



*Using the profound movements of ocean waters as an analogy, Lauralee Alben has devised a comprehensive analysis that helps organizations navigate major transformations—sometimes through uncharted territory. The many elements of her methodology probe the context, as well as the nature and breadth, of change and exploit design as an essential vehicle for conveying new ideas and perceptions.*



What does the design discipline have to do with human rights in Uzbekistan, anthrax, or September 11th? Or tax-law reform in Australia? Or culture change in Procter & Gamble? A few years ago, I would have said, “Not much.” But by thinking deeply about my professional experience and working hard on creating a new consulting model, called Sea Change, I’ve had a chance to apply myself to these issues, and I’ve begun to say out loud what I’ve always felt: Design sensibility and techniques are uniquely suited to help us grapple with the diverse challenges of our modern condition—alienation combined, paradoxically, with increasing interdependence; economic and political uncertainty; the development of new technologies at a blistering pace; and environmental degradation. Complementing the traditional approaches employed in strategic thinking—numbers and words—design can bring new

perspectives and ideas. No interpretation is necessary, no statistical analysis or complex reports required to experience the insights that design can provide.

It’s easy to think of design as creating a web site for the Monterey Bay Aquarium, or architecting customizable appearances that give people computing freedom, or providing a new brand for the Mac OS—all projects I’ve been involved with. But working on Sea Change has taken me (and my colleagues in the Sea Change Consortium) into uncharted waters, where we find our skills tested and expanded, and where we have had the stimulating opportunity to apply our expertise to critical issues usually seen as well outside the purview of traditional design. And if someone asks, “Hey, what’s a nice discipline like you doing in a place like this?” we can now confidently answer, “A whole lot.”

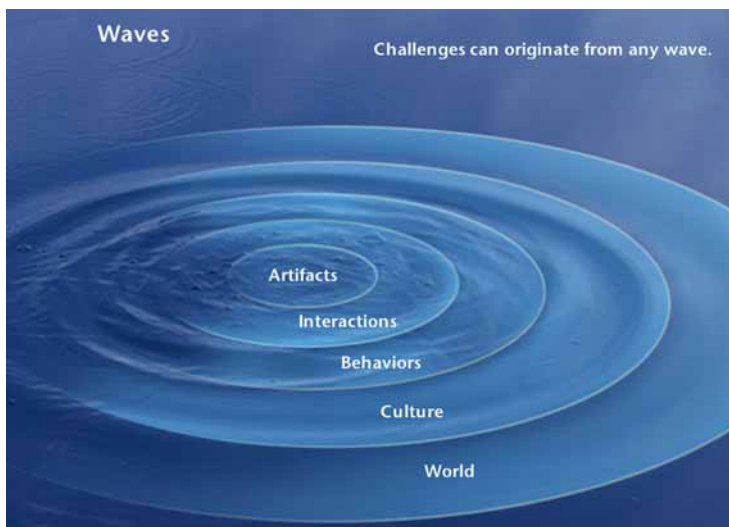
### Designing for sea change

Through magnificent ocean swells, forces are constantly at work shaping and changing the planet. Just as the ocean creates profound effects upon the land, so too, does design affect our lives. The real opportunity is to design for sea change—marked transformation both rich and surprising. This is the intent of the Sea Change Design Process,<sup>SM</sup> a contextual, relationship-based approach to solving challenges in an integrated fashion.

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*Sea Change can be applied to a wide range of activities, from envisioning culture change and strategizing new business initiatives to the creation of products, services, codes of ethics, and law.*

Using proprietary techniques, Sea Change provides insightful ways to help organizations meet today's challenges by creating profound and sustainable change, congruent with their deepest values. It can be applied to a wide range of activities, from envisioning culture change and strategizing new business initiatives to the creation of products, services, codes of ethics, and law. At its core is a model, based on the natural system of the ocean, which creates a fluid framework connecting design, humanity, and our world into one interrelated whole. The ocean is an ancient and timeless archetype expressed in all art forms, legends, and myths. In this model, it serves as a metaphor, illuminating the design of our human experience.



### Becoming aware of the ripple effect

At every moment, we are all rocked by the ripple effects of a myriad of designs launched into the world, sometimes purposefully, sometimes on a bet or a prayer. These ripples, originating from tangible and intangible artifacts, extend outward in ever-widening, concentric circles. They influence our feelings, thinking, ethics, and world views, which in turn affect our shared beliefs and practices. Expressed in culture, the ways in which we come together in communities, organizations, social systems, and countries affect our planet. Global events, both societal and environmental, send repercussions back around again, forming circular patterns of cause and effect that influence what and how we design. The “ripple effect” is a basic tenet of the Sea Change Design Model.<sup>SM</sup> We give considerable time to identifying and analyzing the implications and consequences of actions and artifacts on individuals, cultures, and the natural world over time. Before we do anything else.

Drop a pebble into water; skip a flat, smooth stone across a stream; watch rain pellet the surface of the ocean. The ripples that form from these actions produce a familiar effect. It is common wisdom that every action causes another, which causes another, and another. Every single action each of us takes affects untold others. We all know this principle. Whether we are conscious of it, and whether we choose to act on it at any given moment, is another matter.

