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Amy L. Ostrom, Mary Jo Bitner, Stephen W. Brown, Kevin A. Burkhard, Michael Goul, Vicki Smith-Daniels, Haluk Demirkan and Elliot Rabinovich

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Amy L. Ostrom, Mary Jo Bitner, Stephen W. Brown,
Kevin A. Burkhard, Michael Goul, Vicki Smith-Daniels,
Haluk Demirkan, and Elliot Rabinovich¹

Abstract

Given the significant, sustained growth in services experienced worldwide, Arizona State University's Center for Services Leadership embarked on an 18-month effort to identify and articulate a set of global, interdisciplinary research priorities focused on the science of service. Diverse participation from academics in a variety of disciplines working in institutions around the world—in collaboration with business executives who lead organizations ranging from small startups to Global 1000 companies—formed the basis for development of the priorities. The process led to the identification of the following 10 overarching research priorities:

- Fostering service infusion and growth
- Improving well-being through transformative service
- Creating and maintaining a service culture
- Stimulating service innovation
- Enhancing service design
- Optimizing service networks and value chains
- Effectively branding and selling services
- Enhancing the service experience through cocreation
- Measuring and optimizing the value of service
- Leveraging technology to advance service

For each priority, several important and more specific topic areas for service research emerged from the process. The intent is that the priorities will spur service research by shedding light on the areas of greatest value and potential return to academia, business, and government. Through academic, business, and government collaboration, we can enhance our understanding of service and create new knowledge to help tackle the most important opportunities and challenges we face today.

Keywords

research priorities, service science, technology, innovation, cocreation

Introduction

The world is becoming characterized by services. All the world's most advanced economies are dominated by services, with many having more than 70% of their gross domestic product (GDP) generated by services. The growth of services is projected to continue unabated for these countries. Even countries that have historically focused on manufacturing are experiencing rapid service growth. For example, more than 40% of China's GDP is now attributed to services. This global phenomenon of significant, sustained service growth

has led to an ever-growing array of questions that need to be addressed—questions that have significant implications for the success of firms, the well-being of societies, and the quality of consumers' lives worldwide (Bitner and Brown 2008). More than ever, research is needed to address these issues, and because of the complex nature of services, many of these questions will require an interdisciplinary focus to answer. This, along with the fact that researchers in many disciplines are reframing and refocusing their efforts around service, suggests that the time is right to begin to identify the most pressing issues requiring research attention. Although over the years there have been calls for more research in service-related areas as well as more recent forward-looking work

¹Arizona State University

examining trends, challenges, and important topic areas (e.g., Barrett and Davidson 2008; Berry and Parasuraman 1993; Brown, Fisk, and Bitner 1994; Edvardsson 2009; IfM and IBM 2008; Ng, Maull, and Smith 2009; Parasuraman 2008; Rust 1998, 2004; Smith-Daniels 2009; Spath and Ganz 2008; Swartz, Bowen, and Brown 1992), there is a growing need to continue to refine and promote global service research agendas that concomitantly draw on the interdisciplinary and cross-functional perspectives of academics and business executives.

These trends and worldwide developments led us at Arizona State University's Center for Services Leadership (CSL) to spearhead an effort to develop a set of global, interdisciplinary research priorities in and around service science and service innovation. Given that not everyone views or defines service science in the same way, we provide a broad and inclusive definition as a foundation for our work. We define *service science* as an emerging interdisciplinary field of inquiry that focuses on fundamental science, models, theories, and applications to drive service innovation, competition, and well-being through cocreation of value. We view service science as encompassing many disciplines and perspectives that can contribute to our understanding. Taking a similarly broad view, we suggest that *service innovation* creates value for customers, employees, business owners, alliance partners, and communities through new and/or improved service offerings, service processes, and service business models. Our undertaking to establish service research priorities was grounded by these two working definitions.

The priorities identified are not CSL priorities but rather priorities synthesized from more than 300 academic and business participants. The result of the endeavor has led to the identification of 10 overarching research priorities with more specific service research topic areas for each one. We believe that for each of these priorities and specific topic areas there are significant opportunities for new research that develops innovative theoretical understanding, new managerial insights, and actionable next steps. We hope that this list will spur researchers to tackle questions related to these priorities and that it will help focus firms' and government agencies' investments in research and academic partnering across a variety of disciplines to build theoretical and applied knowledge in these critical areas.

The priorities and related research topic areas were developed from input solicited primarily through in-depth interviews and online surveys from more than 200 academics and 95 business executives. The academics are from approximately 15 disciplines and from institutions in 32 countries. The executives, who are located in 11 countries, are in approximately 25 industries representing companies ranging from small startup businesses to Global 1000 companies. For a discussion of the methodology and participants, see the appendix.

In the section that follows, we present a framework that provides a holistic lens for viewing the resulting priorities. Then, for each priority, a diverse set of academics, each with

expertise in their priority area, provide an overview to frame the priority and shed light broadly on the key service research topic areas. Accompanying the overview are commentaries by leading service-focused academics and business executives from across disciplines and functions who speak from their perspectives regarding the key questions that need to be addressed in relation to the priority. These expositions add richness and lend clarity to the priority, often emphasizing an aspect of the area deemed particularly significant. Many include specific questions related to one or more of the specific research topic areas that were identified. The advantage of providing these expositions is that they highlight the depth and complexity of each priority and, when there is commonality in commentaries, emphasize shared perspectives on the critical aspects of the priority. Similarly, when there are meta-themes or commonalities in expositions across priorities, these complexities reflect the delightful realities of a field of study in which opportunities abound, including those in which disciplines must confront each other to forge workable collaborative research streams. Given that service issues affect both firms and their customers and countries and their citizens worldwide, we strive to achieve diversity in perspective through our methods, both in terms of the process used to develop the priorities and through the accumulation of diverse and well-rounded author commentaries.

Service Research Priorities Overview and Broad Themes

The 10 service research priorities span the gamut, ranging from those that represent key strategic areas for organizations to those that are executional in nature. The priorities are categorized within three broad aspects of business: strategy, development, and execution (see Figure 1). Nine of the priorities fall under these three categories. The three service strategy research priorities are Fostering Service Infusion and Growth, Improving Well-Being through Transformative Service, and Creating and Maintaining a Service Culture. The three service development research priorities are Stimulating Service Innovation, Enhancing Service Design, and Optimizing Service Networks and Value Chains. The three priorities related to service execution are Effectively Branding and Selling Services, Enhancing the Service Experience through Cocreation, and Measuring and Optimizing the Value of Service. The tenth priority—Leveraging Technology to Advance Service—is a pervasive force enveloping the other nine priorities. Each priority is presented with more specific research topic areas in need of further exploration.

Before we discuss the research priorities and related research topic areas, it is important to highlight some consistent themes or viewpoints that emerged from the diverse inputs we analyzed. First, it was clear from the responses that using an interdisciplinary lens to address service challenges

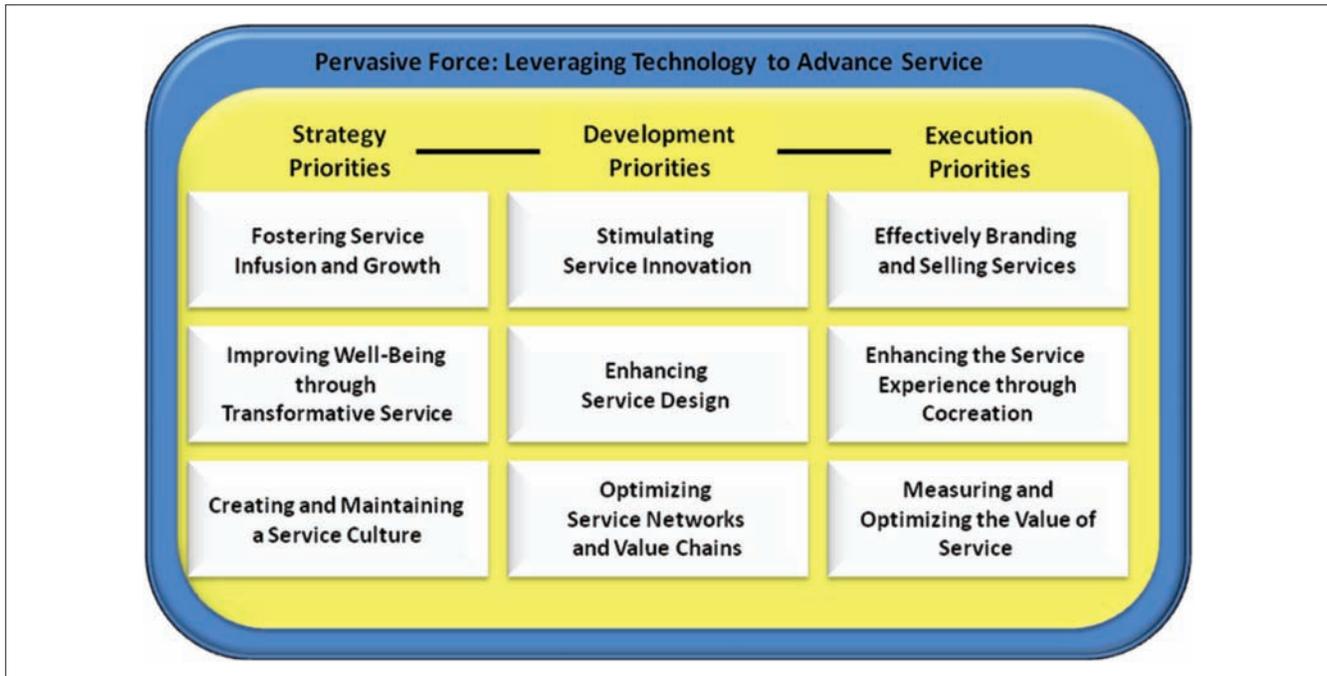


Figure 1. Service research priorities framework.

and opportunities is important and necessary to make significant contributions going forward. A common theme expressed throughout is that research collaboration across disciplines, though at times daunting, should be pursued with the hope that such collaboration will lead to the development of new insights, theories, and solutions related to complex service challenges and opportunities.

Second, in addition to asking participants about pressing issues to be addressed, we asked them about theories and frameworks that would be useful in helping the service field move forward. Given the diverse group of participants, numerous issues were mentioned, but service-dominant logic (Vargo and Lusch 2004), also referred to as simply “service logic,” was most commonly cited. Numerous respondents from across disciplines indicated that this paradigm would continue to be a catalyst for important research in the future.

Third, given the strong trend of service globalization, the importance of taking a global perspective and exploring whether findings in one context hold true in another was acknowledged by many respondents. Although we decided not to have a separate global priority per se, it is paramount to point out that this theme is explicit in some priorities and implicit in all 10. The importance of taking, or at least acknowledging, a global perspective is, in a sense, a meta-level issue that should be considered part of the exposition of all the research priorities.

A fourth theme that was noted consistently was the need for additional focus and research on business-to-business (B2B) services. This area was repeatedly emphasized as

being underrepresented in service research and one in which there is a pressing need for more work. As with the need for more of a focus on global issues, all the priorities can be viewed from a B2B lens, and we encourage researchers to explore research topics in this context.

Fifth, throughout the process of setting research priorities, there was a strong call for and excitement about work focusing on quality of life, well-being, and the emerging domain of transformative service, which is one of the 10 priorities. There are many critical research questions and an expressed desire by academics and business executives alike to gain a greater understanding of the consumer and social welfare implications of service systems, processes, offerings, and choices.

Sixth, it is not surprising that the majority of respondents discussed the implications of technology for services at every level (i.e., strategic, developmental, and executional). So strong was this theme that we deem it a pervasive force that significantly affects the other nine priorities.

Service Research Priorities and Topic Areas for Future Research

To provide context for each priority, as well as the specific service research topic areas that were identified, a service-minded academic with significant expertise relevant to the priority presents an overview of each priority. We asked the priority overview authors to frame the area in accordance with their direct experience, so we do not aim to cover all

the numbered research topic areas in these overviews. The broad nature of the priorities would make this task extremely difficult for a single priority overview author. It is worth noting that coverage of a particular research topic area does not make it any more or less important than one that is not explicitly covered.

The priority overviews are accompanied by shorter commentaries from leading academics across several disciplines, including marketing, management, supply chain, information systems, and design, along with business executives from small, innovative firms to some of the world's leading companies. We asked these commentary authors to be forward looking and to identify research questions that are more specific than one or more of the research topic areas and that have the potential to deliver significant value and contribution to business and academia in the years ahead.

To enhance the value of the priorities, we asked each contributor to write in language that is approachable across disciplines and by both businesspeople and academics. We also decided early on not to include references or an extensive bibliography because the purpose of this process was not to document the current status of a given area but rather to energize people to address critical issues for the future. The research priorities are presented according to the three broad categories shown in Figure 1. However, the order of presentation of the priorities and the numbering of the research topic areas are in no way indicative of importance.

Service Strategy Priorities

Fostering Service Infusion and Growth

This research area focuses on increasing and enhancing an organization's ability to successfully offer services. Four research topic areas were emphasized as being in need of further research:

1. Identifying business models for growth and expansion based on service
2. Evolving goods-based organizations into service-oriented enterprises
3. Integrating and aligning goods, services, and solutions strategies
4. Developing and managing a services-goods portfolio

Priority overview authored by:

Stephen W. Brown, PhD
Professor of Marketing
Arizona State University

Although the world is increasingly becoming a service economy, many business, government, and academic leaders have not caught up with nor do they fully appreciate this development. They continue to think and act with a manufacturing

or product mind-set that, in turn, affects business models and public policy. The major economies of the world are service economies. Yet, even among prominent service firms, disciplined models for service infusion and growth are too often lacking.

Some business and government leaders have recognized the opportunities for service-led growth. Many are working diligently to transform manufacturing and other goods-dominant organizations into goods and services or solutions enterprises. Yet integrating and aligning goods, services, and solutions strategies, as well as developing and managing service portfolios, are challenging and novel for many firms.

Why is there growing interest in strategic service infusion and growth? Both firms and governments are beginning to act on the economic benefits of service-led growth. Compared with manufacturing and goods-dominant companies, service enterprises typically require lower fixed capital investment, frequently provide a more recurring stream of revenue, and often generate higher profit margins. Service firms also tend to develop closer relationships with their customers, which in turn tends to enhance customer satisfaction and loyalty. Finally, many goods-dominant companies are intrigued by services because their traditional offerings are increasingly viewed as commodities by customers.

