

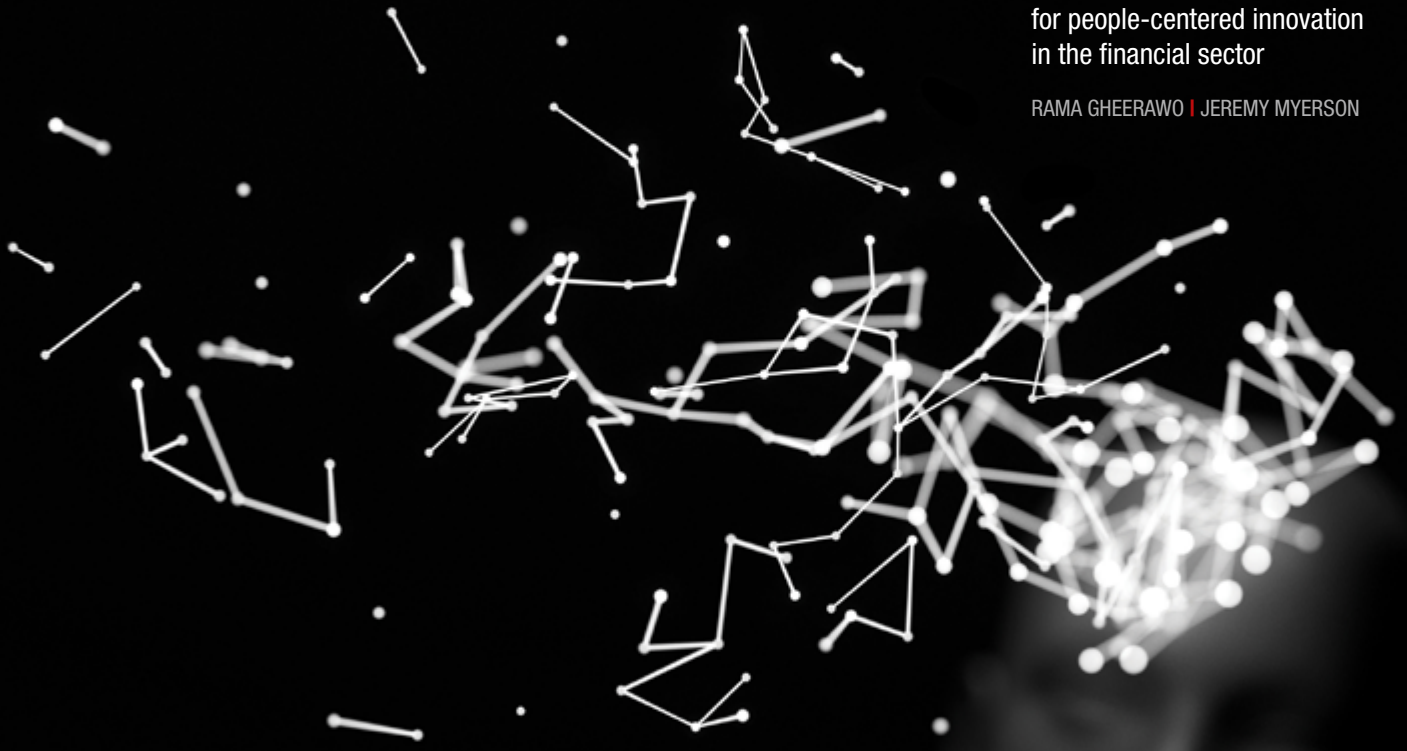
THE CAPCO INSTITUTE  
**JOURNAL**  
OF FINANCIAL TRANSFORMATION

**DESIGN**

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Design thinking as a process  
for people-centered innovation  
in the financial sector

RAMA GHEERAWO | JEREMY MYERSON



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**DESIGN THINKING**

**#48 NOVEMBER 2018**

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**DEAR READER,**

Design thinking, a collaborative, human-focused approach to problem-solving, is no longer just for the creative industries. It has become an important management trend across many industries and has been embraced by many organizations. Its results are hard to ignore. Indeed, design-driven companies regularly outperform the S&P 500 by over 200 percent.<sup>1</sup>

To date, the financial services industry has not led in adopting this approach. However, leaders are recognizing that important challenges, such as engaging with millennial customers, can be best addressed by using design thinking, through the methodology's exploratory approach, human focus, and bias towards action. This edition of the Journal examines the value of design thinking in financial services.

