

Trends and Considerations for Multi-lingual Hazmat Compliance

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Agenda



- Background
- Impact of Globalization
- Brief Regulatory Overview
 - WHMIS
 - GHS
- Challenges of Multilingual HazMat Compliance
- Keys to Success: Developing an Effective Plan
- Taking a Full Lifecycle Approach

Background



- Globalization is here to stay
- Internet has collapsed time and distance barriers
- Compliance is a cost
 - Pressure to reduce cost
 - Continual demand to do more with less
- EHS workforce is aging
- EHS performance getting more visibility

Impact of Globalization



- Compliance issues to be considered
 - Multi-framework global regulations
 - Enforcement environment
 - Issue sensitivity
 - Language
 - Culture
 - Infrastructure and tools

Regulatory Overview

Environmental Health & Safety Compliance Is Complex And Mission-Critical



Environmental Health and Safety (EH&S) compliance pertaining to the regulatory enforcement, documentation, and oversight of hazardous material substances

EH&S Regulatory Complexities

- Material Safety Data Sheets (“MSDS”)
- Hazardous material exposure limits, storage requirements, etc.
- Reporting regulations
- Permits
- Notifications requirements
- Mandated labels
- Recurring regulatory compliance reports
- Transport documentation and compliance
- Regulations differ across markets and geographies

EH&S Considerations

- What are the reporting requirements?
- How do rules differ across your target markets?
- Are your employees and customers protected?
- What is the impact on the environment?
- Are your upstream suppliers and downstream channels and customers compliant?
- What are the transportation requirements?
 - Packaging/Classification/Labeling
 - Segregation
 - Risk
- Is information localized properly (i.e., language, format)?

EH&S Compliance Is Mission-Critical

- Risks of non-compliance include significant fines, potential legal exposure, property and environmental damage, injuries, and death
- Successfully navigating regulatory complexities requires significant resources with domain expertise and vigilance
- Need for product safety and stewardship and workplace chemical safety data, applications, and expertise are especially critical

