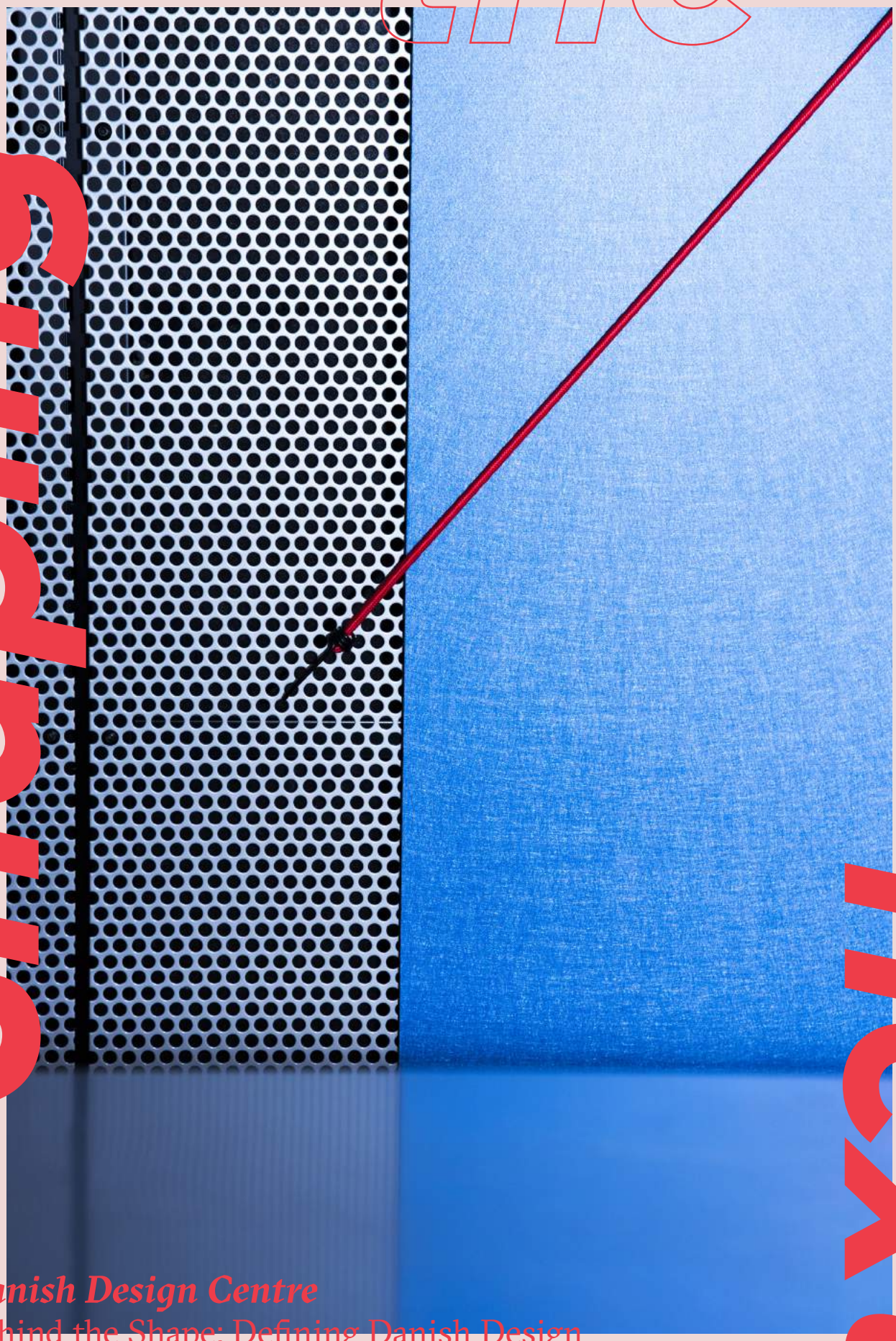
Shaping the next



Danish Design Centre
Behind the Shape: Defining Danish Design
Shaping the Next City
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Shaping the Next: The Future is Now

Shaping the next

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Shaping the next

In the spring of 2019, I attended the interactive festival SXSW in Austin, Texas. It was my third visit and I was happy to be reminded of a lot of relevant questions for our technological future, presented by a variety of leading experts, politicians, futurists, designers and authors.

Every presentation I saw, every talk I heard, and every book people referred to had an overarching theme. Of course, there was a lot about the coming age of machine learning, artificial intelligence and data security. But above all else, weaved into almost every conversation, whether it was about new forms of workspaces and education, IoT or blockchain, was one word: Empathy. Empathy – or the lack of it.

Thousands of people in Austin seemed to agree that, above anything else, we need to find a way back to being human in our digital age. Now, this is good news

> *"If more empathy is indeed part of what we need to address our challenges – and I believe it is – designers have a key role in bringing it into play.*

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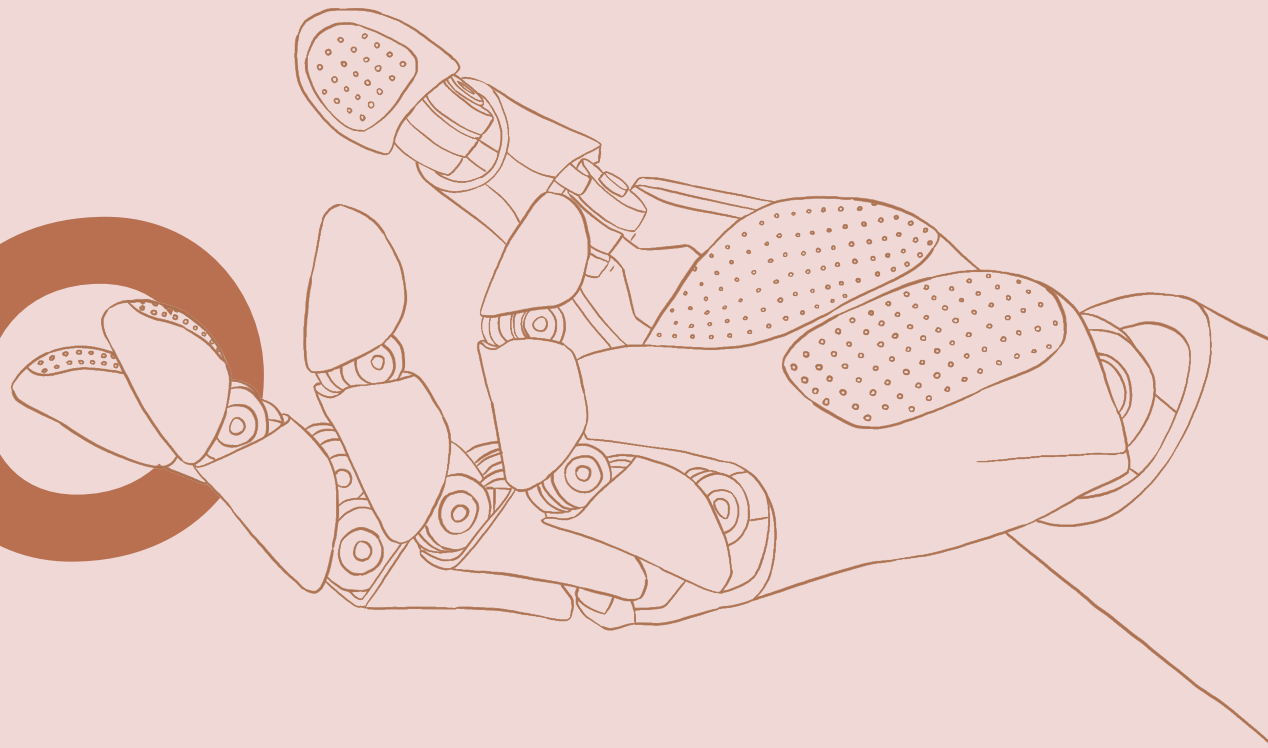

in more than one sense. It is of course reassuring that people who have contributed to seductive marketing through social media, who have coded addictive algorithms, and who have helped push political agendas via our e-mails seem to have woken up simultaneously to realise: We are not doing the right thing.

Being empathetic in all endeavours means you notice if a CEO of a major company has lost his or her emotional compass and is treating employees badly. You notice if they are hogging our personal data with the purpose of using it against our best interest. With empathy, we can steer the development of the most intelligent new technologies simply by asking ourselves not how fast it runs, or how much data it can collect and use, but how it can help humans in the best way possible. It means that something as fluffy as how something feels is actually recognised as a value.

For designers, empathy is nothing new. Empathy is a skill (not a trait) that designers use, train, refine, steer by. But as I have spent most of my career studying and working with design, I notice a shift in my own world as well – a new focus on and recognition of empathy as a vital value. If more empathy is indeed part of what we need to address our challenges – and I believe it is – designers have a key role in bringing it into play.

I believe that the large tech-corporations, governments and organisations that are capable of taking users and customers seriously as humans, will ultimately be the ones who will define our shared future – and thereby the next society.

This year, the Danish Design Centre turns 40, and so it is timely to turn our sights to what is in store for the longer term. I hope by reading the following pages you will learn more about how we and our partners see the potential of design for creating a better present and for shaping the next 40 years. Enjoy!

Christian Bason
CEO, Danish Design Centre

Photo by Julie Due / SpaconX

Behind the shape: defining Danish design

Shaping th next golde Danish des

Exponential technological developments, uncontrolled climate change and political polarisation call for design thinking: A holistic approach to global challenges that places human beings at the centre of solutions for the future.

By Christina Melander
Programme Director,
Danish Design Centre

What will a future with bionic minds and robots look like? How do we design solutions that mitigate climate change, secure growth for businesses in a digital age and create a human healthcare system? These are major challenges that, at a glance, can seem impossible to surmount. We need a holistic approach that puts humans first and places values like empathy and sustainability front and centre. We need design thinking.

As more and more companies and organisations realise the urgency of adapting to these challenges, they are turning to designers to better understand and create tangible results for an uncertain future. Design creates coherence through a people-centered approach, resulting in social, democratic and accessible solutions. Although these would traditionally be considered "soft" values, they are a powerful means to achieving "hard" goals – growth, job creation and innovation.

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Few countries in the world stand on such a strong design foundation as Denmark. This is partly due to our successful furniture icons of the 1950s and 60s. But Danish design has always been more than icons. The essence of Danish design and our creative DNA correspond with the essence and values of the Danish society. Community, equality, democracy and transparency.

These key values have made Danish design an inherent part of Denmark's global brand and Danish export successes for many decades. Take a look at the finalists and winners of the Danish Design Award (formerly the Danish Design Prize) that for the past 50 years has celebrated the difference design makes. These include VELUX windows, electrical sockets from Lauritz Knudsen, playgrounds from Kompan, vacuum cleaners from Nilfisk, medical equipment from Radiometer, bicycle lockers from Basta, pumps from Grundfos, wheelchairs from R82, hearing aids from Oticon, bicycles from Biomega, textiles from Kvadrat, car sharing from GoMore, and colostomy bags from Coloplast. Just to mention a few.

Our biggest challenge is that design, and the way we design, is so embedded in our DNA that we tend take it for granted. In the words of advisory board member for the Danish Design Centre and CEO of Change Labs at Stanford University, Banny Banerjee, *"I don't think Denmark realizes that the world is actually looking at countries like yours. There are very few countries which have the track record, the talents, the potential to bring tremendously transformative and deeply systemic solutions to the world."*

The opportunity to shape a new golden age for Danish design is now. If we dare to be ambitious, activate our world-class design ecosystem and meet the global challenges with our strong tradition for collaboration, openness and curiosity, we can literally help save the world – one design idea at a time.

The Danish design DNA

What does it mean when we say that something is "Danish design"? What common features characterise the thousands and thousands of different ideas that are conceptualised, designed by and produced with the help of Danish designers?

In 2016/2017 the Danish Design Council together with Danish Design Centre, The Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation and Design Museum Denmark, conducted a survey of Danish design in order to identify its exact characteristics - its DNA, so to speak.

The questions were many: What is associated with Danish design in Denmark and internationally? Are there internal factors that influence the development of Danish design, and if so, what are these? How do current external factors, such as globalisation, and trends like technology, sustainability, and new types of design influence the development of Danish design today? Can the Danish design DNA be expressed even more clearly by offering other methodologies, processes and systems to address the dominant and grand societal challenges today and in the future?

The majority of Danish design solutions reflect some of these values, some even reflect all. The values will apply differently to design in the form of furniture and design as industrial solutions or public service. However, both furniture and eg. public services have shared value features, which supports the idea of the special Danish design DNA - across products and services, across industries and across public and private.

Why is the Danish Design DNA essential?
The aim of the exploration was to rediscover Denmark's unique design DNA, solidifying design as a competitive asset for Danish businesses and as a tool for addressing some of the world's greatest challenges.

Design is something we almost take for granted in Denmark. Roman Mars, creator of the immensely popular design podcast "99 percent Invisible," talks about "the unnoticed architecture and design that shape our world." Historically, design has in fact helped shape our entire welfare society; from our furniture and lifestyle to our liveable cities and urban spaces.

In recent decades, design for service and strategy development of companies and organizations has flourished, offering a fresh approach to creating value and not just valuation.

Design is the glue that binds everything else together and makes a product, service or system – digital or analogue - desirable. And the Danish design DNA binds everything together in a way that is unique to Danish creativity. The concept of "Danish design" needs to be updated in a way that substantiates the added value, companies that work strategically with design experience in new markets as well as in new products and services and better user interface. To apply design, we need to define it.

Defining Danish design

Danish Design DNA is a project initiated by the Danish Design Council and carried out in cooperation between KADK, Design Museum Denmark, Design denmark and the Danish Design Centre. The aim was to map the characteristics of Danish design.

The analysis led to 10 values that make up the genetic code of Danish design.

Human

Caring, empathetic,
humanistic, inclusive

Social

Democratic, non-hierarchical, trust-
worthy, rooted in social movements

Holistic

A coherent approach to function, tech-
nology, systems and user-context

Quality

Highest standard in materials,
crafting, and detailing

Craft

High professionalism, detail-oriented,
natural materials, textural

Factual

Addressing the right problem,
unpretentious, discreet

User-driven

Sensible, transparent, user-centered,
everyday aesthetics

Transformative

Innovative, collaborative,
multidisciplinary, process-oriented

Durable

Long-lasting, solid, conscious
of tradition

Simple

Stringent,
minimalistic

Words on Danish design

“

Danish design is at its core functional. It just is – without trying too hard.

Rasmus Ibfelt
Partner og Creative Director, e-Types

“

American design is business, German design is a science, Italian design is art, and Danish design is craftsmanship.

Christian Holmsted Olesen
Head of Exhibitions, Designmuseum Danmark

“

Denmark has a long tradition for design excellence, but equally important is that the national design commitment has increasingly been integrated with the environmental mission.

