

# STRATEGIC VALUE

IS EVERYWHERE

Design professionals seem to act more and more as facilitators, supporting and training companies in pursuing innovation directions. However, design professionals are traditionally 'makers' and like to act as such also at a strategic level: **they want to have ideas, create PSS concepts, and translate them into tangible elements; they want to be the main actors and we think they should be.**

#### Team

Giulia Calabretta, Maaïke Kleinsmann,  
Daniëlle Arets & Onno van der Veen

We would like to thank all CRISP design professionals and practitioners we interviewed over the last four years. We would have never been able to disentangle your unique strengths without your unique openness and enthusiasm.

48

THE STRATEGIC  
DESIGNER'S  
PSSs PALETTE

50

WHAT DOES  
THE DESIGNER WANT?

52

A BOTTOM-UP APPROACH  
TO PROVOKE VALUE

54

STRATEGIC VALUE OF A  
RESTFUL MOMENT

56

PITFALLS AND  
POTENTIALS

# THE STRATEGIC DESIGNER'S PSSs PALETTE

Giulia Calabretta & Gerda Gemser

## 10 CAPABILITIES

Doing a great job in designing successful PSS is rewarding but tricky. Here is a set of additional capabilities that design professionals should master to play a strategic role in PSS design and management. The palette comes from investigating multiple PSS projects where CRISP design professionals were involved. Design professionals should learn how and when to use these capabilities throughout a project and always remember to combine each of them with visualising and making things tangible.

### TRANSLATING

Converting PSS information from a certain language to another (e.g., verbal to visual, visual to verbal, tacit to explicit, explicit to tacit).

### ORCHESTRATING

Combining and balancing different perspectives, knowledge and expertise relevant to a PSS.

### INSPIRING

Make PSS stakeholders confident in thinking and acting differently.

### ENVISIONING

Developing a long-term vision for PSSs (of for a PSS).

### FOCUSING

Keeping stakeholders' attention and resources focused on achieving both short-term and long-term PSS objectives.

### SIMPLIFYING

Reducing a PSS's perceived complexity by organising PSS information in simple ways and concentrating on a PSS's key elements.

### EMBEDDING

Making the organisation embrace the PSS mindset, the PSS vision, and the PSS itself.

### ROADMAPPING

Defining all the steps to implement a long-term PSS vision.

### ALIGNING

Keeping the PSS aligned with the company's strategy, its values, and its resources.

# VISUALISING

## THE CAPABILITY THAT COMPLETES THE PALETTE

Visualising: Making everything tangible, concrete, memorable. Envisioning through scenarios. Aligning and orchestrating through prototypes. Inspiring through personas. Embedding through customer journeys using visual skills and tools to master all the other capabilities.



### ORCHESTRATION

Typical design techniques, such as visualising and prototyping are often used to build a common understanding; that is why we came to understand that orchestration is a very important element when designing PSS. See pages 22-30 on Orchestration for more information.



**GIULIA CALABRETTA** — 1979

[g.calabretta@tudelft.nl](mailto:g.calabretta@tudelft.nl)

- Assistant Professor at Delft University of Technology, Product Innovation Management
- Project leader CRISP project CASD

**GERDA GEMSER** — 1967

[gerda.gemser@rmit.edu.au](mailto:gerda.gemser@rmit.edu.au)

- Professor of Design & Business at RMIT University
- Member CRISP project CASD

## What is it about design and its practitioners that is so valuable for strategic innovation? We set out to answer this question and who better to help us than CRISP members?

We talked with design professionals, but we also wanted to hear from the project leaders and company managers who worked with the designers. How did they experience the strategic value of designers during CRISP?

Several interviewees indicated that innovative companies like to work with designers because of their ability to envision the future. When business practitioners pursue innovation, they tend to get caught in short-term approaches that don't work well for PSS development. Creating successful PSSs like the iPhone or Nespresso requires an unwavering long-term vision. Designers can apply their creativity and trained intuition to shape a vision of the future that fits the company's strategy and assets. At the same time, they can use their visualisation skills to translate a vision into tangible artefacts, such as PSS touch points or prototypes.

