

IBM Institute for Business Value

Digital Reinvention

Preparing for a very different tomorrow



IBM Institute for Business Value

IBM Global Business Services, through the IBM Institute for Business Value, develops fact-based strategic insights for senior executives around critical public and private sector issues. This executive report is based on an in-depth study by the Institute's research team. It is part of an ongoing commitment by IBM Global Business Services to provide analysis and viewpoints that help companies realize business value. You may contact the authors or send an e-mail to iibv@us.ibm.com for more information. Additional studies from the IBM Institute for Business Value can be found at ibm.com/iibv

By Saul Berman, Anthony Marshall and Nadia Leonelli

The individual-centered economy

is already here. The newest digital technologies – among them social media, mobility, analytics and cloud – keep changing how people, businesses and governments interact. These digital forces enable unprecedented levels of connectedness and so the world is already investing in consumer-centricity. However, these new technologies are truly still in their infancies. The transformation that is already underway will soon intensify, resulting in a paradigm shift from customer-centricity toward an everyone-to-everyone (E2E) economy. The implication for value creation and allocation will be profound. New IBM research shows that many organizations are still not ready to navigate the E2E environment. To prepare for the radical disruption ahead, companies need to act now to create experiences and business models that are orchestrated, symbiotic, contextual and cognitive.

Today's uber-connected, empowered individuals seek 24/7 access and organizational transparency. They want to exert greater personal influence over organizations and participate in more digital activities as they conduct their daily lives. In the IBM Global C-suite Study, 55 percent of 4,183 C-suite executives report that consumers have the most influence on business strategy, second only to the C-suite itself.¹ Looking ahead, 63 percent of the leaders we surveyed in this 2013 IBM Digital Reinvention™ Study expect consumers to gain even more power and influence over their businesses.

The culmination of accelerating digital and other technological forces is spawning disruption on an unprecedented scale. And yet, most organizations have not fathomed the full implications of a radically different, digitally-charged future. When asked what kind of digital strategy their enterprise has, more than sixty percent of CEOs told IBM they still lack an integrated physical and digital strategy.²

Digital technologies will ultimately drive drastic changes in the economy: value chains will fragment, industries will converge and new ecosystems will emerge. As a result, the mechanics of value creation and value allocation will also change. Looking five years out, 58 percent of 1,100 executives we surveyed in the Digital Reinvention Study expect new technologies to reduce barriers to entry and 69 percent expect more cross-industry competition.

So, what will this future of continual digital disruption entail? How will new convergent technologies impact organizations and industries? What can organizations start doing today to begin preparing for a vastly different business environment? In particular, which investments, priorities and actions can set the stage for success during turbulent and ongoing change?

This 2013 IBM Digital Reinvention Study considers the answers to such questions. To better understand the deepening impact of digital technologies on today's organizations, the IBM Institute for Business Value surveyed approximately 1,100 business and government executives and 5,000 consumers across 15 countries. We also conducted in-depth interviews with 30 leading futurists (see Methodology section in appendix for more details).

Our analysis of study findings shows that as technological change persists, the interactions between organizations and individuals also keep changing – and this change is accelerating fast. In fact, the global economy was characterized as highly organization-centered for most of the 20th century. Its current state – individual-centricity – emerged around 1990, but this will further evolve into an everyone-to-everyone (E2E) model of engagement.

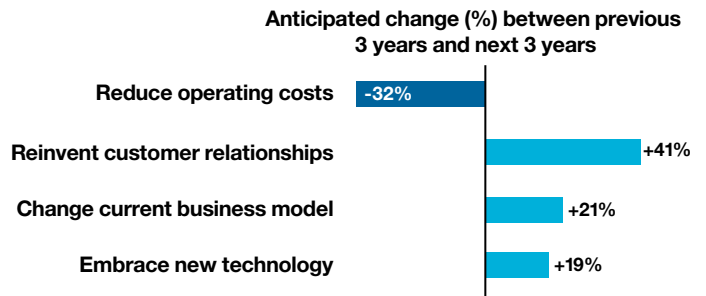
Prospering in an E2E setting demands disruptive innovation that challenges established norms and blurs organizational boundaries. It will be critical to open up to external influences, expand partnering and accelerate digital investments – the sooner, the better. This executive report offers practical ways to prepare for that fast-approaching and very different tomorrow.

Now at warp speed: Digitization

Digitization is rapidly changing the nature of how individuals and organizations interact: the result is an individual-centered economy. Individuals are more connected and empowered, leading to rising expectations about information access, ubiquitous connectivity and transparency. The ability to stay connected through a variety of devices has increased consumer influence over organizations and drives a consumer-centric business strategy. Competition is coming from new and

different areas, opening up opportunities for previously unforeseen entrants – and simultaneously creating new threats. Organizations are adapting innovative business models and using newly found digital capabilities to enable original consumer experiences. The IBM Global C-suite Study shows that the intense focus of the past three years on business strategy that reduces operating costs is shifting to a renewed focus on growth and transformation (see Figure 1).³

In the early part of the 20th century, the economy was organization-centered and dominated by producer-driven consumption. Ford and its Model T are an example of this model. Industries were characterized by high barriers to entry and capital-intensive production, with larger enterprises controlling production.



Source: IBM Global C-suite Study, CEO question: "What are the top priorities in your business strategy?"

Figure 1: Organizations are transitioning from intense focus on operating costs toward growth and transformation.

Later, as technological capabilities changed consumer expectations, the organization-centered economy evolved into today's *individual-centered economy* (see Figure 2). The individual-centered economy is characterized by product differentiation and individualized market segmentation targeted at deriving value for the consumer. There is a strong emphasis on design and marketing, and organizations listen to create relevant, customized experiences that realize value for the consumer.

As discussed in our 2011 study, “Digital transformation: Creating new business models where digital meets physical,” organizations have been embracing digital transformation to create compelling consumer experiences.⁴ In the individual-centered economy, four *elements* of digital transformation are critical: being flexible, integrated, tailored and responsive (see Figure 3).