What factors contribute to the lack of research and disciplined business practice in strategic service infusion and growth? Despite their importance, the paucity of research and accepted business models is noteworthy. The benign neglect of some government and business leaders noted previously has contributed to the situation. However, other reasons also exist. First, the absence of a long tradition of service scholarship and astute practice contributes to the current situation. Second, some observers erroneously believe that existing manufacturing and goods-derived business models can be readily applied to services. Third, the intangibility of many services makes it more challenging to develop and execute concrete approaches for research and practice. For example, it is often difficult to determine the value of services and, in turn, their price. Regardless of the reason, the time is opportune for new and innovative research and business practice in this area.

What is needed from service researchers? Both cross-disciplinary and intradisciplinary contributions are needed to address the compelling needs of this research priority. Most astute observers believe that the future of the global economy is intricately tied to service-led growth. With this in mind, and given the breadth of this priority, only some of the areas of needed research can be introduced here. In the remainder of this overview, I focus most of my attention on research needs associated with the first two research topic areas previously listed—namely, identifying business models for growth and expansion based on service (#1) and evolving goods-based organizations into service-oriented enterprises (#2).

To begin, an overarching need is the development of appropriate business models for service-led growth. Such models do not exist today, and so by default, firms often use long-standing

goods-based frameworks. Another broad question needing attention is this: How can innovative business models for services be crafted within traditionally goods-based organizations? Relatedly, what cultural, as well as strategic, changes must occur to grow services in goods organizations? Addressing the prior two questions is fundamental to most other issues confronting the increasing number of goods-oriented firms eager to add revenue-generating services to their portfolios. Additional research questions of interest include the following: What is the appropriate cost-benefit balance between customizing and standardizing services? When and how should firms engage partners in helping them offer value constellations of benefits for customers? How can firms best cocreate valued services with customers?

To some researchers, these questions may seem overwhelming or at least challenging to address. This work, however,

indicates significant interest in these topics and a willingness among business leaders to engage with researchers to explore them.

In the associated commentaries (see related commentaries), our authors collectively provided insights into the four research topic areas. Specifically, Wolfgang Ulaga, whose research focuses on how B2B firms manage the transition from goods to services, touches on the need for research across all the topic areas. Next, Tom Esposito, who was a key leader in IBM's transition to services, primarily highlights the need for research around identifying business models for services growth (#1) and evolving product-based organizations (#2). Finally, as a complement, Valarie Zeithaml, an internationally recognized services pioneer, stresses the need for research around integrating and aligning offerings (#3) and developing and managing a services-goods portfolio (#4).

Fostering Service Infusion and Growth Commentaries

Wolfgang Ulaga, PhD

Associate Professor of Marketing

HEC School of Management, Paris

Service growth strategies raise multiple managerial and societal questions. For example, in the energy industry, power utilities not only generate revenues by moving beyond their core business but also learn how to do “more with less”—that is, striking a balance between exploding energy needs and growing ecological concerns. The growing pressure on executives to align corporate and societal goals will have far-reaching implications for business practices. For example, by providing a solution rather than selling products, tire manufacturers must learn to sell performance (“more miles per tire”), rather than maximizing product sales (“sell more tires”). The cultural challenges—for customers and vendors alike—are huge, and academics must contribute to a better understanding of the issues at stake. From a strategic firm-level perspective, we need to understand which customers really want services, how to adopt a production-line approach to service, how to shift from a product-centric to a service-savvy sales organization, and how to best integrate services into the overall organization. Finally, at the tactical level, more knowledge is needed about how to capture value. Companies often wrestle with the issues of how to document and communicate value and how to get the pricing of services right.

Tom Esposito

CEO

The INSIGHT Group

(Formerly Vice President of Global Consulting and Services, IBM)

Two seemingly small business strategy changes have had a significant impact in enabling the service culture to gain traction in product-driven firms. The first change was adding an *s* at the end of *service*. This small change to *services* helped firms create a vast array of innovative fee-based services offerings aimed at helping customers accelerate the adoption of their products and business solutions. The second change was adjusting the focus from service in support of products to services in support of customers. Although many senior leaders recognize the need to adopt a services strategy and to create a services business model, the execution of the strategy in many firms failed or did not achieve durable success. Sustainable success experienced by firms such as IBM and General Electric can be attributed to the recognition that product and services businesses each need to be managed by different business models.

Having worked with many product firms over the past 10 years and for IBM Global Services before that, I have discovered that there are key issues that affect the level of success in services that companies experience. A few of the most important issues that are worthy of research attention are as follows:

- How can a firm change its value proposition and measure of success to focus on its customers' success (e.g., the value created for their business model; improvement in their competitive position)?
- How can firms acquire, develop, and retain “thought leaders” with deep knowledge and understanding of the customer's business to compete in a services environment?
- What organizational structure and critical business processes are required to provide the ability to rapidly commit enterprise resources across groups to solve unique customer problems?

- How do firms balance having a customized versus a standardized marketing approach to best acquire customers (i.e., approaching customers/buyers as a market of one vs. a mass marketing approach)?
- How do firms drive senior leadership support for running a services business as a standalone business with a services business P&L and appropriate services accounting practices versus it being subsumed under a traditional product business model?

Valarie A. Zeithaml, PhD

*David Van Pelt Distinguished Professor of Marketing
University of North Carolina at Chapel Hill*

As product-dominant firms seek to infuse services into their offerings, many difficult issues must be confronted, among them five key challenges that service firms have been grappling with for decades. These five challenges, which present tremendous opportunities both for academic research and for successful practice, include developing value propositions for services-goods offerings, determining who does what to execute on the value propositions, creating standardized service building blocks that can be combined to create consistent but customizable services, pricing service offerings, and training customer-centric contact personnel to be capable of matching customer needs with company offerings. Each of these challenges is multifaceted, interrelated, and complex.

To illustrate, I have chosen just one of the challenges: developing value propositions for services-goods offerings. Although most pure goods companies are limited in the products they produce by manufacturing capabilities and inventory costs, they rarely recognize that they need to be equally limiting in the number of services-goods combinations they offer. Because consistent services delivery is difficult, managers must determine a small set of service offerings that are on target to meet the value propositions of substantial segments of customers. This requires careful identification of segments and then—most difficult—understanding these segments' underlying needs or desires that services-goods combinations can address. Following this, managers must then identify who in the organization will deliver each piece of the offering and how the combination will occur.

Improving Well-Being through Transformative Service

This area, focused on the relationship between well-being and service, generated much excitement and discussion, resulting in the identification of the following seven, more specific topic areas for research.

1. Improving consumer and societal welfare through service
2. Enhancing access, quality, and productivity in health care and education
3. Delivering service in a sustainable manner (i.e., one that preserves health, society, and the environment)
4. Motivating the development and adoption of green technologies and related services
5. Planning, building, and managing service infrastructure for metropolitan areas, regions, and nations
6. Democratizing public services for the benefit of consumers and society
7. Driving service innovation at the base of the pyramid

Priority overview authored by:

Laurel Anderson, PhD

*Associate Professor of Marketing
Arizona State University*

My comments focus primarily on the broad area of transformative service research (TSR) with an emphasis on the first research topic area—improving consumer and societal

welfare through service. My colleagues and I define TSR as service research that centers on creating uplifting changes and improvements in the well-being of both individuals and communities. TSR seeks to better the quality of life of present and future generations of consumers and citizens through services. As such, it examines aspects such as the social and ecological consequences and benefits of services offerings, increased access to valued services, the disparity in the quality of service offerings to different groups, the design and cocreation of services with consumers that honors both the agency and the cultural values of individuals and communities, the identification of and planning for the impact of services on well-being and sustainability, and the impact of consumers' service experiences on well-being. In addition to adding to conceptual development, TSR strives to capture and reach ideas and innovations that are framed by fundamental problems and opportunities and provide understanding, service strategies, and/or solutions to build better and sustainable futures.

Whether considering individuals or communities, service research is especially well positioned for this transformative focus because (1) services are consumer centric in that they are experiential and cocreated; (2) service consumers are often vulnerable, lacking control and agency; (3) service consumers are often disadvantaged, especially in terms of expertise and knowledge needed to make decisions about services that bring about consumer, community, and ecological welfare; and (4) services are pervasive and operate and are embedded in a social ecology that affects both individual and collective well-being. Yet there has been little study of the transformative aspects of services.

What is needed from service researchers? To begin, they need to focus on service outcomes that concentrate on well-being. TSR delves into social questions and has the capacity to support and enhance well-being outcomes, such as access to equity, social justice, human capabilities and development, ecological stability, social ecology, consumer resource development, literacy, consumer freedom/control/agency, social networks and support, happiness, and the mitigation of consumer vulnerability. A concept such as triple bottom line, which focuses on the three pillars of people, planet, and profit, provides an example of movement in this direction, encouraging firms to consider economic, ecological, and social outcomes.

Though not always an intentional orientation, service researchers have focused on TSR at the individual level by concentrating on improving the well-being of individuals in a target market through health, education, social, and training services, to name a few. This area should be expanded. Nonetheless, through the lens of TSR, even at this individual level, it is important to incorporate more measures of well-being.

However, perhaps the most pressing area for TSR is at the macro level, in which the unit of analysis is collective—communities, societies, and populations. Services are ubiquitous and part of the social world within which people live. As such, many services have a macro, sociocultural impact on the well-being of nations, subcultures, communities, and families in addition to individuals. Indeed the Nobel Peace Prize won by Muhammad Yunus celebrated microfinance services that have had a global impact. There is a paucity of services research that focuses on the macro level; it is apparent that further research is needed. In considering these macro dimensions, services have the ability to uplift and transform communities. They also, often unwittingly, have the ability to marginalize, judge, and stigmatize citizens and communities and to compromise sustainability. Thus, service researchers have a responsibility to add this social level to their research agendas.

The breadth of TSR is considerable. Research topics might include recognizing and researching the creativity of

subsistence communities and citizens with regard to the development, adaptation, and cocreation of services; the ability to access services; and the ability to spread the value obtained from service consumption (peer to peer) into the communities. It might mean examining well-being outcomes, such as happiness, or the rate of lifestyle illnesses (such as diabetes) in the face of the services milieu in that context. It might mean examining the different costs (economic, social, cultural, temporal) and trade-offs that consumers or communities are willing to assume to adopt sustainable services.

Given the sheer size of this priority, seven commentary authors provide insights on specific research needs (see related commentaries). Tracey Dagger, a leading services academic from Australia with a focus on the economic and social outcomes of services, writes primarily about improving consumer and societal welfare (#1). Jack Bruner, a health care visionary and senior executive with CVS Caremark (the largest provider of prescriptions in the United States), elaborates on the need for research in enhancing health care (#2) and delivering service more sustainably (#3). Next, Rajiv Sinha, a marketing professor with a strong interest in sustainability, comments on the need for research in delivering service in a sustainable manner (#3) and motivating the development and adoption of green offerings (#4).

The final three commentaries are from James Spohrer, Michael Lyons, and Javier Reynoso and Robert Grosse. Spohrer, one of the founders of the emerging field known as service science, writes about key research questions related to service infrastructure (#5) and public services (#6). Michael Lyons, who leads a team of researchers at British Telecom Innovation and Design working on long-term strategic issues including one related to Service Science, also focuses on the service infrastructure (#5) and public services (#6) areas. Finally, Javier Reynoso and Robert Grosse, who lead service research and education efforts at Monterrey Institute of Technology in Mexico, address the research questions and needs related to driving service innovation at the base of the pyramid (#7).

Improving Well-Being through Transformative Service Commentaries

Tracey Dagger, PhD

Senior Lecturer, Marketing

The University of Queensland, Australia

Service consumption influences customer well-being, including life satisfaction, perceived quality of life, and overall happiness. Research that assists decision makers in understanding the value of these measures in addition to traditional performance measures is critical. A key challenge will be recognizing well-being as an important end goal. Therefore, it is also critical to design, improve, and scale service systems in a way that simultaneously enhances cocreation, lifetime value, and well-being.

Improving customer well-being through service necessitates the examination of transformative and restorative experiences and requires researchers to consider the impact of the customer's role in consumption and value creation, relationship development and social interaction, servicescape and service design, planning, building and managing service infrastructure, and technology and innovation on well-being. The focus should be on enhancing access, quality, and productivity across a variety of professions, industries, nonprofit organizations, and government sectors, including health care, travel, corporate management, community planning, social work, public administration, and human resource management. The goal is to understand the impact of service consumption on people's lives.

Jack Bruner*Executive Vice President, Strategic Development**CVS Caremark*

Health care services in the United States are focused on specific services or transactions and are organized around providers of care. As a result, although each procedure may be of high quality, the lack of coordination and proactive planning means that many critical elements are missed whereas others are duplicated. Health care and pharmacy research and claim analysis show that patients receive evidence-based medical care approximately 55% of the time and that 70% of patients discontinue life-saving medications in the first year of treatment. This contributes to an estimated \$300 million of wasted health care expenditures and hundreds of thousands of human tragedies each year. The transformational question is this: Are payers and consumers open to purchasing health care focused on achieving 100% compliance with evidence-based medicine and guarantees to save time, money, and improve health outcomes? Will consumers be open to systems that analyze their health information and proactively alert both the patient and physicians of needed preventive services, diagnostics, and prescription therapies?

Rajiv Sinha, PhD*Professor of Marketing**Arizona State University*

Although services are increasingly being offered as eco-friendly solutions for environmental problems, the predominant goal of most research in this area has been on integrating services into production and consumption decisions to reduce their environmental impact. This is exemplified by the product service systems approach in which products are developed on the basis of dematerializing the supply chain and incorporating new services (e.g., leasing, renting, upgrades and maintenance) to provide improved product functionality. Accordingly, this research has focused primarily on technological, environmental, and economic arguments to make the case for eco-efficiency and has succeeded in putting the idea of sustainability at the forefront of business and political debates.

However, often lost in these technical and economic arguments are the social and behavioral aspects of sustainability. It is natural that scientific and engineering advances are at the heart of new services development, but an equally if not more important consideration is the social milieu in which these technologies are introduced and the ultimate acceptance of these services by consumers. Research on this aspect of services sustainability is still in its infancy, and it is this aspect of sustainable services that can benefit the most from scrutiny by service researchers. For example, it is important to examine mechanisms to incentivize consumers to fulfill their needs from services that are less resource intensive than their corresponding products (e.g., carpooling) and, more generally, to investigate methods for enhancing consumer adoption of sustainable services. Thus, an important and fruitful avenue for future research is the development of a better understanding of the optimal combination of expanded marketing-mix elements, government subsidies, and the use of social norms in enhancing the acceptance of services that replace products as a primary mechanism for meeting consumer needs.

