



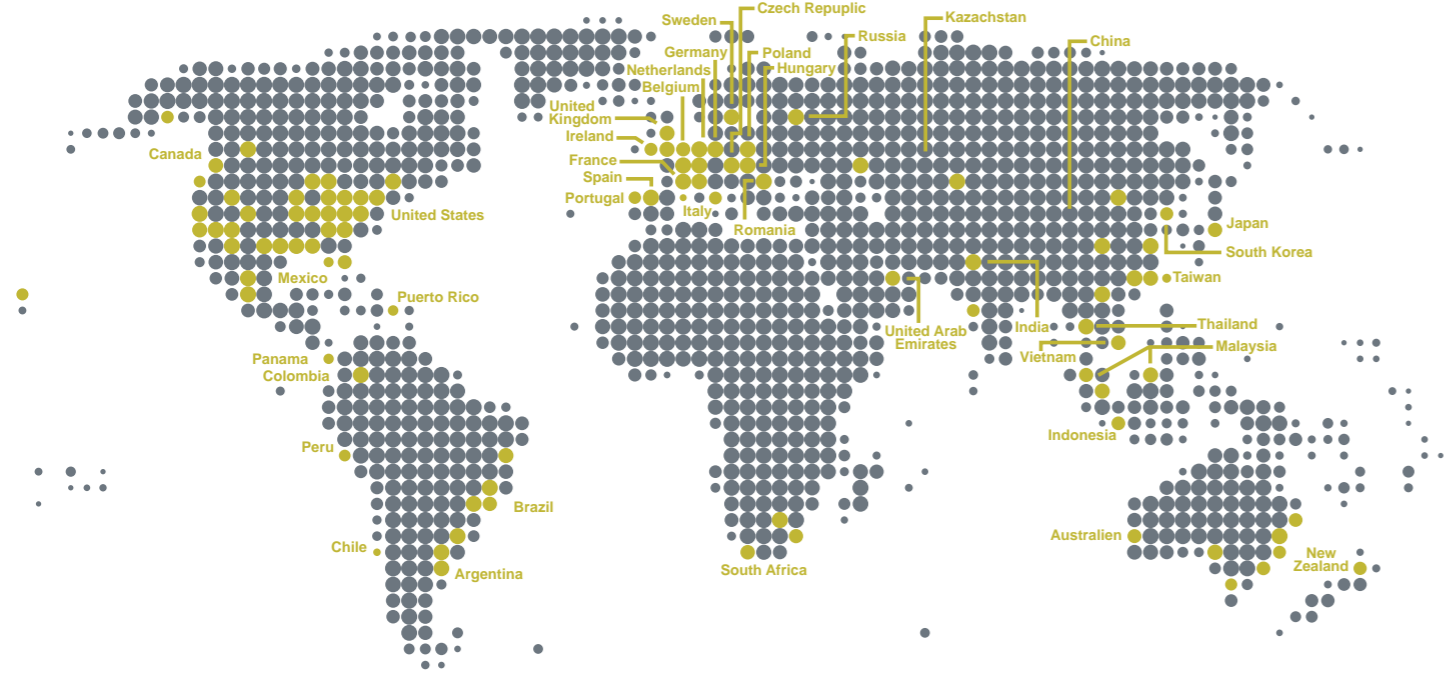
## **ERM Global Product Stewardship Services**

An Overview of ERM's Global  
Services and Experience

*Delivering sustainable solutions in a more competitive world*

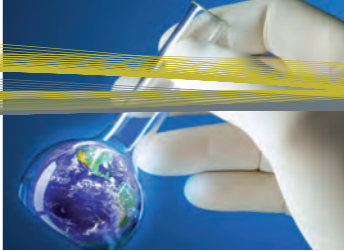


# ERM is locally rooted and globally connected



Environmental Resources Management (ERM) is one of the world's leading providers of environmental, health & safety management and technical consulting services, with considerable experience in providing Global Product Stewardship (GPS) services.

With Global Product Stewardship positioned as a strategic growth Initiative within the firm, ERM offers integrated product service offerings across all Divisions within the company.



