# Good critical thinking about requirements needed for warehouse design and an orga...

Parts of the World, Australia



The U. S. Based Strategic Warehouse Management (SWM), Inc.'s Supply Chain Design for a Proposed Australian Warehouse Which Includes Warehouse Operations

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The U. S. Based Strategic Warehouse Management (SWM), Inc.'s Supply Chain Design for a Proposed Australian Warehouse

Requirements Needed for the Design of the Australian Warehouse
Gavin Clark, who is the CCO for SaaS warehouse management system
provider, Snapfulfil writes in his article, "Ten Tips on Setting Up a
Warehouse in 2014" that a warehouse staff will be more "highly motivated if
they can locate products/stocks easily, are working in a safe environment"
and their well-being is "valued and recognized" (2014, para. 2).
Consequently, a well thought-out design plan for the Australian warehouse
needs to be created and implemented to ensure maximum efficiency.
The following are some requirements for the design layout of the warehouse,
as recommended by Rob O' Byrne in his article, "Warehouse Design—Rule
of Thumb" (2014, para. 3):

- The land to building ratio should in lineal miles should be 2: 1
- The building aspect ratio should be 2: 1
- The warehouse height at springing line should be 10. 5 meters
- Pallet per square meter should be 1. 2 meters
- There should be 25% of the warehouse's floor should be left for non-storage operations, such as receiving, dispatching, and staging
- Truck turning space should be 40 meters

# Some additional considerations as it pertains to the overall planning of the warehouse include the following (O' Byrne, 2014, para. 4):

- There must be plan which bears in mind driver side reversing
- Do not overstock aisles
- Avoid funnels

In addition, Clarke suggests in his article that a "recreational area" be created for the staff which has comfortable furnishings, "small fridge and a coffee/tea maker" (2014, para. 3). He also advises that a storage room which keeps "cartons, boxes, package filler or packing tape" be created in the warehouse (2014, para. 5).

Furthermore, the article "Warehousing and Inventory Management" notes that spaces for the following should be allocated (n. d, paras. 23 & 24):

- An administration office
- An area which is quarantined for goods which should be destroyed or returned
- A space for the refueling of trucks
- A space for the charging of equipment batteries, such as those found on pallet trucks
- A space for equipment maintenance and parking
- Space should be allocated for each type of product as well as their locating numbers.
- There should be sufficient space to ensure easy access to stacks of goods separated for inspection, unloading, and loading. Stacks should be at least one meter away from the walls and an additional meter away from each

other.

- There should be space for facilitating the sizing of the goods received as well as a dispatch area.
- There should be a space for the storage of cleaning materials and supplies.
- Areas should be allocated for damage items which are labeled by a consignment number.
- Sufficient space should be allowed for the repackaging of damaged items which should be placed in separate stacks.

# Other Considerations to Note When Planning the Design and Layout of the Australian Warehouse

According to Clark, when planning the design and layout of a warehouse, the type of "racking, shelving, and storage" which should be used must be carefully considered (2014, para. 4). Clark advises that "robust racking/shelving" should be purchased which will allow the "maximum lifespan" and withstand as much "wear and tear" as it is possible (2014, para. 4). The shelving should be "securely attached to walls and floors" so as to prevent injury to warehouse workers and damage to goods (2014, para. 4). Furthermore, Clark advises that garbage skips should not be too far away from the warehouse so as to prevent the warehouse to be cluttered with garbage and trash (2014, para. 10).

The warehouse should have safety signs and notices placed at strategic places so as to comply with health and safety regulations (Clark, 2014, para. 9).

Additionally, there should be no racking or shelving placed in the "loading

dock area or bay" (Clark, 2014, para. 6). It is important that forklift trucks and warehouse workers in these areas are unimpeded.

# Organization Structure Which Will Be Used in the Australian Warehouse

Figure 1. Organization Structure of Proposed Australian Warehouse

# Present Considerations for Workforce Management of the Australian Warehouse

According to John Lund's and Christopher Wright's "State Regulation and the New Taylorism: The Case of Australian Grocery Warehousing" there are new technologies which are being implemented by the Australian government as it pertains to the management of warehouses in that country. These technologies are being referred to as "' computerized Taylorism'" which involves the process of engineering work standards and "computerized performance monitoring of warehouse workers" (Lund & Wright, 2001, p. 751). The article explains that warehouse workers "' clock in' on each order and real-time computer monitoring software compares actual work time to allowed time" (Lund& Wright, 2001, p. 751). The information received from this computer monitoring software can be connected to an "incentive pay scheme and/or disciplinary action" (Lund& Wright, 2001, p. 751). These new warehouse technologies can "intensify the work pace, reduce [labor] costs and significantly increase managerial control over the [labor] processes" (Lund& Wright, 2001, p. 751). Consequently, these new technologies need to be implemented at the Australian warehouse so as to ensure maximum efficiency and streamlining of its operations.

