annual sustainability report ´20

THE GLOBAL COMPACT
WE SUPPORT

annual sustainability report

´20

GOTTLIEB
PALUDAN
ARCHITECTS

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Snekkersten Waterworks
Photo: Lars Rolfsted Mortensen

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Solrødgård
Photo: Gottlieb Paludan Architects

introduction

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Foot and Cycle Bridge, Odense
Photo: Lars Rolfsted Mortensen

together we create **cohesion**

Great architecture evokes great passion. For us, this is the kind of architecture that contributes to solving the challenges we face today. The kind that creates sustainable development, vibrant and diverse cities, beautiful and future-proof structures as well as inviting urban spaces and landscapes for all to enjoy. An integrated approach and collaboration across professional disciplines form the basis for our contributions to a society that functions today and will function tomorrow.

For us, it is all about creating architecture that connects people and cities – architecture that makes life run smoothly, supplies the necessities for everyday living and inspires positive development. We develop solutions and processes that originate from interdisciplinary collaboration for the common good and with the clear aim of creating greater cohesion. We believe that our communities are stronger and the challenges more manageable when the spaces we share and the connections between them are beautiful and beneficial to us all.

We insist that our projects contribute to the common good. We therefore always employ a fully integrated approach to understand and sensitively develop the sites and structures which are entrusted to us. With both vision and insight, we create simple, timeless and responsible architecture. Collaborating closely with the client, users and professionals of other disciplines, we provide functional, technically sound and aesthetically complete solutions which provide their own contribution – be it small or large – to the world around us.

Working out of offices in Copenhagen, Oslo and Trondheim, we strive to create architecture that understands, connects and enriches the whole world. Together we create cohesion.

At Gottlieb Paludan Architects, we work proactively to integrate the UN's Sustainable Development Goals in all our projects and practice.

comments **from the CEO**

Our world is in a state of climate emergency and the course is imperative for us. The climate crisis poses a threat to the future of our planet and to humanity - and it requires our firm commitment and our immediate action. Buildings are a major contributor to global warming, and, as architects, we can make an impact by changing our practice and aim for carbon neutrality in the built environment.

To this end, Gottlieb Paludan Architects' partners have passed a landmark resolution; our top priority is now to engage in the fight against climate change through carbon reduction in our projects. We have narrowed our focus and, although many of United Nation's 17 Sustainable Development Goals are relevant to our industry, we have decided that a strategy and a plan for reducing the carbon footprint will be required in all our projects. Therefore, we are now concentrating our efforts on goal #13: Climate action. Moreover, we continue to comply with the United Nations Global Compact initiative, which includes principles of human rights, labour rights, environment and anti-corruption.

In order to successfully tackle the climate change within the building industry, measurability is imperative; we need to win over our stakeholders, clients and partners with indisputable data. Therefore, we are in the midst of developing a climate tool – a way to measure, report, and verify greenhouse gas reductions in all our projects. With this tool, we aim to assist and affect our clients in making sustainable decisions and long-lasting solutions.

We look forward to continued collaboration with our clients, partners, shareholders and employees in 2021.

Copenhagen, Decenber 2020

Kristian Hagemann
Chief Executive Officer
Gottlieb Paludan Architects

"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 an open dialogue and work in partnerships to give us good solutions, and they can encourage authorities to make the regulations necessary to move forward.

Mogens Lykketoft in 'An Architecture Guide to the UN 17 Sustainable Development Goals' Volume 2, 2020

Employees: **130 in total**

Hereof Management: **6**

Hereof Team Leaders: **14**

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Infographic
Employees and gender diversity

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Infographic
Change in the number of employees over the past 4 years

the year in numbers

employees from
13 nationalities
working on projects in
Norway, Sweden, UK, Germany, The Netherlands and China.

^
Infographic
GPA: diversity and activities across borders

Financial ratios	2017*	2018*	2019*
Turnover	93,8	100,4	80,9
Pre-tax profit	11,6	**10,5**	**3,9**
Equity	26,0	24,2	19,2
Balance sheet	72,9	71,2	54,9
Equity ratio	35,6%	33,9%	34,9%
All figures are stated in DKK million			

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Infographic
Financial key figures

* Numbers reflect Gottlieb Paludan Architects in DK

Nørreport Station
Photo: Jens Lindhe

the year in numbers

Who we are

Architects	65
Constructing Architects	12
Landscape Architects	10
Engineers	5
Interior Architects	7
Adm, IT and communication	14
Geographers, Sociologists, Philosophers etc.	12
Students and interns	5

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Infographic
Age distribution of employees

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Infographic
Distribution of employees: Copenhagen, Oslo, Trondheim

the year in **brief**

» Gottlieb Paludan Architects' interdisciplinary team of workplace specialists have conducted an employee survey, which provides valuable insight into the effects and experiences of working remotely during the Covid-19 pandemic.

