

# The Future of Service Business Innovation





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# Foreword

This report is written for companies and organizations interested in challenging and renewing their current thinking on services business. “The Future of Service Business Innovation” takes a Silicon Valley focused yet a globally relevant look at the trends, business models and forerunner attributes that activate thinking around service business innovation opportunities. Report is written in a handbook style to provide seeds for further thinking in the individual company’s business development.

This report highlights ten trends that are both driving and enabling global and local level business transformation. It also explores what kinds of business models are needed to compete in this ever changing business environment. Trends presented here are considered broad based enablers of various business-to-business models in services across industries. The report argues that the future business opportunities are most likely found in the intersections of these, and other, trends by experimenting, challenging and questioning current assumptions and conventions.

The report presents four key business model innovation strategies that are commonly used by companies possessing forerunner characteristics. These strategies highlight innovations based upon attributes, knowledge, mobility and solutions. Business case examples are provided from each of the four strategies to describe the characteristics required from a forerunner in each category. When reading the cases it is important to keep in mind that the provided categories are ideal types, and in real life they are often merged. One could say that most forerunners mix features from different strategies. However, the business cases are presented under those categories that are dominating change in company’s service business.

The world of services business innovations is without a question complex, multidimensional and constantly changing. The challenge is to *think* out of the box: how to make yourself and your company to think and see beyond the obvious, looking at the intersections of trends, ideas and models. *What is your company’s version of the Cemex model to change your industry’s pricing models and how you “Zipcar” your business model to challenge longstanding assumptions how to meet your customers’ needs?*

This report has been written by Soren Kaplan and Derrick Palmer from InnovationPoint ([www.innovation-point.com](http://www.innovation-point.com)). Tekes sincerely thanks writers for taking us on this journey to the future of services business innovation. The report is a result of collaboration between Tekes Silicon Valley and Tekes “Serve – Pioneers of Service Business” – programme.

Tekes would also like to thank collectively all those people inside and outside of Tekes who have participated in the work through interactive workshops and by commenting the drafts of the report.

On 1 July 2010 in Helsinki and Santa Clara

Tekes



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# Introduction

It is no secret – services now account for over 75% of US output (GDP) and over 70% of output across other industrialized nations globally<sup>1</sup>. The numbers are growing and the implications are significant. Around the world and across industries, a wide array of organizations – consumer focused, business-to-business, non-governmental, and even governments – have embarked on an explicit journey of defining and creating new service-related value targeted at our ever-expanding, networked global knowledge economy.

While we recognize it is impossible to predict the future, this report highlights the key megatrends and business models that will influence and shape the future of service business innovation. By “service business innovation”, we mean the creation of business-to-business (B2B) services that deliver value directly to business customers, and then ultimately to end-customers, end-users or consumers, depending on the specific service. We also care deeply about the question: “So what?” To this end, we provide practical questions and tools for thinking about what these trends and business models could mean for your own company.

Our premise is simple: gaining insight into emerging megatrends helps you obtain a deeper understanding of the most promising business models for the future. This is exactly what we’ve done. A key component of this report is a portfolio of exemplary business models that each represents an “early signal” with respect to the service business approaches that will drive growth and create differentiation in an increasingly competitive services environment.

And because we know that *ideas* don’t equate to *innovation*, we also highlight the qualities and characteristics of what we call “Forerunner” service companies. These *Forerunner Attributes*, we suggest, are essentially the core competencies required for driving the service innovation of the future – competencies and mindsets that represent a radical departure from traditional manufacturing or product-based approaches to innovation.

While the academic and popular presses are full of articles related to “business models” and “innovation,” little has been written from a services perspective. Even less has been written about service business innovation

within a B2B context. What does exist tends to be focused on IT services, and is often heavily influenced by large IT service providers like IBM<sup>2</sup>.

## Objectives

With this context, there are three objectives of this report:

- Highlight emerging service business innovation megatrends
- Outline the characteristics of Forerunner services companies
- Provide tools for defining practical implications and opportunities

To expand on these points, the first objective is to highlight the global megatrends that individually or collectively will drive the service business innovation opportunities of the future. Given the potentially broad focus of this activity, we have zeroed in on trends that are the broad-based enablers of various B2B business models across industries. We have done this in two ways – first by outlining a number of key megatrends and second by introducing case examples from a variety of industries that existing companies can learn from or even potentially

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<sup>1</sup> Berry, L. et al (2006). Creating New Markets through Service Innovation, MIT Sloan Management Review, Vol. 47, No. 2.

<sup>2</sup> *Succeeding through Service Innovation* by IBM and University of Cambridge. White Paper, Cambridge Service Science, Management and Engineering Symposium, July 2007.



adopt as they make their own transitions to becoming Forerunner services businesses themselves.

The second objective is to outline the characteristics of “Forerunner” services businesses. By “Forerunner” we mean a company that takes a truly innovative approach to providing business-to-business services. In a sense, the concept is an ideal type or archetype, since few (if any) companies are true Forerunners in every sense of the word. The intent here is to outline the full portfolio of characteristics of this ideal organization, and to illustrate these characteristics through case examples that profile one or more attributes at a time.

The third objective is to ensure that all of these insights are presented in a way that is as practical as possible. To this end, the report presents key questions for aspiring service companies to stimulate further strategic insight.

Because the field of services is extremely broad and can be interpreted in many different ways, it is also important to define what this report is not. It does not attempt to classify or map out the domain of services by type of offering, company or industry, nor prescribe implications and recommendations for specific industries or businesses. Rather, it highlights trends and proposes implications that may have cross-industry applications. And while the emphasis is on business-to-business, it does not just focus solely on B2B examples, since certain consumer-focused trends are sometimes better indicators of important weak signals that may eventually become usable in the B2B world. Finally, it does not only highlight proven success

stories, but also includes examples from unproven (and sometimes struggling) start-ups since these fledgling upstarts are often the ones introducing and proving out the intriguing principles and business models of the future.

## Service Business Innovation Framework

The perspective that informs this report comes from the belief that new opportunities reside at the intersection of emerging trends and customer needs (either articulated needs but more importantly *unarticulated* needs). When insights gleaned at this intersection are overlaid with a lens focused on business model innovation, it becomes possible to define new approaches for capturing and deliver value. These approaches, of course, must be supported by specific organizational capabilities that lead to tangible innovation – in the context of this report we call these Forerunner Service Business competencies. Once

you have an understanding of the *what* (the specific opportunities you want to pursue) the question of *how* to achieve these then follows (the capabilities needed to drive the opportunities) (see Figure 1).

## Methodology

The methodology used for this report included three primary activities:

- A research scan of the popular press, academic literature, and the internet;
- Interviews of experts from academia, business, consultants and think tanks;
- Application of InnovationPoint’s own insights from 15 years’ work in the area of product, service and business model innovation and research across industries.

Our research included interviews with a small but diverse group of thought leaders who we knew could provide a stimulus to help challenge conventional ways of looking at services and

Figure 1. Service Business Innovation Framework





service innovation. Interviewees represented organizations including:

- ANWB Netherlands
- NHTV Breda University of Applied Sciences
- Hewlett-Packard
- Cisco Systems
- Institute for Global Futures
- Solar City
- New York City Department of Public Transportation
- Charles Schwab
- Whirlpool

## Forerunner Case Examples

The companies we selected as case studies in this report are used to highlight specific elements or principles of service business innovation. Some of these cases focus on large companies that are over 100 years old, while others involve start-ups with just a handful of employees. None of these companies are “perfect” per se, but they have all approached service innovation in novel ways that challenge existing assumptions in order to introduce what may ultimately become viable new directions for the service business models of the future.

## Service Forerunners – Competencies for the Future

Although it is no secret that services represent a driving force for business growth in the future, there is a secret. And it is only known by firms willing to embrace new “service logic” – a new way of thinking about customers, the

value they desire, and the value that can only be delivered through collaboration and co-creation<sup>3</sup>. The challenge goes beyond one of service development to the heart of an assumption that is ingrained into the fabric of business and society – that delivering value comes from selling something, exchanging goods for money, and that customer interactions are inherently transactional. Of course value is delivered and money is made when products and services are exchanged. The point is, however, that future growth and competitiveness lie in a company’s ability to tap into the power of this new service logic.

The visionary companies that challenge these assumptions are “Forerunners” of the new economy. These companies are emerging every day, and the seeds within their innovative business models promise to sprout entirely new ways of doing business. So why should we care? Because these new business models provide us with clues about ways we can think differently to create significant future growth. They contain the design principles for creating and delivering new value – designs for our future products, services, experiences and even for our organizations themselves.

Many manufacturing companies take a product-centric view of their business – they start by thinking about what they can make using their existing technologies and capital equipment, and then sell a product to someone for a given price. Though they may provide a warranty and customer support if needed, the value of what they

provide essentially lies in the physical product itself. The customer buys and uses the product, it meets a need, and everyone moves on. Similarly, many service-based companies in industries such as insurance, finance, healthcare, and education approach the provision of their services with a similar mindset – they “productize” their offering to allow for scalability, efficiency and repeatability. Thus, the customer receives the service, it meets a need, and the interaction generally ends there, at least until the service is needed again (for example, at annual renewal time for an insurance policy). Even for these types of service companies, the value of their offering resides in a pre-defined, relatively inflexible “product” based on a transaction-based mindset.

At first blush, it is natural to think that a Forerunner company that embodies the future of service business innovation would be a pure services company. No so. Forerunner companies can sell products and/or services, but most importantly they possess a different mindset – a lens from which they operate and participate in the market.

Forerunner companies have moved beyond the transactional mindset and engage with customers in ways that expand the definition of value. For example, their customer relationships are unique, with interactions that are often ongoing, collaborative and that “co-create” value for both their customers and themselves. Enabled by deep insight into their customers’ stated and even unarticulated needs, the value they provide is often differentiated

<sup>3</sup> Lusch, R. & Vargo, S. (2006). The Service-Dominant Logic of Marketing. M.E. Shape Inc: New York.

through novel business models that are unique in the industry.

While Forerunner companies may indeed be pure services companies that never deal directly with tangible products, they may be companies that deliver products, usually in combination with services. A manufacturing company that simply provides goods in combination with ancillary services purely to support the product transaction, however, does not fit the definition. Forerunner companies believe that any products sold are actually vehicles for delivering various services that meet both tangible and intangible needs – even when products contribute revenue streams, the definition of “product” resides in the context of a broader service-oriented solution.

The implications of this service-centered mindset on the organization itself can be profound. A continuous yearning to understand, empathize with and deliver value against the evolving needs of the customer drives everything. Employees are seen as service providers and given opportunities to deepen their knowledge of customer needs and to build skills focused on satisfying these needs.

When it comes to defining and building core competencies, Forerunner companies know that their tangible and intangible assets are both critical to success. Beyond technologies, processes and physical assets, they realize that success is built on how well they manage their evolving brand identities, the ability to manage relationships and facilitate customer networks, and harness information and knowledge in ways that continually deliver new forms of value. Finally, the business models of Forerunner service

companies are anchored in information, knowledge, and technology, often creating solutions by tapping into relationships within a larger value network of stakeholders.

Forerunner companies recognized that value no longer comes from “chains” but from networks. Value chains are linear. Value networks are adaptive. Chains take time to change. Networks are complex, multidimensional and ever-changing. The increasing pace of change increases the pace at which products, services and business models must be changed in order to remain relevant and to continue delivering value. Whereas value chains generally focus on hand-offs of materials and goods, value networks collectively deliver value through exchanging and integrating knowledge and intangible assets such as brand identity and know-how. Forerunner companies broaden their frame of reference around the potential players and their roles in contributing to the creation of

value for both customers and customers’ customers – which often includes customers and customers’ customers themselves.

On the financial side, rather than focus solely on revenues and profit, Forerunner companies recognize that *market value* is equally important, and focus on building up capabilities beyond technologies and other hard assets. Intangible assets are seen as equal to, if not more important than hard assets, and include non-quantifiable or physically visible things such as knowledge and know-how, customer relationships, brand equity, employee alignment, community goodwill, and other intangibles. These intangible assets all contribute to the overall value and competitiveness of the firm – and in fact boost them significantly over the long term. Forerunner companies are also more inclined to recognize that value creation ultimately involves a focus on the triple bottom line – people, purpose, and profit – in ways that

Table 1. Seven Attributes of Forerunner Service Businesses

Traditional Product Business Attributes	Forerunner Service Business Attributes
<b>Transactions</b> are the ultimate driver of financial value	<b>Building relationships</b> drives financial value
Delivering value means <b>selling</b> to customers	Value delivery comes from <b>collaborating and co-creating</b> with customers
<b>Distribution</b> is the best way to reach customers	<b>Designing and managing experimental interactions</b> is the best way to reach customers
<b>Products</b> satisfy customer needs	<b>Solutions</b> satisfy customer needs
<b>Technology development</b> drives innovation	<b>Technology</b> enables service and business model innovation
Strategies focus on participating within one part of the <b>value chain</b>	Strategies focus on building or tapping into <b>value networks</b>
<b>Bottom line profit</b> is the primary goal	<b>Profit is one goal among others</b>

create benefits for employees, shareholders, the community, the environment and society as a whole.

The collective set of Forerunner attributes is anchored in a number of assumptions about what will drive value in the future. Companies seeking to become truly service-centered must shift their mindsets to embrace these assumptions as they move beyond traditional product-focused (and transaction-focused) thinking.

## Global Megatrends – Enablers of New Business Models

The world of “trendspotting” is a big place, so finding focus is critical. While a great many trends could have been highlighted in this report, the end-goal here is to share emerging services business models. It is helpful, however,

to understand the broader context in which these emerging business models reside.

A number of global megatrends are currently shaping the future business landscape, and will continue to have dramatic impact on creating new possibilities for service business innovation. A great number of these trends impact the overall economic and business environment globally, from increasing “democratization” of the political landscape, to the interdependence of financial and economic systems, to shifting demographics, to global health issues and challenges, and the list could go on. While these overall trends are important to acknowledge and understand, we chose here to conduct deeper dives into those megatrends that are the most profound drivers of the specific business models that were identified through our research (see Figure 2). We encourage readers to consider other trends

– whether global, local or industry specific – and how these may connect to or support what is presented here.

Not surprisingly, a number of megatrends presented here are rooted in technology, since new technology often creates new possibilities for value delivery. But technology is not the only enabler. What is important for the future of service business innovation is what can be created, accomplished, or delivered by tapping into the collective power of various megatrends to deliver new forms of truly meaningful value to customers.

The business models presented in the next section highlight the megatrends that have allowed them to become viable new sources of customer value in today’s world. The following ten **Service Innovation Megatrends** appear again and again, in various combinations, as the fundamental drivers of new service business models.

**Figure 2. Service Business Innovation Global Megatrends**



## The Cloud

### *The world is getting cloudy.*

"The Cloud" is the term used to describe the pervasive virtual infrastructure that will support new applications, connected collaboration across individuals, groups, and organizations. While "cloud computing" is now a relatively widely discussed phenomenon – driven forward by the likes of Microsoft, Oracle, Google, Apple, Cisco Systems, etc. – the ultimate impact of the Cloud is still unfolding since this is still in its infancy. What is important to understand is not the technology behind cloud computing per se, but how other interdependent trends will interact with it – that is, how they will help drive it, be impacted by it, or will



result from it. While we do not know how things will materialize, it seems that the future will be characterized by a growing and pervasive cloud

computing infrastructure that will be the fundamental backbone of various new service applications, models and experiences.

## Web Based Value Delivery

### *The world is wired.*

Today, almost 75% of the population of North America, 52% of the population of Europe, and almost 50% of the population in China are internet users<sup>4</sup>. Internet usage percentages hit close to 100% when applied to mid- and large-sized businesses. The web will continue to serve as the essential interface for tapping into a wide range of applications delivered via computers and other devices. Across industries, existing business services are increasingly being transformed to web-based delivery. Whole new applications and services are also being created that use the web to deliver value that spans the gamut, from delivering location-based information to facilitating collaborative interac-



tions to providing complete customer solutions. These services use the internet and web browsers as the delivery platform, and are increasingly expand-

ing to various devices beyond computers. The future will be characterized by increasing web services available across a range of devices.

<sup>4</sup> As of September 30, 2009, [www.internetworldstats.com](http://www.internetworldstats.com)



## Mobile Value Delivery

### *The world is going mobile.*

Mobile devices have become ubiquitous with approximately 4 billion mobile subscribers worldwide<sup>5</sup>. And they are getting smarter too – smart phone sales continue to increase with over 150 million sold in 2009<sup>6</sup>. Mobile value delivery involves web-based services, but this megatrend includes any service delivered through mobile devices, from web-enabled to SMS/text to voice and other delivery forms. These devices can also include phones, smart phones, MP3 players, PCs, GPS systems, tablet computers, wearable computers, or any other device that is “portable.” The future will be char-



acterized by the increasing ubiquity of mobile devices and the anytime-

anywhere service solutions that they enable.

