

Corporate Environmental Strategy

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Corporate Environmental Organizations: Evolving Business Management Strategies

Elizabeth Karan and Richard MacLean

While there is extensive literature on the evolution of corporate environmental management, there is relatively little information published on the impact that these transitions have had on business management strategy as it relates to the organization and staffing practices for this activity. Ongoing research at the Center for Environmental Innovation suggests that the current model for environmental staffing and organization is outdated and that the time may be ripe for a fundamental shift in how these activities are managed within corporations. This article provides an overview of how environmental, organizational and staffing approaches have evolved within the context of events that have unfolded over the past several decades. It suggests what may be in store for the future: realignment along four major activity areas that are disbursed and embedded largely within existing business functions. Movement away from the manner in which environmental activities are currently managed will not be easy and will require business executive leadership.

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Introduction

Corporate attitudes towards environmental issues have undergone a dramatic transformation in the last forty years. At the turn of the 20th century, little attention was paid to the environmental impact of industrial activities. Pollution was accepted as a necessary by-product of economic development, as reflected in the popular slogan whereby noxious odors represented the “smell of money”.¹ Driven by union pressure and public outrage over working conditions (as portrayed in Upton Sinclair’s 1906 classic *The Jungle*), safety was the dominant issue through the 1950s.

¹ Stuart L. Hart, “Business Decision Making About the Environment,” in *Better Environmental Decisions: Strategies for Governments, Businesses and Communities*, eds. Ken Sexton, Alfred A. Marcus, K. Williameaster, and Timothy Burkhardt (Washington DC: Island Press, 1999), 77-90.

Beginning in the 1960s, a popular environmental consciousness arose that resulted in increasingly stringent regulations and greater industry accountability for the environment. While scholars have described the evolution of corporate environmental awareness as a progression through at least three broad stages that are categorized by independent external drivers and internal organizational transitions,² they also suggest that the evolution of environmental management has not necessarily been smooth or uniform across industries. Today, “corporate social responsibility” and “sustainable development” are emerging as a fourth stage, with new standards measuring business competitiveness and success.

While extensive research has been devoted to these transitions, there is relatively little published information on the impact that these transitions have had on management strategy as it relates to corporate environment, health and safety (EHS) organizational practices. The purpose here is to provide an overview of how management organizational approaches and strategies have evolved within the context of events that have unfolded over the past several decades and what may be in store for the future.

The 1960s

Beginning in the 1960s, the acceptance of industrial pollution emissions as “business as usual” began to fade away as public awareness of the impacts of these activities on human and environmental health increased. The publication of Rachel Carson’s seminal book *Silent Spring* in June 1962 proved to be very influential, drawing attention to the negative effects of chemical pollution. In particular, the pesticide DDT was vilified for its persis-

tence in the environment and effect on raptors. Around the same time, pesticide pollution was also implicated in several massive fish kills in the Midwest, including one involving over one million fish deaths on the Mississippi River in 1964.³

While these were not unique events, nor were they the worst effects of industrial pollution to date, the growth of public scrutiny on industry’s environmental activities led to the emergence of pollution regulations at the local, state and federal level, necessitating a corporate response. Despite this, there remained a culture of denial amongst business managers. Corporations responded reactively to these regulatory pressures, in general, viewing investment in environmental controls as a drain on corporate profits. In this pure problem-solving stage, firms typically did not allocate permanent staff or budget resources to address these matters and environmental activities reflected the dominant management strategy of cost minimization.

Perceived as a “problem for engineers,” pollution issues were generally handled on an ad-hoc basis by part-time efforts of the manufacturing or operations engineer within firms.⁴ Stand-alone environmental organizations were rare and formalized training within universities fell to the civil engineering departments that graduated “sanitary engineers” specializing in water treatment systems. Health and safety activities typically fell within employee relations, since these activities were viewed as an extension of labor relations. The corporate focus was on end-of-pipe technological solutions to address waste disposal issues, typically through wastewater treatment or conveyance systems, process vapor emission recovery or conveyance, and solid or liquid waste disposal.

² One of the best summations of these stages is presented by Ans Kolk and Anniek Mauser, *The Evolution of Environmental Management: From Stage Models to Performance Evaluation*, *Business Strategy and the Environment*, *Bus. Strat. Env.* 11 (2002): 14–31.

