AN INTRODUCTION TO ENVIRONMENTAL ACCOUNTING

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An introduction to Environmental Accounting

Chemistry and Accounting! Chemistry and Financial Management! Design and Accounting! It goes without saying that few of us think about these professions as kindred spirits. Make no mistake, however, we are paying a dear price for this fact. The separation of these disciplines is one of several forces directly responsible for some of our most serious environmental problems. Moreover, it bears significant responsibility for billions in public and private spending that could instead both add economic value and be more protective of the environment. Superfund cleanups, toxic air pollution, point and non-point water pollution, damaging raw material extraction, elaborate and expensive end-of-pipe regulatory programs, and civil and criminal penalties are the evidence of the disconnect among the physical and financial aspects of business. One part of the solution lies with designers and chemists and accountants and financial managers who not only consider the environmental and financial consequences of their decisions, but also understand and work with each other. Design decisions are not just the purview of designers, just as accounting and finance are not simply the purview of accountants and financial managers.

Environmental accounting has many meanings, many of which are discussed further on. For an enterprise trying to manage its day-to-day affairs, it is useful to think about environmental accounting as collecting environmental cost and revenue information and applying it to the full array of business decisions. Both steps are necessary conditions for a business trying to improve its environmental performance, invest in cleaner technologies, and produce cleaner products.

This paper presents a short tutorial on environmental accounting, sometimes called green accounting. It introduces the numerous concepts captured in the term environmental accounting, explains why they are important, clarifies some of the confusion surrounding terminology such as full cost accounting and life cycle costing, discusses cost elements that should be included in any financial analysis and accounting system, and briefly describes how the EPA is working to promote improvements in accounting practices. The paper is based on the premise that environmental accounting is not just an accounting issue; it's a design, engineering, manufacturing, finance, competitiveness, legal and environmental issue.

Design for the Environment and Environmental Accounting

Design for the Environment is about thinking before you act. It's about systems thinking and thinking about systems. It's about linking systems, not only technical ones, but also ecological, political, social, and management systems. All
of these ideas should be applied in decisions about new and existing products. This paper is about management systems.

When one thinks about linking ecological and production systems one immediately recognizes that an interdisciplinary team is critical. Years of increasing professional specialization has weakened our collective ability to synthesize and integrate. The challenge for every business and the professionals in them is to figure out how to integrate business activities and systems with ecological needs and systems.

At the core of this effort must be a successful environmental management system. In addition to top management support and cross functional teams, the foundations of a successful environmental management system are good data, an accurate understanding of the business’ activities, including accurate process flows, material flows, activity flows, and costs and revenues. As many businesses have discovered in this competitive world, competitive disadvantage comes to the door of those without this information. The disadvantage is not limited to environmental performance, it also includes general business performance as well. Running a business without this information is like trying to land an airplane in a blinding snow storm without radar or an altimeter. By the time you realize that you have made a poor approach, it’s probably too late. Good information and the appropriate use of it can prevent disasters and provide a leg up on the competition.

As designers of products or chemicals, you must be part of cross-functional, multi-disciplinary teams. You need to evaluate the raw material inputs as well as the product and non product outputs of design decisions. You need to work with the environmental staff to identify regulatory costs that you would not know about and the financial and accounting staffs who can help identify costs of various design options.

In my own informal discussions with hundreds of people over the last few years, several points about environmental accounting have become clear. First, if you ask someone in a business what are the top five environmental business issues facing his or her company, he or she is not likely to mention environmental accounting. If you probe further into a discussion about corporate environmental management systems, or a discussion about how to justify investments in cleaner technology, the same person will invariably acknowledge that environmental accounting issues are increasingly important. He or she may even acknowledge, as I believe, that environmental accounting is essential to any successful environmental management system.