Organization-centered economy



- Organizations drive consumption
- Channels are governed by different incentives
- Each channel provides a different consumer experience
- User experience is typically unintuitive
- Focus groups and market research represent consumer input

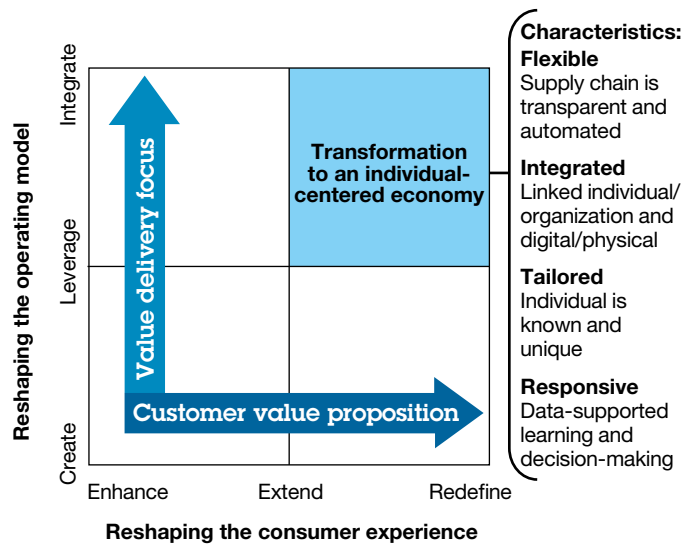
Individual-centered economy



- Consumers expect experiences “my way”
- Channels are integrated for seamless experiences
- Micro-segments are employed
- Focus on ease of use and curation
- Big Data and analytics underpin capabilities

Figure 2: The attributes of an individual-centered economy: keeping the focus on creating customer experiences that are rewarding.

Digital transformation framework



Source: IBM Institute for Business Value analysis; “Digital transformation: Creating new business models where digital meets physical.” IBM Institute for Business Value.

Figure 3: Digital transformation produces customer experiences that support what individuals need or want.

Technological disruption: Then and now

Looking back to 1978, personal computers, mobile phones and the Internet were in their infancy. Those powerful disruptive innovations have shaped the society we live in today and it took decades for their impacts to be fully realized. Today, technological change is happening in a time span that is highly compressed compared to what has come before. We are at the beginning of another shift, as these newer technologies develop and mature – but much faster and even more profoundly.

Social media explosion. Even as they heighten control and privacy issues, collaboration and information sharing are spurring new models of value creation. “Social” has become revenue-generating, evolving from a dot-com trend to a sharing platform and business model. Groupon (a crowd-based deals company) and peer-to-peer lending (lending to individuals without a financial intermediary) are examples of collaborative buying and revenue sharing models that are driving the sharing economy movement.

Mobile revolution. Mobility and miniaturization are transforming consumer experiences via new capabilities, such as the increased use of location-based services to enable both global positioning systems (GPS) and targeted retail promotions. New payment ecosystems using the mobile wallet turn dollars digital. And the miniaturization of mobile devices moves from palm-sized to wearable devices, including fitbit (enabling wireless fitness tracking) and Samsung Galaxy Gear (enabling receipt of texts and emails).

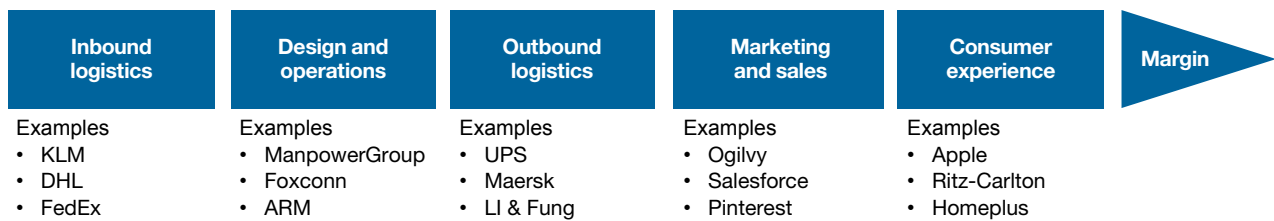
Analytics. Advanced analytics enable deeper business intelligence and consumer insight to be drawn from big data, producing information that ranges from descriptive to predictive. Internal and external data sources can now be integrated and services can be highly personalized based on consumer data, for example, the recent partnership of American Express with Twitter.

Cloud enablement. Cloud enablement allows for new models of interaction between individuals and organizations, and will help facilitate cross-platform data analytics. Examples of these new ways to interact include subscription access to enterprise applications such as Adobe Cloud, cross-platform on-demand content such as Netflix and computing without boundaries such as virtual collaboration spaces.

A view of the vastly different future

The promise of compelling customer experiences can now be realized because of these technological and social changes. As industries converge, new ecosystems that cut across multiple organizations, functions and industries will emerge to enable new and compelling experiences.

A value chain is a sequence of activities that organizations perform to create and deliver some type of product or service to market.

Indicative value chain

Source: IBM Institute for Business Value analysis.

Figure 4: How the fragmentation of a value chain may look as specialists enter to provide key capabilities.

Value chains will fragment

New technologies will make value chains more transparent and easier to decompose (see Figure 4). In the past, value chain disruptions often involved replacing whole value chains or big chunks of value chains, such as replacing traditional banking processes with Internet-based, virtual banking. Next generation value chain disruption will involve contesting more specific elements or functions within value chains.

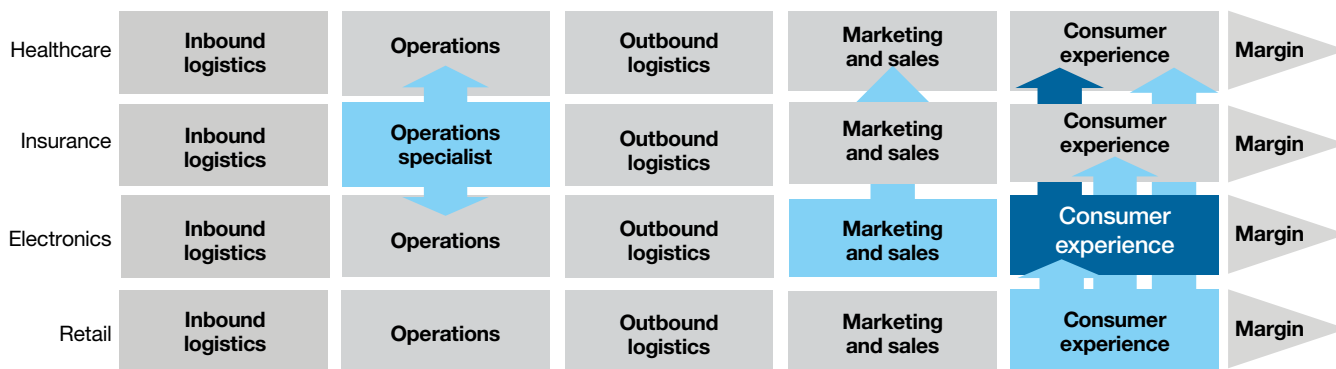
Organizations will increasingly recognize their own unique competitive strengths related to specific functions and expand capability in these areas. These new specialists will begin to contest their chosen functions more aggressively in their own and other markets, for example, outbound logistics providers such as Maersk and Li & Fung. Specialization will generate ever greater pressures to improve. Faced with new functional offerings comprising better capability at lower cost, organizations will as a consequence begin to cede more and more non-core functions to specialists.

