# Dwc supply chain

**Business** 



DWC Supply Chain Management By Ala'aFaris (4409553) Hend Al Subousi (4531346) Muna Al Dhaheri (4476748) Research Submitted to the faculty of Businessand Management for fulfillment of the requirements for the course Of

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# DWC Supply Chain Management

### 1. Introduction

Dubai World Central (DWC) is a new development project, which is currently under construction in Dubai, United Arab Emirates. It is an economic zone for the future, incorporating the latest of technologies so as to support a number of corporate entities and residential areas. The facility will also include activities related to aviation, logistics, humanitarian, tourism and other commercial ventures. It will house the Al Maktoum International Airport, which is said to become the world's largest cargo and passenger hub. The entire Dubai World Central will be set up around this world-class airport and will be operational from 2015. It would be a one-stop destination for the people, whereby the facility can provide residential and all other city related requirements in the same area. This project will emerge as a futuristic mini city (Zawya, 2007).

The entire facility's master plan has been created based on the concept of extreme forward thinking. It is a part of Dubai Strategic Plan 2015. Broadway Malyan, a leading architectural, urbanism and integrated design practice, has partnered with DWC to create this world-class urban city that will be equipped with the most recent and innovative technological solutions. This will be a state-of-the-art facility with new offerings that are completely different from those existing in other economic zones of Dubai and around the world. This would act as a global city that aims to be sustainable as well as progressive. The facility will explore innovative solutions in architecture with least impact on the environment. The designers for this plan will include individuals who have played a key role in developing other major cities around the world such as, New York, Tokyo, Singapore and others.

The project is currently developed with the objective of catering to all commercial needs till the year 2050 and beyond. The different segments will offer complete lifestyle solutions and facilities for the inhabitants. The commercial city will become the nerve cell of DWC, catering to all the markets of Dubai and the Middle East. The commercial district will be a hub for the media and creative firms, including office spaces, luxury boutiques and showrooms. The residential area will house sports and leisure clubs. The enterprise and commercial city within DWC will support a number of banking and financial industries. The city shall be connected with the rest of UAE through rail, where DWC will be one of the main stations for the Emirates Express Train set to be developed in future. The aim of DWC is to develop a perfect environment so as to cater to business and commercial needs as well as set new standards for sustainable urban development (Zawya, 2007).

- 2. DWC background, structure and model
- 1. DWC background

Strategic Location- Dubai plays an important role in connecting the east and the west, facilitating the flow of goods and services. Furthermore, the strategic location of DWC plays a key role in development of MENASA (Middle East, North Africa and South Asian) markets. The development of DWC will further strengthen the logistics industry of Dubai. The Jebel Ali Port that is located near to DWC will serve as a gateway for supply chain development of the facility. The port can be connected with Al Maktoum International Airport located within DWC. This facilitates the flow of goods from sea to air and vice-versa. Hence, a strategic supply chain network can be implemented. DWC aims to serve as a multimodal logistics platform providing good connectivity, speed and efficiency. Some of the leading logistics businesses https://assignbuster.com/dwc-supply-chain/

such as, Aramex and Panalpina, are taking advantage of DWC's strategic location and high-tech facilities in order to expand and grow their businesses.

Airport City- The development of business in the present world depends on speedy connectivity and delivery. Nearly a half of global trade relies upon air transportation. Airports have become a catalyst for economic development as they facilitate development of a large urban economy centered on them. The Al Maktoum International Airport will have an annual capacity of 160 million passengers and 12 million tons of cargo.

Global aviation- The aviation industry in Middle East has emerged greatly in the past years. This industry houses powerful players such as, Qatar Airways, Etihad Airways, Emirates and so on. These airlines help to connect Dubai and DWC with rest of the world. The record breaking ambitious plans of DWC requires the support of a highly developed airport, which can support flow of goods and facilitate transportation. Growth of this airport will further help in development of institutions and industries related to the aviation industry, including educational institutions and manufacturing concerns (Dubai World Central, 2014A).

