مؤسسة محمد بن راشد لتنمية المشاريع الصغيرة والمتوسطة
DUBAI SME

An Agency of the Department of Economic Development – Government of Dubai

A SMALL AND MEDIUM ENTERPRISES DEVELOPMENT PERSPECTIVE OF THE

TRANSPORTATION AND STORAGE

INDUSTRY IN DUBAI

CONTENTS

1. Executive Summary

The report highlights the current status of the transportation & storage industry in Dubai and areas that need to be focused on in order to retain and enhance its competitiveness. The study focuses on sub-sectors of the industry that have a high SME presence.

Transportation and Storage (T&S) is one of the world's largest industries. It contributed 9% to the global GDP in 2008.

Growth of world population and the fast integration of large Asian countries into the world economy has been accompanied by a relocation of manufacturing activities across the globe. The drive to achieve efficiencies, coupled with a high economic growth, led to a surge in global trade volumes (since the 1980s) and emergence of trans-shipment hubs. **These hubs facilitate movement of goods between the key economies of of the world; and generally serve a larger region, instead of serving only their domestic economies.**

For instance, transportation and logistics hubs, such as Netherlands, Singapore, Hong Kong, Dubai, serve as a trading and trans-shipment hub for movement of goods into larger regions- Europe, South / South East Asia, China and Middle East, respectively. T**he growth in the T&S industries in these international hubs depends primarily on the global and regional trade volumes.**

Key Global Trends in the Transportation and Storage Industry

Adverse impact of global recession on the transportation and storage industry; however there have been signs of improvement

The T&S industry was severely impacted due the recent global economic slowdown (due to its heavy reliance on global trade volumes). A decline in global trade volumes in 2009, led to a dip of 8% in the transportation & storage industry. However, with recovery in global trade volumes, the T&S industry is expected to grow in the future, but at lower rates than the recent past (expected CAGR of 3.4% from 2009 to 2012).

Increasing focus on sustainability and efficiency

The transportation & storage industry contributes approximately 2,800 mega tones, i.e. about 5.5% of the total 50,000 mega-tonnes of carbon-dioxide emissions generated by all human activity annually. T&S industry is placing greater emphasis on 'green' issues given increased governmental focus on reducing carbon emissions and a growing trend of environment compliance being required by major global customers.

In the era of globalization, manufacturing activities and markets for goods are scattered worldwide – thereby creating demand for effective and responsive T&S industry. This has led to a higher focus on improving efficiencies and productivity in the T&S sector. **The information age with its introduction of sophisticated databases that can track inventory levels and shipments on a global basis via the Internet has helped in creating these efficiencies.**

Focus on improving efficiencies by the international hubs (such as Netherlands, Singapore and Hong Kong)

In keeping with the trend, **Netherlands, Singapore and Hong Kong, are focusing on enhancing their efficiencies and competitiveness** in the Transportation & Storage through:

- Enhancement of physical and IT infrastructure
- Skill upliftment in the industry
- Reducing carbon emissions and achieving sustainability
- Conducting R&D to promote innovations in the industry

This is reflected in their respective visions with respect to the industry.

Key Trends in the Transportation and Storage Industry in GCC

The transport and logistics industry in GCC represents roughly 2.3% of GDP of the GCC countries. The transport and logistics industry had witnessed a double digit growth in the past few years in GCC, leading to a market size of AED 69.4 billion in 2008. This is expected to grow at a CAGR of 10% to amount to a market of AED 102.6 billion in 2012.

There has been an adverse impact of the global economic slowdown on the industry in GCC; however a number of positive factors are promoting the industry's growth.

- Strong economic growth and substantial investments in manufacturing industries across GCC, even after the decline in oil prices in the fall of 2008
- Low logistics outsourcing levels in the region, especially when compared to global benchmarks; however there is an increasing focus of companies on finding cost-effective ways to manage their logistics activities
- Large-scale infrastructural developments (ports, airports, road and rail networks) taking place across GCC. These developments will enhance the collective capacity for T&S industry in GCC. These developments would also pose a threat to Dubai's current position as a pre-eminent transportation and storage hub in the region.

Other trends in the industry in GCC are:

- Consolidation by players to increase presence in the region and/or expand internationally
- Some signs of initiatives to reduce the negative impact of the industry on the environment, especially in Dubai (being a center and trend-setter for transportation & storage industry in the GCC)

Transportation and Storage Industry in Dubai/UAE

In the GCC region, UAE (especially Dubai) is the key hub for the industry. Currently, the transportation and storage industry accounts for 8.4%[1] of Dubai's GDP.

Dubai's advantages stem from a well developed infrastructure (UAE ranked 3rd in the world in terms of its infrastructure[2]) and presence of a number of growth-oriented government linked companies (DP World, JAFZA, Emirates) in the industry. These advantages have attracted a number of reputed international and regional players to set up their bases in Dubai.

Due to its key advantages in infrastructure and a high government focus, UAE is ranked high compared to the other GCC countries in global competitiveness rankings for the T&S industry.

Ranking of UAE vis-à-vis other GCC Countries on Published Indices for the Transportation & Storage Industry

Global Indices	UAE	KSA	Qatar	Oman	Kuwait	Bahrain
Logistics Performance Index, 2010 (out of 155 countries)	24	40	55	60	36	32
Enabling Trade Index, 2010 (out of 125 countries)	16	40	34	29	65	22
Trading Across Borders, 2010 (out of 145 countries)	5	23	41	123	109	32
Global Competitiveness Report, 2010 - Ranking for Infrastructure (out of 133 countries)	3	28	25	33	60	27

A large number of infrastructural developments in form of port and airport developments, setting up of logistics free zones, etc. are taking place across GCC. These developments could provide competition to Dubai's status as a regional leader in the industry.

As Dubai's economy is highly reliant on trade, transportation & storage industry is critical for its continued economic success. Further, Dubai's T&S industry is influenced by external economic environment, primarily on account of the fact that any changes in external trade flows impact the industry appropriately.

It should be also noted that while Dubai ranks high within GCC, it ranks low on the industry indices (except with respect to infrastructure) when compared to the leading global hubs for the T&S industry. **For Dubai to retain and enhance its position as a leading regional Trading hub, and to emerge as an important global hub (being part of supply chains supply chains of companies in Asia, Europe and the US.); it needs to work towards further strengthening the industry.**

[1] Includes contribution of communication industry
[2] Source: Global Competitiveness Index 2010-11

Ranking of UAE vis-à-vis International Hubs on Published Indices for the Transportation & Storage Industry

Global Indices	Singapore	Hong Kong	Netherlands	UAE
Logistics Performance Index, 2010 (out of countries)	**2**	**13**	**4**	**24**
Enabling Trade Index, 2010 (out of 125 countries)	**1**	**2**	**10**	**16**
Trading Across Borders, 2010 (out of 145 countries)	**1**	**2**	**13**	**5**
Global Competitiveness Report, 2010 - Ranking for Infrastructure (out of 133 countries)	**5**	**1**	**7**	**3**

The global and regional trends are making it imperative for Dubai to work towards maintaining and enhancing its competitiveness in the industry. The focus for the industry in Dubai should be to revitalize and reform the industry by improving overall efficiencies and productivity.

Key Global Trends

- Adverse impact of decline global trade volumes on the T&S industry worldwide; however there have been signs of improvement
- Higher globalization is creating demand for more efficient T&S industry through use of IT and other technologies
- Increased focus on sustainability
- Focus on improving efficiencies by international hubs

Increased globalization, Focus on improving efficiencies of operations and reducing adverse impact of the industry on the environment

Key Regional Trends

Infrastructural developments taking place in other emirates and GCC countries are posing threats to Dubai's position as a trans-shipment hub in GCC

- **Airports:** Development /Expansion of New Doha airport (Qatar), Kuwait International Airport, Bahrain international airport and Abu Dhabi International airport
- **Ports:** Development /Expansion of New Doha Airport, Khalifa Bin Salman port (Bahrain), Abu Dhabi Khalifa port, and a number of ports in Saudi Arabia
- **Roads:** Construction of Qatar-Bahrain Friendship Bridge

Emerging Competition from other emirates and GCC countries

Current State of the Transportation & Storage Industry in Dubai

- **Dubai's economy with its focus on Trade – depends heavily on T&S for its success.**
- **T&S Industry is significantly dependent on external trade making it vulnerable to external environment and regional competition**
- **Industrial developments, a growing retail environment and large-scale construction projects in the GCC will drive the growth of the industry**
- **Large-scale infrastructural developments in logistics sector in other GCC countries can provide competition to Dubai's position as a trans-shipment hub**

T&S industry in Dubai trying to leverage on regional demand, retain domestic business and serve as a global hub

Revitalize and reform the industry to retain and enhance Dubai's position in T&S industry, regionally and globally

The future of Dubai's T&S industry, will depend on its ability to continuously enhance its productivity levels and upgrade its service offerings to tap into the regional demand

The objective of the report is to highlight issues that need to be focused on for Dubai to maintain as well as enhance its competeveness in the region as well as globally.

An analysis of the industry reflects a number of issues impacting the competitiveness of the industry in Dubai. These have been classified into the following three segments:

1. **Industry-wide Issues:** These are issues impacting the entire transportation & storage industry and require a coordinated approach towards development of the industry.
2. **External Challenges:** The solutions to resolve these issues will require involvement of the other GCC countries. Implementation of solutions to address these issues will help to achieve long-term efficiency improvements in the industry.
3. **Issues Impacting Competitiveness of SMEs in Specific Sub-sectors:** These relate to issues that are impacting competitiveness of SMEs in specific sub-sectors.

The following table classifies the issues into key themes.

Snapshot of Key Issues Impacting Competitiveness of the Transportation & Storage Industry

	Low Asset Utilization	Infrastructure	Low Utilization of Technology	Lack of Training	Regulations / Regulatory Structure	Others
1. Industry-wide Issues		✓	✓*	✓*	✓	
2. External Challenges		✓			✓	
3. Issues Impacting Competitiveness of Sub-sectors with a High SME Presence						
Freight Transport by Road	✓		✓	✓	✓	
Private Transport for Passengers	✓		✓	✓	✓	
Sea Freight Water Transport	✓		✓	✓		
Support Activities for Sea Freight Transport Providers	NA		✓	✓		✓
Warehousing and Storage	✓		✓	✓	✓	
Freight Forwarding & Related activities	NA		✓	✓	✓	
Courier Services	✓		✓	✓		✓

** Lack of training and low utilization of technology are industry-wide issues; however, these have been discussed at sub-sector levels in the following section.*

1. Industry-wide Issues

The key issue impacting the industry is lack of coordinated approach to develop the industry. There are a number of regulatory and other government /semi-government bodies (RTA, JAFZA, DAFZA, Dubai Maritime City Authority etc.) that relate to this sector. Each of them is trying to regulate and develop the industry from various perspectives. However, there is a need for a single umbrella body that has the responsibility to develop the industry. The industry-wide issues, their root causes and possible solutions have been presented in the following table.

Industry-wide Issues (Brief Description)

Issue	Brief Description
Lack of a centralized body to promote the growth of the industry	• Presence of a number of regulatory bodies regulating and making efforts to develop the industry but from different perspectives - not by following a coordinated approach
Low Focus on R&D	• Only basic-level research (primarily student projects) is conducted in universities • Absence of a centralized body promoting collaborative research between players, government bodies and universities
Absence of railroad infrastructure in UAE	• ***Rail infrastructure in UAE is currently being developed; the first phase for freight transport is expected to be completed by 2013.***

Note: Issues highlighted in green is being addressed by current initiatives; thus, the focus has to be monitoring implementation and success of these initiatives.

2. External Issues

Dubai's transportation & storage industry is serving the wider region, but access to other countries is hampered by factors outside the reach of the UAE authorities. A relevant example is the Customs requirements in the other GCC countries (especially Saudi Arabia), which leads to a longer time to trans-ship goods within GCC. The external issues, their root causes and possible solutions have been presented in the following table.

External Issues (Brief Description)

Issue	Brief Description
Presence of non-tariff barriers and cumbersome procedures to move goods to other GCC countries by using road transport	• Customs' requirements vary across GCC countries, leading to increased time in transit of goods by roads
Absence of railroad infrastructure within GCC	• ***Plans are in progress to develop rail infrastructure connecting GCC countries***

Note: Issues highlighted in green are being addressed by initiatives of one or more government bodies.

3. **Issues Impacting Competitiveness of SMEs in Specific Sub-sectors:** The key issues impacting competitiveness of sub-sectors with a high SME presence have been discussed below.

Low Asset Utilization (Brief Description)

Sub-sector	Brief Description
Freight Transport by Road	• Excessive empty backhauling (while moving within Dubai and coming back from other GCC countries and emirates) • Lack of parking spaces at key locations (leading to movement of empty trucks from their yards to key locations, such as JAFZA, DAFZA, etc.) • Decline in cargo volumes due to impact of the economic slowdown
Private Transport for Passengers	• Decline in passenger movements due to downsizing by companies (who would require passenger transport services)
Sea Freight Water Transport	• Excessive empty movement of containers on the road (sea freight transport - NVOCCs) due to GCC being a bigger import market, than an export market • Excessive empty movement of containers in the sea (sea freight transport - NVOCCs) • Impact of decline in global shipping volumes
Warehousing and Storage	• Decline in cargo volumes as an impact of economic slowdown • Overcapacity of warehousing space

Note: Issues highlighted in red are beyond the control of the T&S industry stakeholders in Dubai; the focus has to be to support SMEs in increasing asset utilization and support growth of SMEs

Low Productivity and Efficiency in Processes

In case of international logistics companies, the productivity levels in Dubai are about 10-15% lower as compared to their global operations. In case of SMEs, their productivity levels are estimated to be 30-40% lower as compared to SMEs in Europe. The two key reasons for a low productivity are:

- Low Utilization of Technology
- Lack of Training

Low Utilization of Technology (Brief Description)

Sub-sector	Brief Description
Freight Transport by Road	Low level of implementation of GPS tracking systems; and online tracking and tracing capabilities for customers
Private Transport for Passengers	Low level of implementation of GPS tracking systems and online tracking and tracing capabilities for customers
Sea Freight Water Transport	A number of functions in feeder vessel and NVOCCs are being done manually, such as making rate entries, vessel and container scheduling, tracking and tracing of containers etc.
Support Activities for Sea Freight Transport Providers	Documentation and software to automate processes, such as responding to customer queries, providing quotes, etc.
Warehousing and Storage	Low level of implementation of sophisticated racking and shelving systems and warehouse management systems by SMEs
Freight Forwarding & Related activities	Low level of tracking and tracing and documentation-related systems
Courier Services	Low level of implementation of GPS tracking systems, hand-held scanners and route optimization systems

Lack of Training

Majority of the workforce in T&S industry in Dubai lack any formal training for the industry. The low-skilled workforce lacks even basic English and numeracy skills, thereby making formal training even more difficult.

The industry is able to sustain itself with the current skill sets. However, skill enhancement will help to enhance the industry's long-term competitiveness by facilitating:

- Improvement in efficiencies in utilization of assets
- Improving service quality
- Shortening the learning curve of new employees
- Implementation of new technologies

Lack of Training (Training Requirements at Different Levels)

Level of Employees	Training Requirements
Middle Management	• Enhancing knowledge related to technological solutions (fleet management, use of GPS, warehouse management systems), that can ensure efficient utilization of assets • Understanding global best practices to identify better ways of doing routine work and make operational improvements. • Bills of Lading (liabilities and disputes in bills of lading) • Demurrage clauses in freight handling contracts • Warehouse supervision and Inventory management

Low Skill Employees	• Trainings related to handling of specialized goods, such as dangerous goods, chemicals, food products for all employees involved in cargo handling • Driver trainings in areas, such as safety and fuel efficiency while driving, vehicle maintenance, etc. • Customer service skills for employees in private bus operators, courier services • Documentation and procedural requirements while moving from one free zone to another; crossing borders of GCC countries, etc.

Lack of Stringent Regulations

There is a need for more stringent regulations for land transport and warehousing (outside the free zones) to ensure a high quality of services. A lack of stringent regulations can lead to incidents that can adversely impact Dubai's image as a global hub for transportation & storage industry.

Some instances of lack of stringent regulations and their impact are:

- Minimal Entry Requirements leading to a high level of fragmentation in freight forwarding, trucking and passenger bus transport.
- Lack of stringent regulations for running the operations (relevant for trucking, warehouses outside the free zones)

Lack of Stringent Regulations (Brief Description)

Sub-sector	Brief Description
Freight Transport by Road	• Minimal entry requirements leading to a high level of fragmentation and a high cost competition • Lack of stringent regulations for running the operations, related to selection and training of drivers, Number of hours that the drivers are allowed to drive, Number of years that the trailers can be used, etc.
Private Transport for Passengers	• Minimal entry requirements leading to a high level of fragmentation and a high cost competition
Warehousing and Storage	• Lack of stringent regulations for operating warehouses outside the free zones
Freight Forwarding & Related activities	• Minimal entry requirements leading to a high level of fragmentation

Note: Issues highlighted in green are being addressed by current initiatives; the focus has to be to monitor implementation and success of these initiatives.

Other Issues

Sub-sector	Key Issue	Brief Description
Support Activities for Sea Freight Transport Providers	Lack of Ship-Owning Activity	• *Nascent Ship Financing Industry* • *Low attractiveness of registering ships*

Note: Issues highlighted in green are being addressed by current initiatives; the focus has to be to monitor implementation and success of these initiatives.

Although, these issues impact competitiveness of the SMEs in Dubai, a number of companies have adopted one or more measures to be competitive by adopting practices such as:

- Focus on niche segments
- Focus on improving efficiencies and productivity through use of technology
- Ensuring a high quality of services

In order to enhance competitiveness of a larger number of SMEs and the overall industry, the report also discusses the possible solutions.

Details of prioritized solutions (that have a high to medium-impact on competitiveness with medium to high ease of implementation) have been provided in the following table.

List of Prioritized Solutions

	Possible Solutions	Impact on Competitiveness	Ease of Implementation	
			Cost	Time
Lack of a centralized body to promote the growth of the industry	Set up of a centralized regulatory and/or development advisory government body	**High**	**Low**	**Low**
Low Utilization of Technology (All Sub-sectors)	Conduct workshops to increase awareness about available technologies and their benefits	**High**	**Medium**	**High**
	Work with suppliers of the systems to offer 'Pay as you go' models	**High**	**Medium**	**Medium**
	Help SMEs to get discounts for purchasing the systems by getting companies to collaborate to get bulk discounts	**High**	**Medium**	**Medium**
Lack of Training	Provide short-intensive courses in collaboration with educational institutes	**High**	**Medium**	**Medium**
Excessive empty backhauling (while moving within Dubai and coming back from other GCC countries and emirates) – Trucking & NVOCCs	Create load matching service platforms - Online Portal	**High**	**Medium**	**Medium**
Decline in cargo volumes and overcapacity in the industry (Trucking, warehousing)	Encourage companies (large 3PLs, local manufacturers and traders) to outsource their certain functions to SMEs in order to	**High**	**Medium**	**Medium**

	stimulate demand			
	Support SMEs to focus on niche segments, such as cold chain, park and ride services, etc.	**Medium**	**Medium**	**High**
Lack of stringent regulations for running the operations (Trucking, warehouses outside the free zones)	Implement requirements related to number of hours that the driver can drive, age and quality of trailers, etc.	**Medium**	**High**	**Medium**
	Implement Defect Clearing Systems to strengthen on-road inspections	**Medium**	**High**	**Medium**

Setting up of a centralized regulatory and/or development advisory government body is considered a prioritized solution (in spite of lack of ease of implementation) since this body can act as a champion body to promote and implement the other proposed solutions.

Obtaining stakeholder commitment and support to implement the prioritized solutions will be first step in implementing these solutions. The main tasks involved for this are:

- Building consensus with the large players, SMEs, trade associations and key government departments for the proposed solutions
- Coordinating the interaction between the proposed solution and existing/planned/related initiatives by the various government bodies

Dubai has enjoyed competitive advantages of well-developed infrastructure and the first mover advantage in the region. However, these will no longer be sufficient by themselves to ensure a high competitiveness in the region as well as globally over the long-term.

The pursuit of a global transportation and storage hub will require an immense amount of coordination and overall development of all the sub-sectors and firms in the industry. An umbrella body is thus essential to ensure that the initiatives are put in place and their progress is tracked to ensure results.

Structure of the Report

The various sections of the report and their components have been discussed as follows:

1. ***Overview of Global and regional (GCC) Transportation and Storage Industry*** - The report studies the current status and key trends in the transportation and storage industry globally and regionally as it grapples with multiple challenges posed by economic slowdown worldwide.

2. ***Overview of Transportation and Storage Industry in Dubai*** – This part provides an overview of the transportation and storage industry in Dubai, with respect to its contribution to Dubai's economy, its evolution, and role played by Dubai as a regional and global transportation & storage hub.

3. ***Competitiveness Analysis***

   A. **Competitiveness of the Transportation & Storage Industry in UAE based on published indices:** The section analyzes the competitiveness of the industry in UAE based on the following indices:
      - Infrastructure Ranking based on Global Competitiveness Index 2010-11
      - Logistics Performance Index 2010
      - Enabling Trade Index 2010
      - Trading Across Borders - Part of Doing Business Report 2010

   B. **Issues impacting Competitiveness of the Industry, with focus on SMEs:** This section focuses on the various segments of the transportation and storage industry in terms of:
      - Key global and regional trends
      - Current status of the industry in Dubai and its future growth potential
      - Issues impacting competitiveness of SMEs in specific sub-sectors

   Broadly, the transportation and storage industry has been divided into the following segments (based on ISIC Revision 4) for the purpose of analyzing the industry in Dubai:

   C. Analyzing Dubai's Competitiveness for the Transportation & Storage Industry based on Porter's Diamond model

4. ***Benchmarking Examples*** – The section highlights initiatives announced by the governments in international transportation & storage hubs to enhance competitiveness of the industry in their respective countries.
5. **Possible Solutions -** The section highlights the possible solutions to handle the issues impacting the competitiveness of the T&S industry and various sub-sectors in Dubai.

2. Global Transportation and Storage Industry - Overview

Transportation and Storage is one of the world's largest industries. It contributed 9% to the global GDP in 2008.[3]

The role of a country's transportation and storage industry can be differentiated into three key market segments based on the whether it only serves the domestic demand for movement of goods or acts as a regional or global hub for movement of goods.

Market Segments for Transportation & Storage Industry

Market Segments	Description of Competition and Growth	Relevant Transport Mode
Local Logistics Services	**Facilitates movement of goods within a country** • Competition is between local service providers • Growth driven by the growth of the domestic economy	• Heavily dependent on road and rail connections
Export/import Logistics	**Connects a national market with the global economy** • Competition is between several hubs in the country that could potentially provide the international linkage • Growth driven by local and foreign demand as well as the competitiveness of local goods and products	• Sea and airport connections play an important role • Increased importance for intermodal logistical services
Trade and Tran-shipment Hubs	**Facilitate movement of goods along global trading routes and into and out of a larger region** • Logistical platform for a group of countries along global trading routes • Competition is between several locations in different countries that could play this role • Growth is driven by the overall trends in regional and global trade	

Source: Dubai Economic Council: Clusters and Dubai's Competitiveness

Creation of certain trade and trans-shipment hubs across the world has been driven by increasing globalization. Growth of world population and the fast integration of large Asian countries into the world economy forced a relocation of manufacturing activities across the globe. The brand-owning

[3] Datamonitor

companies in the Western world increasingly outsourced non-core activities of manufacturing and managing their supply chain activities to rest of the world.

This drive to achieve efficiencies, coupled with a high economic growth, led to a surge in global trade volumes (since the 1980s) and emergence of trans-shipment hubs. **These hubs facilitate movement of goods between the key economies in the world; and generally serve a larger region, instead of serving only their domestic economies.**

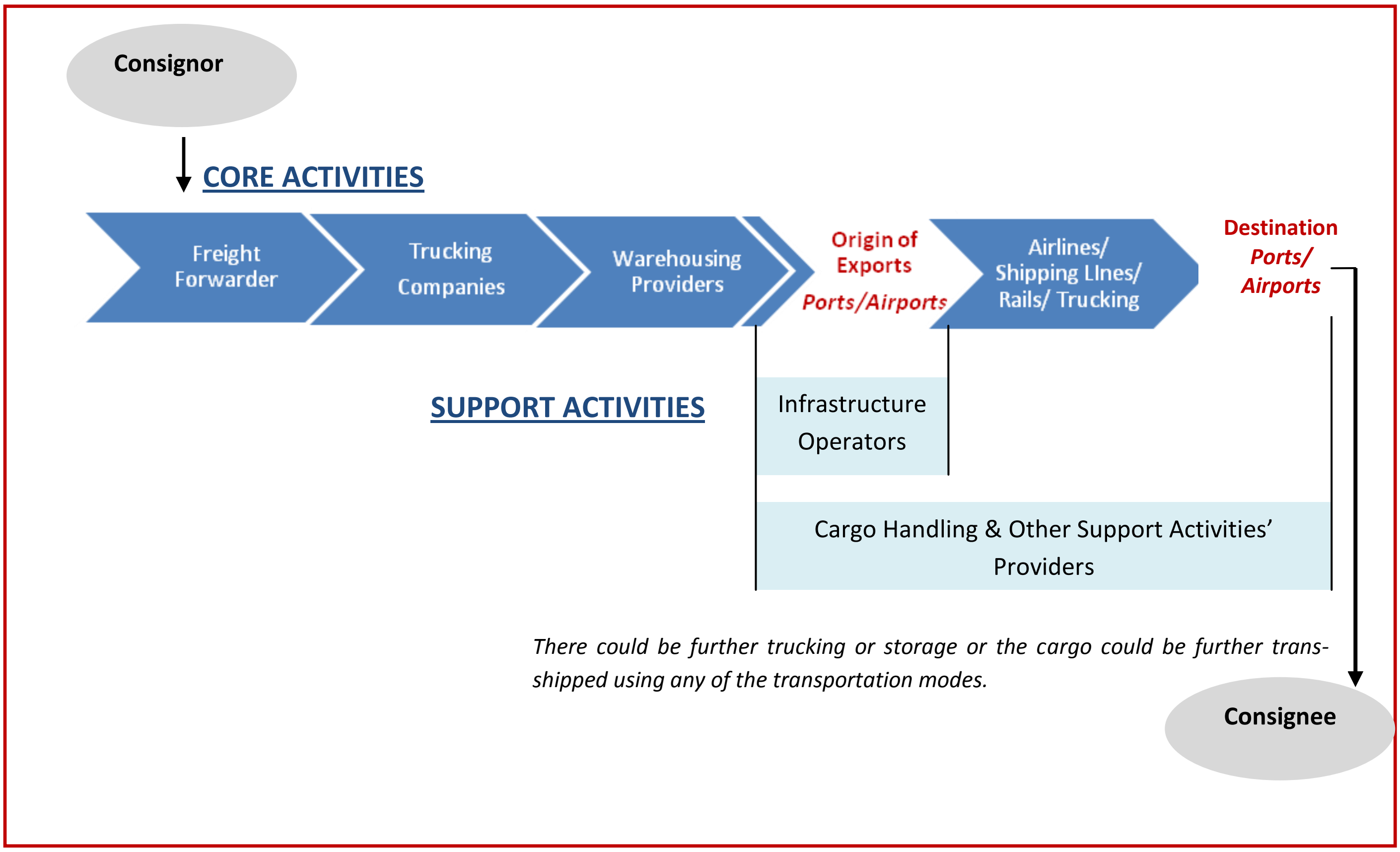
For instance transportation and logistics hubs, such as Netherlands, Singapore, Hong Kong, Dubai, serve as a trading hub for movement of goods into larger regions - Europe, South Asia/ South East Asia, China and GCC, respectively.

The growth in the transportation & storage industries in these international hubs depends primarily on the global trade volumes.

Key Activities and Players in the Transportation & Storage Industry

The following section discusses the role played by the various entities in the transportation & storage industry to facilitate movement of goods across the world.

Key Activities and Players in the Transportation and Storage Industry*



**The chart represents movement of goods; movement of passengers will involve travel agents in place of freight forwarders and passenger land transport companies instead of trucking, with no need for warehousing.*

Consignor/Exporter

Manufacturers/wholesalers/distributors/retailers/individuals sending goods from one destination to another. The consignor could himself plan the transportation of goods or may use the services of freight forwarding and related service providers to manage the transportation of the goods.

Freight Forwarding and Related Service Providers

These are companies that arrange transport of goods by using various transportation modes on behalf of the shippers. Most of these players also manage the customs clearance of the goods. The key roles performed by these companies are:

- *Freight Forwarding:* Planning and implementing transport solutions to co-ordinate the flow of goods within a country or across countries. Unlike fully integrated players that own truck, rail, air or ocean assets to transport cargo, freight forwarders may arrange for transport without owning any transportation equipment.
- *Customs Brokering:* Facilitating clearing of goods through international customs barriers on behalf of an importing or exporting business.

Warehousing and Storage

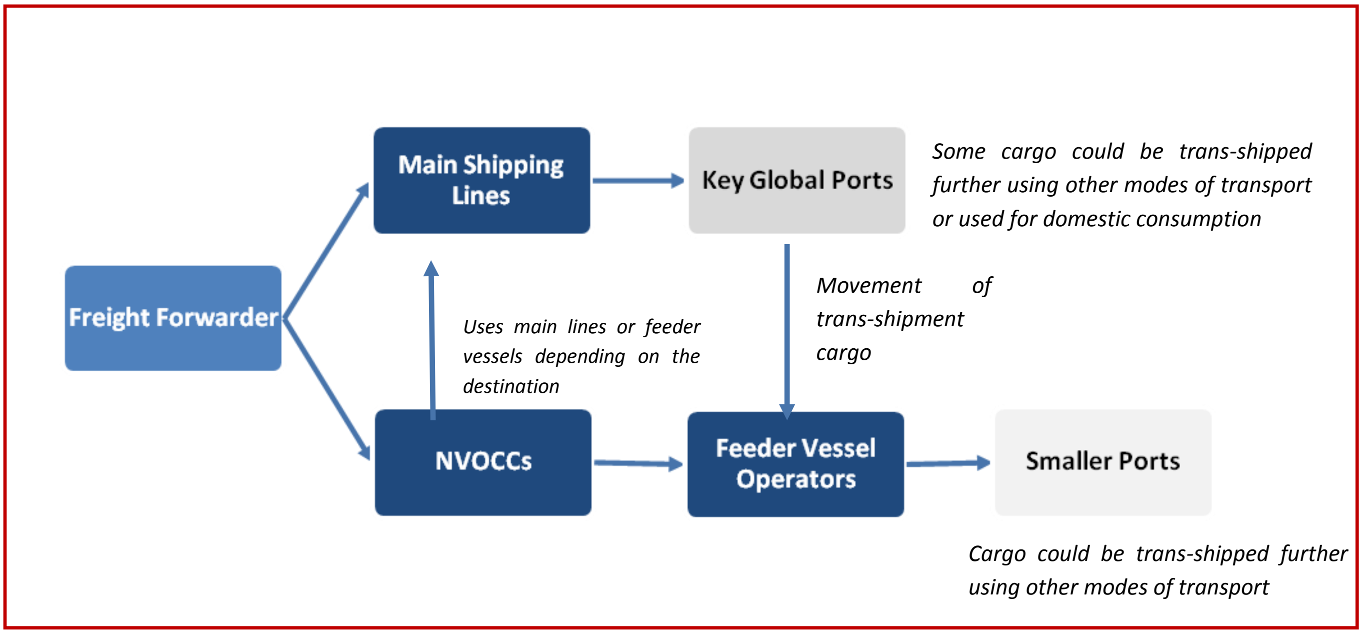
These are companies that provide a protected space where customers can leave items for varying periods. The companies could also provide freight forwarding as freight forwarders and custom brokers, and vice versa. These are usually the third party logistics service providers (3PLs).

Transport Service Providers

- **Airlines:** Airlines carry passengers, cargo, and mail by air. They could offer scheduled or charter services.
- **Trucking Companies:** Companies that act as carriers to transport goods using commercial motor vehicle on road.
- **Shipping Lines**
    - **Main Shipping Liners:** These are global shipping lines, such as Maersk, Hyundai, etc. that operate mother vessels between the key global ports globally (such as Singapore, Dubai, Germany, etc.). They own containers and own/operate large vessels (size of 8,000-15,000 TEUs).
    - **Non Vessel Owning Common Carrier (NVOCC):** It may own or lease containers that it ships using the services of main shipping liners and feeder vessel operators.
    - **Feeder Vessel Operators:** These companies either own or charter small ships for carrying cargo from key ports to smaller ports (for instance from Jebel Ali port in Dubai to ports in Africa, other GCC countries, etc.). The size of feeder vessels ranges from 1,000-2,000 TEUs.

The role of the main shipping lines, feeder vessel operators, and NVOCCs has been detailed in the chart below.

Role of the Main Shipping Lines, Feeder Vessel Operators, and NVOCCs



Transport Related Support Service Providers

- **Infrastructure Operators:** Companies that operate and manage airports, ports, container terminals, roads, tunnels, bridges, etc.
- **Support Service Providers for Infrastructure Operation:** Cargo loading and unloading, navigation and berthing, air traffic control, etc.
- **Other Support Service Providers:** Companies that provide any of the following services:
  1. **Ship Brokerage:** Ship broker finds contracts/long-term orders for the ships owned and operated by ship owners. A ship broker also act as an intermediary between a ship owner and a shipping company that needs to charter vessels.
  2. **Technical and Commercial Service Management:** These provide a range of services to ship owners, such as crewing of ships , ensure that the ships are properly maintained, supply of spare parts, appointment of agents for the ships, arranging and ensuring ship insurance etc.
  3. **Marine Surveying:** Companies that offer the following kinds of surveying services.
     a. Surveying of cargo to ascertain the condition of cargo, ascertain reason for damage to the cargo (if any)
     b. Surveying of ship on behalf of ship owners (who could be located in certain countries and their ships could be operating in other countries)

4. **Ship Agencies:** A company whose business is to represent main shipping liners on one-time or long-term contract basis in one or more countries. Their responsibilities include preparing shipping documents, arrange shipping space and insurance, handle physical needs of the ships at the port, etc.

Key Global Trends in the Transportation and Storage Industry

Adverse impact of recent global slowdown on the transportation and storage industry; however, lately there have been signs of improvement

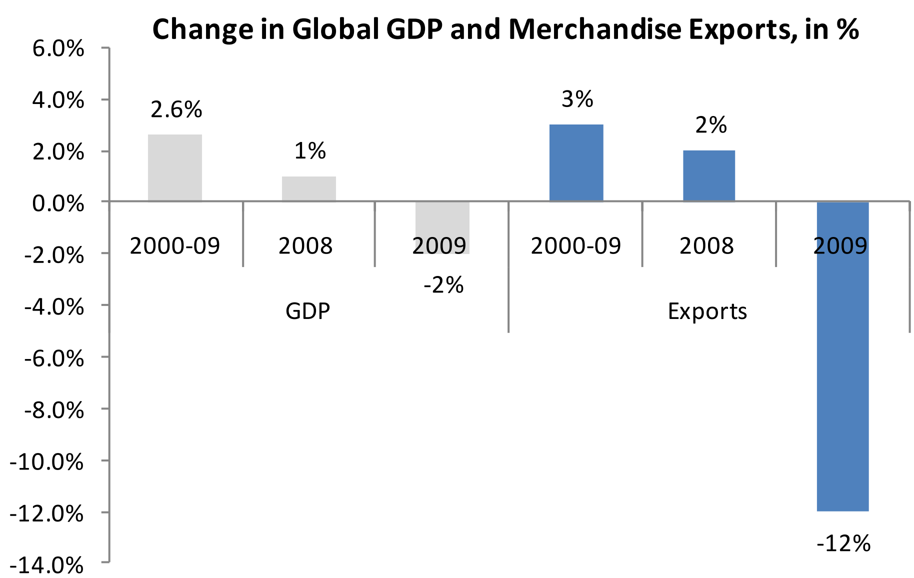
Due to the global nature of the transportation & storage industry and a high dependence on global trade volumes, the growth in the industry is closely related to the economic cycles.

A high consumer and business demand for goods and services inevitably translates into higher demand for transport and logistics services. Thus, when economic activity is buoyant, demand for transport and logistics services is equally strong.

A slowdown in **economies globally in 2008 created a severe impact on global trade volumes and thus on the transport and logistics industry worldwide. However, there have been signs of revival in economies worldwide, leading to higher trade volumes since beginning of 2010, leading to a higher demand for the transportation and storage services.**

Global merchandise export volumes declined by 12% from 2008 to 2009; however they are expected to increase by 13.5% in 2010[4].

The following chart represents growth in trade volumes till 2008; with a huge dip in 2009 due to a fall in global GDP.



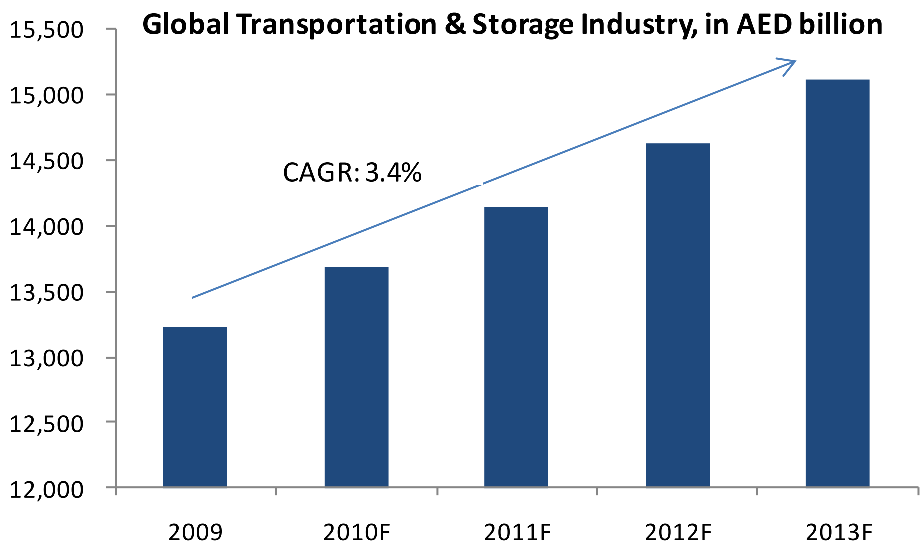
Source: World Trade Organization

[4] World Trade Organization

The steep fall in trade was due to a combination of factors, such as weak demand, falling commodity prices, simultaneous impact of the economic crisis across countries and regions, and limited access to credit in general, and trade finance in particular.

Due to the growing trade volumes between 2003 and 2008, the transportation industry had been witnessing growth at a CAGR of approximately 7%.

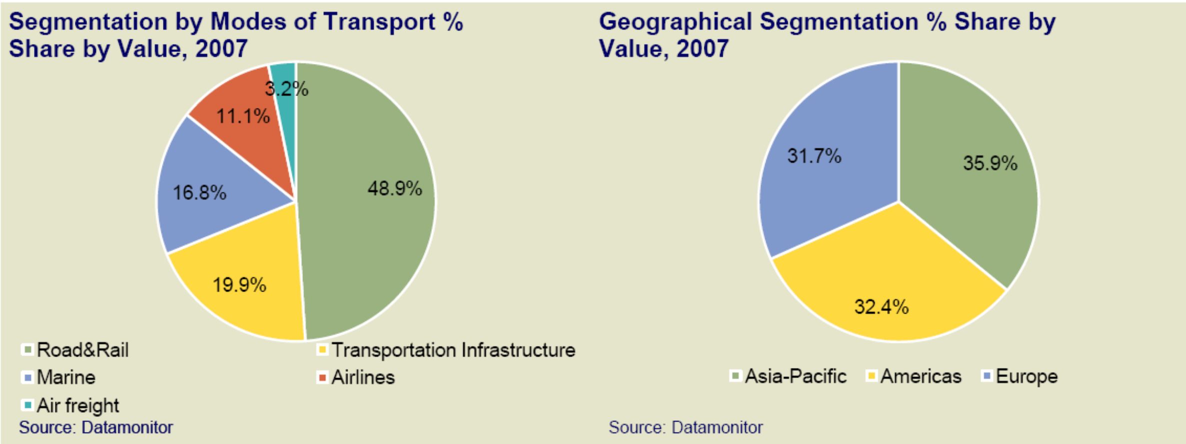
A decline in global trade volumes in 2009, led to a dip of 8% in the transportation & storage industry <<please check – whether the dip was 8 or 12% - refer previous para>>. However, with recovery in global trade volumes, the T&S industry is expected to grow in the future, but at lower rates than the recent past, as shown by a lower expected CAGR of 3.4% from 2009 to 2012.



Source: Datamonitor

The global transportation and storage industry is expected to reach a value of AED 15 trillion (USD 4 trillion) by 2013, up from its current value of AED 13.2 trillion (USD 3.5 trillion).

Roads and rail (land transportation) accounts for the highest share in the industry by value (49% of the total value of the industry) since it is usually the first or last leg in all movements of cargo and passengers.



With respect to geographic classification, Asia-Pacific and Americas account for 35.9% and 32.4% of the total industry revenue, respectively.

However, the demand is expected to continue to shift away from North America and Europe to the emerging markets of Latin America, BRIC and the Middle East. This trend is reflected in the fact that North America and Europe are expected to lose a 2.2% and 1.5% share of the global market by 2013, while Asia Pacific is expected to gain nearly 1.5%.

Although the global transportation & storage industry is expected to grow, a number of trends are creating a challenging environment in which it will be harder for companies to uncover opportunities for growth.

A higher need to achieve sustainability and cost-effectiveness will be the two key areas of focus for the industry's development between 2009 and 2013. **These factors are expected to lead to a modal shift, (with air freight losing ground to rail, road and sea), more horizontal collaborations and higher technology implementation.**

Increasing focus on sustainability

One of the biggest challenges facing the global transportation sector over the mid- to long-term is lowering carbon emissions and enhancing energy efficiency.

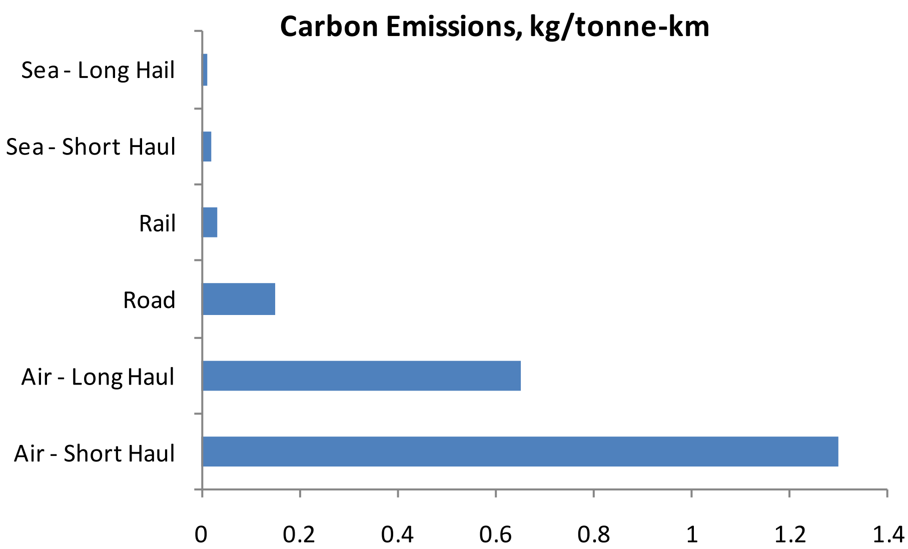
The transportation & storage industry contributes approximately 2,800 mega tones, i.e. about 5.5% of the total 50,000 mega-tonnes of carbon-dioxide emissions generated by all human activity annually. T&S industry is placing greater emphasis on ‘green’ issues given increased governmental focus on reducing carbon emissions and a growing trend of environment compliance being required by major global customers.

Road Freight is the key source of these carbon emissions (contributing 57% to the total carbon emissions from the transportation & storage industry).

Share of Various Segments in Total Carbon Emissions

Source: Supply Chain Decarbonization, World Economic Forum

However, this does not imply that road transport is the least efficient mode. Assessed in terms of emissions intensity per tonne-km, air freight is considerably more carbon intensive than road (as reflected in the chart below).



Source: Supply Chain Decarbonization, World Economic Forum

There has been an increasing focus of the governments and global organizations on reducing the carbon emissions from the T&S industry. A report on Supply Chain Decarbonization by World Economic Forum provides recommendations for reducing carbon emissions. Some of these recommendations are:

Suggestions to Reduce Carbon Emissions in the Transportation & Storage Industry

Recommendation	Description
Use of clean vehicles	Improving the efficiency of vehicles in their day-to-day operation and switching to alternative or hybrid fuel technology
Optimized networks & Co-loading	Enable horizontal collaboration between multiple shippers and/or between carriers to make greater use of co-loading opportunities
Use of green buildings	Encourage wider industry commitment to improve existing facilities through the use of green technologies, via individual and/or sector-wide actions
Training and employee engagement	Set budgets for sustainability training and engagement programmes across the industry, especially driver trainings, efficiency in running warehousing buildings
Mode switches	Work on mode switches wherever possible, for instance switching long haul road transportation to rail or waterways

Source: Supply Chain Decarbonization, World Economic Forum

In a survey conducted by Transport Intelligence[5] amongst 450 respondents in the T&S industry, use of technology was considered an important tool in reducing carbon footprints by 79% of respondents.

Use of technology covers software applications to improvement in mechanical, chemical and electrical engineering.

- Use of alternative fuels
- Use of e-services, which reduces unnecessary use of paper
- Use of software systems, such as Fleet Management Systems, Supply Chain Planning software, Warehouse Management Systems etc.

Increased globalization is creating demand for more efficient transportation and storage industry:

In the era of globalization, manufacturing activities and markets for goods are scattered worldwide – thereby creating demand for effective and responsive T&S industry. This has led to a higher focus on improving efficiencies and productivity in the T&S sector.

The information age with its introduction of sophisticated databases that can track inventory levels and shipments on a global basis via the Internet, has helped in creating these efficiencies.

[5] Transport Intelligence is a UK-based provider of research and analysis for the transportation and storage industry.

Focus on improving efficiencies by the international hubs (such as Netherlands, Singapore and Hong Kong)

In keeping with the trend, **Netherlands, Singapore and Hong Kong, are focusing on enhancing their efficiencies and competitiveness** in the Transportation & Storage through:

- Enhancement of physical and IT infrastructure
- Skill upliftment in the industry
- Reducing carbon emissions and achieving sustainability
- Conducting R&D to promote innovations in the industry

This is reflected in their respective visions with respect to the industry.

Vision with respect to the Transportation & Storage Industry

<table>
<tr><td rowspan="3">Netherlands</td><td>• Transportation and Storage accounts for approx. 10% of Netherlands' GDP. There are more than 12,000 Dutch companies serving its transportation and storage industry.</td></tr>
<tr><td>• The government has the ambition to increase the contribution of logistics industry from EUR 3 billion in 2007 to EUR 10 billion in 2020 (approx. AED 14 billion in 2007 to AED 46 billion in 2020).
• The government has the target of 30% decrease in CO2 emission by 2020 (back to level of 1990), but with doubling of freight volume between 1990 and 2020.
• There is high focus on promoting R&D in the transportation and logistics industry in order to increase efficiencies and make Netherlands the European market leader in controlling flows of goods passing through one or more European countries.
o In 2008, the Ministries of Economic Affairs and Transport, Public Works & Water Management allocated a total of EUR 25 million (approx. AED 117 million) for supporting innovation programs.
o The Dutch Institute for Advanced Logistics (DINALOG) was established to promote R&D Programme for Logistics and Supply Chain Management.</td></tr>
<tr><td></td></tr>
<tr><td rowspan="2">Hong Kong</td><td>• The logistics Industry contributes approx. 6% to the GDP and total employment.</td></tr>
<tr><td>• The logistics industry is one of the four pillars of Hong Kong’s economy. There are increasing number of initiatives related to:
o Developing better links with the Mainland
o Enhancement of the physical infrastructure
o Creating new IT and ecommerce systems
o Developing a better labour force
o Marketing Hong Kong’s advantages throughout the world
• The Hong Kong Logistics Development Council (“LOGSCOUNCIL”), which was set up in 2001, provides a forum for the public and private sectors to discuss and coordinate matters concerning</td></tr>
</table>

	logistics development and is instrumental to advising the Government to take these initiatives forward.
Singapore	• The transport, storage and communications industry contributes approx. 10% to Singapore's GDP and employs around 180,000 people.
	Vision for the T&S Industry: **"To Develop Singapore into a Leading Global Integrated Logistics Hub, with Robust Maritime, Aviation, and Land Transport Capabilities Supporting the Global Economy "** The three enablers for the vision are: a) Political, economic and regulatory stability/predictability b) Excellent physical, IT and financial infrastructure c) Critical Mass of logistics professionals with strong customer orientation

Note: The detailed programmes to achieve these visions have been discussed in the further sections.

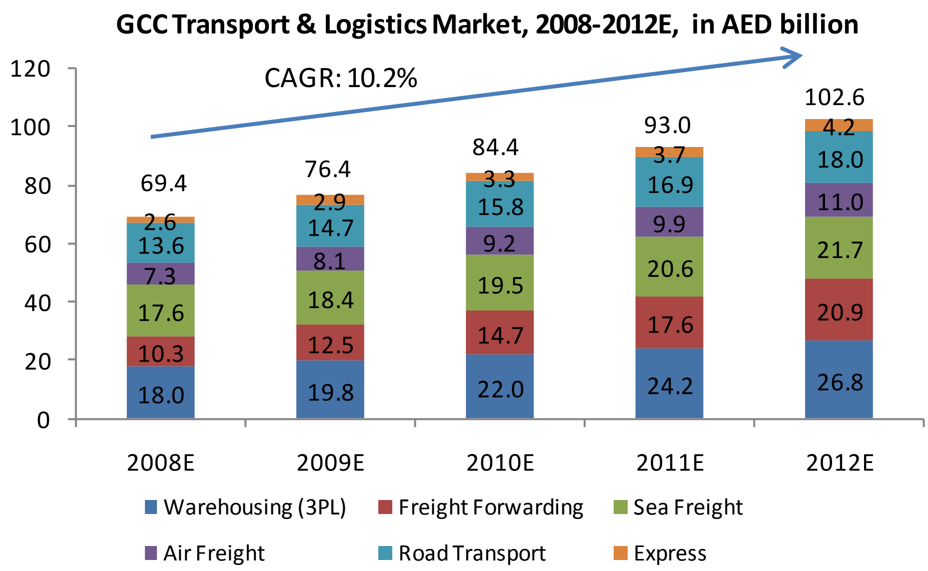
Snapshot of Key Global Trends

- **Adverse impact of decline global trade volumes on the T&S industry worldwide; however there have been signs of improvement** (worldwide trade volumes declined by 12% from 2008 to 2009; however they are expected to increase by 9.5% in 2010)
- **Higher globalization of production and outsourcing of manufacturing and distribution by companies is creating demand for more efficient T&S industry through use of IT and other technologies**
- **Increased focus on sustainability, leading to a higher need for achieving efficiencies**
- **Focus on improving efficiencies by international hubs, such as Netherlands, Singapore and Hong Kong through e**nhancement of physical and IT infrastructure, Skill upliftment, achieving sustainability, and conducting R&D to promote innovations in the industry.