## Everything as a Service

### *The word is servicing.*

In the late 1990's companies like Salesforce.com and WebEx challenged conventional wisdom and established “software as a service” (SaaS) models. Today, the proponents of cloud computing have extended the “as a service” concept to include Platforms as a Service (PaaS), Networks as a Service (NaaS), Communication as a Service (CaaS), and Infrastructure as a Service (IaaS). The overarching idea: with a ubiquitous, always-on technical infrastructure, a whole new world of opportunities arises to create new service offerings based on instant access. Although still focused primarily on technology, an early signal that this megatrend is about to explode is that a new term is emerging – “X” as a Service



(XaaS) – to describe the boundless possibilities. The future will be characterized

by an increasing number of “as a Service” delivery and business models.

<sup>5</sup> [www.canalys.com](http://www.canalys.com)

<sup>6</sup> [www.cleantech.com](http://www.cleantech.com)

## Experience Design

### ***The world is experiential.***

While it used to be that “design” was a concept strictly applied to products and user interfaces, *experience design* has emerged as a new way of approaching innovation – from the end-user or end-consumer perspective. With a recognition that the overall experience is what ultimately delivers value, and can be a significant differentiator for both products and services, experience design is rapidly becoming the de-facto standard as an approach for research, technology development and creating new delivery models. By focusing on the overall experience, it becomes possible to create end-to-end or total solutions that provide greater



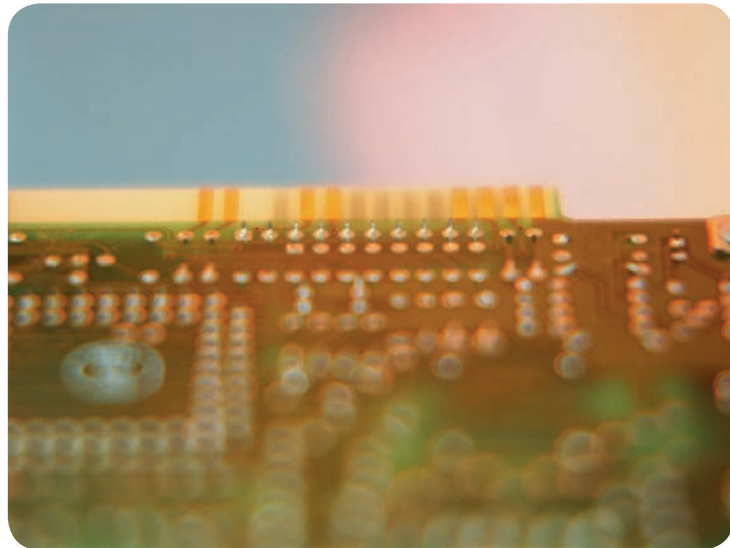
value to customers. This value often goes beyond tangible products and services by eliciting human emotions as a response to physical product attributes or being involved or engaged

with service offerings in new ways. The future will be characterized by an increasing awareness of the power of design as an experience and process for innovation.

## Sensing & Monitoring

### ***The world is being tracked.***

With the growth of embedded microchips, RFID, GPS, barcodes, and a wide range of sensor technologies, it becomes possible to sense and monitor things in ways that provide real-time information and aggregated data to reveal new insights and inform decisions. From sensing temperature changes, carcinogens, food contaminants, motion, noise levels, light, humidity, and other aspects of the physical environment, to monitoring and tracking the movement and attributes of physical objects, it becomes possible to create “sensing networks” that capture patterns that can become the source of value added knowledge, and the basis of new revenue-generating services. With trillions of potential “data events” occurring worldwide, the possibili-



ties of what can be tracked and how is virtually endless. The future will be characterized by increasing services delivered through mobile phones and devices – such as bar code scanners,

accelerometers to detect motion, and GPS enabled location-based services – that provide instant access to the knowledge and insights driven by a wide range of sensing networks.

## Collaborative Contributions

### *The world is collaborating.*

New ways of working are emerging that are enabled by both new technologies and a fundamentally new mindset around the types of interactions that deliver customer value. Group and community collaboration tools like WebEx, LiveMeeting, GoToMeeting, TelePresence, iCohere, Tomoye, SharePoint, and hundreds of others, open new possibilities for anytime-anywhere meetings, learning events, knowledge-sharing, and communication across time zones, cultures, and organizational boundaries. Along with these tools comes a new mindset – a new mental model that advocates co-development and co-creation of new products, services, processes, and business models with the key

stakeholders both within and outside the organization. The future will be characterized by increasing collaboration

within and across individuals, working groups, business functions, suppliers, and especially customers.



## Social Networking & Communication

### *The world is socializing.*

As opposed to “collaboration” which is generally focused on an explicitly defined group objective or task, social networks create new possibilities for grass-roots organizing, knowledge and resource sharing, new relationships, and personal gratification. With the rise of professional networks like LinkedIn and Spoke, to general social networks like FaceBook and Twitter, more and more businesses recognize the potential for tapping into the power of social Networks. From the Visa Small Business Network on FaceBook to hundreds of business and professional groups on LinkedIn, these

networks provide ways for tech-savvy organizations to gain insight into real-time emerging customer/consumer needs and opportunities, to generate awareness, to influence participants, and to engage them in activities that

create value. The future will be characterized by the continued growth and integration of existing and new social networks as a fundamental component and driver of service experiences and business models.





## Globalization with Local Relevance

### *The world is small.*

With new communication, networking and collaboration tools comes the ability to reach global markets and customers in ways never before possible. “Going global” is no longer a strategy limited to large multi-national firms. In fact, more and more, local relevance and global presence will become intertwined as localized offerings and services may rely on globally sourced products, information, and knowledge and vice versa. Smaller and medium sized firms, especially, will increasingly challenge conventional ways of doing business around the world since they



are often nimble and flexible enough to be able to instantaneously tap into global supply chains, new channels, and local resources. The future will be

characterized by increasing competition locally, as well as opportunities for global expansion for those who recognize that the world is truly small.

## Climate Change & Sustainability

### *The world is purposeful.*

More and more research, press and new business innovation is focusing on opportunities tied to climate change and sustainability. A tipping point has occurred in which the vast majority now recognizes that a fundamental shift is needed, and that “good business” and “doing good” are no longer mutually exclusive. From the US \$5.6 billion invested in cleantech innovation in 2009<sup>7</sup> to the multitude of business ventures like the Grameen Bank that have proven out their “profit with purpose” business models, socially meaningful business is becoming a pervasive element of business as usual. Just like today we no longer talk about “e-business” sepa-



rately from “business,” sustainability is rapidly becoming an equally assumed component of simply doing business. The future will be characterized by the increasing adoption of financially viable, socially beneficial business models.

There are many other megatrends that could have made this list. Those that were selected represent key enablers that underlie the emerging business models that are shaping the future of service business innovation.

<sup>7</sup> [www.cleantech.com](http://www.cleantech.com)



## Business Model Innovation – Creating New Value for the New Economy

While a service mindset and an understanding of future trends are key elements of the new “service logic,” they are not enough – an organization must develop and tap into its creative imagination to conceive of a winning business model within its own market context. Here, “business model” is defined as *the way in which an organization creates, delivers and captures value – economic, social, or other types of value.*

While there are many approaches to business model innovation, one tried and true method is to borrow insights from other companies and industries. The goal isn’t to apply a rubber stamp model from one industry to another – rather, by exploring business models from companies in adjacent or non-adjacent industries, the seeds for creative inspiration and imagination can be sewn.

### Forerunner Innovation Strategies

Four key business model innovation strategies are commonly used by companies that possess Forerunner characteristics. Each of these strategies taps into the power of the service innovation megatrends and ultimately relies upon a deep understanding of customers – and customers’ customers – needs. All of these involve the fundamental redefinition or wholesale creation of the customer value equation – what is actually valued by customers, how they receive it, how they pay for

**Table 2. Innovation Strategies and Corresponding Business Models**

Innovation strategy	Description	Business Models
<b>Attribute Based Innovation</b>	Innovation focused on redefining certain core attributes of existing products in ways that fundamentally shift the financial model away from goods to services	1. Time Based models 2. On Demand models 3. Product Transformation models
<b>Knowledge Based Innovation</b>	Innovation focused on leveraging data, information and knowledge gathered automatically or through customer interactions that reinforce existing products or services, or create new revenue-generating services	4. Data Aggregation models 5. User-Generated models
<b>Mobile Web Based Innovation</b>	Innovation focused on transforming existing products or services of creating entirely new value through internet or mobile delivery and experience	6. Digitize it models 7. Make it Mobile models 8. Platform as a Service models
<b>Solution Based Innovation</b>	Innovation focused on expanding the value of existing products or services by adding services that meet a broader set of customer needs or by introducing complementary service offerings	9. Adjacency Complement models 10. Experience Service models 11. Consultative Value models 12. Profit with Purpose models

it, and the lifecycle of the customer relationship.

The four business model innovation strategies are:

1. Attribute Based Innovation
2. Knowledge Based Innovation
3. Mobile Web Based Innovation
4. Solution Based Innovation

Each strategy can be used to create two or more distinct business models that are based on similar design principles. For simplicity sake, these business models are categorized under the four business model innovation strategies to illustrate certain design principles, but in reality each may contain aspects of the others (see Table 2).

Our goal here is to provide an understanding of the core principles underlying each model, in order to highlight insights that can serve as the starting point for aspiring service innovators to identify new opportunities for their own industries and markets.

### Working with the Case Examples

In this report, we describe four business model innovation strategies, underneath which are 12 different business models, illustrated through 24 case examples (see Table 3). We must emphasize that many of the cases actually incorporate elements of *multiple* business

models, which is in many cases what makes these companies innovative. We have chosen to classify the cases based on their *primary* business model – the model that represents the core driver of the value they provide and which serves as primary underpinning of their organizational strategies and structures.

As you become familiar with these

models, consider the core strategies that were employed and the underlying operating principles at work. Then ask yourself how you might be able to apply these principles and approaches to your own business context.

Given that certain innovation strategies and business models are more pertinent to some companies

than others, we have created a chart to help navigate which strategies, business models and cases may be of most interest to you – the chart is organized based on the relevance of the business models to established product companies, established service companies, or start-ups (if both a product *and* a service company then all cases will apply).

Table 3. Business Model Relevance Chart

			Business Model Relevance		
			Manufacturing & Product Firms	Service Firms	Start-Ups
Attribute-Based Innovation	Time-Based Value Models	Cemex	✓		
		Rolls-Royce	✓		
	On Demand Service Models	Hewlett-Packard	✓		✓
		Zipcar	✓		✓
	Product Transformation Models	SolarCity	✓		✓
		IFH Holdings / Espresso Fitness	✓		✓
Knowledge-Based Innovation	Data Aggregation Models	Intuit	✓	✓	
		Gardner Denver	✓	✓	
	User-Generated Models	Honda	✓	✓	✓
		iStockPhoto	✓	✓	✓
Mobile Web-Based Innovation	Digitize It Models	Open Table		✓	✓
		Cisco Systems		✓	✓
	Make It Mobile Models	t+Medical	✓		
		NeoMedia	✓		
	Platforms as a Service Model	Apple	✓	✓	✓
		Nintendo	✓	✓	✓
Solution-Based Innovation	Agency Complement Models	Eureko / Achmea Health	✓	✓	
		Michelin / ViaMichelin	✓	✓	
	Experience Service Models	Harley Davidson	✓	✓	
		Visa	✓	✓	
	Consultative Value Models	FM Global	✓	✓	
		Herman Miller	✓	✓	
	Profit with Purpose Models	iReuse	✓	✓	✓
		Vodafone	✓	✓	✓

Forerunner Innovation Strategy #1: Attribute-Based Innovation

The business models driven by Attribute-Based Innovation fundamentally redefine the core assumptions of existing products in ways that shift the financial model away from selling a product to selling a service (see Table 4). Underlying these models is a deep understanding of what truly delivers value to customers, specifically, that it is not the actual physical product that is desired but rather the service-related value that the product enables. The Forerunner case examples provide illustrations of how both established firms and start-ups have reshuffled the value equation to shift what is often a commodity product into a high value, higher margin opportunity.

Table 4. Forerunner Innovation Strategy #1: Attribute-Based Innovation

Business Models	Case Examples	Descriptions
<b>Time-Based Value Models</b> Redefines the product offering based on the value of “time” to the customer		CEMEX created a value proposition based on “timely delivery”, creating competitive differentiation and a premium pricing model in a once commoditized industry.
		Rolls-Royce shifted from selling aircraft engines to selling “uptime”, which led to the wholesale redefinition of its operations and created a new industry standard.
<b>On Demand Service Models</b> Redefines the product offering based on the value of “anytime access” to the customer		HP cultivated a new-to-the-world business model that transforms the traditional magazine newsstand into an on-demand service, and that uses its own customers as service suppliers.
		Zipcar challenged long-held industry assumptions by introducing on-demand car rentals that address a spectrum of unmet needs that traditional rental models overlook.
<b>Product Transformation Models</b> Redefines the product offering based on the fundamental end-user service need		SolarCity “servicized” what is traditionally sold as an expensive product, lowering the customers’ barrier to entry and establishing it as a major force in an emerging market.
		IFH’s Espresso Fitness introduced new possibilities in fitness-related services by connecting “equipment” to subscription services and social networks in ways that support and reinforce the core motivational drivers of its customers’ customers.

Redefine the core assumptions of existing products in the ways that shift the financial model away from selling a product to selling a service

## Time Based Innovation

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What kinds of services or approaches could you offer based on the value of “time” to the customer?

Consider things that:

- Tap into the ways the customers think about “time” (e.g., the ways that they currently price their time)
- Generally accelerate the customer’s current process
- Help the customer to combine or eliminate steps in their current process, especially the most time-consuming or problematic steps
- Entirely reinvent the customer’s process

### Forerunner Innovation Strategy #1: Attribute-Based Innovation

#### Time-Based Value Models



**URL:** [www.cemex.com](http://www.cemex.com)  
**Headquarters:** García, Nuevo León • Mexico  
**Year Founded:** 1906  
**Revenue:** US \$14,544M  
**Employees:** 56,791

CEMEX created a value proposition based on “timely delivery”, creating competitive differentiation and a premium pricing model in a once commoditized industry.

#### Business Description

Founded in Mexico in 1906, CEMEX has grown from a purely local player to one of the top building materials companies in the world. While the majority of its sales come from cement, CEMEX does not see itself in the “cement business.” Rather, the company views itself as in the business of providing customers with the most efficient and effective building solutions – no matter what their construction needs. The company has a long history of innovation, due in part to its customer co-creation philosophy: “We do more than listen to our clients’ needs; we involve them in the development and refinement of our integrated products and services.”

#### Key Innovation

CEMEX positioned itself as a global leader in the cement business by creating a new measure of customer value: instead of simply providing *ready-mix concrete* (a product), they promise *on-site cement delivery within 20 minutes of a request*. CEMEX realized that their product represents a critical linchpin in the building chain – if the cement is not there exactly when it is needed, delays can result in significant costs to their customers. The only catch – customers often do not know when exactly the cement is needed. Because ready-mix cement turns to useless chunks after 90 minutes, CEMEX knew that customers would pay a premium

price for on-time delivery. Until then, typical delivery times in Mexico were at least three hours from the time a request was received until it was delivered. Because change orders were the norm and not the exception, it was very hard to predict when customers would need their cement, resulting in excess inventory, wasted product and increased costs for suppliers like CEMEX.

To understand the requirements of a just-in-time delivery model, an internal CEMEX team went to places as far afield as FedEx and a 911 call center to observe the principles behind their success. As a result, CEMEX equips its trucks with a Global Positioning System so that the dispatcher always knows exactly where the fleet is located. Using a sophisticated, electronic scheduling system, the dispatcher sends messages to reroute drivers based on traffic information or the changing needs of customers. CEMEX even launched a marketing campaign to make the 20 minute delivery time memorable: "Now the concrete is faster than the pizza."

### Financial Model

This new thinking now gave CEMEX the ability to create a new model that moved away from commodity pricing and to introduce premium pricing for ready-mix cement delivered within 20 minutes of a customer request. Because they understand the cost implications to their customers, CEMEX provides discounts if the delivery is late.



