

smart  
systems  
design

developing new growth  
opportunities and businesses at  
the intersection of smart systems,  
services and the internet of things

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# Firm Overview and Services

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technology research + business strategy + services design

**Harbor  
Research**

Boulder | Zurich

**W**e have entered an era where people, businesses and social organizations are beginning to understand the profound impacts awareness, collaboration, and intelligence will bring. Building new ventures for the Internet of Things requires new and very different modes of design and development – organizations will need to push the boundaries of collaboration to include many new and unfamiliar participants. Smart systems design needs to transcend discrete product or service innovation. Business developers need to creatively imagine fully developed systems and whole marketplaces. As much as we would like to say there is a simple “linear” process and recipe to drive new smart systems innovation, the nature and complexity of the Internet of Things makes that impossible. There is no one best way to move through an innovation process to design new systems. There are useful starting points and milestones along the way, but the innovation continuum for smart systems is best thought of as a group of overlapping stages of innovation rather than a sequence of orderly steps. The reason for the iterative, nonlinear nature of the process is not that business innovation is undisciplined but that the process overall is one of exploration and discovery; done right, the process should lead to unexpected concepts and ideas and it would be foolish not to explore where they lead. Often projects can loop back and repeat steps more than once as a team refines its concepts and ideas.

# smart systems requires new research, strategy, and design approaches

## what are smart systems and the internet of things?

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### Why Is It So Important?

We have entered an era where people, businesses and social organizations are beginning to understand the profound impacts awareness, collaboration, and intelligence will bring.

In the not too distant future, hundreds of millions, then billions, of individuals and businesses, with billions, then trillions of smart, communicating devices, will stretch the boundaries of today's business and social systems and create the potential to change the way we work, learn, entertain and innovate.

Smart Systems and IoT are driving dramatic changes; no matter who you are, what you do, where you are, this will greatly impact you.

Tracking, navigating and determining how to play in this new environment will be challenging. Keeping up with the latest technology innovations, players, use cases and new business models will be challenging...

## where are the biggest growth opportunities?

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### How Should We Respond?

Large organizations have many rules and policies that often seem completely disconnected. We have created language, business processes and systems that seem to be a triumph of technique over value. The assumption that the role of new business design and development is only about making existing products or services more attractive no longer works.

We believe smart systems design needs to transcend discrete product or service innovation. Business developers need to creatively imagine fully developed systems and whole marketplaces.

We must resist the seduction of simplicity and the safety of Byzantine processes and decision models that allow good ideas to fade too quickly. In this environment growth is dependent on thinking and interacting in new and creative ways.

## what are the challenges; how should our organization respond?

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### What Are The Success Factors?

Global expansion; re-engineering; lean practices; mergers and acquisitions. For most companies, these strategies for growth and value creation have reached the point of diminishing returns. Smart systems and services will increasingly have less managerial hierarchy, command and control decision making or proprietary ownership of ideas. Collaborative networks will be self-organized by people who are motivated to explore and develop ideas they care deeply about. Business innovation will extend beyond ideas about new products and services to the very manner in which business is conducted.

What worked in the past to build new growth ventures is less likely to work now or in the future. To discover, design and develop innovative systems, organizations will need new methods and uniquely facilitated processes that push the boundaries of current practices to include many new concepts, participatns and interactions.

# clients need more than traditional strategy, design, and tech analyst firms provide individually

## Smart Systems Requires Deep Domain Knowledge and New Collaboration Approaches

The worlds of sensors, controls, computing and communications are each changing rapidly, while at the same time converging into an entirely new competitive arena: smart systems and the Internet of Things.

The forces at work in these sectors make strategic decision-making extremely difficult. The velocity of change in the marketplace conspires with the number of variables in play to overtax many managers' ability to make confident and informed decisions.

This has two crucial effects on strategists: First, they need better market intelligence methods and frameworks for strategic decision-making. Second, while they are more likely to consult with outside advisors, they also need new, more efficient and effective modes of interaction with them.

The Internet of Things is creating significant discontinuities in the marketplace. Knowing which use cases and applications to focus on, which business model to pursue, and which market relationships to create are becoming increasingly important for maintaining a competitive market position in today's rapidly evolving marketplace.

## Faster More Effective Strategy and Business Development Decisions

It is often unavoidable that a company turns to outsiders for help in strategy and planning. Often this help is of two kinds: industry analysis and strategic consulting. Each of these types of advisor tends to have its own limitations. Greater distance and objectivity often give the industry analyst a better view of the competitive landscape than the client can develop alone. The analysts, though, are often so specialized in the study of specific technologies and industry arenas that they usually offer nothing in the way of processes for making use of the knowledge they purvey. Generalist consultants, on the other hand, offer plenty of process—perhaps too much.

In our experience, both types of advisors employ methods that tend to yield linear extrapolations of the present, rather than any true foresight into technological disruptions and competitive discontinuities.

Harbor's consulting services are designed to overcome these faults and deliver real value while minimizing the cost to the client in money and, far more importantly, time.

## Creatively Combining Research, Content and Consulting Services

Harbor's services combine market analysis, intelligence and modeling with collaborative facilitation processes and alliance development that provide clients with unparalleled perspective and applied methods for designing and developing new business opportunities.