James C. Spohrer, PhD*Director, Global University Programs**IBM*

Numerous factors are driving greater concern for quality of life on the planet: (1) global financial crises, (2) global warming threats, (3) terrorism and rogue-state concerns, (4) natural resource shortages, (5) increased urbanization leading to traffic congestion, (6) dependence on information technology, (7) pandemic threats, and (8) aging population stress on global health care, to name just a few. Citizens of nations, states (regions), and cities (metropolitan regions) are customers of the public and private infrastructure services of those regions. Disparity in service quality levels and employment opportunity levels leads to human migration. Human migration adds additional stress to service systems that are already struggling to maintain service quality levels.

This leads to the monumental question: Can we create a global model for the world's major interdependent service systems? In addition, can we create a next generation of citizens around the world who understand service systems? Can we learn to adopt a run-transform-innovate investment model to continuously improve service systems?

Michael Lyons, PhD*Chief Researcher, Service and Systems Science**British Telecom Innovation and Design, United Kingdom*

Global quality of life will depend on balancing many factors (e.g., economic growth, pollution, energy consumption, global political stability, social cohesion) that are interrelated in complex ways. Sustainable development requires a holistic approach because actions to improve one issue can lead to increased pressures elsewhere. The emerging information and communication technologies (ICT)-based knowledge economy may form part of the solution but only if technological developments are accompanied by complementary changes in socioeconomic behavior. For example, it was thought that advanced telecommunications services would displace travel. In practice, however, telecommunications appears to encourage travel: Over many years, travel and telecommunications usage have increased together.

Emerging ICT services can have a major impact on future energy and resource consumption through a range of services, including remote working, energy and waste management systems, improved logistics, and so on. This depends on the following:

- The development of a high-quality, energy-efficient service infrastructure,
- Policies to ensure that this infrastructure is accessible to as many citizens as possible and that all have the necessary skills.

A key question is determining which incentives will ensure that resource savings in one area are not offset by increased consumption elsewhere.

Javier Reynoso, PhD

Professor and Chair, Services Management Research and Education—EGADE

Monterrey Institute of Technology (ITESM), Mexico

and

Robert Grosse, PhD

Professor and Dean, Graduate School of Management and Leadership—EGADE

Monterrey Institute of Technology (ITESM), Mexico

Emerging societies are becoming service societies. Most developing countries already have become predominantly service economies. Social, political, and economic complexity in emerging regions such as Latin America, Asia, Africa, and Eastern Europe provides a rich laboratory for exploring and researching the management of services under different settings with peculiar structural and functional characteristics. Most of the current knowledge about services has been obtained from research conducted in developed societies with very different conditions. Poverty in urban areas and the important role of the informal economy in those emerging regions, for example, are factors that cannot be ignored in the process of increasing our understanding of and knowledge about services. The large segments of people at the so-called base of the pyramid, even with very low incomes, have an increasing need and aspiration for services. They are also creative service providers to other segments of society. The design, marketing, operation, and delivery of services demanded and offered by those at the base of the pyramid certainly require careful consideration, creative exploration, and establishment of alternative frameworks to expand current theories and paradigms to help researchers make sense of this fascinating reality of services.

Creating and Maintaining a Service Culture

These five topic areas were highlighted as important to enhancing the understanding of how to develop and maintain a service culture.

1. Recruiting, training, and rewarding associates for a sustained service culture
2. Developing a service mind-set in product-focused organizations
3. Creating a learning service organization by harnessing employee and customer knowledge
4. Keeping a service focus as an organization grows, matures, and changes
5. Globalizing a service organization's culture across different countries

Priority overview authored by:

David E. Bowen, PhD

Professor of Management

Thunderbird School of Global Management

People often talk loosely about culture. For example, it is often stated that organizational culture is the basis of the

sustainable competitive advantage of service role models such as Disney, Four Seasons, Google, and Singapore Airlines. This widely accepted principle of service excellence is far more a matter of faith than empirical proof. One would be hard pressed to cite published empirical studies that establish the linkage between *service* culture and either customer satisfaction or financial success when organizational culture is defined and measured consistent with the academic literature.

The first priority for research on culture is to be clear about what it means. Definitions of culture center on shared values and beliefs of how things should be and how things are; these shared values and beliefs are interrelated with deep core assumptions about why things unfold the way they do. These deeper layers of culture are viewed at the surface as cultural artifacts (e.g., stories, heroes, rituals); management practices, such as human resources; and patterns of behavior. In terms of measuring culture, structured and quantitative approaches are believed to be best matched to the surface layers (e.g., artifacts, practices, behaviors) and then to the deeper, more qualitative approaches (e.g., values, beliefs, assumptions). Organizational climate, a related concept found in the service literature, can be viewed as primarily the surface layer of culture (e.g., management practices, cultural artifacts, patterns of behavior). So, climate is arguably easier to

measure and manage than culture and more quickly changed. In addition, considerable research links service climate to customer satisfaction and, in turn, to financial success.

Yet practitioners, certainly, and educators, typically, tend to use the term *culture* and view the strategic returns from culture as twofold: (1) organizational culture itself is a valuable, inimitable resource that is the basis of sustainable competitive advantage, and (2) the organizational culture is such (e.g., a strong shared value of innovation) that it leverages other bases of advantage, such as technical or marketing core competencies.

(1) *Recruiting, training, and rewarding associates for a sustained service culture.* These practices signal to employees the strategic service focus of the organization's climate, and they can reinforce the deeper layers of culture. There is, and should be more, research that links employees' perceptions of human resource practices with customer satisfaction or their perceptions of service quality. This research is valuable because it validates business practices against *external* criteria and establishes which practices help create the right type of service climate for different types of service organizations.

(2) *Developing a service mind-set in product-focused organizations.* Case histories are a recommended method for understanding and adopting a service mind-set because doing so requires changing deeply held values, beliefs, and assumptions about the way things work. Changing employee reward systems may soon lead to new service-oriented behaviors, but it does not guarantee an authentic change in the deeper cultural mind-set that is truly sustainable.

(3) *Creating a learning service organization by harnessing employee and customer knowledge.* The way to harness employee knowledge through empowerment and, more recently, engagement is fairly well understood. On the customer side, genuine engagement extends the boundary of the organization's culture to include the customer as a member who shares in both the commercial and the *psychological* life of the organization. Understanding how to create *engaged* customers is needed for theory building and research.

(4) *Keeping a service focus as an organization grows, matures, and changes.* The key to keeping a service focus is to hire the "right type of people" over time because "focus" is a property of the people, not of the organization. Research is needed on how firms can validly select for person-service culture fit

when the nature of cultural fit is ever-evolving. More broadly, research on maintaining a service focus requires studying the hundreds of elements that shape a service culture over time. Research to date has tended to study a few variables in a cross-sectional design.

(5) *Globalizing a service organization's culture across different countries.* If organizational culture drives competitive advantage, research is needed on what firms should do if a successful home organizational culture clashes with country cultures in global expansion. Remain consistent? Do not change despite the clash? Or be flexible (customize organizational culture to fit the country culture)? Which components of organizational culture, if changed, would rupture the service culture-competitive advantage linkage?

Finally, both culture and climate focus on the social-psychological context in which *people* cocreate value together. This people focus is important to remember in the often technically-oriented field of service science.

In the commentaries connected to this priority (see related commentaries), our four commentary authors offer ideas on all research areas except the fifth listed area. In many ways, this final area can be viewed as an extension of the other research areas and can potentially be positioned as a context for service culture research.

In the first commentary, Steve Church, an 18-year industry veteran at Avnet, one of the world's largest distributors of electronics, focuses primarily on ways to recruit, train, and reward employees for a sustained service culture (#1) and developing a service mind-set (#2). Joe Doyle, who was named one of the 40 emerging state leaders in the United States in the prestigious Toll Fellowship Program, takes a government perspective in his comments on the same areas as Church (#1, #2). The next commentary is offered by Christopher Zane, a service-minded entrepreneur and pioneer who owns and operates one of the largest retail bicycle stores in the United States; he also delves primarily into the research needs around the service mind-set (#2) and its connection to employees (#1). Finally, Benjamin Schneider, a leading authority and consultant on the topic of service climate, calls for research on recruiting, training, and rewarding employees (#1); creating a learning service organization (#3) and keeping a service focus over time (#4).

Creating and Maintaining a Service Culture Commentaries

Steve Church

*Senior Vice President and Chief Operational Excellence Officer
Avnet, Inc.*

Many companies are moving from a product focus to a services and solutions model that either leads or augments the product sale. In many cases, a long product history will be deeply embedded in the culture of the company. As a result, several changes to the infrastructure, processes, measurement systems, and policies and procedures will need to be made for these companies to thrive in a world focused more heavily on services and solutions.

Answering a set of critical, next-order questions will help advance efforts and deliver significant business value. The overarching question is how to develop and sustain a service culture and mind-set in historic product companies. Specifically, it is valuable to understand how to change to a service culture, how to create and leverage a burning platform to initiate and sustain culture change, and how to overcome resistance to change that may exist. This leads to the big question: Can a company transform the current employee base to one of “thinking” and “acting” services and solutions rather than products, or will it be necessary to hire new employees or acquire companies that already have an established services and solutions culture?

Joe Doyle

Administrator of the Governor's Office of Consumer Affairs

The State of Georgia, United States

Georgia state government's Customer Service Initiative, launched by Governor Sonny Perdue in 2005, emphasizes the relationship between complex organizations and their customers. The initiative engages more than 50 executive branch agencies that provide nearly 2,000 unique services, including health and human services, education, public safety, economic development, and the internal management of the state itself. We are focusing on the service experience from the customer's point of view, whether it occurs in a physical location, by telephone, or through the Internet. In every instance, our goal is to speed up service delivery, simplify access to the right employee, and develop an enterprise-wide culture that is helpful and courteous. Over the past 3 years, we have developed statistically valid research tools that measure both customer and employee satisfaction. Customers are being surveyed by type: citizens, business and professional, local governments, and internal service providers/users. Because research shows that customer satisfaction and employee satisfaction go hand in hand, we have identified and measured the key drivers of employee job satisfaction. We have aligned our tools and research with the private sector Great Place to Work Institute in San Francisco. It rates private sector firms and creates a list of the 100 best companies to work for, which is then published annually by *Fortune*.

Our work provides one model for improvement of customer service in government. I would welcome the validation of our research by other public sector entities. In addition, our work leads to several important macro-level issues worthy of additional study. These include the following:

- Why do taxpayers (i.e., “customers” of government services) tolerate the current level of service provided?
- What is the tipping point for government organizations to realize that both a new standard and a higher bar need to be set on service?
- What will it take for government organizations to transition from being the “employer of last resort” to the “employer of choice”?

Christopher Zane

President

Zane's Cycles

To create, shift, or simply understand service culture, one must have a passion for psychology and an intimate interest in consumer behavior. Looking forward at the creation of and conversion to a service culture requires not only the buy-in and commitment by an organization and its reeducated workforce but also an equal commitment from its customers.

Imagine the response from a customer of a trucking company if suddenly the driver spends additional time communicating his company's latest service offering rather than vacating the dock, or imagine the gas station attendant championing to collect customer data from customers at the pump. Careful thought and research on the response from the customer should be considered while developing or, more important, shifting to a service culture.

Equally, the effect within an organization can create turmoil. For example, considering and embracing the long-term returns associated with lifetime customer value, increasing the length of a warranty, or providing a new guarantee may be completely within the comfort zone of senior executives. The challenge is in management having the psychological expertise to engage and focus the frontline in executing these initiatives.

Benjamin Schneider, PhD

Senior Research Fellow

Valtera

Professor Emeritus, University of Maryland

My research and consulting pertain to service climate, not service culture. Climate is more tangible because it has to do with the policies, practices, and procedures under which employees work and the behaviors they believe will be rewarded, supported, and expected. Evidence shows that the more these elements of climate focus on service excellence, the more likely such excellence is to follow. Culture has more to do with values and belief systems, and these systems are a function of the climate created in organizations because, over time, what people do is what they come to believe in and value.

With regard to creating and maintaining a service climate, we need further research on the integration of the following issues: (1) identification of the attributes (skills, knowledge, personality) of the people who create a service climate; (2) identification of what those people do to create that service climate; and (3) the involvement of clients and customers in the creation, maintenance, and enhancement of a service climate. All these are happening simultaneously. These issues rest on the principles that corporate leadership is responsible for the creation of a service climate, that first-line supervisors are primarily responsible for service climate maintenance, and that neither will happen unless both sets of leaders have the appropriate attributes to perform service by involving employee associates and customers in decisions about the kind of service climate that will be effective.

Service Development Priorities

Stimulating Service Innovation

Although service innovation is an extremely broad priority, these seven topic areas were viewed as particularly important.

1. Identifying drivers of sustained new service success
2. Designing emergent and planned processes for incremental and radical service innovation
3. Identifying and managing customers' roles throughout the service innovation process
4. Infusing creativity and arts into service innovation processes
5. Aligning organization structure, customer, and supplier relationships with service innovation
6. Generating, prioritizing, and managing service innovation ideas
7. Using modeling and service simulation to enhance service innovation

Priority overview authored by:

Haluk Demirkan, PhD

*Clinical Associate Professor of Information Systems
Arizona State University*

The world's innovation landscape is changing. For the past decade, many product-centric organizations have focused on traditional product innovation to address the challenges of globalization and economic transformation. Most of these companies are still clinging to what is called the "invention model," centered on structured, bricks-and-mortar product development processes and platforms. Although there has been movement toward more global, integrated, and customer-centric innovation approaches in the product world, there are still few insights into how to drive radical innovation in services, both in traditional service industries and for manufacturers that are differentiating themselves in the marketplace through value-added services. Just as important, today's economic environment demands that service innovation consider how to design and transform delivery processes to improve productivity and performance. In the comments that follow, I discuss the priority broadly while touching on several of the topic areas, including designing processes for incremental and radical innovation (#2); identifying and managing customers' roles in the service innovation process (#3); infusing creativity and arts into service innovation processes (#4); aligning organizational structure, customer, and supplier relationships with service innovation (#5); and handling service innovation ideas (#6).

A key characteristic of service innovation is that it often changes the roles of providers, coproducers, and customers of

services and alters their patterns of interaction. For example, a service innovation can be viewed by some as a cost-efficient way to streamline information exchanges, reduce mistakes, and ensure targeted levels of service quality. Others perceive it as a loss of responsiveness and personal discretion that endangers job security and is detrimental to employee motivation and customer satisfaction. In the case of radical service innovation, the design and delivery of brand new value-added services may not immediately lead to profitable financial performance but, in the long run, set the company apart from its competition. It is important to understand and study these differing perceptions and role changes and their implications for organizations.