### Value Network

With operations in over 60 countries, CEMEX's geographic expansion is largely the result of partnering with and acquiring other building materials suppliers and competitors. Its extensive infrastructure of over 65 cement plants, 400 quarries, 187 distribution centers and 1700 ready-mix concrete facilities

is coordinated through a global logistics network focused on one key metric – delivery within 20 minutes of a customer order. It is working: overall, the company has achieved 98% on-time delivery.

## Forerunner Innovation Strategy #1: Attribute-Based Innovation

### Time-Based Value Models



**URL:** [www.rolls-royce.com](http://www.rolls-royce.com)  
**Headquarters:** London • England  
**Year Founded:** 1884  
**Revenue:** 13,144  
**Employees:** 39,000

Rolls-Royce shifted from selling aircraft engines to selling “uptime”, which led to the wholesale redefinition of its operations and created a new industry standard.

### Business Description

Rolls-Royce is the world’s #2 manufacturer of aircraft engines, behind GE Aviation. While many associate Rolls-Royce with the luxury car, its automotive operations are now owned by BMW. The British government split apart the car and engine operations in 1971, when the company was nearly insolvent and was then nationalized. How did the company transition itself from being a locally-based manufacturer on the brink of bankruptcy to the #2 manufacturer of jumbo jets with a global customer base in 2009? The turnaround came from a brilliant blend of manufacturing and services.

### Key Innovation

Rolls-Royce executives recognized that their airline customers had a unique problem to solve: keeping their planes running longer without any compro-

mise in quality. Customers did not need engines – they needed airplanes with “uptime.” Thus Rolls-Royce shifted from a product-based model of selling engines to a service-based model whereby customers pay a fee for every hour an engine runs.

To ensure continuous performance, Rolls-Royce has made significant investments in an operations center in Derby, England that continuously assesses the performance of its 3,500 jet engines around the world. This sophisticated equipment sends back signals about performance, so that Rolls-Royce can improve its products based on real-time customer data. It also enables Rolls-Royce to predict when engines are more likely to fail, letting customers schedule engine changes efficiently, which further improves the goal of higher “uptime”.

### Financial Model

Jet engine companies like Rolls-Royce make more profit from selling spare parts and providing service than they do from the engines themselves. In fact, some companies sell engines at a loss just to get the larger pay-off

from parts and servicing. The challenge comes when an engine manufacturer sells the engine at a loss and then a smaller, nimbler competitor is awarded the spare part/servicing business. To mitigate this risk, Rolls-Royce successfully bundled the price of the engine and the service into a single “product + service” solution by charging its customers a fee for every hour that the engine runs. Rolls Royce was the first to offer this type of service arrangement, setting a precedent for the industry. Today, roughly half the company’s revenues come from services.

### Value Network

As mentioned, “uptime” is critical to both Rolls-Royce’s and its customers’ businesses. To deliver maximum uptime, Rolls-Royce provides customers with parts and services through a network of strategic partners and suppliers that are located at major airports around the world. And because capital and finance must be part of any major aviation expenditure, Rolls-Royce has created RRPf (Rolls-Royce & Partners Finance) to provide short, medium and long-term spare engine leasing solutions.



Redefine the core assumptions of existing products in the ways that shift the financial model away from selling a product to selling a service

## On Demand Innovation

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What kinds of services or approaches could you offer based on the value of “anytime access” to the customer? Consider things that:

- Increase access to a variety of different things (information, expertise, financing, customer insights, etc.)
- Increase accessibility on more time occasions
- Increase the flexibility of access
- Increase accessibility in more locations (physical and virtual)
- Increase accessibility through different media

### Forerunner Innovation Strategy #1: Attribute-Based Innovation

#### On-Demand Service Models



**URL:** [www.hp.com](http://www.hp.com)  
**Headquarters:** Palo Alto, CA • USA  
**Year Founded:** 1939  
**Revenue:** US \$114,552M  
**Employees:** 304,000

HP cultivated a new-to-the-world business model that transforms the traditional magazine newsstand into an on-demand service, and that uses its own customers as service suppliers.

#### Business Description

As the world’s largest technology company, HP brings together a portfolio that spans printing, personal computing, software, services and IT infrastructure to solve customer problems. Its products include PCs, servers, storage devices, printers, and networking equipment. HP’s services unit provides IT and business process outsourcing, application development and management, consulting, systems integration, and other technology services. Its software products include enterprise IT management, information management, business intelligence, and carrier-grade communications applications. The company markets to consumers, businesses, government agencies, and schools in more than 170 countries.

#### Key Innovation

As part of its “Everything as A Service” vision, HP has launched MagCloud, an on-demand publishing service model focused on eliminating the carrying costs, waste and inventory issues previously associated with magazine publishing. For example, of the 3.8 billion magazines delivered to newsstands in the USA, over 60% are delivered but never sold, resulting in over 2.3 billion wasted magazines. This service is ideally suited to publishers of short-run magazines, such as special interest groups, schools, clubs or niche magazines that are looking to minimize their setup, operational and print costs, and to increase their advertising revenue.



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MagCloud was officially launched in February 2010, and created this simple business model to establish itself as the leading platform. The company's leadership recognizes, however, that a number of follow-on revenues stream exist which may be introduced as the service gains critical mass:



- Targeted, local advertising within magazines based upon data known about the individual purchaser and the content they are purchasing
- A community that supports social networking to connect advertisers, publishers and other service providers
- Print design consultation offered through service providers from within this community.

### Value Network

Through this innovation, HP has created a new way to bring consumers and publishers together in a web-based marketplace, which is supported by a back-end value network. HP has minimized its MagCloud advertising costs since publishers have taken on the bulk of demand generation through promoting the services using social media such as Facebook and Twitter to generate interest and direct their customers to the MagCloud site. To print and deliver magazines, HP contracted with its own commercial print shop customers (print service providers - PSPs), essentially becoming a customer of its customers. These relationships increase business for the PSPs while creating a new workflow that gives them a new service offering. eCommerce is supported through an arrangement with PayPal, and relationships with UPS, FedEx and government-run post offices have also been created to ensure fast delivery times to magazine purchasers.

### Forerunner Innovation Strategy #1: Attribute-Based Innovation

#### On-Demand Service Models



**URL:** [www.zipcar.com](http://www.zipcar.com)  
**Headquarters:** Cambridge, MA • USA  
**Year Founded:** 1999  
**Revenue:** US \$120M  
**Employees:** <50

Zipcar challenged long-held industry assumptions by introducing on-demand car rentals that address a spectrum of unmet needs that traditional rental models overlook.

### Business Description

Zipcar is the world's leading car-sharing service with 350,000 members and 6,500 vehicles in urban areas and college campuses throughout 28 North American states and provinces as well as in London, England. Zipcar offers more than 30 makes and models of self-service vehicles that can be rented by the hour. It offers individuals an alternative to the high costs and hassles of owning a car in the city and provides businesses with an alternative to the traditional company car. It has shifted the paradigm of how cars are rented while simultaneously creating an environmentally responsible solution.

### Key Innovation

Until Zipcar was founded in 1999, consumers and businesses did not seem to question the status quo of car rental:

people picked the cars up at airports or rental car offices, paid for them by the day or week (even if they only needed the car for a partial day) and returned the car to the same location.

Zipcar challenged the rental car market status quo by creating a different value proposition – renting cars by the hour and making them readily available in easily accessed, designated parking spots “where the people are” – starting with city streets and college campuses. Customers could now rent cars only minutes in advance, and could avoid the cost and hassle of car ownership. Zipcar's original value proposition was to provide an environmentally-friendly way to supplement public transportation targeted to urban dwellers and college students and professors.

As Zipcar ridership increased, the company began to market its services to businesses as “the new company car alternative.” Zipcar for Business provides a convenient, cost effective and sustainable transportation alternative to car rental, taxis and personal car reimbursement. Employers create a business account which employees access via the web or mobile phone to reserve a car. This car sharing vs. car renting solution has proven to have a strong appeal to companies.

Once Zipcar members register they receive a Zipcard to unlock their vehicle, which only works for the designated rental time. Zipcar users can also lock or unlock cars with SmartPhones and can use text messages to request to keep their vehicle longer.

Word-of-mouth promotion is vital to Zipcar's membership-based business,



so the company encourages customer input. The makeup of the fleet – from Mini Coopers to BMWs – is heavily influenced by member suggestions. And when customers protested the \$10-an-hour price to rent a fuel-efficient Toyota Prius, the company dropped it to \$7. In pursuing non-traditional, underserved markets such as college students, Zipcar has created a hip, eco-conscious brand image that sets itself apart.

### Financial Model

Zipcar charges an easy-to-understand hourly or daily rate for car rental which covers mileage, fuel, reserved parking and insurance. To rent a Zipcar individual or business drivers become Zipcar members and pay an application fee as well as an annual fee. These fees, as well as the hourly and daily car rates, vary based on the location and car use

(e.g., individual or business). Discount programs provide lower hourly or daily fees for customers able to maintain a minimum monthly dollar commitment for usage.

### Value Network

One of Zipcar's greatest values is its accessibility, especially for people without other modes of transportation. Thus Zipcar's value network extends to the college campuses and local city governments in the U.S. and U.K. who partner with Zipcar to make designated parking places available.

Redefine the core assumptions of existing products in the ways that shift the financial model away from selling a product to selling a service

## Product Transformation

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What kinds of services or approaches could you offer based on your customers' fundamental needs, challenges or issues? Consider:

- Customers' frustrations with existing products or solutions
- The customer's "end game", i.e., their real underlying purpose in using your product
- Unarticulated needs – needs that you may have observed in your customers, but which they have not expressly told you about
- Barriers to greater levels of adoption of your product offering

### Forerunner Innovation Strategy #1: Attribute-Based Innovation

#### Product Transformation Models



**URL:** [www.solarcity.com](http://www.solarcity.com)  
**Headquarters:** Foster City, CA • USA  
**Year Founded:** 2006  
**Revenue:** Unavailable  
**Employees:** 525

SolarCity "servicized" what is traditionally sold as an expensive product, lowering the customers' barrier to entry and establishing it as a major force in an emerging market.

#### Business Description

SolarCity is the leading full-service solar provider for homeowners, businesses and government organizations in the USA. It is the first company to provide solar power system design, financing, installation and monitoring services from a single source for homeowners and businesses. The company was founded in 2006 to help millions of homeowners and businesses adopt solar power, protect themselves from rising electricity costs and protect their environment from polluting power sources. SolarCity's customers include thousands of homeowners, more than 75 schools and universities, government agencies, national landmarks, and well-known corporate clients in-

cluding Intel, British Motors and eBay. Despite the downturn in the economy, SolarCity's revenues continue to double, year-after-year.

#### Key Innovation

SolarCity helped pioneer a way to bring solar to the masses and remove one of the biggest barriers to widespread adoption: start-up costs of \$15,000 or more for homeowners to go solar, and significant capital investments for businesses. They help customers lease a solar system at no money down and generate an average cost savings of 10% – 15% on their combined electric and lease payment bill.

SolarCity's unique value proposition is that it provides start-to-finish solar power systems all from a single

source, with the emphasis on service rather than product. Traditional companies in this space manufacture solar panels and then outsource design and installation to a dealer network. Instead, SolarCity leads with service, including design, installation, financing and monitoring.

End-customers have helped shape SolarCity's services. The community solar program began in 2006 when a resident in Portola Valley, California inquired about a group discount if he could convince his neighbors why solar power was beneficial. Intrigued by the idea of helping communities come together to positively affect their neighborhoods, Solar City set a group goal for a minimum number of installations that would provide the desired discount. They installed solar power in 78 homes in this Portola Valley neighborhood and

went on to complete 30 similar community solar programs.

### **Financial Model**

SolarCity offers both purchase and lease options to customers. SolarCity's leases typically run for 15 years. The company designs, installs and maintains the system. In lease scenarios, SolarCity owns the system and receives the accompanying federal tax credits and state incentives. Customers that purchase systems receive the accompanying rebates and credits. Businesses typically select a Power Purchase Agreement (PPA) that allows them to get started with solar energy without any capital outlay. They pay a monthly fee based upon the amount of electricity that the solar system produces. Homeowners have a similar lease agreement, but they pay only for the electricity that they use. Both businesses and home-

owners are guaranteed a fixed price for their electricity year after year, no matter what the fluctuation is in electric rates.

### **Value Network**

SolarCity contracts with a variety of solar panel manufacturers to obtain products that are most appropriate to the customer's needs. Energy companies represent key players in their value network since excess energy can be sold back to these utilities through net metering, a special metering and billing agreement between the solar system owner and the utility company. In addition, state and federal governments also play key roles, since SolarCity receives incentives and rebates directly. Finally, through a network of community programs, viral marketing and promotion of SolarCity's services leads to new installations and service agreements.





## Forerunner Innovation Strategy #1: Attribute-Based Innovation

### Product Transformation Models



**URL:** [www.ifhholdings.com](http://www.ifhholdings.com)  
**Headquarters:** Sunnyvale, CA • USA  
**Year Founded:** 2009  
**Revenue:** <US \$50M  
**Employees:** <50

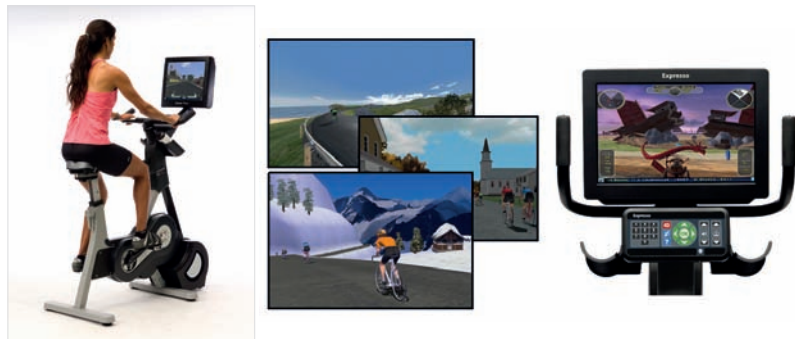
IFH's Espresso Fitness introduced new possibilities in fitness-related services by connecting "equipment" to subscription services and social networks in ways that support and reinforce the core motivational drivers of its customers' customers.

### Business Description

Interactive Fitness Holdings (IFH) was founded to bring fitness into the 21st century. The company provides commercial-grade virtual reality-enhanced cardio fitness systems to health clubs in North America, Europe and other selected international locations. Its mission goes beyond selling equipment to fitness facilities. The company is focused on the experience of their customers' customer – the exerciser's need for a cardiovascular fitness experience that is both effective and mentally engaging. Its best-known product is the Espresso exercise bike which is more than a piece of equipment – it is a true service experience that includes a social network.

### Key Innovation

Through its Espresso family of bikes, IFH has innovated around its customers' customer's need: motivation, competition and engagement while



working out on traditional cardiovascular fitness equipment. Because most cardio equipment is deadly dull, health club customers lose interest quickly, resulting in lower membership retention rates and below par word-of-mouth referrals.

IFH realized an opportunity to apply technology to improve the engagement and desired outcomes of health club members through the intelligent integration of leading-edge technology that delivers an "immersive" experience for the customer while exercising. The integration of this technology also delivers differentiation for the fitness centers that offer this equipment.

Via the Espresso bikes, end-users can take advantage of more than 30 interactive visual scenarios, updated via the web, that create a captivating and motivating fitness experience. Exercise enthusiasts can compete on various tours from the California coast to the Peruvian mountains. These experiences can be enhanced through competition provided via a standard "pacer," a ghost rider based on one's best real-time challenge, or another rider from the health club. In addition, end-users can access a website that tracks all history and progress of the rider, providing both personal statistics and statistics

relative to other riders across its membership base.

### Financial Model

IFH makes the Espresso family of bikes available to commercial fitness facilities through sales or leasing arrangements. They also provide parts and support services. In addition to its B2B sales, the company provides free basic memberships to end-users which include 90 days of historic data and the ability to compete against a "ghost" rider on all rides. The company also offers a fee-based membership which provides riders with access to member-only virtual tours and premium personal statistics.

### Value Network

IFH's value network consists of the Espresso bike technology, visual/interactive equipment, parts and a distributed network of sales and service providers. It also includes dozens of commercial fitness centers in the U.S. and abroad. In addition, IFH's value network includes its customers' customer – the fitness enthusiasts who ride the bikes, compete and share statistics with other enthusiasts, and create demand for more interactive tours and games.

