

EXTRACTS FROM A JAPAN STUDY TOUR

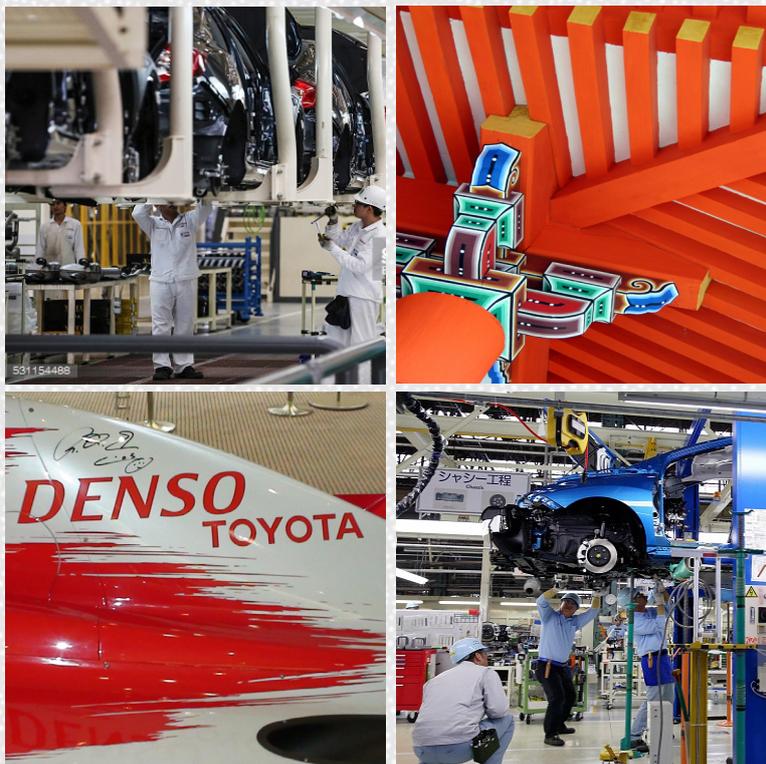


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“Discover, through these pages, some moments shared by our team and customers during a previous seminar”

A look coming from a major actor of the aeronautics sector following exchanges and debriefings

Companies visited

- KYB Corporation (shock absorbers) (1)
- Toyota Motor Corporation (Automotive, « mother plant » for Quality and Production Efficiency) (1)
- Denso Corporation (Automotive Equipments, TOYOTA's major subcontractor)(2)
- MITSUBISHI Electric Corporation (Refrigerators and air conditioners « mother plant » for Quality)(3)
- HINO Motors Limited (Trucks & Bus, Toyota's subsidiary)(4)

All these companies received the Deming price¹ (It is the oldest and most widely recognized quality award in the world) 30 or 40 years ago. Factories are all ISO14001 certified since 18 to 23 years with an emphasizing on the environmental respect.



During the visits we noticed a remarkable organization of production factories with innovative and precursor's concepts. Some concepts are specific to their industries VOLUMES but others are to be deployed and used in our aeronautics developments.

All production flows are rapidly RECOGNIZABLE (physically speaking) into the workshops and are pulled flows. Almost everything is managed with Kanban system.

PRODUCTION LINES ARE

1. « Moving Lines », it is what supports the whole system, what assures the rhythm and so performance. It detects immediately problems. The Moving line does not support any disorganization: it REQUIRES an excellent organization at the workstations and a perfect organization of the supply chain.
2. Flexible: they integrate several products (from the same family) on the same line : 7 different vehicles with specific options at TOYOTA.
3. Rated (« Takt Time » is redefined every 6 months at Toyota or twice a month at HINO).
4. Delivered with upstream pre-equipped units or from the subcontractors with a perfect synchronization.