Creation occurs when we choose to become aware of the ripple effect before acting; to think hard first; to design before we act. It is in the planning of meaningful actions that design, in its “meta” sense, can create purpose and potential, far beyond what would have transpired in the normal course of events. In an all-too-familiar scenario, which I have witnessed over and over, design is still often thought of and included near the end of the product development cycle, to give something form and a face. Using design strategically, from the very beginning, is an altogether different way of thinking—one worth embracing.

What happens when you design the intentions and relationships you desire first? And then create the actions and artifacts to support those intentions? It becomes very clear that surprising, felicitous, and profound results are possible. Often, the appropriate actions required to accomplish a desired impact are

quite different from the obvious, reactive ones that first came to mind, many of which can turn out to be irrelevant, redundant, or misconceived. The risks are high; the costs, both to the bottom line and to goodwill, higher still. Conversely, using design to create well-planned, transformative solutions can result in positive ripples economically, socially, and environmentally.

A client once said to me, after seeing the Sea Change model for the first time, “Your model forces unity, partnership, and creativity. You want me to buck the entire culture of my organization, where specialization is prized, territories are to be defended, and the easy way out is considered pragmatic?” Delighted that he had grasped the potential of a successful culture change, I grinned and replied simply, “Yes!” There was a very long pause as he considered this, and finally he said, “Does your ocean metaphor include tsunamis?”

The ocean is constantly in motion, from the smallest capillary waves to the tides (longest of all waves, spanning half the earth’s circumference.) What is moving, however, is mostly energy—not water, except in the case of breaking waves and tsunami. Waves are generated from many sources, from very small disturbances: wind, gravity and, in the case of tsunamis, landslides, icebergs falling from glaciers, and underwater seismic and volcanic activity. These cause a major redistribution of water, setting up a huge rolling wave that travels incredibly fast. Depending on the shape of the shore, the power of the wave can be relatively benign or it can be magnified, causing enormous damage: In 1946, a tsunami 30 feet (9 meters) high traveled from Alaska to Hawaii in five hours, at roughly 470 miles per hour.<sup>1</sup>

Organizational tsunami can be equally devastating. They are caused by all sorts of events, originating either as a direct result of actions taking place upon the surface waters, or from the hidden depths below. It’s important to understand the legacy of past waves, as well as to be alert to forces currently in motion that could cause future ones. These include changes in management from restructuring, mergers, transfers, and deaths; difficult product launches; unanticipated product releases by competitors; ground-swell consumer reactions (both negative and positive); and global events of an entirely different order of magni-

tude. Often, the impact is experienced in shock. Reactions can be very emotional, and are often unconscious and unexpressed. The ramifications are severe and lasting.

To even remotely predict or respond to these staggeringly powerful waves, you have to be aware of the circumstances that created them in the first place. However, it is not enough simply to be aware and to plan effective actions. Being in business means strategically managing systems in a relatively controlled environment on an ongoing, sustainable basis, not just solving one-off problems. To create sustainable solutions, it becomes critical to understand the complexities of the context, the relationships, and the flow of results that, taken together, form an integrated view of the business. This, of course, means taking the time to understand these interconnections, discouraging fragmented efforts, and forgoing the temptation to let speed to market drive everything at the expense of quality products and quality of life. Sometimes, a culture change is required.

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When we use the Sea Change Process to design a thoughtful and implementable culture change, we look at everything in order to bring all the parts into an integral, meaningful whole. Often, an organization has never been viewed as such (that forest-for-the-trees problem, or its reverse). We often hear words similar to those of Pat Tinsley, former vice president of education and outreach for the Monterey Bay Aquarium: “The Sea Change Process has shifted not only how I approach my work, but also how I approach my life. It forces participants to challenge underlying assumptions, and to consider outcomes from a world view rather than from a corporate or personal view.”

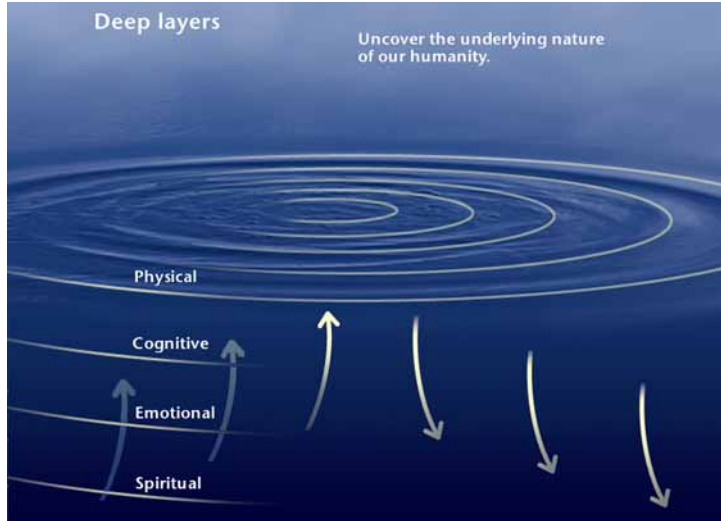
Using the model metaphor, we take into consideration the surface of the ocean, which represents all the identifiable components within the direct sphere of influence of the organization—products, people, the organization itself, resources, events, issues, world

society, and the earth. We study other ripples on the surface—the competition, alliances, adversaries, and industry trends that can either support or hinder desired intentions.

