

Industry Case Study Series on IP-Management

hansgrohe

Digital Alone Does Not Make an Innovation Digitizing a Brand Steeped in Tradition

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In Gold für
RAINFINITY Brausenfamilie



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Frank Schnatz

Frank Schnatz is a member of the Executive Board of Hansgrohe SE. In 2015 the graduate engineer and graduate industrial engineer came to the Schiltach-based fitting and shower manufacturer. Before that, Frank Schnatz held various management positions in production and management at home and abroad. Most recently, he worked for WMF AG, where he was Managing Director of the Silit brand and in March 2013 he additionally became Vice President of Production, Operations Strategy and Projects. Since 2015, he has been responsible for product development, production and quality management at Hansgrohe SE.

Steffen Erath

Steffen Erath is Head of Innovation at Hansgrohe SE and thus the creative innovation head of the Black Forest sanitary company. Under his leadership, radical ideas are spun and tested for feasibility and cost-effectiveness. With the establishment of the InnoLab, Steffen Erath has created a diverse, future-oriented working environment at Hansgrohe in which radical innovation projects can grow and become successful. The latest innovation, created under his leadership, is the hansgrohe RainTunes. The graduate industrial engineer joined Hansgrohe in 2005, where he started as a product manager. The best thing about his job at Hansgrohe, he says, is the magic of the new.

Andreas Diefenbach

Andreas Diefenbach (* 1979) is managing partner of Phoenix Design GmbH + Co. KG in Stuttgart. He completed his design studies at the Folkwang University of the Arts in Essen and at the State Academy of Fine Arts in Stuttgart and has been a member of the Phoenix Design Team for more than 10 years. As a specialist for the sanitary and investment industry, he looks after international brands in the design and innovation process. His expertise extends to business and strategy management. In addition, Andreas Diefenbach is responsible for the client management of national and international partners such as Hansgrohe, Duravit, Haier, Huawei, Interstuhl, Midea, Trumpf, Vorwerk and Zeiss. For many years, Phoenix Design has been ranked first in the iF ranking creative "design offices" of the iF Design Award and has received more than 750 design awards, including more than 400 in the last six years. Andreas Diefenbach is involved internally as a member of the Innovation & Academy Lab for radical innovations and design concepts. He is also active in lectures at the State Academy of Fine Arts and at the Hochschule für Gestaltung in Schwäbisch Gmünd. For lectures and workshops, he was booked amongst others by the Art Directors Club Germany, the German Design Council and the SAP UX Day. Andreas Diefenbach is married and has three children.

PART I

About Hansgrohe

The first chapter of an innovation-based success story that continues until this day was written in the small town of Schiltach/Black Forest in the southwest of Germany in 1901, when tradesman and inventor Hans Grohe founded a metal pressing workshop specializing in metal shower heads for private household bathrooms, a novelty in the domestic environment of the time.

Hans Grohe was born in 1871, the same year in which the German Empire was founded. It was a time which saw the rise of both Germany as a country and of German business. Industrialization in Germany began between the 1830s and the 1870s. In addition to railway construction, the key industries at the time included metal processing, mining, and iron and steel production. In the 1850s, industrialization led to a rapid productivity boost. Per capita social production increased by a factor of ten compared to the pre-industrial era with growth processes amplifying each other.

The rise of mechanical engineering, in particular for locomotives, resulted in a surge of iron and steel production, and the increase in rail transport services, which caused sales and production markets to grow closer together, led to an increased demand for coal as an energy source. The growing demand for fuel and industrial goods led to the further expansion of the rail network and in turn boosted demand for locomotives and rails.

During the Wilhelminian period, this effect was further enhanced by other technological advances. The years between the Franco-Prussian War, which ended in 1871, and the beginning of the First World War saw the invention and development of essential technologies that continue to shape the face of modernity: the refrigerator, the telephone, the electric locomotive, the light bulb, trams, high voltage lines, automobiles, records, subways, airplanes, X-ray technology, air brakes and finally, in 1913, assembly line production.

But the Industrial Revolution was not just characterized by the rise of technologies and industries, as change is always accompanied by the decline of entire industries. German weavers did not manage to hold their own against the cotton imported into Germany from Great Britain, for instance. At the end of the 19th century, the survival of the most important branch of the German textile industry was at stake.

Hans Grohe was born the son of a clothmaker and followed in his father's footsteps. After his journeyman's travels – a customary tradition for tradesmen at the time – Grohe settled as a master clothmaker in the Black Forest region in 1899, but soon left his trade and devoted himself to the emerging metal processing sector. The young inventor started selling metal shower heads in 1905, proving his instinct for market needs and market de-

velopments. At the beginning of the 20th century, private household bathrooms came into fashion. Having one's own bathroom meant pure luxury for the general public in Germany at the time. But Hans Grohe recognized that showers were an affordable alternative to a lavish bath in the tub and henceforth specialized in metal products for sanitary facilities. In subsequent years, Hans Grohe devoted himself to the further development of his showers with utmost passion, creativity, and attention to detail and quality. His ideas shaped both the company history of Hansgrohe and the bathroom and shower culture of the future.



The bathroom

The concepts of bathing and washing have been subject to constant change over time and within the different cultural contexts of Western civilization. Bathing and washing were already very common rituals among the ancient Greeks and Romans, although they were celebrated as a public water cult. In the Middle Ages, bathhouses experienced their heyday, albeit predominantly as

dubious leisure facilities where food and drinks were served, music was played, leech therapies and small surgical interventions were performed, and gambling and amorous adventures were firmly on the agenda. As a consequence, the church prohibited mixed sex bathing in the 15th century. In addition, poor hygiene in the rapidly growing and severely overcrowded cities led to the spread of the plague and other epidemics, and to the closure of virtually all bathing facilities due to the excessively high risk of infection. Bathing with warm water fell into disrepute as it was assumed that water was harmful because it penetrated the skin through the pores along with germs and caused diseases. From then on, “washing” was understood as wiping oneself with a dry cloth and using perfume and powder. During the Baroque and Rococo periods, it was considered sufficient to bathe only twice in a lifetime.

