

Countdown to REACH

In early 2007, REACH—the massive legislation from the European Union (EU) requiring the registration and testing of more than 30,000 chemicals, metals, and compounds—will enter into force. Eighteen months later, producers and importers will have to start complying.

Are you ready?

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

Registration: Producers/importers will have to collect and submit information on each chemical's properties, uses, and safe handling. Testing may be required.

Evaluation: Public authorities will look in more detail at registration dossiers and at substances of concern.

Authorisation: Use-specific permission will be required for chemicals that cause cancer, mutations or problems with reproduction, or that accumulate in bodies and the environment. The European Commission and the European Chemicals Agency (which will be fully functional within 12 months of REACH being ratified) will have the power to restrict the use of certain dangerous substances in the EU.

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) requires that companies in the EU making or importing more than one ton of a chemical substance per year register it in a central database.

According to the European Commission,¹ the purpose of the legislation is to "improve the protection of human health and the environment while maintaining the competitiveness and enhancing the innovative capability of the EU chemicals industry. REACH [will] furthermore give greater responsibility to industry to manage the risks from chemicals and to provide safety information on the substances."² This information will be passed **up** and **down** the supply chain, a daunting prospect given the supply chain's complexity.

How will REACH impact companies, inside and outside the EU?

In some ways, that question is impossible to answer, since the shape and scope of the legislation is still not final. But one thing is certain: compliance will be difficult.

EU producers/importers will have to keep track of the substance volume produced/imported. This requirement will be strict: a company will not be allowed to market or import a substance that is not registered. REACH will likely burden many companies' IT systems, to say nothing of their back-office processes and staff. In some cases, these companies may decide that cost and effort of registration outweigh business benefits; downstream users of these chemicals could end up without suppliers.

At the same time, users will have to track their use of chemicals, including metals that are not yet products, at the compound level (that is, liquid mixtures or metal alloys without a specific form). While it is not clear how strict the legislation will be about reporting usages, many companies (especially smaller ones) probably lack the process disciplines and systems for the likely record keeping.

Also, the amount and type of information sharing that will be required—up and down the supply chain—is unprecedented. How will trading partners introduce a more extensive and complex level of cooperation into their business operations?

The bottom line is this: The cost of REACH is estimated at EUR 2.3 billion over 11 years, the likely time required to register and test all the substances covered by the legislation.

¹ The European Commission represents interests common to all member states of the European Union. For that reason, the Commission can propose legislation (like REACH) on which the European Parliament and the Council decide. http://ec.europa.eu/atwork/basicfacts/index_en.htm#comm.

² http://ec.europa.eu/enterprise/reach/index_en.htm.

But total costs could be much higher—from EUR 2.8 to 5.2 billion—depending on the impact of increased costs on the price of chemicals downstream and on the cost of substitutes for those chemicals taken out of production (an estimated 1–2 %).³

What can you do—right now—to prepare for REACH?

That question is best answered by considering the possible impacts of REACH in three areas: strategy, risk management, and enterprise applications.

Strategy: will profitability and shareholder value be affected?

Major EU producers/importers have been preparing for REACH for years; by now, they have organized the information they already possess about the chemicals they produce/import. But the legislation requires a more extensive type of testing; in fact, some of the tests that will probably be needed are not yet developed. So, despite their preparations, producers/importers will still have work to do to be in compliance. In addition, many have not completed a thorough and sophisticated economic analysis of the possible affects of the legislation on the business. For smaller companies, these impacts are even less well understood.

What types of strategic actions might a producer/importer consider?

To make the registration and testing process more efficient, a company should consider creating networks with other producers/importers and relevant parties, such as laboratories. While consortiums would help companies manage the complexity of compliance, there is a strategic risk: according to the legislation, a consortium must include competitors. The sharing of information of this type, under these circumstances, is a completely new situation—one requiring special attention and planning.

A producer outside the EU selling chemicals to customers inside the EU has a slightly different challenge: protecting customer relationships. If this type of company doesn't establish a representative in the EU to take care of the registration process, its customers will become "importers" and be burdened with compliance. In an opposite scenario, a producer making chemicals in the EU might avoid the legislation by moving production outside Europe or by changing product portfolios. Again, such a choice could turn a customer into an "importer"—and that has consequences for everyone. But if ready-made products are imported into EU, they fall out of the scope of REACH.