Joel Towers
Executive Dean, Parsons School of Design

“

Danish design is centered around the ideology that it is for the people.

Ane Cortzen
Tv-anchor, architect

Photo by Julie Due / SpaceñX

Prototyping the Danish designer in the year 2019

Within the last 40 years the role of the designer has changed significantly. Together with Nordic colleagues, the Danish Design Centre set out to map who the Nordic designers are, how they work and what value they contribute to businesses and society as a whole. We asked two leading Danish designers, Kasper Salto and Nikoline Høgh, how they see themselves and the role of designers in the year 2019.

Kasper Salto
Designer, Kasper Salto and Salto&Sigsgaard

Nikoline Høgh
Lead User Experience Designer, Unity

Kasper Salto

The Nordic Design Resource study found that more than two thirds of Nordic design professionals have formal training, while the rest have come to the field via a different path. You completed both a formal education programme and an apprenticeship. What would you say played the biggest role in bringing you to where you are today?

Formal training and crafts training are equally important, and to me, it's not an either-or issue. My apprenticeship was crucial for me, in the sense that my formal training gave me design skills but not professional craft skills.

For a new designer, product design is not only about giving form to an idea – you also have to prove that it works in practice. That the chair is comfortable, or that the mobile phone feels right in your hand. Through my design training I acquired the design method and learned to ask the right questions, rather than going for the first idea that comes up. During my apprenticeship I learned a craft and developed a basic understanding of material properties. I set out working with wood but through that, I also learned what other materials have to offer. My master, Jørgen Wulff, said, 'I don't really care how you prepare for your apprenticeship, as long as you have worked hands-on with wood.'

You work within a classic design discipline, as do almost 60% of the design professionals in the Nordic countries. Just over 40% of design professionals engage with newer fields, such as digital design, strategic design and service and experience design. These fields are likely to take on growing importance in the coming years. What sort of changes do you see in the role of the designer?

I think it's great that the designer's role is changing. For example, design is sorely needed in digital solutions for the public sector, because the development has been so rapid. I think we're all familiar with the profoundly frustrating experience of dealing with a digital solution that does not seem simple and straightforward, especially when it doesn't work. The new fields are also affecting the classic fields.

As a furniture designer, for example, I also need to deal with service design and nudging. For example, if I'm designing chairs for an airport. How do people move – what is the people flow, where do people prefer to sit? All these factors have a major impact on the system design in a furniture series.

Do you use digital tools in your own work?

I give a lot of thought to how we can use the digital platforms. For example, I think that crowdfunding could help drive many relevant developments. As designers, we are pretty good at seeing what the world needs, and we no longer have to wait for a company to tell us what that is.

Take the Guest chair (for Montana Furniture, ed.) by Salto&Sigsgaard. The chair can be stored in a bookcase when it's not in use, taking up no more room than a ring binder, and be pulled out when you need an extra seat. We're delighted that Montana wanted to put it into production, but it could also have made a good crowdfunding project. Small in delivery and big in use.

And then there's Instagram and Facebook with their own unique rules, strategies and techniques for successful marketing. The new digital platforms do away with the image of the young designer who's struggling to win favour with the established companies, because suddenly everyone has direct access to the global market. Which is great.

What would you say are three basic competences that a designer needs in the year 2019?

First of all, a good grasp of material properties. I began with wood, but as mentioned, you can begin with any material as a way of developing a better grasp of the physical world. Next, technique. The simple practice of putting things together. Or, rather, the meeting of materials, which is the core characteristic of a good designer. And finally, design method. You learn that in design schools. Here we learn to ask the right questions rather than always providing the answers.

I hone these competences on a daily basis, and my design partner (Thomas Sigsgaard, ed.) and I are able to refine our design tools on a daily basis. We have arrived at a very short sentence: design is about taking something and making it better. While art is about a more personal approach, an attitude towards one's surroundings and society, design is much more concrete.

If it isn't functional and relevant in a usage context, you can't call it design.

Nikoline Høgh

How do you see the role of the designer in 2019?

UX (User Experience, ed.) is about equal parts humanism and practice. The finest role a software designer can have is to make technology adapt to people, rather than the other way around. We have all encountered software programs that don't align with our intuition, and we constantly encounter obstacles we have to adapt to. The software I work on in connection with films and games is something people use every single day, so it has to be accommodating. You have to take a step back to humanism, to the human user: what is it we want? And that is a key quality of Scandinavian design.

To me, innovation is when technology goes hand in hand with design. Sometimes technology makes great leaps. When that happens, the role of design is to determine what sort of purpose to add. Wii is a good example. Nintendo had the technology to allow us to stand in front of a computer, using a controller by moving our bodies. The innovation occurred when Nintendo came up with the social element that allowed us to play together. That redefined the purpose of the product.

You speak about putting the user centre stage, and that is indeed a core element in design thinking. In specific terms, how do you do that in a process where you also need to consider hardware and other demands?

Obviously, there are many different demands to be balanced. But we also have user involvement on many different levels before, during and after the development process. I have a bridge-building function and serve as the direct link between the engineer and the users. I am to involve people in defining their own experience and to shape these processes in a good way.

What would you say are three basic competences that a designer needs in the year 2019?

Technical competences. You need fairly good technical skills in at least one specific area. Young designers need depth, because you can almost always develop a broader scope. My student job pointed me in the direction I wanted to go. The school was very helpful in that regard, but real-life work experience is really important to help you discover your field. It gives you an understanding of earnings, of business and of working with others. You discover what it takes to realise your visions.

Next, humanism. That refers to what I said earlier about putting people first.

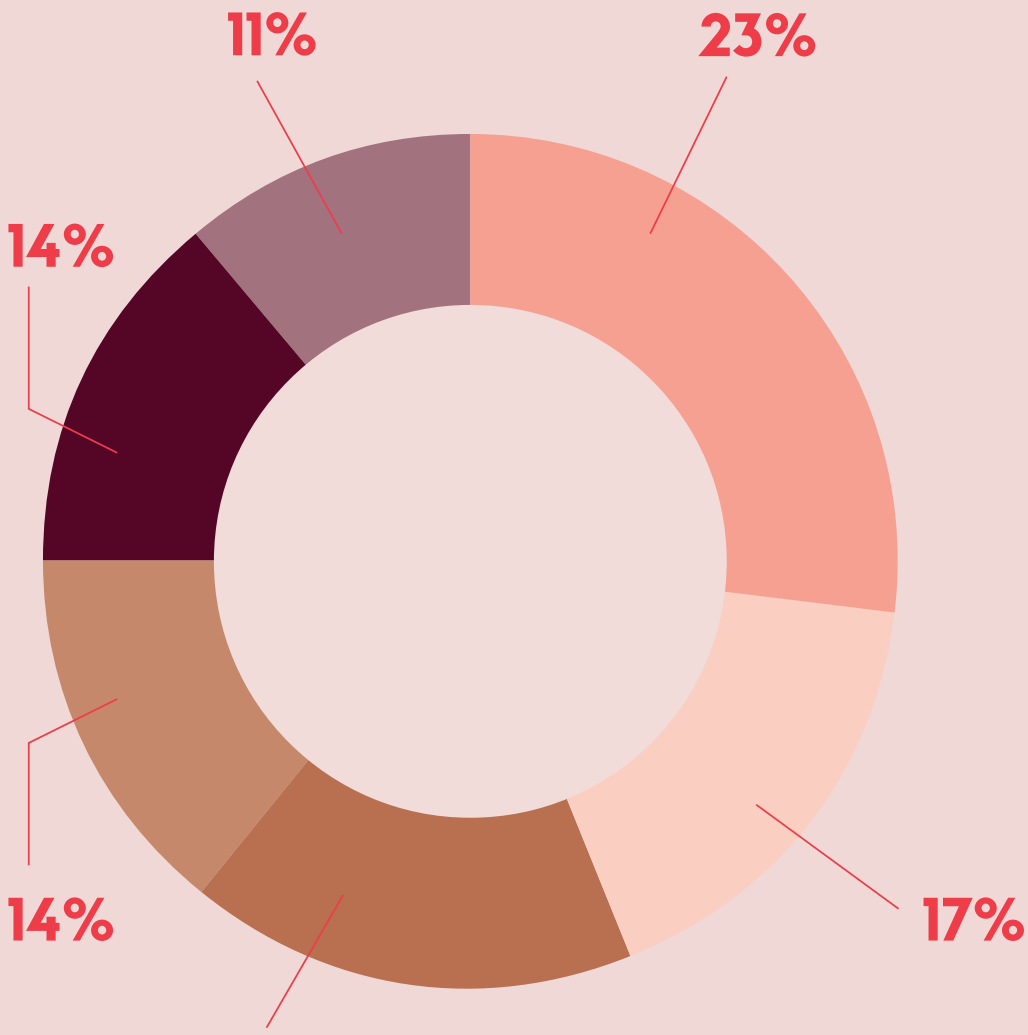
Finally, curiosity. My field is new in many ways, and it's constantly developing. You have to experience change as a positive feature.

How do you see the difference between your profession and the classic design disciplines?

The traditional disciplines have more clearly defined boundaries. The new design areas are challenging because we're building the plane as we're flying it. It's up to us to define methods and approaches. And we have to be self-managing, because design is such a new organisational addition to the digital field. That is why we have to make sure to be heard and included in the processes at a sufficiently early stage. We need to ensure that design is perceived as something that is not only visual but is an integrated part of how the product works.

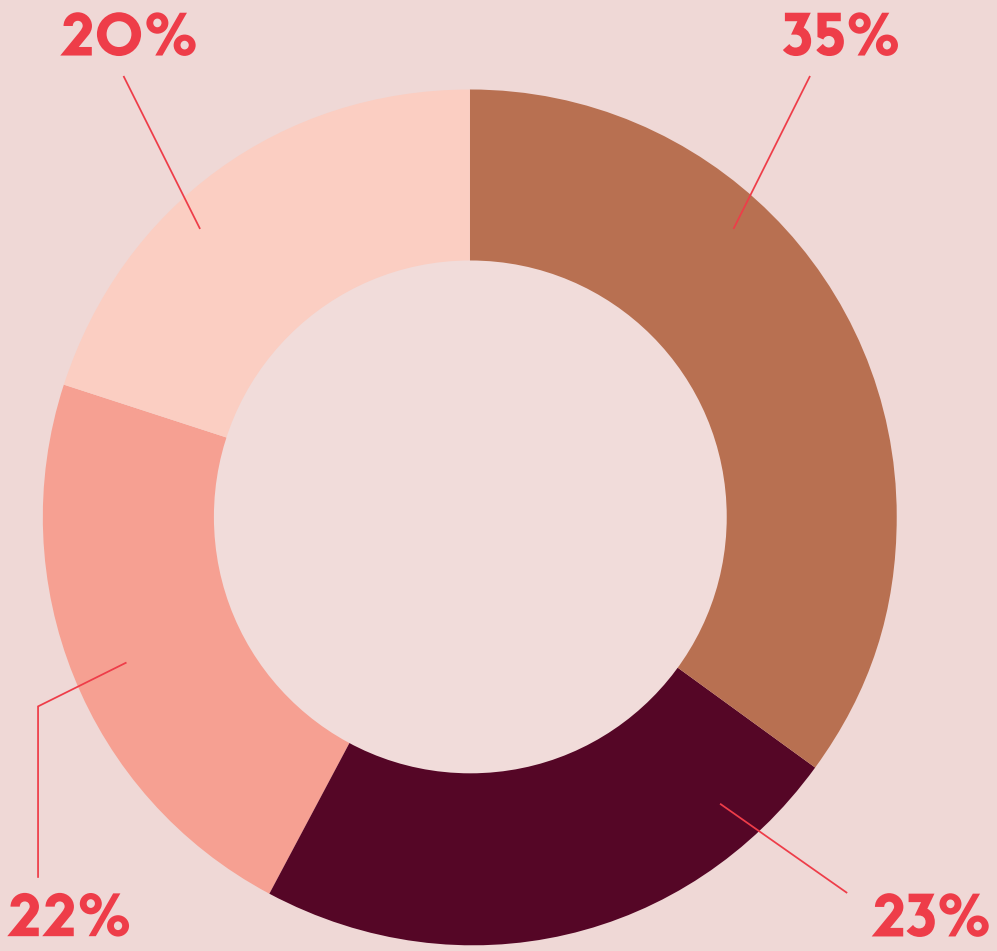
The study
The Nordic Design Resource

The Nordic Design Resource is the most comprehensive study to date of Nordic design professionals. The study was conducted by the Nordic design centres in cooperation with Nordic Innovation and the market research firm Seismonaut. Nearly 250,000 people work as design professionals in the Nordic countries. The majority are employed in the private sector and bring a much more diverse skillset to the market than previously assumed. See all the data from the study at nordicdesignresource.com



Six design disciplines in the Nordic region

- Graphic and visual design
- Digital Design
- Product development
- Management and strategic design
- Formgiving of products
- Service and experience design



How do digital designers create value?

- Products or services
- Insights in users
- Marketing/communication
- Other

Danish Design Award

Celebrating the difference design makes

Every year, Danish Design Award highlights the impact and value of design, celebrates companies and designers across the country and showcases the difference their solutions make for businesses, everyday life and society at large.

Danish Design Award is a joint creation of the Danish Design Centre and the alliance of design professionals, Design denmark.

The award categories range from design that has created jobs or cut costs over health solutions and resource sharing to visionary concepts demonstrating the wide range and diversity of the capability of design to bring added value.

Here, you can see some of the award-winning solutions through the years.

1967

Cylinda Line pitcher set

Designer*: Arne Jacobsen*
Company: ***Stelton***

Architect Arne Jacobsen is without doubt one of the champions of the quality concepts that have made Danish design an established international standard. For over 40 years this untiring man has designed houses, textiles and tools for many different clients. A/S Stelton is one of them, and the Cylinda Line is a typical illustration of Arne Jacobsen's approach to industrial design. Concise form, excellent finish and a well-planned programme are obvious characteristics.

1973

VELUX window

Designer & company: ***Team VELUX & Kann Rasmussen Industri***

The Velux window, designed for sloping roofs, has a convincing way of performing a number of technical functions. The neutral appearance of the Velux window makes it suitable for many types of buildings where daylight is desired in rooms with sloping ceilings.

1977

Kompan playground equipment

Designer: ***Tom Lindhardt***
Company: ***Kompan***

Kompan spring-loaded playground equipment is both sensible and fun. Sensible on account of their construction and educational principle. Fun because it affords children obvious physical pleasure. In addition, its general and detailed design reflects careful consideration for durability and safety. The award is an appreciation of both the technical and artistic contribution, which occurs in a field frequently neglected by both planners and suppliers.