## Summary

The Attribute Based Innovation strategy drives three business models, namely:

1. **Time-Based Value Models** that redefine the product offering based on the value of “time” to the customer
2. **On Demand Service Models** that redefine the product offering based on the value of “anytime access” to the customer
3. **Product Transformation Models** that redefine the product offering based on the fundamental end-user service need

Inherent to Attribute Base Innovation is the critical need to reexamine and question the core assumptions we hold about “the way things have always been done”. We also need to look at the context in which the customer operates, and within which

our products play a role. For example, CEMEX shifted its thinking from “we manufacture cement” to “how does cement fit into what our customer is trying to do” (i.e., managing the complex process of constructing buildings). Zipcar questioned the status quo of car rental – that cars must be picked up at airports or rental car offices and returned to the same location, as well as the financial model of paying by the full day or week. IFH “looked beyond” its direct customer – the health club that purchases its equipment – and created new ways to improve the experience of the end-user, the exerciser.

The common thread across all three cases is a deep questioning and understanding of what customers really desire, what they are trying to achieve, and a bold approach to doing things differently to meet those needs.





## Challenge Questions

1. What are the core assumptions about “the way things are done” in your own markets, industry or organization?
2. What could be your equivalent of the CEMEX success story, or any of the other cases described under this innovation strategy?
3. What kinds of services or approaches could you offer based on the value of “time” or “anytime access” for your customers?
4. What kinds of services or approaches could you offer based on your customers’ customers’ fundamental needs, challenges or issues?

Forerunner Innovation Strategy #2: Knowledge-Based Innovation

The business models driven by Knowledge-Based innovation tap into the power of data. These data can be collected in a variety of ways but the goal is the same: to interpret and give meaning to data in ways that reinforce and enhance the value of existing products and services or to use the data to create wholly new service offerings (see Table 5). Underlying these models is the recognition that inherent in every customer interaction are opportunities to co-create value for the broader community of customers. The Forerunner case examples provide illustrations of how both established firms and start-ups have collected and applied customers' data – either explicitly as an inherent part of the customer experience or as a transparent process through automation – to drive service innovation.

Table 5. Forerunner Innovation Strategy #2: Knowledge Based Innovation

Business Models	Case Examples	Descriptions
<b>Data Aggregation Models</b> Collects and interprets data to provide new knowledge, information and service offerings to customers and customers' customers		Through its Mint.com service, Intuit aggregates anonymous user data to provide win-win solutions for both users and B2B customers - discounts for consumers on services that meet their unaddressed needs and access to these users by the companies with these services.
		Gardner Denver integrated wireless monitoring into its industrial product line, creating new service opportunities based on real-time feedback and aggregated data from individual customers and across its customer base.
<b>User-Generated Models</b> Taps into content and information contributed by end-users to create new forms of value and enhance existing offerings		Honda's embedded navigational sensors make every customer a contributor to its real-time traffic network, reinforcing both the value of its navigation club membership and its overall offering.
		iStockphoto tapped into the power of a network of content contributors to create a B2B service offering that address needs that its competitors' "content licensing" models are unable to meet.

Tap into the power of data to reinforce and enhance the value of existing products and services, or to create wholly new service offerings

## Data Aggregation

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

By aggregating data, what kinds of services or approaches could you offer that would enhance the value of today's products, or represent an entirely new service offering? Consider:

- Points of frustration that customers feel because they lack certain data, information, or real-time feedback
- Unarticulated information needs – needs that you may have observed in your customers, but which they have not expressly told you about
- Data that is readily available, but has not been aggregated
- Data that is “hidden” but which would be extremely valuable if it were uncovered
- Data that is automatically generated without human effort

### Forerunner Innovation Strategy #2: Knowledge-Based Innovation

#### Data Aggregation



**URL:** [www.intuit.com](http://www.intuit.com)  
**Headquarters:** Foster City, CA • USA  
**Year Founded:** 1983  
**Revenue:** US \$3,182M  
**Employees:** 7,800

Through its Mint.com service, Intuit aggregates anonymous user data to provide win-win solutions for both users and B2B customers – discounts for consumers on services that meet their unaddressed needs and access to these users by the companies with these services.

#### Business Description

Intuit is the leading provider of personal finance, small business accounting and consumer tax preparation software for consumers, accountants and small businesses. With over 50 million users, Intuit acquired Mint.com in 2009 to enhance its position as the leading provider of consumer, software-as-a-service offerings that connect customers across the desktop, online and through mobile devices. The company continues to provide Quicken for its desktop users, while Mint.com is its primary online personal financial management solution. Mint.com has over 1 million users and adds over 3,000 users every day. The company currently tracks \$175 billion in transactions and more than \$50 billion in assets.

#### Key Innovation

Mint.com allows users to track bank, credit card, investment, and loan transactions and balances through a single user interface. Because Mint aggregates and anonymously tracks customer data for nearly a million customers, or about 1% of all US households, it can help its customers compare their spending habits to others in similar groups. For example, customers can answer the questions:

- Am I spending more or less on gasoline than the average resident of San Francisco?
- How does my average purchase price and frequency at Amazon.com compare to others in the Mint.com database?



Mint.com also uses the combination of personal spending patterns and aggregated data to offer users ways to save money on credit cards, checking accounts, savings accounts, CDs, brokerage accounts, IRA's and auto insurance. Mint.com makes money on referrals from these other businesses. Mint.com estimates that its typical user finds \$1,000 in saving in their first visit and has identified more than \$300 million in potential savings for its users.

Mint.com has discovered that this aggregated, anonymous data are tremendously valuable in serving as a consumer advocate. For example, the Wall Street Journal used its empirical data on bank fees to identify the banks that charge the highest rates. Mint.com also publishes data related to consumer spending patterns, account balances, investments, and so forth.

"Mint on Mobile" is also available so users can access all of their financial data from their phones. Users can also set up alerts for almost any financially-related activity, from a credit card payment to a low balance on their checking accounts. These alerts are delivered via email or a text message to the user's mobile phone.

## Financial Model

The service that Mint.com provides to its customers is free. It generates revenue through its relationships with its value network of providers such as banks and auto insurance companies. By analyzing the data collected about personal buying habits, Mint.com is able to show its users special offers that can save them money. When users accept an offer from the "Offers" page, Mint makes money from the referral.

## Value Network

Mint.com's business model is based on its network of partners that can provide the same or better services to customers, at a lower cost, based on that customer's specific needs. This network includes credit card companies, national and local banks, brokerage firms, and auto insurance companies. The customer awareness and access that Mint.com provides to these com-

panies is superior to traditional on-line advertising because Mint.com analyzes data, compares costs, shows potential savings, and creates personalized recommendations. In addition, Mint.com partners with Yodlee, an online banking consulting company and leading provider of account aggregation services to the top U.S. financial institutions, to provide end-user services.



## Forerunner Innovation Strategy #2: Knowledge-Based Innovation

### Data Aggregation



**URL:** [www.gardnerdenverproducts.com](http://www.gardnerdenverproducts.com)

**Headquarters:** Quincy, IL • USA

**Year Founded:** 1859

**Revenue:** US \$2,018M

**Employees:** 7,700

Gardner Denver integrated wireless monitoring into its industrial product line, creating new service opportunities based on real-time feedback and aggregated data from individual customers and across its customer base.

### Business Description

With operations in 30 countries on six continents and a worldwide network of distributors and partners, Gardner Denver is a leading provider of products and equipment used in myriad industries. Gardner Denver manufactures compressed air products, vacuum products, fluid-transfer products, well-servicing pumps and water-jetting products. Based in Quincy, Illinois, more than half of its sales come from outside the USA.

### Key Innovation

With the industrial equipment industry becoming more commoditized, and customers becoming more price conscious, Gardner Denver investigated service innovation as means of growth. Realizing aftermarket service and replacement parts represent a vital growth opportunity and means for differentiation, the company teamed up with Qualcomm Enterprise Services for a private-labeled Smart Services solution branded as ESP 20/20 Compressor



Monitoring System. The system monitors air compressors and air dryers that comprise a compressed air system within industrial facilities. The ESP 20/20 incorporates M2M (Machine-to-Machine) technology that wirelessly captures and analyzes real-time product performance information, which is invaluable to customers and service technicians alike.

For customers, the ESP 20/20 provides 24/7 real-time compressor data from any location. This enables its customers to avoid downtime, reduce electric bills, improve response time, reduce maintenance and repair time, and increase long-term reliability.

For technicians, the ESP 20/20 provides the ability to offer higher quality, differentiated customer service. In the past, Gardner Denver and its distributors didn't have visibility into the status of machines in use at customers' facilities. If a unit required service, the field support staff had no way of knowing unless a customer called with a service request. By then, there already would be consequences ranging from a simple inconvenience to a major productivity loss. As a result, many local third-party service companies were taking business away from Gardner Denver's first-responder network for service and repair.

With ESP 20/20 Gardner Denver can improve service response time since immediate notifications are sent to the appropriate person via email, text, page and voice if there is a compressor problem. Likewise, the ESP 20/20 eliminates

multiple site visits, since diagnostics can be performed prior to dispatching a technician. The data monitoring system also helps guarantee long term reliability since automatic notification of service items ensures the compressor operates at peak performance.

The technology also feeds data back to the company's engineering and quality teams, providing valuable insights for new product development.

### Financial Model

Gardner Denver Products, including the ESP 20/20 are sold globally through an extensive approved Sales & Service network. In addition to products, customers can purchase personalized maintenance and service contracts.

### Value Network

Gardner Denver provides sales and services through global network of dedicated authorized distributors. In addition, it partnered with Qualcomm Enterprise Services to create its private-label ESP 20/20 Smart Service solution. The ESP 20/20 consists of an intelligent device directly connected to an Allen-Bradley control system. The modem within the device collects and communicates machine sensor readings and alert conditions wirelessly to the Qualcomm server using a proprietary Qualcomm communications protocol. The information is then transmitted via the Cingular cellular network to a Qualcomm enterprise management application.

Tap into the power of data to reinforce and enhance the value of existing products and services, or to create wholly new service offerings

## User Generated Innovation

### Forerunner Examples



HONDA



As you review these cases, consider the following questions to inspire your thinking:

By leveraging user-generated content, what kinds of services or approaches could you offer that would enhance the value of today's products, or represent an entirely new service offering? Consider:

- User-generated content that is created automatically, (e.g., merely through usage of the product, like Honda)
- User-generated content that is created consciously (e.g., like iStockphoto)
- Expensive content provided by 'professional bodies' that could potentially be offered at a dramatically lower price point if it were to be created by large numbers of individual contributors

### Forerunner Innovation Strategy #2: Knowledge-Based Innovation

#### User-Generated Content



**URL:** <http://world.honda.com>  
**Headquarters:** Tokyo • Japan  
**Year Founded:** 1948  
**Revenue:** US \$102,906M  
**Employees:** 181,876

Honda's embedded navigational sensors make every customer a contributor to its real-time traffic network, reinforcing both the value of its navigation club membership and its overall offering.

#### Business Description

Honda Motor Co., Ltd. is a leading manufacturer of automobiles and power products, and the largest manufacturer of motorcycles in the world. The company also makes a line of ATVs, personal watercraft, commercial and residential machinery, portable generators, and outboard motors that bring it into contact with over 19 million customers annually. Honda Motor Co. has 120 manufacturing facilities in 30 countries worldwide and generates about 85% of its sales outside Japan.

#### Key Innovation

Honda strives to create greater peace of mind and a better automotive driving experience for its customers. Recognizing that this experience could be

improved if customers could modify their route based on real-time traffic conditions, Honda launched a unique onboard car navigation system for its Japanese-market cars in 2003. The InterNaviSystem features embedded user-contribution technology to gather traffic data. Independent of the driver, the Honda vehicle continually monitors its own speed and position information via built-in "floating probe" sensors. These sensors capture traffic information that can be combined with government-supplied traffic data and is then shared real-time with other Honda drivers.

In addition to up-to-the minute traffic conditions, customers also receive congestion predictions, parking facility information, news, weather, and

roadside service information. This can be delivered to the vehicle's navigation system or through email or to a personalized web page that can be viewed on a mobile device. The technology has been expanded to interface to Google Earth, which provides high-resolution satellite images of cities.

### Financial Model

This service is available exclusively for Honda car owners via its InterNavi Premium Club. It is offered free of charge to owners of the Honda InterNavi system. No annual subscription or monthly service charges are required. Honda uses this unique global positioning system as a way to drive new car sales in a highly competitive market. As of June 2008, 660,000 Honda drivers subscribed to the InterNavi Premium Club.

### Value Network

Honda has created value in the form of relevant, real-time information via customers themselves – not through any



overt action on their part but simply by driving their vehicles. The service improves as Honda sells more cars and additional drivers sign up for the InterNavi Premium Club since more data are collected. This customer-generated data are combined with government-

supplied traffic data and is supplemented by media sources for news and weather, as well as local providers of roadside assistance and parking, to create timely and relevant services that lead to better driving experiences.

## Forerunner Innovation Strategy #2: Knowledge-Based Innovation

### User-Generated Content



**URL:** [www.istockphoto.com](http://www.istockphoto.com)  
**Headquarters:** Calgary, Alberta • Canada  
**Year Founded:** 2008  
**Revenue:** US \$23.6M  
**Employees:** 116

iStockphoto tapped into the power of a network of content contributors to create a B2B service offering that address needs that its competitors' "content licensing" models are unable to meet.

### Business Description

iStock Photo is a pioneer in the "micro-stock photography" industry and has become one of the most successful and profitable user-generated content sites in the world. The company sells royalty-free photos, illustrations, video, audio and Flash files to businesses and individuals at a fraction of the cost of traditional stock photography agencies. How can the company sell images for as low as one dollar? The secret is in the source: their photos or other files come from amateur photographers instead of professionals. Aspiring photographers receive a small commission (20-40%) for every image that is sold. These commissions may only amount to pennies since these royalty-free images can be purchased at such low costs, but photographers may make up in volume what they lose in per-shot royalties. iStock estimates that it pays \$1.2 million in royalties every week. In return, the files that are vetted and up-

loaded to iStock's site provide its customers with a collection of more than five million files for businesses, marketing and personal projects.

### Key Innovation

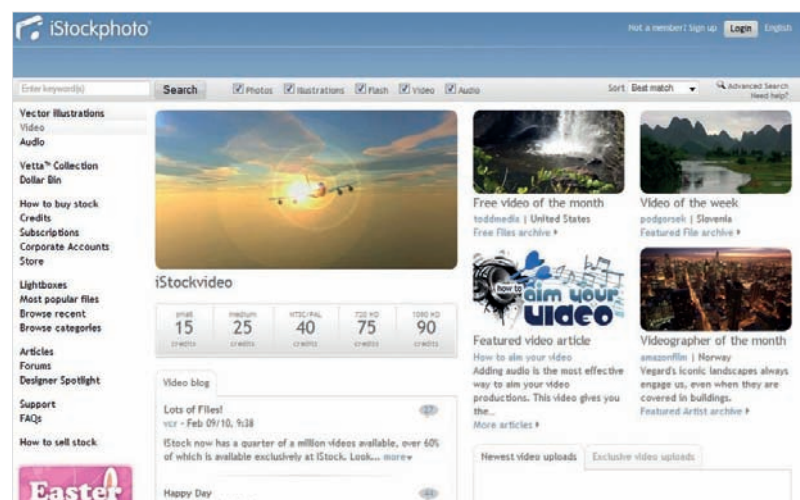
iStock was able to address an unmet customer need by supplying quality images at a fraction of the cost of conventional stock agencies, especially attractive to their target market of small business owners and individuals. The company was able to turn the pricing structure for picture licensing on its head by tapping into a new source of talent: amateur photographers instead of professionals. To guarantee customer quality, iStock requires would-be contributors to read a brief training manual, pass a quiz, and then provide three samples of their work for review prior to uploading images. To ensure the optimal inventory, iStock adheres to guidelines regarding the photos they will and won't accept.

Beyond simply buying and selling photos and other images at a low cost,

however, iStock has innovated by creating a member-generated image and design community. Contributors provide profiles of themselves, write blogs, and build their creative networks of users and contributors. In turn, users rate images and provide testimonials, creating a rich interchange of feedback that helps continually improve the library of images. iStock supports this community through newsletters and training as well as by featuring artists' contributions. To build loyalty among their artist community, iStock incentivizes Exclusive Contributors by doubling commissions and offering access to special events such as iStockalypse, an annual 3-4 day gathering in international cities to produce art and meet major players in the editorial industry.

### Financial Model

Unlike conventional stock agencies, who charge fees based on the published size of an image and circulation, users of iStock's services pay a flat fee per image. They provide customers





with flexibility for making purchases via three possible plans:

- Pay-as-you-go – users pre-purchase credits and spend them whenever they download a file.
- Subscriptions – provides users with a download limit for three months, six months or a year.
- Corporate accounts – provides a high volume credit package and ability to track subaccounts by team members.

