

GLOBAL COMPACT COP 2019

COMMUNICATION ON PROGRESS



PLH ARKITEKTER A/S
VERMUNDSGADE 38K
2100 KØBENHAVN Ø
WWW.PLH.DK

CONTINUED SUPPORT FOR THE UN GLOBAL COMPACT

PLH Arkitekter A/S is a multi-disciplinary architectural practice focused on stimulating an interactive and productive working environment for our talented and creative people: architects, interior designers and industrial designers, together with specialists within construction, process planning, analyses, sustainability and communication.

PLH works with a broad spectrum of commissions from architecture, urban planning and workplace design to client advisory. The company is often involved in complex, large-scale multi-disciplinary projects that evolve over long time frames and are often associated with a high degree of confidentiality and proper due process. Regardless of the project type, PLH's commitment to responsible business practices and highest standards of professional integrity is at the foundation of all interactions with clients, collaborators and fellow colleagues.

PLH's business ethics and code of conduct is grounded in 40 years of professional industry experience and the commitment of the leadership team to follow responsible business practices in an ever changing global marketplace. Since 2009, PLH has been a member of the UN Global Compact initiative as part of maintaining and developing our social and environmental responsibility.

PLH embraces, supports and enacts, within its sphere of influence, the Global Compact set of core values in the areas of human rights, labour standards, the environment, and anti-corruption. PLH wishes to continue our participation in the Global Compact and we seek to support the principles as an integral part of our day-to-day operation and organizational culture, and where possible, align leadership strategies to the ten principles. The principles covering the environment are a focus area for PLH where we can have a measurable, positive impact.

Søren Mølbak, Director, Architect MAA

July 2019

Søren Mølbak



THE 10 PRINCIPLES



Human Rights

- Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2 make sure that they are not complicit in human rights abuses.

Labour

- Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4 the elimination of all forms of forced and compulsory labour;
- Principle 5 the effective abolition of child labour; and
- Principle 6 the elimination of discrimination in respect of employment and occupation.

Environment

- Principle 7 Businesses should support a precautionary approach to environmental challenges;
- Principle 8 undertake initiatives to promote greater environmental responsibility; and
- Principle 9 encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

- Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.

BUSINESS INTEGRITY AND RESPONSIBILITY

Member of DANSKE ARK

PLH is a member of the Danish Association of Architectural Firms (DANSKE ARK), and our operational procedures are based on Danish Legislation and DANSKE ARK'S instructions, guidelines and contractual standards, aimed at strengthening the quality level and professionalism of practicing architectural firms, and covering:

- Level of professional liability insurance and standard contracting agreements - General Conditions for Consultancy and Assistance 1989 (ABR 18).
- Collective bargaining process whereby DANSKE ARK negotiates the general agreements on pay and working conditions etc. of the technical staff in the employment of the member firms.
- Fees and standards for architectural work with individual clients, private client organizations and public authorities.

DANSKE ARK also participates in negotiations with public authorities on tax aspects, prices and profit legislation, regulations on competitive tendering, liability and insurance matters as well as building assignment procedures, quality assurance and other terms relating to the professional activities of the member firms.

PLH is obliged to respect the basic conventions based on national and international legislation on human rights, the Danish Consolidation Act no. 68, of January 2005, and our membership of the Danish Association of Architectural Firms.

Leadership Responsibility

The PLH leadership team members are individually and collectively responsible for ensuring the firm's adherence to responsible business practices and our Code of Ethics.

To that end, the following nominated partners, directors and professional staff have been assigned specific areas of responsibility:

UN Global Compact

Paulette Christophersen - Partner and Anders V. Sonnichsen - Sustainability Manager

Financial Reporting

Svenn Gunborg Olsen - Chief Financial Officer supported by BDO consulting auditors

Legal Accountability and Risk Management

Søren Mølbak - Partner and Director supported by Mazanti-Andersen Korsø Jensen AdvokatPartnerskab

Quality Assurance

Søren Mølbak - Partner and Director

Digital Knowledge Management

Claus Johannessen - Senior Architect, Mathew Brown - Constructing architect, Niels Peter Rosendal - Constructing architect, Oskars Lapsa - Constructing architect

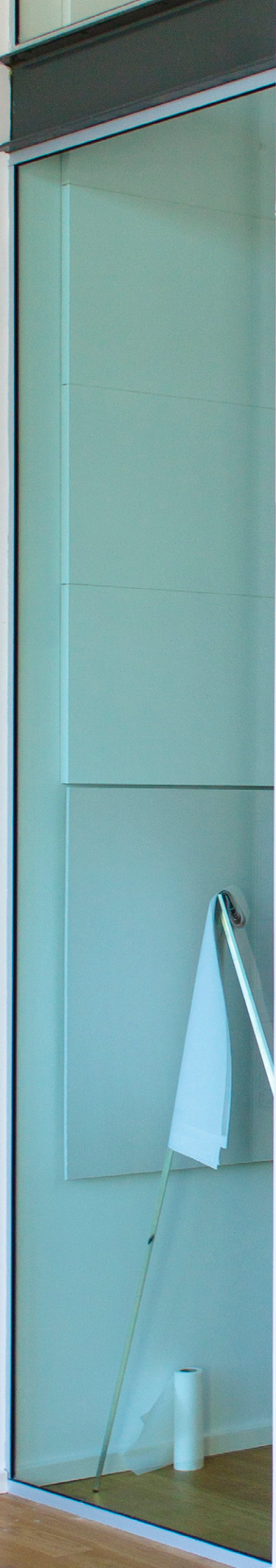
Sustainability - PLH Green Team

Søren Mølbak - Partner and Director
Paulette Christophersen - Partner, Steen Enrico Andersen - Partner and Anders V. Sonnichsen - Sustainability Manager

Staff Representatives

Mark Hamann Hansen - Constructing architect
MAK and Peter Rebild - Architect
Occupational Health & Safety Supervisor Karin Tranberg Schjerbeck - Architect

"Our business responsibility is based on high standards of Danish legislation and our active engagement in associations, committees, conferences and press debates"



we design for people

WORK ENVIRONMENT, POLICY AND SOCIAL ACTION

PLH has a clear and balanced gender policy where some of our key values are to embrace diversity of competencies, experiences and viewpoints and to support a humanistic and collegial work style in order to add real value to our business.

Actions

We recruit solely on proven competencies and experiences, not sex, nationality, religion nor age. Staff members are selected for project teams on the basis of relevant qualifications and experience corresponding with the project demands and our overall strategies and goals for meeting the clients' needs.

Stress Prevention

In order to promote well-being at work, PLH has in recent years focussed on

prevention of stress. Several of our employees have undergone specialised training through the Psychiatry Fund to be able to advise and guide colleagues on issues of stress. The PLH leadership, together with the stress counsellors have prepared an anti-stress policy guideline that covers both preventative actions (behaviours and organisation of work), detection of early warning signs and management of stress affected staff. Any stress affected employees will be offered psychological consultation as needed.

Employee Involvement

PLH follows the Danish Working Environment Act and an integrated part of working at PLH is, involvement and day-to-day dialogue between the leadership team members and the employees. To make sure employees thrive and develop their skills and

competences, every employee has a formalized confidential meeting with the relevant member of the leadership team once a year. The purpose is to give the employees an opportunity to address issues related to their work situation - to express their professional wishes and dreams - and to align the wishes of the employee with the overall direction of the company.

Attractive Workplace

PLH is recognized as a stable and attractive workplace, with many employees being a part of the practice for 10-25 years.

According to our latest annual Work Assessment carried out in 2019, our staff is very satisfied with the working environment, also in relation to the split of sex, nationality and age. We foster an open and inclusive culture where racism or bullying is not tolerated.



