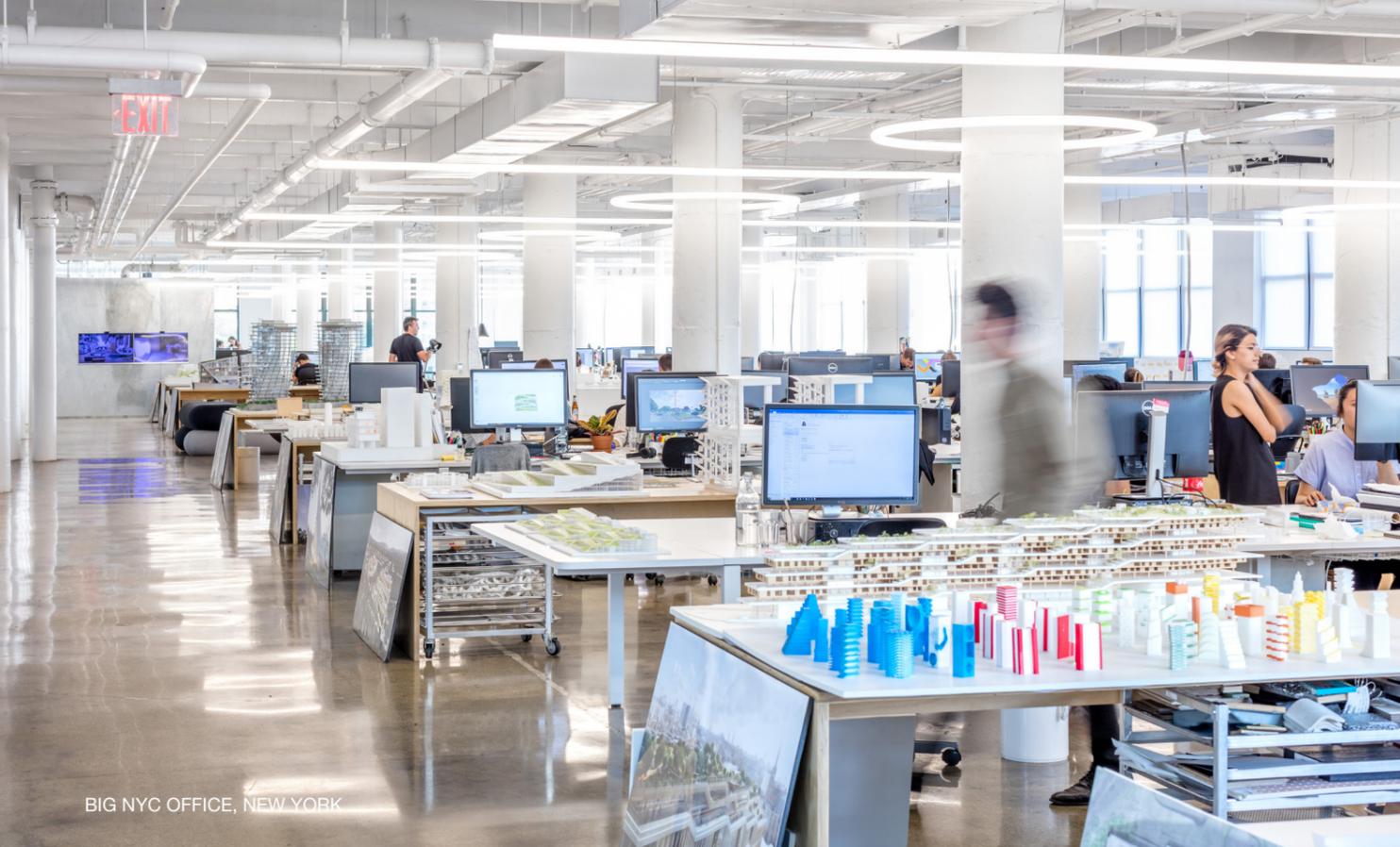


ANNUAL SUSTAINABILITY REPORT 2021

BIG — BJARKE INGELS GROUP





BIG NYC OFFICE, NEW YORK



LANDSCAPE

ENGINEERING

ARCHITECTURE

PRODUCTS

PLANNING

OUR COMMITMENT

We believe that architecture is the art and science of continually refurbishing the surface of our planet so it better fits the way we want to live. We are pleased to reaffirm our unwavering support for the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labour, Environment, and Anti-Corruption again this year. In this year's report, we describe our continued actions to integrate the Global Compact and its principles into our business strategy, culture, and daily operations, as well as our efforts to integrate the 17 UN Sustainable Development Goals into our projects. We hold ourselves to the high standards set by the Global Compact and remain committed to sharing this information with our stakeholders. In 2022, the leadership at BIG, signs this document to assure the United Nations that we are committed to the continuous respect for the human race and to the integrity of its environment.

Bjarke Ingels

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Daniel Sundlin

Beat Schenk

Brian Yang

Jakob Sand

Agustin Perez-Torres

Leon Rost

Martin Voelkle

Catherine Huang

Ole Elkjær-Larsen

INTRODUCTION

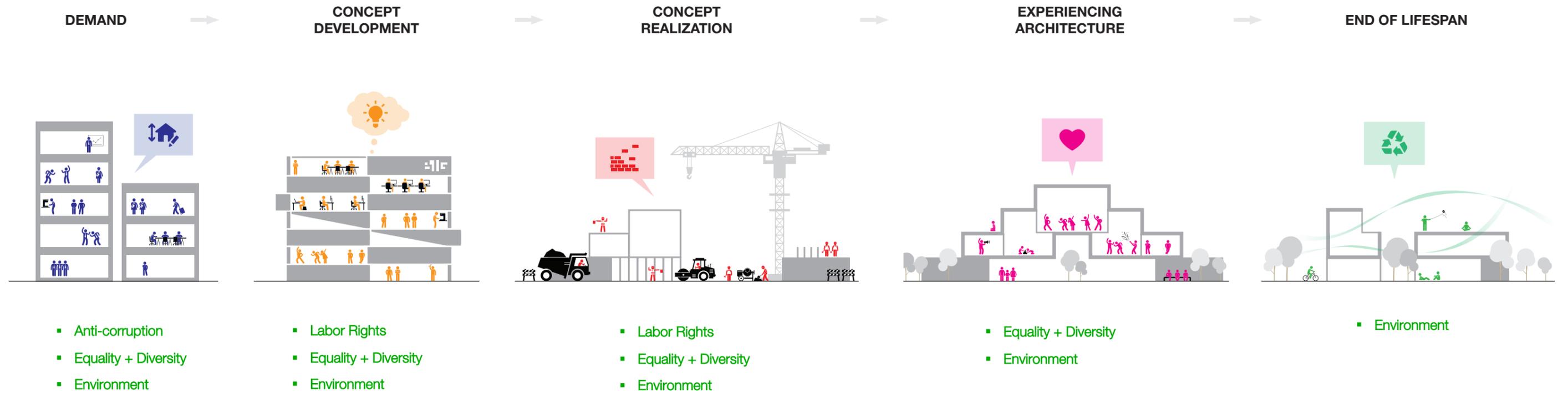
BIG — Bjarke Ingels Group is a group of architects, engineers, landscape architects and designers operating within the fields of architecture, landscape, urbanism, interior design, product design, research and development across our five offices in Copenhagen, New York City, London, Barcelona, and Shenzhen.