» Read more about the study on page 31.

» We received a Wienerberger Brick Award for Delft City Archive in the category "Working together", along with Dutch associates Office Winhov. The Wienerberger is an internationally acclaimed architecture prize, which is awarded every two years for innovative brick architecture.

» We have been selected to design a new ferry terminal in Gamla Stan, Stockholm's historic centre, that will serve as a hub for the city's large ferry network, create more urban life on the quay and strengthen the area's connection with Gamla Stan's characteristic historical architecture. Read more on page 43.

» Our experienced waterworks-architects conquered a new challenge: A vertical waterworks building in the middle of the Danish capital. Four stories high, flexible and adaptable to future needs. Read more about this project on page 51.

» We have designed a new footbridge for the Technical University of Denmark (DTU), providing a safe and spectacular passage for employees and students over the coming light rail line that will run through the campus. Our design supports DTU's overall vision for a sustainable campus, promoting mobility and accessibility for pedestrians and cyclists.

» Our project Holmestrand Station in Norway is shortlisted for the Nordic Lighting Design Awards 2020.

» Gottlieb Paludan Architects is collaborating with ph.d. student Marcus Tang Merit and KADK on a three 3-year industrial PhD research project, with support from Bevica Fonden. The project will employ a sociological study of our work practices in order to heighten the expertise and methodology for planning and developing inclusive public spaces. Read more on page 37.

» Gottlieb Paludan Architects has made the climate crisis its top priority and is currently developing a CO2-monitoring tool, based on our own project benchmarks, to measure and minimize the carbon emission of our projects. When fully developed, the tool will be an integrated part of our daily practice. Read more on page 21.

» Amager Power Plant received a five-star review in a major Danish newspaper, which believes that the walk through our 'forest' of suspended tree trunks will become a new Copenhagen attraction. Read more about this project on page 53.

» We have won the open planning design competition for a new fire station in Oslo city center. Wood is an important material in the fire station, both for its architectural expression and for its sustainability. In the construction, wood is used wherever it can replace concrete. This significantly reduces the building's CO2 footprint and increases the use of short-travelled materials. The chosen materials also contribute positively to the health of the employees, the environment and the local surroundings.

our workplace
- knowledge is key

We combine our professional expertise with a keen eye for society's challenges, user needs and client wishes whether we are working on new builds or renovations. As architects, we have a passion for our profession and for working closely with both clients and colleagues. This is what powers our teams, and we expect a similar attitude and commitment from those wanting to come aboard with us.

There is a great atmosphere in our offices; we are friendly, open and respectful of each other. We are good at sharing our knowledge and experience among ourselves, and nobody would hesitate to ask for help or advice. We are busy, but we make space for inspiration and reflection and always take the time to celebrate our successes.

Project management: Every project manager who is the lead professional on a specific assignment is a member of the GPA Project Manager Forum. The members come together to participate in structured programmes on the responsibilities, duties and tools of project managers. The programmes are concise and carefully managed; both internal and external speakers contribute and members share their knowledge and experience, ensuring that the company's knowledge is updated and employees apply uniform methods wherever relevant.

Digital development: Gottlieb Paludan Architects uses BIM, VR and other digital tools on many levels. Employees are invited to participate in ad hoc, internal training courses, adapted to specific projects or current challenges, and in external programmes, such as ICT management courses.

Skills networks: Employees at Gottlieb Paludan Architects develop their skills and professional networks via a formalized internal networking programme which supports the company's strategic tools and business areas. The internal networks have set coordinators who organize about four annual meetings which revolve around internal or external presentations.

Currently, Gottlieb Paludan Architects has the following networks: Mobility & Urban Development, Materials, Theory and Practice, Behavioural Design, Sustainability, Design Planning & Technology and Landscape.

Professional events: "Friday Briefing" is a set weekly presentation on current projects or themes. Venues are organized together with internal and external speakers, internal workshops and study tours.

GPA Practice: Every six months, Gottlieb Paludan Architects runs GPA Practice which is the company's modular induction course for new employees and interns. The seven modules provide the participants with insight into the company's general expertise and specialisms, phased services, contractual basis and business understanding.

GPA interns: Gottlieb Paludan Architects regards interns as valuable and significant members of the organization. GPA internships provide students with the opportunity to develop their skills and professionalism while they are still at university. All interns are asked to attend the modular induction course GPA Practice, and they are allocated individual mentors who function as their supervisors throughout their internships.

