Towards Experience Design:
Design in the knowledge society

The knowledge economy is coming, and it brings fundamental changes for the way companies are set up and business is conducted. Design is a core discipline in the knowledge economy. Raymond Loewy's "Ugliness doesn't sell" was the slogan for design in the 1940s. "Bad experiences don't sell" could be the slogan for the upcoming knowledge economy, says Mario Gagliardi.

The classical, manufacturing-based economy works by taking raw materials and turning them into goods. This system inevitably leads to diminishing returns, as there is a finite amount of raw materials. For instance, the less oil there is, the harder it is to find more, and each liter gets more expensive to extract from the ground. In the knowledge economy, on the other hand, returns increase: ideas are not a scarce material, as knowledge builds on knowledge, creating a snowball effect. Also information can be built to order, assembled from components, stored, and shipped. The costs of logistics and storage are small, what matters is intellectual labor and creativity. The goal in a manufacturing economy is to take care of efficient production, while the goal in the knowledge economy is to enable ideas and innovation.

The classical, manufacturing-based economy works by taking raw materials and turning them into goods. This system inevitably leads to diminishing returns

In a knowledge society, value is created very differently: The company of the past created value by transforming raw or preprocessed materials into goods through prescribed procedures. The company of the future is a system to generate knowledge and turn it into value.

Europe once enjoyed the advantage of knowledge collections such as museums and libraries to infuse knowledge into its learners; this propositional knowledge (i.e. non-applied knowledge, the kind found in libraries) has in the meanwhile become an ever-growing commodity, accessible anywhere where there is an internet connection. But knowledge which creates value is of another kind: It is prescriptive. Prescriptive knowledge is the knowledge of "how to". To convert propositional knowledge to prescriptive knowledge, there is one core discipline: design.

In an industrial economy, design is part of the procedures converting resources into things. In a knowledge economy, design has a different, more advanced role to play: the conversion of knowledge resources into experiences.

In a knowledge economy, humans are the assets

The factors of production in a knowledge economy are creative individuals and groups. This requires different management approaches. Industrial-style management was primarily concerned with control to ensure efficient

In the knowledge economy, on the other hand, returns increase: ideas are not a scarce material, as knowledge builds on knowledge.

In the context of a knowledge economy, design's lack of defined boundaries, which was long seen as its main weakness by the more rigid sciences, is becoming its main strength.

production. That makes perfect sense in an economy where value is created from predictable, linear procedures. Control is however not the appropriate management paradigm for a knowledge economy, as it tends to stifle creativity instead of encouraging it.

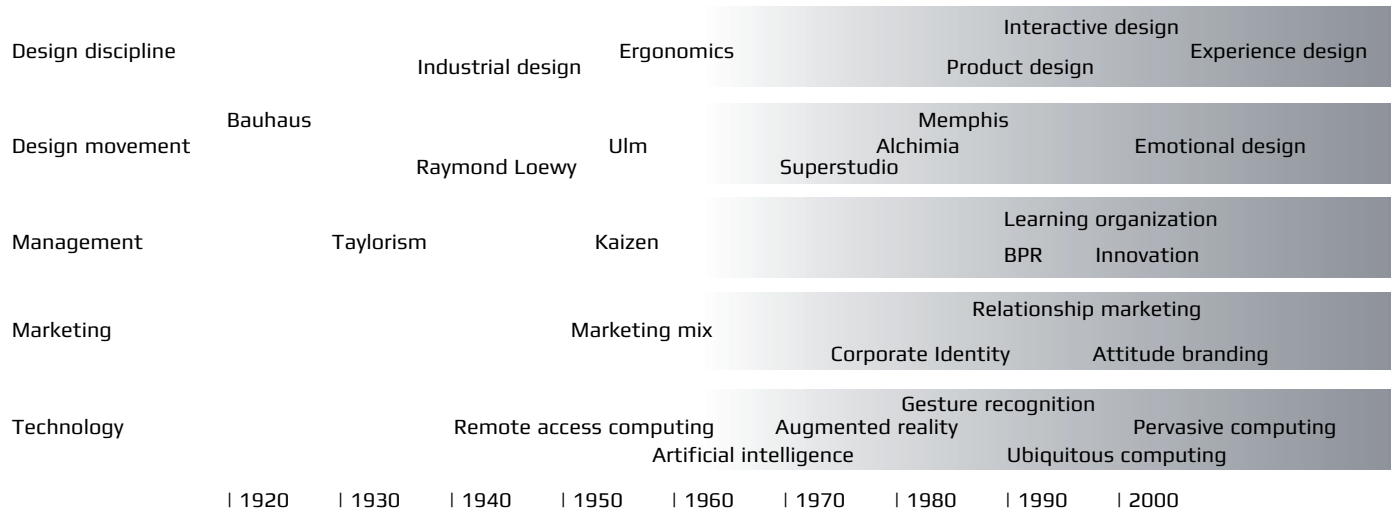
Also the positioning of creativity in the company changes. In a manufacturing-based economy, creativity is in the design department, where it contributes to improve the end product. This type of company structure however is ill-suited for a knowledge economy, where value is created by constant innovation. In a knowledge-based economy, creativity must suffuse the whole company.

