

Quality Infrastructure in Japan

~Reflections and Implications for Syria~

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1. What happens, when “Quality Mindset” is lost?

Case 2 : Non flammable deceit (cheat)

دراسة حالة 2: الغش بإنتاج مواد بلاستيكية يفترض أنها غير قابلة للاحتراق

Industry: building materials (insulator plastic panel)	الصناعة: مواد للبناء (ألواح بلاستيكية عازلة)
When : Nov. of 2007	متى: تشرين الثاني 2007
Happened: It was revealed that a sample for evaluation had been falsified for 15years (adding nonflammable agent)	الحدث: عند أخذ عينة من الألواح لتقييمها اتضح أنه تم تزيفها لمدة 15 عام بإضافة مواد غير قابلة للاحتراق
Cause : The company cheated the test samples, assuming that their business would expand if the official certification obtained.	السبب: افترضت الشركة أنه في حال الحصول على شهادة رسمية تصادق على جودة الألواح البلاستيكية عندها يمكنها التوسع بالإنتاج، لذلك تم تزوير عينة الاختبار
Result : Deprivation of the certification from the company, Lost the company's reliability	النتيجة: حرمان الشركة من الحصول على الشهادة، وبالتالي خسارة السمعة وحصصة السوق

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1. What happens, when “Quality Mindset” is lost?

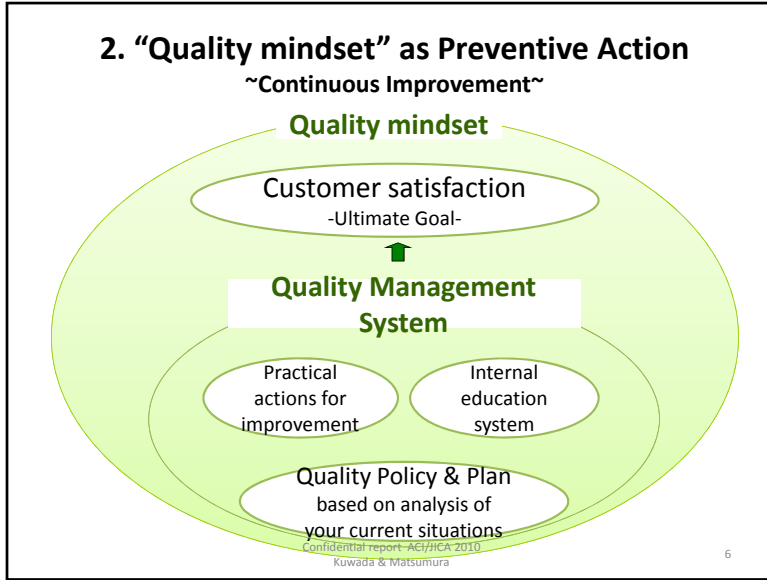
ماذا يحدث عندما نفقد (التفكير بعقلية الجودة)

Case 1: Food poisoning دراسة حالة: التسمم الغذائي

Industry: the dairy industry	الصناعة: الحليب والأجبان
When : June of 2000	متى: حزيران 2000
Happened: 14,780 persons sickened due to minor germs	الحدث: إصابة 14.780 شخص بالمرض بسبب جراثيم مختلفة
Cause : Although the process line was interrupted due to electric cut, the company continued to use the intermediate materials that should have been abandoned	السبب: رغم توقف خطوط الإنتاج نتيجة انقطاع الكهرباء، استمرت الشركة باستخدام المواد الوسيطة التي كان يتوجب التخلص منها
Result : Boycott of consumers One of the plants was forced to shut down.	النتيجة: مقاطعة الزبائن للمنتجات التي تحمل اسم الشركة وأجبرت الشركة على إغلاق أحد معاملها

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1. What happens, when "Quality Mindset" is lost? Review of the cases:

Case	Industry	What happened ?	Missing points?
Case 1	Dairy Product	<ul style="list-style-type: none"> Lost customer's trust Boycott towards the company products 	<ul style="list-style-type: none"> Customer oriented consciousness among both management and workers
Case 2	Building Materials	<ul style="list-style-type: none"> Lost certification Lost market trust 	<ul style="list-style-type: none"> Customer oriented consciousness among managements