³ Andrew J. Hoffman, *From Heresy to Dogma: An Institutional History of Corporate Environmentalism* (San Francisco: The New Livingstone Press, 1997), 52.

⁴ *Ibid.*, 47–63.

The 1970s

In the following decade, the legacy left by Carson's *Silent Spring* was characterized by the prominence of environmental issues and the passage of several landmark environmental regulations including the Clean Air Act, the Clean Water Act, the Toxic Substances Control Act and the Resource Conservation and Recovery Act. On April 22, 1970, the first Earth Day celebration was held and later that year President Nixon formed the Environmental Protection Agency (EPA).

At the EPA, existing environmental programs (previously housed within various federal offices) were consolidated under a central administrative regulatory body. The adversarial approach of the EPA's first administrator, William Ruckelshaus, set the tone for government and industry relations during this era. As a result, a "command and control" regime emerged whereby government regulations often prescribed "best available technology" to control end-of-pipe pollution; compliance was thrust upon industry.

With few exceptions, firms during this time viewed their environmental responsibility in terms of simply obeying the law through regulatory compliance. Dedicated EH&S departments began to emerge in medium to large corporations, initially staffed with technical specialists and engineers transferred from other departments. Universities began to respond to the growing demand for these specialists by offering new courses in the environmental sciences.

Depending on the firm, these new environmental departments operated on many different levels within the organization. Initially, the focus was on site-level issues, then business units and finally, on the corporate-level with the advent of federal legislation requiring company-wide coordinated responses. These departments generally remained isolated from core business functions. New routines were incorporated with minimal disruption to the existing business strategies or organizational

structures. Human resources departments typically retained oversight of health and safety issues since the synergies gained by consolidating EH&S resources were not apparent to business managers.

While environmental management continued to focus on controlling waste pollution at the site-level and technical compliance with the law, the adversarial legal environment established by the EPA and vilification of industry by environmental activists and the media fostered a defensive posture within the business community. As the decade progressed, other departments became more involved in corporate environmental issues, specifically public relations, legal affairs, and government relations.

In 1978, the discovery of nearly 22,000 tons of toxic pollution from a former industrial waste disposal site buried beneath the residential neighborhood of Love Canal, NY directly challenged the traditional corporate approach to environmental management. The Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as the Superfund Act, was a direct legacy of Love Canal.⁵ The legislation held corporations responsible for their historic toxic waste disposal practices requiring payment for the clean up and remediation of abandoned and inactive waste disposal sites.

Aside from this additional financial liability, the cost of compliance with environmental regulations was steadily rising with firms in the United States spending more than 2 percent of GNP on pollution control in the 1970s and 1980s.⁶ The multi-million dollar cost of remediation and regulatory mandated pollution control projects had a profound effect on the corporate response to regulatory initiatives. Environmental issues began to attract the attention of top executives and boards of directors. Department staffing (headcount) was steadily increased to meet the

⁵ Ibid, 78-80.

⁶ Hart (1999), 79.

growing regulatory demands. Executives wanted assurance that these issues were being properly managed and as a result, both the size and sophistication of corporate staffs grew.

The 1980s

Amidst industry pressure against overly confrontational enforcement, EPA and civil lawsuits against industry began to decline in the late 1970s. However, this reprieve proved to be short-lived. While the 1980s began with the Reagan Administration's attempt to "dismantle and deinstitutionalize" environmental issues, under Administrator Ann Burford Gorsuch, the EPA pursued a cooperative relationship with industries that suffered negative publicity due to closed meetings and rumors of secret deals.⁷ Gorsuch was forced to resign in 1983 and, in an effort to repair its tainted reputation, the EPA revived its adversarial stance by reinstating former Administrator Ruckelshaus.