It was not until the Enlightenment period in the mid-18th century that bathing was reintroduced into society by French aristocrats. And even then, it was more of a public act taking place in mobile bathtubs. Washing as part of a personal hygiene routine is a much more recent phenomenon. It was not until the 1950s that private bathrooms became a common phenomenon across all strata of society. Until then, tubs and vats in laundry rooms or in public bathhouses were used for taking a bath. A separate heated room with running water dedicated to personal hygiene was widely considered an unattainable luxury that hardly anybody could afford. Even around

1900, bathrooms were rare in many European cities. Not even five percent of all apartments had one and most of them did not even have running water.

The beginning of the 20th century saw the emergence of the so-called “Frankfurt Bath”, a bathtub installed in a recess of the kitchen or the bedroom and separated by a curtain. In the 1920s, artfully decorated bathrooms with glass, metal and mosaics found their way into the homes of particularly wealthy individuals. But even after the Second World War, a private bathroom in one’s own home was a little-known and luxury, meaning that bathroom furnishings and design were subjects of very little importance. The typical situation in post-war Germany was such that the “bathroom” consisted of a zinc bathtub which lived in the basement and was dragged into the kitchen as needed (typically once a week), where it would be filled with hot water from the stove in order for the whole family to take a hot soapy bath in the agreed order. The kitchen sink was the only washing facility for everyday needs. The way to the toilet led to the outhouse next to the hen house via the cold barn. In cities, communal restrooms with flushable toilets were located on the stairwell next to the main entrance.

During the 1950s construction boom aimed at ending the post-war shortage of living space in devastated cities, wet rooms were installed, which represented a major step backwards compared to the elaborate Art Nouveau bathrooms of the inter-war period. New apartments and houses on the other hand now benefited from their own

bathrooms. But even in 1963, only about one third of German household had their own bathrooms. The average bathroom during that time was about four to five square meters in size.

In the 1960s, dedicated bathroom technology consisting of thermostats, single-lever mixers, jacuzzis, shower enclosures and bidets began to become available. Windowless indoor bathrooms were considered a good solution at the time as they were space-saving and easy to heat. The 1970s saw the emergence of more colorful and playful bathroom designs, including such features as orange and brown tiles, tiles with flower patterns, twin basins and fluffy toilet seat covers complete with color-coordinated bathroom mats. The bathroom as a private retreat and wellness oasis is therefore a very recent development and has only been a standard feature of German dwellings for at most half a century.



The Hansgrohe brand



Against this backdrop, Hansgrohe developed his products further and turned from a shower head specialist into a pioneer of the German sanitary industry. From 1928 onwards, his hand-held shower turned into a convenient alternative to the then very common overhead shower. His designs and ideas set the style for state-of-the-art shower technology for many decades. In 1953, Hansgrohe introduced another new invention: the showerpipe, allowing us to fix the hand shower at any height for the first time. Today, this is a standard feature which can be found in many bathrooms around the globe. In 1977, Klaus Grohe, Hans Grohe's youngest son, took over as sole Managing Director and introduced the Hansgrohe brand name. His son Richard Grohe turned the Hansgrohe brand into an international premium label. Today, Hansgrohe consists of 34 companies and 21 sales offices around the globe, with approximately 5,000 employees (about 60% of them are based in Germany) and a turnover of more than € 1bn.

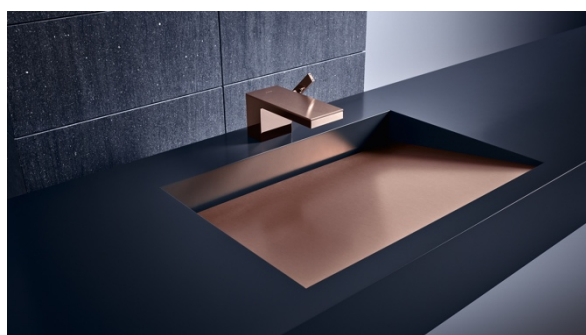
Brands are essential drivers of success for companies, including for Hansgrohe, as they

reduce complexity for consumers. Successful brands represent growth and stability and form an identity for companies following not only the numbers but a substantial purpose. They are the basis for emotional customer relationships. Globalization and digitization have upped the pressure on brand management.

Brands are identities with their own character, talents and recognizable characteristics and a unique signature. Brand management can therefore be described as some form of relationship management between the company, its products/services, the brand and the customer. As a result, a brand must offer something of relevance to its customers and keep its own promise. Brands must behave in a reliable and trustworthy manner and possess a certain degree of uniqueness in order to attract customers. They must evolve and surprise from time to time to make sure they do not become boring. Brand positioning must respect, sharpen and develop the existing brand identity in order to be sustainable in the long term. Particular attention must be paid to positioning the brand in a way that is intuitively understood by customers. And finally, the market positioning must also be implementable in order for customers to be able to experience it.

Hansgrohe is positioned as a premium brand: "We are world leaders in creating pleasurable, life-enhancing experiences with water; our broad portfolio of products is

focused on faucets and showers for bathrooms and kitchens, aimed at quality-conscious customers in the middle and upper market segment. Drawing on its passion and German engineering, Hansgrohe develops superior innovative products within their class. Hansgrohe defines premium as excellent quality, contemporary design, attention to detail and outstanding customer benefits.”



The design

Marrying craft and art, architecture and technology, and material and design poses a major challenge for the company. Design refers to industrial design, which must be characterized by functionality and an appropriate choice of materials. The core idea: mass products for a discerning market, whose design exudes beauty and simplicity and suits the purpose of the products. The ideal: a surprisingly simple and functional design.