# Overview of ERM Global Product Stewardship Services

ERM has over 50 professionals with extensive specific Global Product Stewardship (GPS) experience located at various offices world wide. These consultants are able to utilize the resources of ERM globally to provide back-up for all GPS-related services. ERM is assisting clients around the world to comply with the complete range of product-related regulations and issues, both at a strategic and technical level.

ERM's knowledge of ever changing legislation and the increasing demands placed on our clients enables us to help manage environmental risk throughout the product life cycle, from inception of the idea through research and development, manufacturing, marketing and end of service life disposal recycling.

We have provided consultancy services to around 50% of the global Fortune 500 companies in various market sectors and we achieve in excess of 85% repeat business throughout our organization. In addition, our long-term, leading-edge public sector work provides key knowledge for emerging private sector issues.

# ERM's global quality network – regardless of location

We are committed to providing a service that is consistent, professional and of the highest technical quality. We deliver innovative solutions for clients, helping to manage sustainability related risks.

ERM employs over 4,000 staff. With over 140 offices in 40 countries, ERM combines local focus with global scale, giving us a unique platform to understand local business and regulatory needs as well as the unparalleled ability to leverage the best technical expertise around the world.

ERM provides solutions and strategic advice on how best to handle both current and future environmental and natural resource issues. We work with our business partners and governments to determine the potential implications of key issues such as new regulations, consumer concerns, supply chain management, corporate reputation and cost reduction.



# Registration, Evaluation and Authorization of Chemicals

## Business Management

- Regulatory Compliance Planning and Registration
- Supply chain communication strategies to compile substance use information and disseminate information under Article 33
- Benchmarking research to compare REACH implementation strategies with other players in the same or different industry sectors

## Project Management

- Registration Support
- Consortium Management and Technical Support
- Providing third party representation services and/or technical support in Substance Information Exchange Fora (SIEFs)

## Substance Property Evaluation/Registration Support

- Data compilation, assessment and gap analysis
- Screening and evaluation (Klimisch rating) of substance study reports
- Preparation of robust study summaries
- Preparation of Technical Registration Dossiers using IUCLID 5
- Compilation of Chemical Safety Assessments and Reports (CSA/CSR)
  - Ecotoxicology and Environmental Risk Assessment
  - Human Toxicology and Health Risk Assessment
  - Modelling Capabilities

## Data Management

- IUCLID 5 Hosting
- Assessing, advising and implementing integrated IT strategies to support REACH business integration in cooperation with REACH IT specialists, Trasys Ltd, one of the world's leading providers of REACH IT solutions.

## Socio-Economic Analysis

- Identification of existing uses of Annex XIV substances and potential risks necessitating a Restriction
- Defining the aim and scope of an SEA
- Stakeholder involvement
- Alternatives identification, definition of “apply for use” and “non-use” scenarios
- Identification and assessment of socio-economic, human health and environmental impacts (positive and negative) of restricting the marketing and use or implementing an alternative to a substance subject to authorisation
- Quantification and economic valuation of environmental / human health impacts
- Development of a cost-benefit analysis (CBA) model to determine the economical suitability of alternatives
- Facilitation of workshops, fact sheets and on-line e-learning tools on the application of economics (e.g. valuation, CBA and MBIs) for environmental management and sustainable development.
- Support with development of socio-economic data for input to the public consultations organized by ECHA in the frame of the Authorisation / Restriction processes

## Aquatic Toxicology – ERM's Analytical Services

- Whole Effluent Toxicity (WET) Testing
- Toxicity Identification Evaluations (TIE)
- Toxicity Reduction Evaluations (TRE)
- Bioaccumulation assessments
- Water additive testing
- Sediment toxicity testing
- Analytical support
- NPDES permit assistance/regulatory negotiations
- Chemical product testing
- Water Effect Ratios (WER)
- Expert testimony

In addition, ERM has collaborative agreements with independent companies providing REACH expertise for legal aspects of REACH and Only Representative Services.