5. With an impressive supply chain.

The shop-floor management ensures, not the teams organization which is already predetermined, but the fluidness of the production lines by reacting at the earliest :

1. Trouble shooters take place to support punctually teams if a technical problem appears or if the supply of the line takes too much time.
2. Teams flexibility to respect the customer commitment and finish the work of the day – “finished-gone” concept



3. Temporary workers are engaged and perfectly trained, if the “takt time” is highly reduced for the period to come.
4. Highly automated lines for the elementary pieces' manufacturing or for some subassemblies (1000 KAWASAKI robots at TOYOTA).

“ Production flows are quickly visible

On assembly lines, work is totally made by workers where everyone has a position and whose cycle is defined by the “takt time”.

WORKSTATION

The operator has, in an ergonomic way :

1. The assembly guidelines on each station easily visible.
2. The pieces which need to be assembled, in a pre-es-

established order, in “just in time”, according to the model to be assembled on the chain.

3. Tools and equipments that are necessary for the station and so a perfect 5S.

Other key elements are the « ANDON » placed on each work station and a central one per line which always gives a visible reference for the staff and allows the control of :

- Products VOLUME to be manufactured by day and by each team
- Products VOLUME to be reached
- % realized compared to the objectives of the moment (or number of products delayed)
- Number of temporary breakdowns in the assembly lines by day or TRS
- Level of non-quality per day
- The whole work stations of the line with a red sound signal where there is a problem = stop of the line with immediate response.

WAREHOUSE are into the workshops (delivery every two hours at HINO) and are used to supply, in KANBAN, the work stations (« Takt time » is the same as the cycle time of the line) by staff members.

“ When people sleep, engines have to sleep

HUMAN RESOURCES AND SSE

They are organized as follows :

One or two teams with few or NONE night teams (dedicated to maintenance and delay adjustments).

Ordered breaks (10mn each ½ day at HINO) = stop of the lines (even the light is shutting down).

Japanese say “when people sleep, engines have to sleep”. Behind this sentence that can hurt a purely financial logic, there is experience saying that support functions are highly weakened by night and so that performance and quality are impacted. So, it’s better to abstain.

One exception, for obvious reasons: maintenance in 3x8 (Heavy maintenance, which need an extended stop of the workstations is done by night).

Workers qualifications are posted on the workshops and experts could wear a helmet with a different color related to their qualification.

The workers improvements are highlighted into the workshops by being posted.

TOTAL QUALITY MANAGEMENT

All companies boast and highlight a TQM to explain their success and industrial performances applying the key principles as follows :

- “Quality first”: nothing is worse than loosing customer’s trust
- It is forbidden to manufacture an inadequate product

TQM Enforcement :

1. Policy deployment is made by Top management twice a year : « keep the freshness and dynamism ».
2. Periodic meetings for managers are organized to define action plans, in the short and medium-term, customer-faced.
3. Statistical feedback for products used and solutions to be defined.
4. Monthly ranking of the subcontractors and competitive call (OTD, OQD,...).
5. Quality Circles with everyone’s involvement including line management twice a month and per line.



The strength of Japanese companies is that they never stop to look for process improvement. It is a permanent search integrated in their concept for customer satisfaction.

Nb : a testimony from a German colleague during the seminar: “Mercedes is regularly inspired by Toyota concepts, but even if we are in progress, Toyota is STILL 30% ahead”.

“ Companies are in a rude competition for their survival

TOW CONCLUSIONS

1. A GREAT FOCUS ON the industrial excellence !!
We understand why a country with no natural resources became the world’s second economic power.
Let’s learn something from them to go ahead !
2. Companies visited have a strong feeling, truly important, that they are in a rude competition for their survival, while having a strong ambition for development.
“The World is changing, we must fight to keep alive and develop our Company.” Our manager role should also to make sure that people are aware of the competition level in which we are.

