



**EU REACH**  
WORKSHOP

欧盟REACH  
法规技术峰会

Asia  
**2009**

KIST Europe Knowledge Research Group



### Strategies of REACH Compliance for Korean Enterprises



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Korea **Institute** of science and **Technology** Europe

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- Chemical Industry in Korea
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## I. KIST Europe Overview



- The Korea Institute of Science and Technology in Europe (KIST Europe) was established in 1996 in Saarbrücken, Germany.
- KIST Europe is the first Korean government funded research institute abroad.

### Objectives and functions



#### Objectives

- Contribution to the globalization of Korean R&D activities
- Promotion of S&T cooperation between the Korean and European governments, research institutes, universities and private enterprises

#### Main functions

##### Research and Development

Fundamental and applied research in the fields of mutual interest



##### International cooperation with European partners

Korea-EU S&T cooperation in the national and industrial level

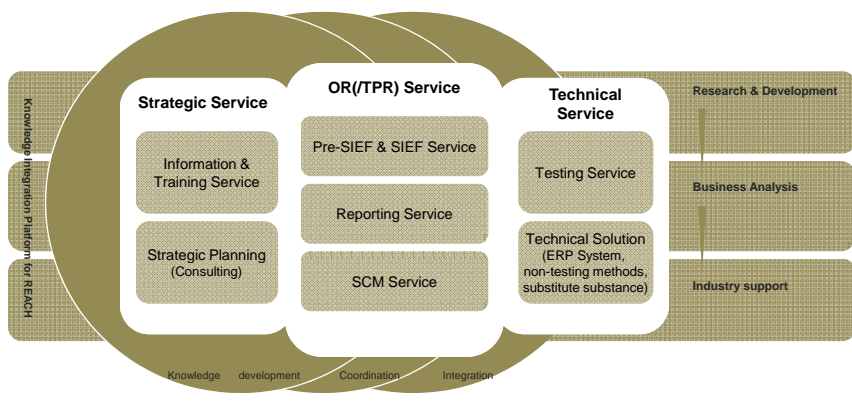
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## I. KIST Europe Overview

### KIST Europe REACH main Service

#### KIST Europe REACH Service Model



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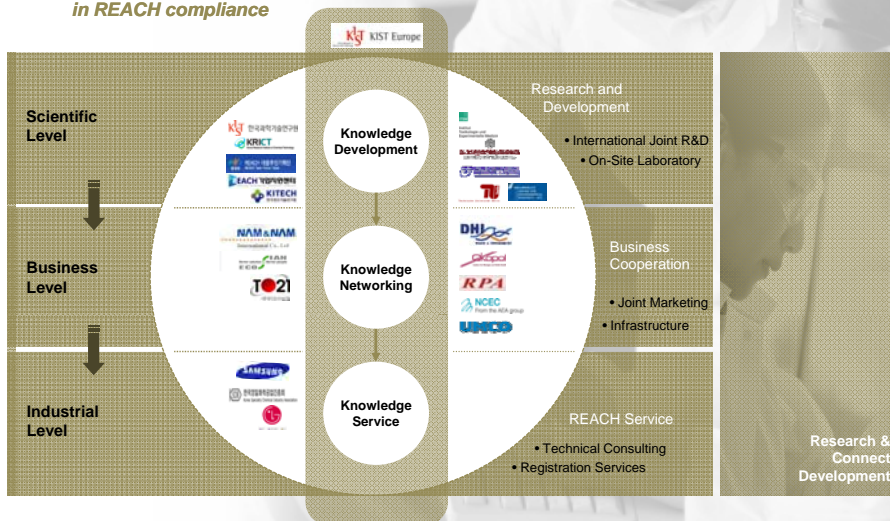




## I. KIST Europe Overview

**Research strategy: Global Research Networking: Knowledge integration platform with excellent partners**

### Success story in REACH compliance



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KIST Europe

## I. KIST Europe Overview

### What is REACH?

The key points of REACH is to fulfil the obligations of submission and exchange of information under certain conditions. **Why is REACH difficult?**

#### Mixed and confused

- **Roles in supply chain**
  - Manufacturer/importer or formulator
  - Distributor
  - Downstream user
- **Types of product**
  - Substance
  - Polymer
  - Intermediate
  - Article
  - Substance exempted from the REACH