In addition, the way organizations define and adapt service innovation processes can have a very large impact on the measurable success of the innovation. Organizations need to find new or improved ways to generate, prioritize, and manage service innovation from idea generation through the end of the development life cycle when the innovation becomes a new service platform or a complementary value-added service. These new ways of managing innovation need to consider the differences between incremental and radical innovation and recognize the leverage that can be gained from cocreation of value with the customer. At the very least, the innovation must start with identifying customer needs, not only business needs, and then perhaps infuse creativity and the arts into the innovation process. Organizations need to optimize the relationship between organization design and service innovation and include participation from many stakeholders and sources of leading-edge thinking to increase the impact and distinctiveness of the service strategy.

Service innovation involves the complex adaptive combinations of people, technology, processes, and information along with a well-thought-out service concept. This, in turn, leads to many research questions, such as the following: What is an ideal service concept? How should an organization focus its attention to innovate through services? How can a firm best involve its customers in service innovations? What should be the customers' role throughout the service innovation process? How can companies develop collaborative relationships with other organizations to stimulate new thinking, creativity, and service innovation?

In summary, service innovation requires new concepts, new approaches, and new techniques that recognize the interdependencies between the customer and the service organization. First, research is needed on how to innovate customer-centric service experience designs in complex organizations in which services oftentimes compete with many traditional functions for strategic resources. Second, this research needs to capture the ways companies are innovating services to identify hidden customer needs and how to transform those needs into radical innovations that set a company apart from the competition. Third, both industry and academia

need to develop state-of-the-art customer-centric service innovation processes and ensure their implementation by practitioners and researchers across different disciplines. Finally, government policy makers need to promote and support service innovation as part of their economic development strategies because of the growing contribution of services to national and regional economies.

The commentaries offered within this priority provide a rich geographic mix with authors from North America, Asia-Pacific, and Europe (see related commentaries). The commentary authors focus their attention primarily on the first five research topic areas. First, Kimberly Gravell, who has deep health care expertise and leads the strategic innovation efforts for Cardinal Health's Supply Solutions Group,

focuses on the need to identify service innovation drivers (#1) and to design emergent and planned service innovation processes (#2). In the next commentary, Xiucheng Fan writes about identifying and managing customers' roles in service innovation (#3) and infusing creativity and arts into these processes (#4). Fan is a marketing professor and is Director of the Center for Service Marketing and Management at highly ranked Fudan University, in Shanghai, China. Finally, Stefan Michel, a marketing faculty member at IMD, a leading global business school in Switzerland, focuses on innovating customers and companies. He delves deeper into the need for research around identifying and managing customers' roles in service innovation (#3) and aligning organization structure, customer, and supplier relationships with service innovation (#5).

Stimulating Service Innovation Commentaries

Kimberly Gravell

Vice President, Innovation and Strategy Management

Cardinal Health

When cost containment is a consideration, it creates a challenge for innovation investment but at the same time provides the opportunity to develop new ways of reaching customers and reengineering existing processes to better meet customer needs. Historically, as turbulent times occur, innovation surges. Building a strategy that embraces a strong vision for improving the customer experience will enable organizations to think beyond what they know today and bring incremental (and potentially radical) innovation to market successfully. Finding new outlets for existing services may well be the biggest revenue opportunity available during challenging times.

The component that is missing in this process is a well-defined and steadfast process. The very essence of innovation takes the guardrails off, but during challenging times, the rules of engagement need to be more flexible. The following question remains: Can we create steadfast innovation processes that will prevail in difficult times and position a company to build on that success when the times turn around?

Xiucheng Fan, PhD

Professor of Marketing and Director of the Center for Service Marketing and Management

Fudan University, China

The increasing share of services in GDP and employment on a global scale calls for systematic service innovation to fuel economic growth and improve quality of life and social welfare. Emerging economies, such as China and India, are dedicated to modernizing and upgrading their industries through service innovation. Leading business publications have declared that service innovation is the next big thing. However, innovation in services has been underresearched.

Innovation in manufacturing usually means research and development expenditure and technological breakthrough. In services, however, innovation always starts with customers' unmet needs. Providers that incorporate customer insights and creativity into service innovation and understand customers' ability to capture value from the service are more likely to stand out from the competition.

The inherent nature of process consumption and cocreation of value with customers in many service activities requires clear focus on the customer role in innovation and design. What tools should be developed to describe the role of customers in innovative services? How can firms ensure that customers are playing their roles correctly given the capability and skill variations among customers? How and to what extent can firms engage customers in the innovation process? What are driving forces for customer engagement? These issues deserve more detailed and deeper research exploration.

Stefan Michel, PhD

Professor of Marketing

IMD International, Switzerland

A growing consensus implies that customers must be perceived as cocreators of value rather than as passive recipients of goods and services. I fully agree. Yet I also am convinced that extant literature on service innovation fails to exploit the vast opportunities of this proposition fully. Currently, the cocreative role of the customer tends to be reduced to a codesigner role, such that firms seek customers' input to create better offerings.

Instead of this current focus—that is, on how firms can use customer cocreation to innovate—a more promising avenue for research may be based on a different question: How can firms innovate with regard to the cocreation role of the customer?

Both firms and customers integrate resources, so service innovation requires the firm to rebuild and rearrange its resources to help customers who are integrating their own resources in novel ways. In this regard, three focal questions seem pertinent: (1) How can firms innovate to alter the three generic roles of customers: as users (cocreating value), buyers (making a buying decision), and payers (providing monetary feedback for exchange)? (2) How can firms *relieve* customers from the activities they are not willing or unable to perform, or how can they *enable* customers to perform the activities they prefer to do? and (3) How can firms create and redesign value constellations (i.e., the interplay across multiple actors and multiple resources that cocreate values) for the benefit of both the firm and its customers?

Enhancing Service Design

Although many academic disciplines contribute to understanding service design, there is much room for collaboration to examine these important research areas.

1. Integrating “design thinking” into service practices, processes, and systems
2. Integrating the performing and visual arts into service design
3. Designing dynamic and flexible services across economic cycles, maturity stages, and market segments
4. Aligning service design approaches with existing organizational structures
5. Learning systematically about how to best engage customers and employees in collaborative service design
6. Using service design to influence the behavior of people within service systems

Priority overview authored by:

Mary Jo Bitner, PhD
Professor of Marketing
Arizona State University

Service design sits at the intersection of service strategy, service innovation, and service implementation. Service design brings service strategy and innovative service ideas to life. It is relevant for all types of service systems from individual for-profit firms to nonprofit organizations and governmental entities. Ideally, service design is a collaborative, cross-disciplinary activity that, at times, crosses marketing, human resources, operations, organizational structure, and technology disciplines. Service design involves the orchestration of clues, places, processes, and interactions that together create holistic service experiences for customers, clients, employees, business partners, or citizens. In some cases, services are designed to be rigid, standardized, and produced for customers; other times, they are flexible, dynamic, and cocreated with customers. Given the broad nature of service design, my comments frame the priority while touching primarily on

integrating design thinking (#1) and the performing and visual arts (#2) into service design.

The design of a service can have a significant impact on any or all of an organization’s key metrics, including costs, revenue, brand perceptions, customer satisfaction and loyalty, and employee satisfaction and loyalty. Yet, despite its importance, in most organizations service design is not a well-established practice, and the processes, tools, and inputs needed for effective service design are not fully developed. The financial implications of effective and ineffective service designs are also not well understood or documented, nor are the linkages between revenue and cost implications of variations in design elements.

Why is there a lack of systematic research and disciplined business practice around service design? Why did service design rise to the top as an important priority for business-relevant service research? The answer, in part, is grounded in history. Business innovators and researchers historically have focused on physical product design, and there is a long tradition of excellent work in marketing, technology, and industrial engineering that supports this focus. Recently, however, strong voices advocating for the unique aspects of service design have begun to be heard. Groups such as the Service Design Network founded in Germany, the acclaimed design firm IDEO, Stanford University’s Design School, and the United Kingdom’s Design Council all advocate for new approaches and attention to service design that go beyond the current limitations of physical product design knowledge. Increasing numbers of academics, across disciplines, are responding.

So what is needed from service researchers? First, it is clear that cross-disciplinary work is critical for service design more than almost any other priority identified. Effective service design is not something that can be isolated to operations researchers, designers, engineers, technologists, or marketers alone. For example, a critical challenge area such as the design of effective and efficient health care systems (whether a hospital, clinic, or entire country-level system) would benefit from integrated models and frameworks that recognize complex patient needs, emotions and behaviors (marketing and design), the efficiencies and cost implications of variations in systems and processes (operations, engineering, and

economics), the roles of service providers (management and human resources), and the capacity for technology to support and deliver across innovative service platforms (information systems and engineering). Research could also explore new methods and ways of thinking about services and integrate these into traditional business models of service development. For example, how might “design thinking” and methods be used to inform traditional, analytical approaches to service development? What roles could the performing and visual arts play in new approaches to service design? Research is also needed to deepen and creatively expand knowledge of design methods and tools, such as service blueprinting, service prototyping, and service simulation models, variations of which have been developed within several disciplines.

Although emphasis centers on the need for cross-disciplinary service design research, that does not diminish the need for deeper analysis of service design topics within disciplines as well. For example, within the marketing discipline, deeper understanding is needed regarding how variations in service design (e.g., technology delivered vs. human delivered) affect key customer outcomes as well as the trade-offs between customer and organizational objectives (e.g., customer productivity vs. organizational productivity).

Given the strong need for research and the vast opportunities to advance service design, five commentaries are presented to

help shed additional light on potential directions for research (see related commentaries). Birgit Mager, a global thought leader and highly respected professor of service design from Germany, and Travis Fagan, a partner within the Operations Practice at McKinsey and Company, focus on the importance of the area and opportunities across the six research topic areas. Commentary from Raymond Fisk, a well-known service academic and pioneer who has written extensively on the topic of services marketing, follows. Fisk focuses on integrating “design thinking” (#1), integrating the performing and visual arts (#2), and learning systematically how to engage customers and employees in this area (#5).

Following Fisk is Joe Shaheen, one of the key leaders advancing Boeing more deeply into services. In addition to covering some of the same research areas as his fellow commentary authors, Shaheen stresses the need for research in designing dynamic and flexible services (#3) and aligning service design approaches with existing organizational structures (#4). The final comment is from Beth Viner from IDEO, who has deep consulting expertise helping companies design and redesign their service offerings. She highlights key research questions tied to integrating “design thinking” (#1), designing dynamic and flexible services (#3), and learning systematically how best to engage customers and employees (#5).

Enhancing Service Design Commentaries

Birgit Mager

Professor of Service Design

University of Applied Sciences in Cologne, Germany

The value of design in goods and manufacturing industries is proven and well understood, and companies using design in a systematic way are significantly more successful in the market. There is a large body of knowledge related to the effective design of information, orientation, tangible products, and user interfaces. Fifteen years ago, service design began to emerge, and since then, many projects have shown that design thinking has enormous power to improve and innovate service systems.

Still, the discipline is young, and one research challenge will be to evaluate and measure systematically the effects of service design. This will support the integration of service design into business models.

It will also be important to learn more about culture- and market-specific needs for the design of services. What are the specific challenges? How should methods and processes be adapted to obtain the best result? How can service design be applied to B2B systems?

Cross-fertilization among disciplines and the integration of different approaches are other challenges. Learning from the structures, processes, roles, and interactions of performing arts, for example, is one of the research fields that is inspiring and promising.

Design has always been about influencing the behavior of the customer or receiver. In the future, we will need to broaden this knowledge to influence the behavior of other people within the service systems. Services are cocreated and coproduced, so the design of settings that enable all actors to perform easily and successfully is crucial.

Travis Fagan

Partner

McKinsey & Company

During the past two decades, services as an industry has undergone a remarkable transformation. In product companies, we have witnessed an evolution from service-for-free or basic break/fix all the way to complete business process outsourcing for clients. In pure services companies (e.g., health care, financial services), we have witnessed a steady raising of the bar around value-add and customer experience. Increasingly, companies look to services as a critical driver of growth and differentiation.

It is equally remarkable then that the topic of service design has received so little attention in academic research and business press. Although there is ample literature about best practices and case studies of the companies that “do service well,” there is surprisingly little information about how great services companies think about forward-looking innovation and design.

As competition in the services landscape continues to escalate in the years ahead, I expect that the winning companies will be those that have a high degree of capability in service design. The result, though unique to services, will parallel the way leading product companies undertake a disciplined approach to product research, innovation, and development. High-quality academic research into this topic is both timely and important.

Raymond P. Fisk, PhD

Professor and Chair, Marketing Department

Texas State University-San Marcos

Progress has been made on many basic aspects of service design, but many complex challenges remain. I agree wholeheartedly that cross-disciplinary service design research is needed. Here, I address two particular areas in which much more service design work is needed: serving emotional needs and technology-enabled services.

Designing services that fully respond to human needs, especially emotional needs, is very challenging. The arts are ancient forms of emotional design. Thus, the arts have much to contribute to cross-disciplinary service design. For example, great theatrical performances provoke laughter or sadness on cue. Few service organizations are skilled at designing experiences to provoke emotions in this way. Investigation into the cocreation of emotional content in service experiences, drawing on the arts as foundational disciplines, could be very valuable.

Technology-enabled services have become commonplace and transformative in the service economy. Unfortunately, many of these services are still too difficult to use. More interdisciplinary design research is needed that pushes technology to the background and makes it easier to use. With collaborative work across disciplines (information technology, engineering, and marketing) and with customers and providers working together, technology-delivered and technology-mediated services can be designed to serve rather than frustrate.

Joe Shaheen

General Manager-Director

Boeing Service Company

The predominance of design best practices, processes, and tools is found in the firms that are tangible product or goods focused. That is not a surprise; however, over the past 10 to 15 years, there has been an increase in and the reliance on service business revenues within product-based companies such as Boeing. In many cases the increase in service revenues complement and extend these companies' growth with their existing as well as new customers and markets. The combination of strained market and economic conditions has provided companies the unique opportunity to engage and adjust. They are leveraging their current capabilities and focus on the design of customer-centric, service solutions for their existing and new customers while increasing customer satisfaction.

As we look to the future, it would be valuable to determine how service firms can leverage and modify product-dominant companies' design processes, best practices, templates, systems, and test environments. In parallel, a study that assesses the unique and specialized processes and best practices specifically needed for the services firm would be invaluable. The initial phases of the design activity, which typically consists of requirements definition, cross-functional concept and detail design, project management, and even some elements of simulation, can be leveraged from traditional product design practices. In addition, a study of the unique service design elements could address incorporation of real-time customer feedback into the design process, validation of new service offerings, and the modeling of tools to help market the proposed services to new customers.