Two studies from the last several years underscore this point. In two of the most thorough reports on the subject of source reduction in the industrial community, the not-for-profit group INFORM studied 29 companies in 1985 and
again in 1992.\textsuperscript{1} The studies carefully documented the "specific economic and environmental benefits of industrial source reduction." Among many other exciting findings, the study found that companies that had some form of environmental accounting system had undertaken three times more source reduction projects than companies that did not have such a system. More recently, a questionnaire administered by George Nagle of the Bristol-Myers Squibb Company at the Spring 1994 Global Environmental Management Initiative Conference reinforces the importance of environmental accounting.\textsuperscript{2} Of the 25 respondents to the informal survey, half stated that their company had some form of a tracking system for environmental costs. Twenty three of 25 reported that they believed environmental accounting issues would be more important to their company in the near future.

Notwithstanding the growing importance of environmental accounting, an accounting system will only succeed as part of an overall environmental management program. It will not fair well as a stand-alone environmental initiative. It is more appropriately viewed as an essential element of any corporate productivity or environmental improvement initiative. Whether your initiative is promoting total quality management, process reengineering, or the like, environmental accounting should be an essential element.

**What is Environmental Accounting?**

Environmental accounting is an umbrella term that can refer to accounting at a national, macro-economic level or a firm, micro-economic level. The term represents a subset of more traditional accounting issues. To understand the different uses of the term environmental accounting, one should know something about three types of accounting: (1) national income accounting, (2) financial accounting, and (3) managerial or management accounting. Only management accounting is truly relevant to a business’s daily management decisions, and as such is the focus of the remainder of the paper. However, it is important to distinguish it from other aspects of accounting.

*National income accounting* is a macro-economic measure. Gross National Product (GNP) is an example. The GNP is a financial measure of the flow of goods and services through the economy. It is often cited as the key measure of our society’s well-being. Environmental accounting is often used in this context. For

\textsuperscript{1} Cutting Chemical Wastes (1985) INFORM, New York, NY; Environmental Dividends: Cutting More Chemical Wastes (1992), INFORM, New York, NY.

example, it is commonly acknowledged that GNP does not recognize damage to natural resources. That is, as the flow of goods and services rises, GNP rises. As the GNP rises, the argument goes, society consumes natural resources, depleting or damaging the nation's renewable and non-renewable resource base. This loss of natural resources is not reflected in GNP. Critics also point to the fact that environmental cleanups reflect positively in the GNP. Environmental cleanups indeed constitute a flow of goods and services, and in this sense are good. As few would argue, however, cleaning up hazardous waste is not exactly a "productive investment" in the traditional sense of the term productive. Although the national accounting dimension of environmental accounting has both intellectual and practical implications for society, it is not the focus of this paper. Simply note, that if you hear economists using the term environmental accounting, they are usually referring to national income accounting.

Financial accounting is at the enterprise level. It is a process by which a firm prepares financial reports of selected information for use by external parties. All businesses report information to the IRS for tax purposes or to a lender to support a loan application. Publicly held companies report information such as their financial health and significant liabilities through annual reports to the public, governed by strict rules set by the U.S. Securities and Exchange Commission and the industry self-regulatory body, the Financial Accounting Standards Board. Generally Accepted Accounting Principles (GAAP) are the basis for this reporting. The historical information collected is aggregated and presented to the public. While it is useful to investors in evaluating the overall health of a company, it is virtually useless to business managers who make capital investment decisions or product costing and pricing decisions. The information was never really designed for such a purpose.

Someone interested in financial accounting and reporting will use environmental accounting to refer to the estimation and public reporting of environmental liabilities. The arena of environmental accounting is highly contentious because of the legal and financial implications of identifying, estimating and reporting environmental liabilities. When you hear accountants or lawyers referring to environmental accounting, they are usually referring to this type of accounting.

Financial accounting for the environment is retrospective; it addresses past environmental problems. Much of the increased attention to it in the last ten years can be traced to the passage of the Superfund hazardous waste cleanup law. The success of the Superfund law and financial reporting of environmental

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liabilities has been the protection of investors and the attention liability has focused on the advantages of preventing environmental problems in the first place. Unfortunately, aggregated and historical financial data are nearly useless for prospective management decisions. A business manager wants to know "What should I do today and tomorrow?" Having managers rely on dated information as a management tool is equivalent to a bus driver driving a route in Washington, DC while facing out the back of the bus using a twenty year old map of the United States. The information is too old and too aggregated to be useful.