Design thinking introduces a fundamental cultural shift that places people at the heart of problem-solving, which is critical in a technology-driven environment. If the customer's real problems are not fully understood, technological solutions may fail to deliver the desired impact. In this context, design thinking offers a faster and more effective approach to innovation and strategic transformation.

The case studies and success stories in this edition showcase the true value of design thinking in the real world, and how this approach is an essential competitive tool for firms looking to outperform their peers in an increasingly innovation-driven and customer-centric future. At Mastercard, design thinking has become a part of almost all organizational initiatives, from product development, research and employee engagement to solving challenges with customers and partners. Meanwhile, at DBS Bank in Singapore, a data-informed design model has been firmly embedded into the bank's culture, enabling them to successfully move from being ranked last among peers for customer service in 2009, to being named the Best Bank in the World by Global Finance in 2018.

I hope that you enjoy the quality of the expertise and points of view on offer in this edition, and I wish you every success for the remainder of the year.

A handwritten signature in black ink, appearing to read 'Lance Levy', with a stylized, flowing script.

**Lance Levy, Capco CEO**

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<sup>1</sup> <http://fortune.com/2017/08/31/the-design-value-index-shows-what-design-thinking-is-worth/>

# DESIGN THINKING AS A PROCESS FOR PEOPLE-CENTERED INNOVATION IN THE FINANCIAL SECTOR<sup>1</sup>

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**RAMA GHEERAWO** | The Helen Hamlyn Centre for Design, Royal College of Art

**JEREMY MYERSON** | The Helen Hamlyn Centre for Design, Royal College of Art

## ABSTRACT

This paper provides an overview of the origins, principles, values, and benefits of design thinking as a creative framework for innovation in business. It looks in particular at the rise of design thinking in the ten years since the global financial crash and speculates on the suitability of its methods for current transformation challenges in the financial services sector. In setting out practical frameworks for adoption, the paper presents three people-centered projects from the Helen Hamlyn Centre for Design at the Royal College of Art, carried out with financial companies.

## 1. INTRODUCTION

There has been growing momentum over the past ten years for non-designers to enter the design space – for engineers, entrepreneurs, managers, and social scientists in particular to think and act like designers by adopting ‘designerly’ ways of thinking and emulating the methods designers use to innovate. This movement has been given a name, “design thinking,” and it has become evident across a broad span of design-based activity, from delivery of public services to development of consumer electronics. The impact in many business circles is tangible.

Design thinking is currently less prevalent in financial services, although that is starting to change and its core principles are relevant to the transformation journey that the sector is undergoing. That is because

design thinking has proven to be an effective method for harnessing the creative, innovative, and people-centered approaches enshrined in the design process and applying them to organizational challenges. In effect, it provides an alternative lens through which to view business problems and identify solutions to solve them.

A catalyst for adoption of design thinking was a Harvard Business Review paper published in 2008 by Tim Brown, chief executive officer of the global innovation consulting firm IDEO. The article described design thinking as a tool for business, explaining it as a discipline that uses the designer’s sensibility and methods to match people’s needs and desires with what is technologically feasible and what is viable as a business strategy. In a parallel development, several business and engineering schools, led by Stanford University in Palo Alto, where IDEO is headquartered and Brown and his colleagues teach, set up ‘D-Schools’ to explore the topic. Tim Brown’s follow-up book, *Design for change: how design thinking transforms*

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<sup>1</sup> Design thinking is taught as an Executive Masterclass to companies at the Royal College of Art by Rama Gheerawo, Director of the Helen Hamlyn Centre for Design, and Jeremy Myerson, Helen Hamlyn Professor of Design.

organizations and inspires innovation in 2009, further broadened the debate on what design thinking actually means and how its key principles work in practice.