Since BIG's founding in 2005, our work has centered around making our cities more livable, resilient, and sustainable. Our early projects were civic and affordable housing projects in Denmark designed around giving communities new green, social and recreational spaces. As the studio expanded into a team that includes landscape architects, engineers, and urban designers, we have continued this approach to nature and public space in the design of projects at a much larger scale. Now that our office has grown to over 600 employees, we have transitioned our design approach to a much more holistic one that we call the **BIG LEAPP** comprising a diverse skillset in Landscape, Engineering, Architecture, Products and Planning. This holistic approach allows us to use our collective creative knowledge to redefine our industry, streamline our design process and impact, and give form to a future that we all want to live in.

Through the success of our projects and research, we are being commissioned by forward-looking developers and municipalities across Europe, North America, Middle East, and Asia. In these projects, we apply our research-based approach and study to local conditions and concerns in an effort to realize their global aspirations. We have active projects in over 30 countries which allows us to collect the best practices in each and bring this collective knowledge to any of our projects we are currently developing. We strive to understand the nuances of the cultures within which we work, applying what we know and learning in the process.

As a member of the UN Global Compact, BIG has pledged to support the 17 UN Sustainable Development Goals. We use these goals as an internal metric to understand how our projects can have a positive impact on people's lives and the environment, and carry those metrics from the concept to completion.

THE BIG BUSINESS MODEL AND RISKS



DEMAND

Design gives us the ability to give form to a future that we all want to find ourselves living in. With a diverse workforce from a range of cultures, backgrounds, and experiences, we create places and spaces for communities around the world that are welcoming for all and seek to achieve the highest level of sustainability possible. Every project begins with transparency with our clients from day one.

CONCEPT DEVELOPMENT

During the concept development phase, the BIG team and our collaborators embark on an iterative design process to discover solutions for existing challenges, and new ways to create healthy, long-lasting environments for people and nature. Starting in 2021, we developed our own LCA tool which is made available to our project teams in an effort to bring more transparency and intelligence to our sustainable design practices. Additionally, designing a successful project necessitates the protection of employee's rights, and an equal, equitable, and inclusive work environment.

CONCEPT REALIZATION

Once we have found the best possible design solution for the client, community, and the natural environment, the concept is realized. Knowing that the construction industry is largely responsible for global carbon emissions, we are always looking for new technologies and methods to build sustainably. As such, our LCA tool is continuously improved, sourcing the latest information from our suppliers and collaborators.

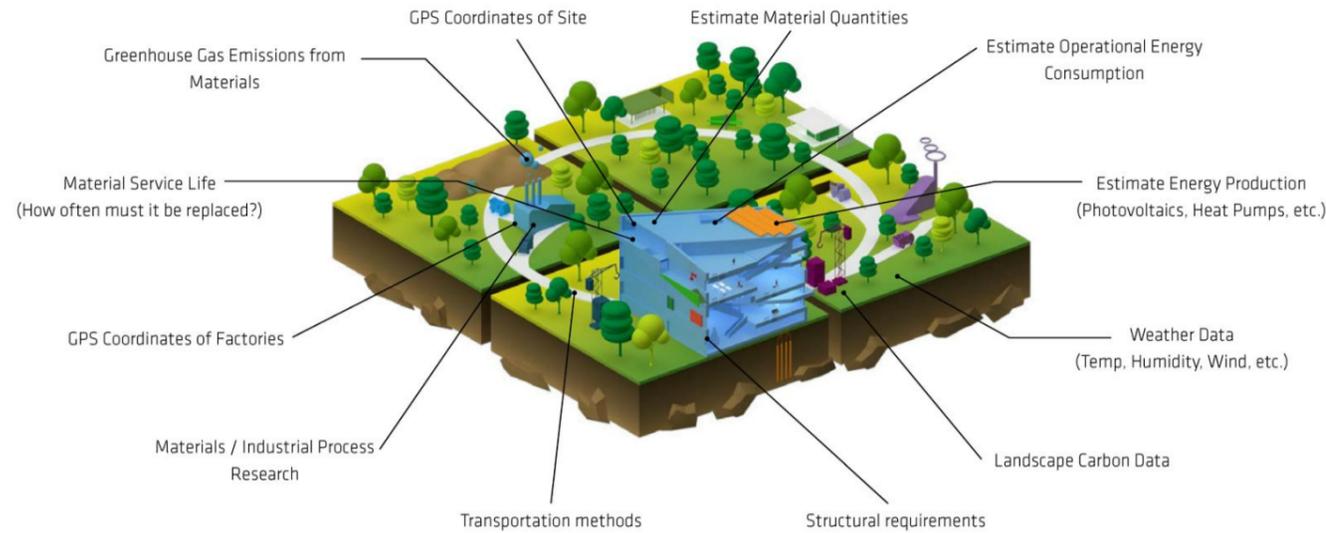
EXPERIENCING ARCHITECTURE

We believe that a successful project is one that encourages relationships between people, their communities, global visitors and with nature. Our success criteria are based off the UN's 17 Sustainable Development Goals—a blueprint for achieving a sustainable planet for all.

END OF LIFESPAN

Architecture eventually reaches the end of its lifespan. We seek responsible demolition practices, and also pursue projects that rehabilitate existing buildings to prevent the production of new building materials and the effects of construction on the planet. We factor end-of-life into our sustainability calculations from day one.

Life Cycle Analysis



158,800
terawatt-hours per year

What does it take to reach a 100% Carbon neutral planet Earth?



2022 COMMITMENT TO LIFECYCLE ANALYSIS

To assess the CO2 contribution of our buildings we are developing our own Life Cycle Analysis (LCA) tool to assess our projects over a 50-60 year period based on three EN15879 standard principles:

1. The material use of the built building (this is A1-A5 stages)
2. The building in use: where energy usages are considered, life span of building materials and maintenance (B1-B7)
3. And lastly the end of life of the building and it's materials (C1-C3 and D)

When we look at the life cycle assessments from the built building A1-A5 stages, the biggest CO2 impact is the structure. Working closely with our in-house structural engineers in the early design phases to build with low carbon emitting structures or to reuse existing structures is important. When we look at the building in use B1-B7 stages, energy usages are the major contributors to CO2 emissions. Here we have our own in-house energy engineer that helps asses projects in early concept, so that we use less energy, translated into well insulated walls and optimally orientated buildings, as well as an energy strategy tailored to the site where we are building.

We look into the energy usages and depending of the site, how much of it can come from renewable energy sources instead of non-renewable sources. We assess buildings over a 50-60 year period, however, in the best case scenario the building is not standing for 60 years, but much longer, which is why energy performance is vital.

When we assess the building from a usage perspective the following is important: flexibility and adaptability (structural systems that allows for many different usages (slap/column grid)), buildings made of materials with a long-life span (less material use), and buildings that are maintainable, with low materials usages. In the end-of-life scenario C1-C3 and D stages, it is important that the building materials are recyclable or reusable, so that they do not contribute to pollution but can be included directly within a new product system.