Regulatory Landscape

Chemical



GHS: Global Harmonization System



European Chemicals Agency



Registration, Evaluation, Authorization and Restriction of Chemicals

Workplace



Health & Safety Commission: UK

Transportation



Transport Canada



Environmental



Environment Canada



Security



Local



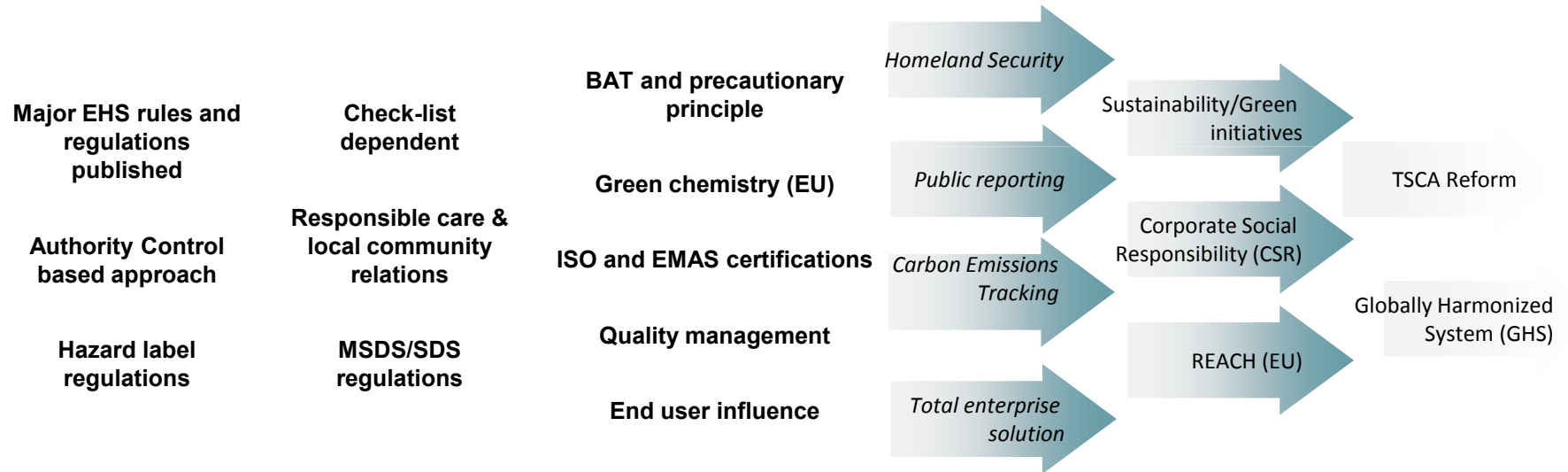
Criminal



Risks and Costs of Non-Compliance Rising as the Regulatory Environment Becomes Increasingly Onerous



Current and Future Regulatory Drivers



EHS compliance needs are pervasive and persistent across geographies and verticals

WHMIS Overview



- Canada's national hazard communication standard
- Became effective October 31, 1988
- Requirements outlined in Hazardous Products Act and associated Controlled Products Regulations
- Administered by the Government of Canada Department of Health (aka) Health Canada.
- Adopted by and enforced through 13 provincial and territorial agencies
- Federal employees covered by Canada Labour Code



Enforcement



- Compliance enforcement activities related to WHMIS are conducted by Health Canada and Federal, Provincial, or Territorial agencies responsible for Occupational Safety & Health (OHS)
- Under HPA §21(1), Minister designates individuals nominated by OHS agencies as inspectors and analysts to conduct inspection program in support of WHMIS requirements from the HPA
- OHS agencies also conduct enforcement for WHMIS employer requirements under their respective legislation

Supplier Responsibilities



- Suppliers are those who sell or import controlled product
- Determine which hazardous materials intended for use in the workplace are classified as controlled products.
- Must label the product or container
- Provide MSDS to their customers

Employer Responsibilities



- Establish education and training programs for workers exposed to hazardous products in the workplace.
- Ensure that all products are labelled
- Have a compliant MSDS present for every product
- Make MSDS readily available to workers.

Worker Responsibilities



- Participate in the training programs
- Use this information to help them work safely with hazardous materials
- Inform employers when labels on containers have been accidentally removed or if the label is no longer readable

WHMIS Components



1. Hazard Identification
2. Product Classification
3. Labelling
4. Material Safety Data Sheets
5. Worker Training and Education

Controlled Products - Fall within any of the following hazard classes:

- Class A: Compressed Gas
- Class B: Flammable and Combustive Material
- Oxidizing material
- Poisonous and Infectious Material
- Corrosive material
- Dangerously Reactive Material

WHMIS Exempt Products



1. Explosives covered by the *Explosives Act*
2. Cosmetic, device, drug or food within the meaning of the *Food and Drugs Act*
3. Products by the *Pest Control Products Act*
4. Radioactive materials covered by the *Nuclear Safety and Control Act*
5. Hazardous waste
6. Products, materials or substances packaged as consumer products and made available to the general public through a retail outlet
7. Wood or product made of wood
8. Tobacco products covered by the *Tobacco Act*
9. Manufactured articles

WHMIS Classification



Controlled Products - Fall within any of the following hazard classes



Class A - Compressed Gas

Class B - Flammable and Combustible Material

- Division 1: Flammable Gas
- Division 2: Flammable Liquid
- Division 3: Combustible Liquid
- Division 4: Flammable Solid
- Division 5: Flammable Aerosol
- Division 6: Reactive Flammable Material



Class C - Oxidizing Material

WHMIS Classification



Class D - Poisonous and Infectious Material

- Division 1: Materials causing acute & serious toxic effects
 - Subdivision A: Very toxic material
 - Subdivision B: Toxic material
- Division 2: Materials causing other toxic effects
 - Subdivision A: Very toxic material
 - Subdivision B: Toxic material
- Division 3: Biohazardous Infection Material