The mentors ensure that the individual interns are academically challenged during their internships and that they are appropriately equipped to embark on their professional careers in the construction industry.

We combine our professional expertise with a keen eye for society's challenges, user needs and client wishes whether we are working on new builds or renovations. As architects, we have a passion for our profession and for working closely with both clients and colleagues. This is what powers our teams, and we expect a similar attitude and commitment from those wanting to come aboard with us.

There is a pleasant atmosphere in our office; we are friendly, open and respectful of each other. We are good at sharing our knowledge and experience among ourselves, and nobody would hesitate to ask for help or advice. We are busy, but we make space for inspiration and reflection and always take the time to celebrate our successes.

Solrødgård
Photo: Gottlieb Paludan Architects

how we **take responsibility**

13 CLIMATE ACTION

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UN's Sustainable Development Goal number 13

measuring and reducing **our carbon footprint**

As one of the large architectural companies in Scandinavia, Gottlieb Paludan Architects has a significant responsibility for sustainable global development. We have many years of experience within our primary business areas: Energy & Utilities and Mobility & Transport. They represent basic functions in society and require technically and artistically ambitious architectural treatment. Good infrastructure is an obvious prerequisite for prosperity and sustainable development, whatever the scale.

Through our work with clients and partners, we always seek to find solutions that are environmentally, economically, and socially sustainable. The 17 Sustainable Development Goals represent the ambition of world leaders and the United Nations to achieve a more inclusive, sustainable and resilient future for people and planet. The Goals outline the global challenges we face together and the problems that are necessary to address, including those related to environmental degradation, climate, poverty and inequality.

When it comes to climate change, the built environment is a major culprit. According to the 2019 Global Status Report for Buildings and Construction coordinated by the United Nations Environment Programme, the building and construction sector accounted for 36 percent of final energy use and 39 percent of energy and process-related CO2 emissions in 2018. The architectural community is deeply entwined with the flows of materials, energy, and ideas that relate to climate change, both causes and solutions.

Meeting the needs of our society without breaching the earth's ecological boundaries will demand a drastic shift in our practice and behaviour. Therefore, Gottlieb Paludan Architects has devoted its focus to Sustainable Development Goal #13. While many of UN's 17 Sustainable development goals are relevant to our organisation and relate to the built environment, we have concluded that the imminent crisis requires firm commitment and immediate action. This has become our top priority and we are committed to reducing the carbon footprint of our solutions.

We are in the midst of developing a so called climate tool – a way to measure, report, and verify reductions in all our projects. With this tool, we plan to generate indisputable data that

can be the driving force behind responsible and sustainable decisions for our clients, stakeholders and partners.

The tool will be applicable for all aspects of our design solutions, as they all offer different possibilities of carbon reduction; from buildings and urban spaces to the surrounding landscapes. When finalized, it will be integrated into our daily practice as a mandatory step in every project. The tool will follow the individual project from the design phase and through to its construction and will provide valuable data and knowledge on sustainable options related to each specific project.

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Foot and Cycle Bridge, Odense
Photo: Ole Malling

Peak-Load Plant KLC2, Copenhagen Airport
Photo: Gottlieb Paludan Architects

the Global Compact Core Values

It is emphasised with the 17th goal that concerted and collective efforts across all levels of society are necessary, in order to achieve each Goal by the year 2030. However, the UN has estimated that the active participation of companies is crucial, in order to achieve as much as one-third of these Goals.

Global Compact is a corporate sustainability initiative which urges companies to align strategies and operations with universal principles on human rights, labour, environment and anti-corruption, and take actions that advance societal goals.

We fully support this initiative and the following will describe how we deliver on UN Global Compact's principles for human rights, labour conditions, the environment and anti-corruption.

Human Rights

Gottlieb Paludan Architects conducts its business in accordance with Danish law, including the Danish Salaried Employees Act (Danish: Funktionærloven) which secures human rights and employment rights. We take care to uphold the general principles of basic human rights for everybody through all our work.

We contribute to increasing liveability through the improvement of connectivity and public spaces in towns and cities.

We contribute to improving living conditions in peripheral regions through the development of provincial towns.

Labour

Gottlieb Paludan Architects conducts its business in accordance with Danish law, including the Danish Salaried Employees Act (Danish: Funktionærloven) which secures human rights and employment rights, including the prevention of child labour, forced labour and employment discrimination. All employees have the freedom of association and collective bargaining.

Our Employee Handbook secures our employees' rights and thereby expresses our responsibility within this area.

We contribute to creating social cohesion through infrastructure projects which link city and countryside, suburb and town centre, giving more people the opportunity to be employed, get an education and participate in society.