Ritz-Carlton, for example, recognized that their true competitive strength is their customer experience. The Ritz-Carlton Leadership Center now trains organizations in other (non-travel) industries on how to create outstanding consumer experiences. Leading hospitals are applying Ritz-Carlton's quality principles to improve their patients' medical experiences.⁵ Chipmaker ARM designs chips for use in smart phones and tablets. Through licensing and royalty agreements, ARM passes the benefits of scale economies and design innovations on to consumers.⁶

Industries will converge

As specific functions in value chains are contested, new competitors will emerge. Functional specialists from one industry will begin competing in specific value chain functions of other industries. This cannibalization across industries will begin to drive industry convergence (see Figure 5).

Example of IT convergence in outcome-based healthcare



Source: IBM Institute for Business Value analysis.

Figure 5: Illustrative example of how industry convergence can occur based on functional specializations.

Organizations will begin pursuing dual strategies: to continue the focus on core business in their primary industries; and to seek growth opportunities in their chosen specialized functions across other industries. Specialization will drive industry convergence as competition expands around specific, common value chain functions.

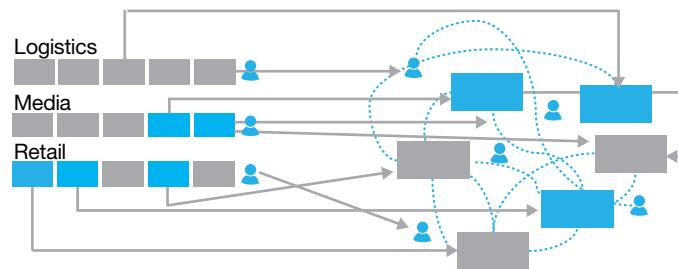
A projected future example is advanced telemedicine, which allows delivery of quality healthcare, regardless of physical location. Access to medical expertise without regard to geographic boundaries can be possible via haptic (tactile) sensor technology from the electronics industry and infrastructure for real-time communications from the telecommunications industry. Related innovations from other industries may also emerge as the telemedicine market evolves.

An ecosystem refers to a complex web of interdependent enterprises and relationships directed towards the creation and allocation of business value.

New ecosystems will emerge

Functional specialization, value chain fragmentation and industry convergence will begin to support formation of ecosystems or value nets (see Figure 6). Ecosystems will typically cut across multiple organizations, functions and industries, providing a foundation for new, seamless consumer experiences and camouflaging functional complexity.

Ecosystems will emerge: Retail example



Source: IBM Institute for Business Value analysis.

Figure 6: Illustrative retail industry example of forming new ecosystems.

Looking to the future, the projected future of retail is an example of emerging ecosystems. An omni-channel retail experience adapts real-time to a particular consumer's context. A combination of elements creates this experience: a concierge service acts as a single contact point for all needs; in-store assistance is augmented with intelligent, mobile self-help options; inventory and product delivery are fully integrated; and mobile payment is available and seamless across physical and virtual channels.

Ecosystems will be very dynamic and able to deliver more complex experiences or activities than single – or even convergent – value chains. The manner in which value is created and allocated changes as organizations evolve from participating in traditional value chains to participating in ecosystems.

In traditional value chains, organizations optimize value with a “cost plus return” model, where organizations at each stage in the chain optimize value creation (see Figure 7). Total value

reflects the aggregation of value created at each step in the chain. Organizations typically interact with the prior function and the next function in the chain, but have little sense of the overall market context.

But in ecosystems, organizations realize value through the engagement with the system as a whole, where “value” is defined by participants' willingness to pay for access to the ecosystem. Once access occurs, specific transactions may occur within the ecosystem. Total value created reflects the value of access to and engagement within the system as a whole.

This creates a substantial opportunity for organizations to insert themselves within emerging ecosystems. Mechanisms are required and can be established to share the value created for access among ecosystem members, whether through central allocation, looser orchestration or some other arrangement.

