

# Developing an Occupational Safety Health in a chemicals company

A best practice  
Wahyu Juhana  
October-2007

# Indonesia

- **Capital** : Jakarta
- **Area** : 1,919,000 km<sup>2</sup> (17,000 Islands)
- **Population** : 222 mil. (2005) ( 300Nation, 250 Language)
- **Religions** : Moslem 88%, Protestant 5%, Catholic 3% etc.
- **Life Custom** : Musyawarat = Harmony Mind
- **Gotong Royong**=Reciprocal Help
- **Weather** : Dry Season(April-September)  
Rainy Season(October-March) Temp:Avg 27°C
- **Currency** : Rupiah
- **Import partners** : Japan 18.5%, USA 10.5% , China 8.2%,  
(Non Oil ·Gas 2002), S'pore 7.7% etc .
- **Export partners** : USA 15.8%, Japan 14.3%, S'pore 10.3%,  
(Non Oil·Gas 2002), China 4.8% etc.
- **Major industires** : Petroleum & Natural Gas, Textiles, Footware,  
Mining, Cement, Fertilizers, Plywood etc.
- **Natural resources** : Petroleum, Natural Gas, Coal, Tin, Nichel etc.

# General Index Data of Indonesia

Index	Unit	2001	2002	2003	2004	2005	2006
Population	Million	209	211	214	217	222	223
GDP	%	3.3	3.7	4.1	4.0	5.6	3.5
Inflation Ratio	%	12.6	10.3	5.06	9.0	17.1	4.96
Interest Rate	3 Month(%)	14.0	17.5	8.3	7.0	12.75	14.0
Exchange	VS US\$	10,400	8,940	8,500	8,500	9,830	9,300
Rate	VS JP¥	79.2	75.4	75	75		