Because iStock images are royalty-free, their customers can purchase files and then re-use them as many times as desired without paying additional fees.

### Value Network

iStock's value network is driven by a community of over 70,000 artist contributors from around the world who have contributed to iStock's library of more than five million files. Equally important in the value chain is the customer who rates images, provides testimonials and ultimately drives the sale -- it is only when a file is purchased that commissions are generated. iStock's editors provide a conduit between contributors and customers to ensure that the optimal quality and right mix of images are added to the digital library to guarantee continued purchases. The company provides incentives to contributors beyond commissions in the way of recognition and access to experts to develop a long-term and exclusive relationship with their top contributors. In addition they secure sponsorship from outside organizations such as Animoto for Photography, The Camera Store, Lensbaby and their parent, Getty Images, to produce the iStockalypse events.

## Summary

The Knowledge Based Innovation strategy drives two business models, namely:

1. **Data Aggregation Models** that collect and interpret data to provide new knowledge, information and service offerings to customers and customers' customers
2. **User-Generated Models** that tap into content and information created or contributed by end-users to drive new forms of value and enhance existing offerings

Knowledge Based Innovation centers on finding imaginative ways to use data, information, knowledge or content. Sometimes the data are readily available, but have not yet been aggregated, as seen in the Gardner Denver example. Sometimes information and content is created automatically, often through embedded technology and through the natural usage of the product, as in the Honda case. Other times it is created intentionally by individuals, as seen in the iStock-photo case. The common theme: an opportunity exists to harness various types of data in new ways to create new value and revenue streams.







## Challenge Questions

1. Thinking broadly, what kinds of data are (or could be) available to your organization?
2. In what ways could you gather data, either through engaging customers or end-users explicitly, or by "mining" their usage patterns or interactions "in the background"?
3. By aggregating certain types of data – including user-generated content – what kinds of services or approaches could you offer that would enhance the value of today's products or even represent an entirely new service offerings?

Forerunner Innovation Strategy #3: Mobile Web-Based Innovation

The business models driven by Mobile Web-Based Innovation create value through transforming taken for granted manual processes, physical products, or traditional services into a mobile or web-based service platform and experience (see Table 6). Underlying these models is the view that the world is moving to anytime-anywhere access of just about anything – and that value is generated through creatively redefining existing ways of doing things, or inventing altogether new ways of operating. The Forerunner case examples provide illustrations of how both established firms and start-ups created new forms of value by offering services in ways that are available anywhere and anytime, and how some companies actually view the very act of Mobile Web-Based innovation as the ultimate business model itself.

Table 6. Forerunner Innovation Strategy #3: Mobile Web-Based Based Innovation

Business Models	Case Examples	Descriptions
<b>Digitize It Models</b> Creates new-to-the-world applications that move taken-for-granted non-services into service opportunities		OpenTable transformed a common, labor intensive process into distinct service offerings that leverage the power of network effects to create annuity revenue streams.
		Cisco invented new options for transforming old ways of working by introducing new-to-the-world collaboration solutions that extend its core business into adjacent markets.
<b>Make it Mobile Models</b> Transforms physical products or processes into mobile services and experiences		t+Medical tapped into mobile technology to create a licensed service platform for delivering consumer health-care solutions for a wide range of prevalent and growing health conditions.
		NeoMedia created a new model for bridging the physical and digital worlds, providing a platform for digitizing various business-to-consumer products, services and experiences.
<b>Platforms as a Service Models</b> Creates platform by which a network of other providers and applications are delivered to customers		Apple established industry-standard platforms that reinforce the value of its products while generating service-based revenues leveraging an open network of content providers.
		Nintendo transformed the consumer gaming experience while building out a supporting platform for delivering access to additional value added services and content of its own and of third party partners.

Transform taken for granted manual processes, physical products, or traditional services into a mobile or web-based service platform and experience

## Digitize It

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What “taken for granted” activities or processes can be “digitized” and offered as a value-added service?

Consider things that:

- Save time
- Save effort
- Save money
- Reduce complexity
- Streamline processes
- Manage customer relationships
- Generate new business

### Forerunner Innovation Strategy #3: Mobile Web-Based Innovation

#### Digitize It



**URL:** [www.opentable.com](http://www.opentable.com)  
**Headquarters:** San Francisco, California • USA  
**Year Founded:** 2000  
**Revenue:** US \$55.8M  
**Employees:** 304

OpenTable transformed a common, labor intensive process into distinct service offerings that leverage the power of network effects to create annuity revenue streams.

#### Business Description

OpenTable is the leading supplier of reservation, table management and guest management (CRM) software for restaurants. As part of its service, OpenTable installs a sleek monitor and mini-PC in the reception area of the restaurant, which provides hosts with real-time access to reservations, table layouts and seating tools, and special notes and information about each reservation guest. OpenTable also operates the world’s most popular website for making online restaurant reservations – every month over 3 million people are seated at one of OpenTable’s 11,000 restaurant customers within its website reservations system. The company operates internationally with operations and restaurant customers

in the United States, Canada, Mexico, United Kingdom, Germany, France, Spain and Japan.

#### Key Innovation

OpenTable claimed new market space by establishing the leading solution for transforming a set of inefficient, manual and non-standard processes in restaurants – managing reservations, coordinating tables, and managing customer (guest) relationships. These services allow end-user guests to resolve 95% of their issues themselves via web self-service, and have given restaurants the ability to more efficiently handle peak periods without adding staff or compromising service. But OpenTable tapped into an even greater need that has become the foundation of their business model. By giving end-user consumers,



concierges, and administrative professionals the ability to search for, discover, review, and make, change or cancel reservations in real-time (either online or via mobile applications) they provide even greater overall value. Beyond streamlining operations and reducing costs, they give their restaurant customers the ability to capture business they would not otherwise obtain, as well as collect the personal information, food preferences and other data about those dining at their very own tables that has traditionally been unavailable as part of the dining relationship.

### Financial Model

OpenTable's financial model is an innovative mix of B2B service fees and consumer-driven "transaction fees." The company receives monthly service fees from each restaurant for use of their

hardware and services, as well as a per reservation transaction fee from the restaurant for each reservation booked (and completed) through the OpenTable.com website. Revenues also come from a range of strategic partnerships in which the OpenTable integrates its online reservation engine into partners' websites and tools, such as the "City Smart Concierge," an information service focused on hotel concierges across the USA.

### Value Network

OpenTable's value network consists of a range of key stakeholders. At the heart of the network are its customers – the restaurants. But consumers are fundamentally just as important for driving the value of its business model. From the start, OpenTable's B2B and consumer solutions were viewed

as interdependent and based on network effects: growth in the number of restaurant customers adds value to their website, and the greater number of website visitors, the more compelling the value for the restaurant. The network has seen such growth that many restaurants view the lack of presence within the OpenTable network as a liability, which has increased the number of new restaurant subscribers. OpenTable's partner network includes technology firms, tourism boards, event websites, dining and restaurant guides, restaurant associations, travel guides and websites, convention and visitors bureaus, and online and print magazines. These partners promote OpenTable's network to their own consumers as a value-added offering, as well as use the company's reservation engine in their operations.

**OpenTable.com™** Restaurant Reservations  
Free – Instant – Confirmed

Home [Sign In](#) [Mobile](#) [Help](#)

**New York / Tri-State Area Restaurants**

**1 Select Location**  
Select a Location  
[See other U.S. cities](#)  
**See also:** [Atlantic City](#), [Philadelphia](#)

**2 Refine Search Criteria**  
All Neighborhoods  
All Cuisines  
- OR -  
Enter Restaurant Name  
[See all New York Area restaurants \(1293\)](#)

**3 Select Date, Time & Party Size**  
05/19/2009 7:00 PM 2 people  
mm/dd/yyyy  
☐ [See Results On A Map](#) **NEW**  
**Find a Table**

**Welcome, Guest**  
**An OpenTable Introduction**  
 > See how OpenTable works  
 > Find out about Dining Rewards  
 > Learn how restaurants are added

**Offers and Events in New York / Tri-State Area**  
 > **Fathers Day - June 21**  
 Special Menus & Offers  
 > **2009 Diners' Choice Winners**  
 Top 50 Best Overall Restaurants  
 > **Earn Free Meals Faster**

**★★★★ OpenTable Diners' Choice™**  
**All New York / Tri-State Area**  
 Refine Location: Manhattan, Brooklyn, Westchester / Hudson Valley [More >](#)

**Most Booked 1000-Point Tables**  
 Best Overall  
 Neighborhood Gem  
 Most Booked  
 Best Food

**Most Booked 1000-Point Tables**  
 1 **Ethos - U.N.**  
 2 **The Modern - Bar Room**  
 3 **Kellari Taverna**  
 4 **Madison & Vine**  
 5 **Accademia Di Vino**

### Forerunner Innovation Strategy #3: Mobile Web-Based Innovation

#### Digitize It



**URL:** [www.cisco.com](http://www.cisco.com)  
**Headquarters:** San Jose, CA • USA  
**Year Founded:** 1984  
**Revenue:** US \$35,117M  
**Employees:** 66,129

Cisco invented new options for transforming old ways of working by introducing new-to-the-world collaboration solutions that extend its core business into adjacent markets.

#### Business Description

Cisco Systems is the worldwide leader in networking that transforms how people connect, communicate and collaborate. Dominating the market for Internet protocol-based networking equipment, the company provides

routers and switches used to direct data, voice, and video traffic. Other products include remote access servers, IP telephony equipment, optical networking components, Internet conferencing systems, set-top boxes, and network service and security systems. Cisco sells its products primarily to large enterprises and telecommunications service providers, but also markets products designed for small businesses and consumers through its Consumer Business Group.

#### Key Innovation

Recognizing the need to help globally dispersed teams collaborate more effectively, accelerate decision making and scale valuable resources, Cisco developed TelePresence™ as a next generation video communications tool. TelePresence is a combination of integrated management software, intercompany connectivity, and a suite of video and collaboration technologies and physical meeting rooms that create a powerful in-person experi-

ence. Interacting with others during a TelePresence™ session, sharing files, and collaborating on documents creates an experience that is “almost like being there” but without the travel cost or time. TelePresence™ lends itself to range of uses including corporate meetings, demonstrations, press conferences, summits, negotiations, interviews and 1:1 meetings.

Initially launched as a product in a variety of configurations, TelePresence™ was adopted first by large corporations who invested in dedicated TelePresence™ conference rooms. To provide affordable, high quality communication for small and medium businesses or remote/regional office workers, Cisco developed the Public TelePresence™. This is a usage-based service, offered through partners such as Marriott International, Taj Hotels, Resort and Palaces, and Starwood Hotels & Resorts Worldwide. The partnerships provide customers with a complete virtual meeting solutions, including on-demand TelePresence™, rented hourly



or per day, as well as catering services, business services such as print/copy/fax, and even a concierge team to address special needs.

In response to customers who have seen an opportunity to radically change existing business practices, Cisco announced five new TelePresence™ services in January 2010:

1. *Classroom of the Future*, to allow students and teachers to interact even if they are not in the usual, physical classroom
2. *Cisco TelePresence Active Collaboration Room*, which allows remote group collaboration using additional tools such as Cisco WebEx™ and virtual interactive whiteboards.
3. *Cisco TelePresence™ Remote Demonstration Center* which provides a way for businesses to showcase new products virtually.
4. *Cisco TelePresence™ Live Desk* which provides customers with instant in-person concierge service in a Cisco TelePresence room.
5. *Cisco TelePresence™ Streaming Service*, which provides live webcasting or recording services from a TelePresence™ meeting to any type of desktop, mobile device, or social video system.

Travel expense reductions are generally cited as a reason for using TelePresence™, but this is often secondary to the benefits businesses realize in terms of saved time and increased productivity. Such results have sparked the sales of TelePresence™ systems worldwide, which jumped 90 percent from 2008 to 2009, according to International Data Corporation.

### Financial Model

Cisco installs onsite TelePresence™ rooms to its corporate clients with costs ranging from US \$35,000 to US \$350,000 depending on the size and scope of the room, not including installation and support fees. Cisco also makes Public TelePresence™ available to businesses through service provider partners such as AT&T and Tata Communications, leading global communications providers. While Service Providers create their own pricing models and service levels, the cost to rent TelePresence™ rooms is approximately US\$299 per room per hour.

### Value Network

In addition to a network of hardware and meeting room furniture suppliers, Cisco has extended the reach of its TelePresence™ solution by making it accessible and affordable to businesses of all sizes through key partnerships with leading hotel chains and service providers. For example, Cisco partner Tata Communications offers its fully managed Cisco TelePresence™ service to Taj and Starwood hotel properties (among other customers). The service includes meeting scheduling, management, and support. In addition to hoteliers, travel service companies including American Express Business Travel and Carlson Wagonlit Travel are helping their clients locate and reserve public Cisco TelePresence™ rooms in hotels and other locations.



Transform taken for granted manual processes, physical products, or traditional services into a mobile or web-based service platform and experience

## Make it Mobile

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What products or processes that are delivered face-to-face today can be offered as a mobile service?

Consider things that are “constrained” by physical interactions or processes, and that if made mobile would:

- Provide greater value if delivered anytime
- Provide greater value if delivered anywhere
- Involve processes that involve data gathering
- Overcome constraints related to obtaining inputs of information or data
- Once completed, make it easier to provide or distribute information to others
- Overcome constraints of “printing” or hard copy paper

### Forerunner Innovation Strategy #3: Mobile Web-Based Innovation

#### Make It Mobile



**URL:** [www.tplusmedical.com](http://www.tplusmedical.com)  
**Headquarters:** Oxford • UK  
**Year Founded:** 2002  
**Revenue:** Private  
**Employees:** Unavailable

t+Medical tapped into mobile technology to create a licensed service platform for delivering consumer healthcare solutions for a wide range of prevalent and growing health conditions.

#### Business Description

t+ Medical offers cost effective disease management and remote monitoring solutions that improve the management, care and compliance of people living with chronic diseases. The company focuses on helping people self-manage their chronic conditions using technology that virtually everyone already owns – the mobile phone – and connecting them with the support of a healthcare monitoring team.

t+ Medical was founded in the United Kingdom in 2002 and expanded to the U.S. in 2007. Their solutions were developed in conjunction with one of the world's leading academic institutions, Oxford University.

#### Key Innovation

t+ Medical telemedicine solutions have revolutionized chronic disease management by providing a simple way for individuals to self-monitor their conditions and get professional healthcare assistance as needed, without leaving their homes. t+Medical currently offers solutions for people living with asthma, high blood pressure, diabetes and COPD (chronic obstructive pulmonary disease).

Patients receive instant personalized feedback about their condition via the integration of a device (such as a wireless blood glucose monitor), their own mobile phone and a secure personalized web page. Software is used

to create graphs and record trends so patients understand how they are controlling their condition. This feedback is also sent to t+Medical's nurse monitoring team to provide early intervention in the case of complications. A patient's own healthcare provider can also subscribe to the system to provide additional support.

### Financial Model

t+ Medical uses a subscription-based model to sell its solutions for asthma, high blood pressure, diabetes and COPD. Once users subscribe, they receive a simple program via text to install on their mobile phone so they can begin using the service. t+Medical has developed a licensing agreement with LifeScan, a Johnson & Johnson company, to develop and distribute products for diabetes management.

### Value Network

t+Medical delivers its solution through tapping into the expertise and distribution network of a wide range of stakeholders. Oxford University, for example, contributed key intellectual property from their Neural Network and Signal Processing Group. Its mobile solution is enabled through shared device standards from Nokia, Motorola and Sanyo, as well as network standards from Sprint, AT&T, Vodafone and Research in Motion. And through promoting education with partners including the American Diabetes Association, American Lung Association, Ameri-



can Heart Association and American Telemedicine Association, awareness and demand is generated from medical professional groups and consumers themselves. t+Medical also has partnerships with device providers who integrate their technology into their own solutions, such as Johnson & Johnson's Lifescan for diabetes management.

In addition, the value network includes its own customer support center that provides services such as patient recruitment, software and phone provisioning, compliance monitoring, training and ongoing end user support for patients and healthcare professionals.



Forerunner Innovation Strategy #3:  
Mobile Web-Based Innovation

Make It Mobile



**URL:** [www.neom.com](http://www.neom.com)  
**Headquarters:** Atlanta, GA • USA  
**Year Founded:** 1989  
**Revenue:** <US \$10M  
**Employees:** <50

NeoMedia created a new model for bridging the physical and digital worlds, providing a platform for digitizing various business-to-consumer products, services and experiences.