# Emerging Chemical Control Laws around the World

## New Chemical Notification

- Regulatory determinations regarding applicability of notification requirement and exemptions
- Preparation of new chemical notifications
- Preparation of exemption applications
- Training on regulatory requirements

## Tracking of Emerging Legislation

- Matrices of emerging legislation, timing and requirements

## Bans / Restrictions

- Development of management systems to address bans / restrictions globally
- Supply chain communication / Bill of materials review

## Beyond Compliance

- Development of Restricted Substances Lists
- Support for Restricted Substances Lists within the supply chain

# Downstream Product Legislation (examples)

## Food / Food Contact

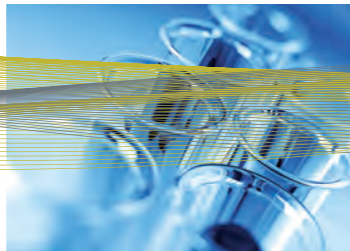
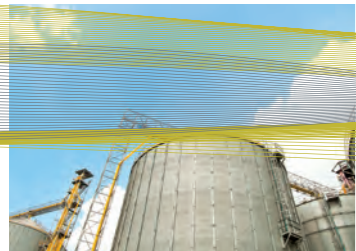
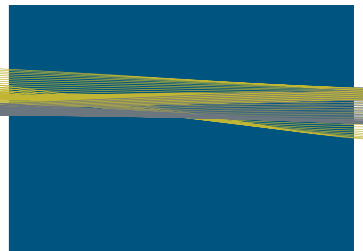
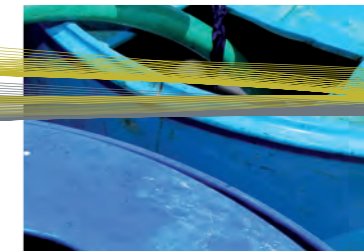
- Food Contact Notifications
- Compliance with country-specific legislation

## Pesticides / Biocides

- FIFRA / BPD Support
- National registrations
- Local / regional registration
- Labeling and claims support

## Electronics / Batteries

- WEEE/RoHS Support
- Supply chain communication / Bill of materials review
- Labeling requirements
- Product take back requirements



# Globally Harmonized System for Classification and Labelling of Chemicals (GHS) and Hazard Communication

## Classification Support

- Classification position development and justification for substances and mixtures and in various geographies around the world

## Safety Data Sheet (SDS) and Label Authoring

- Manual authoring using MS Word
- Manual translation using ERM local resources
- Authoring via client's authoring software of choice

## SDS and Label Review and Improvement

- Review of existing SDSs and/or labels
- Recommendations for improving quality and

# Toxicology, Ecotoxicology & Risk Assessment

## Toxicology

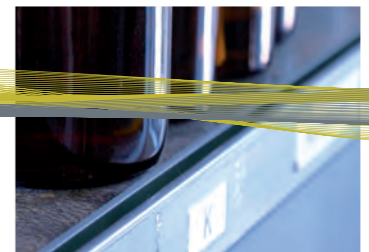
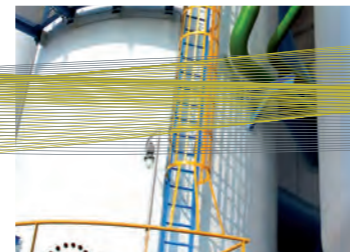
- Study placement / Protocol review and development
- Development of (robust) study summaries
- Review of data for classification purposes

## Ecotoxicology

- Study placement / Protocol review and development
- Development of (robust) study summaries
- Review of data for classification purposes

