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Managing by design: From the Editors

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FROM THE EDITORS

MANAGING BY DESIGN

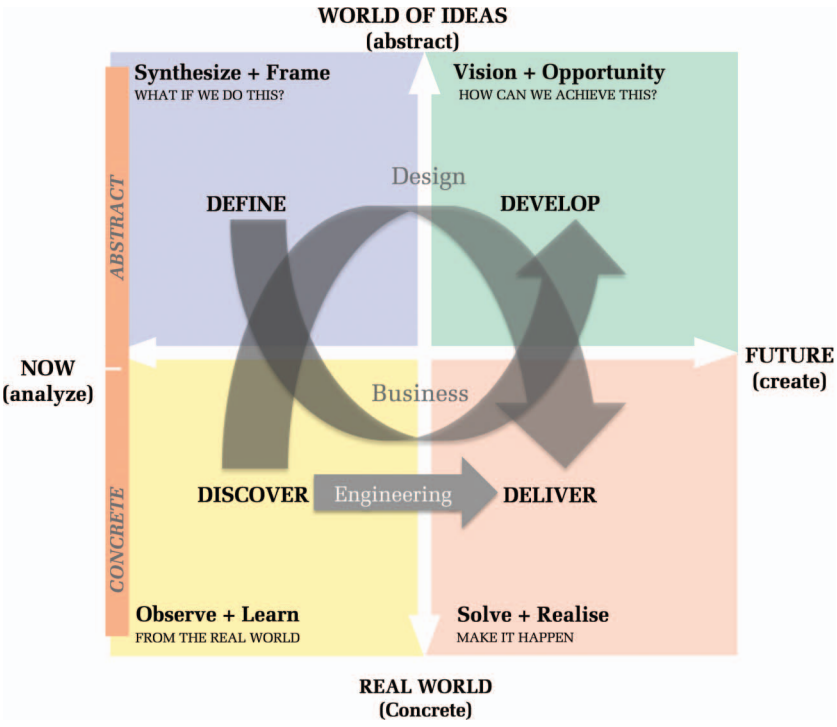
Over the past two decades, the importance of design and the value of design thinking as a tool for innovation have been recognized by both business and government. Firms such as Apple, Samsung, and Dyson have exploited design to translate technological innovation into products that deliver compelling customer experiences, and have come to dominate their respective industry sectors. Design thinking has also been applied successfully to public service innovation—a notable example is the U.K. Government, which championed the use of design with its GOV.UK portal, now internationally lauded. In the domain of digital consumer technologies, design has become a strategic tool for business, helping to translate technological innovation into user value, connecting with consumer needs, and creating compelling product and service experiences that leading firms have, in turn, successfully transformed into business value. The firms that have consistently applied design as a tool for innovation have outperformed their competitors, according to the UK Design Council (2005) and the Cox Review of Creativity in Business prepared for the U.K. Treasury (Cox & Dayan, 2005). For several decades, management scholars have focused on the role of design management and design thinking as a tool for innovation in both products and services, and have studied its impact on business performance (e.g., Black & Baker, 1987; Bruce & Bessant, 2002; Chiva & Alegre, 2009; Gemser & Leenders, 2001; Hargadon & Sutton, 1997; Kotler & Rath, 1984; Moultrie & Livesey, 2014; Walsh, 1996).

The value of a more "designerly" approach, beyond products and services, for business processes and public service innovation has been led by firms such as IDEO, universities such as Stanford and its d-School, and organizations such as the U.K.'s Design Council. Tim Brown, CEO of IDEO, has highlighted the increasing adoption of "design thinking" as a tool for innovation, from banking to the public sector, citing examples in the financial services such as Bank of America and in healthcare with the U.S. Kaiser Permanente and the Indian Aravind Eye Care System (Brown, 2008). By "design thinking," we refer to a human-centered approach to innovation that puts the observation and discovery of often highly nuanced, even tacit, human needs right at the forefront of the innovation process. It considers not just the technological system constraints but also the sociocultural system context. In Figure 1, we provide a stylistic model contrasting the approach of business-, engineering- and design-led innovation.