Class E - Corrosive material



Class F - Dangerously reactive material

WHMIS Labels



- 1. Supplier Label** - Suppliers are responsible for labelling WHMIS controlled products that they provide to customers
- 2. Workplace Label** - Employers are responsible ensuring labelling are on WHMIS controlled products in the workplace or re-labelling as needed



Supplier Label



- Appear on all controlled products received at the workplace
- Contain the following information:
 - Product identifier (name of product)
 - Supplier identifier (name of company that sold it)
 - Statement that an MSDS is available
 - Hazard symbols [the pictures of the classification(s)]
 - Risk Phrases (words that describe the main hazards of the product)
 - Precautionary Measures (how to work with the product safely)
 - First Aid Measures (what to do in an emergency)
 - All text in English and French
 - WHMIS hatched border.

Supplier Label



TOLUENE

<p>RISK PHRASES FLAMMABLE AND TOXIC Eye, lung and skin irritant. Danger of serious damage to health by prolonged exposure. Vapour may travel long distances.</p> <p>PRECAUTIONARY MEASURES Keep away from sources of ignition -- no smoking. Container must be grounded when removing contents. Keep container closed. Do not breathe vapour. Use with enough ventilation to keep below the applicable exposure limit. Avoid contact with eyes and skin. Wear chemical goggles and viton or viton/neoprene gloves. Wash thoroughly after handling.</p> <p>FIRST AID If affected by vapour, move to fresh air. If breathing has stopped, apply artificial respiration. In case of eye contact with liquid, flush with plenty of water for 15 minutes. GET MEDICAL ATTENTION. In case of skin contact, wash with soap and water. If swallowed, DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION.</p>	 	<p>MENTIONS DE RISQUE INFLAMMABLE ET TOXIQUE Irritant pour les yeux, les poumons, et la peau. L'exposition prolongee risque d'entraîner de graves dommages a la sante. Les vapeurs peuvent setendre sur de longues distances.</p> <p>PRECAUTIONS Tenir a l'ecart des flammes et des etincelles--ne pas fumer. Brancher le contenant a une prise de terre en vidant le contenu. Tenir le contenant ferme. Eviter de respirer les vapeurs. Aerer suffisamment pour maintenir le seuil toxicite suggere. Eviter le contact avec les yeux et la peau. Porter les lunettes de securite et les gants de viton ou viton/neoprene. laver a fond.</p> <p>PREMIERS SOINS Placer la victime au grande air, si indispose par les vapeurs. Si la respration est interrompue, recourir a la respiration artificielle. En cas de contact avec les yeux, laver avec beaucoup de l'eau pendant au moins de 15 minutes. OBTENER DES SOINS MEDICAUX. En cas de contact avec la peau, laver avec de l'eau et du savon la region exposee. Si avale, NE PAS PROVOQUER DE VOMISSEMENT. OBTENIR DES SOINS MEDICAUX.</p>
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SEE MATERIAL SAFETY DATA SHEET **VOIR FICHE SIGNALÉTIQUE**

ABC CHEMICAL COMPANY
123 SAMPLE ROAD, TESTVILLE AB1 C2D

Workplace Labels



1. Appear on all controlled products produced in a workplace or transferred to other (secondary) containers by the employer
2. May appear in placard form on controlled products received in bulk from a supplier
3. Must have the following information:
 - Product identifier (product name)
 - Information for the safe handling of the product
 - Statement that the MSDS is available

Supplier vs Workplace



Supplier Label	Workplace Label
Provided by the Supplier	Provided by the Employer
Must appear on all controlled products : <ul style="list-style-type: none">•Received at workplaces in Canada	Must appear on all controlled products : <ul style="list-style-type: none">•Produced in a Canadian workplace•Transferred or transported in secondary containers
Label must include: <ul style="list-style-type: none">• Product Identifier• Supplier identifier• Standardized hazard symbols• Risk phrases• Precautionary measures• First aid measures	Label must include: <ul style="list-style-type: none">• Product identifier• MSDS statement• Information for safe handling of the product
Must have cross-hatched border	May contain WHMIS border or symbols but not required
Must be in both French and English	No specific language requirement
	May be in other formats including placards, signs, codes or diagrams