# Location



# Kao Indonesia at the glance

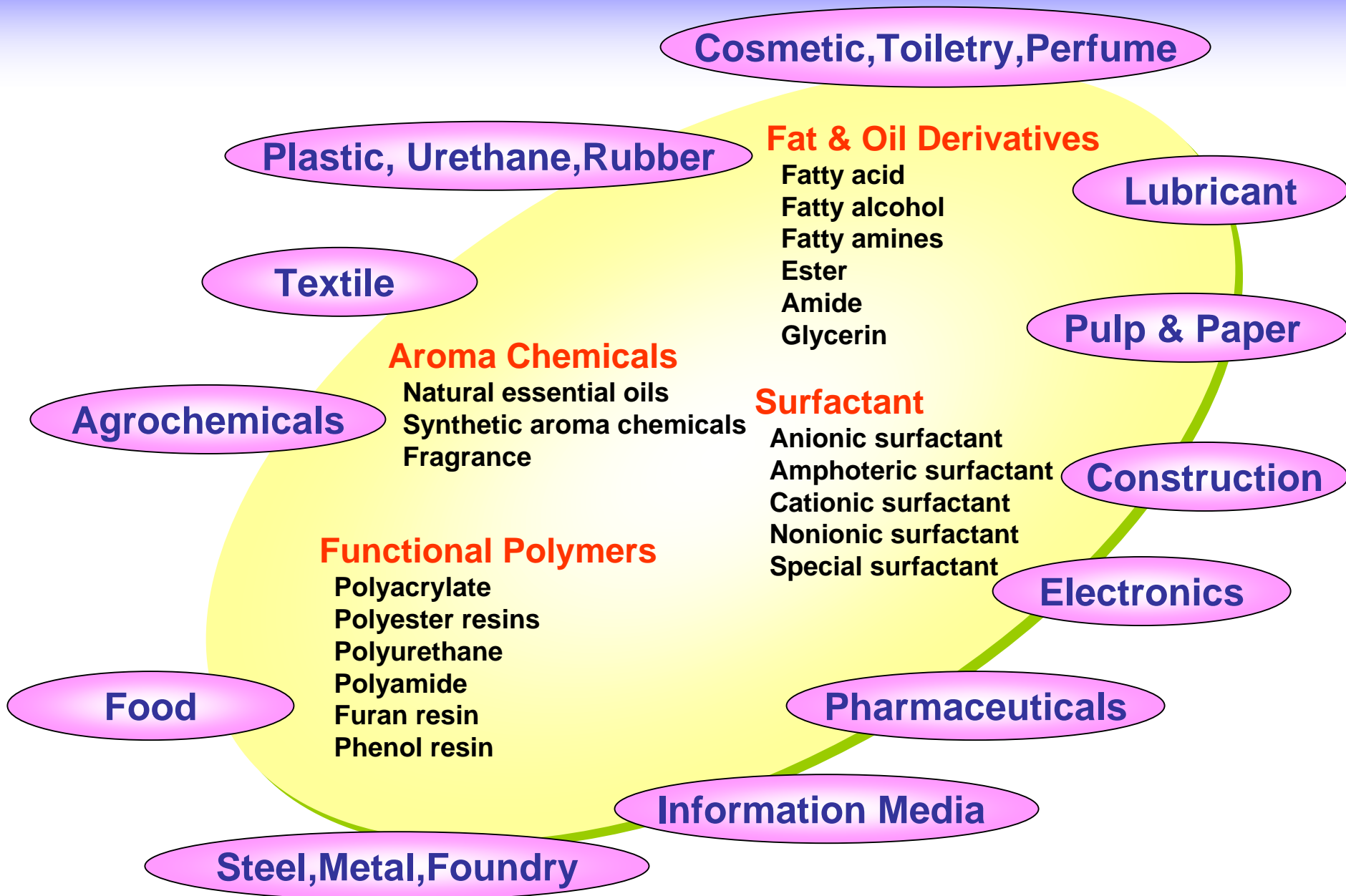
## PT.Kao Indonesia Chemicals

- Location : Jl. Raya Km. 42 Tambun – Bekasi  
17510 (Head Office & Factory )
- Land Area : 56,040 m<sup>2</sup>
- Establishment : April 28, 1977
- Ownership : Kao Corporation 95%  
Rodamas Co.,Ltd. 5%
- Product : Surface Active Agent } ( About 300 kind )  
Specialty Chemicals }
- Certification : ISO 9000 (1998) ,ISO 14000 (2006) ,  
OHSAS 18001 (Sept. 2007)
- Responsible Care : Starting Sept.2002 (58<sup>th</sup> member)

# Kao Indonesia at the glance

- Staff Strength : 281 persons (permanent)  
35 persons (sub con)
- Energy use : 3465 KVA (Government Electricity)  
3 x 350 KVA (Genset for emergency only)  
Fuel Oil (Solar), ± 220 kL/month  
(change to Natural Gas from Sept.07 )
- Water sources : 554 m<sup>3</sup>/day (6 deep well)
- Boiler : 3 pcs (Cap. 1.5 ton)

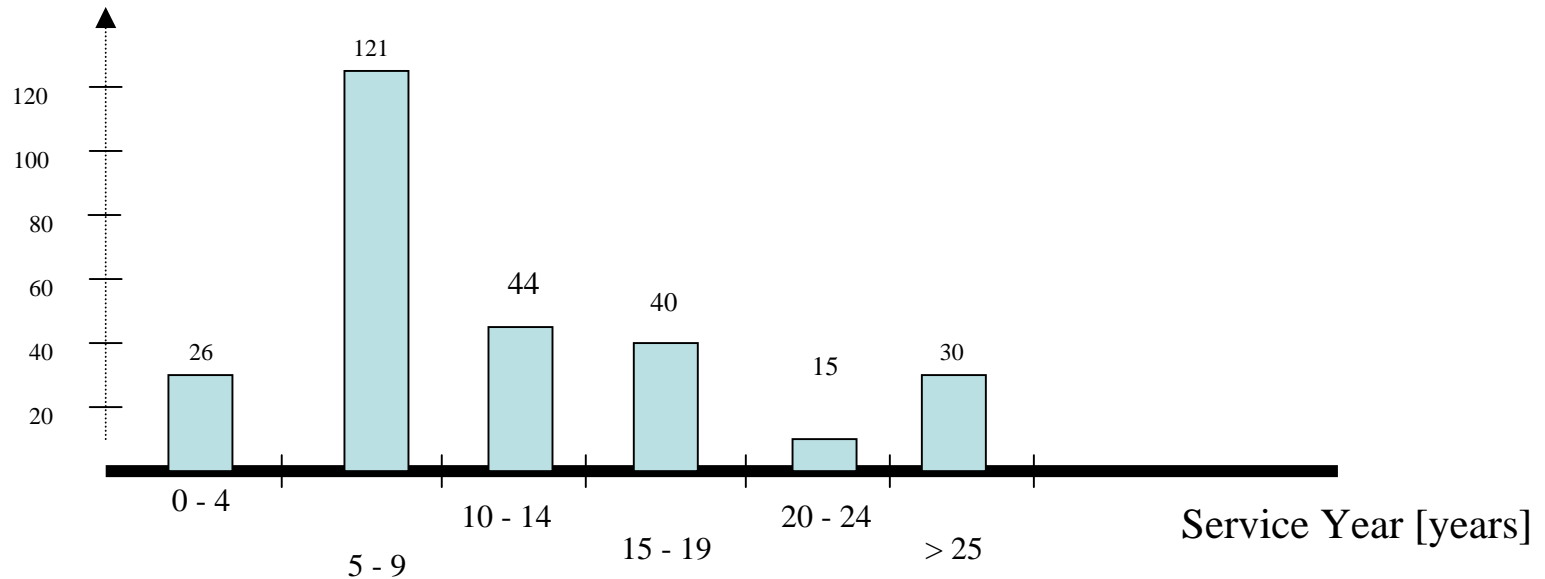
# *Kao's Chemical products for Industries*



# KIC Employees number vs Service Period by January 2007

Average Service Period : 12 years

Total Person  
[employees]



