

# Nissan faculty of engineering and computing management essay



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Nissan got aware about United Kingdom in the mid 1980. They acknowledge that UK companies component suppliers are short of standard in quality, reliability and cost compare to their Japanese counterpart. The suppliers capacity was measured which Japanese was rated highest to scale of 100 while Europe and UK suppliers was rated 80 and 65-70 respectively. Nissan was given criteria by European Union which is to meet in order to produce to their customers taste in Europe. For this instance, Nissan had to improve on the capabilities of its European suppliers so that they can maintain the quality and cost standard attained by Japanese plants.

Therefore, Nissan thought about improvement on their supplier's capability by forming a Supplier Development Team (SDT) in 1987. The aim is to develop their suppliers to their required level of operation so that they can meet Nissan's present and future performance.

## **Introduction**

Supply chain can be regard as the connection of various companies which involves the suppliers, manufacturer which they work together for the purpose of satisfying their customers. (Southey, 2010)

The development of suppliers and manufacturer can be achieved when the companies remain competitive in the future by improving the development capacity of their suppliers. This has to be acquired because most manufacturers now try to achieve higher quality and cost effectively delivery high performance in order to remain at the top. A the early days when focus was not on performance of suppliers, many vendor could spend 70% of their

budget on manufacturers and which in turns bring problems of high lead time to customers.

## **Supplier Development**

Supplier development is a very crucial aspect in most company in recent days. Many companies have so much put in efforts to obtain good quality and maintain capable suppliers. Manufacturer could actually attain their goals if good communication and interaction with the supplier can be their priority. (Krause, 1999)

Competition in the world market is actually increasing drastically between companies and most companies are fighting to meet the development of their suppliers in order not to lose their market share globally. It is suggested by Kraus that resources development on a large scale refers to any effort that a buying firm put in to improve its suppliers performance and/or capability in order to meet the buying firm's short- and/or long-term supply needs. (Krause, 1999)

For business of a company to improve, long-term relationship is required between them and their suppliers. Supply chain relationship is based on communication and information flow. (Bullington & Bullington, 2005)

The studies on the supplier improvement addressed that most the firm's attempt focus on improving supplier's performance and ability, and achieve short and long-term supply needs (Krause and Ellram, 1997)

Manufacturer's invested and ration supplier development views so that they can improve their quality, reduce cost and deliver the product on time.

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Supply development activities can be varying in different level in terms of the degree of how the manufacturing company and suppliers gets involved.

(Krause, Scannell & Calantone, 2000)

**Goal: self-Reliant supply base-continuous improvement**

**6. Problem-Solving to eliminate suppliers' Deficiencies**

**(" Reactive")**

**5. On-site Risk Assessment by Cross-Functional Team**

**7. Establish open relationship through feedback and information sharing**

**9. Maintain Momentum**

**8a. Direct Involvement Activities**

**8. Systematic Supplier Development**

**8b. Incentives and Rewards**

**8c. Warnings and Penalties**

**Goal: Globally Aligned Supplier Network**

**Goal: pool of potentially capable suppliers**

**10. Supplier Integration in new product**

**11. Establish performance improvement in second tier supplier**

**12. Establish integrated supplier network**

**Goal: pool of potentially capable suppliers**

**4. Supply Base Relations**

**3. Establish Performance Metric and Asses Suppliers  
Identify strategic supply chain needs**

**2. Search for competitive supplier**

**1. Identify strategic supply chain needs**

**Stage 1: Identify Assess and rationalize the supply base**

**Stage 2: Problem – Solving Developing**

**Stage 3: Proactive Development**

**Stage 4: Integrative Development**

**Supplier development**

**Increasing Integration**

**Increasing Benefits**

**\*Figr. 1: supply chain Development Model**

**Supplier Development (Meaning)**

As stated by P. Southey, supplier development is a bilateral effort by both buying and supplying companies to come together and improve the supplier's performance and/or capabilities in the following areas:

Cost

Quality

Delivery

Technology

Managerial Capability

Time-to-market

## **CASE STUDY: Nissan COGENT**

### **NEW PROGRAMME FOR IMPROVEMENT**

Nissan noticed there is need to development their suppliers to improve on their quality, a new program was introduced based on this and it is called NX96. Nissan could actually measure its performance and with this achieve its target of quality, cost, delivery and management but could not measure development. This was a problem for them along the line with NX96.

Based on this problem, Nissan thought of shifting to replace NX96 with NEXT 21(Nissan Euro Excellence Towards 21st Century) to face challenges of 21st century. With this new program, Nissan priority has shifted, and many of its suppliers attained world class level by less 10 PPM defect rate but were still ranking low compare to its competitors. (Nissan Cogent Video, 1999)

\*Figure 2- European Perception of Quality (Nissan Cogent Video, 1999)

### **Cranfield University**

Cranfield University has a research company was called into Nissan to come and handle the development of their supplier based on their experience.

They try to give people working inside Nissan and suppliers a chance to better understand each other so as to improve their overall performance to get better cars, cheaper and faster to the market.

Nissan European Technical Centre (NETC) in Canfield now became Nissan's backbone for the design and development of vehicles manufactured in our European plants which plays a strong role in Nissan's global operations.

(Nissan Cogent Video, 1999)

## **COGENT**

COGENT was gotten from a Latin word which means “ Drive Forward Together”. This word has really had an impact in Nissan Co-Development regeneration tool.

It has been implemented as three way partnership between Cranfield University, Nissan European technology centre (NETC) and 89 of Nissan suppliers, involving 900 suppliers personnel.

### **\* Figure 3- Nissan, Supplier and third party**

The program was tabled to run COGENT hand in hand with Nissan’s next 21st program. COGENT has very distant identity within next 21 which comes with specific goals of bringing design and development activities of Nissan suppliers into close alignment with it.

Nissan and its suppliers has really worked together since 1991 to meet improvement target in terms of quality, cost, delivery, development and development (QCDDM)

### **Design and Development:**

Nissan was able to put 80% of cost, quality and delivery performance at the development phase and this was able to have a major effect at the production process. They actually could decide on this because 80% of the production is from their suppliers.



## **\*Figure 4-Design and Development**

### **The COGENT design cycle:**

COGENT is designed to save time and resources at the development phase. They succeeded in moving back their resources to the start of the process, where suppliers with design and development would be more concurrent and predictive. This is based on right design at the first stage and the processes are started below:

Programmed to save time and resources

Make sure it is right first time design

Design and Development is more predictive and concurrent.

## **\*Figure 5- COGENT design cycle**

### **The CO-DEVELOPMENT PROCESS**

Co-development process requires good relationship between supplier, customer and manufacturing more effective in terms of strong communication at production

## **\*Figure 6- CO-DEVELOPMENT PROCESS**

level. Employee from both Nissan and suppliers can work hard in hard to improve in their development process.

## **Problems in Implementing COGENT**

Table (1) (Krause, D. R, Hanfield, R. B. & Tyler, B. B, 2006)

## **COGENT Result**

Average figure achieved by that supplier that participated in cogent shows 11% which has been so considerable.

Some suppliers are hitting the target that could cut development and design cost and time by 30% and 40% respectively.

## **Conclusion**

Nissan has really benefited in the supplier development program which has build effective relationship with their suppliers and also improves partnership among them. It has also showed that participation of the suppliers in the design stage has also helped in improving the product quality and decreases the cost. And participation of suppliers in the design also can conduct to improvement of the product quality and decrease the production cost.

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