While financial accounting is important, it also creates problems for those trying to get a handle on today's and tomorrow's environmental costs. First, and as indicated immediately above, because financial reporting is heavily regulated, many businesses build their management accounting systems to support financial reporting requirements. Highly aggregated and historical costs needed for financial reporting is not very useful at a management level. A second problem arises because financial accounting is nearly the exclusive focus of accountants, lawyers, financial managers, non governmental organizations, and other advocates of corporate disclosure. More balanced attention on environmental accounting is needed. Designers, chemists, engineers, production managers need information to find problems, know how much it costs to produce products, and create incentives for employees. This is the realm of third type of accounting -- management accounting.

Management accounting, like financial accounting, is firm-level accounting. Generally, it is the process of identifying, measuring, collecting, preparing and analyzing information principally for internal decision making. It involves cost information, production data, sales information, and a myriad of other data. The information collected under a business's management accounting system is used for three principle purposes: (1) planning and directing management attention, (2) informing decisions such as purchasing, capital investments, product costing and pricing, liability management, and compliance strategies, and (3) controlling and motivating behavior through techniques such as performance evaluation and compensation formulas. There is an important difference between management accounting and financial accounting, however. Unlike financial accounting, which is governed by GAAP, management accounting practices are not governed by a single set of rules. Every business has a management accounting system, but each system differs according to the needs of the business. Some businesses have unsophisticated systems, others have elaborate ones.

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4 A subset of this information will find its way into financial reports.
Two key elements of any management accounting system are the cost accounting system and the capital budgeting process. At this time in the development of environmental accounting, these two business systems have great potential to improve environmental protection and increase business profits. Generically, a cost accounting system is the internal process that tracks and allocates product costs and revenues to the process or product responsible for them. It specifies the particular cost pools such as labor and materials. In traditional accounting systems, all material and labor directly associated with the production of a product is assigned to these cost pools. Overhead is any cost that, in a given accounting system, is not wholly attributed to the manufacture of single product. Examples include supervisors' salaries, janitorial services, utilities, and waste disposal. Overhead cost is treated in either one of two ways: it may be attributed to two or more products by allocating it, or it may be left in the business' pool of costs that are not attributed to any of its products. In former case, overhead may be allocated back to products according to formulas that disproportionately assign overhead. One product may bear an overhead allocation greater than its actual share of overhead, while another may bear an allocation smaller than its actual contribution. The result is poor product costing and pricing. In the latter case, overhead costs may not be reflected at all in product cost and price. In both instances, managers cannot see the true costs of producing products.

An environmental cost accounting system involves merging environmental cost and revenue information into the traditional cost accounting system. Most commonly it means disaggregating environmental costs from traditional overhead cost pools where they are hidden and assigning them to the product or process directly responsible for them. Doing so, reveals these costs to managers, financial analysts, engineers, designers, chemists and others. This is critical not only for a business to have accurate estimates of production costs for different product lines and processes, but also to help managers target cost reduction activities that can also reduce hazardous waste and other environmental damage. The simple axiom, one cannot manage what one cannot see, pertains here.

An simple example illustrates the problem.\(^5\) Figure 1 below depicts a traditional accounting system that assigns costs to overhead.


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Figure 1 -- Traditional Cost Accounting System

Figure 2 demonstrates the misallocation of environmental costs. Widget B is responsible for waste costs. Widget A has no waste costs. The misallocation occurs because the waste cost is lumped together in an overhead cost pool that is allocated to both Widget A and B equally. The effect is that the cost of producing Widget A reflects environmental costs of Widget B.

