

Methods to Demonstrate a Financial Return on Investment in Product Stewardship



John Phillips
Technical Director
Product Stewardship, North America
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Product Stewardship – Business Drivers

More and more companies are expressing a stronger public commitment to sustainable products and business practices. The need for proactive, effective, and global product stewardship programs is growing due to changes in societal norms that are driving the demand for safer and more environmentally-sound products. This trend is reflected in consumer purchasing decisions, evolving global policies (laws and regulations), and retailer sustainability programs such as the recent Sustainability Chemistry Policy at Walmart.¹

Companies that understand these dynamics incorporate them into their business practices in order to:

- Improve corporate reputation, which translates into sustained stock value and brand;
- Reduce business disruption and the potential for non-compliance penalties while increasing customer loyalty; and
- Drive the innovation of new, more sustainable products.

1. http://www.walmartsustainabilityhub.com/app/answers/detail/a_id/310/session/L2F2LzEvdGltZS8xNDA1MjcyNjk5L3NpZC9YcFJ2M2NabA%3D%3D

Defining Product Stewardship

Responsibly managing the health, safety, and environmental aspects of raw materials, intermediate, and consumer products throughout their life cycle and across the value chain in order to prevent or minimize negative impacts and maximize value.

- *Product Stewardship Society*

Also known as:

- Product Sustainability
- Product Compliance
- Product Safety

Companies that do not confront these realities face business risks such as a loss of market segments, noncompliance fines, government restrictions on product manufacturing and sales, increased litigation, and erosion of corporate reputation. Worst-case scenarios result in employee prosecution and imprisonment.

Yet some companies decide to take such risks. Perhaps they've "never had such problems in the past", or they will continue to "fly under the radar". But we all know that luck doesn't last. Sooner or later, business risks and consequences are realized.

Why take such risks?

In part, companies take these risks due to the significant cost of product stewardship program design and implementation. Such programs require a “top down” commitment from senior management to set company-wide policies, establish an organizational structure, provide funding, ensure accountability, and provide governance. These programs also require highly trained experts in the fields of human health, environmental sciences, product stewardship, and regulatory affairs.

The Necessity of a Return on Investment

Even companies that are fully committed to product stewardship programs need to show a return on investment. Like with all investments, the cost of product stewardship programs must be weighed and prioritized with other company investments. While the costs to development a robust product stewardship program can be estimated and efficiencies to reduce costs can be defined, it is very difficult to show a financial

return on investment (ROI). This is because improved product stewardship performance is measured by “negative indicators” that cannot be counted. The number of incidents/ fines/ litigation that did not occur cannot be counted because they did not happen as a result of the pre-emptive product stewardship actions that were put in place.

The reality of “negative indicators” of success provides another reason that a ROI needs to be demonstrated. When a product stewardship program is fully implemented and effectively functioning, there will be a reduction in non-compliance penalties and incidents. When there is a lack of incidents over time, new senior management can get the impression that the problems have gone away or that they don't exist, which can lead to questions like “why are we spending so many resources on product stewardship?” This can result in budget cuts and resource reductions during difficult economic times, which is a mistake because the problems of the past will reemerge. Therefore, regular updates to senior management on the ROI are needed to show the continued value in product sustainably programs.

Methods to Calculate a Financial Return on Investment for Product Stewardship Programs

These methods are further described in this paper to illustrate how a financial ROI is achieved in practice. Table 1 provides some methods for each business practice and the associated ROI.

Table 1. Examples of Methods to Integrate Product Stewardship that Demonstrate a Return on Investment Business Practice

Type	Method	Return on Investment
Research and Development (R&D)	New product development processes	Accelerated time to market
Manufacturing	Evaluation of raw materials for existing products	Sustained global supply
Acquisitions and Diversities (A&D)	Business unit portfolio management	Reduced corporate risk
Enterprise Risk Management	Incident tracking after risk reduction measures are put in place	Reduced incident costs

METHOD: Integration of Product Stewardship into New Product Development Processes

A call comes into the company Product Compliance Group from sales and marketing (Commercial Group).