1990

NovoLetTM easy insulin pen

Designer: ***Steve McGugan***
Company: ***Pharma-plast A/S & Novo Nordisk A/S***

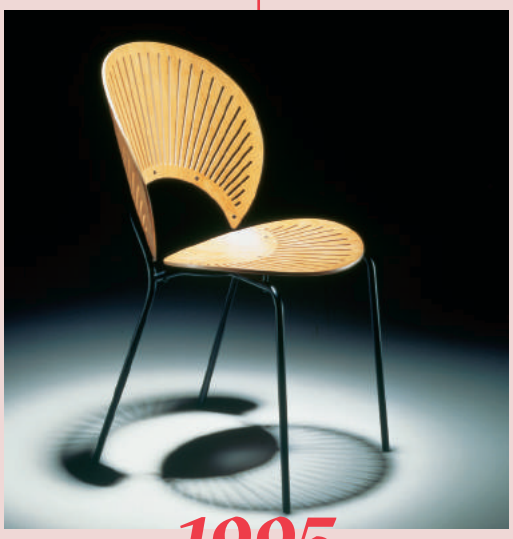
Novolet was launched in the summer of 1989 as an alternative to the syringe for diabetics. Patients have said that the pen allows them to control their disease rather than the other way around. NovoPen is constructed to give a click for every unit of insulin which is convenient for users with poor eyesight. The pen is manufactured in brass and has been nickelplated to give it a good grip.

1991

Signage programme for Copenhagen Airports

Designer: ***Designlab/Per Mollerup***
Company: ***Københavns Lufthavne***

The signage programme for Copenhagen Airports focuses on the user: Getting through an airport doesn't allow any time for misunderstandings, and travelers are usually required to manage on their own in an environment full of stress and rush. The signage is characterised by a Nordic no-nonsense sensibility. The typography is fresh and clear, and equally clear in Danish and English. In short, a public design assignment that does not aim to be different, but to be better.



1995

The Trinidad Chair

Designer*: Nanna Ditzel*
Company: ***Fredericia Stolefabrik***

Over the years, excellent chairs have been developed for all sorts of assemblies. In cooperation with Nanna Ditzel, Fredericia Stolefabrik has produced a stackable chair of excellent quality. It is absolutely marvellous to sit in – the construction is convincing. Because of the cutting of the seat and back, it is almost as comfortable as a basket chair. In its production technique, the chair is a true industrial product that equates design and quality.

1997

Pictoform guidelines for the blind

Designer*: Knud Holscher Industriel Design*
Company: ***GHform ApS***

Getting around in the city's streets and squares is difficult and sometimes dangerous for blind and partially sighted people. The system of tactile paving stones designed by industrial designer Jens Christian Larsen of Knud Holscher Industriel Design is a fine example of a simple solution for a complicated problem. Both the pattern of the stones and the sound they make help guide the user, whether these features are detected through the rhythmic touch of the white cane or through the feet.

2001

Danske Bank

Designer*: Bo Linnemann, Kim Meyer Andersen, Peter Brix & Morten Sørensen*
Company: ***Dansk Bank***

Danske Bank was awarded the Danish Design Prize 2001 for a very well-functioning design programme that is simple, flexible and extensively worked out down to the smallest detail. It appears complete and consistent at every level, from the logo over guidelines for printed materials to the implementation in the highly functional and practical digital design manual, which the jury wishes to highlight especially.

2003

The ICE chair

Designer*: Kasper Salto*
Company: ***Fritz Hansen A/S***

The chair ICE from Fritz Hansen is an elegant and stylish chair, and its very high quality of industrial material processing provides a product quality that makes it applicable in many different contexts.

2007

Lightyears

Company: ***Lightyears A/S***

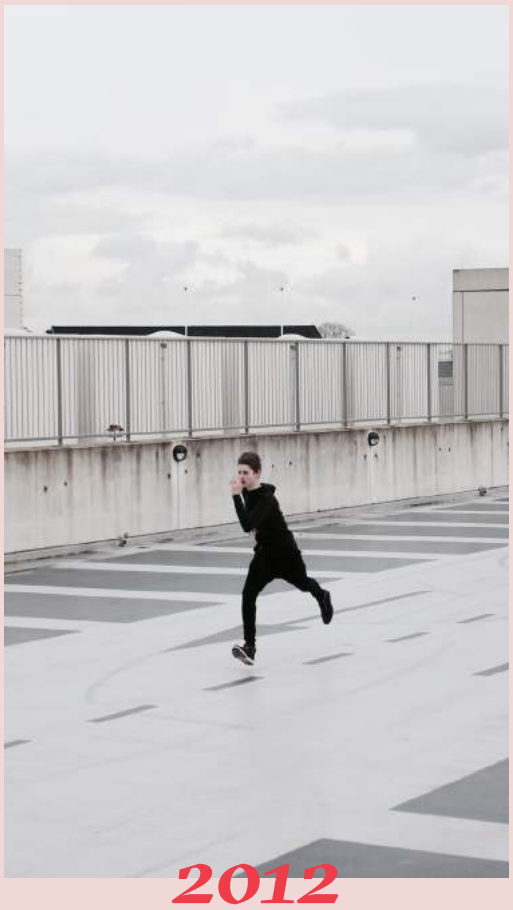
Lightyears A/S made design a key parameter, and with a series of specially designed lamps the company has become an international success in less than two years. Lightyears received the Designmatters Award 2007 for securing a strong market position with a very successful product. With a quality-conscious and competent line of lamps created in collaboration with some of the best Danish designers and design firms, Lightyears has managed to set the agenda not just in Denmark, but also in the international market.

2010

Clouds

Designer*: Ronan & Erwan Bouroullec*
Company: ***Kvadrat A/S***

With Clouds, Kvadrat and the design duo Ronan & Erwan Bouroullec have engaged in an experimental and innovative process to incorporate production techniques that are normally used in other contexts, and that has led to a surprising and unconventional use of textiles. Clouds is a system of two-dimensional 'patches' that combine to create spatial formations in any size, depending on the user's needs and imagination.



2012

Endomondo

Designer*: Ali Tabatabai, WEM3*
Company: ***Endomondo***

Endomondo is a sports community based on free GPS-tracking of running, cycling etc. Endomondo is an excellent example of active user involvement without any compromise on clarity. The design is intuitive, dynamic and ambitious. In only four years, Endomondo has become one of the largest sports communities in the world. That is impressive, and it is nice to see a small Danish firm earning a place on the world map of well-designed digital solutions.

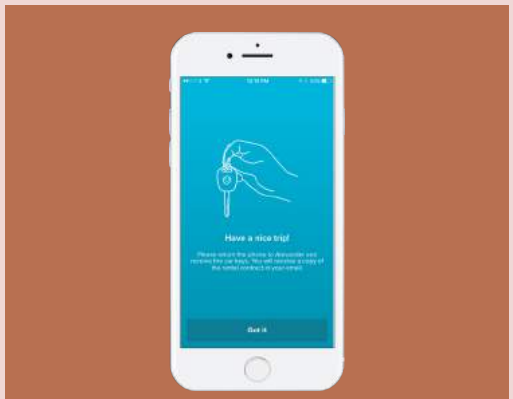
Photo by Jascha Huisman

2016

Sensura Mio

Designer*: Coloplast Design Team*
Company: ***Coloplast A/S***

The Mio ostomy product range is designed to provide a healthy feel and a sense of dignity. The colour is neutral for any ethnicity and skin colour. The material is a silk-like woven textile. It includes mobility-enhancing features such as an effective filter that neutralizes smell and an elastic and secure adhesive that follows the body's movements. Coloplast's innovative ostomy bag makes life simpler for millions of people.



2017

GoMore

Designer*: Alexander Varney, Benjamin Ottensten & Helder Almeida*
Company: ***GoMore***

GoMore is a community and marketplace for car sharing. It helps people connect, save money, and makes car rides more environmentally friendly and fun. Digital hitchhikers are at the heart of the growing success of GoMore. It is an example of service design that supports, simplifies and optimises the familiar tradition of filling up the car and splitting the petrol costs. An intelligent use of resources that can help reduce the number of cars on the roads while also facilitating access to those parts of Denmark that are hard to reach by public transportation.

2018

The Bicycle Snake

Designer*: DISSING+WEITLING architecture*
Company: ***København Kommune***

From day one, Copenhageners loved the gently curving cycle bridge with the impressive view. The elegant and empathic solution lets cyclists cross the harbour in a safe and dignified manner, underlining the city's profile as a sustainable metropolis with a pedal-powered profile. A visionary example of architecture that builds connections and does the entire city proud.

The Bicycle Snake

Winner of Danish Design Award 2018
Design: DISSING+WEITLING architecture
Company: Københavns Kommune

From day one, Copenhageners loved the gently curving cycle bridge with the impressive view. The elegant and empathic solution lets cyclists cross the harbour in a safe and dignified manner, underlining the city's profile as a sustainable metropolis with a pedal-powered profile. A visionary example of architecture that builds connections and does the entire city proud.

Photo by Rasmus Hjortshøj /
DISSING+WEITLING architecture

What makes an icon?

"A design icon is defined by two things: On the one hand, it is a reflection of its time and the needs of that time. On the other hand, it's timeless," says Anne Louise Sommer, Director of Design Museum Denmark. We asked five contemporary designers to name an icon that has inspired their work.

Albertslund Mini Post
Jens Møller Jensen

"Creating an icon that can last this long requires scraping off and not adding on layers. This is evident in the Albertslund-series, which over the years has become a big "family." The fact that it was created in the late '60s is not noticeable today, and since it has been updated with the latest technology, including LED and smart city-thinking, it will likely last another 50 years. Jens Møller-Jensen has, in my opinion, created a bright icon in the Albertslund mini post."

Chosen by: Kasper Salto

PP501/PP503
Wegner

"Wegner's exquisitely beautiful chair, the PP501/PP503, epitomises Danish furniture tradition and craftsmanship. The form feels complete; instinctively incredibly pleasing to the eye and the senses - gentle and inviting. That Wegner himself named it 'The round chair', and that it came to be known all over the world as 'the most beautiful chair in the world' just goes to show this. With its modest, defined, yet generous and elegant expression, it is a cultured, illuminated gesture that excludes no one, and stands as clear and relevant today, as when Kennedy and Nixon lifted it to international fame in 1960."

Chosen by: Signe Bindslev Henriksen & Peter Bundgaard Rützou

Tøjtræ
Cecilie Manz

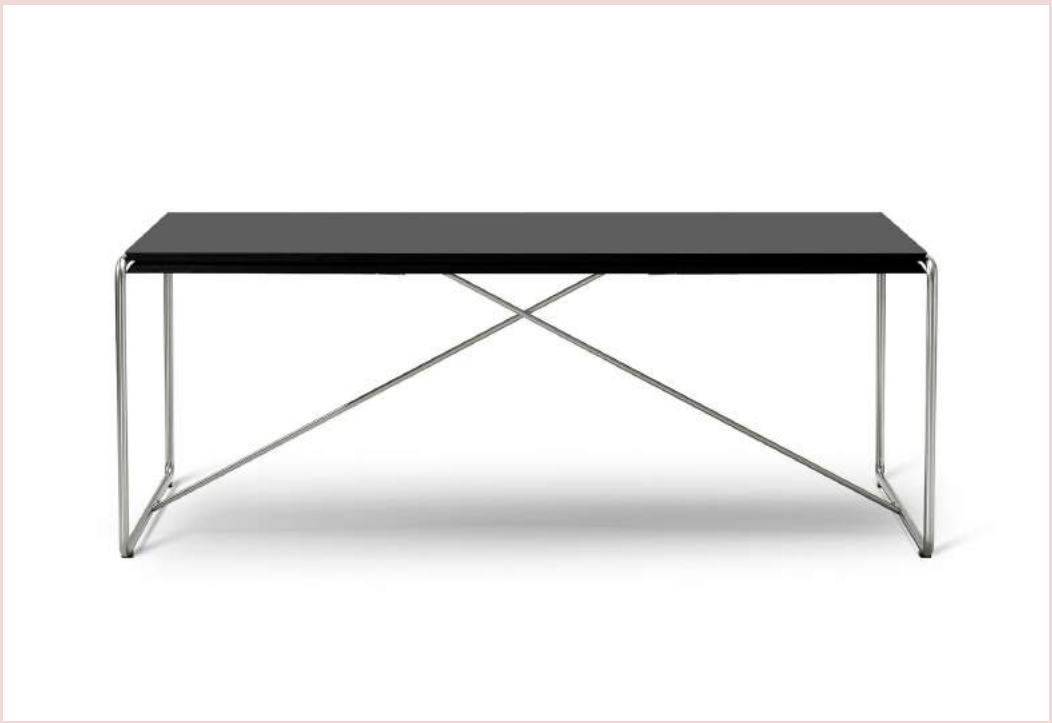
"One of my favorite designers is Cecilie Manz, who creates really beautiful and thorough furniture and products in a delightful and contemporary form language. I sense the attention to detail and getting the form just right, the fine use of materials with varying tactility. Her work with the function/situation openly allows space for usage and a closeness to the user. Her piece 'Tøjtræ' shows beautiful assembly points and the function is open, making room for both casually strewn clothes and stringent order."

Chosen by: Line Depping

ARV Chair
David Thulstrup

"The beautiful ARV Chair, designed by David Thulstrup and produced by Brdr. Krüger, draws on its mid-century heritage, but with a lightness and tactility so defining for the time we're in. The chair is created for the new Noma restaurant and like its first home, it is the essence of "details and craftsmanship" which will ensure its place among the classics for years to come."

Chosen by: Norm Architects



Haugesen table
Niels Jørgen Haugesens

"The Haugesen table is carefully thought out in its construction and amazing in its functionality. Its combination of functionality, technique and aesthetics is actually quite unique. You get the exact amount of extra places you need in an easy and aesthetically pleasing way. Visually, it hardly takes up any space in the room at all, which is of course a huge benefit."

Chosen by: Cecilie Manz

Danish design elevates everyday life

Matilda McQuaid
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Matilda McQuaid is deputy director of curatorial and head of the Textiles department at the Cooper Hewitt, Smithsonian Design Museum. Prior to the Cooper Hewitt, she worked at The Museum of Modern Art, NY, where she curated over 30 exhibitions, including the highly acclaimed "Structure and Surface: Contemporary Japanese Textiles."

When I think of Danish design, I think of home, but the utilitarian aspects of home, like a table setting or functional gadgets.

How has Danish design shaped global design history?

Danish design has helped shape the notion of timelessness in design with its longstanding tradition of intrinsic craftsmanship. It combines the best of craft with the best of industrial design.

Danish design has helped move the focus to the user. It invites user interaction and centers around a positive user experience. There is a tactility and warmth about Danish design, that also places significance on function. And let's not forget that designers are users, too. Design is more than aesthetic and form-for-form's sake. It is humanistic, and Danish design incorporates this in their best designs.