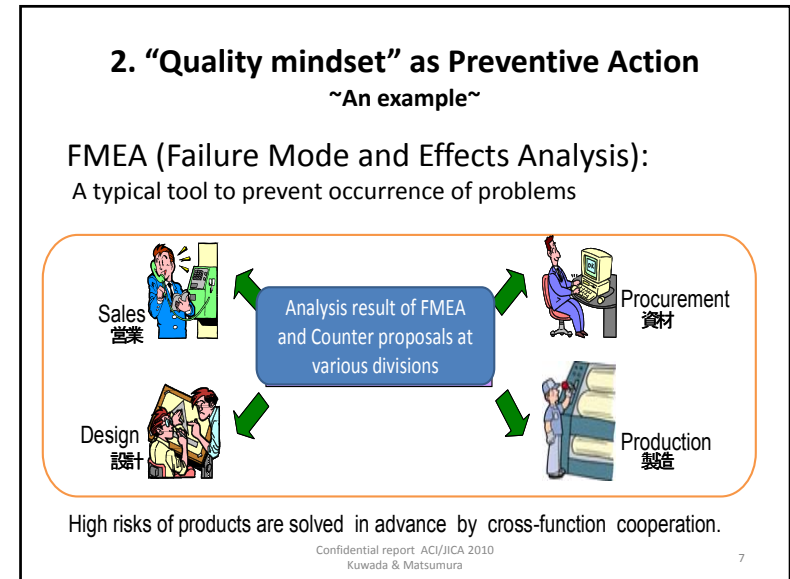
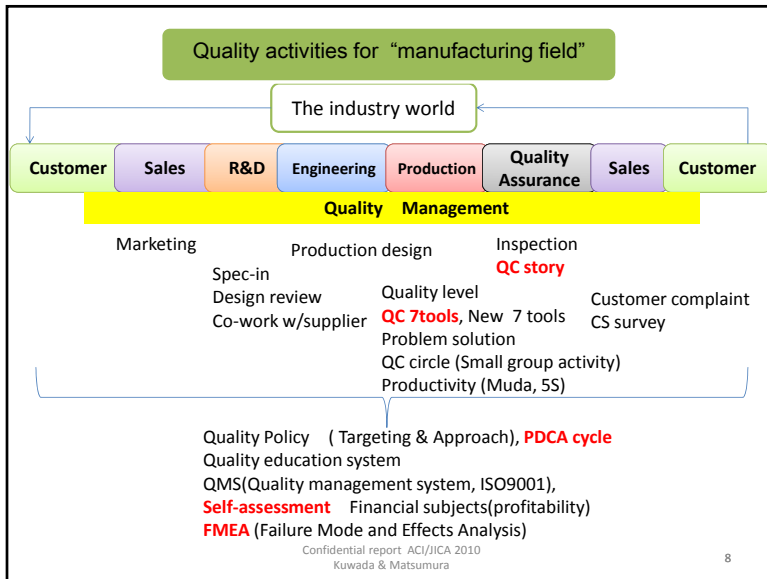
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Lessons learnt:

Once you lose your customers' trust,
you would need years and years to regain it

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3. Approach 1 (Manufacturing)
 Example: self-assessment Your E-mail address ()

Company name	Assessment date	Division(Responsibility)	Your Name

A. Defect level examination

Level 1-5	The content	Check
Level 1	There is no system to see defect ratio.	
Level 2	The system exists. Just monitor.	
Level 3	Counterproposal is taken based on the analysis.	
Level 4	The trend is getting improved.	
Level 5	The level is in a top class in the business field.	

B. Internal education for Quality (including out sources)

Level 1-5	The content	Check
Level 1	There is no system of education system.	
Level 2	There is education course, but not systematic.	
Level 3	There is a systematic course and it works	
Level 4	The employees level is monitored and improving.	
Level 5	The level is in a top class in the business field.	

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3. Approach 1 (Individual company and factory level)

3.1) Self-assessment
 Practice a self-assessment to know the own positioning

Based on the assessment, to establish an action plan for continuous improvement

Compare between the current and the past to know the future direction

3.2) Quality Education

PDCA cycle: Basic approach to continuous improvement
 QC story: Basic approach to solve problematic issues
 Q7 tool (ex.Pareto Chart): Typical Quality tools to develop "QC story"
 FMEA : Typical tool to prevent occurrence of Quality problems

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3. Approach 1 (Manufacturing)
 Example: self-assessment (continued)

E. Quality awareness (to you)

Level 1-5	The content	Check
Level 1	In our business, "Quality" is not important.	
Level 2	"Quality" is important, but don't know well how to improve.	
Level 3	"Quality" is measured, and the level is known by all staff.	
Level 4	We are proud that "Quality" is improving by our efforts.	
Level 5	Our "Quality" is in a top class of the business field.	

