



Danish Association of Architectural Firms Vesterbrogade 1E, 2. sal 1620 København V +45 32 83 05 00 www.danskeark.dk

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THE 17 GLOBAL GOALS PAGE 9 HOW? PAGE 25 PLAN! PAGE 39 **DESIGN!** PAGE 59 CHECK! PAGE 179 ADJUST! PAGE 185 **EXTRAS** PAGE 190

THIS IS HOW IT'S DONE! PAGE 31 **USING THE SDGS IN BUSINESS DEVELOPMENT!** PAGE 75 **IMPLEMENT – WALK THE TALK!** PAGE 97 **IMPLEMENT - GLOBAL GOALS ARCHITECTURE!** PAGE 109 **USING THE SDGS WHEN DEVELOPING PROJECTS!** PAGE 141

Foreword WHAT USE CAN ARCHITECTS **MAKE OF THE GLOBAL GOALS?**

Architecture has an impact on each of the United Nations' 17 Sustainable Development Goals (SDGs), and architects can change the world by making sustainable choices in the way that they model and design buildings, communities, landscape architecture and urban planning.

> That's why we have written this guide to implementing the Global Goals in your way of working and your projects, so that the Global Goals can become your springboard for rethinking your business. Then you can make the most of opportunities, cultivate new business areas, and position yourself at the front of the bus in relation to taking advantage of changes in the market that are going to delineate the future.

Therein lies the great potential inherent in the Global Goals, which is exactly what can seriously contribute to fulfilling the goals in a global perspective. So, when you collate the Global Goals' possibilities with your quality management work and the way you document the value creation of your projects, you're really preparing yourselves very thoroughly for the future.

This guide is structured in such a way that it fits together with the methodologies underlying the Danish Association of Architectural Firms' other two publications, "Det hele hænger sammen" [Everything is connected] and "Architect - document your value creation".

Lene Espersen

CEO, cand.oceon. Danish Association of Architectural Firms Vibeke Grupe Larsen PhD Researcher - Circular economy and SDGs Danish Association of Architectural Firms



[EVERYTHING IS CONNECTED]

Sustainable development is development that meets the needs of the present without compromising the ability of future generation to meet their own needs."

The Brundtland Commission Report, 1987

GLOBAL GOALS

THE 17





The 17 Global Goals SUSTAINABLE DEVELOPMENT

In 1987, the Brundtland Report, "Our Common Future"* defined sustainable development as holistic, comprehensive economic development, social development and environmental protection: three dimensions that are reciprocally interdependent.

On the shoulders of the Brundtland-definition of sustainable development, the UN - The United Nations - adopted, in the year 2015, the 17 Global Goals for Sustainable Development for Humans and the Planet on which we live, also known as Sustainable Development Goals (SDGs).

This global agenda acknowledges that economic, social and environmental development are closely linked to peace, security and international cooperation, and that this calls for nothing less than an integrated effort to achieve sustainable development results.

UN has made a commitment that the Global Goals will realized by the year 2030.

The Global Goals are a framework for how you, your enterprise and the many different communities of which you form a part can contribute to a sustainable future - both locally and globally.

The Global Goals can become your instrument for tackling a reality that is undergoing rapid change and for communicating and rendering precise the value that you, as architects, are creating.



The 17 Global Goals THE BRUNDTLAND-DEFINITION **OF SUSTAINABILITY**

The 17 Global Goals can be inscribed in the three dimensions of sustainable development, with Global Goals 17 as the common thread, pertaining to the need for solving the challenge through partnerships.

Architects can contribute to the Global Goals in many ways:

Economic sustainability - ECONOMY

In architecture, sustainability has to do with securing long-term economic interests and investments for cities and buildings, as well as establishing suitable and efficient frameworks for the optimization of resources.

Social Sustainability - SOCIETY

In architecture, sustainability has to do with preventing and diminishing illness, with ensuring higher productivity and with bringing forth desirable cities and buildings that make us feel comfortable and provide us with quality of life.

Environmental Sustainability – BIOSPHERE

In architecture, sustainability has to do with building and renovating cities and buildings while making as little impact on the environmental impact and generating as few CO2 emissions as is possible.



The 17 Global Goals **4.7 TIMES OVER**

... that's how many times one single Dane's resource consumption exceeds the rate at which the Earth can recreate the resources. The economic, social and environmental dimensions of sustainable development reflect the fact that the economy is dependent on the life of the community, which, in turn, is dependent on the foundation of nature.

Everything is connected

In a global sense, the life of the community and the economy have taken significant leaps in recent decades. However, the foundation of nature is being fiercely challenged. Nature's resources are being consumed more rapidly than they can be renewed, fomenting major consequences for flora and fauna - a developmental process that is being further exacerbated by changes in our climate. In architecture, you can create value with a much wiser use of resources so that future generations will continue to be furnished with better starting points than the previous ones.

At the same time, human rights are facing pressure, globally speaking, especially when it comes to employees' rights in the Global South, and this can affect material production and value chains in building. In architecture, there is great potential for promoting democratization processes and creating inclusive urban communities for everybody. Here, there is a need for your innovation.

You, as architects, can lead the necessary processes of change. Right there, wherever you may be. In your business. Among your customers. In your community.

UIA SDG Dhaka Declaration

Over the last few decades, tremendous progress has been made in improving the health, education, and well-being of people around the world. However, this development has been accompanied by environmental damage, climate change, and resource depletion as well as social and cultural challenges. In 2015, the nations of the world came together and laid out the United Nations 17 Sustainable Development Goals to be achieved by 2030.

Architecture interacts with each of the 17 Sustainable Development Goals and architects can help the goals to be achieved. As architects, we have the responsibility to contribute to the built environment and make choices that change the world for the better – through better buildings, settlements, landscape architecture and urban planning.

We call on architects worldwide to take action in their own practice and as civic leaders to shape their work and their words to help achieve these goals:

1. End poverty: Architects can seek to build in ways that help to eradicate poverty, by designing low-cost housing and institutions that are safe, healthy, and resilient.

2. End hunger: Architects can through planning, landscape and building design protect ecosystems and preserve areas for food production.

3. Good health and well-being: Architects can design and plan so that exposure to communicable diseases and pollution is reduced, daylight, good acoustics and air quality is provided, and healthy levels of activity promoted.

4. Quality education: Architects can design educational facilities that are affordable and inclusive.

5. Gender equality: Architects can help to shape buildings, settlements and urban areas to include all persons, regardless of gender and can work to promote gender equality in the design and construction industry.

6. Clean water and sanitation: Architects can design and plan to avoid water waste or excessive runoff, and to reduce the encroachment of saltwater on freshwater aguifers and bodies.

7. Affordable and clean energy: Architects can design and plan buildings and settlements to reduce energy use, produce renewable energy where feasible, adapted to geographic, climatic and cultural conditions.

8. Decent work and economic growth: Architects can specify building materials produced in safe and clean environments, and work to ensure secure conditions on building sites and in demolition processes.

9. Industry, innovation and infrastructure: Architects can seek to use services, products and systems that pollute less, use less energy, produce less waste, and provide solutions that are safe, healthy and less costly.

10. Reduced inequalities: Architects can promote design and planning approaches that are socially responsible, inclusive and accommodate the needs of all people.

11. Sustainable cities and communities: Architects can promote measures that help to make cities more inclusive, safer and more resilient, and adaptive to anticipated climate change, with special attention to vulnerable segments of society.

12. Responsible consumption and production: Architects can seek to design for durability and for sustainable life cycles in building components and materials, favoring recycled materials wherever possible.

13. Climate change: Architects can take action to reduce or eliminate the climate changing emissions associated with the construction and operation of the buildings they design, and make their designs adaptable to anticipated changes in climate.

14. Life below water: Architects can exercise special care for buildings and settlements in coastal regions and in fragile aquatic ecosystems, taking all possible steps to reduce harmful effects of waste and pollution on water.

15. Life on land: Architects can help promote urban development that minimizes sprawl and so reduces threats to biodiverse habitats; they can design buildings and settlements that integrate landscapes, provides habitats and connects with larger ecosystems.

16. Peace, justice and strong institutions: Architects can advocate for policies on their projects that reduce opportunities for corruption, bribery, or unjust labor practices.

17. Partnerships for the goals: Architects can join with those who work to advance the goals. Working together we can achieve a prosperous and sustainable future.

Ar. Ishtiaque Zahir Titas & Ar. Natalie Mossin

Co-chairs UIA Commission on the UN Sustainable Development Goals

Ar. Thomas Vonier President International Union of Architects

Ar. Jalal Ahmed President Institute of Architects Bangladesh

Ar. Rita Soh President Architects Regional Council Asia, ARCASIA

The 17 Global Goals THE DHAKA DECLARATION

Globally, the construction industry can be held accountable for consuming 35% of the total global resources, 40% of the global energy consumption and generating as much as 30% of the total global greenhouse gases. That's a lot!

What this means is that there is a great potential for architects, globally as well as locally, to contribute to a sustainable development of the world, through sustainable development of the construction industry. Both on the global scale, in the local context, and among actors in the construction industry's value chain.

The Dhaka Declaration is The International Union of Architects, the UIA's call to all architects to contribute towards fulfilling the Global Goals, with all the powers they have at their command, from urban planning and landscape architecture to building architecture and industrial design.

We can call this Global Goals Architecture.

The UIA is an international non-governmental organization that is recognized by UNESCO as the only architectural union that operates at an international level. This international union of architects was founded in 1948 to unite the world's architects through an amalgamation of their national organizations. From the 27 delegations that existed already in 1948, the UIA has expanded to encompass, in the year 2020, the most important professional architectural associations in 115 countries and to organise 1.5 million architects.



The global scale

The Global Goals are ingredients in a global process of change that encourages us to think and work in new ways. Like any other new mode of thinking, this demands a solid organizational foundation.

P4G - Partnering for Green Growth and the Global Goals - is an organ that aims to accelerate the implementation of the UN's Global Goals by bringing together the private sector, civil society and public authorities, in partnerships for green and inclusive growth.

International organizations like the World Resources Institute, the World Economic Forum, the C40 Cities, the Global Green Growth Institute, the International Finance Cooperation and the UN Global Compact are P4G partner organizations. In 2018, P4G held its summit conference in Copenhagen. For this event, GEHL Architects stood behind the design of an installation that displayed a gigantic urban apartment situated at the Town Hall Square in Copenhagen. In every one of the apartment's rooms - in the kitchen, the bathroom, the living room and the bedroom, visiting guests were presented with global challenges related to climate, energy, and water, and with what somebody as a citizen could do, on his/her own devices, to make intelligent choices and consume sustainably.

PROJECT EXHIBITION PAVILION, "URBAN APARTMENT", THE 17 GLOBAL GOALS CLIENT P4G ARCHITECT GEHL ARCHITECTS FLOORAGE 350 M² PERIOD 2018

GOALS ALL THE GLOBAL GOALS

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DAJOID

The local context

Similarly, the Global Goals are ingredients in local processes of change – as can be seen in the municipality of Gladsaxe, the first municipality in Denmark that has incorporated the UN's Global Goals into its overall strategy: The Gladsaxe Strategy. Here, the city council has prioritized a number of objectives, taking its point of departure in one or more of the UN's Global Goals. This is being implemented in the specifications for sustainability certifications, such as Nordic Ecolabelling (children's-institutions and -homes) and DGNB (youth housing for the especially vulnerable) as well as the handling of circular economy in construction projects. Børnehuset Grønnegården is being offered with concomitant requirement specifications for Nordic Ecolabelling. Currently, the building attains 25 out of 42 possible points in the Nordic eco-labelling. Moreover BBP Arkitekter has an target of minimizing the building's CO2 emissions and, conversely, of maximizing the CO2's embedment in the buildings. The dogma governing the selection of materials has therefore been: minimizing the use of CO2-emitting cement and maximizing the use of CO2-embedded wood; this has entailed certain architectonic choices, such as having all the walls built with CLT solid wood elements, except for the wet areas which are being executed with recycled bricks; having the roofs built with wooden cassettes with wood fibre insulation; and having the CLT exterior walls insulated with wood fibre insulation.

PROJECT BØRNEHUSET GRØNNEGÅRDEN CLIENT MUNICIPALITY OF GLADSAXE ARCHITECT BBP ARKITEKTER FLOORAGE 1.250 M² PERIOD 2020-2021

GOAL 7 FIVE TIMES AS MUCH AREA FOR SOLAR CELLS IN RELATION TO DK BUILDING CODE GOAL 15 WOOD FROM FSC-APPROVED EUROPEAN CONIFEROUS FORESTS







The value chain

Private-sector building owners are also increasingly calling for competencies that can be related to dealing with Global Goals. For example, PensionDanmark has expressed an interest in contributing with concrete solutions for fulfilling the UN's 17 Global Goals. PensionDanmark has a sustainability program, which spells out minimum requirements for sustainability in connection with the construction of homes and offices. This program embraces the UN's Global Goals. The intention of the sustainability program is to clarify how PensionDanmark, as investor, implements and contributes with concrete solutions to both the 17 goals and PensionDanmark's visions. DGNB is being used as a platform to ensure documentable sustainable solutions that will simultaneously clarify PensionDanmark's visions and contribute to the redemption of the Global Goals.