Anti-corruption

Gottlieb Paludan Architects' main activities are concentrated in Denmark and Scandinavia, which traditionally top Transparency International's list of least corrupt countries. We never encounter corruption in our daily work and will continue to oppose any signs of it.

Environment

As an architectural company, environmental sustainability is the area of responsibility in which we can create the most value.

We contribute to promoting and strengthening public transport, cycling solutions and bicycle culture, thereby reducing transport-related CO_2 emissions.

We contribute to lowering the environmental impact of construction work by proposing building materials that require fewer resources in production, recycling and disposal, and which last longer. In this way, every individual construction leaves a smaller carbon footprint throughout its service life.

The least harmful construction is often the recycled construction, and we specialize in renovation, transformation and refurbishment. With a combination of architectural design, understanding of materials and respect for the construction and its history, we raise renovation and adaptive reuse to a level where it can easily compete with new construction. The focus is not only on improving energy performance but also on rethinking the purpose of the construction to suit current and future use.

We integrate climate adaptation measures and rainwater management in all relevant projects.

Moreover, Gottlieb Paludan Architects commits itself to spread environmental sustainability by educating the public about resources cycles through visitor and education facilities in connection with green energy facilities, power plants and waterworks.

Solrødgård
Photo: Gottlieb Paludan Architects

Gottlieb Paludan Architects, Cph office
Photo: Jens Lindhe

professional and organisational development

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Working from home: 'Heimekontor'
Photo: Alexander Millan Eide

developing the work life **of the future**

....requires balanced, interdisciplinary knowledge.

Towards this end, Gottlieb Paludan Architects in Denmark and Norway have conducted employee surveys among their own staff and at the parent company AFRY. The survey asked roughly 1,200 employees to evaluate their personal experiences of working from home during the spring's COVID-19 lockdown.

The analysis of the survey's 647 responses revealed a number of nuances in employees' experiences depending on seniority, current life situation, etc. The results will now be included in the development of new advisory services and the planning of the company's own future modes of operation.

Gottlieb Paludan Architects' workplace experts join forces on an interdisciplinary team of architects and social scientists specialized in fields such as organizational development, change management and interior design. Our advice is always based on modern research, and the lockdown period's working from home was an ideal opportunity to deepen our knowledge of workplace trends and modern working life – and contribute balanced, interdisciplinary knowledge to ongoing research.

The employee survey was worked out by taking a qualitative approach and asking open-ended questions to encourage respondents to describe the work-from-home experience in their own words.

Kris Ervik, Senior Consultant, Gottlieb Paludan Architects Norway (and an anthropologist with a PhD in change management) was in charge of working out the details of and analysing the employee survey. According to Ervik, a qualitative analysis is beneficial because the responses give a detailed, in-depth appreciation of the respondents' personal experiences: "Asking such open-ended questions enables respondents to respond by telling about what's most important to them, which we can see when they share the joys and challenges of working from home in this unusual period. Analysing the responses was rewarding because of the situational snapshot view it provides," Ervik says.

Even if there were minor differences in the responses, it was still possible to single out overall tendencies. Employees have generally experienced that working from home functioned relatively well, but the survey also indicated a few unexpected fine points in how employees experienced the unusual working situation.

One size does NOT fit all.

This is exemplified by the significance of seniority. Employees with many years of experience accounted that working from home meant fewer interruptions, which made them feel more productive, whereas young and newly hired employees missed receiving guidance and professional feedback. These insights indicate the necessity of developing balanced ways of working to provide satisfying working situations to experienced and young employees alike

"...It took me a little by surprise that those most affected by the problem were young team members: the absence of peer mentoring is far more important than technology."

According to Ervik, the analysis of the employee survey drew attention to three general points:

Management: the supervisor's role is changed

It will be necessary to depart from traditional 'management by walking around', as the physical workplace no longer functions as a unifying element for the organization. Accordingly, supervisors need to be able to let go of their employees and strike a proper balance between control, trust and closeness. This requires a more personal approach to management at the same time, because the supervisor has to be more aware of each individual employee's various skill-sets, seniority and current life situation.

Wishes for a more flexible use of the home office

58%

Management plays a crucial role in whether employees experience working from home as positive in terms of coordination and skill-sets. At the same time, employees' self-management and joint-leadership skills can relieve pressure on the supervisor.

"... Well-being and atmosphere are important management elements, because an extra effort is needed to maintain good relations with all employees working from home."

Self-management: working from home is a personal skill

Like the conclusions drawn by other surveys, many found it challenging to structure their daily work and strike the right work–life balance. Whereas it was hard for some to get a good sense of work flow, others felt it was hard to take breaks and stop working at the end of the work day. These skills become increasingly valuable as new working solutions are developed.