"We believe that responsible design and architecture is based on understanding people's activity and culture"

WORK ENVIRONMENT, POLICY AND SOCIAL ACTION

Number of employees at PLH split on sex and age. PLH is a team of 89 employees in June 2019



age 20 to 30 years: 17 pers.



age 31 to 40 years: 30 pers.



age 41 to 50 years: 19 pers.



age 51 to 60 years: 15 pers.



age 61 to +70 years: 8 pers.

Continued Focus on the Working Environment

Our procedures have proven effective and PLH wishes to continue to invest in the working environment in order to remain an attractive, healthy and productive office - retaining and attracting the best. The priority of a responsible work environment and recognition of human diversity is a significant value for the office's ability to evolve in tune with the changing demands, challenges and tendencies of our industry.

Celebrating Diversity

One of the building blocks of the PLH family is our celebration of diversity. The office is home to colleagues from around the world who are working

together to improve quality of life through design. This creates a diverse working environment where multiple languages and cultures meet.

Social Engagement

Great value is put into maintaining and strengthening the social interactions between colleagues through multiple events and interest groups.

Events range from educational lectures and study trips to social events such as the annual summer party, clay pigeon shooting, canoe trips, vine tasting, fishing trips, snorkling, golf tournaments, theatre outings and an annual PLH football tournament with teams from more than 15 different architectural and engineering companies.

The interest groups range widely and new ones are added continuously. Thus, the PLH Cycling Team was followed by PLH Runners and PLH Yoga in 2017.

Lunchtime

PLH has a healthy lunch scheme as a way to encourage employees to stay at the office and have lunch with their co-workers - hereby strengthening social ties. The lunch scheme also focuses on supporting small local businesses through a ongoing rotation of the lunch suppliers. Additionally all suppliers are chosen based on a focus on ecological products, fish once a week and always a vegetarian alternative. Approx. 1/3 of the employee choose the vegetarian dish.

Our purpose is to improve the quality of people's life through design. This could be at home, at work, at school, in the city, in nature, at the station - anywhere people gather in a space or use objects of design



OUR PURPOSE IS TO IMPROVE QUALITY OF LIFE THROUGH DESIGN

Environmental Challenges

PLH's main focus in connection to the principles of UN Global Compact is directed towards environmental challenges and possibilities. PLH has a responsibility to create holistic sustainable and humanistic solutions to the greatest extent that it can influence project outcomes.

Improving Quality of Life Through Design

We are committed to reviewing how our activities can contribute to the reduction of CO₂ emissions and minimize the planet's consumption of fossil resources.

However, sustainability is not only a question of energy – social well-being and cultural behavior are aspects that we consider just as vital a part of designing sustainable buildings.

Our mission and purpose is to improve quality of life through design - and the value of our work is found where the built environment becomes a better place for people – whether it's minimizing energy consumption, improving indoor climate or providing structures that resolve social challenges and promote well being.

Promoting Awareness

PLH supports a considered approach to environmental challenges by promoting our own and others awareness of the impacts on the environment and surroundings. We expect our staff to be conscious of the consequences of their actions concerning the environment, whether it is "locally" at the office or "globally" with a client.

Sustainability

To optimize the implementation of sustainability, our sustainability leader uses a defined process tool.

This tool operates in several stages, to ensure that the intentions, that are decided early in the process, are followed through to the build project. The focus is the five criteria of DGNB: Process, environment, economy, technical and site.

This requires both that the possibilities on site are logged and that the clients priorities are integrated.

Workshops are held with multidisciplinary specialist teams, tenants, facility managers and other relevant persons, to discuss the actual solutions. This is done in order to find the best

balance of the possible solutions.

The focus points could be the following:

Buildings have both an active and a passive energy balance, that very much depends on the building energy design. This must be considered from an early start, to ensure the total energy goal can be achieved.

Materials and holistic costs are compared for the primary materials, different structures and technical solutions.

Flexibility and design for disassembly must be considered, in order to increase the possibility, that the build structure may last longer than the initial purpose it is designed for.

Maintenance and cleaning is a major expense in the total costs in a 50 years timespan. So the design must strive to optimize the daily use and save money.

The accommodation of social quality is vital. This is both functional, thermal comfort, optimal light, views and orientation, access to green, low toxic emissions, safety etc. This is where people thrive.

All this and more is woven into the fabric of the early project and the goals are kept in focus all through the development onto the finished building.

LOCAL INITIATIVES - GLOBAL IMPACT

Environmentally Sustainable Design

By focusing attention and knowledge sharing on environmentally sustainable design (ESD) parameters, the practice has been able to inform clients of possibilities and advantages, and advise them about ESD options and systems, that can become an investment in operational savings.

Our significant competencies within the area have enabled the office to respond to and challenge the expectations of our increasingly environmentally conscious investors and clients.

Local Resources

Central to sustainable design is using local resources such as materials and labour.

Other local resources such as - wind for electricity, sun for energy, sea water for cooling, rainwater for recycling and the underground for geothermal potential - are also important factors to consider.

Internal Task Force

The office is revitalizing the internal task-force working with initiatives and approaches for internal development, including; training, debate and knowledge sharing, study trips, lectures, workshops etc. The aim of the task-force is to create ownership of the sustainable development across the entire office and create an environment where challenging the status quo is the norm.

DGNB Certification

We are continuously having employees partake in the certification training from the Green Building Council Denmark. DGNB Denmark is a european certification system, adapted for Danish conditions, to make sustainability in buildings measurable. It is the most advanced sustainable evaluation standard in Europe.

We have also been part of a DGNB-development team, drawing up a new certification tool for existing office buildings. As part of the pilot

phase, we've completed the first ever certification of an existing office building in Denmark.

An essential approach in all our work is the integration of hard factors such as geometries, orientation, location of windows, choice of materials, emission rates, engineering systems and lighting, with soft factors related to user comfort and welfare.

Our Office

PLH is working on a targeted effort to minimize the environmental load of the daily running of our own office and to create a healthy and safe workplace. Resource consumption (power, HVAC, water) as well as the waste of office supplies and paper is continually being reduced or recycled.

We are conscious of the environmental impact of transportation to/from meetings, and use office bikes for meetings held within a 5 km radius of the office. Our other initiatives in this area include widespread use of teleconferences and tele-meetings.

"As architects, our area of expertise within sustainable design, is optimizing the passive characteristics in building designs by selecting durable and low impact materials, facilitating a multi disciplinary design team with early influence in the design process and promoting that all participants understand and take part in bringing the goals from early idea to final building."

**ANDERS V. SONNICHSEN,
SUSTAINABILITY MANAGER
PLH ARKITEKTER**



PLH OFFICE PREMISES

REDESIGNING A FORMER FACTORY BUILDING

We have transformed and redesigned our own office building - contributing to the social task of updating the existing building stock. Our office building was once a factory in the city of Copenhagen - now it's transformed into a new workspace for PLH based on synergies from inside to outside.

The Refurbishment

The conversion project involved refurbishment of the existing building, adding a mezzanine along one side, as a huge 'piece of furniture' providing 40 extra workspaces upstairs and diverse 'laboratory spaces' below for meetings, model-making, brainstorming and product research. The interior is defined by its spaciousness, with a ceiling height of 6.5 meters, and the tall, narrow industrial windows. The verticality of the space is underlined through the rhythmic repetition of columns and windows, and the inserted mezzanine level creates

a dynamic effect, and exciting new vantage points.

Showcasing the Industrial Past

The original crane structures and elements such as steel trusses and beams are exposed as a dramatic reminiscence of the buildings industrial past. The cranes are now parked in each end of the studio where they create a 'roof' that defines the café at one end and team space at the other.