Commercial Group: "Hey, we're launching a new product by the end of this week. We need a product Safety Data Sheet and label ASAP!"

Compliance Group: "OK...What's the chemical inventory status for each country where the product will be sold?"

Commercial Group: "What's a 'chemical inventory'?"

Unfortunately, this scenario occurs more than we'd like. This discussion typically leads to a delay or time-lag in the product launch – which can be as much as two years – while the new product is registered with the appropriate government agencies and other requirements are met. It can also lead sales and marketing to conclude that the Compliance Group is slowing the product launch or being “business disablers”, when in reality they are reducing business risks. If the Compliance Group had been included in the new product development process from the beginning, the process would have been streamlined because the compliance requirements would have been met prior to launch.

The *financial loss in sales* that did not occur while the compliance requirements were put in

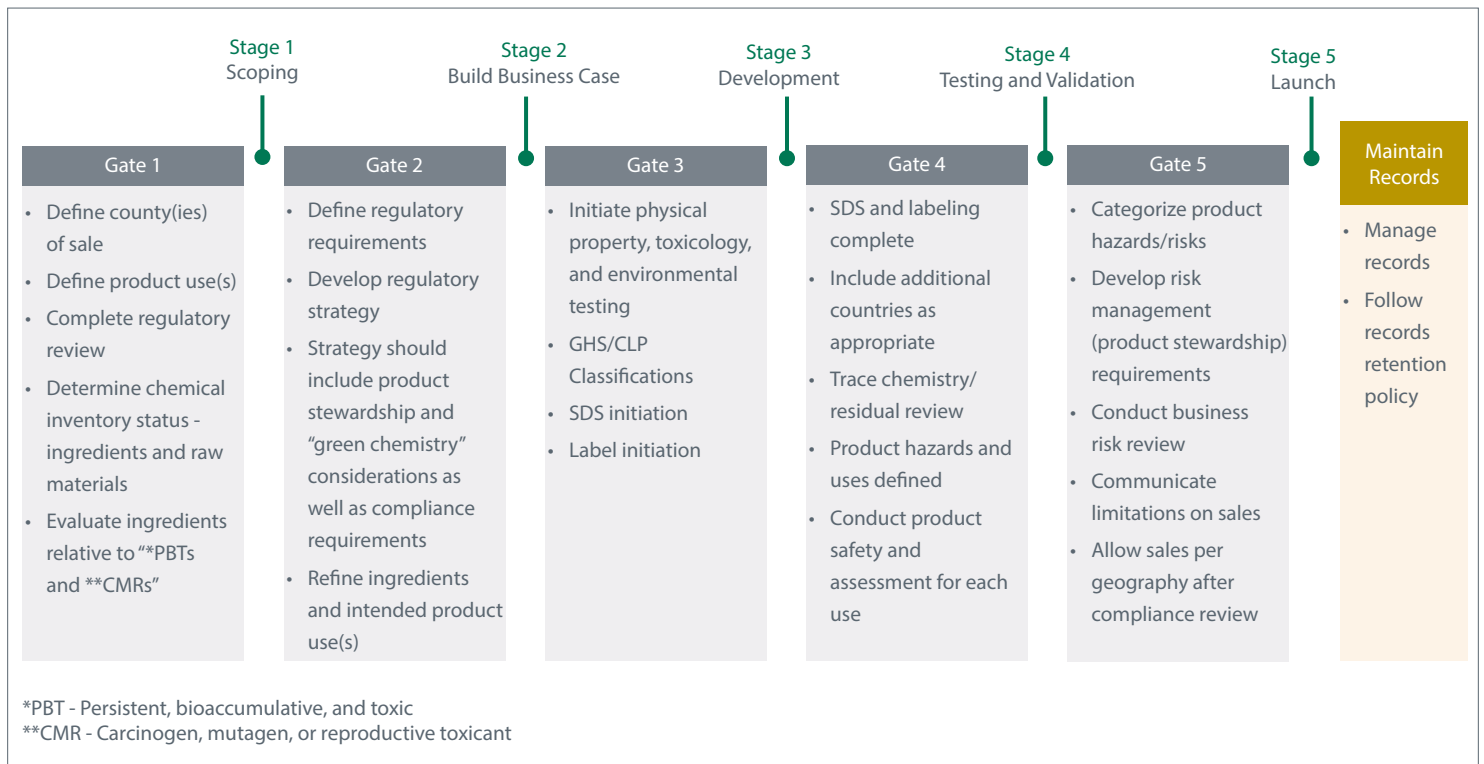
place can be calculated by estimating the dollar value of the outstanding sales (or unfulfilled orders) and multiplying that number by the number of days the launch was delayed. If the cost to meet compliance is subtracted from the total amount of lost sales, the remainder is the ROI. Stated another way, the remainder shows how much money would have been made if the compliance requirements were put in place before the product launch.