WHMIS MSDS



- WHMIS compliant MSDS are required to be provided by the supplier or importer downstream user **upon sale** of the product
- MSDS's are required to be supplied in both English and French.
 - Rule of thumb: MSDS are provided in the language the transaction although suppliers would need to provide both where requested
- WHMIS MSDS must be updated every three years or when there is a formulation change

MSDS Pains



- Obtainment of MSDS from suppliers or manufacturers outside of Canada
- Timing for revising MSDS
- Absence of Sale
- Supplier archiving/ recordkeeping of MSDS
- OSHA Compliance \neq WHMIS Compliance

Employer Options



- If an updated MSDS can not be obtained with a date less than 3 years, employers generally have 3 options to ensure WHMIS compliance:
 - Perform their own hazard assessment and create their own WHMIS MSDS
 - Discontinue use of the product and remove from the workplace
 - Document with upstream supplier that no changes have been made and retain in file as a supplement to the MSDS for reference

WHMIS vs. OSHA MSDS



- US OSHA Compliant MSDS may not be WHMIS compliant:
 - WHMIS requires the % concentrations of hazardous ingredients be disclosed
 - Minor differences in formatting and section headings
 - WHMIS requires the TLV as well as the LD50 value. OSHA requires PEL and TLV
 - OSHA MSDS only required to be in English

Global Harmonization



What is GHS?



- Globally Harmonized System for Classification and Labelling of Chemicals
- United Nations approach to defining and classifying intrinsic hazards of chemical substances and mixtures, and conveying information about those hazards on labels and Safety Data Sheets (SDS)
- Criteria for hazard classification and hazard communication (Labels and SDSs) are harmonized and standardized.
- One system for workers, consumers, transport workers, and emergency responders.
- Provides the underlying infrastructure for establishment of national, comprehensive chemical safety programs.

Global Harmonization Benefits



- Enhances the protection of humans and the environment by providing an internationally comprehensive system for hazard communication
- Reduces the need for duplicative testing and evaluation of hazardous chemicals
- Eliminates the barriers to international trade in chemicals whose hazards have been properly assessed and identified on an international basis Provides a recognized framework for those countries not having an existing system; and
- Promote regulatory efficiency, facilitate compliance, provide better and more consistent information.

GHS Development



GHS legislation or standards have been passed in:

- **New Zealand** (2001)
 - **Japan** (2006)
 - **Korea** (2008)
 - **Taiwan** (2008)
 - **EU** (2008)
 - **Singapore** (2008)
 - **Vietnam** (2008)
 - **China** (2009)
 - **Russia** (2009)
 - **South Africa** (2009)
 - **Brazil** (2009)
 - **Indonesia** (2009)
 - **SOLAS (International Convention for the Safety of Life at Sea)** (2009)
-
- Draft regulations on GHS published:
 - **USA**
 - **Australia**
 - **Malaysia**
 - **Philippines**



Canada GHS Implementation



- Canada was among the countries that signed the 1992 agreement in Rio to develop GHS
- Canada officials since 2004 have been holding multi-stakeholder consultations on issues related to GHS implementation in WHMIS to evaluate economic impact of GHS implementation
- Health Canada initially targeted 2008 but has since been pushed back
- No new target dates have been established but expectation is that Canada it is still at least a year or two away from fully implementing GHS proposal