"...The day becomes blurred and gets longer without me even noticing it."

Joint leadership: remote work is a collective skill

Cooperation is a social skill that develops naturally in an office community, and lots of research has shown how cooperation can actually be promoted by specific office-based layout solutions. But how do you take steps to maintain the same sense of community in completely different circumstances where employees are separated, while some periodically work from home and others are at the office?

"...The number of Skype meetings has risen sharply, with less time for actual production."

Together we create cohesion

Generally speaking, the employee survey seems to indicate that if employees know what they have to do, they are just as or even more efficient than working at the office in person, whereas collaboration and development tasks are more difficult.

This necessitates the development of new modes of working that can accommodate different needs and levels. Each individual needs to develop skills in how to structure the working at home process, whereas managerial staff need to take a fresh approach to management which is capable of defining the framework and making sure that cooperation functions and occurs. The wish for greater flexibility has to be supported by dynamic facilitation of both the configuration and organization of future work solutions. Cohesive energy is the basis of success.

Misses the social interaction with colleagues

72%

The results of Gottlieb Paludan Architects' employee survey are part of developing the company's own tools and advisory services that are also developed in cooperation with the parent company AFRY. For example, we are creating a learning network for developing the workplace of the future in which we offer property administrators, administrative and HR managers at major Norwegian companies a unique opportunity to take part in a closed professional network focused on learning and experience sharing.

Misses professional sparring with colleagues

47%

Gottlieb Paludan Architects, Cph office
Photo: Jens Lindhe

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Foot and Cycle Bridge, Odense
Photo: Lars Rolfsted Mortensen

universal design: **leave no one behind**

Leave no one behind is the central, transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). It represents the unequivocal commitment to end discrimination and exclusion, and reduce inequalities.

Universal design is concerned with creating inclusive architecture, where everyone, regardless of abilities, gender, religion, age, etc., can be involved in the workplace, the educational institution, the urban space, etc.

In our efforts to innovate and expand our expertise within coordinating inclusive public spaces, Gottlieb Paludan Architects is collaborating with ph.d. student Marcus Tang Merit and KADK - The Royal Danish Academy of Fine Arts, Schools of Architecture, Design and Conservation on a three 3-year industrial PhD research project, with support from Bevica Fonden. The project "Coordinating Inclusive Future Public Spaces in Architecture" investigates how physically disabled users' experiences of space are mediated and operationalized in the architectural design process, when designing inclusive public spaces in multi-stakeholder collaborations.

Through selected longitudinal cases at Gottlieb Paludan Architects and in-depth qualitative interviews of architects, officials, and group representatives of physically disabled users, architectural and sociological knowledge will be combined and operationalized in new work methods for designing inclusive public spaces.

The chosen methodology is paired with a theoretical and analytical emphasis on how futures, imagined, projected, designed, communicated, and otherwise present within architectural work, impact on successfully coordinating the construction of public spaces. The goal is thus to provide new architectural tools for designing and planning inclusive public spaces, and to expand the sociological knowledge on this topic.

The following is an article by Marcus Tang Merit on the topic of universal design and the ambitions behind his industrial Ph.D.

Universal design and the future coordination of architects

By Marcus Tang Merit
Industrial PhD at Gottlieb Paludan Architects

Design is a notoriously contested field, even before one attempts to attach the somewhat grandiose 'universal' prefix to it. For newcomers, who have not previously dealt professionally or academically with urban public spaces, this might be seen as a weakness, perhaps even an immaturity, of the concept of universal design.

However, the city and its shared spaces have always been highly contested for better or worse acting as a mirror of the power structures and social struggles of society at large. Therefore, it should come as no great surprise that universal design has been as contested as the spaces it attempts to address.

My PhD is by no means a deep dive into the discussions and relations of universal design, or for that matter, its practical applications. Instead I apply universal design as an ethical torch whose light I can attempt to follow and spread further, as I study the role of inclusivity in the everyday design processes of architects, and their multitude of external collaborators. In this context, in which a multitude of often conflicting spatial requirements must be coordinated, a guiding principle is necessary if architects are to deliver anything resembling a coherent product. As it stands, such principles are to a large extent defined by the wishes of clients and the architectural vision and professional values of the architect in question.

To be successful in creating accessibility, inclusivity, universal design, or whatever adjective one wishes to apply, this element needs to be introduced as a core element in the design principles of architects. Universal design needs to introduced as the platform from which decisions are made, not as a decision of where to place the platform.