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#### Fathoming the deep

To truly understand a problem or aspiration, we dive into the moving waters below the surface—the deeper levels of our humanity. Most ocean water stabilizes into three layers: the surface, the intermediate, and the deep or bottom layers. Stratification occurs mainly as a result of density, with the colder, saltier (denser) waters sinking to the bottom. However, these waters are constantly circulating, moving vertically through upwelling and downwelling from the warm surface, where the wind, waves, and currents combine, to depths of more than 14,000 feet.



Huge, silent, slow-moving waves move the waters horizontally around the globe. It can take a particle of water thousands of years to travel from the sea ice at the polar ocean surface to the solar-heated tropics; from the submarine canyons of Monterey Bay to the coral cathedrals of the Great Barrier Reef; it makes its journey through this one magnificent ocean, connecting all of us.


The deep symbolizes our physical, cognitive, emotional, and spiritual layers, which eventually influence or are influenced by events or currents on the surface. These include the behaviors, motivations, thinking, and values of customers, clients, and employees. We have found that respectfully and sensitively exploring these depths helps to build trust and partnership within an organization. Surprising and influential things are revealed, bringing awareness to those participating in the process, and a better understanding of the once hidden factors that have caused significant repercussions. Giving people the opportunity to express their feelings of excitement, frustration, and even pain, helps free up blockages and create new energy. It is always most moving to me when we tap into the spiritual layer, where wisdom, creativity, and a profound sense of belonging reside. When there is a lack of these things, when a sense of “family” or “home” is not present within an organization, employees withhold themselves, their talents, and their knowledge. There is less possibility for innovation and informed initiatives.

In a culture change, a high priority is given to uniting the people within an organization, inclusive of their areas of expertise, experience, and humanness. This requires asking lots of penetrating questions in order to understand how the culture is currently functioning and needs to change. What is the existing paradigm—the history, mission, principles, values, products, and practices? Who are the people employed by the organization (at all levels), and what are their deepest passions, concerns, emotions, and beliefs? Looking below the surface provides a wealth of information and insights, not readily recognizable on the surface, yet having a profound effect.

#### Reading the waters

The most dynamic force in mixing the ocean’s waters—surface currents driven by the force of the winds and the warmth of the sun—have a significant impact on circulation around the globe. From the tropics to the poles, currents redistribute the ocean’s energy, affecting climates everywhere. They also redistribute water rich in nutrients and marine life, along with anything else that might happen along, from oil spills and sewage to tennis shoes. Currents are rivers of water, powerful catalysts that direct flow and have far-reaching influences upon the surface, the deep, and the atmosphere. Gyres (of which there are six on our






The **ripple** represents all the identifiable components within the direct sphere of influence—products, people, the organization, resources, events, and issues—viewed as an integral system.

**The ripple effect** is the implications or consequences of actions and artifacts on individuals, cultures, and the natural world, over time.

**Other ripples**—competition, alliances, adversaries, and industry trends—can either support or hinder desired intentions.



The **atmosphere** represents the universal influences that shape your challenge—global forces such as rapid change, increasing alienation, or economic uncertainty.



**Currents** are the actions and artifacts that connect the organization to its customers and the world. These dynamic relationships are interdependent, interconnected, and critical to success.

**Gyres** are self-sustaining currents of influence, circular feedback loops that surface innovative solutions and new possibilities.

**Flow** produces sustainable results in four areas: design integrity, economic prosperity, social responsibility, and environmental stewardship.



The **Sea Change Design Model<sup>SM</sup>** uses a visual metaphor based on an integrated natural system—the winds of the atmosphere, the surface of the ocean and its flowing currents, and the circulating deep water below the surface.

The entire model consists of three cycles. It is used in each phase of the Sea Change Design Process.<sup>SM</sup>

The **deep waters** represent the deeper layers—physical, cognitive, emotional, and spiritual—of our common humanity. These include the behaviors, motivations, thinking, and values of customers, clients and employees that influence or are influenced by events and currents at the surface through **upwelling** and **downwelling**.



**Context**



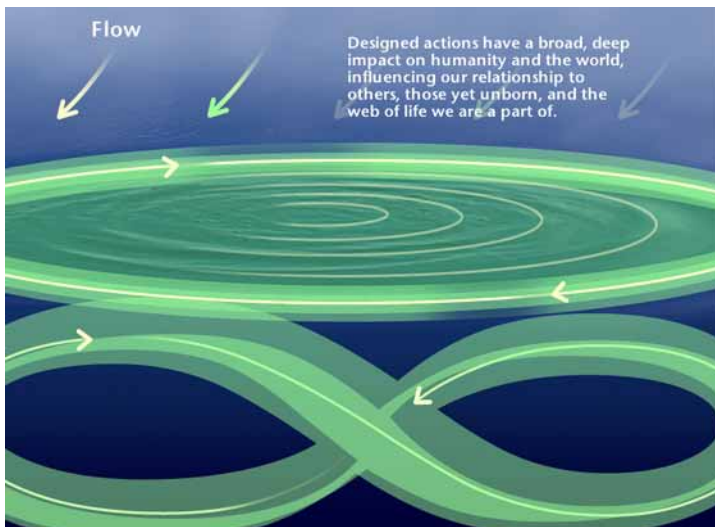
**Relationship**



**Flow**

planet) are massive, elliptical currents that continuously circulate water around the periphery of ocean basins.