The 1984 disaster at a plant in Bhopal, India, where methyl isocyanate was released killing over 3,000 people and injuring another 300,000, inspired immediate concern within the chemical industry as local communities hosting chemical plants throughout the United States became aware of the potential threat in their backyard.⁸ During the 1980s, Love Canal, Times Beach, Exxon Valdez and so on provided the media with a seemingly endless supply of stories, keeping environmental issues at the forefront of the public consciousness and motivating a new wave of federal regulations. The aim of legislation was to increase industry's accountability to the

public for the environmental impact of their operations.⁹

In this new era of public disclosure, pollution was becoming a political liability and an image-damaging lightning rod. Business managers began to conceive of an environmental strategy that moved beyond standard regulatory compliance; the value of "social accountability" emerged. Drawing on experience from earlier pollution prevention initiatives, such as 3M's Pollution Prevention Pays (3P) program, companies began to realize the potential cost saving, risk reduction, and public relations benefits of pursuing a voluntary strategy of environmental stewardship. Introduced in 1975, the 3P program stood in stark contrast to the prevailing business attitude towards environmental management. By the mid-1980s, Dow chemical started its Waste Reduction Always Pays (WRAP) program and Chevron instituted an initiative called "Save Money and Reduce Toxics" (SMART).

With this "beyond compliance" mindset, corporate attention shifted from end-of-pipe control to identifying "win-win" opportunities that realized substantial cost savings and pollution reductions. As their scope expanded from regulatory compliance to process control and corporate strategy, EH&S resources became increasingly less centralized and environmental responsibilities became more diffused throughout the organizational structure.¹⁰

At the same time, the core functions of the EH&S field were becoming institutionalized; a professional environmental culture was

⁹ For example, Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) established the Toxics Release Inventory, which required companies to publicly report all forms of pollution created at their plant.

¹⁰ John R. Ehrenfeld, "Cultural Structure and the Challenge of Sustainability," in *Better Environmental Decisions: Strategies for Governments, Businesses and Communities*, eds. Ken Sexton, Alfred A. Marcus, K. Williameaster, and Timothy Burkhardt (Washington DC: Island Press, 1999), 229.

⁷ Hoffman (1997), 86-87.

⁸ Andrew J. Hoffman, "Institutional evolution and change: Environmentalism and the U.S. chemical industry," *Academy of Management Journal* 42 no.4 (1999): 351-371.

emerging with the addition of staff with specialized environmental education and training. Company environmental managers were now directly engaging with environmental organizations, business associations and other corporations.¹¹ At the corporate organizational level, environmental issues continued to gain attention at the executive level. In 1991, approximately half of the Fortune 100 companies and more than two-thirds of Fortune 50 companies had environmental vice presidents.¹²

In addition, environmental managers were increasingly expected to interact with a broad range of stakeholders in this era. As a result, the technical skills that served these individuals well in the 1970s were now considered merely threshold competency and environmental consulting firms emerged to undertake many of the standard corporate pollution prevention and clean technology-switching efforts. Health and safety departments were frequently “rolled under” environmental department managers who often had significantly greater staffs and budgets than those of their health and safety colleagues. In some companies, this caused consternation among health and safety managers who considered themselves to be on an equal organizational footing as the environmental manager; their functions were just as important, if not more important, than those of the environmental group. This tension continues, even today, within some companies.

The 1990s

The 1990s marked a move towards a new paradigm for environmental issues. In the late 1980s, the scientific discovery of a hole in the Earth’s ozone layer stimulated global attention to pollution concerns. The Montreal Proto-

col, an international United Nations treaty aimed at halting the production of ozone-depleting chemicals worldwide, was signed in 1987. The success of the negotiation process leading to the Montreal Protocol inspired further attention to global environmental problems and, in 1988, concern over global warming emerged on the political scene.

This momentum culminated in international agreements on climate change and biodiversity negotiated at The Rio Earth Summit in 1992 and popularly introduced the concept of “sustainable development” in the text of Agenda 21. In the wake of the Rio Summit, the Business Council for Sustainable Development (BCSD) an industry association of companies with members including prominent multinational corporations such as Dow Chemical, Du Pont and Royal Dutch/Shell was formed. The BCSD published a book entitled *Changing Course: A Global Business Perspective on Development and the Environment* and ushered in a new generation of “beyond compliance” strategies to the lexicon of corporate environmental management, including concepts such as full-cost pricing, life-cycle analysis, design for the environment, and stakeholder partnerships.¹³

The 1992 Rio Summit represented the height of prominence for environmental issues, after which corporate environmental departments began to shrink rather than grow in size. Prior to this date, environmental departments had grown rapidly to meet the regulatory deadlines of legislation passed over the previous two decades. A combination of these deadlines, plus business management’s concern over the company’s image, their own personal liability, and unfamiliarity with the regulations had previously inoculated environmental departments from staffing cutbacks, even during business downturns.