#### Long-term and changing

- **Changing an internal BIZ condition**
  - Change of production volume in EU
  - Change of market
  - Change of product
- **Changing an external BIZ condition**
  - Change of volume requirement
  - Change of supplier

**The Understanding of REACH should be Simplified, Clarified, Systematic**

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II. Status and Difficulties

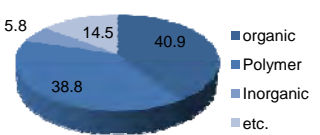
**The Status of Export and Import of Chemicals in South Korea**

- The market size of Korean chemical industry is 122 trillion \$ in 2006 and the avg. AGR is about 10% (cf) OECD's AGR : 2.3%
- Amount of export occupies 10% of exports as 32 billion USD

Year	2001	2003	2005	2006	Avg. Annual Growth Rate
Export (USD in million)	13,242	17,854	28,248	32,003	28.3%
Import (USD in million)	14,052	16,891	23,865	26,100	17.1%

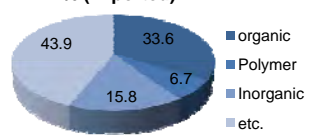
(Source: the Korean National Statistical Office, 2006)

**% (exported)**




- Organic and polymer, about 80% of exports
- Fine chemicals, about 7%

**% (imported)**



- Organic and polymer, about 40% of imports
- Fine chemicals, about 17%

(Source: the Korean Chemical Management Association)

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## II. Status and Difficulties

### EU, important market of Korea

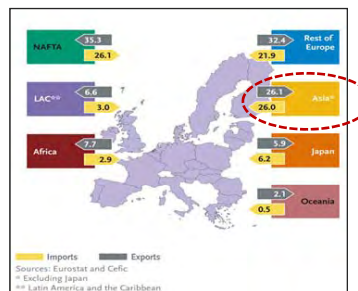
Chemicals sales growth rates of selected countries and regions



(Source: CEFIC Chemdata international, 2009)

On a worldwide level, the high growth countries and regions are China, Mexico, India, Taiwan, Korea and Brazil.

The Asian countries (Korea, China, India etc) are key players in EU chemical market.



➡ Chemical trade volume is growing. It is expected to trade more chemicals after FTA.

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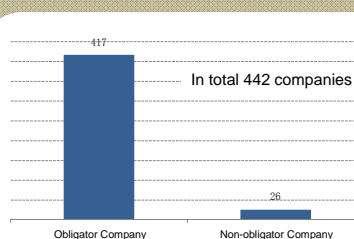
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## II. Status and Difficulties

### Pre-registration status of Korean companies

- In total 442 companies have pre-registered their substances (417 companies have obligation, 26 companies have no obligation\*)
- Only one company did not pre-register his substances

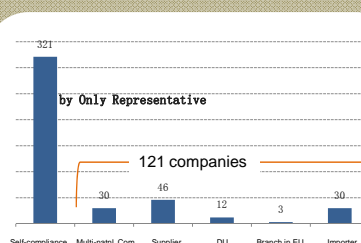
Pre-registered companies



\* The companies export chemicals under 1 ton/y.

- 442 companies have pre-registered,
  - 321 companies submitted pre-registration by themselves
  - 121 companies submitted pre-registration by EU partners

Types of compliance for pre-registration



(Ministry of Environment Republic of Korea)

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## II. Status and Difficulties

### Main Concerns of REACH for non-EU companies

**Non-EU companies are not directly impacted** (i.e. no direct legal obligations)

**However, the situation is not that simple.**

#### Non-EU company may have REACH obligations:

- If the company directly exports chemical products to any EU member state in quantities higher than 1 t/a;
- or**
- If the company sells chemical products to a formulator, non-EU distributor or a polymer producer intending to export to EU but not intending (or allowed) to register under REACH.

#### Duties of Non-EU company under REACH

To fulfill REACH requirements, non-EU companies have to :

- Appoint an EU "legal entity" [OR, Importer or EU branch] to execute all REACH registration requirements.
- Provide any available hazard data and safe use information to the EU-based partners(s)

## II. Status and Difficulties

### Main Impacts of REACH for non-EU companies

**Non-EU companies have to change their development stagey because of REACH**

**Benefit or Barrier?**

#### Consequences

- Increasing the direct and indirect costs for both EU and non-EU companies (e.g. registration fee, OR costs for non-EU companies, data gathering and testing costs, changing classification, labeling and SDS)
- Requirements to set up the communication infrastructure within the whole supply chain