Product design must reflect the brand positioning and allow customers to experience it in the form of fittings, showers and accessories. While the brand reflects the desired illusions, the products represent the intended realities. Hansgrohe products

intend to provide pleasure every day, from the first bathroom visit in the morning to the last shower in the evening. This is part of the Hansgrohe design DNA making products functional, elaborate, intuitive, humane, clever, novel, smart, graceful, durable and sustainable. The products are always systemic part of the Hansgrohe product family and part of the individual reality of the customer. Here the key factor is the harmonic integration of the Hansgrohe products into the individual environment for a daily customer brand experience. The premium brand positioning at Hansgrohe is achieved through highest quality standards, revolutionary functionality and excellent product design.

In partnership with renowned designers, Hansgrohe products have won numerous design awards. For the Hansgrohe brand, product design is the ultimate fulfilment of their brand promise that customers invest in a product that is not only functional but also valuable and not just a fad. The quality of the products, which results from the manufacturing techniques, processes and materials used, is where innovation meets design competence. It provides reassurance for customers that “Premium” stands for long-lasting joy derived from investing in one’s bathroom.



Design is understood to mean not only the outside appearance of a product, but rather an all-encompassing product philosophy. Hansgrohe is concerned with the experience we get from our bathroom fittings, showers and accessories and wants to make sure that they are well thought-out in terms of both form and function. The brand wants its customers to be able to enjoy their products even after many years of use, to rely on Hansgrohe's flair for product design and to be reassured that the investment, which is typically geared to 20 years, outlasts any short-lived fads. Great design is timeless and never goes out of fashion.

Hansgrohe has regularly joined efforts with internationally renowned designers in creating revolutionary bathroom products over the years. 1974 saw the launch of the colorful Tri Bel shower head in collaboration with Esslinger-Design, for instance. This shower head was designed to give the bathroom, which was considered a bleak wet cell by most people until that time, a new lease of life. Tri Bel was the first Hansgrohe product to qualify for the German selection of Design Center Baden-Württemberg in

Stuttgart. And this was just the beginning of an endless series of accolades and design and innovation awards. The design studio, which was renamed frog design in 1982, was named after Hartmut Esslinger, who is responsible for the distinctive design of Apple's first Macintosh, for example.

In 1994, Hansgrohe once again set new standards with the innovative functionality and minimalistic design of the AXOR Starck Collection designed by Philippe Starck, which has since become a design classic and ranks among the bestsellers in the field of designer fittings. Its numerous design innovations and new standards in bathroom design have earned Hansgrohe more than 500 international awards. Good design transcends form; it is not just a means to an end. At Hansgrohe, good design is expected to directly communicate customer benefits; design and functionality must be in perfect harmony.

In 2003, Hansgrohe and Phoenix Design launched another shower archetype, the "Raindance", which has since become a staple of modern bathroom design. Phoenix Design has shaped the face of Hansgrohe for over 30 years and the studio based in Stuttgart, Munich and Shanghai designs all of Hansgrohe's shower heads and fittings.

The careers of Phoenix Design founders Andreas Haug and Tom Schönherr are intimately linked to the rise of modern German design. Andreas Haug was co-owner of frog design and Tom Schönherr

was the design studio's Senior Designer. Among other things, they are responsible for Apple's "snow white design language". Founded in 1987, their studio soon became one of the leading names in industrial and product design. Since its inception, Phoenix Design has won more than 700 design awards, 450 of them in the past six years. The founders have been awarded the Lucky Strike Design Prize for their lifetime achievement. In 2012, they received the German Design Award from the Design Council for their overall achievement in the "Personality" category. Hansgrohe and Phoenix Design seek to jointly create an intelligent interplay of design, function and convenience – or ease of use, for short. Phoenix Design creates Corporate Product Design Languages. Brand Shaping Product Design Languages lend products a memorable look and feel that symbolizes, defines and sets the scene for the brand.

The digitization of the bathroom by Hansgrohe

Hansgrohe Group's "RAINFINITY" ecosystem puts the vitalizing and lively qualities of water at the heart of the brand. The RAINFINITY mission unleashes the vitalizing powers of water using digital technology to create the most beautiful moments day after day. The RAINFINITY DNA consists of three elements: people, water and smart technology.



People

People are creatures of water! The human body is increasingly regarded as something that can be regulated. The health-promoting fusion of people and digital technology will lead to lasting changes in the way in which we interact with our own bodies. Self-responsibility and self-assessment consider body and mind as modifiable systems. Digitization is changing behaviour and multiplying the opportunities for managing and improving needs and expectations.

Water

Water as an element and resource is the medium and source of what moves and connects Hansgrohe. The vibrancy and freshness of water as a valuable resource and as an invigorating source drives the company and challenges its innovative spirit.

Smart technology

By 2030, the harmonious and seamless merger of our way of living with technology will be completed. Our bathrooms will above all do one thing: take care of us. Connected living will transform our homes into holistic

centres where meditation and virtual reality will nurture our souls and train our minds. In the era of the “Internet of Me”, customized “made-to-pleasure” programs catering to our personal preferences will exponentially gain in relevance, especially in the bathroom, a place of hedonistic recollection. This technological revolution offers the best of two worlds: a fusion of the smartness, customizability and adaptability of the digital world with the interactive and immersive experience of the real world, which will continue to develop a distinctly analog character of smartness – especially in the bathroom – to offer us lighter, more natural and more relaxing moments.

This DNA clearly illustrates that a digital shower does not yet constitute an innovation simply because of the use of digital technology. Hansgrohe must focus on creating incomparable new experiences by means of technology as digital alone does not make an innovation. The Hansgrohe brand was the starting point for the company’s digital strategy. Hansgrohe not only stands for the “beauty of water” but also for stimulating and genuinely revitalizing everyday experiences. Hansgrohe’s digital vision significantly broadens the company’s aspirations as a global market leader in the sanitary industry beyond the “flow of water”. The aim is to

improve people’s everyday lives with the power of natural elements such as water, light and sound in order to enrich, stimulate and decelerate them.

Building on the attributes of today’s brand positioning (Innovation, Quality, Sustainability and Design), the digital Hansgrohe brand is associated with the following attributes:

- elemental
- abundant
- intense
- flowing
- immersive
- activating
- purifying
- vitalizing
- healing
- invigorating
- life loving
- sensuous
- familiar
- peaceful
- inspiring

The sum of this conceptual cloud is: RAINFINITY. To implement this brand vision, a design process for a new digital product was launched in 2018.