Beth Viner

Business Lead

IDEO

Designing delightful and relationship-building services demands taking into account all the actors in a system—those whom firms serve (consumers, patients, and guests) and those who serve firms (frontline staff, employees, and leaders)—and then applying three principles to guide design: envision, enable, and evolve.

Envisioning involves creating a vision that is tangible enough that all players understand how it affects them, that is clear enough that it can be expressed concisely at every level of the organization, and that is actionable because it has tactical and strategic implications for both the near- and the long-term.

Enabling boils down to designing for those who serve. Creating the appropriate tools and processes (also spaces, communications, and technologies) allows employees to understand how they fit into a broader vision balanced by their specific responsibilities within that experience.

Evolving means creating a living service experience. To stay relevant, service must constantly evolve as people and their expectations shift. By enabling frontline staff to notice these shifts, an organization can evolve by prototyping new ideas locally and creating mechanisms to capture them across the system. Reward critical thinking and consider doing away with standard operating protocols that do not leave room for evolution.

These three principles are important, but they are also very broad in nature. This leads to the bigger question: How can companies best operationalize and build these principles into the fabric of an organization? For example, with regard to evolving, how can an organization scale with comfort knowing that operating and services standards are being met but, at the same time, provide local entities control over decision making? How can an organization empower employees to have a hand in owning and evolving service if they do not always have a direct role or full responsibility?

Optimizing Service Networks and Value Chains

Given that interfirm collaboration is often critical for organizational success, these five topic areas were emphasized as those in need of additional research.

1. Optimizing interorganizational service network collaboration around customer experiences
2. Creating and improving distributed service networks globally
3. Developing effective pricing to share gains and losses across a service system
4. Managing upstream and downstream migration in the service value chain
5. Using outsourcing for enhanced service productivity and success

Priority overview authored by:

Elliot Rabinovich, PhD

*Associate Professor of Supply Chain Management
Arizona State University*

Value chains reside within service networks in which resources are configured and connected in a myriad of external and internal interactions to profitably meet consumers' needs. These interactions may occur between service providers and consumers, between providers and suppliers, and among different providers. Such relationships can offer a variety of value propositions depending on the degree of multiple network members' involvement in the value-creation process. My comments that follow focus primarily on optimizing service network collaboration around customer experiences (#1), creating and improving distributed networks globally (#2), and using outsourcing for enhanced service productivity and success (#5).

Over the past few decades, there has been a gradual increase in the involvement of multiple parties in service value-creation processes. Much of this evolution occurred following the mass adoption of information technologies by organizations. As a result, service researchers have increasingly focused on studying ways to optimize interorganizational service network collaboration around users' experiences. Little is known about how to accomplish this goal. There is opportunity for future research to offer insights on the importance of sharing data among the different parties involved in the cocreation of services as an initial step in adding value to the outcomes that users experience. A case in point is the sharing of information among networks of service providers in the health care industry to improve the speed and accuracy in diagnosis and treatment of illnesses. Future work could aim to provide a better understanding of how to complement the sharing of information among organizations by tightly coupling relationships among organizations to avoid replicating

the same functionalities in the network. Again, in the case of the health care industry, providers in the network would be able to offer better service if they could allocate the diagnosis function to only one member of the network, rather than just sharing overlapping diagnosis information obtained by different providers in the network.

Researchers could go beyond studying the role of information sharing and the allocation of service functions in service networks to try to understand how to better distribute these service networks globally. Research could build on what is already known about the outsourcing of back-room operations into, for example, call and data centers. It could focus not only on evaluating the trade-offs between cost savings and service quality when implementing these outsourcing solutions but also on isolating the steps and resources that would contribute to this trade-off. In particular, scholars could learn from the progression that software providers, such as Infosys in India, followed from carrying out very basic and simple programming tasks to comprehensive and complex development and consulting functions.

These research streams have recently converged with the emergence of studies that have examined how to leverage information technology media such as the Internet to distribute value creation and include consumers at the forefront of service networks. This new research has been influenced by the emergence of social networks on the Internet. It offers future opportunities for service scientists to better understand how the creation of value through services could shift to consumers and how services should be priced to attract consumers not only to acquire those services but also to motivate them to participate in cocreating them.

Consumers could participate in cocreating services by engaging in discrete and modular activities that do not demand onerous time commitments. This type of consumer participation has already occurred in Internet retailing services. In the creation of those services, consumers are actively cocreating a shopping experience by contributing video, pictures, and reviews of products available for sale. This involvement will deepen as consumers engage in the creation of core content for news services (through blogs and social networks) as well as the cocreation of richer service experiences on the Internet. The service literature will benefit from research that examines these developments. These issues parallel those relevant to the priority Enhancing the Service Experience through Cocreation, which is discussed subsequently.

In the associated commentaries (see related commentaries), the authors collectively touch on the need for research in all of the listed research topic areas. Chris Voss, a leading European academic who has been publishing for decades on topics related to services and operations, addresses the need for further research around optimizing interorganizational service networks (#1) and distributed service networks (#2). The second commentary features Paul Maglio, whose work

at IBM Research focuses primarily on research related to people and information-intensive businesses. In addition to the areas highlighted by Chris Voss, Maglio delves into research needs related to sharing resources, risks, and rewards, which has a strong connection to developing effective pricing across the service system (#3). Finally, to provide the full

coverage of the research areas, Stephen Tax, a Canadian-based academic who studies interdisciplinary issues tied to customer performance and service networks, touches on the challenges of and need for research around managing upstream and downstream migration in the value chain (#4) and using outsourcing for enhanced service productivity and success (#5).

Optimizing Service Networks and Value Chains Commentaries

Chris Voss, PhD

*Emeritus Professor of Operations and Technology Management
London Business School, United Kingdom*

Increasingly, much of the quality and cost of services delivered to customers in business-to-consumer and, particularly, in B2B is a function of the performance of the network of suppliers of services (i.e., a service supply chain). Although the discipline of supply chain management is well developed with a rich stream of research, little attention has been paid to services. Despite its importance, research in this area is still fragmented. Part of this fragmentation is due to the limited amount of real managerial or research attention. To address this, it is necessary to bring together disparate areas, including service procurement, service networks, service-oriented software, service and process outsourcing, modular service design, and two-sided service platforms. Service supply chains have distinct characteristics, including direct supplier contact with customers, uncertain specification settings, the use of integrators, and performance measurement difficulties. Key questions for future research include designing services for effective supply chain management, further understanding the service bullwhip effect and how to mitigate it, improving the process of service specification, designing robust service supply chains, and exploring further how distinctive aspects influence supply chain design and management. There is an urgent need for a coherent approach to develop the area of service supply chains.

Paul P. Maglio, PhD

*Senior Manager, Service Systems Research
IBM Almaden Research Center*

Service is value cocreation. It depends on the coordination of activities across individuals, organizations, and firms. One basic unit of analysis for service, the service system, has at least two parts: provider and client. These groups interact by sharing resources and applying capabilities, and their aim is to make both better off (i.e., the intent is to cocreate value). Service relationships are intimate relationships that involve sharing resources, risks, and rewards. Providers and clients are often embedded in networks of suppliers, partners, and others. In B2B settings, the service network may be the basic unit of analysis. Information sharing is important to value cocreation in service networks. Coordination of action across a network depends on information flowing among stakeholders—not just information about the provision of service and resource allocation but also information about facts on the ground, client needs, provider capabilities, and more. The biggest research opportunity lies not in technology for information sharing, but rather in the larger context of human communication. That is what information sharing is for.

Today's globally integrated enterprises pose problems for human communication—some obvious, such as time zone and language differences, and some not so obvious, such as differing priorities and privacy concerns. By focusing broadly on communication and coordination of joint action, firms can aim to increase value cocreation by increasing understanding among stakeholders in service networks.

Stephen S. Tax, PhD

*Professor of Marketing and Service Management
University of Victoria, Canada*

The challenge of delivering valuable, memorable experiences and complete “service solutions” while lowering costs has greatly elevated the discussion of building networks and value chains to achieve those goals. This transformation has potentially dramatic implications for how firms relate to their customers, and it is rife with research issues and opportunities.

Establishing and growing profitable customer relationships (customer relationship management in general) have historically been at the center of services economics. These are often anchored by trust, reliability, and the ability to anticipate future requirements. How can firms ensure that service standards and quality of customer care are delivered especially in cases in which there is an informal governance structure and limited coordination among partners (unlike traditional supply chains)? Furthermore, how can firms maintain *ownership* of their customer relationships when much of the value and key contact is delivered by partners? This becomes even more critical when partners find it in their best interests to compete for those relationships and to try to take on a more central role in the network. Research examining how customers form attributions and choose to reward or punish network members following a service failure and recovery event would further contribute to understanding network customer relationship management influences.

Service Execution Priorities

Effectively Branding and Selling Services

Although considerable work has examined branding and selling, it has typically focused on tangible offerings. There are several important service-related topic areas within the domain of branding and selling that are worthy of study.

1. Effectively branding service and solutions and identifying ways to assess brand value
2. Developing consistent brand experiences across touch points
3. Harnessing social media's impact on service brands
4. Achieving effective solution selling and defining the new role of the sales force
5. Forging closer relationships between employees and the brand

Priority overview authored by:

Lawrence A. Crosby, PhD

President

L.A. Crosby & Associates, Inc.

This is certainly the era of the branded experience, judging by the attention the topic has received in business and academia. It can be argued that a service is, first and foremost, an experience (from the customer's perspective). It involves the interaction of the customer with the people, physical evidence, processes, and so on, of the service brand. Brand-related symbols (e.g., name, logo, signage) can evoke memories of past service experiences and expectations of future experiences. The brand promise equates to the experience the customer can expect from the service provider.

Goods marketers lament the loss of "brand control" due to audience fragmentation and brand democratization. Now it is less what the advertiser says the brand is and more what the brand means to the customer, with that meaning increasingly derived through social media. Conversely, service marketers are not sure they *ever* had control of the brand. Generally less reliant on advertising, they have had to work through a multiplicity of non-marketing-controlled touch points (e.g., sales, customer service, Web site, property, contact employees) to both convey and deliver the brand promise. And given the classic characteristics of services (e.g., intangibility, heterogeneity), doing so on a consistent basis has always been a challenge. The notion of "herding cats" comes to mind.

Yet, despite the difficulty, strong service brands exist in almost every category: Mayo Clinic (health care), Mandarin Oriental (hotels), Best Buy (electronics retailers), HSBC (banking), AT&T (telecommunications), Southwest Airlines, McDonald's (quick-service restaurants), and Google (search

engines), to name just a few. Multidisciplinary work is needed to better identify the success factors underlying the establishment and maintenance of service brands such as these. Recent research attempting to uncover the dimensions of a strong brand experience may prove helpful. How have the leading service brands been able to connect/engage with buyers at the sensory, cognitive, emotional, behavioral, and social levels? Also of some use might be nomothetic historical analysis, which seeks to uncover the patterns behind observed events. For example, what is the relative importance of marketing communications, operational standardization, culture, first-mover advantage, and so on, in creating these strong service brands?

An issue for many service providers at the brand establishment stage, and one highlighted in research topic area #1, is how to effectively convey the value proposition behind an innovative service. Short of "try it you'll like it," service marketers seek ways to communicate the *unexperienced* experience. There are tactical issues around brand naming: a name that says directly what the firm provides (e.g., Netflix for an online DVD rental company), an intriguing name that alludes to the service ("Alice" for an online grocery retailer), or a nonsense name that gives the brand freedom to roam (e.g., Yahoo! for an online search and related services company). In some cases, overcoming the chicken-and-egg problem is a matter of enabling early brand adopters to act as ambassadors. Although referral programs abound, relatively little research exists around the effective design of such programs. A corollary issue is the ability to successfully leverage social media (#3). Under the rubric of "brand democratization," some service brands are drawing consumers into the ad-making process. Research is needed regarding the motives, credibility, and effectiveness of pro-brand customer-created content.

With regard to research topic area #5, the notion of "employees living the brand" has become almost cliché, yet there is little agreement about how to make that happen. What exactly is the process by which employees translate the brand promise into their daily jobs? An issue is the degree of scripting. At one extreme are customer relationship management systems telling agents what to say to customers with Profile X. At the other extreme are broad policy statements, such as Nordstrom's (a leading U.S. fashion specialty retailer) famous 75-word employee handbook. It is unclear how much empowerment should exist in the hands of contact employees. Is brand consistency best served through detailed scripting or broad statements of policy, and if so, under what circumstances? And how do brand-based hiring practices fit in?

It is indeed a brave new world for services branding and selling. As goods marketing begins to resemble services marketing more, services remain on the frontier of unlocking the secrets of the highly subjective, intangible, and ultimately personal branded experience.

The three commentaries that follow provide excellent insight into potential research questions to address within service branding and selling (see related commentaries). The commentary by Leonard Berry, a true service pioneer and a well-known author of groundbreaking services books and articles, raises several intriguing questions tied to effectively branding service and solutions (#1), developing consistent brand experiences (#2), and forging closer relationships between employees and the brand (#5). Julie

Moll, who is responsible for framing competitive strategies and identifying and validating new product and business opportunities for the Marriott portfolio of brands, touches on several areas—with emphasis on emerging opportunities to harness social media's impact on service brands (#3). Finally, Luciano Arosemena of Abbott Laboratories in Colombia highlights research needs tied to achieving effective solution selling (#4) and forging closer employee-brand relationships (#5).

Effectively Branding and Selling Services Commentaries

Leonard L. Berry, PhD

Distinguished Professor of Marketing

Texas A&M University

Mayo Clinic, a premier health care facility in the United States, built one of the most powerful service brands in the world and has sustained it for more than a century. The clinic rarely advertises, relying instead on favorable word-of-mouth (and word-of-keyboard) communications among patients. Mayo Clinic's branding story teaches us that nothing trumps a customer's actual experience with the service in building a brand.

Studying strong service brands such as Mayo, Starbucks, McDonald's, Google, and Southwest Airlines raises questions that merit research attention, such as the following:

- How should brand execution priorities change as a brand evolves through stages, such as creation, spread, and protection?
- What are the critical differences between branding an organization (common in services) and branding a manufactured good?
- What are the most effective ways to manage customer expectations given the variability of labor-intensive services?
- What roles can marketing personnel effectively play to improve the consistency and overall quality of customers' experiences using the service?
- What are the important distinctions between external branding (to customers and prospects) and internal branding (to service providers), and what are the implications of these distinctions?

Services branding is fundamentally different from goods branding. We know far more about goods branding; few topics offer a more fertile research opportunity than services branding.