New products are typically developed by the company's R&D department, which in many cases use some form of a “Stage-Gate^{®2}” review process to evaluate the viability of the new product at each stage of development. The new product advances from one stage to the next by meeting company criteria for value creation potential, the ability to manufacture the product cost effectively, and the likelihood of customer acceptance. As the product advances through these stages, it should also be evaluated for compliance requirements in each geography where the product is intended to be manufactured and/or sold, as well as for potential business risks throughout the product lifecycle. The responsibility for the regulatory and business risk evaluation is typically managed under the product stewardship program.

Figure 1 provides an example of the type of product stewardship questions that could be considered at each stage of a new product development process. These considerations need to be customized for the type of products under evaluation and to be consistent with corporate policies, positions, and culture.

2. Stage-Gate[®] is a registered trademark; © 1996–2014 by the Product Development Institute, Inc.

Figure 1. Example Product Stewardship Questions integrated into a Stage-Gate Review Process



Once the product stewardship program is integrated with the Stage-Gate review process, there should be no time-lag in the product launch, which leads to an accelerated time to market. *The financial loss in sales* now becomes *“sales realized”* because the compliance requirements were integrated into the Stage-Gate review process. The ROI can be calculated on an ongoing basis by adding the sales realized for each new product launch. These results should be calculated and reported to senior management on a regular basis to show the continued value in the product stewardship program over time.

This information is also useful in developing global marketing strategies, with priority given to countries where new or existing products are already in compliance. As the profits grow from success in these countries, a portion can be used to meet compliance requirements in other countries for further global growth. Once the power of this collaboration between the sales and marketing department and the product stewardship program is realized, the perception of the Compliance Group will change from *“business disabler”* to *“business enabler”*, further substantiating the value of the program and organization.

ERM experts have conducted numerous evaluations of client global and regional product stewardship programs. An element of these evaluations is to examine the integration of product stewardship and compliance into business practices (including the Stage-Gate review process), and provide recommendations for continual improvement. From this experience, ERM created Figure 1 as a general example of the types of considerations that can be made at each stage. These considerations need to be customized for each client to ensure that the applicable questions are being asked based on the product types, ingredients, and product use.

METHOD: Integration of Product Stewardship into an Evaluation of Raw Materials for Existing Products

Existing products typically are considered to be “in compliance” with regulatory requirements in the countries where they are manufactured and sold. However, new uses and new countries of sale can be added unknowingly after the initial product launch. This can create an unforeseen vulnerability to non-compliance violations, which in turn can result in significant penalties. For example, violations of the new Chemical Safety Act of 2015 (CSA) in the United States (US) can result in fines up to \$35,000 per day per occurrence (e.g., package), as well as criminal penalties if it is determined that the violations were made knowingly.