As such I attempt to research how architects coordinate between future scenarios internally and externally, and how they communicate these varying futures through the use of devices. Here I understand devices as the models, drawings, sketches, presentations, renderings, and other visual objects discussed internally as part of the design process, and disseminated externally to collaborators and clients.

This analytical focus is based on the hypothesis that if inclusivity is not an inherent element in the future visions circulating around as spaces are designed, it will at best become an afterthought ones spaces are actually build. With such 'shit we need a ramp'-moment occurring late in design processes, rather than in the earliest ideation phases, it is almost assured that the urban space in question will never become fully inclusive for people with physical disabilities.
It is not that architects are unaware or opposed to this. At least not the ones I have encountered. They do however need the tools to introduce universal design as the foundation upon which spaces are sketched, and just as importantly, the arguments to convince clients why universal design is important and can improve the spatial experiences of all (dis)abled users. Working towards creating such tools, and formulating such arguments, is what I am attempting with my PhD.

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Nørreport Station
Photo: Jens Lindhe

green **mobility**

Bridges
We design bridges for soft and motorized traffic

Bicycle parking
We plan, develop and design bicycle parking and innovative parking racks

Urban infrastructure
We advise cities and municipalities on the development of urban life through improved connectivity

Light rail
We manage and execute large design tasks for comprehensive transport systems

Cycle lanes
We plan and design safe and attractive bicycle lanes

Traffic hubs
We create intermodal traffic hubs that support the efficient interchange between different modes of transport

Train stations
We design, renovate and transform stations for local, regional and international train traffic

Station forecourts
We shape attractive and flow-efficient public space in connection with stations and traffic hubs

BRT systems
We plan and design for the integration of Bus Rapid Transit systems into existing urban contexts

Metro lines
We contribute to feasibility studies and design stations for metro lines

Railway lines
We contribute to feasibility studies, environmental impact assesments and design tasks for new railway lines

Industrial design
We design all the fittings, fixtures, equipment and furniture needed for urban space, station forecourts and platforms

Ny Ellebjerg Station

In the future, Ny Ellebjerg Station will become the next big transport hub in Copenhagen, Denmark. Gottlieb Paludan Architects and Rambøll have won the task of establishing connections between the existing and future train and metro lines and creating a well-functioning central hub.

Today, many different means of transport cross their tracks at Ny Ellebjerg Station and in the future, many more will be added. Ny Ellebjerg will be the terminus station for the Sydhavnsmetro in 2024 and, in addition, there will be transfer options for S-trains, Regional trains, long-distance trains, Øresund trains, buses and perhaps even a future light rail.

Gottlieb Paludan Architects and Rambøll will be responsible for establishing a center at Ny Ellebjerg Station in the form of a joint underground concourse hall that connects the individual lines and provides safe and fast travel options. The project will help to create an even stronger public transport network that will reduce congestion and increase mobility in Copenhagen.

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Ny Ellebjerg Station

Visualization: Gottlieb Paludan Architects

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Stockholm, Skeppsbron

After the transformation, it is expected that Ny Ellebjerg will be used by approx. 60,000 passengers every day and will thus ease traffic at Copenhagen Central Station.

In step with the transformation to a traffic hub, the area around Ny Ellebjerg is undergoing hefty urban development. Gottlieb Paludan Architects has previously developed a master plan for the future urban development around the station, where passenger and traffic flows are integrated into an ambitious plan for good and safe access to, from and between the districts in the area near the station.

Gottlieb Paludan Architects has also contributed with studies in connection with the urban integration of the new Sydhavnsmetro and has designed the five upcoming metro stations.

Ferry terminal in Stockholm's Gamla Stan

Stockholm city consists of several islands, islets and skerries and, therefore, ferriesmake up a big part of the city's public transport system. Gottlieb Paludan Architects and AFRY have been selected to design a new terminal which will serve as a hub for the ferry traffic as well as a meeting place, in Stockholm's historical district.

The client is the Public transport administration of Stockholm and the ambition of the project is to create more urban life on the quay and strengthen the area's connection with the water and Gamla Stan's characteristic historical architecture.

Gottlieb Paludan Architects and AFRY will be responsible for project management and design in the early stages. A prevailing theme is combining design and technical function and the ambition is to create an area which will function both as a hub for public transport and as a meeting point in the city, which allows locals and tourists to reside by the water.

The area around Skeppsbron and the new ferry terminal constitute a complex part of the quay area in the historical district. The area is undergoing major changes in connection with the current redevelopment of the traffic junction Slussen and the new ferry terminal will be part of the general enhancement of the area. The new ferry terminal will be completed in 2023.