We track the flow of design currents—actions and artifacts that connect the organization to its customers, consumers, or clients, and to the world. These dynamic relationships are interdependent, interrelated, and critical to success. Among other things, they provide a fundamental and vital purpose, one that results in brand equity, credibility, and customer loyalty. How cognizant is everyone in the organization of this fact? In what ways do consumers provide the basis for all product design and delivery efforts? How clear are the communications among functional groups and departments? Most important, is there a common view of what a product, service, or system is? Then there are the interconnections among the organization and its competition, partners, and outside suppliers, and the impact of its efforts on the world. A focus of our process is to identify, strengthen, or build gyres. These self-sustaining currents of influence are circular feedback loops that bring to the surface innovative solutions and new possibilities. We ask how all these relationships contribute to a cohesive, well-functioning, interdependent whole. Is there flow—results that reflect design integrity, economic prosperity, social responsibility, and environmental stewardship?



Finding new ways to approach the protection of human rights in Uzbekistan has been one of the most sobering uses of the Sea Change Model. Culture change on the level of a country is an extraordinary

thing to envision. Advising on ombudsman law in a country renowned for human rights abuse requires temerity, wisdom, humility, and global street smarts, all of which Dean Gottehrer, an international ombudsman consultant for the United Nations, possesses in quantity. Uzbekistan, once infamous for its cities on the Silk Road, is now, as everybody knows, pivotal in the Afghanistan war. Uzbekistan's human rights issues now ripple out to America's military, the Green Berets, the State Department, and beyond.

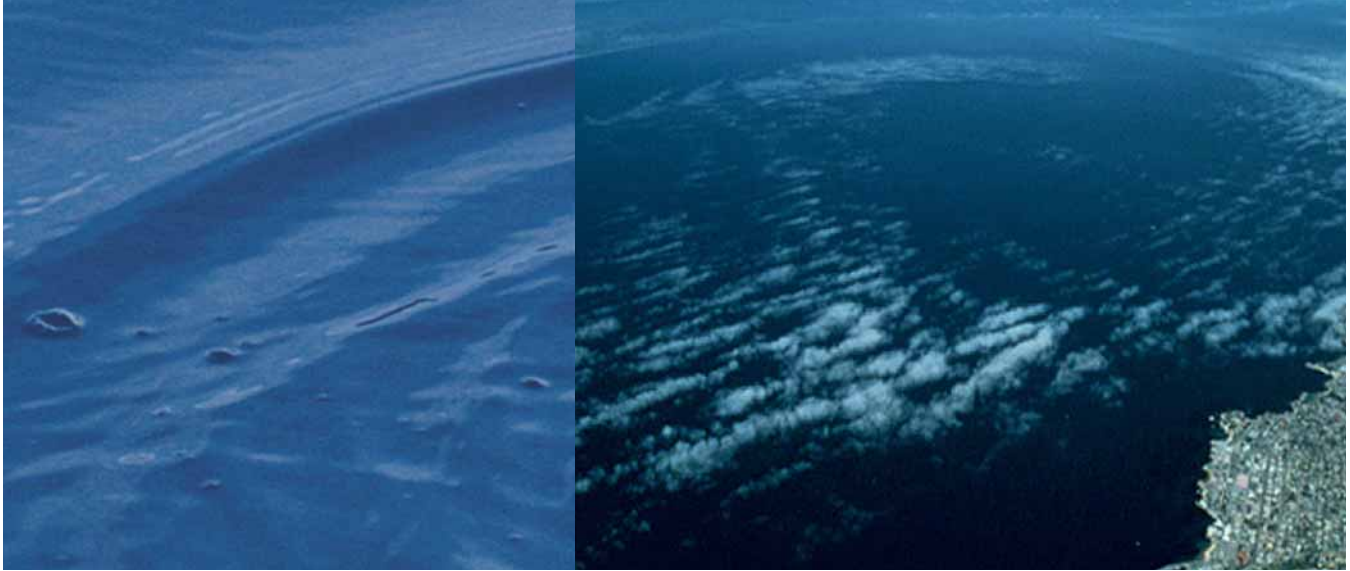
Uzbekistan has been an unstable, volatile state for some time. Before designing ways to generate gyres that could encourage respect for human rights and court system reform, we needed to understand the country's global context and the critical relationships among many conflicting parts. Uzbekistan desperately needs geopolitical security, as well as international credibility and investment. It has a history of Soviet repression, conflicts among conservative Islam, ethnic groups, and secularism; and an economy based on cotton, oil, and tourism. Add to this the environmental disaster of the dying Aral Sea, whose receding waters are used to irrigate the cotton fields and isolate the island where the results of Russian research into germ warfare are buried.