MASTERPLANET - A VISION AND PLAN FOR A CARBON NEUTRAL PLANET

Over 7.7 billion humans live on Earth and depend on its biosphere and natural resources for their survival. While the subject of climate change has reached peak awareness politically, there seems to be an absence of concrete proposals for how to address the problem on a global scale. Rather than the cacophony of reports and speeches, partial goals, and limited regulation that characterize the current efforts, we believe that a master plan for our entire planet would help create a tangible, actionable, executable plan — pragmatic in its principles, utopian in its ambition.

To do this, we approach the planet in the same manner as we would approach a planning or architectural project of any scale: carefully identify the problem and opportunities, research the possible technological solutions, explore and benchmark multiple options of intervention, quantify the means and scope of work, resolve the basic planning implications, visualize the impact, break down the steps needed for realization, and propose a phasing and financing model. Our objective is to create a manual that can be intuitively understood and implemented by various user groups in diverse industries to support the sustainability ambitions of our world and future wellbeing.

Masterplanet aims to address the fundamental challenges of energy, transport, industry, biodiversity, resources, pollution, water, food, and prosperous living conditions for a world with up to 10 billion inhabitants. The purpose of the project is to present an overview of what it would actually take to stop the net emission of greenhouse gasses, and to get an idea of the practical implications of the ultimate goal, a 100 percent sustainable human presence on planet Earth. This initiative is our approach to thinking bigger and connecting the sustainable ambitions of our built environment from the small scale to the planetary scale.



THE PLUS FURNITURE FACTORY, NORWAY

REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES



We are committed to finding unique ways in which our projects can benefit underserved communities. In Cambodia, we are working on the CCF Institute, a pro-bono project to provide educational, healthcare and community development opportunities for 250 girls living in extreme poverty. The CCF Institute for Girls will ensure that these girls, and future generations of Cambodian girls, are given the resources to be successful in Cambodia's economic developments. The quality and breadth of education provided will mean CCF's girls can enter society as competent, confident leaders who will not only have the opportunity to engage in, but also have the capacity to positively influence, their country's development and that of the region.

BIG is also committed to creating equitable housing throughout the globe. Since 2014, we have been collaborating with World Housing to build a new home in Phnom Penh for every unit of housing of the Vancouver House. This partnership with Westbank and World House—a one-for-one commitment—is the first of its kind to World Housing by a developer. To date, we have helped build 320 homes out of a total of 375, forming 24 communities and housing 1,500 people, and a projected 375 additional people by completion. With 100 new units of affordable housing built each year, to date we have developed over 200 affordable housing units in NYC alone. In projects including VIA 57 West in New York City and The Smile in Harlem, 20% of units are designated for affordable housing. In Copenhagen, we fulfilled our "Homes for All" mission for non-profit social housing association Lejerbo. The building offers 66 new homes to low-income citizens featuring unprecedented 3.5m ceilings, generous floor-to-ceiling windows and outdoor terraces, realized on a strict budget. The residential building, Vejlevej, in Denmark, includes a total amount of 64 homes divided between 22 private, 31 affordable housing and 11 nursing homes, creating a new community. In 2022, we submitted a concept for The Bailey-Holt House in NYC, which will provide 74 studio units and affordable housing for formerly homeless individuals with HIV/AIDS.

Lastly, we are currently undertaking a pro-bono effort to design 3D printed community center for a 500 affordable home community in Tabasco, the third-goorest state in Mexico.

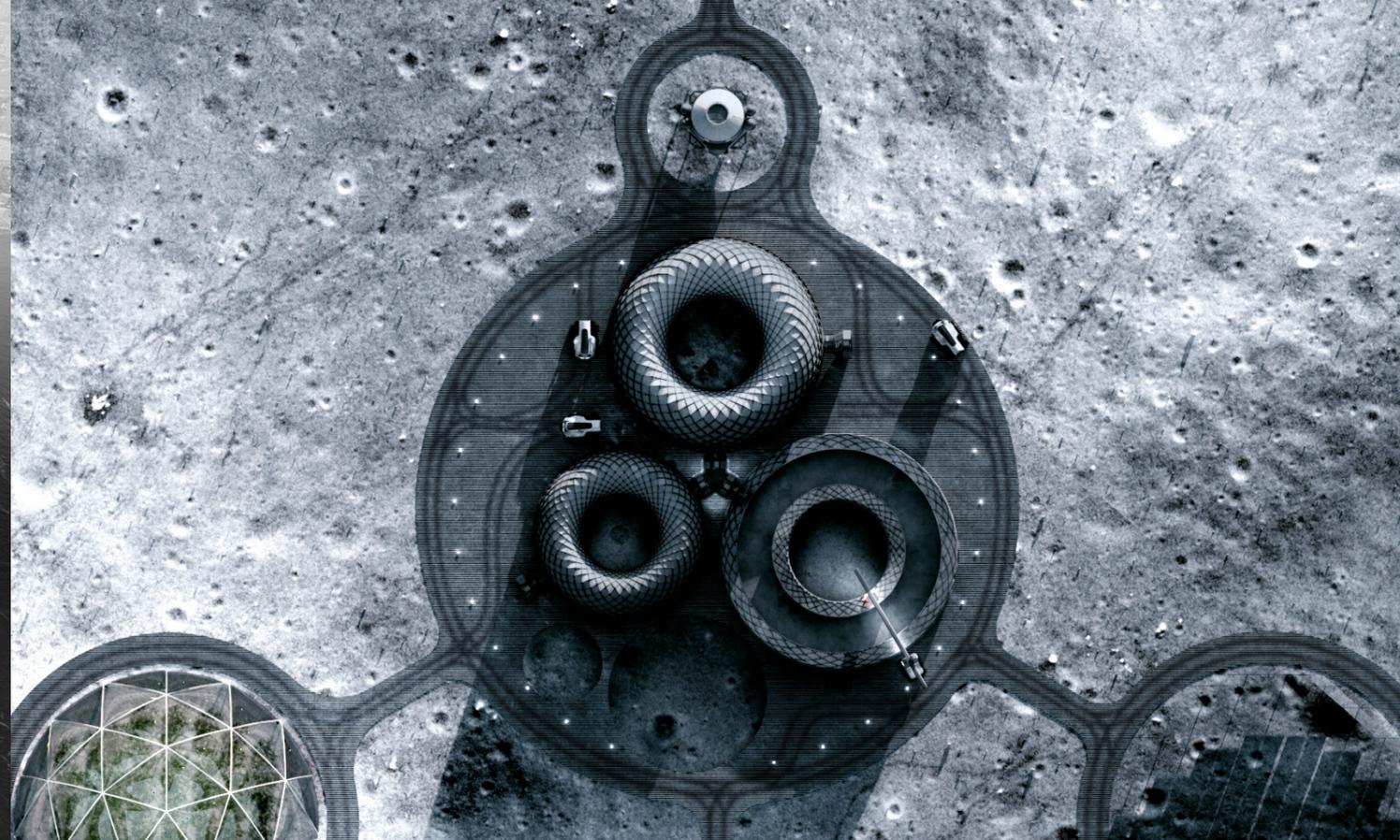


ENCOURAGING SUSTAINABLE PRACTICES

With the Paris Agreement from 2015, the goal is to prevent the global mean temperature from rising by more than 1.5° C or 34.7°F. Achieving this goal will require greenhouse gas emissions to be halved in less than ten years. At the same time, the world must halt the loss of biodiversity and protect precious natural environments. These are the two key objectives for the Norwegian furniture manufacturer, Vestre, to create green growth: creating economic growth by managing the world's natural resources in a sustainable way. They aim to strengthen the long-awaited green shift in the manufacturing industry, by building the world's most environmentally friendly furniture factory in Norway.