### 2. Structure of DWC

The entire area of DWC will be subdivided into the following prominent regions:

**Dubai World Central Logistics City** 

Dubai World Central Enterprise Park

Dubai World Central Commercial City

Dubai World Central Aviation City

Dubai World Central - Al Maktoum International Airport

Dubai World Central Staff Village

Dubai World Central Golf City

Figure: Dubai World Central Layout

(Source: Dubai World Central, 2014B).

The master plan for the city includes eight important districts: aviation, logistics, Al Maktoum International Airport, commercial, humanitarian, residential, leisure and exhibition. The centerpiece of this plan is the Al Maktoum International Airport, around which the whole city has been planned. The humanitarian, logistics and aviation districts enjoy close proximity to the port. The commercial, residential and leisure districts offer accommodation, office and entertainment options to the dwellers of DWC. The structure of DWC has been strategically designed in order to develop easy flow of goods from any part of DWC to the airport. Moreover, aviation being the prime industry that DWC aims to serve; the logistics network has been especially built to fulfill this need. DWC is closely located to the heart of the city with world-class golf courses, shopping centers and five star hotels. The commercial and enterprise areas have been especially developed to support growth of numerous industries such as, banking, financial institutions, manufacturing hubs, service industries and so on (Dubai World Central, 2014B).

## 3. Business model

DWC has been strategically planned to cater to a variety of industries. Some of the prime industries to be developed in this region are:

Aerospace hub- The aviation district has been the prime focus of DWC. This has been developed in such a manner that it caters to all needs of a successful and state-of-the-art aviation industry. The hub will be equipped https://assignbuster.com/dwc-supply-chain/

with firms operating in the aviation and aerospace industry. Additionally, Al Maktoum International Airport will support the supply chain development in DWC and its surrounding areas. Many aerospace companies are choosing the Middle East as a prime location for their firms due to rapidly developing Asian markets (Dubai World Central, 2014C).

Logistics district- DWC will help in development of numerous logistics based industries. Location of DWC is highly strategic due to its proximity with Jebel Ali Port. Hence, industries located at DWC can enjoy facilities of the closely located port as well as the airport. This also further paves way to devise well-integrated supply chain solutions for different firms located at DWC (Dubai World Central, 2014D).

Other industries- DWC also lays emphasis on development of industries such as, banking and finance, manufacturing and services related industries. Firms in these industries can benefit from the presence of a high tech airport and port nearby. Travelling and developing connectivity with other business locations will become quite feasible. This feature may attract a number of firms and industries to DWC. The city will also witness development of a number of media and entertainment related firms (Zawya, 2007).

3. Supply chain elements, practices and their roles

The key logistics elements followed by DWC and that which also supports industries located within it are discussed as follows (Christopher, 2013):

Demand Management- A proper supply chain should produce a certain level of output whereby it can successfully cater to demand existing for the product. Hence, DWC has strategically developed the city so that all areas within the zone are adequately covered with industries and firms and no part of DWC is left vacant. This ensures that availability of space is fully utilized.

To ensure this, developers of DWC had forecasted and analyzed the extent of area that is needed to be allocated for each district. Deals were settled with many companies who were likely to set up their firms in DWC. By analyzing total demand for the industrial area for developing different industries, plan for the city was made (Casemore and Co. Incorporated, 2013).

Communication- The most important factor for any logistics platform is to successfully implement a good communication network. This involves development of easy transport facilities, close proximity to ports, wellintegrated network of transferring information and so on. Since most of the firms located at DWC will be international firms, it will be necessary to develop options that facilitate a good network of communication across the globe. The primary support in this aspect arises from Al Maktoum International Airport and the Jebel Ali Port. Both of them will facilitate easy communication and flow of goods. Globalization has led to development of a global market. Hence, getting adequate and correct information on time becomes extremely important. DWC will be equipped with state-of-the-art information network that supports this requirement. Development of information management sector, therefore, is also considered by DWC. Furthermore, where traveling and transport is a part of communication, DWC successfully serves through its airport and Jebel Ali Port (Linton, 2014). Integration- DWC paves way for the industries located within it to easily integrate and develop a well-established supply chain. For this DWC has been linked well with the port and provides its own internal airport. The main aspect this facility aims to fulfill is to reduce the cost of transportation. Goods can easily be taken to the port or the airport without the wastage of

much time and also as soon as they are produced. This paves way for efficiency in lead-time and timely delivery of goods. A good network of communication also helps to integrate the logistics chain by communicating timely information regarding production and distribution. All these aspects can be provided well with strategic design and development of DWC (Ivanov and Sokolov, 2009).