Dean Gottehrer remarked after our second day of working together, "It's often way too easy to focus on bits and pieces of problems or issues on which we are working. Sea Change encourages a more global view, which is useful in any situation where it may be difficult to see or consider the interrelationships, to develop resolutions, or to innovate alternative ways of working. By using this approach to look at human rights negotiations, I see a world rich in interconnections and consequences that we tended to overlook."

Recently Dean wrote to me, "Who knew, those many months ago when we talked about Uzbekistan and the anthrax buried on an island in the Aral Sea, that anthrax would be a threat to our country and the impetus to help clean up the Aral Sea mess? But apparently that is what has happened."<sup>2</sup>

### Finding our bearings

In the Sea Change Process, we also monitor the winds of the atmosphere—the universal influences that shape all of us. These are not hard to miss, given how constantly we struggle with them—rapid change, increasing alienation, economic uncertainty,



global wars. When events like the terrorist acts of September 11, 2001, happen, the true impact on economics, politics, society, and the environment are not readily apparent at first. These events take on universal implications affecting the entire world in one way or another, over time. Lately, in our Sea Change workshops, September 11th has been coming up a lot. Attendees are feeling its economic impact on productivity and profitability, as well as, of course, the emotional toll it has taken. These events sprang from deep, complex causes, and will have lasting effects on America's national security, the legal system, industry (especially the airlines, to state an obvious one), purchasing and investing habits, technology, culture, national psyche, and on and on. And then there are the continuous waves of global impact. In order to manage responses tempered with foresight and wisdom, we must become aware of the world context—understanding the disjunctions in the relationships among people, systems, and countries; and then negotiating the breaks in terrain in order to design sustainable solutions.

Thomas Friedman has a kindred perspective. In *The Lexus and the Olive Tree: Understanding Globalization*, he writes, "I believe that this new system of globalization—in which walls between countries, markets, and disciplines are increasingly being blown away—constitutes a new state of affairs. And the only way to see it, understand it, and explain it is by arbitrating all six dimensions...."<sup>3</sup> He refers to the dimensions of technology, finance, culture, politics, ecology, and national security.

The Sea Change Design Process, and design in general, can be especially useful in finding your bearings in this uncertain world. As an antidote to growing alienation, design is human-centric, requiring partnership and multi-disciplinary collaboration. In response to frenetic change, the design process is iterative, producing adaptability, responsiveness, and resilience. Ill-defined, seemingly intractable problems of ever-growing complexity can be approached with design's intentionality, meant to manifest things. Using systemic thinking to simply see and to synthesize challenges is the very nature of design. If we can visualize our problems, at least we have a better chance of getting our hands around them. And finally, as a counterbalance to the chaos that seems so pervasive in our lives today, design, done with imagination and integrity, makes our relationships clear, uniting us in our efforts to temper, and even embrace, the uncertainty. This is the essence of Sea Change. Our definition of design is the conscious planning of meaningful acts that influence our relationships to one another, those yet unborn, and the web of life, of which we are a part.

Dr. Lewis Mehl-Madrona writes in his book *Coyote Medicine*, "Finding direction means recognizing that life actually has a purpose. Once we believe it does, then we have it in our power to heal ourselves. To me that is proof enough that our lives are meaningful."<sup>4</sup> The traditions, tools, and techniques of design can help orient us as we venture outside current boundaries and borders into the unknown world of possibility. And there, in that world of sea changes, lies hope and healing.



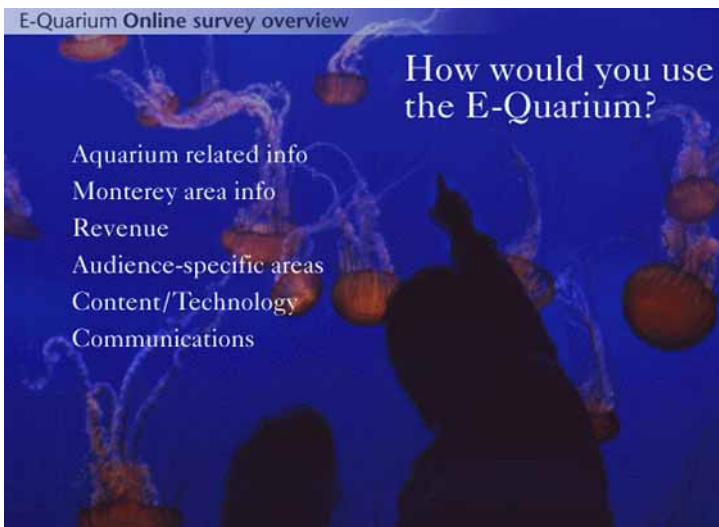
*The three phases of the Sea Change Process bring a design-centered orientation to solving complex, ill-defined problems and aspirations. What is exciting is the diverse range of challenges that benefit from the application of the Sea Change Model consistently over time, from strategic planning, new business initiatives, and culture change to research and development efforts, new products, services, systems, and global and environmental initiatives. What is unique is the focus, emphasis, and techniques used in each phase. The consulting process is flexible, scalable, and customized to fit the specific challenge.*

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**Phase 1: Discovery**

In the discovery phase, we use the Sea Change Model to create the broadest possible awareness of the general conditions, influences, and deep human values that form the context of the challenge. The outcome of this phase is a consensus definition of the deep challenge. For the Monterey Bay Aquarium, we helped examine their organization in relationship to the E-Quarium; their services, exhibits and practices, traditions and innovations, and competition,

as well as their visitors' values and desires. One of the key contextual findings was that there was very little connection between the physical aquarium and the existing web site. In fact, the original web site was one of the best-kept secrets around, and yet, it was heavily used by teenagers (29 percent of the site visitors)—kids who typically don't visit the aquarium (hey, it's not a mall!) What an opportunity to achieve the mission in ways new to the aquarium's culture.