Nominated for The 'RENOVER' Award

Our office renovation was one of six projects to be nominated to become Denmark's best renovation in 2014. Initially, 165 projects were set to the Renovation Award 'RENOVER prisen' in March 2014 and in June 2014 the field was reduced to only 6 nominated projects. An electoral college of 67

representatives of the Danish building industry evaluated the 6 projects and voted for the best project.

Preserving History and Spirit

The committee described our project with these words - 'The PLH office has taken a dose of their own medicine and transformed an old factory building to their new studio. The refurbishment is a beautiful example of how to modernize an old building while preserving its history and spirit.' Chairman of the Nomination Committee and former City Architect, Gøsta Knudsen, said: "The six nominated projects are all performed at the highest professional level while showcasing the width of renovation. We have projects that intelligently and artistically interact with their surroundings, projects with enormously ambitious energy solutions and projects that completely rethinks the buildings function without compromising the heritage."



"It was important for us to preserve and showcase the history and spirit of the building to create an authentic atmosphere. We now have a spacious studio with distinct character - and both employees and visitors enjoy coming here and complement our beautiful office."

**PAULETTE CHRISTOPHERSEN,
PARTNER AND LEAD WORKPLACE DESIGNER,
PLH ARKITEKTER**

ANTI-CORRUPTION, LABOUR AND HUMAN RIGHTS



Anti-Corruption

According to 'The Corruption Perceptions Index' Denmark has been the least corrupted country in the world for 5 years (2011-2016) and again in 2018. Although bribery and corruption are not a common phenomenon in our culture, we are still very aware of the possibility of nepotism, exchanges of favours, unofficial agreements between companies etc. Therefore, we aim for clarity in all our business agreements.

Ensuring Human Rights and Labour Rights

Human rights and labour rights are very well protected in Denmark and in

Danish legislation. Being a member of DANSKE ARK - The Danish Association of Architectural Firms, PLH has to follow DANSKE ARK'S instructions, guidelines and contractual standards - and we are obliged to follow Danish legislation as well as respecting national and international legislation on human rights conventions.

Suppliers and Business Partners

Where PLH can make the greatest difference with regards to human rights and labour rights, is when we do business with companies and suppliers from other countries. When possible, we always make sure manufacturers

of building materials respect the protection of internationally claimed human rights and are not complicit in human rights abuses. We make sure we only do business with companies and suppliers that respect the rights of their workers, take care of their security and do not use child labour. It's part of our normal procedures to use certified materials and to state in tenders that we do not accept materials produced and manufactured with the assistance of child labour.

All the above, anti-corruption, labour and human rights are criterias that are evaluated in our DGNB-certifications. Therefore they are naturally evaluated in our certified projects.

SUSTAINABLE SOLUTIONS AND DESIGNS

CASES

General Approach to Sustainable Solutions at PLH

PLH's knowledge about sustainability comes from both our overall experience, gained by many certified projects and furthered by hiring specialists. For this, Anders V. Sonnichsen was hired in early 2019, to further the implementation for DGNB in our projects, and to increase the offices broader awareness of energy design, sustainable materials and the process, by which sustainability is implemented in both the projects as well as internally, the way the office is driven.

Anders has taken the task to both educate his colleagues and engage directly in all our projects, to ensure the process is focused sustainability.

Everyday Sustainable Designing at PLH

Apart from specific project examples, it is important to note that on a daily basis, the staff at PLH is making informed and conscious decisions impacting on the environment when they use passive design parameters, select and specify materials, finishes, furniture and fixtures. Through one-on-one or group activities, our staff is continually updated on new and emerging products, techniques or manufacturers that can strengthen our ESD approach.

Products and Techniques to Reduce Environmental Impact

PLH put effort into the specification, use and development of new products and techniques that reduce the impact on the environment. As stated earlier, it is a question of using local resources and adapt the construction methods

and technologies to the local climate conditions, inspired by local traditions. PLH integrates this in developing projects with the central aim - to improve the environment, generating energy and add value to the human everyday life.

Sustainable buildings

Over the past years, PLH qualified to participate in many competitions, most of which included sustainability as criteria in the weighted scoring system.

In 2012, PLH won the competition for a new headquarters for the transportation and logistics company DSV with 750 employees.

Since then the office has designed a number of buildings that have been, or are to be, certified. Some are therefore still in the design or completion phase:

Completed:

BREEAM - 'Very Good': DSV, Warszawa
DGNB Gold: Rigspolitiet (Ejby) and Alfa Laval (Aalborg)

To be completed:

DGNB Gold: Nykredit (Cph.), DFDS (Cph.) and Norreport Hotel (Cph.) and City Hall (Høje Taastrup)

BREEAM: DSV Warszawa

Competition entries:

DGNB Gold: FL Smidt (Valby), LEO Pharma (Ballerup), DSB maintenance garages (Cph. + Vejle)

And more

BREEAM Certification

As a direct result of the DSV HQ in Denmark, PLH is almost finished with a new DSV office building in Warsaw which builds upon key ideas developed in the successful project at Hedehusene, Denmark. A compact office building

is proposed with working spaces arranged along the perimeter, adjacent to breakout spaces around a light open central atrium. The new building reuses the distinctive filleted curve geometry and a similar palette of materials chosen - white balconies, distinctive natural timber with concrete columns. This maintains a common architectural aesthetic in DSV's buildings and reinforces a singular brand identity. The DSV Warsaw building is designed with emphasis on encouraging a social and vibrant working environment. Outwardly, the building has a distinctive metal fin facade that reduces direct sunlight.

The building prospect calls for a building that is certified according to BREEAM "Very Good". PLH focuses on multiple elements through the holistic approach. Elements such as; energy efficiency with a compact building envelope, external solar shading, highly insulated façades, a visual connection through the open atrium, good daylight conditions, easily divided office areas for dual tenancy arrangements and promoting reductions in transport burdens.

DGNB Certification

PLH continues to partake in the development of sustainability in the building industry. One of the ways has been as part of the DGNB-development team, as stated earlier, drawing up a new certification tool for existing office buildings. During the pilot phase, PLH has completed the first ever DGNB certification of an existing office building in Denmark.

The focus of the DGNB certification for existing office buildings is to reveal the unresolved potential of our existing building stock - on optimizing resources and supporting the green change in society.

SOCIAL SUSTAINABILITY - REVITALIZATION

CASE - HUNOSØGÅRD

Social Sustainability at PLH

At PLH we understand social sustainability as a process for creating sustainable, successful places that promote well being and improve the quality of peoples' lives by understanding what people need from the places they live and work. This means that when we design with social sustainability in mind, we aim to

“Our mission is to improve the quality of people's life through design. That's why it's especially important for us to be part of projects like Hunosøgård that not only improve the everyday experience for the immediate users - but also help create success and better conditions for people in the entire community “

combine the design of the physical realm with design of the social world – this could be infrastructure to support social and cultural life, social amenities, systems for citizen engagement and spaces for people and places to evolve.

New Local Gathering Point

The aim of the conversion and expansion of the mansion of Hunosøgård is not only to strengthen and increase the number of visitors and hotel-guests coming to enjoy the unique nature – but also to make Hunosøgård a new local gathering point marking the start of a revitalization of the entire community. This is achieved partly by the 'dark sky'-principle, where no lamp lights are on at night, so visitors can enjoy the unpolluted darkness.

Reversing the Depopulation

The island of Møn, as many other areas in the outskirts of Denmark, suffers from increasing depopulation with a decrease in commercial activities as a consequence. The project to develop Hunosøgård opens up the estate to the public and the local community by creating a cultural center and farmers market where locals can sell their foods and products to hotel guests and tourists in the area – and where cultural activities such as exhibitions by local artists and outdoor activities can take place.