Leverage- Guaranteed future growth is one of the most important means of developing leverage. Leverage comes from reduction of costs and continuous improvement of services. Both these aspects are well considered by DWC. Its location and well-developed network of transport and communication helps to reduce costs to a great extend. On the other hand, it is also important to consider that most of the companies operating at DWC are high growth firms and will suitably contribute towards the development of the zone as a whole (Shah, 2009).

Efficiency- The growth of firms also depends on efficiency of operations. Hence, a supply chain system should incorporate skilled employees and efficient technology. In order to fulfill this requirement DWC will house a number of training institutions that will cater to the talent needs of various firms. Similarly, DWC will also develop a number of technology-based institutions to cater to the immense technical needs of different firms so as to improve efficiency of operations. Efficiency in different activities can also be achieved through well-integrated designs. This feature has also been covered successfully by DWC by developing a highly innovative and efficiency embedded plan of set up.

Innovation- A good supply chain strategy must cater to innovative needs.

Innovation is the improvement in output achieved through new methods and https://assignbuster.com/dwc-supply-chain/

technologies of production. DWC aims to be highly innovative in its structure and functioning. It is designed in a manner so that high level of efficiency is achieved by creating very less impact on the environment. Hence, it is based on the aspect of sustainable growth. Industries of present and the future give high importance to this aspect. DWC developers have made sure that the facility emerges to be one of the most innovative destinations to conduct business. A highly innovative business zone also supports growth of supply chain systems (Arlbjorn, 2010).

# 4. Dubai World Central Operational Strategy

Dubai World Central has been constructed to serve various segments of logistics and transportation industries; focusing on the passengers airlines, general aviation and cargo. In prior segmentation of business operations, DWC has built its various operational strategies to insure and satisfy each industry segment carriers and customers.

In this paper we are going to go thru each industry segment operational strategy according to the commence date and timeline for each segment to identify the strategy adopted for each and highlight the strengths of DWC as an industry environment and specify the areas of improvements.

Initial operations triggered in DWC were at Al Maktoum International Airport with the Cargo industry, which has been commenced in June 2010.

Operations started with two carriers only [4], and with an attractive business environment and competitive advantages DWC adds to industry parties; the number of carriers reached 36 by 2013 with 16, 317 aircraft movements during 2013 only announcing that DWC airport is an emerging cargo airport in the region [1].

DWC followed the competitive strategy for its cargo operations by providing https://assignbuster.com/dwc-supply-chain/ the infrastructure and resource required and support the carriers and customers among the DWC district and within the city including the ports, transportation networks, warehouses, and the district structure that creates a comfortable and suitable business and operations environment for the companies who are already started booking for more spaces in the expansion of DWC in phase II operations commencement.

The competitive strategy adopted by DWC for the cargo operations was built from the decades of experience that Dubai Airport has in cargo industry, which helped to identify the customers' needs and create the operations environment that industry parties desire. The adoption for the competitive strategy has reflected on the DWC structure with the districts built for logistics operations and resources, aviation, residential units, commercial, and Al Maktoum International Airport, beside the business supportive districts like humanitarian, leisure district, and exhibitions, which complete the cycle of major needs and desires of DWC customers. [5]

Following to cargo operations, general aviation operations have been commenced on April 28th, 2011 with maximum capacity of 50 passengers including the crew following the rules and regulations set by the General Civil Aviation regulatory. [1]

DWC has commenced Al Maktoum International Airport aviation operations on October 27th, 2013 with three airways carriers starting with Wizz Air; the European commercial airways company with a fleet of 40 aircrafts serving 30 worldwide destinations. Along with Wizz Air, NAS Air, the Saudi carrier has commenced its operations as well with 21 aircrafts and operates in capacity of 50 flights per week between Dubai and different destinations in the Kingdom of Saudi Arabia. [1]

Also, Kuwaiti carrier; Al Jazeera Airways Company and Gulf Air have lined-up for Al Maktoum International Airport at DWC with operations size of one flight per day.