OSHA Developments



- Notice of Proposed Rulemaking – Published September 30, 2009 to modify the current Hazard Communication Standard “HCS” to conform with the United Nations Globally Harmonized System of Classification and Labeling of Chemicals “GHS
- Final rule could be expected in August 2011
- Three years from promulgation comply (2 years for training)
- EU GHS labels are accepted now provided conformance with the current OSHA standard









http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27218

WHMIS Implications










- Current WHMIS regulations will need to be amended
- Changes to existing classification criteria requiring products currently classified under WHMIS would need to be reclassified under GHS
- Inclusion of some new hazard classes as well as some not covered by GHS
- Changes to label elements such as hazard symbols, signal words and hazard statements
- Changes to label format (e.g. no border)
- MSDS format from 9 section to 16 section






Symbols and Pictograms

WHMIS Hazard Class	WHMIS Symbol	GHS Pictogram	GHS Hazard Category
A			Gases under pressure
B1 to B6			Flammables, self-heating, pyrophoric liquids & solids
C			Oxidizing Gases, Liquids, Solids and Peroxides
D1			Acute Toxicity - oral, dermal, inhalation

Symbols and Pictograms

WHMIS Hazard Class	WHMIS Symbol	GHS Pictogram	GHS Hazard Category
D2			Eye damage / irritation, Sensitization
D3		N/A	N/A
E			Skin corrosion / irritation, corrosive to metals
F			Self-reactive substances

Symbols and Pictograms

WHMIS Hazard Class	WHMIS Symbol	GHS Pictogram	GHS Hazard Category
N/A	N/A	 A red diamond-shaped pictogram with a black and white illustration of an exploding bomb.	Explosive substances
D2	 A black circle containing a white exclamation mark with a 'T' above it.	 A red diamond-shaped pictogram with a black silhouette of a person's head and shoulders, with a white starburst on the chest.	Respiratory sensitization, TOST, reprotox, carcinogen, mutagen
N/A	N/A	 A red diamond-shaped pictogram with a black silhouette of a person's head and shoulders, with a white starburst on the chest.	TOST (Single exposure)
N/A	N/A	 A red diamond-shaped pictogram with a black and white illustration of a dead tree and a dead fish.	Aquatic toxicity

Supplier Labels



WHMIS Label Requirement	GHS Label
Product Identifier	Product Identifier
Supplier Identifier	Supplier Identifier
N/A	Hazardous Ingredients
Hazard Pictogram	Hazard Pictogram
N/A	Hazard Statement
N/A	Signal Word
Precautionary Measures	Precautionary Information
Risk Phrases	N/A
First Aid Statements	Part of Precautionary Statement

Material Safety Data Sheet



- 16 section SDS format instead of 9 currently required by WHMIS
- Addition of Transport, Regulatory and Ecological Sections
- May require additional disclosure of chemical ingredients on SDS



Impact on Businesses: Suppliers and Importers



- Analyze existing formulations
- Source the data and capabilities to:
 - Re-classify substances and mixtures
 - Take into consideration country specific classifications and variations in GHS adoption
 - Develop and distribute new MSDS and labeling documentation
 - Evaluate compliance with new notification requirements
- Companies have to decide how to meet these different requirements where the GHS classification and the labeling of a chemical substance or mixture may vary from country to country

Impact on Businesses: Chemical Users



- Familiarization with the new regulations and requirements
- Evaluate systems to manage influx of new hazard data from suppliers
- Evaluate and update hazard communication program elements as needed
- Train employees on how to identify and understand new requirements (Labels, MSDS, etc)
- Ensure updated MSDS are made available to your employees **for each chemical on-site**

Challenges of Multilingual HazMat Compliance

Identifying the Challenges



- “Product Compliance” and “Workplace Compliance”
 - Note: Workplace compliance as it relates to chemical products

- Infrastructure and tools

- Regulatory knowledge management

- Inventory control

Regulatory Complexity

- Is the product on the respective inventory
- Are employees/public protected
- What documents are needed for distribution
- What is the best way to ship
 - Packaging/Classification/Labeling
 - Segregation
 - Risk
- What is the impact on the environment
- Are rules the same across target markets