Part II

Design thinking and IP design within the Rain tunes project



The starting point was Roberto Verganti's assumption that customers do not buy objects but meaning. Design-driven innovation means radical shifts in meaning. For a clearer understanding of such shifts in meaning, take the smartphone, for example. While cell phones were originally developed for wireless voice communication, today's

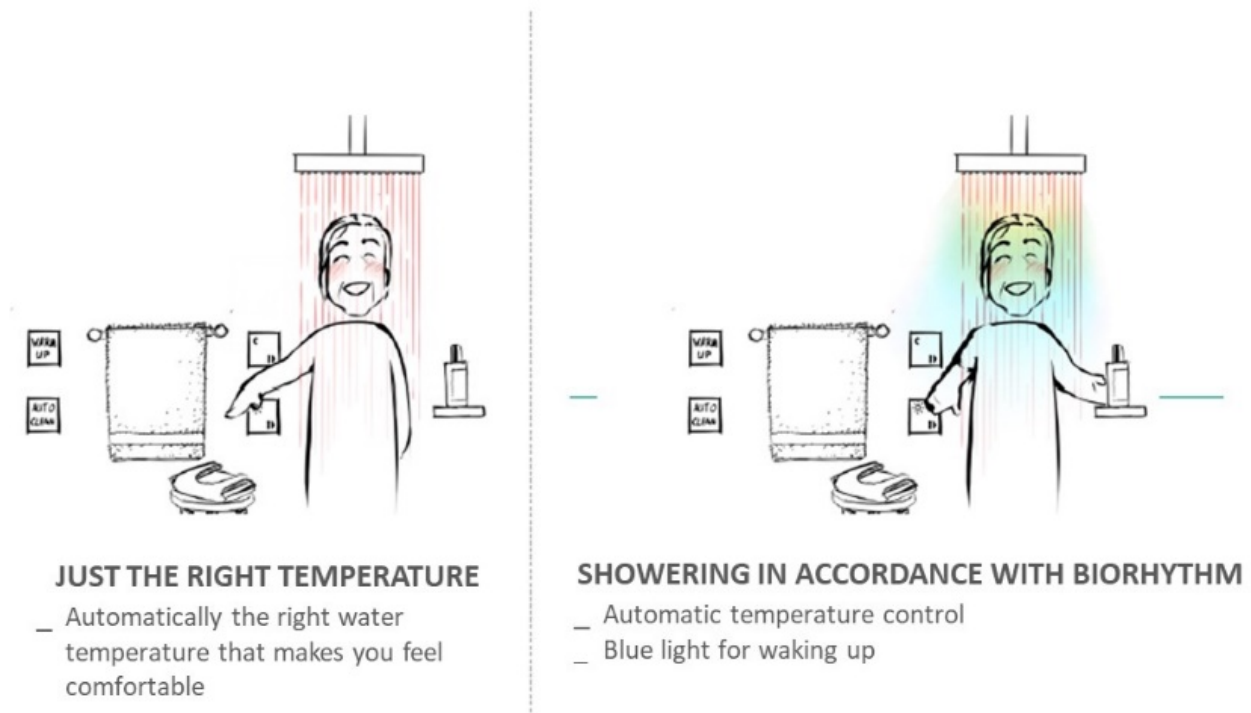
smartphones are universal personal assistants and life companions. Cars, too, are going to undergo a shift in meaning through electric and autonomous driving – perhaps as a place for good conversations or intense family experiences. Design-driven innovation is about gaining interpretive sovereignty for meanings with people. It is not just about how people use things and people's needs, but also about how people interpret and see things and what they mean to them.



The starting point of Hansgrohe's digitization project was therefore to find out what showering means to people. An online survey was used to capture people's impressions and interpretations. Respondents included women and men between the ages of 30 and 70, with a single household income of at least €2,000 and a two-person household income of at least €4,000 as well as different family situations, and living in their own homes or in rented flats. The question was: How do people really shower?

constantly accelerating. An increasing number of people feel left behind by digitization. They feel pressured by their everyday lives and their personal needs. People have less and less time for a growing number of things. The hunger for more is almost insatiable. As a result, they are feeling an ever-increasing need for retreat, well-being, recreation and leisure. Paradoxically, this leads to additional stress. Hansgrohe wants to play its part in breaking this vicious circle.

MEANWHILE



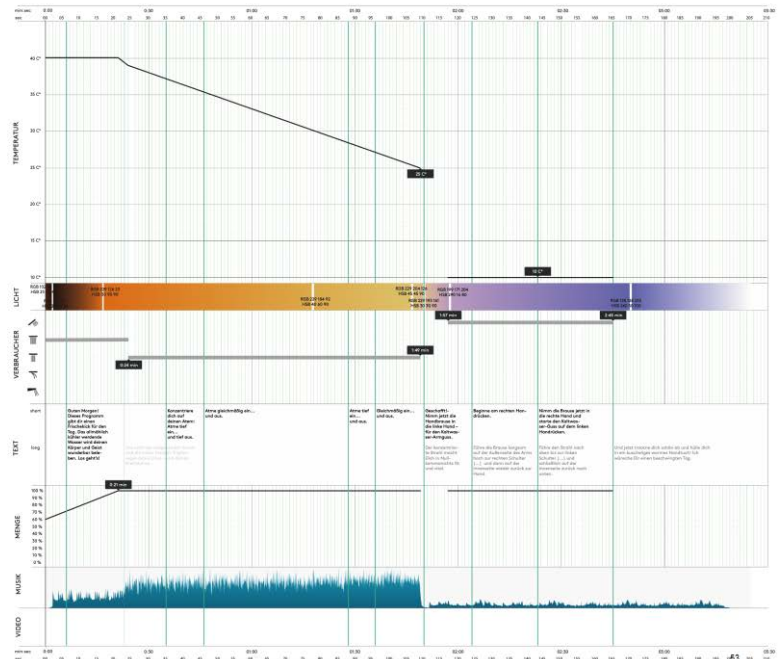
The analysis led to the development of different archetypes such as indulgence showerers, grooming showerers, quick showerers and hotel showerers. The analyses also revealed that people feel that their lives are

Partitur

Shower Rezepte



Hansgrohe, Visual Brand Language byPhoenix
Donaueschingen, 14. Februar 2019



The shower is becoming a place of retreat where people can recharge their batteries, daydream, enjoy some me-time and focus on their worries, problems, fears and dreams.