We see this in the current generation of designers, such as Cecilie Manz, who Cooper Hewitt included in its 2010 National Design Triennial. Her multifunctional Pluralis Chair combined table, step ladder and chair into one artifact, while drawing on the tradition of minimalist art. Artist/designer Olafur Eliasson is playful and accessible on many different levels, such as "The Little Sun," which has now become an important social enterprise for solar energy.

The high-tech character of some industrial design has it limits, and the pendulum keeps swinging back to a closer relationship with nature and the touch of the designer's or maker's hand. Danish design encapsulates this moment.

“Danish design has always played an important role, culturally and politically.

Which trends from Danish design have made a lasting impact in the US?

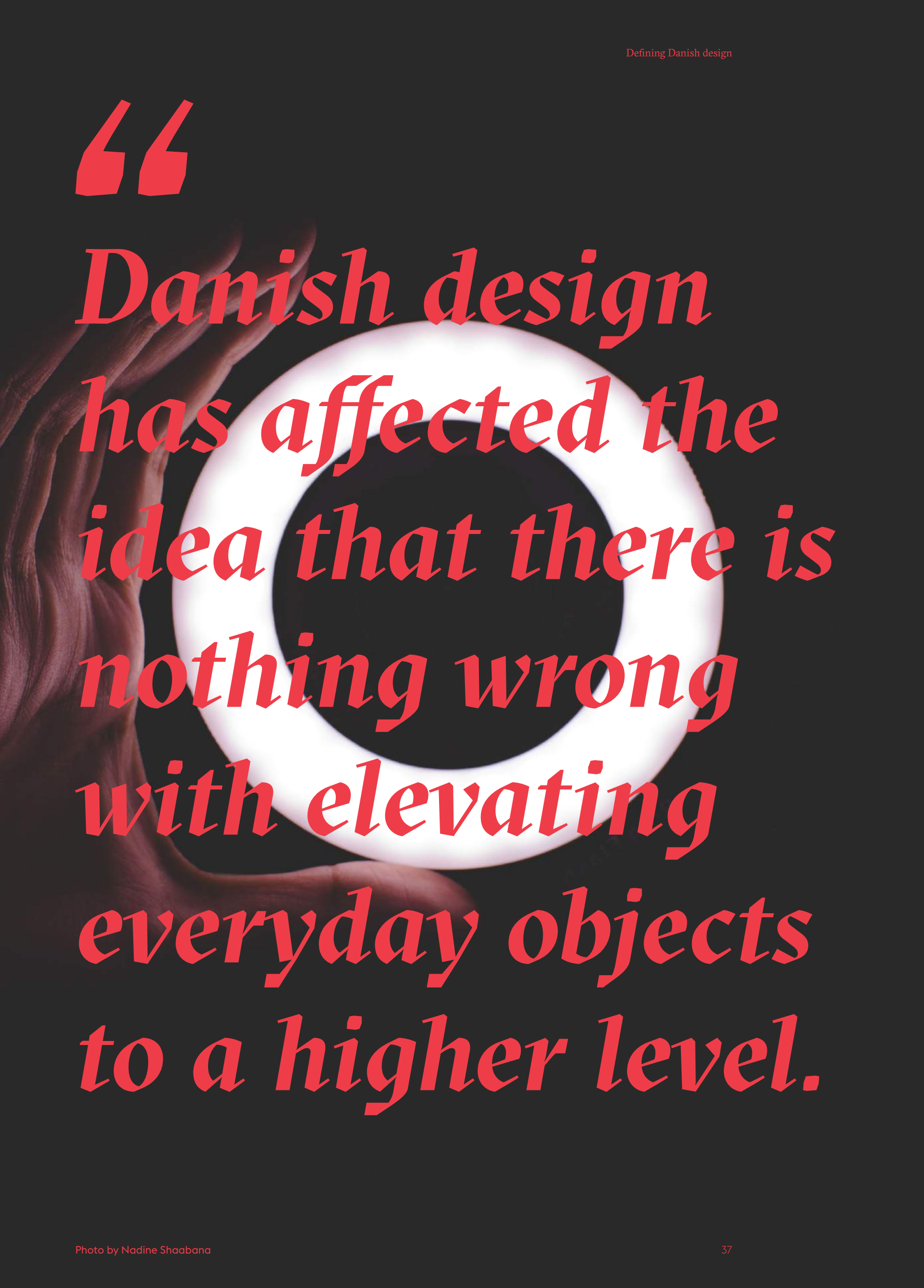
Danish design has been influential in elevating everyday objects to a higher level. When I think of Danish design, I think of the comforts of home, especially those utilitarian objects that provide that comfort--from furniture to table settings. Most of our time is spent outside our homes, so we want efficiency combined with pleasant experiences in those precious hours we spend at home and interact with our objects. In the United States, we look to Danish design for guidance in reducing design to its minimal components without sacrificing tactility, comfort, and function.

In addition, traditions of craft have become quite important in the US, and we look at many different maker cultures around the world, including Denmark. More recently, comfort in the form of “hygge” has seeped into the American culture and language.

The concept of design has changed significantly over the past 40 years, perhaps particularly in the last decade. How do you see Danish design contributing to this shift - and to solving future challenges?

One of the greatest strengths of Danish design is its tradition---there is a solid foundation on which contemporary Danish design stands. And in areas like healthcare, the US looks to many Scandinavian countries, like Denmark for inspiration. For instance, in Nature--Cooper Hewitt Smithsonian Design Triennial opening in May 2019, Nacadia Therapy Garden, is being featured. Nacadia is a research-based therapy garden for patients suffering from various mental disorders such as post-traumatic stress disorder (PTSD) and can be considered a model for certain types of mental health treatments.

The concept of craft has also evolved. Craft used to have a negative connotation, but this has changed in the last decade, and there is a greater appreciation of it with many initiatives taking place that are helping reinvigorate various craft traditions. It has also become closer aligned with design. In Danish design the importance of craft has always been there, but we are now looking at it in a new context that is more welcoming to tradition, which has resulted in craft being more relevant than ever before.



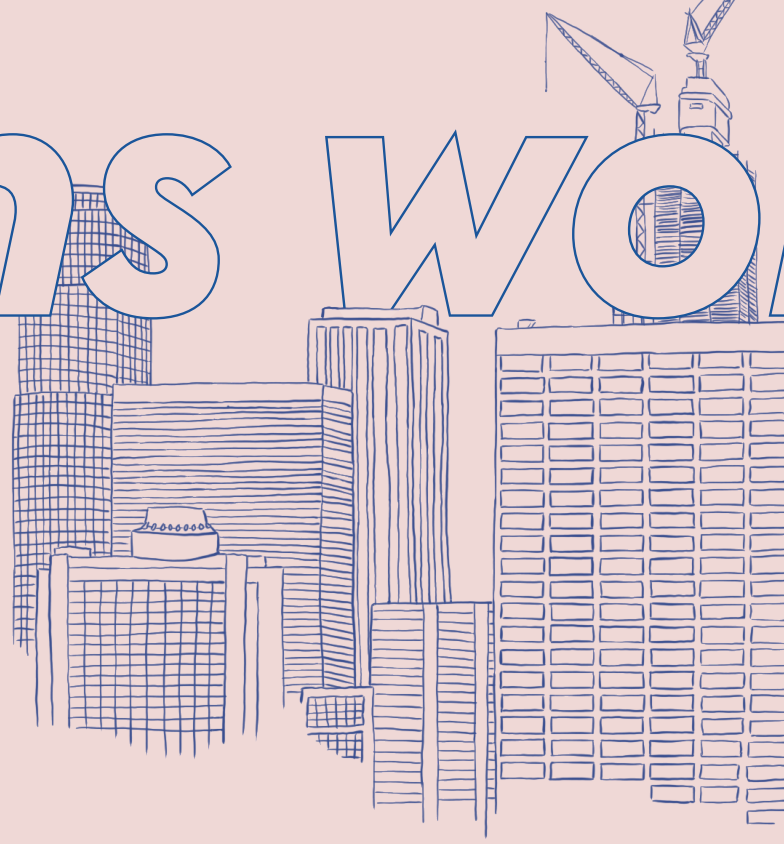
“Danish design has affected the idea that there is nothing wrong with elevating everyday objects to a higher level.

Photo by Nadine Shaabana

Danish Design Centre

Shaping the next city

Why Denm designs wo cities



By Runa Sabroe
Programme Director,
Danish Design Centre

Several surveys have declared the Danes to be the happiest people on the planet. Perhaps this is because we live in some of the world's best cities. This is an area where Danish design has a unique edge. Time and time again, our cities have won great international awards. But what is it that Danish cities have to offer, and what does design have to with it?

We know how to put the individual first without losing sight of the bigger picture. For decades, we have sought to understand and shape the urban structure, from micro to macro, from individual to master plan, in a creative exchange.

World champions of urban design

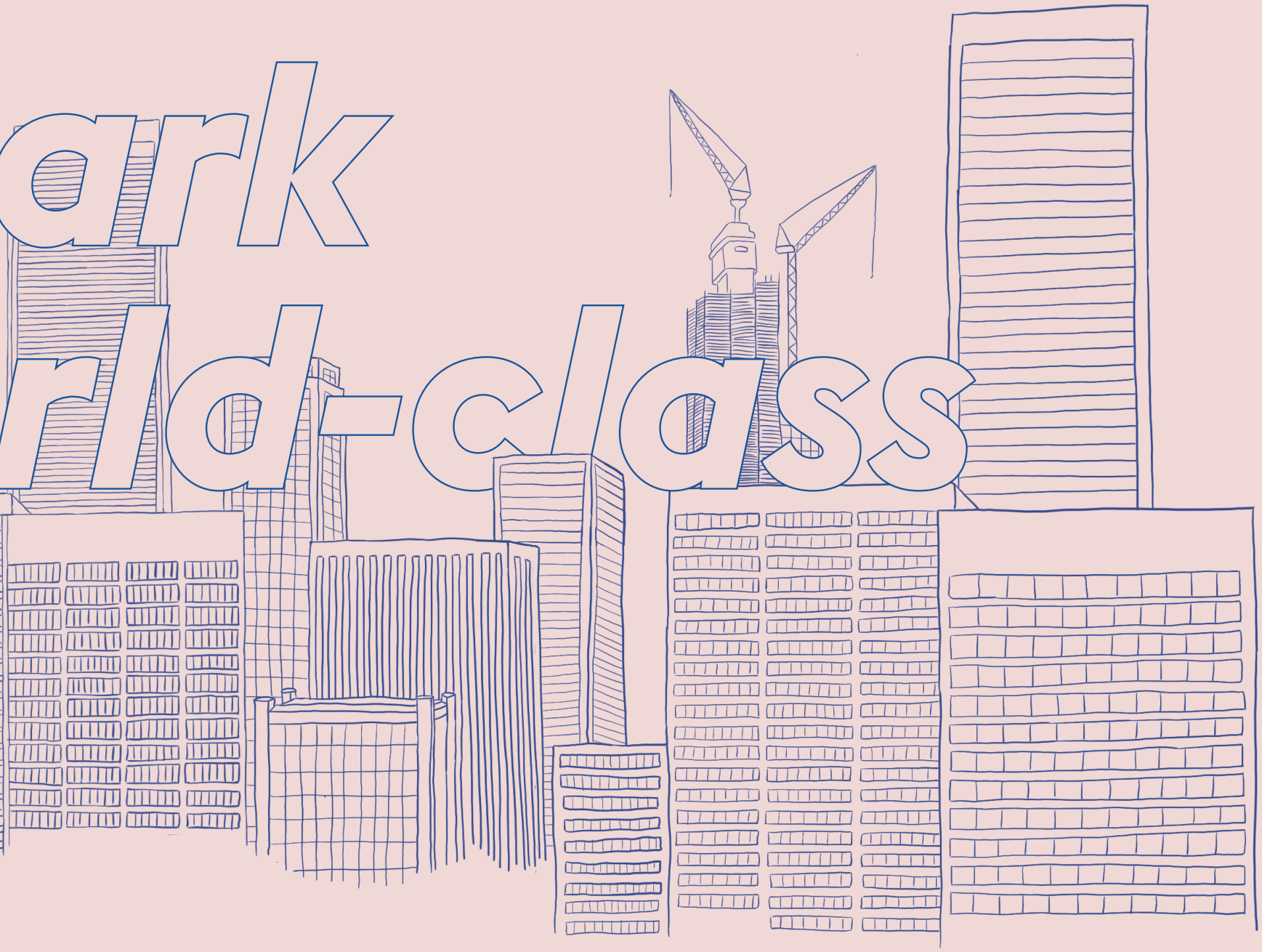
There is a reason why Copenhagen is repeatedly named one of the world's most liveable cities. Copenhagen's emphasis on 'soft' values, such as providing good conditions for the people who visit, live in and work in the city, wins out over other cities' 'harder' values such as growth and infrastructure. This is not an either-or scenario, however. Copenhagen is both pleasant to live in and a well-built growth engine with a strong infrastructure. The point is that successful urban development requires that we first and foremost understand the people who are going to inhabit the city, then create a quality setting for them. Because the soft values are the premise for the hard values, and vice versa. The recipe for success is to view the city as a design, from A to Z. Several Danish cities approach urban development as a design task with room for soft qualities as well a firm grasp of the hard, objective requirements a good city needs to meet.

> *"We know how to put the individual first without losing sight of the bigger picture.*

Inviting the client to the drawing board

A few years ago, I visited BIG's offices in New York, adjacent to the new World Trade Center. Here, 200+ people were busy at the drawing board, about half of them working on a master plan for Google's new headquarters in Silicon Valley, and the rest designing high rises in Miami and Canada. Things are going well for the Danish architectural firm that came to the United States in 2011, arriving as a team of four, packing big dreams for the future. But what is BIG's recipe for its worldwide acclaim?

At BIG and many other Danish architectural firms, great building design springs from a close, in-depth dialogue with



everyone who is going to be a part of the new setting. Preferably leading to a shared physical model that everyone is invited to be a part of. With this shared modelling approach, BIG has created architecture that is equally popular with clients, people in the street and architecture critics.

Cities for people

In Denmark, we are good at bridging the gap between small and large scales. Urban development is driven as much by a profound understanding of how people move through the city, as it is by ambitious, large-scale master plans. And in this context, Danish design has something new to contribute. Because we are exceptionally good at co-designing with the people who will be using the city and translating their needs into new, innovative solutions. We have an unparalleled awareness of the specific micro-needs for shade, sun, calm, water or life. Primarily because designers are great at putting people's basic needs first as they shape new products, services and communication. We can zoom in and out, focusing alternately on the detail and the master plan.