Haga Station and urban space

Gothenburg municipality, Parks and nature administration and Västtrafik, Västfastigheter, The Swedish transport administration and architects Sweden

Gothenburg Municipality laid out a competition programme with great emphasis on the interplay with the Haga district's cultural-historical environment. The project will contribute to transforming an area dominated by traffic to an attractive, accessible and safe place to meet, creating a sense of calm and coherence in an area characterised by many different modes of transport.
The urban space at Haga Station is dominated by Kungsparken, a park which is also involved and activated as part of the winning project. Generally, the project has an ambition of giving centre stage to the urban space while the station buildings are constructed as subdued, functional pavilions in the green urban space

The Haga district's special historical nature and the future flows of people have guided the competition proposal. The proposal has an ambition that all new additions must build on an in-depth understanding of the character of the location and contribute positively to the park and the urban space.

Haga is among the oldest neighbourhoods in Gothenburg and Haga Station will increase access to important local areas, while creating a new hub for public transportation in a valuable, popular and culturally sensitive environment.

Haga Station and urban space
Visualization: Gottlieb Paludan Architects

green **energy**

Industrial facilities
We specialize in the development and design of efficient, sustainable and architecturally distinct industrial facilities.

Recreational storm water solutions
We offer experienced specialists in recreational rainwater management and integrated solutions for complex climate challenges.

Cooling plants
We helped design the very first sustainable cooling plants in Denmark and we continue to assist in this sector

Control facilities
We have delivered numerous control room facilities securing optimal work environments and the highest level of operational safety.

Heat and power plants
Having realized a very large number of projects, we have gained outstanding competencies within the planning and design of sustainable power plants.

Water works
We have contributed to developing Denmark's clean and efficient groundwater extraction system by designing state-of-the-art waterworks

Switch stations
We design new switch stations as well as extensions of older facilities – large and small alike

Data centres
We have managed the planning and design of some of Denmark's largest data centres

Energy from Waste facilities
We design some of the largest EfW facilities in the world

Waste water treatment plants
We have a lot of experience with water treatment plants and their integration into often scenic and protected surroundings

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Pumpestation kalvebod brygge
Visualization: Gottlieb Paludan Architects

Pumpestation Kalvebod Brygge

Gottlieb Paludan Architects are the architects behind a new pumping station at Kalvebod Brygge in Copenhagen, aimed to safeguard the capital city against the increasing volumes of storm water of the future. The project was carried out for HOFOR in close collaboration with NIRAS' consulting engineers.

The City of Copenhagen and Frederiksberg Municipality have prepared a cloudburst plan as part of the City of Copenhagen's overarching climate adaptation plan. Storm water from cloudbursts will be channelled from Frederiksberg and the Vesterbro district to Copenhagen Harbour by gravity via an underground cloudburst tunnel to a pumping station at Kalvebod Brygge. The pumping station's six powerful electric pumps will lift the massive volumes of storm water roughly 12 metres up from the tunnel, before discharging it into the harbour basin.

Gottlieb Paludan Architects designed the above-ground pumping station structures, comprising the biggest visible component of the new cloudburst tunnel. Above ground, the pumping station is made up of two circular structures mirroring their subjacent counterparts, and the adaptation of the underground pumps required close, constructive collaboration with NIRAS. The two circular structures appear distinctly separate but intermesh into a single unified building.

At Kalvebod Brygge, the circular shape and low height of the pumping station stands out from the surrounding office and hotel buildings. The pumping station will have a brickwork facade, however, similar to several surrounding buildings, and special recessed brickwork will give the facades a profusion of details for a diminished visual effect. The building will occupy a section of the harbour promenade, which will therefore be enlarged to include terracing that will provide new publicly accessible seaside areas.

Window sections facing the harbour promenade will make it possible for passers-by to look into the pumping station, visually communicating the station's functions and technology.
It is anticipated that the pumping station will be needed roughly once every five years during particularly heavy cloudbursts. In these instances, the pumping station will prevent flooding in Copenhagen that would otherwise cause widespread damage.

The underground boring of the cloudburst tunnel is expected to begin in May 2021 and be completed in 2022, after which the pumping station will be built.

Snekkersten Waterworks

Since early spring of 2020, the new waterworks in Snekkersten has supplied local residents and businesses with clean drinking water. The facility is the latest in a series of new waterworks designed by Gottlieb Paludan Architects – all with new, modern technologies, and all focusing on managing our water resources and communicating about the circulation of water.

The new waterworks replaces the old 1969 facility, introducing new technologies such as seven-chamber bottom aeration for stripping methane, double filtration, 2*1250 m3 detached, inspectable clean-water stainless steel tanks as well as bactericidal UV treatment to counter contamination.