Increasing Local Activities

The new Hunosøgård thus helps revitalize the community by increasing cultural and commercial activities.

SØREN MØLBAK
PARTNER, DIRECTOR AND LEAD DESIGNER
PLH ARKITEKTER



BREEAM CERTIFIED SUSTAINABILITY - OFFICE

CASE - DSV, WARSZAWA

Certified Sustainability

This project focuses on a broad spectrum of sustainability criteria. The project was from the start required to be BREEAM certified. It is almost complete, and the score has been calculated to reach the level: **Very good**.

The building is designed as a compact volume, to minimize the external surface, and hereby reduce both heat loss and the use of materials.

Due to the compact volume of the building, it is shaped with a large glazed atrium with automatic sunscreens. This room supplies the building from the inside, with both light, great orientation and solar heating in the winter.

Furthermore, the facade is designed with fixed solar shading and automatic sun screens, to reduce overheating.

The windows have 3-layered low energy glass with varying properties of heat loss and solar gain, depending on orientation.

The design process has optimized and reduced the thickness of the floors, to increase the glass area and therefore the level of natural light.

All light sources are LED and change light temperature during the day, to match the employees' biorythms. The light is therefore colder in the morning and grows warmer towards the afternoon.

It is closely located to public transport. 40 % of the site is designed as either green roof or recreational park areas surrounding the building. Each floor has integrated terraces.

All plants in the gardens are native to the area, to preserve the local fauna.

At project start local amphibian habitats were registered, and temporarily relocated. They were later brought back to the site, when the building project was finished.

Social Sustainability at PLH

The building promotes values uncommon in Poland, with a social vibrant work environment with a flat hierarchy, by informal meeting cafés, quiet rooms, spacious lunch area etc. Significantly, the openness of the atrium, with the central staircase, promotes the informal meeting, with break area and good visual contact across the building.

Also a fitness room and a large bicycle parking area in the basement, intended to promote a healthy lifestyle of the employees.

"This building introduces new office standards for Poland. The building is bright, welcoming and very comfortable. Also the building performs well in the sustainability certification"

**CECILIE STARUP,
LEAD ARCHITECT
PLH ARKITEKTER**



DGNB CERTIFIED SUSTAINABILITY - OFFICE

CASE - ALFA LAVAL, AALBORG

The integration at the site

Alfa Laval's major role in the maritime branch, with the production of components to the shipping industry for example, has inspired the design of the building. The long, white horizontal bands in the façade provide uninterrupted views over the water and give the feeling of a ship's sun-deck, together with the "bridges" that overview all of the building's interior. The site was formerly home to Aalborg Wharf which has inspired the naming of meeting rooms after the vessels that were built there.

Social sustainability

The new office brings employees together in a bright, friendly and

straightforward building where all workplaces are equal. Flow and flexibility are the key themes in the layout design, with an openness that invites employees to move around, and creates a workplace that is easy to adapt when new needs arise.

There is great variety in informal and formal meeting rooms and places where people can gather to support the activities and working patterns of the various departments. Additionally, there are lounge areas where you can hold meetings with external guests.

Like many other PLH office buildings, this building is also designed around a large atrium, that both brings light and spaciousness into the building. The open atrium is both an asset as an aesthetic social space, that provides

visual contact across the various floors, but also provides a naturally hybrid ventilated central space.

DGNB design

The building is designed to achieve a the DGNB Gold standard, by focusing on the five main quality criterias: Process, environment, economy, social and site. Therefore the design focus on all aspects. This includes solutions such as a compact volume with a low thermal conductivity, responsible materials selections, good indoor climate, acoustic dampening carpets and ceilings, automatic sun screens, good daylight quality, visual connection to surroundings, a flexible column structure allowing for future changes and many other sustainable solutions.



"The atrium connects the employees. Together with the carefully designed floor plans, the natural light, comfort level and views, all make the building a great place to be. Further more, the building is minutely designed to have a low environmental impact."

**SØREN MØLBAK, PARTNER,
DIRECTOR AND LEAD DESIGNER
PLH ARKITEKTER**

ENERGY EFFICIENCY & SUSTAINABILITY

CASE - K29



In the first year after completion the building K29 has been awarded 5 titles. One prize was given in late 2016 by The Lithuanian Ministry of Environment for the most sustainable building in the category innovative buildings.

The K29 business center is a major, new landmark in Vilnius built from all natural and mostly local, eco-friendly materials making it the most eco-friendly building in Lithuania to date. K29 sets the standards for a healthy and attractive workplace in Lithuania. The building is situated on Konstitucijos Prospektas (Constitution Avenue) creating a transition area between a large park area to the north of Vilnius and the city's international business area in the east.

Holistic Design Approach with 'People', 'Profit' and 'Planet' in Mind

Through a successful integrated design process K29 has been developed and designed with the three objectives 'people', 'profit' and 'planet' in mind. When

PLH designs with 'the planet' in mind it often means investing in local, sustainable materials and labour force and designing structures that promote sustainable behaviour. When we design for 'people' it means investing in an attractive and healthy workplace ensuring increased user satisfaction and well-being. And when we design with 'profit' in mind it means designing structures that add value for our clients as well as the users of the new structures.

Optimized Energy Savings

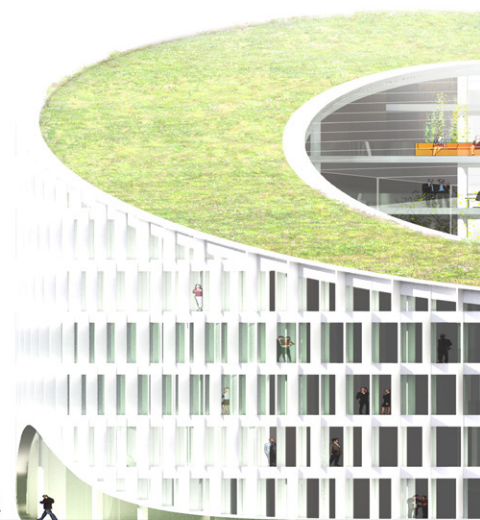
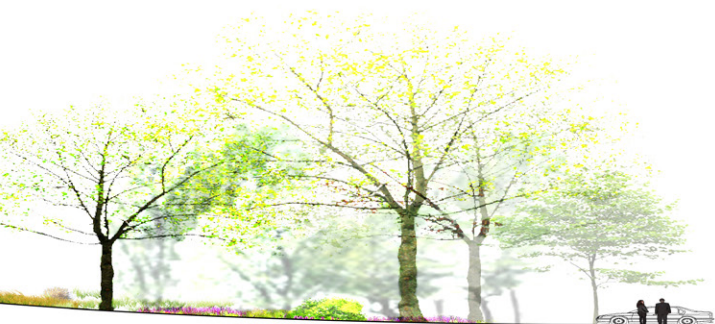
K29 is equipped with the newest building management system optimizing energy savings. It has an efficient water management system and the lighting design is created with the newest and most energy efficient components. All meeting rooms, ancillary spaces, toilets etc. are equipped with light sensors - and the lighting design as well as the natural light control system has been designed to give the users a maximum feeling of wellbeing.

Less Need for Power Related to Cooling and Ventilation

The façade is an advanced double skin construction with energy glass and an automated solar control system. The building has a hybrid ventilation and cooling system with natural ventilation of office spaces with high-sitting openable windows on the inner façade and through the atrium skylights as well as ventilation on each floor following the newest guidelines.