Julie Moll

Senior Vice President, Brand Strategy and Research

Marriott International

In a world in which much is in flux, maintaining a deep understanding of the customer will remain challenging and, for most, will be an iterative endeavor. Brand leaders will need to proactively explore innovative new research techniques to understand which values and trends are likely to endure and which are ephemeral. With many new features and offerings becoming possibilities (to address newly discovered "unmet customer needs"), and with continuing pressure on margins, many brands are challenged to determine which attributes and/or specific solutions of the past are no longer as critical or valued as before. Thus, service brand research needs to become more dynamic than ever and also well integrated with the parent company's experience innovation and concept development engines.

For many service brands, word of mouth—and, especially, personal recommendations—has long been more powerful than media advertising in driving both trial and repeat purchase behavior. With the advent of both social media and consumer reviews on the Web, brand marketers have both a challenge and an opportunity to ensure that the live experience not only lives up to its promise but also is compelling and "buzz worthy" enough to provide a "viral" push.

As always, ensuring that live experience, including the consistency of the experience across all service venues and channels and the alignment of that experience with the desired brand expression, lives up to its promise will remain a critical challenge. Perhaps most exciting of all is the development of the "next-generation service measurement system" (one that seamlessly integrates the most valuable elements from both traditional and new forms of customer feedback, including those that "scrape" the Web) that is now just getting underway.

Luciano Arosemena

Service Sales Manager

Abbott Laboratories, Colombia

The development of service branding in a traditionally product-driven organization with a strong brand is always a challenge with many possible impacts. A free, independent branding strategy might help differentiate a service offering, while a strong linkage to the traditional brand may provide a quality proxy and facilitate sales.

Another factor to be considered is the impact of service branding on internal consumers. One of the most important drivers enabling the migration from products to services is convincing the organization about the viability of service sales. Given its importance, further research should consider the impact of service branding on internal consumers. Does having a more independent service brand facilitate change, or does it hold it back? Is there an impact in sales, and if so, is it driven by customers' increased interest or sales force enthusiasm? Is there an adequate mix of branding innovation and traditional branding? What is the impact, if any, of using a new brand on other, more standardized product brands used by the company?

As more companies embark on the profitable but difficult migration from products to services, service branding and its double impact on external and internal customers will become an issue that companies and researchers should address.

Enhancing the Service Experience through Cocreation

Although prior research has explored many aspects of the customer experience, the service experience—particularly the cocreation of the service experience—remains a research priority because it is central to creating value for customers and capturing value for the organization. The following five topics are especially important.

1. Managing the customer experience across complex and diverse offerings, touch points, and customers
2. Defining the customer's role and developing methods for motivating customer contributions to enhance service success and loyalty
3. Driving customer/service collaboration through technology (e.g., Web 3.0)
4. Creating, managing, and measuring the impact and returns of customer communities
5. Determining intellectual property rights to and the pricing of cocreated services

Priority overview authored by:

Ruth N. Bolton, PhD

Executive Director

Marketing Science Institute

Thought leaders now recognize that an organization cocreates with partners—that is, customers and other organizations in its supply chain or value network—to produce value for each participant. “Cocreation” is conceptualized as collaboration in the creation of value through shared inventiveness, design, and other discretionary behaviors, whereas “coproduction” is more narrowly defined as participation within parameters defined by the focal organization (e.g., selecting from predetermined options).

Service researchers and managers use the term *service experience* to encompass all aspects of the production, delivery, and creation of value *considered from the customer's perspective*. Customers perceive service experiences holistically but interact with organizations through diverse channels in complex environments characterized by physical elements (e.g., spatial layout, signs, uniforms, catalogs, technology), processes (e.g., related structured activities or tasks), and people (e.g., employees and customers who may interact face-to-face or through technology). Recent attention has focused on the role of technology, complex processes, and social networks in service experiences.

Customer participation in cocreated services influences outcomes (e.g., wait times), perceptions (e.g., assessments of quality, satisfaction, and the brand), the extent of service usage, repeat purchases, and recommendations. It also influences organizational performance, including the efficiency of operations, employee satisfaction, and turnover, and financial outcomes, such as cost efficiency, revenues, and profits. Consequently, managing cocreated services is critical to organizational success—especially for complex service offerings with multiple touch points. Unfortunately, little is known about how to manage cocreated services because the underlying mechanisms that link customers and organizations are not well understood.

What is needed from service researchers to close this knowledge gap? My comments address this issue, touching on each of the service research topic areas. First, research is required to define and measure the system of cocreation, so that it can be studied and managed. What are the dimensions of cocreated services? How should they be conceptualized and measured? These issues are problematic for four reasons. Certain dimensions of services seem to be in opposition to each other, such as customization versus efficiency or personalization versus speed. People differ in many ways that are relevant to cocreation: knowledge, expertise, skills, past

experiences, emotional intelligence, attitudes toward risk, and so forth. A dyadic or network perspective necessitates measures of the nature and frequency of interactions between partners, the extent of compliance with partner requests, information asymmetry, spontaneity, and so forth.

Second, research is required to develop methods for motivating and guiding each partner to effectively collaborate, thereby improving the customer's service experience and enhancing outcomes for all partners. How is the role of the customer and the organization defined during cocreation? What processes, tools, and business practices are useful in defining, motivating, and managing customer and employee roles? This latter question is especially difficult when there is diversity between employees and customers—with different levels of technology readiness, relational profiles, and cultural backgrounds—that must be managed.

Third, from a systems perspective, research is required to develop methods for integrating partners' resources and activities to cocreate services. How can partners' capabilities be assessed and their inputs integrated? How should organizations create, interact with, and manage customer or brand communities? What metrics can be used to assess the effectiveness of organizational resources and activities assigned to cocreation? These questions are extremely important in "open innovation" models—that is, when the organization is receptive to customers' collaboration in the design of products. This is especially evident for cocreated services with many collaborators that take place in high-technology environments, such as open source or open architecture models. For example, Web 3.0 has been defined and discussed as the creation of high-quality content and services produced by gifted individuals using Web 2.0 technology as an enabling platform. However, complex offerings, such as solutions for business customers or hedonic experiences for consumers,

may require different enabling platforms (i.e., the mode and methods used for integration are likely to be very different).

A fourth research issue concerns how to measure the economic and noneconomic benefits of cocreation. How should financial benefits be shared between partners? How are intellectual property rights and prices, which both depend on and influence each partner's roles and resources, jointly determined for cocreated services? How can rich, contextual knowledge be acquired and shared, given that it seems to be facilitated by informal, person-to-person solution-sharing networks (unlike digitized information). Organizations are struggling with these questions because, in the long run, they must be profitable and create value for shareholders. Yet they have found that the financial benefits of cocreation arising from single transactions, such as "one-off" solutions, are not always shared fairly. They have also discovered that financial benefits may not be subject to economies of scale in the way that early Web-based activities were scalable.

In the commentaries associated with the cocreated service experience (see related commentaries), several rich research questions are raised by our business and academic authors. James Patrice, a thought leader in service delivery excellence who is responsible for Oracle's worldwide customer support services operation, which includes 6,000 support professionals, delivers several thought-provoking research questions that span the five previously listed research topic areas. In the next commentaries, Stephen Vargo, an academic thought leader in the service field with a primary focus on service-dominant logic, and Anders Gustafsson, who co-leads the Service Research Center at Karlstad University and has published widely on the interface between customers and quality improvement efforts, focus on the need for further research to define the customer's role in the service experience (#2).

Enhancing the Service Experience through Cocreation Commentaries

James Patrice

*Senior Vice President, Global Support Operations
Oracle Corporation*

As the strategic importance of services grows within technology companies, so does the responsibility to provide customers with an improved customer experience. However, the challenges of managing the customer experience, especially across complex service offerings and touch points, are not trivial. Cocreating the new service experience with customers (especially in business-to-business environments) can help drive a more open, collaborative innovation process, resulting in higher customer success and loyalty.

There is still more we need to understand to advance to this new level of cocreated customer experience. Customers have told us what they want, such as more personalized and proactive support, better access to intellectual property and best practices, a trusted network for peer-to-peer interactions, deeper relationships with companies, and higher value solutions. However, getting there requires an unprecedented level of customer collaboration.

As an industry, we need to further explore the underlying questions and implications of cocreation. Even if we have the willingness of customers and the Web 2.0 technology platforms to foster co-innovation, new questions arise. How do we determine intellectual property rights of cocreated services? How do we manage and measure the impact and returns of customer communities? How do we drive adoption and sustain participation in this new collaboration channel?

Stephen L. Vargo, PhD*Professor of Marketing**University of Hawai'i at Manoa*

A profound transition is taking place in the way we think about and practice marketing. Some consider it part of a shift from a “goods economy” to a “service economy”. Others view it in terms of a deeper, more foundational shift from thinking about all business and economic exchange in terms of goods provision to being fundamentally characterized as reciprocal service provision. Regardless of the orientation, this transition implies a change in how we think about the venue, process, and meaning of value. Rather than created and delivered by the firm, value is being reconceptualized as cocreated by firms and customers, each in the context of and participation by their own unique, complex networks of resource access. This requires zooming out to this dynamic, network-with-network, value-creation space to understand value as contextual, emerging, and experienced, rather than fixed, deterministic, and objective. In turn, this perspective raises new, challenging questions about (1) how to measure value as an experiential quality, (2) how to innovate and design for cocreated experiences, (3) how to understand the role of goods as inputs into customer experiences, (4) how to translate customers’ cocreative activities into firm value, and (5) how to plan and manage in complex, interdependent service ecosystems.

Anders Gustafsson, PhD*Professor, Service Research Center (CTF)**Karlstad University, Sweden*

Customer cocreation as a phenomenon is attracting interest from both practitioners and academia partly because of the popularity of the service-dominant (S-D) logic and its emphasis on value in use. A fundamental notion of S-D logic is that the true value of an offering can only be evaluated through the lens of the customer. The focus is not on the offering, per se, but rather on the customer’s value creation process. This shift in focus should have tremendous effects on how organizations work in order to create better services for their customers.

Customers are a good source of information regarding what they want from a service—they are experts on their own consumption process. Companies, however, often view the customer as a passive responder to various offerings, rather than an active participant in the value-creating process. Part of the problem is that organizations view themselves as the sole experts on their offering and do not consider how customers can contribute. There is a need to understand when and how customers should be invited to actively cocreate and when to use the more traditional passive approach.

A customer active paradigm also requires appropriate research techniques. The most frequently used methods, such as surveys, in-depth interviews, and focus groups, build on a passive or backward-looking view of a consumption process. There is tremendous potential in forward-looking techniques that encourage a more active and real-time understanding of the customers’ service experiences. In turn, this will require more focus on a more experimental approach in real contexts rather than cross-sectional studies or interview-based methods that build on previous experiences.

Measuring and Optimizing the Value of Service

How can companies measure the value of service? What factors can enhance service value? Six topic areas were highlighted as being worthy of further research.

1. Measuring the value and return on investment from service
2. Creating and enhancing tools for capturing the value in use for services and communicating value to customers and throughout the firm
3. Integrating service value and the costs of service delivery into joint optimization models
4. Creating and enhancing service standards and metrics that link to financial outcomes of the firm
5. Managing the sales and service channel portfolio to maximize value
6. Integrating the role of customers, employees, and technology for value optimization (e.g., the use of self-service technologies)

Priority overview authored by:

Vicki Smith-Daniels, PhD*Professor of Supply Chain Management**Arizona State University*

Service value measurement and optimization is truly a priority in its research infancy. As a result, significant opportunities exist to create new knowledge in this area. In this overview, the bulk of my focus is on measuring the value and return on investment from service (#1) and creating and enhancing service standards and metrics (#4). I weave in the balance of the priority research areas in an effort to provide a full flavor of the research opportunities present in this space and highlight areas in which synergies can be captured by tackling more than one priority research topic area at a time.

Service organizations understand the importance of focusing on the customer in everything they do. Yet many of these customer-centric service providers recognize that

sustainable, long-term economic value will not come from having more customers or selling more to them but rather from increasing the value of each customer relationship. This value-based competitive paradigm requires service providers to more clearly define and measure the elements of customer value. By having service standards and reliable metrics, service organizations can optimize all the dynamic elements needed to deliver service value. Well-defined, value-based service measures enable an organization to evaluate the return on investment of existing services and to calculate the expected return from new service designs and new service innovations. Without measurable performance outcomes, service outsourcing arrangements are not likely to consistently deliver expected service and targeted quality levels.

Service value measurement and optimization transforms a service provider's strategy and service design into value-based service execution. To accomplish this, service providers must develop metrics that span many functions and business units. These metrics must integrate the critical role of customers, employees, and technology in creating value in the customer experience. For example, the tracking of contact-center call answer speed, service response time, and revenue per customer each focus on measuring the dimensions of the customer experience. Service value optimization goes beyond tracking these discrete customer-centric metrics and finds an ideal balance among the many other dynamic variables in the value equation, including technology investment, operating costs, and service provider skills and capabilities. Service value optimization requires the ability to access, integrate, and analyze information across multiple business functions—creating a holistic view of service delivery across different sales and service channels—to assess and optimize customer value. Through the use of service value analytics and optimization tools, service providers can communicate value to their customers, mobilize resources around specific financial opportunities, and dynamically predict customer value before committing resources.

Only recently have organizations realized the potential benefits of value optimization. Service providers faced with stiff competition, high labor costs, and increasingly demanding customers have tended to be the early adopters of value optimization and measurement. Not surprisingly, these early adopters learned that services are more difficult to measure and monitor than manufacturing processes. To receive the full benefits of value optimization, these service

providers realized the importance of learning by doing and overcoming organizational resistance by setting up broad, detailed cost management systems. Too often, service providers find that cost accounting systems are designed to meet accounting needs and do not have the capability to track service costs across all functions and business units.

Service value measurement and optimization is in its infancy. There are many opportunities for academics and industry to advance value optimization and service measurement. Because value creation crosses functional boundaries, academics must embrace a cross-disciplinary research initiative that includes marketing, operations, accounting, finance, and information technology. Optimization approaches involving statistical methods and operations research need to be developed around rigorously developed value metrics. Empirical studies revealing how shifting to a value optimization approach leads to delivering more quality and services at the same cost, improving value across all dimensions, or cutting costs without affecting quality or service need to be undertaken across a range of service industries. Only after service metrics and standards are institutionalized and value optimization gains traction will business executives and academics have the hard evidence needed to link value-based service delivery to the financial performance of the firm.