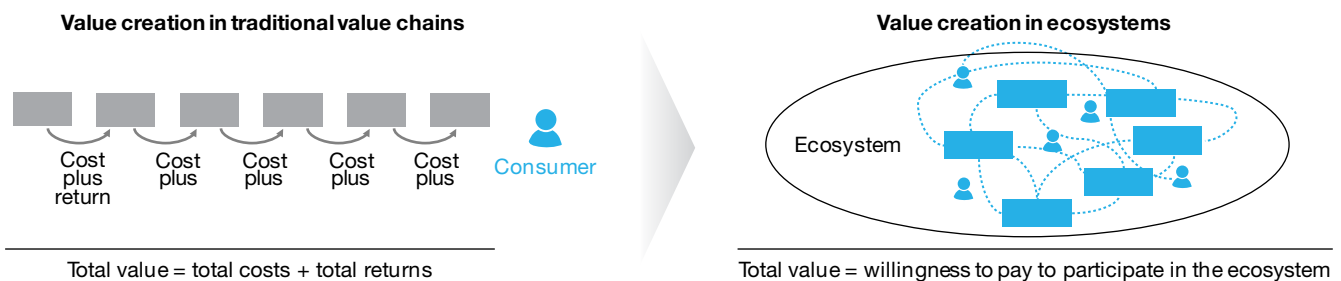
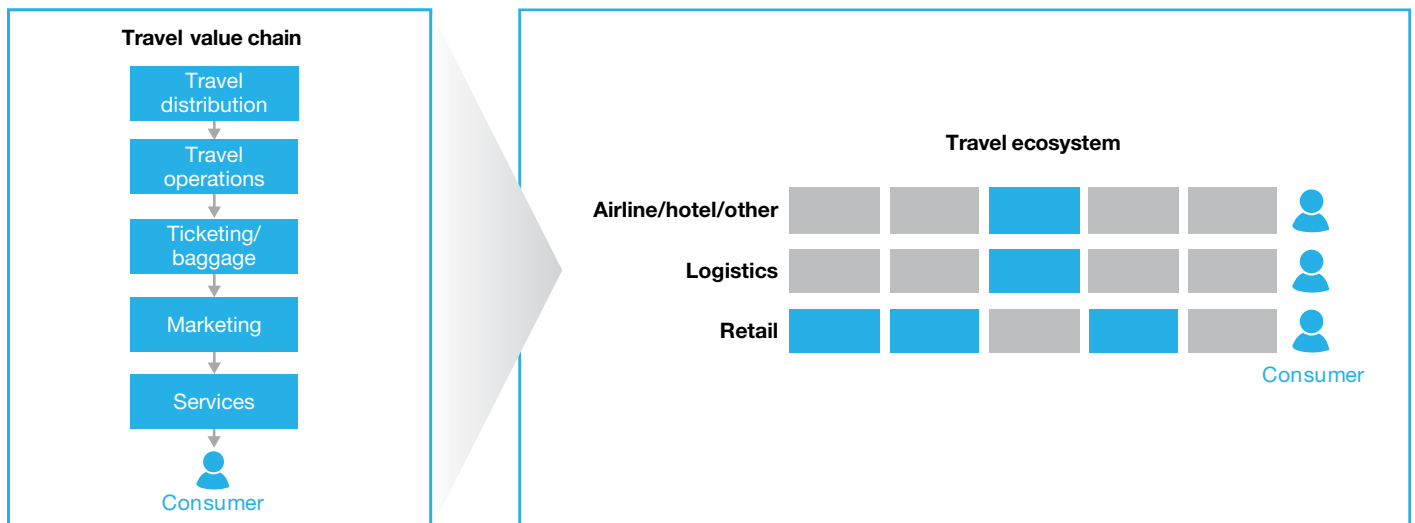


Figure 7: The way that value is created and allocated within ecosystems will differ from traditional value chain environments (as described in Figure 4).

Envisioning the new Travel ecosystem

In the traditional travel value chain, value is tied to sales of specific travel services, including seat and room reservations, baggage and other service fees, itinerary coordination and post-trip services. Intermediaries benefit from the value that the entire system generates – by providing specific services in the value chain, such as online travel agents and global distribution systems that extract fees for reservations (see Figure 8).



Source: Travel 2020: The distribution dilemma" and "New routes to profitability." IBM Institute for Business Value.

Figure 8: Value creation in a Travel ecosystem is based on delivery of the end-to-end travel experience.

In a future travel ecosystem, value is tied to the value perceived through access to a comprehensive travel experience, including physical goods, services, information and coordination. As each member of the current value chain expands its aperture, it will realize that consumers value the net benefit of the entire experience, not just isolated travel components. In this ecosystem view, value is extracted by a party that orchestrates the delivery of service, not just the travel provider or asset owners. Key travel ecosystem players include airlines and hotels that provide the primary perishable "good," the retail industry that provides travel-relevant goods, and the logistics industry that provides baggage pick-up and delivery.

Price is determined by consumers' willingness to pay for the travel experience – consisting of a personalized package of goods and services rendered. Airlines and hotels are already experts at pricing perishable assets like rooms and seats based on specific willingness to pay criteria of individual consumer segments. But as the ecosystem emerges and expands, the number of variables they must optimize against will also increase. Soon, prices will need to be set on the basis of what each individual is willing to pay for the specific set of goods and perishable services that meets personal preferences. Such pricing algorithms will need to be robust enough to include variables collected not just across the travel domain, but also across retail, social media and other sources of information that can inform an estimate of an individual's willingness to pay.

A radically different automotive/mobility ecosystem

In a traditional automotive value chain, value is tied primarily to the vehicle and controlled by the original equipment manufacturer (OEM). Additional value is contained in ancillary products and services including suppliers, dealership networks, tire and automotive maintenance providers, gas stations, auto parts stores, insurance providers and the like (see Figure 9). Value creation is focused on product differentiation and supporting services, including upgrade options like leather interiors and sun roof, as well as safety ratings and brand exclusivity.

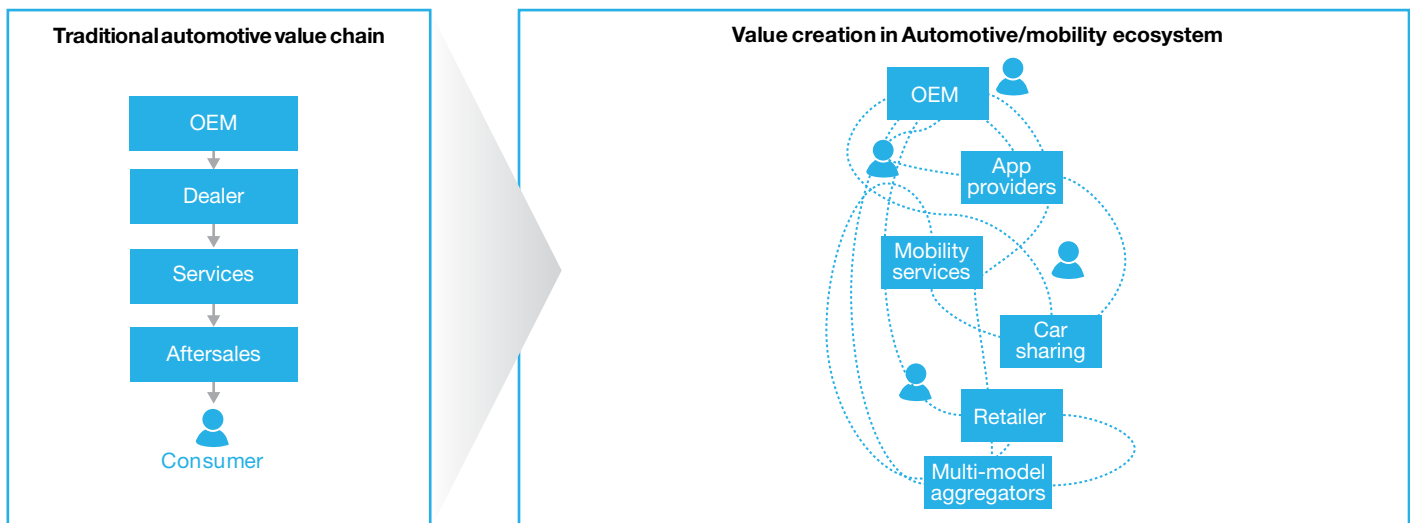


Figure 9: Value creation in an automotive/mobility ecosystem is tied to utility gained from the entire mobility experience.