F. Your request

If you have any request to JICA or me in terms of QM, please advise here.

If you have any questions, please don't hesitate to contact me, Kazuyuki Kuwada.

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Thank you!

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3. Approach 1 (Manufacturing)
 Example: self-assessment (continued)

C. Customer satisfaction

Level 1-5	The content	Check
Level 1	We don't know our customers, nor what they want.	
Level 2	When complaint from customers, we follow it.	
Level 3	There is a customer list for special request & past complaint.	
Level 4	Customer satisfaction survey is planned and practiced.	
Level 5	The level is in a top class of the business field.	

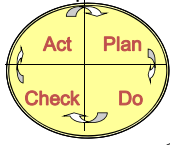
D. Quality management system (QMS)

Level 1-5	The content	Check
Level 1	There is no Quality division (QA or QC), nor QMS.	
Level 2	Quality division exists and it works.	
Level 3	There is a Quality policy and all staff know it.	
Level 4	Already obtained ISO9001 or have internal QMS equal to it.	
Level 5	The level is in a top class of the business field.	

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3. Approach 1 (Manufacturing)

Example: Quality Education (PDCA Cycle)



PDCA cycle is a key to achieve your goal under a continuous improvement.
 إن دورة PDCA هي المفتاح لإنجاز هدفك و التحسين المستمر
 When ever you face a quality problem or improve the situation, please follow the PDCA cycle.
 عندما تواجه مشكلة في الجودة أو لتحسين حالتها الرجاء اتباع دورة PDCA

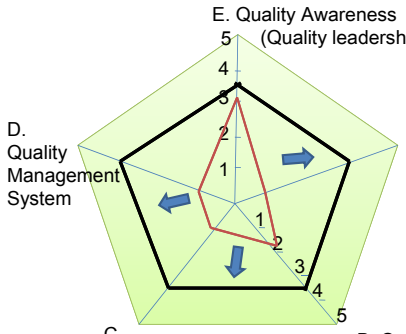
Plan(P)	Do(D)	Check(C)	Act(A)
Analyze the subject حلل الموضوع	Factor analysis حلل العامل	Review the result مراجعة النتائج	Standardize معايرة
Define the goal حدد الهدف	Make counterproposal ضع اقتراح مضاد	Back to "DO", if no ارجع للعمل إذا لا	Take a necessary action خذ الفعل الضروري
Make a progress plan ضع خطة تنفيذية	Take an action أبدأ بالعمل	Confirm the effect حدد الأثر	Make a further plan نقد الخطة التالية

In order to conduct an improvement activity according to the PDCA cycle, Quality Education (like Quality 7 tools(Q7), New Quality 7 tools(N7), etc) is important to all of the related members.

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3. Approach 1 (Manufacturing)

Example: self-assessment (continued)



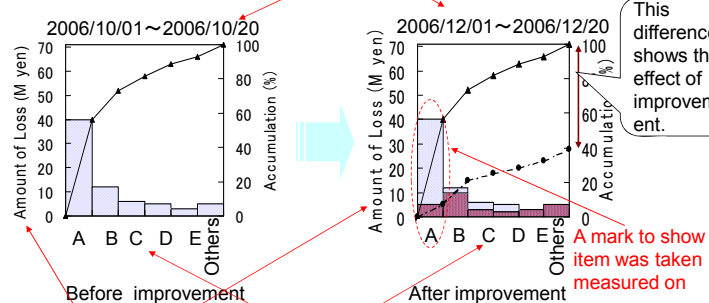
— Current (Average of private companies as of April 2009)
 — Target of 2 years after (>3.5)

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3. Approach 1 (Manufacturing)

Example: Quality Education (Pareto Chart مخطط باريتو)

Effect of improvement can be visualized by depicting before and after improvement in a figure.