**Key contextual finding**

Visitors rely upon the aquarium as a trusted guide to scientific knowledge of the oceans and ocean conservation. On the web site, they want more in-depth content, photographs, illustrations, and data.



**Phase 2: Vision**

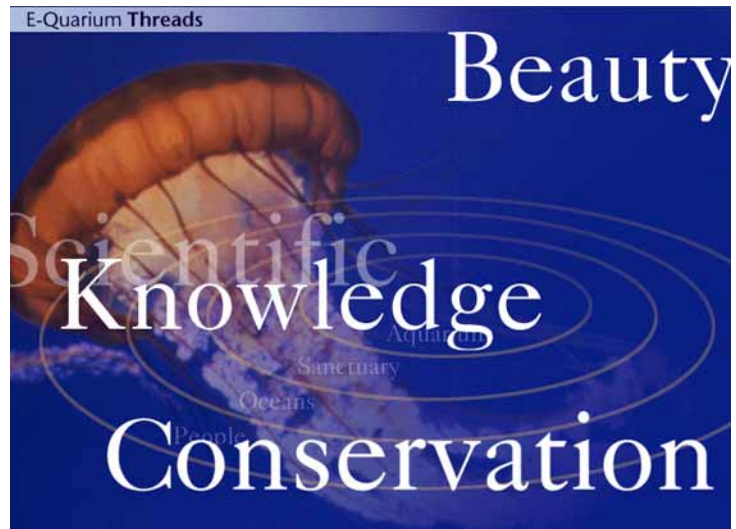
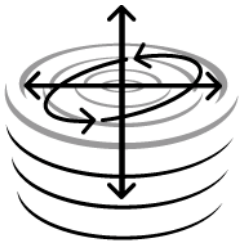
In the vision phase, we identify the key relationships that can create "self-sustaining currents of influence." We envision multiple courses of action that can create these key influences. The outcome of this phase is a detailed picture of the desired future state and a plan of action. The aquarium needed to build and strengthen many relationships.

Among them was providing compelling content that answered a wide range of visitors' needs. This included making interconnections among many types of media and content across the site in ways that helped achieve the aquarium's conservation mission, preserve its reputation for scientific accuracy, and inspire awe within the hearts of visitors.



**Key relationship**

On every page of the web site, we will interweave three "threads," providing scientific knowledge, presenting conservation opportunities and showcasing the ocean's beauty.

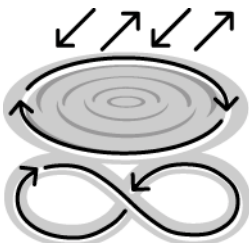


**Phase 3: Creation**

In the creation phase, we design and implement the plan of action in a fashion that is iterative, feedback sensitive, timely, and cost effective. The outcome of this phase is "flow"—new energy that creates sustainable, felicitous results, new ideas for future actions, and broad and deep impact in the world. The E-Quarium continues to evolve in response to visitor needs and the aquarium's goals. Eight months after launch, revenues from the online ticketing far exceeded projections, the number of unique visitors tripled, and just as important, the E-Quarium received the Webby's People's Voice Award for science, high praise from the people for whom we originally designed it.

**Key flow result**

The Living Species List, a "living" database of habitat and animal photographs, illustrations, movies, and cool facts, has turned out consistently to be the second most requested page on the site.