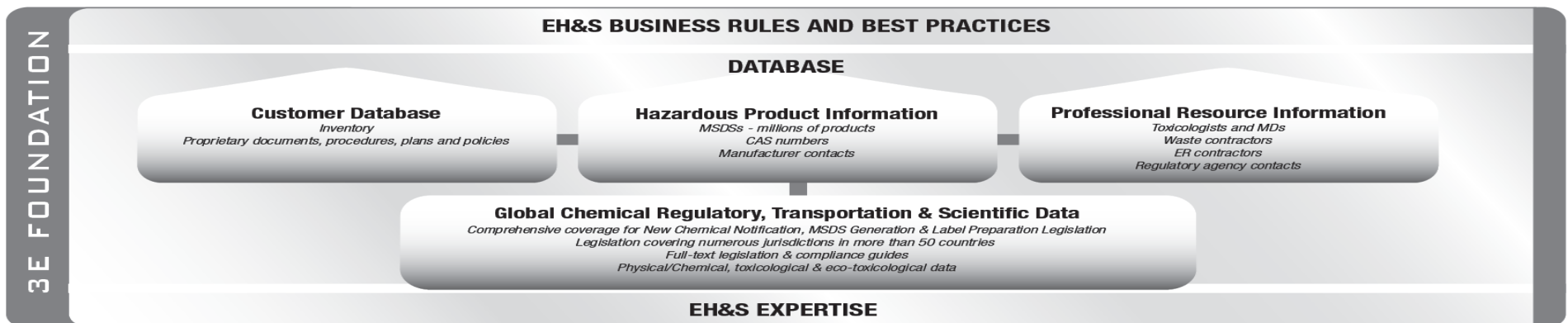


Keys to Success: Developing an Effective Plan

Inventory is Key



- Having visibility and control of chemical inventory is critical to EHS compliance
- Using MSDS management as a lever to manage inventory is a best practice
 - Product constituent information
 - Incident response



Global MSDS Management



Successful multilingual MSDS management

- Multiple formats
- Multiple languages
- Ease of use
 - Simple to train
 - Simple to use

24-7-365
3E COMPANY
EHS INFORMATION & COMPLIANCE SERVICES

3E Onli

Willkommen

Benutzername

Kennwort

Anmeldung

Mindestanforderungen

English

Español

Français

Français (Canada)

Deutsch

Italiano

3E InstaCall

Done

The screenshot shows a mobile application interface for 3E Company. At the top, there is a header with the phone number '24-7-365', the '3E COMPANY' logo, and the tagline 'EHS INFORMATION & COMPLIANCE SERVICES'. To the right of the header, it says '3E Onli'. Below the header is a dark red bar with the word 'Willkommen' in white. The main content area is a light gray box containing a login form. The form has two input fields: 'Benutzername' (Username) and 'Kennwort' (Password). Below the password field is a red button labeled 'Anmeldung' (Login). Underneath the login form is a section titled 'Mindestanforderungen' (Minimum Requirements) with a list of language options, each with a red play button icon: English, Español, Français, Français (Canada), Deutsch, and Italiano. At the bottom of the screen, there is a red button with a globe icon and the text '3E InstaCall'. The very bottom of the screen shows a small portion of a mobile keyboard with the word 'Done' visible.

Global MSDS Management



The screenshot shows a Microsoft Internet Explorer browser window displaying the 3E Company Portal. The browser's address bar shows the URL <http://www.3eonline.com/eeeOnlinePortal/DesktopDefault.aspx>. The page title is "3E Company Demo - European Edition". The main content area is titled "(M)SDS" and contains a search interface. The search section includes a "Suchen nach" (Search for) dropdown menu with "Produktname" (Product name) selected, and an "enthält" (contains) dropdown menu. Below this is a text input field. The "Zu verwendende Sprache" (Language to use) section has a dropdown menu with "Deutsch" (German) selected, and a list of other languages: Englisch (English), Spanisch (Spanish), Französisch (French), Französisch (Kanada) (French (Canada)), and Italienisch (Italian). A "Suchen" (Search) button and a link "Diese Suche individuell einrichten" (Configure this search individually) are also present. The footer of the page includes the "3E InstaCall" logo, contact information for 3E Company (www.3ecompany.com, 800-451-8346), copyright information (© 2007), and a link to "Datenschutzrichtlinien" (Privacy Policy). The version number "Version 5.7.1.0" is also displayed. The browser's taskbar shows the "Internet" icon.

