# Transformations: 7 Roles to Drive Change by Design

By Joyce Yee, Emma Jefferies and Kamil Michlewski

Tracking how design has changed in previous book *Design Transitions* has inevitably led the authors to explore how organisations are changing using design. Design is now the key driver of innovation and change within organisations across the globe. It is therefore important to learn how, when and why to use design to drive change in your organisation.

*Transformations* documents how design is being used to support change across different organisations, countries and sectors, sharing the stories of experts in their fields at varying stages of their transformative journeys. The authors present seven roles for change that are used to influence the development of products and services, the shape of the organisation itself and, most importantly, their ability to embrace change. These seven roles can transform organisations to be more innovative, human-centred and resilient: Cultural Catalyst; Framework Maker; Humaniser; Power Broker; Friendly Challenger; Technology Enabler and Community Builder.

Well-documented case studies offer readers insight into how design strategies can be successfully activated in different types of organisation. The seven roles offer both designers and non-designers a common language and framework to support design-driven transformation. *Transformations*, in the right hands, is a potent tool to understand, shape and implement design-driven change.

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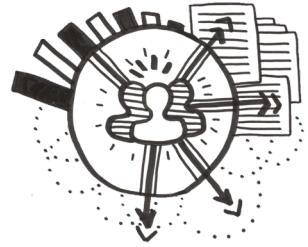
• *An authoritative guide for leaders, managers and front-line employees looking to use design to support change in their organisations*

• *Presents seven roles for change that are paramount to creating impactful outcomes and transformative learning experiences for organisations*

• *Features 13 in-depth case studies and 7 expert interviews including Steelcase, Spotify, Deloitte Australia, SAP, Telstra, US Department of Veterans Affairs, Itaú Bank and Accenture & Fjord*

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# SAP: Humanising technology

## The start of an IT giant

SAP started life as a German software company set up by five former IBM employees in 1972. In its first year of operation, it employed nine employees and generated roughly $350,000 in revenue. Since then, it has grown to be a world leader in enterprise applications software and is the third largest independent software manufacturer, behind Microsoft and Oracle. It currently employs around 75,600 employees with office locations in more than 130 countries. Their annual revenue is a staggering $19.3 billion and they serve over 296,000 customers in 190 countries worldwide.

## The Design Thinking journey in SAP

Hasso Plattner, one of the five original co-founders of SAP has been instrumental in bringing design thinking into SAP. Design thinking resonated with Hasso because it offers a more human-centred approach to problems. He felt that their connection with their customers had been lost as they expanded over the years. He also felt that the time was right for the world of business and software development to put a more human emphasis on their work.

As a result, he sponsored Stanford University's first design school, now more popularly known as the 'd.school' aimed at bringing design thinking to the business world. Concerned that good ideas were often being lost through a lack of an innovative culture, Hasso set up the Hasso Plattner Institute (HPI) at Potsdam, Germany in 2008 to provide 'a better' education for software engineers. The School of Design Thinking was later established at the HPI Potsdam to introduce design thinking to the curriculum. At the same time, Hasso started to introduce and accelerate design thinking into SAP by bringing in 35 design thinkers to create the Design Services Team, a multi-disciplinary

*Who we spoke to*
Jochen Guertler, Senior Design Strategist, Design and Co-Innovation Center, SAP

# Why change?



SAP is the world's leader in enterprise software. Although they have been extremely successful and dominant in this sector for a number of years, they felt that their connection with customers had been lost as they expanded over the years. They were very good at what they did but had become too engineering and process focused. They wanted to reconnect with customers and felt it was time to make people their focus again.