Three design principles for cities

As a natural part of the process, designers expertly use tangible representations to realise new urban solutions. Designers have a unique ability to create visual, graphic 1:1 models and thus incorporate a trial-and-error method in turning abstract ideas into concrete proposals. That is an effective tool in urban transformation. CEO of the Danish Design Centre, Christian Bason, lists three design principles as key in urban development: visualisation, collaboration and the use of physical prototypes, because urban development is such a complex and organic task that it could not possibly be approached from any single perspective. The transformation process simply short-circuits if we fail to structure it in a way that includes politicians, officials, civil society and the private business sector. The use of visual and creative methods in a design-driven urban development process encourages collaborative solutions. A key point here is that this is not just about public debates and wordy memos. Involving designers in the urban development process means creating physical representations as we move from abstract ideas to potential solutions and thus a far more experimental approach to urban development.

For Danish cities to retain their world-class status, designers need to be involved along with the architects as key contributors to future urban development. The Nordic capacity for co-designing with the users and translating their needs into innovative urban solutions has already attracted attention internationally. Now, we need to get even better at activating this capacity, also in developing future cities in Denmark from the best cities to the most outstanding cities.

Building a *future* without waste

Half of the world's waste comes from the built environment. Three Danish solutions show us how we can turn waste into a resource and initiate a circular transition in construction.

Using fungi as a new building material, selling used timber in retail and constructing sheds from discarded building materials.

These three Danish solutions are ready to transform the built environment. They are the winners of "The Circular Construction Challenge," initiated by the philanthropic association Realdania in 2018 to drive forward the best Danish ideas for a more sustainable future in construction. The challenge is operated by the Danish Design Centre as part of the effort to design better cities.

A need for circularity

Globally, 1.3 billion tons of solid waste is generated every year – half of this waste comes from building materials.

"The world needs new solutions in the built environment. Construction is on the rise, and we need new circular methods to meet the massive challenges of waste generation and resource use. Danish companies are at the forefront of this development, and with this challenge we aim to promote the best ideas, bringing new solutions from Denmark to the world," says Simon Kofod-Svendsen, Head of Projects for Realdania and responsible for the Circular Construction Challenge.

Bringing new solutions to the market

The winners were selected among 39 applicants by an international committee of experts in circular economy, design, innovation, and construction. The challenge received 81 applications from around the globe, and the three winning teams have participants from across the global circular ecosystem – businesses, startups, organisations, waste suppliers, researchers etc. During 2019, the teams participate in a six-month innovation phase, where they are assisted by expert mentors to develop their prototype. They also receive a cash prize of €130,000 to support the development of the prototype, help to scale it and potentially bring it to the global market. Learn more about the solutions on the next page.

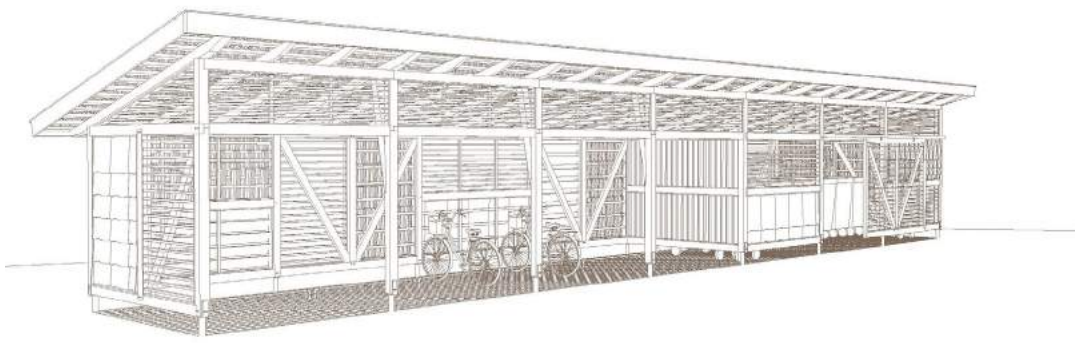
Circularconstructionchallenge.dk

From Waste to Biomaterial: Developing mycelium and waste-based materials for the building industry

Imagine a world where buildings no longer leave a massive impact on Earth's planetary boundaries. Where building materials grow from organic waste and fungi spores. "From Waste to Biomaterial" focuses on enabling this future through the development of new waste to biomaterial recipes, compliance testing, optimized production methods, full-scale product and building samples, business model design for biomaterial manufacturers and a knowledge-sharing platform.

ReSkur: The next generation's shed is built from the construction waste of previous generations

Millions of tons of high-quality building materials, such as clay pantiles and wood rafters, are today wasted every year in Denmark. With ReSkur we create a demand for the reuse of those materials and with a new product as a service introduce a circular business model that could potentially revolutionise the building industry.



GENTRÆ: Circular Alternative – Introducing reused building materials in large-scale retail sale

Every year an estimated 50,000 tons of timber used for temporary construction measures at building sites is incinerated after a mere six months of use. GENTRÆ will disrupt the current linear process by developing a concept with a strong set-up, simple strategy and a cost-effective focus that will bring the timber into a circular loop – making reused timber available in large-scale retail sale.

A new work-space for the Danish Design Centre

In 2018 Danish Design Centre moved into the newly opened BLOX building – a co-working space and knowledge hub for design, architecture, city planning and innovation. To create the new workspace, Danish Design Centre chose Spacon & X, short for Spatial Conversion & Cross-functionalism – a Copenhagen-based design and architecture studio. The goal was to find a simple way of reusing the Centre's existing furniture, explore more sustainable solutions, and to create a new, flexible structure to accommodate the changing needs of the office, including workshops, talks, mini-exhibitions or regular operations.

Echo Jazz

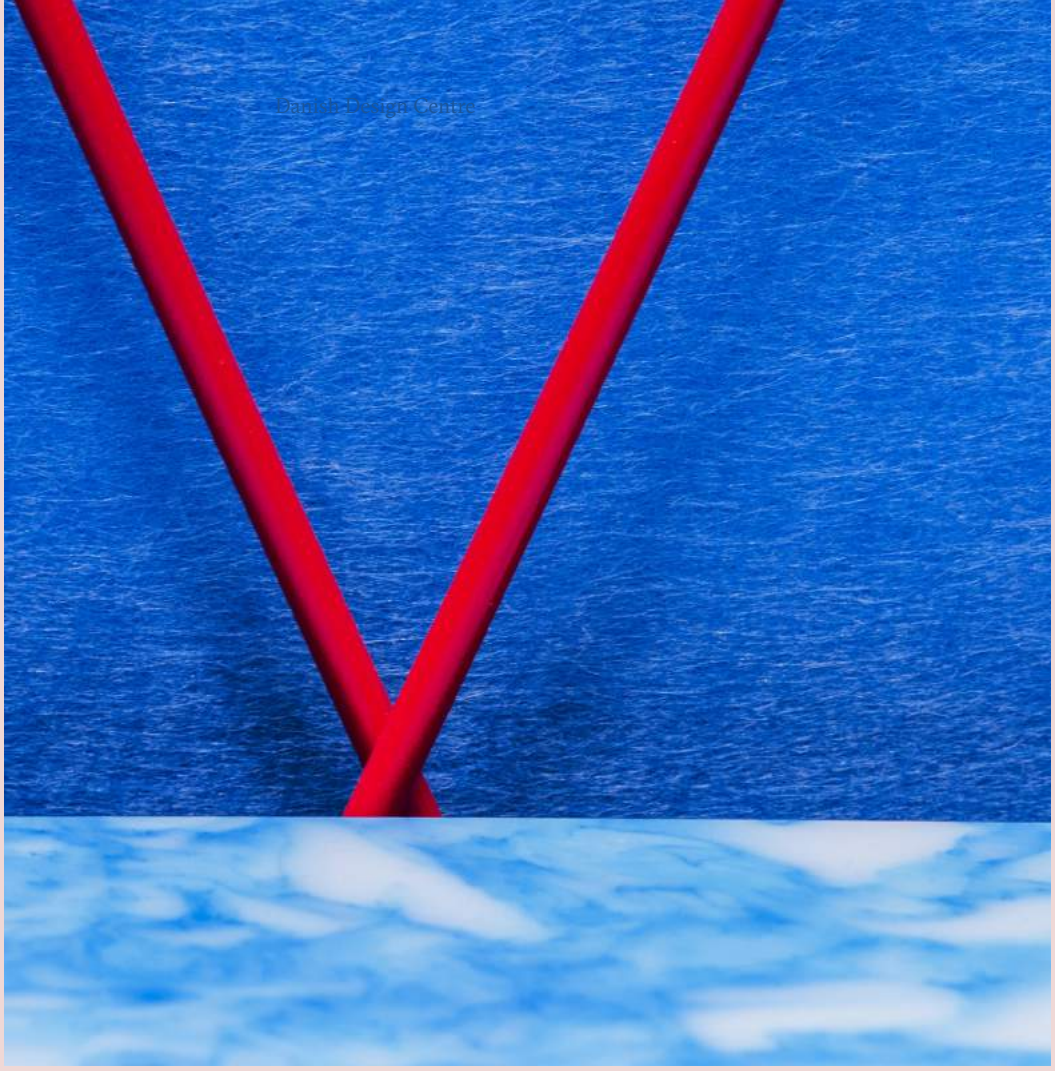
An acoustically absorbing felt material made from old plastic bottles. For every square meter of this material, between 47 and 72 used plastic bottles from landfills and The Pacific Ocean have been upcycled.

Phone booth

The phone booth, creating a welcome room for semi-privacy in the open office space, is an adaptation of an existing design on Open Desk's platform, customised for the Danish Design Centre and lined with the acoustic material Echo Jazz that is made from recycled water bottles.

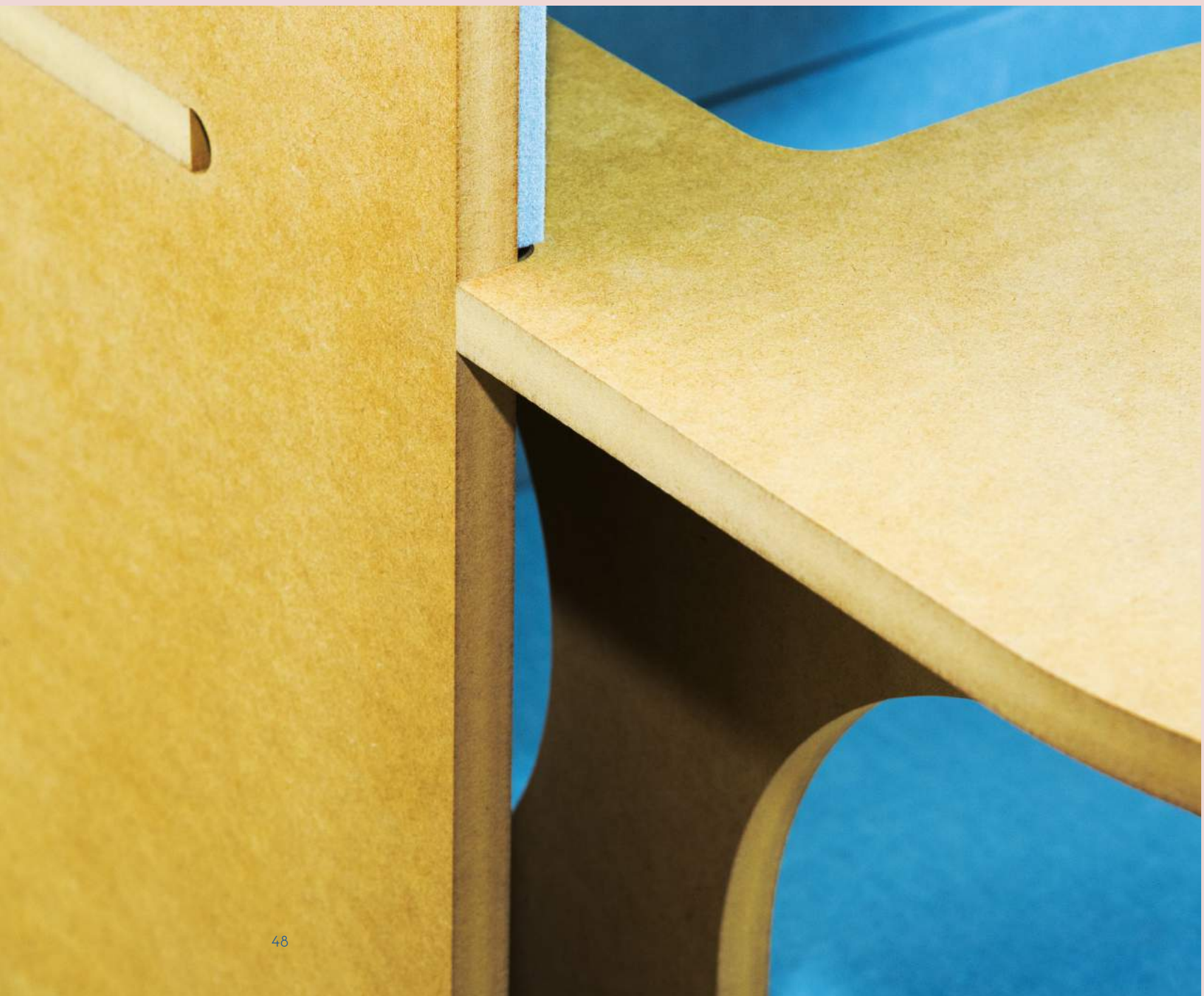
Frame structure

The frame structure of the shelving system ties the space together. It is a custom construction system consisting of five different lengths of ash wood sticks with a hole configuration that allows easy assembly in unlimited combinations without the use of tools, just by turning wing nuts. This flexibility is built into the system to meet changing office behaviour over time.



Smile Plastics

In an attempt to enhance awareness of sustainability and recycling, and change people's perception of waste, Smile Plastics developed this sheet material, used for shelving and table tops. The shelves used in the frame structures are made from recycled waste plastic ground into chips which are then melted into sheets, perfect for CNC milling or laser cutting. The cut-offs can then be reintroduced into new sheet materials in an infinite cycle.



Open source – Open Desk

In collaboration with the global open-source agency Open Desk, Spacon and X designed a series of mobile office elements, ideal for open plan solutions like the Danish Design Centre at BLOX. The series is fully open-sourceable and will be available on Open Desk's online platform.

Shaping the transfor-mation

Shaping the business: a challenge

Photo by Joshua Ness

By Julie Hjort
Programme Director,
Danish Design Centre

When business leaders look towards the future, they face fundamental questions about their existence: What are the next business models? What are the responsibilities of companies in the future, and what challenges will they face?