¹¹ Andrew Jamison, “Environmentalism in an Entrepreneurial Age: Reflections on the Greening of Industry Network,” *Journal of Environmental Policy & Planning* 3 (2001): 5.

¹² Hoffman (1997), 107-140.

¹³ Carl Frankel, *In Earth’s Company: Business, Environment, and the Challenge of Sustainability* (BC, Canada: New Society Publishers, 1998), 47.

However, as the 1990s progressed, a number of factors converged to profoundly impact how corporations ran their operations, allowing for greater realignment and integration of environmental responsibility. First, the EPA began shifting to a regulatory paradigm that focused more on voluntary and market-incentive schemes. As a result, the regulatory burden began to level off in many industries and responding to regulatory pressures became routine. Second, industry networks emerged to establish “corporate environmental norms” and coordinate actions.¹⁴ For example, in response to the accident at Bhopal, the Chemical Manufacturers Association initiated their Responsible Care Program in 1990, which outlined a set of proactive environmental principles that all members of the trade association are required to adopt.

Another major influence was the development of environmental management systems (EMS), specifically ISO 14001, and environmental management information systems (EMIS), which standardized environmental practices allowing for greater decentralization and integration of environmental functions with other business responsibilities. While these systems were available on an individual and custom-built basis during the 1980s, these tools became “off the shelf” commodities more readily available to a greater number of corporations towards the end of the 1990s.

With the regulatory onslaught of the previous two decades and the growth of standardized environmental management approaches, business managers became increasingly comfortable with how environmental issues were handled at all organizational levels. As a result, environmental department activities became viewed as primarily service-type functions and were swept up in the wave to reengineer service groups in the mid to late 1990s.

Outsourcing and centralization of shared service groups became *en vogue*. There were

shifts to centralization from decentralization and vice versa, depending on a particular company’s perception of what constituted the most cost effective and efficient model for “service” organizations. Progress toward positioning environmental issues and opportunities as core strategic business matters was stalled. As Robert Shelton characterized it, environmental managers had hit a “green wall.”¹⁵

Today

Today, corporate social responsibility and sustainable development have become concerns for many companies, prompting the development of new metrics for measuring shareholder value and business competitiveness. Still, regulatory compliance, fire fighting, and public relations continue to dominate the agenda. In a number of recent studies in the United States and Europe, researchers have concluded that, indeed, these emerging topics are now being discussed at the board level, but the translation of these concepts into a fundamental shift in corporate business strategy has not occurred for the vast majority of corporations.¹⁶

The reasons for this lack of forward progress are obvious in some cases: issues such as the economy, terrorism and corporate malfeasance have competed for management’s and the public’s attention. Environmental conditions in the United States have gradually improved in most areas, as claimed by the EPA in its most recent status report. Many of the most visible environmental problems in the

¹⁵ Robert D. Shelton, and Jonathan B. Shopley, *Hitting the Green Wall*, (Cambridge, MA: Arthur D. Little, 1995).

¹⁶ See for example – Ernst & Young, *Corporate Social Responsibility - A survey of Global companies, 2002*; PricewaterhouseCoopers, *Sustainability Survey Report, August 2002*; and Chris Hibbitt & Nancy Kamp-Roelands, *Prudently Protecting Profits? The (Mild) Greening of Global Corporate Management*, Technical Department of Royal NIVRA (Koninklijk Nederlands Instituut van Registeraccountants), Amsterdam, the Netherlands, March 2001.

¹⁴ Hoffman (1997), 107-140.