# Design roles that enabled change in SAP
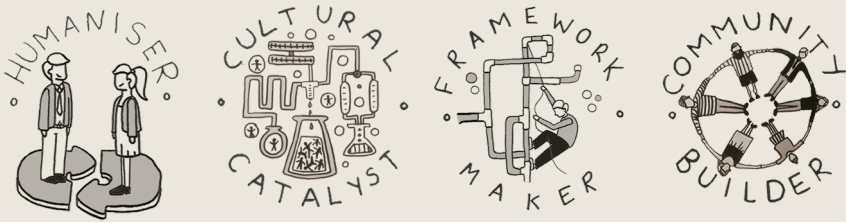


# Types of changes achieved through design

Since 2008 - Internally in SAP
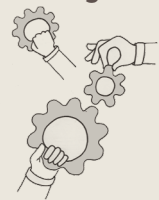Since 2012 - Externally through the Design and Co-Innovation Center

**Changing products & services**
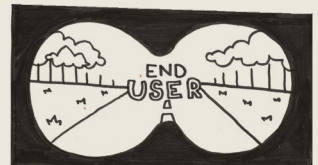
**Changing organisation**

**Changing the process of change**



# What has a design-driven approach brought to SAP?

- Given teams a sense of 'agency' due to direct exposure to user concerns.
- Developed empathy not only for customers but also with team members.
- Fostered a more open, collaborative and user-focused culture.

group that is housed in the CEO's Office. This enabled the group to reach across the organisation to use design to impact SAP strategy, products and people. The team initially comprised 35 individuals from diverse backgrounds that worked with different teams in the organisations to introduce design thinking.

Setting up a visible and tangible team ensured that design became a strategic priority to drive innovation across the organisation. This model of creating a 'design thinking' focal point either through the creation of a team, space or an innovation lab has been copied and replicated in many of our book's examples, for example in Telstra.

Since the creation of the Design Services team, design thinking has slowly spread, effecting not only internal processes and culture but also becoming evident in the organisational structure. Sam Yen initially joined SAP as a senior member of the Design Services Team. He then led the SAP AppHaus, an innovation team tasked with building new solutions, establishing new markets, and reaching new users for SAP. In June 2014 he was appointed SAP's first ever Chief Design Officer to further cement the strategic role design plays in driving innovation in SAP.

## Using design as a Framework Maker

The initial Design Services team was set up centrally and tasked with spreading the use of design thinking in SAP. However, after two years it was evident that for design to be truly embedded into SAP, there had to be access and engagement with design at a local level. Hence various incarnations of the Design Services team were set up in different departments to provide a range of services internally and externally. Since 2013, a new service team was set up as the Design and Co-Innovation Center (DCC) to elevate perception of SAP's user experience and design. DCC became the focal point for SAP to deliver UX design services to SAP customers.

DCC offers a portfolio of services that helps in the areas of user analysis, design thinking, design, proof-of-concepts, custom development and training. Their services are loosely grouped into four areas: Advise, Innovate, Empower and Realise. The 'Advise' service helps business to identify, evaluate and explore ways to improve an organisation's UX strategy. The 'Innovate' service helps organisations to develop a competitive advantage by creating value for their customers. The 'Empower' service supports organisations in achieving the best user experience. And finally, the 'Realise' service helps customers put their UX strategy into action by supporting them in optimising, customising and adapting existing SAP software specific to their purpose. Examples of DCC's work includes: designing user interfaces, working with customers on co-innovation projects, coaching customers in design thinking, developing custom

# Stages of transformation

1. Hasso Plattner, one of the original co-founders of SAP, founded the Stanford University d.school with David Kelley (2005).

2. A branch of the d.school was set up in Potsdam, Germany. 35 design thinkers were brought in to collaborate with the corporate strategy group to make design thinking a strategic priority at SAP. The aim was to drive innovation across the organisation (2008).

3. Various design thinking teams were set up across the organisation to work at a more local level with different departments (2010).

4. SAP made a strategic decision to change the perception of business software through human-centred design (2012).

5. Design and Co-Innovation Centers established in various locations to offer design thinking approaches to external clients (2013).

6. SAP's first Chief Design Officer appointed (2014).



# What can we learn from SAP's story?



Organisational change only happens if individuals experience it for themselves.

Learning through doing is the most impactful way to enact change.

Turning a new practice into a 'new normal' requires assimilation and eventual ownership of the practice.

applications in existing SAP software, developing mobile apps and customising graphical user interface in SAP software.