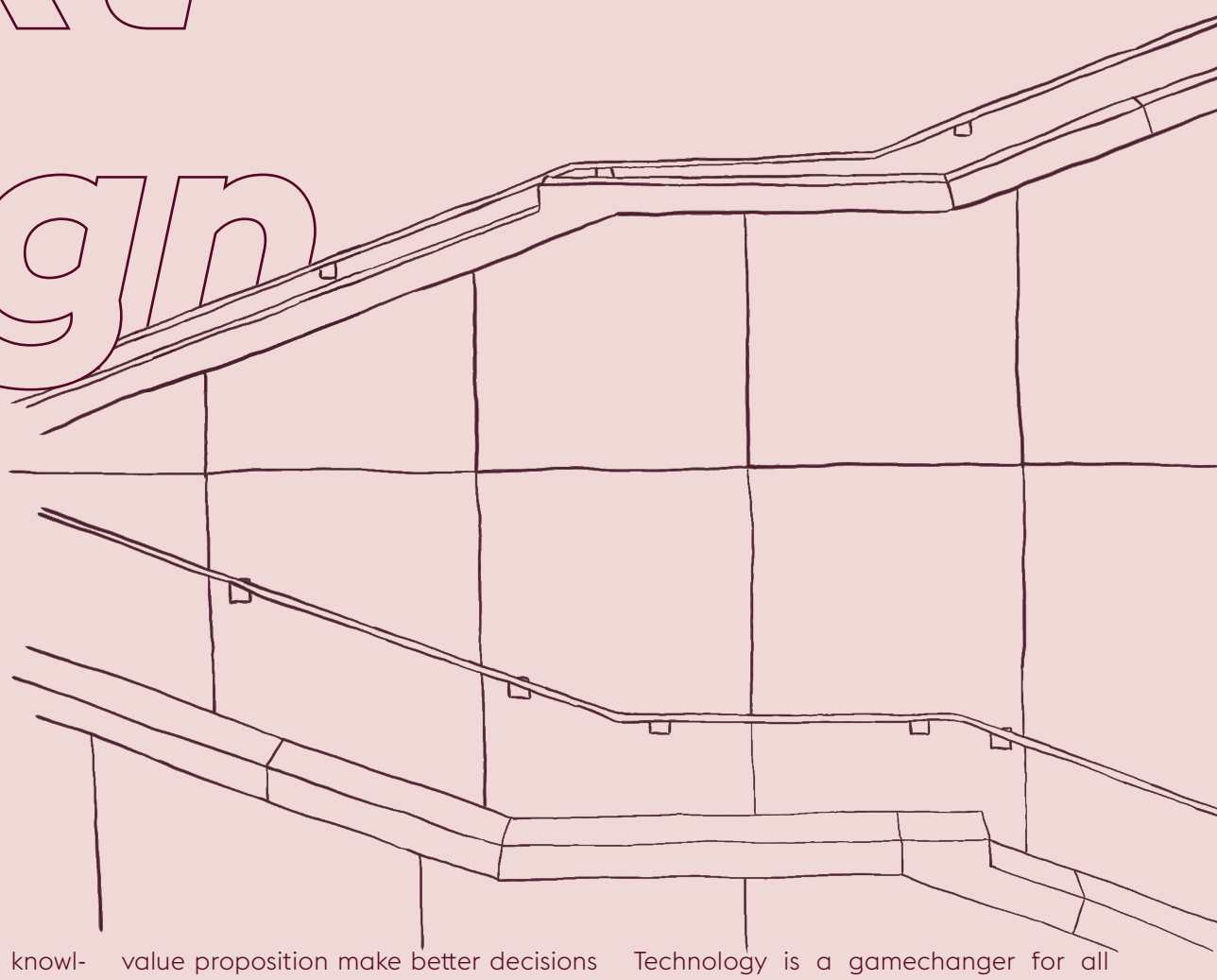
In a time where rapid technological advances are upending both market dynamics and consumer behaviour, it seems appropriate with a revision of a famous John Lennon quote: The future is what happens, while you are busy making plans for the present.

Creating the next business, when someone has changed the rules of the game, is fundamentally a design challenge.

A new rule book
Technology has increased productivity, and more efficient production methods have lowered the cost of manufacturing and distribution, which in turn makes products and services more difficult to trade in the market place than before. We have seen it clearly in the media and entertainment industry: Consumers boycotting distributors and producing and distributing images, music, videos and news at practically no cost. But this development is rapidly moving towards physical goods, where the cost of production is decreasing. Thus, we are seeing manufacturing companies move from goods to digital services. The High Tech Software Center in Eindhoven describes it as not selling a car or a lamp in the future, but selling driving hours or light hours. Entirely new business models that are changing the dynamic between company and consumer radically.

Another interesting shift is how consumers move from a passive role as recipients to being active co-creators, making, sharing and selling items – whether it's your apartment, car, clothes or knowledge. This shift will both shape new business models and experiences, while simultaneously alleviating the pressure on the planet's resources, as fewer goods will need to be produced. Some of the most successful new businesses are built as digital service that connects and mo-

e next design



bilises consumers to share their knowledge or goods.

Design as an enabler for transformation

As Danish companies enter into this transition, they need to turn their focus to their customers' needs and increase the awareness of the ecosystem surrounding them. Designers can facilitate this journey. One Danish company that decided to use design as an enabler is the recruiting agency Moment. Moment had the challenge of recruiting and retaining young talent, capturing their attention in a busy landscape. In a so-called sprint process, hosted by the Danish Design Centre and design agency D2i – Design to innovate, they laid the foundation for a new digital solution with a focus on their users. As many other companies that use design to build their next business model, Moment reported that the sprint gave them a room to clearly define their value proposition to clients and the market. Being able to step away from the internal dynamics of the company and understanding the underlying causes for why consumers buy your solution/product, and the trends that drive the market and society around your business, is crucial. Companies with a razor-sharp value proposition make better decisions and are more agile when reacting to new conditions that arise. The design strategist's empathetic and experimental approach to gaining these insights and test new solutions is a valuable tool in the process. Ideally, he or she will move beyond the product/solution-customer relation towards a systemic perspective: How the product or solution affects society as a whole throughout its lifespan.

> *"What are the next business models? What are the responsibilities of companies in the future, and what challenges will they face?*

Technology is a gamechanger for all businesses in the 21st century. The holistic, sustainable and user-driven design process can help business leaders navigate in a landscape, where you don't know what you don't know. Design is a vital tool for framing an agile business strategy in the face of uncertainty.

Growing the next generation of founders

The founders of tomorrow's start-ups are not just in it for the quick buck. In something as unusual as a design-driven public/private accelerator programme, cohorts of young founders are fueled by the earnest wish to make a difference and create impact. The programme is called InnoFounder Graduate and is running second year in a row.

InnoFounder Graduate is a design-driven incubator, scouting entrepreneurial talent among recent graduates in Denmark and helping them grow their companies. It is funded by Innovation Fund Denmark and operated in a collaboration between CIID & The Danish Design Centre.

”We’re for the doers and the makers. Many people talk about solving the world’s great challenges – in InnoFounder, we aim for impact,” says Christoffer Malling, Programme Director, the Danish Design Centre.

The InnoFounder Graduate programme is open for all fields, as long as the idea is innovative and has potential to become a sustainable business. Over a period of 12 months, the InnoFounders learn to develop their business idea. The first six months the focus is on designing “the right thing” by understanding the end users and the value that will be created for them. The last six months, focus is on designing “the thing right” – how the product/service and business model will hit the spot. After building competence for a year, the InnoFounders are ready to go to market or gain investment.

Even though the InnoFounder Graduate programme does not take any shares in the business or require repayment of the funding, there are requirements for the young founders, explains Programme Director Christoffer Malling: “We ask three things of our founders: That they dare to try, dedicate themselves fully, and are willing to commit.”

InnoFounder takes away the stress of being a startup.

Niels Fibæk
CEO & Co-founder Matter

InnoFounder helped us build and launch the company without losing momentum. It was a stepping stone to securing the first rounds of investments.

Christian Gabriel
CEO & Co-founder, Capdesk

We had spent two years developing the robot and it was almost done. By becoming InnoFounders we were able to use our earnings to develop the product instead of paying our private bills.

Tommy Otzen
CEO & Co-founder, KUBO Robot

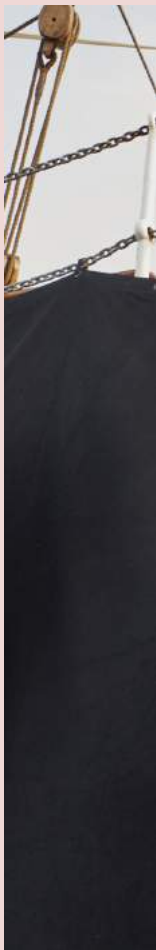
Design ***startups*** save the world

Modu

Building blocks that help kids stay active and healthy through play. MODU is designed to trigger the physical activity and imagination of kids, while encouraging and supporting every stage of their development.

SolarSack

Three billion people in the world currently don't have access to drinking water. SolarSack is a household water container that provides safe water using only the sun. SolarSack can clean four liters of water in four hours and one Solarsack can provide clean drinking water for two people for a year.



Trebo

Trebo is a new technology that allows the plastic industry to reduce its carbon footprint by enabling access to sorted recyclable materials. The award-winning technology is able to separate mixtures of different plastic types with a separation quality of +98%.

GRIM

By 2030 the world needs 50% more food, but today one third of all food is wasted. GRIM aims to reduce food waste by delivering boxes of ugly and surplus fruit and vegetables straight to your door, all organic and biodynamic.

Matter

Matter provides a sustainable alternative to a normal pension plan. Matter avoids investments in fossil fuels, weapons and tobacco, while more money is invested in companies working towards a sustainable future.

Design Delivers

How design accelerates businesses

In 2016 and 2018, the Danish Design Centre and the Confederation of Danish Industry (DI) mapped the use of design in Danish companies in the survey "Design Delivers".

The survey shows that a wide range of different companies use design, and that it generates value across many different business areas.

Many Danish companies work systematically with design as a key component in their business development and strategy. These companies generally have a strong position in Denmark and abroad, and they are the ones that reap the greatest benefits from working with design.

A total of 802 companies have participated in the survey.

Note: The figures apply to the companies that use design (except for the 54% stating that they systematically use design).

64%

expect design to become a more important competitive parameter over the next five years.

79%

find that design enhances their brand.

67%

find that design improves their competitiveness.

65%

find that design improves customer satisfaction.

54%

of Danish companies state that they make systematic use of design.

50%

find that design has taken on growing importance for their bottom line during the past five years.

75%

find that design has a positive impact on their bottom line.

For companies that use design strategically, the number is

92%

77%

state that design decisions are made by management.

Shaping the next: the future is now

As we r for the

By Christian Villum
Director of Future and Digital Thinking, the Danish Design Centre

"It is not in the stars to hold our destiny but in ourselves," said Shakespeare, and with that he reminded everyone of the agency given to us at birth to shape the lives we want to live. While this may seem quite obvious to many, we generally still seem to forget about it when we discuss - and often worry about - the future. The stars are clearly no longer the dominant mystical force that we trust to shape our destinies, but we have found another almost other-worldly deity to worship: Technology. Always a source of both uncertainty and opportunity - not just now, but throughout history - it seems more important than ever to remember that we are shaping technology, not the other way around. Or are we?

AI will at some point reach sentience: it may take 25 or 50 years, but it will happen. The outcome will be beings that we will need to co-exist with, and you can argue that they represent that supernatural force that Shakespeare so confidently wrote off. In other words, it will be part of the shaping of our destiny. But is that so bad? If we imagine AI to become Terminator-like creatures that may decide that humans would be better off extinct: Yes, that would be bad. But what if the evolution of the human species and that of AI are much more directly entwined leaving us not to develop as rivals, but rather a team of one?

> *"The stars are clearly no longer the dominant mystical force that we trust to shape our destinies, but we have found another almost other-worldly deity to worship: Technology.*

reach stars

Right now, we are already dissolving the idea of the human being as remaining a solely biological, naturally evolved organism. Augmentations such as medical implants (pacemakers, hip replacements, etc.), sensory enhancements (ie. glasses, contact lenses, hearing aids) and advanced surgery coupled with the potentials of the new frontier of DNA sequencing and gene modification is just the beginning of making humans something more.

As we continue to hack and improve ourselves, the human being and the machine will melt together long before true AI - or what is referred to as AGI, Artificial General Intelligence - becomes a reality. Small AI brain enhancements, or what Doug Engelbert back in 1962 coined IA, Intelligence Amplification, will merely be the first stage of the amalgamation of our brain and computer chips, and down the line our reality, identity and self-perception will naturally resemble the node structure of computer networks much more than we are able to imagine at this point. It is the natural proliferation of the kind of super-connectedness that we are already fully embedded in. This merging - the true realisation of the cyborg - will happen well in advance of the emergence of artificial superbeings saying 'hello world' for the first time.