We believe for clients to effectively utilize market intelligence it needs to be combined with effective decision making forums. The two thrusts need to be mutually supportive without inhibiting one or the other.

The best companies have come to see the continuously evolving relationship between research and the decision making it is meant to support as a fertile ground for innovation. The two need to be interwoven and mutually supportive, and increasingly, success in either goes to the company that effectively utilizes the combined potential of both.

research

strategy

design

# harbor combines deep domain and technology knowledge, creative processes and interactions

## research

### Opportunity Analysis

Organizations interested in exploring new growth opportunities require inspiring analysis, creative research and compelling content. They often ask themselves:

- » Where are the most significant growth opportunities?
- » Where are the biggest disruption opportunities?
- » How should we conceive our business opportunity map?
- » How can we best use technological and market uncertainty to our advantage?
- » How will the competitive structure evolve?

Our research, content and modeling provides an ideal context for discovery, ideation and planning.

## strategy

### Unique Facilitation and Strategy Development Methods

Organizations often require new processes and unique facilitation to really drive discovery and innovation. They need to be able to ask themselves:

- » What customer needs and requirements should we be focusing on? How will these change over time?
- » How can we emphasize our unique value proposition to differentiate ourselves from our competition?
- » What specific development opportunities should we target?
- » Which elements should we own versus source?
- » Are our ideas and concepts economically viable and attractive?

## design

### Collaboration and Participatory Design

With thirty years of deep involvement in the tech industry, Harbor Research has been able to develop innovation processes and a network of contributors to help clients re-frame their role within the value chain.

- » What elements will combine to create unique value for our intended customers?
- » How can we prototype, iterate and validate the customer experience?
- » What are the key elements and design factors we need to consider?
- » What formal and informal relationships should we anticipate?

Although many of our clients start at the beginning of the process with a focus on envisioning the future, projects can start at any of the stages. Given this, Harbor's workshops, forums and interactions are ideal venues for smart business systems innovation.



# our services deliver creative innovation tools, practical methods and applied problem-solving

## research services

### Deep Domain Knowledge

Smart Systems and IoT are creating significant discontinuities; knowing which segments and applications to focus on, which business model to pursue, and which relationships is increasingly important.

### SmartSphere

Our client Portal provides access to our on-going research, news tracking and ecosystem mapping activities

- » Interactive ecosystem maps allow for filtering by relationship types and navigation across markets and technologies
- » The news navigator allows for clients to track custom news against Harbor's taxonomies
- » Other features include acquisition and investment tracking

### Forecast Model and Reports

- » Harbor's quantitative model uses a unique proprietary methodology for producing actual figures, forecasts, and modeling developed over years of tracking smart systems devices, revenues, and services.
- » Our team of analysts produce a variety of quantitative and qualitative research reports and content types covering a wide array of markets, technologies, and topics around smart systems and the Internet of Things.

## consulting services

### Rigorous Strategic Thinking Processes

- » Strategy Development: Our strategy and business development services deliver creative innovation tools, practical methods and applied problem solving. Our highly interactive mode focuses on clients' specific needs and helps create unique strategies and early resolution to high-priority business issue
- » Opportunity Assessments: Understanding needs, usage and buying behavior in a networked context is key to capturing value. It is an attempt to characterize potential customers by the attributes that relate most closely to what they buy, how they participate and use and how they buy and why.
- » Alliances and Acquisitions: Beyond alliances, companies often need to consider when to acquire instead of build? Through a focused process we identify "catalytic" external combinations based on your forward strategy and your business model. We then, through a series of analytical filters, assess and prioritize the opportunities to help drive a coordinated program.
- » Visit our website for a full list of consulting activities

## smart systems lab

### Lab Participation

We are creating a real world lab where organizations can design, prototype, and test new models for delivering value. Our mission is to enable business model, technology and system level innovation in arenas enabled by The Internet of Things. Our forums include:

- » Innovation Workshops: Understand, develop and design meaningful and innovative solutions through a deep discovery of trends, forces, needs, and new technologies and capabilities enabling and impacting evolving customer needs.
- » Business Model Design: We work with clients to customize workshop format and structure in order to address the unique issues facing cross-functional teams, functions, business units, or other internal or external interests.
- » Community and Alliance Building: Become a part of, or even organize your own "community of interest" among complementary constituents aligned around new value creation for The Internet of Things. Harbor will help aggressively orchestrate introductions between and among key players.

# we emphasize interactive analysis and the incorporation of outside participants and perspectives

## innovation forums

### Collaboration and Participatory Systems Design and Development

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The reason for the iterative, nonlinear nature of the process is not that business innovation is undisciplined but that the process overall is one of exploration and discovery. Done right, the process should lead to unexpected concepts and ideas and it would be foolish not to explore where they lead. Often projects can loop back and repeat steps more than once as a team refines its concepts and ideas.

We often may invite an external thought leader, potential partner or customers to join the sessions to share fresh perspectives and best practices, and to work side-by-side with participants to develop solution concepts and action plans.