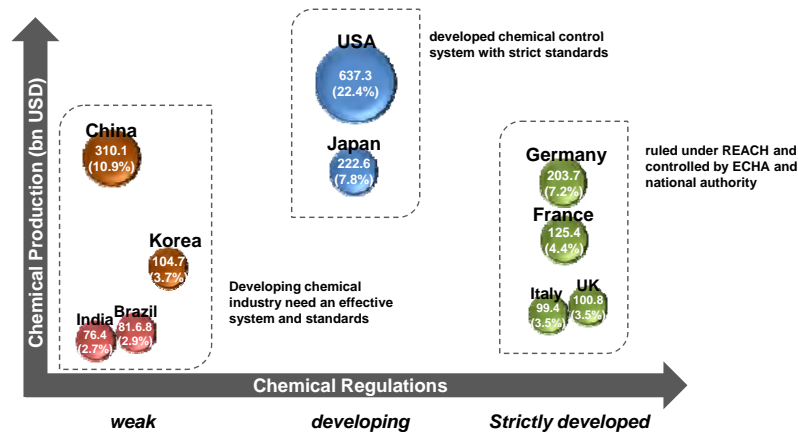
#### Commercial Changes

- Change in competitive position for non-EU companies in the EU market
  - Have an advantage on the markets outside the EU (short-term)
  - Have a disadvantage on the markets inside the EU (long-term)
- Change of business development strategy for the non-EU companies
  - remain in EU market or withdraw?

## II. Status and Difficulties

### Difficulty of non-EU countries – different standards of regulation

- Chemical regulations overview of the top 10 chemical producing countries



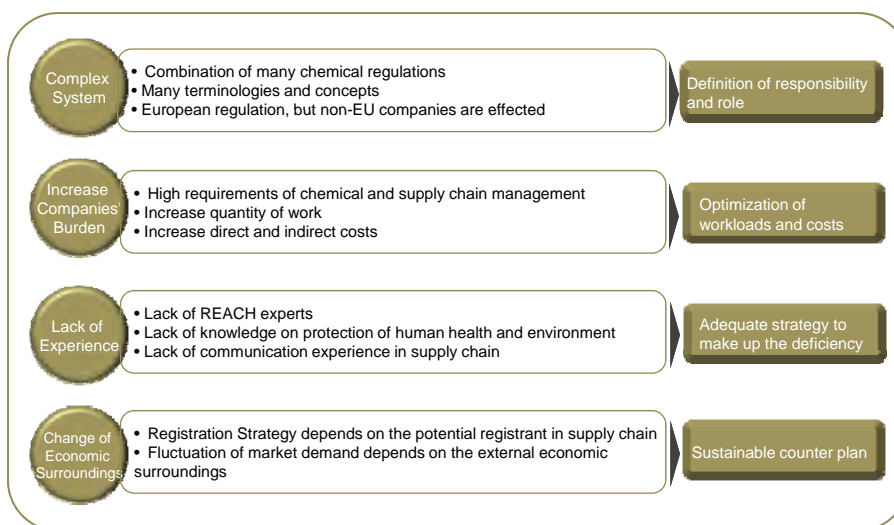
(Source: ICCA, 2006)

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## II. Status and Difficulties

### REACH-main difficulties for non-EU companies



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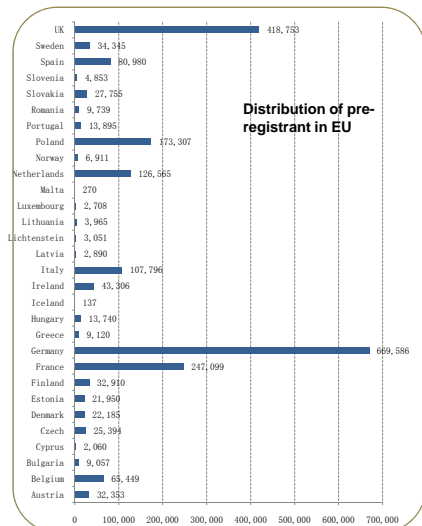
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## II. Status and Difficulties

### Difficulties because of Pre-registration

- More than 146,200 different substances have been pre-registered (source from ECHA Dec. 2008)



- about 2.75 million pre-registrations by 65,000 companies
- Top 3 countries from which pre-registrations submitted: Germany, UK and France
- More than 68% of total pre-registration were made in Nov. 2008