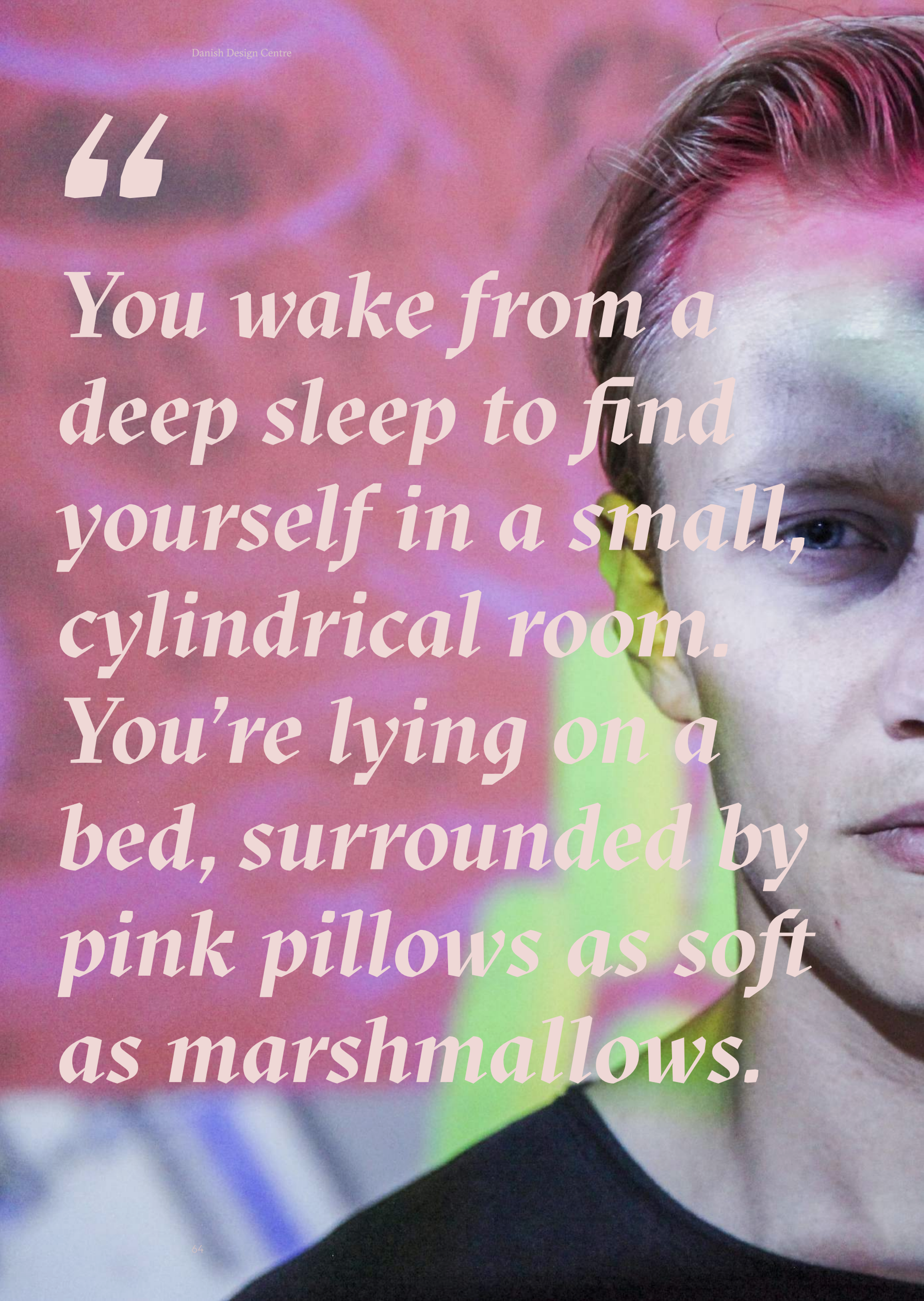
In other words, building that superbeing capability into ourselves and enhancing ourselves rather than building it as an external entity might be the natural step. If you think about it, it plays right into Shakespeare's quote and human nature: The ability to shape our destiny comes from within. Can you imagine future generations using the pinnacle of technological achievement to advance anything other than ourselves and our own ability and opportunity? Those believing in the singularity predict it to happen around 2045; that's when the first humans will upload themselves to the cloud. Might as well download some superhuman AI too, then.

Let's take a step back to the present day and say to ourselves: If this is likely where we are heading, then let's abandon our fear of this new technology and replace it with constructive and critical curiosity. Whichever supernatural power it will produce will ultimately become ours to absorb anyway. Let's take control and design that future in which new amazing technology adds to the human condition, rather than taking away from it. Because this is the role of design: To proactively look into the future with curiosity and making that future one that is better for us than where we currently are.

Historically, when new technologies have presented us with the inability to see the future clearly, we have always been able to rely on design practices to help us explore and take charge to create sound and healthy outcomes, even if the path towards it is unclear. Our current challenges are no different; they are just taking us beyond our wildest dreams.

Or at least the dreams of Shakespeare.

Photo by Free Nature



“You wake from a deep sleep to find yourself in a small, cylindrical room. You’re lying on a bed, surrounded by pink pillows as soft as marshmallows.

How to (un-)box the *future*

Confront the deep uncertainty for the future of healthcare in four scenarios

You wake from a deep sleep to find yourself in a small, cylindrical room. You're lying on a bed, surrounded by pink pillows as soft as marshmallows. The room smells of freshly cut flowers. The lighting is soft and you catch sight of yourself in the mirrored ceiling. Then you hear a young woman's voice. It's pleasant-sounding, reassuring even. She tells you it's 2050, and she is being treated at the recently launched Ministry of Root Causes. Its purpose is to eliminate risk factors for illness, promote healthy living, and prevent us all from getting sick. Once you've been screened, you can look forward to a lifetime of excellent health. But what will you have to give up in order to secure your good health?

As outlandish as it sounds, this scenario was one of four "alternative future" experiences enjoyed by participants at "Boxing Future Health" – a workshop held in Copenhagen in 2016 by the Danish Design Centre. Boxing Future Health takes the form of four cylinders which you can enter to feel, smell, and listen to alternative futures for healthcare anno 2050. The four scenarios, which have been developed with Public Futures and Fokstrot in collaboration with 100 experts from the field of healthcare, make the future present and tangible.

This might sound abstract. And it is. But that is exactly the purpose of Boxing Future Health, says Programme Director at Danish Design Centre, Sara Gry Striegler: "The laboratory gives us the chance to think radically differently about the healthcare service of 2050. There is a tendency towards healthcare politics being a question of giving new billions to cancer treatments rather than of how we create services and solutions leading to illness being a secondary element of life. And this makes it difficult to initiate the more profound discussions."

Facilitated by the Danish Design Centre, the workshop has since its birth in 2016 drawn participants from a range of fields, including government, academia, and healthcare. Along with medical-device manufacturers, there have been representatives of medical schools and nur-sing schools. As part of the workshop, the design firm converted four rooms into the experiential spaces that the participants could explore. Each space depicting a hypothetical future scenario – such as a patient's room at the Ministry of Root Causes.

This gives us a chance to do something even more important than predicting the future; to create it.

The point is to facilitate long-term thinking about healthcare. Several questions are on the table. How will we train the doctors and nurses of tomorrow? What products and services will hospitals need? What is the future of nursing and healthcare if people are increasingly going to be treated at home? How might AI and precision drugs change how we treat patients? What will "healthcare" mean in 2050? In other words, their aim is to explore how we might prepare doctors and nurses for a future in which the only certainty is that the skills they possess today won't necessarily be the ones they need tomorrow.

The Boxing Future Health workshop typifies designers' way of grasping and coping with an unforeseeable, complex future. First, it's an example of how designers can devise a set of approaches that stimulate the imagination and expand the range of decision-making options available to us. Second, it encapsulates the kind of long-term thinking that matters more than ever today.

Learn about the four scenarios on the following page.

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Denmark is not at the forefront of new treatments and health technology.

Photo by Samuel Zeller

Delivering the Most for the Many

The healthcare system is public welfare at its core. A changing framework with new conditions require adaptation and choices, and Denmark chooses the broad spectrum: improved average life span, treatment of the most common diseases and equality are important goals, and the majority of patients with common diseases receive quality care. But the National Health Council prioritizes sharply, and Denmark is not at the forefront of new treatments and health technology.

“

People are occupied with their own personal health and take advantage of the many new opportunities.

Photo by Ian Dooley

The Healthy Human

Technology and new business models create a new dynamic within healthcare, pushing the boundaries for both disease and health. People are occupied with their own personal health and take advantage of the many new opportunities for prevention, diagnostics, treatment and performance enhancement. The public healthcare system attempts to keep up and benefits from the new opportunities as well, but its basic function is to be a public provider.

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The focus is on creating a solid framework for a healthy society.

Photo by Ian Dooley

Ministry of Root Causes

Ministry of Root Causes plays a dominant role in healthcare policy. Its primary task is to eliminate causes for disease and promote drivers for health. The focus is on creating a solid framework for a healthy society. The environment, our worklife, traffic, food production, life patterns and close relationships are seen as one, health is built into all policy areas and is an important driver for overall social progress. “Make life fit” is the slogan of the moment.

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Health is about more than the body and the absence of disease.

Photo by Mathew MacQuarrie

The Health Bazaar

Health is about more than the body and the absence of disease. It is about life itself, and in this scenario, we see a general search for meaning. The narrow perception of health in the classic biomedical paradigm is challenged from multiple sides. The end result is not an all-encompassing new paradigm, but rather a buzzing bazaar of different, competing approaches.

Photo by Herzog & de Meuron - Vilhelm Lauritzen Arkitekter

Nyt Hospital Nordsjælland

Nominated for a Danish Design Award 2019

The design of the New North Zealand Hospital proposes a new type of hospital: A house designed to break down the boundaries between sick and healthy; building and nature; hospital and community.

Ideas of connection to nature and challenging the traditional role of a hospital are part of the philosophical basis for this major development. The new hospital design takes place on a human scale, with only two building levels that make abundant use of natural materials and natural light. Integration with the local neighborhood is a major consideration and a common design language is used throughout. The solution is holistic, visionary and indicative of the Danish state's focus on achieving well-being through design.

Future designers are leaders, bridge-builders and digital

Over the past 10 years, the design profession has undergone profound transformation and now includes such disciplines as design thinking, service design, strategic design and digital design. What challenges is the next generation of designers facing? How will each of them make a difference? And how can we best prepare them for that? We asked three Danish design scholars.

Christian Bason
CEO, Danish Design Centre

Randi Brinckmann
Dean, Faculty of Health and Technology, University College Copenhagen

Elsebeth Gerner Nielsen
Rector, Design School Kolding

Christian Bason

The design profession has changed considerably in just the past decade. If you were to point to three trends that define the future for designers, what would they be?

First of all, cooperation. Designers will continue the shift from stars to co-designers. Tomorrow's designers are not just individual creative geniuses but facilitators of creative processes with a wide range of perspectives. And the design process is opened up when it transitions from design to co-design.

Secondly, digitisation. It is already impossible to develop a service that does not contain some degree of digitisation. Suddenly, designers are able to test solutions thousands of times and include hundreds of thousands of people in the creative process. Technologies such as artificial intelligence, VR and speech/facial recognition have given us a new palette of design possibilities. That also means that designers need to learn to navigate in the fusion of digital and the physical reality.

The third trend is sustainability. The design field/profession has gone from being an industry companion to having a broader social and societal aim. The big questions here and now are, what about people? What is fair and decent? The growing complexity of the problems requires us to develop an even better understanding of the citizen's reality. Businesses are faced with growing ethical demands; just look at the United Nations' Global Goals and the big issues concerning data ethics. The new criterion for good design is that it makes a difference in the world. It is necessary to consider many different dimensions, including how we (re) establish trust. Take Airbnb and the sharing economy, which is based on mutual trust. With the current focus on the humanistic context, the designer's background and value set are incredibly well suited for the time we live in.

We're seeing a growing demand for the newer disciplines, such as service design and digital design. What will that require of the educational programmes and of the designers themselves?

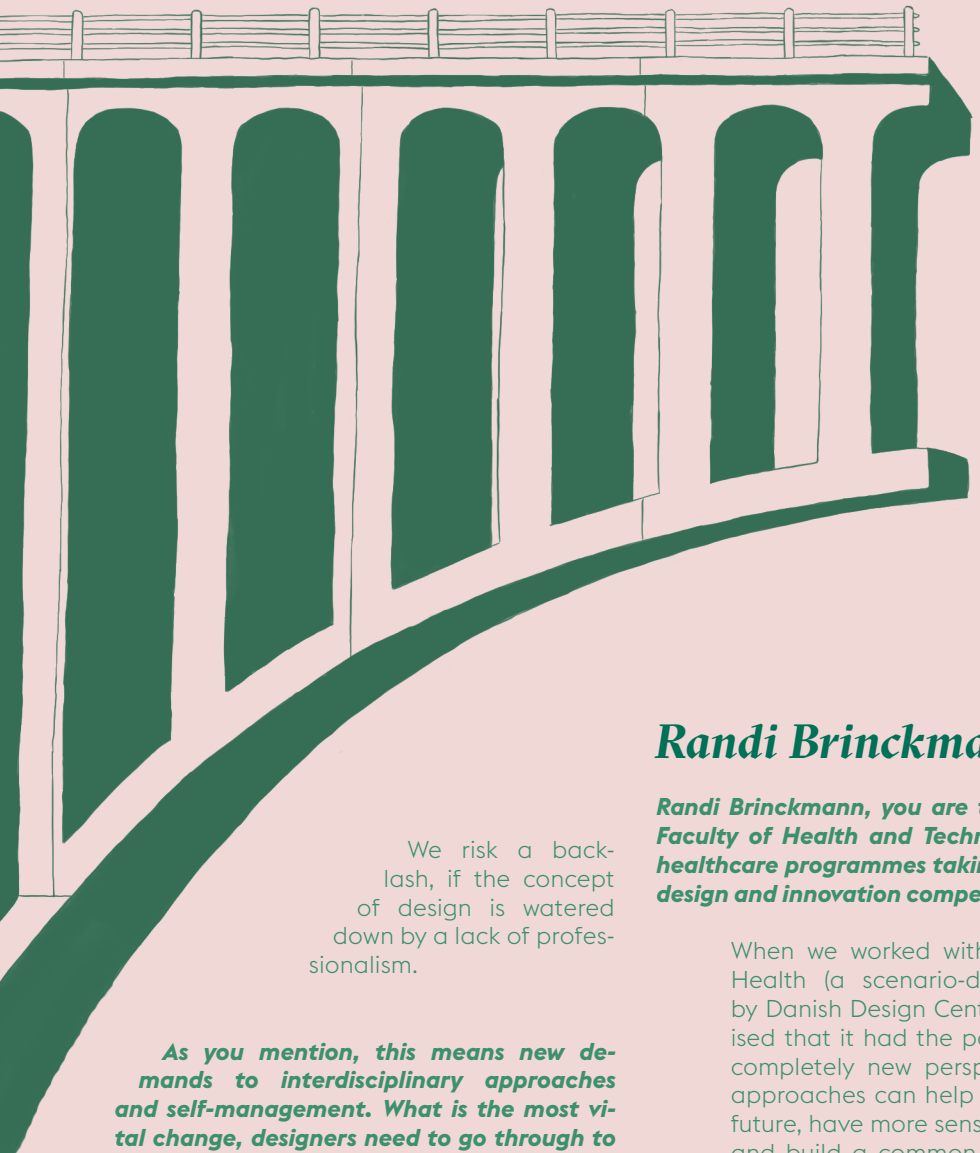
For the designers, there is nothing new in technology, they have been working with that since the invention of the assembly line. However, we need to ask ourselves if we are fast enough and competent enough in training the designers who will be needed. Future designers need to be able to build bridges, adopt more transdisciplinary approaches and, not least, work with technology. An artistic foundation is nice to have, but they need to be able to balance their artistic competences with digital competences.

We have to embrace the notion of different types of designers: some need to go deep, while others need to master the broader process. We should not focus exclusively on aesthetics, since there is a far wider field in need of a designer's mindset. Perhaps we should have two parallel tracks in the educational programmes, training an art-based as well as a more humanistic outlook.

If we look at the designers themselves, we are going to see more designers with other educational background than traditional design schools. It is important that we provide ways for this group to improve their qualifications too; otherwise there will be too many in the profession lacking adequate skills and competences. And that's going to give design a bad name. We need to maintain a certain level to prevent a devaluation of the design concept. Design thinking is the new black; now you can even become a certified design thinker. We have to insist on proper qualifications and transdisciplinary approaches.

So how do we translate that into action?