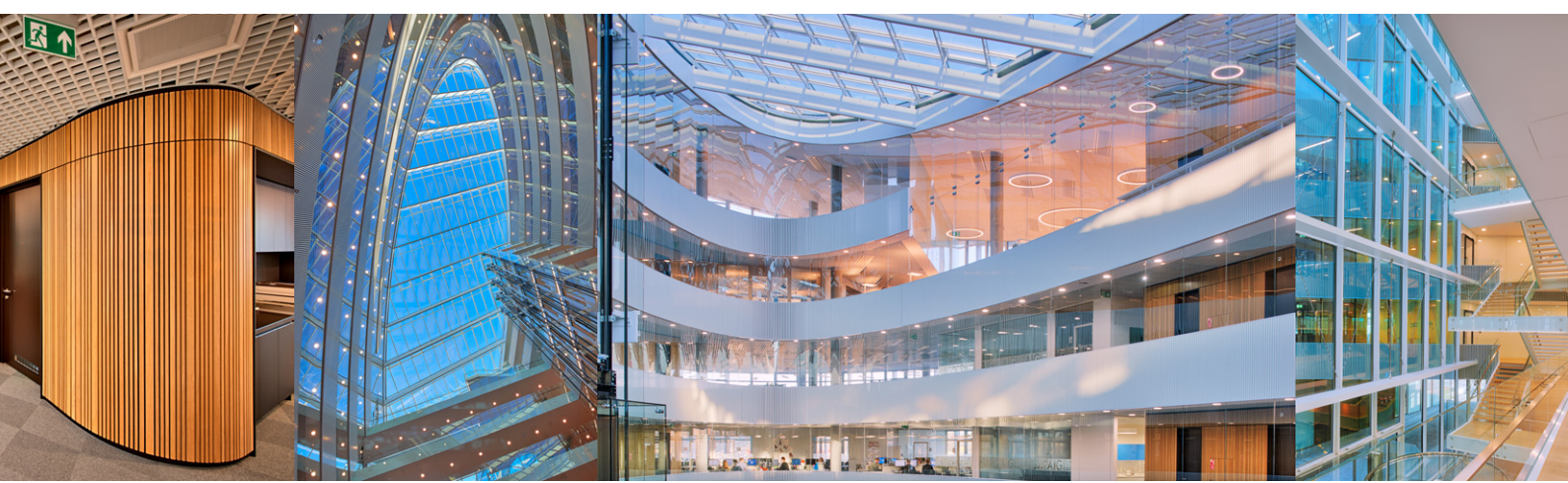
Local Resources

Central to the sustainable design parameters of PLH is using local resources and adapting the building complex to the local climate conditions. In the building of K29 local materials, local manufacturers and local contractors have been used - to the benefit of the environment, the local community and the economy of the project.



"DESIGNED FOR PEOPLE"

CASE - K29



A Building Designed for People

Designing for people and improving the quality of life for the users is part of the overall PLH-approach – and it has been for many years. PLH was the first architectural company in Denmark to design workplaces focusing on learning environments and how the architecture can strengthen the integration and knowledge sharing between different business areas of a single company.

Maximum Daylight Access

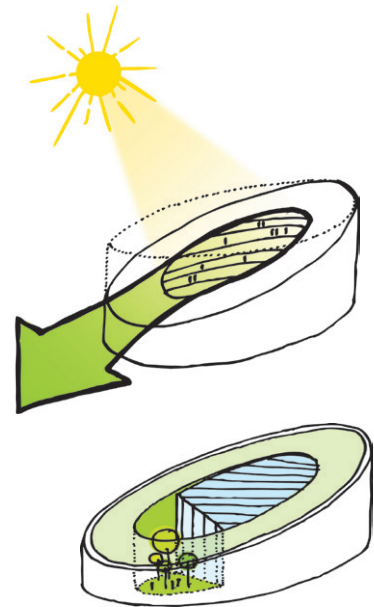
The oval shape of the building with the central atrium and a sloping roof gives optimal conditions for daylight for all users. Because of the sloping roof, light flows in to the atrium most of the day – and users close to the windows of the inner atrium can look beyond the atrium itself having visual contact with the cityscape beyond the building. The building thus ensures maximum wellbeing and daylight access having no dark areas.

Acoustics Design

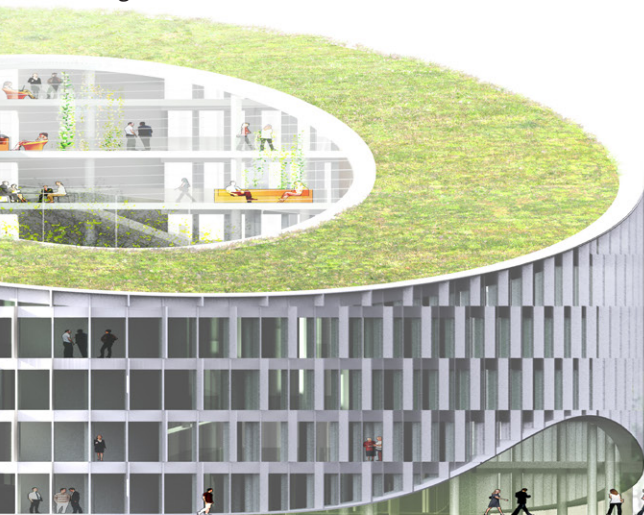
The acoustic design has had a strong focus on creating the best auditory environment for the users in all areas of the building. Besides the ceiling tiles and carpets, specially designed core cladding and balcony frontages are important elements of the acoustic control.

Enhanced Physical Working Environment

Design elements like double facades, an optimal location on the site and a maximum utilization of daylight are all elements that enhance the physical work environment. K29 is the first atrium office building in Lithuania offering a variety of shared settings in a pleasant indoor climate all year around – and tenant feedback shows an increased workers satisfaction and productivity.



"We are very proud that K29 recently was awarded best office building in The Baltics. K29 was awarded because the building creates increased worker satisfaction and productivity, improved health, greater flexibility and enhanced energy and environmental performance of the workplace"



**STEEN ENRICO ANDERSEN
PARTNER AND LEAD DESIGNER
PLH ARKITEKTER**



SOCIAL SUSTAINABILITY - WORKPLACE

CASE - PHARMACOSMOS

Workplace design

At PLH workplace we develop environments for people and organisations to thrive. This is done from the inside out with a focus on the long term perspective to both solutions and overall design. The ability of the physical framework to adjust and respond to future changes in an organisation's needs is a significant success criterion. As per our holistic approach to architecture, human needs and patterns of use are integrated into the interpretation of organizational and real estate strategies to achieve sustainable workplace environments. Not only does PLH bring the humanistic approach of Scandinavian design to the world,

we also create settings for our clients to fulfil their dream of helping people around the world.

Pharmacosmos UK Office

One example of this work is the new UK office for Pharmacosmos. Pharmacosmos is a global specialist in iron therapy and they develop, manufacture and market medicines for the treatment of iron deficiency.

The Scandinavian Feel

Throughout the design, patient stories are integrated in the daily experience of the office alongside the emphasis on team spirit. The welcoming, Scandinavian inspired design - with an "inviting, natural and friendly"

feel, open office with views, natural daylight and high quality ergonomic furniture - aligns the Pharmacosmos new UK office with the company's strong Danish roots. Here, the Danish culture of dining together is given a special place in the new office, with its informal collaboration lounge, complete with cafe, long team table and terraced seating. This space is the first area you meet on arrival to the office and functions as a meeting point throughout the day for specialists in the field and those concentrating on projects in the office. The new office supports the company's commitment to help people by being people driven, committed to quality, and innovating for better lives.



ITACS

ITACS is a randomised double-blind multi-centre clinical trial investigating the efficacy, safety and cost-effectiveness of preoperative intravenous iron vs placebo in patients with iron deficiency anaemia before elective cardiac surgery. The study is sponsored by Helsinnic Australia and supported by Pharmacosmos.