- Many substance information mistakes because of lack of understanding of system and less of time
- Executed by unqualified legal entities
- Duplicate pre-registration in a supply chain

Pre-SIEF and SIEF processes were delayed

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## II. Status and Difficulties

### REACH compliance in EU countries and Korea

- Activities of REACH compliance on the three levels, government, Association and company are compared

	EU countries	Korea
Government supporting	<ul style="list-style-type: none"><li>Professional helpdesk</li><li>Experts in all fields (toxicology, ecotoxicology, environment, regulatory affairs)</li><li>closely contact with ECHA and other countries</li><li>training, workshops, etc.</li></ul>	<ul style="list-style-type: none"><li>REACH Helpdesk</li><li>Cmmnct. tool for chem. sub. info.</li><li>Facilitation of data-sharing within HPV DB</li><li>Roadshows, workshops, training courses, etc.</li></ul>
Association supporting	<ul style="list-style-type: none"><li>strongly support the companies</li><li>fully study on REACH regulation</li><li>developed guidance, models, GES, SIP etc.</li><li>cooperation with other associations</li></ul>	<ul style="list-style-type: none"><li>Education and training P/G (Korea Chemicals Management Association)</li></ul>
companies	<ul style="list-style-type: none"><li>well planned strategy</li><li>relevant department and skilled employees or,</li><li>good cooperation with TPR</li></ul>	<ul style="list-style-type: none"><li>widely recognized about REACH</li><li>cooperation with OR</li><li>mostly large com. leading the REACH compliance</li></ul>

➡ Although not comparable to the European countries in terms of Strength and professionalism, the governmental support in Korea significantly helps Korean companies in fulfilling their REACH compliance duties.

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### III. Best Practice I

#### Case study (Samsung Fine Chemicals) – 1/2

##### Status

- **Large size company**
  - ✓ 900 Employees
  - ✓ Capital: about 4.35 Mio. Euro
  - ✓ Annual turn-over: about 6.3 Mio. Euro
  - ✓ about 35 Products
- **Products mostly in high tonnage bands(>100 TPA)**
- **Many EU and non-EU clients**

##### Challenges

- **Difficulty in communication within supply chain**
  - ✓ Non-EU suppliers have no compliance
  - ✓ Considering non-EU clients exporting to EU
- **Needs for the integration of enterprise network**
  - ✓ Company-wide cooperation was needed
- **Lack of data**
  - ✓ Substances in mixtures which were supplied by non-EU suppliers were hardly identified

##### Strategy

1. Construction of web-based integrated communication system expanded to REACH
2. Setting up the REACH TF team for company-wide cooperation was organized
3. Preparation of REACH Strategy full-covering from pre-registration to after-registration
4. Through workshops and training programs, educating collaborators in supply chain



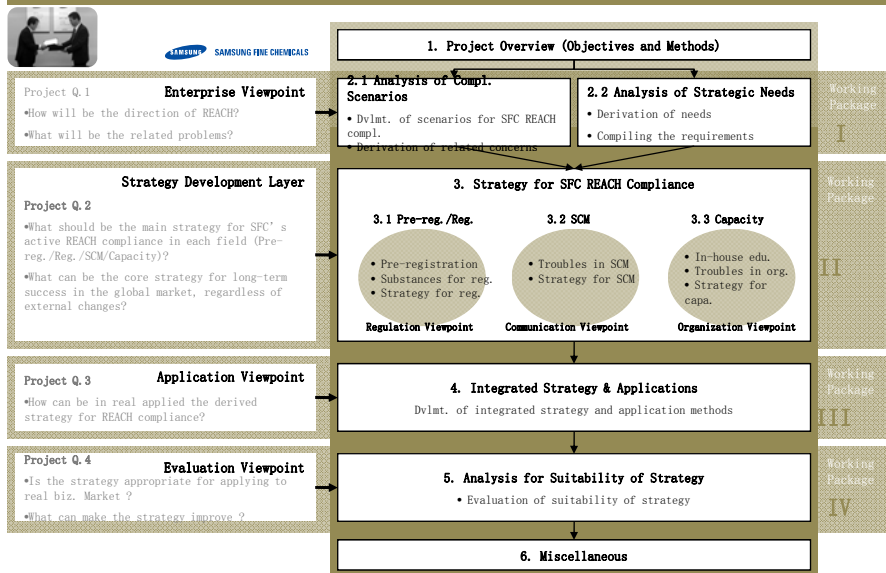
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### III. Best Practice I