A designer's approach to a design challenge begins with an acute observation of the users and of the system's context and constraints, in what is referred to as the *discovery phase*. This may involve ethnography, visual anthropology, and the use of design probes and co-creation workshops. The next phase involves developing insights and framing the problem, the *define phase*; before moving into the *ideation phase*, which explores, through prototypes and visualizations, alternative potential solutions and how different types of users and stakeholders might interact with those solution concepts; and then concluding with the final *delivery phase*. In this phase, the prototypes are tested not only in terms of their technical robustness and effectiveness, but also of their fit with users' needs and the broader context of their lives. The process is highly iterative, as it moves backwards and forwards through the phases; it is collaborative, involving users and other stakeholders in the framing of the problem, as well as in scoping the opportunity for design interventions; and it is interdisciplinary, involving technical, design, and business disciplines in each of the phases. It combines a very concrete approach to both observation and analysis in the discovery phase, a switch into the world of the imagination in the definition and design ideation phases, and then moves back into the material realm as concepts are prototyped and tested with users before implementation.

By contrast, a more business-like approach to such a challenge may begin with defining a potential problem or market opportunity through personal insights and market analysis; move into a more concrete phase by testing the problem definition and potential solutions to it through primary and secondary market research and testing; and, finally, move back into the more conceptual level by developing a business plan based on estimates

FIGURE 1
Design Thinking



of market penetration, pricing, and distribution strategies. A technical or engineering approach, meanwhile, is rooted in the concrete zone, analyzing the problem and potentially deconstructing it into its component elements, identifying and assessing potential solutions to each of those components, and then developing a systemic response that resolves the technical requirements identified in the problem-definition phase.

All three approaches to design challenges are contextually appropriate, with the first being best applied where breakthrough thinking and disruptive innovation is required, or to address "wicked" problems (Rittel & Webber, 1973) where the nature of the problems and the system's context may be unclear or highly complex. The second approach is more risky, as it depends on entrepreneurial insights, conviction, and agility to respond to fresh market information, but, when it succeeds, it can be spectacularly successful. The third is highly effective for problems that are well defined, perhaps rooted in technological rather than human system constraints, or for incremental innovation.

Applying design thinking to the services sector implies using the customer journey, rather than the process workflow, as the frame of reference for the design. For instance, focusing on the customer buying experience and journey from identifying potential needs to fulfilling those through acquiring and using a product or service, rather than commencing with the design of a sales and order fulfillment process. It involves co-design with users, customers, and frontline teams delivering the services, and is a highly collaborative and iterative process that discovers needs, frames the key insights, and then rapidly prototypes and trials potential solutions with key stakeholders before moving into the delivery phase. At the heart of design thinking is the primacy of the customer or user experience, and that the products, services, processes, organizational design, and business model should be designed to enable that compelling experience, rather than the other way around. That is, the compelling user experience should not simply be the consequence of other design choices, it should be intentional.

THE DIGITALLY ENABLED SERVICE EXPERIENCE

High-performance organizations are creating these compelling, even seductive, consumer experiences by design, and have thereby challenged—even up-

turned—long-established incumbents, especially in the consumer electronics and related digital services. In recent years, we have witnessed the rise to dominance of companies such as Google, Skype, Amazon, Apple, and Samsung, among others, that have delivered compelling consumer experiences, enabled by digital technology, and have thus seized market share from competitors unable to respond. These firms have not only exploited industrial design to make more attractive products—for instance, at Apple and Samsung—but used user experience (UX) designers to transform the human–computer interface (HCI), and service designers, as well as interior designers, to transform the quality of overall service provision and customer engagement, from physical stores to online services. While the world of consumer electronics and related digital service providers have been leading the way with their exploitation of design, other sectors, especially business-to-consumer services, are lagging—most notably, in the financial services, retail, telecommunications, and the utilities sectors.

In many business-to-consumer sectors, customers are voting with their feet, and this is putting a substantial cost on business. Accenture's 2013 Global Consumer Pulse Survey showed that 51% of U.S. consumers switched service providers in the past year due to poor customer service, up 5% since 2012. Financial services, telecommunications, utilities, and retail were the industries impacted most severely. Consequently, Accenture estimated that $1.3 trillion of revenue was in play in the U.S. market, represented by the "switching economy" (Accenture, 2013).