In a future Automotive/mobility ecosystem, value will be tied to the utility gained from the entire mobility experience and associated services, instead of the value inherent in the car itself which acts as means of transportation. Value creation reflects the quality of the overall consumer experience with better consumer experience, creating more value. Supporting services like satellite radio (SiriusXM) and remote services such as OnStar or high speed connectivity improve the enjoyment of the ride and afford greater convenience to the consumer. Since the experience creates more value, the consumer is likely to have a greater willingness to pay. Value will also likely shift from the automotive manufacturer and distributor to the mobility ecosystem orchestrator.

Key dimensions of an E2E economy

Just as the organization-centered economy gave way to the individual-centered economy, a new sea change is brewing. The maturation of social media, mobility, analytics and cloud are motivating a transition from an individual-centered to an *everyone-to-everyone (E2E) economy*.

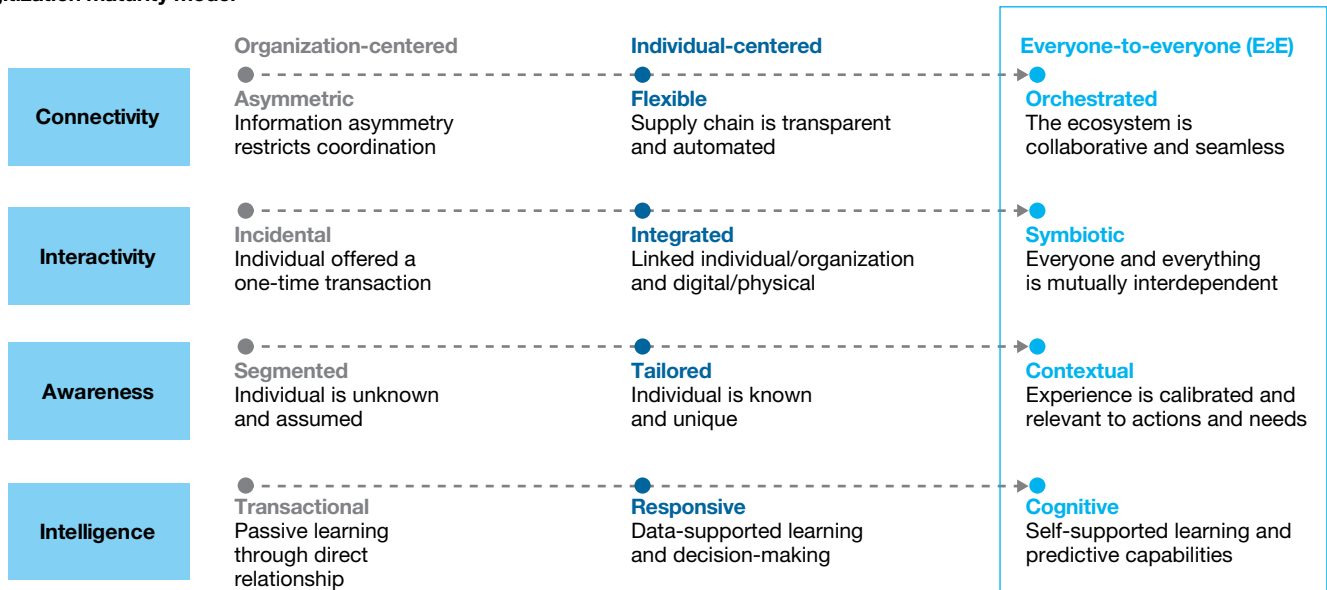
E2E is characterized by hyper-connectedness and collaboration of consumers and organizations across the gamut of value chain activities: co-design, co-creation, co-production, co-marketing, co-distribution and co-funding. In this integrated system, consumers and organizations work together to create value, with transparency driving trust and effectiveness. The differences among the three types of economic models can be illustrated by considering four key dimensions: connectivity, interactivity, awareness and intelligence (see Figure 10).

Connectivity: How is the ecosystem coordinated and what are the driving forces?

In an organization-driven economy, connectivity is best described as *asymmetric*. Information flows in one direction – from the organization to the consumer. Traditional insurance is one example, both because insurance costs are driven up by unknown risks that drive complexity and because there is limited visibility into operations of insurance providers such as how premiums are determined and approval/claims processing.

In the individual-centered economy, *flexible* connectivity prevails, thanks to a supply chain that is transparent and automated. Traffic management systems are an example of connectivity that is more digitally mature than in an organization-driven setting. For example, real-time traffic management information systems such as Bitcarrier get data from wireless

Digitization maturity model



Source: IBM Institute for Business Value analysis.

Figure 10: A comparison of “digitization maturity” for three economic models: organization-centered, individual-centered and E2E. An E2E environment is orchestrated, symbiotic, contextual and cognitive.

network activity and the information enables active traffic management and identifies pedestrian movements.⁷ Knot Standard, a clothing retailer, allows individuals to order custom-fitted suits, shirts and other men's clothing by transmitting their measurements digitally via webcam or other methods, including use of a local tailor or an old suit. The company guarantees a "100% perfect" product to be shipped in 20 days.⁸

In the future, connectivity will become orchestrated, within an ecosystem that is collaborative and integrated. An example of this is Kiva.org, a microfinance non-profit provides small, interest-free loans around the world. Through its online community of over 600,000 lenders, Kiva has issued over US\$250 million in loans to hundreds of thousands of people in 60 countries since 2005. With U.S. loans comprising less than 1 percent of borrowers, it partnered in 2010 with Visa on a program to help small Gulf Coast businesses get microloans. Expanding further, Kiva formed Kiva City with the Clinton Global Initiative to serve small businesses in American cities by collaborating with civic leaders, community organizations, financial institutions and lenders. Within three hours of launching in Detroit, Kiva raised over US\$25,000 to help fund five local start-ups and 14 loans totaling more than US\$125,000 were fully funded within 24 hours of launching in New Orleans.⁹

Interactivity: What is the depth of relationship between the individual and the organization?