Showering is less and less about personal hygiene. The analysis showed that people tend to use showers as an occasion-specific ritual. The shower is a place of retreat where we can escape from the hustle and bustle of everyday life for a short but intense period of time, a place where we can deal with everyday problems which are too small for seeking professional help but too important to ignore.

The Rain tunes system offers the users multisensoric shower scenarios providing an individual showering experience. These scenarios include individual sound, lighting and fragrance for the best showering experience tailored to the moods and needs of the customer. In the near future a good

brand is required to take the customers needs and behaviour into account and improve it for their own good as the brand personality results out of the customer behaviour.

By 2021, the global wellness market will be



worth US\$ 815 billion. For 2020, the global market for digital health products and services is estimated at over US\$ 200 billion. The four major health problems of our time are: anxiety, depression, insomnia and stress. There is an ever-increasing number of digital and physical products for improving mental

fitness. Mental health and fitness is the new physical fitness. The “Calm” app is regarded as a trendsetter in times of digital overstimulation. The app provides guidelines for meditation and has been downloaded by over 18 million users so far. The developing company has already made profits and achieved a turnover of more than US\$ 30 million. In 2017, Calm was Apple’s App of the Year with over 30,000 downloads per day.

Based on this logic, RAINFINITY offers vitalizing showering experiences that fit people’s lifestyles and offer them a broad spectrum of options for alleviating everyday problems. RAINFINITY is a cyberphysical product combining hardware and software components. Ultimately, the showering experience is an app that can be taken anywhere the RAINFINITY ecosystem is installed: from private bathrooms to hotels, holiday homes,

COMPONENTS

ALIVE



In addition, the lion’s share of people’s expenditure on luxury consumption accounts for experiences. 55% of luxury-oriented spending is attributable to experiences. In China, 40% of total luxury spending is invested in experiences, 35% in cars and 25% in personal goods. Consumer behaviour is experiencing a dramatic shift from status-oriented object ownership to enjoying meaningful experiences.

theme parks and hospitals. Based on the ecosystem design, which consists of a digital platform for showering experiences, a number of business models are conceivable.

Multiple scenarios and use cases were analysed within the scope of the IP design process. IP design follows the agile method of project management. In order to understand the agile aspect of project management, it is important to understand what a project really is. According to DIN69901, projects are characterized by certain defining features:

- Uniqueness:
Project activities are carried out once rather than in a cyclical fashion in order to reach a defined state.
- Clear objectives:
Project activities must be carried out for a purpose. There are clear and measurable goals for the intended project outcomes.
- Time limits:
The beginning and end of a project are clearly defined and scheduled.
- Budgeting:
The project costs can be determined and differentiated from ongoing expenses.
- Human resources:
The work is conducted by interdisciplinary teams outside of the usual hierarchies.



- Differentiation from other projects:
Project outputs can be determined without any overlap with other projects.
- Independent organization:
A project requires its own organization, independent from the line.

In practice, another criterion must be added, namely that of novelty or an inventive step. From the company's point of view, a project is an innovation in terms of its content, task or goal. This is a crucial feature which makes a process unsuitable for a project. Thinking in terms of processes and their optimization assumes a repetition of the same tasks and the attainment of the same goals and deals with at least one analogous object.

In practice, a project is also characterized by its team character. Projects such as Rain tunes are usually handled by teams that are put together for a specific project in a specific way, e.g. based on skills and capabilities.

In contrast to corporate structures and process organizations, projects are temporary measures for dealing with extraordinary tasks and the project organization exists alongside other organizational structures. Looking at it from the perspective of the primary hierarchical structure and secondary process organization, it is therefore a tertiary form of organization running in parallel to the other structures for a limited period of time.

Project organization is a special case of an organizational form since it is only temporary, i.e. for the duration of the project, and exists in addition to the existing primary and secondary structures. The members of a project team are responsible for the project while simultaneously having their roles within the primary and secondary organization.

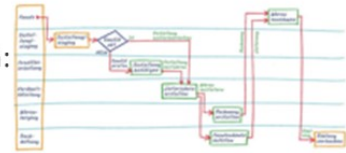
A characteristic feature of traditional project management is the rigid, predefined sequence of stages and individual steps within them. A fundamental principle is: once a step has been completed, this decision cannot and should not be changed in subsequent steps.

This results in a high level of planning safety according to the so-called cascade model. The clear structure even enables the management of very large projects. In practice, the cascade model is defined with different stages and steps. But in any case, these are project steps with defined, pre-planned and expected delivery points.

Primary organization:
hierarchical structure



Secondary organization:
process organization



Tertiary organization:
project team



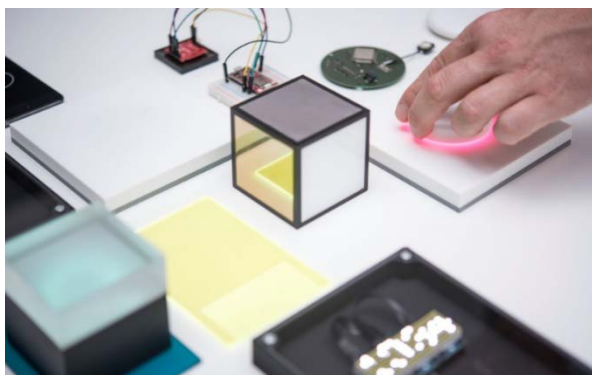
The obvious disadvantages of traditional project management highlight the need for alternative project management solutions:

- According to the traditional project management paradigm, changes throughout the course of a project pose major problems and entail considerable efforts and delays. Plans must be adapted, schedules must be aligned and resources must be adjusted, which can lead to cumulative project planning problems.
- Traditional project management is unable to cope with unclear and changing requirements. Changing environments require a degree of flexibility which is not permitted by traditional project management.
- Traditional project management does not provide for a portfolio approach or even unfinished program components which are spun off from the project. From a tra-

ditional point of view, the premature termination of certain aspects equates to the failure of the project.