## Risk Assessment

- Environmental & Human Health Risk Assessments



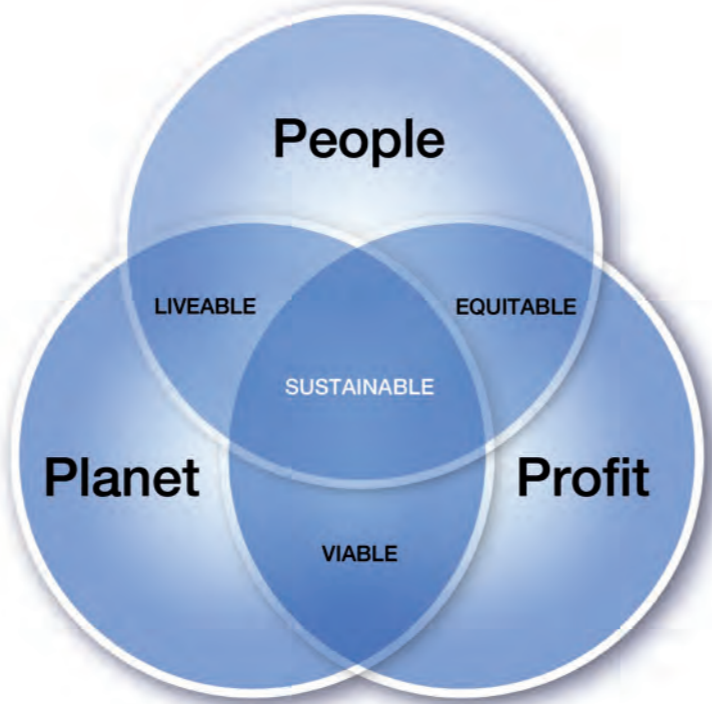
# Life Cycle Assessment (LCA) & Sustainability

## Life Cycle Analysis (LCA)

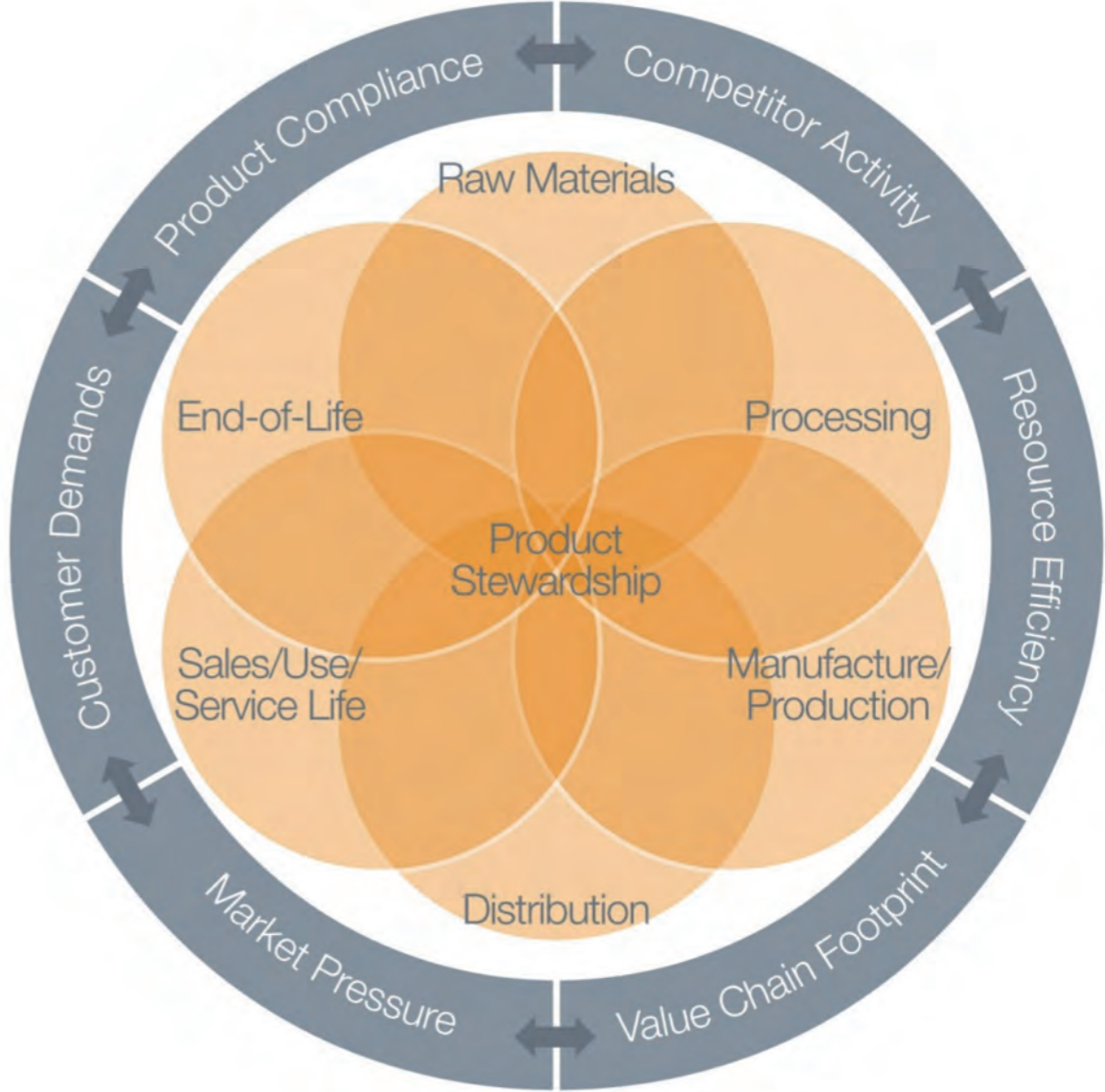
- Carbon foot printing and emission inventories
- Life cycle management (LCM) also to ISO14040
- Input/output as well as eco-efficiency analysis
- Supply chain management & Carbon reduction advice
- Design for environment (DfE)
- Environmental product declarations (EPDs)
- Peer review and training
- Foot printing and inventory software tools

