

## **Challenges in Life Sciences supply chains in Asia**

The distribution network of a (bio) pharma company depends obviously on the one hand on where life sciences products for the APAC market are manufactured and on the other hand the nature of the product which might require for example temperature controlled handling. Market requirements and propositions of competitors also influence the design of a company supply chain as well as the location of strategic inventory and the chosen route to market. Last but not least, life sciences supply chains are also heavily influenced by regulations and legislation. Especially in a growth market like APAC it is challenging to find the right solution in determining the appropriate cost/service balance to serve specific channel and market combinations. Martin Gouda and Sui Leng Khoo of BCI Global explain which pitfalls to avoid and how.

### **Life Sciences manufacturing APAC**

Many life science companies are rapidly expanding in the APAC region. Manufacturing takes place in clusters in e.g. Singapore, Japan, India and China. Some Asian countries attract investments to create a solution specifically for their domestic market. Medtech companies are investing in manufacturing plants in countries like Thailand, Malaysia and Vietnam. Still more than 85% of life science products are produced in other global regions. Looking at the distances in those situations between manufacturing locations and the APAC markets, a thorough Sales & Operations Planning process to align manufacturing with local demand is mandatory.

### **APAC Market**

There are differences within the various APAC markets that influence the development of the most optimal supply chain structure for an individual company. Local (i.e. national) regulations sometimes require brand owners to work together with distributors to get a license for a specific country. Regulations are not harmonized across the whole region and local customs impact the cross-border capability heavily, resulting in low reliability and the need for local stock points.

### **Go to market strategies**

APAC represents 28% of the global healthcare market and is rapidly growing in size. Today Japan and China still represent 70% of the total APAC market. The total share of ten ASEAN countries is only 10%. For these smaller countries most brand owners decide for a distributor model to go to the various national markets. In some countries like Japan and Vietnam the position of dealers and/or distributors is strong and bypassing them is not an option. Regional players like DKSH, Zuellig and LF are distributing into many national markets based on their strong (logistics) networks. Direct and more centralized models are not common in the APAC market yet, also prevented by the lack of harmonization in regulations.

### **Supply Chain Partners**

Supporting the brand owners in the distribution to the markets four main categories of service providers distinguished. First of all the *local dealers and distributors*. In the majority of the countries you will find thousands of distributors ranging from big to small. The second category consists of *important regional players in the distribution* like Zuellig who operate across the region. The third category are the *local logistics providers* that are active in specific national markets. Examples here are Yongma in Korea and Mitsubishi in Japan. *Global players* like DHL, Schenker, UPS, Fedex, the last category, are active across the whole APAC region and trying to position themselves.

Altogether, there is a broad array of services offered by a variety providers in the market. Although many investments are being done by those companies, there are still challenges that have to be addressed before a safe and cost effective route to market can be realized. This goes especially for shipments that are dependent on a temperature controlled environment. In countries like Indonesia, where it is already a challenge to keep food products in the proper conditions, the challenge for pharma and biotech is even bigger.

### **Supply chain enablers in the future**

There are five drivers which will enable smooth supply chains in the future: adjusted regulations; investments in infrastructure; temperature controlled packaging; late postponement; e-commerce.

### **Regulations**

Countries in APAC are reviewing their regulations for the life sciences market in order to make things easier for companies to provide life sciences products to the consumers/patients. This is especially difficult when these regulations prevent companies to implement their most optimal strategy. A good example is the difficulty to set up central solutions because of local labeling requirements. One of the biggest enablers for the industry will be the alignment and harmonization of regulations in the APAC region. This will make more centralized and regional solutions possible, allowing also for late postponement in the area.

### **Investments in infrastructure**

Many service providers are exploring the potential to expand their activities in the life science industry. Global and local service providers are investing heavily in infrastructure (warehousing & transport) and service (e.g. consignment, hospital logistics and temperature controlled). The growth in APAC will fuel the investments that will be done by the main players in the logistics services industry. The advantage for APAC here is that lessons learned from more mature regions like the US and Europe can be taken as a starting point. For example, modern warehouse building techniques (like the use of earth warmth) will allow for more cost efficient solutions with less energy consumption to keep the facilities within the temperature range.

### **Temperature controlled - packaging**

Temperature controlled shipments are a challenge across the globe, but especially also in APAC. It can be concluded that most of the temperature excursions are experienced at hand over points like airports. To overcome the challenge of keeping temperature at the right level, not only at 2-8C but also for 15-25C shipments, the packaging industry is very active in developing phase change solutions. A phase change material (PCM) is a substance with a high heat of fusion which, melting and solidifying at a certain temperature, is capable of storing and releasing large amounts of energy. Heat is absorbed or released when the material changes from solid to liquid. These solutions based on PCM are less dependent on human intervention and can be used in different transport modes without any interference with the temperature controlled cargo. Manufacturers like C Safe, Sky Cell and Tower are amongst the front runners of this development that will bring opportunities for improvement in reaching a controlled and compliant cold chain without excursions.

### **Late postponement**

A model that is developing rapidly is called the late postponement model. This model is already more common in the European market where regulations are more harmonized and supported by authorities and customs. Companies like Celgene and Ferring are using this model. Product is brought into the APAC region from manufacturing locations (in these examples: in Europe) in bulk in customer packs. The product is stored in a central location and based on demand, the product is

labeled in the central location just before it is sent to a specific (national) market. Centralization concepts based on central distribution centers or regional hubs support a decrease in cost and generally an improvement in service. Unfortunately, these concepts are only possible when allowed by customer requirements. In most cases, due to the regional distances, these requirements are only met when using (expensive) air freight solutions and therefore only possible for high end products like e.g. biotech based medicines.

## **E commerce**

APAC is one of the global regions where e-commerce is developing rapidly. Customers in the region are used to being online. Easy ordering via a smart phone is (getting) part of daily life. Especially for fashion and luxury goods already good examples of successful e-commerce strategies in the APAC region can be seen. Since medical technology is looking for more end customer intimacy for certain products (like glucose meters for diabetes patients), the use of these e-commerce channels might be a viable solution for certain products in the future.

**Given the situation today the expectation is that developments will be slow, but steady. Many countries are looking at streamlining their legislation to support the distribution of pharmaceutical products in their territory. Product availability will increase in the future but most APAC countries still have a way to go. It will certainly take more than a couple of years before the streamlining of supply chain solutions will match European and US practices. Step by step the supply chain setup will reach more mature stages, benefitting in the first place patients in the APAC region.**



*Martin Gouda, Partner ( Supply Chain Practice)  
martin.gouda@bciglobal.com*



*Sui Leng Khoo, Vice President APAC  
suileng.khoo@bciglobal.com*

*BCI Global is a global supply chain and location consulting company with an unequalled track record in working for the pharmaceutical, biotech and medical devices companies.*