Similar period of measurement
 This difference shows the effect of improvement.
 A mark to show this item was taken a measured on
 Same items
 Same scale
 Same order

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3. Approach 1 (Manufacturing)

Example: Quality Education (QC story)

QC story	Main activities	Related QC tools
Set up theme	• Discuss problems • Select the theme	Pareto chart, Affinity diagram, Graph, Matrix diagram
Analyze the current	• Grasp the current situation (collect data, analyze data)	Pareto chart, Control chart, Graph, Scatter diagram, Check sheet
Set targets	• Study problems to be tackled	
Factor analysis	• Examine relation between characteristic values and causes • Factorial analysis & follow-up	Tree diagram, Relation diagram, Pareto chart, Graph, Histogram, Cause-effect diagram
Establish the measures	• Recite counter measures • Narrow down the measures	Tree diagram, Matrix diagram, PDPC, Arrow diagram
Implement the measures	• Implement the measures • Manage the progress	Check sheet, Action plan
Check the results	• Evaluate the results • Back to the measures if not enough	Pareto chart, Graph, Control chart, Matrix diagram
Standardize	• Establish standardization • Make a future plan	Check sheet, Control chart

Red=Q7
Blue=N7

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Example: Quality Education (FMEA) =Continued =

Recommended activities

- 1) Ranking failure modes according to RPN
 $RPM = S(\text{level of influence}) \times O(\text{frequency of occurrence}) \times D(\text{detective ratio})$:1-10 points
- 2) To take corrective actions to the highest risk problem and urgent subjects
- 3) To take a concrete and proactive corrective action
- 4) Any division needs to cooperate to overcome the risky problem

Preventive activity is better than any activity after finding defects.

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3. Approach 1 (Manufacturing)
Example: Quality Education (FMEA)
 = Influence Analysis of Failure modes =

Requirement of function	Potential failure mode	Potential influence of failure	(S) Level of influence (1-10)	Cause of the failure	(o) Frequency of occurrence (1-10)	Current detective control	(D) Detective ratio (1-10)	(RPN) Risk level (SxOxD)	Recommended action
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RPM= Risk Potential Number (SxOxD)

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5. Expectation for future generations

<Example of Quality Education in University of Japan>

=My experience in Japan=

At the second grade of Applied Chemical course of Engineering Faculty In 1968 of Osaka University

Frequency: One hour every week w/ a textbook of "Fundamental Quality Control"

Content: Quality mindset
 Histogram, Check-sheet
 Statistical study (normal distribution)
 Control Chart
 Inspection
 Scatter analysis etc.

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4. Approach 2 (Industrial society as a whole)

Quality activity in Quality month (November)

= slogan of 2009= (50th in Japan)

**Quality that Enables Sustainable Society
 ~ What is the Quality for You, now ? ~**

Here, "Sustainable Society" is a society inherited down the generations while maintaining a favorable balance among our environment, economy and society. For example, reducing quality losses leads to reducing the environmental burden, and thus considered to help realize a sustainable society in the end.

(Award system for excellent companies)



Cf. In Syria, 14th Quality month (in 2009)

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6. Closing Message:

“Faith in quality”

-Quality management
with cordial and courteous attitude-

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(continued) 5. Expectation for future generations

**Suggestion about “Quality related course”
= proposal for university/ institute in Syria=**

Back ground :
Syrian industry need to expand its business competitiveness in the global market.
In order to support the strategy, all persons who engage in manufacturing should have “ Quality mindset”.
The concept should be learned at university/ institute.

Proposal:
Preparation time in 2009
Starting a trial in 2010 as an elective subject
Trial years for 3 years (2010 - 2012)
Setting up an essential subject from 2013 based on an investigation of trial periods

Year	2009	2010	2011	2012	2013
Action plan	Investigation Discussion Trial draft	Trial periods for 3 years (elective subject)			Starting (essential)
		Summary repo	Summary repo	Summary repo	

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Severe assessments towards QC & Management

Authorized certification of ISO9000

Steady improvement in quality...?

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Developing new technologies

Daily continuous activities for improvement

⇒a real important force supporting the company.

⇒**There’s no end in KAIZEN**
-continuous improvement- activities

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Furthermore...

PEOPLE

Royalty for their company

Faith in their products

Commitment for improvement

...and LOVE for their people

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Zero defects in production

Necessary conditions BEFORE introducing ISO:

Appropriate production facilities

Complete maintenance

Thorough working standards

Operators properly trained to implement the standards

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Thank you very much for your attention!



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“Cordial and courteous” attitude and commitment.

Origin for MONODUKURI

–shop-floor production technologies–

Foundation to sustain the quality control system

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