Knowledge – as it might lead to innovation – is potentially disruptive. Most businesses today have been set up as systems fit for an industrial economy, not for a knowledge economy. They are set up as systems where change is perceived as threat, organized so that their stability is maintained through rules and hierarchies. Employees are usually not hired to excel in creative tasks but to be predictable and able to perform prescribed tasks. Most businesses today have a hard time innovating simply because they have not been set up to innovate.

The transition of product-oriented to knowledge-oriented companies is extremely demanding as it involves the complete overhaul of management approach and company structure, a change from linear, predictable structures aimed at efficiency in production to non-linear, more complex structures set up to catalyze creativity and foster the creation of new knowledge.

In the knowledge economy, creativity becomes both the vital basis of a company and a veritable new management task, needing dedicated strategies, company structures, and tools. Creativity needs top management commitment and with it encouragement, support, and feedback. Matrices, networks and interdisciplinary project structures support creativity, while rigid hierarchies inhibit it. It needs time and space – employees whose activities and whereabouts are constantly monitored won't be creative. It needs the commitment to take on challenges and the motivation for experimentation. Failure must be seen as an opportunity: when failure is punished, people will not dare to experiment. Support tools are creativity techniques, building mental models, systems for problem seeking and solving, and information tools to catch, decode, and distribute knowledge.

Hence business environments are becoming increasingly complex. Again design comes into operation: It is the discipline which is especially good in unpacking very complex, or "wicked" tasks which are difficult to tackle for analytical sciences. Design can create meaning accessible for the human senses, breaking down complexity to enable people to operate on it. While today most interfaces are computer screens, tomorrow human gestures will suffice to interact with complex technology. Design can unpack complexity through a combination of cross-disciplinary knowledge and an integrated research component – designers like to observe, compare, and rethink, and come up with solutions other more defined and narrower disciplines did not see.



In the context of a knowledge economy, design's lack of defined boundaries, which was long seen as its main weakness by the more rigid sciences, is becoming its main strength. Another main strength is its inherent visionary quality – every design is an instruction for something which does not yet exist. It is – not part-time, but constantly – concerned with envisioning new systems, with uncertainty and risk.

Experience makes knowledge

So how is knowledge, that fundamental ingredient, gained at all? Information is not knowledge until it is made into sense - through experience. Experience comes from Latin experientia, denoting the process of effort, endeavor and trial resulting in proof and knowledge. The range of meanings of "experience" in English illustrates the concept very well:

> You experience (perceive, apprehend) by experiencing (going through) to experience (to find out, to learn). Or, in the same words: Experience (adventure, endeavour) creates experience (know-how, practice, knowledge). As such experience is an impression (perceiving, apprehending), an event (adventure), a process (going through) and a result (know-how, knowledge).

And where does design come in? A short look at history shows how experience and design meet.

The modernist idea implied that there is a rational answer to rational problem. The Bauhaus assumed that design, armed with "form", can change functions in society – similar to the Taylorist approach of "scientific management". "Form follows function", a term originally coined by Louis Sullivan with a different intention, came to mean that a form is able to prescribe a function. The Ulm school of design perpetuated this idea, and it took until the late 1960´s when first Superstudio, followed by Alchimia and Memphis in the 80´s, opposed the rational paradigm.

Postmodernism began with the widespread realization that modernism and rationality did not solve the problem, and that the problem can perhaps not even be rationalized. As Niklas Luhmann said: There is no rational behavior, as for rational decisions there is always information missing. At most, there is intelligent behavior.

Since around 2000, the final form of post-modernism in architecture is deconstructivism, a trend mainly concerned with appearance and the celebrity of its creators. Deconstructivism almost seems like the last defiance of modernism after the insight that there is no rational solution, so it repudiated human needs, gave up on finding a solution and found relief in superficiality instead.

In the meanwhile, the center of gravity has changed. Since the 1990s there is ubiquitous computing; now it becomes pervasive. Marketing has moved on to look at relationships and attitudes; emotional design has put emphasis on

Experience design, means assisting people in realizing existing and creating new context, mediating between systems and people and finally enabling the user to define his own experience.

the sensual qualities of products; interactive design has put emphasis on the interaction with complex software systems; and successful companies moved to innovate business models and integrate various formerly disconnected elements of product, brand, service and delivery, new and upcoming examples being:

- Google Docs & Spreadsheets (online office suite);
- Joost (filesharing-based online TV with community features in cooperation with Viacom);
- Virgin Galactic (commercial spaceflight in cooperation with NASA);
- The LG Prada phone (co-branding);
- The Apple iphone (multi-touch screen phone+iPod+ Internet browser).