PROJECT TRÆLASTEN [THE TIMBER LOAD], URBAN AREA IN AARHUS CLIENT PENSIONDANMARK Advisers for the comprehensive plan gehl architects, henning larsen architects A/S, **BRIO GROUP, AAEN ENGINEERING** FLOORAGE 70.000 M² PERIOD 2020 AND ONWARD

GOAL 3 HEALTHY AND COMFORTABLE MICROCLIMATE, REDUCED TRAFFIC NOISE AND IMPROVED AIR QUALITY, ETC. GOAL 8 HEALTHY AND FAVORABLE CONDITIONS AT THE CONSTRUCTION SITE. INCLUDING REQUIREMENTS FOR THE NUMBER OF APPRENTICESHIPS GOAL 11 MIXED URBAN SPACE, WITH SPACE FOR EVERYBODY, FOCUS ON DIVERSITY AND COMMUNITY CONCEPTS, MIXED HOUSING FORMS AND FUNCTIONS GOAL 12 RESOURCE MAPPING-OUT OF EXISTING BUILDINGS AT THE SITE AND DOGMAS FOR THE RECYCLING **OF EXISTING BUILDING MATERIALS** GOAL 13 WOOD CONSTRUCTION FOR THE PURPOSE OF REDUCING THE URBAN AREA'S TOTAL CO2 EMISSIONS AND CLIMATE IMPACT GOAL 15 MAPPING-OUT OF THE AREA'S BIODIVERSITY AND BIOFACTOR, WITH INDIVIDUALISED MEASURES TO PROTECT THE AREA'S SPECIES AND BIOTOPES

Are the Global Goals relevant to you? - or is it all just a matter of "rainbow washing"?

HOW?



How? **GET GOING!**

You proceed with a sense that those Global Goals are something you ought to be interested in ...

You experience that some of your customers and collaborative partners are using the term quite frequently ...

You're ruminating back and forth on whether there might be some potential or other ...

You're speculating on how you can get started ...

Should you hire a consultant - or ...?

How difficult can it be?



At Christensen & Co Architects, we've held two workshops in order to assess how **DD** we were going to make use of the Global Goals. The first of the workshops was centred on concretizing the company's Global Goals strategy, with a focus on putting all the disciplines into play to identify concrete solutions that we can actively bring into play. early on in our projects. It is on the basis of this workshop that we are now busy developing an inspiration-catalogue with solutions, targeting the different phases in a project. The second of the workshops had to do with unveiling positive and negative effects of the Global Goals in relation to Christensen & Co Architects' daily operations, with a focus on internal activities in relation to staff employees, office management, collaborative partners and activities. Against this backdrop, we have been drawing up an action plan for CSR-activities. Vibeke Lydolph Lindblad, CEO, partner, CHRISTENSEN & CO Arkitekter

How? **GET STARTED!**

Your firm is one part of a societal value chain, and in the future you will be expected to take a responsibility.

At the same time, the Global Goals constitute a unique opportunity to articulate your firm's value creation and put this into perspective in relation to The Big Why*.

However, this is most certainly going to raise a whole lot of questions among you and your team - for example:

- How are you going to integrate the Global Goals into your business?
- How are you going to obtain structure for a system that offers you the possibility of measuring the progress of your company?
- How can you integrate the Global Goals into your projects?
- What do you need to know in order to integrate the Global Goals into your projects?
- What can you do to qualify the dialogue about the Global Goals with your customers and stakeholders?

The timetable is an internal document that charts out the direction for your company's activities. Remember, that it is the company's interest, that are at stake here - and not the interests of individual persons.

"Det hele hænger sammen" [Everything is connected]

THIS IS HOW IT'S DONE!



This is how it's done! **PREPARE A TIMETABLE**

Let's take a look at it.

We would like to help you along your way, with this guide, to plan, design, implement, check and adjust your business model in relation to the Global Goals.

You can use the Global Goals as an instrument within an innovation- and change-process for developing your company and its projects.

Include Danish Association of Architectural Firms' guide to guality management, "Det hele hænger sammen" [Everything is connected]*, as an inspiration for your deliberations on how you, as architects, can integrate the Global Goals into your company's everyday doings.

Start by laying out a timetable for how you, as architects, might go about advancing your business model – not only to ensure a bottom line profit but also to take a position with respect to the surrounding community, of which your firm and your products are a part, and use this actively in your firm and projects.

Moreover, it's a good idea to take a position and make a decision, up front, about how you, as architects, want to go about financing such a process of change - because nothing comes for free!

This is how it's done! The timetable can, for example, unfold in these phases:

IMPLEMENT

STEPS IN A PROCESS OF CHANGE



CHECK

The timetable serves as your structured approach to continuously creating changes that can be applied to all your activities and processes – also in your projects. We'll be getting back to this on pages 113-115.

- In the planning phase, you, in your capacity as leader, define your baseline and set your goals. (Spend a month doing this)
- In the design phase, you'll be involving your employees in developing, together, the firm's change process in the direction of fulfilling your goals. (Spend two months doing this)
- In **the implementation phase**, you translate the change process into specific methods, which you carry out together. (Spend three months doing this)
- When you **check** your work, you gather up the threads and decide whether the methods are working effectively and whether the goals have been achieved. And you reflect on this, together, if not ... (Spend a month on this)
- When you **adjust** your work, you update or restructure because maybe you, working together as architects, can do better next time around ... (Spend a month doing this)

Let's take a look at what tasks pop up in each of the phases ...





PHASES IN YOUR PROCESS OF CHANGE







IMPROVEMENT THE FIRM'S WAY OF PASSING EXPERIENCES ALONG PAGE 187 Adjust timetable, employees' manual and project manual

Let's get started with the process!

Start by getting yourselves together, in the management, and taking a look at your strategy.

PLAN!



PROJECTS: GLOBAL GOAL ARCHITECTURE

Projects Design strategies Sustainability management etc.

EMPLOYEES

MANAGEMENT

Plan! **SET THE COURSE**

Everybody in a firm plays an important role in making a success of it – but it is the management that sets the course.

We suggest that you examine the Global Goals on the three levels* that form the basis for this publication:

- STRATEGY: Your self-understanding and direction for where your firm is heading.
- ORGANIZATION: Do whatever is relevant for the sake of your employees, by involving them in making it operational - WALK THE TALK.
- PROJECT: Underpin your methods, create GLOBAL GOALS ARCHITECTURE, which changes.

And then, you can implement the Global Goals:

■ In your **SYSTEM**, through your manuals and tools, so that you can move beyond the steppes!

PLAN

*"DET HELE HÆNGER SAMMEN" [EVERYTHING IS CONNECTED] PAGE 192-193

41

Our philosophy is that CSR is nothing other than maximizing the value of the business over an extended period of time because social and environmental themes will be turning, in the course of time, into financial themes."

Lars Rebien, Novo Nordisk

Plan! WHERE DO YOU WANT TO GO? **AND HOW?**

ASSIGNMENT: Ask yourselves who you are, as architects: what you want, where you want to go; and how you want to get there.

For example, do you want to:

- Contribute to the service of a larger cause by actively taking part in the transformation to 'green' and taking part in new mind-sets?
- Differentiate and/or position yourselves with respect to sustainability?
- Enter into new markets or segments, where sustainability is important?
- Create new markets through sustainable bids?
- Develop new partnerships and sales channels through a focus on sustainability?
- Develop new value quotations through innovation of projects, products and services?
- Develop innovative business models with sustainability as the core?
- Be at the forefront when it comes to securing the future's "license to operate" in the construction sector?

Or?





At RUBOW Architects, we in the management of the firm, sat down together to discuss the significance the Global Goals had on our company in relation to our values, our specific projects, our core areas and our working methods.

We were working out from a number of questions:
How are we working with the Global Goals today?
Which of the goals are most important to us?

What principles can we deduce from this? This gave us the opportunity to discuss where we could influence directly, or indirectly, and to stipulate where we have no chance to make any influence. Against this background, we were able to point out a preliminary set of primary Global Goals that characterize RUBOW Architects' activity, as well as a number of other Global Goals that play into and play out from the 'primary goals'. The next step has been to involve all our employees through a joint workshop. Currently, the whole firm is continuing to work on developing a common practice in relation to the Global Goals.

Lars Bo Lindblad, CEO, partner, RUBOW Architects

Current megatrends (mid-year 2020)

Let's take a look at the Corona crisis as some kind of 'emergency drill' in being ready to make readjustments. Throughout the ages, crises have triggered off consequences for the design of cities and buildings. Also this time, there is occasion to consider a number of trends for design that can be articulated through the aid of the Global Goals, for example:

- Build for togetherness how can we consolidate presence, curiosity and empathy, and combat the effects of loneliness? (Global Goals 10, 16, 17)
- Build for social cohesion how can we build in an even better way, so as to strengthen communities? (Global goals 1, 11, 17)
- Build for air quality and mobility as Corona had consequences upon heavy traffic, we saw how cities' air quality improved significantly, how can we hang onto this, for the future, through green mobility? (Global goals 3, 7, 9, 11, 13)
- Build so as to make room for distance and green open areas in the cities – how are we going to support health and the need for space on the part of all those who cannot get away to a vacation home during pandemics? (Global goals 3, 9, 10, 11, 13, 15)
- Build robustly, flexibly and multifunctionally how can we build homes that can accommodate jobs being performed remotely, training, togetherness and reflection, and many kinds of family structures? (Global goals 7, 9, 11, 12, 17)

- Convert office properties when the homes become workplaces, the workplaces change character, and many office workplaces have to be transformed, to an even greater degree, so as to be susceptible to accommodating workshops and collaboration. (Global goals 3, 7, 8, 9, 10, 11, 16, 17)
- Save on resources The Corona Iull fostered patterns of thinking about what it is that's really important - how does this exert an influence on material consumption in the construction industry? (Global goals 3, 12, 14, 15)

And on the somewhat larger scale:

- Globalization is changing tack, from uncontrolled growth to reciprocal inspiration.
- Genuine knowledge and deep insight have become important again.
- We have been pushed to understand more about why it is important to take action in time - also when it comes to the climate.

Plan! **BUSINESS MODEL CANVAS**

The questions can provide you with the occasion to peer into what your future looks like, and the Global Goals can help you, as architects, to manoeuvre and communicate with respect to the future.

But how can you, as architects, take hold of the process?

Discuss your position in the future's markets, at a time when your stakeholders (customers, end users, partners, employees, investors, competitors and authorities) are moving their positions.

ASSIGNMENT: Use, for example, Business Model Canvas* to discuss and develop your value proposition, taking your mark in current megatrends that are relevant to the real estate and construction sectors.





Plan! **STAKEHOLDER ANALYSIS**

There is much to indicate that the future belongs to those who understand that sustainability is going to be favoured as broad value creation, with more than one (economic) bottom line.

What is this going to look like for you?

ASSIGNMENT: Conduct a stakeholder analysis* in relation to your customers and partners and ask yourself the following questions:

- What products and services are you offering to each of your customerand end-user-segments?
- Which of the stakeholders' needs are you going to meet?
- Where, in relation to the Global Goals, are you, as architects, typically delivering value to your stakeholders?
- Which of your stakeholders' problems are you helping to solve?





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***SWOT** PAGE192-193

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SWOT* to examine rtunities and ustomers, your such.

In order to enhance the focus on and concretize the work with the Global Goals in our branch, SWECO Architects presented a workshop on sustainability in architecture, with the Global Goals as the overall frame around a management seminar. At the workshop, the management group discussed how the Global Goals can be employed as a design parameter for specific tasks. The jointly executed exercises engendered a sense of anchoring and awareness about what sustainability - and particularly the Global Goals - contains when it comes to qualities and potentials that can be brought into play when buildings and urban areas are being designed. Today, the Global Goals are being used in several projects - as a value-, dialogue-, and design-implement. Among other things, this has had a marked influence on the way in which we articulate sustainability in our projects.

Henriette Falk Olesen, Competence Leader Sustainability Architect, SWECO Architects



Plan! SWOT YOURSELVES - WHERE DO YOU WANT TO GO?

The future depends on your firm being able to come forth with innovative and sustainable solutions. For this reason, you are going to need the most astute leaders and employees. It is altogether crucial that your firm enjoys a reputation for being a good and sustainable workplace.

The Global Goals can become a tool for your firm to become an attractive workplace for future generations and can come to attract and maintain "Top Talents". Your firm will inspire an enhanced commitment on the part of your employees (with fewer sick-leave days and higher satisfaction as results) and accordingly ensure a higher degree of satisfaction among the employees and make it possible to attain higher earnings, and you and your firm will become sharper when it comes to defining your policy and your need for competence development.