3. GCC Transportation & Storage Industry - Overview

The transport and logistics industry in GCC represents roughly 2.3% of GDP of the GCC countries. This is still low as compared to the industry contribution in the European Union of approximately 6% and a worldwide average of 9%.

The transport and logistics industry had witnessed a double digit growth in the past few years in GCC, leading to a market size of AED 69.4 billion in 2008. This is expected to grow at a CAGR of 10% to amount to a market of AED 102.6 billion in 2012.



Source: Booz & Company

Key Trends in the Transportation & Storage Industry in GCC

There has been an adverse impact of the global economic slowdown on the T&S industry in GCC; however a number of factors are promoting the industry's growth.

Strong economic growth and substantial investments in manufacturing industries across GCC, even after the decline in oil prices in the fall of 2008:

The high level of economic and industrial activity in GCC is driving the growth and need for transportation and logistics services. There is an increasing focus in most of the GCC countries towards increasing the contribution of manufacturing to their GDP and developing clusters for manufacturing industries.

Vision of GCC Countries in Increasing GDP Contribution of Manufacturing Sector

Country	Vision for the Manufacturing Industry
Oman	Manufacturing sector's contribution to GDP increased from 8.7% in 2004 to 10.3% in 2008 due to strong domestic demand and an improvement in the performance of exports (growth at the annual average rate of 30%). ***Vision 2020 has set a target of raising the manufacturing base of the country from 5% of GDP in 1995 to 15% by 2020.***
Bahrain	The GDP contribution of manufacturing sector increased from 12.9% in 2004 to 17% in 2008. Most of the industrial developments in the country stems from ALBA (Aluminum Bahrain) (growth at the annual average rate of 29%) The increased impetus on infrastructure development and **light manufacturing** as per Vision 2030.
UAE	The GDP contribution of manufacturing sector declined from 14% in 2004 to 12.4% in 2008. This is due to the fact that the share of other sectors in GDP increased at a higher rate than the manufacturing sector. A number of **industrial zones** (Dubai Industrial City, Emirates Industrial City and RAK Industrial City) are being developed.
Qatar	The contribution of manufacturing sector was 18% to the non-oil GDP in 2008. The manufacturing sector grew over 30% in 2008. The growth was mainly supported by the Government as a part of a general policy to diversify income sources and to maximize the utilization of Qatar's natural resources (natural gas, oil reserves, etc.).

Planned or Upcoming Manufacturing Clusters in GCC

Manufacturing Clusters	Bahrain	Oman	Qatar	Saudi Arabia	UAE
Aeronautical				✓	✓
Metal	Light & medium manufacturing	✓ (Aluminium)	✓ (Aluminium)	✓ (Aluminium)	✓ (Aluminium & Steel)
Medical				✓	✓
Plastics		✓		✓	✓
Chemicals					✓
Food & Beverages		✓		✓	✓*
Automotive	✓	✓	✓	✓	✓

Note: *Data is based on clusters/economic zones developing in the GCC. Kuwait does not have any plans on developing clusters or economic zones as yet and hence has been excluded in the table above*

**planned or upcoming manufacturing cluster in Dubai*

Low logistics outsourcing levels in the region, especially when compared to global benchmarks:

The outsourcing levels of logistics functions are lower in GCC (18-20% of total value of transport and logistics functions in GCC are outsourced to 3rd parties) as compared to global benchmarks (40% in the UK, 25-20% in Western Europe of total value of transport and logistics functions). [6]

An increasing focus of companies on finding cost-effective ways to manage their logistics activities in order to focus on their core business is expected to increase the level of outsourcing by companies. This in turn is expected to drive the demand for transportation and storage services in GCC.

Large-scale infrastructural developments (ports, airports, road and rail networks) taking place across GCC

All the GCC countries are making significant investments in developing their infrastructure and are promoting a conducive environment for the industry through development of a number of free zones.

Examples of Infrastructural Developments and Free Zone Developments in GCC[7]

Sub-sector	Examples
Airports	Development /Expansion of • New Doha airport (Qatar) • Kuwait International Airport • Bahrain international airport • Abu Dhabi International airport
Ports	Development /Expansion of • Khalifa Bin Salman port (Bahrain) • Abu Dhabi Khalifa port • Number of ports in Saudi Arabia
Road and Rail Network	• Construction of Qatar-Bahrain Friendship Bridge • Plans for a high-speed inter-gulf railway to connect the GCC countries • Plans to construct the UAE Railway connecting all the seven emirates, with the main route being Sharjah-Dubai-Abu Dhabi
Free Zones	Planned/Upcoming Development of: • Bahrain Logistics zone (BLZ) • Logistics Village, Qatar • Abu Dhabi Airport Business Park • Khalifa Port and Industrial Zone (KPIZ), Abu Dhabi

The infrastructural developments in other emirates as well as in the GCC countries have the potential to pose a threat to Dubai's position as the dominant transportation and storage hub in the region.

[6] Source: Primary Interviews with Experts
[7] The details of the expansions are discussed in the following sections on each of the sub-sector

Opportunity to strengthen Dubai's credentials as a global hub especially between Europe and Asia)

Dubai has grown over a period of time as the main trans-shipment hub for GCC and Middle East. The development of Al Maktoum International Airport and Dubai Logistics City, is expected to strengthen Dubai's importance as a major global hub. Due to its geographical position, Dubai has the potential to be a significant centre in the complex supply chains of companies in Asia, Europe and the US. This is expected to fuel growth of the transportation and storage industry from global companies.

Consolidation by players to increase presence in the region and/or expand internationally

- In 2009, Aramex expanded its presence in Europe by acquiring TwoWay Vanguard, a logistics and freight service provider that has offices in the Netherlands, Ireland and the United Kingdom.
- **Toll Group,** a leader in integrated logistics in Asia, **acquired Logistic Distribution Systems (LDS)**, a large private international freight forwarder based in Dubai. The objective of the acquisition for LDS was to strengthen its existing operations as a global transshipment hub for freight movements between Europe and Asia. LDS has the image of being a quality freight forwarder in the trade lanes between Dubai and Europe/Asia Pacific.
- In **2008,** Barloworld **Dubai-based logistics company had acquired Swift Freight** (along with its various affiliates in the Middle East, Indian subcontinent, Africa, Europe and the Far East) in a deal worth approximately USD 70 million (AED 257 million). [8]
- **Gulftainer** (manager and operator of container terminals in Port Khalid and Khorfakkan on behalf of Sharjah Port Authority) **acquired Avalon General Transport LLC** (a trucking company) **for Gulftainer's transport business (run under the brand Momentum).** The objective of the acquisition was to gain wider access to GCC markets and increased ability to participate in major logistics and distribution contracts.

Some signs of initiatives to reduce the negative impact of the industry on the environment

Some of the global players have adopted initiatives in GCC and in the Middle East to reduce the impact of their operations on the environment. The key global players (such as DHL) and regional players (such as Aramex) have played a key role in implementing these initiatives, which are in line with their sustainability initiatives worldwide.

Most of these initiatives have been adopted in Dubai (being a center and trend-setter for transportation & storage industry in the GCC).

The examples of these initiatives have been discussed in the next section of the report (Transportation & Storage Industry in Dubai – Overview).

[8] Source: News Articles – Arabian Supply Chain

Snapshot of Key Regional Trends in the Transportation & Storage Industry

- **Growing demand for Transportation & Storage industry due to increased infrastructural and manufacturing developments across GCC**
- **Large-scale infrastructural developments (ports, airports, road and rail networks) taking place across GCC**
- **Some signs of initiatives to reduce the impact of the industry on the environment, primarily in Dubai (being the hub for T&S industry in GCC)**
- **Opportunity to strengthen Dubai's credentials as a global hub especially between Europe and Asia)**
- **Consolidation, primarily acquisitions, by key global and regional players to increase presence in the region**

4. Transportation & Storage Industry in Dubai - Overview

Transportation and Storage is one of the key industries in Dubai with a high contribution to the Gross Domestic Product (GDP), Gross Value Added (GVA) and total employment.

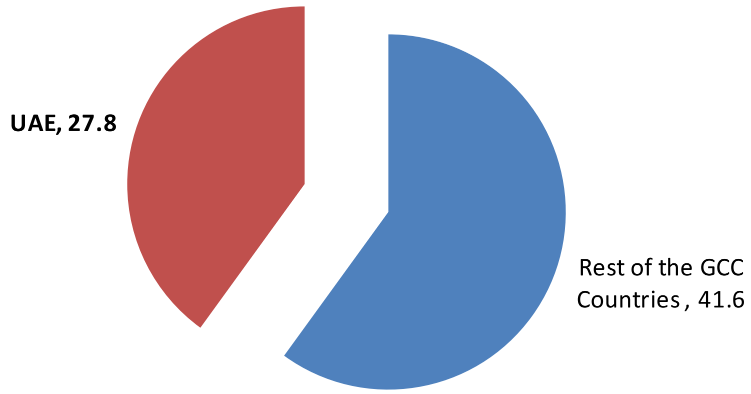
Contribution of Transportation and Storage Industry to Dubai's Economy

8.4% to Dubai's GDP in 2008[9]
Approximately 14% to the total Gross Value Added
9% to the total employment

In terms of the overall market size, UAE , especially Dubai, is a hub for the transportation and storage industry in the GCC.

UAE accounts for 40% of the Transportation & Storage market in GCC, thus amounting to a market size of AED 28 billion (USD 8 billion).[10]

Maket Size of Transportation & Storage Industry in UAE and Other GCC Countries, AED billion



Source: Booz & Company

All the industry segments are expected to grow at a CAGR of 5-10% over the next 18 months and 10-15% over the next 4-5 years.

[9] Includes contribution of the Communication industry as well
[10] Source: Booz & Company and Expert Interviews

Key Characteristics of the Transportation & Storage Industry in Dubai

- Dubai's economy with its focus on Trade[11] (contribution of 38% to Dubai's GDP in 2008) depends heavily on Transportation & Storage as an enabler.
- Transportation & Storage industry is significantly dependent on external trade making it vulne
- rable to external environment and regional competition.
- Industrial developments, a growing retail environment and large-scale construction projects in the GCC are becoming one of the key growth drivers for the T&S industry in Dubai.
- Opportunity to strengthen Dubai's credentials as a global hub especially between Europe and Asia. (Developments such as Al Maktoum Airport will enhance Dubai's strengths in the sector).
- There have been some initiatives to reduce the negative impact of the industry on the environment, primarily in Dubai. Some of these initiatives are:

Carbon Neutral Warehouse

The Dubai Department of Economic Development (DED) led the initiative to transform a critical Dnata Cargo site - the FreightGate-5 airport cargo terminal - to develop the first carbon neutra**l warehouse in the Middle** East. The initiative is part of the agreement signed between DED and DHL in 2009, to develop logistics innovation initiatives that drive efficiencies within the logistics sector through better policy management.

The project is expected to serve as a template for green warehousing across Dubai. According to the estimates made during the study, it can save 1.9 million tons of carbon dioxide annually by 2020, equivalent to the current annual carbon footprint of some 60,000 UAE residents.

The project's implementation has resulted in warehouse electricity savings of 36 - 40 %. Upgrading work
included installation of state-of-the-art lighting systems, energy monitoring equipment, solar-powered lights and operational training of staff.

According to His Excellency Mr. Sami Al Qamzi, Director General, DED,: "The carbon reduction project demonstrates that significant improvements in energy usage can be achieved in the logistics sector. In addition to contributing to the environment, this project – if replicated across the logistics sector – can bring about large cost savings, which can eventually be passed on to the supply chain, thus boosting operational efficiency."

[11] Trade refers to Wholesale, Retail Trade and Repairing Services

Plans to develop Packstations in Dubai

RTA has signed a contract with DHL, whereby the company will provide postal services (including parcels and documents) through the post system known as Packstations at the Dubai Metro stations. These postal units will be functioning 24-hours a day and will be self-operated units. This will make Dubai the first city in the region and second worldwide, after Germany, to introduce these services.

Pack stations allow customers to receive their packages at a secure station, normally located at popular spots, like train stations, which they can access 24/7. In this way, the delivery system does not depend on the availability of the customer and can reduce the kilometers spent trying to deliver to unavailable customers.

Currently, there are some 2,500 Packstations in Germany, with 1.5 million users. The savings from such an initiative can be significant: in 2005 alone, the network of 33 Packstations throughout the German city of Cologne helped reduce the total driving distance required to deliver items by over 40,000 km and CO_2 emissions by 11 tons.

Environmental initiatives by Aramex in Dubai

- Aramex has initiated the use of alternative transportation means in Dubai by using 'canal' boat delivery and is aiming to explore this and other alternative means further. As part of such initiatives, Aramex has started a boat service from Marina to Sharjah to deliver shipments. This helps to avoid traffic, reduce carbon emissions by road vehicles and deliver shipments in a much faster way.
- Aramex implemented a pilot initiative that introduces a strict quota for printing paper usage per employee in Dubai.

Evolution of the Transportation and Storage Industry in Dubai

1950s - Dubai became the main connection point between Indian demand and products and other countries

India, after independence, witnessed a huge demand for goods, such as textiles, gold and later electronics, that faced serious restrictions within India. Given its free trade orientation, Dubai became the main connection point between Indian demand and products and other countries. In textile and electronics, this trade then attracted further trade flows from Europe, North America, and Japan.

1960s and 70s: Infrastructural Developments

Sheikh Rashid pursued aggressive infrastructure developments. In the early 1960s, the first airport was built. Port Rashid was opened in 1971. In 1979, a new, much larger additional port was created at Jebel Ali. Thereafter, the Dubai Dry Docks were built.

1980s-1990s and Early 2000s: Establishment of Anchor Companies

Dubai started to create government-linked companies in the transportation and logistics industry. It also improved the conditions for foreign companies to operate. In 1985, Emirates and JAFZA were established. JAFZA allowed foreign companies to operate with 100% ownership, with access to dedicated administrative procedures, and a favorable tax regime. Thereafter, the Dubai Ports Authority was created in 1991.

Eight years later Dubai Ports International began operating as an international port management company. In 2005, DPA and DPI were eventually merged to create DP World.

2006-2010 – Expansion of Infrastructure

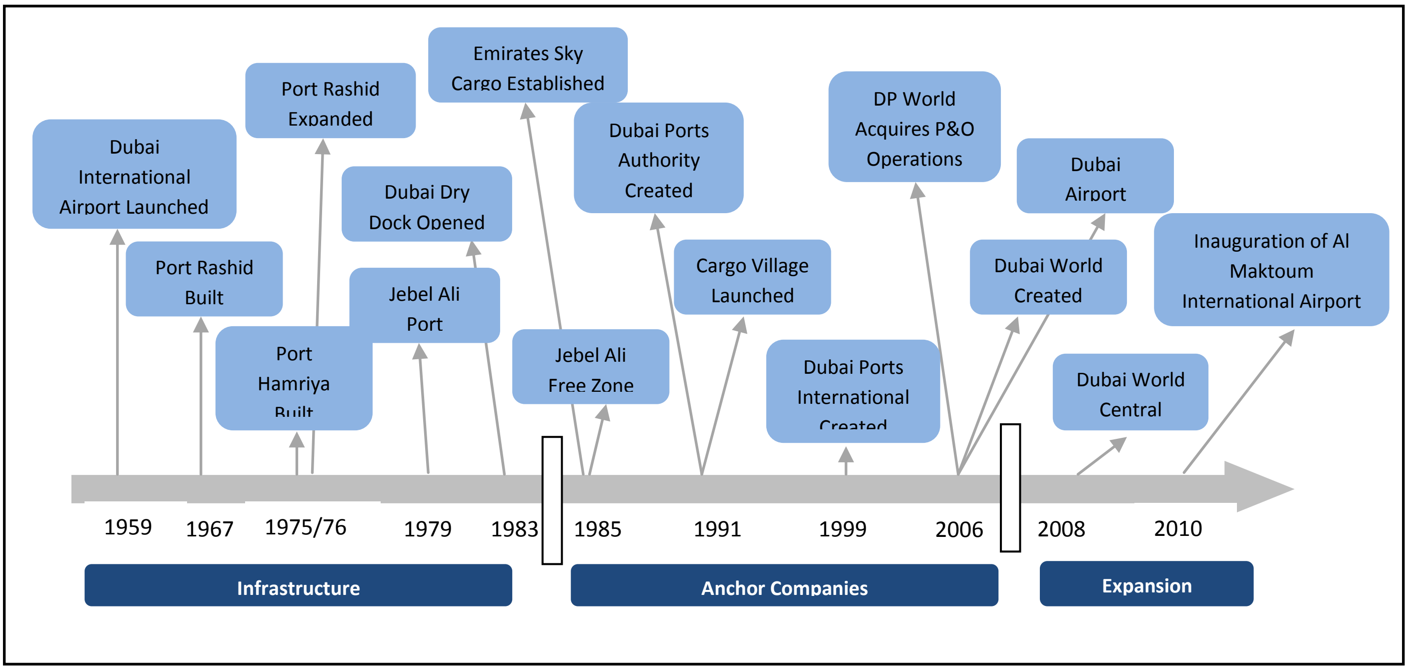
In the years that followed, Dubai's logistical cluster experienced strong growth, building on the infrastructure and institutional foundations that had been created. Emirates and DPI, later DP World, launched a strong international growth strategy, moving beyond the home base in Dubai. Local infrastructure was continuously upgraded to meet the needs of the growing economy. Dubai's airport was extended significantly and a new large infrastructure investment was announced for the Al Maktoum international Airport and a dedicated logistical zone, Dubai Logistical City.

In June 2010, the Al Maktoum Airport was inaugurated.

The new airport is expected to support the emirate's aviation, tourism, commercial and logistics requirements through 2050 and beyond. The new airport and the Dubai Logistics City will provide a multi-modal logistics hub that will provide significant benefits to the economy of Dubai and the wider region.

The following chart represents the evolution of the transportation and storage industry in Dubai.

Evolution of the Transport and Storage Industry in Dubai



A series of infrastructural developments, starting as early as late 1950s and 1960s, gave Dubai a first mover advantage to leverage its geographical position to become the trans-shipment hub for GCC. Currently, based on the Global Competitiveness Index, UAE is highly competitive in the world with respect to its infrastructure. It is ranked 3rd in the world for its infrastructure.

The following section details areas of high and low competitiveness for UAE in the Transportation and Storage Industry across a number of indices comparing countries across the world.

5. Competitiveness of T&S industry in UAE based on Published Indices

Transportation and Storage industry is one of the key industries contributing to competitiveness of nations. This is reflected by the fact that extensive and efficient infrastructure (related to roads, railroad, port, airport, electricity supply and telephone lines) is one of the key indicators in the Global Competitiveness Index (GCI).

GCI, published by World Economic Forum, assesses competitiveness of 139 countries on 12 key parameters. Infrastructure is one of these parameters and has a weightage of 25% in the index.

The criticality of a strong infrastructure emanates from the following reasons:

- Extensive and efficient infrastructure is critical for ensuring the effective functioning of the economy, as it is an important factor determining the location of economic activity and the kinds of activities that can develop in a particular economy.
- Well-developed infrastructure reduces the effect of distance between regions, thus integrating the national market and connecting it at low cost to markets in other countries and regions.
- Effective modes of transport for goods, people, and services—such as quality roads, railroads, ports, and air transport—enable entrepreneurs to get their goods and services to market in a secure and timely manner, and facilitate the movement of workers to the most suitable jobs.

Performance of UAE's Transportation and Storage Industry on Published Indices

The indices evaluating competitiveness of countries across the world on factors related to Transportation & Storage Industry are as follows:

1. <u>Infrastructure Rankings – Part of Global Competitiveness Index</u>

Global Competitiveness Index, prepared by the World Economic Forum, compares 139 countries on a number of parameters, related to basic requirements (infrastructure, macro-economic safety, etc.), efficiency enhancers (higher education and training, technology readiness, etc.) and innovation factors (business sophistication and innovation) .

Out of these, infrastructure ratings are directly related to evaluating a country's competitiveness for the Transportation & Storage industry.

2. <u>Trading Across Borders – Part of Doing Business Report 2010</u>

Doing Business Report is prepared by International Finance Corporation compares 183 countries on a number of parameters, including:

- Starting a Business
- Dealing with Construction permits
- Employing Workers
- Registering Property
- Getting Credit
- Protecting Investors
- Paying Taxes
- Trading Across borders
- Enforcing Contracts
- Closing a Business

Out of these parameters, **Trading Across Borders** is an important indicator to assess an economy with respect to its competitiveness in enabling trade across borders. It is based on the following sub-parameters:

- Documents to Export and Import
- Days to Export and Import
- Costs to Export and Import

3. Logistics Performance Index (LPI), 2010

Published by World Bank; the LPI compares 155 countries on six parameters:

- Efficiency of the customs clearance process
- Quality of trade and transport-related infrastructure
- Ease of arranging competitively priced shipments
- Competence and quality of logistics services
- Ability to track and trace consignments
- Frequency with which shipments reach the consignee within the scheduled or expected time

4. Enabling Trade Index, 2010

Published by World Economic Forum; compares 125 countries on four sub-indices:

- Market Access
- Border Administration Access
- Transport and Communication Infrastructure
- Business Environment

Global Competitiveness Index (GCI) – Rankings for Infrastructure

As per the GCI, UAE ranks 3rd in the world in terms of its infrastructure. On the quality of airport and port infrastructure, UAE is ranked 4th and 8th, respectively.

Moreover, UAE ranks way ahead of the other GCC countries, as reflected in the following table.

Comparison of UAE with other GCC Countries, Rank for Infrastructure (Out of 139 Countries), Global Competitiveness Index, 2010-11

	UAE	Bahrain	Kuwait	Qatar	Saudi Arabia	Oman
Infrastructure (including electricity and telephone lines)	**3**	27	60	25	28	33
Quality of Overall Infrastructure	11	26	45	39	29	21
Quality of Roads	6	25	40	41	26	10
Quality of Railroad Infrastructure	NA	NA	NA	NA	38	NA
Quality of Port Infrastructure	8	13	63	27	36	33
Quality of Air Transport Infrastructure	4	20	64	16	46	41

Source: Global Competitiveness Report 2010-11

However, it still ranks lower than the international transportation and storage hubs in terms of rankings for road, railroad, airport and port infrastructure (as reflected in the table below).

Comparison of UAE with International Hubs, Rank for Infrastructure (Out of 139 Countries), Global Competitiveness Index, 2010-11

	UAE	Singapore	Hong Kong	Netherlands
Infrastructure (including electricity and telephone lines)	**3**	**5**	**1**	**7**
Quality of Overall Infrastructure	11	3	2	17
Quality of Roads	6	1	4	27
Quality of Railroad Infrastructure	NA	6	2	9
Quality of Port Infrastructure	8	2	1	3
Quality of Air Transport Infrastructure	4	2	1	8

Source: Global Competitiveness Report 2010-11

Going forward, the opening of DWC-Al Maktoum International Airport (the world's largest airport) in June 2010 is expected to reinforce Dubai's trade, and transport and logistics capabilities.

Another extremely significant development is Dubai Logistics City, an integrated logistics platform with all transport modes, logistics and value added services, including light manufacturing and assembly, in a single customs bonded and free zone environment.

Trading Across Borders – Part of Doing Business Report 2010

UAE ranked number five in the Trading Across Borders Sub-index of the Doing Business Report 2010.
Singapore ranked number 1 in the Trading Across Borders Index, followed by Hong Kong.
The following table lists the rankings of the top 10 countries and all the GCC countries on Trading Across Border Index, 2010.

Top 10 Countries and GCC Countries as per Trading Across Borders, 2010

Rank - 2010	Rank - 2009	Countries	Documents to export	Days to export	Cost to export (US$ per container)	Documents to import	Days to import	Cost to import (US$ per container)
1	1	Singapore	4	5	456	4	3	439
2	2	Hong Kong, China	4	6	625	4	5	583
3	5	Estonia	3	5	730	4	5	740
4	4	Finland	4	8	540	5	8	620
5	14	UAE	4	8	593	5	9	579
6	3	Denmark	4	5	744	3	5	744
7	6	Sweden	4	8	697	3	6	735
8	12	Korea, Rep.	3	8	742	3	8	742
9	7	Norway	4	7	830	4	7	729
10	8	Panama	3	9	729	4	9	879
23	16	Saudi Arabia	5	17	681	5	18	678
32	21	Bahrain	5	14	955	6	15	995
41	36	Qatar	5	21	735	7	20	657
109	104	Kuwait	8	17	1,060	10	19	1,217

123	119	Oman	10	22	821	10	26	1,037

Areas of low competitiveness for UAE as per the Trading Across Border Rankings;

UAE fron

Source: Doing Business Report 2010

import/export documents and improved procedures at the port, leading to reduction in time and costs involved.

Performance of UAE on Trading Across Borders Index, 2009 and 2010

Year	Rank	Documents to export	Days to export (days)	Cost to export (US$ per container)	Documents to import	Days to import	Cost to import (US$ per container)
2009	14	5	10	618	7	10	587
2010	5	4	8	593	5	9	579

Source: Doing Business Report 2010

Most of the key reformers are from low- or lower-middle income economies.

The key reformer in the Trading Across Borders index in 2009-10 was Georgia.

Georgia has been one of the most consistent reformers over the past 5 years and was also the top reformer in trade in 2008/09. Some of its measures adopted by Georgia are as follows:

- Responding to business complaints about slow processing of paperwork, the government issued new regulations reducing the number of documents required for importing/exporting to 4.
- It implemented new job performance measures for customs officers, which require them to examine customs declarations within 2 hours of receipt.

In contrast, economies in the high-income group, and in East Asia and the Pacific had the fewest reforms in the index since most of them have already adopted global good practices.

However, Korea, in spite of being one of these countries, has continually reformed its trade logistics environment over the past decade and is trying to reform its practices even now[12].

In view of a number of reforms being implemented in countries worldwide, UAE's needs to continue to focus on the "Trading Across Borders" aspect, in order to retain or enhance its competitive edge.

The following table highlights areas of low competitiveness for Dubai vis-a-vis the top four countries (as per the Trading Across Borders Index).

[12] Korea's single window system has been discussed further in this section

Detailed Scores of UAE vis-à-vis the Top Four Countries

	Singapore		Hong Kong		Estonia		Finland		UAE	
Exports	**Days**	**Cost ($)**	**Days**	**Cost ($)**	**Days**	**Cost ($)**	**Days**	**Cost ($)**	**Days**	**Cost ($)**
Documents preparation	1	105	2	70	1	200	3	100	5	181
Customs clearance and technical control	1	31	1	40	1	30	1	85	1	100
Ports and terminal handling	1	180	2	315	2	175	2	155	1	137
Inland transportation and handling	2	140	1	200	1	325	2	200	1	175
Totals:	**5**	**456**	**6**	**625**	**5**	**730**	**8**	**540**	**8**	**593**
Nature of Import Procedures										
Documents preparation	1	88	2	78	1	210	3	180	6	167
Customs clearance and technical control	1	31	1	40	1	30	2	85	1	100
Ports and terminal handling	1	180	1	265	2	175	2	155	1	137
Inland transportation and handling	0	140	1	200	1	325	1	200	1	175
Totals:	**3**	**439**	**5**	**583**	**5**	**740**	**8**	**620**	**9**	**579**

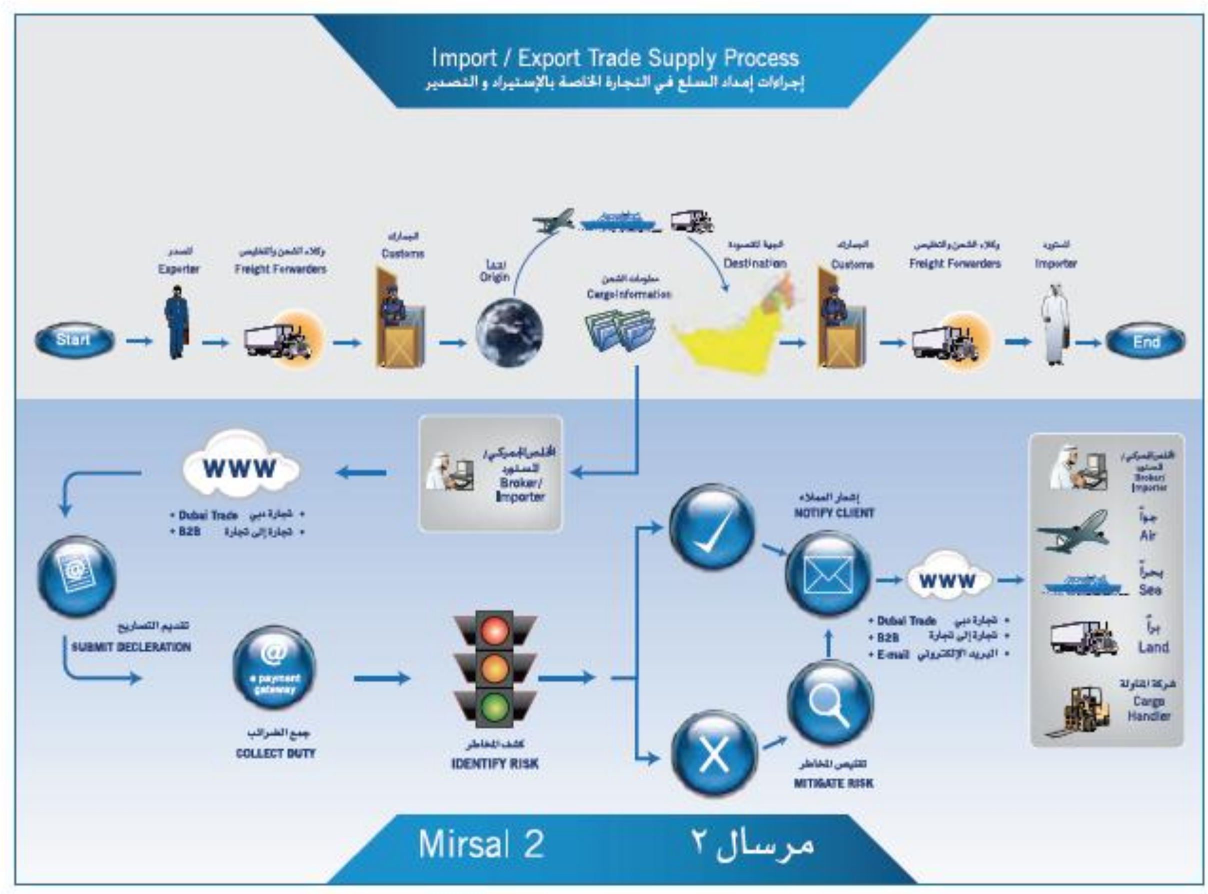
The areas of low competitiveness for Dubai vis-a-vis the top four countries have been discussed as follows:

A. High number of days and costs involved in preparation of documents

On this dimension, Dubai / UAE have already initiated steps to improve the situation. UAE has reduced the number of required documents, implemented online customs clearance (through Mirsal 2) and has made a number of port and free zone-related services online (through Dubai Trade portal). The following sections details the two online initiatives Mirsal 2 and Dubai Trade that have been adopted to make imports to and exports from Dubai simpler and faster.

Mirsal 2

Dubai Customs has been progressive in terms of making the customs clearance online through implementation of **Mirsal 2** (depicted in the chart below). The electronic declaration system allows companies to complete goods clearance procedures online round the clock without the actual papers being handed in to customs. This means pre-clearance of goods, enabling service delivery times and ability to amend and cancel declarations online. Currently, Dubai Customs processes 85% of all declarations through electronic channels.[13]



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13 Source: [Aramex]

Dubai Trade Portal

In addition to Mirsal 2, Dubai Trade Portal has been formed under Dubai World as a single window to the online services of DP World, Dubai Customs, Economic Zones World, and Jebel Ali Free Zone Authority.

In fact Mirsal 2 is accessed through the Dubai Trade portal. The other online services offered through the Dubai Trade portal are listed in the table below.

Services Being Provided on Dubai Trade Portal

Industry Segments Benefiting from e-Services	Description of e-Services
Exporters & Importers or their Nominated Clearing Agents	All Customs and Ports documentation formalities which include: submitting a Customs Declaration, making online payments for Customs duties and fees, receiving online Customs approval and printing of Export Bill/ Bill of Entry (through Mirsal 2) Make payment for DP World charges online for all containerized cargo
Hauliers	Create electronic tokens on behalf of exporters/importers for delivery of export/empty-return containers or pickup empty for export/ import containers to/from Jebel Ali Port
Shipping Agents & Forwarders	Perform online transactions on Dubai Trade for various services such as Berth Booking, Load/ Discharge List Submission, Issue Delivery Orders, Issue Container Release/ Acceptance, etc.
Free Zone Companies	Companies licensed in Jebel Ali Free Zone, TechnoPark or Dubai Auto Zone or Dubai Multi Commodities Centre can use Dubai Trade to perform online transactions for such as Company Registration, Renewal of Lease, Visa Permits etc.
Commodities Trading Companies	Commodities Trading Companies licensed with Dubai Multi Commodities Centre can utilize Dubai Trade to avail commodity trade financing for all parties registered on DMCC Global Multi Commodities Receipt (GMR) platform.

However, there are certain limitations of these systems currently, which if handled will help to increase efficiencies in the industry:

- The trader/freight forwarder still needs to send the documents to the customs within 14 days. In comparison, a scanned copy of the document works in a number of countries, such as Sweden.

- **According to Dubai Trade, 20% of the services related to the transportation and storage industry are not currently online.** A number of interactions of the importer/exporter with government bodies and other industry entities in UAE are not electronic or are not done through Dubai Trade portal. Thus, the importer/exporter needs to coordinate with multiple agencies and provide the same data again and again to multiple agencies, leading to higher time and costs involved in these processes.

- Lack of a single window for all transport and storage related services increases the time involved in exports from and imports to Dubai (as compared to other international hubs). This is reflected by a higher number of days involved in documents preparation for exports and imports (8 and 9, respectively) as compared to 5 and 3 days in case of Singapore and 6 and 5 days in Hong Kong. [14]

Having a single window for all transportation and storage related services helps to reduce the number of days and costs involved in document preparation for imports and exports. Dubai Trade has been actively pursuing efforts to enhance its online services in order to make the import/export processes more efficient. However, it needs greater support from other entities in the industry to provide a more exhaustive set of services.

- In contrast to this, some countries, such as Singapore (ranked 1st in Trading Across Borders in 2009 and 2010) and Korea (improvement from rank 12th in 2009 to 8th in 2010), have implemented systems which are much more exhaustive in terms of the services being provided by them.

[14] Source: Trading Across Borders Report 2010

Singapore's TradeXchange

Singapore has an electronic platform TradeXchange, which is a 3-dimensional trade platform allowing traders to interface with government agencies as well as local and international businesses. **It offers a single electronic window for integrated workflow, submissions and enquiries to the Sea Ports, Airports, Maritime Authorities, Customs, Banking and Financial Institutes, Shipping lines, and Controlling Agencies.** TradeXchange is led by Singapore Customs, Economic Development Board and Infocomm Development Authority of Singapore.

Services Being Provided on Singapore's TradeXchange Portal

Service	Description
Title Registry	Create, transfer and verify title documents of goods electronically, or issue electronic bills of lading
Overseas Highway Customs	Reuse and send trade declaration data online for customs clearance in neighboring countries like Australia, Chinese Taipei, Malaysia and Thailand
Overseas Highway Manifest	Submit manifest data to overseas regulatory authorities before the cargo arrives in foreign country
Integrated Multimodal Solution	Connect to system providers like Cargo Community Network and Portnet to enquire on air/sea schedules and track cargo
RosettaNet Automated Enablement (RAE)	Manufacturers can connect with their customers, suppliers and trading partners on the RAE framework to exchange commercial documents like purchase orders, packing list and invoices.
Shipping Line Linkages	Send and receive cargo space bookings, enquiries and other relevant messages from shipping lines electronically
Other value-added services such as	Trade document preparation Trade financing and insurance matters

Korea's Single Window System for Trade Transactions

By 2003 Korea Customs Service already had in place an electronic data interchange system that cut firms' costs from trade-related paperwork by 80%.

Thereafter, it embarked on making a comprehensive single-window project aimed at making Korea the logistics hub of North Asia.

Completed in July 2008, the system allows traders, government agencies and private sector participants—including traders, banks, customs brokers, insurance companies and freight forwarders— to exchange information in real time, speeding up approvals. Firms' savings in labor, printing, paper delivery, storage and inventory costs are estimated at more than 2,582 billion won, or about USD 2 billion, a year.

Since a single window involves cooperation of several parties, the single window in Korea succeeded due to the priority accorded to trade facilitation reforms at high levels of government. The National e-Trade Committee was chaired by the prime minister and included 10 ministers, the commissioner of customs and the chairs and presidents of leading private industry associations, including those for small and medium-size businesses.

Currently, the Korea Customs Service is now working with the customs services of other economies to link their systems as well.

Logistics Performance Index (LPI), 2010

UAE ranked 24th, out of 155 countries, in the Logistics Performance Index for 2010. Germany was ranked number 1, followed by Singapore.

Countries with LPI Rankings Higher than UAE

	LPI rank			LPI score			% of highest performer	Customs		Infrastructure		International shipments		Logistics quality and competence		Tracking and tracing		Timeliness	
	Rank	Lower bound	Upper bound	Score	Lower bound	Upper bound		Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Germany	1	4	1	4.11	4.07	4.16	100.0	3	4.00	1	4.34	9	3.66	4	4.14	4	4.18	3	4.48
Singapore	2	4	1	4.09	4.01	4.17	99.2	2	4.02	4	4.22	1	3.86	6	4.12	6	4.15	14	4.23
Sweden	3	10	1	4.08	3.90	4.25	98.8	5	3.88	10	4.03	2	3.83	2	4.22	3	4.22	11	4.32
Netherlands	4	4	1	4.07	4.00	4.14	98.5	4	3.98	2	4.25	11	3.61	3	4.15	9	4.12	6	4.41
Luxembourg	5	20	1	3.98	3.68	4.28	95.7	1	4.04	9	4.06	7	3.67	21	3.67	19	3.92	1	4.58
Switzerland	6	17	2	3.97	3.84	4.11	95.5	12	3.73	6	4.17	25	3.32	1	4.32	1	4.27	15	4.20
Japan	7	10	5	3.97	3.91	4.03	95.2	10	3.79	5	4.19	12	3.55	7	4.00	8	4.13	13	4.26
United Kingdom	8	11	5	3.95	3.89	4.02	94.9	11	3.74	16	3.95	8	3.66	9	3.92	7	4.13	8	4.37
Belgium	9	14	5	3.94	3.86	4.02	94.5	9	3.83	12	4.01	26	3.31	5	4.13	2	4.22	12	4.29
Norway	10	19	1	3.93	3.72	4.14	94.2	6	3.86	3	4.22	24	3.35	13	3.85	10	4.10	10	4.35
Ireland	11	19	5	3.89	3.74	4.05	92.9	18	3.60	19	3.76	5	3.70	16	3.82	13	4.02	4	4.47
Finland	12	19	5	3.89	3.74	4.03	92.6	7	3.86	8	4.08	19	3.41	10	3.92	11	4.09	25	4.08
Hong Kong SAR, China	13	18	6	3.88	3.78	3.98	92.4	8	3.83	13	4.00	6	3.67	14	3.83	17	3.94	26	4.04
Canada	14	18	7	3.87	3.78	3.97	92.3	13	3.71	11	4.03	32	3.24	8	3.99	15	4.01	5	4.41
United States	15	18	11	3.86	3.82	3.89	91.7	15	3.68	7	4.15	36	3.21	11	3.92	5	4.17	16	4.19
Denmark	16	20	5	3.85	3.65	4.04	91.4	19	3.58	15	3.99	16	3.46	15	3.83	18	3.94	7	4.38
France	17	18	11	3.84	3.78	3.91	91.3	17	3.63	14	4.00	28	3.30	12	3.87	14	4.01	9	4.37
Australia	18	19	9	3.84	3.73	3.95	91.2	14	3.68	18	3.78	3	3.78	17	3.77	20	3.87	18	4.16
Austria	19	25	5	3.76	3.53	4.00	88.7	20	3.49	21	3.68	4	3.78	20	3.70	22	3.83	23	4.08
Taiwan, China	20	25	16	3.71	3.56	3.85	86.9	25	3.35	22	3.62	10	3.64	22	3.65	12	4.04	30	3.95
New Zealand	21	40	3	3.65	3.22	4.08	85.0	16	3.64	26	3.54	23	3.36	26	3.54	25	3.67	17	4.17
Italy	22	25	20	3.64	3.57	3.72	84.9	23	3.38	20	3.72	37	3.21	18	3.74	21	3.83	24	4.08
Korea, Rep.	23	25	21	3.64	3.57	3.70	84.7	26	3.33	23	3.62	15	3.47	23	3.64	23	3.83	28	3.97
United Arab Emirates	24	25	20	3.63	3.54	3.72	84.5	21	3.49	17	3.81	14	3.48	27	3.53	28	3.58	33	3.94

Source: Logistics Performance Index 2010

Key Areas of Lower Competitiveness (where UAE has a lower rank as compared to its overall rank)

- Logistics Quality and Competence
- Tracking and Tracing
- Timeliness

The high-income countries dominate the Logistics Performance Index ranking, which reflects the their success in developing a modern and effective T&S industry as a part of their overall economic development programme. **Germany was ranked 1st in the LPI 2010, followed by Singapore**.

According to the LPI 2010 report, 26 countries witnessed statistically significant LPI changes from 2007 index to 2010 index. Among these countries, Colombia (LPI 2007:82; LPI 2010: 72) has implemented key reforms, which includes the following:

- Setting up of an interagency single window
- Implementing a national logistics action plan
- Setting up a logistics observatory to assess its performance at a fine level and monitor the impact of reforms

In 2009, Tunisia also established a national logistics council—involving the lead government agencies and the private sector and reporting to the Prime Minister—to implement a comprehensive action plan dealing with border procedures, improving the ports, and logistics services, etc.

This reflects that developing countries are actively implementing reforms and best practices pioneered by top high-income countries. The reform process requires outlining and developing an integrated national level policy and plan for logistics development with the involvement of the highest levels of government.

For instance, Germany issued a Freight Transport and Logistics Masterplan in 2008. Similar documents are being drafted in a number of other countries, such as Sweden and Finland (ranked 3 and 12 in the 2010 LPI).

Enabling Trade Index, 2010

UAE was ranked 16th in ETI 2010. Singapore was ranked 1st, followed by Hong Kong in ETI 2010.

Countries with ETI Ranking Higher than UAE and GCC Countries

Rank 2010	Rank 2009	ETI 2010	Market Access	Border Administration	Transport and Communication Infrastructure	Business Environment
1	1	Singapore	1	1	7	2
2	2	Hong Kong	16	6	5	5
3	4	Denmark	95	3	8	3
4	5	Sweden	96	2	9	10
5	3	Switzerland	58	10	10	8
6	11	New Zealand	37	5	26	11
7	7	Norway	33	18	21	7
8	6	Canada	25	17	20	18
9	13	Luxembourg	73	20	3	4
10	10	Netherlands	85	4	6	17
11	NA	Iceland	14	22	27	12
12	8	Finland	90	8	18	1
13	12	Germany	101	15	1	15
14	9	Austria	94	9	12	13
15	14	Australia	63	14	19	19
16	18	UAE	81	12	22	9
22	24	Bahrain	29	26	33	25
29	34	Oman	34	47	47	14
34	35	Qatar	72	35	46	6
40	42	Saudi Arabia	54	31	45	39
65	59	Kuwait	71	81	69	38

Areas of low competitiveness for UAE; *Source: Enabling Trade Index 2010*

Detailed Rankings for UAE across the Sub-Indices in ETI 2010

Market Access	**81**
Domestic	49
Foreign	121
Border Administration	12
Efficiency of customs administration	12
Efficiency of import-export procedures	9
Transparency of border administration	21
Transport and Communication Infrastructure	22
Availability and quality of transport infrastructure	4
Availability and quality of transport services	29
Availability and use of ICTs	30
Business Environment	9
Regulatory environment	13
Physical security	4

Source: Enabling Trade Index 2010

UAE fares better than all the GCC countries at an overall level as well as across all the parameters, except market access and business environment (only in comparison to Qatar). **Overall, UAE improved by two positions over the past year by building on its following strengths.**

- **Clearance of goods at the border**, already efficient in previous years, has become even easier in international comparison (UAE's 12th).
- In terms of the **availability and quality of transport infrastructure**, the UAE moved up to be among the best countries in the world (4th).
- Another distinct advantage, **high levels of physical security**[15] **(UAE's rank 4th),** has been equally strengthened.

[15] *The parameter on physical security gauges the country's level of violence (both in terms of general crime and violence as well as the threat of terrorism), as well as the reliability of the police services in their ability to enforce law and order.*

Despite progress achieved in these areas, **the key areas for low competitiveness are as follows:**

1. **Availability and quality of transport services :** Key inputs for this sub-index are taken from the Logistics Performance Index, where (as discussed previously), UAE lags behind in terms of :
   - Logistics competence (UAE's rank 26)
   - Tracking and tracing ability (UAE's rank 28)
   - Timeliness of shipments in reaching destination (UAE's rank 29)

2. **Availability and use of ICTs:** The key inputs for this sub-index are:
   - Extent of business Internet use
   - Mobile telephone subscriptions
   - Broadband Internet subscribers
   - Internet users
   - Fixed telephone lines
   - Government Online Service

   According to the report, the UAE government needs to place higher priority on putting more public services online (UAE's rank 88th). This would not only facilitate trade in a direct way but would also lead the way in internet usage, given that the business sector presently lags behind a number of other countries in this area (UAE rank 27th).

3. **High domestic tariffs (UAE's rank: 53) as well as the high trade barriers faced by the country's exporters abroad (UAE's rank: 117th):** UAE had fared worse than the other GCC countries on this parameter.

4. **Transparency of border administration (UAE's rank 21st):** The key inputs for this sub-index are:
   - Irregular payments in exports and imports (UAE's rank 18)
   - Corruption Perceptions Index (UAE rank 28)

<u>Snapshot of the Areas of High and Low Competitiveness for UAE (Based on Published Indices)</u>

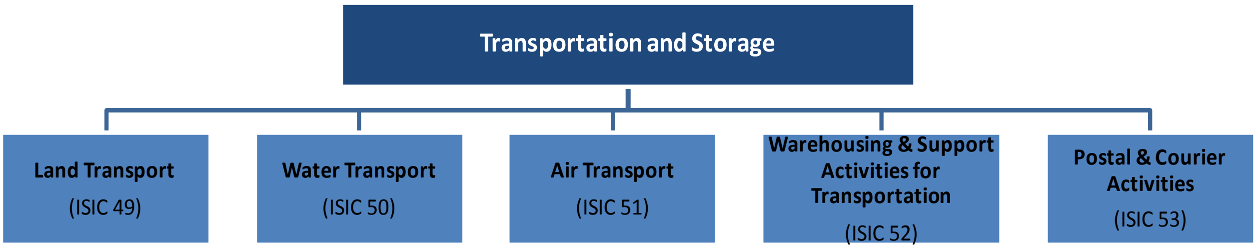
	Rank	Comments
Infrastructure	**GCI 2010-11: Rank - 3**	**Reflects UAE's strengths in infrastructure related to transportation and storage industry**
Documents, Time and Costs to Import and Export from UAE	**Trading Across Borders: Rank - 5**	**Reflects need to maintain the position and enhance it further by enhancing capabilities of DubaiTrade portal on the lines of single-window portals in international hubs, such as Singapore, Korea, Hong Kong, etc.**
Availability and quality of transport services	ETI 2010: Rank – 29	Reflects need for improvement in speed, reliability and quality of services offered through measures, such as increased use of technology.
Logistics Quality and Competence	LPI 2010: Rank – 27	
Tracking and Tracing	LPI 2010: Rank - 28	
Timeliness of shipments	LPI 2010: Rank - 33	
Availability and use of ICT	ETI 2010: Rank – 30	
Domestic and Foreign market Access	ETI 2010: Rank – 81	Reflects need to improve trade facilitation with other countries through more Foreign Trade Agreements

A key step being adopted in other countries to enhance their capabilities and thus improve their rankings in these indices is establishing a national logistics council (involving the lead government agencies and the private sector) to devise a comprehensive Transportation & Storage Industry action plan dealing with various aspects of the industry.

6. Industry Segmentation

The section discusses the segmentation of the transportation & storage industry for the purpose of the study and the definitions of these segments.

Broadly, the transportation and storage industry has been divided into the following segments (based on ISIC Revision 4) for the purpose of analyzing the industry in Dubai:



Transportation and storage : This section includes the provision of passenger or freight transport, whether scheduled or not, by rail, pipeline, road, water or air and associated activities such as terminal and parking facilities, cargo handling, storage etc.

Description of the Segments of the T&S Industry

ISIC Rev 4 Classification	ISIC Rev 4 Definition	Consideration for the Report
49 - Land transport and transport via pipelines	Includes the transport of passengers and freight via road and rail	Service Activities incidental to land transportation – infrastructure operation & support services have also been included
50 - Water transport	Includes the transport of passengers or freight over water, whether scheduled or not	Service Activities incidental to marine/water transportation – infrastructure operation & support services have also been included
51 - Air transport	Includes the transport of passengers or freight by air or via space	Service Activities incidental to air transportation – infrastructure operation & support services have also been included
52 - Warehousing and support activities for transportation	Includes warehousing and support activities for transportation, such as operating of transport infrastructure (e.g. airports, harbours, tunnels, bridges, etc.), and cargo handling.	Support activities for transportation, such as operating of transport infrastructure (e.g. airports, harbours, tunnels, bridges, etc.), and cargo handling have been included under each of the transport segments –

		marine, land and air. Warehousing, freight forwarding & related activities are also generally referred to as “Logistics services”. Accordingly, the term “Logistics” in this segment would imply warehousing, freight forwarding & related activities, and would generally exclude other core transportation activities like air transport, flag carriers etc (unless otherwise implied by context).
53 - Postal and courier activities	Includes postal and courier activities, such as pickup, transport and delivery of letters and parcels under various arrangements	

Note: A detailed description of these sub-sectors as per ISIC Rev. 4 has been presented in the Annexure 1 of the report.