In an organization-centered economy, interactivity is best described as *incidental*, where an individual is offered a one-time transaction. Interaction between organization and consumer only occurs because it is necessary for a transaction to be executed. Product-focused retailers are one example, operating with high turnover, low margin and low-value transactions. Here, the goal is to maximize volume as a priority over developing long-term, personal consumer relationships.¹⁰

By comparison, the interactivity in an individual-centered economy is *integrated*, linking individuals with the organization, as well as linking the digital with the physical. Digitized eyewear purchasing is an example of integrated activity that is more digitally mature than in an organization-driven setting. Retailers such as Warby Parker offer online, direct-to-consumer sales for eyewear bypass physical outlets. Online retailers focus on low prices and convenience as they digitize physical products: consumers can receive glasses to try on at home or try on glasses virtually.¹¹

The future of interactivity will be *symbiotic*, in which virtually everyone and everything are mutually interdependent. An epidermal electronic system is such an example. Electronic circuits that are like a "second skin" and are aware of a user's cognitive state can stimulate tissues for rehabilitation. Future applications are expected to blur the physical and digital further and extend to include external limb control, sub-vocal communication and military uses.¹²

Awareness: What is the depth of market insight and is it reflected in the consumer experience?

In an organization-driven economy, awareness is *segmented*, with individuals being both unknown and assumed. Traditional beverage marketing illustrates this approach. Beverages maintain classic flavors with some regional diversity. Manufacturers use traditional demographic and psychographic consumer segmentation to promote products.¹³

But in an individual-centered economy, awareness is *tailored* and each individual is known and unique. Mass customization in retail is an example of awareness that is more digitally mature than in an organization-driven setting. For example, Jockey, a clothing manufacturer, developed a new volumetric bra featuring a new sizing system offering 55 size combinations based on surveys of women. These size combinations create a mass-customized alternative to existing bras, which are often described as ill-fitting.¹⁴

The future of awareness will be *contextual*, with an experience that is calibrated and relevant to each individual consumer's preferences, location and moment in time. An example of this is a projected future retail experience: retailers integrate data across multiple sources, combining location, behavior, servicing, social, virtualization, fulfillment and access to create a "for-me-only" experience. The provider of the retail experience may, in fact, know the consumer better than the consumer knows his- or herself. The future contextual experience may even be capable of turning on when needed and off when not wanted.¹⁵

Intelligence: How is decision-making informed?

In an organization-driven economy, intelligence is primarily *transactional*, which results in passive learning through direct relationship. Traditional telephony illustrates transactional intelligence since providers offer combinations of subscriptions and service packages that can be flexibly combined, but do not vary based on usage history or length of consumer relationship.¹⁶

By comparison, an individual-centered economy has *responsive* intelligence, featuring data-supported learning and decision making. Energy optimization systems are an example of intelligence that is more digitally mature than in an organization-driven setting. Optimization systems like the Nest learn user preferences and behavior for smart energy management.¹⁶ These systems leverage data to support convenient product usability and future development of energy efficiency services.¹⁷

In the future, intelligence will become *cognitive*, using probabilistic techniques that enable computer-based decision making. One example of this is applying the artificial intelligence of IBM Watson in the field of medicine. Watson will soon help diagnose medical conditions by leveraging its cognitive ability and ingested medical documentation, and continuously learning from mistakes. In a recent test, Watson successfully diagnosed lung cancer 90 percent of the time compared to 50 percent for human doctors.¹⁸

Guiding principles for an E2E economy

Heightened consumer expectations for seamless, connected experiences and increased collaboration among organizations characterize the E2E. To find direction within complexity, consider these guiding principles:

- **Organizations will only be as relevant as their ability to deliver the best experience through the right partner ships.** Consumer experiences will require services from different providers, and will demand that companies work together to adapt. Value delivered to customers will not be concentrated in one company, but distributed across multiple organizations. The ability to attract, assemble, manage and retain the right organizational partners will be a differentiator for success in the E2E marketplace. Ecosystems require trust and mutuality – open lines of communication and shared agility are vital.
 - **The demand for data by contextual and predictive analytics will become insatiable.** Consumer experiences will require a highly contextual understanding of users and their needs through data insight. Creative and innovative integration of transactional, behavioral and contextual data are necessary ingredients to produce value for customers. Organizations need the ability to capture, analyze and model data to extract – and then act upon – profound insights, and then make these insights available to partners. Information sharing and the ongoing process improvement will need to become ‘business as usual’ to gain operational efficiencies within and across partnerships.
 - **Open standards do not mean the end of intellectual property – successful organizations will protect what they do best and open up the rest.** In the age of specialization, the imperative of protecting critical intellectual capital will need to be balanced against the imperative of being integrated into dynamic and flexible ecosystems. Secrecy will increasingly be replaced by openness within the context of strong and enforceable intellectual property rights.
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The new Digital Reinvention Framework

A new innovation layer – beyond the traditional definition of digital transformation – is emerging. Organizations should continue to invest in individual-centricity while recognizing it is just the first step toward the radical Digital Reinvention in the future.