Are you ready? Are you the ones you want to be? Are you there where you want to be?

ASSIGNMENT: Make use of SWOT* to look astutely, for yourselves, with a fine-tooth comb, at your strengths, your frailties, your opportunities and the perils you face, especially in relation to yourselves, your collaborative partners and your spheres of competence.



A business that makes nothing but money is a poor business.

Henry Ford

Plan! **ADJUST YOUR STRATEGY** - AND SET YOUR BASELINE

- Set your baseline for the Global Goals on the basis of the strategic work with the stakeholder analysis, Business Model Canvas and SWOT.
- **Set your overall objectives** for where you want to go, who you want to be, what you want (and do not want), and how you want to get there.
- Adjust your strategy.

PLAN

ASSIGNMENT: Gather it all up into an internal memorandum touching upon how to involve your employees at the time you are getting started with designing and implementing your changes in the company.

10 Inorganizations with little diversity and poorly balanced equality, there is a prevailing risk of not fully understanding the market's and the customers' requirements, and of not be able to fully reflect the broader conditions that might exist in society.

This can also give rise to problems when it comes to attracting and holding onto the best employees and problems related to creating a well-balanced work environment. This is the reason why we have been focusing especially on Global Goal 5 and Global Goal 10, which specifically mention gender equality and discuss reducing inequalities, and at C.F. Møller, with our eight architectural offices in five Nordic and northern European countries, we are aiming to set targets on equality and diversity as cornerstones in an inclusive and creative workplace. C.F. Møller has approximately 300 full-time employees, of which 43% are women and 57% are men. Employees come from more than 20 nations. C.F. Møller is committed to continuing the work of increasing the proportion of women in the company, in the management, and in the whole board of directors.

Rob Marsh, Head of Sustainability, C.F. Møller Architects



Present your conclusions to your employees, and involve them in designing the process of change, perhaps at an in-house seminar – or two ...

DESIGN!

We observed that that clients called for projects to address the SDGs in the tenders we were invited for. For our own part, we got busy establishing a platform to formulate efforts based on the goals. Then, we started to plan an in-house workshop for our employees on the content of the Global Goals. At the workshop, we discussed the Global Goals in relation to ourselves as an architectural firm, both in terms of our operations and our projects - and at the same time, we talked about what the goals mean to us, on a personal level. We made an attempt to prioritize the goals - and it's not so easy to do this ... - because everything is connected and important in the final analysis, when it comes to our contribution to sustainable development - but we are well on our way towards dealing with the goals.

Kristian Nordheim, partner, Pluskontoret

Design! **REFLECTION IN COLLABORATION** WITH THE EMPLOYEES

Now, you, as the company's management, have defined who you are and where you want to go.

Present your conclusions to your employees, and involve them in **designing** the change process: for example, at an in-house seminar - or two ...

Here you can - together - envision ways of setting goals for your efforts, so that you are on common ground when it comes to understanding the Global Goals and how you can make use of them in your organization and your projects.

- You can, for example, discuss how you, as a firm, have the opportunity to positively influence the construction sector – might this be in relation to your daily operations? Or in relation to your projects? Or both?
- You can, for example, make use of the Global Goals Barometer* as a tool for discussing your projects' fluctuations and effects in relation to all of the Global Goals.
- You can, for example, try to make a CO2 calculation of your firm's climate impact.

Let's see how to do this ...

*GLOBAL GOAL BAROMETER PAGE 192-193



Design! **GLOBAL GOALS AND INDICATORS**

Please note that each one of the 17 Global goals are aggregated formulations of 169 targets, with 240 indicators,* and that all the Global goals are interconnected on deeper levels and cover almost all aspects of sustainable development. No one of the 17 Global goals can be considered in isolation from the others.

A risk that is run when designating a limited selection of Global Goals is therefore that of sub-optimizing the goals being formulated in relation to other relevant Global Goals if we happen to tie ourselves all too statically to the selected Global Goals.

One good way to get a shared understanding is to discuss which of the Global Goals are most obviously relatable and aligned with your core-business and -services, in dialogue with your employees and customers.

ASSIGNMENT: Reflect, together, on how your organization is being mirrored in the Global Goals, and on which of the goals you, as architects, can make a noticeable impact, via, for example:

- Personal and professional relations to the Global Goals.
- Sustainable architecture examples your own and that of others.
- Are there obvious indicators that you can make use of, when you want to gauge your contribution?

DESIGN

THE PAST

THE PRESENT

THE FUTURE

Tips on how to measure your contribution:

- Make up your minds to aim towards a meaningful goal, and decide on a method of measuring it.
- Find how you have performed up until now and how you are performing at the present time. Find a reference value, if possible, and define a measurable effect, which you can follow up.
- Decide on a number of initiatives, and try them out.
- Measure the effect. Figure out what it is that works and how, and why.
- Document the values that you are creating and the potentials for improvement.
- Communicate it the positive stories need to get told!
- Repeat the process, make it even better. Become wiser from the experience.

If there are no suitable relevant indicators among the 240 indicators, then you, as architects, can define your own way of measuring your progress, a way that appears to be relevant to you and your collaborative partners.

Design! INDICATORS AND BENCHMARKS

The Global Goals are supposed to be realised by 2030, and this is the reason that the 169 targets for how one can measure progress along the way have been developed.

Some of the targets are aimed at governments and public organs while others are aimed at private actors. And since there can be, globally speaking, enormous differences among the various challenges that need to be addressed, development work is being carried out in several places for purposes of adapting targets and indicators, so that they will be relevant in the local context. In Denmark, this overall work is being done by Statistics Denmark and Deloitte, at the bidding of The Danish Parliament's 2030 Panel.*

At the same time, it is the manifest intention of the Global Goals that everybody can contribute whatever he or she can and with whatever might be relevant to precisely the place where they are working.

Accordingly, you are welcome to interpret the Global Goals and set goals and benchmarks that are relevant to your own company.

PLAN DESIGN I

) IMPLEMEI

CHECK

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Design! PRIORITIZING

In order to get hold of the Global Goals and their targets and indicators, trying to prioritize the goals and amalgamating them is a beneficial exercise.

ASSIGNMENT: Prioritize the Global Goals in relation to how they might be able to help you, as architects, to define who you are and what direction you want to head.

Remember to reflect and to remain critical when you are prioritizing, so that you will not sub-optimize any of the goals at the expense of others.

Do this a couple of times, where you take a look at and discuss whether or not you can boil down the number of Global Goals in relation to your own firm.

1 ^{no} ₽overty Å¥ÅÅÅÅ	2 ZERO HUNGER	3 GOOD HEALTH AND WELL BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SAMTATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED NEQUALITIES	11 SUSTAINABLE CITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE	14 WFE BELOW WATER	15 UFE MIAND	16 PEACE JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	





CHECK

ADJUST

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Design! **PORTFOLIO ANALYSIS**

ASSIGNMENT: Look at your portfolio of projects - where do you "hit the target" of the Global Goals with your projects?

Expand the task suggested earlier on, and figure out if you, as architects, can "reflect yourselves" in the Global Goals in relation to the projects that characterize your firm.

Make use, eventually, of the Global Goals Barometer* as a tool in the discussion.

Move in closer on whether you really possess the requisite knowledge and the necessary competencies by discussing your own projects, taking your mark in, for example, Global Goals Barometer* and/or the Dhaka Declaration* and/or The Association of Construction Client's Manifesto*.

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Climate adaptation projects						•		
Institutions								
Health sector Construction								
Housing								
Business/Offices								
Infrastructure								
Education								
Urban construction / Planning								
Production & Industry								
Culture Buildings								
Landscape								
Commercial / Retail								
Sports								
Public buildings								
Hotels								



*GLOBAL GOALS BAROMETER. THE DHAKA-DECLARATION. THE ASSOCIATION OF CONSTRUCTION CLIENT'S MANIFESTO PAGE 192-193





The bitterness of poor quality remains long after the sweetness of low price is forgotten.

Benjamin Franklin

Design! **ALLOCATION OF RESOURCES AND TIME**

It's important to discuss what needs to happen in order to get your plans and ambitions to succeed - organizationally, temporally and economically - nothing comes for free. Involve the employees in this discussion, for the purpose of ensuring a sense of coownership on all levels.

ASSIGNMENT: Gather up the tasks in an internal memorandum. Use this memorandum as a requirement specification, in order to lay out an action plan and allocate resources, and in order to budget the change process.

Look for inspiration on pages 77-93, in order to set Global Goals on what you, as architects, are already doing and on what you can do more of, for purposes of promoting your proclivities to handle the Global Goals in your everyday doings at your firm.

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From the outset, sustainability has been a passion for Randers Arkitekten's employees, and sustainability has been an important aspect of the architectural studio's vision and brand.

Randers Arkitekten has renovated a property in Randers and turned this into homes and the company's domicile, and in the redevelopment process, the firm has "gotten a taste of its own medicine". The transformation has given the building new life and a new chance. The redevelopment work on the firm has been given two different titles, based on two respective periods' knowledge about sustainable architecture.

The ground floor is now called "Version 1.0"; here, there has been a great deal of focus on working environment, indoor climate, and choice of materials in order to earn an Aktivhus Denmark certification.

The second floor, which is now called "UPCYCLE by Randers Arkitekten" on a daily basis, has been designed on the basis of the 17 Global Goals. Special attention has been devoted to indoor climate, and particularly to improved air quality, with an enormous green plant wall in the middle of the company's premises. Recycled materials have been used for the fabrication of furniture and carpets, which can then be recycled in the third generation. The façade has been endowed with slats of Danish certified wood, and in the new windows, determined efforts have been done to cut down on overheating. Brian Andersen, owner, Randers Arkitekten



The 17 Global Goals

USING THE SDGS IN BUSINESS DEVELOPMENT!

Let's unfold the 17 Global Goals ...

- Establish a CSR policy for your firm, and comply with it.
- Ensure access and infrastructure in your company for marginalized citizens.
- Increase awareness in your company about reduction of energy and resource consumption.
- Transparent salary conditions in your company.
- Contribute to alleviating poverty, for example, in relation to vulnerable families and the homeless.

NO Poverty



- Reduce food waste in your firm.
- Give priority to (locally grown) vegetables in your lunch-catering.
- Reduce the consumption of meat in your lunch-catering.
- Promote biodiversity and local food production in your company.
- Inspire sustainable approaches to living in your company.
- Contribute to alleviating hunger among vulnerable families and the homeless.
- Contribute to creating more sustainable food production systems through your demand.

- Ensure good air quality, good lighting, and good acoustic conditions at the workplace.
- Promote movement through company exercise.
- Hold meetings where the participants are encouraged to stand up.
- Ensure accessibility, a sense of security, and safety in the firm.
- Helpful guidance in the company.
- Environmentally friendly inventory and cleaning products.
- Health insurance.

GOOD HEALTH AND WELL-BEING





- Focus on timely competence development and lifelong learning.
- Focus on continuing education and post-graduate study programs.
- Focus on formalized and instructive knowledge sharing and the exchange of experiences.
- Secure apprenticeships and work-experience placements.
- Collaborate with job centres and educational institutions.
- Set requirements on qualifications among collaborative partners.

- No sexual harassment in the company.
- Equal pay at the company.
- Positive tone among the staff and management at the company.
- Promote a sense of security.
- Gender quotas in both management and staff.
- Support choices related to career paths, in the company, that might be the opposite of conventional choices.
- Organize work processes so that both men and women will come to have their say in the company.
- Secure frames for design-workers, constructionworkers and people working on the grounds, so that all qualified people, regardless of gender identity, can take part in solving the tasks.

GENDER EQUALITY



CLEAN WATER AND SANITATION



- Proper toilet set-up and sanitary conditions, in order to diminish any risk of infection spreading.
- Make use of rainwater and wastewater for watering the plants – avoid using drinking water/groundwater!
- Focus on reduced water consumption when cleaning with environmentally friendly cleaning agents.
- Water-conserving solutions in buildings and facilities.
- Discipline your sorting of waste and maintain focus on wastewater, chemicals and materials, in order to avoid any contamination of the groundwater and watercourses.
- Make sure that that your firm contributes to improving water quality.

- Energy-saving appliances, electrical fittings, and light sources at the firm.
- Hybrid ventilation at the firm.
- **Optimize the company's m² consumption.**
- Select energy-supplying utility companies that guarantee the lowest level of CO2-emission.
- Organize the running of the firm's buildings and facilities so as to build up good habits around switching on and switching off electric current and heat.
- Fly less on behalf of the firm.
- **Do online meetings.**
- Charging stands for electric vehicles.
- Environmental-friendly energy consumption.