Passengers' aircraft flights schedules at Al Maktoum International Airport in DWC have been capped to six movements per hour excluding general aviation and cargo flights operations. [1]

Current operations at Dubai Airport show that 66 million passengers are facilitating the airport services for 2013. Al Maktoum International Airport at DWC is capable to accommodate operations with 5 to 7 million passengers only in phase one operations commencement. Phase two operations commencement at Al Maktoum International Airport is dependent on shifting Emirates airlines hub to DWC with expectations to announce the world's largest airport with five runways and capacity of 160 million passengers with 12 million tons of cargo per year upon DWC completion. [4]

As per the executive director of Dubai Aviation City Corporation, Khalifa Al Zaffin said that Emirates hub would not be shifted to DWC till 2025-27 due to the huge investment in infrastructure, which approximately hits \$100 billion, which lead to delay the commencement of phase two operations of Al Maktoum International Airport in DWC. [3]

# 5. Key Supply Chain Issues

Key Supply Chain issues are the obstacles and challenges that logistics companies are always seeking to avoid and overcome in order to satisfy their customers' needs and meet their expectations along with meeting companies' business needs to have the maximum of business efficiency with least cost and quality in service delivery by finding the suitable industry environment.

Dubai World Central has took in consideration the key supply chain issues that logistics industry challenges to avoid and overcome, and accordingly DWC has built its strategy and infrastructure to provide the best environment that logistics requires worldwide. The main key supply chain issues that DWC has addressed are Forecasting, Extended Supply Chains, Collaboration, Customs, People, and Infrastructure.

Dubai World Central took the key supply chain issues in consideration in early stages of the project; primarily the DWC project idea was adopted for the logistics industry and the plan was set accordingly. Starting from DWC physical location to the city, it was planned to be in the scope of the current sea logistics area in Dubai; Jabal Ali Port and Free Zone, where JAFZA is built to meet the international standards of sea shipments and provide the industry resources required of warehouses, customs facilities, transportation, infrastructure and power. In parallel with sea logistics operations, DWC planned to build the air logistics hub closer by introducing the largest international airport in the world; Al Maktoum International Airport. The location of DWC to the city creates the area of logistics operations that logistics industry parties are seeking for, sea logistics operations and air logistics operations are supported with adequate road networks within each zone and within the city itself.

Figure 1: Dubais Logistics Platform

Dubai has built the city infrastructure to attract the worldwide business in all industries, either manufacturing sectors or services sectors which is apparent with the 23 free zones established in the city, and with the network of transportation roads, metro railways and tram infrastructure. That makes the city districts accessible at any point of time with fastest and safest ways https://assignbuster.com/dwc-supply-chain/

to insure the proper delivery for the products and insure that products' qualities are maintained from the point of landing in the airport or seaports to the point of delivery destination.

As well, Dubai World Central has adopted the same concept that the city has deployed in its business infrastructure; DWC has built the environment in a districts manner that serves the business environment from different aspects including business, accommodation, leisure and humanitarian. Moreover, DWC was built with different access to the city roads network and logistics operations areas.

Dubai World Central took in consideration the globalization in business management and operations, and the global need for business collaboration especially within the supply chain communications which primarily requires a strong and consistent information technology infrastructure. Therefore, DWC has developed the IT infrastructure within the industry environment to meet the latest technologies implementation and deployment, and as per the high standards that serves the industry worldwide.

DWC has covered the logistics industry needs looking into major, intermediate, and minor business needs and provided the business solutions within the business environment itself. Beside the air cargo business dedicated area and sea logistics operations and the transportation network of roads, metro and tram within the city; DWC built the supportive resources that logistics industry requires for the day-to-day operations including containers parking, truck facilities, commercial support facilities and warehouses.

This bundle of facilities and supportive resources for the logistics industry insure the operations run around the clock, where and when business https://assignbuster.com/dwc-supply-chain/

forecasting is met or went under estimation and sudden high volume of operations is received so that it can be operated with high efficiency, as well as, when companies are move forward with extended supply chain; the resources would be available to proceed on time and with efficient utilization for the space required. Logistics companies can reserve and rent shared warehouses or build its own by renting the land where the warehouses is going to be built. As well, the transportation for logistics industry within the DWC is separated from the public traffic into business areas and airport to insure the continuous flow of business without public traffic distractions or interruptions. Moreover, cargo pallets may differ from continent to another or country to another according to the country standard, although, the euro pallet is the standard pallet dimension worldwide, DWC offered the pallet building within the facility itself.