The team at DCC comprises professionals from 27 countries, working as design strategists, UX designers, user researchers and programme managers. The team works out of four locations: Heidelberg, Berlin, Palo Alto and Seoul. The DCC team's working style is both agile and scrum-based and highly iterative in its engagement with end users.

Since its inception, DCC has had over 500 customer engagements and has reached thousands of end users during a variety of user research activities. They use design thinking as a *Framework Maker* to develop empathy for customers and users by creating tangible reference points such as personas and user journeys. They collaborate closely with customers and in some cases establish design practices within customers' organisations through hands-on learning and prototyping to ensure they have the ability and capacity to deliver the strategy.

DCC uses a design thinking approach with three key stages: Discover, Design and Deliver. In the 'Discover' stage, the DCC team would scope out the work, help their client explore the problem space and then conduct appropriate user and market research. As in all stages the DCC does this in a very interactive workshop-driven way involving customer and potential user groups from the beginning. They then synthesise their findings, turning them into ideas and prototyping them with their customers. DCC usually starts with simple paper prototypes co-created with their clients, which are then used to validate the ideas. To help them refine and communicate the idea further, the paper prototypes are turned into wireframes and interactive prototypes. Implementation during the 'Deliver' stage is sometimes handled by the DCC team but most often is handed over to their client's internal IT team or other development teams within SAP.

### Making data more meaningful

How do you leverage existing statistical data and use it to create a better experience for your customers, the ice-hockey fans? This was the question the German Ice Hockey League (DEL) brought to DCC with the aim of enhancing the fans' experiences. DEL manages all the first division games, organises marketing activities and promotes young talent. DEL had already collected a lot of statistical data about recent games but

had not really utilised the data apart from using it internally (for example to announce a player's birthday).

To help answer this question, DEL needed to identify and understand who their fans were and what they were interested in. Two innovation coaches from DCC ran a two-day co-innovation workshop with members of DEL and their media partner to introduce them to various design thinking tools. Part of the activity in the workshop involves speaking with a range of stakeholders and fans to help the team develop a range of fan personas. This activity helped the team realise that a majority of the fans are not ice hockey experts and mostly attended games to enjoy the family-like atmosphere. This insight led the team to develop a dashboard interface idea that would display interesting facts about each team. It would enable fans to compare different kinds of statistics for fun (for example number of fouls or assists) but also help them understand the sport better. Paper prototypes were created during the final stage of the workshop and used to test with users.

A second workshop was held to explore how the content can be expanded and defined. At this stage, other experts from the DCC were brought in to help realise the vision. Visual designers were tasked with developing the interface design and thinking through the navigation workflow. DCC was also involved in the final implementation and realisation of the dashboard and leveraging existing SAP software to help DEL improve its data analysis capabilities.

The public dashboard went live in the new season and hockey fans are now able to access data in a visual and fun way through the dashboard. They can now track statistics in real time, for example passing accuracy and player scoring ratio. The dashboard has been really successful with fans and has increased fan engagement with DEL across its entire communication platform – Facebook, website and Twitter.

**Design as a change management tool**

Increasingly the DCC is working on projects using design as a catalyst for organisational change. Organisation X (anonymised) is a world-leading food and beverage company creating well-known products in the global market. DCC has recently started to work with Organisation X to help them become more innovative, agile and future proof. To create the right momentum for the design topic, the DCC conducted several 2-day workshops with a total of 500 employees of Organisation X. Design is being used as a *Framework Maker* – introducing design thinking processes and methods to the organisation and offering them tools to help them innovate.

The second aspect of the engagement involved DCC running a 'Train the Trainer' programme, where they spent 20 days training future design thinking coaches in the organisation. DCC initially trained five coaches

and these coaches have now subsequently trained other members of the organisation. This enabled Organisation X to grow competencies internally and build shared practices.