"We aspire to develop a workspace that on its own ignites desire and ambition to improve care for people living with iron deficiency. A workspace created in the belief that its design and functionality is an extension of our company: our aspiration, our values and our culture."

**ANDREAS SIDELMANN CHRISTENSEN,
MANAGING DIRECTOR UK/IE
PHARMACOSMOS**

SOCIAL SUSTAINABILITY - BETTER QUALITY OF LIFE

CASE - FIXER ROOMS HALMTORVET

"I have to put myself in the place of the users to create an optimal framework for their living and working conditions. This case has been very interesting because the living conditions of drug abusers are so extreme. And it has been inspiring to experience the people who – on a daily basis – are fighting for dignity and decent lives for drug abusers."

RIKKE HAUGAARD SEJERSEN,
LEADING ARCHITECT
PLH ARKITEKTER

A New Injecting Center in Copenhagen

PLH has transformed a former storage building in the central part of Copenhagen into a medically supervised injecting center. The center opened in 2016. It is located at Halmtorvet – a very mixed neighbourhood populated by artists, creative businesses, restaurants, galleries but also an area frequented by drug abusers and afflicted by drug-related problems and crime. The injecting center is an initiative aimed to improve the conditions for the abusers, but also at diminishing the related problems and the discomfort and safety, related to drug-issues, for the majority of the people living in the neighbourhood, thus creating a better coexistence.

A Better Life for Drug Users and Reduced Inconveniences for the Community

The center is open 24/7 and designed to facilitate the intake of drugs while staffed by health professionals. The purpose is to give drug users a better life and diminish the number of drug

related deaths and overdoses by assisting with supervision of and counselling from medical staff that can offer first aid as well as a chance to rest after drug intake, acute nursing and counselling on other health services and treatments. This saves lives and creates a better relationships with drug users and improves the chances for the municipality, to connect them to other services and treatments.

Architecture Creating Stability, Security and Safety

The users of the center need a safe and welcoming place where they encounter respect and tolerance. The character of the spaces must therefore give a sense of calmness and discretion without an institutional touch, so the users experience stability and security. Safety is a key issue for both staff and drug users. Nudging through design and communication makes it possible to affect user behaviour in a positive direction, preventing conflicts and ensuring visual contact with other staff members. It's estimated that approx. 500-1000 drug users live in Copenhagen

and that the majority will use the center on a daily basis.

Cooperation, Engagement and Involvement

Authorities, politicians and locals pay great attention to the new center and the impact it will have on daily life in the neighbourhood. Because of the special nature of the project it's founded on cooperation, engagement and involvement between different interested parties such as health professionals, the local community, the local police, the Meatpacking District facility department and the client – the Municipality of Copenhagen. All parties are part of a Building Committee where the entire socio-cultural and health spectrum is represented. PLH has carried out an intensive and structured process with the Building Committee and the building's space program has been clarified and adjusted in accordance with the economy. Being able to decode all issues, suggesting the right solutions and navigate an area of great public and political attention is imperative to a project like this.

THE ENVIRONMENT & IMPROVED INFRASTRUCTURE

CASE - RAIL BALTICA, RIGA

Creating an Infrastructural Heart

PLH has been announced the winner of the open International sketch design competition 'Rail Baltica' arranged by The European Railroad Lines, Ltd. The purpose of the competition is to develop the central multi-modal public transport hub in the Latvian capital Riga, and to construct the Rail Baltica railway bridge over The Daugava River. The Rail Baltica project is part of the European transport network.

"Our proposal delivers a coherent, smooth and living infrastructural hub that connects the city and strengthens the existing identity of Riga".

**STEEN ENRICO ANDERSEN
PARTNER AND LEAD DESIGNER
PLH ARKITEKTER**

The Station Building

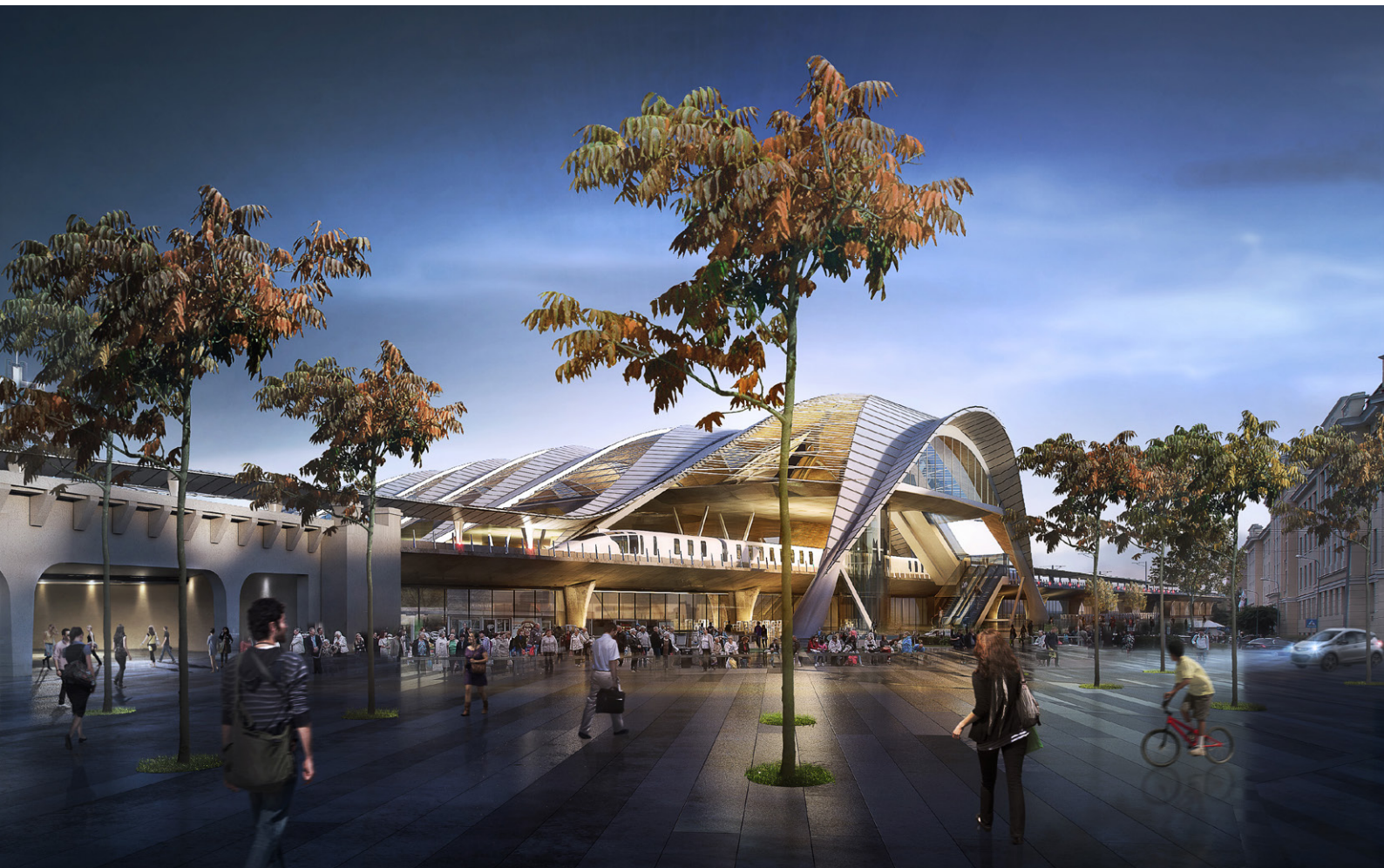
The focal point of the plan is the iconic station building that creates a strong visual identity in the cityscape strengthening the sense of Riga as a metropolis. The inspiration for the design is the archetypal form of historic central stations worldwide – The Arch.