In 2022, BIG is realizing this ambition by celebrating the opening of the world's most sustainable furniture factory, The Plus, dedicated to the high-end fabrication of urban and social furniture in the heart of the Norwegian forest. Not only is the production inside the factory but also the building itself set to be an example of CO2 and waste reduction to ensure a long living, flexible and profitable production facility - open and friendly for everyone interested in sustainable furniture manufacturing, landscape design and architecture. The 6.500 M2 factory located in the woods becomes a new landmark and the evidence that industrial production can be sustainable and profitable in a high cost country like Norway.

With high ambitions for sustainability, The Plus is designed to achieve the very highest environmental rating, BREEAM Outstanding, meeting the goals of the Paris Agreement. The Plus will generate 50 per cent less greenhouse gas emissions than a conventional factory, going beyond the goal of cutting greenhouse gas emissions by 40 per cent by 2030. This is only possible due to carefully choosing all materials by their environmental impact: the building shell meets Passive House Standards and the load-bearing structure is constructed from local, solid wood, as well as low-carbon concrete and recycled reinforcing steel. In addition, a combination of fossil-free and emission-free machines will be used at the construction site. The Plus is designed to inspire manufacturers to become global innovators, strengthening the development of global sustainable practices and responsible production.



DESIGNING AND BUILDING RESILIENT INFRASTRUCTURE



By 2050, 90% of the world's largest cities will be exposed to rising seas. The vast majority of coastal cities will be impacted by coastal erosion and flooding, displacing millions of people, while destroying homes and infrastructure. With the construction of the BIG U masterplan in NYC, we have developed resilient and sustainable toolkits paired with technological innovations for vulnerable coastal cities from San Francisco to Penang, Malaysia.

As urban centers around the country turn away from highly trafficked ports and degraded shorelines back towards the kind of harbor life that founded them, these projects represent a new vision of a balanced habitat for a wide range of human, plant, and animal communities. New York City took an unprecedented step in being the first major city to tie its sustainability and resilience plan reporting to the UN Sustainable Development Goals and we are very proud to have taken on a significant role in this series of initiatives.

The Big U is a protective system that encircles Manhattan, responding to the needs and concerns of the island's diverse communities. Stretching from West 57th Street south to The Battery and up to East 42nd Street, the Big U protects 10 continuous miles of low-lying geography that comprises an incredibly dense, vibrant, and vulnerable urban area. The ESCR project is the first of these compartments to advance from the Big U concept and spans 2.5 miles of Manhattan's east side, and broke ground in 2020.

BIG is also designing Penang South Islands to transform Penang into a sustainable, global destination by providing the area of approximately 4,6 km of public beaches, 600 acres of parks and 25 km waterfront. BIG's design is centered around biodiversity using development to increase the green space, plant and animal species, and overall health and well-being of the environment, rather than destroy it. The project includes 4,500 acres across three islands off the coast of Malaysia, that integrates localized water resources, renewable energy and waste management, tied altogether in a human-made ecosystem.

Most recently, BIG, in collaboration with the UN-Habitat and Oceanix reached an agreement with the city of Busan in South Korea, to build the world's first floating metropolis. The project could be completed as soon as 2025, and would help provide a blueprint for coastal cities looking to combat climate change.



CREATE PARTNERSHIPS THAT SUPPORT AND IMPLEMENT THE GOALS OF SUSTAINABLE CITIES

In all our projects, we always strive to create international partnerships and strategic collaborations supporting sustainable innovation and development, as well as knowledge sharing of science, technology and innovation. Since we always seek opportunities to work in all parts of the world—from hot to cold, and even in outer space— we are continuously searching to create strong partnerships across nations to promote a more inclusive and equitable society through our design of the built environment.

As we strive to design the best solutions to the world's most challenging problems, we are currently experimenting with the technologies, robotics, 3D printing and AI. These technologies will be the future of construction as it increases productivity, reduces costs, and allow new design opportunities for optimizing the performance of buildings. Therefore, one of our most significant partnerships is the collaboration with ICON, a developer of advanced construction technologies that help humanity by using 3D printing robotics, software and advanced materials. They have used these technologies to 3D print social housing since 2018.

This year, we extended our partnership with ICON, and teamed up with SEArch+ (Space Exploration Architecture) to work with NASA on beginning research and development of a space-based construction system that could support future exploration of the Moon. As part of NASA's Artemis program, we are designing Project Olympus, a sustainable lunar habitat that will be the first human foray into extra-terrestrial construction with robust structures that provide better thermal, radiation, and micrometeorite protection than metal or inflatable habitats can offer. The construction system includes a 3D-printed structure using local materials found on the moon's surface, which makes the design highly sustainable and reduces waste. In collaboration with NASA's Marshall Space Flight Center, our team will use a simulant of moon soil to investigate a 3D-printable robotic construction. Together with ICON, SEArch+ and NASA, the aim is to develop future building techniques that can be used for sustainable development both in Space and on Earth. Hence, the collective efforts exemplify how we strive for partnerships that support sustainable change.

"I have seen hundreds or thousands of presentations about space architecture and work on the Moon, and this is the best I have ever seen."

— Mark McDonald,
NASA Chief Architect



BUILD INCLUSIVE AND ACCESSIBLE GREEN AND PUBLIC SPACES, THAT FOSTER SUSTAINABLE DEVELOPMENT IN CITIES



In 2019, the celebrated BIG-designed Copenhill in Copenhagen opened its doors to the public. A combined waste-to-energy facility and urban park, the plant is the first of its kind—economically, environmentally, and socially profitable. Not only is it the cleanest waste-to-energy plant in the world, but also a recreational destination for everyone from Olympic skiers to locals looking to hit the slopes, climb the tallest rock wall in the world, hike, mountain bike, or enjoy views of Copenhagen. The project is our most blatant manifestation of social infrastructure: a piece of public utility that opens with positive social and environmental side effects from day one. CopenHill converts 440,000 tons of waste annually into enough clean energy to deliver electricity and district heating for 150,000 homes, producing 25% more energy than the original plant from the same amount of waste. Copenhill harvests local resources, rainwater, daylight and natural airflows. The 10,000 M² green roof includes 400 plant species, addresses the challenging micro-climate of an 85m high park, rewilds a biodiverse landscape and adds social spaces for all species not just human.

As a new typology, CopenHill is a great example of hedonistic sustainability. It goes beyond being only environmentally profitable, by adding a new urban spaces for citizens and becoming the bedrock of the social life in the city. Hence, the plant has stimulated many conversations around sustainability. In its opening week, Copenhill hosted C40 Cities sustainability talks, and became an important part of the Mayor's commitment to achieving carbon neutrality for Copenhagen within the next 5 years. The power plant has become an international landmark for visits from global leaders including Michael Bloomberg and Greta Thunberg.