The culmination of all this is Experience Design. With Experience Design, the focus changes from conceiving and planning products to creating opportunities for experience. To achieve this goal, organizations are being restructured, operational processes dis-and reintermediated, business models reconfigured, and value chains catenated in new ways.

Experience design is the application of design processes to the creation of human experiences. The most obvious difference to previous design disciplines is that tangible objects or graphics are only one possible aspect of experience design. Experiences can be intellectual and sensory -visual, tactile, auditory, and olfactory. Experiences comprise memories as well as the complete actual being in the present – a wide repository of human impressions and conditions.

It is a currently just emerging discipline, being constituted by knowledge and processes of a variety of disciplines. The term is at times found reduced to specialized design disciplines such as digital design, branding, or usability, or products such as computer games or theme parks. Experience Design can, but does not have to, connect to any of these aspects of design. Its goal is to improve the complete human experience of a wide variety of activities including doing business, learning, working, and leisure.

For instance, designing a bank branch usually meant to design the interior; everything else was not the job of the designer. From the Experience Design viewpoint, the focus is the experience of the customer when visiting. This experience is made up by the impression, the event, the process and the final result – what knowledge of the bank and its behavior the customer brings home from his experience. The first impression when entering the branch, the process to get what the customer wants, the possible waiting time, the feeling of security, the quality of interaction: All elements of the visit combined form the experience and are subject to designerly investigation. When concerned with learning, Experience Design would look at the whole experience of learning: the experience of experience. When concerned with work, Experience Design would not only look at the design of the workplace, but investigate the whole process involved, including the structure and quality of communication flows, situations for learning on the job, and factors for motivation.

Experience design, thus, means assisting people in realizing existing and creating new context, mediating between systems and people and finally enabling the user to define his own experience – the next level of personalization, if you so want. The focus is on the whole situation a person is in, and the experience somebody makes in that situation, involving the whole environment, the narrative unfolding and the interaction happening.

Mario Gagliardi is designer, strategist, and theorist of design and management. He is currently principal of mg strategy. His roles included advisor for the Korean Institute of Design Promotion and the Innovative Design Lab of Samsung, special advisor for the Austrian Ministry of Education, Science, and Culture, and chief designer of LG. Mario is speaking at universities and congresses worldwide and is currently visiting professor at Aalborg University.
Find more of his thinking at www.mariogagliardi.com

Mario Gagliardi skriver i hvert nummer af inform lounge edition om et selvvalgt emne under overskriften "Mario Gagliardi On Design". Alle artikler er på engelsk.

As such experience design is concerned with the process of human sensemaking. It will deal with metaphors of space, flows of communication, and the entire contextual complexity unfolding in a given situation. It should inspire dialogue and invite exploration by offering space for creativity and mental bridges for interaction; it should be open-ended and adaptive, offering orientation and guidance without limiting the positive potential of a situation.

Sweeping changes ahead

Businesses are transforming, and the ones who did not yet will need to do so in the near future to remain. The same holds true for the design profession.

There is an increasing specialization in distinct design niches. As disciplines get more specialized, their respective bits of knowledge and skills are also getting increasingly isolated from each other. At the same time, the emerging discipline of experience design is a meta-discipline encompassing a wide variety of fields, demanding the exact opposite: a bird's eye view and a wide knowledge and skill base. However, conventional schooling still directs people into knowledge niches from early ages, and conventional companies still look for increasingly specific rather then lateral and general skills.

The knowledge economy will also bring new industries as typical clients for design: government, education, social services, the hospitality industry, healthcare, banking and insurance, legal and business consulting, and the entertainment industry, for tasks such as designing entire company structures and human experiences.

There is a pressing economic need to integrate design into social and business processes at a more fundamental level.

The contribution of design to the coming knowledge economy is currently profoundly underrecognized. In government agendas much is invested in technology but little into creativity and design. But also technology has to be conceived and implemented by humans, and they, in order to actually invent and innovate, need to be creative. Technology, on its own, has no value; it has to be converted into meaningful human experiences, and the tool to do that is design. There is a pressing economic need to integrate design into social and business processes at a more fundamental level. Yet, most designers are still spending most of their time designing isolated products.

Whenever history enters a new paradigm, it takes time until people realize what is happening. The previous economy brought viewpoints, mindsets and approaches which are still applied by designers, managers and governments alike. Already Marshal McLuhan pointed out that we are always trying to solve the tasks of today with the conceptions from yesterday. Alas: What got you here won't get you there.