The station building stands as a new landmark with eye-catching canopies resembling arched fern leaves – aspiring to the qualities of the Art nouveau period. The sloping roof canopies let light flow easily and evenly throughout the building, creating a concourse space with an open and airy atmosphere. To the North side the canopy lifts allows a unique undisturbed view over the historic city creating a strong sense of relation to the city you have just arrived in, or are leaving

behind. Geometric features, symmetry and repetition are qualities that enhance way finding and maintain orientation in the building landscape. The generous space, reminiscent of ecclesiastical architecture, creates moments of great wonder as travellers enters the building – a memorable experience and a recognizable point of arrival and departure.

Bridge & Railway

The plan contains two new tracks that run parallel on the south side of the existing tracks amplifying the clear signage of the railway in the cityscape and across the river. The bridge is designed with a light and floating expression. To maintain the relation between the new and the old, the bridge has a varying cross section that emerges on the underside of the bridge, with a rolling, wavy line that refers to large arch construction of the old bridge.



THE ENVIRONMENT & IMPROVED INFRASTRUCTURE

CASE - RAIL BALTICA, RIGA

The new bridge is designed with integrated bicycle and pedestrian path that creates a better connection along the rails and across the Daugava.

Green Metropolis

One objective of the design is to create a denser city with defined squares and urban places to frame an active city life for inhabitants, commuters and visitors alike – thereby strengthening the sense of Riga as a metropolis. An increase in the amount of green in the city creates better urban conditions and adds sensory experiences and an aesthetic dimension to strengthen the feeling of affiliation with the city. The new sequences of green urban spaces will also act as a new chapter in the development of the city with great respect for the existing city and its cultural heritage. At the same time the added urban nature has the power to remedy climate

challenges by creating a better micro climate in the city, improving air quality, thermal comfort, biodiversity, storm water management and preventing urban heat island effect.

Connecting the City

The full project comprising the bridge, the overpass and the station, is planned as one coherent infrastructural element with a design-language that belongs to the language of bridges, as a low scale, continuous waving series of arches and

“The central station, the connected station area, and the adjacent infrastructure hold great potential to be much more than just infrastructure – becoming an important city hub with a strong visual identity in the cityscape in a modern sustainable urban development”.

vaults – opposed to the vertical elements of the city towers.

The entire project serves multiple functions as an infrastructural heart that connects the regional with the local, where one can seamlessly change between modes of transport, train, to bus, car, bike, and as a public space, an urban living room for both recreation and commercial activities.

The green rampart, the water, the historic city and the market are all elements that contribute to the strong identity of Riga.

By taking on a holistic approach to traffic and urban space development we have removed barriers and prioritized public transport, pedestrians and cyclist to create a more liveable and sustainable city.

**STEEN ENRICO ANDERSEN,
PARTNER AND LEAD DESIGNER
PLH ARKITEKTER**



SOCIAL SUSTAINABILITY - WORKPLACE

CASE - SIVANTOS



Sivantos headquarters in Singapore is a collaboration between Danish architecture practice PLH Arkitekter as the concept designer, and local interior design company Geyer Design for design development and delivery. The leading hearing aid company Sivantos relocated its global headquarters and its Singapore operations, representing a critical moment to change culture and establish a renewed image and identity. The outcome is a sound-inspired workplace that fosters collaboration, agility, accountability and an entrepreneurial spirit. It is a place that employees are proud of, and that gives visitors a memorable experience.

Connected by Sound

The facility is intuitively designed, across 3 very large floor plates, and comprises research & development (R & D), manufacturing, global departments and South East Asia office. Effective branding experience is integrated into both the visitor and employee flow around the workplace, and it has been developed in an

inclusive manner that ensures employees embrace, utilise and understand their new workplace environment. Sivantos' desire to strengthen its identity has resulted in a new headquarters that represents a powerful manifestation of the company's vision to invent the future of better hearing and understanding. PLH's concept for Sivantos is called "Connected by Sound", hereby the design is a physical manifestation of the experience and connective potential of sound. The workplace design and spatial experience draw on two main themes - "sound unites us" and "sound as a celebration of global diversity". Subsequently, form, light, colour and materiality are integrated to bring visitors and employees together in spaces that are rich in sensory experience. Upon entering the head quarter, it becomes clear that sound is the focal point of this organization.

Bringing Sound to Life Visually

Inspired by sound waves, an exciting

sculptural 'sound wall' encases the arrival and reception area – establishing a strong and immediate wow factor to anybody who visits. The visual elements work aesthetically and acoustically towards transforming sound waves into physical form and bringing sound to life visually for an emotional and uplifting experience. It is here that global and local visitors want to be photographed with the Sivantos logo as a backdrop.

Hubs as Sound spaces Drawing People Together

Hubs are centrally located around the floors creating spaces for collaboration, focus, contemplation and breakout. In connection is a series of team support functions such as phone booths, small meeting rooms, pantries, print/storage rooms and various break-out spaces with diverse seating modes that encourage team building, exchange of expert knowledge and collaboration.

SOCIAL SUSTAINABILITY - WORKPLACE

CASE - SIVANTOS

Easy accessibility and close proximity to all desk areas means all functions are equally distributed through the floors. The hubs act as attractive destinations within the workplace, each with their own sound concept based on the diversity and contrasts of 'sound of nature', 'sound

of the city' and 'sound of celebration' creating different soundscapes within the office. The combination of materials, colour and lighting in each hub emphasize the variations and nuances of the sounds that we hear in nature, the city and when we celebrate.

are modular and respond to each team's individual needs but also share similar design elements creating a unified look throughout, with a balance of privacy and team spirit.

"The new headquarters has completely transformed the culture of working here at Sivantos, making the interaction between different departments and teams much stronger. The collaboration hubs provide a platform for spontaneous meetings and brainstorm sessions improving productivity immensely, and at the same time giving the opportunity to unwind while still at work."

Team Neighbourhoods

The private work areas are grouped into neighbourhoods that can accommodate a variety of individual and group work processes with each department having its own home base. The desks

Environmental Materials

The linoleum we have used was possibly the most environmental flooring choice so that's a big plus – 97% raw material + 43% recycled, this was a big win to convince the client to go for something like this over stone, ceramic tiles etc. The carpet is also a Green product. The acoustic timber cladding should also be Green certified.

**SIVANTOS SENIOR,
VICE PRESIDENT – HR
NICOLAI R. JENSEN**



SOCIAL SUSTAINABILITY - WORKPLACE

CASE - MAERSK



A Connecting Multi-user Building

Maersk's new domicile at Amerika Plads is a multi-user building for 800 staff from Maersk. The building marks its presence with a striking curved corner towards the busy Kalkbrænderihavnsgade, and likewise towards the inner square behind. Thus creating a welcoming meeting with its urban context where residential, office, retail and restaurant activities blend together.

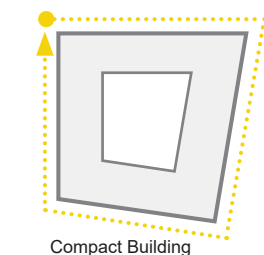
Building Concept

The building is a carefully designed object with a clear and simple modern expression. The roughly quadratic footprint is distinct

with its rounded corners, which create lightness, transparency and a comfortable, functional flow. The interior expression mirrors the soft exterior shape with dynamic and varying spatial experiences. The focus has been to promote the welfare of the employees through the layout of the building. Across the 6 floors open spaces meanders to create room for cafés, break- and meeting places near the stairs and office spaces in the periphery of the building. The ground floor is disposed with a reception, meeting rooms and a canteen. The proceeding floors are arranged with associated communal facilities. Changing rooms and technical spaces can be found in the basement.