"BIG takes the industrial architectural typology and transforms it... offering a new breed of waste-to-energy plant."

– MIPIM Future Award Jury



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

"Yes is More" is our optimistic motto for inclusivity—an architecture that is driven by saying yes to all the demands and concerns of the surrounding society. Buildings are never stand-alone entities. Instead, they are part of a larger network, a campus tied together by rich public spaces and the complex urban context. As such, we involve and engage our clients, the community, future users, and any other experts and stakeholders early in the design process, to broaden our own understanding of a project through their input, which directly impacts our examination and analysis.

Similarly, we seek opportunities to work in all parts of the world—from hot to cold, and even, in outer space—to promote a more inclusive and equitable society through our design of the built environment. By working internationally, BIG has a unique opportunity and responsibility to try to affect change throughout the world and break down socio-economic barriers across borders. While some companies refuse to work in certain countries for political reasons, we believe our work in the Middle East, for example, which builds on our extensive cultural experience, can have a positive impact in helping establish a new social infrastructure for the local community by translating our beliefs and principles into the architecture that ultimately shapes society. Across all of our projects, we challenge clients, subvert programs, and shift typologies in an effort to create a more equitable environment for all.

As life evolves, so should our cities and buildings. If they don't fit with the way we want to live our lives, it is our responsibility to make sure we change the city and make our physical world a bit more like our dreams, or our fantasies.



THE PLUS CONSTRUCTION SITE, NORWAY



BIG CPH OFFICE, COPENHAGEN, DK

OUR HUMAN RIGHTS POLICY

INTRODUCTION

BIG firmly believes that human rights are indisputable universal truths. We are unwavering in our determination to, as far as we are able, provide all humans the rights and freedoms they wish to enjoy. BIG will never knowingly be complicit in human rights abuses, and instead always seek to uphold the rights and freedoms of all, contributing where we are able.

POLICY

We believe that architects have a responsibility to uphold human rights in their work and working relationships. Every client of BIG is held to the same standard that we expect of ourselves for protecting the rights and freedoms of all people in the world. Our projects are created with the lens of how we can make the world a better place, and collectively work toward a future that we all want to live in. To the extent of our ability, we work to prevent the violation of human rights.

BIG adheres to the guidelines provided by the Danish Association of Architectural Companies (Danske Ark). These provide guidelines to exercise due diligence in connection to all phases of design and construction. BIG deliberately declines invitations to engage in projects or collaborations when our assessment of a country, region, or organization proves that our involvement will potentially contribute to supporting violation of internationally proclaimed human rights. When our internal screenings do not provide sufficient information to make a decision on whether to engage in a project or not, we will consult with the Danish General Consulates around the world. In addition to our commitment to prevent any violation or negative impact on human rights, we continue to strive that human rights are developed and supported in the designs of our projects and the way we run our business.

RISK & ISSUES

For architects working on numerous projects a year, around the world, it is challenging to have a full understanding of the global production chain of a project from concept to completion. Although subconsultants collaborating on BIG projects are chosen based on their expertise and same values and standard of human rights protection, the subcontractors and material production is challenging for an architect to have precise knowledge of. This includes whether subcontractors are meeting legally binding national employment rights.

2022 GOALS

Our ongoing goals have not changed from previous years—we continue to ensure that human rights are developed and supported in the designs of our projects and the way we run our business. In 2021, we founded a global Diversity, Equity and Inclusion Committee, tasked with bringing more of all three to BIG. In 2022 and beyond, we seek to act on the 6 DEI Pillars as identified by the Committee and we are already seeing positive effects of this effort. In addition, BIG continues to employ aspiring students from countries around the world to enable people from various cultures, backgrounds and experiences to work together, learn from each other, and respect the universal rights we strive to uphold. As we select our clients, our projects, and the regions in which we do work, we carefully consider the positions prospective clients take relative to human rights.

2022 ACTIVITIES

In countries and projects, where violation on human rights is more likely to happen than in our core markets, the responsible partner, project leader and other key staff members will in the coming year be educated in our policy. We keep updating and evaluating our vetting procedures and practices in order to act proactively and globally-aligned, as well as to develop a protocol which outline a course of action in the unfortunate case that we should discover that any stakeholder does not work to protect human rights proclaimed by the United Nations.



OUR LABOR RIGHTS POLICY

INTRODUCTION

The Global Compact's principles relating to labor rights are interpreted literally and so followed. BIG opposes any form of forced and compulsory labor, condemns child labor practices, effectively recognizes the right to collective bargaining, and does not practice discrimination. BIG upholds labor rights principals and respects the rights of employees in the many countries where we work.

POLICY

BIG's greatest asset is its employees. At BIG, we take employee well-being, development, and engagement as seriously as we do architectural design. The larger we grow as a company, the more we strive to create a workplace that encourages input, dialogue, interaction, and collaboration across the network of relations of BIG's flat hierarchy. We believe it is a prerequisite for both our creative processes as well as our project delivery methodology that everybody knows that they can speak their mind and that their opinion counts. All BIG employees, regardless of position held or field of expertise, are given a voice—a voice that is heard and valued. Employees are more aware of their importance to the company by being encouraged to communicate with the management regarding all areas of the growing company.

NO FORCED LABOR

There is neither forced nor compulsory labor at BIG, and we do not condone or tolerate this within our own office or in the offices of our collaborators. Should any managing partner be informed that employees are forced to work, the situation will be swiftly resolved. We do not accept policies of companies, clients, colleagues, or collaborators that employ forced labor. In countries where this could be an issue, and where we are able to influence the construction process, forced labor of any kind will not be tolerated whether the collaborators are from the private or public sector.

ABOLITION OF CHILD LABOR

BIG is not involved in any projects that make use of child labor, nor will we ever be. The epitome of BIG's philosophy of hedonistic sustainability is the opposite of children forced into a situation of labor. Hedonistic sustainability is about creating tolerable situations in which all peoples may live happily; BIG will never tolerate child labor and will always support all efforts to abolish this practice.

WORKPLACE SAFETY

As an architecture studio, BIG maintains workshops fully equipped with the most advanced laser cutters, wood cutters, and tools and materials necessary to produce architectural models, in addition to the facilities of an average office. Thus, we have strict guidelines for use of the model workshops and take extreme precautions to ensure the safety of anyone handling said tools and machinery. All employees are given a workshop orientation with the workshop manager, covering basic safety guidelines and proper workshop protocol to ensure the workshop is a safe place to work for all. Proper ventilation is provided for the spray painting and foam cutting areas. The office first aid supplies are kept on an easily accessible and clearly visible shelf, and are regularly checked and restocked.

EMPLOYEE ENGAGEMENT

As mentioned above, BIG has a well-established Health and Safety Committee that oversees the safety and health of all employees. BIG also conducts work place assessments regularly and since 2017 the focus on the psycho-social and engagement-related matters has been expanded.

In addition, BIG has instituted a number of activities to support the health of our employees, such as a healthy company-subsidized lunch, discount deals for employees at gyms and fitness-centers, and company subsidized participation in sporting events.