- The rigid planning can neither absorb acceleration effects nor compensate for delays. Efficiency-reducing time buffers are required in order to meet a fixed deadline.
- In summary, traditional project management can be criticized for exceeding the planned project duration, running up higher costs than budgeted for and producing unsatisfactory outcomes in terms of functionality and customer orientation.

Agile project management such as design thinking and IP design is fundamentally different from traditional project management. In agile project management, there is a different emphasis on what a project should achieve and how. Not all project evaluation criteria of the traditional paradigm are given equal weight. Agile projects are characterized by a comparatively high tolerance when it comes to typical target variables such as scope, process, time and costs, and by significant client involvement. Agile project methods place a strong focus on deliverables and quality from the user's perspective.



Agile project management originates from software development where the traditional approach had proved too slow, rigid and inflexible. High innovation pressure combined with very short innovation cycles make fast, results-oriented action indispensable. Software development is seen as a highly creative process performed by highly motivated developers and without detailed predictability of typical business metrics such as use of resources and duration. The IT community thus had to reject traditional project management as an unfit approach.

Agile methods were developed in order to reduce the risk of bad investments and misguided development, because they are not based on uncertain assumptions and are able to safely respond to changing conditions.

IP design as a facilitator of agile action

IP design is an agile method of protecting digital business models by means of digital patents. IP design puts the customer and their product experience at the heart of all activities by asking what the customer 'really' wants and how digital transformation can answer this question. IP design is geared towards identifying, evaluating and selecting appropriate methods in iterative steps.

The Rain tunes project focuses on redefining showering and what it means to customers: the move away from body care and personal hygiene to mental fitness, meditation, ritual retreats and short breaks from the stresses of everyday life.

Established IP design tools enable the project team to analyse each evaluation and to revisit it at a later stage with a different level of knowledge. Creative output does not get lost. The company builds a portfolio of options for action and is able to control their implementation itself.

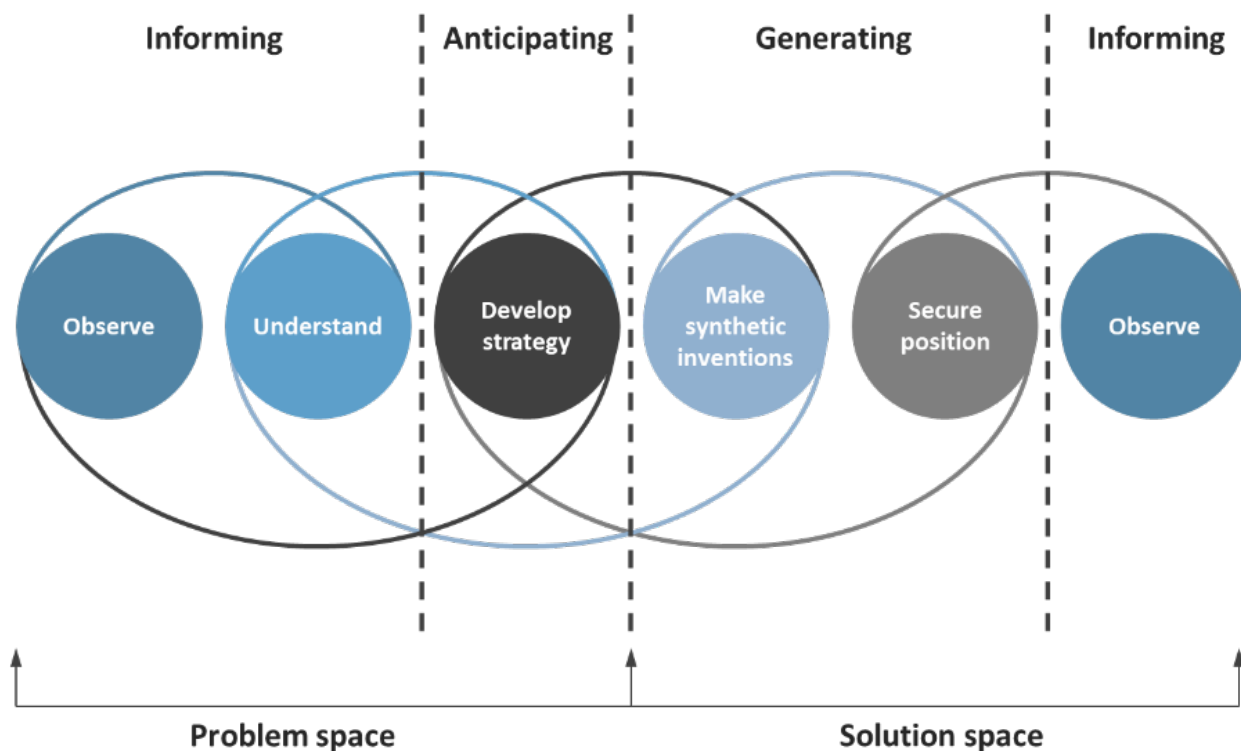
IP design leads to a permanent review cycle of the portfolio of options and scenarios for action and thus enables the company to evolve in the direction of different digital business models. Revision, adaptation and modification are therefore no longer a problem or a special case, but reflect the actual purpose of IP design. IP design even takes into account scenarios which are undesirable from the company's perspective and should be suppressed by IP. Even digital "nightmares" leading to disruption can be captured by patents without requiring those patents to be implemented.