### Envisioning through prototypes

When Océ-Technologies B.V. asked CRISP design professionals to help them find new PSS applications for their elevated printing technology, this was the reason why. They wanted designers to think long-term, to grasp the essence of the technology for the user, and to cut across company departments to achieve a common goal.

Elevated printing is a new technology that makes it possible to add an extra dimension to designs by printing multiple layers of ink up to 5 millimetres thick onto a non-porous flat surface. In the 'Incubator 2.5' research project, Karianne Rygh, a Research Associate of Design Academy Eindhoven, collaborated with researchers from Delft University of Technology and experts from Océ. The project explored how elevated printing technology could be applied in the field of architecture and how design professionals in general could contribute to determining new business opportunities for this innovative technology.

To facilitate the discovery and discussion of these opportunities, Rygh designed an archive of explorations in elevated printing in a tangible sample book. The book was initially used during conversations with potential clients, such as Marcel Wanders Studio and Next architects to showcase the technology and to learn from them how they could use it in their work.

# WHAT DOES THE DESIGNER WANT?

Giulia Calabretta, Maaïke Kleinsmann,  
Daniëlle Arets & Onno van der Veen

What designers do is envision stuff and make a prototype, or make a visual, or make a concept, which then brings the project further. I think that's the most visible contribution, also the most recognisable.

Klaas Jan Wierda,  
Océ-Technologies B.V.

Unfortunately, the interviews often only produced broad and generic responses and never led to new knowledge, for instance, on additional and more specific applications, or on the practical challenges in using the technology.

With that aim, Rygh decided to use what she had learned about using the new technology and she shifted the focus from the printing samples to the process of developing the samples. She thought that perhaps this approach would bring a deeper level to the discussion, one that is less general and more focused on finding new, viable, and valuable opportunities for the technology. Rygh designed the Super-Maker; a co-creation session where all relevant stakeholders—in this case, architects, designers, researchers, Océ printing experts, and business developers—participated in workshop activities, experimented with the technology, and produced tangible representations of the application ideas that emerge. As workshop participants visualised their discoveries and used them to communicate with their co-workers or clients, they became extensions of the designers' strategic role of identifying opportunities for the elevated printing technology.

The CRISP design professionals involved in the 'Incubator 2.5' research project helped identify long-term innovations directions for Océ and their elevated printing technology, but also helped translate them into tangible samples that serve to envision these new directions.

This shows that design professionals can and want to use their ability to envision possible futures in PSS innovation effectively, but it also suggests that they have a long way to go to convince managers to fully adopt a long-term innovation vision. This becomes especially important when they move from the business unit level to the corporate level, as discussed by Berry and Karpen in their article on page 56. It is often difficult to get people on board if they are not fully informed, or if they lack a proper understanding of the concept in question. By using a 'thinking through making approach' to understand stakeholders' needs and by 'dropping something on the table' (Stappers, 2014) to get them to imagine and see the potential in their own and others' innovation, designers can help guide new ideas through an organisation. Rygh's decision, for instance, to embody the explorations and subsequent research in tangible objects helped to trigger discussions and a dialogue between relevant stakeholders at Océ, allowing them to communicate with one another in new ways and to explore new innovation opportunities.

### Do we need a new envisioning language?

Corporate commitment is crucial for the development, management, and healthy growth of a PSS, because of its longevity. Unfortunately, design professionals still lack PSS-specific envisioning tools that speak a management-friendly language and that match innovation visions with executive boards' key performance indicators. The question has now become, 'how can we upgrade designers' envisioning skills and tools so that they are perceived as reliable and actionable by managers in an executive board? At the same time, how far should we go into this adaptation process without compromising the intrinsic identity of design professionals?

Similar questions arise when design professionals' PSS concepts reach the implementation stage and need to be embedded in an organisation. CRISP projects like the Active Cues for dementia patients or the Adaptive Relaxation Space show that design professionals are good at gaining user insights and transforming them into prototypes or other tangible artefacts.



However, it remains a challenge to embed the resulting concepts into the company while ensuring that the company markets a PSS that users really want. At that stage, design professionals' strategic contribution involves interpreting and transforming information mainly across three key actors:

- 1— the users, whose needs form the starting point for the innovation process;
- 2— the design professionals, who capture the user insights and transform them into a proposition that fits the company;
- 3— the companies that create and market the PSS.