THE "EXPERIENCE ECONOMY" AND THE CHANGING WORKPLACE

These findings reflect the analysis of Pine and Gilmore (2011) who argued that the "experience economy" is the next economy following the agrarian economy, the industrial economy, and the service economy. They suggested that businesses must orchestrate memorable events for their customers, such that memory itself becomes the product—the experience—and that it is not enough to provide quality service. Those sectors in which the consumer experience is not purposely designed, or even intentional, but, instead, the consequence of the design of the workflows, processes, organizations, websites, and other material artifacts that deliver it are paying a price in terms of customer acquisition and retention. Conversely, where the craft of industrial design, UX design, and service design have been used effectively and together, they have delivered compelling user experiences that have propelled the business performance of well-known global brands. In the field of consumer electronics and consumer digital services, designers are creating user experiences so seductive that our behavior with mobile devices, games, and apps is becoming addictive. Those seductive and compelling consumer experiences are raising the bar of what we expect from information technology services—and not only as consumers, but in the workplace, too. When we can buy online with one click on Amazon, make video calls with Skype, connect to our social networks via Facebook, and share knowledge and ideas through Twitter, it is hard to understand why our corporate procurement systems, teleconferencing, directory and workgroup services, and corporate communications platforms are so woeful by comparison. Expectations in the workplace have changed, and savvy employers understand the impact of this on their workforce.

Design Thinking in the New Workplace Experience

The lens provided by design thinking might also be applied to elements within the management domain that are not so apparent; that is, within the roles of process re-engineering, workflow, the workplace itself, and the design of organizations. In the early decades of the twentieth century, the scientific management of workers ("Taylorism") and the standardized, industrial, mass production of goods ("Fordism") redefined not only the nature of the workplace but also the entire operation of organizations. In a similar vein, the process re-engineering of the 1990s and early 2000s that focused on operational effectiveness created business processes that were engineered rather than designed—just as we might consider a product to be well engineered technically, but lacking in design and not empathetic with its users' needs. Re-engineering such as that undertaken by Taylor and Ford focuses on workflow optimization rather than on employee or customer journeys and their experiences. Yet, today, several drivers make workers expect more from the digitally enabled workplaces, not least their consumer experience of digital devices and services outside of work. One of the key drivers of the NWX is the competition for talent, with companies designing the employee experi-

ence and the services that support them in order to enable them to deliver value to clients and colleagues. Another is the expectations of the Generation "Y" workforce, where young adults, who tend to be well educated, well networked, multilingual, and self-determined, are looking for jobs that enable personal growth and development of the self, and yet, in their job search, typically encounter workplaces that are suffering from restrictive hierarchies, high levels of routinization, and do not offer the preferred flexible and multifaceted activities. Finally, technology in the workplace also exerts a strong influence, from social media to big data, cloud computing to the Internet of Things, and mobile devices in every shape or form to ever-present high-speed connectivity. Many established businesses have found this rate of technological innovation almost indigestible, but have had to compete with new entrants adept at exploiting these technologies and integrating them into their business operations or product and service offerings. These technologies not only blur the boundaries between work, rest, and play, but also have the capacity to transform the workplace experience, as well as the consumer services—and this requires not only engineering but design thinking (Myerson & Ross, 2013).

Professional services firms are responding. They are hiring designers, collaborating with design firms, and even acquiring companies. In 2013, Accenture acquired Fjord; IBM announced, in 2014, that it was hiring 1,500 designers, and as well as partnering with Apple for business-to-business services; and Samsung is growing its 1,500-strong interaction design, UX, and product design team with a service experience design group. In the United Kingdom, the Government Digital Services unit is expanding its design team to comprise more than 250 designers and the Cabinet Office has hired designers for its new Policy Lab, while Capita, a major provider of government services in the United Kingdom, has created a service design practice. All of these firms are focusing on creating a richer and more compelling experience for businesses—both in terms of the "new workplace experience" (NWX) as well as the "new consumer experience."