Business Description

NeoMedia Technologies, Inc. is a leader in mobile barcode scanning solutions. The company’s technology allows mobile devices with cameras to read 1D and 2D barcodes and provide “one click” access to mobile content. The company combines this technology with advanced analytics and reporting capabilities to revolutionize the way advertisers market to mobile consumers.

Key Innovation

NeoMedia’s state-of-the-art barcode design and barcode reading technology unleashes the power of mobile phones in a whole new way. Mobile phones with cameras become barcode scanners that give consumers and businesses instant access to the web for a host of applications, including:

- Tracking or inventorying products and services
- Tracing products through manufacturing or distribution channels
- Instantly validating tickets for

events, cinema, transportation or facilities

- Instantly validating coupons from retail chains, fast food and other stores
- Purchasing airline tickets, checking in for flights and obtaining boarding passes

Advertising and media companies also use NeoMedia’s barcode technology to extend the reach of traditional media into the new mobile world. For example, any magazine, newspaper, retail display or billboard with a 2D code can provide access to real-time product or service information, downloadable content or mobile commerce transactions. IQ Mobile, for example, used this technology to develop a multi-channel advertising campaign that enabled mobile consumers to scan a 2D code for a chance to win a Nokia 6210 Navigation phone. Prentice Hall, a leading book publisher, created interactive textbooks that allow students and professors to access fresh, additional content such as news, case studies, and videos from their mobile phones and even “talk” directly with the textbook authors via a mobile video linked to the book’s cover.



Financial Model

The company generates revenue by licensing its technology, and from service fees related to designing and implementing mobile marketing campaigns.

Value Network

NeoMedia’s value chain includes companies that produce camera-enabled mobile phones; companies that create 1D and 2D barcodes for advertising and promotional purposes; and any company that seeks to create an interactive customer experience via mobile devices.

Megatrends & Forerunner Attribute Highlights

Riding the Megatrends		Living the Forerunner Attributes	
	The Cloud		Relationships
✓	Web Based Value Delivery		Collaborating and co-creating
✓	Mobile Value Delivery	✓	Experiential interactions
✓	Everything as a Service	✓	Solutions
✓	Experience Design	✓	Customer needs and customers’ customers’ needs
	Sensing & Monitoring	✓	Value networks
	Collaborative Contributions		Profit +
	Social Networking & Communication		
	Climate Change & Sustainability		
✓	Globalization with Local Relevance		



Transform taken for granted manual processes, physical products, or traditional services into a mobile or web-based service platform and experience

## Platforms as a Service Model

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What industry standards are missing or lacking that represent platform opportunities?

In what ways can certain collections of products and services be aggregated within a unifying business model, organizing framework, or integrated process to deliver greater customer value?

Also consider:

- Ways to migrate existing products and services into larger standardized platforms that integrate others' products and services
- Opportunities to establish a network of complementary providers that, if aggregated, would provide greater value to customers
- Opportunities to gain access to proprietary content, information, or other resources that can serve as the foundation of a new platform

### Forerunner Innovation Strategy #3: Mobile Web-Based Innovation

#### Platforms as a Service Model



**URL:** [www.apple.com](http://www.apple.com)  
**Headquarters:** Cupertino, CA • US  
**Year Founded:** 1976  
**Revenue:** US \$36,537M  
**Employees:** 36,800

Apple established industry-standard platforms that reinforce the value of its products while generating service-based revenues leveraging an open network of content providers.

#### Business Description

Apple ignited the personal computer revolution in the 1970s with the Apple II, and reinvented the personal computer in the 1980s with the Macintosh. Today Apple is an industry leader with award-winning computers, the OS X operating system, iLife and professional applications. Apple led the digital media revolution with its iPod portable music and video players and iTunes online store. In a similar way, the company is revolutionizing the mobile phone market with its iPhone and the host of applications it sells through its App Store.

#### Key Innovation

While Apple has developed intuitive, sleek-looking products like the iPod and iPhone, its innovative genius is related to novel business models, not simply the products themselves. When Apple launched the iTunes store in 2003 it successfully executed business model innovation, involving a combination of the right software, digital rights-protected music, and an MP3 player uniquely configured to use that software and access iTunes music. This new business model, wrapped around a novel and visually compelling product, allowed Apple to create a platform



from which to distribute music in an entirely new way, and now allows music artists, themselves, to share and sell music via the platform.

In a similar way, what makes Apple's iPhone so distinctive is that it is more than a product – it is a platform from which to launch thousands of applications or “apps” that are designed by software developers outside Apple's walls. Using a revenue share model, these apps provide an ongoing source of revenue without increasing Apple's R&D expense.

iPhone apps have created entirely new service innovations for vertical markets such as healthcare, wellness, sports, entertainment, and transportation. There are over 100,000 apps on the market today, with strong demand continuing to drive new opportunities. Likewise, large enterprises and small businesses alike are tapping into the

“make it mobile” trend to take traditional services and make them available through devices like the iPhone.

### Financial Model

Apple has developed ways to fill the needs of partners who are increasing the value of its ecosystem, while at the same time monetizes each element of their value network. For example, iPhone app developers set the price for their apps and receive 70% of the revenue, while Apple receives the balance. Gross revenues from Apple's share of iPhone apps alone (not including the phones themselves) will soon reach \$1 billion.

When it comes to iPhone service and distribution, AT&T is the iPhone's only US carrier, and is constantly striving to increase the number of users and ARPUs (average revenue per user). The sale of Apple phones through its

exclusive contract with AT&T drives these numbers, so AT&T pays Apple an estimated \$320 – \$420 for each new subscriber.

### Value Network

Apple doesn't actually manufacture anything itself. Its extensive value network includes application and content providers; software platform, operating system and middleware providers; handset makers; network operators; and of course the consumers who create buzz and generate demand for the myriad of apps. Apple maintains tight control over its value network. For example, all apps must go through a strict approval process before they are accepted into the App Store, which has at times created controversy since the company has rejected apps from competitors like Google.

### Forerunner Innovation Strategy #3: Mobile Web-Based Innovation

#### Platforms as a Service Model



**URL:** [Nintendo.com](http://Nintendo.com)  
**Headquarters:** Kyoto • Japan  
**Year Founded:** 1947  
**Revenue:** US \$18,899M  
**Employees:** 4,306

Nintendo transformed the consumer gaming experience while building out a supporting platform for delivering access to additional value added services and content of its own and of third party partners.

#### Business Description

Nintendo is the market-leading video game maker, with products such as Game Boy, GameCube and the Wii™ systems. When the company was originally founded, it produced handmade Japanese playing cards but quickly developed into a video game company. It has become one of the most influential companies in the industry and is Japan's third most valuable listed company, with a market capitalization

of over US \$85 billion. As of October 2008, Nintendo had sold over 470 million hardware units and 2.7 billion software units.

#### Key Innovation

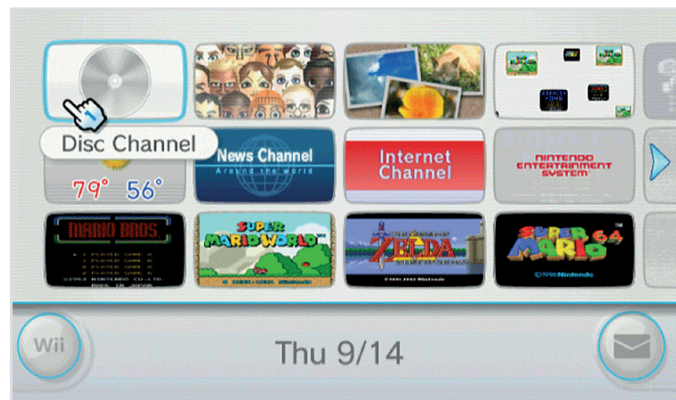
Nintendo reshaped the home entertainment and video game landscape with the launch of its Wii™ home video game console in November 2006. Instead of going head-to-head with competitors who offered advanced processors and complicated games, Nintendo created a stripped down product, offered at a lower cost, and targeted to a different market of regular people and non-traditional gamers. Its highly intuitive motion-sensor based wireless remote allowed a totally different gameplay and user activity. Because the Wii™ remote recognizes physical gestures in 3D space, it created a whole new gaming experience for individuals and groups.

The Wii™ has become a raging success largely due to the fact that Nintendo intimately understood their product in terms of customer value. Reggie Fils-Aime, President of Nintendo America, said: "Our competitors are stuck in an old paradigm. They think

that processing power and beautiful graphics are the path to success. We disagree. Consumers want great entertainment experiences and value for money, and we provide both." The Wii™ is designed as unique social gaming experience for the whole family. "You don't just play Wii™, you experience it."

Every Wii™ console includes a distinctive feature: a series of on-screen "channels" that make up the Wii™ Channel Menu, from which the system can be customized. These channels create a gateway to a huge platform of entertainment options. For example, when connected to a TV, Wii™ players can select games to play, get news or weather, view and send photos, surf the internet, and play vintage Nintendo video games.

When initially launched, Nintendo offered 30 different Wii™ games created both by Nintendo and third parties such as Electronic Arts, Activision and Atari. Today, hundreds of games are available from a host of game manufacturers. As such, the Wii™ represents a rich development platform for game creators as well as manufacturers that create aesthetic and ergonomic accessories for the Wii™ Remote, including



remote-add-ons shaped like tennis rackets, baseball bats, light sabers and golf clubs, as well as musical instruments, dance pad and exercise pads.

In January 2010, Nintendo and Netflix announced a partnership that will create another Wii Channel that will provide a service to bring streaming television shows and movies to the Wii™.

### Financial Model

Because the Wii™ console is specifically designed as a lower cost product than competitors', it is able to sell the Wii™ for about US\$250 compared with competitors in the range of US\$400 – US\$500. More importantly, Nintendo has maximized their lower cost hardware into two competitive advantages: games are cheaper to develop, and the company makes a profit on every console sold. Although this sounds like common sense, it flies in the face of the conventional rules in the gaming industry. Beyond the console itself, Nintendo generates the bulk of its revenues from games and accessories.

While Nintendo provides a free news and weather channel as part of its Wii™ Channel Menu, it also sells "credits" that can be used to purchase various services and games. For example, US \$5 buys the ability to add a new channel to the Wii menu that provides users with the ability to surf the internet using the standard Wii remote. Another US \$10 adds a new channel that provides unlimited access to play Donkey Kong, one of Nintendo's most famous vintage arcade video games. The Netflix partnership creates additional revenues through a revenue sharing agreement.

### Value Network

A highly robust and complex value network is at the heart of the Wii's success. It includes:

- Game Development Value Chain, including game developers, digital rights management (DRM) providers, and game publishers.

- Game Marketing Value Chain, including distributors, retailers and marketing agencies.
- OEM Hardware Value Chain, including the OEM hardware manufacturer and console manufacturer who receives a licensing fee for required technical information
- Content Provider Value Chain, including content providers who license copyrighted characters, music and even real personalities (such as sports superstars), as well as IPTV content.
- Brand Advertising Value Chain, including brands that advertise while the customer is immersed in the gaming experience
- Connectivity Value Chain, including the service providers who make available the Internet connectivity for the customer's console system

## Summary

The Mobile Web Based Innovation strategy drives three business models, namely:

1. **Digitize It Models** that create new-to-the-world applications that move taken-for-granted non-services into service opportunities
2. **Make it Mobile Models** that transform physical products or processes into mobile services and experiences
3. **Platforms as a Service Models** that create a platform by which a network of other providers and applications are delivered to customers

Mobile Web Based Innovation leverages technology to create value by transforming taken-for-granted manual processes, physical products, or traditional services into mobile or web-based service platforms and experiences. For example, Open Table used technology to transform the manual, labor-intensive process of making dining reservations. t+Medical used cell-phone and other technologies to allow patients to receive instant personalized feedback about their medical condition. And Apple built standard, industry-transforming platforms that allow an open network of content providers to “plug in” and create new revenue streams for themselves (and for Apple).

## Challenge Questions

1. What “taken for granted” activities or processes within your industry or markets can be “digitized” and offered as a value-added service?
2. What products or processes that are delivered face-to-face today can be offered as a mobile service?
3. What industry standards are missing or lacking that represent platform opportunities?
4. In what ways can certain collections of products and services be aggregated within a unifying business model, organizing framework, or integrated process to deliver greater customer value?










## Forerunner Innovation Strategy #4: Solution Based Innovation

The business models driven by Solution-Based innovation take the concept of customer value to the next level. Seeking to understand customers from a solutions perspective necessitates stepping back and looking at the broader context in which the customer operates

(see Table 7). With a larger view, it comes possible to see unaddressed problems and opportunities that are interconnected but are best addressed through a more holistic portfolio of products and services that provide greater value. The following Forerunner case examples

provide illustrations of how a range of diverse companies have created solutions that address needs in ways that guide them into domains of service that at first may appear off strategy, but that ultimately become a core component of their overall business model.

**Table 7. Forerunner Innovation Strategy #4: Solution Based Innovation**

Business Models	Case Examples	Descriptions
<b>Adjacency Complement Models</b> Introduces service offerings in new markets that complement and reinforce existing products or services		Eureko's Achmea Health gained insight into the needs of its customers and defined adjacent services and business relationships to concurrently reinforce and strengthen both its value proposition and core business model.
		Michelin developed its ViaMichelin service to support end-customer behavior that drives greater product usage and sales, and while concurrently generating B2B revenue.
<b>Experience Service Models</b> Delivers value-added end-customer experiences to drive loyalty and reinforce existing products or services		Harley-Davidson introduced a range of experiential services that support the brand, deliver customers to dealers, drive product sales and build long-term loyalty.
		Visa's value network of merchants, product and service suppliers, and technology providers delivers unsurpassed customer experiences that support its core goal of growing credit card transactions.
<b>Consultative Value Models</b> Delivers services that would otherwise be provided by third party consultants to complement offerings, drive down costs, or create new revenue streams		FM Global built engineering competencies to differentiate its insurance offerings through consulting services that add greater value and create customer loyalty, while concurrently reducing risk exposure which increases bottom line profit.
		Herman Miller recognized the broader context in which customers acquire furniture and developed full-service workplace design services that represents a trusted "agnostic" solution that generates new revenues and reinforces product sales.
<b>Profit with Purpose Models</b> Delivers services to generate profit while concurrently appealing to "higher purpose" customer needs		iReuse found an untapped market for usable yet unrecyclable items, generating revenues from a unique service model as well as consulting services.
		Vodafone entered into a pilot to explore microfinance in emerging markets and uncovered a viable financial model that delivers value while scaling to the economic needs of the indigenous population.



Expand the value of existing products or services by adding services that meet a broader set of customer needs or by introducing complementary service offerings

## Adjacency Complement Models

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What “adjacent” services could be offered that complement and reinforce existing products and/or services? Consider things that:

- Are often purchased alongside your existing offering
- Are purchased before or after your existing offering
- Add value through enhancing the customer experience
- Are outside your existing market but help complete the broader “solution”
- Help reduce the risk or cost associated with your current offering
- Help promote your existing offering

### Forerunner Innovation Strategy #4: Solution-Based Innovation

#### Adjacency Complement Models



**URL:** [www.eureko.net](http://www.eureko.net)  
**Headquarters:** Zeist • The Netherlands  
**Year Founded:** 1992  
**Revenue:** US \$19,306M  
**Employees:** 24,810

Eureko's Achmea Health gained insight into the needs of its customers and defined adjacent services and business relationships to concurrently reinforce and strengthen both its value proposition and core business model.

#### Business Description

Active in eleven countries, Eureko is the holding company for a group of successful insurance brands, including Achmea, the largest insurance company in the Netherlands. Achmea provides insurance and financial services through several subsidiaries in Benelux. The company sells life, health, and disability insurance under several brand names. Their products are sold through company agents, bankers, and brokers, as well as through the Internet.

#### Key Innovation

In 2006, Achmea Health was faced with increasingly stiff competition, compounded by a new health plan regula-

tions in the Netherlands which required greater price transparency. Achmea Health's executives realized a need to add value to its insurance products so it wouldn't have to compete solely on price. To reduce the company's risk (when policy holders become ill), the company focused on a prevention strategy to keep their policy holders healthier.

Their new mission became focused on helping people become aware of the possibilities they have for taking care of their own health. To support this mission, Achmea developed an entire distribution channel of health-related information and services. Policy holders can now easily find health-related information from their



website, company stores, educational programs, and a series of lifestyle workshops. The company also offers discounted memberships to 23 gyms and provides regular health checkups and health trips to policy holders. Achmea also publishes Achmea Health Magazine, which had an estimated circulation of approximately 1.4 million.