Figure 2 Misallocation of Environmental Costs Under Traditional Cost Accounting System

Figure 3 demonstrates a revised costing accounting system that attributes the environmental costs of Widget B only to Widget B. By breaking environmental cost out of overhead and attributing them directly to products, decision makers will have a much clearer view of what the true costs of producing Widget A and B.\(^6\)

\(^6\) Accounting professionals refer to the process of more accurately tracking costs (environmental or other) as activity based costing. *In contrast, ABC systems focus on activities required to produce each product or provide each service based on each product’s or service’s consumption of the...
Capital budgeting is the process of developing an enterprise's planned capital investments. It includes strategic planning information, future predicted cost and revenue streams, and available capital. Integrating environmental cost and revenue information, as well as changing market preferences for environmentally safer products into capital allocation decisions is the second critical step a business can take to make more environmentally sound business decisions. Including this information in an analysis can help identify the advantages of investing in cleaner production processes and products. It will also help businesses see that many environmental investments can reduce costs or enhance market position. When environmental investments compete fairly and on similar terms with more traditional investments, the business and the environment will very often be better off.

To summarize briefly, a successful environmental management system should have an environmental cost accounting system and a capital budgeting process that considers a full array of environmental cost and revenue information.

If one is only interested in explaining why a company should integrate environmental costs into existing cost accounting systems and capital allocation activities. Using ABC, overhead costs are traced to products and services by identifying the resources, activities, and their costs and quantities to produce output. A unit of output (a driver) is used to calculate the cost of each activity. Institute of Management Accountants, Statement on Management Accounting 4T, "Activity Based Costing."
decisions the reader could stop here. To begin the process of implementing these
termology is unfortunately confusing and used rather loosely. The
following pages try to sort out some of this confusion by defining some key terms,
explaining some of the different uses of the same terms, and most importantly,
presenting the underlying concepts that will help cut through the confusion.

**Full cost accounting** is a term often used to describe desirable environmental
accounting practices. Speakers may use it to refer to either or both
"environmental cost accounting" and the "integration of environmental information
into capital investment decisions." How do accounting professionals view these
terms? In traditional accounting circles, "full cost accounting" has a specific
meaning. It is a method of management accounting that allocates all direct and
indirect historical costs to a product or product line. It is generally used in pricing
decisions and profitability analysis. Therefore, to an accountant unfamiliar with
environmental issues, full cost accounting will not necessarily have any
environmental implications.

One way to distinguish an environmental notion of full cost accounting is to
use the term **full cost environmental accounting**. Full cost environmental
accounting embodies the same concept as full cost accounting but adds the
environmental cost elements. **Total cost accounting**, an often used synonym for
full cost environmental accounting, is a term that seems to have origins with
environmental professionals. It has no particular meaning to accountants.

Whether or not one uses these terms to refer to an environmental cost
accounting system or capital budgeting decisions, there is another critical
difference in the way the terms are commonly used. Some professionals use the
terms to refer to a firm’s private costs (i.e., those costs that affect the firm’s
bottom line and that the firm actually pays out), while others include the full
range of private and societal costs imposed throughout the life cycle of a product
(from raw material extraction to product disposal, some of which do not show up
directly or even indirectly in the firms "bottom line." This difference is at the
heart of much of the confusion in environmental accounting. (It confuses those
things that can be remedied easily -- incorporation of private costs -- with those

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7 Allen White and Monica Becker, (Winter, 1992) "Total Cost Assessment: Catalyzing Corporate Self
Interest in Pollution Prevention." New Solutions, p. 34. See also, "Total Cost Assessment:
Accelerating Industrial Pollution Prevention through Innovative Project Financial Analysis, With
Applications to the Pulp and Paper Industry," U.S Environmental Protection Agency (May, 1992)
EPA/741/R-92-002.

8 Full cost pricing is a less-used term sometimes used as a synonym for the expansive view of full
cost environmental accounting. As used by Frank Popoff, Dow Chemicals President, Chairman and
that are more difficult to address -- internalizing external costs.) Being able to understand and recognize how someone is using the terms will do a great deal to advance full cost environmental accounting and capital budgeting.

Figure 4 provides a graphical representation of this important difference between private and societal costs.