United States have been addressed and as a result, media reporting and public concern has waned. Less obvious is the fact that many of the senior environmental executives that “grew up” with the environmental activist movement have retired or are on the verge of retirement. Replacements sometimes lack the experience, are consumed by day-to-day fire fighting, or may be unwilling to aggressively push for major change in an atmosphere dominated by corporate downsizing.¹⁷

Not surprisingly, departments continue along a functional model (i.e., what the typical environmental organization is responsible for), substantially formed in the 1980s. It is a model familiar to today’s executive business managers who were exposed to it during their mid-level careers (i.e., they are comfortable with it). Environmental departments tend to be viewed by executives as overhead and environmental staffs are under tremendous pressure, similar to other business staff departments, to hold or cut costs and do more with less. For example, at the site level, environmental professionals are being asked to take on much broader assignments.

Some environmental organizational change has occurred in response to recent concerns for corporate governance and social responsibility. Companies such as Con Edison and Arizona Public Service have transferred their environmental auditing staffs into corporate business governance departments. Other companies such as Procter & Gamble and Intel have created senior level positions to address corporate social responsibility issues. Still, the question remains as to whether or not these changes can sufficiently address emerging environmental issues and opportunities. We suspect not.

¹⁷ R. MacLean and Frank Friedman, “Green Arthritis,” *The Environmental Forum*. Environmental Law Institute 17, no. 6, (Nov./Dec. 2000): 36-49.

Tomorrow

Environmental issues are undergoing a fundamental shift from local/regional process-centric concerns to global concerns involving product and supply chain competitive dynamics. Volumes have been written on the subjects of social responsibility and sustainable development, but when you distill these concepts there is a common thread: corporations will be held accountable for responsibly using resources, both human capital (e.g., employees, the community, and other stakeholders) and natural capital (e.g., the earth’s resources).

Most companies, at least on a public relations level, have acknowledged the need for a new approach. A few major companies such as BP, Shell, and DuPont appear to be taking more concrete, albeit initial, steps to reposition their business strategies. Still, many environmental departments appear to be stuck in an earlier decade – a time when regulatory compliance, process cost cutting, and public relations defined corporate environmental activities.

Ongoing research at the Center for Environmental Innovation, with which we are associated, suggests that the environmental activities in the future will be aligned along four dimensions:¹⁸

- *Transaction services*, including the fundamental services that EH&S departments or outside service-providers deliver, such as permit writing, industrial hygiene monitoring, and compliance management;
- *Governance* functions which, in contrast to traditional compliance audits, are related to the fiduciary and oversight duties of the Board of Directors and as such include management system audits and certain due diligence investigations;
- *Internal and external human resource development* which consists of communications to

¹⁸ See website <http://www.Enviro-Innovate.org> and the research program Organizations in Transition.

internal and external stakeholders, culture change, key training programs, and external policy development and lobbying support. These resources are responsible for stakeholder influence and development, both internally and externally; and

- *Strategy*, which consists of the overall strategic position of the company for long-term sustainability. It is heavily focused on products and services, R&D, strategic issues involving internal and external stakeholders, operating permits, emerging technical, legal or social issues, and strategic planning.

Most large corporate environmental departments incorporate these dimensions to some degree. These activities do not need to be, and more than likely should not be, consolidated into a single EH&S corporate organization. Indeed, there is already movement under way to separate some of these activities, as illustrated by the previously mentioned transfer of environmental auditing to corporate governance groups.

Organizational structure has a very significant impact in the extremes, namely if *all* environmental activities are outsourced, decentralized or consolidated, effectiveness suffers. However, there is an infinite range of possibilities in between. The key determinants are (1) how these activities are efficiently handled within the company; and (2) the level of management understanding of EH&S contribution to business value. A groundbreaking five-year study by Nohria, et. al. concludes that “what really works” in the business world is not a particular organizational structure but how the organizational structure can simplify the work and “force open the boundaries [to] get divisions, and departments cooperating and exchanging information.”¹⁹ In this regard, environmental organizations have been less than

efficient and isolated from business strategy (a continuation of the Green Wall syndrome).

What might this environmental organization of the future look like? It will not be one of the organizational extremes previously mentioned. These options are just too inefficient in addressing the full spectrum of competitive issues and opportunities. Nor will it be some single, universally applied organizational template across all industry sectors. The future structure in a particular company will be made up of a collage of best practices that may work well in some companies and very poorly in others. The challenge is to find the right combination.