Recognizing that health is also derived through the caring of loved ones, not just quality medical procedures, Achmea created high-touch services such as Rabbit Care, which

allows parents to easily communicate with their hospitalized children. Rabbit Care lets parents send a nightly, virtual message and hug via a digital cuddly bunny, making them feel that home is nearby. The Rabbit Care is an initiative of IBM, supported by one of the Achmea brands, Silver Kruis Achmea.

### Financial Model

As a health insurance cooperative, Achmea Health is owned by the people that it insures. The company's mission is to achieve balanced value creation

for all its stakeholders: customers, distribution partners, shareholders and employees. Achmea's aim is quality rather than price leadership which is achieved through its commitment to being the best, most customer-centric and innovative services provider.

The company drives revenue from its insurance services while controlling costs by reducing health-related risk. Thus, services have enabled Achmea Health to be more cost-competitive in its major line of business.

### Value Network

Achmea Health extends the value of its services through a host of health care providers and organizations who offer information and education about health and wellness. It also extends to IT partners such as IBM who enable Achmea to deliver differentiated services to address the human side of patient care. In addition, Achmea has created partnerships with gyms to provide discounted memberships to those it insures.

## Forerunner Innovation Strategy #4: Solution-Based Innovation

### Adjacency Complement Models



**URL:** [www.michelin.com](http://www.michelin.com)  
**Headquarters:** Clermont-Ferrand • France  
**Year Founded:** 1889  
**Revenue:** US \$23,127M  
**Employees:** 117,565

Michelin developed its ViaMichelin service to support end-customer behavior that drives greater product usage and sales, and while concurrently generating B2B revenue.

### Business Description

Michelin was established in 1889 and has grown to become one of the world's largest tire manufacturers. Tires are sold to OEMs, replacement centers and also to consumers through a global network of dealers/distributors and auto repair shops. While passenger car, truck and related distribution account for 86% percent of the company's revenue, 14% comes from specialty businesses, which include Red travel guides, road maps and the Green Guides for tourism. Michelin is also famous for the stars that the Red Guide awards to restaurants for their cooking and, of course, for its emblem, the Michelin Man.

### Key Innovation

Innovation occurred early in Michelin's history. Just 12 years after creating a company to manufacture and sell tires, co-founders Eduoard and Andre Michelin recognized an unmet customer need: people want to know where to stay when they are traveling. To address this market adjacency, they developed the now-famous Red Guides to hotels and restaurants. Realizing that customers wanted even more information about restaurant quality, the brothers introduced the Michelin star symbols in 1926 which have become an industry benchmark against which restaurants and chefs are rated.

In 2001 Michelin leveraged its assets from the publishing world to launch ViaMichelin. The wholly-owned subsidiary designs, develops and markets digital travel assistance products

and services for travelers in Europe, but more importantly it has created an interactive consumer travel experience which builds the brand and drives sales. ViaMichelin.com is now the #1 travel site in Europe. In addition to core services like route calculation and map display, the site offers online hotel booking and digital services that facilitate travel, such as traffic updates and tourist information.

Through the ViaMichelin site, travelers can update their Michelin portable GPS by downloading the contents of their European Green Guides and Hotel and Restaurant Guides. GPS users can also upgrade to a free "advantage" level which includes value-added services such as map updating and interconnectivity with the Viamichelin.com website.



Michelin uses the ViaMichelin interactive website to drive product sales. While visiting the site, the consumer can click on an interactive activity to determine which tire best suits their car and then click to find the appropriate dealer/distributor. Thus Michelin uses the site to meet the travel planning needs of its customer's customer, while simultaneously directing that buyer to its customer.

### **Financial Model**

While the ViaMichelin site is free to visitors, the company generates revenue through subscription-based registration targeted to tourism professionals. These companies can place targeted, local advertising to promote their businesses in the form of value-added web content that complements search results. ViaMichelin estimates that 100,000 tourism-related searches and almost 2,000 reservations are made each day on ViaMichelin.

### **Value Network**

A host of companies and underlying technologies form the value network for ViaMichelin. This includes the parent company, the underlying ViaMichelin web technology, authorized ViaMichelin dealers, thousands of hotels and restaurants, and dozens of companies who place advertising or provide information on the ViaMichelin site.

Expand the value of existing products or services by adding services that meet a broader set of customer needs or by introducing complementary service offerings

## Experience Service Models

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What value added end-customer, end-user or end-consumer experiences can reinforce existing products or services and drive loyalty? Consider things that:

- Provide useful information and knowledge
- Help within training
- Build community
- Give “access” and “status” through unique membership services
- Give customers differentiation versus their competition

### Forerunner Innovation Strategy #4: Solution-Based Innovation

#### Experience Service Models



**URL:** [www.harley-davidson.com](http://www.harley-davidson.com)  
**Headquarters:** Milwaukee, WI • USA  
**Year Founded:** 1903  
**Revenue:** US \$5,594M  
**Employees:** 10,100

Harley-Davidson introduced a range of experiential services that support the brand, deliver customers to dealers, drive product sales and build long-term loyalty.

#### Business Description

Harley-Davidson is a major US maker of motorcycles and the nation's #1 seller of heavyweight motorcycles. The company offers 35 models of touring and custom Harleys through a worldwide network of more than 1,500 dealers. Harley-Davidson sells “attitude” with its brand name products, which include a line of clothing and accessories (MotorClothes). Harley-Davidson Financial Services offers financing to dealers and consumers in the USA and Canada.

#### Key Innovation

Harley Davidson knows it doesn't simply sell motorcycles, but something more valuable and aspirational: it sells

“freedom” to middle-aged men. Several years ago, the company realized it could have a broader reach and bigger market if it could grow its motorcycling community. In partnership with the Motorcycle Safety Foundation, Harley Davidson developed course materials for Riders' Edge, the “Harley-Davidson Academy of Motorcycling.” To launch the program, they made a minimal investment using dealers' parking lots and their own fleet of motorcycles. To support their brand image of a community of bikers, they provided follow-up community building activities to maintain the relationships formed in training. By 2008, over 100,000 people had attended.



To meet the diverse needs of its expanding motorcycle community, Harley-Davidson expanded its motorcycling academy to include multiple levels of classes (New Rider, Skilled Rider and Group Riding) delivered throughout the U.S. on a regular basis. The company has made it easy for riders to find classes and sign up via their website. They provide the option of

video/handbook for leaders seeking to organize group rides.

#### **Financial Model**

Harley-Davidson generates revenue from the sale of training materials and classes, offered from \$30-\$395, but the larger opportunity is to drive revenue from new bike sales as a result of extending the motorcycle community.

#### **Value Network**

By organizing riding classes through Harley-Davidson's 800+ U.S. dealerships, Harley-Davidson connects interested buyers with its suppliers, but it does this in a "soft sell" way by providing both training and community with like-minded motorcycle enthusiasts. In this way, Harley-Davidson provides value to its customers (the dealerships) as well as to their customers (the riders).



## Forerunner Innovation Strategy #4: Solution-Based Innovation

### Experience Service Models



**URL:** [www.visa.com](http://www.visa.com)  
**Headquarters:** Foster City, CA • USA  
**Year Founded:** 1976  
**Revenue:** US \$6,911M  
**Employees:** 5,700

Visa's value network of merchants, product and service suppliers, and technology providers delivers unsurpassed customer experiences that support its core goal of growing credit card transactions.

### Business Description

Visa operates the world's largest consumer payment system that includes a circulation of approximately 1.7 billion credit and debit cards. Visa licenses its name to member institutions, which include over 20,000 banks and financial firms, which in turn issue and market their own Visa products. As part of membership, these firms participate in the VisaNet payment system which provides authorization, processing, and settlement services for financial transactions. In addition to credit cards, Visa also provides its customers with the ability to issue and provide debit cards, Internet payment systems, value-storing smart cards, and traveler's checks.

### Key Innovation

Visa's most direct customers are the financial institutions that join Visa's network, issue their cards and generate revenue for Visa through paying transaction fees. End consumers who

apply for and obtain these cards from these financial institutions often do so because they are attracted to the Visa brand. End consumers drive revenue indirectly, since every purchase on a Visa card generates transaction fees for the issuing bank, but then ultimately for Visa.

Financial institutions that issue credit cards have the choice to go with Visa, American Express, MasterCard or other branded providers. But they often choose Visa because of its brand – a brand that offers ubiquitous acceptance, lends credibility and promotes a sense of "lifestyle" in the minds

of consumers. For Visa, reinforcing the brand with consumers results in greater use of their cards, which concurrently creates greater demand from financial institutions to issue and promote the Visa offering.

Visa has become a master at focusing on their customers' customer – the end consumer. A central component of Visa's strategy involves creating service experiences for consumers that are delivered both independently by Visa and in close partnership with its largest financial institution customers. Visa's "Signature" card and related services, for example, include access to a wide

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Search

Applications edit

- Page Manager
- Groups
- Photos
- Posted Items
- Events
- Marketplace
- more

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range of travel, entertainment, fine wine & food, and sports-related events and experiences. Many of these involve providing selected consumers with exclusive access to shows, wineries, sporting events, or other activities they would otherwise be unable to obtain on their own. Beyond such access, Visa also provides discounts on movie tickets, sporting goods, hotel stays, flowers and gifts, apparel and shoes, computers and electronics, and various other items. In addition, any consumer with a Signature Visa Card gains access to a complementary 24/7 concierge service that will take custom requests and solve problems related to reservations, vacation planning, finding tickets, and even finding daycare for pets.

As part of its experience strategy targeting small businesses, Visa recently partnered with social networking giant FaceBook to create The Visa Business Network, a small business community focused on sharing best practices for

running and managing small businesses. Small business owners, who often lack the resources and collaboration of other leaders that managers in large companies enjoy, can now tap into a social network of like-minded business owners. Visa built and is cultivating this network as part of its approach for building the same credibility and engagement in the small business market (currently dominated by American Express) as it has with consumers.

### **Financial Model**

Visa's core revenues come from transaction fees paid to them by the financial institutions that issue their cards. Coop-marketing fees may also apply to certain experiential consumer marketing events conducted in partnership with a customer. Other marketing services to support business intelligence using Visa's breadth of purchase data may also be supported through additional fees.

### **Value Network**

Visa recognizes the power of its interdependent ecosystem. For Visa, it is about one key thing: growing transactions results in growing revenue. To support ubiquitous acceptance, Visa has put significant focus on developing its network of "merchants" to accept their cards. Beyond these merchants, Visa's value network also includes all of the players necessary for providing a comprehensive experience for its card holders – airlines, travel agents, hotels, insurance companies, roadside assistance companies, retailers, booksellers, ticket agencies, concierge services, sponsors such as the Olympic committee, golf resorts, and the list goes on. Visa also has active programs in mobile payments and other areas of innovation which involve leadership and participation across a variety of industry standards groups and with small and large technology providers.

Expand the value of existing products or services by adding services that meet a broader set of customer needs or by introducing complementary service offerings

## Consultative Value Models

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

What value added services that would otherwise be provided by third party consultants could be used to complement existing offerings, drive down costs, or create new revenue streams? Consider things that:

- Create deeper relationships by addressing broader issues and needs
- Add value through providing additional data, information and knowledge
- Add value through providing advice
- Provide free services that help significantly reduce the costs related to your existing offering
- Provide fee-based consulting services that complement your existing offering

### Forerunner Innovation Strategy #4: Solution-Based Innovation

#### Consultative Value Models



**URL:** [www.fmglobal.com](http://www.fmglobal.com)  
**Headquarters:** Johnston, RI • USA  
**Year Founded:** 1835  
**Revenue:** US \$3,365M  
**Employees:** 5,000

FM Global built engineering competencies to differentiate its insurance offerings through consulting services that add greater value and create customer loyalty, while concurrently reducing risk exposure which increases bottom line profit.

#### Business Description

FM Global is a Fortune 1000 insurance company with a unique approach to risk management that sets it apart from competitors. In addition to commercial property/casualty insurance primarily targeted at other large companies, it provides an array of consulting services to help its customers reduce risk and avoid property loss, which, of course, helps FM Global control costs and pass savings along to its customers and improve margins.

The company dates back to 1835, when Zachariah Allen, a prominent textile mill owner, made property improvements that would minimize the chance of fire loss. When he approached his insurance company for a discount and was turned down, he formed his own

mutual insurance company with other textile mill owners who shared his philosophy for loss prevention. Over time Allen developed partnerships with other mutual insurance companies and "Factory Mutuals" (FM) was created.

By 1878 the FM companies created a dedicated unit of loss control specialists to handle inspection activities for policy holders. This service grew into appraisals and adjustments, loss analysis and research activities associated with preventing fire and other hazards. All of these services remain integral parts of FM Global's offerings today.

#### Key Innovation

To ensure world-class methods to understand and mitigate property hazards, the company recently created

FM Global Research. This is a specialized group of scientists, engineers and technicians that sets new standards for loss prevention and helps to develop related products and services. The Research Group shares these new technologies with its customers through a nonexclusive, royalty-free licensing arrangement.

For example, FM Global Research developed the “skipping resistance sprinkler”, a new kind of sprinkler designed to put out fires using less water than standard sprinklers. The National Fire Protection Agency estimates that property fires in vacant or idle buildings cost owners \$640 million annually. If FM Global’s technology and consulting services can reduce this risk by even 10% they can save \$64 million in claims. It is a win-win situation for clients, vendor-partners and FM Global itself.

Because FM Global’s value proposition is based on loss prevention – not simply selling an insurance product – it develops long-term relationships with customers versus merely conducting transactions. These relationships open doors to deliver new services and capture ever-increasing value over time.



### **Financial Model**

FM Global employs an unusual business model whereby risk and premiums are determined by engineering analysis instead of historically-based actuarial calculations. This business approach is based on the assumption that property losses can be prevented or significantly mitigated. FM Global engineers regularly visit insured locations, at no additional cost, to evaluate hazards and recommend improve-

ments to their property or work practices to reduce physical and financial risks if a loss occurs.

### **Value Network**

FM Global both sells direct to its customers through its sales force and also has a large network of brokers. Its 1,500 on-staff engineers and client service team are critical elements of the delivery and relationship management model.

## Forerunner Innovation Strategy #4: Solution-Based Innovation

### Consultative Value Models



**URL:** [www.hermanmiller.com](http://www.hermanmiller.com)  
**Headquarters:** Zeeland, MI • USA  
**Year Founded:** 1947  
**Revenue:** US \$1.630M  
**Employees:** 5,229

Herman Miller recognized the broader context in which customers acquire furniture and developed full-service workplace design services that represents a trusted “agnostic” solution that generates new revenues and reinforces product sales.

### Business Description

Herman Miller designs commercial furnishings and provides related services that improve the human experience wherever people work, heal, learn, and live. While the company is known for its ergonomically designed furniture, lighting, seating, textiles, filing and storage systems, it is also known for designing workplace environments in a way that bring people and places together to improve performance. Core services include workplace planning and design to transform corporate facilities into a strategic asset.

A strong corporate culture, engaged employees, and a commitment to social responsibility have also established Herman Miller as a recognized global company. In 2009, Herman Miller was again cited by *Fortune* as both the “Most Admired” in its industry and among the “100 Best Companies to



Work For” in America, while *Fast Company* named Herman Miller among the innovative “Companies to Watch.”

### Key Innovation

While Herman Miller provides workplace design services for the furniture it manufactures, it innovates by providing a complete range of workplace support services – including the logistics coordination of buying furniture from other manufacturers, even including competitors.

The company’s Facility Services Group operates much like an independent consulting agency. Its focus is to provide holistic solutions that help customers optimize space design and furniture to meet specific business goals. Because the Group does not sell furniture, it is able to apply its expertise regardless of the furniture that a client elects to purchase.

By functioning as a service hub for procuring furniture from other manufacturers, the Facility Services Group addresses an unmet customer need for “one stop shopping.” Most manufacturers have mature distribution networks comprised primarily of dealers that are not permitted to represent other manufacturers’ products. This service provides a single point of contact for procuring furniture which will most likely include Herman Miller, in addition to other manufacturers.

Since the Group is solution-focused, it provides a broad range of services that go beyond typical workplace planning. These include:

- Consulting – includes standards development, benchmarking, and ergonomic assessments
- Workplace Services – includes furniture and equipment storage, furniture delivery, distribution and repair

- Workplace Management – includes the supervision of moves and changes, overseeing assets and performing interior design activities
- Project Management – includes architectural and engineering coordination, budget development, tracking and control, schedule development and tracking, as well as the coordination of renovation activities
- Technical Services – proprietary software applications that complement CAD/CAFM industry standards, and enable us to seamlessly integrate technology into a client company's daily activities

### **Financial Model**

Herman Miller charges consulting fees for these workplace services based upon the project and resources involved. While the services are offered independently of Herman Miller furniture sales, they most likely will be connected to the purchase of Herman Miller furniture. Thus Herman Miller has created a separate revenue stream from consulting services, while at the same time providing a way to keep its product in the forefront of customer's minds as they plan an office move or renovation.