In its simplest form, to think like a designer involves a number of basic things, such as: showing human empathy with people rather than being scientifically neutral; adopting a participatory mindset rather than an expert one, so you can ask the dumb questions and challenge accepted wisdom; and making use of design tools and skills such as visualization and prototyping to share ideas, and elicit and incorporate feedback as part of a co-design process. A key question for the financial service industry, as it struggles to reconnect with customers and staff amid a crisis of legitimacy and trust following the global financial crash, is how much impact design thinking might have in a field where its influence to date has been less evident than in other spheres.

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**“A definitive move that strengthens the relationship between design thinking and business is the development of design thinking methods, tools, teaching curricula, and practice at business schools.”**

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## 2. BACKGROUND AND DEFINITION

While design thinking has gained currency in the decade directly following the crash, its practices predates its modern nomenclature. Some scholars argue that its ideas and ideals resonate across the centuries and even reach back to the achievements of ancient civilizations. Human history is thought to be full of design thinkers, long before the term was defined and popularized. Leonardo Da Vinci, Isambard Kingdom Brunel, and Richard Buckminster Fuller all used or created processes that resonate with a design thinking approach that modern practitioners would recognize – from a desire to better the human condition using a cross-disciplinary approach, to taking advantage of technological advances to invent and innovate in a way that tackles complex challenges situations. In his 2009 book, Tim Brown himself used Brunel’s passenger-focused strategy for the engineering and design of his Great Western Railway from London to Bristol in 1841, with trains “floating across the countryside,” as a pioneering early example of design

thinking in action. To achieve such a user-centric effect, Brunel built bridges, viaducts, cuttings, and tunnels to create a smooth experience.

As to the more modern origins of design thinking as a phrase or a concept, Mottee (2013) and Chae (2017) suggest Herbert Simon’s 1969 book, *The sciences of the artificial*, as the initial point at which design was proposed as a way of thinking, highlighting the definition of design as “the transformation of existing conditions into preferred ones.” The book proposes seven steps which still relate to current processes of design thinking as follows: define, research, ideate, prototype, choose, implement, and learn.

Szczepanska (2017) talks about the Design Science movement that originated in the U.S. in the 1960s, where Buckminster Fuller created multidisciplinary design teams to address complex systemic challenges. Peter Rowe’s 1987 book, *Design thinking*, is also notable, though its focus was on the process of designing in architecture and urban planning rather than design thinking as it is known today. Kleinsmann et al. (2017) cite another early use of the term from Bruce Archer in his 1979 article, “Whatever became of design methodology?” stating that design thinking originated within the design research community. Archer helped found the Design Research Society in 1967 and established the Department of Design Research at London’s Royal College of Art (RCA), where The Helen Hamlyn Centre for Design (the host institute for the authors of this papers) is now based.

In today’s context, design thinking has become a living, evolving idea that is being adopted by a range of individuals and organizations. It is also being defined and redefined and means different things to different people [Johansson-Skoldberg et al. (2013)]. Importantly, at the center of design thinking is the idea that everyone can access and activate the creative value of design. Cross (2011) states that “everyone can – and does – design,” noting that humans have had a long history of design thinking as evidenced by the artefacts and inventions of previous civilizations and the “continuing tradition of vernacular design and traditional craftwork.”

Exact definitions of design thinking vary but some commonalities and convergences have emerged. Dorst (2015) talks about design thinking as a “real alternative to conventional problem-solving strategies,” something which design thinking case studies attest to. The move



to address systemic challenges through design thinking [Luchs (2016)] or create organizational change by establishing a design thinking culture within an institution or company [Calabretta et al. (2008)] are ideas that have gained visibility in the last decade. The people-centered aspect of design thinking is also prevalent, with the terms human-centered and user-centered used unilaterally within the field. Fraser (2012) talks about “deep human understanding” based on work at the Rotman School of Management. Curedale (2015) notes that design has moved from being a marketing tool to answering human need.