Design in this instance was used as *Community Builder*, through its hands-on and action orientated workshops. It helped build shared practices. This in turn has enabled the creation of different innovation communities in the organisation. As a result, different teams in the organisation have initiated a number of new projects. They range from redesigning aspects of the intranet system to developing a new app to help maintain customer loyalty around a product range. DCC were only minimally involved in these projects but they have learnt that the most persuasive way to demonstrate the effectiveness of design thinking to an organisation is to apply it to projects that have defined focus and produce concrete, measurable outcomes (for example reducing the number of steps required to fulfil certain tasks). DCC also felt that it was perhaps too early for the internal teams to apply design thinking without prior experience. After the initial buzz and excitement, producing concrete outcomes is really important to ensure the continued use of design as well as offering continued project support after the initial training stage.

### Personal story of transformation

It is evident that SAP and Hasso Plattner have really pushed for the adoption of design thinking through the establishment of the initial centralised Design Services Team and its various local incarnations like the Design and Co-Innovation Center. While these were very explicitly and overtly public actions to embed and promote design thinking, it's important that we bring our focus back to the individual and explore how the transformation feels for an SAP employee. We spoke to Jochen Guertler, who works as a senior design strategist at DCC. He joined SAP in 1998 and has first-hand experienced of the transformation as well as seeing it through the eyes of his colleagues. Over the years, he has worked on a number of software projects as a developer, software architect, product owner and team leader. He joined DCC's Heidelberg office in 2013 and his current role is to organise and moderate design thinking and co-innovation workshops and projects with clients and to guide them through their innovation journeys. He also supports customers to help them develop more innovative and user-centred solutions.

He was a developer and a software architect when design thinking was first introduced to SAP. Since design thinking was introduced in 2008, he has seen 'extreme changes' in SAP. While he acknowledges that SAP is a massive organisation and that the rate of change differs and is inconsistent across the different teams, he has seen and experienced a significant enough shift

# What are the conditions for impact in SAP?

- A strategic aim driven by leadership.
- Being pragmatic in how people learn about design to ensure a positive experience and subsequent adoption.
- Continuous support and access to required resources.



# What have been the challenges so far?

**Using design thinking with clients**

- Ensuring deeper understanding and application of design thinking through doing.
- Getting access to end users, a key part of a design thinking approach.
- Using design as a change management tool requires expertise from change managers.
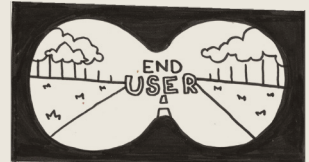


**Embedding design thinking in SAP**

- Uneven application and adoption across the different teams due to the size of the organisation.
- It's a long-term process requiring the right support and organisational structure.



# What type of change still needs to be achieved?

- Further cross-organisational adoption and alignment (across global teams and offices).

in how people work to convince him of design's effect as a *Cultural Catalyst*. For example teams are working in a more iterative manner, working in shorter developmental cycles, weeks rather than years. He has also observed that people collaborate better and are more comfortable with teamwork. They are also much more user focused and devoting much more of their time to talking and working with clients collaboratively.

*'Realistically it's not always easy to gain access to users, but since the overall perception is that users are important, we have to find ways to talk to them, however difficult.'*

Teams are also more comfortable showing unfinished projects in the form of first and rough prototypes at an early stage to clients to get their feedback and to learn whether the idea could work for them. Teams have adopted the mantra of 'fail early to succeed sooner'. Compared to how a traditional software engineering process works, this is indeed a huge shift in the mindset and behaviours of the staff. The physical spaces in the SAP offices have also changed. There are now a lot more creative and flexible spaces available for teams to sit and work together, both internally and also with customers.

*'Traditionally in big companies like SAP, there are normally never ending discussions about everything. While it's important in some cases, in many cases it's more important to act. Our attitude is becoming less about talking and more about doing.'*

Jochen also observes how attitudes towards design have changed in SAP, especially amongst the software developers. Previously, design was merely thought of as adding to the visual aspects of the user interface. However, they now see design as a holistic engineering solution and as playing an important part in creating the overall experience of their product. He sees this attitude as part of SAP's DNA now.