## Sustainability

- Sustainable Business Strategy
- Ecosystem Services Valuation
- Sustainable Assessments
- Conflict Minerals



# Why examine stewardship and sustainability?



# Selected Experience

## REACH Projects

**Momentive Performance Materials:** Pre-registration Validity Checks, Study Inventory Mgmt, Toxicological Advice; Preparation of Lead Dossiers and Chemical Safety Reports, Preparation of Classification & Labelling Proposals.

**Global Pharmaceutical Company:** Chemical Inventory Compilation and Classification based on volumes, uses and properties. Pre-registration Support. Preparation Lead Dossiers and Chemical Safety Reports, Third Party Representation Service for Company and nominated Third Party Manufacturers. SIEF Management.

**General Electric (GE):** Supporting GE's "REACH Operationalization" initiative in mobilizing to implement REACH compliance strategies and technical programs. ERM supports GE and most business units in REACH, GHS, and increasingly TSCA, FIFRA, US FDA, Japan, China, Australia, Brazilian product compliance. SIEF Support.

**Japanese Automotive Association and two Japanese OEMs:** REACH Regulatory Support and Benchmark Studies

**Various German Chemical Manufacturers:** Preparation of Lead Dossiers, Joint Member Dossiers and Chemical Safety Reports

**Global Flavour Producing Company:** Preparation of Lead Dossier, SIEF Management

**EU Industry Association:** Preparation of a Socio-Economic Analysis related to a lowering of an occupational threshold limit for a metal

**Two Japanese Electronics Manufacturer:** Pre-registration Support and Third Party Representation.

**US Automotive Company (OEM):** Evaluation of Product Portfolio Obligations; Pre-registration Support; Third Party Representation, Dossier Preparation.

## Socio-Economic Assessment

**Industrial Trade Association.** ERM conducted a socio-economic assessment of a proposed reduction in a substance occupational exposure level (OEL) and environmental quality standard (EQS) at a manufacturing site, manufacturing sector and EU level.

**Anglo American.** Development of an industry-leading Socio-Economic Assessment Toolkit (SEAT).

## Environmental Valuation

**International environmental benefits study, EU.** As part of a consortium, ERM advises on the development and application of a 'benefits transfer' methodology to assess the economic benefits for 19 countries surrounding Europe to improve their environmental management.

**Manufacturing Company.** ERM explored the scope for using environmental market prices and societal costs for a selection of air, water and waste related externalities to develop a sustainability investment decision-support tool.

**Environmental expenditure decision-tool, Global.** ERM developed a semi-quantitative sustainability decision-making tool to help an oil company evaluate alternative investment options for complying with their internal environmental performance standards (e.g. relating to controlling chemical and waste pollution etc). It will help them determine commercial feasibility and focus resources on more effective environmental and social expenditures.

**World Business Council for Sustainable Development**  
Development of a guidance document on Corporate Ecosystem Service Valuation





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