In this situation too, design professionals lack the right language to talk to CEOs, nor do they have the complete overview of the key actions necessary to embed the concept in an organisation. We still need to study how design professionals should present a PSS to stakeholders in a concise, comprehensible, and appealing manner. Where and when should design professionals start the implementation? Within CRISP, opinions differ on whether future design professionals should be equipped with skills for embedding, or whether they should focus on the ideation process and leave the strategic implementation to others.

### The embedding debate

Some CRISP practitioners feel that design professionals should take responsibility for embedding in order to pursue long-term coherence in designing and managing a PSS. They should support the company in coming up with PSS 'stories' that are meaningful to the users. From that point of view, developing additional skills and tools to equip design professionals for embedding will become a priority, as well as understanding the added value of such skills and tools.

Another camp of CRISP practitioners feel that embedding is too far removed from core design competences and is the responsibility of other actors within a company. They plead instead for a close collaboration between design professional and the company-designated actors for embedding. From that point of view, investigating this interface in more detail would then be valuable. What skills and abilities should both actors have? What language should they develop to make the best fit between design making (i.e., the PSS concept) and corporate KPIs (i.e. a successful PSS embedding)?

I would like to brush up the design probes and see how we can make them consistently work without falling in the obvious trap. It is really difficult for people to understand that these probes serve to gain insights and that when probes trigger a major negative reaction, that is still a wonderful result. As such, probes are a very powerful tool in the early phases of innovation.

Geert Christiaansen,  
Philips Design

## A BOTTOM-UP APPROACH TO PROVOKE VALUE

Martijn ten Bhömer &  
Maaike Kleinsmann

In the Smart Textile Services (STS) project, we saw design professionals doing something differently. Instead of setting the PSS innovation strategy that the partners should follow, what you might call a top-down approach, the design professionals allowed strategic value to emerge during the project by following a bottom-up approach.

Martijn ten Bhömer is one of the PhDs involved in the STS project. He worked together with partners to develop Smart Textile PSSs for eldercare. He met with partners interested in eldercare and, based on their input from previous meetings, presented them with several prototypes. These formed the input for co-creation sessions in which stakeholders could contribute to the innovation process with their knowledge and skills; a physiotherapist, for instance, would point out and explain which area of the body needed to be trained and how the application might be tested; an electronic engineer would offer suggestions on the electronic circuit used and contribute with their own technology; a textile designer would choose the yarns and sew the product together.

De Wever, a service provider of eldercare in Tilburg, is one of the partners in Martijn's project. Martijn worked in close collaboration with the family of the elderly, physiotherapists, motivational therapists, and managers, to develop multiple PSSs to support the services around care for people with dementia. Early in the process, De Wever supported the development of these PSSs, not only by offering their

expertise, but also by actively being involved in the testing of the PSSs: a big commitment, as they had to involve other staff members, real clients and their families. Besides benefitting from the knowledge the CRISP research resulted in, De Wever, through their commitment, also positioned themselves, according to Ben Janssen, as an organisation which "stands for innovation, and is involved with new innovation."

Another partner in the STS network is Metatronics, an electrotechnical engineering firm that created an electronics platform which supports designers and students working with smart textiles. This platform arose out of the need that, in order to experience and test the PSSs, the PSSs' products needed to be prototyped. The Tactile Dialogues PSS, for instance, required a pillow with touch sensors and vibration actuators. Likewise, the Vigour PSS needed a cardigan with movement sensors and auditory feedback, and was based on the same electronics platform as Tactile Dialogues. Through their involvement in CRISP, Metatronics adopted Wearable Technology as a key expertise. They are currently developing the electronics platform further, and have produced a large batch as a do-it-yourself toolkit which they plan to give away to all visitors of the upcoming Electronics & Automation Fair, in June.

For these two STS partners, strategic value clearly emerged during CRISP, but the project also had strategic value for Martijn. He took the Tactile Dialogues further in a collaborative venture with another partner, Borre Akkersdijk (owner of ByBorre). Together, they created two spin-off projects (one exhibited at SXSW2014, another at the Beijing Design Week 2014), and are currently working on starting a new company.