AFFORDABLE AND CLEAN ENERGY



DECENT WORK AND ECONOMIC GROWTH



- Competence development with a focus on environmental strains (LCA*) and service life (LCC*).
- Focus on physical and psychological workenvironment – on employees' well-being, character and the extent of staff calling in sick and taking sick leave.
- Prevent and avoid accidents in the workplace.
- Focus on management quality, flexible and secure conditions surrounding hiring and employee turnover.
- In the event that CO2-compensation is being purchased, this must be done through a recognized supplier.
- Think, together, about how you, as architects best work together.
- Carry out CO2 calculations related to the company's activities and offices, with an eye towards registering and reducing the company's CO2 emissions.
- Support other companies in creating sustainable growth and local jobs.
- Support local vendors.

- When you are programming, define functional needs rather than specifications.
- **Exercise risk-taking.**
- Digitization BIM, big data, VDC, etc. LCA-* and LCC-*informed building models.
- Strive for long-term business models and long-term value creation.
- Make an effort to ensure sustainable industrialization of your products.
- Make an effort to ensure an efficient utilization of resources, as well as the use of clean and environmental-friendly technologies and processes.
- Make an effort to promote research and innovation.



INDUSTRY, INNOVATION AND INFRASTRUCTURE





- Avoid the practice of 'social dumping' in your activities.
- Integration of marginalized groups within your firm: have you made efforts related to ensuring people on the periphery of the job market access to jobs in your firm?
- What about the disabled? Have you made efforts to ensure that these people have access to jobs in your company?
- Building owners are different who is it that has what needs? And how are you going to deal with these differences?
- Employees are different who is it that has what needs? And how are you going to deal with these differences?
- Ensure diversity in order to watch over your building owners' diversity and safeguard your own diversity.

- Cut down on environmental impact per employee in your own company.
- Company bicycles.
- Promote the use of public transportation through the spatial placement of the organization's facilities.
- Support cultural heritage and nature heritage.
- Support accessible and sustainable transport systems.
- Support the development of accessible public green spaces in your neighbourhood.
- Support sustainable local tourism and culture.
- Learn Jan Gehl's "Livet mellem husene" [Life between buildings]* by heart and comply with its principles in the localisation of your office.



SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



- Waste sorting, with an eye towards re-use and recycling.
- Recycling of furniture, appliances and physical objects.
- Cutting back on the use of virgin resources in everyday activities: for example, in connection with printing.
- Optimize your m2 through the help of using sharing spaces, more efficient land use, and sustainable conversion/new construction.
- Review your purchasing policy VERY resourcecritically: What resources/materials are you using to produce your products? Who produces them? Where are they being produced, and under what conditions?* And how are they being distributed to you and to your clients?
- Is your value chain one part of a value chain that supports others in as much as it is producing sustainably?
- Familiarize yourself with "Doughnut Economics"* as a general technical joint property and use this in the definitions of your resource-related scope as a firm.

- Keep a CO2 account, check and reduce your CO2 emissions.
- Cut down on the company's energy- and resourceconsumption.
- Optimize the company's m² consumption.
- Choose energy-saving electrical fittings and light sources for the firm.
- Choose, for your company, the energy supply utility companies that promise the least CO2-emission.
- Establish landscape-based rainwater management (LAR), in connection to your company.
- Publish your company's sustainability account.







14 LIFE BELOW WATER



- Use less plastic in the company's everyday activities – everywhere ...
- Think about whether what you, as architects, are doing in the company's everyday life can lead to pollution being discharged into the sea for example, when you are cleaning, what are you cleaning with? When you water the plants, could it be that your watering is putting artificial fertilizers into the aquatic environment? And matters like this.
 And make an effort to reduce critical emissions.
- Take part in ensuring the sustainable use of waterfront areas in your neighbourhood.
- Support the sustainable use of land and freshwater ecosystems in your neighbourhood.

- ^{'s} 15
- Eat locally produced foods during the working day's lunch break.
- Cut down on the consumption of meat during the working day's lunch break, and prioritize light meats.
- Make use of indigenous planting in the company's outdoor areas.
- Go for Fair Trade* products in the company's everyday life.
- Contribute to more urban nature, where the firm is domiciled.
- Establish bee hives or nesting boxes or anything else that might support fauna diversity, where the firm is domiciled.



16 PEACE, JUSTICE AND STRONG INSTITUTIONS

- Enter into fair-spirited competition through demands for transparency in tenders, in relation to collaborative partners and stakeholders.
- Expect and ask for equal treatment among the various bidders in the tenders that you, as architects, might happen to be bidding on.
- Ask for and demand factual bases in connection with decisions you need to make on the tenders you are bidding on.
- Make an effort to eradicate and to avoid bribery, corruption and cartel formation.
- Stand as a good example of sustainable behaviour for your collaborative partners.
- Contact Foreningen for Byggeriets Samfundsansvar [The Danish Association for Responsible Construction] for more information.
- Take responsibility for the company's CO2 footprint and refrain entirely from exporting this footprint to Third World countries.

- Listen to each other in the company.
- Involve each other in the workings of the company.
- Keep each other informed in the company.
- Share your knowledge, so that everyday life can become easier and better, for all of you.
- Do whatever you can do to make sure you are talking about the same things when you need something to happen in the company.
- Think across the different disciplines and competencies when you need to solve, in an innovative way, matters in your daily life and your projects.
- Mobilize the correct resources, at the right times, in the design process.
- Implement user involvement.
- Enter into partnerships with others, in order to bring forth effective and sustainable solutions to everything that has been mentioned above.

PARTNERSHIPS FOR THE GOALS





One of the greatest surprises while calculating our own CO2 footprint was to see the extent to which our CO2-footprint was dependent on the behaviour of all of us and dependent to a somewhat lesser degree on the building's physique and our consumption. It was our eating habits and our patterns of movement that constituted what was by far the largest portion of our footprints. I believe that this fortified our awareness of how important it is that architecture and urban planning help us to live more sustainable lives.
Of course, it is important that we, in the services that we are offering as architectural consultants, can reduce climate impact on our buildings to a minimum and it is important that we become better and better at re-using and transforming the buildings we already have.

It is crucial that we, as architects, do not develop projects that are "frozen in the moment" – after the project is completed. Buildings, urban areas and landscapes are living organisms, and the premises are constantly changing. People's needs change. Green technology and construction technology are very important, but in the final analysis, we build for people. And it is we humans who need to change the way we are living, so that the world will also be here when our grandchildren are going to need it. Dan Stubbergaard, COBE A/S

On the basis of the company's own CO2-account, COBE changed its practice for travel and came up with new lunch-catering offers, which will cut down on total emissions by 25%. Every year, COBE is going to prepare a CO2-accounting in order to follow up and monitor whether the various strategies are working.



Albert Einstein



IMPLEMENT

We are using the Global Goals as a conscious designstrategy and we have created a design tool that takes its point of departure in the 17 Global Goals. In Tingbjerg, we are working with social sustainability; Stejlepladsen is also speaking directly into the Global Goals agenda. TR31 Aarhus is speaking into the goals of inclusion, learning and building materials. The institution, Svanen, in Gladsaxe becomes Denmark's first circular construction site, where we are building innovatively with buildings that were formerly standing on the site and in this way, we address problems surrounding waste, and also knowledge-sharing. In the UN17 Village framework, we are making a broad appeal and we are especially strong on health and materials.

The SDGs are important because they are universally acknowledged and make a very wide impact. There are 240 indicators. This means that no matter where you are in the world and no matter what challenges you are facing, the SDGs are speaking into them. They are disseminating sustainability so that there is more than just CO2 and they are talking about matters like social sustainability and health.

Anders Lendager, CEO and Founder Architect, Lendager Group



Walk the talk! **EMPLOYEES HANDBOOK**

Hopefully, you have now been inspired by what you, as architects, can do in your firm, and you have also discussed what you want to do in order to get where you want to go. Moreover, you have designed your change process - now, you've got to get it all to happen.

Knowing the consequences on your own body and getting a taste of your own medicine are often really good methods of offering advice in a gualified manner, on the background of the fact that you know the social, environmental and economic consequences of your activities - both the positive and the negative consequences. Therefore, you can profitably write this into your employees' handbook, so that everybody in the company can go to the same source, for everything that is common to everybody in the company, also in relation to the Global Goals. For the employees' handbook can be used to:

- Describe your areas of responsibility, your roles, your systems, your habits and your sustainability competencies, your written and unwritten rules, and all the practical things, which - in addition to everyday operations can also be your own internal learning and test cases in relation to what and how you watch over the Global Goals in relation to social, environmental and economic sustainability in everyday life.
- Concretize your objectives into goals for sustainable direction for your everyday life at the firm and for sustainable development in relation to your collaborative partners.
- Measure the impact of what you are doing in your business, on the environment and in the operations.

From the outset of the project, AI sets ambitious green goals, which have a special relation to bear on the United Nations' Global Goals 4, 11 and 12. Our architects and engineers are jointly designing sustainable solutions that optimize floorage, reduce energy consumption and accordingly support Global Goal #11-Sustainable Cities. We are creating sensible square meters, with more lighting and better air, thus supporting Global Goal #4 -Quality education. We are offering advice on sustainable materials which can minimize maintenance costs, accordingly supporting Global Goal #12 - Responsible Consumption and Production.

Tomas Snog, Creative Director, Partner, AI Architects & Engineers

Walk the talk! **ORGANIZATION AND METHOD**

ASSIGNMENT: Draw up and regularly adjust your organizationdiagrams and get each one of the employees to understand how the work with the Global Goals is being integrated into your services, your HR, your IT, your purchasing, your communications, your process management, your user involvement, and your documentation of value creation.

Establish the organization of responsibility for handling and implementing the Global Goals, on all levels, in relation to your workflows and in relation to other systems in the firm's everyday doings, and ensure connections in relation to, for example, guality assurance and environmental management.

Take your mark in, for example, the Danish Association of Architectural Firms' and The Danish Association of Consulting Engineers' interim supplement to service-descriptions* regarding sustainability, and collate this with the Global Goals in order to come up with your own way of doing it - both in relation to your everyday life and the projects. And write this into your employee handbook.

Evaluate annually - we'll be getting back to that ... (page 187). *

IMPLEMENT



Walk the talk! **GOALS AND OBJECTIVES**

ASSIGNMENT: On the background of your strategy and change process, concretize your baseline. Define, by taking inspiration from pages 77-93, just what you want to measure in terms of the effect made in your organization and how this works - and strive to set concrete goals for your activities.

This could be, for example: the firm's floorage use - number of m2 per employee, airplane trips per employee, commuting to and from work, meeting and conference activity, eating habits and food waste in the lunch-catering, waste generation, the extent of organized Global Goal efforts in the firm's operations and projects, the quality of the working environment and safety organization, the indoor climate's quality in relation to sick leave taken, the extent of knowledge about - and competencies related to - the Global Goals in your firm, the extent and quality of Global Goal efforts in your services and projects, etc.

See the example on pages 105-107, suggesting how you can calculate your firm's climate footprint.



How many employees are there in the firm? How many m2 of office floorage are there per employee? How energy-efficient is the building in which you are working? What is the amount of the company's energy consumption? What is the quota of renewable energy?

How far do the employees have to travel when commuting back and forth to work? How many meals does your canteen serve, and what are the impacts of the different food types? How many kilogrammes of waste does the company produce?

> How many sleepover nights do your employees spend in connection with their jobs? How many journeys by plane, train and car are the employees making - domestically, internationally and transcontinentally?

How many m2 of construction projected by the firm were put into use last year? What is the climate footprint of your new construction, remodelling and renovation projects?

Walk the talk! **EXAMPLE: WHAT IS YOUR** FIRM'S CLIMATE FOOTPRINT?

If you are in control of your firm's climate footprint, you are also in a position to advise your customers about their readjustment to 'green'. When you've got to come up with a climate account, you calculate your climate footprint in relation to three purposes, or "scopes", as they are called:

- SCOPE 1: Direct greenhouse gas emissions from the firm's production and activities.
- SCOPE 2: Indirect greenhouse gas emissions typically related to energy consumption.
- SCOPE 3: Other indirect emissions for example, from travelling, waste, services and products.

How your products and services can be categorised precisely might vary from one company to another. But in order to bring forth an overview, The Danish Association of Architectural Firms asked some of its member firms to document their production as well as the purchase and sale of various goods and services: for example, energy, transportation, food, printed matter, and so on. We used the CarbonNeutral Calculator tool to make an estimated calculation. Using a few straightforward extrapolations and conversions of data in relation to local or Danish conditions, doing this can yield an overview of what your climate footprint is.

There can be considerable differences between firms. Data is not difficult to get hold of, or to make an estimate of. The firms spent approximately 7-10 hours on doing this, and once you get hold of data, it's easier to do it the next time around. It's important to note that the calculations do not take the footprint of the companies' projects into account. This has to be calculated separately, and requires more effort.





Our domicile space is larger than what we need. We have proposed to the property owner to optimize the energy consumption of the property. We can con- the direction of circustruct a case that will be of benefit to both the tenants and the owners, but we can't figure out what they're can save the climate waiting for! Fortuna- many thousands tely, we are saving resources by biking around to our projects. gives rise to a high And the renovation projects we are doing are extending the life- We have investigated time of the buildings and saving the clima- reducing our footprint te from the impact of having usable buil- to climate-compendings demolished and sate for all our travel having new ones built. activities."