Total Employee : 276



# Topics

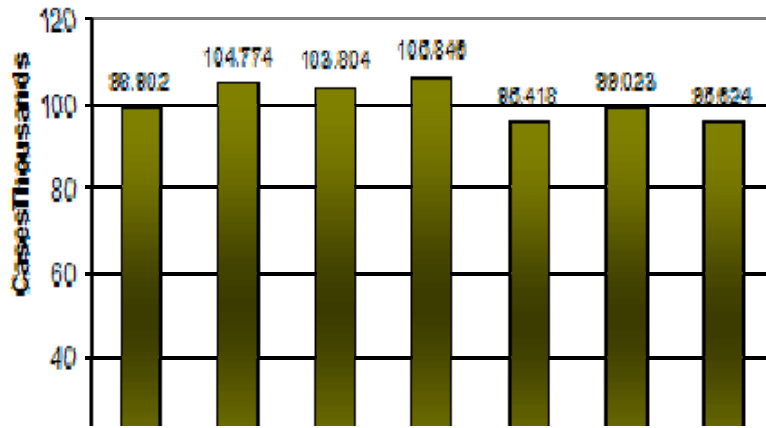
- Introduction
- Company Profile
- Master Plan of Improvement
- Fundamental Activities
- Nip bud improvement
- Establish a system
- Discussion & Conclusion

# Introduction

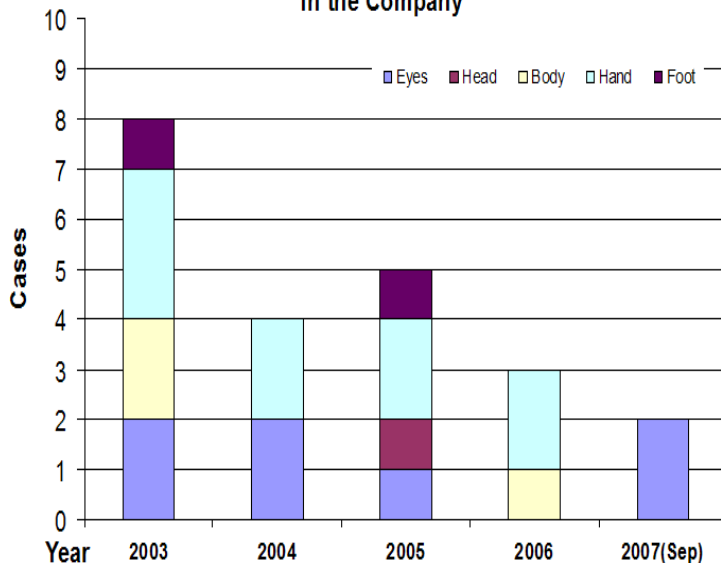
- Typical OSH situation in Indonesia :
  - No clear & real commitment in Safety from the top management
  - Safety meaning “cost”
  - Applying safety was only in PPE
  - Not available of clear data about accident
  - Safety is only slogan
- Safety is not an industrial culture
- Multi national company usually have better situation due to they have mandatory to follow their cooperation
- Need all out cooperation to improve the Safety & Health situation

# OSH Accident in Indonesia & in Our Company

## Accident Cases In Indonesia



## OSH Accident & it Kind in the Company



	Year					
	2002	2003	2004	2005	2006	2007(Sep)
<b>Regular member employee / Junior employee / Part time employee</b>						
1. Number of employee	237	230	237	230	224	224
2. Total working hours	389144	506725	642,626	643,259	601,513	453,999
3. Number of accident employees with lost day	0	0	0	0	0	0
4. Number of accident employees without Lost day	4	8	4	5	3	2
5. Total number of accident	4	8	4	5	3	2
6. Total Lost Days	0	0	0	0	0	0
7. Total days without accidents	1321	1628	1992	2328	2,722	2,995
8. Severity rate	0.000	0.000	0.000	0.000	0.000	0
9. The continuity hours without accident	2,061,545	2,549,397	3,192,023	3,727,732	4,329,245	4,736,255
10. Frequency rate	0	0	0			
<b>Stationary subcontractor / Temporary employee</b>						
1. Number of employee	0	46	46	35	35	35
2. Total working hour	69,838	34,436	129,104	217,759	284,399	339,769
3. Number of accident with lost day	0	0	0	0	0	0
4. Total lost day	0	0	0	0	0	0
5. Frequency rate	0	0	0	0	0	0
6. Severity rate	0	0	0	0	0	0
<b>Non Stationary subcontractor</b>						
1. Number of employee						
2. Number of accident with lost day						

1. Frequency rate = (Number of accident with lost day / Total working hour) X 1,000,000

2. Severity rate = (Total lost day / Total working hour) X 1,000

3. Total days without accident and Total continuity hours without accident means the greatest figure in that year or continuity