If a downstream user becomes an EU importer, it will have to register the substantive components in a chemical or find a substitute material. Given the costs and complexity of registration, the latter choice might be better. A user can employ Chemical Product Services (CPS),⁴ which would take care of registration as a part of its service. Before opting for that solution, the company would have to decide: "Are we willing to reveal our usages or should we make a separate registration to protect business secrets?"

Also, while REACH concerns chemicals, not products, the legislation might affect a user's product portfolio—for example, if a chemical becomes too difficult or expensive to acquire—as well as its R&D, new product development, and supply chain relationships. (That said, it's easy enough to imagine cases in which the very definition of "product" might be called into question: for example, is a spoon a product or a metal?)

Risk management: the business changes—even disruption—could be pervasive

For producers/importers, the risks from REACH are many and varied, as the legislation could affect strategic, operational, and financial areas, including (but not limited to) product portfolio management,

facility networks and logistics, cost to serve, supply chain integration, intellectual property/business secrets, and community good will. (The good news for producers: compliance will likely improve the image of the chemical industry.)

Joining a consortium could exacerbate these risks or relieve them, depending on the participant's size, market position, and other competitive levers. For example, for smaller companies, being left out of a consortium could be a grave business risk.

For downstream users, the most obvious risks are three: 1) that a producer/importer might not register a chemical; 2) that a producer might stop making a chemical; and 3) that prices will go up. Either way, changes in raw material availability, reliability, and costs have to be planned for and taken into account.

For companies touched by REACH, a risk governance function, including a steering committee and project teams, is a good way to make sure that risks are recognized and addressed; that these risks and actions are communicated openly and systematically to top management and other stakeholders; and that the right processes (documented in writing) and people (motivated and dedicated) are put in place for dynamic risk management.

Questions about risk: Producers and Importers

- Who will be responsible for compliance? For communicating the impact of REACH inside and outside the company? For acting as a contact with downstream users?
- How elastic/inelastic are prices – by product, customer, or market?
- Should the company participate in a consortium? Which one? How can the company protect its business secrets while participating in a consortium?

Questions about risk: Downstream Users

- What are the company's roles under REACH? Is the company considered an EU importer? If yes, then how can it manage the registration process? Or should it consider a change of material? If so, how will a change of material impact its operations, including sourcing, procurement, product design, and manufacturing?
- What is the situation with current chemical suppliers? Have they prepared for REACH? Who will evaluate and select suppliers, taking into account the impact of REACH? Who will negotiate new supply chain partnerships, if necessary?
- Have the chemicals currently in use been mapped? What about those being used in products under development? Which are the most critical substances for production?
- Who will make sure that the specific usages of the company are communicated upward in the supply chain and that the company making the registration of each chemical compound will also register this usage?

³ http://ec.europa.eu/environment/chemicals/reach/fact_sheet.pdf.

⁴ "CPS represents a restructuring of the traditional relationship between the chemical supplier and customer ... a shift in focus, from selling/using chemical products, to selling/using combinations of chemical products and services, that together create a win-win situation for both customer and supplier demands." (http://www.cmsforum.org/verkorte_executive_summary.pdf).

Enterprise applications: integrated information is more important than ever

For producers/importers, the amount of information required for registration will depend on the amount of substance produced/imported each year. So, more sophisticated tracking and documenting systems will be required; with those comes a need for training.

To address the tracking and reporting requirements of REACH, as well as other issues rising from environmental legislation, systems providers such as SAP are adding functionality to their Environmental, Health and Safety (EH&S) modules. These modules need to be integrated with other systems in the company. In fact, integration beyond the enterprise with supply chain partners—while not required—would likely make the compliance process even smoother and more accurate.

For producers/importers, the right information system lets employees see whether a usage for which a given chemical has been registered and, thereby, avoid duplication of effort or poor product planning. For users, the benefit of the right IT is similar, as it enables them to keep track of the registered, approved usages of substances versus their actual use. These companies should consider automated document creation as a way to manage the increased record keeping caused by REACH.

For everyone, a good IT system—well integrated with other enterprise systems—enables better reporting of environmental matters, as well as analyses of the economic impact of changes in the environmental legislation. Also, an investment in IT is a good idea for the long run: over time, the application provider will keep up with changes in environmental legislation and update its products, thereby helping its customers continue to comply efficiently and effectively—a benefit of particular value to companies operating globally.