### 3. PRINCIPLES OF DESIGN THINKING

A definitive move that strengthens the relationship between design thinking and business is the development of design thinking methods, tools, teaching curricula, and practice at business schools. The d.school at Stanford University, founded in 2005,<sup>2</sup> outlines eight “core abilities”:

1. Navigate ambiguity
2. Learn from others (people and contexts)
3. Synthesize information
4. Experiment rapidly
5. Move between concrete and abstract

6. Build and craft intentionally
7. Communicate deliberately
8. Design your design work

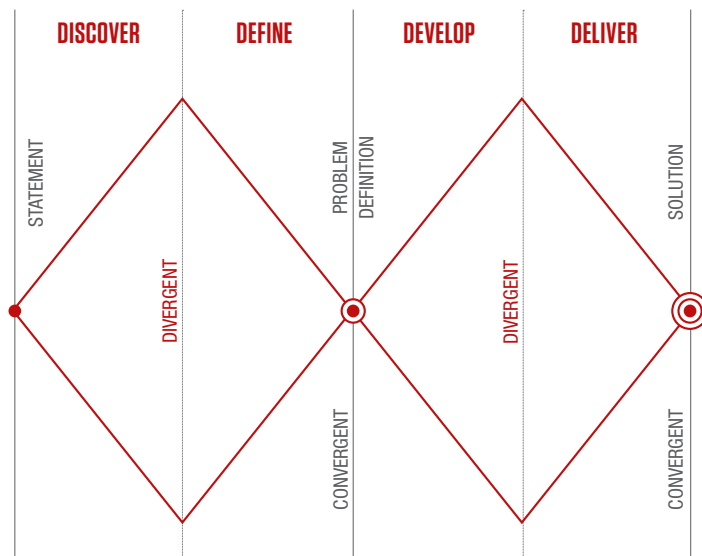
An empirical interview study of five large organizations by Carlgren et al. (2016) led to five themes said to characterize design thinking: user focus, problem framing, visualization, experimentation, and diversity.

“**User focus**” is about “deep empathy building” as well as understanding and involving people in the generation and making of ideas. “**Problem framing**” looks at “widening, challenging, and reframing” a problem statement instead of simply trying to solve it, and avoiding the trap of narrowing down to a solution too quickly. “**Visualization**” aims to use “visual representations” to show ideas in either two or three dimensions to gain consensus and share ideas rather than simply being about prototyping and delivering a solution. “**Experimentation**” refers to iteratively developing and testing ideas in ways that are convergent and divergent, working on multiple solutions to maximize the creative value of process and outcome. “**Diversity**” was seen as a cross-cutting theme applicable to ensuring a range of opinions and perspectives as well as a diversity of team members.



<sup>2</sup> <https://stanford.io/2yMGRcd>

**Figure 1:** The Double Diamond model outlines the place of convergent and divergent thinking within the process



Source: U.K. Design Council

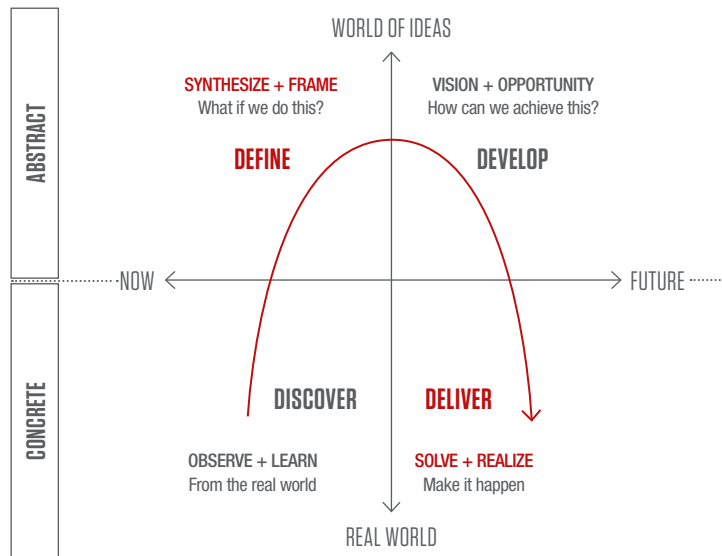
Within our own institution, The Helen Hamlyn Centre for Design, we have developed design thinking frameworks, tools, and practice over the past 10 years through close connection with IDEO, the U.K. Design Council, and others. These are our own principles for engagement with design thinking:

- **Look and learn:** a primary characteristic of design thinking is to be patient, to go into the field, to observe and record in a sketchbook or with a camera, and to do user research without preconceptions. So much business thinking is based on preconceived ideas, on existing market “knowledge,” and an over-awareness of barriers to change. When asked to design a new product, service, or communication, designers look at things in a fresh and sometimes naïve way, asking the dumb questions and behaving like participants in a process, not experts. That way, they look and learn. Design ethnography need not be complicated – it can simply be about walking a mile in your customer’s shoes.
- **Prototype early and often:** the prototype tends to mark the final stage before production in default business thinking: “this is what it is going to be like.” But design thinkers treat the prototype differently. They build, test, and experiment in an iterative loop, revising from one prototype to the next to learn about what will work. Remember that James Dyson, a Royal

College of Art graduate, experimented with more than five thousand prototypes before perfecting the dual-cyclone vacuum cleaner that built his business empire. So the key message is try things out first – and do not fret if they fail. As a business, you will discover a lot and succeed sooner by prototyping often.

- **Don’t be afraid to cross-pollinate:** business managers are often specialists in a particular field – and their thinking is bounded by that field of expertise. But designers tend to take a more generalist approach that means lessons in one sector can be applied to another. One of the central tenets of design thinking is a willingness to cross-pollinate – to take ideas from one area and apply them in a totally different context. Can the pit stop tyre change process in Formula 1 racing be translated into the team dynamics in the accident & emergency department of a hospital? Can aerospace technology be inserted into an ergonomic office chair? Can the typography associated with prayer books help to sell shampoo? There can be surprising solutions to business problems if you are willing to be open-minded and cross-pollinate.
- **Think visually, not in words:** many professionals rationalize or justify design decisions by writing long reports with lots of words to wade through. Design thinkers use images. Their way of thinking is visual. Simple diagrams, photo-evidence, development sketches, etc., all help to communicate ideas and support effective and collaborative design decision-making. When the authors of this paper were asked to organize a design thinking seminar at 10 Downing Street for senior civil servants, one of the key learnings from the day was to put more images and less words into briefings for government ministers, as these had more impact in terms of argument and evidence, and saved time.
- **Know the limits of design thinking:** as a designer thinker, you can look and learn, you can prototype early and often as you test designs with users, you can cross-pollinate ideas from one sector to another, and you can think visually at every opportunity. But that does not make you a designer. The final principle is to know the limits of design thinking. Even when you have collected a wealth of customer evidence and formulated and tested your innovative new approach, you will still need the services of a professional designer to help make the project a reality in the marketplace. In our view, design thinking is a useful bridge between designers and those who commission and use design, a shared set of perspectives or values so that everyone is on the same page and pulling

**Figure 2:** design thinking manages a shift of focus between “now” and the “future,” and the “world of ideas” and the “real world”



Source: The Helen Hamlyn Centre for Design, Royal College of Art

in the same direction when it comes to making the project a success.

#### 4. FRAMEWORK FOR DESIGN THINKING

As well as establishing our principles, we have also established our own framework for using design thinking to address business problems. We took as our starting point the “Double Diamond” model of innovation developed by the U.K. Design Council (Figure 1). This sets out four key stages: discover, define, develop, and deliver. Each stage involves either convergent thinking or divergent thinking depending on whether you wish to create choices (blue sky thinking) or make choices (focusing ideas) within the process.

Typical activities in each phase are:

- **Discover phase (divergent):** exploration of brief and hypothesis, contextual research and definition of project participants or communities. Looking at the world in a novel way and gathering insights
- **Define phase (convergent):** designing and conducting design ethnography. People-centered briefs defined from the research insights. Curating and implementing the possibilities identified in the Discover phase. Writing of design brief that nails the real problem.

- **Develop phase (divergent):** development of a number of ideas through co-creation and design ideation processes. This process of trial and error helps to improve and refine ideas.
- **Deliver phase (convergent):** selection of ideas to take forward and delivering outputs in the form of prototypes, services ideas, or guidance. The resulting project is finalized, produced, and launched

However, our own framework adds a new dimension by negotiating the relationship between the real world (concrete) and the world of ideas (abstract), and by placing the define and develop stages in the world of ideas, not the real world, thus freeing up innovation potential. Figure 2 sets out the process.