# Basic Consideration for OSH Improvement

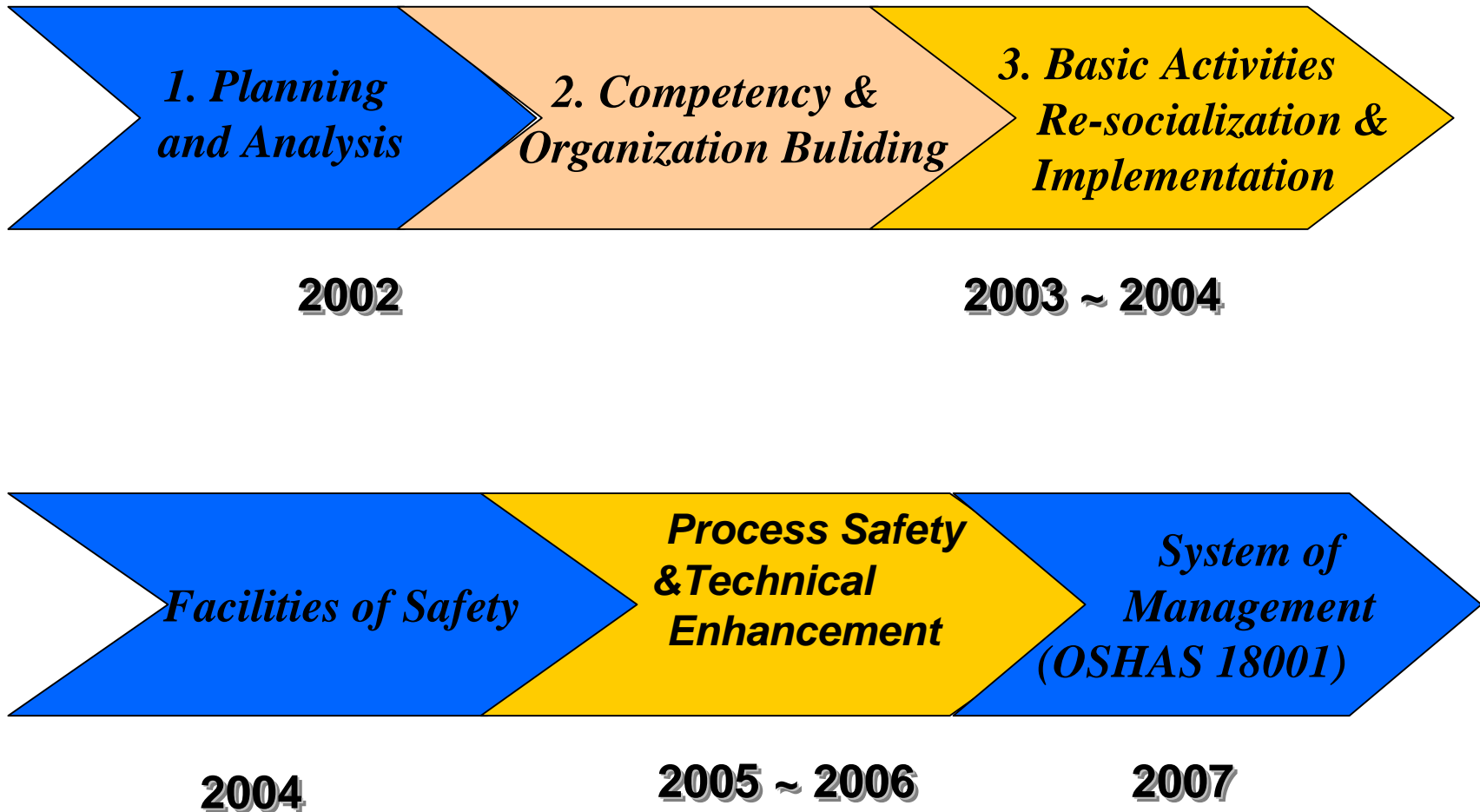
## Beginning Analysis Situation

- Complexity and risk of Factory become high risk due to some enhancement capacity & technology
- Old Plant need better safety management
- Cultivation of Industrial Culture
- We need better of Occupational Safety & Health

# Basic Consideration for OSH Improvement

- Long or mid term program
- Organization propulsion
- Make a management commitment : Put 3 responsibilities (Quality, OSH & Environment) in a one term
- Basic activities propulsion : 5 S , Suggestion scheme, Discussion in a SHE Committee Meeting
- Yearly base program
- Up date Rules & regulation adoption
- Facilities improvement by top down & bottom up
- Applying OSH investment in a high range