#### Development of REACH compliance model for Samsung Fine Chemicals – 2/2

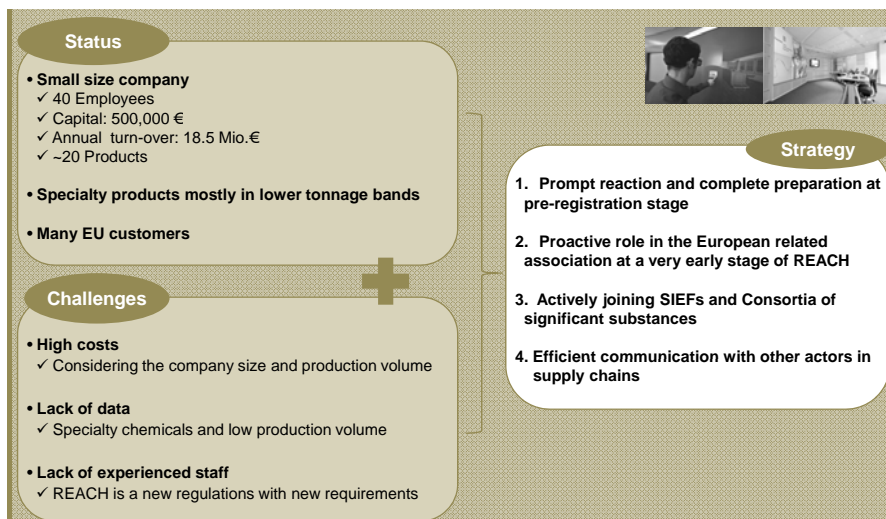


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### III. Best Practice II

#### Case study (specific small company) – 1/2



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### III. Best Practice II

#### Case study (specific small company) – 2/2

#### REACH Compliance Model for 3 Ps

- Early preparation of REACH strategy prior to Pre-Registration stage

- Less confusion about the substance identity and sameness through well-organized cooperation with other companies and association.

#### • On-time preparation of registration requirements:

- ✓ Data gap analysis
- ✓ Testing proposals and orders
- ✓ Uses Identification
- ✓ CLP requirements
- ✓ Planned joint submission

## 3 Ps – Strategic Concepts

*Punctual Reaction !*

*Pro-active efficient collaboration !*

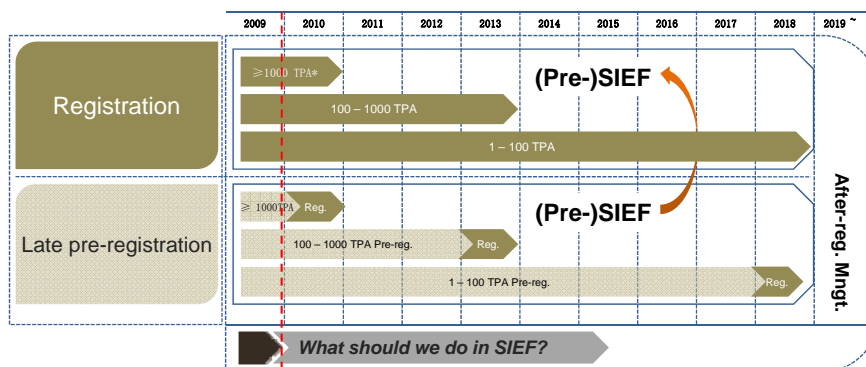
*Positive timely communication !*

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### III. Best Practice III

#### Now we are in SIEF



- SIEF code
- Join a consortium or not?
- Substance Identification Profile
- data gathering
- Scope of dossier (e.g. full, intermediate, CSR)
- new CLP & GHS regulation
- Identification of use in supply chain