The following sections detail the status of the various industry segments (marine transport, air transport, land transport, warehousing, freight forwarding and related activities, and postal and courier activities).

in terms of the following aspects:

- Global and Regional Trends
- Current Status of the Sub-sector in Dubai and Future Growth Potential
- Issues Impacting the Competitiveness of the Sub-sector in Dubai, with focus on sub-sectors that have a high presence of small and medium enterprises in Dubai

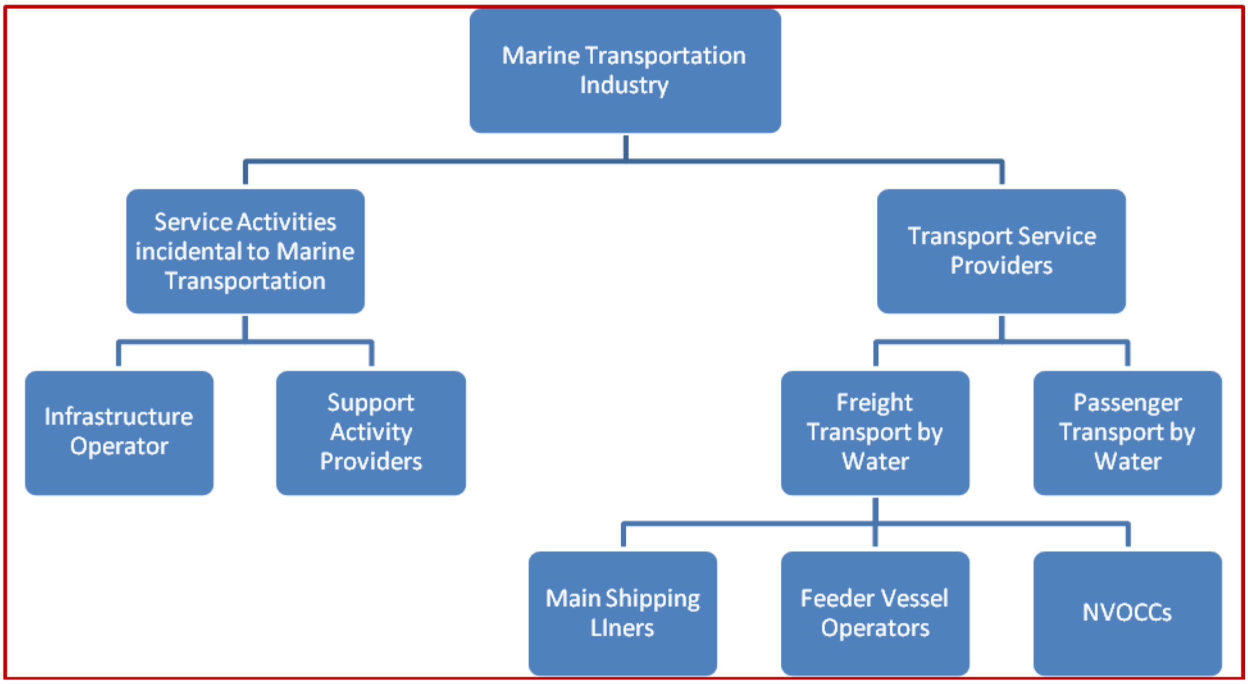
Although the following sections discuss the various industry segments, the focus is on sub-sectors that have a high SME presence in Dubai. These sub-sectors have been identified and discussed under each of the industry segments.

7. Marine / Water Transport Industry

The section discusses the global and regional developments in the marine transportation industry and competitiveness of the industry in Dubai, especially the SMEs.

The Marine Transportation Industry comprises the following segments (as per ISIC 4).

Structure of the Marine Transportation Industry



Key Trends in Global Marine Transport Industry

Slowdown in the global marine transport industry in 2009; however there have been signs of improvement

The global marine transportation industry enjoyed five boom years until 2007, but the global recession had a huge impact on the market.
The global marine industry grew at a CAGR of 34.5% between 2004 and 2006 but revenues declined by 21.4% in 2007. Further decline is expected to have occurred in 2009 but a recovery period is forecasted to start from 2013 onwards.[16]

[16] Source: DataMonitor

The shipping industry *(transport service providers)* suffered from a combination of dropping demand and an oversupply of ships as vessels ordered during the growth years were delivered. In early March 2009, the number of massive container ships sitting idle globally was estimated at an all-time high of 453 vessels.

Some examples of impact on shipping companies are as follows:

- Orient Overseas (International) Ltd, Hong Kong's largest container line, witnessed a 65% decline in second-half profit in 2008 (for the six months ending December 31, 2008).
- The volumes for Denmark's AP Moller-Maersk, whose Maersk Line is the largest container shipping line worldwide, were 20% lower in January 2009 as compared to 2008.
- Container lines responded to the downturn by taking vessels out of service, reducing the number of routes, and cutting jobs, Orient Overseas had cut capacity by 20% in 2009 by returning as many as 16 chartered vessels to ship owners.

The worldwide shipping industry is expected to pick up by end of next year with the worldwide demand picking up and the shortage of containers being filled up slowly in China. This is expected to benefit all segments of the shipping industry, including port operators.

On the port operation side, Hutchison Whampoa dominates the market, followed by DP World. The following table represents the share of the key port operators in the world and change in volumes of cargo between 2004 and 2008.

Global Marine Ports & Services Market Share, 2008

Company	% Share
Hutchison Whampoa, Hong Kong	**11.50%**
DP World, UAE	**7.00%**
PSA International, Singapore[17]	**5.30%**
Other	**76.20%**

Global Marine Ports & Services Market Volume

Year	Tonnes (bn)	% Growth
2004	6.1	
2005	6.5	6.30%
2006	6.9	6.50%
2007	7.3	6.50%
2008	7.7	5.40%

Source: Datamonitor

[17] *PSA was formerly the Port of Singapore Authority, a statutory board regulating, developing, operating and promoting the port of Singapore's terminals. In 1996, PSA's regulatory functions were handed over to the Maritime and Port Authority of Singapore. PSA Corporation Limited was subsequently incorporated in 1997 as the corporate successor to the Port of Singapore Authority to manage and operate its terminals and related businesses. In December 2003, PSA International became the investment holding company for PSA's businesses in Singapore and world-wide. PSA International is fully-owned by Temasek Holdings.*

DP World had a 7% market share in the global marine port and services industry in 2008. The port operators operate ports across the world.

The following table represents the top 15 ports in the world based on freight tonnage in 2009. Dubai is the only port in GCC featuring in the top 15 ports in the world.

Top 15 Ports in the World Based on Freight Tonnage Handled in 2009

Rank	Port and Country	'000 TEUs (2009)
1	Singapore	25,886
2	Shanghai, China	25,002
3	Hong Kong	20,983
4	Shenzen, China	18,250
5	Busan, Korea	11,955
6	Guangzhou, China	11,190
7	**Dubai, UAE**	**11,124**
8	Ningbo, China	10,501
9	Qingdao, China	10,260
10	Rotterdam, Netherlands	9,743
11	Tianjin, China	8,700
12	Kaohsiung, Taiwan	8,581
13	Port Klang, Malaysia	7,310
14	Antwerp, Belgium	7,309
15	Hamburg, Germany	7,010

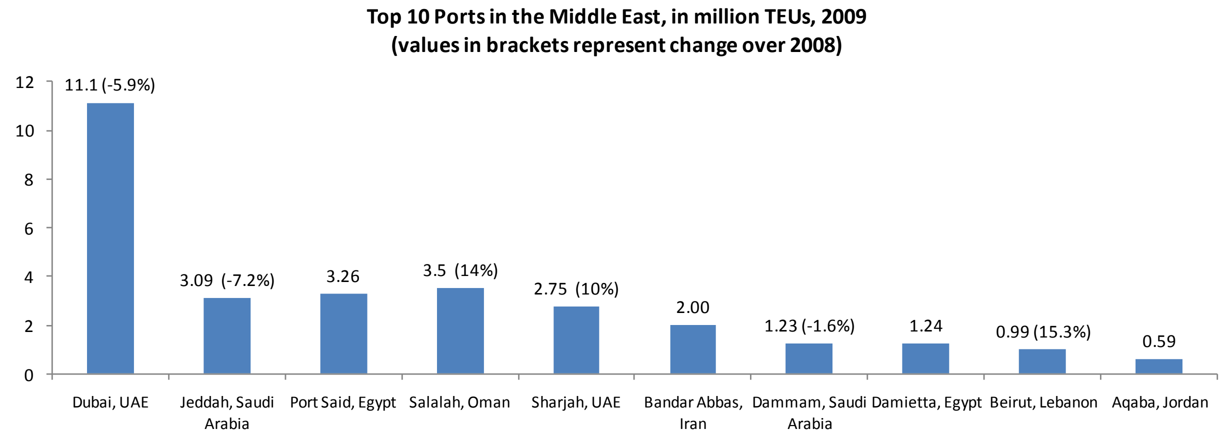
Source: Containerization International

Key Trends in the Marine Transportation Industry in GCC

<u>Decline in cargo volumes at a number of ports in the Middle East due to the global slowdown; however, lately, there have been signs of improvement</u>

With the global downturn, the historically buoyant sea freight volumes to and from the GCC and overall Middle East region reduced, as reflected by decline in volumes at some of the ports in 2009.

The chart below represents the top 10 ports in the Middle East and the change in volumes handled at the port in 2009.



Source: Transport Intelligence, Port Authorities/Operators of the Respective Ports

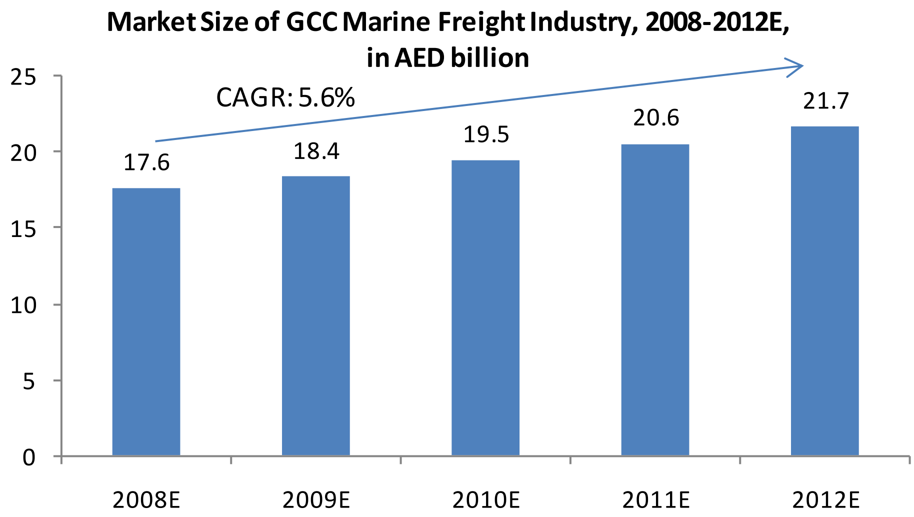
Note: The data for Port Said, Damietta port, Bandar Abbas and Aqaba is for 2008.

DP World, one of the world's largest port operator, had also been affected by the economic conditions. **However, the scenario has improved in the first half of 2010, when it witnessed a 10% increase in its profits and 7% increase in its container volumes worldwide.**

	First Half of 2008	First Half of 2009	First Half of 2010
Consolidated TEUs Worldwide (million TEUs)	13.6	12.3	13.2
% Change		-9.6%	+7%

Source: Transport Intelligence

At an overall level the marine freight industry is expected to grow at a CAGR of 5.6% to reach the market size of AED 21.7 billion in 2012 (as depicted in the chart below).



Source: Datamonitor

The industrial and infrastructural developments and growing economies in the GCC are expected to drive the growth of the marine freight industry.[18]

Large-scale port infrastructure developments taking place across GCC

The port sector in the GCC and the Middle East is currently dominated by UAE (mainly Dubai), which accounts for 50% of the throughput. However, there is increasing competition from other emirates and the GCC countries, that are developing their sea port infrastructure (through development of new ports and expansion of capacities at the existing ports).

The key developments taking place in the seaport infrastructure have been discussed in the following table.

[18] This has been discussed in detail in the overall growth drivers for the T&S industry in GCC.

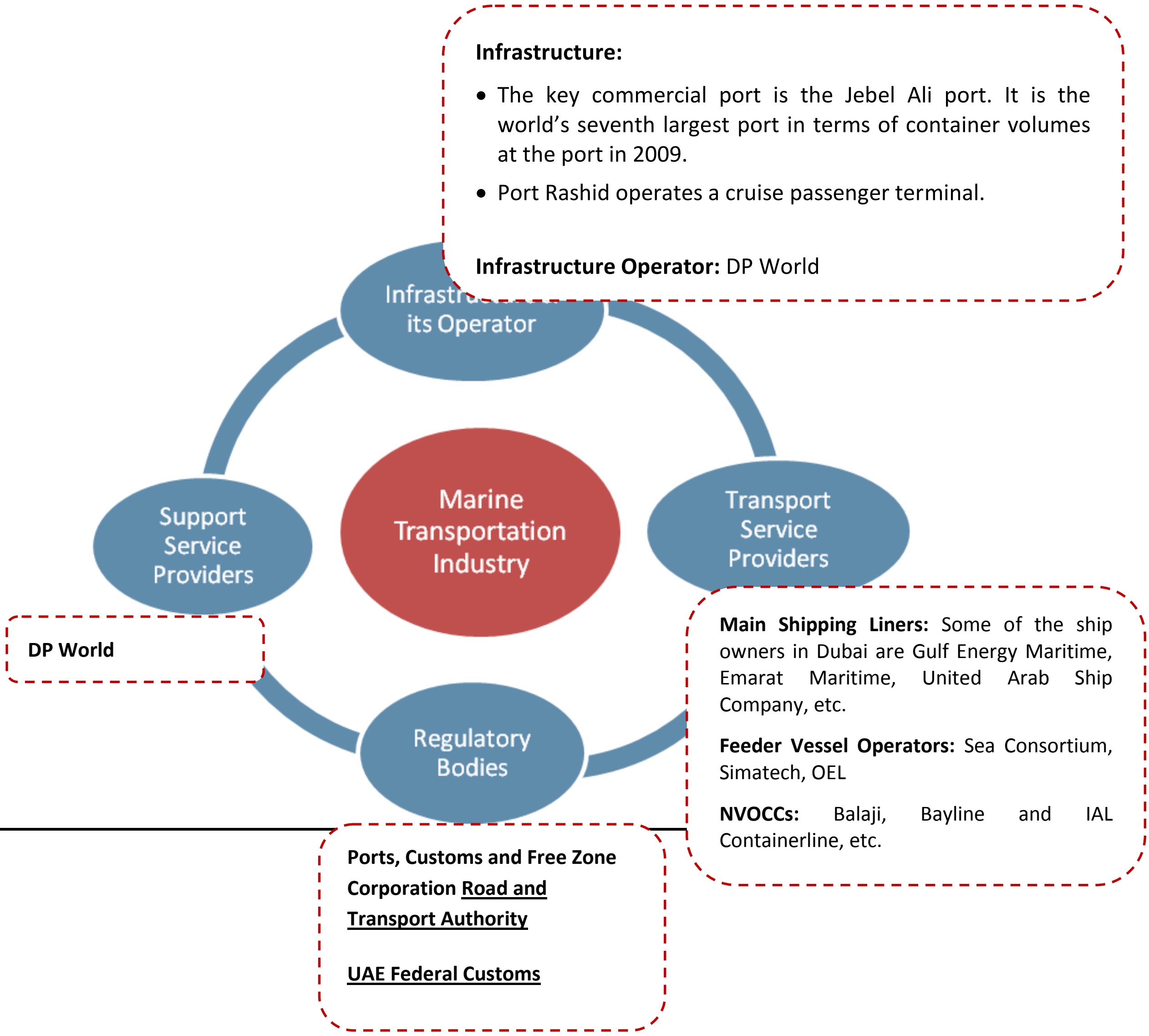
Key Developments in Sea Port Infrastructure in GCC

Country	Port	Expected Year of Completion	Capacity Expansion Details
Qatar	New Doha Port	2030 (fully operational)	1st phase: 2 million TEUs per year Fully Operational: 6 million TEUs
	Expansion of Ras Laffan Seaport		Expansion includes new LNG berths, liquid cargo berth, dry docks and repair yards Capacity: 225 million tons of products per year more than double its present size
Saudi Arabia	Expansion of King AbdulAziz port	1st phase: 2012	1st phase: 3.5 million containers (current capacity: 1.5 million containers)
	Expansion of Jeddah Islamic Port	End of 2010	2 million TEUs and a handling and storage area covering 400,000 sq. m.
	Development of Ras Al Zour Port	Beginning of trial operations: August 2010	Being constructed to serve the Ras Al Zour Industrial Zone in the Eastern Province. Capacity: 6 million tons of granular diammonium phosphate, 440,000 tons of liquefied ammonia, 1 million tons of caustic soda and one million tonnes of alumina per year
	Expansion of Jubail Commercial Port	2012	Privatization of cargo handling, improvement of berths and infrastructure Planned Capacity: 1 million TEUs
	Development of King Abdullah Economic City Seaport		Planned Capacity: 10 million TEUs Will include a custom-built Hajj Terminal with a capacity to handle up to 300,000 pilgrims on their way to Mecca and Medina
Kuwait	Expansion of Shuwaikh Port		Increase in the depth of the port's naval canal, to enable ships of up to 14 meters in immersion and more than 420 meters width to pass. Currently the canal is only 8.5 metre deep. Planned Capacity: 1 million containers (current capacity: 400,000 million containers)
	Development of new deep seaport at Bubiyan Island	2013	Initial container handling capacity of 1 million TEUs, which will be increased to 2.5 million TEUs at a later stage
	Expansion of Shuaiba port		Stages I & II aim to increase the harbor capacity from 900,000 to 2,500,000 tonnes per year

Country	Port	Expected Year of Completion	Capacity Expansion Details
Bahrain	Development of Khalifa Bin Salman Port	2009	1.1 million TEUs
Oman	Construction of Duqm Port	2010	Turning basin of more than two kilometers diameter that will comprise the ship-repair facilities, bulk and general cargo plus facilities for the ROP Coast Guard, Royal Navy of Oman, etc.
Abu Dhabi - UAE	Construction of Khalifa Port	1st Phase: 2012 (last quarter)	Initial capacity of 2 million TEUs and 8 million tonnes of cargo Total capacity of 15 million TEUs and 35 million tonnes of other cargo at the end of the five-phase construction in 2030
Sharjah – UAE	Expansion of Sharjah Container Terminal	2010	Increase draft to 12.5 metres, add a further berth of 200 metres and increase storage/stacking area by 30,000 square metres. All work will be completed in 2010
	Expansion of Port Khalid		Plans to possibly deepen the port to 14 meters in order to double the port’s capacity from 280,000 TEUs in 2008 to 450,000 TEUs every year

Marine Transportation Industry in Dubai

The various aspects of the marine transport industry in Dubai have been summarized in the chart below.



As depicted in the chart, infrastructure operation and support services segments are dominated by government-owned DP World.

The private players operate in a few segments, such as feeder vessel operators, NVOCCs, etc.

Infrastructure and its Operation

In 1970s, the only port in Dubai was Port Rashid. The focus of the trade was India and Africa and the key products were rice, sugar, meats, etc. The Jebel Ali port was started in 1979. In 1980s, approximately 1 million TEUs were handled at the Dubai ports. In 2007, a new phase was started with the opening of Terminal 2 and movement of all cargo operations from Port Rashid to the Jebel Ali port.

- **The key commercial port is the Jebel Ali port. It handles approximately 11 million TEUs every year.** It has the capacity to handle 12.5 million TEUs. It is the world's seventh largest port in terms of container volumes at the port in 2009. It was awarded as the Best Middle East seaport for the 15th consecutive year in 2009 by AFSCA (Asian Freight and Supply Chain Awards).

  Jebel Ali port is operated by DP World. DP World had a 7% market share in the global marine port and services industry in 2008. It operates 49 terminals across the world. In UAE, it operates Terminal 1 and 2 at the Jebel Ali port, Fujairah port and the Khalifa port in Abu Dhabi.

- **Port Rashid operates a cruise passenger terminal.** It is the only cruise passenger terminal in Dubai. It had handled approximately 100 ships and 250,000 passengers in 2009. Dubai's Department and Tourism and Commerce Marketing (DTCM) is the operator of the cruise terminal at Port Rashid.

Cargo and Passenger Movements at the Ports

Port Rashid's cruise terminal handled approximately 100 ships and 250,000 passengers in 2009. DTCM expects to host a total of 120 ships and over 325,000 passengers in 2010 (a growth of 30% over 2009).[19]

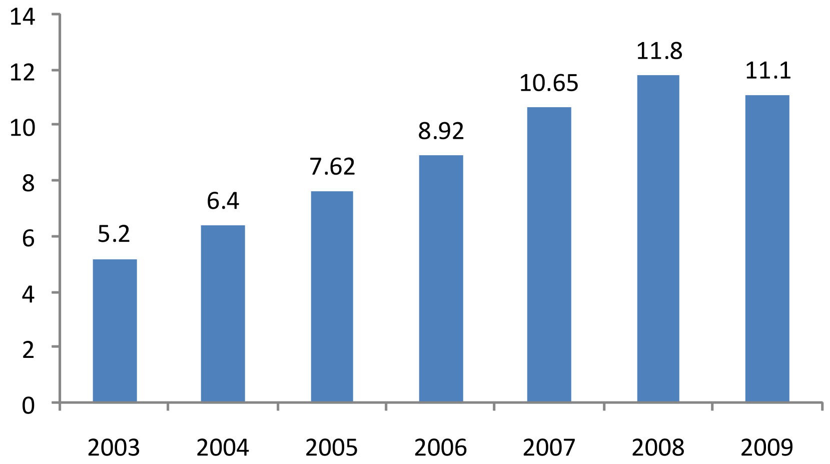
In terms of cargo volumes, the Jebel Ali Port witnessed a double-digit growth in container volumes till 2008. In 2009, there was a decline in container volumes by 6%. **However, DP World expects the container volumes to grow at a rate of 5-6% over the next 4-5 years.**

The spilt of the cargo coming into Dubai is as follows:[20]

- **50% of the cargo arriving at the port is trans-shipped directly from the port**
- 25% of the cargo comes into the free zones and is later trans-shipped to other emirates and countries in the region
- The remaining cargo i.e. only 25% of the cargo comes into Dubai for local consumption

[19] Source: DTCM
[20] Source: Expert Interview with DP World

Container Volumes at Jebel Ali Port (in million TEUs)



Source: DP World

Percentage Change Over Last Year

	2004	2005	2006	2007	2008	2009
Container Volumes (%)	23.1%	19.1%	17.1%	19.4%	10.8%	-5.9%

Source: DP World

Support Service Providers for Infrastructure Operations

The various support services required at the port can be cargo loading unloading, navigation and berthing, etc. DP World handles all the support services inside the Jebel Ali port on its own. It does not outsource any of these services to a third party.

Regulatory Structure

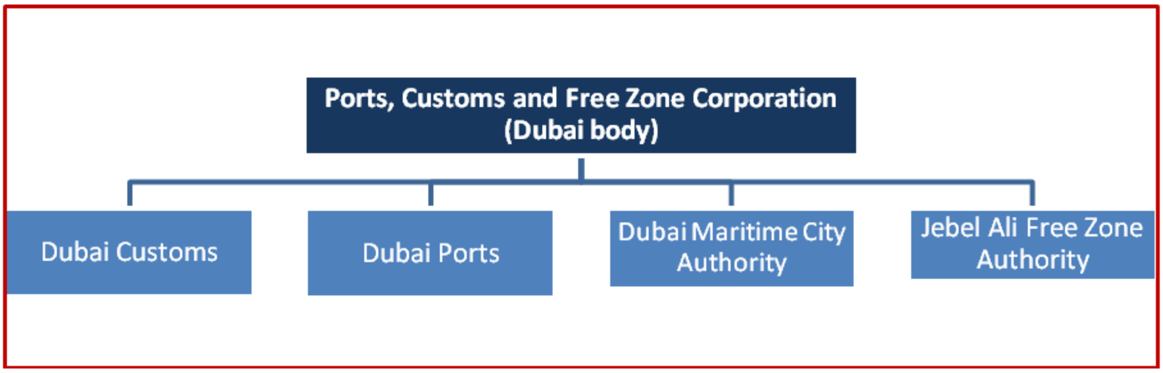
Ports, Customs and Free Zone Corporation (PCFC) is a public corporation established under the revisions of Law No. 1/2001 issued by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai.

PCFC oversees Customs Department, Dubai Ports, Dubai Maritime City Authority and Jebel Ali Free Zone Authority, in addition to companies affiliated to both Authorities, and lends support to these bodies.[21] The supervising body for PCFC is the Dubai Executive Council.

In PCFC, the licensing and business registration processes are administered by Trakhees.

[21] Source: DED

Environment, Health and Safety (EHS) (part of Trakhees) controls, regulates and enforces rules and regulations related to all aspects of Environment, Health, Safety and Fire Protection for all Dubai World Business Units (such as Nakheel, Dubai Multi Commodities Center, Dubai Maritime City, DP World, JAFZA, Istithmar amongst others).



Dubai Maritime City Authority (DMCA) is the regulatory body for all businesses involved in coastal marine activities. However, inland marine transport is regulated by the Road Transportation Authority.

- DMCA was formed in 2007 to enhance Dubai's position in the maritime industry, and to oversee the development of specific maritime sectors such as maritime services, maritime management, vessel and yacht registration, vessel and yacht ownership and charter, maritime and educational research, etc.
- DMCA aims to become a one-stop shop for all marine related activities. For e.g. in August2010 , all the Jet Ski-related transactions for the public, including registration, inspections, issuance of license, renewal of license, amendment of license and cancellation of license were transferred from Marine Department in RTA to DMCA.
- All the marine companies existing before 2007 had to move to DMCA license.
- A number of international maritime-related laws have been adopted at a federal level in UAE, such as MARPOL (Marine Pollution) and International Maritime Organization (UAE is part of the white list of IMO). All countries that want to develop their maritime industry comply with IMO's regulations. Currently, DMCA is working on customizing and preparing regulations as per Dubai's requirements. DMCA plans to announce these regulations by 2011. These regulations are related to environment, financial and other aspects of the industry.
- DMCA's initiatives are expected to enhance Dubai's position as a maritime hub, leading to increased demand for ancillary services for the shipping industry (ship brokerage, ship financing, ship service management services, etc.).

Road Transportation Authority

- Responsible for planning, constructing, operating and maintaining infrastructure for inland marine transport (transport of goods or passengers within a city/country using boats, water taxis, etc.) in Dubai
- Responsible for licensing and inspection for all kinds of inland marine transport vehicles

UAE Federal Customs

UAE Federal Customs is responsible for formulating customs-related laws and regulations at a federal level.

Marine Transportation Service Providers

All the sub-sectors of the marine transportation industry, besides infrastructure operator and support services providers, are characterized by presence of a number of international, regional as well as local players.

The following table highlights the role of SMES and the large players in the Marine Transportation Industry in Dubai

Snapshot of the Role of SMEs and Large Players in the Marine Transportation Industry in Dubai

Sub-Sector	Key Players
Infrastructure Operators	Port Rashid, primarily comprises a cruise terminal, is operated by the Department of Tourism and Marketing. Jebel Ali Port, the key cargo port, is operated by DP World.
Transport Service Providers – Main Shipping Lines	Dubai has no major locally-based shipping line but all major international shipping lines have included Dubai in their regular schedules. Over 180 shipping lines used the Jebel Ali port in 2008. Some of the ship owners in Dubai are as follows: • Gulf Energy Maritime: Key shareholders include ENOC (wholly-owned company of Government of Dubai); IPIC (wholly-owned company of Government of Abu Dhabi); Oman Oil Company (wholly-owned company of Government of Oman); Thales (an international electronics and Systems Group) • Emarat Maritime (owners of 5 tankers and 9 Bulk Carriers) • United Arab Ship Company (formed jointly between the Kingdom of Bahrain, Republic of Iraq, State of Kuwait, State of Qatar, Kingdom of Saudi Arabia, and the United Arab Emirates)
Transport Service Providers – NVOCC	Balaji, Bayline and IAL Containerline
Transport Service Providers – Feeder Vessel operators	OEL, Simatech and Sea Consortium
Support Service Providers – for Port Operations	DP World handles all the support services inside the port on its own.

Support Service Providers – For Shipping Lines	**There are a large number of ship agents and marine surveyors in Dubai. However, there is low presence of ship service management and ship brokerage firms.** **Key Ship Agencies:** • Regional players: Sharaf, Rais Hassan Saadi Group, Kanoo, etc. • International players: Inchcape, GAC and Barwill **Marine Surveying**: International players (such as Noble Denton, Coral Marine, Claygon Milton, etc.) and a large number of small and medium size companies. **Ship Service Management:** Ship owners in UAE with in-house divisions for technical management: ENOC, Emirates, Vela, etc. V-ships (ITC – large international company) is the only established 3rd party service provider for technical services. **Ship Brokerage:** Most of the international ship brokers serve UAE and the GCC region through their offices in London. Key international players in ship brokerage present in Dubai: Clarksons, BRS, Scantrans, and Optima. Small and Medium-size UAE-based ship brokers: Glimpex Trading, Optima, etc.

Sub-sectors with a high SME presence

Sub-sectors that offer opportunities for new SMEs

Competitive Landscape of the Sub-sectors (with a high SME presence)

Transport Service Providers - NVOCCs

- There are a large number of NVOCCs in Dubai. They range from being independent companies to being part of larger groups. Most of NVOCCs operate within GCC (primarily from Jebel Ali) to India sub-continent route since primarily the main shipping lines (with their own containers) operate on the routes beyond these destinations.
- Few of the NVOCCs also go upto Far East – Malaysia, Singapore, Thailand by taking up space in main shipping liners. However, this space is given to them at higher rates (since NVOCCs are competition with main liners on those routes). Some NVOCCs have also started going to Iraq and East Africa.
- The NVOCCs also face competition from Main Liners, who while coming from Far East bring in goods from India and deliver at Jebel Ali. The market share of main liners to NVOCCs is 50:50.
- In total there are approximately 20-25 NVOCCs in Dubai. The key and the oldest players in NVOCCs in Dubai are – Balaji, Bayline and IAL ContainerLines (have been present in Dubai since 1990s). These account for approximately 30% of the market of NVOCCs.
- The other key companies that have come up in the last 9-10 years are Parma Container Lines, Vasco Shipping, TransAsia, Caraval, OEL, Pan Asia, and CK Shipping, etc. These players have tried to penetrate the market by offering lower prices as compared to the existing players.
- The demand for NVOCCs had suffered badly due to the economic conditions since 2008. However, the demand picked up in the first half of 2009. The container exports (in volume) from Jebel Ali port to India increased by 15% in the 1st half of 2009 as compared to the last year. The container exports from India to Jebel Ali port increased by 7% in the 1st half of 2009 as compared to the last year. The former rate of growth is higher due to heavier cargo going from Jebel Ali to India (metal scrap, oil, dates, etc.) as compared to the latter route (textiles, machinery, etc.).

Feeder Vessel Operators

- There are a number of global players in this segment. The players in this segment usually have a regional focus, except Sea Consortium (a Singapore-based company) that operates worldwide.
- Sea Consortium (Singapore-based with office in Dubai), Simatech (Dubai-based) and OEL (in are the key players with a strong Middle East focus.
- Star Feeders (part of Sharaf Group) is a Dubai owned and headquartered feeder operator.

Support Activities for Sea Freight Transport Services Providers - Ship Agencies

There are a large number of ship agents and marine surveyors in Dubai. On the other hand, ship brokerage and ship service management are nascent in Dubai.

The competitive landscape of the industry is as follows:

- **Regional players** (Dubai-based companies that have been in business for 20-30 years, such as Sharaf Shipping, Rais Hassan S**aadi Group, Ka**noo Shipping, etc.
- **International players** (Global companies with their regional headquarters in Dubai, such as Inchcape, GAC and Barwill, etc.)
- Dubai-based SMEs, such as Green Port, Karkasia Shipping & Logistic Services, etc.

The agency services are conducted as long-term contracts or even one time relationships. The agents can be appointed by the owners, charterers or ship managers.

Support Activities for Sea Freight Transport Services Providers - Marine Surveying

- There are hundreds of marine surveying companies in UAE.
- These include international players (such as Noble Denton, Coral Marine, Claygon Milton, etc.) and a large number of SMEs. These companies either have their own branches or make their surveyors travel across GCC to serve the entire GCC market.

Support Activities for Sea Freight Transport Services Providers - Ship Service Management

- Most of the ship owners in UAE have their in-house divisions for technical management. ENOC, Emirates, Vela, etc. have their own in-house divisions.
- **V-ships is the only established 3rd party service provider for technical services.**
- This is not in line with the global trend, wherein technical services of 25% of the ships are managed by 3rd party technical services providers. Moreover, this percentage is expected to increase. The reason for the same being that ship owning is becoming more of an asset play for companies (not long-term investments). Thus the owners act as investors, who usually need managers to take care of their vessels. Some of such investors in UAE are: Abraj Group, Abu Dhabi Investment Group and E-Ships.
- Noah Ship Management is the only new start-up in technical services management in Dubai.

Support Activities for Sea Freight Transport Services Providers - Ship Brokerage

Most of the international ship brokers serve UAE and the GCC region through their offices in London.

The key international players in ship brokerage present in Dubai are:

- **Clarksons:** started in 2005 with 3 people; currently has 31 people; focused on dry cargo as well as specialized products (oil, chemicals, etc.); Volume-wise it accounts for 50% of the specialized cargo out of GCC.
- **BRS:** started in 2002-03; however only has 5-6 people – focused on specialized products
- **Scantrans:** has 5-6 people – focused on dry cargo
- **Optima** (Greece-based company with offices in Athens, Shanghai and Dubai) – 12 people

Besides the international players, there are a few small ship brokers (people who have been here for 20-25 years) servicing certain niche clients. Some of the local ship brokers do majority of their business outside Dubai. **A key reason for this is that they had entered Dubai expecting a huge demand; however for certain reasons ship owning[22] and thus the ship brokerage industry have not grown Dubai (in line with the industry expectations).**

For instance:

- **Leo Shipping:** It provides ship brokerage and ship management services. For its ship brokerage business, initially it was only handling trade from Dubai to Iran, India and Africa. Currently, most of its business is for employing ships in China, India and ROW (not so much in Dubai).
- **Glimpex Trading:** Most of its business is outside Dubai/UAE in other GCC countries and rest of the world.

Key Trends in the Marine Transportation Industry in Dubai

- **Impact on NVOCC business due to GCC being a bigger import market than exports**

  NVOCCs are impacted heavily due to GCC being a bigger import market, than an export market. This leads to empty containers being moved from Jebel Ali to India. This, combined with the overall economic slowdown, has led to a high cost competition in the market.

- **High presence of companies in ship agencies, NVOCCs and marine surveying businesses; however a nascent ship brokerage and ship service management industry**

  There are a large number of players providing services of ship agencies, NVOCCs, marine surveying. However, ship brokerage and ship service management services are still nascent and offer potential for entry of more players, subject to development of ship owning / registration activity in Dubai.

- **Focus on training and implementation of systems in order to differentiate from competitors and increase efficiencies by key players**

  The key players have implemented initiatives that have helped them to differentiate and also achieve higher productivity as compared to the large number of SMEs present in the industry.

[22] The reasons for a low ship ownership in UAE are nascent ship financing industry and a low attractiveness of registering ships in UAE. These have been discussed in the issues impacting competitiveness of the marine industry in Dubai in the following section.

Examples of Differentiation and Other Initiatives Adopted by the Key Players

- Some shipping companies and agencies help/assist their employees to go in for trainings to become Member of the Institute of Chartered Ship Brokers (MICS). The institute has one office in Dubai and has an exam once a year. Such trainings help to improve the services of these companies and increase credibility for the clients.

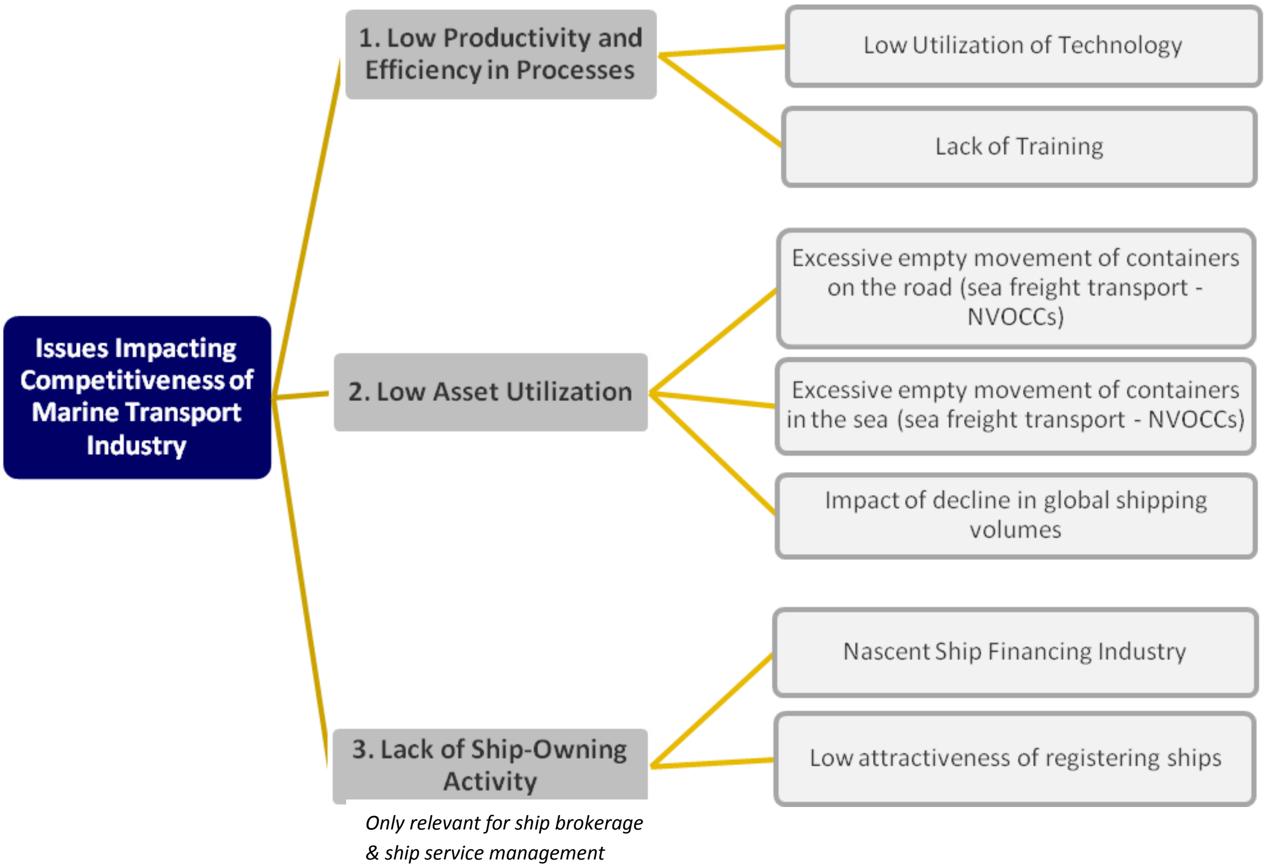
- Some of the companies are planning to implement track and trace systems; however their plans got slowed down due to the economic scenario

Key Issues Impacting Competitiveness of SMEs in Dubai

There are three key issues for the SMEs in the marine transportation industry:

- Low Productivity and Efficiency in Processes
- Low Asset Utilization
- Lack of Ship-owning Activity

Key Issues Impacting Competitiveness of Marine Transportation Industry



These issues for specific sub-sectors and their root causes are discussed below.

1. Low Productivity and Efficiency in Processes

Low Utilization of Technology

Sea Freight Transport - Feeder Vessel Operators and NVOCCs

There are a large number of functions in feeder vessel and NVOCCs which are being done manually, such as making rate entries, vessel and container scheduling, tracking and tracing of containers etc. Such functions are usually automated by main liners.

Currently, most of the NVOCCs have basic software systems (either developed by their in-house teams or bought from outside) that help them in their daily business needs, such as managing bills of lading, generating reports, etc.

A key area where the NVOCCs currently lack are tracking and tracing systems. The containers are usually tracked over phone, emails and the information is kept and used internally to plan movement of containers. The updates to customers are done over phone or email. However, online tracking and tracing systems can help NVOCCs to enhance their customer service and achieve higher efficiencies in container utilization.

The key reasons for a low utilization of technology are:

- There are not many software developers in Dubai/UAE that have experience in developing systems for the shipping industry.
- A few of the companies had planned to implement these solutions. However, their plans got delayed due to the slowdown in demand.

<u>Implementation of appropriate software systems will help the companies to achieve higher efficiencies in their processes and substitution of a few employees with technological solutions; which will in turn help them to achieve higher productivity.</u>

Lack of Training

Overall Marine Transport Industry

The key skills required in the shipping industry are sales, customer service, operations, and commercial skills (documentation, handling of goods, chartering of ships, etc.). The technical skills (science and engineering) are only required for technical ship management services.

At the most basic level, many internal staff in the industry hold the essential skills which are sufficient for the industry to sustain itself. However, certain trainings would be needed to achieve higher efficiencies in asset utilizations and implementation of better technologies.

Most of the larger shipping companies, such as ETA, Maersk have in-house trainings provided by the internal trainers. However, 95% of the businesses in the marine transportation industry in Dubai are SMEs who have not paid a lot of attention to training of their employees since:

- **Lack of availability of short and intensive courses:** There are certain workshops, trainings that are organized by the Dubai Shipping Agents Association at a nominal fee. However, these are only held once or twice a year.
- **High costs for certifications:** There are certain certifications that are available to be taken in Dubai, such as Chartered Institute of Ship Management, Member of Chartered Ship Brokers, etc. However, these are extremely expensive (costs as much as GBP 500 per paper and each certification has 6-7 papers, which makes the cost of GBP 3,500/employee – AED 20,000/employee).

2. Low Asset Utilization

Sea Freight Transport - NVOCCs

The key challenge impacting the NVOCC sector's growth since 2008 has been the slowdown in demand for cargo moving from India to Dubai for local consumption and to be trans-shipped to other GCC countries. This coupled with presence of a large number of players has led to a **high cost competition and under-utilization of containers.**

Excessive empty movement of containers in the sea & impact of decline in global shipping volumes

The key route for NVOCCs in Dubai is from Jebel Ali to India. They also work on getting cargo from other GCC countries into Dubai and then shipping it to the Indian sub-continent and vice versa. GCC being a bigger import market, than and export market, most of the times empty containers are moved from Jebel Ali to India.

Overall, approximately 1/3rd of the containers are full while going from Jebel Ali to India.

This coupled with presence of a large number of players and decline in cargo volumes to and from Jebel Ali port to the Indian sub-continent (as an impact of slowdown in demand) led to NVOCCs offering free movement of any cargo going to India (only the basic port charges are paid by the exporter and not any cargo moving charges and margins).

This has been explained as follows:

- A higher amount of cargo is moved from India to Jebel Ali, as compared to Jebel Ali to India.
- The players always try to move the containers from the "non-revenue route" (Jebel Ali to India) to a "higher revenue route" (India to Jebel Ali) even if their containers are empty.
- Thus, if they get customers who need to move the cargo on the non-revenue route, they only charge the customers the port charges (no additional charges and margins).[23] This is being done to recover the basic costs from the customers by operating on one side of the route without making any margins.

In contrast, the feeder vessel operators have chosen a cooperation route in order to improve efficiencies. OEL, Simatech and Sea Consortium work cooperatively in order to utilize their vessels more efficiently. Thus, if the feeder vessel of one of these players is operating on a certain day, they share the vessel for shipping their respective customers' containers.

This is in line with collaboration measures being adopted by main liners across the world to achieve higher utilization of their vessels.

[23] Expert Interviews

A decline in cargo volumes has led some of NVOCCs to resort to a number of measures to sustain in the industry:

- Divesting from the business by selling off the containers
- Reducing container operations and focusing on other logistics-related activities (freight forwarding, warehousing, etc.)
- Expansion into newer markets; earlier, a number of companies (such as IAL Container Lines, Perma Container Lines, Vasco Shipping, etc.) were primarily operating from Jebel Ali to the Indian sub-continent route. However, now a number of them have expanded into going upto Far East – Malaysia, Singapore, Thailand by taking up space in main liners or have started serving Iraq.

Excessive empty movement of containers on the road

Sea Freight Transport - NVOCCs

The procedures and time involved in moving goods to and from one free zone to another (within UAE) – to take bill of entry and exit and going through inspection at both ends **increase the time required for container movements.**

Moreover, the containers are usually empty on atleast one-way during their road transportation since companies find it difficult to find load on their way back within Dubai/UAE.

3. Lack of Ship-Owning Activity

Support Activities for Shipping Lines – Ship Brokerage and Ship Service Management

An overall low culture of owning ships, combined with a nascent ship financing industry and low attractiveness of registering ships in UAE has led to a low ship owning activity in UAE. **This in turn has led to a slow emergence of business that provide ancillary activities to the shipping lines, such as ship brokerage and ship service management firms.**

Nascent ship financing industry

Ship financing has not developed in UAE and overall in the Middle East due to lack of interest of local banks in ship financing due to their lack of knowledge of the shipping industry and the volatile nature of the shipping industry. Currently, National Bank of Fujairah is the key local bank in the region dedicated to ship finance, while other local banks such as Emirates NBD[24] have extended only a few loan facilities on ships.

Few international banks have entered the region to tap the shipping industry with departments dedicated to ship finance. Some of the recent developments in ship finance have been:

[24] Source: Zawya

- In 2008, French bank Natexis Banque Populaire and Dutch-owned Fortis Bank had established offices at Dubai International Financial Centre to specifically target the financial needs of regional shipping companies. Other foreign banks in UAE with transport desks dedicated to shipping finance include Standard Chartered Bank, Credit Suisse and Hypoveriens Bank.
- Tufton Oceanic (a fund management company) began its operations in Dubai in 2001 to help arrange loans for regional shipping companies from banks overseas and to create ship leasing funds.
- In December 2009, SFS Group Public Company, a Cyprus-based non-banking financial institution and

  Malaysian subsidiaries of the Kuwait-based bank **Kuwait Finance House** had announced their partnership to set up a Global Shariah Shipping Fund, a private equity fund that aims to raise USD 150 million (AED 550 million).
- In November 2009, **QInvest** (Qatar-based investment bank) and Fortis Bank Nederland signed a joint

  venture agreement and each committed USD 50 million (AED 184 million) to the **QInvest**-Fortis Bank Nederland shipping fund, making it the world's first Shariah-compliant ship financing fund.

However, the ship financing industry still remains nascent as compared to global hubs, such as Singapore and Greece.

Low attractiveness of registering ships in Dubai

Ship ownership is not so active in Dubai/UAE due to lack of a ship owning culture and lack of ship financing options. UAE accounts for only 0.82% of deadweight tonnage in the world.

Moreover, only small boats are being registered in UAE currently.

This is possibly due to the following reasons:

- The current rules are lengthy and cumbersome
- There are restrictions on ownership (require 51% of Emirati ownership)
- Presence of restrictive mortgage provisions
- Lack of an enabling regulatory environment

Out of 405 vessels owned in UAE (as on January 2009), 86% were registered under foreign flags. Out of 9,033 ('000) deadweight tonnage owned in UAE (as on January 2009), 92% were registered under foreign flags.

Top 15 Countries with the Largest Controlled Fleet (dwt) and GCC Countries (among the top 35 countries), as of 1 January 2009 [a]

Rank	Country/Territory	Number of Vessels	Deadweight (dwt '000 tonnage) [d]

	of Ownership [b]	National Flag [c]	Foreign Flag	Total	Foreign Flag (as a % of total)	Total Deadweight ('000 tonnes)	Foreign Flag Deadweight (as a % of total)	Deadweight (as a % of world total)
1	Japan	733	2987	3720	80.3%	173,285	93.0%	15.68%
2	Greece	720	2344	3064	76.5%	169,427	68.8%	15.33%
3	Germany	479	3043	3522	86.4%	104,954	83.4%	9.50%
4	China	1944	1555	3499	44.4%	92,799	59.9%	8.40%
5	Norway	783	1244	2027	61.4%	50,216	77.0%	4.54%
6	Republic of Korea	797	438	1235	35.5%	46,623	55.3%	4.22%
7	United States	867	915	1782	51.3%	39,966	48.4%	3.62%
8	Hong Kong	307	373	680	54.9%	33,724	45.8%	3.05%
9	Denmark	347	567	914	62.0%	31,596	62.2%	2.86%
10	United Kingdom	398	520	918	56.6%	30,917	63.9%	2.80%
11	Taiwan	91	540	631	85.6%	29,804	86.4%	2.70%
12	Singapore	545	331	876	37.8%	28,230	41.6%	2.55%
13	Italy	582	238	820	29.0%	19,750	34.9%	1.79%
14	Russian Federation	1516	557	2073	26.9%	18,288	67.5%	1.66%
15	India	495	69	564	12.2%	17,213	16.4%	1.56%
18	Saudi Arabia	73	99	172	57.6%	14,911	91.7%	1.35%
22	UAE	58	347	405	85.7%	9,033	92.2%	0.82%
28	Kuwait	38	44	82	53.7%	6,448	40.4%	0.58%
	World Total	**16996**	**20840**	**37836**	**55.1%**	**1,104,959**	**68.6%**	**100.0%**

Source: Compiled by the UNCTAD secretariat, on the basis of data supplied by Lloyd's Register

a. *Vessels of 1,000 GT and above; Deadweight tonnage (abbreviated to dwt) is a measure of how much weight a ship is carrying or can safely carry*

b. *The country of ownership indicates where the true controlling interest (i.e. parent company) of the fleet is located.*

c. *Includes vessels flying the national flag but registered in territorial dependencies or associated self-governing territories, such as Isle of Man (United Kingdom), and also second registries, such as DIS (Denmark), NIS (Norway) or FIS (France).*

An amendment to the nation's maritime laws has been drafted by the National Transport Authority (NTA) and submitted to the UAE Government.

According to Nasser Saif al Mansoori, the director general of the NTA, the whole registry is being revamped in order to operate as an international flag on similar lines as Singapore, the Marshall Islands, Denmark and Norway. The new provisions include a more flexible approach to crewing and taxes while not compromising on safety and security.

In addition, DMCA is working on customizing and preparing regulations that are as per Dubai's requirements.

These measures are expected to enhance the business environment for the maritime industry. This in turn will lead to increasing Dubai's attractiveness for registering, owning and financing ships.

This will encourage shipping companies to set up their operations in Dubai and it will also lead to development of more ship owning companies in UAE. This will lead to opportunities for SMEs in ship brokerage and ship service management businesses.

Current Initiatives to Develop Dubai into a Maritime Hub

Current Initiatives

Revamping of UAE ship registry by NTA

+

Formulating of maritime regulations by DMCA

+

Entry of Foreign Banks in the ship financing industry

Potential Impact on the Industry

Increased ship owning activity in UAE

Setting up of head office operations by global shipping lines

Impact on SMEs

Increased opportunities for SMEs in ship brokerage and ship service management businesses

The following table discusses the potential for SMEs in the offering support services for ships.