# Developing Items



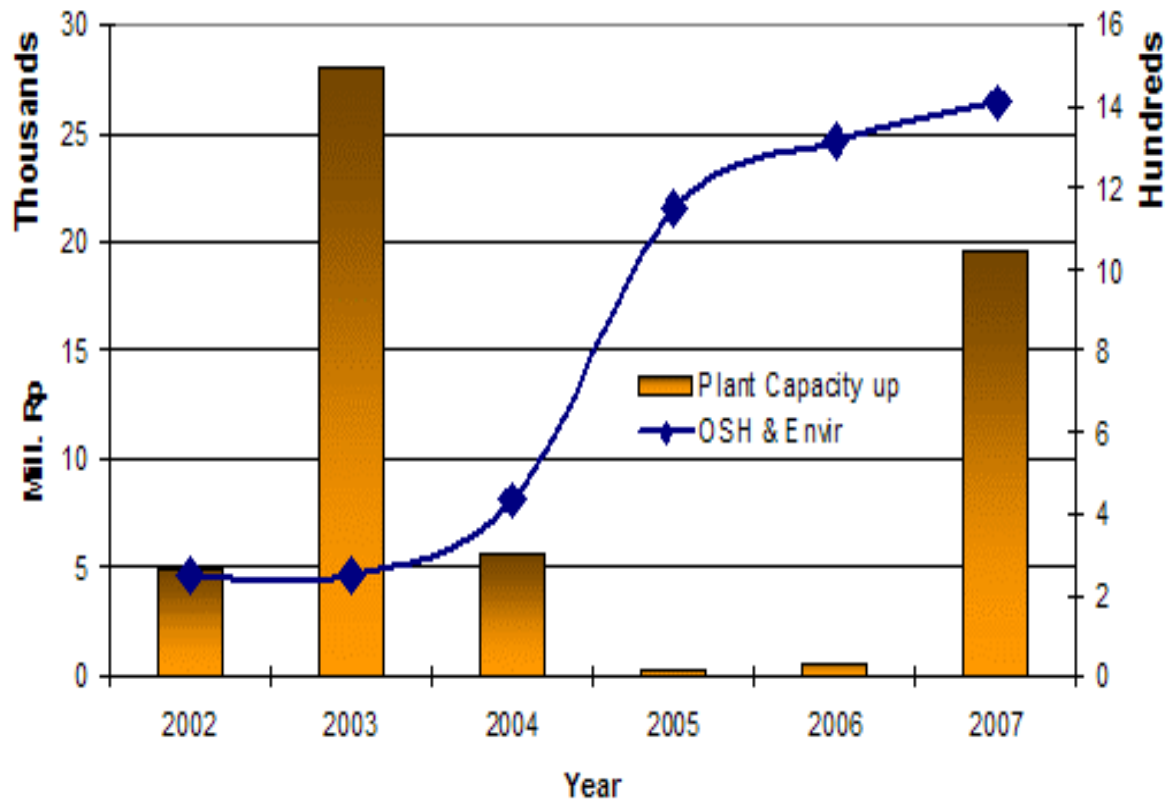
# Master Plan of Occupational Safety & Health Management Improvement

No.	Step	Year ==>	2002	2003	2004	2005	2006	2007
1	Management Commitment refreshment & Development		↔				↔	
2	Organization Propulsion (Include Committee Building)		↔ →					
3	Competency In Management of OSH		↔					
4	Rules & Procedure Improvement		← →					→
5	Basic Activities Training & Implementation			↔ →				
	5 S Activity in Plant, Suggestion Scheme (Include Hiyari Hatto Memo, etc)			↔ →				
	Total Productivity Maintenance			↔ →				
	Problem Solving for Supervisor up				↔ →			
6	Safety Facilities Improvement				← →			→
7	Technical & Process Safety					← →		→
8	Audit (by Corporate and Internal)		← →					→
9	System Management (OHSAS 18001)							↔
10	Next challenge : Behavioral Safety							???

 Planning  
 Actual

# Building Commitment in OSH & Environment as Investment Index

Actual Investment of Capacity up vs OSH & Environment



## Major Project :

- 2005 ~ 2006 : ISO 14000
- 2006 ~ 2007 : OHSAS  
18001

In OHSAS 18001:

We have written and  
complete policy of OHS



# Organization of Committee

**Chairman**  
VP. Production  
Deputy  
Prod. Ass. Director

**Secretary**  
Wahyu Juhana  
Ahmad Rivai

**Service Center**  
M. Wahyudin  
Rinni Damayanti

**Production**  
M. Santoso

**Logistic**  
Agus Irianto

**Technical & Engineering**  
Wenang R.

**Safety & Environment**  
Wahyu Juhana

**Quality Assurance**  
M. Elsyelena

**Labor Union SPSI**  
Udin Safrudin

Edi Kuswanto

Adi Heri Santoso

Arie Handoko

Eko Budi H

Ervan Giri B

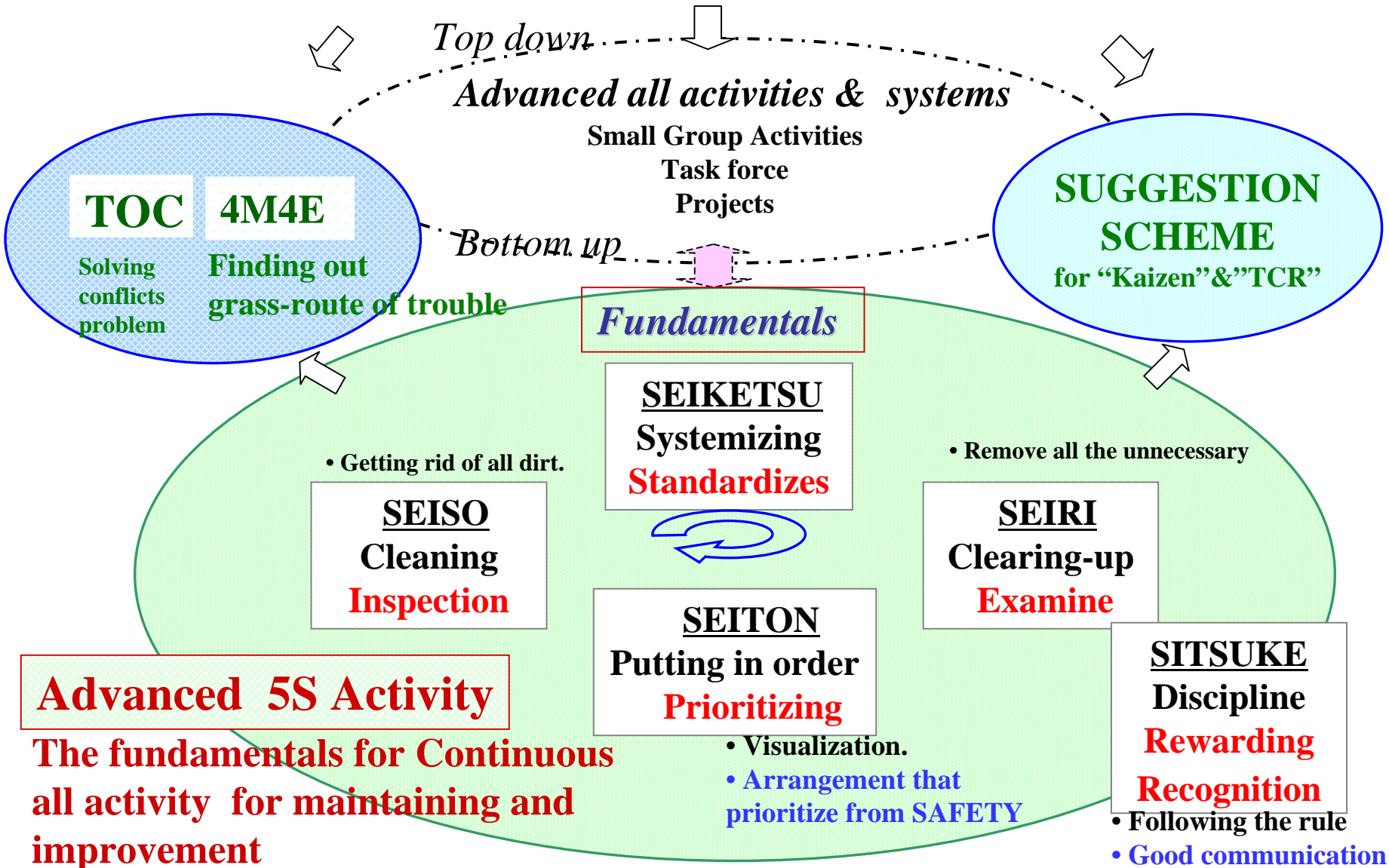
Ahmad Gojali

Suharyanto

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# Fundamental Activities Re-launching (5S)