<u>A</u>

KRYDSRUM

We are working way people build, in lar economy – both in with circular economy However, air travel

3XN

SCOPE 1



0.13 0.10

Catering, travelling, waste, third party suppliers, commuting, workplaces at home

SCOPE 3

0.08 5.89

Walk the talk! **EXAMPLE OF CLIMATE** FOOTPRINTS: **KRYDSRUM CONTRA 3XN**

At two opposite ends of the spectrum, we find Krydsrum Arkitekter, which is busy carrying out renovations and making transformation projects in the local area, and 3XN, which is busy making innovations and doing green prestige construction on the global market.

Analysis bears out that Krydsrum has a somewhat higher floorage- and energy-consumption per employee, since this firm is working inside an older industrial property that has not been energy-renovated. This is less climate efficient than what we see at 3XN, which has it's domicile. in the former gunboat sheds that have been renovated fairly recently. For this reason, Krydsrum's climate footprint is about 20% greater than 3XNs, if we concentrate our gaze only on Scopes 1 and 2.

However, 3XN is engaged with a great deal of international travel activity, in order to be able to run it's many projects abroad. And the many airplane trips are, far and away, the largest single factor in 3XN's climate accounts - up to 50 times larger than any of the other factors. But the climate accounts are not taking the companies' projects into account. And it's right there where their largest footprints are being made.

Let's take a look at what you, as architects, can do to boost your projects' imprints and profiles.

Climate footprint in 2019, per employee (tonnes of CO2 per person). The climate footprint of the companies' projects is not being taken into account here.

0.43 0.35

Architects can provide basic ideas and proposals for regulations that make it possible for us to have sustainable cities and communities in the future. Architects can facilitate the open dialogue and work in partnerships to give us good solutions and can encourage authorities to make the regulations necessary to move forward."

Mogens Lykketoft - on architects' opportunities for exerting influence on sustainable development, through the 17 Global Goals, from the foreword to the publication of "An architecture quide to the UN 17 Sustainable Development Goals", 2018 (Royal Danish Academy, The Danish Association of Architects, UIA)*

IMPIFMFNT



Climate adaptation as potential

In order to awaken reflection and bring about understanding of climate changes as well as inspire a more sustainable lifestyle, climate adaptation is being made visible and turned into new potentials for recreation, leisure and learning. Water is present everywhere and is a prominent part of yard spaces and surroundings. In the open yard spaces, the collection of rainwater ensures a luxuriantly fertile and green yard milieu that is robust in the face of the changing climate and future's cloudbursts. These are inviting social meeting places with prospects and offering contact with nature. The landscape-based rainwater management (LAR) conducts all the rainwater away from the roofs, the pathways and the surfaces in open canals. The area's canals collect the rainwater into two newly constructed lakes just outside the residential area, from where it becomes part of the natural water circulation and gives rise to a local nature destination for the area's residents – The Way of Water invites the residents to get out into the local nature. Juul|Frost Architects has taken its starting point in the surrounding landscape's plants, in order to give each of the housing clusters its own distinctive bio-identity.

PROJECT RESIDENTIAL HOUSING AND LANDSCAPE PLAN, MOVIE THEATRES, VÆRLØSE AIR BASE CLIENT BONAVA ARCHITECT JUULIFROST ARKITEKTER GROUND AREA RECREATIVE LAR-LANDSCAPE OF 10 HECTARES. 38 SWAN-LABELLED ROW HOUSES WITH REUSABLE FACADES, 11, 872 M2 IN TOTAL PERIOD 2016-2019

GOAL 3 GOOD HEALTH AND WELL-BEING GOAL 11 SUSTAINABLE CITIES AND COMMUNITIES GOAL 13 CLIMATE ACTION GOAL 15 LIFE ON LAND Construction accounts for approximately 40% of society's energy consumption (and consequent CO2 footprint), approximately 35% of society's resource consumption, and 30% of the waste produced in Denmark and comparable countries.

Construction is of fundamental importance when it comes to public health, well-being, productivity and learning, etc.

Architects' unparalleled opportunity to exercise influence on sustainable development is manifest through your imprint in the form of your services, that is to say, through the advice you are offering and your projects in relation to construction. The projects are architects' 'products'. The lessons you can come to learn in running your business in relation to the Global Goals can be utilised to hone your services and projects.

> You can make use of the Global Goals to guide you in the direction of designing buildings that bring forth social, environmental and economic value for the builders, for the users and for communities, by employing the goals as tools for programming, designing and projecting sustainable buildings and cities.

Remember, moreover: The Global Goals support DGNB* - and DGNB* supports the Global Goals - Everything is connected.

Global Goals architecture! VALUE CREATION THROUGH **GLOBAL GOALS**

ASSIGNMENT: Make a timetable that will serve as a as a starting point for an innovation process.

You are implementing a change process in your firm, and you can use the timetable to plan activities and processes in your projects:

- In the planning phase, you define the project's goals.
- In **the design phase**, you design the project, through design strategies, so that you will be able to achieve your goals.
- In the construction phase, the project is built up in such a way so as to achieve your goals.
- In the use phase, you evaluate whether the design strategies and tools are achieving the goals - and you reflect, together, if this is not the case ...
- In the recycling phase, which is about circularity but also about doing things smarter the next time around, you adjust or restructure the process.

IMPLEMENT

We offered a hint about this on page 35. Let's look at what you can do, concretely, in each of the individual building phases. And at how you can gain stronger influence through more services in several of the phases, through the Global Goals.

Global Goals architecture!

The most important value creation* ...

... of a project takes place during the initial phases, which provide fertile soil for new business areas and se

services* for architects, as well as a greater presence in several phases of the construction process.



RE-USE

ARCHITECT OTHER ACTORS

- Sustainability management
- Recycling and disposal
- Circular economy



BUILDING OWNER

ARCHITECT

- **CONSTRUCTION ENGINEER**
- **BUILDING OWNER / FACILITY MANAGER**
- **I OTHER ACTORS**

00001





PLAN delineates the whole point of departure for the project: how you get started with it, internally in the design team as well as with external partners.

In the planning phase, the Global Goals can be utilised in connection with the dialogue with the building owner, with regard to the success-criteria of the assignment, defining its economic, environmental and social objectives, and defining its baseline in relation to measuring the project's value creation.

Use the Global Goals to communicate about the project's strategy, idea and program:

■ What exactly is the purpose?

■ What do you, as architects, want to achieve?

■ How are you going to make it measurable?

Consider very carefully whether or not there are new opportunities for your business area and services available to you here (see pages 114-115).

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17 INTRACIONAL 88

Social sustainability

In 2014 and 2015, a major expansion took place at the Muusholm vacation centre. Twenty-one holiday residences were constructed, as well as a restaurant, a professional kitchen and a large multi-purpose hall that can be used for sports activities, conferences and concerts. The expansion of Musholm fulfils the Muscular Dystrophy Foundation's long-standing dream of creating an internationally leading holiday- and sports-centre for people with disabilities. Having now been crowned the world's most socially inclusive building and praised the world over as signalling a breakthrough in accessible architecture, the expansion has amplified and fortified the narrative about the Muscular Dystrophy Foundation as a forward-looking organization for handicapped persons.

The expansion of Musholm not only carries further the holiday centre's architectural tone and quality but also raises the bar for socially sustainable architecture by giving all of its visitors, regardless of handicap, the opportunity to enjoy attractive holiday experiences. In this way, the expansion sets new standards for how accessible solutions can be integrated into architecture, so that it will speak to the senses and simultaneously incite people to activity and inspire a sense of community.

PROJECT VACATION AND SPORTS CENTER FOR PEOPLE WITH DISABILITIES CLIENT MUSCULAR DYSTROPHY FOUNDATION

ARCHITECT AART FLOORAGE 3.200 M PERIOD 2014-2015

GOAL 3 PHYSICAL ACTIVITY, SOCIAL INCLUSION, ACCESSIBILITY GOAL 8 create frames around increased – and new forms of – tourism in Peripheral Areas GOAL 10 ENSURF FOUAL OPPORTUNITIES TO EVERYBOD REGARDI ESS OF THEIR HAND



Global Goals architecture! VALUE CREATION THROUGH THE GLOBAL GOALS

DESIGN - sketching / disposition / project documentation: In the design phase, the Global Goals can be used to define intentions, to describe effects of sustainability means and what they must be able to do, and to define how effects and qualities must be documented in order to estimate the value of social, environmental and economic efforts in the project.

This can be pursued, for example, through evidence-based design as a working method and the deployment of LCA* and LCC* as tools for decision-making on managing material-use and -quality, for making the effects of sustainability efforts visible, and for describing anticipated social, environmental and economic quality, impact and value-economic profits for the building owner. That, which the Danish Voluntary Sustainability Class* also has to do with, basically.

Consider carefully whether or not there are new opportunities for business areas and services available to you here (see pages 114-115).

IMPLEMENT



Sustainable design

The project Ny Vinkel demonstrates how the Global Goals can be transposed into practice in the construction and real estate sectors. It has been estimated that the project represents a savings of 30-50% CO2 load in comparison to what we see in standard construction. This happens especially through project design, material selection, system solutions, a focus on climate and biodiversity, and by creating a frames for community and sustainable lifestyles. The proposal's systemic thought and many repetitions make carrying out the construction in wooden elements the obvious choice. Above and beyond significant CO2 savings, calculations similarly reveal that the project is financially sustainable and can be carried out with low start-up costs. One extraordinary challenge at the site is the traffic noise from nearby motorways and ring roads. In Ny Vinkel, the noise is being managed without making any compromises on the quality of the homes and the outdoor spaces, by letting the design of the buildings take its point of departure in the road's noise. Parking is established under a plinth of elevated terrain with green open spaces. This makes it possible to establish a safe, green, cohesive courtyard in the middle, with favourable daylight conditions for outdoor spaces and all the homes, and the slope of the roof is, moreover, optimal in relation to the placement of solar cells on the roof.

PROJECT HOUSING AND BUSINESS CLIENT ABERDEEN STANDARD INVESTMENT FOR DANICA ARCHITECT TREDJE NATUR FLOORAGE 10.793 M² PERIOD 2018 AND ONWARD

GOAL 3FOCUS ON ACOUSTICS, DAYLIGHTGOAL 7SOLAR CELLS AND DAYLIGHT OPTIMIZATIONGOAL 8TOTAL ECONOMYGOAL 12SUSTAINABLE MATERIAL CHOICESGOAL 15GREEN OUTDOOR SPACES



ARCHITECT **CONSTRUCTION ENGINEER**

Global Goals architecture! BUILD PHASE AND DOCUMENTATION

BUILD - digitization / construction management / working environment:

In the building phase, what is important is that you, together with the people who are carrying out the project, engender a common understanding of what it is going to take to fulfil the projects' objectives when it comes to the value creation of the social, environmental and long-term financial efforts. You can make use of the Global Goals as the common language to define and harmonise your outcome requirements.

When you inform your building models with LCA- and LCC-data, you can employ the Global Goals as a communication platform for strengthening your communication and impact in relation to challenging the contractors on matters like quality management, budgets and construction processes, and you will be able to stand clear in relation to following-up, in relation to construction management and in relation to supervision when solutions need to be quality assured, assessed in terms of value, and fiscally adjusted.

Consider carefully whether or not there are new opportunities for business areas and services available to you, here (see pages 114-115).

IMPLEMENT



Integrated design

Community, security and friendships spanning across generations are some of the values that are going to be central in 2023, when the future's Gauerslund Fællesinstitution is expected to be completed. The guiding vision of the project is to create a building that will become an asset in the local area and that, with its design, will play host to meetings and interactions between children, nursing home residents and the rest of the people in the city. A large activity centre is therefore going to be placed at the centre of the project, where nursing home residents, the caregiving staff, the day care centre, the guests and the citizens from the rest of the city can meet for café visits, creative workshop days, bingo games or marketplace days – as well as for informal meetings.

In its preparations for the project, SWECO Architects have pre-screened the whole project in relation to social, environmental and economic sustainability, taking its point of departure in the UN 17 Global Goals. Sustainability is going to be a central part of the design process, and SWECO Architects see the chance to incorporate, to a greater or lesser degree, initiatives that will make a contribution to realising 15 out of the 17 Global Goals – for example, Goal 11 on 'Sustainable cities and communities' and Goal 13 on 'Climate action', inasmuch as they are going to be working with rainwater collection, biodiversity and healthy and robust building materials with a long service life.

PROJECT JOINT INSTITUTION CLIENT MUNICIPALITY OF VEJLE ARCHITECT SWECO ARCHITECTS FLOORAGE 27.000 M² PERIOD 2018 AND ONWARD

GOAL 3, 4, 5, 6, 7,8, 9.10, 11, 12, 13, 14, 15, 16, 17



ARCHITECT CONSTRUCTION ENGINEER

Global Goals architecture! EVALUATION AND DOCUMENTATION

USE - user analyses / big data / user contact: The Global Goals can form a good basis for communication about and the monitoring of the experience of quality and functionality that are being put to use whenever there is a need to assess quality, and when value and social, environmental and economic effects in the use of your projects need to be documented.