Opportunity Assessment

Support Services for Ships

Opportunity	**Ship Brokerage, Ship Service Management**
Sub-sector	**Support Activities for Sea Freight Transport Providers**
SME Potential	**Moderate potential due to competition from global hubs and nascent supporting and related industry environment**
Key reasons	**Ship Brokerage and ship management services offer scope of entry of SMEs due to:**

	• Demand not limited to the local or regional market; there is potential to capture a share in the global market (25% of ships worldwide are managed by 3rd parties for technical management & ship brokers are required by all ship owners) • High focus of DMCA and NTA to develop Dubai into a maritime hub • Dubai has the time and location advantage (to deal with both western and Asian clients) and become a shipping industry hub. • Low capital and regulatory requirements • Low competitive intensity in the industry in Dubai currently
Capital and Regulatory Requirements	1. **Capital Investments:** These are services and do not require high investments in assets. The key investments are in an office set-up and people. For e.g. a technical service management company would need a capital investment of USD 1 million (AED 3-4 million), involving costs for getting a license, manpower, rentals, contract with crewing agents, set up hardware and software systems, etc. • **Regulatory Requirements:** The company needs to get a license from DMCA. Currently, these companies are allowed to operate from any location in Dubai.
Challenges and Risks	• **Competition from global players: Since it is a global industry, any firm in UAE will face competition from** a large number of SMEs offering similar services in maritime hubs, such as Singapore, Hong Kong, etc. Singapore alone has over 4,400 shipping companies and maritime ancillary service providers.[25] • **Low ship owning activity** in UAE due to ○ **Nascent ship financing industry and the regulating environment for these segments (although steps are being adopted by DMCA to enhance the regulating environment)** ○ **Low attractiveness of registering ships in UAE** • **Getting skilled people is a challenge:** 95% of the employees in these businesses are sea farers.[26] Most of these people need to be sourced from India due to lack of a local pool of trained sea cadets. Emirates International Maritime Academy (EIMA) has started courses for the maritime industry, however these courses are still in nascent stages.

To summarize, the focus for the marine transportation industry should be to:

- **Improve competitiveness of existing firms by providing support to handle the key issues**
  - **Low productivity and efficiency in processes due to low utilization of technology and lack of training**
  - **Low asset utilization**
- **Monitoring implementation and success of initiatives that are being adopted to develop Dubai into a maritime hub since that will lead to opportunities for more SMEs**

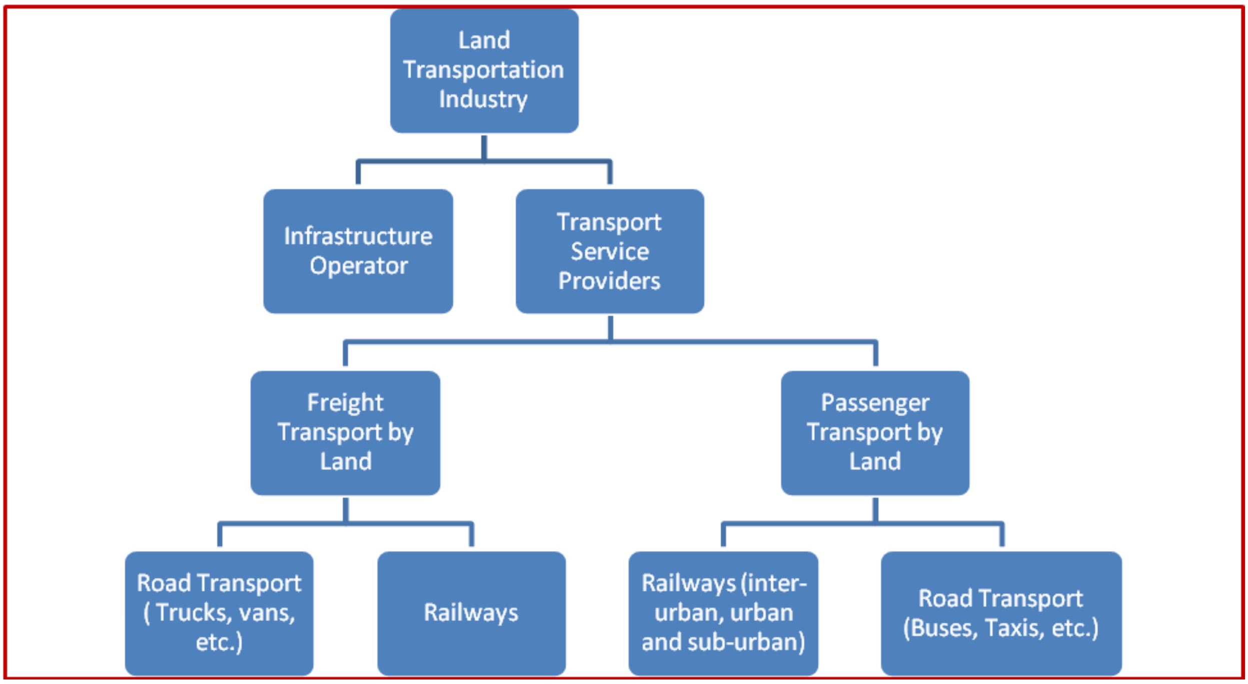
[25] Source: Maritime and Port Authority Singapore
[26] *People who are trained sea cadets and have worked as chief engineers or captains on ships*

8. Land Transport Industry

The section discusses the global and regional developments in the land transportation industry and competitiveness of the industry in Dubai, especially the SMEs.

The Land Transport Industry comprises the following segments (as per ISIC 4).

Structure of the Land Transportation Industry



Note: Urban and suburban passenger land transport includes motorbus, tramway, streetcar, trolley bus, underground and elevated railways etc.

Key Trends in the Global Land Transportation Industry

Adverse impact of the global slowdown on the Road Transport Industry

The road transport industry was estimated to be AED 8.5 triillion in 2008 and had grew at a CAGR of 7.8% between 2004 to 2008

Global Road Transport Industry Size and Growth

Year	USD billion	AED billion	% Growth (as compared to previous year)
2004	1,708.70	6,271	
2005	1,856.10	6,812	8.60%
2006	1,975.90	7,252	6.50%
2007	2,118.40	7,775	7.20%
2008	2,308.30	8,471	9.00%

Source: Datamonitor

However, the decline in global trade volumes and passenger movements had a high impact on the road transport industry in 2009 since road transport is the initial and final stage of transport.
The industry is expected to resume growth in 2010, with overall improvements in volumes of trade globally.

High fragmentation in the road transportation industry

The road transport industry is characterized by intense competition and low entry barriers. This has led to a high fragmentation in the industry worldwide, with the top 50 companies worldwide accounting for only one-third of the market.

Impact on margins of road transport companies

The margins of the road transport companies are getting impacted and achieving high utilization of assets is becoming increasingly important due to:

- Increasing costs due to high oil prices
- New environmental measures being adopted since road transport is the largest contributor to global warming (road freight transport contributes 57% of the total carbon emissions from the Transportation and storage industry)

Planned improvements in Railroad infrastructure worldwide

The railroad industry had also witnessed a high growth between 2003 and 2007, with a CAGR of 6.3%. The global railroads sector created USD 472.1 billion (AED 1,733 billion) of revenue in 2007.
A number of countries, especially in Europe and North America are working towards improving and renovating their existing railway infrastructures.

Government economic stimulus plans, from the US to Europe to China, promise increased investment in transportation infrastructure over the near term, including improvements to railroads, highways and bridges: For instance:

- In February 2009, in the US, American Recovery and Reinvestment Act provided the following new funds for transportation: USD 8.4 billion (AED 31 billion) for public transit projects, USD 8 billion (AED 29 billion) for high speed rail, USD 1.3 billion (AED 4.8 billion) for Amtrak upgrades, and USD 27.5 billion (AED 101 billion) for highway infrastructure.
- The Chinese government unveiled a USD 586 billion (AED 2,151 billion) economic stimulus package in November 2008 that was largely earmarked for highways, railroads and airports. Major projects include a USD 17.6 billion (AED 65 billion) passenger rail line in northwest China; a USD 22 billion (AED 81 billion) network of freight rail lines in north central China; and a USD 24 billion (AED 88 billion) high-speed passenger railroad from Beijing to Guangzhou.

Key Trends in the Land Transportation Industry in GCC

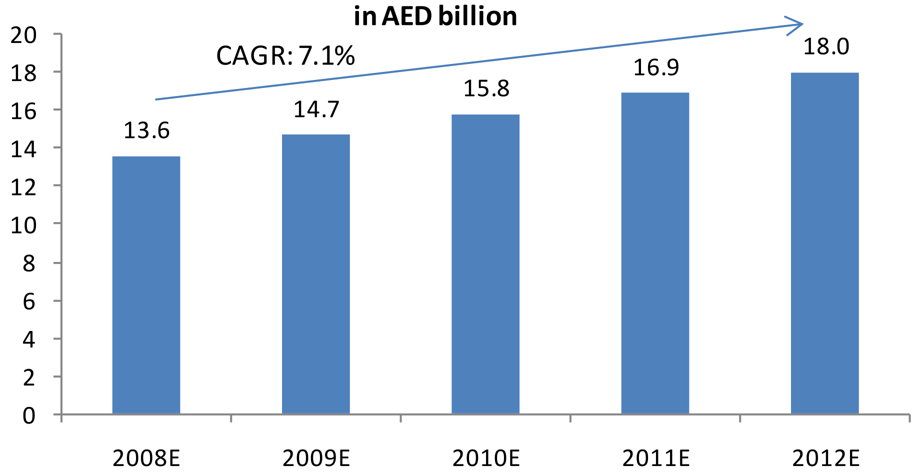
Decline in road freight due to the economic slowdown; however there have been signs of improvement

The road transportation industry had grown rapidly in the past in the GCC and overall in the Middle East due to relatively fast development of road networks.

Lower trade volumes have created an impact on the land transport industry in the region, especially due to low demand for construction and building materials in Dubai. However, the infrastructural and industrial developments taking place across the region, as well as growing population and consumer demand are expected to drive the demand for the road freight industry (road transport being the key mode of transport amongst the GCC countries).

Overall, the road freight industry is expected to grow from AED 13.6 billion in 2008 to AED 18 billion in 2012 (CAGR of 7.1%).

Market Size of GCC Road Freight Industry, 2008-2012E, in AED billion



Source: Booz and Company

<u>Large scale road and railroad infrastructure developments taking place across GCC</u>

There are a number of developments taking place across the GCC in order to enhance the road and rail networks (within a country and across countries).

While road networks within major GCC cities are well-developed, there is a need to enhance road connectivity across cities.

Some examples of the current / proposed developments on road network are highlighted below.

Road Infrastructure Developments

- Construction of Doha expressway (expected to improve connections with Doha and also extend better links between Doha and North of Qatar)
- Construction of Qatar-Bahrain Friendship Bridge that will include 22 km of viaduct bridges, 18 km of built up embankments, a 4 lane motorway and a railway line
- Plans to increase capacity on Bahrain's main highways and improve the vital connections between the port, international airport, causeway and industrial zones
- In UAE, in February 2008 the Surface Transport Master Plan was commissioned by the Department of Transport, Abu Dhabi to develop a detailed Master Plan and implementation program. For the year 2030, the Surface Transport Master Plan calls for a multi-billion Dirham integrated system of transport services: regional rail, metro rail, trams, buses, taxis, park & ride, highways, and more.

The railroad infrastructure is currently under-developed in the GCC, however the situation is likely to change significantly in the medium-long term on account of major railroad infrastructure development projects across the region.

Railroad Infrastructure Developments

- Plans for a high-speed inter-gulf railway to connect the GCC countries (the transport ministries of the GCC countries have approved a detailed feasibility study for the establishment of this network)
- Plans to construct the UAE Railway connecting all the seven emirates, with the main route being Sharjah-Dubai-Abu Dhabi (expected to be completed by 2017)
- Plans for a rail project linking the East and the West parts of Saudi Arabia (the Landbridge project involves a 950-km Riyadh-Jeddah line, a 11- km Dammam-Jubail line as well as plans to upgrade and integrate the existing tracks. The Kingdom's railway expansion will add 3,900 km of new tracks)

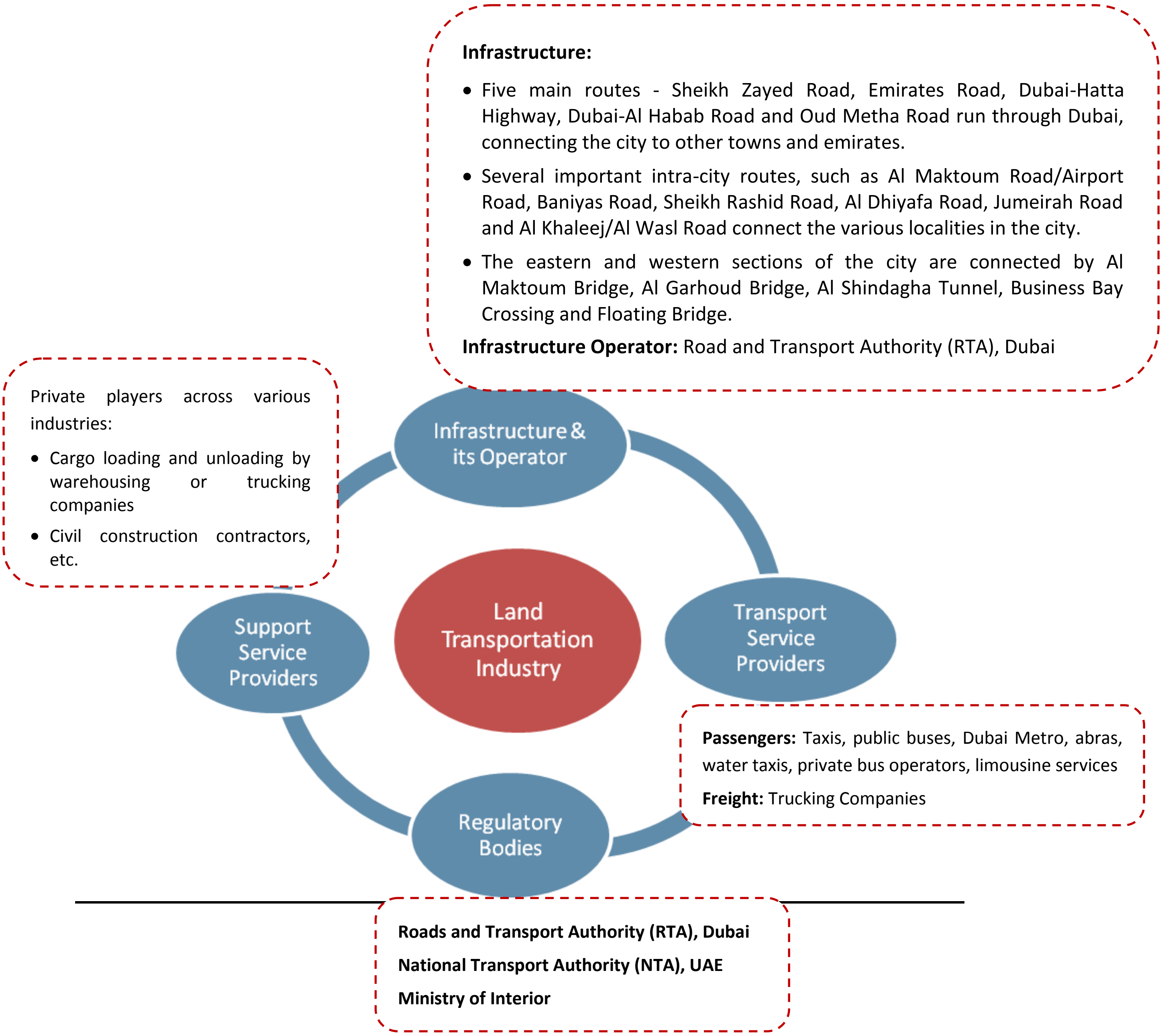
The infrastructure developments in road and railroad networks are expected to enhance movements of cargo and passengers amongst the GCC countries.

Some of the developments are also expected to create competition for Dubai to serve as the trans-shipment hub. For instance, the Qatar-Bahrain Friendship bridge is expected to facilitate movement of cargo from Bahrain to Qatar. This, combined with development of its new port, will enhance Bahrain's position to act as a trans-shipment hub for Qatar.

Thus, in order to maintain its competitive advantage in the region and to serve as a global hub, Dubai needs adopt measures to identify areas of improvement and enhance its competitiveness in the industry.

Land Transportation Industry in Dubai

The various aspects of the land transport industry in Dubai have been summarized in the following chart.



Infrastructure operations in Dubai is in control of the government through the Road and Transport Authority (RTA), which is also responsible for setting regulations for the industry in Dubai.

Private players are present in segments of owning and operating transport services (except water taxis, public transport buses and the metro, which are being operated by RTA).

<u>Infrastructure and its Operation</u>

The road infrastructure in Dubai includes the following:

- Five main routes - Sheikh Zayed Road, Emirates Road, Dubai-Hatta Highway, Dubai-Al Habab Road and Oud Metha Road run through Dubai, connecting the city to other towns and emirates.
- Several important intra-city routes, such as Al Maktoum Road/Airport Road, Baniyas Road, Sheikh Rashid Road, Al Dhiyafa Road, Jumeirah Road and Al Khaleej/Al Wasl Road connect the various localities in the city.
- The eastern and western sections of the city are connected by Al Maktoum Bridge, Al Garhoud Bridge, Al Shindagha Tunnel, Business Bay Crossing and Floating Bridge.

Road Transportation Authority (RTA), Dubai is responsible for planning, constructing, operating and maintaining infrastructure for road and inland marine transport. **In 2009, RTA had announced plans to develop the road infrastructure further. 95 new interchanges, nine ring roads, 70 new pedestrian crossings and cycle tracks were planned for completion by 2020.**

In addition to the roads and highways, the infrastructure also includes Dubai metro and its stations, buses, parking lots, marine stations, etc.

<u>Regulatory Structure</u>

The role of the three regulatory bodies involved in regulating the land transport industry has been detailed below.

Ministry of Interior – Traffic Department

- Supervise the preparation of the Strategic Plan of the General Department for coordination of traffic
- Coordination with the traffic departments of the emirates, and policy development and standardization of traffic measures.
- Represent the country in all internal and external meetings relating to the affairs of traffic
- Coordination with external entities, such as the jurisdiction of the Ministry of Public Works and other parties with regard to traffic and licensing

National Transportation Authority (NTA)

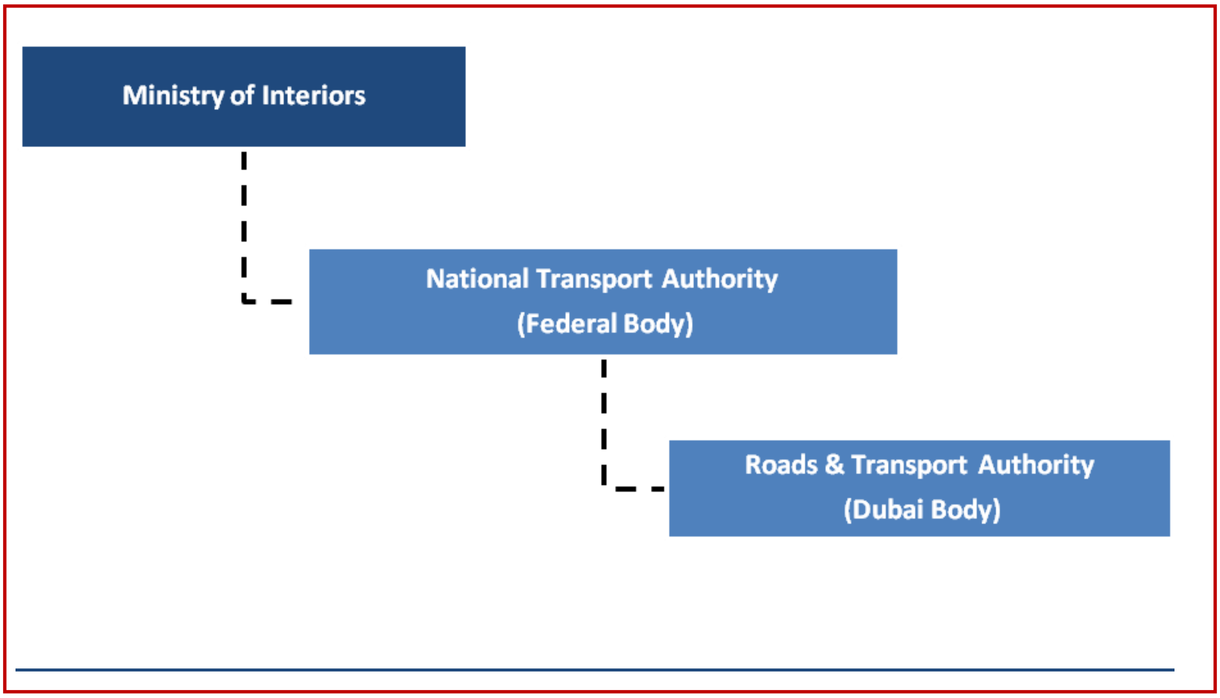
- Responsible for formulating policies related to UAE's Land (i.e. Rail, Road) and inland maritime industries

Roads & Transport Authority (RTA)

- Responsible for planning and providing the requirements of transport, roads & traffic in Dubai, and between Dubai and other Emirates of the UAE as well as neighboring countries
- Responsible for planning, constructing, operating and maintaining infrastructure for road and inland marine transport in Dubai
- Responsible for licensing and inspection for all kinds of road transport vehicles

Although NTA is responsible for formulating regulations at a federal level; emirate level authorities (such as RTA) have formulated and implemented plans specific to the respective emirate (Dubai).

Regulatory Structure for Land and Inland Marine Transport[27]



[27] *Inland marine transport refers to transport of goods or passengers within a city/country using boats, water taxis, etc.*

In contrast, Deep Sea Shipping refers to overseas shipping of freight, to and from foreign ports.

Land Transportation Service Providers

The land transport industry is highly fragmented. There were approximately 2,500 establishments in Dubai involved in land transport in 2008, accounting for 51% of firms in transport, storage and communications industry. 97% of these firms had less than 250 employees. **This reflects a high role of SMEs in the land transport industry in Dubai.**

There were 81,000 employees involved in land transport in 2008, accounting for 45% of employees in the overall transport, storage and communications industry.

Snapshot of the Land Transportation Industry in Dubai (2008)

Employees	Upto 25	26-100	101-250	More than 250	Total
Establishments	1,932	564	65	88	**2,649**
GVA (AED)	1,840,292,485	1,555,225,814	883,094,579	2,765,721,126	**7,044,334,004**
Output (AED)	3,185,501,381	2,591,268,498	1,422,117,296	5,007,074,410	**12,205,961,585**

Source: Dubai Statistics Center

Snapshot of the Role of SMEs in the Land Transport Industry in Dubai

	Sub-sector	Characteristics	Key Players
Freight Transport by Road	Trucking	**Highly saturated and fragmented industry with the key players accounting for 30-40% of the market** Presence of thousands of companies with fleet size varying from 1-2 trucks to upto 100 trucks Only the key players have been able to grow in size with fleets of over 100 trucks	• Allied Transport • Al Mashaweer • Oman Transport
Passenger Transport by Road	Private Operators for Transport Services	**Private Bus Operators:** Highly saturated and fragmented industry with hundreds of companies Fleet size varies from 1-2 buses to 100 buses	International Companies: Avis, EuropCar, etc.; Dubai-based companies: Fancy Transport, Royal, Budget, etc.
		Taxis: Operation of taxis contracted by RTA to six companies	Dubai Taxi, National Taxi, City Taxi, Arabia Taxi, Metro Taxi, Cars Taxi
		Limo Services: Saturated market with 35-40 companies offer limo services in Dubai, with the key players accounting for 20-25% of the market.	Louisana Limo, Parkline, Prime Limo, Premier, Excellence Limo, and Emirates Transport
	Inland Marine Transport	The water taxis and water buses are owned and operated by RTA; the abras are owned and operated by a number of individuals.	-

	Public Buses	Owned and operated by RTA	-

Sub-sectors with a high SME presence

Competit **high SME presence)**

Freight Transport by Road

Trucking Companies

The industry is highly fragmented in Dubai and UAE. **There are two main categories of trucks according to their size:**

- 2.5 to 3 tonne trucks: These are smaller in size and are used for distribution within Dubai or UAE. There is no restriction on timing of operation of these trucks.
- Trailers: The trailers range from 6 meters (10 tonnes) to 15.3 meters (25 tonnes) in size.
    - 90% of the trailers in Dubai are 12-13 meters in size. Current regulations prevent these trucks from using major urban thoroughfares, such as Sheikh Zayed Road, during specific times of the day (6:30 AM to 8:30AM; 1:00 PM to 3:00 PM and 5:30-8:30PM).
    - Most of the trailers used in the industry are second-hand trailers imported from Europe.

The various categories of trucking companies are as follows.

Competitive Landscape of the Freight Land Transport Industry in Dubai

Category	Examples	Description
Specialized Trucking Companies - Key Players	• Al Mashaweer Transport (operates in UAE and Oman, plans to expand in other GCC countries) • Allied Transport (operates in the entire Middle East) • Oman Transport (operates in the entire Middle East)	Market share of 30-40%; Each owns 100-150 or more trucks
Specialized Companies - Other Players	• Royal Transport (across GCC countries, and Jordan, Syria, Yemen, Iraq, Lebanon etc,) • Nashwan Transport (operates only in UAE)	Each owns 10-100 trucks
Individual Truck Owners	Highly fragmented segment (players operate by using number plates rented from specialized trucking companies)	Each owns 1-2 trucks
'Backlog' Trucks	These are trucks coming in from other emirates and GCC countries and carrying goods on their way back.	
Trucks operated by 3PLs, traders, manufacturers, etc.	Agility, Ceva Logistics, Mohebi Logistics, etc.	

Key Trends in the Industry

Impact of the economic slowdown on the trucking industry

The volumes of cargo being moved by the trucking companies have reduced, especially due to slowdown in the construction industry in Dubai. However, the infrastructural and manufacturing developments in the other emirates (especially Abu Dhabi) and GCC countries are driving the demand for trucking services.

Focus on niche opportunities by only a few players

Only a few companies (such as Allied Transport, etc.) have specialized trailers for food, pharmaceuticals, etc. Allied has 5-6 trailers for frozen products. This is due to the following reasons:

- It requires a huge investment since these trailers need 24-hours special care.
- Most of the food traders and manufacturers have their own fleet.

Traditional approach towards moving goods

- There thousands of truck operators with a fleet size varying from 1 to 100 trucks. In addition, the companies also compete with the backlog trucking from other emirates and GCC countries. The industry has been operating in the traditional way of hundreds of micro to medium-size firms moving goods with low focus on technology, skills and quality by majority of firms.
- Only the key players (Allied Transport, Al Mashaweer and Oman Transport) have been able to grow to a significant size of having a fleet more than 100 trucks. These companies have a focus on enhancing skills, implementing technologies (such as GPS systems), enter into permanent tie-ups with large companies. However, a large number of SMEs do not focus on these aspects.
- The key players have implemented initiatives that have helped them to differentiate and also achieve higher productivity as compared to the large number of SMEs present in the industry.

Examples of Differentiation and Other Initiatives Adopted by the Key Players

- Providing training to their employees, primarily through internal trainings in areas, such as handling of specialized cargo, such as chemicals, paints, etc.
- ISO certifications that requires them to maintain timesheets and standard operating procedures for all operational activities
- Implementation of GPS systems that help in tracking and tracing of drivers and vehicles, and thus in managing efficiency in vehicle utilization and drivers' productivity
- Act as a long-term contractor for larger logistics companies, for instance: Allied Transport acts as a vendor for DHL; it operates its functions and plans for expansions in line with DHL's quality standards and expansion plans, respectively.
- Operate in niche segments, such as foods and beverages, etc.
- Have a mobile workshops with mechanics, electricians, etc. moved by car to reach the truck in case of a breakdown

Passenger Transport by Road

Private Bus Operators for School Buses, & Staff and Commuter Services

The key customer segments for these buses are:

- **Schools:** The bus operators work on contracts with schools to provide transport for their students.
- **Individual customers and Corporates:** The bus operators work on contracts with one or more companies to provide bus transport to their blue collar and other staff.

The school buses, and the staff and commuter services segments are highly saturated in Dubai with presence of a large number of companies providing these services. These companies vary in size from 1-2 buses to 30 buses. Some of the large domestic and international companies in these segments are:

- International: Avis, EuropCar, etc.
- Dubai-based companies: Fancy Transport, Royal, Budget, etc.

Limousine Services

- There are 35-40 companies offering limousine services in Dubai. The key players are Louisana Limo, Parkline, Prime Limo, Premier, Excellence Limo, and Emirates Transport. The key players account for 20-25% of the market.
- The companies face cost competition from individuals owning 1-2 luxury cars. This has happened since a number of companies have kept 10-20 number plates issued by RTA for their operation and have given out the remaining number plates to individual drivers at a monthly fee of AED 2,500-2,600. These companies also arrange for loans for these drivers (cars are usually in these companies' names). Thus, these drivers charge much lower prices (AED 500-600/10 hours as compared to 1,200-1,500/10 hours by the professional companies). This has led to cost competition.

Key Trends in the Industry

Focus on niche segments by only very few players

Only a few companies have focussed on niche transportation segments. For instance iMan is an innovative company that offers specialized land transport services called 'park and ride' services. It has contracts with DIFC-based companies, (such as Morgan Stanley, Clifford Chance) to provide transport services to their employees to and from DIFC to surrounding areas, such as Zabeel, which have a free parking space.

iMan works on the concept that employees prefer to use its services since its services cost 20-25% of the monthly parking fee that needs to be paid for parking in DIFC.

Focus on corporates as a customer segment

- Prior to the slowdown, the key customer segment for limousine services was the tourism and hospitality industry. However, a slowdown in the tourism industry has led companies to focus on other customer segments, such as corporate and resident population. However, tourism still accounts for majority of their revenues.
- Currently, the key customer segments for the industry are as follows:
    - Tourists: Transfer guests to and from the airport, to and from one emirate to another, movement within Dubai, etc.
    - Corporates: Senior executive travel within Dubai and/or to other emirates
    - Resident population: Leisure and special occasions

Examples of Differentiation and Other Initiatives Adopted by the Key Players

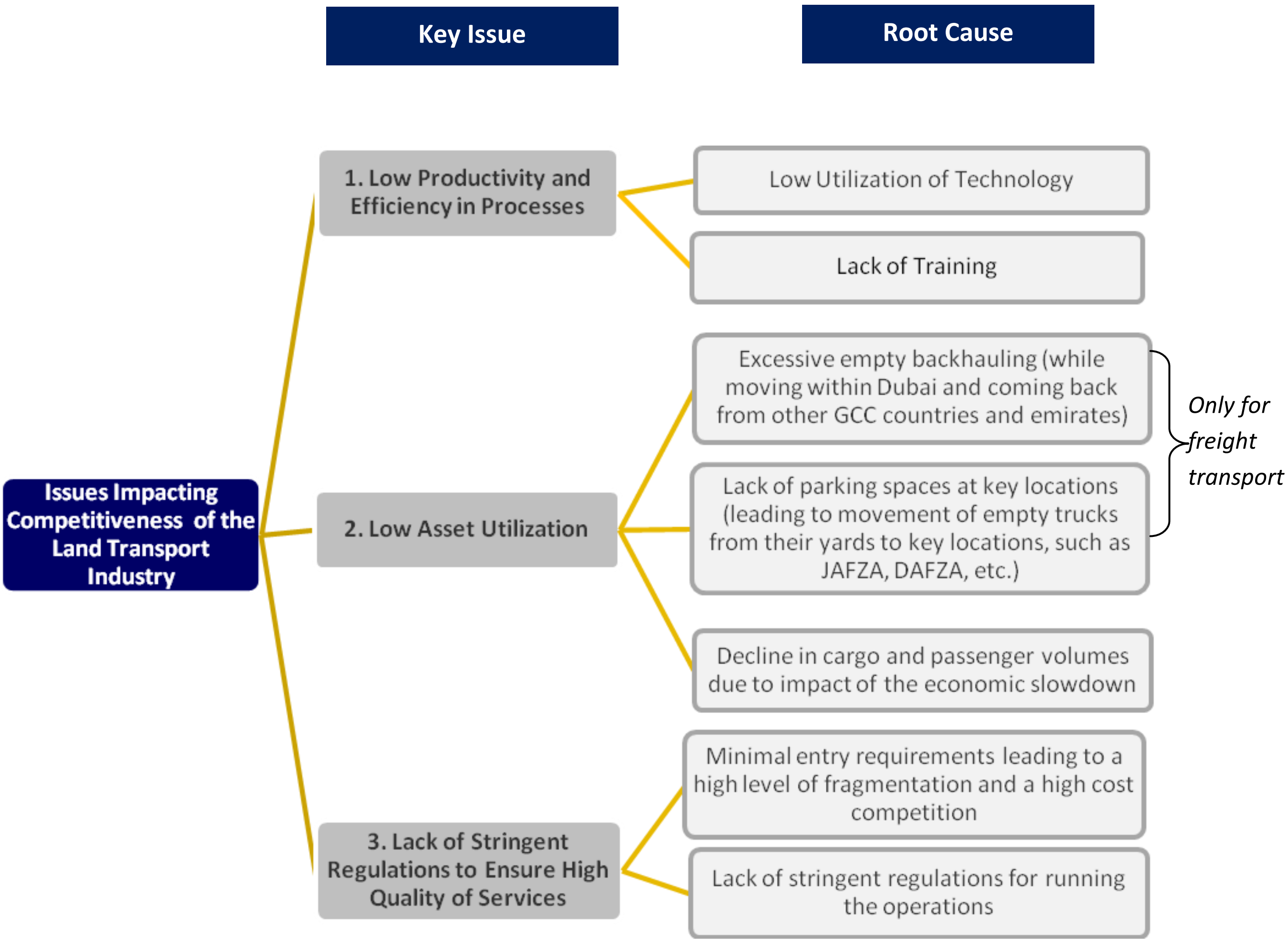
- Providing training to their employees, primarily through internal trainings in areas, such as drivers; training on soft skills training and maintaining student attendance sheets by school bus operators, etc.
- Implementation of GPS systems that help in tracking and tracing of drivers and vehicles, and thus in managing efficiency in vehicle utilization, drivers' productivity and better customer service
- Operate in niche segments, such as park and ride services, etc.
- Offer discounts/or free trips if the vehicle reaches late
- Offer convenient Lost and Found services
- Maintaining high standards for selection of drivers
- Allowing only 10-hour shift for the drivers

Key Issues Impacting Competitiveness of SMEs in Dubai

There are three key issues for the SMEs in the land transport industry:

- Low Productivity and Efficiency in Processes
- Low Asset Utilization
- Lack of Stringent Regulations to Ensure High Quality of Services

Key Issues Impacting Competitiveness of Land Transportation Industry



The key issues for specific sub-sectors and their details are discussed below.

1. **<u>Low Productivity and Efficiency in Processes</u>**

Low utilization of technology

Freight Transport by Land, Private Bus Operators, Limousine Service Providers

GPS systems, that can help land transport companies in more efficient utilization of vehicles, ensure high productivity of employees and better customer service, are not in place in Dubai. Only the key players in the trucking and bus operation industry, such as Al Mashaweer and Allied Transport (truck operators), Fancy Transport (bus operator), etc. have implemented these systems.

In other companies, most of the tracking updates for internal planning and tracking purposes are done manually (on phone) and shared with the customers. The key reasons for a low implementation of these systems in Dubai are:

- Lack of awareness of these systems and their benefits
- Hesitation to invest due to the costs involved in implementation, including the hardware cost and the monthly charges for using the GPS services through Etisalat or Du.
- Low fuel prices have traditionally not motivated companies to invest in technologies that help to achieve higher asset and fuel utilization. However, increasing diesel prices in the last one year are driving companies to think about such solutions but an unfavourable economic environment is acting as an hindrance

The key benefits of GPS systems are:

- Enhance track & trace capabilities
- Improve security & control
- Enhance asset utilization and minimize abuse
- Enable real time information with exception alerting
- Enable pro-active management & planning

An example of how implementation of GPS Technology helped Gulf Food Trade (exclusive distributor of MARS in GCC) to achieve higher productivity and efficiency has been detailed in the table below.

Efficiency Improvements - Installation of GIS and GPS Systems to Distribution Vehicles by Gulf Food Trade

Company Name	**Gulf Food Trade**
Company Background	Gulf Food Trade is the exclusive distributor of MARS GCC for its famous brands, such as famous brands such as Galaxy, Mars, Bounty, M&M'S, Twix, Snickers, Maltesers, Uncle Bens, Pedigree and Whiskas in the UAE. It has 14,000 points of distribution across the hypermarkets, groceries, self service stores, gas stations, baqualas, hotels, cafes, electronic stores, airports and in fun parks across the seven Emirates of the UAE.
Size of the Company	Number of Employees: 180+ (as of January 2009)
Key Initiative	The company has incorporated Geographic Information systems (GIS) into its distribution vehicles in the UAE to improve logistics to protect the environment and serve customers more efficiently. GIS integrates with Global Positioning System (GPS) technology to optimize the daily routes travelled by vehicles. It also contributes positively to the environment by lessening carbon emissions.
Impact of Investment	Since the investment in the last quarter of 2008, the investment reduced the number of kilometers driven by each van by 57% and Carbon Footprint by 55%. In addition, productivity improved by 133% due to reduced vehicle stops during journeys and kilometers travelled, increase of sales, coverage areas, and sales invoices
Future Plans	By the end of 2010, Gulf Food Trade plans to incorporate GIS into their Pre-Sales operations and empower 45 Vehicles with the system across every channel in the UAE. GIS used in the company’s operations are expected to save one million kilometers which equates to a saving of 134 tonnes of Green House Gas emissions.

GPS systems can also be used to provide a more efficient customer service by allowing customers to track the vehicle on the company's website.

For instance, Fancy Transport had implemented GPS systems in 2009. In 2010, it plans to enhance its customer service by allowing parents of children commuting on their school buses to find out the location of the vehicle anytime by logging on to their website.

Lack of Training

Freight Transport by Land, Private Bus Operators, Limousine Service Providers

Although, the land industry does not need a high level of technical skills and educational qualifications, trainings can facilitate a higher implementation of new technologies and raise the quality standards in these companies.

The traditional focus upon just moving cargo and passengers and manual processing must now give way to skills sets focussed on better management, better customer service, ability to offer complete solutions to clients and ensuring efficient utilization of assets. Some of the key industry players provide in-house trainings; however a large number of SMEs do not focus on skill upgradationupgradaton for their employees:

The following skills upgradationupgradation aspects are important for the land transport industry:

- **Mid-management level:** Skills related to fleet management, increasing technology implementation, and ensuring higher utilization of vehicles
- **Drivers:** Trainings related to:
    - Handling of specialized goods, such as dangerous goods, chemicals, food products, etc.
    - Vehicle maintenance, Safety and fuel efficiency, etc.
    - Documentation and procedural requirements while moving from one free zone to another; crossing borders of GCC countries, etc.
    - Customer service skills for employees in private bus operators, etc.

2. Low Asset Utilization

Freight Transport by Road

Excessive empty backhauling (while moving within Dubai and coming back from other GCC countries and emirates)

Currently, the majority of deliveries involve a leg when the truck is empty. A number of trucks carrying containers from Dubai discharge the containers in other emirates and GCC countries and return to Dubai empty.

This is primarily due to presence of a large number of transport companies even in the other emirates and GCC countries, which makes it difficult to find load.

In certain cases, companies are able to charge full amount (two way charges including the backlog charges). However, at times due to cost competition among the players, they are forced to charge only a one-way fee. Some of the key players (such as Al Mashaweer) have tied up with transport companies or other agents in Saudi Arabia to help them get load while coming back from the kingdom. However, a number of companies do not have such arrangements.

Even within Dubai, there are a number of free zones and industrial zones from where the goods come in the city and go to various malls/locations. A number of trucks commute on the same routes to the same distribution points; but all of them are not fully utilized. Within Dubai, truck utilization is as low as 50%, due to lack of load matching activities by truck operators.

Lack of parking spaces at key locations (leading to movement of empty trucks from their yards to key locations, such as JAFZA, DAFZA, etc.)

The yards of the trucking companies are located in areas, such as Al Aweel, Al Quoz, etc. In contrast, the sources and destination of cargo (free zones, port and airport, etc.) are located at a distance from these yards. Moreover, a number of trucking companies do not even own a yard. This accompanied with lack of parking spaces in the source locations of cargo leads to inefficiencies for the trucking companies.

The trucks are either just parked anywhere near these source locations or the trucks commute empty on atleast one side of their route from the yard or driver accommodation areas. A key reason for these inefficiencies is lack of appropriate urban land planning.[28]

Decline in cargo and passenger volumes due to impact of the economic slowdown

Freight Transport by Road

The slowdown in demand for cargo, especially within Dubai for the construction industry, has impacted the utilisation of trucks.

Moreover, low outsourcing of transport function by large 3PLs, manufacturers and traders makes it difficult for the trucking companies to find cargo. The key reasons for low outsourcing of trucking functions by these companies are:

- There is a lack of high quality standards followed by majority of the firms. High quality refers to companies with good system integration practices, high safety and environment concern, high quality equipments, sound labour practices, etc. These practices are important since the large companies want to maintain their global standards, while servicing their clients in the Middle East.
- Manufacturers and traders, being part of larger business groups, have already invested in their trucks
- Only a few trucking companies offer specialized services, such as temperature controlled trailers for frozen foods, etc.

[28] Findings of the report on the Freight Land Transport Industry prepared by RTA

Bus Operators

The economic scenario has made companies more cautious about their spending on activities, such as transport for employees. There is low focus on quality by these firms and they look for the most economical options provided by extremely small players.

Limousine Services

Low utilization of limousine cars due to slowdown in tourism activity in 2009: Till last year, the limousine services industry was focused on tourism as their key customer segment. However, due to the impact of recession on the tourism industry, it started to focus on corporates. Currently, the share of various customer segments for the industry is as follows:

- Tourism: 60%
- Corporates: 30%
- Resident population for leisure and special occasions: 10%

3. Lack of Stringent Regulations to Ensure High Quality of Services

Lack of stringent regulations for running the operations

Freight Transport by Land

A lack of stringent regulations for the trucking industry leads to negligence on part of the drivers, over-loading of cargo on the truck, etc. This in turn leads to accidents, breakdowns on the roads and loss in efficiencies.

In 2009, trucks were the second highest contributor (16%) to the total number of accidents in Dubai, just after private vehicles which contributed 59% to the total number of accidents with injuries. Some of the accidents of trucks in 2009 and 2010 have been cited below:

- *An accident happened on Dubai Crossing road at 4.30 am after a sleepy Asian driver lost control of his heavy truck and hit a heavy truck parked at the road side.*
- *An overloaded truck tipped over on Shaikh Zayed Road towards Abu Dhabi causing huge tailback on the highway.*
- *An Asian driver was killed when his truck carrying construction materials flipped over on Dubai Bypass Road. The accident happened when the speeding driver lost control of the truck while trying to avoid a road barrier.*
- *A truck driver hit a number of cars and killed one passenger and injured six others. Inattentiveness and failure to keep a safe distance were the main causes of the accident.*
- *Two Asian workers were killed in an horrific accident when their speeding truck collided into another. The driver is believed to have been speeding when he crashed into another truck that was moving at a slow pace in the traffic.*

The key players try to follow a high level of safety standards on their own, however lack of high quality standards amongst the large number of small players can harm image of Dubai.

The key issues with respect to regulations are:

- There are no standards/regulations related to:
  - Selection and training of professional drivers (besides the training required for getting a license)
  - Number of hours that the drivers are allowed to drive
  - Number of years that the trailers can be used
  - Registration of trailers
- There are annual inspections, however some T&S companies get their vehicle parts (for e.g. tyres) replaced just before the inspection and then change back to the old ones once the inspection is done.
- The on-road inspections are also done; however it is limited due to the following reasons:
  - Lack of certain heavy equipments (weighing machines, etc.) with RTA
  - RTA does not have the authority to stop trucks for on-road inspections and impose fines unless it is accompanied by the traffic police. In other countries, such as Australia and UK, the licensing bodies have higher authority to impose fines and conduct on-road inspections.
- EU countries also have 'Defect Clearing System' in place, according to which once the road inspection is done; the vehicle owner has 24-48 hours to fix the defect and get certified by the licensing body that the defect has been fixed.

Private Bus Operators

The industry (staff and commuter services) is highly fragmented. The key players maintain certain service standards to differentiate themselves.

On the regulatory front, stringent rules are applied for school bus operators, whereas the rules are relatively relaxed for commuter and staff services.

E.g. Some of the regulations for school bus operators are related to following quality filters:

- Age of drivers
- Language capabilities of the driver (should be familiar with Arabic or English
- Age of buses (15 years)
- Compulsory training of drivers for driving school buses (every year at the time of license renewal of buses), etc.

However, there is a lack of similar stringent regulations for the staff and commuter services. This has led to lower quality of services being offered by some of the players. Currently, there are no standards related to:

- Cleanliness of buses
- Selection of drivers
- Number of hours a driver is allowed to drive at a stretch

- Training of drivers, etc.

Minimal entry requirements leading to a high level of fragmentation and cost competition

Freight Transport by Land

A key challenge for the industry is the cost competition from large number of owners of 1-2 trucks, who are currently operating by using number plates rented from larger trucking companies. These truck owners are able to charge 30% to 50% lower prices as compared to the rest of the industry.

This leads to loss of business, especially from small traders, who are willing to work with these lower priced-players irrespective of the quality of services offered by them.

Limousine Service Providers

A number of limousine service providers have got number plates issued from RTA. They utilize 10-20 number plates for their operation; and rent the remaining number plates to individual car owners at a monthly fee of AED 2,500-2,600. These companies also arrange for loans for these drivers (cars are usually in these companies' names); but do not have these drivers on their payroll.

These drivers are able to charge much lower prices (AED 500-600/10 hours as compared to 1,200-1,500/10 hours by the professional companies). This has led to very high levels of competition, and the situation worsened with the slack in demand since third quarter of 2008.

Opportunity Assessment

In a business environment of high fragmentation and saturation in the land transportation industry in Dubai, there are only a few niche opportunities for new SMEs to enter the industry.

Niche Opportunities in Land Transport Services for Passengers

Opportunity	Niche land transport service providers for passengers
Key reasons	**Presence of niche opportunities that have not been tapped by existing players.** • **Park and ride services** in office areas: iMan is the only company that offers park and ride services to companies (for their employees) in DIFC. There are other areas in Dubai, such as Emaar Square, where these services could be offered. This could be a B2B or a B2C opportunity. • **Feeder buses from metro stations** (in addition to the feeder buses offered by RTA) for individual customers • **Buses from Dubai to Abu Dhabi from areas,** such as Marina, JLT, Ibn Batuta, where a large number of people are staying who actually work in Abu Dhabi. There are buses from Dubai to Abu Dhabi currently; however they operate from bus stands in Bur Dubai, Deira, etc. but not from that side of the city. This is more of a retail opportunity and not serving corporate clients.
Capital and Regulatory	2. The capital requirement is in investment in a fleet. The amount could vary depending on whether the company buys or leases its vehicles.

Requirements	**3. Capital Investment:** ○ 10 buses: AED 100,000 each ○ Staff: AED 2,000 – AED 4,000 per month per driver ○ Office Set-up: Rent of 5,000-10,000 per month ○ Total Investment: AED 1-2 million 4. **Regulatory Requirements:** ○ Trade license from Chamber of Commerce and license to operate passenger transport from RTA. ○ RTA currently requires 10 minimum number of buses to be registered within the 1st year by the company.
Challenges and Risks	Does not offer potential for a large number of players
SME Potential	**Moderate potential due to overall saturation of the market and potential for only a few niche players**

To summarize, the sub-sectors with potential for SMEs (trucking, bus operators, limousine services etc.) are highly saturated in Dubai, except a few opportunities in niche land transport for passengers.

However, these large numbers of firms have been operating in the traditional way of moving goods and passengers with low focus on technology and skills to achieve efficiency in operations and improve quality of services.

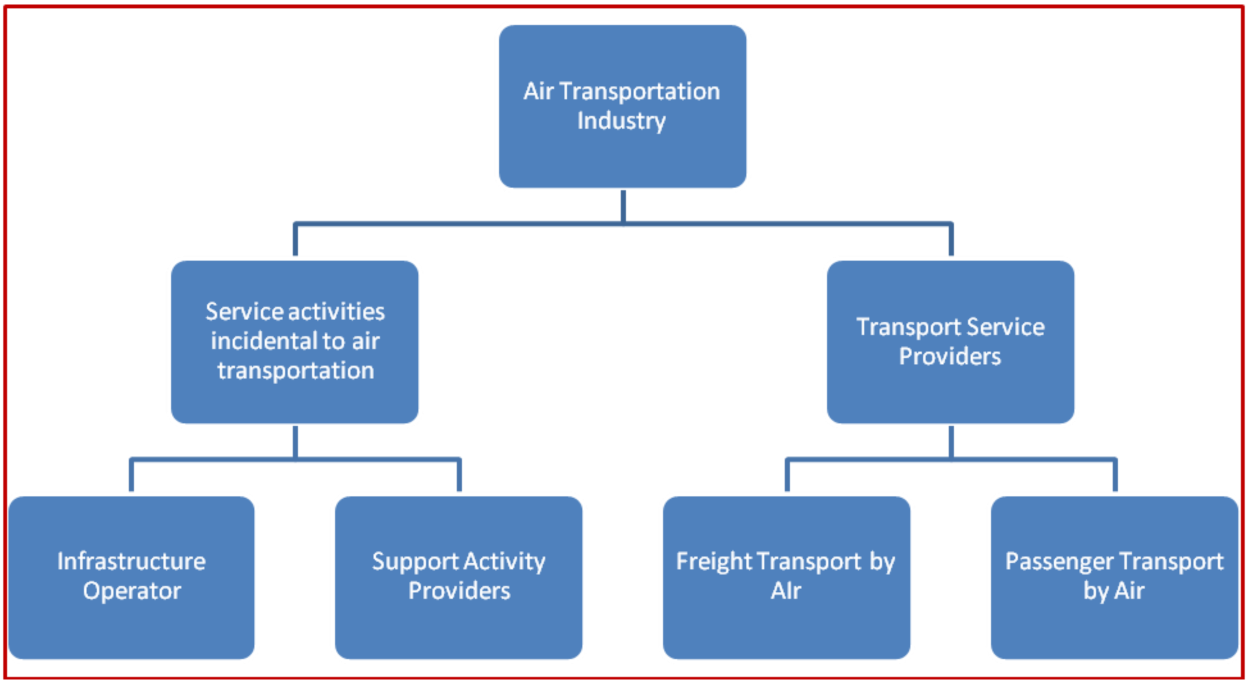
Therefore, the focus has to be to adopt measure to enhance competitiveness of existing companies and promote companies to focus on niche segments.