**Customer complaint, Accident, Trouble, Pollution**



# Sample 5S Activity in Labo & Office

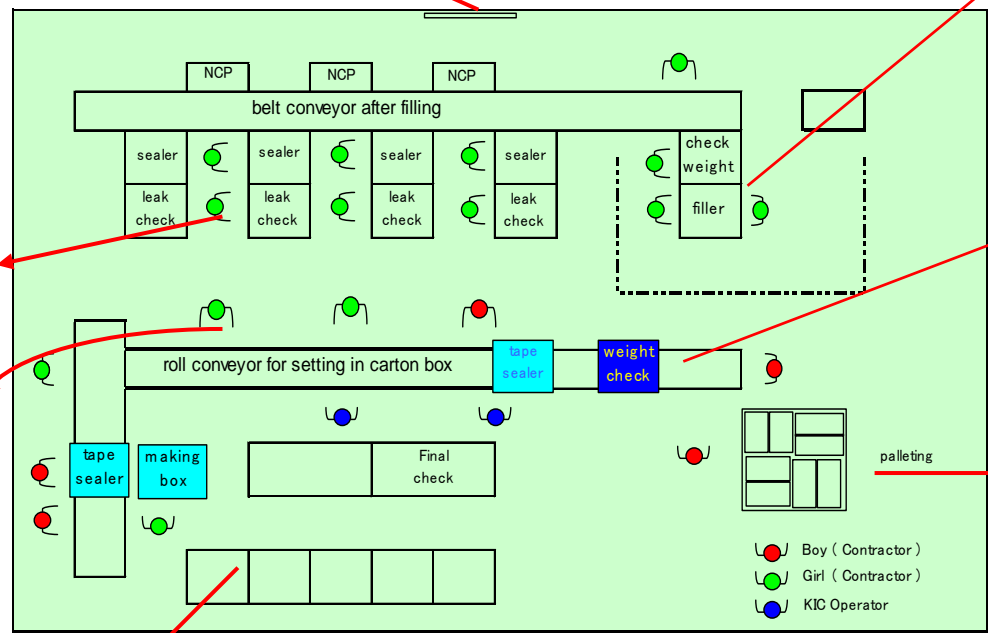
Before



After



# Sample of 5 S Activity in Production ( 2004 )



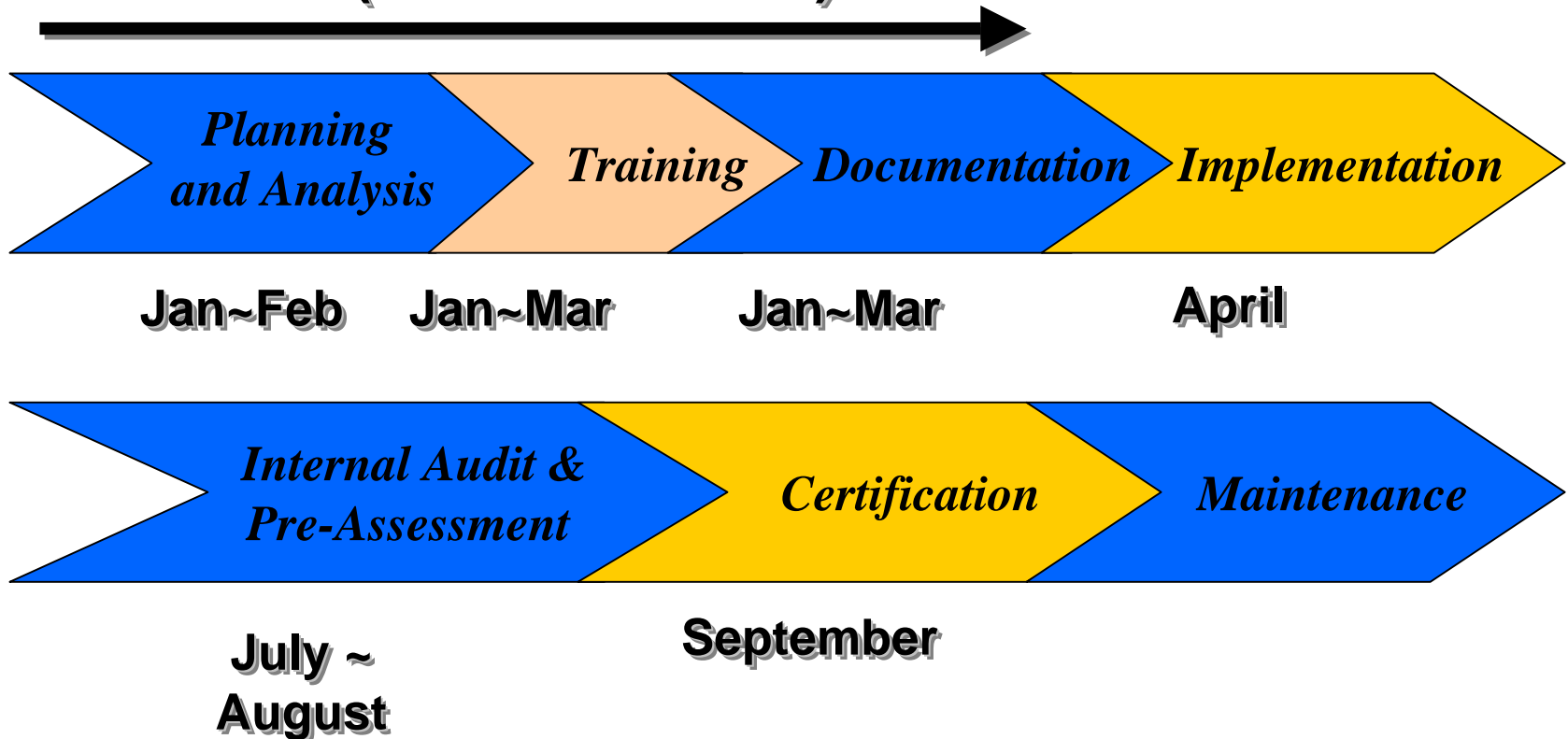
KIC	1 Total control	Contractor	3 seal	Contractor	2 palleting
	1 Total QC.	( Girl )	3 check seal / leak	( Boy )	2 making box
	1 Jumbo bag transfer		4 filling and check weight		1 feed from Jumbo bag
			3 charge in carton box		1 closing the box
			1 making box		
	<hr/>		<hr/>		<hr/>
	3		14		6



# Establish an OSH System

## Schedule

( Jan ~ Mar 2007 )



# Actual Implementation OHSAS 18001 Project

No.	Activities	February					March				April				May				June				July					Aug					Sept				
		1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	5	1	2	3	4	5	1	2	3	4	
1	Organization Forming																																				
2	Regular Meeting																																				
3	Kick Off Meeting																																				
4	Preliminary Study by Specific Team																																				
5	Gap study by Specific Team																																				
6	Awareness, Documentation & Internal Audit Training of OHSAS 18001 and Integration of System by SGS																																				
7	Awareness Training of OHSAS 18001 to All of employees by Department Team																																				
8	Design and Develop System																																				
9	Hazard Identification, Evaluation & Risk Control																																				
10	Objectives & Target, Program Preparation																																				
11	Law Compliance Study																																				
12	Review the documents and Aproval																																				
13	Field study to another company (if needed)																																				
14	Start Implementation																																				
15	Plant Improvement related to implementation																																				
16	Review the implementation																																				
17	Internal Audit																																				
18	Corrective and Preventive Action from Internal Audit Process																																				
19	Management Review																																				
20	Pre-Audit by Certification Body (SGS)																																				
21	Corrective and Preventive Action from Certification Body's Pre-Audit Process																																				
22	Final Audit by Certification Body																																				
23	Corrective and Preventive Action from Certification Body's Audit Process																																				