Describe and measure the project's environmental qualities and figure out the economy of the social effects and activities that the project stimulates, and relate this to the project's overall costs.

You can, for example, make use of interviews, observational studies and questionnaires as tools for evaluating quality, measuring effect and documenting value. Along with evidence-based design principles, performance simulation and measurements, including life cycle assessments, BIM, construction economics modelling, total economy and total value.

Consider carefully whether or not there are new opportunities for business areas and services available to you, here (see pages 114-115).

WIN WIN potentials

The combined climate adaptation- and urban space-project, "Sankt Kjelds Plads & Bryggervangen" is the Municipality of Copenhagen's largest and greenest cloudburst-project to date: a climate adaptation project that's supposed to improve the city's biological diversity, that's supposed to increase the health and augment the quality of life of local citizens, and also reduce air pollution and reduce the city's heat island effect.

Here, rainwater is being treated on the surface and thereby becomes a resource that gives life to the plants and trees rather than merely winding up in overcrowded sewers. The project defines a distinctive urban nature in Copenhagen, which has learned its lessons from characteristic Copenhagen biotopes like Utterslev Mose, Kongelunden and Amager Fælled – and makes use of their processes in a rational and aesthetic manner. The result is new urban nature that is aesthetic and functional, biodiverse and sustainable, green and blue, climate adaptable and giving rise to a sense of community. An urban nature that gives Copenhageners a strong aesthetic feeling about nature lying right outside the door.

The project also safeguards the area from flooding by collecting and detaining the rainwater in a great many specially designed lush urban areas.

PROJECT LANDSCAPE, CLIMATE ADAPTATION AND URBAN DEVELOPMENT Client Municipality of Copenhagen Architect SLA Floorage 34.900 M² Period 2016-2019

GOAL 6 GROUNDWATER PROTECTION GOAL 11 RECREATIVE URBAN ROOMS GOAL 13 CLIMATE PROTECTION GOAL 15 BIODIVERSITY





Global Goals architecture! THE POTENTIAL OF THE GLOBAL **GOALS AS A COMMUNICATION IMPLEMENT**

From End of Life to RE-USE / Recycling / Circular Economy: The Global Goals can be used to define potentials, effect, and the value of existing buildings as well as of future buildings, in relation to social, environmental and economic benefits.

The detectability of building- and facility-waste and safety in connection with re-use and recycling can be augmented through the use of the material pass. The material pass is going to be used for the registration of data concerning the origin of the materials and, as the case might be, of data concerning any occurrence of harmful substances and technical specifications, etc. The Global Goals can shore up communication of the criteria, of which it is necessary to have a common understanding in order to define the material pass.

Consider carefully whether or not there are new opportunities for business areas and services available to you, here (see pages 114-115).

Sustainable design

At Kistefossdammen Kindergarten, Christensen & Co have been working strategically with CO2 reduction, both during construction and in the daily operation of the building, and the result is a building with a 62% cutback in CO2 emissions, as compared to a standard building in the same area The characteristic roof forms impart a most distinctive character to the building. The south-facing roof forms create place for 216 integrated solar panels that harvest the sun's energy, and the roof hoods engender ideal conditions for a good indoor climate, favourable acoustics, and natural ventilation in the common rooms. The windows in the roof forms allow exceptionally good daylight conditions in interaction with the facade windows.

The construction is a wooden building with a point-by-point foundation and woodbased ground decks, while the roof hoods have been created in prefabricated solid wood elements (CLT). With straightforward architectural grips, the building is thus making a contribution to a more sustainable Norwegian society, where new "citizens" are learning, through architecture, to understand the connection between energy consumption and climate.

PROJECT KISTEFOSDAMMEN KINDERGARTEN Client Municipality of Asker Architect Christensen & Co Arkitekter Floorage 1.360 M² Period 2017

GOAL 3DAYLIGHT-OPTIMIZED DESIGN SOLUTIONS AND FOCUS ON HEALTHY MATERIALSGOAL 4VISIBLE SUSTAINABILITY INITIATIVES THAT SERVE TO STIMULATE LEARNING THROUGH PLAYGOAL 7ENERGY INITIATIVES CONTRIBUTE TO A STRONG ARCHITECTONIC CONCEPTGOAL 11CONDITIONS FOR CYCLISTS AND PEDESTRIANS CONTRIBUTEGOAL 12USE OF HEALTHY MATERIALS, FOCUS ON RESOURCE-CONSUMPTION AND TRANSPORT IN PRODUCTIONGOAL 13MINIMIZED CO2 CONSUMPTION THROUGH REDUCTION OF CONCRETE USED IN THE FOUNDATION





Global Goals architecture! THE PROJECT MANUAL

Hopefully, you, as architects, have now been inspired by what you can do to expand and develop your business and your projects, taking your mark in the Global Goals.

As has been mentioned, knowing the consequences on your own body and taking your own medicine can be a truly good method of advising and designing in a qualified way, on the background of the fact that you know the social, environmental and economic consequences of your activities - including both the positive and negative consequences.

Therefore, you can advantageously write this into your project handbook, so that everybody in the company can go to consult the same source, for everything that is common to everyone in the company, also in relation to the Global Goals. In the project manual, you can develop your own method for how you will make use of the Global Goals to document your projects' performance and value creation. In the publication titled "Architect - document your value creation!"*, you can find more input about how you can take hold of this.

We recommend that you make use of the Global Goals in order to communicate what performance and value creation can be when you are heading into dialogue with your collaborative partners about design strategies and artistic agents.

On the coming pages (pages 139-177), you will be presented with a whole lot of input related to how you can use the Global Goals as tools for developing design strategies and artistic agents.

IMPLEMENT

*"ARCHITECT-DOCUMENT YOUR VALUE CREATION!" PAGE 192-193



Global Goals architecture! SET GOALS - AND PURSUE THEM

It is obvious to make use of the Global Goals and their 169 targets as inspiration for how to create value with your projects, with the clear intention that the goals are supposed to be realised by 2030.

In Denmark, there is currently (as of 2020) development work going on to adapt the targets so that they become relevant in our context. This overall work is being carried out by Danmarks Statistik and Deloitte, at the request of the Danish Parlament's 2030-panel*.

At the same time, it is precisely the intent of the Global Goals that everybody can contribute with whatever they can, and with that which is relevant in precisely the place where they are working. You are accordingly most welcome to interpret the Global Goals and set targets and benchmarks that might be relevant to your projects.

ASSIGNMENT: Use the Global Goals to set goals for your projects that extend as far as the year 2030, and use these as a frame for documenting and communicating your value creation.

IMPLEMENT

***OURGOALS** PAGE 192-193

A great building must begin with the unmeasurable, must go through measureable means when it is being designed and in the end must be unmeasurable.

Louis Kahn

WHEN DEVELOPING

USING THE SDGS PROJECTS!

Ask yourselves:

- What categories of projects are you working with, and how do the projects comply with the Global Goals? (See also pages 68-69)
- How are you taking hold of the goals and integrating them into the projects?
- How are you measuring and making adjustments?

ASSIGNMENT: Use your answers to establish the organization of responsibility for handling and implementing the Global Goals, on all levels, in relation to your workflows and other systems in the company's everyday operations, in order to secure connections in relation to, for example, quality assurance and environmental

Using the SDGS when developing projects! **DESIGN STRATEGIES AND TOOLS**

On the following pages, pages 145-177, we offer you a whole lot of suggestions for possible design strategies and sustainability means that can comply with the 17 Global Goals in your projects and inspire you as to where you can intervene and where you might already be well under way.

You will also obtain some inspiration as to where and when in the construction process it could be prudent to cast a sidelong glance at the Global Goals, so as to be able to use them as design parameters.

And we will give you some hints about which of the Brundtland definition's three dimensions are going to be taken into account should you happen, alongside of working with the Global Goals, to need to DGNB-certify* an upcoming urban- or building-project.



*DGNB-CERTIFICATION PAGE 192-193
NO **POVERTY**



ARCHITECTS CAN CONTRIBUTE TO RIDDING THE WORLD OF POVERTY BY DESIGNING INEXPENSIVE HOUSES AND INSTITUTIONS THAT ARE SAFE, HEALTHY AND RESILIENT.

Problems related to poverty issues in the Danish context are by no means as pressing as they are in a Third World context.

However, in relation to whatever society it occurs, poverty is a relative dimension. Poverty carries with it privation, lack of opportunities and marginalization for those who happen to be poor.

Significant efforts are accordingly being made to develop, build and renovate housing that is affordable in our society, as well as efforts to counter the effects of poverty in the countries we are trading with, by giving orders for materials to be used in construction- and renovation-projects that have been obtained, processed, transported and assembled under fair conditions.

We can shore up the Global Goals by focusing on avoiding social distortions through the phases of development, design, construction, use, and the operation of the built environment in the scenario of a win-win situation for all parties, through lean and transparent construction processes, sustainable production and justifiable health- and safety-related frames around construction and demolition.







THE BUILT ENVIRONMENT CAN BE DESIGNED IN SUCH A WAY AS TO SUPPORT SUSTAINABLE FOOD PRODUCTION

Hunger, per se, does not pose all that much of a challenge in Denmark. However, this goal not only has to do with solving a hunger problem; it also has to do with food security in a world where there are more and more of us. This includes avoiding food waste and supporting a correct and adequate food intake.

Examples of design strategies and tools:

- Securing of existing ecosystems and acreage's species diversity when it comes to food production.
- Design robustly in relation to the connection with the local environmental context.
- Public utility gardens.

PLAN

- Make use of durable plant species that are natural in the Danish environment, so that they will require less fertilizer and maintenance.
- Refrain from using artificial fertilizers and pesticides.
- Create 'productive' landscapes for food production in the cities.

DESIGN



GOOD HEALTH AND WELL-BEING





THE BUILT ENVIRONMENT CAN BE DESIGNED SO AS TO MAKE USERS HEALTHY, BOTH DURING CONSTRUCTION AND WHILE USING THE BUILDING, AND NEGATIVE HEALTH IMPACTS CAN BE PREVENTED.

Examples of design strategies and tools:

When it comes to ensuring good health for everyone, it's a matter of training our focus on:

- Rooms with appropriate room heights and suitable spatial depth, Indoor climatelabelled, environmentally-declared building materials and cleaning products, daylight optimization, sun-oriented window settings, reflectors, light shelves, no glare or overheating, night cooling, hybrid ventilation, ground cooling, water cooling, etc., surfaces that ensure favourable acoustics, low-noise technologies.
- Inclusive space and universal design.
- Healing architecture.
- Good recreational facilities, sports facilities and facilities for playing, with reasonable maintenance.
- Good lighting and wayfinding (safety and security).
- Rooms with a strong visual connection to the surroundings.
- Prioritization of activating circulation and routes: for example, stairways, bicycle parking, walking routes.
- Plants.

QUALITY **EDUCATION**





THE BUILT ENVIRONMENT CAN BE DESIGNED SO AS TO SUPPORT INCLUSIVE OUALITY EDUCATION BY HAVING THE ARCHITECT STRIVE FOR A QUALITY THAT ENABLES US TO UNDERSTAND AND TO DO SOMETHING ABOUT THE WORLD'S PROBLEMS, AS WELL AS MAKE LIFE BETTER FOR OURSELVES.

Examples of design strategies and tools:

- Buildings that "speak for themselves" and establish fine frames for learning and education.
- Buildings that make the individuals who design, execute and run them even more proficient and competent.
- Buildings that encourage a transformation to 'green' approaches and sustainable living by virtue of their design.
- Supporting interdisciplinary collaboration on pedagogical communication related to operations and maintenance, for inspiration.
- Ensuring greater coherence between theory and practice for the future's citizens, through an enhanced focus on promoting sustainable design and crafts in the course of schooling.
- Ensure the buildings' preconditions so as to be sure to also include those people who do not have limitless opportunities, today - children as well as youngsters, as well as adults, as well as older people.





THE BUILT ENVIRONMENT CAN BE DESIGNED SO AS TO SUPPORT WOMEN'S, GIRL'S AND TRANSGENDER PERSONS' VOICES, AUTONOMY, BEHAVIOUR, ACTIONS, AND SAFETY ON AN EQUAL FOOTING WITH MEN AND BOYS.

Examples of design strategies and tools:

- Design and execution of indoor and outdoor spaces for all genders, to an equal extent for all genders, in public as well as in private contexts.
- Design of both indoor and outdoor spaces so that they will be safe and attractive for transgender people, women and girls.
- Organization of construction processes so that they can be carried out by women - strengthening women's opportunities to handle strength-demanding construction processes that have otherwise been reserved for men - for example, through the use of lifting technologies - need to be encouraged.
- Helping aids in construction processes and operations, for both women and men.