9. Air Transport Industry

The section discusses the global and regional developments in the air transport industry and their impact on the industry in Dubai.

The Air Transport Industry comprises the following segments (as per ISIC 4).

Structure of the Air Transportation Industry



Key Trends in Global Air Transportation Industry

Slowdown in the Global Air Transport Industry in 2008-2009; however there have been signs of improvement in 2010

- The global air freight sector created total revenues of USD 100 billion (AED 367 billion) in 2008, with a CAGR amounting to 5.6% between 2004 and 2008. After a rapid growth stage between 2004 and 2007 (a CAGR of 7.4%), economic scenario worldwide adversely impacted the aviation industry as reflected in the following facts:
- **The air freight sector grew only by 0.1% in terms of value and contracted by 0.5% in terms of volume in 2008.**

- In 2009, some airports reported extreme decreases in freight volumes due to lower frequency, merged routes and bankruptcies. Also, high oil costs posed a challenge for the airlines and forced them to pass on such costs to customers.
- The cargo volumes fell by 23.2% year-on-year in January 2009, after December 2008's 22.6% decline, the eighth consecutive month of contraction in freight traffic. [29]
- **Overall, air freight volumes fell 7.9% to 79.8 million tonnes worldwide, with the** Middle East being the only region worldwide that witnessed some growth.[30]

However, there have been signs of improvement in the air transport industry worldwide: In June 2010, the global freight volumes increased (by over 20%), the seventh month in a row to record growth. The key results related to the growth in air freight industry in June 2010 are as follows;

- Shanghai, Hong Kong, Frankfurt, Miami, Incheon and Dubai grew by more than 25% compared to the same month last year.
- Total freight tonnage in the first six months of 2010 was higher than in the first half of 2008, before the global recession. According to ACI, declines in Europe (-1.6%), North America (-4.4%), Latin America/Caribbean (-4.4%), and Africa (- 6%) suggest there is still some way to go to overcome the effects of the downturn on airfreight industry.[31]

The following table represents the top 15 airports in the world based on freight tonnage in 2009.

Top 15 Airports in the World Based on Freight Tonnage Handled in 2009

Rank	Airport and Country	'000 Metric Tonnes (2009)
1	Memphis, USA	3,697
2	Hong Kong	3,385
3	Shanghai, China	2,543
4	Incheon, Korea	2,313
5	Paris CDG, France	2,054
6	Anchorage, USA	1,995
7	Louisville, USA	1,949
8	Dubai, UAE	1,927
9	Frankfurt, Germany	1,887
10	Tokyo, Japan	1,852
11	Singapore	1,661
12	Miami, USA	1,557
13	Los Angeles, USA	1,509

[29] Source: The International Air Transport Association (IATA)
[30] Source: Airports Council International (ACI)
[31] Source: Airports Council International

14	Beijing, China	1,476
15	Taipei, Taiwan	1,358

Source: Airports Council International

The table represents that five out of the top 15 airports in the world are in the US. Dubai International airport ranks 8th in the world in terms of air cargo handled in 2009.

Key Trends in the Air Transportation Industry in GCC

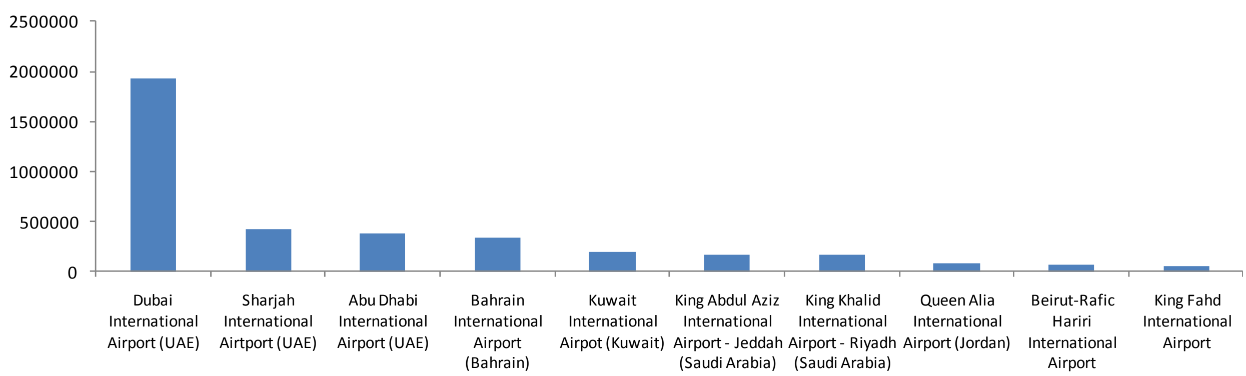
Growth in the Middle East Air Transport industry, in spite of a global slowdown in the industry

Middle East was the only region worldwide that witnessed some growth in the air cargo volumes during 2009. According to ACI statistics, air freight movement in the region grew by 4.9% during 2009.

Dubai International Airport, handling the highest volumes of cargo in the Middle East, witnessed a higher growth (5.6%) as compared to the regional average (4.9%).[32]

The chart below represents the top 10 airports by cargo in the Middle East in 2009.

Top 10 Airports in the Middle East by Cargo Volumes in tonnes, 2009



	Cargo (in tonnes) - 2009	% Increase/Decrease over 2008
Dubai International Airport (UAE)	1,927,520	5.6%
Sharjah International Airport (UAE)	421,398	16.1%
Abu Dhabi International Airport (UAE)	382,523	7.4%
Bahrain International Airport (Bahrain)	342,724	-6.9%
Kuwait International Airport (Kuwait)	197,984	9.9%
King Abdul Aziz International Airport - Jeddah (KSA)	173,630	-4.6%
King Khalid International Airport - Riyadh (KSA)	168,687	11.2%

[32] Source: Airports Council International

Queen Alia International Airport (Jordan)	82,183	-5.8%
Beirut-Rafic Hariri International Airport	72,589	-6.9%
King Fahd International Airport	55,627	-32.1%

Source: [Airports Council International](); Data for airports in Saudi Arabia is for the period Jan-Oct 2009

<u>Large-scale airport infrastructure developments taking place across GCC</u>

There is growing competition for Dubai from the present and upcoming airports in the other emirates and GCC countries.

- Amongst the top 10 airports in the Middle East, a number of airports (Sharjah International Airport, Abu Dhabi International Airport, Kuwait International Airport and King Khalid International Airport – Riyadh) had witnessed a higher growth in 2009.
- Currently, all the other emirates and GCC countries are trying to develop their airport infrastructure further as part of their overall plans to enhance their transport and logistics infrastructure.

The key developments taking place in airport infrastructure have been discussed in the following table.

<u>Key Developments in Airport Infrastructure in GCC</u>

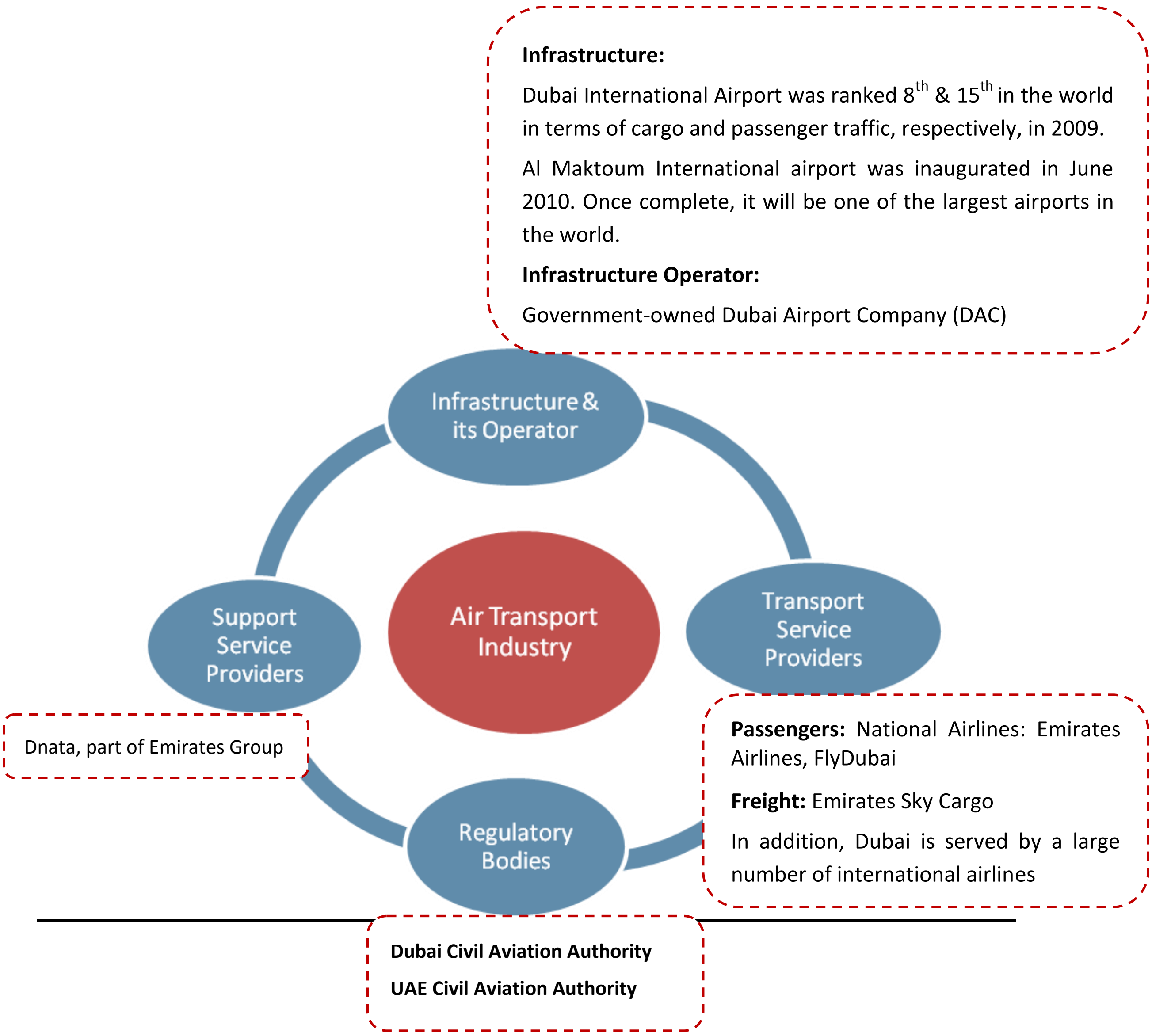
Country	Port	Expected Year of Completion	Capacity Expansion Details
Qatar	New Doha International Airport	2011 (1^{st} two phases) 2015 (final completion)	1^{st} two phases: 24 million passengers and 750,000 tonnes of cargo annually Final completion: 50 million passengers, 2 million tonnes of cargo and 320,000 aircraft landings annually
Saudi Arabia	Development and Expansion of local airports		Plans to spend USD 666 million (approx. AED 2,444 million) for airport expansions. These projects include the development, creation and expansion of 23 airports, locally, that will serve around 9 million travellers annually.
	Expansion of King Abdulaziz International Airport	2012 (1st phase) 2035 (Phase 3)	1^{st} phase: 17 million passengers annually
	Expansion of Prince Mohammed Bin Abdulaziz Airport	2016 (1^{st} phase)	1^{st} phase: 14 million passengers annually (from the current capacity of 3.5 million passengers)
Kuwait	Expansion of the Kuwait International Airport	Over the next five years (1st phase)	Passenger capacity: 20 million passengers and 6 million tonnes of cargo (from the current capacity of 7 million passengers and 600,000 tonnes per year)
Bahrain	Expansion of Bahrain International Airport	2012-13 (terminal 2)	Terminal 2 is being planned by 2012-13. Thereafter, terminal 1A will be built over the next 2-3 years. Once built, these two terminals will have the capacity to handle more than 9 million passengers. A cargo village (an expanded cargo handling facility capable of handling 1.5 million tonnes of cargo) is also being planned.
Oman	Expansion of Muscat International Airport	2011 (initial stage)	Initial stage: 12 million passengers and 200,000 tonnes of cargo annually
	Expansion of Salalah airport	2013	1 million passengers annually
	Construction of an airport at Sohar	2013	500,000 passengers and 100,000 tonne cargo a year

UAE	Inauguration of Al Maktoum International Airport at Dubai	2010	Once complete, the cargo center at the airport will have a capacity of 12 million tonnes and 160 million passengers a year, making it one of the world's largest airports.
UAE	Development at Abu Dhabi International Airport	2015	20 million passengers annually

Air Transportation Industry in Dubai

The various aspects of the air transportation industry in Dubai have been summarized in the chart below.

The air transport industry is primarily dominated by large government-owned enterprises, such as Dubai Airport Company (DAC), Emirates Airlines, Dnata, etc.



Infrastructure and its Operator

Dubai/UAE has a well developed airport infrastructure.

- **UAE was ranked 4th in the world in terms of the air transport infrastructure in the Global Competitiveness Index 2010-11.** The infrastructure is being enhanced further with the development of the Al Maktoum International Airport.
- **Dubai International Airport (DIA)** was ranked 8th and 15th in the world in terms of cargo and passenger traffic, respectively, in 2009.
- Al Maktoum International airport was inaugurated in June 2010. Once complete, the airport will have a capacity of 12 million tonnes of cargo and 160 million passengers a year, making it one of the largest airports in the world.

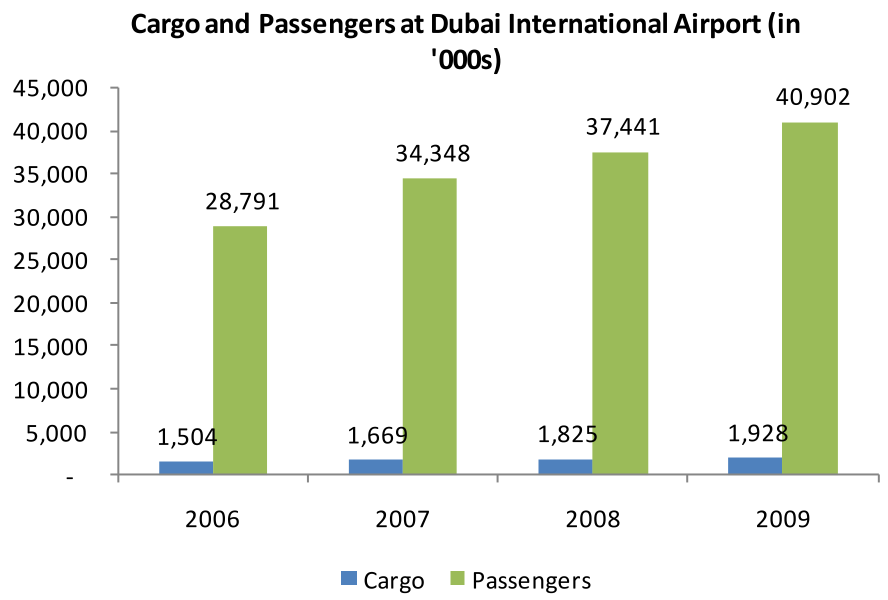
Dubai Airport Company (DAC) is the operator and is primarily responsible for commercial aspects related to the airport, such as renting of spaces.

Cargo and Passenger Movements at DIA

Approximately 2 million tonnes of cargo and 41 million passengers were moved through the Dubai International Airport.

Majority of the air freight in Dubai is transit cargo, going from East to West and to other GCC countries. Approximately 800-900 tonnes of air cargo (40-45% of the total air cargo) is actually brought into Dubai, a part of this is further re-exported through sea and road links.[33]

[33] Source: Expert Interviews



Percentage Growth in Number of Passengers and Cargo Volumes

	2006-07	2007-08	2008-09
Cargo (%)	11%	9.4%	5.6%
Passengers (%)	19.3%	9.0%	9.2%

Source: Airport Council International

Both cargo and passenger volumes witnessed almost 10% growth till 2008. The growth slowed down in 2009 as an impact of the economic recession worldwide.[34] Overall, a 7-8% CAGR is expected over the next 4-5 years in cargo volumes.

Regulatory Bodies

The air transport industry in Dubai is primarily regulated by the Dubai Civil Aviation Authority. UAE General Civil Aviation Authority is the federal-level regulatory body for the UAE.

Regulatory Structure for Air Transport Industry

[34] Source: Expert Interviews

Roles of the Key Regulatory Bodies

UAE General Civil Aviation Authority

To improve the civil aviation industry in the UAE by establishing and developing the policies related to
- Organization of air navigational services
- Enhancing safety and security levels in the aviation industry
- Ensuring quality implementation of the policies in line with the civil aviation approved regulations and the best international standards and practices

Dubai Civil Aviation Authority
- Laying down policies for Civil Aviation in Dubai
- Participating, negotiating and signing of Air Service Agreements, on behalf of the Government of Dubai
- Receiving and authorizing local or foreign air transportation, regular or non regular passenger and cargo flights to and from airports in the Emirates, including landing and operational approval

Air Transportation Service Providers

Emirates Airlines, a government-owned company, is the dominant locally-based airline in Dubai. FlyDubai is a low-cost airline launched in 2008.

In addition, Dubai is served by a large number of international airlines. A total of 140 airlines come into UAE. Emirates Sky Cargo has 60% market share by cargo volume in air transport in Dubai, with Cathay Pacific and Lufthansa being the other two significant players. Overall in UAE, Etihad is the 2nd most important carrier and is also designated as the official airlines of the UAE.

Snapshot of the Industry Structure of the Air Transport Industry in Dubai

The air transport industry in Dubai is dominated by a few large government-owned companies.

Sub-Sector	Presence in Dubai	Key Players
Infrastructure Operators	Monopoly	Dubai Airport Company (DAC) is the operator and is primarily responsible for commercial aspects related to the airport, such as renting of spaces.
Transport Service Providers	Monopoly	Emirates Airlines, a government-owned company, is the dominant locally-based airline.
Support Service Providers for Airport Operations	Monopoly	Dnata, part of the Emirates Group, is the only airport handling services provider.

Given the above, there are no sub-sectors within Dubai Air Transport industry with significant SME presence.

Accordingly, the focus of study has been to examine the issues relating to how SMEs in other transport sectors (e.g. land transport) are affected by constraints in the Air Transport.

In this context, it is observed that there is a difference in administrative procedures for companies inside and outside the free zones. Also, the procedures for moving goods in and out of free zones as well as between them are seen as cumbersome. For instance:

- While moving goods from JAFZA to DAFZA; one needs to get a Bill of Exit while coming out of JAFZA and again a bill of entry at DAFZA.
- In spite of a logistics corridor agreement between Economic Zones World and Dubai Aviation City Corporation, movement of cargo from Al Maktoum Airport to JAFZA (and vice versa); there is still dual inspection of the cargo at the entry and exit points of the two zones.

A key reason for these issues is the fact that there is no single government body responsible for standardizing rules in the various free zones and ensuring a seamless movement of goods within Dubai.

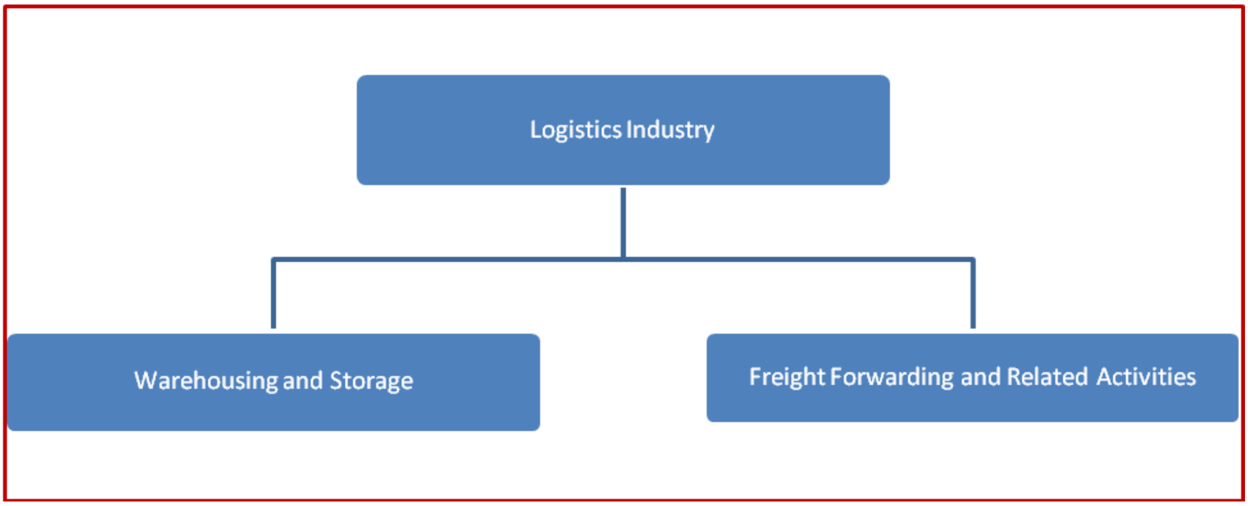
10. Warehousing, Freight Forwarding & Related Activities

Warehousing, freight forwarding & related activities are also generally referred to as "Logistics services". Accordingly, the term "Logistics" in this section would imply warehousing, freight forwarding & related activities, and would generally exclude other core transportation activities like air transport, flag carriers etc (unless otherwise implied by context).

The section discusses the global and regional developments in the logistics industry and competitiveness of the industry in Dubai, especially SMEs.

Logistics companies provide a range of services, such as services related to warehousing, freight forwarding, customs clearance, complete supply chain management, etc. However, they could also offer other related services, such as trucking, courier services, NVOCC operations, etc.

Segments of the Logistics Industry



Note:

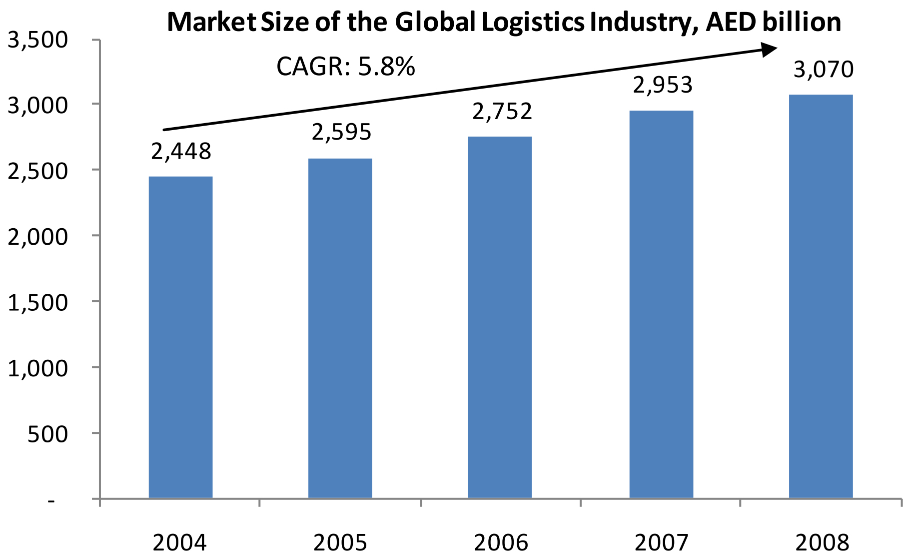
1. *Freight forwarding and related activities include:*
    - *arranging or organizing of transport operations by rail, road, sea or air*
    - *organization of group and individual consignments (including pickup and delivery of goods and grouping of consignments)*
    - *Logistics activities, i.e. planning, designing and supporting operations of transportation, warehousing and distribution*
    - *issue and procurement of transport documents and waybills*
    - *activities of customs agents*
    - *activities of sea-freight forwarders and air-cargo agents*
    - *goods-handling operations, e.g. temporary crating for the sole purpose of protecting the goods during transit, uncrating, sampling, weighing of goods*

Key Trends in the Global Logistics Industry

Slowdown in the Courier Services industry in 2009; however there have been signs of improvement in 2010

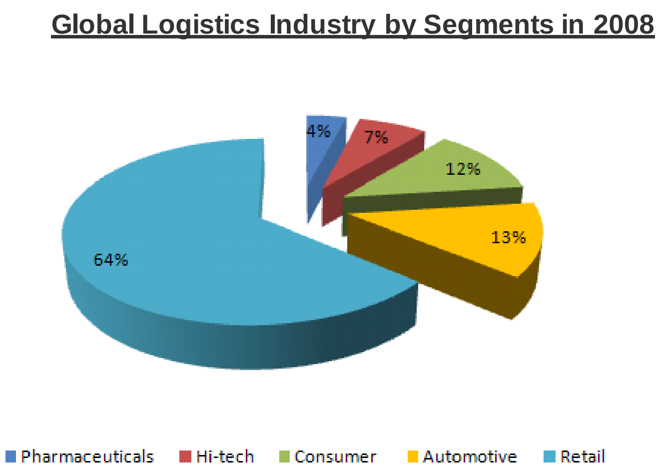
The global logistics industry witnessed a growth of 5.8% from 2004 to 2008 and generated total revenues of **USD 836.4 billion (AED 3,070 billion)** in 2008.

By 2013, the global logistics market is forecasted grow at 5.7% with a market value of **USD 1.1 trillion (AED 3 trillion)**.



Source: Datamonitor

The demand for the logistics industry is primarily driven by the retail industry, which constituted 64.1% of the market value in 2008.



Source: Datamonitor

The key global players in the various segments of the logistics industry are Kühne + Nagel and DHL, who rank amongst the top three players in sea, air, road & rail and contract logistics segments (as detailed in the following table).

Ranking of Top Players in the Logistics Industry Worldwide, Rank based on Turnover 2008

	Sea	Air	Road & Rail	Contract Logistics
Kühne + Nagel	1	3	6	3
DHL	2	1	2	1
DB Schenker Logistics	3	2	1	6
CEVA Logistics	>10	5	-	2
Panalpina	4	4	-	-
DSV	>10	>10	3	>10

Source: Annual Financial Presentation of Kühne + Nagel for 2009, Based on Turnover for 2008

There was a negative impact of economic recession on the global logistics industry as reflected by decline in revenues for key players. This led to a decline in gross profits, which made companies focus on controlling costs and improving productivity levels.

Overall, things have been looking positive for the logistics industry since early 2010 as reflected in results of some of the key logistics firms. The following table reflects decline in revenues for the key players from 2008 to 2009, however an increase between first half of 2009 and 2010.

Change in Revenues of Key Global and Regional Logistics Players From Their Warehousing and Freight Forwarding Business Segments, 2008 to 2010

		% Change in Revenues from 2008 to 2009	% Change in Revenues from H1 2009 to H2 2010
Key International Players with offices worldwide	**Panalpina**	-32.9%	+17.1%
	Kuehne + Nagel	- 19.4%	+24.7%
	DHL	-16%	+19.0%
	DB Schenker Logistics	-23.4%	+23.2%
Key Regional Players with a high focus on Middle East region	**Agility**	-7.6%	+1.5%
	Aramex	-15.7%	+19%

Source: Financial Statements of Panalpina, Kuehne + Nagel, Agility, Aramex, DHL, DB Schenker Logistics

Consolidation is a key trend in the logistics industry worldwide

The key logistics players have been focusing on acquisitions in transport and logistics companies as a route to extend their presence across the world. Acquiring a company instead of growing organically provides the acquiring company a network of existing customers, regional presence, etc.

Growing environmental concerns

There is a growing awareness and concern amongst the logistics players worldwide to minimize the impact of their operation on the environment**.**

In a survey conducted by Transport Intelligence amongst 450 logistics companies across the world, the vast majority of respondents stated that the environment was either 'important' (52%) or 'highly important' (35%) to their companies' strategy.

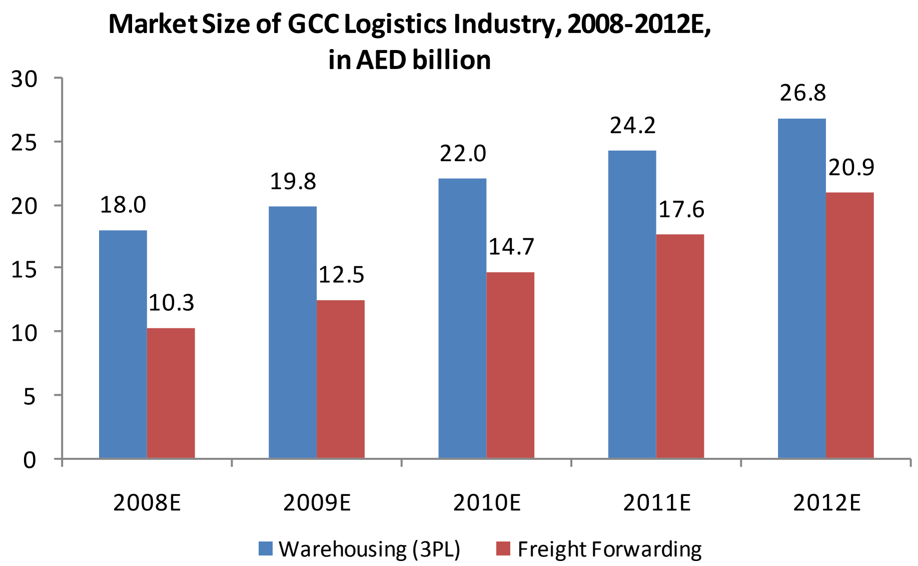
Warehousing was mentioned as one of the areas in which companies' environmental impact could be reduced. In addition to choosing specially designed 'green' warehouses, many respondents said that a number of initiatives can be adopted to reduce impact within older facilities. This included recycling of packaging waste, reducing air conditioning use, switching off lights and, etc.

In terms of using technology to reduce the impact on the environment in the warehouse sector, improvements in pervious concrete were mentioned, which prevents run off. Others indicated reduction in unnecessary use of paper by making processes online as one of the key initiatives.

Key Trends in Logistics Industry in GCC

Growth in the GCC logistics industry expected to be driven by Economic growth and substantial investments in manufacturing industries across GCC

The warehousing and freight forwarding industry is estimated to be AED 28 billion in 2008. It is expected to grow at a CAGR of 14.4% to reach the market size of AED 48 billion in 2012.



Source: Booz and Company

Economic growth and substantial investments in manufacturing industries across GCC (even after the decline in oil prices in the fall of 2008) is expected to be the key driver for the industry.

The other drivers promoting growth of the industry are:

- **Low logistics outsourcing levels in the region, especially when compared to global benchmarks.** As worldwide and strong regional logistics service providers grow their global footprint and capabilities, the level of outsourcing can be expected to increase in the near future.
- **Establishment of regional distribution and logistics headquarters in the Middle East region,** due to improved accessibility by road, sea, and air; strong and efficiently managed free zones; and good access to markets in the Cauca-sian and Central African countries.
- **Evolution of global logistics hubs in key locations, such as Dubai, along the Europe–Asia trade route**

Expansion by medium to large-size logistics companies from their base countries into other GCC countries

- Mohebi Logistics, a Dubai-based logistics company, plans to expand into Abu Dhabi and other GCC countries (primarily Saudi Arabia and Oman) due to customer's demand to have warehousing set-ups in these locations
- Maxx Logistics, a Saudi-Arabia based company had set up its office in Dubai in 2008 as a warehousing company. It later expanded by starting its freight forwarding division as well.
- Reliance Freight Systems, a Dubai-based logistics company, opened its Abu Dhabi office in 2010

Development of Free Zones within UAE and Across GCC Countries

A number of logistics free zones are being developed in the UAE and other GCC countries to tap into the potential growth opportunities in the logistics industry.

The following table details the free zones that are being planned or have been developed recently in GCC.

Key Logistics Free Zone Developments in GCC

Free Zone	Country	Benefits
Bahrain Logistics zone (BLZ)	Bahrain	BLZ is strategically located at a distance of 13 km from the airport, 1 km from Khalifa Bin Salman port, 40 km to KSA through the King Fahad causeway. It offers companies flexible tenancy options and a full range of services, including: Serviced warehouses, offices and commercial spaces, purpose built infrastructure, one-stop-shop government and facilities services, etc.
Logistics Village	Qatar	It is a one million square meter development strategically positioned in the Industrial Area of Doha. It will have readily available infrastructure with components such as: dedicated warehouses, multi-purpose warehouses, car storage, container yard and repair depot, etc.
Abu Dhabi Airport Business Park	Abu Dhabi	It offers world class infrastructure and user-friendly environment for a broad range of businesses including: Aviation & Aerospace, Logistics, Cargo & Freight, internet and IT solutions, Telecommunications, etc. It will offer a number of benefits such as congestion-free serviced facilities, efficient cargo clearance services, access to international freight forwarders & logistics services

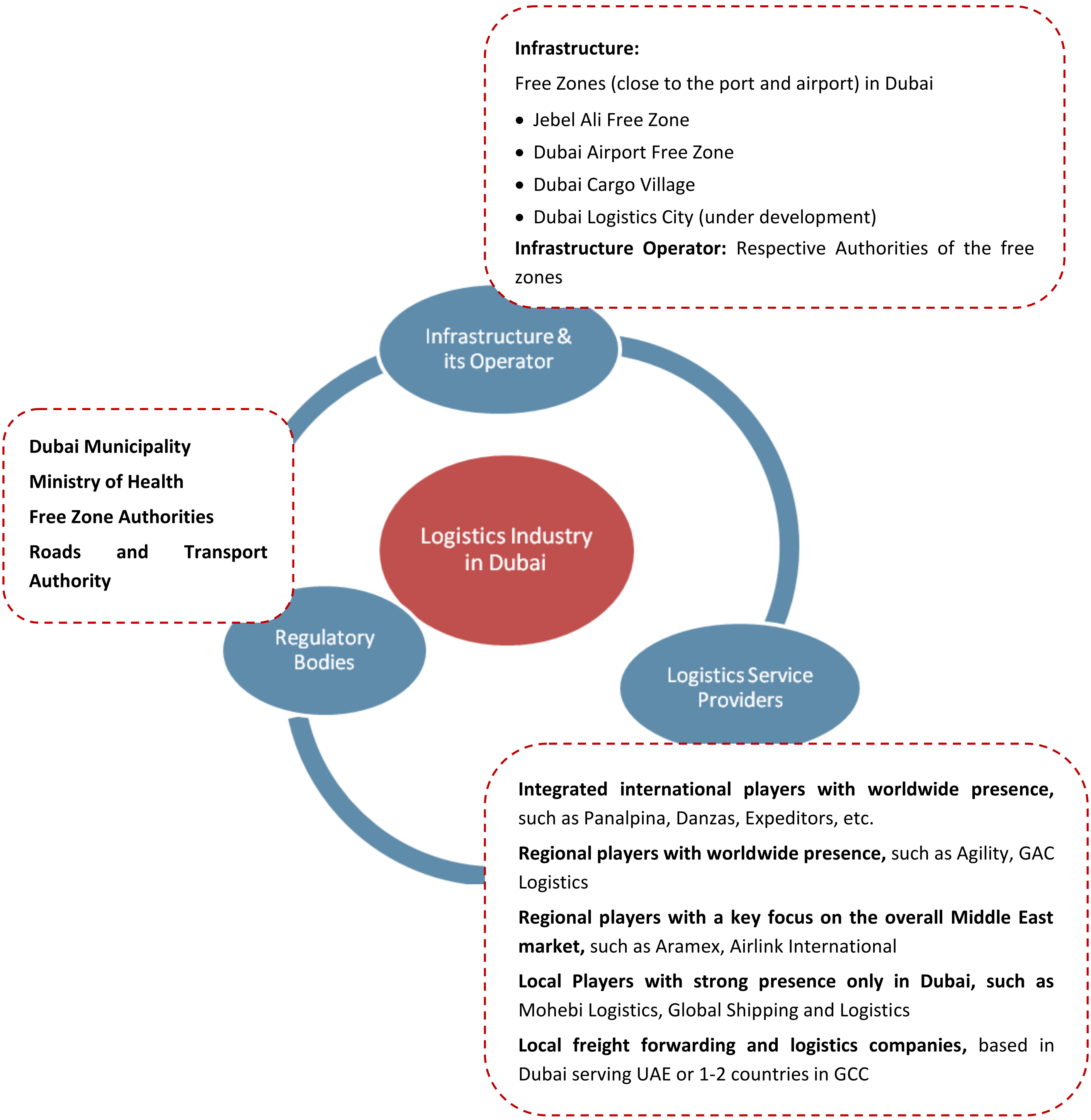
		complemented with a wide array of free zone offerings.
Khalifa Port and Industrial Zone (KPIZ)	Abu Dhabi	It will be a multi-purpose facility located in Taweelah, strategically located between the Abu Dhabi and Dubai. The project includes the construction of a world-scale container and industrial port and the development of over 100 sq.km of industrial, logistics, commercial, educational and residential special economic and free zones.
Sharjah International Airport Free Zone	Sharjah	SAIF-Zone is built adjacent to the Sharjah International Airport and is easily accessible to Port of KhorFakkan and Port Khalid.

The infrastructural developments in the other GCC countries can potentially pose a threat to Dubai to serve as the transportation and storage hub in the region. Thus, in order to maintain its competitive advantage in the region and to serve as a global hub, Dubai needs adopt measures to identify and enhance the areas of low competitiveness in the industry.

There have been signs of consolidation and growing environmental concern in the logistics industry. These have been discussed in the section on Overview of Transportation & Storage industry in Dubai.

Logistics Industry in Dubai

The various aspects of the logistics industry in Dubai have been summarized in the chart below.



Infrastructure and its Operation

The infrastructure is operated by logistics players inside or outside the various free zones.

There are a number of free zones in Dubai. They have become clusters for the logistics industry. The commercial incentives offered to companies in free zones are as follows:

- 100% foreign ownership
- Zero corporate and income taxes
- No customs duty
- Exemption from local labour restrictions
- Full repatriation of profits and capital
- No foreign currency restrictions

Free zones in Dubai for the Transportation and Storage Industry

Name	Year of Establishment	Description	Number of Companies
Jebel Ali Free Zone	1985	**First free zone to be established in GCC; operated by Jebel Ali Free Zone Authority** Allows companies to base their warehousing **operations right next to the port** - Goods can come into port, be shifted to a nearby warehouse and then loaded into a truck for redistribution across the GCC. **Situated between Jebel Ali Port and the Al Maktoum International Airport**, JAFZA will facilitate the transportation of goods (custom bound) from sea to air through the Logistics Corridor.	6,400
Dubai Cargo Village (now rebranded as 'Dubai Cargo Gateway')	1991	Owned by the Dubai Department of Civil Aviation and located adjacent to Dubai International Airport **Offers sophisticated and specialized storage facilities for everything from live animals to perishables to explosives**	
Dubai Airport Free Zone	1996	**Offers strategic location next to Dubai International Airport,** along with the other benefits of being located in a free zone Operated by Dubai Airport Free Zone Authority	1,450
Dubai Logistics City	2010	**Offers an integrated logistics platform with all transport modes**, logistics and value added services, including light manufacturing and assembly, in a single customs bonded and Free Zone environment **Due to its adjacent location and direct connection with the Jebel Ali Port and Free Zone through the Dubai Logistics Corridor**,** DLC is expected to facilitate the transportation of goods from air to sea and vice versa.	Over 150 companies have reserved space within DLC

Source: Websites of the respective free zones

***Dubai Logistics Corridor: Economic Zones World (through its flagship entity JAFZA) and Dubai Aviation City Corporation (responsible for Dubai World Central Development) agreed to collaborate to form a Logistics corridor in order to enhance links between sea, land and air to create a multi-modal logistics platform.*
As per the agreement, the two entities will effectively act as single entity (in terms of business processes, sharing of assets, etc.) facilitating seamless and fast transportation of goods from sea to land and air (and vice versa).

Regulatory Structure

A number of regulatory bodies in Dubai are responsible for specific aspects of the industry.

- **Dubai Municipality** sets guidelines related to safety and hygiene standards for warehouses in Dubai.
- Specialized warehousing for pharmaceuticals requires certifications from **Ministry of Health.**
- **Free Zones Authorities:**
    - The companies under each of the free zones are licensed and regulated by the **licensing departments of the respective free zone authorities.**
    - **Environment, Health and Safety departments** of the respective free zone authorities (along with Dubai Municipality) are responsible for ensuring health and safety standards being ensured by the warehouses in their free zones.
- **Roads and Transport Authority**
    - Responsible for planning and providing the requirements of transport, roads & traffic in Dubai, and between Dubai and other Emirates of the UAE as well as neighboring countries
    - Responsible for planning, constructing, operating and maintaining infrastructure for road and inland marine transport in Dubai
    - Responsible for licensing and inspection for all kinds of road transport vehicles

Logistics Service Providers

There are a large number of companies offering logistics services in Dubai.

The table below provides a snapshot of the role of SMEs in the logistics industries in Dubai.

Snapshot of the Role of SMEs in the Logistics Industry in Dubai

Sub-Sector	Key Players
Warehousing and Storage	The warehouses are owned and operated by logistics companies or by traders and manufacturers themselves. There are a range of logistics companies in Dubai. These range from global companies, such as Danzas, Panalpina to strong regional players, such as GAC, Agility and domestic logistics companies, such as Mohebi Logistics, Freight Systems, etc. In addition, there are a large number of warehouses operated by freight forwarders, traders and manufacturers.
Freight Forwarding and Related Activities	The industry is highly fragmented. There are 1000s of freight forwarding companies in Dubai, ranging from 1-2 people set-up to large international 3PL companies operating low-asset based operations (for e.g. Expeditors).

Sub-sectors with SME presence

Competitive Landscape of the Sub-sectors (with a high SME presence)

- The industry is characterized by presence of a large number of players ranging from integrated global and regional players to extremely small freight forwarding businesses run by 1-2 individuals.
- Most of the players in the industry (especially the international and regional players) do not focus on only one business activity; but provide a range of logistics services, such as warehousing, freight forwarding, trucking, etc.
- The freight forwarding industry is highly fragmented with thousands of players operating in this segment. These companies generally do not have own offices in other countries and use formal or informal networks to connect with agents in other countries.

The various categories of logistics companies have been discussed in the following table.

Competitive Landscape of the Logistics Industry in Dubai

Category	Examples of Companies	Revenues	Description
International Players with offices worldwide	• Expeditors • Danzas • Panalpina • Kuehne+Nagel		These companies usually have global contracts and they have their regional distribution centers in Dubai.
Regional Players	• Agility • GAC	>USD 1,000 million (More than AED 3,700 million)	These have **emerged from being only regional players to having operations worldwide. However,** the **Middle East region accounts for majority of their revenues.** For e.g. Aramex derives 73% of its revenues from Middle East (2009) and operates in multiple segments, such as express delivery, freight forwarding, warehousing, customs brokerage, etc. Agility derives 42% of its revenues from Kuwait; with another 21% accounted by Asia and Middle East.
	• Aramex • Al Futtaim Logistics • Airlink International • Freight Works	USD 100-600 million (AED 370-2,200 million)	
Local Players	• Freight Systems • Global Shipping and Logistics (GSL) • Mohebi Logistics	USD 15-100 million (AED 50-370 million)	**These operate primarily in Dubai/UAE.** **Some of them operate in specialized segments.** For instance, GSL and Mohebi Logistics specialize in logistics for the food and beverage industry.
	A large number of players exist in this category. For e.g.:	Less than USD 15 million (AED 50 million)	These serve a few clients. **Some of them are either more focused on non-asset activity or they own and operate** warehouses in areas, such as Al Quoz,

	• Reliance Freight Systems • Triple Crown Shipping and Forwarding • Heavy Loads • Dux Logistics		Al Aweer, etc. In case their clients, need to operate through free zones; these local players rent space in warehouses of the companies in JAFZA.
Small freight forwarders	These are extremely small freight forwarders run by 1-2 individuals.		

Source: Expert Industry Interviews and annual reports of publically listed companies

Key Trends in the Regional Logistics Industry

Focus on niche segments by a few players

In an industry, which is comprises a large number of players, it is imperative for SMEs to focus on niche segments in order to differentiate themselves from the rest of the industry. This allows them to provide customized services to a niche clientele.

A number of companies, such as Mohebi Logistics, Global Shipping and Logistics, Hazmat Logistics, etc. are focusing on niche segments in order to differentiate themselves.

<u>Examples of Companies Focusing on Niche Segments</u>

- **Mohebi Logistics and Global Shipping and Logistics** are two of the companies that have focused on logistics of food and beverages as a segment. Both of them offer warehousing at different temperature levels of frozen, chilled and temperature controlled environment.
- **Heavy Loads,** a small-size freight forwarder operates in the niche segment of moving heavy volume oil field equipments from UAE to Libya (Africa).

  For this route, the two available options for any companies are:

  - **Air transport:** a **flight would take two days but would be extremely expensive**
  - **Water Transport: a ship from Dubai would take a month** since there is no main line going directly from Dubai to Libya (except an Iranian line – which can't be used since the company's clients are Americans). The main lines either go through Jeddah (GCC) or Spain or Italy (Europe).

  The company has been able to overcome these limitations and manage the transportation of oil field equipments from UAE to Libya in 15-20 days by devising the route in the following way:

  1. Send goods using land transport from UAE to Egypt
  2. Send the goods from Egypt to Africa by ship

Such specializations indicate a higher need for collaborations in the industry. For instance:

- Some of the larger 3PL companies outsource their warehousing needs for food and beverages to Mohebi Logistics.
- Dux Logistics, an SME player in freight forwarding and warehousing, works with a number of 3rd parties in warehousing (for its warehousing needs in the free zones) and trucking companies to provide a complete solution to its clients.

Focus on quality and more efficient customer service to differentiate by a number of players; however there is increasing cost competition due to oversupply in the market

Some of the key players have implemented initiatives that have helped them to differentiate and also achieve higher productivity as compared to the large number of SMEs present in the industry.

Examples of Differentiation and Other Initiatives Adopted by the Key Players

- ISO certifications that requires them to maintain timesheets and standard operating procedures for all operational activities
- Implementation of track and trace capabilities
- Providing in-house training to their employees in areas, such as handling of specialized cargo (chemicals, paints, food and beverages), inventory management, warehouse management systems, etc.
- Implementation of Warehouse Management Systems

However, due to the impact of the economic slowdown, there is lower asset utilization, leading to greater cost competition in the industry.[35]

Consolidation is an emerging trend

In line with the global and regional trend of consolidation, there have been a number of instances of consolidation in the industry in UAE, for instance:

- **Toll Group,** a leader in integrated logistics in Asia, **acquired Logistic Distribution Systems (LDS)**, a large private international freight forwarder based in Dubai. The objective of the acquisition for LDS was to strengthen its existing operations as a global transshipment hub for freight movements between Europe and Asia. LDS has the image of being a quality freight forwarder in the trade lanes between Dubai and Europe/Asia Pacific.
- In **2008,** Barloworld **Dubai-based logistics company had acquired Swift Freight** (along with its various affiliates in the Middle East, Indian subcontinent, Africa, Europe and the Far East) in a deal worth approximately USD 70 million (AED 257 million). [36]
- **Gulftainer** (manager and operator of container terminals in Port Khalid and Khorfakkan on behalf of Sharjah Port Authority) **acquired Avalon General Transport LLC** (a trucking company) **for Gulftainer's**

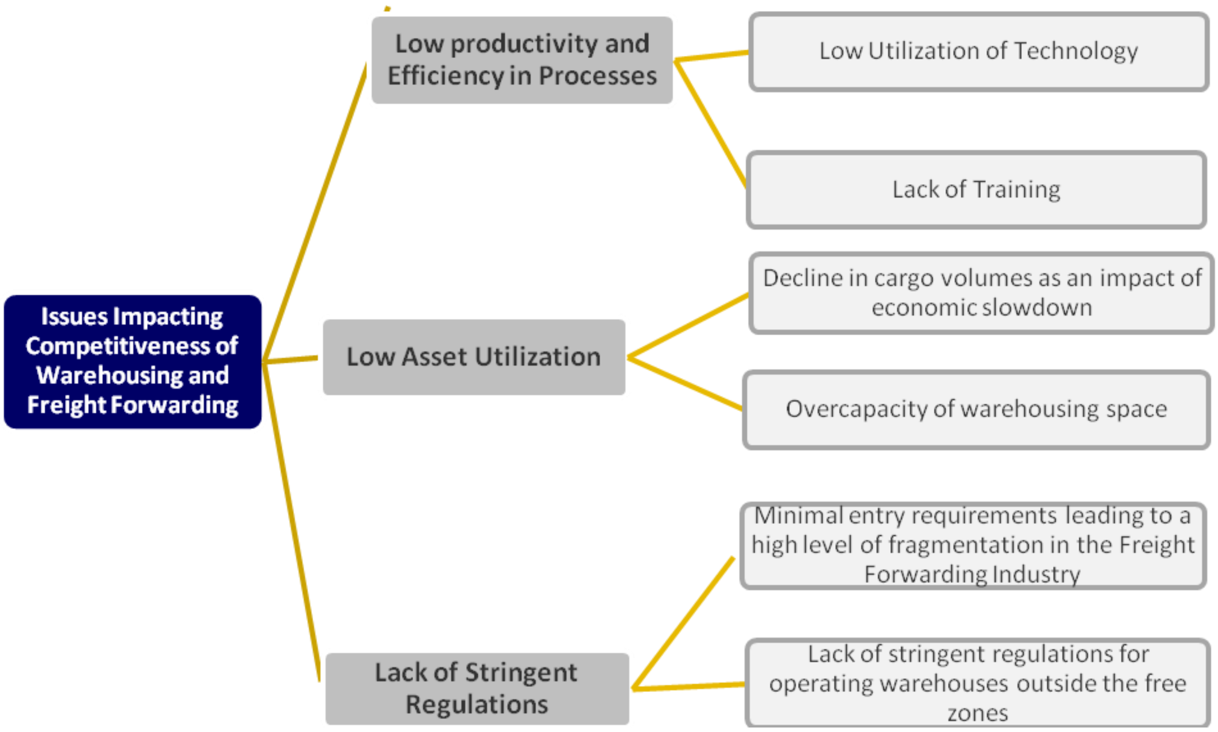
[35] Discussed further in the section on issues impacting competitiveness
[36] Source: News Articles – Arabian Supply Chain

transport business (run under the brand Momentum). The objective of the acquisition was to gain wider access to GCC markets and increased ability to participate in major logistics and distribution contracts.[37]

Key Issues Impacting Competitiveness of SMEs in Dubai

There are three key issues for the SMEs in the logistics industry:

1. **Low Asset Utilization**
2. **Low Productivity and Efficiency in Processes**
3. **Lack of Stringent Regulations to Ensure High Quality of Services**



1. **Low Productivity and Efficiency in Processes**

Lack of Training

Warehousing and Storage; Freight Forwarding and Related Activities

[37] Sources: News Articles - MENAFN

The availability of employees, especially low-skilled labor, has been an advantage for Dubai. Dubai has traditionally been open for low-cost labor from South Asia, and its high quality of life attracts foreign specialists.<<do mean foreign SPECIALISTS or do we mean foreign labour?>>

However, the industry is witnessing some issues with respect to skills of existing employees in the industry since most of the employees lack an academic background or any kind of training in the logistics industry. The key issues with respect to skills of current workforce are:

- **Lack of core skills at the lower level, even covering basics such as English and numeracy.**
- **There is scarcity of high-quality labour** in areas, such as fork lift drivers, IT (including software skills for warehouse management), warehouse supervisors, and experienced white collar workers (unless already employed by competitor).
- **The employees in the industry are primarily expatriates with extremely low involvement of Emiratis,** leading to hesitation on part of employers to train transient labour (especially through 2-3 year courses available in the industry currently).[38]

Although, the industry has been able to sustain with the current skill levels, trainings can facilitate a higher implementation of new technologies, increase productivity (by shortening the learning cycle) and raise the quality standards of services.