# Recent Status

## Quality, Safety, Health & Environment policy

### The Kao Way

Following The Kao Way spirit, We aimed to be a global manufacturer of surfactant and specialty chemicals with Quality, Safety, Health and Environment policy statement :

- Satisfy Customers Needs and gain their Trust through Quality and Continual Improvement
- Keep and good practices of our environment and occupational safety and health in whole of company & employee activities

To promote the above policy, The company will strive to operate our business activity with criteria as follow :

- Prompt response to satisfy customers' needs.
- Pursue continually improvement to the effectiveness ISO 9001 : 2000, ISO 14001 : 2004 and OHSAS 18001 : 1999 standards
- Comply with all relevant statutory and all regulatory requirements of quality, occupational safety, health & environment regulations and other requirements in Republic of Indonesia.
- Commitment in prevention of pollution, incident, accident, and works diseases
- Company will do conservation with implementing 4 R ( Reduce, Reuse, Recycle and Recovery practices to conserve the sources)
- Communicate this policy to all person who working for or on behalf of the company (staff, vendor, contractor, etc) and available to public.

Mission

Satisfaction and enrichment  
of lives of people

Vision

To be closest  
to the consumer

Quality  
Yuki-Monozukuri

Integrity

Principles

Customer driven  
Genba-ism

Respect & Teamwork

Global Perspective

# **Some of Sample Progress in Chemicals Management**



# Chemicals Safety Handling

Use MSDS & Labeling, a Special Warehouse for dangerous material

## LEMBARAN DATA KESELAMATAN BAHAN LDKB/MSDS

PT. Kao Indonesia Chemicals



### Bagian 1. IDENTITAS BAHAN DAN PERUSAHAAN

NAMA BAHAN : ASAM AKRILAT  
 NAMA DAN ALAMAT PERUSAHAAN : LOCTITE CORPORATION  
 1001 TROUT BROOK CROSSING  
 ROCKY HILL, CT 06067-3910  
 DIVISI : Department/Bagian Pemasaran  
 TELEPON : 1-860-571-5100  
 FAKSIMILI : -  
 NO. TELEPON DARURAT : -

### Bagian 2. KOMPOSISI BAHAN-BAHAN

BAHAN/CAMPURAN : Bahan  
 NAMA KIMIA (NAMA GENERIK) : HYDROXYALKYL METHACRYLATE  
 RUMUS KIMIA : HCOOH  
 CAS No. : 7813-02-1  
 UN No. : -  
 EINECS (Eropa) : -  
 TSCA Inventori (USA) : Ya  
 INFORMASI LAINNYA : Tidak Ada

### Bagian 3. IDENTIFIKASI BAHAYA

BAHAYA KEBARAKARAN DAN LEDAKAN : Menyebabkan panas jika kontak dengan senyawa alkali. Dapat terbakar/menyalu oleh panas, percikan api atau nyala api. Mudah terbakar, mudah menguap.  
 EFEK TERHADAP KESEHATAN : Menyebabkan luka bakar serius. Sangat korosif. Asam format pekat dapat menyebabkan kerusakan kulit yang serius. Dapat menimbulkan bahaya permanen. Beresiko menimbulkan kerusakan serius pada mata. Bahaya jika tertelan.  
 EFEK TERHADAP LINGKUNGAN : Beracun pada ikan dan hewan.

### Bagian 4. TINDAKAN PERTOLONGAN PERTAMA PADA KESEHATAN (P3K)

TERKENA PADA MATA : Secepatnya bilas dengan air yang mengalir sekurang-kurangnya selama 15 menit. Jika diperlukan cari pertolongan medis.  
 TERKENA PADA KULIT : Cuci bagian yang terkena dengan menggunakan sabun dan air yang banyak. Jika diperlukan cari pertolongan medis.  
 TERHIRUP : Bawa penderita ke tempat terbuka. Jika diperlukan cari

Halaman 1 dari 5

Tanggal diterbitkan: 12/04/04 Revisi: 2 Tanggal Cetak: 5/24/2006



# Chemicals Safety Handling : Setting partition or dike in Tank Area

Remarks : General storage tank, flammable / combustible liquids tank



# Chemicals Safety Handling : GHS Regulation

## Storage & Delivery : Use GHS label



# Conclusion & Next Challenge

- In our cases, re-launching of basic activities give a huge contribute for all improvement items, including OSH
- Management Hazard of Chemicals training will make some trigger for improve OHS Implementation
- Next Challenge : Behavioral Safety or make self improvement through culture change

**Thank You very much**