Customs at the emirate of Dubai has proofed its support to business development in the city with full exemption on imported raw materials, imported equipments, with no taxes on exports or imports. The approach Dubai Customs follows to encourage business operations and creates a suitable and profitable environment for business including the logistics industry gives DWC a competitive advantage compared with worldwide-distributed logistics cities, where in DWC companies can increase their profit margin and competitive advantage with prices when the operational cost is reduced. [6]

# 6. Roadmap ahead and Recommendations

Dubai World Central has developed their roadmap towards a consistent and coherent structure and operations within the DWC districts and Al Maktoum International Airport. However, the greatest challenge has occurred when https://assignbuster.com/dwc-supply-chain/

Emirates has announced that operations hub would not be moved to Al Maktoum International Airport before 2025-27 as stated by the executive director of Dubai Aviation City Corporation, Khalifa Al Zaffin [3]. This announcement came to address new challenges for Dubai as a city and DWC as holding the largest international airport in the world, which are going to have a high volume of passengers, investors, visitors and high volume of cargo operations via seaports and airports during the preparation for Expo 2020 and during the Expo 2020.

Herewith, we recommend the following roadmap ahead for the DWC to be ready for the expected high volume of logistics and flights operations:

1. Emirates to move partially to Al Maktoum International Airport by 2016
Emirates operations hub would not move to Al Maktoum International Airport
at DWC before 2025-27, thus, the increasing volume of Emirates flights and
operations will make Dubai International Airport fully occupied which impacts
other business aviations companies like Jet Aviations who already started to
move to nearest airports to the city to operate their flights and operations
from, one of these airports is Sharjah International Airport which has less
constraints compared with Dubai International Airport.

In order to move Emirates operations to DWC, and meets the city needs during Expo 2020 with expectations that visitors are going to be tens of millions who visit the city within 6 months and thru the city airports, we recommend that Emirates to classify their flights and operations according to the volume of operations and destinations; accordingly, and gradually, Emirates can move partially to Al Maktoum International Airport with offered resource At DWC by moving the operations of each class one by one to ensure the services efficiency and continuity with consistent movement to https://assignbuster.com/dwc-supply-chain/

the new airport.

Partial movement of Emirates to Al Maktoum International Airport at DWC is recommended to start by 2016 to 2019, when then operations set to be stable and constructed with capability to manage the high volume of visitors. As well, Emirates during the partial movement in three years can plan the infrastructure required for the complete hub movement by 2025-27.

2. DWC to build separated transportation lines from/to the city by 2018

Dubai city has an efficient transportation infrastructure with a well-structured rads network, metro and tram using different transportation intermediates like taxis, public buses, waterbuses and shuttle services.

DWC is expected to be a home for 900, 000 people upon completion [7], which makes it a city within a city; and with expected high volume of visitors thru DWC airport and high volume of logistics during Expo 2020, the transportation needs will became much more required and needed around the clock.

Therefore, and to improve the efficiency of DWC in and out transportation, and to have a controlled structure of transportation to and from the city, we recommend that DWC and with support and cooperation of Roads and Transportation Authority of Dubai to construct a separated transportation channels from DWC to Dubai city districts and from Dubai city to DWC that is out of the public transportation channels to ensure that DWC operations volume is controlled without public transportation impact under any situation.

3. Dubai city facilities to be offered in DWC by 2019

Dubai city is an active and attractive city, and has a lot of facilities, places to visit, and activities that make any visitor looks to go thru the city and https://assignbuster.com/dwc-supply-chain/

facilitate what it offers.

DWC and its largest airport in the world and with high volume of visitors expected will need to manage the huge number of visitors and arrange their movements within the city. It is not about being an arriving point and direct move into the city from the airport, but it can be managed by offering city facilities in the airport from visitor perspectives not the business and profitability ones. Moreover, DWC can arrange free guidance and show about the city and places to visit, each visitor can selected placed to visit and submit the request to the DWC crew who plans for shuttle and tourism trip for a day. That will insure the proper arrangement of city visits instead of moving the visits flood from airports to the city.