### **Value Network**

Herman Miller's value network includes its own manufacturing and distribution capabilities, along with those of other furniture manufacturers and their dealer networks. To provide a broad array of consulting services, Herman Miller partners with external designers and consultants.



Expand the value of existing products or services by adding services that meet a broader set of customer needs or by introducing complementary service offerings

## Profit with Purpose Models

### Forerunner Examples



As you review these cases, consider the following questions to inspire your thinking:

How can you reposition existing services or offer new services to generate profit while concurrently appealing to “higher purpose” customer needs? Consider things that:

- Address climate change and sustainability needs of customers and/ or end-consumers
- Address health, wellness and quality of life needs of customers and/or end-consumers
- Gives customers the ability to provide higher-purpose offerings themselves
- Create a unique market approach that drives differentiation and competitive advantage with both customers and end-consumers

### Forerunner Innovation Strategy #4: Solution-Based Innovation

#### Profit with Purpose Models



**URL:** [www.ireuse.com](http://www.ireuse.com)  
**Headquarters:** Sausalito, California • USA  
**Year Founded:** 2005  
**Revenue:** US <\$50M  
**Employees:** <50

iReuse found an untapped market for usable yet unrecyclable items, generating revenues from a unique service model as well as consulting services.

#### Business Description

iReuse is a northern California company that uses a web database to match unwanted, reusable items with non-profit groups or individual buyers. It carved out a niche in handling large inventories of unwanted office furniture from big companies such as Autodesk, Charles Schwab and PG&E. In addition to removal services, the company offers sustainability consulting in a wide range of areas such as Energy & Water, Waste, Procurement, Carbon Emissions, Tracking & Reporting and Employee Programs for increased sustainability.

#### Key Innovation

Recycling is nothing new to the business world. Most corporations recycle paper products, metal cans, and plastic. iReuse takes recycling to new levels, however, by collecting hundreds of items from companies that don't fit into the standard recycling arena. Typically these items would be picked up by a disposal company and then dropped off at a garbage dump for a fee. Instead, iReuse collects the items at a competitive rate and then takes the process one step further. They coordinate the delivery of salvageable items

with non-profit partners or individuals to make sure people in need benefit, and to likewise ensure reusable items don't simply end up in a landfill. The company offers a range of scalable services that fit the needs of large corporations as well as small businesses and individuals. In addition, they provide web-enabled tools that easily connect individual or business donors with appropriate recipients from a list of over 2000 non-profits and buyer wish lists.

### Financial Model

iReuse is a for-profit company that charges competitive rates for the removal of unwanted items in homes and businesses, similar to other recycling companies. Their rates include a fee to support the distribution costs associated with matching unwanted items to the organization or individual in need. The company also generates revenue from its sustainability consulting services.



### Value Network

The iReuse business model is based on a network of non-profit organizations, small and medium sized businesses, large corporations and individuals – all of whom can create wish lists of items they need, and/or contact the company via phone or the web to donate items they don't need.

## Forerunner Innovation Strategy #4: Solution-Based Innovation

### Profit with Purpose Models



**URL:** [www.vodafone.com](http://www.vodafone.com)  
**Headquarters:** Newberry, West Berkshire • England  
**Year Founded:** 1984  
**Revenue:** US \$58,281M  
**Employees:** 79,097

Vodafone entered into a pilot to explore microfinance in emerging markets and uncovered a viable financial model that delivers value while scaling to the economic needs of the indigenous population.

### Business Description

The Vodafone Group is one of the world's top wireless phone service carriers with approximately 300 million customers in more than 20 countries. While the company does most of its business in Europe, it increasingly serves callers in Asia, Africa, the Middle East, and the Pacific region through subsidiaries and joint ventures. Vodafone also provides data, broadband Internet, and fixed-line phone services.

### Key Innovation

In 2007, Vodafone and the UK Department for International Development jointly funded a project to develop a mobile-based microfinance solution, and partnered with Faulu Kenya, a local microfinance institution. The results of the six month pilot were surprising. The original idea was to use the mobile

phone to reduce the cost of loan disbursement and recovery. Instead, customers were found using it for person-to-person transfers, so Vodafone developed a payment service called M-PESA to formally facilitate these transfers. The service allows customers to borrow, transfer and make payments using a mobile phone, transforming financial services by making transactions cheaper, faster and more secure. Through M-PESA customers can deposit cash at a local agent (an affiliated mobile phone dealer, gas station, supermarket or other shop), send and receive money from other mobile phone users by SMS, and withdraw cash at any agent. M-PESA allows any shop to potentially act as a "bank" by eliminating physical barriers to cash transfer.

Vodafone has had incredible success in Kenya through a jointly-owned subsidiary, Safaricom. Three months after launch, M-PESA had 175,000 customers and was signing up 2,500 new customers a day. Over US \$7.5 million was transferred over the service

during this initial period. The M-PESA mobile money transfer service is now well established in Kenya and is being used by customers for a wide range of money transfer transactions. For example, it provides people without bank accounts a cost effective way to send money to their families and is a secure method for people to store money when traveling on public transport. It is also becoming an accepted payment method for small traders such as grocers and taxi drivers. Vodafone is now expanding the service internationally.

The Consultative Group to Assist the Poor (CGAP) estimates that more than five billion of the world's people live without a bank account, but more importantly for Vodafone, two billion of those individuals have mobile phones.

### Financial Model

The overall model for payment is a licensing agreement based on M-PESA transactions. Vodafone developed a license with Vodacom which pays Vodafone for each registered user of the



M-PESA service. Vodafone makes money based on registered users that are active; and they are also paid on every transaction. In Vodafone's license with Safaricom, the company is paid based on how much money M-Pesa generates, not by the number of users or transactions. Local supermarkets, gas stations and other shops that serve as agents also receive a small commission on the transaction.

### Value Network

The M-banking value network requires the interaction of an eclectic mix of customers, local merchants, local mobile network operators, local micro-finance agencies, and several multi-billion dollar telecommunication giants, as well as a large government agency that helped initiate the pilot.

Customers and merchants are key drivers of this value chain because revenue is only generated if the M-PESA service is used. Some M-PESA telecom agents are hiring promoters to walk around the streets, signing up users and directing them to an agent location where they can deposit money to send.

## Summary

The Solution Based Innovation strategy drives four business models, namely:

- 1. Adjacency Complement Models** that introduce service offerings in new markets that complement and reinforce existing products or services
- 2. Experience Service Models** that deliver value-added end-customer experiences to drive loyalty and reinforce existing products or services
- 3. Consultative Value Models** that deliver services that would otherwise be provided by third party consultants to complement offerings, drive down costs, or create new revenue streams
- 4. Profit with Purpose Models** that deliver services to generate profit while concurrently appealing to "higher purpose" customer needs

Inherent to Solution Based Innovation is the essential need to understand customers' needs and to adopt a "solutions" perspective. To do this we need to step back, consider the customer's "end game" (what they are trying to achieve), how we can better engage them, or how we can solve their broader and most fundamental challenges and needs.

Michelin, for example, moved beyond a manufacturing mindset that "we make tires" by recognizing that travelers want to know where to stay and eat, and that they also want great, trouble-free travel experiences. Harley-Davidson developed

the "Academy of Motorcycling" to expand its customer base of riders and to create new ways to engage and energize its current members. Recognizing that customers have multiple needs when buying furniture, Herman Miller set up a Facility Services Group to provide a range of workplace support services, including the logistics coordination of buying furniture from other manufacturers – even competitors. The common theme across all of these cases: imaginative "solutions thinking" pushes boundaries to deliver value that meets a broader set of customer needs.

## Challenge Questions

1. What "adjacent" services could you offer that complement and reinforce your existing products and/or services?
2. What value added end-customer, end-user or end-consumer experiences can reinforce your existing products or services and drive loyalty?
3. What value added services that would otherwise be provided by third party consultants could be used to complement existing offerings, drive down costs, or create new revenue streams?
4. How can you reposition your existing services or offer new services to generate profit while concurrently appealing to "higher purpose" customer needs?

## Harnessing the Future

What the future holds – the business models that will prevail, which companies will emerge as the leaders, and what will be the next big opportunity – is anyone's guess. Certainly, there is no "one right answer", no easily identifiable "silver bullet". What we can say with certainty, however, is that the answers to these questions will be created by those willing to imaginatively push the boundaries of today's conventions by experimenting with new ideas and approaches.

As we think about the future, let's first think back to the late 1990's when the term "e-business" was all the rage. It was everywhere – most companies had "e-business" initiatives, consulting firms were touting it, and the term was found across every business publication and industry imaginable. And where is it today? No, not gone. It is embedded into our everyday operations as an assumed aspect of doing business. The same will ultimately be true of many of our megatrends.

Perhaps the most critical megatrend – though also perhaps the least interesting since it sits in the background as enabling infrastructure – is The Cloud. Although The Cloud is a key enabler of the future of service business innovation, the competitive landscape is already fairly crowded and many of the infrastructure players are finding their places. Most companies, ultimately, will find opportunities that tap into The Cloud and deliver cloud services using the web and mobile devices. Some of the more interesting opportunities will be found when these service companies help simplify the increasingly pervasive information

overload we all feel, or when they add heightened value through aggregating and interpreting data which leads to better decision-making.

Based on our research, we firmly believe that the Service Innovation Megatrends will continue to shape our world, that the Forerunner Attributes are here to stay, and that those companies that keep a watchful eye on both will be successful in identifying new opportunities. We also believe that the future is dynamic; some trends and attributes may become more important than others, and new trends and attributes may emerge as equally important drivers of the future.

In addition, some trends and attributes are more relevant to some types of companies than to others (e.g., mature manufacturing companies, vs. service companies vs. start-ups). Nevertheless, all are important to consider when exploring opportunities for innovation, as the power of this thinking lies at the intersections – unique combinations of trends, insights and attributes that reveal differentiating opportunities and suggest new ways of creating value.

Here's our view:

- The Cloud will become ubiquitous and eventually fade into the background as a core enabler of our entire global service economy
- Similarly, social responsibility will become expected, since these business models and practice will become an assumed part of how we must work and live, and how organizations must do business
- Mobile and web-based value delivery models will become prerequisites necessary for any service business

- An increasing number of services will add value by making meaning out of complex data – data that are either intentionally collected through sensors for this purpose or that are captured within the existing course of doing business
- Social networking, collaboration and user-generated content will continue to play roles in service definition and delivery itself

With respect to the business models that we have shared, one important question is whether any single model stands out as more powerful or promising than any of the others? The answer is no. Arguably, each one could be a game changer or game creator in its own right, as we have seen in many of the case examples. However, if pressed to single out the biggest opportunity (and likely the most challenging to create), we would select the Platform as a Service model. This tremendously powerful model is here to stay, and while some companies like Apple have led the way, others like Nintendo are just now starting to tap into the power of the platform that they have seemingly "backed into" serendipitously. Still others, like HP's Magcloud – which is both an on-demand service model and an aspiring platform – have yet to establish themselves as a true industry standard. Although Platform as a Service is complex, and is one of the most challenging business models to achieve, one of the critical questions service innovators must ask themselves is whether an untapped platform-type opportunity exists within their own industries and if so, how to create and begin to capitalize on the model.



The question that you are hopefully asking by now is this – which models apply to me, and of these which should I actively explore? Our answer: it depends. It depends on your starting point, whether you're already a services or a product company, and if neither, whether you're a start-up without a legacy to build upon (or to overcome).

If you're currently a product company, or a product and service company, you can consider all of the business models. If you're already a pure services company, then some of the business models may not be as applicable, since

their starting point assumes you are moving from a product to a service focus. If you're a start-up without an established product, service, or customer base, then about half of the business models will most likely be relevant for you.

In conclusion, we want to re-emphasize that the future of service business innovation will be characterized by the creative interpretation and subsequent combinations of megatrends, business models and the competencies and attributes that must bring them to life. The global winners in the

future will continually look into the future themselves. They will identify new opportunities but they will also adopt a flexible mindset that affords them the ability to organize and operate in ways that tap into knowledge and networks that create intangible sources of competitive advantage. These Forerunners will pave the way to new approaches for creating and capturing value – value that begins with customers and extends to customers' customers, broader value networks and then to the community, environment and society.



## Reference Charts

Table 8. Innovation Strategies, Business Models & Cases by Megatrends & Forerunner Attributes

			Megatrends										Forerunner Attributes						Business Model Relevance				
			The Cloud	Web Based Value Delivery	Mobile Value Delivery	Everything as a Service	Experience Design	Sensing & Monitoring	Collaborative Contributions	Social Networking & Communication	Climate Change & Sustainability	Globalization with Local Relevance	Relationships	Collaborating and co-creating	Experiential interactions	Solutions	Customer needs and customers' customers' needs	Value networks	Profit +	Manufacturing & Product Firms	Service Firms	Start-Ups	
Attribute-Based Innovation	Time-Based Value Models	Cemex				✓	✓	✓				✓		✓		✓	✓			✓			
		Rolls-Royce				✓	✓	✓									✓	✓		✓			
	On Demand Service Models	Hewlett-Packard	✓	✓		✓	✓		✓	✓	✓			✓		✓	✓	✓	✓	✓		✓	
		Zipcar		✓	✓		✓				✓				✓		✓				✓		✓
	Product Transformation Models	SolarCity				✓	✓			✓	✓		✓	✓		✓	✓			✓	✓		✓
		IFH Holdings / Expresso Fitness		✓		✓	✓	✓		✓					✓	✓	✓	✓			✓		✓
Knowledge-Based Innovation	Data Aggregation Models	Intuit	✓	✓	✓	✓	✓									✓	✓	✓		✓	✓		
		Gardner Denver		✓			✓	✓					✓				✓				✓	✓	
	User-Generated Models	Honda			✓	✓	✓	✓		✓				✓		✓	✓				✓	✓	✓
		iStockPhoto	✓	✓		✓	✓		✓	✓					✓	✓			✓		✓	✓	✓
Mobile Web-Based Innovation	Digitize It Models	Open Table	✓	✓	✓	✓	✓				✓				✓	✓	✓	✓			✓	✓	
		Cisco Systems		✓		✓	✓				✓		✓				✓	✓	✓			✓	✓
	Make It Mobile Models	t+Medical		✓	✓	✓	✓	✓								✓	✓	✓	✓		✓		
		NeoMedia	✓	✓	✓	✓	✓			✓						✓	✓	✓	✓		✓		
	Platforms as a Service Model	Apple	✓	✓	✓	✓	✓		✓			✓		✓			✓	✓	✓		✓	✓	✓
		Nintendo	✓	✓	✓	✓	✓									✓	✓		✓		✓	✓	✓
Solution-Based Innovation	Adjacency Complement Models	Eureko / Achmea Health		✓			✓		✓		✓					✓	✓	✓	✓	✓	✓		
		Michelin / ViaMichelin		✓	✓		✓		✓			✓				✓	✓	✓	✓		✓	✓	
	Experience Service Models	Harley Davidson		✓			✓			✓			✓	✓	✓	✓	✓				✓	✓	
		Visa		✓	✓		✓			✓		✓	✓	✓	✓	✓	✓	✓	✓			✓	
	Consulataive Value Models	FM Global					✓		✓					✓	✓	✓	✓				✓	✓	
		Herman Miller					✓		✓						✓	✓	✓		✓			✓	
	Profit with Purpose Models	iReuse				✓	✓			✓	✓						✓	✓	✓	✓	✓	✓	✓
		Vodafone			✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 9. Case Examples by Primary and Secondary Business Models

	Attribute-Based Innovation			Knowledge-Based Innovation		Mobile Web-Based Innovation			Solution-Based Innovation			
	Time-Based Value Models	On Demand Service Models	Product Transformation Models	Data Aggregation Models	User-Generated Models	Digitize It Models	Make It Mobile Models	Platforms as a Service Model	Adjacency Complement Models	Experience Service Models	Consultative Value Models	Profit with Purpose Models
Cemex												
Rolls-Royce												
Hewlett-Packard												
Zipcar												
SolarCity												
IFH Holdings / Expresso Fitness												
Intuit												
Gardner Denver												
Honda												
iStockPhoto												
Open Table												
Cisco Systems												
t+Medical												
NeoMedia												
Apple												
Nintendo												
Eureko / Achmea Health												
Michelin / ViaMichelin												
Harley Davidson												
Visa												
FM Global												
Herman Miller												
iReuse												
Vodafone												

Primary Business Model

Secondary Business Model

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