The four quadrants that result from the framework described in Figure 2 lend themselves to the following design thinking activities, creating an “arc of design thinking” from “discover” (observe and learn), through “define” (synthesis and frame), and “develop” (vision and opportunity) to “deliver” (solve and realize).

- **Now-real world:** this is about observing and learning from what is currently happening. Activities are about understanding context and people’s behaviors in existing situations and gathering insights that can be evaluated. This takes place in the present moment and builds up a real picture of any given situation.
- **Now-world of ideas:** synthesizing and reframing the insights that were gathered in the previous stage is the main activity here. Asking questions such as “what if we do this?” talks to the speculative characteristic of this. This is a transformational process that moves a project into more imaginative and unknown spaces.
- **Future-world of ideas:** here, the focus is on articulating a vision and defining opportunities. Design briefs are typically formulated and answered at this point and a number of creative avenues are delineated and explored. It is important to nourish every idea at this stage as often the most creative ideas come from unfettered ideation.
- **Future-real world:** the final stage is about solving, realizing, and delivering ideas back in the real world, making sure that they are relevant to the people who will most benefit from them, and that they are market-appropriate. Activities such as prototyping and evaluation often take place at this point.

When we map “The arc of design thinking” onto the Double Diamond model, our final model can be described visually as that presented in Figure 3.

## 5. DESIGN THINKING CASE STUDIES IN THE FINANCIAL SERVICES SECTOR

The Helen Hamlyn Centre for Design at the Royal College of Art has used this framework to work with partners to address innovation challenges in the financial services sector. Three are discussed here.

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**“A key question for the financial service industry, as it struggles to reconnect with customers and staff amid a crisis of legitimacy and trust following the global financial crash, is how much impact design thinking might have in a field where its influence to date has been less evident than in other spheres.”**

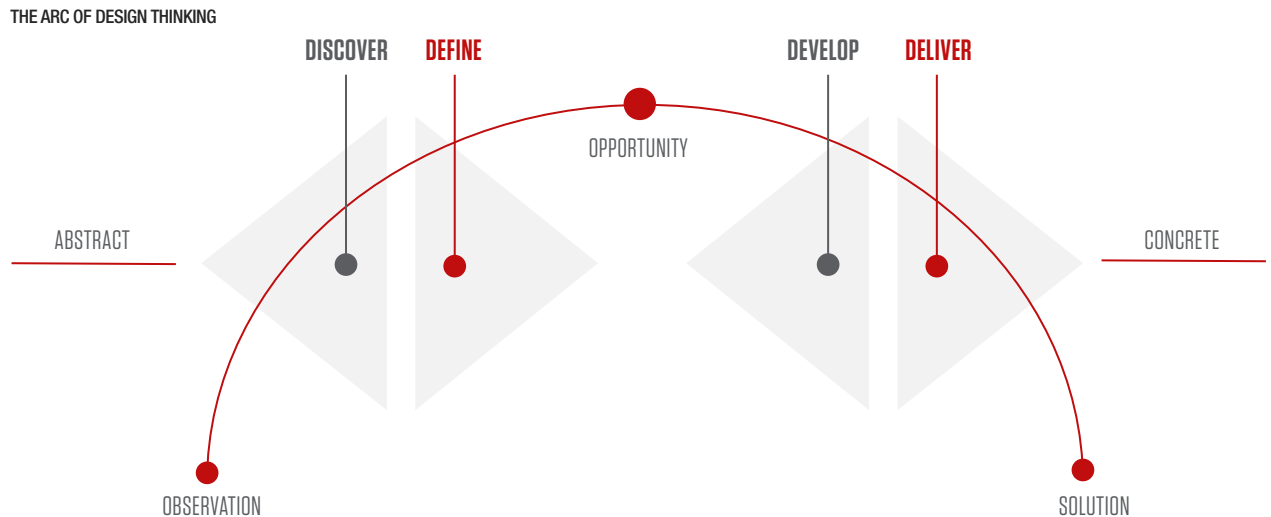
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### Case study 1: Designing a hybrid bank branch network

In an era of digital disruption with more customers going online, a large Italian banking group wanted to rethink its approach to designing a future bank branch network so that it could draw customers in and connect with local communities as well as improve working conditions for employees and optimize the property portfolio. The project looked at the trend towards opening “hybrid” stores, combining bank branches with bookshops or coffee shops, for example, in order to provide a more local and individual experience. This kind of hybridization is often very practical in the sense that having multiple services on a site both draws more customers in and invites them to stay.