Evaluating the raw materials and ingredients of existing products relative to applicable requirements in each country where they are manufactured and/or sold increases the likelihood that compliance has been met and reduces the potential for non-compliance violations.

While fines not realized due to effective compliance practices cannot be calculated, a ROI can be related to historical fines if they occurred in the past and have not occurred after the improved compliance practices were put in place.

The reliability of raw material supply should also be evaluated due to the cost of compliance in some regions and countries. For example, the costs associated with chemical registration in the European Union (EU) under the Registration, Evaluation, and Authorization of Chemicals (REACH) legislation can be very expensive. Similarly, it is expensive to register chemical products in other countries that are adopting their own version of REACH, such as China, South Korean, and Taiwan. Some suppliers may conclude that the cost of registering their products in these geographies is not substantiated by their sales. If a raw material supplier makes the decision to not register their products in certain regions or countries, their customers who sell their products into these areas will be faced with the decision to either find an alternative supplier or register the raw material themselves. Such a decision should be made well in advance in order to continue business operations without disruption.

Again, the cost of compliance penalties and/or the business disruption that did not occur cannot be calculated. However, the value of sustained sales in the geographies where a new supplier was found or a registration was justified is equal to the financial ROI in the raw material evaluation.

ERM has completed hundreds of product registrations for clients in diverse industries for countries in North America, the EU, and Asia/Pacific. A key strategic element of a product registration plan is the evaluation of raw material and the product ingredient registration status. ERM experts work with clients to determine if product raw materials are registered and, if so, use this information to develop registration plans per product family, which reduces registration costs; if product raw materials are not registered, ERM experts work to find alternate suppliers or develop registration plans.

METHOD: Integration of Product Stewardship with Corporate Portfolio Management

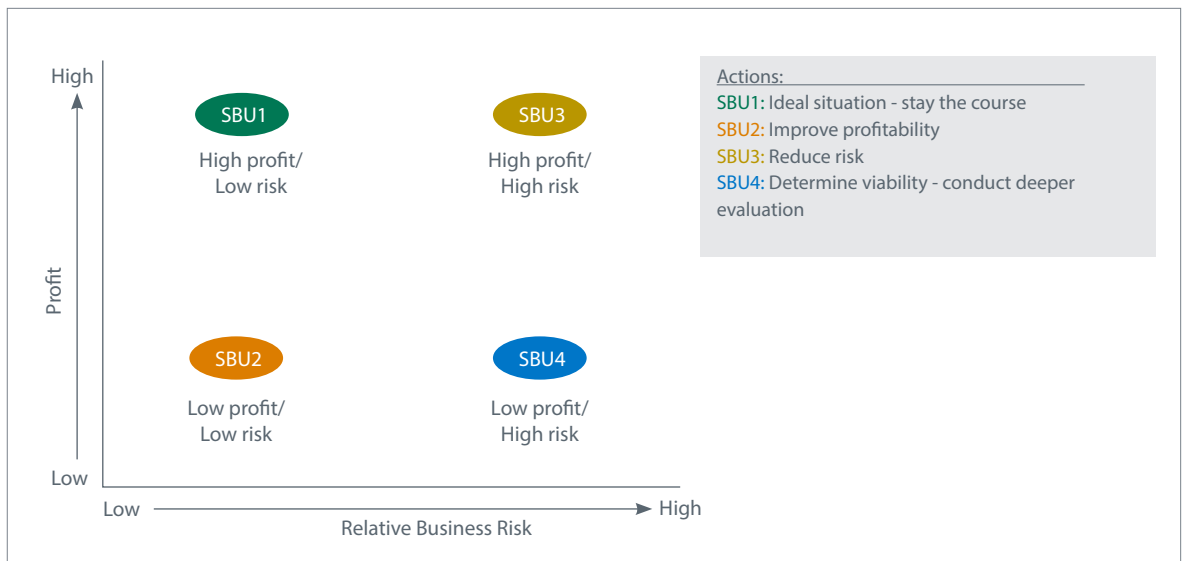
At the corporate level, product lines or groups of product lines are typically organized into business units, where management of profit and loss is delegated to business management teams (BMTs). It is incumbent on the BMTs to understand and manage business risks, as well as, profit and loss. They can be delegated authority to make business risk decisions that do not exceed the value of the business unit and do not present the corporation with undue risk.