BIG is committed to offering growth and learning opportunities across all offices. Hence, we have established BIG LEARN - an umbrella of various initiatives that support this development. In 2020, we established BIG ACADEMY, an internal education program, that offers courses in project leadership and management, BIM, Computational Design, Tech, Sustainable Architecture and the UN SDG's. Additionally, we offer an in-house lecture series, BIG PICTURE, inviting external, inspirational speakers to present at our offices, as well as BIG SCHOOL, where BIG employees are invited to share their own expertise in monthly presentations and training sessions available to all employees. BIG also supports staff with a \$250 continuing education fund per employee which can be used towards memberships, certifications, or outside courses. With these initiatives we aim to give our employees the opportunity to grow their skillset and develop unique competencies.

BIG participates in the Global Goals World Cup, a sports and advocacy game geared towards forwarding the UN Sustainable Development Goals by 2030. With past games having been conducted in Copenhagen & Nairobi, representatives of BIG NYC took part in the finals in New York in 2017. The game was opened by her Royal Highness the Crown princess Mary of Denmark and was refereed by UNDP Goodwill ambassador Nikolaj Coster-Waldau & Nobel Peace Prize nominee Victor Ochen.

Finally, BIG has always offered profit sharing as a means to ensure that when the company is doing well, all employees—from kitchen and reception to executive's office—are recognized for their contribution and receive their share. There is no discriminatory risk in the program as employees in the same job family receive the same percentage of their salary.

RISK & ISSUES

Critical to our work is the ability to attract and retain creative talent from around the world. Without the talent of our employees at BIG, our projects are not as successful nor are we able to have the positive impact on the world that we strive for. A company that does not uphold labor rights, and that does not maintain a safe workplace, is at a great risk of losing the talent necessary for that company's survival.

2022 GOALS

Our ongoing goal is to ensure the health, well-being, and development of our employees, and we also continue to encourage feedback from and to all employees and aim to better integrate employees into the countries in which they are working as we branch out from our home base in Copenhagen into the rest of the world.

There are several feedback mechanisms we have installed to ensure we capture feedback from employees on their engagement and well-being—ranging from quantitative surveys, onboarding evaluation conversations with each individual two and a half months after startup, and exit interviews. They allow us to constantly evaluate if there are any employee engagement issues we need to address. Also, we have an additional, voluntary opportunity for employees to have focused input on how to strengthen skills. This last year we have implemented an upward feedback loop to allow managers to receive feedback from their employees as well. This process ensures that managers are getting the support and knowledge they need in order to successfully lead their teams, and that employees feel their needs and concerns are heard by their managers.

The feedback mechanisms in place at BIG working in tandem with the Diversity, Equity, and Inclusion Committee established last year (further detailed in the Diversity, Equity, and Inclusion section here), created to ensure that all employees receive fair, equitable and equal treatment at BIG. The feedback mechanisms at BIG allow employees to openly voice their concerns about diversity, equity, and inclusion in the workplace.

An important part of the workforce at BIG are students (interns), as it is common practice to spend six to eighteen months during the training to become an architect or construction architect. This group has a formalized forum where it can meet during working hours. We have also established an intern evaluation system, which allows interns to discover their strengths and weaknesses following the completion of projects as part of their architectural education.

2022 ACTIVITIES

After a challenging year, during which a majority of our workforce has been operating from home, we will be spending our time and resources during 2022 on strengthening the social fabric of our practice, starting with several new social and educational events. In addition to more informal events such as parties and Friday celebrations, we will implement a variety of BIG Learn and BIG Schools where new employees will have the opportunity to be exposed to our design thinking, visions, and mission.

We established our DEI SteerCo in the Summer of 2020 and have since welcomed two new members



Linus Saavedra



Daria Pahhota



Tran Le



Kai-Uwe Bergmann



Sheela Sogaard



Douglass Alligood



Jessica Wells



Daniel Sundlin

DIVERSITY, EQUITY AND INCLUSION

INTRODUCTION

Our mission is to respond to the world's greatest challenges with designs that give form to a future that accounts for and benefits us all. A diverse and inclusive workplace is instrumental to deliver these thought provoking and groundbreaking designs. We do not have all the answers, but we are committed to listening, learning and collectively working towards a world where we are all equally heard and respected.

BIG upholds this principle by choosing to not practice discrimination of any kind. All employees are chosen on their talents and skills alone, as well as the requirements for the project. Diversity has been part of our DNA since BIG's foundation. A multitude of cultures and backgrounds creates a new point of reference which leads to amazing insights. At BIG, we celebrate and support diversity because it makes our team, work, and the built environment better. We are proud to be an equal opportunity workplace and take affirmative action to employ equally regardless of race, color, ancestry, religion, sex, national origin, sexual orientation, age, citizenship, marital status, disability, gender identity, or Veteran status.

APPROACH

BIG has a zero-tolerance policy with regard to discrimination in or outside of the workplace. BIG strictly prohibits all forms of unlawful discrimination, including on the basis of race, religion, or any other category protected by applicable state or federal law. Beyond discrimination, we do not take bullying and harassment of colleagues lightly. The BIG personnel handbook states that bullying and harassment are not tolerated in or outside of the workplace.

As BIG employs nearly 30 nationalities, we have a particular focus on ensuring that all feel treated with respect and are included at the work place. This comes naturally due to the diversity of the workforce. English is installed at the official language at work, ensuring all work on equal terms. The above-mentioned employee representatives come from all parts of the world (India, Hawaii, Denmark, China, France etc.). We have national diversity in all managerial levels and report on this internally on an annual basis. We treat gender equality with the same focus. As a company led by a female CEO and where a third of the Group Management (C-suite) are female, BIG strives to have a gender distribution at all managerial levels that mirror the organization.



BIG's philosophy of an inclusive and proactive design process extends to how we assemble our project teams; BIG regularly works with consultants from various fields, such as civil engineering, landscape, and historic preservation, who are registered as disadvantaged business enterprises. These include Minority- or Woman-Owned Business Enterprises (M/WBE), Local Disadvantaged Business Enterprises (LDBE), Veteran-Owned Small Businesses (VSOB), and other such classifications. BIG supports the goals of Requests for Qualifications/Proposals offerors to include disadvantaged enterprises, and, as a respondent to these RFQ/P's, BIG composes teams to meet and even exceed these goals. One example is the pursuit of an academic project in Virginia, we put together a team comprising 50% Small, Women-owned, and Minority-owned Business (SWaM) certified consultants.

"Yes is More" is our optimistic motto for inclusivity—an architecture that is driven by saying yes to all the demands and concerns of the surrounding society. Buildings are never stand-alone entities. Instead, they are part of a larger network, a campus tied together by rich public spaces and the complex urban context. As such, we involve and engage our clients, the community, future users, and any other experts and stakeholders early in the design process, to broaden our own understanding of a project through their input, which directly impacts our examination and analysis.

Similarly, we seek opportunities to work in all parts of the world—from hot to cold, and even, in outer space—to promote a more inclusive and equitable society through our design of the built environment. By working internationally, BIG has a unique opportunity and responsibility to try to affect change throughout the world and break down socio-economic barriers across borders. While some companies refuse to work in certain countries for political reasons, we believe our work in the Middle East, for example, which builds on our extensive cultural experience, can have a positive impact in helping establish a new social infrastructure for the local community by translating our beliefs and principles into the architecture that ultimately shapes society. Across all of our projects, we challenge clients, subvert programs, and shift typologies in an effort to create a more equitable environment for all.