Some of the key industry players provide in-house trainings; however a large number of SMEs do not focus on skill upgradation of their employees:

The following skill upgradation are important for the logistics industry:

- **Mid-management level:**
    - Use of warehouse management systems
    - Understanding global best practices to identify better ways of doing routine work and make operational improvements.
    - Bills of Lading (liabilities and disputes in bills of lading)
    - Demurrage clauses in freight handling contracts
    - Warehouse supervision and Inventory management

- **Low-skill labourers:** Trainings related to:
    - Handling of specialized goods, such as dangerous goods, chemicals, food products, etc.
    - Documentation and procedural requirements while moving from one free zone to another; crossing borders of GCC countries, etc.

[38] Source: Expert Interviews and Dubai Logistics Labour Market Study conducted by Foreign Investment Office of the Department of Economic Development

Low Utilization of Technology

Warehousing and Storage

Implementation of technology to automate warehouses can be at two levels:

A. **Automation of processes:** This relates to implementation of one or more of the following:

<table>
<tr><th>Systems/ Technologies</th><th>Key Suppliers in Dubai</th><th>Description and Benefits</th></tr>
<tr><td>Warehouse Management Systems (WMS)</td><td rowspan="2">Ehrhardt + Partner Solutions (EPS)
Red Prairie
SPAN group</td><td>WMS helps to plan movement and storage of materials in a warehouse. It provides a set of computerized procedures to handle the receipt of stock into a warehouse, decide the location of storing the goods and enable a seamless link to pick, pack and ship goods out of the facility.
• Optimize overall warehouse operations
• Reduce working capital and labor costs
• Gain accuracy while sending out goods by using principles, such as FIFO[39]
• Enhance customer service and ensure on time deliveries
• Reduced paperwork through electronic document routing and defined workflows</td></tr>
<tr><td>Pick by voice systems, RFID, Bar Coding, etc.</td><td>These are used in conjunction with WMS to enhance picking and receiving capabilities. The key benefits are:
• Improve workforce productivity and efficiency by reducing possibility of errors
• Enhance product traceability
• Enhance customer service levels
• Improve space & asset utilization
• Improve management control & reporting
• Reduce thefts of valuable items & shipments
• Reduced training requirements</td></tr>
<tr><td>Sophisticated racking and shelving systems (mobile racking, Very Narrow Aisle racking, etc.)</td><td rowspan="3">• Schaefer
• FAMCO
• SPAN group</td><td>These systems help to ensure optimal space and asset utilization.
Mobile racking provides maximum utilization of the warehouse space, since the rack/superstructure is fixed onto electrically powered mobile bases, which move on rails embedded in the floor. The rack can be moved as and when required.
Very Narrow Aisle Racking or VNA racking decreases the aisle widths by 50% for greater storage capacity.</td></tr>
<tr><td>Material handling equipments: conveyor belts, automated laser guided forklift trucks, etc.</td><td>These equipments facilitate movement of goods inside the warehouse with higher accuracy and lower human involvement.</td></tr>
<tr><td>Dock Doors & Levelers</td><td>Useful to ensure rapid, safe, and effortless access between the docks and trailers</td></tr>
</table>

Source: Expert Interviews

Implementation of these systems reduces human involvement (thus reducing chances of errors) and easier and faster movement of goods in the warehouses.

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[39] FIFO refers to First In First Out; according to FIFO – goods coming in first should be sent out first in order to avoid their expiry

B. **Full automation of warehouses:**

This requires minimal human intervention and completely automated systems in the warehouses. These are more relevant for manufacturing and retail companies **requiring fast movement of huge amounts of goods**, especially in food and beverage industry.

<u>Key issues with respect to low utilization of technology in the warehousing industry:</u>

- A number of warehouses belonging to small to medium-size logistics firms in Dubai lack in sophisticated warehouse management systems and they still rely on excel sheets and manual systems.
- Automation in medium and large size companies in Dubai is also lower as compared to their international counterparts.
  - Most of the key 3PL players have automated their processes by investing in sophisticated racking and shelving systems and warehouse management systems. However, there is still scope for improvement in these processes. For instance, a number of firms have not invested in conveyor belts, automated laser guided forklift trucks, etc.
  - A number of improvements are possible in operations of local traders and manufacturers, who currently manage their logistics functions internally.
  - Approximately only 50% of firms dealing in food and beverages in Dubai have mobile racking (which is extremely important for efficiencies in food and beverage industry).[40]

The key reasons for a relatively lower implementation of technology in warehouses in Dubai are:

- Large 3PLs hesitate to make long term commitments in the Middle East by making significant investments in automating warehouses since most of their contracts in the region are not beyond 2-3 years.
- Availability of cheap labour makes it cheaper to hire more labour (in the short-medium term) than to implement automation solutions
- Slowdown in demand and cost competition (leading to impact on margins) has made companies hesitant to invest more
- Lack of sufficient volumes with some small to medium-size companies makes it difficult to justify return on investments for these technologies
- **Lack of awareness of complete benefits and background about implementation of these systems**; for instance, a number of times the companies construct the warehouse and then start looking for the right automation solutions – however it should be done the other way round
- **Full automation is not so prevalent due to low presence of manufacturers** in Dubai

[40] Expert Interviews with providers of racking and shelving systems in Dubai – Schaefer and FAMCO

Freight Forwarding and Related Activities; and overall the logistics industry

Low Level of Implementation of IT systems by Freight Forwarders: A number of software systems are available for freight forwarders. A number of freight forwarding SMEs have not implemented these systems due to cost constraints. Such systems help in quick response to customer queries and quotes, enhance tracking and tracing capabilities, etc.

Even among the freight forwarding SMEs that have implemented some software systems for internal processes; most do not have track and trace systems for their customers. Most of the updates regarding the location of the cargo are shared with customers manually (phone or email). In contrast, most of the international players (DHL, Panalpina, Kühne + Nagel, etc.) and some of the regional players (Aramex, Agility, Freight Systems) offer tracking and tracing capabilities on their websites for their customers. The track and trace systems have the following benefits:

- Enhance customer service by providing up-to-date information about the goods being moved
- Reduce human involvement in providing these services, thus enhance productivity of the firm
- Differentiate from a large number of logistics companies present in the industry

2. Low Asset Utilization

Warehousing and Storage

- Prior to 2009, there was a strong demand and less warehousing space. The situation has changed with the slowdown in demand due to the economic recession, leading to an oversupply of warehousing space.

- Overcapacity in warehousing space has led to a high cost competition in the warehousing industry, leading to impact on margins especially for SMEs. Large 3PL companies have been giving offers, such as six-month free warehousing, extremely low rates, etc.

  Earlier, the warehousing rates were AED 1 per cubic meter per day; a number of companies have now reduced the rates by 50-60% to as much as AED 0.40-0.50. This has led to decline in revenues of other companies and a significant impact on their revenues and margins.

3. Lack of Stringent Regulations

Minimal entry requirements leading to a high level of fragmentation in the Freight Forwarding Industry

Freight Forwarding and Related Activities

Lack of any entry requirements (capital and regulatory) has led to presence of thousands of freight forwarders in Dubai. A large number of these are driven opportunistically. Many of the small operators lack sophistication in their processes and systems. This accompanied by absence of mandatory liability insurance for freight forwarders implies that Dubai’s transportation and storage ecosystem carries uncovered risks in certain areas. E.g. Currently, if a freight forwarder commits professional errors or omissions (such as misdirection of cargo, etc.), his liability is limited to AED 300,000 (the amount paid by him to get his license).

Lack of stringent regulations for operating warehouses outside the free zones

Warehousing and Storage

Dubai Municipality and the Environment Health and Safety Departments of the respective free zones are responsible for ensuring that the warehouses inside the free zones meet the required standards. For locations outside the free zones, it is only the responsibility of Dubai Municipality to ensure that the warehouses meet the required standards.

However, there is a need for more stringent implementation of the requirements since a number of warehouses (especially the ones outside the free zones in areas, such as Al Quoz, Al Aweer, etc.) do not meet the required standards in Dubai.

These standards are related to the following aspects:

- Health and safety of employees
- Environment concerns
- Waste management
- Fire safety systems
- Standards for handling specialized goods, such as food, flammable materials and explosives such as firecrackers, chemicals and gas cylinders, etc.

Lack of thorough implementation of standards leads to various potential problems: adverse impact on the quality of goods (especially food products), lower productivity of employees and fires and accidents in the warehouses, as also upward pressures on insurance premiums.

Some of the instances of accidents in warehouses in Dubai are as follows:

- June 2010: A fire broke out in two warehouses storing food products in Al Quoz and it completely destroyed these warehouses.[41]
- July 2010: A major fire broke out in the warehouse complex of Adamallys Ship Chandlers located in the Al Ramool area near Dubai International Airport. The fire was believed to have started from one of the warehouses which contained fire-sensitive materials, such as marine cables, clothes, high pressure cleaners, marine chemicals and lubricants, etc.
- October 2009: A warehouse facility for wooden doors and windows in the Ras Al Khor area of Dubai was partially destroyed after a fire broke out in the facility.
- February 2009: A fire broke out in an Al Quoz compound containing 22 warehouses storing design materials. Two warehouses were completely burned out and a third warehouse was mildly damaged.[42]

[41] Gulf News
[42] Gulf News

- January 2009: A fire destroyed six warehouses in Al Quoz Industrial Area. The fire was caused due to a faulty exhaust fan, which led to generation of a lot of heat that burnt the wires and carton carrying storing home appliances. All the six warehouses were built in 'U' shape and there were no barriers between them which allowed the fire to spread easily.[43]

In addition to these incidents, as part of an inspection by Dubai Municipality in May 2010:

- 56% of the food storage warehouses were fined for a number of offences, including the lack of proper ventilation, lack of proper health and safety measures being followed for employees, allowing stock to build up over months, etc.
- 7% warehouses (18 out of a total of 257 warehouses) were found not to be complying with hygiene standards.

Such instances, even though outside the free zones where most of the key logistics companies are located, can severely damage Dubai's image as a hub for the transportation and storage industry.

A number of logistics companies have been able to grow by focusing on a niche segment with a high emphasis on efficiency improvements and a high quality of services.

An example is Global Shipping and Logistics, which has been able to capture market share by focusing on a niche segment, investing in technology and providing a high quality of services (quality certifications being a testament to a high quality).

[43] Dubai Police

Global Shipping and Logistics – Focus on Niche Segment and Focus on Improvement in Efficiencies

Company Name	**Global Shipping and Logistics (GSL)**
Company Background	GSL is member of the Al Shirawi Group, which owns more than 20 different businesses from a diverse collection of industries and has secured partnerships with over 100 multinational companies for technical licensing, distribution, servicing and trade representation.
Size of the Company	Number of Employees of GSL: Upto 250 Turnover of GSL: AED 60-70 million
Key Initiatives	**Focus on a niche segment:** GSL operates in the niche segment of offering cold chain logistics for food and beverage industry. It offers controlled warehouse infrastructure (Cold Storage/Temperature Controlled/Ambient), temperature ranges from -25° Celsius to Ambient and Project cargo storage. It made investments of USD 40 million (AED 147 million) to build a 100,000 square meter warehouse in Dubai Investment Park in order to tap into the growing food and beverage industry. **Implementation of Warehouse Management System (WMS):** GSL has implemented a WMS called Manhattan to provide alerts on inbound and outbound shipments, barcoding and customized label creation, fleet management and inventory control. **Implementation of a range of different racking systems**, including mobile, high-rise very narrow aisle (VNA) and selective racking, in order to ensure optimum utilization of space. **Completed the certification process in four different categories from the International Standardisation Organisation (ISO)** – the environment management system (EMS), quality management system (QMS), occupational health and safety management system (OHSMS) and hazard analysis and critical control points (HACCP).
Impact of Investment	According to the company, it has captured around 90% of the share of the third party logistics market for ice creams and 75% of the chocolate-logistics market in Dubai; It has been able to service clients, such as Baskin-Robbins, Federal Foods and Coldstone Creamery
Future Plans	Plans to explore the opportunity to provide logistics services for the pharmaceutical industry

Opportunity Assessment

Although there is over-capacity in the warehousing space, there are still opportunities for new players to enter in the 3rd party cold chain logistics for food and beverages.

Opportunity :	**Cold Chain Logistics for Food and Beverages**
Sub-sector	**Warehousing, Freight Transport by Land**
SME Potential	**High potential due to a growing market and low competitive intensity ; but**

	requires high capital investments
Key reasons	**Growing Market for Food and Beverages in the GCC:** GCC's imports of food and beverages were estimated to be AED 88 billion (USD 24 billion) in 2008 and are projected to more than double by AED 179 billion (USD 49 billion) by 2020. [44]UAE accounts for 1/3rd of the food and beverage imports in GCC, with imports valued at AED 29.4 billion (USD 8 billion) in 2008. **Low Competitive Intensity:** There are not many players in the cold chain segment. Agility, Global Shipping and Logistics and Mohebi Logistics are the only three players that operate in all the three segments. These players account for 85-90% of the 3rd party food and beverage logistics industry. Thus, only 10-15% of the market is accounted by players that do not operate in all the three segments. Some of the other players in the market are: Companies focused on food warehousing, but not operating in all the three temperature segments: Dubai Cool Stores, Triburg Services, GAC Logistics Companies offering temperature controlled warehouses for FMCG products: CEVA Logistics, RHS Logistics, Al Futtaim Logistics. The key reasons for a low number of players operating 3rd party food and beverage logistics business are: ○ A number of manufacturers and traders for food and beverage handle their logistics functions on their own. For e.g. food manufacturers, such as Al Marai, Al Kabeer, and local supermarkets, such as Almaya, Choithram, own and operate their own warehouses and transport fleet. ○ The capital investments and maintenance required for food is higher as compared to warehousing for dry cargo. The three segments (according to the temperature levels) within warehousing for food and beverage are: o Chilled: -18 degrees o Frozen: 4 to 8 degrees o Temperature controlled: 20 to 25 degrees
Capital and Regulatory Requirements	**Capital Investments:** Required investment for a warehouse operating in all the three segments with an area of 10,000-12,000 sq. m.: AED 70-90 million (USD 20-25 million)[45]

[44] Source: Economist Intelligence Unit Report (EIU) – The GCC in 2020
[45] Source: Expert Interviews

	Components of capital investments: ○ Cost of building a warehouse with air conditioning and chillers ○ Cost of land, labour and utilities ○ Cost of maintaining the warehouse since the facility has to maintain the required temperature even if the warehouse is not fully occupied ○ Cost of buying or leasing the fleet **Regulatory Requirements:** A company needs to take the license from the respective free zones authority and also needs to meet the requirements of Dubai Municipality related to fire safety, hygiene conditions, etc.
Challenges and Risks	• High capital investments • Low level of outsourcing by local food manufacturers and retailers

To summarize, the sub-sectors with potential for SMEs are highly saturated in Dubai, except a few opportunities in cold chain logistics services for food and beverage industry.

The focus has to be to improve competitiveness of existing firms by providing support to handle the key issues

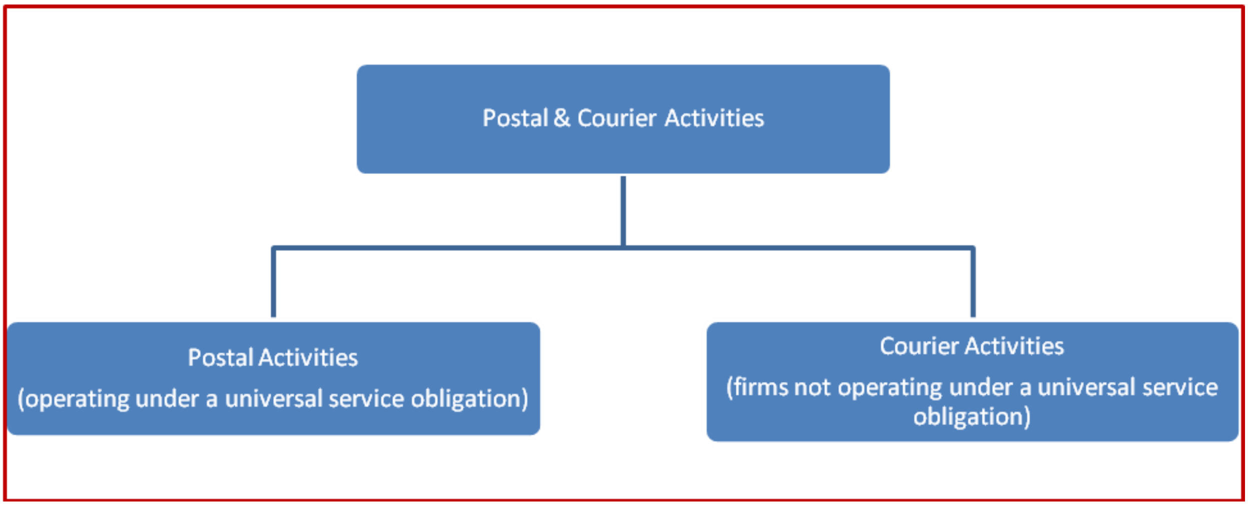
- **Low productivity and efficiency in processes due to low utilization of technology and lack of training**
- **Low asset utilization**
- **Implementation of stringent regulations**

11. Postal and Courier Services Industry

The section discusses the global and regional developments in the courier and express industry, and issues impacting competitiveness of the industry in Dubai, especially the SMEs.

The postal and courier industry comprises the following segments (as per ISIC 4).

Segments of the Postal & Courier Industry



Key Trends in the Global Postal and Courier Industry

Consolidated market with four key players accounting for 80-90% of the market share globally

The worldwide courier market is dominated by the four large delivery companies FedEx, UPS, DHL and TNT. The networks of these companies, including air, sea, rail and road, work as the lifeline of the services provided by them. The top global players account for 80-90% of the courier market globally.[46]

In addition to these global players, a number of regional and local players operate across the various countries in the world. Many of these courier companies operate independently, where as others rely on some of the larger courier companies when it comes to providing international deliveries.

[46] Source: Expert Interviews

Slowdown in the Courier Services industry in 2009; however there have been signs of improvement

The global players in the courier and express industry were impacted severely between 2008 and 2009 due to the global economic slowdown; however there have been signs of improvement (as detailed in the following table).

Change in Revenues of Key Global Courier Companies, 2008 to 2010

		% Change in Revenues from 2008 to 2009	% Change in Revenues from H1 2009 to H2 2010
Key International Players with offices worldwide	**DHL**	-14.4%	+5.5%
	TNT	-1.6%	+4.9%
	FedEx	-8%	-4%

Source: Financial Statements of DHL, FedEx, and TNT

Note: Only revenues from mail and express business segments have been included for these players

Positive impact of the growing e-commerce industry on the courier industry

A growth in the **e-commerce industry** across the world has been one of the key drivers for the demand for courier services.

- In the US, e-commerce is estimated to have grown by 11% in 2009 in spite of the economic crisis. E-commerce is expected to grow at a CAGR of 10% by 2014.[47]
- China's e-commerce industry grew by 60% in the first half of 2010 and is expected to see rapid growth in the next few years, with the average annual growth rate of more than 35%.[48]

A surge in e-commerce worldwide has led to emergence of a number of courier companies, expansion of fleet and operations by existing players and investments in better technology to handle orders more efficiently and to track parcels in real-time.

A number of e-commerce sites promise to deliver as early as possible, even same-day deliveries. For instance Amazon.com has started same-day deliveries in seven cities in the US. Thus, many courier companies have entered into agreements with the online retailers to deliver orders in the shortest possible time. Speed of communication and delivery through increased use of technology are the key to deliver these services.

Growing investments in technology

Courier companies worldwide have been looking at achieving higher efficiencies through increased use of technology. Courier software systems, such as Xcelerator[49], and other technology solutions, such as

[47] Source: Forrester Research
[48] Source: ChinaDaily

MobileArc, etc. allow courier companies to wirelessly dispatch orders to their drivers to begin picking of goods and making a delivery immediately. They also enable functions like signature capture of the customer on delivery in order to ensure that the package has been received.

These systems help to improve operational efficiencies and enhance in tracking delivery team's productivity.

Growing environmental concerns

The growing environment concerns affecting the overall transportation and storage industry have impacted the courier services industry significantly due to their heavy reliance on various transportation modes, especially air and road. The key global players have been adopting measures to reduce the impact of their operations on the environment. For instance:

- FedEx has launched "20 by 20" initiative, aiming to reduce its aircraft's carbon emissions by 20% and increase delivery vehicles' fuel efficiency by 20% by 2020. It is adding zero-emission, all-electric trucks and converting conventional trucks to hybrid-electric technology. Its new hub in Cologne, Germany, with its 1.4-megawatt solar power system and use of all-electric trucks in the US (in March 2010) are its recent initiatives. The tagline used by Fedex for its sustainability-related initiatives is "**The Long Future Requires Efficiency**."
- DHL has implemented *GoGreen*, the Group's environmental protection programme. It has four main focus areas:
    - A carbon accounting and controlling system to manage and measure efficiency improvements
    - A group-wide binding target to improve CO2 efficiency by 30% by 2020
    - Efforts to develop low-carbon technologies and solutions
    - Initiatives to mobilize Deutsche Post DHL employees worldwide

Some of the examples of DHL's initiatives are:

Implementation of Packstations in Germany: Higher capacity utilization can be achieved in delivering couriers and mails to homes and commercial premises. This is important since unsuccessful deliveries are time-consuming, inconvenient, and they have an adverse effect on the environment. In order to handle this issue, DHL implemented Packstations in Germany.
Packstation is a service run by DHL Parcel Germany, a business unit of Deutsche Post's Mail division, in Germany. It provides automated booths for self-service collection of parcels and oversize letters as well as self-service dispatch of parcels 24 hours a day, seven days a week.

Managing empty backhauling of delivery vehicles: In 2008, DHL Freight Euronet in Germany concluded launched an initiative to reduce empty vehicle kilometers and the resulting CO2 emissions. This was done by defining clear responsibilities to increase backloads, training dispatchers to optimize capacity utilization and installing a real-time information tool to monitor vehicle availability. As a result, there

[49] Xcelerator: courier dispatch software that offers immediate package information and messenger tracking system; MobileArc is a comprehensive mobile computing systems that helps to generate the information demanded for continuous delivery tracking. The offering includes the mobile computing unit, activation on a national carrier network, as well as the specialized software necessary for expedited delivery and distribution.

were 7,000 fewer empty runs and the CO_2 efficiency improved from 100 to 70 g CO_2 per revenue ton kilometer.

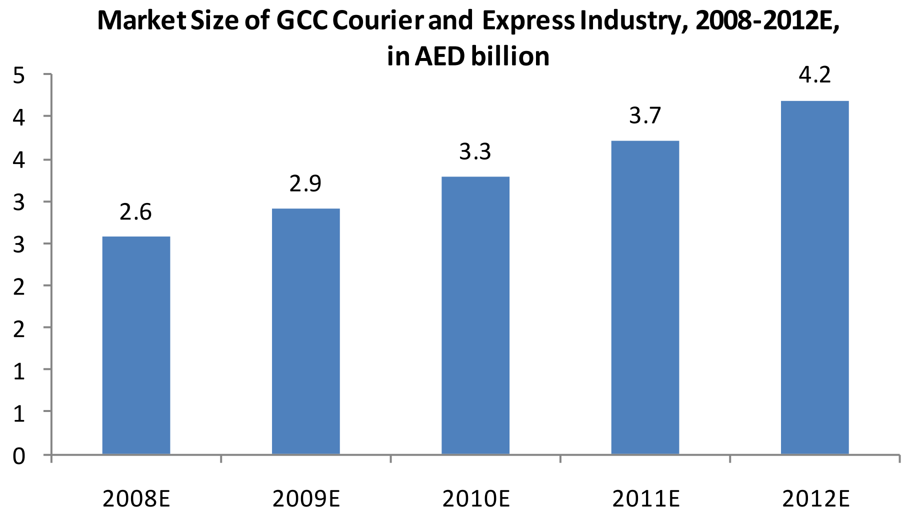
Key Trends in the Postal and Courier Industry in GCC

Growth in the GCC courier and express industry faster than the other segments of the Transportation & Storage Industry

The Middle East has emerged as a key growth region for international express at the crossroads between Europe, Asia and Africa. The GCC courier and express market was estimated to be AED 2.6 billion in 2008 and is expected to grow at a CAGR of 13% from 2008 to 2012.

Potential growth of the e-commerce industry in the region is expected to be one of the drivers for this growth.

The following chart represents the market size of the courier and express industry in GCC.



Expansion by global players in the GCC and overall Middle East region

The global players have been investing heavily in the GCC and overall Middle East.

- **TNT Express** had invested heavily in the Middle East till 2008 to build up its business. The focus was primarily on developing the Middle East Road Network, opening new ground facilities and offering competitive services. Its Middle East Road Network was expanded from GCC to Jordan, Egypt and Iran last year, and there are plans to extend it northwards into Lebanon and Syria. [50]

In June 2010, TNT Saudi Arabia announced addition of 30 new trailers for its Middle East Road Network, offering its customers greater availability of express delivery services at rates that are more convenient than air freight. [51]

- **DHL Express** is concentrating on trying to defend and slightly increase its high regional market share by upgrading infrastructure, extending services and seeking synergies between the Express, Global Forwarding and Supply Chain divisions.

  It has plans to develop 50,000 sq. m. facility at Dubai Logistics City, although it plans to retain the bulk of its Middle East hub operations at Bahrain.

  Although air shipments make up 70% of its Middle East business, **DHL Express is also building up its regional road trucking network as it sees stronger growth in overland transport in the future.** In 2007, DHL announced investment of EUR 2.2 million a year to increase its fleet by 50 trucks to 250 vehicles. DHL's Middle East road network covers the GCC countries, Jordan, Lebanon, Syria and extends into Egypt, Turkey (Istanbul) and Iran.

Expansion of the key regional player, Aramex, into other geographies

In June 2009, Aramex announced opening of its new offices across Germany in order to expand its presence in Europe and providing enhanced wholesale express services to its customers, (especially for business from Germany to the Middle East).

The new Aramex services will be of particular appeal to independent courier companies across Germany who now have direct access to an independent network throughout the Middle East, Africa and Asia. [52]

Some signs of focus on environment in the Middle East Region

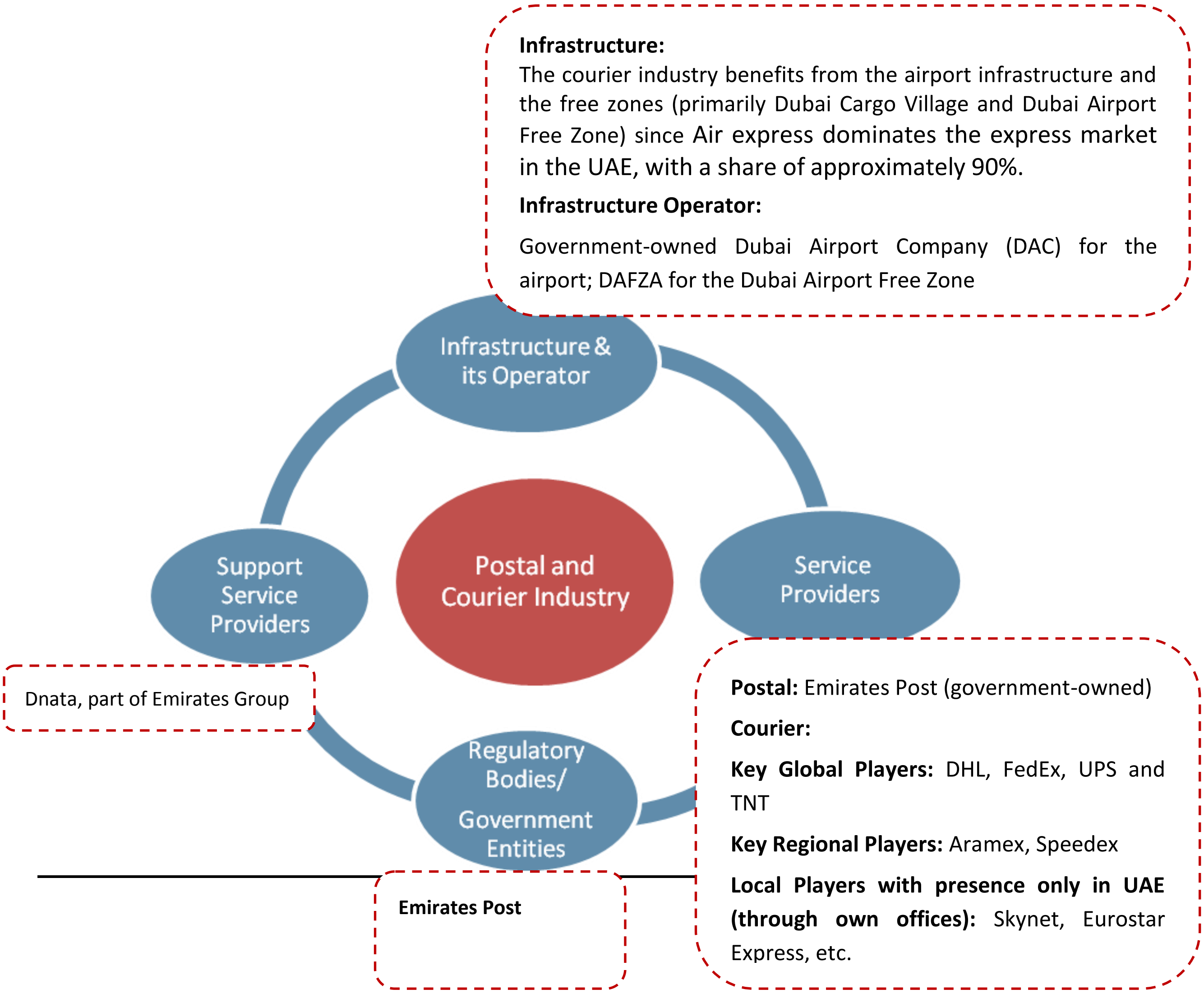
- **In line with the global trends to reduce impact of logistics operations on the environment, Aramex introduced Piaggio's MP3 hybrid bikes in Lebanon for its courier operations (June, 2010)**. The new bikes aim to reduce carbon emissions, increase fuel efficiency and improve overall driving safety.
- In June 2010, Aramex launched its Green Champions program, which provides training to its staff in environmentally friendly practices at the workplace and at home. The program, which was launched at the company's Global Support Office in Amman, Jordan, is planned to be rolled out across Aramex's worldwide network.

[50] Source: ITA Logistics
[51] Bi-ME
[52] Middle East Events

* There are plans to implement Packstations at the metro stations in Dubai, similar to the Packstations in Germany (as explained in global developments). UAE will be the second country in the world to implement packstation.[53]

Postal and Courier Industry in Dubai

The various aspects of the postal and courier industry in Dubai have been summarized in the chart below.



<u>Infrastructure and its Operation</u>

[53] DHL – Sustainability Report

- The infrastructure and its operation for postal and courier is similar to the infrastructure present for the overall logistics industry.

Regulatory Structure

- A company needs to take a trade license and needs to get approved by Emirates Post. A courier license fee of AED 100,000 needs to be paid every year and a 10% tax on profits has to be paid to Emirates Post.

Postal and Courier Service Providers

Postal services are provided by Emirates Post in UAE (a government organization). There are overall 50-60 companies offering courier and express services in UAE/Dubai.

The table below provides a snapshot of the role of SMEs in the industry in Dubai.

Snapshot of Role of SMEs in the Courier Industry

Sub-Sector	Key Players
Postal Services	Managed and Operated by Emirates Post, which is government organization
Courier Services	There are 50-60 courier companies in Dubai. These include: **Big 4 Global Players:** UPS, TNT, FedEx and DHL. **Key Regional Players:** Aramex, followed by Speedex, First Flight, etc. **Examples of Local Players:** Skynet, Immex, Eurostar Express, etc.

Sub-sectors with a SME presence

Key Trends in the Courier Industry in Dubai / UAE

- The courier industry in UAE/Dubai has got impacted due to the recession. However, it is still expected to witness growth over the next 4-5 years, primarily due to the expected growth in the e-commerce industry.
- The courier and express market in UAE grew at a CAGR of 14% during 2004 to 2008. However, with the economic recession affecting business, the market is expected to grow at a single-digit CAGR during 2008 to 2013.
- On the recipient front, the express business-to-business (B2B) market constitutes about 90% of the market. However future growth is expected to be driven by business-to-consumer (B2C) express market, primarily due the increasing use of e-commerce in the country.
- The market is dominated by the four global players – DHL, TNT, UPS and Fedex. Aramex is a strong regional player, which is trying to expand into geographies outside the Middle East. **The big 4 and Aramex constitute 70-80% of the market in UAE.**

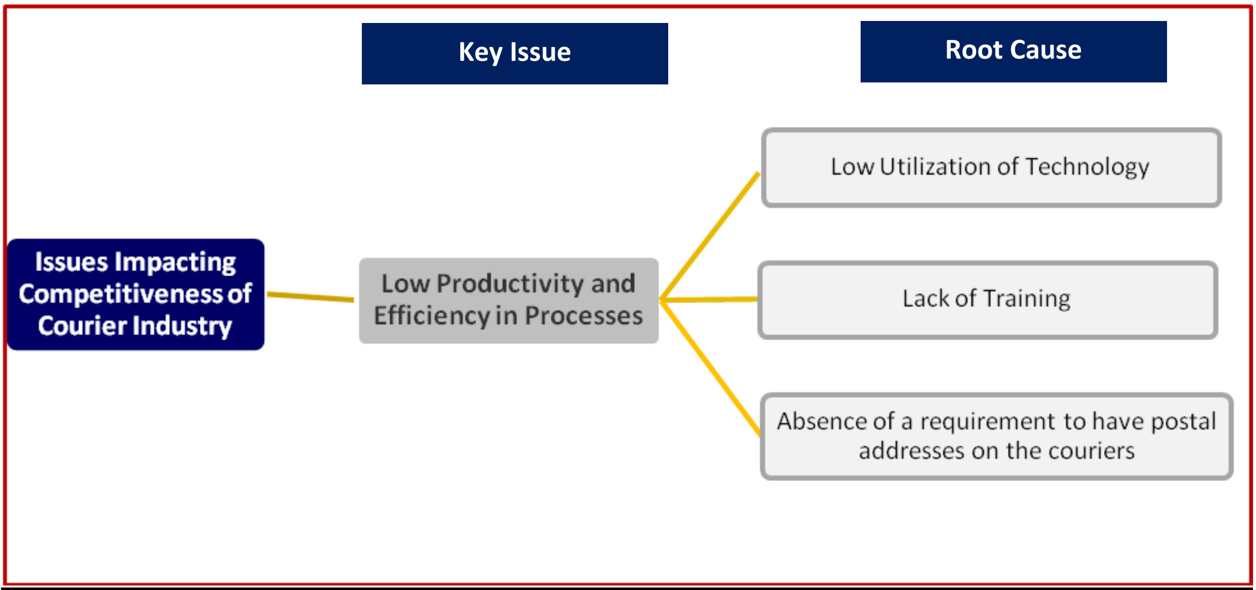
- The key players have implemented initiatives that have helped them to differentiate and also achieve higher productivity as compared to the large number of SMEs present in the industry.

Examples of Differentiation and Other Initiatives Adopted by the Key Players

- DHL has signed a contract with RTA, whereby the company will provide postal services (including parcels and documents) through Packstations at the Dubai Metro stations. This will make Dubai the first city in the region and second worldwide, after Germany, to introduce these services.
- Aramex has started a boat service from Marina to Sharjah to deliver shipments. This helps to avoid traffic, deliver shipments in a faster way and reduce carbon emissions. It had also invested AED 6 million (USD 1.5 million) in wireless systems (including hand-held scanners) in 2007.
- Speedex Courier has introduced a “Bullet Service”, which is a direct point to point service within UAE (without taking the goods in its distribution center). This provides a much faster delivery at a higher cost as compared to a normal courier. A normal courier will be picked up, delivered at the operations location, sent to the delivery point as per the delivery schedule.
- FedEx Express has launched next-business-day domestic express service in the UAE. The new service will provide customers with a highly reliable and convenient shipping solution for time-critical consignments in the UAE.

Key Issues Impacting Competitiveness of SMEs in Dubai

There are key issue for the SMEs in the courier industry is Low Productivity and Efficiency in Processes



The key issue and its root causes are discussed below.

Low Productivity and Efficiency in Processes

Low Utilization of Technology

The small and medium-size courier companies in Dubai have a low level of technology implementation. For instance:

- **Most of the vehicles of courier companies are not equipped with GPS tracking systems.** Most of the tracking updates and planning are done manually (on phone) and shared with the customers. Implementation of GPS tracking systems can help in reducing chances of thefts; more efficient planning for picking and dropping of courier; and in providing real-time information to customers.
- Most of the medium-size courier companies do **not have route optimization systems that are linked to GPS tracking systems.** These help to identify the shortest routes, routes with minimal traffic, taking into account rush hours on certain routes. By using the route optimization systems, the fleet manager can design the fastest and the most efficient delivery schedule.
- There is low implementation of hand-held scanners by some of the companies. Hand-held scanners are used by the courier delivery staff to transmit or store collection and delivery information (time, date, etc). This helps to track the productivity of the employees and improve customer servic. For instance

In 2007, Aramex had invested AED 6 million (USD 1.5 million) in wireless systems (including hand-held scanners) that enabled its ground courier staff to transmit collection and delivery information in real-time. These devices are now carried and used by Aramex ground couriers across GCC countries. According to Aramex, the system was highly appreciated by its clients, especially those in the banking sector since getting instantaneous delivery updates of their invoices and credit card deliveries enhances their operational efficiency[54].

The key reasons for a low implementation of these systems by SMEs are:

- **Availability of cheap labour** makes it cheaper to hire more labour than to implement these solutions
- **Slowdown in demand and high cost competition** (leading to impact on margins) has made companies hesitant to invest more
- **Lack of sufficient volumes** with some small to medium-size companies to justify return on investments for these technologies
- **Lack of awareness of complete benefits and background about implementation of these systems**
- **Availability of cheap fuel in the past led to a low focus of companies on improving efficiencies;** however this is expected to change with increasing fuel prices

Lack of Training

Although, the courier industry does not need a high level of technical skills and educational qualifications, trainings can facilitate a higher implementation of new technologies, enhance expertise and raise the quality standards in these companies.

The following skill upgradation is required for the courier industry:

- **Mid-management level:** Skills related to:
    - Improving the knowledge and awareness levels of employees regarding best practices related to route optimization, optimum utilization of vehicles, etc. across the world
    - Increasing awareness about the available technologies and their benefits
    - Environmentally friendly practices, etc.
- **Drivers and Delivery Staff:**
    - Customer service skills
    - Fuel efficiencies and ensuring safety while driving

Absence of a Requirement to have Postal Addresses on the Couriers

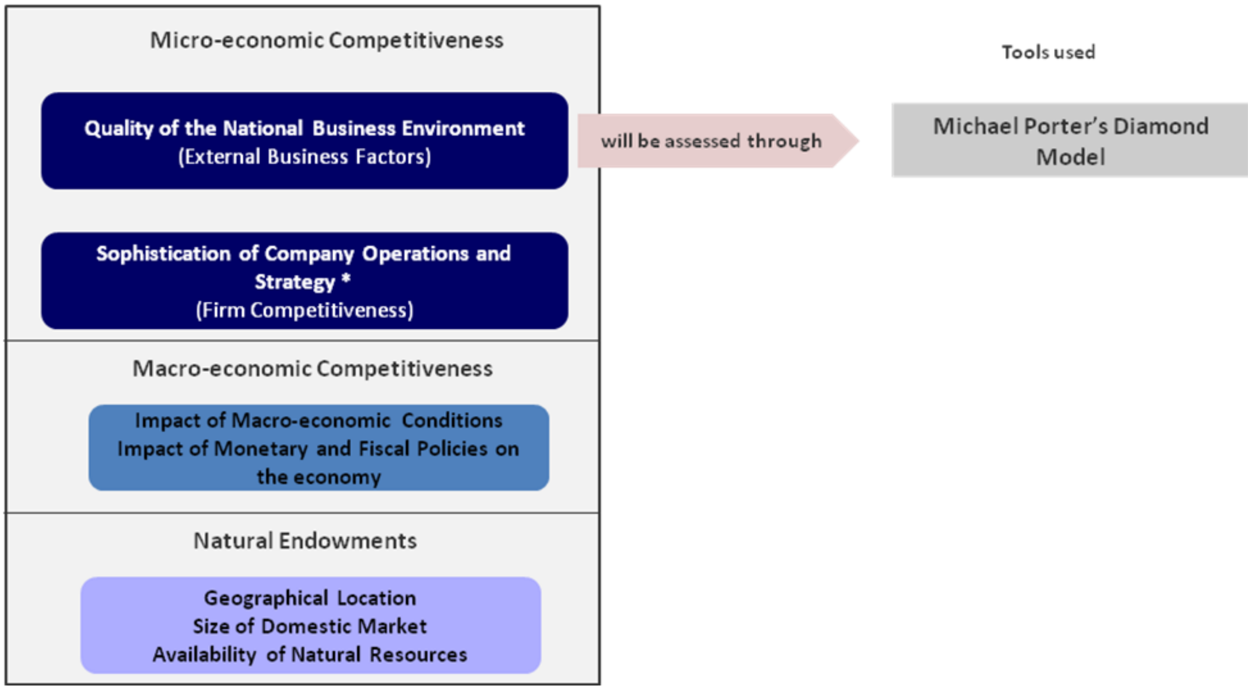
[54] Aramex News

There is a need for a courier-friendly address system in Dubai/UAE. Banks and other users of courier services are not mandated to give complete address on the parcels. This leads to a waste of time on part of the courier companies to call up and find out the location of the receiver. However, presence of a large expatriate population, which may change addresses frequently, leads to difficulty in mandating postal addresses to be mentioned on couriers.

To summarize, the focus has to be to improve competitiveness of existing firms by providing support to enhance productivity and efficiency in processes with better utilization of technology and training of employees.

12. Competitiveness of T&S industry

This will be assessed through the following model. (Note: factors that add to the competitiveness are marked in 'green', while factors that are a challenge to competitiveness are marked in 'red').



**Sophistication of company operations and strategy has been discussed under each SME-oriented sub-sector*

<u>Natural Endowments</u>

Geographical Location

Located strategically between Europe and Far East, UAE ports (particularly Dubai ports) have been the preferred choice of location for a wide range of companies.

As the commercial and maritime center of the Middle East region, UAE has been proactive in recognizing its strengths in the global market. The country has embarked building its infrastructure and attracting companies into its free zones.

Size of Domestic Market

UAE is the second largest economy in the GCC with respect to GDP and third largest in terms of geography and population (the largest being Saudi Arabia). With a population of 4.7 million (20% locals and 80% expats), UAE is a relatively small market (as compared to Saudi Arabia with a population of 29.2 million).

Impact of Macro-economic Conditions

The fortunes of the transport and logistics industry are closely connected to the economic cycle. When economic activity is buoyant, demand for transport and logistics services is equally strong. Consumer and business demand for goods and services inevitably translates into higher demand for transport and logistics services.

Thus, the slowdown in the global economic growth that has occurred since the second half of 2008, and that has caused global trade volumes to drop, created a severe impact on the transport and logistics industry worldwide.

The industry in Dubai got impacted in two ways:

1. Reduction in demand for cargo for consumption by the construction industry in Dubai
2. Impact of the global economic slowdown on the Middle East region, However the growth of the transportation and storage industry in the Middle East has been high as compared to the other regions[55] **This is primarily due to high industrial activities and infrastructural developments across GCC countries.** These developments are also expected to drive the demand for transportation and storage industry in Dubai.

However, the demand for the T&S industry in Dubai is being driven by GDP growth of GCC economies, growing population, rising income levels, and a high focus on diversification by GCC countries.

[55] As discussed in the previous sections on Transportation and Storage industry in GCC

Quality of National Business Environment for the Transportation and Storage Industry

Demand Conditions

+Increasing trans-shipment demand due to increased industrial developments and economic growth, industrial and infrastructure-related construction activities in GCC

+DWC's efforts to make Dubai a global hub with the setting up of the Al Maktoum International Airport and the Dubai Logistics City.

+International companies drive demand for 3PL services and higher quality standards

+Low outsourcing level of logistics functions by firms in GCC; however increased focus on improving efficiencies

-Adverse impact of the global economic slowdown

Factor Conditions

+Dubai's geographic location in between Europe, Africa and Asia

+World-class air and sea port infrastructure; however an under-developed rail infrastructure

+Well-developed free zones (JAFZA, DAFZA)

+Access to low cost expat labour; however low levels of skills of the existing employees in the industry

Firm Strategy, Structure & Rivalry

+Open market for domestic and foreign providers of transport services for UAE

+Presence of key international and regional logistics players

+Infrastructure providers have a monopoly; however these and other government-owned entities are highly growth oriented

-Emerging competition from other GCC countries

-Overcapacity leading to a high cost competition and impact on margins

-Lack of stringent regulations to ensure high quality of services

-Low productivity & efficiency of operations of a number of firms, due to:

- Low level of technology adoption
- Availability of cheap

Related & Supporting Industries

+Strong ship-repair and ship building industry

+Growing aircraft maintenance industry

+Presence of some platforms for industry collaboration; however their role can be strengthened

-Low attractiveness of registering ships in UAE

The other issues impacting competitiveness of the industry in Dubai are as follows:

+Adoption of initiatives in order to make customs and other services online; however need to create a single window for all T&S-related services

-Lack of a centralized body responsible for developing the industry

-Low focus on R&D** at the firm as well as industry-level

-Need for homogenization of rules within the GCC countries with respect to non-tariff barriers

*****R&D in transportation and storage industry refers to:***

- *At the firm level: how to improve efficiencies in storage and transportation of goods*
- *At the industry level: Enhance collaborations between universities, government and private players for conducting research on areas, such as implementation and testing use of RFID to ensure seamless movement of goods ; ensuring seamless inter-modal movement of goods*

Factor Conditions

+Dubai's geographic location in between Europe, Africa and Asia

The geographical location is an important advantage for Dubai.

- Dubai provides access to 2 billion potential customers from South East Europe, Indian Sub-Continent, Middle East and Africa within a 4-hours flight.

- Dubai's location enables companies to do business throughout the world - time zone being an advantage. This is extremely important since a number of businesses in the transportation and storage industry derive demand from companies worldwide.

+World-class air and sea port infrastructure; however an under-developed rail infrastructure

Dubai shares its location advantage with a number of ports and airports in the region. In order to leverage on its location, Dubai has aggressively invested in the physical infrastructure.

Competitiveness of Dubai Based on Published Indices

The Global Competitiveness Index (for 2010-11) ranked UAE at the 3rd position for its infrastructure. On the quality of airport and port infrastructure, UAE ranked 4th and 8th, respectively.

With respect to the roads, port and airport infrastructure, UAE ranks behind the international transportation and storage hubs, such as Singapore and Hong Kong. However, it is way ahead of the other GCC countries.

Comparison of UAE with other GCC Countries, Rank for Infrastructure (Out of 139 Countries), Global Competitiveness Index, 2010-11

	UAE	Bahrain	Kuwait	Qatar	Saudi Arabia	Oman
Infrastructure (including electricity and telephone lines)	**3**	27	60	25	28	33
Quality of Overall Infrastructure	11	26	45	39	29	21
Quality of Roads	6	25	40	41	26	10
Quality of Railroad Infrastructure	NA	NA	NA	NA	38	NA
Quality of Port Infrastructure	8	13	63	27	36	33
Quality of Air Transport Infrastructure	4	20	64	16	46	41

Source: Global Competitiveness Report 2010-11

Comparison of UAE with International Hubs, Rank for Infrastructure (Out of 139 Countries), Global Competitiveness Index, 2010-11

	UAE	Singapore	Hong Kong	Netherlands
Infrastructure (including electricity and telephone lines)	**3**	**5**	**1**	**7**
Quality of Overall Infrastructure	11	3	2	17
Quality of Roads	6	1	4	27
Quality of Railroad Infrastructure	NA	6	2	9
Quality of Port Infrastructure	8	2	1	3
Quality of Air Transport Infrastructure	4	2	1	8

Source: Global Competitiveness Report 2010-11

Significant Transportation & Storage Industry Infrastructure Developments in Dubai

- The opening of **DWC-Al Maktoum International Airport** (the world's largest airport) in June 2010 is expected to further reinforce Dubai's trade, and transport and logistics capabilities.
- Another extremely significant development is **Dubai Logistics City (DLC),** an integrated logistics platform with all transport modes, logistics and value added services, including light manufacturing and assembly, in a single customs bonded and free zone environment. A few companies have recently started their operations in DLC, such as Ehrhardt + Partner Solutions - a Warehouse Technology solutions provider (2010), Panalpina (2010), Kuehne + Nagel (2009), etc.
- UAE currently does not have any railroad infrastructure (besides Dubai Metro, which is used within Dubai for passenger transport). **Rail infrastructure** in UAE is currently being developed. Union Railways, the government-owned firm is in charge of 1,500 kms UAE railway network. It plans to begin operating the first phase of the network for freight transport in 2013, starting with Ruwais to Habshan areas in Abu Dhabi. The project is scheduled for completion in seven to eight years and is estimated to cost between AED 30 to 40 billion.

+Well-developed free zones (JAFZA, DAFZA)

There are a number of free zones, JAFZA, DAFZA, Dubai Cargo Village in Dubai, which have become clusters for the transportation and storage industry.

The commercial incentives offered to companies in free zones are as follows:

- 100% foreign ownership
- Zero corporate and income taxes
- No customs duty
- Exemption from local labour restrictions
- Full repatriation of profits and capital
- No foreign currency restrictions

These incentives, accompanied by a strong port and airport infrastructure, have attracted a large number of international and regional players to set up their bases in Dubai to serve the region.

+Access to low cost expatriate labour and foreign specialists; however low levels of skills of the existing employees in the industry and nascent education programmes

The availability of employees, especially low skilled basic labor and advanced specialists, has been an advantage for Dubai. The high quality of life attracts foreign specialists; while Dubai has traditionally been open for low-cost labor from South Asia.

However, the industry most of the employees in the industry lack any formal training for the industry.