The dream scenario might be a higher degree of national cooperation with technical, artistic and business programmes, for example the Technical University of Denmark (DTU), the Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation (KADK) and the Copenhagen Business School (CBS). We're a small country, and designers need to be up to date on some very complex fields. At the Danish Design Centre, we try to build a wider professional environment with Design Forum. Democratising design is a good thing, but we need to maintain a level of professionalism.



We risk a backlash, if the concept of design is watered down by a lack of professionalism.

As you mention, this means new demands to interdisciplinary approaches and self-management. What is the most vital change, designers need to go through to adapt to this new paradigm?

Designers need to reflect on the difference they make. Their self-image often revolves around establishing an independent studio. The fact is that most independent art-based designers are among the lowest earners, while designers who are employed or work in teams earn more. We need to include organisational understanding and an understanding of the processes in our educational programmes.

Just over half of Danish designers have a leadership role. That is positive. They need to dare to embrace that role and lead the way in the transformation phase that many companies find themselves in. However, they also need to understand the companies' KPIs and their conditions for value creation. Most of the new design graduates have a different sense of humility, they know that the only way they can create something is in cooperation with others. We are deeply dependent on others in this profession. We will be doing them a disfavour if we don't prepare them to understand what it means to act within an organisation and create value in and for a company.

Randi Brinckmann

Randi Brinckmann, you are the dean of the Faculty of Health and Technology. Why are healthcare programmes taking an interest in design and innovation competences?

When we worked with Boxing Future Health (a scenario-driven workshop by Danish Design Centre, ed.) we realised that it had the potential to offer completely new perspectives. Design approaches can help us look into the future, have more sensory experiences and build a common frame of reference because we have completed this process together.

We looked at specific scenarios for different versions of the future and listened to patient stories, and that enabled us to have new discussions.

University College Copenhagen recently adopted a new strategy aimed at improving the quality of the programmes. What role did design thinking play in connection with that?

The goal of the strategy is to join forces to develop excellent education. In that process we also worked with scenarios, including in relation to technology, innovation and partnerships with clients and students. We are going to develop stronger study and work communities and, thus, stronger students. We want to enrol the right students and place high demands on them, for example in the form of talent processes. We want to work with practice labs, both to experiment with teaching approaches and to simulate the very practice we are training the students for. That makes design thinking an obvious element.

In the strategy, among other points, you mention interdisciplinary approaches and collaboration as new criteria. How has design thinking helped promote this in your strategy?

Implicitly, in the way we have addressed various trends and thus various future scenarios together. That has helped us to look past the near future that we are so often focused on. It frees up the dialogue to go beyond, "now, University College Copenhagen is going to train teachers for primary and lower secondary school" to "if the pace of innovation continues unabated, what impact will that have on primary and lower secondary school?"

Elsebeth Gerner Nielsen

The design profession has undergone considerable changes just over the past decade. If you were to point to three trends that define the future for designers, what would they be?

First, designers need to be able to address society's major challenges, including the lack of sustainability, the excessive exclusion of the full diversity of people and the lack of creativity. At Design School Kolding this is manifest in three transdisciplinary master's programmes: Design for Planet (sustainability), Design for People (social inclusion) and Design for Play (creativity).

To offer an example: the fashion industry accounts for 10% of all CO2 emissions. As much as 73% of all fashion production is 'linear'. It is produced, used (perhaps) and then winds up in either an incineration plant or a landfill. Naturally, this cannot go on. Thus, in the future, the role of the fashion designer won't be limited to creating beautiful clothes, but will involve de-

signing clothes and the related system in a way that makes fashion circular.

Second: technological development, including digitisation, AI etc. It will take a huge effort for the design programmes to catch up.

Finally: the future is "co-". Future solutions are so complex that they can only be developed across disciplines and sectors. Often also across national borders. That sets the bar maddeningly high in terms of cooperation skills and cultural/social insight.

The study suggests a growing demand for the newer disciplines of service design and digital design. What is that going to require from the educational programmes?

We are well underway with this transition. Rather than designing products, the students learn to design holistic solutions that combine digital and analogue, material and immaterial aspects. It's worth noting that we still need the traditional basic skills with regard to method, aesthetics and form, even when the design solution is largely digital.

For the past four years, digital competences have been a focus across all the study areas at Design School Kolding. Thus, external examiners are required to provide an explicit assessment of the students' digital competences. We ask the same of our traineeship hosts. We are also developing a digital hub – in cooperation with D2i and the Danish Design Centre – where we teach small and medium-sized enterprises to use design as leverage for the integration of new technology. The students are invited to take part in this effort, including as assistants.

In terms of research, we need more knowledge about how we can transform Danish design for the digital era – based on the unique Danish design DNA. Ultimately, it is this DNA that helps set our products and solutions apart from those of our competitors. Hence, it's regrettable that there is such limited research funding available for the field of design!

Are you doing enough to meet that demand today?

We are trying, but we welcome input as to how we might do better. Could the Danish Design Centre, for example, bring together the companies that are demanding digital and service design and work with them to define what specific competences they need? Naturally, we want to offer the most relevant education possible.

There are also new demands for interdisciplinary approaches, cooperation and self-management. Should this be part of the training of designers, or should it be up to the designers themselves to acquire these competences?

We agree. That's also why we are contributing to a master's degree in design management in cooperation with the University of Southern Denmark, SDU.

For the past four years, Design School Kolding has had three key focus areas in our educational programmes: digital competences (see above), business competences and communication competences. The latter means that our students have to learn to communicate the value of design and their own skills and capabilities. According to our external examiners, we have been quite successful in this endeavour. For example, all our graduates have to produce a film offering a brief and concise presentation of their competences.

Further, with the intent to mature the students' ability to communicate the value of design, our new master's programme includes a course (15 ECTS) where the students do an assignment for a company. This course comes just before the final master's project, which is also conducted in cooperation with a company. This raises the possibility of a master's student spending nine months with the same company, thus completing his or her training while learning what it takes to make a difference within a company.

Twelve per cent of the Danish design resource is unemployed. All these designers have formal training. Does that give you cause to consider the current distribution or focus in your educational programmes?

Yes, every single day! Of the past 10 years' graduates from Design School Kolding, 45 are unemployed. That is 45 too many, but it is worth remembering that the 45 full-time unemployment cases are distributed across a much larger number of individuals. Designers face a labour market with a high share of projects and short-term jobs.

Leading the transition

Danish corporations share their visions for the next 40

Lars Tveen
President, Heating Segment, Danfoss

District heating clearly has the potential to play a vital role in the cost-effective de-carbonisation of future energy systems. With its inherent flexibility to integrate renewables, I believe that in less than 40 years, we will be able to accommodate a 100% renewable energy supply for all of Europe. The technological know-how, the component manufacturers, and business models are ready and available.

Annemarie Meisling
Director of Sustainability, Chr. Hansen

Bacteria were among the first living organisms on the planet, but we have only just started to understand the potential of good bacteria, in terms of reducing overuse of antibiotics, reducing food waste and developing a sustainable agriculture. In 40 years, the picture will be very different. We have significantly replaced pesticides and antibiotics with good bacteria and we will plan our diet to keep our gut strong, happy and healthy. Enjoy.

Jesper Schleimann
Digital Transformation Officer, SAP

The Digital Transformation holds great potential to transform our world and build a sustainable economy. In 40 years, we will all have meaningful work as AI and the autonomous economy will allow us to unfold our personal potential, eliminate waste in the supply chain and make our enterprises run better - creating a world we all want to live in!

Mads Nipper
CEO, Grundfos

In 40 years, the devastating impacts of climate change have been contained, and there are no more people without safe access to water and sanitation. Companies who pioneer mechanical and digital technologies have played a pivotal role in the change towards the better. And there are no remaining concerns about how the world can cope with population growth and urbanisation.

Helle Valentin
MD & Global Account Partner, Board Member, IBM Denmark Aps

The big challenge will be to make sense of the infinite amounts of data. And, of course, to secure it. We are one of the most trusting societies in the world, but the time for blind trust is over. At IBM, we work specifically with an AI charter to ensure full transparency in the way we handle our clients' data.

Ulla Riber
Head of Corporate Garage, ISS

Today, the relationship between employer and employee is generally characterized by permanent employment and full-time positions. 40 years from now, terms like "task completion" and "self-organization" will be predominant – and the workforce will flow freely in a task-based structure. Perhaps we will all be our own employer, offering our skills and time to the market piecemeal, and with the freedom to choose and define our own work life.

“Nobody wants to buy things that make the future impossible”

The future of design is about redesigning the products and systems that are destroying our planet, says Executive Dean of the Parsons School for Design, Joel Towers

Joel Towers
Joel Towers is the Executive Dean of Parsons School of Design, widely known as one of the best design schools in the world. Parsons has a close collaboration with Denmark, including exchange programs with Copenhagen Business School, events such as "Danish Design Review" jointly presenting rising stars of Danish and US Design and annual lectures in collaboration with the Danish Consulate General in the Trusteeship Council Chamber in the UN Headquarters in New York, designed by Finn Juhl.

If you were to name three ways in which the concept of design has changed over the past decade, what would they be?

The concept of design has emerged as being as much about strategy and systems as about physical objects. Meaning that we're now using design methods and approaches to solve system-level problems and drive innovation.

Secondly, the concept of design has been democratised as a result of changes in media and communication, including social media and mass communication. The notion of user-centered design has changed, now that the user has the option to provide feedback.

Finally, the biggest change – and this is of course also one of the most complex issues facing society overall – is climate change and environmental issues. The boundaries of the natural system are defining the characteristic of the work designers will do in the future. We have been used to having the capacity to use creativity and innovation to transform the environment around us. But now, we've gotten to a point with industrialization and tech, where we must take into account the impact of being human.

How can design help solve the issue of climate change?

At first design was about avoiding the impact, now it's about redesigning the systems. We're destroying the planet through the current design of our systems for energy, for cities, for houses. We're externalizing the waste stream, so turning towards a more circular model is crucial.

We haven't been taking the restraints of the environment into account, but people are beginning to demand this work. Nobody wants to buy things that make the future impossible.

What does this mean for the future generation of designers?

They will have a knowledge gap. We need the training and education of designers that can equip them with the right tool sets to meet these challenges. At the same time, the regulatory systems are still very immature in accounting for the system change, and there is still an economic disincentive to move away from the existing systems. We can't address this nationally by ourselves, because the impact of systems of design is global. In much of the world, the ethics of a product now takes into account human wellbeing. The impact of systems not been seen as an ethical challenge yet. In that sense, the evolution of natural rights is still in its very early stages.

What can designers as changemakers do right now?

Designers are really fantastic at taking on constraint. I think all designers have an obligation to evaluate their work, both the things they make, and the systems they design. By standards that account for the way that they produce it. They need to educate themselves about natural resource depletion and risk – and hold themselves to that standard.

In the students, I see a very real interest in doing this – mixed with a healthy dose of skepticism and a kind of impatience. They know very well that they are the first generation that need to comprehensively deal with the impact of climate change. Obviously, we've known about climate change for a while, but this is the vanguard of first generation that will truly feel the impact while also being the last generation to take action in time.

Why is it so important to include international knowledge exchange and inspiration in design education?

Because we are facing global challenge. The basic framework of innovation requires mixing perspectives, cultures and solution approaches. That comes from the paradigm in which you grow up. We need to create a context – a microcosm - for solutions that can come from anywhere and everywhere. In the case of Denmark, Danish design influences our disciplinary perspective. Denmark's commitment in product design and fashion design, where you are addressing zero-waste, reusability, local production, material selection. For example the green fashion summit this year.

And what was your motivation for establishing a long-term collaboration with Denmark?

Denmark is a leader in every one of these areas. You have a long tradition of design excellence, but equally important is that the national design commitment has increasingly been integrated with the environmental mission. There are still challenges and areas of improvement, but on the whole, Denmark represents an approach of examples and possibility which is very motivating. We can have the hope that things can move in a direction with resource awareness, balance etc., but it's also important to have those examples.


Design
Dansk

Photo by Julie Due / SpaconδX

40 years with th Danish Design C

1978 - 1999

The Danish Design Centre (DDC) is founded with a focus on design as a means of boosting exports and turnover in Danish business and industry. The emphasis is on industrial design, and design is mainly promoted in the form of objects designed for industrial production with function and aesthetics as the key parameters. Danish Modern is the ideal, and the finest products are rewarded with the ID Prize. Based in the domicile of the Confederation of Danish Industry on Town Hall Square, the DDC hosts lectures, exhibitions and promotion events and publishes books, articles and magazines about the use of design in industries. Until 2000, the DDC is headed by Jens Bernsen.

2000 - 2011

In 2000, the DDC moves to its new domicile on H.C. Andersens Boulevard. A radically new view of the concept of design emerges in the early 2000s and challenges the perception of design as the end result, a product achieved in a symbiosis of art and industry. Around the world, and also at the DDC, the emphasis shifts to the process itself, and design thinking becomes a key term. This leads to an expanded concept of design that also includes systems design, service design and co-creation. The DDC now seeks to promote design thinking in business, industry and the public sector. Design as a driver and a source of innovation is the ideal, and the DDC promotes this through courses and models, including 360 degrees, DesignBoost, the DIN model etc. The expanded concept of design is embraced by many companies and is increasingly reflected in the services offered by design agencies. The DDC stages exhibitions in the new domicile and becomes a popular event venue. In 2000-2005, the DDC is headed by Ulla Hovgaard Ramlau and in 2005-2011 by Christian Scherfig.

ne Centre

Photo by Rasmus Hjortshøj

2011 - 2014

DDC begins to focus more on gathering, analysing and communicating knowledge about the key factors influencing design. This effort takes place in cooperation with designers, partners, sponsors, business and industry and a broad national and international audience. The goal is to preserve Denmark's role as a leading design nation by facilitating design and innovation and demonstrating the key role of design in societal challenges. As part of this effort, the domicile on H. C. Andersens Boulevard is turned into a creative community for design companies and institutions. The design shop and restaurant close, and the conference services are discontinued. Instead, the shared office 'Design Society' is launched, and a new large café area opens on the ground floor. The design organisations INDEX: Design to Improve Life and the Danish Fashion Institute (DAFI) move in. The DDC is headed by Nille Juul-Sørensen.

2015 -

The government's growth plan for design and the creative professions from 2013 gathers DDC and the other national architecture and design organisations in BLOX, Realdania's new building complex by the harbour. DDC sells the building on H.C. Andersens Boulevard and no longer has public facilities for café and exhibition activities. Instead, it becomes possible to expand the organisation, bringing in new employees and competencies in design, innovation and technology, renewing the focus on the interactions between companies and designers.

Today, the Danish Design Centre works to empower businesses, people and society to shape the next. This means providing them with design experiences, tools and skills that enable them to address their challenges and capture new opportunities. Since November 2014 the Danish Design Centre has been led by Christian Bason.

Danish Design Centre