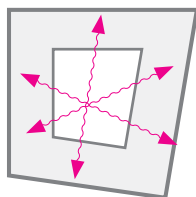
Sustainability

The Danish building authorities' energy regulations are among the strictest in the world, by having increased the requirements by 25 % three times since 2008. The building is designed with a holistic approach, which in sustainable terms gives a cheaper, greener and healthier operational building. The sustainable aspects include a compact building mass, daylight through the big atrium, visual connection throughout the building, optimized floor plans and circulation as well as being flexible and enabling departments to expand more freely.



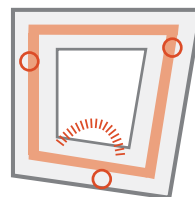
Compact Building

... Reduced facade area
More energy efficient



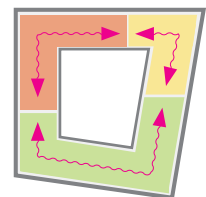
Visual Connection

— Creates a visible connection
Supports 'one company'
Universal contact with atrium



Circulation

||||| Main staircase in atrium
— Circulation without 'dead ends'
○ Only three cores > good orientation / way finding



Flexibility

— High degree of flexibility between departments, which are able to expand in two directions and around corners.

ENVIRONMENTALLY FRIENDLY TECHNOLOGY

CASE - BREATHE 55



Recycling of Energy to Improve Air Quality in Older Buildings

The existing building stock represent a tremendous energy consumption and there is a great potential for reducing the total energy consumption in refurbishments of older buildings.

Recycling 4/5 of the Energy Otherwise Lost

PLH has developed a ventilation unit called Breathe 55, that can recycle 4/5 of the energy in the otherwise lost heat, which makes the unit an obvious technical device to use in connection with the renovation of older buildings.

Better Indoor Air Quality - and Easier Life for Allergy Sufferers

The unit is easily applicable and adaptable to different wall thickness's. It ensures basic ventilation of individual rooms with high heat recovery efficiency transforming the energy to fresh air entering the room. It is also possible to incorporate filters that make life easier for allergy sufferers and the unit improves indoor air quality.

Operates Automatically

The unit operates automatically depending on the indoor climate. With more people and higher levels of CO₂ or humidity in the room, the unit

automatically increases the flow.

Energy Efficient Technologies

The project was initially sponsored by the Innovation Fund (Fornylesesfonden) and one version of the unit is now sponsored by the Market Maturation Fund (Markedsmodningsfonden). A slightly different version of the unit better suited for kitchens and bathrooms is sponsored by the Danish Public Service Agency 'Elforsk' which supports research in and development of energy efficient technologies.

70 units have been tested in a residential area in Kokkedal. The test results have been analysed and incorporated into the final design of the unit which has now been put into production.

PRODUCT DESIGN - LONGEVITY & ENERGY SAVINGS

CASES

PLH has put great initiatives in product design that bears modern marks and aims at long lasting validity. This is, among other designs, shown in the PlanSign series, which was designed in 2004 and gained a Cradle to Cradle Certification in 2014.

'PlanSign Series' - Cradle to Cradle

The sign is made of 5 mm aluminium, in a very flexible design, that allows it to be combined in countless ways and in many different sizes for indoor and outdoor use. The sign is equipped with the patented magnetic locking system that ensures that it is easy and simple to maintain. PlanSign is the only sign system in the world that is Cradle to Cradle certified. In 2014, the manufacturer DanSign met higher environmental standards and increased their certification level from Basic to Bronze. PlanSign was previously

awarded the international product design award "iF Design Award".

Lighting that Saves Energy

PLH design team developed a new series of light fittings for energy saving lighting. These innovative light fixtures are produced in collaboration with, and for, major international light manufacturing companies.

'LumiStone' - Reusable, Long Lifespan, High Efficiency

In April 2012 Philips Lighting launched LumiStone - a new LED fixture designed by PLH (Henning Solfeldt design specialist) as the first suspended LED fixture that meets current requirements for office lighting. LumiStone gives a luminous efficiency exceeding 100 lm / W, which is 30-40% higher than T5 luminaires often used for offices. The fixture is elegant, evocative and energy efficient, and is

specifically developed to bring a homely atmosphere into the work spaces. It has a unique LED-shielding so the light does not dazzle or distract the user. LumiStone is designed for long life cycling and has a lifespan of approx 17 years by usage of 8 hours a day - and all materials can be reused by a simple separation of the fixtures parts.

'LumiLine'

In 2013, the LED technology and the cone-shaped apertures from LumiStone were transferred unchanged into a recessed ceiling fixture, called LumiLine. Design kinship with LumiStone is clear even though LumiLine is a flat, oval luminaire. LumiLine was developed for DSV's new headquarters, where the building's rounded volumes called for a ceiling fixture in a similar friendly expression. The fitting was subsequently also used throughout Alfa Laval's new office in Aalborg.

"I develop products with common sense in mind. Firstly, the product should be able to get dismantled into individual components when its lifetime has come to an end. Secondly, the materials or components should be reusable. Thirdly, the product should have as low an energy consumption as possible"

HENNING SOLFELDT
PRODUCT DESIGN SPECIALIST
PLH ARKITEKTER

PLH GLOBAL COMPACT AMBITION 2019/2020

PLH is proud to be a member of Global Compact. In the year ahead we will continue to seek opportunities to support and enact the 10 principles.

In particular, we aim to show built works that demonstrate more extensive and measurable outcomes in the area of environment.

Human Rights

We will continue our membership of DANSKE ARK, continue to follow DANSKE ARK'S instructions, guidelines and contractual standards. PLH will continue to follow Danish legislation as well as respecting national and international legislation and human rights conventions.

In addition we will continue to demand that collaborators, business partners, suppliers and whoever we have business dealings with - both in Denmark and abroad - will respect national and international legislation and human rights conventions.

Labour

We will continue our membership of DANSKE ARK, continue to follow DANSKE ARK'S instructions, guidelines and contractual standards. PLH will continue to follow Danish legislation on labour standards and will continue to dissociate ourselves from all forms of discrimination.

In addition, we will continue to invest in the working environment making PLH Arkitekter an attractive workplace - retaining and attracting

the best. Upholding a humanistic and collegial working style, high employee involvement, stress prevention and creating a responsible working environment where human diversity is recognized, will continue to be very significant factors for the office. Furthermore, we will continue to recruit solely on proven competencies and experiences - not regarding gender, nationality, religion, age or other discriminating criteria.

We will also continue to demand that collaborators, business partners, suppliers and others we have business dealings with, will respect and uphold the freedom of association, recognize the right to collective bargaining, support the elimination of all forms of forced and compulsory labour and child labour and support the elimination of discrimination in respect of employment and occupation.

Environment

PLH will continue to support the principles 7, 8 and 9 of The UN Global Compact as an integral part of our day to day actions and creative processes. We will continue to design sustainable solutions and structures that support and promote sustainable behavior – and continue to promote sustainable solutions to our clients.

Our central purpose is to improve the quality of peoples' lives - and we will continue to design with the 3 objectives 'People', 'Profit' and 'Planet' (A triple bottom line) in mind. The triple bottom line-approach ensures sustainable design that also better the lives of the users while at the same time improving conditions for the

client.

We will aim at creating sustainable, successful places that promote wellbeing and improve the quality of peoples' lives by understanding what people need from the places they live and work.

Through research, innovation and cooperation with manufactures, institutions and clients we will continually strive to develop and diffuse sustainable solutions, environmentally friendly technologies and new sustainable structures that underpin and promote environmentally responsible behavior.

Anti-Corruption

We will continue to work against corruption in all its forms and avoid nepotism, exchanges of favors, unofficial agreements between companies and other forms of bribery - aiming for clarity in all our business agreements.