BIG TEAM IN THE SHENZHEN OFFICE, CHINA



VIA WEST 57 CONSTRUCTION SITE, NYC

RISK & ISSUES

It is proven that a diverse company is a more successful and impactful company. A diverse workforce reflects the cultural diversity of the world. As architects, this is critical to be able to build a better future for us all. Without providing an equal and equitable work environment, a company will be unable to maintain a safe environment for their employees, and therefore will be unable to retain the talent they need to succeed in various markets and with clients.

2022 GOALS

In 2022, 47% of the total workforce at BIG are women: 45% of architects/designers; 37% of Associates and Directors, 67% of the C-suite, 17% of the partner group, and 33% of the External board members. In response to ongoing racial inequality in the United States and many other places in the world, BIG implemented a Diversity, Equity, and Inclusion (DEI) Committee to ensure that all employees at BIG feel safe, heard, and that they can succeed at BIG in equal part to their peers. This task force was assisted by employees voluntarily as well. The first goal of the DEI Committee was to have a thorough understanding of BIG's existing practices and protocols to ensure an equitable and equal work environment, as well as the success of these practices and protocols. In 2021, we created a framework of 6 DEI Pillars to act on our goals.

2022 ACTIVITIES

In 2022, we are continuing our efforts with the Diversity, Equity, and Inclusion Committee by following through on the goals that we established last year. Our current leadership includes 94 individuals, 32% of whom identify as women, while 18% in our NYC office identify as non-white/caucasian. We aim to increase the inclusion of women to 40% of our leadership, and the number of BIPOC individuals to 25% by 2025. We have outlined six pillars to achieve this:

- **Employing:** We continue to offer equal opportunity at all levels and are committed to doing our part to steer the profession onto a more progressive path starting with equitable hiring practices.
- **Developing:** We seek to empower and enable our colleagues to reach their fullest talent, skill and intelligence guided by principles of inclusion and equity.
- **Collaborating:** We will find more equitable design opportunities and partner with long overlooked minority and women owned collaborators.
- **Designing:** Through our work we will continue the long- standing commitment to inclusive design focusing in equal measures and quantities on impactful projects that consider all genders, ages, abilities or disabilities, sexual orientations, ethnicities, and races.
- **Communicating:** At BIG we will continue to provide an inclusive work environment where we continuously learn from one another and where everyone who joins our journey is listened to and treated with respect.
- **Giving:** Beyond BIG, we will invest into the communities we call home through local school and community programs to ensure that the world we are designing for is more just and humane.

ANTI-CORRUPTION

INTRODUCTION

BIG values transparency and does not tolerate any form of corruption. We are determined to maintain the highest standards of integrity and work ethics among our staff and across all areas of activity. We therefore maintain a zero-tolerance policy towards corruption in all its forms. BIG will not participate in corruption; BIG will not contribute to corruption; BIG will not support corruption.

APPROACH

Externally, when submitting to Requests for Qualifications (RFQs) or Requests for Proposals (RFPs), we always inform the client if there is any potential conflict of interest and make sure that the collaborators on our team do so as well. When choosing projects to pursue, BIG also makes sure that our collaborators and clients are not involved in any activities that suggest corruption. We will not give or accept bribery in any form, and we will not use deception, trickery or breach of confidence to gain an unfair or dishonest advantage.

RISKS & ISSUES

The construction industry broad reach and impact is at great risk of supporting corruption globally. As architects we are aware of the possibility for corruption within the industry, and do our best to make decisions with the knowledge that we have available to fight corruption in our work.

2022 GOALS

In 2022, we have continued our standard of always informing our clients of any potential conflict of interest prior to agreeing to the work. We ensure that this is the same for our collaborators on our project teams as well. In 2022, BIG did not experience any cases of corruption on our projects.

2022 ACTIVITIES

In 2022, we will continue our anti-corruption internal standards by ensuring that internal staff are educated and clients are aware of any conflicts of interest for us or our collaborators prior to starting a project, refusing to give or accept bribery in any form, or using tricky or breach of confidence to gain an unfair or dishonest advantage.