Building new ventures for the Internet of Things requires new and very different modes and development forums – organizations will need to push the boundaries of collaboration to include many new and unfamiliar participants.

## workshops

### Effective Strategy, Business Design and Market Development Decisions

Our workshops deliver creative innovation tools, practical methods and applied problem-solving. Our highly interactive workshops focus on participants’ specific needs and help create unique strategies and early resolution to high-priority business issues. Collaborative techniques are facilitated to drive new thinking. We offer guidance in preparation, so that participants can be well-prepared in minimal time.

Our guidance includes suggesting tools and frameworks to help management creatively design the right agenda, one that will bring the maximum relevant knowledge to the table. We help determine the best mix of participants for the workshop. This mix is based on such considerations as achieving the proper diversity of viewpoints as well as gaining the buy-in of those who are likely to be key players in the implementation. Most importantly, though, the participant mix as well as every other aspect of the process is designed to foster a free-flowing exchange of creative ideas.

## briefings

### Charting and Understanding Disruptive Forces

Organizations interested in exploring new growth opportunities require inspiring analysis, creative research and compelling content. Harbor’s market and technology analysis and modeling work helps clients define emerging markets where technological uncertainty can be advantageous. It is in the “gray areas” that clients have the potential to deliver unique value propositions. Harbor Briefings are an ideal learning environment when executive teams who are trying to put their arms and minds around emerging disruptive opportunities can come together and build a shared understanding of new growth opportunities.

Harbor Briefings are always tailored to client circumstances. They can be as brief as a half day, or as long as a full day, depending on your needs. They can be conducted at the client or at our offices.

# why harbor.... our unique knowledge, skills, experience and tools

## unique processes

**How should we conceive our business opportunity map?  
How large and how fast are opportunities developing?**

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## thought leadership

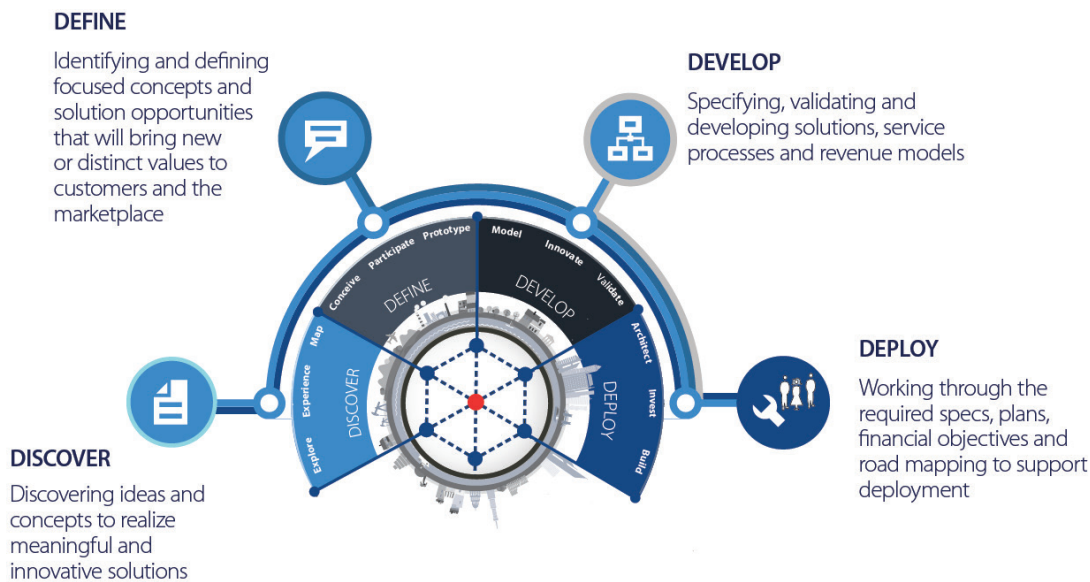
**Where are the most significant growth opportunities? Where are the biggest disruption opportunities?**

We provide our clients with rigorous analysis and insight to support critical new business design and development decisions. Our research, content and modeling provides an ideal context for discovery, ideation and planning.

## vibrant community

**How can we best use technology and market uncertainty to our advantage? How will competitive structure evolve?**

Building new ventures for the Internet of Things requires new and very different modes of design and development – organizations will need to push the boundaries of collaboration to include many new and unfamiliar participants.





# get in contact with Harbor Research to learn more about Smart Systems and the Internet of Things

## our history

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An internationally recognized research, technology, and business development consulting firm, Harbor Research has predicted, tracked, and driven the development of the Internet of Things since our inception in 1984. While our history is long, our strategy is simple: capture and create value by combining accurate data discovery and analysis with creative systems-thinking. It is this mindset that has given us the privilege of working with some of the greatest companies in the world.

## about us

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Today, we continue to work with C-level executives and top management of some of the world's most consistently successful companies and innovative startups. In the same way that the market has flexed and grown over the years, our services and experience have grown to make us the premier service organization you see today. We work with clients in a variety of ways including consulting, advisory, research and content development, thought leadership, workshop facilitation, and beyond.

## join our community

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Interested in joining our community, connect with us on any of the following channels:

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Read out recent blog post

Join the smart systems lab

Meet our team

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