These examples show that it is not only up to the PSS concepts to create value for the community of partners involved in the process. These concepts functioned as drivers for a sustainable business infrastructure that emerged throughout the process. They served as a tangible representation of the project's status quo. The concepts also supported the stakeholders in keeping the common goal in mind, as they enabled the stakeholders to elicit their individual values at every moment in time.

We expect that this infrastructure will soon provide the partners with the opportunity to further harvest the value created in the STS project, by letting their individual and common businesses grow. The STS project is one of the great achievements of CRISP: it demonstrates the power of 'making' in the design process to create sustainable business value.

### Defining the role of designers

This embedding debate is part of a larger conversation on the role that design professionals play in strategic design tasks. On the one hand, design professionals act as facilitators, supporting and, increasingly, training companies in pursuing attractive innovation directions. But traditionally, design professionals are 'makers' and like to act as such, also at a strategic level. They want to have ideas, create PSS concepts, and translate them into tangible elements. They want to be the main actors in strategic design projects.

### Combining facilitating and making

In their article, Ten Bhömer and Kleinsmann discuss how design-making could support the formation of strategic directions within and between companies. The examples provided by CRISP projects suggest that playing only the facilitator role may lead to a sub-optimal use of designers' potential in PSS innovation and take away the main reason to hire a design professional: their unique ability of seamlessly switching between the role of facilitator and 'maker.'

When it comes to the fundamental question of who design professionals really want to be when they take on a strategic role, the best answer might be to balance between facilitating and the actual 'making'. CRISP provides some initial suggestions on how to achieve that balance. For instance, we have learned that prototypes can serve as a bridging tool between these two roles.

When prototypes are used as a probe, as a means to harvest inspirational data about people's lives, values, and thoughts, the design professional could facilitate rich design conversations about the probe, leading to new value propositions. Yet, the same prototypes could also represent the 'making' role of the design professional, as the other stakeholders involved in the PSS project often use the prototype to evaluate the design and the status of the project.

### Use prototypes to balance the roles

Design professionals should realise that it is their responsibility to ensure that the prototype serves the right purpose at the right time in the project. This is especially difficult for the probing function, a function that other stakeholders frequently disregard as they often only use prototypes to evaluate market potential.

Several questions remain unanswered. In which projects, for instance, should design professionals act more as facilitators or as 'makers'? What other tools can support them to balance both roles? How should design education support future design professionals in playing both roles? →

Based on CRISP research, we have learned that as design projects become more strategic, as they begin to affect a company's strategy and core values, designer professionals should act as facilitators rather than makers. However they might feel about the issue, design professionals should get used to integrating facilitation activities in their projects. The facilitator role is essential for the successful completion of strategic projects, especially in the complex context of PSSs. The increasing importance of this role presents design professionals with a valuable opportunity to extend their service offering, and thereby increase their influence on companies' innovation strategies.

If design professionals want to take this opportunity, they will need to invest in developing specific skills, and design education needs to support them in that ambition. Education programmes for strategic designers could put emphasis on developing the soft skills required for effective facilitation, including interpersonal communication, emotional literacy, and leadership. The same programmes should provide future designers with a more thorough understanding of business processes, corporate priorities, and company culture. We should continue investigating the design profession and develop new, design-driven tools to enable design professionals to play a facilitating role in a unique and effective manner. We count on CRISP's posterity to follow this thread.

The main point is the role that the interplay between strategy and bottom-up plays in the project. You can see that with reference to the PSS networks.

We distinguish three networks: the user network, the design network, and the organisation network. We (i.e., the design professionals) look at all these networks when designing product service systems, and we look at this strategically and practically; we work at an operational, tactical and strategic level.

We're continuously mediating between these levels, but the strategic level is mainly concerned with the organisation network.