Corporate governance is provided when corporate leadership evaluates the business unit profit and loss as well as business risks in light of long-term growth strategies and possible

negative impacts. This information can also be used to make decisions on which business units to grow – possibly through acquisition – and which to divest.

Profitability information is typically obtained from and presented by the BMT, and product/business unit risk information is obtained from/presented by the Product Stewardship organization. Combined, this information can be used to compare and contrast relative performance and risks among strategic business units (SBUs). Figure 2 provides an example of how profitability and risks of one SBU can be compared in relation to the other SBUs, and how a particular SBU's relative profitability and risks can be used for strategic decision-making purposes.

Figure 2. Comparison of Profitability and Risks



This information can guide a corporation toward the appropriate action for each SBU. In this example case, SBU 1 represents the ideal situation, where the SBU is profitable and presents low relative risk to the corporation. No additional action is required.

The main action for SBU 2 would be to increase its profitability and move it up into the same quadrant as SBU 1. This move may take time. The impact of actions to increase profitability will need to be tracked over time and evaluated within the context of annual fluctuations in order to determine if the SBU has long-term viability. If financial viability cannot be achieved and sustained, the corporation may want to consider an exit strategy for this SBU.

SBU 3 has high profitability; however, some aspect(s) of this SBU present high relative risk to the corporation. Thus, further evaluation of these risks is needed. This could include a

deeper evaluation of product hazards, uses, and markets to provide the needed information for understanding the source of the risk and defining the most effective risk mitigation options. This can be accomplished by conducting a business risk review.

SBU 4 presents a significant challenge given that it has low profitability and presents high relative risk to the corporation. A deeper evaluation of profit dynamics and sources of risk is needed to determine the most effective course of action for increasing profitability and decreasing risk. If these goals cannot be achieved, the corporation may need to consider an exit strategy for this SBU.

The financial ROI in this sustainability evaluation is directly related to the increased growth and profit of the SBU(s) moved into the High Profit/Low Risk quadrant and the reduction in possible losses through the divestiture of Low Profit/High Risk SBU(s).

ERM experts have worked with a major multinational client in the chemical industry to develop criteria for defining product/business unit risks and profitability metrics. ERM then graphed this information, which was used to develop specific action plans for products/business units that fell into each category described above. It should be noted that each company has its own independent risk tolerance. These methods are only used to define and compare risks versus benefits for informed decision making.

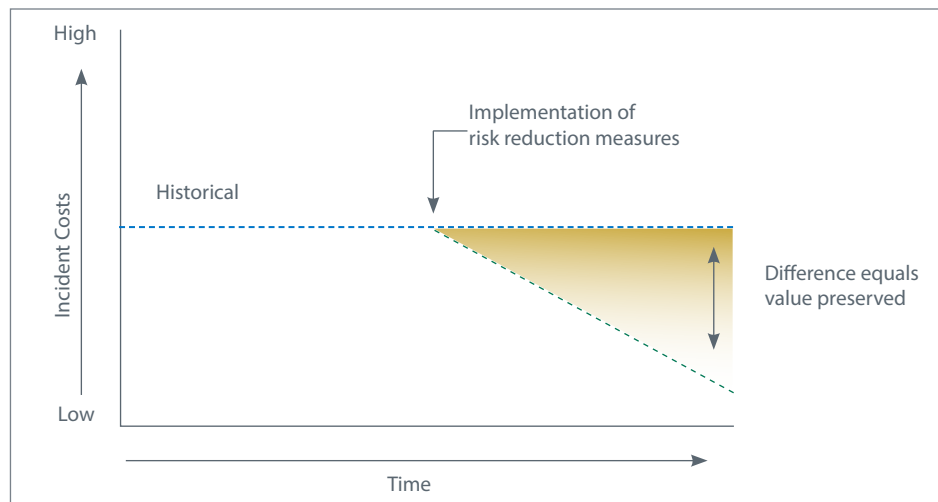
METHOD: Integration of Product Stewardship into Enterprise Risk Management