THE PHYSICAL ENVIRONMENT CAN BE DESIGNED IN SUCH A WAY AS TO SUPPORT RE-SPONSIBLE USE OF SCARCE RESOURCES OF FRESH WATER. TAKING INTO CONSIDERATION HEALTH, HYGIENE, HEAT- AND ENERGY PRODUCTION, AND FOOD PRODUCTION

Examples of design strategies and tools:

- Landscape-based rainwater management (LAR) for drawing water away, for the gathering and recycling of water, and for the safe seepage of rainwater to groundwater - controlled and without generating pollution.
- Water-conserving solutions in buildings and facilities.
- Building materials (and their packaging) must not, at any point in their life cycle, contaminate the groundwater.
- Ensure proper toilet conditions, and sanitary conditions in general.
- Construction activities must take place in such a way that groundwater resources and the risk of flooding are always being taken into account.
- Create sustainable urban drainage that supports natural aquatic-environments and -habitats and generates amenity value for people.
- Offer recycling and damping of rainwater- and grey-wastewater and remain aware of the operation-related implications of complex systems.









THE BUILT ENVIRONMENT CAN BE DESIGNED SO AS TO SUPPORT THE USE OF **RENEWABLE ENERGY**

Examples of design strategies and tools:

- Prioritization of the energy renovation of existing buildings.
- Fine-tuning in relation to indoor climate, using efficient mechanical systems.
- Specifying adequate low-energy appliances.
- Offering responsive local control.
- Solar cells, heat pumps, solar heating and wind energy, when any of these make sense.
- Appropriate (renewable) energy technology, in relation to geography, climate and culture.
- Connection between building design and energy technology, with an eye towards minimized energy consumption.
- Attention to the building materials' embedded energy, life cycle and potential - in the design, execution and running of the building (LCC and LCA)*.
- Promoting renewable energy.

PLAN

*LCC.LCA PAGE 192-193

Promoting opportunities for interaction with collective energy systems.

B DECENT WORK AND ECONOMIC GROWTH





THE BUILT ENVIRONMENT CAN BE DESIGNED SO AS TO PROMOTE RENEWABLE, Inclusive and sustainable economic growth, total and productive employment, as well as decent jobs for everybody.

Examples of design strategies and tools:

- Prioritize ethical and responsible sourcing of all building materials.
- Prioritize the working environment and fair conditions (LCA)* for materials and tools.
- Choose reliable and durable products that have been produced under conditions that do not exploit individuals unfairly (LCA)*.
- Always weigh the question of whether 'cheap' really IS better than 'good' (LCC)* and implement life-cycle costing assessments of key components as a basis for making decisions.
- Establish some consistency around measuring the added value of users' health and well-being and the sustainable benefit of the building / community.
- Make use of experiences for the running of sustainable operations and future projects.
- Keep a close eye on management, operating costs and maintenance costs.
- Measure the added value of users' health and well-being.
- Measure the added value of the sustainable yield of the building / community.



*LCC, LCA PAGE 192-193

ts and maintenance costs. Il-being.

INDUSTRY, INNOVATION AND INFRASTRUCTURE





THE BUILT ENVIRONMENT CAN BE OUR LABORATORY, OUR SANDBOX, FOR PURPOSES OF ENSURING RESOURCE-EFFICIENT, ENVIRONMENTALLY-CLEAN AND HEALTHY TECHNO-LOGY, AND FOR PURPOSES OF FACING UP TO GLOBAL AND SOCIETAL CHALLENGES.

Examples of design strategies and tools:

- Pose to the collaborative partners the necessary and challenging questions and requirements, and ask them to 'think outside the box', in relation to designing and executing buildings and areas.
- Drive innovative processes so that your innovative capacity is being developed in such as way as to comply with the expectations of the outside world.
- Evaluate all solutions with an eye trained on whether or not they are 'futureproofed'.
- Strengthen global and local cohesion through the optimization of infrastructure - both physical and IT.
- Prioritize high-quality digital contact/connection in order to avoid unnecessarv travel.
- Prioritize choosing areas with proximity and easy access to public transportation.
- Secure facilities for those who are transporting themselves actively (running, bicycling, etc.) in the form of showers, changing rooms, etc.
- Offer facilities for carpooling.







THROUGH PROGRAMMING, PLANNING, DESIGN, EXECUTION, APPLICATION AND THE USE OF BUILDINGS AND AREAS. THE BUILT ENVIRONMENT CAN SUSTAIN SOCIAL INCLUSION AND DEFENSIBLE ADMINISTRATION OF SOCIAL COMMUNITY RESPONSIBILITY.

Examples of design strategies and tools:

- Democratic design.
- Universal design, accessibility.
- Functionally mixed urban districts with varied shopping life, and a focus on creating variation and room for smaller initiatives and building communities.
- Residential buildings that ensure mixed residential forms and a variation in housing sizes, housing types and forms of ownership, both in new and existing housing areas.
- New housing types for several different target groups, including new forms of housing and ownership and community housing.





SUSTAINABLE CITIES AND COMMUNITIES





CITIES AND LOCAL COMMUNITIES CAN BE DESIGNED SO AS TO BE INCLUSIVE, SAFE AND ROBUST, WITH SUSTAINABLE TRANSPORTATION SYSTEMS, A MINIMIZATION OF ENVIRONMENTAL IMPACT, AND HOUSING THAT PEOPLE CAN AFFORD TO LIVE IN.

Examples of design strategies and tools:

More public housing.

- Inclusive planning processes for all relevant stakeholders in sustainable land area development.
- Promoting of robust and sustainable infrastructure, with public transportation and sustainable mobility, bicycling and pedestrians, including public pedestrian facilities of high-quality.
- Focus on microclimate and species diversity, urban gardening, parks and urban nature.
- Promote sustainable solutions for rainwater management, waste management, energy supply, water balance and exploitation of land area.
- Neutralise the urban 'heat island's' effect and pollution.
- Promote urban life, social and functional diversity, security and accessibility.
- Create public infrastructure that conjoins cities, suburbs and rural areas and provides a good balance between the cityscape and the landscape.



RESPONSIBLE CONSUMPTION AND PRODUCTION





THE BUILT ENVIRONMENT CAN BE DESIGNED SO AS TO SUPPORT SUSTAINABLE PRODUCTION AND CONSUMPTION OF BUILDING MATERIALS, IN RELATION TO HANDLING CHEMICAL SUBSTANCES DEFENSIBLY. IN RELATION TO REDUCING THE AMOUNT OF WASTE, AND IN RELATION TO MAKING EFFICIENT USE OF NATURAL RESOURCES.

Examples of design strategies and tools:

- Prioritize the recycling of buildings and 'brown sites' (formerly used land areas that are not currently in use and which may potentially be contaminated).
- Design for dis-assembly and circular economy.
- Recyclable and recycled materials.
- Biodegradable materials.
- Local materials.
- Materials without de-gassing and noisome vapours.
- Environmentally-declared or indoor climate-labelled materials, climateregulating and absorbent materials, heat-accumulating building components.
- Design for long lifetime and robustness and carry out a CO2 analysis, in a lifetime perspective, on building components and materials with the help of LCA and LCC*.
- Prioritize ethical and responsible sourcing of all building materials.
- Prioritize materials with low embedded energy and healthy materials.
- Promote the use of local materials.



*LCC.LCA PAGE 192-193







THE ONE WAY OF ENVISIONING CLIMATE ADAPTATION HAS TO DO WITH COMBATTING CLIMATE CHANGES. THE OTHER WAY OF ENVISIONING CLIMATE ADAPTATION HAS TO DO WITH PRIORITIZING THE STRUGGLE AGAINST CLIMATE CHANGES' CONSEQUENCES. WHICH ENTAILS THAT WE'VE GOT TO DESIGN BUILDINGS, LOCAL AREAS AND CITIES SO THAT THEY WILL EMIT AS LITTLE CO2 AS POSSIBLE.

Examples of design strategies and tools:

- Shape buildings, communities and cities through robust and flexible design that is resilient to climate changes - as exemplified by Biowater, Klimaflisen, Samvejr, Vandvejen and SCALGO.
- Cloudburst valves, larger sewers, water-permeable coating, fascines, Landscape-based rainwater management (LAR), delay, delay basins, greencovered roofs, rainwater-basins, rainwater-lakes, pumps, sluices, fauna passages, elevated quaysides, less closed-off asphalt and tiles.
- Prioritize the recycling of buildings and brown-sites (formerly used land areas that are not currently in use and which could potentially be contaminated).
- Offer recycling and damping of rainwater- and grey-wastewater and remain attentive to the operation-related implications of complex systems.

PLAN DESIGN

LIFE 4 **BELOW WATER**





THE BUILT ENVIRONMENT CAN BE DESIGNED SO AS TO SUPPORT THE MAINTENANCE OF HIGH SEAWATER QUALITY IN ORDER TO ENSURE A SUSTAINABLE USE OF THE WORLD'S OCEANS AND THEIR RESOURCES, ESPECIALLY WHEN IT COMES TO FOOD SAFETY AND CLIMATE CHANGES.

Examples of design strategies and tools:

- Take good care of marine- and coastal areas.
- Exercise great caution when building close to the sea and the coast.
- Make use of building materials that do not contribute to damaging seas and coastlines, as a direct consequence of pollution brought about by nonbiodegradable wastes like plastic.
- Regarding planting avoid the discharge of pesticides and nitrogen into our oceans.
- Call into the discussion the appropriate research and science in planning alongside the oceans and coasts.
- Create sustainable urban drainage, which supports natural aquatic habitats (related to plants and animals that live their lives in water) and generates amenity value for people.



LIFE 15 **ON LAND**





THE BUILT ENVIRONMENT HAVE TO BE IN BALANCE WITH NATURE, SO THAT THERE WILL BE SUSTAINABLE LIVING CONDITIONS FOR ECOSYSTEMS, FLORA AND FAUNA AND THE POPULATION OF INHABITANTS LIVING IN VULNERABLE AND VALUABLE NATURE AREAS. ESPECIALLY WITH AN EYE TOWARDS FOODWARE SAFETY AND CLIMATE CHANGES.

Examples of design strategies and tools:

- Ensure nature-formation and -restoration through the planning of buildings, urban areas and cities, with a focus on microclimate and species diversity, urban farming, parks and urban nature.
- Take care of park- and nature-areas, to avoid inexpediently demanding plant species or the use of artificial fertilizers.
- Establish green areas, in the form of green-covered roofs, vertical greenery, pocket parks, green corridors, etc.
- Issue orders for planting that plays expediently well with the given climate.
- Issue orders for sustainable wood, natural stones and building materials that will not exploit and exhaust scanty resources, deplete nature areas or compromise biodiversity and natural habitats for flora and fauna.





THE BUILT ENVIRONMENT CAN BE DESIGNED TO SUPPORT THE OBSERVANCE OF CIVIL. POLITICAL, ECONOMIC, SOCIAL AND CULTURAL HUMAN RIGHTS. **Examples of design strategies and tools:**

- Design inclusive, welcoming, security-engendering and non-discriminatory cities and buildings.
- Support association activities.
- Develop protection from terrorism in the buildings, urban areas and cities that can form a natural and amicable part of the environments.
- Bring forth safe and secure places, with advantageous overview.
- Work to include local people in the co-creation of buildings, urban areas and cities, which advance justice and ensure co-ownership and commitment, thereby diminishing vandalism and a sense of insecurity.
- Support democratic decision-making and a positive working environment.
- Use building materials that do not have anything at all to do with abuse, exploitation, human trafficking or any forms of violence against and torture of children.
- Use building materials and construction processes that do not encourage or promote theft, corruption, bribery or any other forms of organized criminality.

PARTNERSHIPS FOR THE GOALS





IN ORDER TO REALISE THE GLOBAL GOALS AND CREATE SUSTAINABLE PHYSICAL ENVIRONMENTS. IT IS NECESSARY THAT WE ORGANIZE OURSELVES IN PARTNERSHIPS FOR TAKING ACTION.

Examples of strategies and means:

- Mobilization of the right resources at the right times in the design processes.
- Design of buildings, urban areas and cities in partnership with end-users in order to ensure commitment and ownership that can run the projects sustainably.
- Constructive collaboration with other consultants in the programming, the design, the execution and the operations, along with an appraisement of all competencies in the processes directed towards the most sustainable projects.
- Sharing of knowledge, promotion of technology, development and improvement of research-collaborations and transfer and dissemination of environmental-friendly technologies, with an eye towards designing as sustainably as possible.
- Counteracting conflict culture.

PLAN

Utilizing synergies: for example, through further development of PPPs (public-private partnerships), partnering, and strategic partnerships.



Piet Hein

CHECK!