Overlooking Snekkersten and the waters of Øresund, the waterworks is integrated on high ground that slopes down towards Øresund, taking advantage of the terrain to incorporate the big clean-water tanks so that they appear smaller. This also enables the facility to utilize the natural elevation differences to conduct water through the various processes.The waterworks is 1,700 m2, organized into a technical wing and a visitors' and staff wing. The processing plant is symmetrically constructed and placed in a cubic building with rust-red Corten steel façades that rise above the low concrete wing.

Snekkersten Waterworks is intended to have a communicative role in Elsinore Municipality, and we have consequently constructed learning hotspots at several points in the architecture that invite the public to get a closer look at the water processing steps, both inside and outside the facility. A large glazed section will be constructed facing the Øresund strait and providing a view of the tanks inside, while water pumps along the façade and visible downpipes also contribute to the tale of water.

New Snekkersten Waterworks is being designed by Gottlieb Paludan Architects, with the project realized as a turnkey contract in collaboration with Krüger A/S, CC Brun A/S and ISC Ingeniører A/S.

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Snekkersten Waterworks
Photo: Kim Dahl / Effectphoto
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Frederiksberg Waterworks
Photo: Gottlieb Paludan Architects

Frederiksberg Waierworks

A new waterworks with a softener plant will supply the city of Frederiksberg with drinking water with an environmentally and economically sustainable method and will secure the city's future water supply. Gottlieb Paludan Architects provides architectural expertise on the project.

The waterworks will treat water from Frederiksberg Forsyning's own drills as well as purchased water from HOFOR, in order to ensure a sufficient volume of water up to 785,000 liters per hour. The water is purified, filtered and softened separately before it is mixed in the waterworks' distribution reservoirs and disinfected before it is distributed to consumers.

With the softener plant, the new waterworks will lower the water's hardness from 22-30 dh to approx. 10 dh which will reduce limescale in water pipes and installations throughout the city. This will, in turn, lead to reduced energy consumption and thus a lower CO2 footprint. The waterworks thus make a positive contribution to four of the UN's 17 Sustainable Development Goals; "Clean Water and Sanitation", "Affordable and Clean Energy", "Sustainable Cities and Communities" and "Climate Action".

The waterworks will be based on modern, high-quality technical solutions and will provide Frederiksberg with homogeneous, soft water from 2022.

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The Amager Power Plant, Block 4
Photos: Sarah Plauborg, Lars Rolfsted Mortensen

The Amager Power Plant, Block 4

On 26 August 2020, Copenhagen's new power plant at Amagerværket, block 4, was inaugurated, marking a significant day for the City of Copenhagen's vision of becoming the world's first CO2-neutral capital in 2025. The power plant is now up and running and supplies the capital area with district heating from sustainable biomass.

At the inauguration ceremony, Lord Mayor of Copenhagen, Frank Jensen, highlighted Gottlieb Paludan Architects and the power plant's architectural design, which reinforces the new block 4 as a landmark for sustainable heat production and a future excursion destination for Copenhageners and tourists.

The new plant is enclosed by a deep façade of suspended tree trunks, tangibly illustrating the vision promoted by Greater Copenhagen Utility (HOFOR) and Copenhagen Local Authority for green energy through powerful architecture which tangibly depicts the changeover from fossil fuels to renewable energy.

BIO4 integrates seamlessly with the existing technical installations, while infusing the peninsula with new architectural expression. Though prioritizing security and safety, the design invites visitors to move through the forest of tree trunks via a spectacular staircase, from which the sustainable energy production within is visible. The stairs lead to a platform on the roof, affording a magnificent view of the capital.

In 2021 a light installation, which we have designed in collaboration with the British lighting designers from Speirs + Major, will move calmly across the façade and clarify the structure and depth of the stems at night. The purpose of the illumination of the facade is to avoid the very large plant becoming a large black globe in the cityscape at night, but instead can give a beautiful and stylish experience back to the city.

our focus in **2021**

During the coming year, we will focus on the following ambitions:

- We will finalize and implement our climate tool measurement tool as part of our daily practice.
- We will continue our focus on constantly improving our work environment in 2021.
- We will work intensively to retain our position as Scandinavia's preferred infrastructure architect.
- We will engage with our customers to promote recycling and to increase the use of local and sustainable materials.
- We will actively pursue assignments and research projects with a sustainable profile.
- We will continue to encourage and invest in our employees' further education, arming them with the newest knowledge within the field of sustainable solutions, in order to enhance the sustainability of our practice.

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The Arena Quarter

Photo: Gottlieb Paludan Architects

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