As previously mentioned, it can be difficult to define the financial return on product stewardship programs due to negative indicators of success. This can be overcome by comparing historical incident tracking to ongoing tracking after risk reduction measures (RRM) are put in place as part of a product stewardship program. The development of such tracking mechanisms is further justified by U.S. laws, which require demonstration and full disclosure that corporate risks are identified, quantified, and effectively managed. These elements of product stewardship typically fall under Corporate Social Responsibility or Enterprise Risk Management programs.

With this method, incidents are identified and tracked. Incidents could include litigation history, non-compliance penalties, product recalls, business disruption, lag-time on new product launch, etc. The incidents represent business risks that typically result in costs, loss of customer confidence, and/or a negative impact on corporate reputation. Upon evaluation of the incident and business risk, a risk reduction measure is put in place to reduce or eliminate the incident from reoccurring. Once in place, the impact of the risk reduction measure can be tracked and compared to historical experience.

Figure 3 shows how the financial ROI in product stewardship programs can be calculated by subtracting of historical costs of incidents from the reduction in these costs after implementation of risk reduction measures.

Figure 3. Calculation of Return on Investment from Implementation of Risk Reduction Measures



ERM experts have worked with clients to establish a cross-functional team composed of company representatives from marketing and sales, manufacturing, R&D, product stewardship and regulatory affairs, and the insurance departments to develop a program as described above. This included the establishment of a product relative risk ranking tool, risk management methods, and incident tracking metrics. Once a program is put in place, clients can leverage the demonstration of reduced business risks with insurance providers for lowered premiums.

Conclusion

While the cost to develop and implement a robust product stewardship program can be significant, the consequences of not doing so are often far greater. Companies can face various business risks such as noncompliance fines and erosion of corporate reputation, not to mention employee prosecution and imprisonment. It is difficult to show a financial ROI on product stewardship programs; however, it is necessary for continued support. The more these methods are put in place, the greater the understanding that these investments are worthwhile and integral to the basic elements of business practices and decision making. They can also be used to substantiate company commitments to sustainability, which strengthens corporate reputation campaigns and branding.



How to Learn More

Questions or comments? Email the author John Phillips at john.phillips@erm.com.



John is a Technical Director at ERM. He is an expert in global chemical policy and product stewardship which was developed over a successful 30 year career at The Dow Chemical Company, 15 years of which were spent leading the development of chemical industry sustainability programs and working with the United Nations Environmental Program (UNEP) and Organization for Economic Cooperation and Development (OECD) on the Strategic Approach to International Chemicals Management (SAICM).

John works with major chemical, plastics, pharmaceutical, agricultural, chemical, and consumer product companies. He applies his experience and expertise to integrate product stewardship into business practices that accelerate time to market, facilitate global growth, mitigate risks, and improve corporate reputation.

About ERM

Environmental Resources Management (ERM) is a leading global provider of environmental, health, safety, risk, social consulting services and sustainability related services. We have more than 160 offices in over 40 countries and territories employing more than 4,500 people who work on projects around the world. ERM is committed to providing a service that is consistent, professional and of the highest quality to create value for our clients. We have worked with many of the Global Fortune 500 companies delivering innovative solutions for business and selected government clients helping them understand and manage the sustainability challenges that the world is increasingly facing.