# 8. Conclusion

Infrastructure is the key to economic development being used by nations globally. The United Arab Emirates has invested heavily in infrastructure to ensure that it competes effectively with other economic giants. Dubai World Central is one such project set to incorporate 2015 strategic plan for Dubai. The project is aimed at providing a facility that will incorporate the latest technologies into businesses. The state of art facility has incorporated various players from many developed nations. The futuristic project is aimed at providing for the commercial needs of the country beyond the year 2050. The project will also play a crucial role in connecting the east and the west. The project has been strategically located to ensure that trade routes converge for maximum benefit. Various industries will be located within the location. The country will benefit by providing employment to the locals and improving the cost of living in the nation. Projects such as Dubai World Central are the future for developed nations competing in the era of https://assignbuster.com/dwc-supply-chain/

globalization. The project has incurred some setbacks that need to be evaluated for future projects. There is a need to catalogue the issues facing the project to ensure that there are enough solutions for future problems.

# 9. Reference

Arlbjorn, J. S., 2010. Supply Chain Management. Massachusetts: Academica. Casemore and Co. Incorporated, 2013. The 6 elements of supply chain strategy. [online] Available at: [Accessed March 24 2014].

Christopher, M., 2013. Logistics and Supply Chain Management. New Jersey: Pearson Education.

Department of Economic Development. (2011). Economic freezones in Dubai. [online] Available: http://www.dubaided.gov.ae/en/Pages/Economic-freezones-in-Dubai.aspx. Last accessed 9 May 2014.

Dubai Airports. (2013). DWC to start passenger operations in October. [online] Available: http://www.dubaiairportsconnect.

com/uncategorized/dwc-to-start-passenger-operations-in-october/. Last accessed 9 May 2014.

Dubai World Central. (2014). Dubai World Central Master Plan. [online]

Available: http://www. dwc. ae/project-details/. Last accessed 9 May 2014.

Dubai World Central, 2014A. About DWC. [online] Available at: [Accessed March 24 2014].

Dubai World Central, 2014B. Project Details. [online] Available at: [Accessed March 24 2014].

Dubai World Central, 2014C. Next generation aerospace hub. [online]

Available at: [Accessed March 24 2014].

Dubai World Central, 2014D. Strategic Location for innovative logistics. [online] Available at: [Accessed March 24 2014].

Ellis, D. (27th October, 2013). Dubai World Central Faces Emirates Hub 'Conundrum'. [online] Available: http://gulfbusiness.com/2013/10/dubai-world-central-faces-emirates-hub-conundrum/#. U20koLHDV3W. Last accessed 9 May 2014.

Ivanov, D. and Sokolov, B., 2009. Adaptive Supply Chain Management. New York: Springer.

Linton, I., 2014. What are the four elements of Supply Chain Management? [online] Available at: [Accessed March 24 2014].

Shah, J., 2009, Supply Chain Management: Texts and cases. New Jersey: Pearson Education.

Shaw-Smith, P. (2012). Strategy Revised in Transition to Dubai Worlds
Airport. [online] Available: http://www.ainonline.com/aviation-news/ain-air-transport-perspective/2012-03-26/strategy-revised-transition-dubai-worlds-airport. Last accessed 9 May 2014.

Shaw-Smith, P. (2013). DWC Development To Accelerate If Dubai Wins World Expo 2020 Bid . [online] Available: http://www.ainonline.com/aviation-news/dubai-air-show/2013-11-15/dwc-development-accelerate-if-dubai-wins-world-expo-2020-bid. Last accessed 9 May 2014.

Staff Reporter. (20 April 2008). Over 3, 500 apply for jobs online at DWC. [online] Available: http://www.khaleejtimes.com/DisplayArticle.asp? xfile=data/theuae/2008/April/theuae\_April626. xml§ion= theuae. Last accessed 9 May 2014.

Zawya, 2007. Dubai World Central Commercial City gets world class urban design. [online] Available at: [Accessed March 24 2014].