Indeed, there may no longer be an “environmental department”. Instead, resource issues surrounding human and natural capital may disperse thought out the organization strategically, led by a new breed of senior executives. The early signs of all of these changes are already underway: from the dispersing of EH&S activities to the formation of new positions with broader titles that do not even include the word environment.

Conclusion

In the last half-century, corporate attitudes towards environment, health and safety issues have evolved from maintaining plant utility systems to broader issues involving stakeholder involvement, beyond compliance activities and voluntary initiatives. This evolution over time in corporate strategies is illustrated in Table 1. As we have described, each decade has been accompanied by an evolution in the approach to how environmental activities are organized, staffed and managed within corporations.

Talk of social responsibility and sustainable development has made it into the lexicon of corporate officers and boards. Progress has, in our view, been painfully slow. The time may be ripe for a fundamental shift in how environmental activities are organized and managed within corporations. The current

¹⁹ N. Nohria, W. Joyce, and B. Robinson, What Really Works, *Harvard Business Review*, July 2003, Page 50.

model, we believe, is outdated and ripe for significant advancement. Changes will not be easy, however, since as with any organizational transformation, careers and turf are at stake. It will require executive leadership, akin to the leadership and courage that will be required to lead corporations on a truly sustainable and socially responsible path. Which corporations will step forward?

**Table 1
Business Strategy Evolution**

	Stage	Strategy
Pre 60s	Minimalist	<ul style="list-style-type: none"> • Maintain “utility” systems
70s	Compliance	<ul style="list-style-type: none"> • React to / minimize regulatory burden
80s	Image Management	<ul style="list-style-type: none"> • Manage public image
90s	Process Cost Reduction Management Efficiency	<ul style="list-style-type: none"> • Build compliance infrastructure and remediate at lowest cost • Reduce process waste and staff overhead costs
00s	Stakeholder Management	<ul style="list-style-type: none"> • Respond to external stakeholders and protect brand and licenses
Future ?	Resource Management	<ul style="list-style-type: none"> • Human and natural capital optimization



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Editor in chief, Don Smith, provides a thought provoking **Editorial** in each issue. The **Articles** and **Commentaries** are written by leading sustainability experts and opinion leaders. Some of those same leaders provide their unique insights in the journal's exclusive **Interviews**. In addition to the comprehensive **Table of Contents**, **Calendar** and **Index** which are updated with each issue, *CES Journal* includes **Legal & Legislative Developments**, and **In the News** sections, which focus on late-breaking news and trends about sustainable business. The **Resource Review** section now includes reviews of **Books**, **Conferences** and **Software**.

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The screenshot shows a Microsoft Internet Explorer browser window displaying the website for Corporate Environmental Strategy. The page title is "Sample Content - Microsoft Internet Explorer". The address bar shows "http://www.corporate-env-strategy.com/Pages/SampleContent.htm". The website header includes the logo "CES" and the text "Corporate Environmental Strategy International Journal of Corporate Sustainability" with the ISSN 1066 7938. A navigation menu contains "Home", "About Us", "Submissions", "Subscriptions", and "Contact Us". The main content area is titled "Sample Journal Content" and includes a description of the journal's format and content types. A vertical navigation bar on the left lists content types: "Sample Content Types", "Tables of Contents", "Editorial", "Article", "Interview", "Commentary & Analysis", "Resource Reviews", "Legal & Legislative Developments", "In the News", "Calendar", "General Information", and "Index". The main content area features a "Sample Journal Content" section with a thumbnail image of a landscape and the text "Corporate Environmental Strategy International Journal of Corporate Sustainability Volume 10 (2003)". To the right of the thumbnail is a vertical navigation bar with tabs labeled "TOC", "Tab 1", "Tab 2", "Tab 3", "Tab 4", "Tab 5", "Tab 6", "Tab 7", "Tab 8", "Tab 9", and "Tab 10". The "TOC" tab is selected, showing a list of content types: "In This Issue; Cumulative Table of Contents", "Editorial", "Articles", "Interviews", "Commentary & Analysis", "Resource Review - Books, Conferences, Software", "Legal & Legislative Developments", "In the News . . . Industry News & Trends", "Calendar", "General Information", and "Index". On the far right, there is a sidebar with text about ordering the journal and viewing PDF files, including an "Order CES" button and an "Adobe Reader" logo.

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