Common frustrations with IT (yes, they affect the success of compliance)

- Relevant EH&S data is located in multiple systems
- Manual process are needed to coordinate EH&S data collection
- The connection between different EH&S processes is missing
- Since there's no planning for EH&S, every change in legislation is hard to assimilate; nor are there company-wide REACH compliance processes in place
- The current EH&S systems contain multiple, redundant tools for reporting, but none for steering; the system architecture is too complex
- EH&S management reporting and analysis is infrequent and of a poor quality

Confused? Contact the Deloitte REACH Competence Center

If there's one particularly positive aspect to REACH, it's this: the new legislation will consolidate and replace a lot of old legislation. At the end of the day, REACH could mean big savings for a chemical company.

In the meantime, compliance will be perplexing.

As a service to producers/importers and users, Deloitte has opened a REACH Competence Center—what we like to think of as an antidote to uncertainty.

The specialists working the Center are providing information to companies to assist in creating a clear compliance strategy, manage the risks caused by changes in environmental laws, and develop

effective EH&S processes and systems.

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REACH in the real world: A study of the EU textile industry

In June 2005, the European Commission studied the possible impacts of REACH on the textile industry. This brief summary captures highlights of this research.*

The textile supply chain is complex. In fact, the consolidated European textile supply chain uses about 1,500 basic chemical substances and about the same number of specialty chemical substances, which come together in about 15,000 combinations.

The suppliers of these chemicals—only about 50 companies—are nearly all based in Europe. Up to 90 percent of the specialty chemical substances are produced in low volumes (i.e., less than 100 tons a year). The greatest environmental impact of textile finishing processes comes from chemical substances contained in “grey textile,” most of which is imported from outside the EU.

How will REACH impact this supply chain? The study drew these conclusions.

Chemical producers

- Many of the low volume, specialty chemical substances are vulnerable to withdrawal from the market. For many, this vulnerability will not be mitigated by consortia building or by the use of alternative grades.
- While suppliers want to keep the functionality of their processes/products intact, they might be limited in their ability to absorb or pass on the costs of REACH. As a result, some product rationalisation will inevitably take place, particularly when entire packages need to be substituted because of the falling out of one or more components.
- The successful substitution of withdrawn substances and/or the reformulation of substances and preparations will take from one to nine months and cost 5,000 to 100,000 Euros per package.
- Suppliers expect complications from 1) a lack of information on imported formulations used in their production processes; 2) low expectations on the quantity and quality of the usage information from customers; and 3) the chemical interactions of their products with chemicals in the “grey textile” fabric or in other finishing packages. (They do not think they should be held responsible for this problem.)

- Given the large number of customers and applications covered, suppliers perceive a great need for workable exposure categories and practicable IT tools.
- The anticipated business benefits of REACH come from better information about the real application conditions of downstream users—information that could have a positive impact on product liability and quality issues (where problems can be caused by incomplete or asymmetric information). Furthermore, better knowledge of usage could enrich new product development.

Textile finishers

- Most users are concerned about the availability of substances and preparations because their competitiveness depends on innovative uses of many of these specialty chemicals. As some degree of withdrawal will inevitably occur, textile finishers will face significant costs for reformulation and process adaptation—costs they cannot absorb or pass on their customers because of fierce competition.
- Reformulation and adaptation efforts will take textile finishers from three to 18 months, depending on whether they are able to keep their production functionality intact. Time-to-market lags will hurt this industry, which is tied to fashion cycles (consumer textiles) and product cycles (industrial textiles). The costs per reformulation could run to 300,000 Euro.

- The identification of usage will involve substantial costs and effort, since finishers use a large number of chemicals in an even larger number of applications. An additional complication: unintended impurities and by-products not necessarily known at this time. The business risks are real, as users must give suppliers sensitive information on usage; this could seriously affect their market position. Also, they could likely have a competitive disadvantage vis-à-vis non-EU competitors.
- The business benefits of REACH come from knowledge about the actual composition of textile auxiliaries and dyestuffs. This could have a positive impact on product liability and quality. Furthermore, users will have an easier time comparing specific chemicals, as the market becomes more transparent. This understanding could enable the simplification of recipes, as well as cost-effective substitutions.

* The European Commission, EnviroTex GmbH: Private Institute for Product Safety and Environment, and CAST Consulting (http://ec.europa.eu/enterprise/reach/docs/reach_tex_executive_summary_ds_09_06_05.pdf)

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