Takeomi Nagafuchi

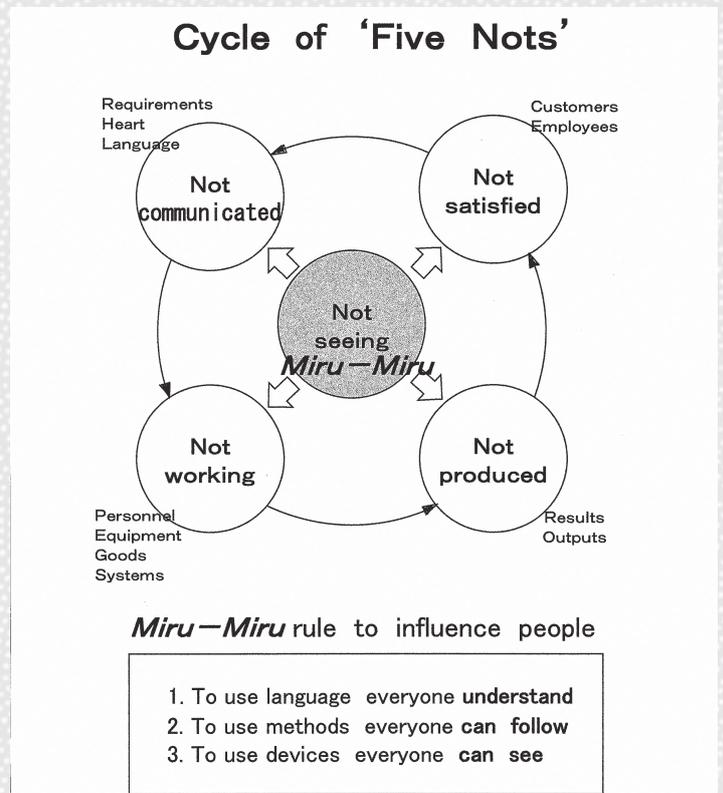
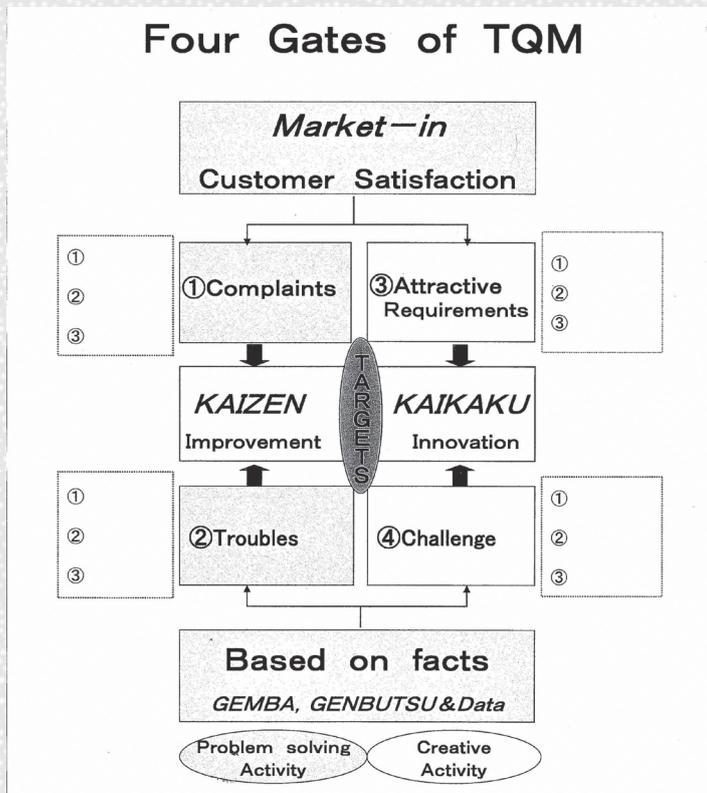
Consultant, Quality Management
 Miru-Miru Management
 Executive director, Advance N

TOTAL QUALITY MANAGEMENT

Total quality management is a quality management process. The aim is to obtain a wide rallying and involvement of the entire company. And this, with the aim of achieving a perfect quality while reducing wastes as much as possible and by constantly improving the "outputs".

MIRU MIRU MANAGEMENT

The art of observation



A memory with the lecturer, always available for a picture !



Working atmosphere during a conference, at the back, translators in their cabin.