Importance of MSDS Data



- Each country maintains its own MSDS requirements
- Products/Chemicals are manufactured by the same materials in the US as in other parts of the world
 - Acquire MSDS for the country where the product is stored
 - Transcribing a MSDS from one language/format has to be overseen by knowledgeable compliance professionals
- Display the appropriate product information by country to ensure safety program is compliant
 - Ensure employees are aware of the appropriate hazards
 - Understand regulatory impact on products by country

- Infrastructure to respond to incidents may vary by country
 - Availability of PPE or response equipment
 - Reliance on public sector for response and clean up
- Language of response can be critical
 - Not everyone understands English
 - Non-English MSDS may not be available
 - Third-party translator capabilities maybe critical

Waste Management



- Regulations for waste management may not be fully evolved or fully implemented in various countries
 - Challenges in meeting corporate requirements
 - High cost to meet company policies
 - Partner with like-minded companies
- Transcend cultural issues on what is considered waste
 - Sensitivity to local customs

Compliance Task Management



- Tracking and managing compliance related tasks
 - Urgency and timeliness may vary by culture
 - Clash between “corporate edicts” and local practices
- Permits, disclosure and local reporting requirements
 - Difficult to ascertain
 - Can be a significant liability
 - Local law firms can assist

Taking a Full Lifecycle Approach

Full Chemical Lifecycle Approach to EHS Information Management



The 3-Step Approach



- **Step 1:**
 - Centralize your data components across the organization
- **Step 2:**
 - Integrate these components for maximum value
- **Step 3:**
 - Expose the necessary information to only those who need it.