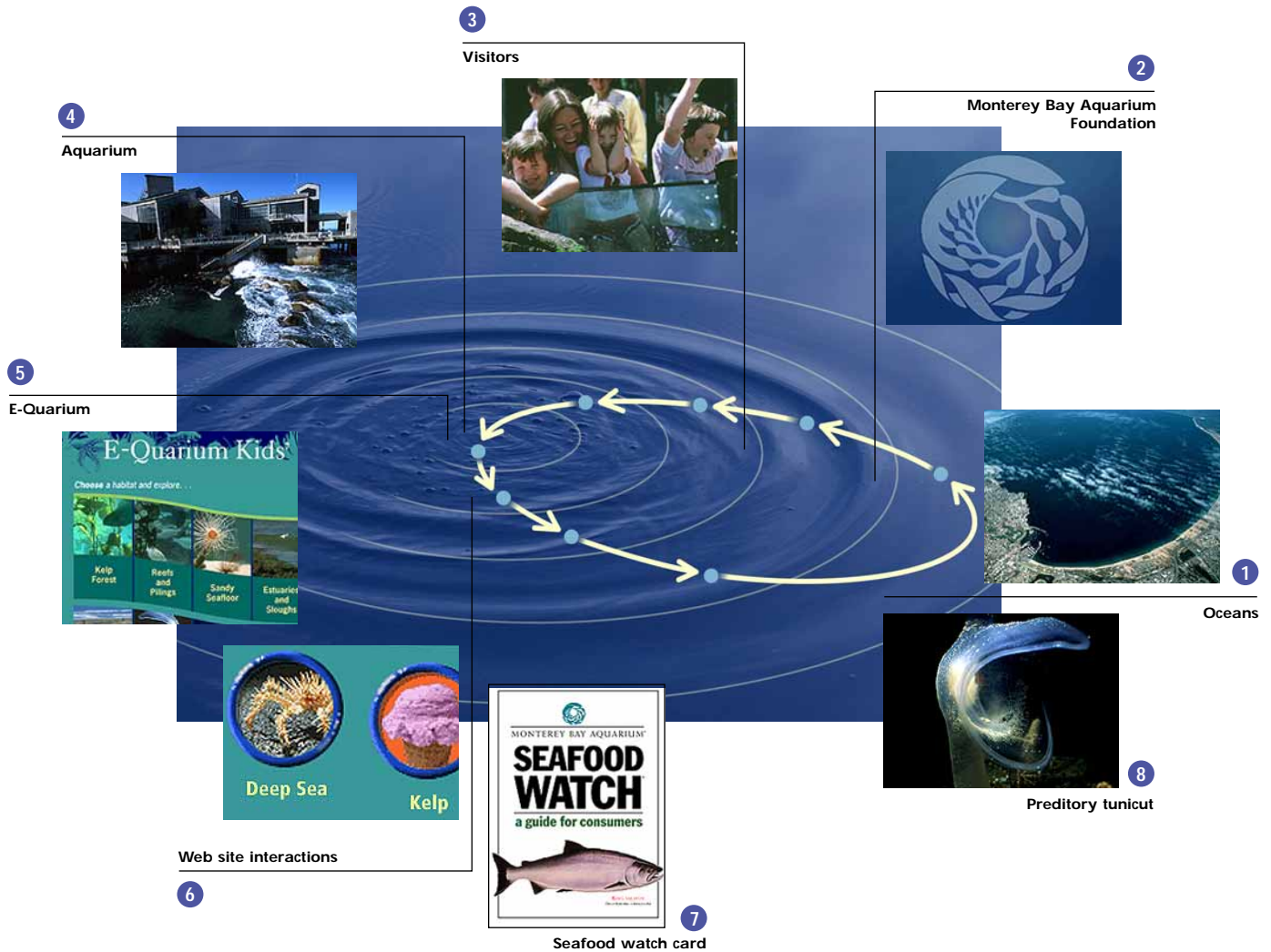
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## The ripple effect of the Monterey Bay Aquarium

*Sea changes are legend, as are their designs, as varied and profound as the challenges they spring from. One of them took place in 1978, with the founding of the Monterey Bay Aquarium. Launched by four marine biologists and Hewlett-Packard co-founder David Packard, it began a ripple effect that continues today. Their vision to share the ocean's wonder, and their concern for its survival, brought forth an aquarium that is world-renowned for the design of its pioneering and popular exhibits on jellyfish and deep-sea creatures, cutting-edge conservation and research programs for sea otters, bluefin tuna, and other open-ocean fishes, and landmark education and outreach programs. Since 1984, more than 30 million visitors have joined the aquarium in creating a sea change of its own—conservation of the world's oceans.*

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- 1 The oceans of our planet cover more than 70 percent of its surface and make up 99 percent of its living space. Yet in many respects, we know more about outer space than we do about inner space—life in the oceans here, where we live. The aquarium founders understood that this needed to change, and that designing an aquarium would provide very effective ways to increase people's awareness and encourage their feelings of stewardship toward the oceans. America's largest national marine sanctuary provided the perfect location; the relatively pristine waters of the Monterey Bay are exceptionally rich in marine life and diversity of habitats, from kelp forests to the deep sea. Sea water is piped directly into the aquarium at a rate of 2,000 gallons per minute, filtered during the day to enhance viewing of the breathtaking exhibits and the 300,000 plants and animals living within their habitats.
- 2 As part of their initiative, the founders created the Monterey Bay Aquarium Foundation, whose global mission is to inspire conservation of the oceans. Today, more than 400 staff and 900 volunteers contribute to the nonprofit aquarium work of the scientific-based institution, which emphasizes innovation and quality. (There are no performing porpoises here.) It has a \$35 million annual budget, supported by revenues generated from admissions, events, gift and bookstore sales, and grants.
- 3 Taking its role seriously as a trusted guide, the aquarium provides visitors with moving experiences designed to reach their hearts and minds, moving them to become more connected with the oceans. The aquarium inspires, informs, and helps them to invest in and get involved with conservation issues.
- 4 The aquarium is built on the footprint of the Hovden Cannery, one of the first on Monterey's Cannery Row and the last to close when the sardine fishery collapsed due to intense overfishing, which came at a time of natural fluctuation in sardine populations. The site serves as a fitting reminder of the ecological change and upheaval that we, humans, can cause.
- 5 In 1998, the aquarium launched a new web site ([www.montereybayaquarium.org](http://www.montereybayaquarium.org)) to serve as its virtual home. This E-Quarium connects visitors and the oceans, visitors and the aquarium, and visitors with each other. AlbenFaris provided strategic planning, branding, design, and content development, working with a large team of aquarium staff and outside consultants. Our intent was to augment the ripple effect already in motion—to leverage the momentum, reputation, and equity of the physical aquarium.
- 6 Along with e-commerce, the web site includes the E-Quarium Kids' Habitat Guide; an interactive kelp forest tour; ocean conservation content, and games like "The Deep Sea Memory Game." Working closely with the aquarium staff, we generated many "currents of influence." As with all circular currents or gyres, what goes around comes around. As the E-Quarium reached more and more people, the aquarium responded to feedback, data, and an avalanche of mail, like this letter from Lenor Friedman, of San Francisco—which, in turn, influenced business in many ways, from online ticketing to conservation content. Lenor wrote, "I am eleven years old. I have already written to the President about protecting dolphins because they are my favorite animal. He wrote me back saying that he would do something to help them. I love your aquarium so much that I went there to celebrate my birthday. I think you could make it even better though if you put a section where people could complain about any marine mammals that they think are being treated unfairly."