Design Principles for the New Workplace Experience

To understand how we might translate the compelling and seductive nature of the consumer experience into the workplace means deconstructing the workplace experience into those elements that leaders and managers might influence, and defining an approach or set of principles for applying design thinking to the NWX. Factors that influence the workplace experience include the organizational design and related incentives and management procedures; the task and associated business process design; the support tools and information services that enable the execution of the task; the physical and virtual environment in which the task takes place; the internal interaction between employees within a business or organizational function, as well as between functions and the extended enterprise and its partners and customers; and the organizational culture and communications and human resource support programs. This is not an exhaustive list, but it is the combination of these and other factors that add up to the employee workplace experience—and, as we can see, that experience is not designed but is the consequence of design decisions in each of these areas.

To take a more designerly approach, we have considered the principles proposed by Zomerdijk and Voss (2010) for the design of "experience-centric" services alongside the ten principles developed by the U.K. Government Digital Services (GDS, 2015), and combined these with the work of the Royal College of Art's service design department. The resultant approach we are proposing has six key elements for consideration by managers and leaders that relate to the design of the NWX:

(1) *Identify real and compelling needs.* The design of the NWX begins with a deep and empathic understanding of needs; first, of the end-user customers and how value is created for them, and then, with the same empathy, translating that into the roles and tasks to be performed by the employees to fulfill those needs and the organizational, management, and digital systems that support them.

(2) *Focus on value and values.* The NWX must enable the employee to understand how their role (and associated actions) contributes value to the organization's goals, and how it creates new value for its customers. It should enable employees to generate new value personally, rather than robotically execute processes conceived by others; to feel valued for their contribution by their management; and to recognize that there is an alignment of values between the employee, organization, and its customers.

(3) *Design the employee experiences, not just workflows and tools.* Design of the NWX should be from the perspective of the user or employee journey, and each and every one of the associated touchpoints that unfold over time. The design should consider not only the task phase, but also the phase the leads up to the activity as well as afterwards. The goal is simplicity. An elegant solution resolves a complex set of activities with seeming simplicity, making the outcome natural and harmonious, rational and efficient. This is particularly important in customer-facing roles, where the interaction between staff and customers will influence both emotions and perceived quality and satisfaction.
(4) *Collaboration, co-creation, co-production.* The design of activities and the employee or user experience and resulting workflows cannot be designed in a vacuum; they are co-created, even co-produced. Not just consultation but real collaboration with employees, the frontline resources and the back office teams who support them, as well as the customers who may be the recipients of the service is a crucial part of the designerly approach to innovation in service experience.
(5) *Sensory and emotional engagement.* The tangible elements involved in delivering the service, the digital interaction, and the physical environment in which the service or task is executed all influence the employee experience, their perceptions and behaviors. They can be designed to evoke particular emotions and responses, from playfulness to stimulating creativity and collaboration, and thereby intensify the engagement.
(6) *Creating a narrative.* Managing the sequence, progression, and duration of events creates a narrative, just as at the theater. The sequence may follow a dramatic structure of rising action, climax, falling action, and dénouement, with a special focus on the management of the start and the end, especially where the service involves direct end-user customer engagement.

HOW MIGHT LEADERS MANAGE BY DESIGN?

Applying design thinking to the design of work itself, the systems that support it, and the physical and virtual environments in which it takes place, or designing not only the customer and end-user but the employee experience, are opportunities for business and organizational leaders to attract and retain top talent, as well as to enhance productivity and operational effectiveness. However, firms are slow to respond to changing needs in the workforce and slow to grasp the opportunities. Yet, the application of design thinking to a number of domains that contribute to the workplace experience is possible. These include, first, new service and product design processes, including HCI, that enable a more integrated, interdisciplinary, and collaborative innovation process. They might also incorporate the design of business processes and related systems that support the workplace. Relatedly, the design of information and the information experience that support workplace operations—organizational design—enables greater and more effective integration of different disciplines and functions. This may include the organization's relationship to the extended enterprise or partner eco-systems that participate in the value chain. Thirdly, the application of environmental design to the physical workplace enables greater interaction, collaboration, and interdisciplinary working, as well as the capacity to move between the concrete or material world and the world of the imagination (see Myerson & Ross, 2013). Finally, management design can be applied through communication, motivation, and incentivization programs that stimulate, support, and reward new behaviors; for example, human resource programs that consider the end-to-end employee journey and resulting experience, from recruitment to onboarding, through promotions and employee development to exit or retirement.