Skovhusene [The Forest Houses], homes for autistic people, make their bid directly into the United Nation's Global Goals for sustainable development, relating to Goals 3, 6, 7, 8, 11, 12, 13 and 15, with a wide fan of approaches and initiatives. These direct UN Global Goals indirectly affect all the other Global Goals. We have developed a "wheel" for the purpose of illustrating these connections to the three dimensions of sustainability and the activities and tools that we are going to need in order to ensure that the Forest Houses will become sustainable. SKOVHUSENE

Suna Cenholt, partner, Pluskontoret

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Check! **USE AND FOLLOW-UP**

CHECK: Changing one's procedures can be costly - and failing to change one's procedures can be costly. So therefore: be methodical when it comes to gathering experiences and sharing knowledge - this will be worth its weight in gold for your business.

In order to gain an overview, it is crucial that you gather up the threads related to what the changes mean, positively and negatively - both in relation to expenses and also in relation to your firm's work environment, productivity and resource consumption (pages 99-107, WALK THE TALK) and your projects' performance (pages 113-133, GLOBAL GOAL ARCHITECTURE). Try to gauge the economics on the social effects and activities that the process stimulates

ASSIGNMENT: Observe regularly – for example, once a month - that you make sure to gather up the threads of your efforts in relation to the Global Goals. Reflect, document and revise.

Ask the employees - for example, at annually held joint feedback days for the entire company - how things are going with implementing, using, and doing:

- What do you all think?
- What can be done differently?
- What can be done better?

MEDIAN-NEW CONSTRUCTION

14,5

9.5

6.5

REFERENCE New construction Kg CO2 / m^2 / year (AAU BUILD)

3XN:

We are working with circular economy – that is to say, with the re-use and recycling of constructions and materials. This can save 50% of resource consumption.

RE-USE AND **RECYCLING:** -50% CO2

EFERENCE

KRYDSRUM:

We are renovating and rebuilding. This extends the lifetime of buildings and materials, and can save 80% of resource consumption.

RENOVATION -80% CO2



EFERENCE



Check! **AN EXAMPLE OF BENCHMARKING IN PROJECTS**

In the Danish building regulations that will be in force from 2023, there are going to be requirements pertaining to documenting the buildings' climate footprints. Therefore, you, as architects, should already be obtaining and securing for yourselves the knowledge and the skills, so that you will be able to advise and create solutions that are climate effective.

In fact, the planning and design decisions you make are of the greatest importance. The climate footprint is calculated with a life-cycle assessment (LCA)*. Here are some rules of thumb regarding the buildings climate footprint:

There are very large differences in Denmark among how climate-efficient new construction is: The median value is estimated to be 9.5 Kg CO2 / m2 / year, according to an analysis from AAU BUILD. However, the climate footprint can vary from 6.5 and all the way up to 14.5 Kg CO2 / m2 / year.

For new construction, approximately 75% of the climate footprint comes from the production of materials and 25% from energy used for building operations. This is why you should put a lot of effort into material selection and construction optimization.

If you are also working with Global Goal 12 (Responsible production and consumption), it appears obvious to take hold of re-use, recycling and extended service life with renovation.

*LCA PAGE 192-193



Charles Darwin



ADJUST!



[EVERYTHING IS CONNECTED]

Adjust! **IMPROVEMENT POTENTIAL**

One of the very most beneficial and sustainable things you can do for your business and your projects is to formalize your transfer of experience from already implemented processes and projects to future processes and projects.

Accordingly, you can advantageously develop a process for how you dynamically and continuously adjust and update your strategy, your timetables, your employee manual and your project manual in relation to the Global Goals. In all of these activities, you must remember to adjust your objectives and goals and make adjustments on your websites and in your core narratives.

ASSIGNMENT: Your management tools and guidelines must be kept up to date. So you've got to make sure, internally within the organization, that somebody is doing this. Check out our publication, "Det hele hænger sammen" [Everything is connected] for input on how to go about doing this.

It's very engaging if you and your employees can constantly see yourselves and your inputs in your adjustments. So, make room for a new round, maybe in about 12 months - because then will you know much more, and the rest of the world will presumably also have moved, by then.

And then, start all over again - in the best circular fashion.

UN17 Village - the Global Goals as specific design tools

At the last construction site located at Ørestad, the erection of UN17 Village is soon going to be underway – a housing project that, as the first one ever to be doing so, will be implementing all of the UN's 17 Global Goals in one aggregate building design. UN17 Village is taking a unique approach to sustainability, seeing as the UN's 17 Global Goals have been employed for the first time ever as a decided design tool, and the building sets completely new standards for sustainable construction, because all of the Global Goals have been translated into concrete solutions, in one ambitious construction project.

The project is the result of a competition on land purchase in Ørestad, in 2018.

UN17 Village has been developed in close collaboration between NREP, Lendager Group, SWECO Architects and Moe Rådgivende Ingeniører.



1 16 10

Extras LET'S SUMMARIZE ...

PLAN!

- Start by gathering the management of your company and taking a look at your strategy. Ask yourself who you, as architects, are; what you want; where you want to go; and how you want to get there. (page 43)
- Use, for example, the Business Model Canvas* to discuss and develop your value proposition, taking your mark in current megatrends that are relevant to the real estate and construction sectors. (page 47)
- Conduct a stakeholder analysis* in relation to your customers. (page 49)
- Make use, for example, of SWOT* in order to reflect on yourselves as a business. Examine your strengths, your frailties, your opportunities and whatever perils you might face, especially in relation to your customers, your collaborative partners and the market as such, and in relation to yourselves, your employees and your areas of competence. (page 51-53)
- Gather it all up into an internal memorandum and/or an employee event or two, to reflect upon how to involve your employees at the time you are getting started designing and implementing your changes in the company. (page 55)

DESIGN!

- Present your conclusions to your employees, and involve them in designing the process of change, perhaps at an in-house seminar – or two ... (page 58)
- Reflect, together, on how your organization is being mirrored in the Global Goals, and on which of the goals you, as architects, can make a noticeable impact. (page 63-65)
- Prioritize the Global Goals in relation to how they can help you to define a direction for your sustainability journey. (page 66)
- Look at your portfolio of projects where do you "hit" the Global Goals with your projects? (page 68)
- Gather up the tasks in an internal decision-memorandum. Use this memorandum as a requirement specification in order to stipulate and lay out the action plan and allocate resources, and in order to budget the change process. (page 71)

IMPLEMENT – WALK THE TALK! Your daily operation

- Adjust your organization diagrams on a regular basis and communicate how working with Global Goals is being integrated into your services, HR, IT, purchasing, communication, process management, user involvement, documentation of value creation, etc. (page 99-101)
- Concretize your baseline based on the background of strategy and change process. Define what you want to measure in terms of the effect on in your organization and how this works - and strive to set concrete goals for your activities. (page 103)

IMPLEMENT – GLOBAL GOALS ARCHITECTURE! Your projects

- Draw up a timetable as a point of departure for integrating the Global Goals into your projects. (page 113)
- Use the Global Goals to set goals for your projects that extend as far as the year 2030 and use these as a frame for documenting and communicating your value creation. (page 139)
- Establish the organization of responsibility for handling and implementing the Global Goals, on all levels, in relation to your workflows in your projects and other systems in, for example, KS and environmental management. (page 142)

CHECK!

Observe regularly – for example, once a month – that you make sure to gather up the threads of your efforts in relation to the Global Goals. Reflect, document and revise - maybe even at annually-held joint feedback days for the whole company, focussing on on-going evaluation and updating. (page 181)

ADJUST!

Your management tools and guidelines must be kept up to date. So you've got to make sure, internally within the organization, that somebody is doing this. Check out our publication, "Det hele hænger sammen" [Everything is connected] for input on how best to do this. (page 187)

And then, start all over again - in the best circular fashion. ... Call us if you need a sparring partner. Have a good time heading into the future!

Extras **DO YOU WANT TO KNOW MORE?**

An architecture guide to the UN 17 Sustainable Development Goals is an introduction to architectural works from around the world, which demonstrate how the Global Goals can be design strategies, tools and form-generators in architecture. Architect - document your value creation is the title of The Danish Association of

Architectural Firms' publication on architects' value creation. The publication is meant to help architectural firms document their value creation.

The Brundtland Report, Our Common Future, was compiled by The World Commission on Environment and Development under the auspices of the United Nations and was published in 1987. This signalled the first time that there was a focus on global sustainability.

Business Model Canvas is a method of describing and developing a business model for a company or project. The method is intended for business development but also lends itself for use in project development.

The Danish Association of Construction Clients' manifesto describes construction clients' "translation" of the Global Goals into the building owners' universe.

The voluntary sustainability class is an independent and voluntary implement from 2020, which is aimed at making construction more sustainable than the requirements in current building codes.

Det hele hænger sammen [Everything is connected] presents the Danish Association of Architectural Firms' take on guality management, and defines it as a wholly overall approach to what's involved in running an architectural firm.

Dhaka-deklarationen / UIA is the International Union of Architects' call to all architects to contribute to fulfilling the Global Goals, with all the competencies they have at their command.

DGNB is a Danish certification system for sustainable construction. DGNB contributes to 14 out of the 17 Global Goals.

Doughnut conomics is a new model for economics, where the success criterion can be described with a doughnut-shaped figure, where our resource-related and societal latitude are defined within the doughnut's boundaries.

Fair trade designates sustainable trade as a principle in which better rights are guaranteed to producers of agricultural goods and craft products in less developed countries.

Stakeholder analysis designates an analysis of stakeholders - that is to say, anybody who has an interest in a given task or project. For the analysis, there are a number of tools that focus on the management and handling of "stakeholders". LAR can signify Landscape-Based Rainwater Management, as well as Local Drainage of Rainwater, or Local Use of Rainwater. LCA (Life-Cycle Assessment) denotes a life-cycle assessment that can calculate the potential environmental impact of construction. In support, the Danish Transport, Construction and Housing Agency has launched LCAbyg.

LCC (Life-Cycle Costing) is an assessment that has its basis in a total cost principle, where relevant expenditures and income are taken into account. In support of total economic calculations, the Danish Transport, Construction and Housing Agency has developed a calculation tool called LCCbyg.

Life between buildings Jan Gehl's classic book about urban construction remains the best source for gaining an understanding about the use of outdoor space and the life lived in our cities - the most fundamental introduction to the outdoor environments' interaction with social life.

SWOT is an analytical tool that makes it easy to approach issues and problems constructively and to assess a company's strengths and weaknesses in relation to strategic planning.

The Big Why is the headline for communications expert Simon Sinek's management philosophy on how clarifying meaning and value gives rise to inspiration and motivation.

Verdensmål.org is Denmark's official website dealing with how Denmark and the Danes are working with the Global Goals.

The Global Goals Barometer is a tool that can be used to measure the fulfilment of the Global Goals, for use in judging processes in project competitions and when making tenders on architectural services. The barometer has been designed and put into effect by The Danish Association of Architects and The Danish Association of Construction Clients.

Our goals is the title of the Danish indicator project, which is the world's first open Global Goal development project that has the aim of establishing supplementary Danish indicators for the Global Goals.

Supplement to YBL description of services: Sustainability is a beta version concerning services in connection to sustainable building and landscape. It has been designed for the purpose of defining roles and services as well as the division of responsibilities between consultant and building owner.

A HEARTY ROUND OF THANKS FOR CONTRIBUTIONS FROM:

3XN Architects Al Arkitekter & Ingeniører **BBP** Arkitekter C.F. Møller Architects Christensen & Co Arkitekter COBE CUBO Arkitekter **Gehl Architects** Gladsaxe Kommune Juul | Frost Arkitekter KRYDSRUM arkitekter Lendager Group NREP PensionDanmark Pluskontoret Randersarkitekten **RUBOW** arkitekter SLA Landskabsarkitekter TREDJE NATUR Aaen Engineering SWECO Architects AART









THE 17 GLOBAL GOALS – HOW TO GET GOING!

Many architects are not familiar with the United Nation's 17 Sustainable Development Goals. Some choose to discount them while others choose to pick out one, two or three of the Global Goals that jibe well with their key products or deliveries and then go on doing "business as usual".

But there are architects that make use of the Global Goals in order to push their business towards "doing good", exert a positive influence and/or reduce negative impact by employing the Global Goals as strategic and tactical development approaches for their business. And then there are those who go "all in" when it comes to making use of the Global Goals for re-thinking, innovatively – to push their business activity, create opportunities, cultivate new areas of business, and be at the front of the bus while deriving benefits from changes in the market that will delineate the future.

Regardless of what level an architectural firm happens to be on, there is a need for input and inspiration when it comes to administering the Global Goals. For this reason, the Danish Association of Architectural Firms has written this instructive publication, presenting various cases from architectural firms that have been pro-active with the 17 Global Goals, to develop their business as well as their projects.

The intention behind the Global Goals is that everybody should contribute whatever they possibly can and whatever might be relevant at exactly the place they happen to be working. You, as architects, are accordingly welcome to interpret the Global Goals and come up with goals and benchmarks that are relevant to your own firms. With this publication, it is our aim to offer you the inspiration to do just that.

Have a good time!