# **Key Regulations and Other Key Issues Related to Managing** a Warehouse in Australia as a Foreign Entity

Key Regulations Pertaining to Managing a Warehouse in Australia as a Foreign Entity

According to the website of the Land and Tax News, a company is resident company in Australia if the business is incorporated in that country (" Doing Business in Australia," n. d., para. 1). Therefore, it follows that companies which are not incorporated in Australia are non-resident companies. Land and Tax News indicate that although in Australia's " state, territory, and local governments" there is no additional imposition of corporation rates, payroll tax, stamp duty, land tax and sales taxes are expected to be paid by a nonresident company (" Doing Business in Australia," n. d., para. 4). In addition, non-resident companies are expected to pay a goods and services tax (GST), as indicated by the website of the Australian Tax Office (2014, para. 1). The Australian Tax Office explains further that if a non-resident company is conducting an enterprise, "which includes a business, and making sales of goods and services that are connected to Australia" or if an entity intends do the above then it is required to pay goods (GST) (2014, para. 2). According to the article, "EnterpriseOne IDE5 Australian Goods and Services Tax PeopleBook" the GST applies to "goods and services supplied in Australia and to goods imported into Australia" (2002, p. 1). However, the article makes sure to note that some goods such as " certain foods, and some services, such as health, education and financial fees" are exempt from the GST (2002, p. 1).

Consequently, this means that the CEO should take the necessary measures

to ensure that SWM adheres to the new tax regulations recently implemented by the Australian Government. A tax attorney should be employed to ensure that the company sufficiently complies with Australian tax regulations pertaining to non-resident companies.

# Other Key Issues Related to Managing a Warehouse as a Foreign Entity in Australia

Labor Climate. As it pertains to the labor climate in Australia, it is quite good as it is reported by the article, "Australia's Unemployment Rate Remained Steady at 5. 8 per cent in May 2014," the labor force participation rate decreased by only "0.1 percentage [point] to 64. 6 per cent in May 2014" (Australian Bureau of Statistics, 2014, para. 2). However, when the seasonally adjusted unemployment rate of 7. 6 per cent is combined with the unemployment rate of 5. 8 per cent then the "latest seasonally adjusted estimate of total labor force underutilization was 13. 5 per cent" (Australian Bureau of Statistics, 2014, para. 6).

Therefore, the statistical findings of the Australian Bureau of Statistics (ABS) can be interpreted favorably by the CEO of SWM since it means there will be suitable pool of prospective employees to choose from which the company can hire to perform the various functions and operations of the warehouse. Crime and Corruption Levels in Australia. In his keynote address at the Fifth Contemporary Criminal Justice Forum, Simon Bronitt noted that a week seldom passes by in Australia without "allegations of serious fraud and corruption surfacing" which often implicate government officials, such as "the Prime Minister, the Speaker of the House of Representatives, and a federal politician" (2013, p. 1). In addition, he also noted that a survey

revealed that one in three Australians believe that their Federal Government is corrupt (2013, p. 2). Therefore, it can be assumed that it would be quite difficult to do business in Australia because it has been proven that governments which have a high incidence of corruption create difficult environments for businesses since corruption increases the operation costs of businesses.

However, the Australian government is attempting to combat crime by strengthening its "existing governance arrangements by developing a 'whole-of-government' policy on corruption" (Bronitt, 2013, p. 7). This will make it easier for the Australian government to assess potential "corruption risk" (Bronitt, 2013, p. 7).

The Current State of Australia's Economy. According to the website, Trading Economics, the Australian GDP expanded by 1. 1% in the first quarter of 2014 (" Australia GDP Growth Rate," 2014, para. 2). The website indicates that exports of goods and services from Australia increased by 4. 8 % in the March quarter of 2014 (" Australia GDP Growth Rate," 2014, para. 8). Moreover, " real net national disposable income" increased by 1. 3% in the first quarter of 2014 (" Australia GDP Growth Rate," 2014, para. 7). Consequently, an analysis of the above statistical findings indicates that Australia's economy is fairly stable. As a result, in this regard, SWM will be able to earn a reasonable amount of profits from its warehouse operations in Australia.

Export and Import Procedures in the U.S.

### Import Procedures at the Proposed Australian Warehouse

The Australian Customs Act (1901) stipulates that for importation purposes a "ship or aircraft may be boarded," "the cargo may be reported" and goods can also be entered "unshipped and may be examined" (Australian Government, 1901, para. 1).

Hence, SWM can integrate more than one modes of transportation such as shipping and air travel. According to the text, Transportation: A Supply Chain Perspective " greater accessibility is created by linking the individual modes" and "overall cost efficiency can be achieved without sacrificing service quality or accessibility" (Coyle, Novack, Gibson & Bardi, 2011, p. 359). Export Procedures to the U. S. from the Proposed Australian Warehouse As asserted by the Australian Customs Act (1901), the owner of goods intended for export must ensure that the goods are "entered for export" and the goods should not be permitted to enter Australia if the goods are "a ship or aircraft that is exported otherwise than in a ship or aircraft" or " if the goods are other goods which are to be "loaded on the ship or aircraft in which they are exported" (Australian Government, 1901, para. 1). Nevertheless, these goods can be allowed if there is an " authority to deal with them is in force" or the goods are included in a category of goods which are otherwise excluded by the regulations stipulated under Section 113 of the Act (1901) (Australian Government, 1901, para. 1).