OPPORTUNITIES FOR MANAGEMENT SCHOLARS

The design discipline has gone beyond product appearance and has developed in terms of industrial design, HCI and UX design, and service and experience design to have a strategic impact on business. Design thinking has helped to create compelling consumer and user experiences that translate into enhanced business performance. However, while the role of design in products and services has been explored to a modest extent, scholarly discourse is limited on the role of the overall experience on firm performance. There are now new questions and opportunities for empirical work and theory development, as well as for the development and testing of new conceptual frameworks and methods in terms of the role, impact, and application of design, not only to products and services but also to management science.

Perhaps most obvious are questions regarding the performance effects of new workplace design initiatives. As studies investigating product and service design teach us (e.g., Black & Baker, 1987; Chiva & Alegre, 2009; Moultrie & Livesey, 2014), the measurement of the costs and benefits of new workplace design initiatives is far from trivial, and has to take into account the possibility that substantial benefits only accrue (much) later than the associated costs. Yet, as with product and service design, one may speculate that a relatively "small investment in the experiential aspects of design has a disproportionate effect, or leverage, on the financial results of the firm" (Moultrie & Livesey, 2014: 581–582). Beyond investigations emphasizing traditional measures of firm performance, the design of the NWX also raises questions about performance measures (and methods) that can capture the quality of the employees' work experience in a holistic and also detailed manner, so that it can become subject of managerial assessment and improvement.

Along these lines, it is important to understand the extent to which tensions exist between the design of favorable, individual- and group-level workplace experiences and performance outcomes (e.g., Stigliani & Ravasi, 2012). Case in point, while the benefits of a more devoted, satisfied, and loyal workforce are evident, the design of a workplace experience may establish internal structures, processes, and activities that fail to meet the economic pressures established by the external marketplace. Furthermore, such tensions seem to be more pronounced in exploitative types of organizational activities (vis-à-vis exploratory activities); that is, in activities that typically rely on efficient and flawless execution of pre-defined routines. The ongoing technological transformation of the workplace may, however, enable organizations to redesign the very nature of exploitative types of jobs, and to redefine traditional roles in clerical and office work (Stubbs, 2013).

These observations also beget questions of interest to organizational scholars, as they relate to the design of new organizations and the redesign of existing ones (George & Bock, 2011, 2012; Simon, 1981). Researchers are just beginning to understand how founders shape the types of workplaces that they want to work in, and how their actions and decisions in new firm creation correspond to their needs and values (Fauchart & Gruber, 2011). In terms of the redesign of existing organizations, questions arise regarding the role of hierarchies, interfaces, networks, and organizational cultures that are conducive to an improved workplace experience, and, perhaps even more importantly, the very ability of established organizations to engage in such (oftentimes substantial) changes. In particular, less studied organizational forms, such as the holacracy, and forms that are typically not in the center of scholarly attention (e.g., European monasteries or the Israeli kibbutz), may offer interesting insights into workplace experience design from an organizational perspective (see Dark Horse Innovation, 2014).

These are just a few examples of topics and issues that scholars could address. Additional opportunities for research exist, for instance, in terms of the physical environment and its interaction with organizational design to create the NWX, in terms of human resource management practices (e.g., new patterns of authority in co-creation) and their intersection with the NWX, and in terms of how design thinking may be influenced by and influence motivation. Because the design of the NWX integrates employee perspectives, it is likely that one could use motivation theories to predict the types of needs that should be fulfilled by the design of the NWX and the design choices that might best fulfill those needs. Overall, it seems that the design of the NWX has the potential to become for the experience economy what the assembly line was to industrialization—and, with this transformation, an array of important new questions for scholars is beginning to take shape.

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