Ingrid Mulder,  
Delft University of Technology

#### References

- 1 Stappers, P.J. (2014)—*The designer as instigator in networked collaboration*—Value Pursuit, Strategic Creativity Series, volume 7, pp 57-60

# STRATEGIC VALUE OF A RESTFUL MOMENT

Evelien van de Garde,  
Dirk Snelders & Federico Trevia

Time for a retreat, time for a moment of rest: this has become rare in our 24/7, always connected economy. On top of that, the topic of stress has become taboo, especially at work. The GRIP project—about how designers achieve a balance between flexibility and control when designing a PSS—led to the design of the Relaxation Space. This is a space with environmental light and sound effects in which workers can relax, either alone, with co-workers, or with service providers or researchers. The original Relaxation Space was designed to break through the taboo of work-related stress and to raise awareness among office workers and their organisation.



The Relaxation Space combines appealing technology and design which motivates workers to balance their levels of stress and relaxation, as well as making organisations more sensitive to the needs of their employees. The space has already been used by service providers for breathing relaxation and

meditation training in an office, but it can also be applied in more diverse domains, such as reducing anxiety in hospital waiting rooms, improving concentration for performance in sports and education, and stimulating creativity. The design was evaluated positively by the stakeholders, GGZE and Phillips, because it provided new opportunities for them to further develop their own expertise. This resulted in new directions for their activities and businesses. The mental health care organisation GGZE is now investigating the value of a first prototype in a real-life setting: The Room for Inspiration.

Stakeholder Philips Design also saw the potential of this Relaxation Space and the knowledge they gained may have potential applications in other fields of Philips' vast array of businesses, far beyond the original work-related stress 'application'. In addition, Philips Design has already applied the GRIP approach of working in partnership with external parties and knowledge institutes on a longer term basis in a current project in another domain.

The initial Relaxation Space has been rebuilt and redesigned a number of times and, as such, has been a stimulus for the Dutch Design Sector and Creative Industries. In addition, the design industry has shown interest in the Relaxation Space thanks to its presence at a number of events e.g. the Service Design Network, PROUD Proms @ DDW in Eindhoven, Design Matters in Amsterdam, and Salone del Mobile in Milan. The publicity created by these events has established a reputation for the stakeholders from the creative industries involved in the project, such as Philips Design, Studio Knol, and de Bende. It has helped to create intangible capital (i.e., goodwill) for all parties, in the form of better access to information, social networks, and economic resources.



#### THEME TEAM



**GIULIA CALABRETTA** — 1979  
g.calabretta@tudelft.nl

- Assistant Professor at Delft University of Technology, Product Innovation Management
- Project leader CRISP project CASD



**MAAIKE KLEINSMANN** — 1976  
m.s.kleinsmann@tudelft.nl

- Assistant Professor at Delft University of Technology, Product Innovation Management, Collaborative Design in Industry
- Member CRISP project STS



**DANIELLE ARETS** — 1977  
danielle.aretts@designacademy.nl

- Associate Lector Strategic Creativity at Design Academy Eindhoven
- Knowledge Transfer Officer at CRISP



**ONNO VAN DER VEEN** — 1966  
onno@ideate.nl

- Service design consultant & partner at Ideate
- Member CRISP project CASD
- Member CRISP Board of Creative Professionals

When we stress the importance of design for business innovation, it is sensible to approach experts in the field who research how design approaches can be translated to management studies. We asked Daved Berry and Ingo Karpen to share their thoughts on how designers can effectively apply their abilities to support innovation.

# THE DESIGNER MANAGER I PITFALLS POTENTIAL

Daved Berry

**Designers certainly have a set of key abilities and tools with which to support managers in setting innovation directions and finding opportunities. However, several questions remain on how to effectively use these capabilities in a management context.**

FastCompany recently published an intriguing article called “Why Samsung Design Stinks”.<sup>1</sup> It appears that Samsung doesn’t employ bad designers; rather, it’s that the designers’ ideas are so contested by management that they ultimately die from a thousand cuts. This raises a fundamental question around the designer-manager relationship: How can designers work more effectively with the managers of this world? From the managerial side, one answer has been that managers can better understand design by becoming designers themselves.<sup>2</sup> The manager-as-designer movement began with ABC’s widely viewed ‘shopping cart’ documentary on IDEO, and then went viral with the Harvard Business Review article on IDEO’s approach to design thinking.<sup>3</sup> Suddenly, hundreds of thousands of managers thought that they should think and work like professional designers. And, even more importantly, they thought that they could.