IP design is a process consisting of three different sequential stages:

- • Obtaining information
- • Anticipating
- • Generating

Obtaining information refers to a process consisting of observing and understanding. It is all about analysing the environment, the trends and developments within industries and markets with a particular focus on the influences of new technologies and changes in customer needs.

Anticipating means developing IP strategies for possible future scenarios. This is followed by synthetic inventing for the purpose of protecting future positions. These three process steps are then followed by obtaining information again. IP design is a continuous process which supports business models throughout their market life.



Source: HPI School of Design Thinking / Qudosoft

PART III

Summary: Success factors and benefits for Hansgrohe

Digital transformation poses a particular challenge for successful companies with a long-standing tradition. As Harvard Professor Clayton Christensen aptly described in his bestseller “Innovator's Dilemma” in the late 1990s, disruptive changes are particularly challenging for successful and established companies. They are literally trapped within their own success and the customer expectations they have generated, and the move away from the old interpretive sovereignty for products, services and markets towards a new paradigm is much more difficult for them than for newcomers. On the other hand, their long-standing and profound market knowledge is a great advantage. With the Rain tunes project, Hansgrohe has embarked on its journey towards a digital transformation which not only involves the application of digital technologies in order to generate customer benefits, but also a redefinition of customer relationships, service delivery and customer value. Against this backdrop, the company has also redefined its approach to innovation, including the associated business processes.

The Rain tunes project also allows Hansgrohe to derive key success factors for design thinking and IP design. The pivotal role of the project partners in the progress of IP design requires highly effective communication. The project-based working methods of IP design are in line with today's interconnected work environment characterized by flat hierarchies, transparent contributions and solution-oriented thinking. This applies in particular to the agile overall approach involving design thinking methods.

Therefore, a corporate culture is needed that recognizes the creative contributions of the team members and prioritizes the outcome over planning. The methodology itself must also be secondary to the outcome, and to the exclusive character of the business model and the customer experience.

The transparency of contributions increases the pressure on the team members, reduces project management efforts and places the focus on the outputs. IP is by its nature structured according to procedures and formalities. Its integration with agile methods therefore poses a particular challenge. IP design integrates the possibility of making business models exclusive by design.

The interdisciplinary nature of project teams results in creative and innovative journeys from customer benefits to business models. Communication, empathy and clear rules are essential in order to facilitate the integration of creative potentials, different experiences, opinions and perspectives when it comes to solving a problem. IP design provides a way to overcome the functional silo mentality stemming from the hierarchical structure.

Success is the basis for acceptance and sustainability. This is why concrete cases where project teams have made positive experiences with IP design in their innovation work are vital in order for companies to be able to share these experiences with the rest of the organization in the form of credible testimonials.

Contact

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Additional information:

- Hansgrohe: Meet the beauty of water
<https://www.youtube.com/watch?v=cRCw7CtvVXc>
- SWR3 – “Schöner Duschen” (Greater Showering Pleasure - in German)
<https://www.youtube.com/watch?v=vRSAzpOCjII>

What is the MIPLM?

The 21st century marks a new era as our economies increasingly rely on knowledge-based production processes and services. Consequently, the institutions responsible for education and research in the field of intellectual property law in Europe must provide appropriate training for staff from the respective professional environments to acquire or reinforce their ability to initiate, control, protect, exploit and increase the value of intangible assets. The knowledge-based economy integrates research and development activities, innovation, industrialization and the marketing of products and services including intangible assets and completely revolutionizes enterprise management. It creates new professions specialized in dealing with intangible assets: this branch of law attracts consultants and intellectual property experts from among managers, jurists and lawyers. Indeed, every innovation process generated by new economic activities assumes the intervention of the law, the installation of tools and structures for developing or planning in order to control the intangible assets and to optimize their valorization. It has therefore been the duty of CEIPI, University of Strasbourg, as a leading center for Intellectual Property Studies in Europe, to propose a master program on "IP Law and Management" (MIPLM) since 2005, which complements the existing training course for engineers, scientists and lawyers. This "European" master program features a continuous training scheme aimed at experts in the field of intellectual property. It provides a genuine education program based on an investigation carried out in large enterprises in Europe. The teaching staff comprises academics and experts from various countries, renowned for their work and competence in dealing with the impact of intellectual property on the policy of enterprises.



M. Yann Basire
Director General of CEIPI

Intellectual property has become a crucial factor and driving force in the knowledge-based economy. The economic development and the competitiveness of companies increasingly depend on the generation and exploitation of knowledge. Intellectual property can convert investment in corporate knowledge creation into economic benefits. Thus IP-based appropriation strategies form the basis for creating wealth and competitive advantages for companies from their R&D and innovation activities. The development and implementation of sustainable strategies for IP exploitation require a concerted integration of the disciplines involved in order to achieve an interdisciplinary perspective on IP. In a knowledge-based economy, companies can only achieve a competitive edge by combining the economic, legal and technological sciences. IP management within such a holistic approach provides optimized appropriation strategies and thus essentially contributes to the creation of wealth within a company. Accordingly, IP management needs skilled managers who can combine the economics of intangible assets in an intellectualized environment with multidisciplinary knowledge in order to maximize the benefits of IP. A new type of competencies, skills and underlying knowledge enters the arena of management and management education. The increasing impact of intellectualized wealth creation by investment in knowledge, R&D and innovation followed by its exploitation and IP-based appropriation calls for seminal new education concepts. The CEIPI program "Master of IP Law and Management" offers such a new type of management education. It follows an intrinsically multidisciplinary approach to meet the challenges and requirements of the knowledge-based economy. This master program combines legal, economic and management sciences and includes lectures from leading scholars in the field of IP law and management. Its ultimate objective is to qualify experienced IP professionals for acting as practically-skilled IP managers with a sound knowledge of the principles of wealth creation in our knowledge-based economy.



Alexander J. Wurzer

Director of Studies, CEIPI | Adjunct Professor

Director of the Steinbeis Transfer Institute Intellectual Property Management

Concepts of the Studies Intellectual property and economics in the present context are two disciplines that exist in parallel.