7 As often happens with gyres, many surprising and felicitous results occur. Witness what happened in 1999, when the aquarium designed and placed a small icon for its “Seafood Watch” wallet card on the E-Quarium’s home page. Another gyre, with momentum of its own, quickly formed. Part of a campaign to increase public awareness of ocean wildlife conservation practices, including seafood buying and the status of fisheries, the card provides seafood recommendations rated Best Choices, Proceed with Caution, and Avoid. Tens of thousands of printable cards have been downloaded from the site. The Ocean Conservancy and the White House Council on Environmental Quality have requested cards. The Yosemite Concession Services Corporation no longer serves Chilean sea bass at its properties in Yosemite National

Park. Bon Appetit Management Company adopted the Seafood Watch guidelines, distributing the cards to its 150 clients around the world, which include The Getty Center, corporate headquarters for Exxon Mobil and Oracle, and the food services at Stanford University. And on and on it flows.

8 True to the intentions of the founders, both the aquarium and the E-Quarium have spurred concerned individuals and organizations into actions that ripple back to the ocean habitats and the wondrous life within them. Understanding the consequences of our actions as we explore, harvest, and mine the deep sea, will have a significant impact on our chances for survival. From what the aquarium marine biologists tell us, we won’t get another chance to get it right unless we inhabit another planet.



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## Footnotes

<sup>1</sup>Tom Garrison, *Essentials of Oceanography*. Belmont, CA: Wadsworth Publishing Co., 1995.

<sup>2</sup>Judith Miller, "U.S. Agrees to Clean Up Anthrax Site in Uzbekistan," *New York Times*, October 23, 2001.

<sup>3</sup>Thomas Friedman, *The Lexus and the Olive Tree: Understanding Globalization*. New York: Anchor Books, 2000, p. 23.

<sup>4</sup>Lewis Mehl-Madrona, *Coyote Medicine*. New York: Scribner, 1997, p.125.

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## Suggested Readings

Burke, James, and Ornstein, Robert. *The Axemaker's Gift*. New York: G. P. Putnam's Sons, 1995.

Capra, Fritjof. *The Web of Life*. New York: Doubleday, 1996.

NOAA & Monterey Bay Aquarium. *A Natural History of the Monterey Bay, National Marine Sanctuary*. Monterey: Monterey Bay Aquarium Foundation, 1997.

Remen, M.D., Rachel Naomi. *My Grandfather's Blessings: Stories of Strength, Refuge and Belonging*. New York: Riverhead Books, 2000.

Whyte, David. *The Heart Aroused: Poetry and Preservation of the Soul in Corporate America*. New York: Doubleday, 1994.

Wilbur, Ken. *The Theory of Everything: An Integral Vision for Business, Politics, Science, and Spirituality*. Boston: Shambala, 2000.

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Page 11

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**Lauralee Alben**, of Alben Design, is dedicated to creating new ways to apply design sensibilities and strategies. She is currently consulting with Procter & Gamble on designing a culture change within one of their Research and Development departments. She is the founder of the Sea Change Consortium, an association of professional consultants who are committed to creatively responding to today's complex economic, social and environmental challenges by consulting with diverse organizations, running workshops and giving keynote speeches. Lauralee is currently working on a book and film about the ways in which we are designing our humanity, called *Designing Ourselves*.

Lauralee was selected by the Design Management Institute as the first recipient of the prestigious Muriel Cooper Prize in 1997, for showing original thinking, future promise, and spirit of exploration in the digital environment. Included in I.D. Magazine's "I.D. Forty," Lauralee was chosen as "one of the most important design innovators from the West Coast." Lauralee's design work and articles have appeared in many computer, design and business publications. Until 2000, Lauralee was a principal of AlbenFaris Inc., a firm that specialized in the design of interactive experiences for clients including the Monterey Bay Aquarium, Apple, IBM, Netscape, and SONY.

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