The project used design thinking methodology to undertake a study tour looking at hybrid spaces in London and Milan in the “discover” phase of the project. The precise requirements of the bank and its customers were defined as employees and customers were engaged in co-creation workshops. This led on to the development of a flexible architectural “kit of parts” to aid the converting and re-purposing of bank branches for more hybrid uses.

Figure 3: Diagrams showing how project stages combine convergent-divergent thinking with the concrete-abstract balance



Source: The Helen Hamlyn Centre for Design, Royal College of Art



Mini-hybrid, midi-hybrid, and maxi-hybrid models were developed. In the later stages of the project, a real-world pilot was built in Milan for evaluation and iteration.

Ultimately, this design thinking project will provide an insight into how the bank can adapt its physical and digital spaces to provide the bank branch network of the future, reaching out to local communities in a more meaningful way at a time when so much engagement and interaction is lost through online banking.

### **Case study 2: Rethinking the financial office environment**

A large Scottish banking group wanted to improve working conditions, optimize space, and enhance employee engagement in its Edinburgh headquarters. Our research team began the project with in-depth user research inside three media organizations operating at different scales, from a creative agency with 60-70 staff working in a converted warehouse to a global communications company with 4,000 employees based on an out-of-town campus. These firms are early adopters of new ways of working.

Findings were used in the 'define' phase to create an architectural framework for office interiors. This framework demonstrated how workspace could be redesigned to be more socially engaging and dynamic

by addressing four elements: programmable surfaces, circulation, large objects for way finding, and points of social interaction. This abstract thinking was developed in the world of ideas and brought back into the real world for implementation in the corporate headquarters building. The project using design thinking principles tested a fundamental design proposition to create more ownership, social capital, and social cohesion within a given financial service space.

The framework was subsequently developed into an online toolkit designed to enable a global furniture manufacturer, Herman Miller, to collaborate with its clients on workspace analysis and employee consultation when creating new people-centered work environments. Wider applicability was only achieved, however, through a process of direct design ethnographic engagement with a communities of office workers.

### **Case study 3: Banking without barriers for older people**

This project worked with an age charity and a U.K. retail bank to explore the issues and challenges arising from the rise of internet banking, which has reduced branch footfall significantly and prompted a number of retail banks to review their branch footprint. While welcomed by many, these developments can prove problematic for some customers such as older people, 75-plus, who are

unfamiliar with online banking and those with physical and/or cognitive challenges who are most affected by reductions in traditional branch services. In this context, the empathic and people-centric focus of design thinking was highly relevant.

In the “discover” phase of the project, the research team investigated how customers who are affected by branch closures may need support to identify alternative ways to meet their banking needs, and those who consider digital banking may need some assistance to overcome their concerns. Throughout the project, extensive mixed-method design approach was adopted that included case studies, interviews, discussion groups, co-design sessions, spatial prototyping, and workshops co-authored with older customers.

New solutions were developed with the aim of improving access to financial services in a digital age, benefiting everyone in society regardless of age or digital ability. The study was brought back into the delivery stage with targeted proposals fed into the bank’s design and implementation teams.

## 6. CONCLUSION

As these case studies demonstrate, whether building a community-based bank branch network of the future, rethinking headquarters office space, or removing barriers to banking for excluded groups of older, vulnerable, and disabled people, design thinking has something to offer in terms of addressing the challenges around financial transformation. At its most basic level, the financial services sector needs to get closer to its customers and employees to raise standards, performance, and, ultimately, profitability. The empathic, iterative, experimental, and evaluative qualities that design thinking brings to innovation can be practiced by non-designers, with elements of co-creation, and it can be argued that these are precisely what the era of digital disruption in the sector now requires.

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