**TYPES OF ENVIRONMENTAL COSTS**

![Diagram of Types of Environmental Costs]

The inner box labeled "conventional company costs" includes the many costs businesses typically track pretty well. Many of these costs are directly allocated to the products or processes responsible for them in the cost accounting system and are included in the financial evaluation of capital expenditures. The larger shaded box marked "total company costs" includes all of the hidden, indirect and less tangible costs a business faces. These costs include some external costs that government has internalized through laws and regulations. Examples of these costs include environmental regulatory costs, waste management costs, future liabilities, and intangibles, such as enhanced company image from being an
environmentally sensitive company. Exhibit 1 provides an extensive listing of these costs. The problems arise because many of these costs are assigned to overhead cost pools and excluded from financial evaluations of new capital investments. The more difficult to estimate costs such as future liability and corporate image may not be estimated at all and will not show up in the cost accounting system or in a capital investment analysis. Nevertheless, all of these costs are real costs that the business pays or real revenues that the business receives. Note also that environmental costs have increased and will continue to increase with future government regulation. Regulation pushes out the frontier of the company’s total costs.

The outside box labeled "external societal costs" captures those costs that a business imposes on society but does not actually have to pay. For example, damage caused to a river because of polluted wastewater discharges, or to asthmatics because of air pollutant emissions, or to ecological systems from mining raw materials are all forms of externalities, or external costs, that a business does not currently pay. They may someday be internalized by government regulation. Together, the total company costs and the external costs equal the full costs.

For some people, full cost accounting, full cost environmental accounting and total cost accounting refer only to those costs within the shaded box labeled total company costs. For others, they refer to the full costs, including societal costs. Undoubtedly, everyone will agree that in the long run businesses should include the full costs of their activities in their decisions. At present, internalizing the external costs is both difficult and controversial. Not the least of these problems are estimating costs, and the impact internalizing them would have on competitiveness among U.S. businesses and between U.S. businesses and their world wide competition. Among professionals, economists rather than accountants tend to focus on these issues.

Because of these difficulties, in the short run it seems reasonable that all businesses should integrate private environmental costs into their cost accounting systems and into their capital budgeting decisions. This step is not difficult. It can be done with existing accounting and financial analysis tools. Companies should start with those costs that they know the most about and work out to the more difficult to estimate private costs such as liabilities, corporate image, etc. In many instances, it may be unnecessary to quantify these difficult to estimate costs and revenues to justify an investment in cleaner technologies because the more easily measured costs and benefits justify the investment. Ultimately, business should strive to include these probabilistic and difficult to estimate costs as well as external costs in these costing and capital investment systems. The best advice is to go as far as you can in integrating environmental costs into cost accounting and capital budgeting systems.
If one understands this basic distinction between private and social costs, it will be possible to hold a conversation with anyone interested in management accounting for environmental costs.

Other terms have come to be used to explain the concepts elaborated above. Most of the them have originated with environmental professionals, not with accountants. The ensuing pages provide an overview of the following terms: total cost assessment, and life cycle assessment, life cycle analysis, and life cycle cost analysis.

**Total Cost Assessment** (TCA) has come to represent the process of integrating environmental costs into a capital budgeting analysis. It has been defined as the long-term, comprehensive financial analysis of the full range of internal (i.e., private) costs and savings of an investment (White and Becker, 1992). It can be used to compare an existing process to a new process or to compare several new process options.

TCA has six essential components when evaluating a potential investment. The six steps are critical because they help place pollution prevention investments on a level playing field with other investments. Step one is to expand the inventory of costs and revenues considered in the analysis to include as many of the costs and revenues needed to demonstrate the financial viability of a cleaner technology investment. The cost categories identified in Exhibit 1 below provide a useful checklist. Begin with the easiest to estimate direct and indirect costs and revenues and work toward the more difficult to estimate and less tangible environmental costs and benefits such as liabilities and improved corporate image.