For Jochen, the change did not happen overnight. Of course he was aware of the drive by Hasso and the executive team to push design thinking. However, it only really clicked for him when he was given the opportunity to be involved in a concrete design thinking project. In 2010 Jochen moved from a development role to a research role and he started work with the German

Sailing team on an innovation project. They wanted to use design thinking in the project and colleagues from the Hasso Plattner Institute were asked to train and support them in using design thinking. It was a revelation to Jochen–for example, he learnt so much by talking to sailors and their coaches during the Kiel week, a big sailing event in the north of Germany. Prior to that, although Jochen was told it was important to speak to users, he was never given the opportunity to do this first-hand. After this experience, he realised how powerful yet simple this approach was. It was also the first time he experienced a multi-disciplinary team working with design, marketing and business experts. This project and experience completely changed the way Jochen viewed and understood what design can do.

Jochen believes that if you have this positive experience with this new way of working, then there is a very good chance (provided it is continually supported) that you will apply it to your daily job. He also believes that design thinking is not only useful for innovation projects but suited to incremental development, which is what a majority of the SAP teams are involved in on a daily basis. Small changes like faster testing cycles with key users will make a huge difference to the way they work.
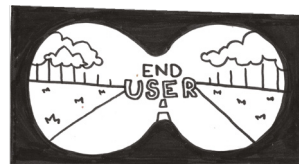
*'This is not a mind-blowing fact. True change only happens if you try it and experience it for yourself. This was a key aspect in how design was introduced and embedded in SAP. Hasso really pushed for it and SAP invested a lot of money to provide training and supported projects using design thinking. Although not all projects were successful or implemented in the end, it did not matter since the key benefit was that people had the opportunity to experience what design can do.'*

### Humanising aspect of design

One of the most important roles of design in SAP is to act as a *Humaniser*–challenging the techno-centric way of working and enabling a closer connection to consumer needs. For example, Jochen ran a project retrospective session after the end of a project. During the session one of the developers in his team remarked that this was the very first time in his 10-year career in SAP that he truly understood the reasons why he had to implement certain features in the software. And it was the first time he had direct contact with users right from the start. He was really engaged in the project and was highly motivated simply because he understood the needs of the users and why it was important to them. He was able to see the direct impact of his work on them. This was extremely powerful and often taken for granted in terms of someone's agency in a project.

The collaborative nature of a design thinking approach not only requires working closely with the client, it also requires working closely with the project team. Continuously sharing and early prototyping of ideas builds a shared understanding of the issue and the possible solutions. It is increasingly about fostering not only empathy with end users but with your own project team members.

*'I see higher motivation amongst colleagues. I see many examples of people working together and there is a better working environment. Ultimately all organisations are made up of people in the end, therefore the people have to change if you want to change the organisation.'*

Prototyping is considered one of the key tenets of design thinking and often talked about as a very powerful engagement tool. For example, creating quick paper prototypes has helped the DCC project teams to communicate ideas with clients at an early stage. This not only establishes a shared understanding of the project, it helps motivate and enthuse clients right from the start. It is no longer seen just as an IT project, but one that is tangible and real for the team to see its effects on actual users.

### Sustaining a cultural change

It's almost a decade since SAP started its design thinking journey. Design has not only transformed the way people work in SAP, it seems to have transformed its DNA. They have provided us with a rare example of how a culture change of this magnitude can be achieved and, importantly, maintained.

One of the challenges of maintaining a cultural change (and this can be seen in the Telstra example) is ensuring that there is consistency in the support for design in the strategic direction of the company. This has had to come from the executive team to ensure that new members buy-in to the original vision that Hasso had from the beginning.

Another key condition in maintaining this open, collaborative and user-centred culture is to ensure that the team constantly reflect on how they want to work. Now that a design-led culture is established and has become 'normalised' it is important to keep challenging and questioning whether this is the most appropriate way to work. This will build ownership of the process and links back to Jochen's earlier point of enabling people to develop agency in their own work. It will also lead to the most transformative aspect of design, influencing their change process.

And finally, it's really important for the organisation to develop its own 'version' of what it means to be design-led and to decide how it fits within their existing corporate culture. It has been really interesting to explore how design has had an impact on the process, structure and culture at SAP. However, the establishment of the DCC and the work they are doing shows how much SAP has made design thinking their 'own'.