Experts are found in each discipline, but with a lack of mutual understanding and training. Both "worlds" are nowadays bridged by experts, called IP managers, who link both disciplines through knowledge and experience. The CEIPI studies pursue a holistic approach and engage experts for the developing market of an IP economy. They are experts for basic economic management processes with specific assets. Management is understood in the broad sense of an overall company management and accordingly divided into six general functions:

- 1. Strategy
- 2. Decision
- 3. Implementation
- 4. Organization
- 5. Leadership
- 6. Business Development

On the basis of this differentiation skills should be allocated to management functions, and relevant knowledge to the functions and skills. The teaching concept focuses on both areas, skills and knowledge, as relevant to business with intellectual property.

Skills can be allocated to the specific management functions as relevant to the practical work within IP management. The skills are thus determined by the daily challenges and tasks an IP manager encounters.

For example, the "Decision" function includes skills such as "valuation and portfolio analysis techniques", and "Organization" as a function requires skills to manage IP exploitation and licensing including economic aspects as well as contractual design and international trade regulations with IP assets.

Special knowledge of economy and law is required in order to implement and deploy these skills in business. This includes knowledge of economic basics such as function of markets and internal and external influence factors. Additional management knowledge is also included such as value-added and value-chain concepts.

The legal knowledge includes contractual and competition law, and special attention will be paid to European and international IP and trade law, e. g. litigation, licensing, dispute resolution. Following this concept, IP law and management can be combined in clusters formed of specific skills and knowledge defined within each management function.

The lectures have a high international standard; the lecturers possess a high reputation and long experience in the teaching subject with academic and practical backgrounds.

The top-level experts come from the fields of law, economics and technology. The experts and the students work closely together during the seminar periods. Exchange of experience and, as a consequence, networking are common follow-ups.

Participants & their Benefits This European master's program was designed especially for European patent attorneys, lawyers and other experienced IP professionals.

Its ultimate objective is to qualify experienced IP professionals to act as IP managers with the practical skills and knowledge to deal with the new challenges of wealth creation and profit generation. Participants acquire first and foremost a new understanding of how intellectual property works in business models and are conveyed the necessary skills to achieve the systematic alignment of IP management and business objectives.

The course provides an international networking platform for IP managers and in addition enables participants to build long-lasting relationships and to further develop relevant topics within the field of IP management. Being part of this international alumni network also offers new job opportunities and publication possibilities.



Past lecturers and academics

Prof. Jacques de Werra,
University of Geneva

Prof. Estelle Derclaye,
University of Nottingham

Prof. Christoph Geiger,
University of Strasbourg

Prof. Jonathan Griffiths,
School of Law, Queen Mary,
University of London

Dr. Henning Grosse Ruse-Kahn,
Faculty of Law, University of
Cambridge

Prof. Christian Ohly,
University of Bayreuth

Prof. Christian Osterrith,
University of Constance

Prof. Yann, Ménière,
CERNA, École des mines de
Paris

Prof. Cees Mulder,
University of Maastricht

Prof. Julien Penin,
University of Strasbourg, BETA

Prof. Nicolas Petit,
University of Liege

Prof. Alexander Peukert,
Goethe University,
Frankfurt/Main

Prof. Jens Schovsbo,
University of Copenhagen

Prof. Martin Senftleben,
University of Amsterdam

Prof. Bruno van Pottelsberghe,
Solvay Business School

Prof. Guido Westkamp,
Queen Mary University London

Prof. Alexander Wurzer,
Steinbeis University Berlin

Prof. Estelle Derclaye,
University of Nottingham

Prof. Ulf Petrusson,
Göteborg University

Past lecturers and speakers, practitioners and institutions

Arian Duijvestijn,
SVP BG Lighting Philips

Kees Schüller,
Nestlé S.A.

Thierry Sueur,
Air Liquide

Heinz Polsterer,
T-Mobile International

Dr. Fabirama Niang,
Total Group

Philipp Hammans,
Jenoptik AG

Dr. Lorenz Kaiser,
Fraunhofer-Gesellschaft

Leo Longauer,
UBS AG

Nikolaus Thum,
European Patent Office

Bojan Pretnar,
World Intellectual Property
Organization

Romain Girtanner,
Watson, Farley & Williams

Peter Bittner,
Peter Bittner & Partner

Prof. Didier Intès,
Cabinet Beau de Loménie, Paris

Malte Köllner,
Köllner & Partner Patentanwälte

Dr. Dorit Weikert,
KPMG

Keith Bergelt,
Open Innovention Network

Selected companies

3M Europe S.A.

ABB Corporate Research Center

ABB Motors and Generators

AGC France SAS

Agfa Graphics

Air Liquide

Airbus Defence and Space

Akzo Nobel NV

BASF Construction Chemicals

Boehringer Ingelheim Pharma

British Telecom

Clyde Bergemann Power Group

Danisco/Dupont

DSM Nederland

Fresenius Medical Care

Groupe Danone

Jenoptik

Kenwood

Nestec Ltd

Novartis AG

Philips

Pilkington

PSA Peugeot Citroen

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Kategorie: MIPLM Industry Case Studies

Digitization of water: How IP-design is used to protect Apps and Eco-System for LUQEL- case study

3. Dezember 2019 Alexander J. Wurzer Luqel, MIPLM Industry Case Studies, Publication




LUQEL revolutionize the way people drink water, thanks to sustainable products that individually adapt to the digital lifestyle and requirements of each person – with fascinatingly precise and user-friendly technology and design. The LUQEL digital eco system consist of a water station, a smart bottle and an app. With the LUQEL Water Balancer App, users can create their individual water recipes at home, mobile or in the office.

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Digitalization in material engineering: How IP-design creates and protects new digital business models for Heraeus – case study

2. September 2019 Alexander J. Wurzer Heraeus, MIPLM Industry Case Studies



Heraeus is one of the world leaders in putting to work material and technology know-how for industrial purposes. With Heraeus Amloy, the company is becoming pivotal in shaping the digitization of materials science. With IP-design Amloy creates new digital business models and protect them with IP.

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