Step two is to collect environmental cost data and allocate those costs and revenues more directly to the products, processes or activities that are responsible for generating them. Step three is to use appropriate financial indicators that include the time value of money (a dollar today is worth more than a dollar next year). Sound financial indicators include net present value, internal rate of

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9 Adding to the confusion, the acronym for total cost assessment (TCA) is the same as the acronym from total cost accounting (TCA).

10 The Tellus Institute developed the total cost assessment approach. As developed, it contains the first four steps. A fifth and sixth step have been added to take into consideration the qualitative impacts of the investment decision and to properly prepare the information for managers or financial lenders.

11 The present value of the future cash flows of an investment less the investments current cost. It incorporates the time value of money (i.e., that one dollar today is worth more than one dollar one year from today.
return,\textsuperscript{12} and other profitability indices. The fourth step is to consider cash flows and the profitability of a project over a sufficiently long time horizon to capture the long-term benefits of pollution prevention solutions. Fifth, analyze qualitatively those data and issues one cannot easily quantify. Sixth, and finally, prepare the data and information in a format that managers and lenders can understand and find useful.

What costs should be included in an environmental cost accounting system or in a total cost assessment analysis? There are many types of environmental costs: (1) direct, (2) indirect, (3) liability, health and safety, (4) intangibles and (5) externalities. These costs range from those easiest to estimate to those more difficult if not impossible to quantify. Exhibit 1 provides a useful checklist.

Environmental Cost Elements
Exhibit 1

\begin{table}[h]
\centering
\begin{tabular}{|l|}
\hline
\textbf{Direct Costs} \\
\hline
Capital Expenditures \\
- Buildings \\
- Equipment Installation \\
- Project Engineering \\
Operation and Maintenance Expenses and Revenues \\
- Raw Materials (include energy and water) \\
- Labor \\
- Waste Disposal \\
  - Disposal fees \\
  - Waste Taxes \\
  - Transportation Fees \\
- Utilities \\
- Value of recovered material \\
\hline
\end{tabular}
\end{table}

\begin{table}[h]
\centering
\begin{tabular}{|l|}
\hline
\textbf{Indirect Costs} \\
\hline
Administrative and Regulatory Compliance Costs \\
- Permitting \\
- Recordkeeping \\
- Reporting \\
- Labeling \\
- Monitoring \\
- Preparedness \\
- Manifesting \\
- Protective Equipment \\
- Sampling \\
- Closure/post closure assurance \\
- Insurance \\
- Workman’s compensation \\
- On-site Waste Management \\
- On-site Pollution Control Equipment \\
\hline
\end{tabular}
\end{table}

\textsuperscript{12} The discount rate at which the net present value of a project is equal to zero.
Life cycle assessment is a holistic tool used to identify the environmental consequences of a product, process, or activity through its entire life cycle and to identify opportunities for achieving environmental improvements. By itself, it does not include a costing element. The four components of a life cycle assessment are: (1) determining the boundary around the system to be studied, (2) developing and inventorying the environmental impacts of the product or process being studied, (3) translating the inventory into environmental impacts, and (4) recommending improvements. Life cycle analysis is sometimes used as a synonym for life cycle assessment. The U.S. EPA subscribes to the life cycle assessment term. Neither term captures the costing dimensions of conducting an analysis, however.

Life Cycle Cost Assessment does address the costing aspect of life cycle assessment. It is a systematic process for evaluating the life cycle costs of a system by identifying life cycle cost items, assigning measures of value to those items, and evaluating options for reducing the total life cycle cost and optimizing the use of scarce resources. A life cycle cost assessment includes all private and social (or internal and external) costs identified with a product, process, or activity throughout its lifetime, from raw material acquisition to disposal of final...
waste materials.\textsuperscript{14} A true life cycle cost assessment (including private and social costs) cannot be done without some form of life cycle assessment.