The industry is able to sustain itself with the current skill sets. However, skill enhancement will help to enhance the industry's competitiveness by facilitating:

- Improvement in efficiencies in utilization of assets

- Improving service quality
- Shortening the learning curve of new employees
- Implementation of new technologies

There is a need for skill upgradation with respect to the following areas:[56]

- **Mid-management level:**
    - Use of warehouse management systems, fleet management systems, etc.
    - Understanding global best practices to identify better ways of doing routine work and make operational improvements.
    - Bills of Lading (liabilities and disputes in bills of lading)
    - Demurrage clauses in freight handling contracts
    - Warehouse supervision and Inventory management
    - Awareness about available technologies to improve efficiencies

- **Low-skill labourers:** Trainings related to:
    - Handling of specialized goods, such as dangerous goods, chemicals, food products, etc.
    - Documentation and procedural requirements while moving from one free zone to another; crossing borders of GCC countries, etc.
    - Vehicle maintenance, Safety and fuel efficiency, etc.
    - Customer service skills for employees in private bus operators, etc.

A key challenge with respect to skill upgradation is that the employees in the industry are primarily expatriates, leading to hesitation on part of employers to train transient labour (especially through 2-3 year courses available in the industry currently).

A number of educational programmes for the transportation and storage industry have been started in Dubai, such as:

- **Chartered Institute of Logistics and Transport** offers a range of courses and qualifications in logistics, transport and supply chain management
- **University of Wollongong** offers Master of Science in Logistics

[56] Source: Expert Interviews and Dubai Logistics Labour Market Study conducted by Foreign Investment Office of the Department of Economic Development

- **Emirates Aviation College offers** 4 MBA courses related to the logistics industry: MBA in Logistics and Supply Chain Management, MBA in Aviation Management, MBA in Aviation Safety, MBA in Information Technology
- **University of Dubai** offers Bachelor of Business Administration with a major in Supply Chain Management and a one-year MBA in Logistics and Operations Management
- **SP Jain Centre of Management** offers MBA with specialization in logistics and supply chain management
- **NAFL (National Association of Freight Forwarders)** provides training endorsed by International Federation of Freight Forwarders' Association (FIATA) for the freight forwarding industry.
- Some of the certifications, such as Certified Supply Chain Professional (CSCP) and Member of the Chartered Ship Brokers (MICS) are offered in Dubai. These certifications are usually sponsored by some of the key companies.
    - Morgan International is a training institute that offers Certified Supply Chain Professional (CSCP) course and certification in Dubai in partnership with APICS (Advancing Productivity Innovation and Competitive Success – American standards for process and operations management).
    - The UAE-branch of Institute of Chartered Ship Brokers (UK) provides training and certifications in Dubai.
- **Emirates International Marine Academy** offers courses for the maritime industry on subjects, such as safety, fire fighting, etc. It has also tied up with New Castle University to offer MSC in Marine Studies.

However, so far these programmes have not made a meaningful contribution to generating a local group of specialists. The key challenges with respect to the existing training courses are as follows:

- There are not many quality short-term training programmes for existing employees in the industry. Companies want vocational training system to supply new workers, as this will provide hands-on experience as well as theoretical knowledge. The companies also want courses to up-skill current employees at all levels.
- Companies are willing to outsource majority of their own internal training. However, awareness and perception on quality of the available courses with the companies is low.
- Awareness of opportunities and benefits of training in the industry needs to be increased for both current employees and potential new recruits.

Demand Conditions

+Increasing trans-shipment demand due to economic growth, increased industrial and infrastructure-related construction activities taking place in GCC

A strong economic growth and substantial investments in the local production base are expected to drive the demand for cargo in the GCC countries.

Moreover, large-scale infrastructure-related construction projects are in progress or are being planned across GCC countries.

The industrial and construction activity brings with it a need for transportation and storage industry, and thus are acting as a driver for the industry in Dubai. [57] This is since, Dubai's plays an important role as a trade hub, both for the GCC and also for a much larger region including large parts of the East African coastline.

+Dubai World Central's (DWC's) efforts to make Dubai a global hub with the setting up of the Al Maktoum International Airport and the Dubai Logistics City

Till now Dubai has served as the trans-shipment hub for GCC and Middle East. Currently, the focus is to make it a global hub and make it part of complex supply chains of companies in Asia, Europe and the US. A key step in this direction has been setting up of the Al Maktoum International Airport and the Dubai Logistics Zone.

Thus, the benefits of DWC for Dubai and the wider region will not be confined merely to its transport capabilities; but for attracting customers who can most benefit from multi-modal capabilities, especially those who have:

- High value to weight ratio products (e.g. cell phones)
- Products sensitive to time criticality (pharmaceuticals, spare parts for medical devices, etc.)
- Postponement strategies in purchasing, manufacturing, and distribution (A large number of international companies (for e.g. Nike, Dell, Apple, etc.) only manage the supply chain and branding for their products, while decentralizing production around the world. Therefore these companies benefit from mass customization as close as possible to the customers – specialized packaging, putting of specific chords on laptops, etc.).

+Low outsourcing level of logistics functions by firms in GCC

The outsourcing levels of logistics functions are lower in GCC (18-20% of total value of transport and logistics functions in GCC are outsourced to 3rd parties) as compared to global benchmarks (40% in the UK, 25-20% in Western Europe of total value of transport and logistics functions). [58]

For instance: Carrefour's warehousing is managed by Agility. However some of the local players in grocery retail (such as Al Maya, Choithram, etc.) manage it on their own. According to the industry, there is a scope of improvement in the efficiencies for some of these companies if their logistics functions are managed by specialized 3PL players.

The level of outsourcing is expected to go up with change in mindset of companies and increased activities of the global as well as regional logistics service providers.

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[57] Discussed under the overview of the T&S industry in GCC and key trends in each of the sub-sectors

[58] Source: Primary Interviews with Experts

The demand for 3PL services is also expected to grow in the GCC as companies look to focus on their core business and find cost-effective ways to manage their logistics activities.

+International companies drive demand for sophisticated 3PL services and higher quality standards

The key driver for demand for logistics-related activities comes from multinational companies (manufacturers or companies with their own brands), who understand how outsourcing their logistics functions can help them reduce cost and improve efficiencies. Moreover, the international clients lay more importance on high the quality standards and certifications followed by the logistics companies.

Presence of a number of international companies in the free zones is driving the demand for 3rd party logistics services. These companies outsource their logistics functions to their global logistics partners, as well as to the regional 3PL players.

For instance, a number of international companies, such as Nestle, McDonald's and Danone have outsourced their logistics functions to Mohebi Logistics.

In contrast, the level of outsourcing and demand for high quality services is comparatively lower by the local traders and manufacturers.

Firm Strategy Structure and Rivalry

+Open market for domestic and foreign providers of transport services

In recent years, the UAE has pursued liberal policies with respect to allowing foreign transport service providers, i.e. shipping lines and airlines, to use Dubai's physical infrastructure without facing specific market barriers. Especially for airlines this differentiates Dubai from many other countries. UAE has open skies agreements with a number of countries, such as Egypt, the US, Singapore, Spain, Luxembourg, Eritrea, etc. [59]

In 2009, UAE also joined a group of seven countries (along with Chile, Malaysia, Panama, Singapore, Switzerland, US) and European Commission in further liberalizing its air space by signing Bilateral Air Service Agreements under the International Air Transport Association's (IATA) Multilateral Statement of Policy Principles.

As a consequence, there is competition between alternative providers that offer logistical services via Dubai. However, key providers, such as Emirates Airlines have strong to dominant market positions in key segments.

+Presence of key international and regional logistics players contributing to Dubai's image as a transport and logistics hub

[59] *An "Open Skies" air service agreement creates a very liberal market between the two signatory nations. It allows any number of airlines from either nation unlimited rights to fly between any city-pair involving the two countries, without significant restrictions on capacity, frequency or price.*

A number of international logistics companies are serving their global contracts in the Middle East through their offices in Dubai. A number of international companies have expanded operations in Dubai recently, especially with the opening of the Dubai Logistics Zone. The presence of international players is important since they transplant knowledge gained in the more mature markets to the region.

For instance:

Panalpina commenced operations at its 450,000 square feet multi-modal transit and logistics hub in Dubai Logistics City in June 2010.

Kuehne + Nagel was one of the first international logistics companies to sign a contract for the establishment of a regional hub in the Dubai Logistics City (DLC) in 2006.

In addition to the global players, a number of strong regional players have emerged that have expanded operations internationally. The key examples of such players are: Agility (Kuwait-based), Aramex (Kuwait-based), GAC (Kuwait-based), etc.

+Infrastructure providers and their support service providers have local monopoly; however these and other government-owned entities are highly growth oriented

DP World and Dnata have monopoly positions on the port operation and cargo handling at the airport, respectively. Emirates is the dominant airline (with 60% market share in Dubai).

However, Dubai Ports and Emirates have pursued aggressive international growth strategies, which put them in direct competition with leading global rivals across many locations. Success on these markets requires them to constantly strive after leading performance, and these operational practices are also being applied in the local market.

DP World employs state-of-the-art technology to ensure the highest level of performance and safety. Among the equipment employed are the tandem lift gantry cranes, also known as quad lift cranes. These cranes are capable of simultaneously lifting two forty-foot containers or four twenty-foot containers and are an industry benchmark of technological advancement and operational capability. Jebel Ali is the first Port in the world to achieve the ISO 27001:2005 Certification for its Information Security Management System (ISMS). This is reflective of the enhanced focus on all facets of security management at the terminals.

An example of growth-oriented initiatives is the adoption of e-freight by Emirates airline. E-freight is an initiative by IATA to reduce the amount of paper documents in the air cargo industry. A single air shipment can involve up to 30 paper documents, and e-freight currently replaces 20 of these with electronic messages.

In November 2008, Emirates SkyCargo started sending e-freight shipments from five airports. Today there are 126 e-freight compliant airports worldwide, 38 of which are within Emirates' global network. The carrier estimates that more than 50 of its airports will be handling e-freight by the end of 2010.

- Overcapacity leading to a high cost competition and impact on margins

According to industry inputs, there is oversupply in the market for warehousing space in Dubai. This has resulted in high cost competition, leading to impact on margins, especially for SMEs. Large 3PL companies are giving offers, such as six-month free warehousing, extremely low rates, etc. It has overall led to lower rates and decline in revenues of 3 PL companies. Earlier, the warehousing rates were AED 1 per cubic meter per day; a number of companies have now reduced the rates to as much as AED 0.25-0.50; thus creating a significant impact on their revenues and margins.

A similar situation exists in other segments, such as trucking, passenger transport by private bus operators, and freight forwarding. A large number of companies had entered the industry, before the economic slowdown, due to expectation of high demand and minimal entry requirements. The over-capacity has led to cost competition in most of the industry segments.

- Lack of Stringent Regulations to Ensure High Quality of Services

Minimal Entry Requirements leading to a high level of fragmentation in freight forwarding, trucking, passenger bus transport, etc.

- The trucking industry is the most fragmented segment of the Transportation and Storage industry. There were approximately 2,500 establishments involved in land transport in 2008. 97% of these firms had less than 250 employees.[60] RTA has imposed a minimum requirement of 10 heavy trucks for any new company to enter this industry.
- The private bus operator segment is also highly saturated with a large number of companies (hundreds of them) already providing these services. There are a large number of companies with varying fleet sizes (from 1-2 buses to 30 buses). There is low control on quality of services provided by these companies due to lack of stringent quality-related regulations from RTA and presence of a large number of companies. However, now RTA has imposed a minimum requirement of 10 buses for any new company to enter this industry.
- There are a large number of freight forwarding companies in Dubai, ranging from 1-2 people set-up to large international 3PL companies focused on freight forwarding (such as Expeditors). Low entry barriers in terms of regulatory and capital requirements have resulted in the emergence of a large number of players in this segment. Currently, the number of players is large, but the number of players offering high quality services is low.

Lack of stringent regulations for running the operations (relevant for trucking, warehouses outside the free zones)

Trucking: Lack of stringent regulations for the trucking industry leads to negligence on part of the drivers, over-loading of cargo on the truck, etc. This in turn leads to accidents, breakdowns on the roads and loss in efficiencies. In 2009, out of a total of 1,827 road accidents that had injuries, 292 accidents (16% of the total number) were caused by trucks. The key players try to follow a high level of safety standards on their own, however lack of high quality standards amongst the large number of small players can harm image of Dubai as a hub for transportation and storage industry.

[60] Source: Dubai Statistics Center

Warehouses outside the free zones: There is a need for more stringent implementation of the requirements since a number of warehouses (especially the ones outside the free zones) do not meet the required standards in Dubai.
These standards are related to the following aspects:

- Health and safety of employees
- Environment concerns
- Waste management
- Fire safety systems
- Standards for handling specialized goods, such as food, flammable materials and explosives such as firecrackers, chemicals and gas cylinders, etc.

In May 2010, as part of an inspection by Dubai Municipality:

- **56% of the food storage warehouses were fined** for a number of offences, including the lack of proper ventilation, lack of proper health and safety measures being followed for employees, allowing stock to build up over months, etc.
- **7% warehouses (18 out of a total of 257 warehouses) were found not to be complying with hygiene standards**

Such instances, even though outside the free zones where most of the logistics companies are located, can severely damage Dubai's image as a hub for the transportation and storage industry.

Competitiveness of Dubai Based on Published Indices

Lack of stringent regulations impacts the quality of services offered by these firms (as reflected in 27th rank on the Logistics Quality & Competence parameter in the Logistics Performance Index 2010).

- Low Productivity and Efficiency in Processes
In case of international logistics companies, the productivity levels in Dubai are 10-15% lower as compared to their global operations. In case of SMEs, their productivity levels are 30-40% lower as compared to SMEs in Europe.[61] The key reasons for lower productivity of firms are:

- Low utilization of technology
- Lack of training

[61] Expert Interview with Department of Economic Development, Dubai; discussed in detail in the following section on Industry Productivity Assessment

-Emerging competition from other emirates and GCC countries

There are huge infrastructural developments taking place in the other emirates, such as Abu Dhabi, and other GCC countries, such Saudi Arabia, Kuwait Qatar. The GCC countries are expected to invest over USD 119.6 billion (AED 439 billion) in infrastructure projects over the next 10 years, of which rail projects account for more than 90%.[62] Some of the examples of these developments are[63]:

- Saudi Arabia, which leads the Gulf countries in terms of investment, is spending USD 25 billion (AED 92 billion) on its rail network adding 3,900 km of track through three major projects.
- The government in Qatar plans to spend 36.9%of the 2010/2011 fiscal budget (USD 11.9 billion) on major capital projects, such as New Doha International Airport, New Doha Port project, etc.
- Khalifa bin Salman port and Bahrain Logistics Zone (BLZ) were opened in April 2009 in Bahrain. There are plans to increase BLZ's size by 150% from the current 475,000 sq m of leasable land.
- Bahrain International Airport will soon be home to the Cargo Oasis, an expanded cargo handling facility that will treble Bahrain's international air cargo to a capacity of one million tonnes per annum, a level comparable with London's Heathrow Airport

[62] Source: Business Monitor International

[63] *Details related to port, airport and free zone developments in the GCC have been detailed in the respective sub-sectors*

Related and Supporting Industry

+Strong ship-repair and ship building industry

Dubai has a strong ship repair and ship building industry with presence of Jadaf Dubai, Dubai Drydocks and Dubai Ship Building and Engineering Company.

There are plans to open Dubai Maritime City's Industrial Precinct (new drydocks). This is expected to significantly enhance the emirate's ship repair capabilities. The Precinct will be a 1.1 square km repair yard with 42 dryberths and 100 workshops and warehouses, and more powerful ship lifts that can carry vessels of up to 6,000 tonnes.

+Growing aircraft maintenance industry in the Middle East

The Middle East MRO (maintenance, repair and overhaul) industry is expected to witness a steady growth of 4.4% and reach USD 3.4 billion (AED 12.5 billion) by 2018 as compared to USD 2.8 billion (AED 10.3 billion) in 2008.[64]

In 2009, the global MRO was down to USD 41.8 billion (AED 153.4 billion) as compared to USD 45.1 billion (AED 165.5 billion) in 2008 since airlines reduced capacity worldwide (especially in North America and West Europe). However, the long-term outlook for the MRO industry remains positive as global growth is expected to be maintained at 4.3% CAGR through 2018 worth USD 68.6 billion (AED 252 billion) as compared to USD 45.1 billion (AED 165.5 billion) in 2008.

The Middle East is expected to be a key center for the MRO industry in the future, due to its strong infrastructure, a strong network of MRO service providers, a high availability of skilled workers and competitive labour cost (halfway between that of Europe and Asia).

Dubai World Central (DWC) Aviation City is expected to cater to the Middle East's growing MRO industry. DWC Aviation City's value preposition to capture this growth is its unique concept of establishing a complete aviation cluster in one area within Dubai World Central. The project has been designed to become the region's premier centre of excellence for aviation manufacturing, MRO, aviation support services and consultancy, research and development, training, aviation products and parts and high tech industries.

+Presence of some platforms for industry collaboration; however their role can be strengthened

The key associations for the transportation and storage industry in Dubai/UAE along with their role for the industry have been listed in the following table.

Key Associations for the Transportation and Storage Industry in Dubai/UAE

Association	Members	Role
Supply Chain and Logistics Group (SCLG)	Traders, manufacturers, IT companies, etc. – everyone who is part of a Supply Chain	• To promote the cause of Logistics and Supply Chain industry and raise the

[64] Source: Expert Opinions at MRO Middle East Conference and Exhibition in Dubai in January 2009; Expert Opinions at the MRO Middle East conference in Dubai in March 2010

		overall standards of end to end supply chain • To protect the interest of member organisations and support government bodies in formulation of policy framework for logistics organisations • To conduct training courses, seminars, conferences and studies relating logistics and supply chain
National Association of Freight and Logistics (NAFL)	Freight Forwarders Warehousing players 3PL companies	• To represent the freight forwarding and logistics industry internationally • To issue FIATA bill of lading • To improve standards of the industry • To provide training to the individuals in the industry (including a 10 module-programme for 2 years)
UAE Ship Owners Association (UAESOA)	Ship Owners	• To promote the interests of Ship Owners based in and operating from the UAE, whilst also providing a common platform for interaction within the rest of the Industry

**There is no association for the land transport industry.*

The associations do not have many specific programmes to develop key aspects of the industry. Some of the initiatives adopted by associations internationally to develop the transportation and storage industry are as follows:

Hong Kong

- **Hong Kong Sea Transport and Logistics Association (HKSTLA)** has initiated **"Develop a Technology Demonstration Project to Promote IT Usage among Logistics SMEs in Hong Kong".** The funding for the programme (to be carried on for 18 months) was granted by the SME Development Fund from the Trade and Industry Department. The objective is to upgrade the skill level of IT usage among the local logistics SMEs.
- **Hong Kong's Freight Forwarding Association (HAFFA)** along with the **Chartered Institute of Logistics and Transport in Hong Kong (CILTHK), and with funding support from the Hong Kong Government via the Hong Kong Logistics Development Council (LOGSCOUNCIL),** has developed a Vocational Training Program (VTP) in the Airfreight and Seafreight sectors. The VTP will provide industry newcomers and existing industry employees with a structured curriculum which will greatly enhance the skills and capabilities of the local workforce. As per a new benefit of the training, HAFFA's Member Companies give higher priority to any job seeker if he/she has obtained the certificate of VTP for Airfreight Sector.

Singapore - Singapore Maritime Foundation (SMF), Association of Singapore Marine Industries (ASMI) and Singapore Shipping Association (SSA) are the key associations for the maritime industry in Singapore. These had established the MaritimeONE Scholarship Programme, whereby the sponsors (private players) provide the funding for scholarships and offer job opportunities to students in their companies. They are also involved in raising awareness of the exciting job opportunities in the industry.

SMF is a private sector-led body that works work closely with the Singapore Government to develop Singapore into a premier International Maritime Centre.

-Low attractiveness of registering ships in UAE

Ship ownership is not so active in Dubai/UAE due to lack of a ship owning culture and lack of ship financing options. UAE accounts for only 0.82% of deadweight tonnage in the world.

UAE is not viewed as an attractive location for registering large ships; consequently only small boats are registered in UAE currently.

A number of countries, such as Singapore, have attractive ship registries since they offer financial and other benefits, such as:

- Easy registration
- Tax incentives
- Availability of ship financing
- Flexibility in hiring crew (since the crew's contract is as per the ship flag's country's regulations)

The following table provides the list of measures that Singapore has adopted to make its registry attractive for ship owners.

Initiatives Adopted to Make Singapore Registry Attractive

Quick Processing	A ship can be registered within two hours upon the complete submission of all relevant documents. Advance registration facilities are also available to facilitate delivery of a ship in a foreign port.
Ensuring high quality and flexible ship registry	**Adoption of international standards:** Singapore is a party to all the major International Maritime Organization (IMO) conventions on ship safety and marine pollution prevention. **Tax exemption:** Profits derived from the operation of a Singapore vessel are exempt from Singapore income tax **Good safety record:** The Singapore Registry of Ships (SRS) is on the White List of key port state control regimes, with a dedicated flag state control unit (FSCU) that actively monitors, identifies and regularly penalises any non-conforming ships in the SRS. **Choice of classification societies:** Nine internationally recognised classification societies, in addition to Maritime and Port Authority (MPA), are authorised to survey and issue tonnage, safety and pollution prevention certificates to Singapore ships: American Bureau of Shipping (ABS) Bureau Veritas (BV) China Classification Society (CCS), etc. **Flexibility on crew nationality:** As the owner of a Singapore-registered ship, one can employ officers and crews of any nationality as long as the crew meets the standards of the

	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) 1978. **Recognition of foreign certificates of competency:** Singapore allows foreign officers and engineers who hold valid and relevant foreign certificates of competency (COC) to serve onboard Singapore ships. No prior approval is required.
Tax Advantages and Financial Incentives for Singapore – based Maritime Companies	**Approved International Shipping Enterprise (AIS) scheme** (qualifying companies enjoy tax exemption on qualifying shipping income for 10 years); It aims to attract international ship owning and operating companies in Singapore **Maritime Finance Incentive (MFI) scheme** (Ship or container leasing companies, funds, business trusts or partnerships all get to enjoy tax concessions for up to 10 years on their qualifying leasing income); It aims to encourage companies to use Singapore as their capital and funding base **Maritime Cluster Fund (MCF):** MCF was set up in 2002 with an initial budget of S$80 million (AED 219 million). Aimed at facilitating the growth of the maritime cluster in Singapore, the fund is available for the development of manpower, local training infrastructure and capabilities within the maritime industry.
Block Transfer Scheme	To encourage the flagging of foreign flagged ships as a fleet under the Singapore flag, the Block Transfer Scheme ("BTS") was introduced as a **volume discount scheme for ship registration fees, provided their primary registry elsewhere is suspended.** In addition to the tax exemption available for income from chartering or operating Singapore flagged ships, the BTS also provides for automatic exemption from withholding tax on interest paid on an overseas loan taken to finance those ships. This scheme applied to ships registered during the period ended November 1, 2003 to December 31, 2008.

-Nascent ship financing industry

Ship owners undertake financing mostly for expansion of fleet, fleet renewal, refinancing or for repair/upgrading of vessels.

Ship financing has not developed in UAE and overall in the Middle East due to lack of interest of local banks in ship financing due to their lack of knowledge of the shipping industry and the volatile nature of the shipping industry. Currently, National Bank of Fujairah is the key local bank in the region dedicated to ship finance, while other local banks such as Emirates NBD[65] have extended only a few loan facilities on ships.

In contrast, Singapore has a well-developed shipping finance sector, and offers shipping players both traditional and innovative financing solutions. Some of the ship financing options available in Singapore are:

[65] Source: Zawya

- Shipping Finance Portfolio with more than 20 major banks, national banks, such as Development Bank of Singapore and world's largest shipping banks, such as CommerzeBank, Nordea Bank, DVB Bank AG, etc. Most of the international banks have their regional head offices in Singapore for South East Asia or entire Asia
- Alternative financing options, including shipping trusts (e.g. Pacific Shipping Trust), ship funds (NFC ship Fund)and listing and raising capital on the Singapore Exchange (SGX)
- Financial institutions, boutique shipping investment banks and private equity arrangers focused on all aspects of the shipping industry

In addition, the Maritime Finance Incentive (MFI) scheme encourages companies to use Singapore as their capital and funding base to finance both their maritime vessels and sea containers.

Ship or container leasing companies, funds, business trusts or partnerships get tax concessions for up to 10 years on their qualifying leasing income under the MFI scheme. MFI is provided by Maritime and Port Authority.

The other issues impacting competitiveness of the industry in Dubai are as follows:

+Adoption of initiatives in order to make customs and other services online; however there is a need to make these systems more comprehensive to create a single window for all transportation and storage-related services

Dubai Customs has been progressive in terms of making the customs clearance online through implementation of **Mirsal 2**. The electronic declaration system allows companies to complete goods clearance procedures online round the clock without the actual papers being handed in to customs.

In addition, Dubai Trade Portal has been formed under Dubai World as a single window to the online services of DP World, Dubai Customs, Economic Zones World, and Jebel Ali Free Zone Authority.

However, there are certain limitations of these systems currently, which if handled will help to increase efficiencies in the industry:

- The trader/freight forwarder still needs to send the documents to the customs within 14 days. In comparison, a scanned copy of the document works in a number of countries, such as Sweden.
- **According to Dubai Trade, 20% of the services related to the transportation and storage industry are not currently online.** In comparison, international single-window portals for the industry, such as Singapore's TradeXchange, offer a comprehensive set of services for the industry.
- **Singapore's TradeXchange portal offers a single electronic window for integrated workflow, submissions and enquiries to the Sea Ports, Airports, Maritime Authorities, Customs, Banking and Financial Institutes, Shipping lines, and Controlling Agencies.** TradeXchange is led by Singapore Customs, Economic Development Board and Infocomm Development Authority of Singapore.

Having a single window for all transportation and storage related services will help Dubai to reduce the number of days and costs involved in document preparation for imports and exports. Dubai Trade has been actively pursuing efforts to enhance its online services in order to make the import/export processes more efficient. However, it needs greater support from other entities in the industry to provide a more exhaustive set of services.

Competitiveness of Dubai Based on Published Indices

Lack of a single window for all T&S related services increases the time involved in exports from and imports to Dubai (as compared to other international hubs). This is reflected by a higher number of days involved in documents preparation for exports and imports (8 and 9, respectively) as compared to 5 and 3 days in case of Singapore and 6 and 5 days in Hong Kong. [66]

-Lack of a centralized body responsible for developing the industry

In Dubai, there are a number of regulatory bodies responsible for regulating various aspects of the transportation and storage industry.

- Dubai Civil Aviation Authority regulates the aviation industry
- RTA is responsible for development of the land and marine infrastructure and services
- Dubai Maritime City Authority is looking at development of Dubai's maritime industry
- DP World manages and operates the port
- The respective free zone authorities (JAFZA, DAFZA, Dubai Cargo Village) have their own regulations for the companies operating under their license.

The difference in administrative procedures for companies inside and outside the free zones, and procedures for moving goods in and out of free zones as well as between them is viewed as cumbersome.

[66] Source: Trading Across Borders Report 2010

Overall, there is a perception in the industry that multiple administrative charges and rules increase the cost and complication of doing business in Dubai. This might lead to some potential customers to source directly from production sites in Asia or move to other GCC countries that are currently developing their infrastructure.

A key reason for these issues is the fact that there is no single government body responsible for development of the transport and logistics industry, which is one of the key industries in Dubai.

In contrast, in the international hubs, the Ministry of Transport is usually responsible for all modes of transport industry, and the authorities responsible for each transportation mode fall under it. In case of Hong Kong, a separate transport and logistics council exists that acts as an advisory body to the government to support the development of the industry.

Example of Hong Kong's Regulatory and Advisory Structure for the Transportation & Storage Industry

Transport and Housing Bureau is responsible for the formulation of policies on matters relating to Hong Kong's internal and external transportation, including air services, land transport, maritime transport and logistics.

There are departments in the bureau that look after implementation of policies and regulations with respect to the three transportation modes.

- **Transport Department:** Authority for administering the Road Traffic Ordinance and legislation for the management of road traffic, regulation of public transport services and operation of major transport infrastructures.
- **The Marine Department, headed by the Director of Marine:** Responsible for all navigational matters in Hong Kong and the safety standards of all classes and types of vessels.
- **Civil Aviation Department:** Regulatory role for aviation industry and act as an air navigation service provider and provides air traffic control services to all aircraft operating in and out of Hong Kong International Airport.

In addition, the Logistics Development Council has been set up as a champion body with representatives from government, private players and representatives of other associations. The aim of the council is to enhance Hong Kong's competitiveness in the T&S Industry.

The work of the LOGSCOUNCIL is supported by five project groups, each aiming at enhancing a specific aspect of the transportation and storage industry:

- E-logistics Project Group (cyber and IT infrastructure)
- H-logistics Project Group (human resources)
- M-logistics Project Group (marketing and promotion)
- P-logistics Project Group (physical and regulatory infrastructure)
- S-logistics Project Group (support for SMEs)

Since, an ideal transportation and storage hub requires efficient coordination of efforts from the various modes, it is important to have an umbrella body for Dubai. The body should be responsible for the overall enhancement of Dubai as a Transport and Logistics hub.

-Need for homogenization of rules within the GCC countries with respect to non-tariff barriers

In order to maintain Dubai's role as a trans-shipment hub for GCC, there is a need to simplify and harmonize rules across GCC countries.

Currently, a number of custom requirements vary across GCC countries, leading to increased time in transit for goods, delays and congestions at the borders.

According to industry inputs, delays due to border issues can take several hours to days. The UAE-Saudi border represents the key bottleneck. The key issues with respect to cargo clearance at the border are:

- 100% inspection of goods at the border of Saudi Arabia
- All food products going into Saudi Arabia have to get a SASO certification, which needs to be done at the Saudi Embassy in UAE.
- The customs at Saudi Arabia require specific space between the containers in the truck
- A special food inspection report is required if food products need to be shipped to Oman
- The custom procedures in the other GCC countries are not online currently, leading to delays in trans-shipping goods to these countries.

According to the recent reports, GCC countries might start implementing an automatic customs clearance system by 2010-11 as against a manual system they are using now. However, **finalization and complete execution of the GCC customs union (a zone in which the customs charges and procedures hindering trade amongst these countries would be abolished) has been postponed for atleast two years.**[67]

[67] Gulf News, September 2010

-Low focus on R&D (to improve efficiencies in the industry and ensure seamless movement of goods) at the firm as well as industry-level

R&D in transportation and storage industry refers to:

- At the firm level (traders, manufacturers, 3PL companies): how to improve efficiencies in storage and transportation of goods
- At the industry level: Enhance collaborations between universities, government and private players for conducting research on areas, such as implementation and testing use of RFID to ensure seamless movement of goods; promoting inter-company collaborations and ensuring better transport utilization by matching their supply and demand

Most of the international players in the Transportation and Storage industry transfer the technical knowledge from their international offices to their set-ups here.

However, R&D on how to improve efficiencies in the industry and ensure seamless movement of goods is low in Dubai as compared to international standards.

The level of research in universities is basic (primarily student projects) and there is no centralized body promoting collaborative research between players, government bodies and universities.

Most of the international hubs for transportation and storage are focusing on research and development in order to increase efficiencies. R&D Models in international transportation and storage hubs have been detailed in the following table.

Key Centers/Funds for R&D in Transportation and Storage Industry Globally

	Hong Kong	Netherlands	Singapore
Key Center/Fund Focussing on R&D	R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM R&D Centre)	Dutch Institute for Advanced Logistics*	TRIDENT – Part of Maritime Innovation and Technology Fund (MINT)**
Key Supporting Government	Funding Support from Innovation and Technology Commission of the Government	The Ministry of Economic Affairs and Transport, Public Works & Water Management Fund of EUR 25 million (AED 117 million)	Maritime and Port Authority (MPA) MINT Fund of S$100 million (AED 270 million)
Objective of the R&D Center/Fund	To strengthen Hong Kong's economic competitiveness and to enhance its technology leadership in the logistics and supply chain management industry by strengthening collaborative research	To promote R&D in Logistics and SCM To serve as a physical and virtual meeting place, where the private sector can cooperate	To promote R&D in the maritime industry MPA funds upto 50% of project costs incurred

	between the industry and research organizations	with Centres of Excellence (i.e. universities) and post-experience education can be organised.	by: Singapore-incorporated companies who are involved in R&D or test-bedding of maritime technological innovations Foreign companies who own or are developing maritime technological innovations and wish to pilot test their innovations from Singapore. Tertiary and research institutions who wish to pilot test maritime technological innovations they own, have access to or are developing. Innovations pilot tested must have the potential to be marketed and sold.
Focus R&D Areas	• RFID Hardware and Systems • Networking and Infrastructure Technologies • Applications and Decision Support Technologies	• Cross Chain Control Centers • Service Logistics • Control of Hubs	
Universities Involvement	Involves three leading universities in Hong Kong • The University of Hong Kong • The Chinese University of Hong Kong • The Hong Kong University of Science and Technology	Supports R&D projects conducted by a consortia consisting of at least 1 SME and 1 university or academic research institute	
Key Details of the Programmes	***Platform Research Programme ***Collaborative Research Programme		

**In April 2009, the Ministries of Transport and Economic Affairs officially launched the Logistics and Supply Chains innovation programme. This programme was developed by the 'Van Laarhoven' Committee (coalition of Dutch logistical and supply chain parties and supported by the government; with TU/e (School of Industrial Engineering) and Erasmus University Rotterdam as the scientific partners). It aims to achieve European market leadership in controlling the flow of goods through one or more EU countries.*

***Platform for Test-bedding, Research, Innovation and Development for New-maritime Technologies*

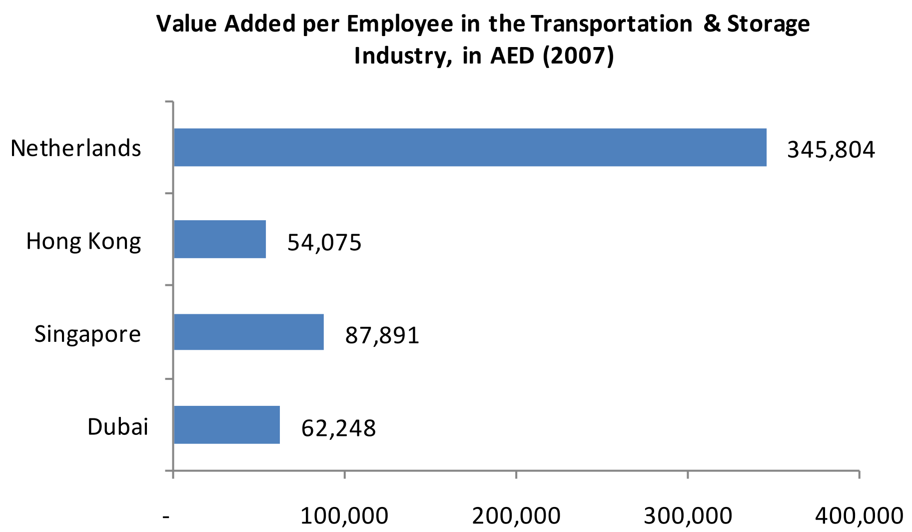
******Platform Research Programme:** Applications are open to universities, industry support organizations, and research institutes. This requires cash and/or in-kind contribution from at least two industry partners for at least 10% of the total project cost*

Collaborative Research Programme

Applications are opened to a private company which requires a cash and/or in-kind contribution of no less than 30% of the total project cost at the start of the project and gradually increase to over 50% of the total project cost *during the project period.*

13. Industry Productivity Assessment

The Transportation & Storage industry is Dubai faces the challenge of a lower productivity as compared to the key international hubs. For instance, value added per employee in Singapore and Netherlands are 40% and 400%, respectively, higher as compared to Dubai.



Source: Dubai Statistics Center, Asian Productivity Organization, Netherlands Transportation Industry Association (TLN)

In case of international logistics companies, the productivity levels in Dubai are 10-15% lower as compared to their global operations. In case of SMEs, their productivity levels are 30-40% lower as compared to SMEs in Europe.[68]

[68] Expert Interview with Foreign Investment Office, Department of Economic Development, Dubai

The key reasons for lower productivity in firms in Dubai are as follows:

Low Level of Technology Adoption

Low Level of Implementation of GPS Tracking and Related Systems

- **Most of the land transport vehicles (trucks, delivery vans, vehicles of courier companies, etc.) are not equipped with GPS tracking systems.** Most of the tracking updates and planning are done manually (on phone) and shared with the customers. Implementation of GPS tracking systems can help in reducing chances of thefts; more efficient planning for picking and dropping of cargo; and in providing real-time information to customers.
- Most of the medium-size courier companies do **not have route optimization systems that are linked to GPS tracking systems.** These help to identify the shortest routes, routes with minimal traffic, taking into account rush hours on certain routes. By using the route optimization systems, the fleet manager can design the fastest and the most efficient delivery schedule.

Some of the reasons (as cited by the companies) for not implementing these systems are:

Nashwan Land Transport: *"Implementation of tracking systems will help in reducing chances of thefts (which is a problem right now); help in more efficient planning for picking and dropping of cargo; help in providing real-time information to customers. However, the business scenario is not favorable right now to invest in new fleet and systems"*

Limo Service: *"GPS systems will help it to ensure early allotment of cars/drivers for the next service once they have finished one. However, we have not invested in these systems due to slowdown in the market demand right now"*

Speedex Courier: *"Tracking and Tracing systems are not in place for their fleet. Most of the courier companies rely on mobile phones or handheld devices to coordinate with their staff. The challenge to invest in these is the cost. It requires AED 2,000 per unit for initial installation and then Etisalat's package – which is also expensive (as compared other developed countries*

Low Level of Automation of Warehouses

- **A number of old warehouses in Dubai lack in sophisticated warehouse management systems** and they still rely on excel sheets and manual systems.
- **Automation in medium and large size companies is also lower as compared to their international operations.**

- Most of the key 3PL players have automated their processes by investing in sophisticated racking and shelving systems and warehouse management systems. However, there is still scope for improvement in these processes. For instance, a number of firms have not invested in conveyor belts, automated laser guided forklift trucks, etc.
- A number of improvements are possible in operations of local traders and manufacturers, who currently manage their logistics functions internally.
- Approximately only 50% of firms dealing in food and beverages in Dubai have mobile racking (which is extremely important for efficiencies in food and beverage industry).[69]

The key reasons for the same are as follows:

- **Availability of cheap labour** makes it cheaper to hire more labour than to implement automation solutions

  It is cheaper to hire labour than to automate the warehouse in Dubai.
  - Adopting a Warehouse Management System can cost AED 150,000-200,000, in which a warehouse owner can deploy as many as 8-10 labourers by paying them AED 1,500-2,000 per month.
  - A forklift operator in Dubai costs AED 1,500 per month (AED 20,000-25,000 per year) versus AED 60,000 in Europe, where most of the warehouses are highly automated.
- **Slowdown in demand and competition leading to impact on margins, making companies hesitant to invest**
- **Large companies hesitate to make long term commitments in the Middle East** and hence hesitate to make significant investments in automating warehouses. Most of the contracts with the large 3PL companies are not beyond 2-3 years.
- **Full automation is not so prevalent since there are not a large number of manufacturers handling large amount of goods**

Low Level of Implementation of IT systems by Freight Forwarders

A number of software systems are available for freight forwarders. A number of freight forwarding SMEs have not implemented these systems due to cost constraints. Such systems help in quick response to customer queries and quotes, enhance tracking and tracing capabilities, etc.

Even the freight forwarding companies have implemented software systems for internal processes; most of the companies do not have track and trace systems for their customers. Most of the updates regarding the location of the cargo are shared with customers manually (phone or email). In contrast, most of the international players (DHL, Panalpina, Kühne + Nagel, etc.) and some of the regional players (Aramex, Agility, Freight Systems) offer tracking and tracing capabilities on their websites for their customers.

[69] Expert Interviews with providers of racking and shelving systems in Dubai – Schaefer and FAMCO

Competitiveness of Dubai Based on Published Indices

A low level of IT implementation in various segments of the industry also impacts the tracking and tracing capabilities offered by these firms (as reflected in 28th rank on the Tracking and Tracing parameter in the Logistics Performance Index 2010).

Lack of Training

The availability of expatriate employees has been an advantage for Dubai. The high quality of life attracts foreign specialists; while Dubai has traditionally been open for low-cost labor from South Asia.

However, the industry most of the employees in the industry lack any formal training for the industry.

The industry is able to sustain itself with the current skill sets. However, skill enhancement will help to enhance the industry's competitiveness by facilitating:

- Improvement in efficiencies in utilization of assets
- Improving service quality
- Shortening the learning curve of new employees
- Implementation of new technologies

A key challenge with respect to skill upgradation is that the employees in the industry are primarily expatriates, leading to hesitation on part of employers to train transient labour (especially through 2-3 year courses available in the industry currently).

Low Utilization of Trucks & Containers

This is primarily due to lack of load-sharing activities while moving cargo from one point to another. This leads to excessive empty backhauling while moving within Dubai and coming back from other GCC countries and emirates.

So far, **companies have not focussed on these activities till now since earlier the fuel was cheap and there was a low focus on controlling carbon emissions from vehicles.** However, now with increase in fuel prices accompanied with decline in cargo volumes would require companies to focus on ensuring optimum utilization of their trucks and containers.

Worldwide, a number of horizontal collaborations are present in the trucking industry worldwide. Most of these collaborations are industry-driven. An example of such collaborations is the Load Link online services (offered by TransCore Link Logistics, a transportation technology provider for the trucking and freight brokerage industry) in Canada.

TransCore Link Logistics' load and equipment matching service, Loadlink, is the source of information for available loads and trucks throughout North America and Canada to keep their trucks loaded and shipments moving.

The LoadLink services enable carriers to find freight and freight brokers to find trucks to move their shipments. Approximately 5,000 trucking companies, owner operators, private fleets, brokers and freight forwarders access Loadlink every day.

Internationally, the key T&S hubs are focusing on implementing programmes (supported by the government) to enhance technology adoption and skill levels in the industry.

Stringent regulations and their strict enforcement (through fines, cancellation of licenses) is also present in order to enhance the productivity and quality of services in the industry.

Examples of Initiatives in Singapore

Initiative Name	Objective	Champion Agency	Sub-sector	Description
Logistics Capability Development Programme (CDP)	• To encourage SMEs in logistics to improve or develop new capabilities, processes and value-added services • To encourage companies in the logistics industry to form strategic alliances and jointly offer services to tap into global outsourcing opportunities	SPRING Singapore	Any Kind of Logistics Services	*Upto 70% of qualifying costs of the projects are funded through the programme* *Funds allocated for the programme: S$10 million (AED 27 million)* The funded projects include: • Capabilities upgrading • Process improvement • Service development • Certifications • Strategic alliances
Customer-Centric Initiative (CCI)	• To fund and support projects undertaken by land transport companies: • To improve service levels • To achieve higher customer satisfaction • To develop service benchmarks	**SPRING Singapore and National Traders Union**	Land Transport	*Funds up to 70% of the qualifying costs* Examples of service improvement projects: • Service audits (e.g. customer satisfaction surveys) • Implementation of service strategies, service blueprints, • Implementation of technology to improve service • Development of training programmes to train staff
Local Enterprise and Association Development	• To fund and assist industry associations for projects which will result in significant benefits for the whole industry	**SPRING Singapore**	Land Transport NVOCCs Any kind of Logistics services	*Funds upto 80% of the costs of for projects, such as:* • Setting up a training centre and organizing networking sessions and overseas study missions • Create a one-stop web portal for businesses to recruit employees , share services (e.g. excess trailers, post outstanding jobs) • Conduct branding exercises or research and benchmarking studies

Examples of Initiatives in Hong Kong

Initiative Name	Objective	Champion Agency	Sub-sector	Description
Sharing Best Practices	Knowledge sharing of logistics best practices to general SMEs	Hong Kong Polytechnic University	All Logistics Companies	• Project funded and supported by the SME Development Fund
Enhancing competitiveness and efficiency of SMEs	Enhancing competitiveness and efficiency of SMEs	Hong Kong Polytechnic University	Freight Forwarding	• Project funded and supported by the SME Development Fund • The project involved development of Logistics Intelligence Optimizer - Logistics Middleware for Freight Forwarders.
Programme on the Use of IT and Automation Techniques in Logistics Services	To promote the adoption of information technology in logistics operation	H-logistics Project Group of the Logistics Development Council and Hong Kong Productivity Council	All Logistics Companies	• Through a series of workshops, demonstration sessions and a forum, the programme aimed to improve SMEs logistics practitioners' technological skills.
On-Board Trucker Information System (OBTIS)	To promote application of OBTIS - location-based trucking information system	S-logistics Project Group (SLPG) of the Logistics Development Council	Freight Transport by Land	Undertake a pilot project to promote application of electronic communication technologies, including GPS and RFID, to increase the flexibility in fleet management as well as maximizing the cost-effectiveness of trucking operation

Examples of Initiatives in Netherlands

Initiative Name	Objective	Champion Agency	Sub-sector	Description
Strict regulations for freight transport by land	To ensure high quality of services of the trucking industry	EU-level Regulations & The Inspectorate for Transport, Public Works and Water Management , Netherlands	Freight Land Transport	EU regulations make digital tachographs mandatory for all freight transport vehicles manufactured after August 1, 2005. In addition, there are strict regulations related working hours of drivers, non-compliance with duty roster, Loss or theft of the tachograph[70] card not reported, etc. The fines range for not adhering to the regulations range from EUR 50 to EUR 1,380 (approx. AED 200-AED 6,500).
Specific regulations governing the agreements	To ensure clarity and clarify liability of each party in the agreement	Ministries of Economic Affairs and Transport, Public Works & Water Management	Freight Transport by Land; Warehousing	The government has specific regulations (such as AVC (Algemene Vervoers Condities/ General transport regulations) PDG conditions (storage conditions) that clarify liability of each party to the agreement.
Promoting horizontal collaborations	To promote reduction in carbon emissions; thereby leading to efficiencies in utilization of resources *(In traffic and transport industry, the government aims to reduce CO2 emissions to between 30 and 34 million tonnes by 2020 from39 million tonnes in 2005)*	DINALOG	Entire Supply Chain Activities	Conduct R&D to evaluate how the supply chains of larger companies (such as Unilever, Nestle, etc.) can be combined to achieve higher efficiencies.
		EVO – Dutch Shippers' Council TLN - Transport and Logistics Association Initiatives of Private Players		Bring various companies together and stimulate them to work towards bundling their goods flow. For e.g. a number of trucking companies have set-up a warehouse in the middle of the city. Goods come in from the port and airport into this center. The trucks are utilized in a collaborative way (one truck carries goods to one location) in order to ensure low carbon emissions. This in turn leads to efficiency improvements for these companies.

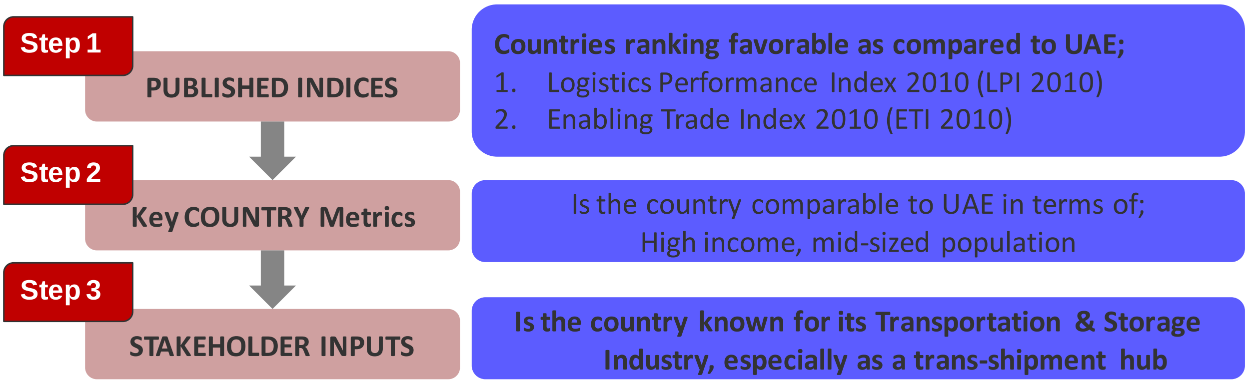
An example of such an initiative in the GCC region is the GPS-based tracking system being rolled out in Jeddah (Saudi Arabia). The Public Transport Committee in the Jeddah Chamber of Commerce and Industry is promoting implementation of GPS-based tracking systems in vehicles, especially commercial vehicles (like trucks) to counter increasing vehicle thefts. It is offering these systems at the subscription

[70] *A tachograph is a device that combines the functions of a clock and a speedometer. Fitted to a motor vehicle, a tachograph records the vehicle's speed and whether it is moving or stationary. It records the distance and time traveled by a vehicle (especially a truck or coach), used to check the drivers' working time.*

rates of initial fee of SR 800 (AED 783) and monthly fee of SR 40 (AED 39). The system will be initially launched in Jeddah and will be later spread to the entire kingdom.

14. Global Benchmarking

The identification of countries for global benchmarking has been done as per the following 3-step process.