This proved to be remarkably naïve. Like many other professions, design takes the proverbial 10,000 hours to master, and merely watching a few design videos and reading a few books simply doesn’t do the trick. It’s no surprise then that the manager-as-designer movement, and

particularly the evangelist version of design thinking, has been heavily criticised by managers, designers, and design researchers.

There is, however, an upside to all this. The manager-as-designer movement has sensitised many managers to the possible benefits of having designers working *with* them on managerial issues, and also pushed design into mainstream management studies. To avoid death by a thousand cuts, what do designers need to do to successfully collaborate with managers? Based on our experience and research, we propose three things to think about: profitability, understanding, and feasibility.

## Profitability

Managers spend much of their time focusing on key performance indicators (KPIs) connected to costs, revenues, and profits, and they have to justify any under-performance relative to these. Most designers think about other things. Making business models as a core part of the design process can create common ground. The Business Model Canvas, with its visual character, is one of the more designer-friendly business modelling tools out there, and it provides a vocabulary that both executives and designers can relate to. Designers need to consider ‘cost structures’ and ‘revenue streams’ as much as ‘value propositions’.

# SIGNER- INTERFACE:

# KEYS & INITIALS

& Ingo Karpen

## Understanding

Understanding how executives frame problems & opportunities, or better yet, the situation, and how the situation is problematic from the manager's point of view, is key to coming up with more relevant designs—whether at the product-service level or at a strategic level.<sup>4</sup> What are managers' perceptions of their organisations' purposes and priorities? Which of the KPIs are they struggling with and why? Which human or leadership issues stand in the way of achieving desired KPI standards? Managers often approach their situations in linear, deductive, 'let's fix it' ways. There can be a bias against more creative, and even chaotic designerly approaches that use frame-breaking toolsets. Importantly, designers need to understand when a manager's perspective represents some underlying bias rather than a real barrier to the realisation and implementation of the design. An empathetic understanding that includes the ability to understand and even foresee the possibility for perceptual biases and objective barriers to implementation can make or break the design effort.

## Feasibility

Successfully dealing with managers means developing human-centric solutions *and* ensuring goal-effectiveness and process efficiencies; that is, combining creativity with uncompromising impact on the situation itself, and by extension, the manager's KPIs. As such, designers have a dual responsibility to 1) envision the new desired reality, and 2) predict *and* overcome barriers for this reality to come into being, as seen through the managers' eyes. Feasibility here is not only a matter of money; it considers the potential risks & costs of innovations against their potentiality and impact.

As in the core Strategic Value article, we don't have an answer to whether it is better for designers to have clear design boundaries or that they should actively engage in managerial issues. If the latter is case, reality often requires designers to have a culturally sensitive and convincing storyline for managers within clear boundary conditions—a storyline that goes beyond aesthetics and human stewardship and towards one that elegantly considers organisational purposes, priorities, and KPIs. In doing so, designers can directly contribute to managers' success and are more likely to be heard.

Designers often think from the user's perspective, but they don't design for the organisation around it.

Klaas Jan Wierda,  
Océ-Technologies B.V.

## References

- 1 Wilson, M. February 17, 2015. Why Samsung design stinks: Blame Steve Jobs syndrome. FastCompany: <http://www.fastcodesign.com/3042408/why-samsung-design-stinks>.
- 2 Boland, R. and Collopy, F. (eds). 2004. *Managing as designing*. Palo Alto: Stanford Business Books.
- 3 Brown, T. 2008. Design thinking. *Harvard Business Review*, June Issue: 1-9.
- 4 Bunginger, S. 2014. Towards policymaking as designing: Policymaking beyond problem-solving and decision-making. In Bason, C. (ed) *Design for Policy*, pp. 57-69. Farnham, England: Gower Publishing Limited.



**DAVED BERRY**

davedberry@gmail.com



**INGO KARPEN**

ingo.karpen@rmit.edu.au

• Professor of Creative Organisation Studies at Copenhagen Business School and NovaSBE

• Senior Lecturer at RMIT University, Melbourne