The four commentary authors collectively provide rich research ideas and questions across all research areas under this priority (see related commentaries). Chris Melocik, who is leading the integration efforts associated with the merger of Republic Services and Allied Waste, a leading provider of waste management services in the United States, and A. Parasuraman, one of the pioneers in services research and who is well known for his research on service quality, provide the first two commentaries. These commentaries touch more broadly on several of the research areas listed within this priority. The final two commentaries are more focused. Eric Senesi, who heads Worldwide Customer Services and Support for Agilent Technologies, one of the premier measurement companies globally, delves into the need for research around creating and enhancing tools (#2) and managing the sales and service channel portfolio for different customer segments (#5). Finally, Christian Grönroos, one of the pioneers of modern service marketing and earliest proponents of service management, stresses the need for research in creating and enhancing service standards and metrics to capture value from the perspectives of the customer and the firm (#4).

Measuring and Optimizing the Value of Service Commentaries

Chris Melocik

*Senior Vice President, Integration and Process Improvement
Republic Services, Inc.*

Organizations struggle to justify investments to deliver improved or additional services. Intuitively, these investments are consistent with customer desires and appear to be the right actions for strategic success. However, without a means to predict the value of the investment and then to measure actual versus expected impact, service initiatives are continually deprioritized. These initiatives cannot survive the competition for capital and resources in strategic and annual planning processes.

Research on service value identification, measurement, and optimization has the potential to inform management decision making. If the intuition of many is confirmed, the research findings may unleash a fresh, high-return, service-focused agenda.

Some of the challenging questions that researchers might address include the following:

- Where are the hidden values of service design changes within and across business functions? (For example, a customer facing technology improvement may improve order accuracy, enable operations to correctly execute the first time, avoid operations rework, reduce customer complaint call volume, improve customer retention, and reduce requirements for capital investment.)
- What are the standard metrics for service? How are they linked to financial performance? (Building case studies will help management teams believe until they prove it for themselves; demonstrating that valuation methods and data analysis are practical will give them confidence to try.)
- How can organizations find the break points at which differential levels of service matter? How can organizations evaluate adjustments to multiple levers?

A. Parasuraman, PhD

*Professor of Marketing
University of Miami*

Intensifying competition in many sectors implies that value-added services and superior customer service are critical for companies to achieve competitive differentiation and strengthen their market positions. However, extant frameworks for identifying the most appropriate value-added services—and the optimal service levels in interacting with customers—primarily portray “value” from limited perspectives (e.g., focusing solely on the customer’s or the company’s perspective rather than on both; focusing solely on prepurchase value assessment rather than on value assessment throughout the customer’s experience cycle). There is a pressing need for more comprehensive frameworks for offering managerial guidance—and a commensurate opportunity for cutting-edge scholarly research to develop such frameworks—in determining the most appropriate services and service levels to offer.

Especially needed are robust *joint*-optimization models that simultaneously consider cost effectiveness from the company’s perspective and benefit maximization from the customer’s perspective. A parallel need exists for developing appropriate metrics for operationalizing *nonmonetary* costs (e.g., customer frustration due to poorly designed services) and benefits (e.g., potential increase in customer loyalty due to the provision of complementary services) in the value-assessment models. The models also need to incorporate customer heterogeneity in preferences (e.g., across-customer-segment variations in preferences for high-tech vs. high-touch services).

Eric Senesi

*Vice President and General Manager
Agilent Technologies*

Most product original equipment manufacturers (OEMs) are struggling to understand how their customers value the services they are delivering to support and complement their product offering. For them, it is essential to understand customer expectations and needs in terms of service value and quality and to delineate it from the product value, in order to correctly focus service investments and resources to improve this value, to build customer loyalty, and to improve service profitability. This is particularly difficult because the customer definition of service value and quality expectation is not absolute but relative and often subjective. Furthermore, value optimization requires an integrated view of the supplier-customer end-to-end value chain and processes.

Companies need more comprehensive methods and tools to measure service value and to develop systemic frameworks to map these supplier-customer, end-to-end value chains and processes. This will enable a more effective customer segmentation that is mandatory to optimize the service portfolio, true value-based pricing, and service delivery performance. Investing in service value optimization and measurement research is essential to help companies—especially product OEMs—improve the value of their services and to enable their product-biased sales force to position and communicate clearly this value to customers and drive service penetration.

Christian Grönroos, PhD

Professor of Service and Relationship Marketing

Swedish School of Economics and Business Administration, Finland

For far too long, research has concentrated on studying trust, commitment, satisfaction, loyalty, and perceived quality effects of service strategies. Now monetary effects should be studied, and metrics required to do such measurements should be developed. For consumer services, it is more complicated to do this, but for manufacturing firms, accounting-based data are available. The problem is to get access to such data. I am not talking about customer lifetime value measurements because they are one-sided. Value for the firm is dependent on the value the customer can create, and therefore metrics that capture value creation for both the firm and the customer should be used. This requires a dyadic approach (and a network approach), which means that accessibility to data may be even more challenging.

A Pervasive Service Priority

Leveraging Technology to Advance Service

In each of the first nine priorities, technology's role is evident. It is a critical component of many of the specific research topic areas presented. In addition to those mentioned, the following seven topic areas emerged as important.

1. Building business models for new service technologies (e.g., smart services, cloud computing)
2. Accelerating adoption and acceptance of new, service-oriented technologies
3. Capturing and delivering service-oriented information for real-time decision making
4. Enabling and accelerating mobile commerce and productivity for consumers and employees
5. Enhancing online privacy and security of information and assets to protect service consumers, employees, companies, and society
6. Using the service system paradigm to drive innovation
7. Enabling agility and integration through service-oriented architecture and service platforms

Priority overview authored by:

Michael Goul, PhD

*Professor and Chair, Department of Information Systems
Arizona State University*

When used together, the terms *service* and *technology* conjure a broad spectrum of unique viewpoints. However, an overarching paradigm shift is beginning to envelop that spectrum. Scholars have captured the phrase "the freedom economy" to characterize the context in which customers are increasingly at the center of boundaryless relationships and low-friction transactions, exchanges, and business operations. The subtle but significant change is that in the freedom

economy, capabilities come to the customer rather than the other way around. Customers in the freedom economy expect new choices and will define value wherever, whenever, and however they want. Given that the research topic areas are all connected to this shift and increased focus on the customer, the balance of my comments highlight where service research is today and where it needs to go as it pertains to this movement. I do not specifically cover the research topic areas because it is important to address the overarching shift to the customer, which has led to the need for these suggested research areas. In addition, five academic and business commentary authors provide insights into the specific areas of greatest research value in the coming years.

Many researchers are investigating building blocks for technological ecosystems tailored for the freedom economy. A current thrust addresses organizational agility, self-service, knowledge worker mobility, and so on. A services metaphor has been adopted to vitalize research into wide-scale interoperability (e.g., service-oriented architecture, Web services, platform as a service, cloud computing). Organizations adopting this metaphor aspire to reduce application switching costs and lock-in. They want to efficiently integrate software, systems, and infrastructure with an ever-changing set of strategic partners and suppliers, and they need new building blocks to forge customer relationships by leveraging a variety of channels. Advancing these building blocks remains an important technology research priority for the foreseeable future. However, the technology service metaphor has yet to be reconciled with mainstream service research notions. Such reconciliation is plausible should there be increased insight into what can be referred to as "service platforms."

Shedding light on service platforms would enable researchers who have adopted the service metaphor to leverage platform strategies in building ecosystems tailored to the freedom economy. In addition, traditional service research could emphasize findings that establish requirements and design norms for service platforms intended to deliver high-quality service solutions in which families of services are

differentiated within a platform on the basis of customers' when, where, and how preferences. However, is a service platform in any way analogous to a product platform, and if so, could what is known about product platforms be applied to service platforms? Or if service and product platforms are completely different, what can be gleaned from highlighting those differences? One direct advantage of the service platform perspective is that it would enable a direct link to strategy research findings associated with multisided platform markets. These markets require participants to nurture "complementor" relationships while concomitantly designing and delivering customer-delighting service solutions. The delicate and complex nature of excelling in all market sides is often referred to as a "platform balancing act." That balancing act is a research priority in service and technology, and there is one area of emerging services research that can serve as a beacon: smart services.

Smart services take advantage of the "Internet of things" to support customer freedoms by bringing capabilities directly to them. The majority of today's smart services are layered atop traditional mobile telecommunications infrastructures; this type of platform supports core ecosystem services that exhibit the properties currently targeted in the technology research agenda. The platform also engages many ecosystem participants as complementors, and customer solutions are delivered from cross-ecosystem participant boundaries. These properties—a collaborative platform, the need to engage many ecosystem partners in providing service solutions, and core services that are differentiated within a family of services—are central to the notion of a service platform.

In summary, advancing technology and service research will require new initiatives that drive reconciliation of currently disparate research streams. Forging a new conceptualization—the service platform—is a ripe middle ground. The smart services context can stand as exemplar. Business and technology alignment in service research will increasingly depend on discoveries related to this new and challenging platform balancing act.

The size and influence of technology on services warranted inclusion of several commentaries from different perspectives (see related commentaries). From these five commentaries, we obtain a variety of perspectives and insights into potential future research. To begin, the first two commentaries are from Mark Vigoroso, who works in his role with nPhase with a variety of firms to develop and sustain business cases for smart service solutions, and Florian v. Wangenheim, a professor of services and technology marketing in Germany whose research focuses on customer management, management of technology-intensive services, solutions marketing, and online marketing. Both commentaries (one from a business perspective and one from an academic perspective) primarily highlight the need for research on building business models (#1), accelerating adoption and acceptance of new technologies (#2), and using them to enable real-time decision making (#3). Vigoroso also touches on privacy and security concerns (#5) and the drive for innovation (#6). Next, Gary Bridge, whose strategic role at Cisco results in his working with many of the world's leading companies and governments to help them become more effective through changed business processes and intelligent technology deployment, presents his views on adoption and acceptance of new technologies (#2) and privacy and security of information (#5). The fourth commentary comes from Bob Zollars, CEO of Vocera Communications, who has deep expertise in health care and technology. Zollars highlights needs for research around mobility of workers (#4) and protection of employee privacy and security (#5). The fifth and final commentary is from Kris Singh of IBM Research, who has more than 25 years' experience in the high-technology industry and is president of the Service Research & Innovation Institute (SRII). Singh's commentary primarily fits within the research areas identified as using the service system paradigm to drive innovation (#6) and as enabling agility and integration through service-oriented architecture and service platforms (#7).

Leveraging Technology to Advance Service Commentaries

Mark W. Vigoroso

Director, Strategic Market Development

nPhase, a Verizon Wireless and Qualcomm Joint Venture

As mobile broadband connectivity blankets the planet, the "Internet of things" is certain. As we approach the era when products of every size, function, and location can transmit and receive information in real time through cellular wireless networks, the biggest unanswered questions are about business transformation and not technology enablement.

This ubiquitous connectivity fundamentally changes the way companies can create and sustain value for their customers. Questions loom regarding optimal business models that can commercialize persistent connectivity as profitable smart services. Traditional intermediary supply chain roles could become marginalized as product manufacturers electronically tether themselves to their products and deliver smart services to customers over the entire product life cycle.

Zero-latency alignment between supply and demand of everything from electricity to car parts will enable new service offerings and profit-optimization strategies. But the impacts of such responsiveness on business models have just begun to be explored. Smart services will shift the health care community toward preemptive maintenance of wellness versus reactive treatment of sickness. But will the insurance industry keep pace or quell innovation? Will patient security and privacy concerns be sufficiently addressed to satisfy regulators? These and other questions need to be explored to understand how companies will compete in the smart services age.

Florian v. Wangenheim, PhD

Professor of Service and Technology Marketing

Technische Universität München, Germany

More and more, manufacturing companies are building connectivity into the tangible objects they sell to their customers. These connectivity-enabled tangible objects can receive, store, and send data. The fact that objects can receive data allows for the provision of a broad range of previously unknown services, including customer self-services, smart services, and remote services. The fact that objects can send and store data enables companies to reconfigure, update, and upgrade objects. By analyzing objects' stored data, companies can better understand when, how, and for what purpose customers are using their products. Object connectivity enables manufacturers to be transformed into service and solution providers.

There are some challenging elements in this transformation: understanding customers' adoption and usage behavior for new services that are emerging from this connectivity (in particular, remote and smart services), understanding how usage data are predictive of future customer needs and behavior, realizing how such data can play a role in innovation and customer relationship management, and understanding how firms can use those services to transform themselves into service and solution providers that leverage appropriate business models. All of these are timely topics for managers to think about and for researchers to investigate, and if at all possible, investigation should proceed on a cross-disciplinary basis.

R. Gary Bridge, PhD

Senior Vice President, Internet Business Solutions Group

Cisco Systems

Services productivity, which has lagged manufacturing productivity, is poised for breakthrough gains. Three trends enable new services:

- *Digitization of content*: more of what people want and need is embodied in digital content or managed by digital processes;
- *Mobility*: communications are untethered from fixed devices or fixed times, and
- *Virtualization*: traditional computing "stacks" are being deconstructed and reassembled in cloud computing arrangements, enabling cost-effective content delivery on any device, anywhere, anytime.

We live the "connected life." Seventy percent of U.S. households are connected to the Internet, and 85% of adults own a mobile phone. This connectivity provides new ways to deliver services, and new business architectures are exploiting opportunities. There are important questions about how services productivity surges will unfold:

- Which services will evolve the fastest and which will be the slowest to benefit from technology?
- Which countries, regions, and professions will benefit, and at whose expense?
- How will global competition, coupled with disruptive innovation, re-sort current services' profit pools?
- Many wicked problems facing society involve services. Modernizing the global electricity grid, for example, requires complex changes. How will all these individual decisions and investments be orchestrated?
- How will data access, security, and privacy concerns be resolved?

Bob Zollars

Chairman and CEO

Vocera Communications, Inc.

As the service economy continues to grow and become a larger part of the worldwide economy, it is clear that technologies must adapt to the changing needs of the workers who are on the front lines of this service revolution.

More times than not, these mobile workers are on the move, serving their customers and their constituents without the benefit of a desk, computer, or physical office. Regarding the largest service industries (e.g., health care, hospitality, retail), the vast majority of the people who bring these industries to life are completely mobile.

This leads to several critical questions regarding the technology that is deployed in these service settings. How can communication among these mobile workers be better managed? What devices and technology should these mobile workers be equipped with to better do their jobs? What broadband and infrastructure dependencies will these technologies require? How can privacy and security be assured in this mobile environment? And what will be the impact of these enabling technologies on the traditional office? Will it become obsolete?

The delivery of world-class service and the technology that enables it are inextricably intertwined. It is an exciting time to watch and potentially influence how these issues will evolve!