Meeting with Noriaki Kano

The “big-shot” of product development



Noriaki Kano

Board Director, Komatsu Ltd.
 Honorary Chairperson, Asian Network for Quality
 Professor Emeritus, Tokyo University of Science

THE KANO'S MODEL

It is a multidimensional approach which is based on the postulate that satisfaction and dissatisfaction are not based on the same types of criteria.

Kano's model defines three types of customers' expectations :

1. Basic expectations or “Must be”

They are not necessarily “said” but lead to customer unhappiness if latent needs are not met.

2. Proportional expectations or «More is better»

Also named “performance expectations”. Waiting time, at the customer service, can be analysed in this way “The less I wait, the more I’m satisfied”.

3. The attractive expectations «Delighters»

Generally not expressed, these expectations give a small « advantage » to the customer and bring a great satisfaction. The customer loyalty is a perfect example.

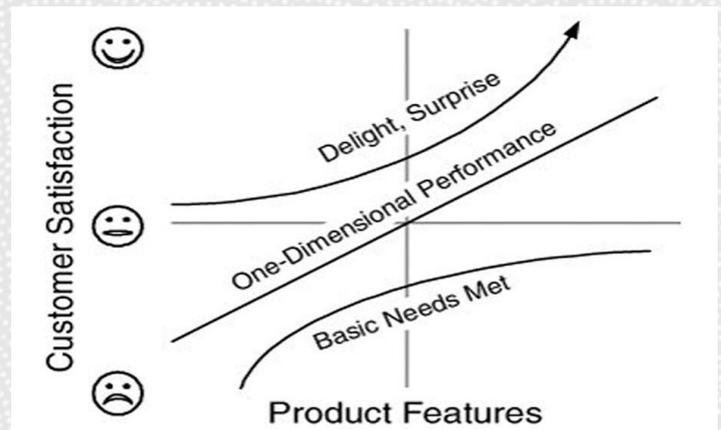
THE KANO DIAGRAM

It is mainly a Qualitative tool which is based on face to face interviews with two series of questions :

1. If the function exists and is perfectly operational, what does the user feel ?

2. If the function does not exist or dysfunctional, what does the user feel ?

For each couple of questions, the user expresses his satisfaction on a 3 values scale: satisfied/neutral/dissatisfied.



Some of the Progress Partners team members, honoured to be hosted by M. KANO.



M. Kano's office visit, one of his numerous prizes.

La JUSE (Union of Japanese Scientists and Engineers), is a referent Japanese body which promotes the good practices survey for technology and science progress; in order to contribute for the companies and industry development.

The JUSE manages, the Deming prize, one the best world quality prize promoting excellence.



Certifications presentation



Participants gathered during the certifications presentation. 46 participants coming from Brazil, France, Germany, India, Thailand

DEMING PRIZE

It is one of the world highest reward for Total quality Management. Created in 1951 in the memory of William Edwards Deming, who has greatly contributed to the development of quality control in Japan.

His teaching helped Japan in its foundations building up and thanks to that, the quality level of Japanese products had been recognized as the best in the world.

The Deming teaching, which is known all over the world, is related to the Management as a whole. In a company, management consist in controlling processes, coordinate operations and prepare for the future.

Since 1951, the Deming prize has been attributed to 238 companies and 81 persons all around the world.



Noriaki Kano received the Deming Price in 1997

JST tour

Japan Study Tour is also the discovery of a country and its culture

lors des visites touristiques et des «quartiers libres», chacun peut partir à la découverte du quotidien des japonais. Découvrez aussi quelques photos autorisées des visites usines.



Comment acheter un ticket de métro devient compliqué



Découverte des Temples, très, nombreux au Japon



Le Shinkansen -TGV local - pionnier de la grande vitesse en 1964



Usine Toyota «Easy Swing Seat»



Quand l'habit traditionnel côtoie le 21ème siècle



Un quartier traditionnel s'illumine la nuit



Visite de Toyota



Découverte de la nourriture japonaise



Tokyo by night



Un bus, oui mais Hybrid !

Program Japan Study Tour 2017