Step 1: Centralize your data sources

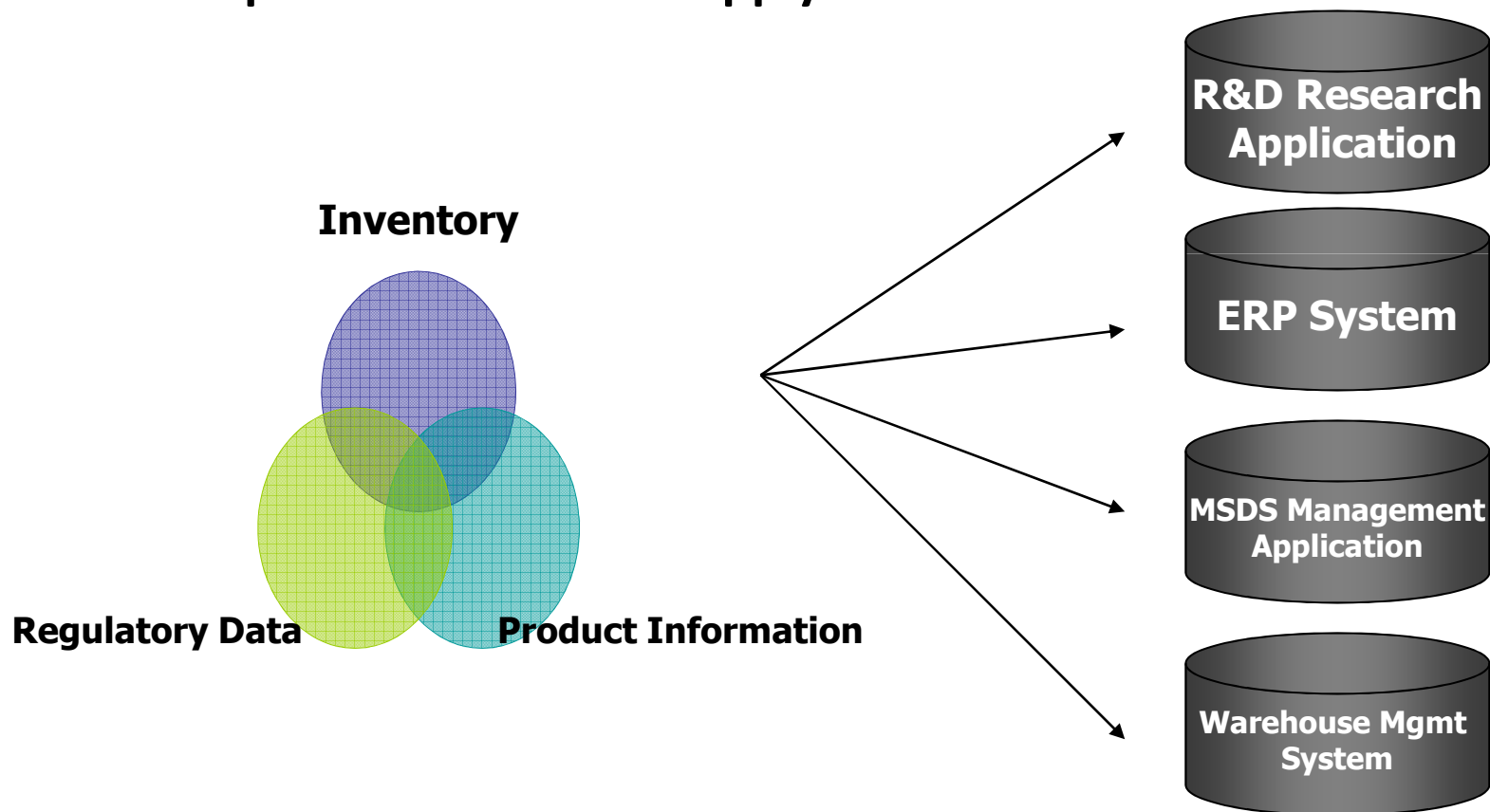


- Assemble all stakeholders
 - Corporate (Legal, Risk Management, Marketing, Product Stewardship, IT)
 - Facilities: Plant Managers, EHS Manager, Transportation Managers, local IT)
- Prioritize Objectives
- Evaluate your options for EHS Data
 - Internally Managed
 - Outsourced
- Implement
 - Typically a phased approach with one data component at a time.

Step 2: Integrate EHS Data Components



Develop integrated systems, either internally or outsourced, that allow you to send each data component across the supply chain.



Step 3: Expose Relevant Data by User



- Understand each user to provide what is relevant
 - Plant Employees: Simple Access to MSDS
 - R&D: Detailed Regulatory Information
 - EHS Management: Regulatory reporting capabilities
 - Customers: MSDS, Technical Data Sheets for Finished Goods

Benefits of this Approach



- Significant Cost Savings
 - Reduction is duplicate data sources
 - Increased efficiencies across supply chain
- Improved Product Stewardship
 - Able to react swiftly to regulatory changes
 - Ability to support internal and external customers with Regulatory and MSDS information in a timely manner.
- Change Management
 - Once the baseline of regulations, locations and products is established, you need to track any changes to this baseline.
 - Each of these changes can impact Product Safety and Workplace Safety related protocols.
 - By integrating each of these entities, you can track this impact based on any type of change.

Conclusion



- Globalization affects EHS compliance
- Culture and language add additional complexity to challenging (and uncertain) compliance requirements
- Adopt a life-cycle approach to EHS compliance
 - Implement tools to stay on top of evolving regulations
 - Absolute control over inventory; leverage MSDS (or other specification sheets) to control inventory
- Be sensitive to local customs
 - Partner with local companies, law firms and compliance service providers