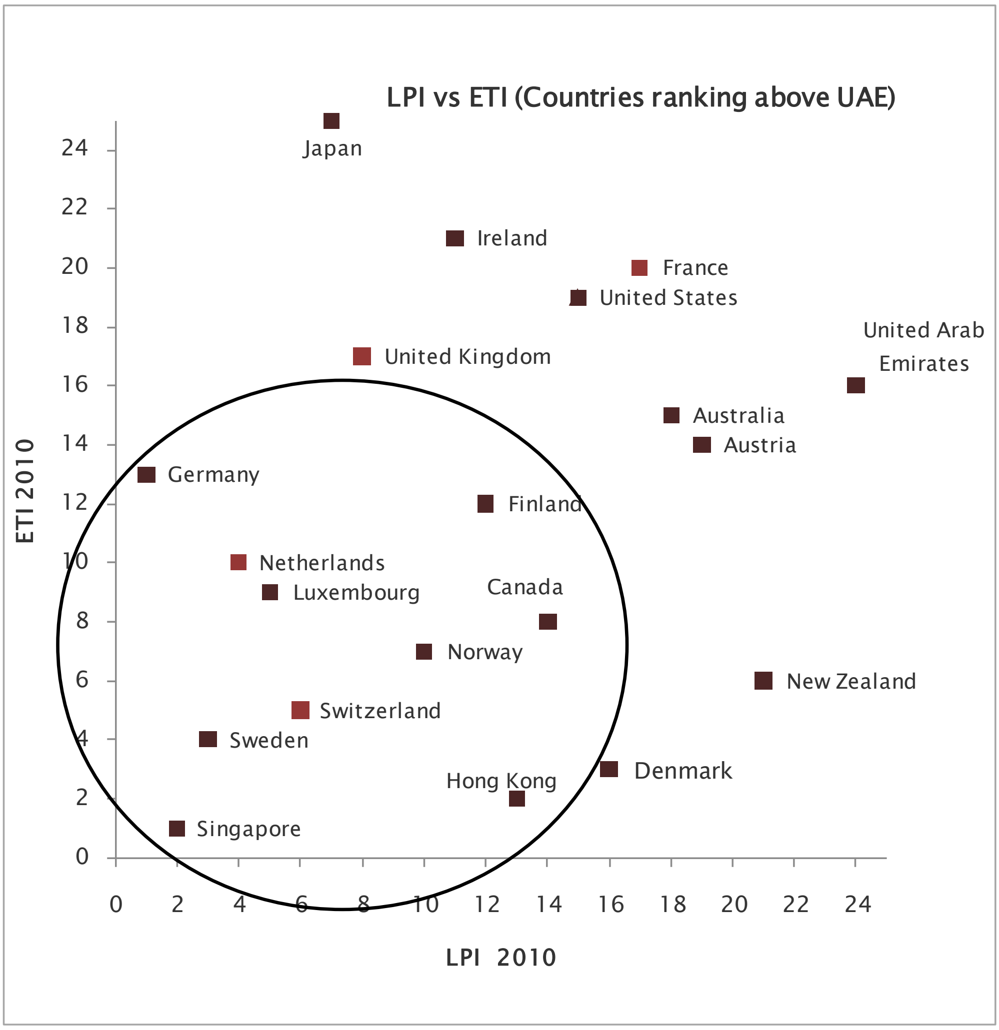
Key considerations for benchmarking;

Published indices:

- *Logistics Performance Index (LPI):* Published by World Bank; compares 155 countries on six parameters:
    - Efficiency of the customs clearance process
    - Quality of trade and transport-related infrastructure
    - Ease of arranging competitively priced shipments
    - Competence and quality of logistics services
    - Ability to track and trace consignments
    - Frequency with which shipments reach the consignee within the scheduled or expected time
- *Enabling Trade Index (ETI):* Published by World Economic Forum; compares 125 countries on four sub-indices:
    - Market Access
    - Border Administration Access
    - Transport and Communication Infrastructure
    - Business Environment

- *Key country metrics*: to benchmark countries which are similar in economic and demographic parameters (high income countries, mid-sized population, industry contribution to GDP, etc)
- *Stakeholder inputs*: opinions of industry leaders. The business community is the actual investor and hence are accurate on identifying countries which compete with Dubai and /or have adopted best practices.
- *Key industry metrics*: for the transportation and storage industry relevant metrics are cargo handled at the ports and airports; country's role as a trans-shipment hub, etc.

Step 1 – Published Indices: All the Countries that Rank Better than UAE



- ***Both X- and Y-axis represent the rank of the countries on these indices, thus, lower the rank – the better it is.***
- LPI reflects the logistics performance of the country and ETI reflects the overall competitiveness of the country with respect to enabling trade environment
- All the countries which rank better than UAE (LPI:24 and ETI:16)have been plotted on the scatter plot alongside

- The Top 10 countries on both LPI and ETI have been highlighted on the plot

Step 2 & 3 – Key country metrics and Stakeholder inputs

Container Ports			Cargo Airports		
Rank	Port and Country	TEUs (2009)	Rank	Port and Country	Metric Tons (2009)
1	Singapore	25,866,400	1	Memphis, USA	3,697,054
2	Shanghai, China	25,002,000	2	Hong Kong	3,385,313
3	Hong Kong	20,983,000	3	Shanghai, China	2,543,394
4	Shenzen, China	18,250,100	4	Incheon, Korea	2,313,001
5	Busan, Korea	11,954,861	5	Paris CDG, France	2,054,515
6	Guangzhou, China	11,190,000	6	Anchorage, USA	1,994,629
7	Dubai, UAE	11,124,082	7	Louisville, USA	1,949,528
8	Ningbo, China	10,502,800	8	Dubai, UAE	1,927,520
9	Qingdao, China	10,260,000	9	Frankfurt, Germany	1,887,686
10	Rotterdam, Netherlands	9,743,290	10	Tokyo, Japan	1,851,972
11	Tianjin, China	8,700,000	11	Singapore	1,660,724
12	Kaohsiung, Taiwan	8,581,273	12	Miami, USA	1,557,401
13	Port Klang, Malaysia	7,309,779	13	Los Angeles, USA	1,509,236
14	Antwerp, Belgium	7,309,639	14	Beijing, China	1,475,649
15	Hamburg, Germany	7,010,000	15	Taipei, Taiwan	1,358,304

Source: Airports Council International and Containerization International

Identification of Countries Comparable to UAE (out of the top 15 countries on LPI and ETI)

Economy	ETI	LPI	GDP per capita	Population group	Is the country known for its Transportation and Storage Industry?
Singapore	**1**	**2**	**34761.9**	**Mid-sized Population**	• **Ranks 1st and 11th in terms of cargo handled at the port and the airport, respectively** • **Serves as a key trans-shipment hub for Asian countries (similar to Dubai's position as a trans-shipment hub for GCC)**
Hong Kong	**2**	**13**	**31422.3**	**Mid-sized Population**	• **Ranks 3rd and 2nd in terms of cargo handled at the port and the airport, respectively**
Sweden	4	3	50942.9	Mid-sized Population	
Switzerland	5	6	65333.5	Large Population	
Norway	7	10	87067.5	Mid-sized Population	
Canada	14	8	41728.7	Mid-sized Population	
Luxembourg	9	5	84892.0	Small Population	
Netherlands	**10**	**4**	**50150.4**	**Mid-sized Population**	• **Rotterdam (10th) is part of the top 15 ports in the world; Amsterdam (17th) is part of top cargo airports in the world** • **Serves as a key trans-shipment hub for European countries (similar to Dubai's position as a trans-shipment hub for GCC)**
Finland	12	12	48124.9	Mid-sized Population	
Germany	13	1	42435.8	Large Population	
UAE	**16**	**24**	**54606.5**	**Mid-sized Population**	**Dubai ranks seventh and eighth in terms of cargo handled at the port and the airport, respectively**

- As per the Doing Business Report (based on World Bank specifications) UAE is classified as a "High Income" and "Mid-sized Population" country
- Hence, benchmarking with economies of similar scale has been considered.
- Thus, Singapore, Hong Kong and Netherlands have been identified as comparable to UAE for their Transportation and Storage industry. The initiatives adopted in these countries to develop various aspects of the industry have been discussed throughout the report.
- **The following section will present the key findings of the global benchmarking with Singapore, Hong Kong and Netherlands.**

Regional Benchmarking

- All the GCC countries rank relatively low in logistics performance index and Enabling Trade Index.

- For the purpose of benchmarking with regional peers, the study focuses on initiatives that are being adopted in the GCC countries and other emirates to develop their transportation & storage industry.[71]

Netherlands

Local Market	• Transportation and Storage accounts for approx. 10% of Netherlands' GDP. There are more than 12,000 Dutch companies serving its transportation and storage industry. • The government has a high focus on the transport and logistics industry. ○ The government has made huge investments to leverage its natural location advantages by building the world-class port of Rotterdam. ○ The government has also focused on attracting foreign companies to set up their headquarters and European distribution centers in Netherlands; thereby promoting flow of goods through the country. This has been done by providing a number of corporate taxation benefits (such as corporate tax is 25% - lower than EU average of 26.9%, double taxation treaties, etc.) • The Rotterdam port handled 9.7 mn TEUs and the Amsterdam airport handled 1.3 metric tonnes in 2009.
Vision wrt T&S Industry	• The government has the ambition to increase the contribution of logistics industry from EUR 3 billion in 2007 to EUR 10 billion in 2020 (approx. AED 14 billion in 2007 to AED 46 billion in 2020). • There is high focus on sustainability. The government has the target of 30% decrease in CO2 emission by 2020 (back to level of 1990), but with doubling of freight volume between 1990 and 2020.
Is the Industry competitive / known?	1. Netherlands acts as the logistics gateway to the European market. Of all the Dutch imports: 40% are re-exported, representing a value of EUR 120 billion (approx. AED 562 billion). 2. More than 50% of all international companies using a Centralized European Distribution Center locate their center in the Netherlands 3. Netherlands competes with other EU-countries and ports, such as Hamburg to act as a gateway to the European market. • The Rotterdam port and the Amsterdam airport rank 10th and 17th, respectively, in the world in terms of the cargo handled (2009).
Role of SMEs	• Certain segments of the industry are highly fragmented, such as trucking, inland water transport, warehousing and 3PL, etc. • There are a large number of SMEs in the transportation and storage industry. Most of the time they are subcontractors for larger companies (3PL companies, manufacturers, traders, etc.) or have developed a niche market in which they specialize in dedicated solutions for clients. • SMEs are very important for the industry as they enable companies to be able to work efficiently during peak- and low-demand periods.
Regulators	• **Ministry of Transport, Public Works and Water Management** is responsible for the overall development of the various segments of the transport industry. It consists of three sections: policy, implementation and inspection.
Education and Training	• There is a huge concern about the demographics of the population with the baby boomers retiring. • **The government has identified logistics as one of the key industries for the future. It has allocated EUR 5 million (approx. AED 23 million) for a PR campaign for 3 years.** The objective is to spread awareness about the industry in schools and colleges regarding the opportunities in the industry. The campaign focuses on the fact that SCM is not only about warehousing and transporting – it relates to how you manage entire supply chain so that "a fish caught in the morning is fresh on the table at a restaurant in the evening".

[71] As discussed in the section on Transportation and Storage Industry in GCC

	• The education in T&S ranges from basic job-oriented courses to higher education. • According to the educational system in Netherlands, every student goes through 12 years of basic education. Thereafter, they give an exam, based on which they go to different levels of high schools. At every level, there are certain courses available for students: o Low level: there are training courses for low-level high school students to become truck drivers, fork lift operators o Medium level: training for warehouse coordinators, admin jobs, etc. o High level: training in operations research, supply chain management, etc. • Higher education in logistics and SCM is provided by a number of universities and technical institutes, such as Eindhoven University of Technology, Erasmus University (especially Rotterdam School of Management), Universities of Groningen, Tilburg, Nijmegen, Twente, Delft, Nyenrode, etc. In addition, 15 colleges/technical universities throughout the Netherlands offering training in Logistics. • The key associations (EVO and TLN also have courses); VLM provides certifications, such as APICS (Advancing Productivity Innovation and Competitive Success – American standards for process and operations management. Netherlands has the highest number of APICS certified professionals.) • Netherlands Maritime University Rotterdam provides Master programs in 'Shipping and Transport' and fosters research in the maritime industry.
PPP	• In 2008, the Ministries of Economic Affairs and Transport, Public Works & Water Management allocated a total of EUR 25 million (approx. AED 117 million) for supporting innovation programs.
Research Institutes	• In April 2009, the Ministries of Transport and Economic Affairs officially launched the Logistics and Supply Chains innovation programme. This programme was developed by the 'Van Laarhoven' Committee (coalition of Dutch logistical and supply chain parties and supported by the government; with TU/e (School of Industrial Engineering) and Erasmus University Rotterdam as the scientific partners). It aims to achieve European market leadership in controlling the flow of goods through one or more EU countries. • The Dutch Institute for Advanced Logistics (DINALOG) was established to promote R&D Programme for Logistics and Supply Chain Management. • The Port of Rotterdam Authority is also actively involved in research. It invites researchers, entrepreneurs, students and port workers to jointly develop the smartest port of the world. Focus areas of the port's R&D-agenda are: o Spatial development; room for growth o Mobility & accessibility o Energy & climate o Sustainability o Supply chain efficiency
Associations	• **NDL/HIDC (Holland International Distribution Council)** represents the logistics sector in the Netherlands. It supplies tailor-made matchmaking services to foreign companies that are entering the European market or that are re-engineering their European supply chain structures. HIDC can put these foreign companies in touch with the right third-party logistics service providers based in the Netherlands. • **VLM:** It is an association for professional members who have formed this association voluntarily for two key functions - informal (Exchange of information through discussions and conferences; formal (conducting exams and offering certifications for various functions related to T&S, such as Advancing Productivity Innovation and Competitive Success (APICS certification). • **Transport and Logistics Association:** It works closely with the government and usually lobbies with the government in order to promote the interest of the industry. • **EVO:** It is the Dutch shipper's council – an association of traders, retailers, importers and exporters i.e. people who need T&S services. It is the lobbyist and adviser for business in the Netherlands concerning internal and external logistical activities including supply of raw materials or products, their storage, transport or distribution to the customer.

Funding Availability	• There is no specific funding available for SMEs in logistics industry.
Conclusion	• The industry is regulated by one body that has the overall responsibility of developing the industry. • There are strong associations to develop and support the industry, including lobbying with Ministry. • There is high focus on promoting R&D in the transportation and logistics industry in order to increase efficiencies and make Netherlands the European market leader in controlling flows of goods passing through one or more European countries.

Hong Kong

Local Market	• The logistics Industry contributes approx. 6% to the GDP and total employment (workforce of over 200,000 covering sea-air-land transportation of cargo). • The Port of Hong Kong has always been a key factor in the economic development of the Hong Kong SAR. It is a hub port serving the South Asian Pacific region and acts as an entreport for the Mainland of China. • Cargo handled through the various transport modes: ○ Port: 21 million TEUs ○ Airport: 3.4 million tonnes ○ Road: 37 million tonnes
Vision wrt T&S Industry	• The logistics industry is one of the four pillars of Hong Kong's economy. There are increasing number of initiatives to enhance the industry. These include ○ better links with the Mainland ○ enhancement of the physical infrastructure ○ creating new IT and ecommerce systems ○ Developing a better labour force ○ Marketing Hong Kong's advantages throughout the world • The Hong Kong Logistics Development Council ("LOGSCOUNCIL"), which was set up in 2001, provides a forum for the public and private sectors to discuss and coordinate matters concerning logistics development and is instrumental to advising the Government to take these initiatives forward.
Is the Industry competitive / known?	4. Ranks 3rd and 2nd worldwide in terms of cargo handled at the port and the airport, respectively 5. Serves as a trans-shipment hub for mainland China Is focussing on becoming a trans-shipment hub for high-value goods, such as cell phones, high-end fashion, etc.
Role of SMEs	90% of the companies involved in the industry are SMEs.
Regulators	• Transport and Housing Bureau is responsible for the formulation of policies on matters relating to Hong Kong's internal and external transportation, including air services, land transport, maritime transport and logistics. • There are departments (Transport Department, Marine Department, Civil Aviation Department) that look after implementation of policies and regulations with respect to the three transportation modes.
Universities	• Hong Kong Polytechnic University is the largest government-funded tertiary education institute in Hong Kong. It has a Department of Logistics and Maritime Studies, focussing on full range of programmes, from higher diploma to postgraduate and research degrees in the industry. The Department's research portfolio lies in both academic and applied research, and consultancy for the shipping, operations and logistics industries. • Other universities involved in providing education for T&S are: University of Hong Kong through its Department industrial and Manufacturing Systems Engineering offers B.Eng. in Logistics Engineering and Supply Chain Management and MSC in Industrial Engineering and Logistics Management.

PPP	• Hong Kong Polytechnic University has been involved in a number of projects focussing on SMEs in the T&S industry. These projects were funded and supported by the SME Development Fund o Knowledge sharing of logistics best practices to general SMEs in Hong Kong o Enhancing competitiveness and efficiency of SMEs in the freight forwarding and warehouse business through the development of a Logistics Intelligence Optimiser • Hong Kong Maritime Industry Council and The Hong Kong Port Development Council are dedicated, high-level advisory bodies (made up of private sector and Government officials) that advise the Government on matters related to port planning and development and promote Hong Kong's position as an international maritime centre, respectively. • Logistics Development Council is an important body with representatives from government, private players and representatives of other associations. The aim of the council is to enhance Hong Kong's competitiveness in the T&S Industry.
Research Institutes	• Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM R&D Centre) is established with funding support from the Innovation and Technology Commission of the Government and is commissioned to provide a one-stop shop for technology development, transfer and knowledge dissemination and intellectual property commercialization.
Associations	• **Hong Kong Sea Transport and Logistics Association (HKSTLA)** is the association of shipping, freight forwarding and logistics companies. HKSTLA is active in providing educational courses to enhance the professional standards of shipping and logistics industry in Hong Kong. • **Hong Kong Logistics Association (HLA)** aims to enhance the knowledge and technology in modern logistics and to advise the government on policy making and enhance the competitive power of Hong Kong in global logistics market. It also strives to develop business opportunities for SMEs. • **Hong Kong Shippers Council** is involved in collecting information of the needs and opinion of manufacturers, exporters and importers, and traders and conveys them to the policy makers and other stakeholders of the industry. • **Hong Kong's Freight Forwarding Association (HAFFA)** is a non-profit making organization which promotes, protects and develops the carriage of goods (whether by air, sea or land) generally, and the businesses of cargo forwarding agents and logistics service providers in particular.
Funding Availability	• **SME Development Fund** is part of the Trade and Investment Department of the government. It aims at providing financial support to projects carried out by non-profit-distributing organisations operating as support organisations, trade and industrial organisations, professional bodies or research institutes to enhance the competitiveness of Hong Kong's SMEs in general or SMEs in specific sectors. • These could be projects related to research studies, award schemes, codes of best practice, conferences, seminars, databases, exhibitions, service centres, support facilities and technology demonstration projects. The other SME funds include: • **SME Loan Guarantee Scheme:** The SME Loan Guarantee Scheme (SGS) aims to help SMEs secure loans from participating lending institutions for acquiring business installations and equipment; and meeting working capital needs of general business uses. The amount of guarantee for an SME is 50% of the approved loan, subject to a maximum amount of USD 6 million (AED 22 million). • **SME Export Marketing Fund:** The EMF provides grant to SMEs for their participation in trade fairs/exhibitions and business missions outside Hong Kong, as well as local trade fairs/exhibitions which are export-oriented. The funding is provided upto 50% of the total approved expenditures incurred by the applicant or USD 50,000 (AED 183,500), whichever is the less. • **Funds from Logistics Development Council:** These funds aim at enhancing the logistics industry through projects across its five project groups.
Conclusion	• There are advisory councils with members from the government as well as private sector's that advise the government on initiatives that need to be adopted to develop the industry. • There have been some specific programmes to develop the competitiveness of SMEs in the industry.

Singapore

Local Market	• The transport, storage and communications industry contributes approx. 10% to Singapore's GDP. • The transportation and storage industry employs around 180,000 people. • Over 3,000 international and local logistics establishments are operating in Singapore. • 21 of the top 25 leading international 3PL international players such as DHL, UPS and Agility have a strong presence in Singapore.
Vision wrt T&S Industry	**"To Develop Singapore into a Leading Global Integrated Logistics Hub, with Robust Maritime, Aviation, and Land Transport Capabilities Supporting the Global Economy"** • Global Integrated Logistics Hub: Nerve/Brain Center Controlling and Managing Activities and Assets of Global Supply Chains Across an Expanded Hinterland • Maritime: An international maritime center attracting shipping companies by providing all round services and facilities for ship management and operation. • Aviation: A regional hub with high connectivity and capacity • Land Transport: Superior warehousing and distribution capabilities that are tightly integrated with customers, aviation and maritime facilities. The three enablers for the vision are: a) Political, economic and regulatory stability/predictability b) Excellent physical, IT and financial infrastructure c) Critical Mass of logistics professionals with strong customer orientation
Is the Industry competitive / known?	6. Ranks 1st and 11th worldwide in terms of cargo handled at the port and the airport, respectively 7. Serves as a key trans-shipment hub for Asian countries (similar to Dubai's position as a trans-shipment hub for GCC) 8. Nearly 180 global companies have based their procurement and marketing in Singapore to reach the Asian markets.
Role of SMEs	• SMEs account for 90% of the companies and employs 43% of the workforce in the transportation and storage industry
Regulators	**The Ministry of Transport (MOT) oversees the development and regulation of these sectors:** • Civil aviation and air transport (Civil Aviation Authority of Singapore) • Maritime and ports (MPA) • Land transport (Land Transport Authority) and Public Transport Authority MOT is responsible for setting the policies, the implementation of the policies and the day-to-day operations are handled by the respective bodies for each of the transport means.
Universities	• **The Logistics Institute - Asia Pacific** is a dedicated Institute for Logistics courses. It is a collaboration between The National University of Singapore (NUS) and The Georgia Institute of Technology (Georgia Tech) for research and education programs (dual master degree and executive programmes) in Logistics and SCM. • A number of other institutes offer diploma courses in Logistics and supply chain management, such as Institute of Technical education, Ngee Ann Polytechnic, Tamasek Business School, Singapore Chinese Chamber Institute of Business and The Chartered Institute of Logistics and Transport (Singapore) , Singapore Institute of Purchasing and Materials management, etc. • A Memorandum of Understanding between SLA and School of Business, SIM University was signed in 2008 to collaborate in the area of training. As per the MoU, Bachelor of Science in Logistics and Supply Chain Degree Programme launched in July 2009. • Singapore Maritime Academy is the key institute for Maritime education and Training.

Research Institutes	• Center for Transportation Studies (located at the School of Civil and Environmental Engineering on the Nanyang Technological University Campus) conducts research projects (usually jointly with the industry) on areas, such as transport planning, airport engineering, etc. • Center for Maritime Studies (part of National University of Singapore) is involved in the research on the maritime affairs.
Associations	• **Singapore Maritime Foundation (SMF), Association of Singapore Marine Industries (ASMI) and Singapore Shipping Association (SSA)** are the key associations for the maritime industry. • These had established the MaritimeONE Scholarship Programme, whereby the sponsors provide the funding for scholarships and offer job opportunities in their companies. They are also involved in raising awareness of the exciting job opportunities in the industry. • SMF is a private sector-led that works work closely with the Singapore Government to a develop Singapore into a premier International Maritime Centre. • **Container Depot Association (Singapore), Singapore Logistics Association and Singapore Transport Association** are the other key associations.
Case Study	**Yang Kee Logistics** • Established in 1997, Yang Kee has grown to be one of the top 5 logistics and warehousing companies in Singapore, with annual revenue of USD 30 million (approx. AED 110 million) and market presence in Malaysia, Indonesia, Thailand and China. • One key ingredients of Yang Kee's success is its focus on developing new growth opportunities, building management & people capabilities, and improving efficiency and productivity. • **Focus on new niche growth opportunities**: It has been focussing on its chemical logistics business, which is being driven by Singapore's strong chemical industry and rising demand for chemicals in Asia. Yang Kee anticipates its chemical logistics business to eventually account for 20% of its total turnover, an increase from 5% in 2009. • **Developing people:** It has tapped on SPRING's HR capability programme to improve its HR systems and practices, and leveraged on SPRING's ETP to bring in promising young talent from the universities. • **Improving productivity:** In 2008, with support from SPRING's Logistics Capability Development Programme, Yang Kee developed and implemented an integrated E-logistics system. This system enabled Yang Kee to improve efficiency by 25%. The new hub will allow Yang Kee to consolidate its existing operations in 6 different locations into 1 centralised hub, and enable the company to implement RFID and transportation tracking system to improve the efficiency of its operations. Together with the E-logistics system, the total productivity improvement is expected to be significant with estimated cost savings of some USD 2.7 million (AED 9.9 million) per year.
Funding Availability	• The funds are available as per a number of schemes to enhance technology adoption, training and capabilities development for firms.
Conclusion	• There is a high focus on offering funding support to transport and logistics companies to enhance their technology adoption and enhance skill levels of their employees. • Ministry of Transport is the centralized regulatory body for the industry.

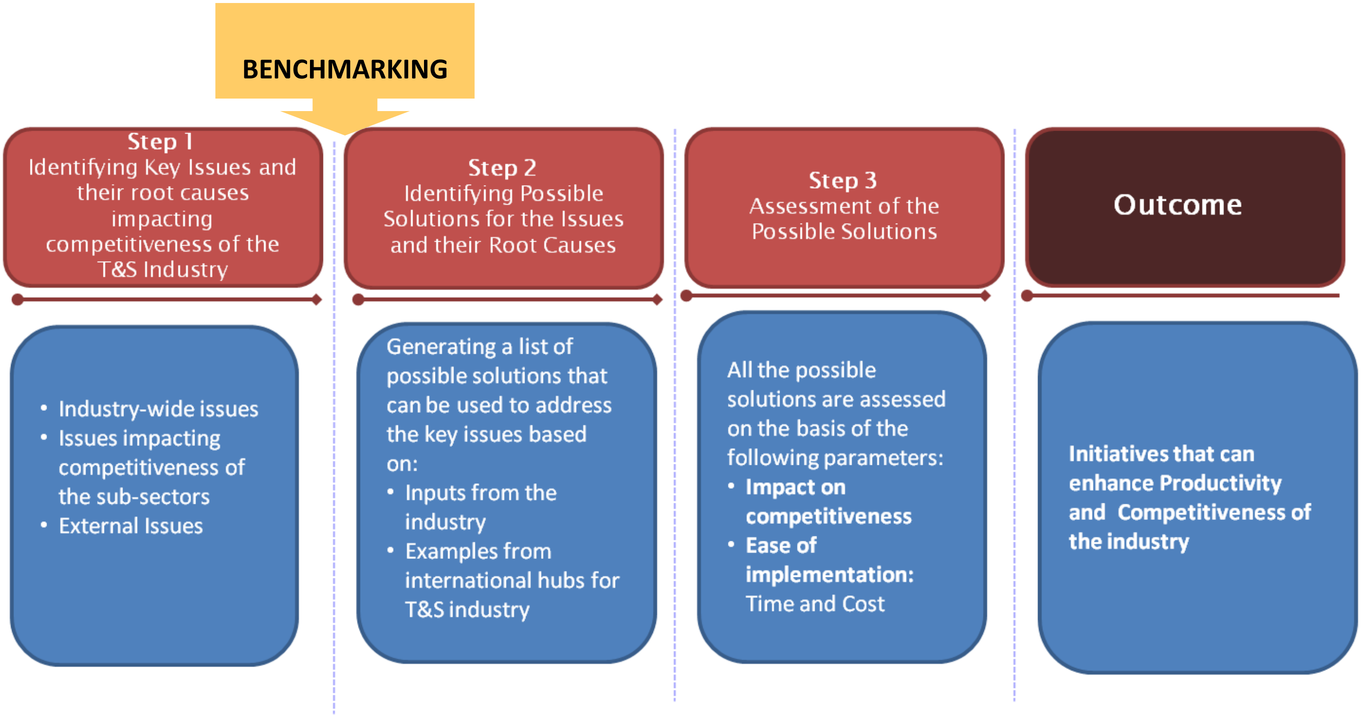
Summary of Benchmarking Examples

	Regulators	Universities	R&D Focus	SME Funding
Dubai	Presence of a number of regulatory bodies	Nascent educational programmes	Low	Not available for specifically promoting or enhancing SMEs in the transportation and storage industry
Singapore	Presence of a centralized government body	Courses for the industry are provided as bachelor and master degrees, diplomas, executive programmes, etc.	Primarily conducted by research centers at universities and other educational institutes	Funds available as per a number of schemes to enhance technology adoption, training and capabilities development of firms
Netherlands	Presence of a centralized government body	Allocation of funds to spread awareness in schools and colleges regarding the opportunities in the industry Basic-level to advanced level education courses available	High focus on R&D at a strategic level (not so much at SME level) - Setting up of DINALOG	Not available for specifically promoting or enhancing SMEs in the transportation and storage industry
Hong Kong	Presence of a centralized government body as well as the Logistics Development Council	Courses for the industry are provided as engineering degrees, diplomas, post-graduate and research degrees	High focus on technical R&D through LSCM R&D Centre	Funds for SMEs also directed towards transportation and storage industry; Logistics Development Council provides funds for specific projects that it initiates

15. Possible solutions to Enhance Competitiveness

Having defined the key issues and root causes impacting the competitiveness of the T&S industry, this section discusses the possible solutions that can help to enhance competitiveness of the industry (especially SMEs) in Dubai. The possible solutions are based on primary research, stakeholder views and benchmarking analysis.

The steps involved in determining possible solutions are detailed in the following illustration.



Step 1 is the detailed analysis to identify and classify the key issues impacting competitiveness of the T&S industry in Dubai into three main categories.
Step 2 involves generating a list of 'Possible Solutions' to address the issues based on inputs from the industry and examples from international hubs.
Step 3 is a 'High Level' assessment of all the possible solutions identified in order to prioritize the "Most Appropriate" solutions. The assessment is based on key characteristics of the solution;

- **<u>Favorability</u>**: refers to "How favorable/feasible is the Possible Solution with respect to;"
  a. ***IMPACT*** – What is the outcome of the solution? What is the possible affect on improving competitiveness of the industry?
  b. ***COST*** – What is the cost/investment to implement? Does it require an additional administrative set-up?
  c. ***TIME*** – What is the time-frame for implementation?

- **Stakeholders involved in Implementation**: Will it be acceptable to all stakeholders involved?, Who will be the owner?

Outcome: Based on the favorability assessment, possible policy areas, programs and regulatory interventions shall be highlighted to identify solutions which can be implemented with no/low cost investment within a medium time frame (less than 3 years).

***Benchmarking*:** Based on the benchmarking section of the report (explained earlier), relevant benchmarking examples and initiatives will be cited for identifying possible solutions.

The issues impacting the competitiveness of the industry in Dubai have been classified into the following three segments in order to identify possible solutions for these issues:

1. **Industry-wide Issues:** These are issues impacting the entire transportation & storage industry and require a coordinated approach towards development of the industry.
2. **External Challenges:** These issues will require involvement of the other GCC countries. Implementation of solutions to address these issues will help to achieve long-term efficiency improvements in the industry.
3. **Issues Impacting Competitiveness of Sub-sectors with a High SME Presence:** These relate to issues within a specific sector, where a large number of SMEs are present.

The following table classifies the various issues into key themes at an industry and sub-sector level.

	Low Asset Utilization	Infrastructure	Low Productivity & Efficiency in Processes		Regulations	Others
			Low Utilization of Technology	Lack of Training		
1. Industry-wide Issues		✓	✓*	✓*	✓	
2. External Challenges		✓			✓	
3. Issues Impacting Competitiveness of Sub-sectors with a High SME Presence						
Freight Transport by Road	✓		✓	✓	✓	
Private Transport for Passengers	✓		✓	✓	✓	
Sea Freight Water Transport	✓		✓	✓		
Support Activities for Sea Freight Transport Providers	NA		✓	✓		✓
Warehousing and Storage	✓		✓	✓	✓	
Freight Forwarding & Related activities	NA		✓	✓	✓	
Courier Services	✓		✓	✓		✓

** Lack of training and low utilization of technology are industry-wide issues; however, these have been discussed at sub-sector levels in the following section.*

Industry-wide Issues (Brief Description and Possible Solutions)

The key issue impacting the industry is lack of a coordinated approach to develop the industry. There are a number of regulatory bodies (RTA, JAFZA, DAFZA, Dubai Maritime City Authority, etc.). Each of them is trying to regulate and develop the industry from their perspectives. However, there is a need for a single umbrella body that has the responsibility to develop the industry. It should aim at promoting a collaborative consensus-based policy making and coordinating efforts of multiple-bodies (including the private sector) to promote and develop Dubai into a leading global transportation and storage hub.

Adopting solutions to handle the other industry issues, absence of railroad infrastructure and low focus on R&D, will help to enhance efficiencies in movement of goods and promote innovation in the industry, respectively.

The industry-wide issues, their root causes and possible solutions have been detailed in the table below.

Industry-wide Issues (Brief Description and Possible Solutions)

Issue	Brief Description	Possible Solutions
Lack of a centralized body to promote the growth of the industry	• Presence of a number of regulatory bodies regulating and making efforts to develop the industry but from different perspectives - not by following a coordinated approach	1. Set up of a centralized regulatory and/or advisory government body 2. Devise a Transportation and Storage Industry Master plan
Absence of railroad infrastructure in UAE	• Rail infrastructure in UAE is currently being developed; the first phase for freight transport is expected to be completed by 2013.	
Low Focus on R&D	• Only basic-level research (primarily student projects) is conducted in universities • Absence of a centralized body promoting collaborative research between players, government bodies and universities	3. Set up a dedicated R&D center for the industry 4. Support R&D to be conducted by universities (in collaboration with the industry)

Note: Issues highlighted in green are being addressed by initiatives of one or more government bodies; the focus has to be to monitor implementation and success of these initiatives

External Issues (Brief Description and Possible Solutions)

Dubai's transportation & storage industry is serving a wide region, but access to other countries is hampered by factors outside the reach of the UAE authorities. A relevant example is the Customs requirements in the other GCC countries (especially Saudi Arabia), which leads to a longer time to trans-ship goods within GCC.
In addition, in order to raise their global competitiveness, the GCC needs to develop rail-road infrastructure that can efficiently support and connect regional markets.

The external issues, their root causes and possible solutions have been detailed in the table below.

External Issues (Brief Description and Possible Solutions)

Issue	Brief Description	Possible Solutions
Presence of non-tariff barriers and cumbersome procedures to move goods to other GCC countries by using road transport	• Customs' requirements vary across GCC countries, leading to increased time in transit of goods by roads	5. Promote homogenization of rules across the GCC countries
Absence of railroad infrastructure within GCC	• Plans are in progress to develop rail infrastructure connecting GCC countries	

Note: Issues highlighted in green are being addressed by initiatives of one or more government bodies.

Issues Impacting Competitiveness of Sub-sectors with a High SME Presence (Brief Description and Possible Solutions)

The key issues impacting competitiveness of sub-sectors with a high SME presence and their possible solutions have been discussed below.

Low Asset Utilization

These issues are substantial and they are very difficult for an individual SME to address. Collaboration is therefore a key strategic theme which must be taken forward to:

- Enhance SME's potential to compete for services and to increase revenue
- Enable SMEs to have higher efficiencies and a higher asset utilization

Low Asset Utilization (Brief Description and Possible Solutions)

Sub-sector	Brief Description	Possible Solutions
Freight Transport by Road	• Excessive empty backhauling (while moving within Dubai and coming back from other GCC countries and emirates) • Lack of parking spaces at key locations (leading to movement of empty trucks from their yards to key locations, such as JAFZA, DAFZA, etc.) • Decline in cargo volumes due to impact of the economic slowdown	6. Create load matching service platforms (Online Portal) 7. Create load matching service platforms (call center) 8. Allocate parking spaces for trucks in key locations (JAFZA, DAFZA, etc.) 9. Encourage companies (large 3PLs, local manufacturers and traders) to outsource their certain functions to SMEs in order to stimulate demand 10. Encourage SMEs funded by MBRE trading, hotels, and manufacturing industries to work with a preferred list of T&S service providers 11. Support SMEs to focus on
Private Transport for Passengers	• Decline in passenger movements due to significant downsizing by companies (who would require passenger transport services)	
Sea Freight Water Transport	• Excessive empty movement of containers on the road (sea freight transport - NVOCCs) due to GCC being a bigger import market, than an export market • Excessive empty movement of containers in the sea (sea freight transport - NVOCCs) • Impact of decline in global shipping volumes	

Warehousing and Storage	•Decline in cargo volumes as an impact of economic slowdown •Overcapacity of warehousing space	niche segments, such as cold chain, park and ride services, etc.

Note: Issues highlighted in red maybe beyond the immediate control of the T&S industry stakeholders in Dubai

Low Productivity and Efficiency in Processes

In case of international logistics companies, the productivity levels in Dubai are 10-15% lower as compared to their global operations. In case of SMEs, their productivity levels are 30-40% lower as compared to SMEs in Europe. The two key reasons for a low productivity are:

- Low Utilization of Technology
- Lack of Training

Low Utilization of Technology

A key solution for enhancing productivity and efficiencies of SMEs is promoting technology adoption and thus reduce manual work. These include the provision of track and trace functionality for cargoes, implementation of systems that facilitate fleet management, etc.

Low Utilization of Technology (Brief Description for Sub-sectors and Possible Solutions)

Sub-sector	Brief Description	Possible Solutions
Freight Transport by Road	Low level of implementation of GPS tracking systems; and online tracking and tracing capabilities for customers	12. Conduct workshops to increase awareness about available technologies and their benefits 13. Conduct a pilot project with a small number of SMEs for implementation of systems 14. Work with suppliers of the systems to offer 'Pay as you go' models 15. Help SMEs to get discounts for purchasing the systems by getting companies to collaborate to get bulk discounts
Private Transport for Passengers	Low level of implementation of GPS tracking systems and online tracking and tracing capabilities for customers	
Sea Freight Water Transport	A number of functions in feeder vessel and NVOCCs are being done manually, such as making rate entries, vessel and container scheduling, tracking and tracing of containers etc.	
Support Activities for Sea Freight Transport Providers	Software systems to automate processes, such as making rate entries, providing quotes etc.	
Warehousing and Storage	Low level of implementation of sophisticated racking and shelving systems and warehouse management systems	
Freight Forwarding & Related activities	Low level of tracking and tracing and documentation-related systems	
Courier Services	Low level of implementation of GPS tracking systems, hand-held scanners and route optimization systems	

Lack of Training

The industry is able to sustain itself with the current skill sets. However, skill enhancement will help to enhance the industry's competitiveness by facilitating:

- Improvement in efficiencies in utilization of assets
- Improving service quality
- Shortening the learning curve of new employees
- Implementation of new technologies

Lack of Training (Training Requirements and Possible Solutions)

Level of Employees	Training Requirements	Possible Solutions
Middle Management	• Enhancing knowledge related to technological solutions (fleet management, use of GPS, warehouse management systems), that can ensure efficient utilization of assets • Understanding global best practices to identify better ways of doing routine work and make operational improvements. • Bills of Lading (liabilities and disputes in bills of lading) • Demurrage clauses in freight handling contracts • Warehouse supervision and Inventory management	16. **Provide short-intensive courses** in collaboration with educational institutes 17. **Help SMEs to get discounts for sending their employees for certifications** by getting companies to collaborate and book for these exams in bulk 18. **Conduct awareness programmes** to attract qualified people into the industry 19. **Make certain trainings mandatory for low-skill employees,** such as handling of specialized goods for drivers and warehouse staff, refresher training in safety and fuel efficiency while driving, etc.
Low Skill Employees	• Trainings related to handling of specialized goods, such as dangerous goods, chemicals, food products for all employees involved in cargo handling • Driver trainings in areas, such as safety and fuel efficiency while driving, vehicle maintenance, etc. • Customer service skills for employees in private bus operators, courier services • Documentation and procedural requirements while moving from one free zone to another; crossing borders of GCC countries, etc.	

Lack of Stringent Regulations

There is a need for more stringent regulations to ensure a high quality of services. Lack of adequate quality controls can lead to risk incidents; thereby adversely impacting Dubai's image as a major hub for transportation & storage industry.

Some instances of lack of stringent regulations are:

- Minimal Entry Requirements leading to a high level of fragmentation in freight forwarding, trucking, passenger bus transport, etc.
- Lack of stringent regulations for running the operations (relevant for trucking, warehouses outside the free zones)

Lack of Stringent Regulations (Brief Description and Possible Solutions)

Sub-sector	Brief Description	Possible Solutions
Freight Transport by Road	• Minimal entry requirements leading to a high level of fragmentation and a high cost competition • Lack of stringent regulations for running the operations, related to selection and training of drivers, Number of hours that the drivers are allowed to drive, Number of years that the trailers can be used, etc.	*RTA has imposed a minimum requirement of 10 heavy trucks for any new company to enter this industry.* 20. Implement requirements related to number of hours that the driver can drive, age and quality of trailers, etc. 21. Implement Defect Clearing Systems to strengthen on-road inspections
Private Transport for Passengers	• Minimal entry requirements leading to a high level of fragmentation and a high cost competition	*RTA has imposed a minimum requirement of 10 buses for any new company to enter this industry*
Warehousing and Storage	• Lack of stringent regulations for operating warehouses outside the free zones	22. Conduct more frequent inspections and implement more stringent fines/punishments for warehouses outside the free zones
Freight Forwarding & Related activities	• Minimal entry requirements leading to a high level of fragmentation	*Use of systems, such as Mirsal 2, Dubai Trade portal will require the small freight forwarders to make investments in systems and training and will thus lead to making them sophisticated*

Note: Issues highlighted in green are being addressed by initiatives of one or more government bodies; the focus has to be to monitor implementation and success of these initiatives in the medium to long term.

Lack of ship-owning activity in Dubai

A lack of ship-owning activity has led to a nascent ship brokerage and ship service industries in Dubai. The key initiatives that are being adopted to promote the marine industry in Dubai are listed in the following table.

Issues	Current Initiatives	Potential Impact of Current Initiatives
A. Low attractiveness of registering ships in Dubai	Efforts are being made at Dubai as well as Federal level to enhance the business environment for the maritime industry, which in turn will lead to increasing Dubai's attractiveness for registering, owning and financing ships and thus a higher demand for support services for ships. **Regulatory Environment**: DMCA is working on customizing and preparing regulations that are as per Dubai's requirements. **Developing Skills:** Emirates International Marine Academy was established 2 years back to offer courses for the maritime industry. **Changes to the Ship Registry:** The National Transport Authority is preparing a draft to reform the rules related to the shipping registry. The current rules are lengthy and cumbersome, have restrictions on ownership (require 51% of Emirati ownership) and mortgage provisions.	• An attractive maritime industry business environment can act as a driver to attract shipping lines to set up head offices and promote growth of ship owners in Dubai. This leads to need for the whole range of ancillary services for the shipping lines - ship brokerage, ship service management services. • Ship registry fees acts as an additional source of national income. • Help UAE/Dubai to leverage its strengths in port infrastructure and presence of Dry Docks to become a maritime hub. • A number of businesses supporting the maritime industry are SMEs, thus it will lead to entrepreneurial opportunities.
B. Nascent ship financing industry	**Ship Financing:** Looking at Dubai's potential in the maritime industry, a number of foreign banks and other financing institutions have entered Dubai. These are expected to grow with DMCA's plans to attract them once the regulations for the industry are in place.	

Assessment and Prioritization of Possible Solutions

All of the possible solutions present opportunities to improve the industry's competitiveness. The following table provides assessment of these solutions based on:

- **Impact on competitiveness:** Assessed based on impact in handing the issue and number of companies that will benefit from the proposed solution
- **Ease of Implementation:** Assessed based on favorability with respect to cost and time required for implementation
  - **Cost of implementation:** *High: Does not require any investments/funding; Medium: Requires investments to conduct workshops, discussions, devising programmes, etc. ; Low: Requires high investments*
  - **Time of implementation:** *High: <1year; Medium: 1-3 years; Low: >5years*

The objective of assessing all the possible solutions is to prioritize solutions that have a high to medium-impact with medium to high ease of implementation. These solutions have been highlighted in the following table**.**

Assessment and Prioritization of Possible Solutions

Issues	Possible Solutions	Impact on Competitiveness	Ease of Implementation	
			Cost	Time
Lack of a centralized body and co-ordinated efforts to promote the growth of the industry	Set up of a centralized regulatory and/or development advisory government body	High	Low	Low
	Devise a Transportation and Storage Industry Masterplan	High	Low	Low
Low focus on R&D (technical & non-technical)	Support R&D to be conducted by universities (in collaboration with the industry)	Medium	Low	Low
	Set up a dedicated R&D center for the industry	Medium	Low	Low

Issues	Possible Solutions	Impact on Competitiveness	Ease of Implementation	
			Cost	Time
Presence of non-tariff barriers and cumbersome procedures to move goods to other GCC countries by using road transport	Promote homogenization of rules across the GCC countries	High	Low	Low
Low Utilization of Technology (All Sub-sectors)	Conduct workshops to increase awareness about available technologies and their benefits	High	Medium	High
	Conduct a pilot project with a small number of SMEs for implementation of systems	Medium	Medium	Medium
	Work with suppliers of the systems to offer 'Pay as you go' models	High	Medium	Medium
	Help SMEs to get discounts for purchasing the systems by getting companies to collaborate to get bulk discounts	High	Medium	Medium
Lack of Training (all sub-sectors)	Provide short-intensive courses in collaboration with educational institutes	High	Medium	Medium
	Help SMEs to get discounts for sending their employees for certifications by getting companies to collaborate and book for these exams in bulk	Low	Medium	Medium
	Conduct awareness programmes to attract qualified people into the industry	Medium	Medium	Medium

Issues	Possible Solutions	Impact on Competitiveness	Ease of Implementation	
			Cost	Time
	Make certain trainings mandatory: handling of specialized goods for drivers and warehouse staff, refresher training in safety and fuel efficiency while driving	Medium	High	Medium
Excessive empty backhauling (while moving within Dubai and coming back from other GCC countries and emirates) – Trucking & NVOCCs	Create load matching service platforms - Online Portal	High	Medium	Medium
	Create load matching service platforms - Call center	High	Low	Low
Lack of parking spaces at key locations (leading to movement of empty trucks from their yards to key locations, such as JAFZA, DAFZA, etc.)	Allocate parking spaces for trucks in key locations These can be leased out to trucking companies for a reasonable fee.	Medium	Low	Medium
Decline in cargo volumes and overcapacity in the industry (Trucking, warehousing)	Encourage companies (large 3PLs, local manufacturers and traders) to outsource their certain functions to SMEs in order to stimulate demand	High	Medium	Medium
	Encourage SMEs funded by MBRE trading, hotels, and manufacturing industries to work with a preferred list of T&S service providers	Low	Medium	High
	Support SMEs to focus on niche segments, such as cold chain, park and ride services, etc.	Medium	Medium	High
Lack of stringent regulations for running the operations	Implement requirements related to number of hours that the driver can drive, age and quality of trailers, etc.	Medium	High	Medium

Issues	Possible Solutions	Impact on Competitiveness	Ease of Implementation	
			Cost	Time
(Trucking, warehouses outside the free zones)	Implement Defect Clearing Systems to strengthen on-road inspections	Medium	High	Medium
	Conduct more frequent inspections and implement more stringent fines/punishments for warehouses outside the free zones	Low	High	Medium

List of Prioritized Solutions

	Possible Solutions	Impact	Ease of Implementation		Stakeholders Involved
			Cost	Time	
Lack of a centralized body to promote the growth of the industry	**Set up of a centralized regulatory and/or development advisory government body**	High	Low	Low	DED
Low Utilization of Technology (All Sub-sectors)	**Conduct workshops to increase awareness about available technologies and their benefits**	High	Medium	High	MBRE can work with the Industry associations (NAFL, SCLG) and Suppliers of WMS, GPS systems, etc.
	Work with suppliers of the systems to offer 'Pay as you go' models	High	Medium	Medium	
	Help SMEs to get discounts for purchasing the systems by getting companies to collaborate to get bulk discounts	High	Medium	Medium	

	Possible Solutions	Impact	Ease of Implementation		Stakeholders Involved
			Cost	Time	
Lack of Training	**Provide short-intensive courses in collaboration with educational institutes**	High	Medium	Medium	MBRE can work with industry associations (NAFL, SCLG), and Educational institutes (EIMA, CILT), and the key industry players
Excessive empty backhauling (while moving within Dubai and coming back from other GCC countries and emirates) – Trucking & NVOCCs	**Create load matching service platforms - Online Portal**	High	Mediu m	Mediu m	Private-players Industry associations (NAFL, SCLG); they will have to deal with concerns of conflicts of interest and data security
Decline in cargo volumes and overcapacity in the industry (Trucking, warehousing)	**Encourage companies (large 3PLs, local manufacturers and traders) to outsource their certain functions to SMEs in order to stimulate demand**	**High**	**Medium**	**Medium**	MBRE can work with the Industry associations (NAFL, SCLG)
	Support SMEs to focus on niche segments, such as cold chain, park and ride services, etc.	**Medium**	**Medium**	**High**	Industry associations can conduct industry meetings to discuss such opportunities and to companies to focus on niche segments
Lack of stringent regulations for running the operations (Trucking, warehouses outside the free zones)	**Implement requirements related to number of hours that the driver can drive, age and quality of trailers, etc.**	Medium	High	Mediu m	NTA, RTA
	Implement Defect Clearing Systems to	Medium	High	Medium	

	Possible Solutions	Impact	Ease of Implementation		Stakeholders Involved
			Cost	Time	
	strengthen on-road inspections				

Obtaining stakeholder commitment and support to implement the prioritized solutions will be first step in implementing these solutions. The main tasks involved for this are:

- Building consensus with the trade associations and key government departments for the proposed solutions
- Coordinating the interaction between the proposed solution and existing/planned/related initiatives by the various government bodies

Setting up of a centralized regulatory and/or development advisory government body has been prioritized solution as a (in spite of lack of ease of implementation) since this body can act as a champion body to promote and implement the other proposed solutions.

Dubai has enjoyed competitive advantages of a well-developed infrastructure and the first mover advantage in the region. However, these may not be sufficient to ensure high competitiveness in the region as well as globally over the long term.

Strengthening Dubai's position as a regional / global transportation and storage hub will require an immense amount of coordination and overall development of all the sub-sectors and firms in the industry. An umbrella body is thus essential to ensure that the initiatives are put in place and their progress is tracked to ensure results.

16. Annexure I

Detailed ISIC Revision 4 Components of Transportation and Storage Industry[72]

Sector	Transportation, trade & Logistics
Sector Definition (ISIC References)	This Section is divided into the following Divisions: • 49 - Land transport and transport via pipelines • 50 - Water transport • 51 - Air transport • 52 - Warehousing and support activities for transportation • 53 - Postal and courier activities

Subsectors	49 - Land transport and transport via pipelines
	This class includes:
	• 491 - Transport via railways
	  ◦ 4911 - Passenger rail transport, interurban
	  ◦ 4912 - Freight rail transport
	• 492 - Other land transport
	  ◦ 4921 - Urban and suburban passenger land transport
	  ◦ 4922 - Other passenger land transport
	  ◦ 4923 - Freight transport by road
	• 493 - Transport via pipeline
	50 - **Water transport**
	This division includes the transport of passengers or freight over water, whether scheduled or not. Also included are the operation of towing or pushing boats, excursion, cruise or sightseeing boats, ferries, water taxis etc. Although the location is an indicator for the separation between sea and inland water transport, the deciding factor is the type of vessel used.
	501 - Sea and coastal water transport
	502 - Inland water transport

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51 - Air transport

This Division is divided into the following Groups:

- 511 - Passenger air transport

  This class includes:

  - transport of passengers by air over regular routes and on regular schedules

  - charter flights for passengers

  - scenic and sightseeing flights

- 512 - Freight air transport

  This class includes:

  - transport freight by air over regular routes and on regular schedules

  - non-scheduled transport of freight by air

- 52 - Warehousing and support activities for transportation

This Division is divided into the following Groups:

- 521 - Warehousing and storage

  This class includes:

  - operation of storage and warehouse facilities for all kind of goods:

  · operation of grain silos, general merchandise warehouses, refrigerated warehouses, storage tanks etc.

  This class also includes:

  - storage of goods in foreign trade zones

  - blast freezing

- 522 - Support activities for transportation

  - 5221 - Service activities incidental to land transportation
  - 5222 - Service activities incidental to water transportation
  - 5223 - Service activities incidental to air transportation
  - 5224 - Cargo handling
  - 5229 - Other transportation support activities

53 - Postal and courier activities

This Division is divided into the following Groups:

- 531 - Postal activities
- 532 - Courier activities