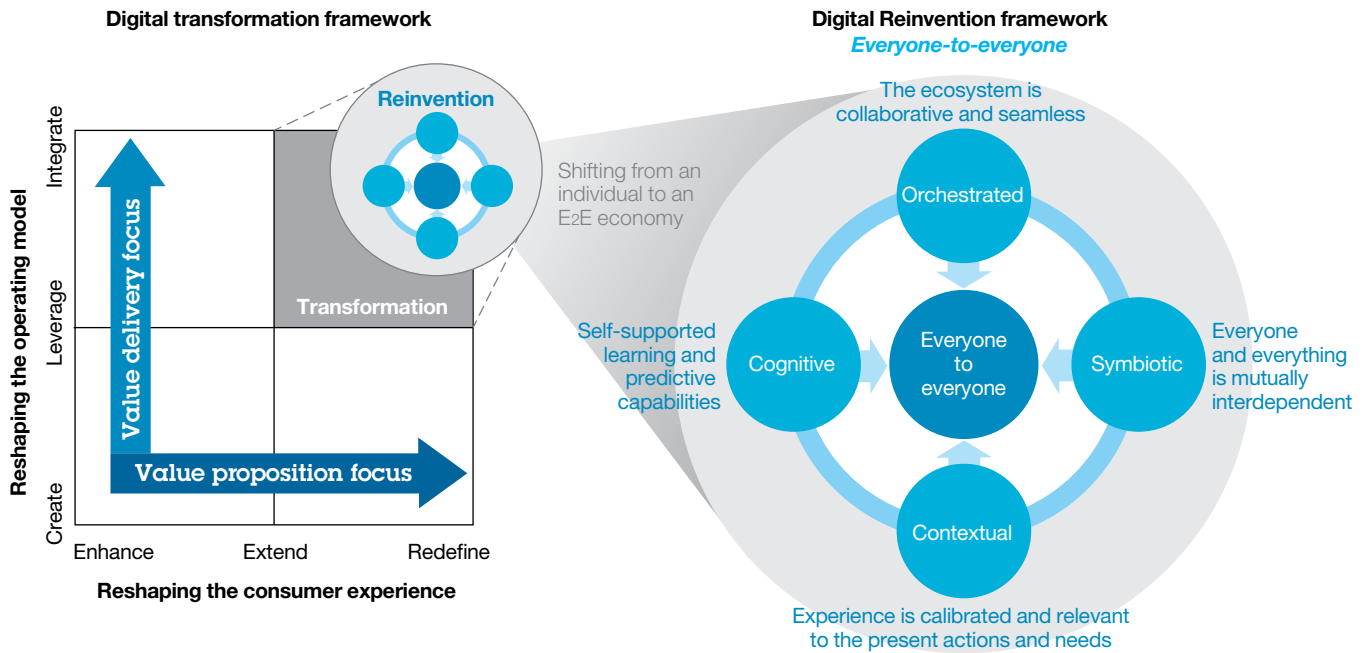
The E2E economy requires reinvention of markets, strategy and value from the ground up. And with the shift to E2E, the historical Digital Transformation Framework is being replaced by a new Digital Reinvention Framework (see Figure 11) which features *orchestrated connectivity*, *sympiotic interactivity*, *contextual awareness* and *cognitive intelligence*.

Becoming orchestrated, sympiotic, contextual and cognitive

Successful organizations will be open to the challenges ahead and rethink all aspects of their business. Above all, they must decide *where to focus*. The future will be very different from the present.

Rethink how your organization interacts with consumers and markets. Do not allow what is possible today (given existing IT or other capabilities) to limit you. After defining compelling experiences, identify monetization opportunities and technical/organizational requirements. Develop the business case and make investment decisions accordingly.

Next is the decision about *how to focus*. In the future, organizations will become even more specialized than they are today. Understanding what you are good at will become essential. Take a highly critical, impartial look at what you do well, and what others do better. Agree to focus your efforts on those activities that truly differentiate you from your competition. Make investments there, to build and maintain a position of excellence. Source most or all of the other functions in your business to top providers. Focus on those activities that differentiate you.



Source: 2011 IBM Digital Transformation Study and 2013 IBM Institute for Business Value analysis.

Figure 11: The new Digital Reinvention Framework supports the E2E economy.

The other facet of determining where to go is *building and integrating new capabilities*. Skills and capabilities required for business change through time – those required for success in the future will not necessarily be those that have contributed to success in the past. Take an objective look at what skills and capabilities you have today, what will be required in the future and move aggressively to retrain or recruit. Think through new models of investment, metrics and incentives, and begin building an organization designed for the future.

Step one: Open up to external influences

Turbocharge insight. For many organizations, market or competitive insight has struggled to keep up with new technologies around social media and big data. Yet insight will play an ever-more important role in understanding not only changes in consumer attitudes and behavior, but also looking across industries to scope business model possibilities and implications of new technologies. Upgrade insight to encapsulate capabilities such as social analytics and scenario envisioning. Build better processes to detect weak but potentially profound signals from supply chains or partner networks and channel them into IT and the business.

Embrace digital natives. Managers will need to look at their businesses differently. Markets are unlikely to incrementally evolve as they once did. Organizations will be much more susceptible to disruption coming from both inside and outside their industry parameters. Millennials and other digital natives are much more likely to anticipate the power of new technologies and experiences. Build processes that channel insights directly from Millennials to permeate the C-suite and others.

Internalize consumer influence. Consumer influence in most organizations tends to be filtered through the sales organization or the CMO. Such filters inevitably create distortions. Invite consumers to participate in ideation, project evaluation and development processes, as well as in fundamental business strategy development. Establish processes for consumers to have a real say in key business decisions. Increase decision making permeability, and rethink key initiatives as consumer collaborations.

Step two: Connect to new ecosystems and partners

Conceptualize ecosystem parameters. In the future, organizations will operate in ecosystems of converging products, services and industries. By focusing on single products or transactions, organizations will miss the big picture. Become proficient in understanding new ecosystems as they emerge. Identify and assess new sources of value and define where your organization might sit and what role it might play. Develop mechanisms to identify new opportunities and train your people to anticipate emergent threats to your business.

Build systemic connectivity. Application programming interfaces (APIs, a set of protocols for building software applications) and cloud computing are the tissue connecting ecosystems of organizations and individuals. The influence of APIs and cloud go far beyond the IT department. If handled right, APIs and cloud can empower dynamic new business models, consumer interactions and organizational flexibility. To position strategically for the future, combine technology strategy with business strategy. Compel IT to work with the business and the business to work with IT. Test what is possible with new technologies and anticipate the unexpected by maintaining technical and operational flexibility.

Establish ecosystem partners. In the future, the most successful organizations are likely to be those who partner with the right organizations or people in the right ways. No single organization can hope to do everything required in new ecosystems. But partnering with anyone will introduce risk and confusion. Successful organizations will understand their capabilities and how to realize synergies with ecosystem partners. Find partners who can further your objectives and decide how you want to partner. Prioritize those that do things that are not easily replicable. Partner with world class organizations, even if they happen to be small. Explicitly align objectives both informally and contractually.