Life cycle cost assessment is subject to the same sort of confusion that has plagued full cost environmental accounting. As explained previously, some people say full cost environmental accounting refers only to private costs while others say it refers to both private and social costs. Some organizations, including EPA and the Society for Environmental Toxicology and Chemistry, use life cycle assessment and life cycle cost assessment, in the broadest sense, from raw material extraction to ultimate disposal of the product or system. The Defense establishment in the United States also uses the term. It tends to use it to describe the life cycle of a system from its acquisition to its decommissioning. The defense community, therefore, uses the concept somewhat more narrowly than the U.S. EPA. Regardless, the importance is to recognize the different uses of terms and to be able to identify underlying concepts. The key concept is to determine whether someone is using the terms to include private and social costs.

In summary, a successful environmental management system must have a full cost environmental accounting system and should integrate environmental costs into capital allocation decisions. At a minimum, private environmental costs should be integrated into cost accounting and capital budgeting processes. Where private costs are difficult to estimate or intangible, and there is little management support for integrating them, then handle them qualitatively, particularly in requests for capital. Achieving these ends is the surest way to find ways for business and environmental protection to exist harmoniously.

The more expansive efforts to integrate societal impacts and costs into business decision making must continue and expand. It will not be as easy as integrating private costs and impacts. Most of our decision systems do not currently support such proactive and prospective decision making. The capital markets do not yet have adequate ways to evaluate the financial performance of progressive companies who do so. Nevertheless, many companies are at the leading edge of efforts to overcome these barriers. And for all practical purposes, we have no choice but to find answers to these difficult questions.

It is going to be some time before external impacts and costs can be integrated fully into cost accounting systems, capital allocation processes and general business decisions. Success is going to depend on continued dialogue

between and among the key professional groups, including designers, chemists,
accountants, economists, financial managers, and environmental managers. It will
also depend on governments' ability to find creative market-based mechanisms to
internalize external costs. And, finally, it will depend on a changing set of
consumer and societal preferences for sound environmental practices. Everyone
has a role to play. The federal government is taking a creative approach to
addressing these issues.

**EPA’s Management Accounting and Capital Budgeting for Environmental Costs
Project**

EPA’s Design for the Environment Program working cooperatively with key
stakeholders to "to encourage and motivate businesses to understand the full
spectrum of environmental costs and integrate these costs in decision making." The Agency is doing so by encouraging the development and use of improved cost
accounting and capital budgeting practices." Most of the Agency’s efforts have
been designed to facilitate dialogue, develop, pilot and disseminate tools, develop
curricula, and promote research and disseminate findings.

Through a series of focus group meetings and a national meeting of experts
held in December, 1993, major stakeholders\(^\text{15}\) in this issue have crafted an Action
Agenda.\(^\text{16}\) According to the Stakeholders, there are four overarching issue areas
that require attention to advance environmental accounting (1) better
understanding of terms and concepts, (2) creation of internal and external
management incentives, (3) education, guidance and outreach (which has been a
near term focus of EPA’s activities, and (4) development and dissemination of
analytical tools, methods and systems. The Action Agenda also identifies critical
activities for each of 10 stakeholder groups.\(^\text{17}\)

EPA is committed to new partnerships and new ways to advance full cost
environmental accounting and capital budgeting. Interested parties may obtain a
variety of materials from the EPA’s Pollution Prevention Information Clearinghouse
(PPIC):

\(^{15}\) the U.S. Chamber of Commerce, the Business Roundtable, the American Institute of Certified
Public Accountants, the Institute of Management Accountants, AACE International (the Society of Total
Cost Management), and the U.S. EPA co-sponsored the Workshop.

\(^{16}\) "Stakeholder’s Action Agenda: A Report of the Workshop on Accounting and Capital budgeting
for Environmental Costs," December 5-7, 1993; EPA 742-R-94-003 (May 1994).

\(^{17}\) The ten group are: business accountants, business financial managers, business environmental
staffs, business operations staffs, accounting and other professional societies, education and research
institutions, consultants, small business, and government.

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• Project Fact Sheets
• Information and resources available from EPA & other outside organizations
• EPA’s Environmental Network for Managerial Accounting and Capital Budgeting
• Annotated bibliography of sources of pollution prevention (P2) case studies
• Spreadsheet summary of P2 case studies with economic information (i.e. savings from P2)

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