In addition, to ensuring that the required personnel are employed by the SWM Warehouse in Australia to ensure that goods which are being exported closely adhere to the regulations stipulated in the Act (1901), but intermodal transportation should also be used in the exportation of goods since

intermodal transportation "facilitates global trade" (Coyle, Novack, Gibson & Bardi, 2011, p. 359). This is the case since the shipping allows large volumes of goods to be transported at "relatively low-cost per unit costs" and air transportation is most suitable for transporting "perishable goods" (Coyle, Novack, Gibson & Bardi, 2011, p. 359).

### **Supply Chain Risks and Possible Mitigations**

One of the biggest supply chain risks which needs to be considered in the management of the operations of the SWM Australian Warehouse is the fuel cost. The text, Transportation: A Supply Chain Perspective, mentions that the "pattern of [crude oil] price increases and volatility" continue to pose a challenge for industries which rely on transportation (Coyle, Novack, Gibson & Bardi, 2011, p. 468).

One way to mitigate this problem is to use the concept of "don't ship water, don't ship air." As explained by the article, "The Real Impact of High Transportation Costs" this approach to packaging helps to "reduce shipping, weight, size and materials" (Russell, Coyle, Ruamsook & Thomchick, 2014, para. 18). This will then lead to savings in "freight costs, packaging costs, and space utilization" (Russell, Coyle, Ruamsook & Thomchick, 2014, para. 18).

Another way in which this risk could be mitigated is wherever possible "
nearshoring sourcing strategies to reduce the number of miles traveled," as
suggested by the abovementioned article (Russell, Coyle, Ruamsook &
Thomchick, 2014, para. 13). The article reported that there has been a "
sharp increase in imports from near-shore sources in North America, Latin

America, and the Caribbean" in 2008 (Russell, Coyle, Ruamsook & Thomchick, 2014, para. 13).

In addition, another supply chain risk that the Australian warehouse needs to assess is the financial impact waterway congestion can have on the ships which the warehouse contracts to export and import goods overseas. The text, Transportation: A Supply Chain Perspective, mentions that the "congestion problem at the ports is a real challenge, especially since these ports are the gateways for imports and exports" (Coyle, Novack, Gibson & Bardi, 2011, p. 461). The authors of the text explain that the port congestion problems are caused by a "growing share of waterborne commerce" which is transported in "very large container ships" (Coyle, Novack, Gibson & Bardi, 2011, p. 461).

However, it is difficult to develop any solutions to deal with this problem because most shipping companies are using "larger and less frequent shipments" in order to reduce transportation costs (Russell, Coyle, Ruamsook & Thomchick, 2014, para. 19). The authors of the article, "The Real Impact of High Transportation Costs" contend that shipments are now being consolidated by shipping companies which are now creating "consolidated, multiproduct containers, pallets, or cartons to optimize capacity utilization" (Russell, Coyle, Ruamsook & Thomchick, 2014, para. 19). Although the authors of the article admit that "[s]hipping larger loads translates into higher levels inventory on hand," these inventory costs increases are generally offset by the reduction freight cost, which ensures that space is not wasted on the ships and that these vehicles are better utilized (Russell, Coyle, Ruamsook & Thomchick, 2014, para. 20).

Highway congestion is another supply chain risk needs to be accounted for while operating and managing the Australian warehouse. The text, Transportation: A Supply Chain Perspective notes that highway congestion is responsible for "1.5 million annual truck hours of delay" in the United States, for instance.

In order to avoid highway congestion, it is advisable that Australia's railway system be utilized. The text, Transportation: A Supply Chain Perspective notes that "[t]raffic congestion, road damage, and maintenance and repair costs are all reduced" since the number of trucks being used on the highways will be reduced when the railroads are utilized.

# Operations at the Australian Warehouse that Should Be Outsourced and Managed, and the Reasons Explaining Why

The operations which should be managed at SWM are the shipping, air transport, the general warehousing duties such as packing, sorting, driving, etc. It is important not to outsource these operations because in order to ensure efficient and streamlined service to SWM's clients these activities should be consistently monitored.

On the other hand, clerical, administrative, and customer service work can be outsourced since this work does involve strenuous activity which must be conducted at the warehouse, and most of this work can be carried out on computers. There is no need for persons doing these types of work to be present at the warehouse

# The Budget Line Items that Need to be Considered in the Operations of the Australian Warehouse

The budget line items which need to be considered include: payroll, supplies and materials, professional and contracted services, capital outlay (which pertains to the warehouse's fixed assets such as buildings and land).

# The Metrics that Need to be Used to Measure the Warehouse's Success

The metrics which need to be measured to determine a warehouse's success include the following: quality customer service, on-time delivery, few damaged or returned goods, efficient and streamlined warehouse operations, and cost-effective strategies are consistently utilized.

The above metrics will determine the success of the warehouse since a warehouse expected to provide punctual, courteous, and efficient service to its customers while doing so in a cost-effective manner.

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