Step three: Invest in digital mobilization across the organization

Appoint digital torchbearers. Succeeding in the E2E economy will require fundamental rethinking of markets, consumers and products and services. It is likely that some business units and employees will struggle with understanding new imperatives and the change required. Appoint specific individuals to be digital torchbearers. In circumstances where the C-suite struggles to embrace new imperatives, consider appointing a Chief Digital Officer. Mandate these individuals with influencing strategy and educating other executives. Give them real authority, including a say in approving new projects and other investments.

Secure functional/business unit buy-in. Functional or business unit groups may become insular and self-focused, losing sight of overall strategic goals. Interactions between IT departments and business units can often be strained. Business complains that IT does not understand consumer imperatives; IT complains that the business does not understand technical feasibility. Yet Digital Reinvention will require IT and the business to work together like never before. Compel a closer working relationship. Co-location, cross-functional tours of duty and combined planning exercises are among initiatives that might be pursued.

Pursue continuous innovation and experimentation. Investing in consumer-centricity remains necessary and desirable. Successful organizations are currently rethinking consumer imperatives and building compelling consumer experiences. But invest in consumer-centricity with knowledge and sensitivity to what will emerge beyond. As new technologies mature and businesses adapt, the economy will begin to shift from an individual-centric to an E2E paradigm. Think about how to shift as well – continuously identify opportunities, conceive business models and navigate new ecosystems. Pursue experimentation, and apply the results of experiments to the business if successful.

Key steps for reinvention: 1. Open up to external influences, 2. Connect to new ecosystems and partners, and 3. Invest in digital mobilization across the organization.

Begin reinventing: Ask the right questions

Organizations must be inquisitive and open to the challenges ahead. The following questions can help:

- What fundamental consumer needs have you been serving? What new experiences can address those needs?
- How will you identify your core strengths? What is the best way to increase investments in those true differentiators?
- In what ways can you identify new potential sources of value, and where in emerging ecosystems should you engage?
- What can you do to assess current skill levels and capabilities objectively? How should you acquire new skills to fill gaps?
- What sorts of digital torchbearers already exist in your organization? What can you do to incorporate their influence into strategy and education?

Seize the future through Digital Reinvention

Until the turn of the century, the most powerful impacts of new technologies have taken years to emerge. Today, we're experiencing the transformative impacts of social media, mobile, analytics, cloud and other technologies at a highly-accelerated pace. Digital disruption has begun: it marks the start of a new technological and economic paradigm requiring the re-imagining of markets, strategy – and value itself.

Organizations must start reinventing themselves from the ground up to remain competitive. On one hand, rapid digitization is creating new value and new opportunities for organizations to gain influence and innovate. On the other, established norms are in peril due to the blurring of traditional industry definitions and formation of new ecosystems. To prepare for a radically different tomorrow, those who seek to prosper under digital disruption should constantly redefine strategy in terms of how best to open up to external influences, connect to new ecosystems and partners, and how they can drive digital mobilization across their organizations.

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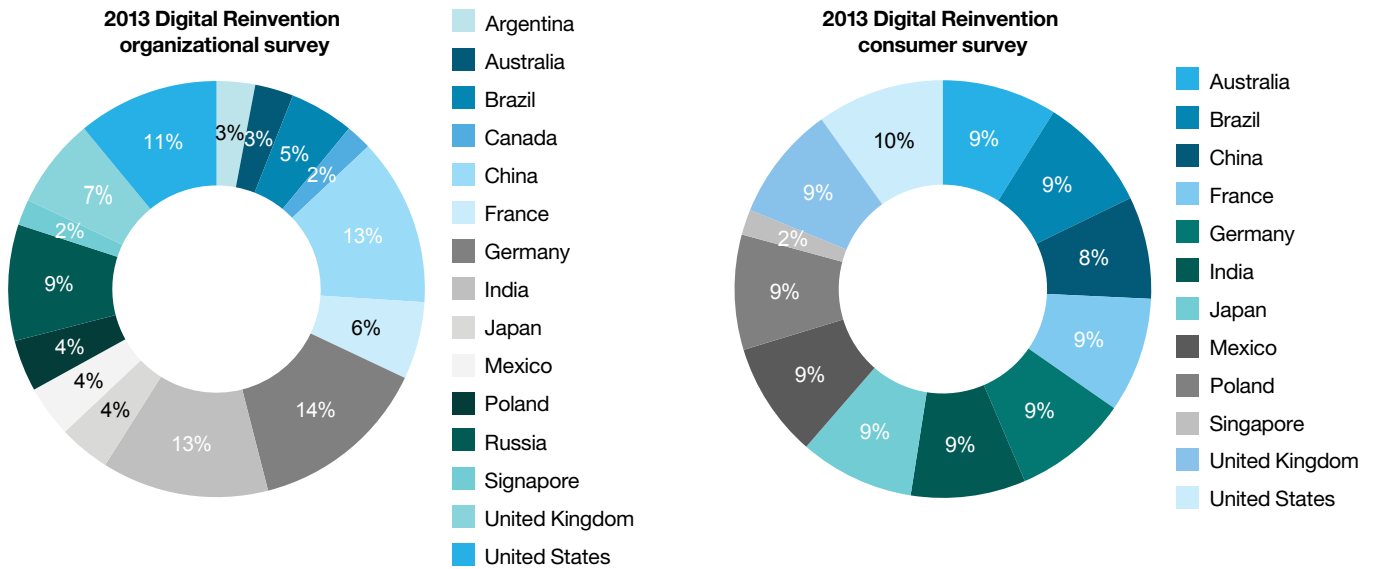
Related publications

- “The Customer-activated Enterprise: Insights from the Global C-suite Study.” IBM Corporation. October 2013. <http://www-935.ibm.com/services/us/en/c-suite/csuitestudy2013/>
- “Leading through Connections: Insights from the Global CEO Study.” IBM Corporation. May 2012. <http://www-935.ibm.com/services/us/en/c-suite/ceostudy2012/>
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Appendix: Methodology of this study

For the 2013 IBM Digital Reinvention Study, we surveyed approximately 1,100 business and government executives and 5,000 consumers across 15 countries (see pie charts). Thirty leading futurists were also interviewed.

Of those interviewed for the executive study, 42 percent are C-level executives, with Chief Executive Officers comprising 10 percent of that group. More than three-fourths of the consumer study participants are university graduates, with 68 percent between the ages of 25 and 54.



Survey respondents by country.

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