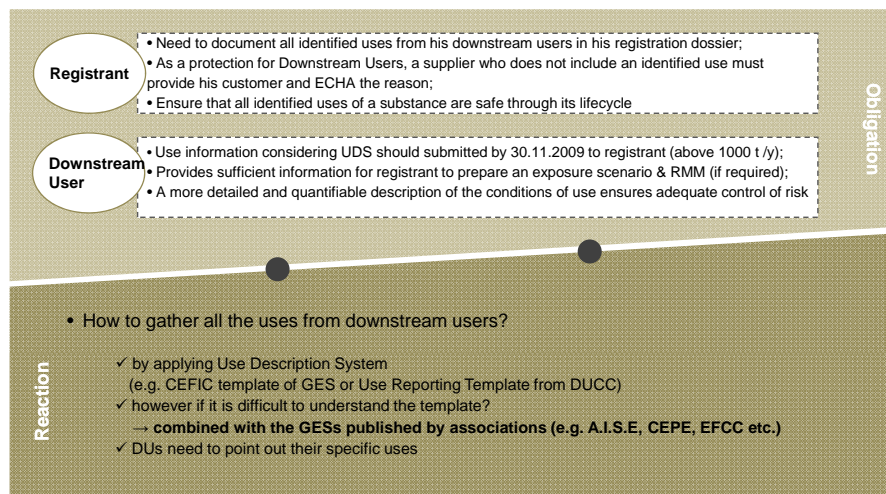
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### III. Best Practice III

#### Current Problem in SIEF - Supply chain communication and identification of uses



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### III. Best Practice III

#### Example of Use mapping

Association	Sectors
AISE	Detergents, Soaps
ATIEL/ATC	Lubricants, Lubricant additives
CEPE	Coating, Inks, Artist colors
Colipa	Cosmetics
Concawe	Petroleum
ECCA	Coil coating-Paint
ECMA	Catalysts
ECPA	Corp protection
EDANA	Nonwovens
EFCC	Construction
EPMA	Powder, metallurgy
ERMA	Resin
ESIG	Solvents
ETAD	Pigments
ETRMA	Rubber
Eurometaux	Metal
FECC	Distributors
FEICA	Adhesives, Sealants
ISOPA	Diisocyanates, polyols
PEST	Plastics
PPRM	Polyester, Powder resin, Manufactures
RECONSOLE	Silicone industry
SRM	Solvent resins Manufactures

#### Merit

- + Bulk of Generic Exposure Scenarios (GES) Library in almost all sectors
- + Common use descriptors
- + Covering both the manufacture and application for each sector

#### Deficit

- However, sometimes difficult to find the relevant uses
- Some process categories overlap, the choice is not always clear



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### III. Best Practice

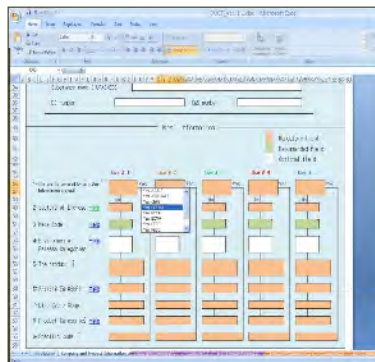
#### Our Use Mapping Tool

##### Our idea:

- to our Clients and DUs:
  - Easy to understand
  - Fill as less as possible
  - Clear, simple
- for us:
  - Collect only the data we need
  - Get feedback on time
  - Prepare ES efficiently

##### Our system:

- Clear and user friendly Excel file;
- Most of fields have drop-in list function;
- Includes most of codes from associations;
- Combination of templates DUCC and associations;
- Considered input requirements of exposure estimation tools.



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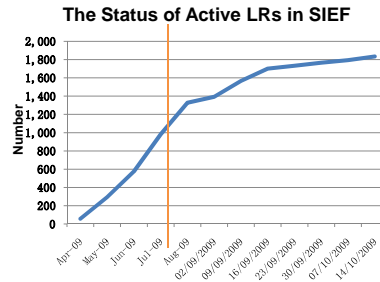


#### IV. Open Issues and summary

##### Opened issues

(Source: ECHA)

- many SFF/LRs are not active
- many Korean companies still hesitate
- Substances classification, labelling and package with new CLP regulation
- Exposure Assessment by using models
- How to prepare registration dossier correctly (Completeness Check, Business Rules)
- etc.



2025 registered LR by ECHA << 146,200 substances !

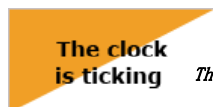
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#### IV. Open Issues and summary

##### Summary

- EU is an important market for Korean chemical industry;
- REACH regulation consists of not only business concerns but also scientific concerns;
- Many difficulties for Korean enterprises to accomplish REACH registration;
- As OR, we helped our clients to overcome many difficulties;
- Korean companies will face to more challenges in further registration process.



*The first REACH Registration deadline is approaching...*

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**Towards the Excellence**

**REACH**

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