Kris Singh

President, Service Research & Innovation Institute (SRII)

Director of Strategic Programs

IBM Almaden Research Center

We live in the era of *service revolution* where the world economy is largely service dominated. This raises important questions that we need to analyze and answer:

- What role does information technology (IT) play as a major force in the service economy?
- What role will service innovation and research play in driving future IT innovations, business productivity, and building a smarter world?
- Will services drive technology, will technology drive services, or is it a two-way street?
- Science, technology, engineering, and mathematics (STEM) play a very significant role in driving the future of the service economy. What changes are needed in STEM to move forward?
- How will future technology focuses shift to products and services?
- Services have different meanings and scopes. How can we universally clarify definitions and constructs?
- A deeper understanding of future requirements of different market segments and service verticals is critical to defining the future product and technology roadmap. How do we achieve this deeper understanding?
- The service world is a huge mountain. Real service innovation will require global partnerships. How will that occur, and what will motivate it?

One way to initially address these questions is through new collaborative organizations (e.g., the Service Research and Innovation Institute, a new global, nonprofit organization that has members from industry, academia, research institutes, and government organizations). Going forward, collaboration will be critical to successfully gain new knowledge in these important areas.

Discussion and Call to Action

Much can be learned from the process used to develop the service research priorities and from the resulting 10 priorities and each priority's research topic areas. Both the process and the results provide a useful and documented reference source for future research. We reemphasize that this work is forward looking rather than providing a commentary on the state of the art in service research. Beyond the priorities and specific research topic areas, the process allowed us to identify fundamental themes that cut across priorities, including the need for interdisciplinary work, recognition of global challenges within each priority, the need for more work in B2B contexts across priorities, and the overarching influence of technology. Also noteworthy is the growing interest and consensus that these priorities are important to a diverse set of academics and businesspeople around the world. We are not aware of a priority-setting process in service that has attempted to identify and combine both points of view, and it was illuminating to find the strong level of agreement.

Without a doubt, most of the priorities will be readily acknowledged by people involved in service research and practice. Yet some are quite novel (e.g., transformative service), and others have received little research attention (e.g., service infusion in goods-dominant companies) to date. Varying amounts of research exist for each of the priorities and thus will serve as a foundation for future inquiries. We conjecture that the 10 priorities will be relatively stable over the next several years, though the specific research topic areas for each priority are more likely to change.

The priorities also illuminate and confirm the notion that the service field has become extremely broad, interdisciplinary, and cross-functional, creating opportunities for researchers and executives with diverse expertise to become involved. For example, the area of transformative service will appeal to a diverse set of academics and organizations. In this context, service is not only about increasing revenues and profits at for-profit firms but also about how to advance service in a way that delivers higher-order, societal outcomes. This expanded view leads to an inclusive environment that welcomes new and diverse thinking.

It is noteworthy that many of the significant advancements in the service field could result through collaboration across diverse stakeholders. This collaboration might take different forms. It could involve research partnerships among academia, business, and/or government aimed at producing significant value for each. This approach combines real-world opportunities and challenges with theory to generate new knowledge. Another form of collaboration could be joint research across academic disciplines. There is widespread belief that sharing and integrating thinking across disciplines is one of the best formulas for making truly groundbreaking service contributions.

The research priorities are intended to be of value and a call to action to academics and business and government leaders. For academic researchers, the priorities are intended to spark discussion and spur thinking about research areas that present a significant opportunity to drive academic and business contributions. Ideally, they will be a catalyst for new work and provide additional evidence and support for scholars who are already embarked on a promising service research trajectory. The priorities of Fostering Service Infusion and Growth and Effectively Branding and Selling Services, for example, represent emerging but underresearched areas. Conversely, Leveraging Technology to Advance Service is an established research area but is in need of significant and novel contributions well into the future. For example, building new business models through smart services, cloud computing, and other technologies holds great promise for advances in research. We expect that these priorities will be elaborated on by service researchers over time, leading to continued discussion of and emphasis on these important areas. Academics are encouraged to look beyond their discipline for collaborators who may help frame and investigate service issues in unique ways.

For business executives and government leaders, these research priorities can be brought into their organizations for open discussions about where service research investments are and should be made. Although every research priority will not be relevant for every organization, the priorities can act as a reference and discussion guide when deciding how to invest service research funds for the long-term success of the organization. Business leaders can also use the priorities to investigate partnerships with researchers that can lead to a greater understanding of service challenges and opportunities and the identification of effective solutions that can drive business and/or societal value.

As with any major study, this research has limitations. First, although more than 200 academics from approximately 15 disciplines and from institutions in 32 countries contributed to the research priorities, our approach did not allow for the incorporation of insights from all disciplines showing interest in service research. Second, although more than 95 business executives, many with multicountry

responsibilities, participated in the process, most are with global companies located in the United States. Third, even though the research priorities are relevant to many government services, there was limited involvement of government leaders in the priority setting process. Finally, our methods and results are qualitative and derived from a modified Delphi approach; thus, the interpretation and development of the themes is necessarily subjective. Qualitative research is often the best option when addressing a relatively novel and broad topic such as research priorities.

Setting research priorities in a context in which multiple stakeholders and disciplines need to discover commonalities is daunting. Differences in language and terms, assumptions, and constructs, as well as even significant variation in the nature of what constitutes research by academics in various disciplines and by academics and business executives, made setting these types of broader research priorities challenging. However, with the significance of the service-related challenges and opportunities facing the world today, pushing past these boundaries and silos is mandatory to make progress. Working with established service centers such as the Center for Excellence in Service at the University of Maryland and the Service Research Center at Karlstad University, as well as newer service research centers around the world, our intent is to continue to spotlight service research priorities in the years to come. In developing future research priorities, we plan to expand our scope in terms of geography, discipline, and government-sector representation in the priority-setting process and to explore additional ways to engage participants in critically thinking about and identifying the most important service research issues that need to be addressed.

We thank everyone who participated in the priority-setting process and who provided feedback on the many iterations of the priorities. We are encouraged by the number of service researchers and business executives who are committed to devoting their time, talents, and resources to make needed progress in these important research areas.

Appendix

Description of Methodology

To ensure involvement and comprehensive coverage of the most significant emerging topics and priorities, we sought input from both service-minded academics around the world who represent a variety of disciplines and service-focused business executives representing an array of industries and organizations. Their contributions were used to broaden our perspective, spark our imagination, help identify themes, and shape our thinking. The following describes the priority development process.

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Appendix (continued)

Phase 1: Data Collection

- In summer 2008, a team composed of academic service researchers affiliated with the Center for Services Leadership (CSL), who represent a variety of business disciplines, and CSL senior staff identified academic service research thought leaders.
- Forty-two of the thought leaders contacted participated in an in-depth interview conducted by a team member, typically within their discipline, which usually lasted 30 minutes. They were asked about their current service research and service research they planned to do in the future as well as the critical opportunities and challenges facing business and government in the next 5 years within the area of service science and service innovation. Notes taken during the interviews were used in the priority development process. The contributors also provided names of other service research thought leaders who should be included. These people were invited to provide input through an online survey.
- Twenty-seven senior business executives, who are members of the CSL's Board of Advisors, participated in an in-depth interview conducted by Arizona State University MBA students. These executives were asked to describe service trends affecting their business and burning research questions related to service science and service innovation that would help them achieve their business goals within the next 5 years.
- Online surveys were used to collect insights from a wide variety of academics and business executives. Information about the service research priorities initiative, an invitation to participate, and a link to a survey were sent to numerous listservs associated with different academic disciplines and service-related special interest groups. Information about the survey was also presented to attendees at several service-oriented, academic conferences and to business executives associated with the CSL. For example, e-mail invitations were sent to the American Marketing Association's ELMAR and SERVSIG, the Association for Information Systems' Special Interest Group on Services and SIGDSS (the Special Interest Group on Decision Support Knowledge and Data Management Systems), the ISWorld Mailing list, the IT Service Management Forum, the INFORMS SERVSIG, and the IEEE Services Computing Forum. Invitations were made in person to attendees at the 2008

INFORMS annual meeting in Washington, DC; the 2008 Frontiers in Service Conference in Washington, DC; and the 2009 Service Science and Service Innovation Workshop at National Chengchi University in Taipei, Taiwan. The goal of these efforts was to obtain diverse participation rather than to achieve a representative sample across, for example, academic disciplines or industries.

Phase 2: Data Synthesis

- Halfway through the data collection process, two of the coauthors read the interview notes and survey responses collected to date to develop an initial set of possible priorities. These included emergent themes that were identified from multiple mentions across the interview and survey data. These priorities also included seemingly novel ideas that appeared to have significant implications for consumers, firms, and society. As additional data were collected, new themes were added and other themes were consolidated, modified, and refined.
- The larger team reviewed the large number of themes that were identified based on the interviews they had conducted as well as their own experience. This resulted in an initial set of priorities and more specific, important research topic areas related to each priority.
- As new data were received, team members examined this new input in relation to the priorities and the specific service research topic areas that had been identified to date. Although the overarching priorities themselves remained relatively stable, revisions to the research topic areas continued to be made as we learned about new topic areas and identified logical places to consolidate and enhance existing ones.

Phase 3: Priority Refinement

- At several points in the process, groups of academics and business executives were asked to provide feedback on the working priorities that had been developed. Thirty-five academics interested in service research who participated in the CSL's first annual academic meeting in February 2009, 26 executives who participated in a CSL Board of Advisors meeting in February 2009, and 49 attendees at the June 2009 QUIS Conference held in Wolfsburg, Germany, were given a list of the priorities and related research topic areas and asked to

(continued)

Appendix (continued)

indicate their top three priorities based on future impact. They were also asked to provide input on any additional research questions or issues that should be investigated for each of the priorities. This input helped to shape the research topic areas.

- Overview and commentary authors were asked for their feedback and suggestions for their priority as well as the entire list of priorities and research topic areas. This process involved several iterations before the list was finalized.

Methodology Summary

- Input on the priorities was collected from 204 academics, 96 business executives, and 18 others who did not provide identifying information, for a total of 318 contributors. The academics come from approximately 15 disciplines and from institutions in 32 countries. The executives are located in 11 countries, and many of them have significant geographic responsibilities. They are in approximately 25 industries, representing companies ranging from small startup businesses to Global 1000 companies. Most of the companies were global with headquarters in the United States.¹

Notes

1. Please refer to the Research Priorities for the Science of Service: CSL Business Report for a comprehensive list of the academics and business executives who provided input into the priority-setting process. The report can be accessed on the Center's Web site (wpcarey.asu.edu/csl). The list is also available as a Web appendix at jsr.sagepub.com/supplemental.

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Bios

Amy L. Ostrom is an associate professor of marketing in the W. P. Carey School of Business at Arizona State University. She received her PhD from Northwestern University. Her research focuses on issues related to services marketing including customers' evaluation of services, customers' role in creating service outcomes, and customers' adoption and evaluation of self-service technologies. Her work has appeared in a number of journals including *Journal of Marketing*, *Journal of Consumer Research*, *Journal of Consumer Psychology*, and *California Management Review*.

Mary Jo Bitner is a professor of marketing, PetSmart Chair in Services Leadership and Academic Director, Center for Services Leadership in the W. P. Carey School of Business at Arizona State University. She is the recipient of the AMA SERVSIG award for Career Contributions to the Services Discipline and an IBM Faculty Award in service science. She has published extensively on service topics in journals such as *Journal of Marketing*, *Journal of Service Research*, *Journal of the Academy of Marketing Science*, and others and is co-author of *Services Marketing: Integrating Customer Focus Across the Firm* (5th ed., 2009).

Stephen W. Brown holds the Edward M. Carson Chair in Services Marketing and is a professor of marketing and Executive Director of the Center for Services Leadership in the W. P. Carey School of Business at Arizona State University. He has received two honorary doctoral degrees from the Karlstad University in Sweden and the HANKEN School of Economics in Finland. Brown is the co-author and co-editor of 21 books and over 150 articles appearing in various publications, including *Journal of Service Research*, *Journal of Marketing Research*, *Journal of Marketing*, *Journal of Applied Psychology*, and *MIT Sloan Management Review*.

Kevin A. Burkhard is the Director of Strategic Initiatives for the Center for Services Leadership in the W. P. Carey School of Business at Arizona State University. He is responsible for providing leadership and coordination of high-impact initiatives to further the Center's vision. He works with academia, business, and government to advance global thought leadership in the science of service and deliver value to key stakeholders. Prior to joining the Center, he was vice president of consulting solutions at Synovate and a senior practice associate at McKinsey and Company. He earned his MBA in services marketing from Arizona State University and a BA in political science from the University of North Carolina at Charlotte.

Michael Goul is a professor and chair of the Department of Information Systems in the W. P. Carey School of Business at Arizona State University. He is also the Academic Director of the Teradata University Network. His research interests are services computing, data warehousing, and business intelligence. He was a pioneer in bridging the concepts, methods, and technologies of the artificial intelligence, knowledge management, and decision support disciplines. His work in the services computing area involves analytics as a service, smart services, self-service, and virtualization. He has authored or co-authored over 50 journal and refereed proceedings papers.

Vicki Smith-Daniels is a professor of supply chain management in the W. P. Carey School of Business at Arizona State University. Since January 2005, she has served as editor-in-chief of *Decision Sciences Journal*. Her recent research projects are in health care and service supply chains, supply chain integration, and project management. Her recent projects include health care supply chain performance improvement, supply chain collaborative practices, and decision making under ambiguity and complexity in development projects. She received her doctorate from the Ohio State University and her bachelor's degree from the University of San Diego.

Haluk Demirkan is a clinical associate professor of information systems at the W. P. Carey School of Business at Arizona State University. His doctorate is in information systems and operations management from University of Florida. His research in service science has included recent industry-sponsored research projects with American Express, Intel and IBM. His research appears in a number of journals, including *J AIS*, *J MIS*, *EJOR*, *CACM*, and others. He has 15 years of consulting experience in service-oriented solutions and information supply chain. He is the recent recipient of the IBM Faculty Award for a research project titled "Design Science for Self-Service Systems."

Elliot Rabinovich is an associate professor and member of the Dean's Council of 100 Distinguished Scholars at the W. P. Carey School of Business, Arizona State University. He received his PhD from the University of Maryland. His research centers on the role of e-commerce in the definition of strategies and performance in supply chain management and on implementation decisions involving information systems and inventory management. His research has been published in *California Management Review*, *Decision Sciences*, *Journal of Business Logistics*, *Journal of Operations Management*, *MIT Sloan Management Review*, *Production and Operations Management*, and others.