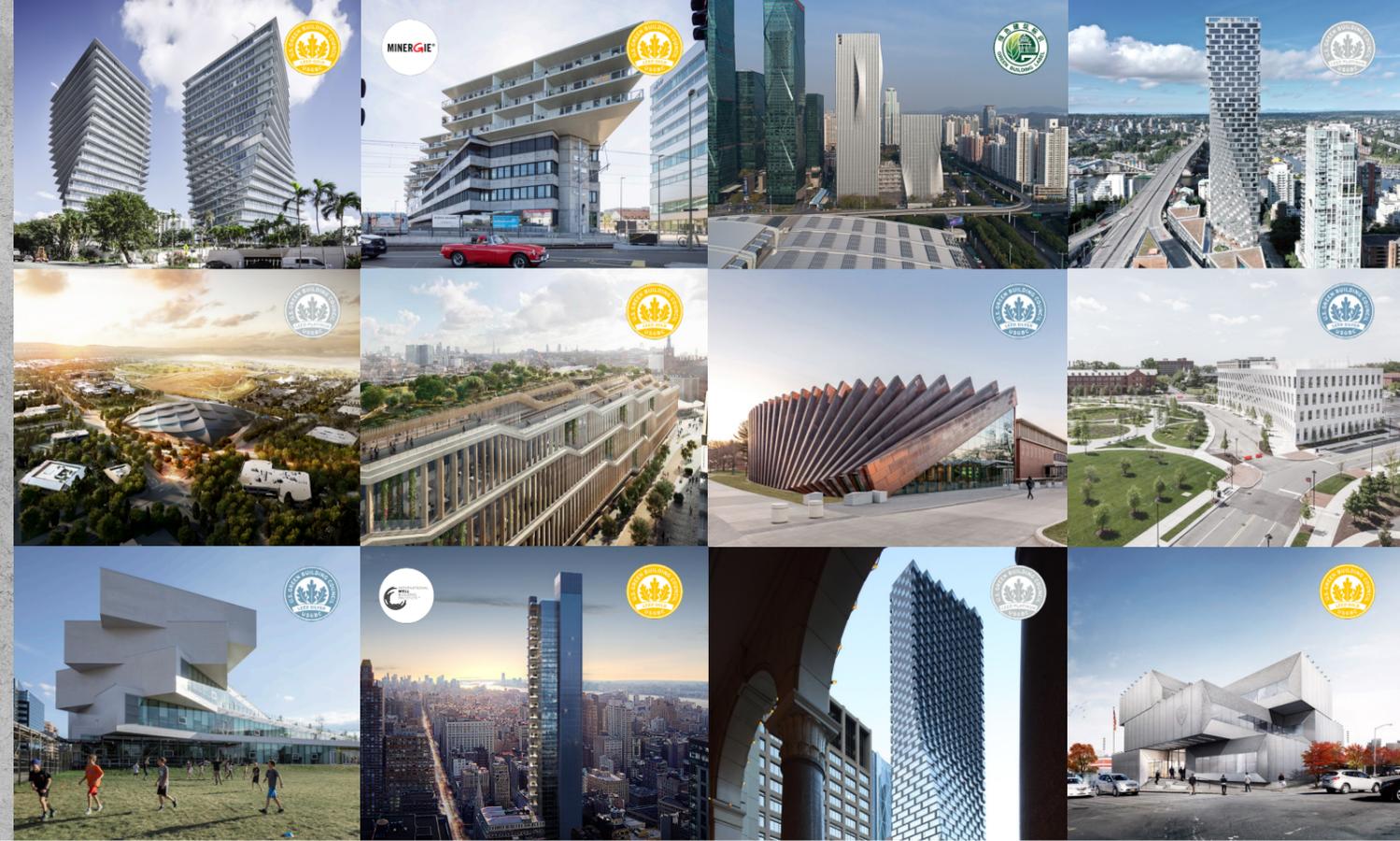
BIG PLANET



Did you know, the average American emits around the size of a 34 story house worth of carbon per year? If we continue in this direction **the oceans will be empty by 2048!**

We, at BIG, are taking steps to help earth and are making **strides to generate a healthier company** where we can be proud to say that we are doing our part for the environment.

- Water:** If livestock were their own country, they would be the 2nd largest emitter of greenhouse gasses, and it takes **15,500 liters/4095 gallons of water to produce 1 kilo/2.2 lbs of beef.** Therefore, to save water and to lower our CO2 footprint, BIG is taking action and serving 2 plant-based meals per week, and 2 poultry-based meals per week.
- Plastic:** A truck load of plastic is dumped into the ocean every minute. For every square mile of ocean, there are 46,000 pieces of plastic floating on the surface. Therefore, BIG is switching to all green and reusable supplies, and we need your help in discarding your trash in the proper containers. Please be mindful and discard your waste responsibly.
- Soil:** At the current rate of progression, 50% of soil life will be dead in 60 years due to erosion, deforestation, and poor farming techniques. Therefore, BIG is eliminating pesticides by switching to organic meals in our space.



ENVIRONMENT AND CLIMATE

INTRODUCTION

We continue to strive for what we call “hedonistic sustainability,” which is sustainability that improves quality of life for everyone while minimizing the impact on the surrounding environment. The general perception of sustainability is an idea of a moral code: How much of our existing quality of life are we prepared to sacrifice to afford being sustainable? It is the perception that it has to hurt to be good and that a sustainable life means doing less than a normal life. But we are looking at how sustainable cities, or sustainable buildings, can increase the quality of life; we look for ways of designing cities and buildings as double ecosystems that are both ecologically and economically profitable, and where the outcome doesn’t need to force people to alter their lifestyles to do good.

In 2021, we officially created BIG Sustainability - our internal department of Computational Design Specialists, material and certifications specialists, which includes architects, engineers, programmers and researchers to further strengthen and develop our work in this field. In 2021, we began work on our in-house LCA tool that will enable us to assess GWP (Global warming potential) from early concept stage. All important decisions are made in concept, height, orientation, volume, basic structure etc. We therefore wanted to be able to assess the Global warming impact, not as an afterthought, but as a design parameter. It has not been an easy task and work is continuing in 2022. We feel confident that we have a functioning tool for our designers in 2022.

POLICY DESIGN

We begin every project with a climatic analysis which then allows us to choose the appropriate sustainable strategies and technologies. We site buildings to optimize their solar orientation, integrate inventive daylighting measures, green roofs, geothermal systems, and greywater systems. We look at the site synergies, their history and thereby sometimes need to address the challenges of brownfield sites. Our strategies always look at the ongoing life cycle value by reducing material, money, and energy. BIG Sustainability acts as a research and development consultancy meant to support the designs coming out of BIG’s offices. This further builds on our holistic design approach and body of knowledge that can cross-pollinate our projects across offices and can exponentially improve how we approach every project and select best suited systems over time.

BIG strives to consider and design with environmentally friendly materials, – essentially always thinking out of the box to create innovative building solutions with materials that haven’t necessarily been employed before in a similar context. We prioritize pioneering ambitious design and construction to pave the way with precedents for future projects and become an example in the greater architectural field.

CERTIFICATIONS

We are currently building projects seeking certifications in LEED, Green Mark, Minergie, DGNB, BREEAM NO, HQE, Estidama, and Passive House Standards. Current projects that have received or are seeking LEED certification include among others Shenzhen International Energy Mansion in China (Gold), two residential towers, The Grove at Grand Bay, in Miami (Gold), Omniturm Tower in Frankfurt (Platinum), Google Charleston East Headquarters (Platinum), the Heights School in Arlington (Gold), Telus Sky Tower in Calgary (Platinum), the Vancouver House tower in Vancouver (Platinum) and an office building in Philadelphia (Gold). To name a selection of projects achieving other certifications: King’s Cross Google Headquarters in London (BREEAM Excellent & LEED Gold), The Plus factory in Oslo (BREEAM Outstanding), BIG Headquarter in Copenhagen (DGNB), and Audemars Piguet Museum in Le Brassus (Minergie). Our designs have received sustainability awards including the Scandinavian Green Roof Award for our 8 House residential development in Copenhagen. For the BIG U, the design has received the 2015 AIA National Honor Award for Regional and Urban Design, 2015 APA National Planning Excellence Award for Urban Design, the 2015 Bronze Holcim Award for Sustainable Construction, and many others. The Superkilen Masterplan in Denmark has been recognized by the Aga Khan Award for Architecture as well as the International Civic Trust Award winner.

OFFICE CULTURE

On the smallest of scales and on a daily basis, BIG follows the “reduce, reuse and recycle” principles in the office. The COVID-19 epidemic, causing limited access to working in all our offices this year, has still been a challenge. However, all our efforts to reduce the overall carbon footprint as a company are still continuing and highly prioritized.

When making architecture models, we save material by optimizing the space on a block of foam or wood and we reuse leftover material whenever possible. Leftover material that cannot be reused is systematically recycled according to type—wood, paper, foam, plexi, and other plastics. We are continuing to use Polyactic Acid (PLA) as a primary material for all our 3D printing. PLA is a renewable corn sugar-based biodegradable plastic. We are always striving to find greener alternatives for all products and materials that we use in our office, and our dedicated workshop team are educating our staff on best practices to ensure that materials are recycled and reused to our best abilities office wide.

RISKS & ISSUES

The construction industry is responsible for 40% of the world’s carbon emissions, and as architects we have a responsibility to find new ways to build sustainably for people and the planet. Our goal to give form to a better future starts with our own building practices. The impact of our projects is not just how they are used, but how they come to fruition, too. We are striving to find ways to build more sustainably. From design, to construction, working worldwide this is not always easy.



BIG CPH OFFICE, COPENHAGEN, DK



BIG CPH OFFICE, COPENHAGEN, DK

2022 GOALS

Our team of BIG LEAPP - Landscape, Engineering, Architecture, Planning and Products—uses the power of a collective to have a greater positive impact, while creating faster and earlier feedback loops between architects and specialists, and more informed design decisions benefiting the client and the world.

As in the years prior, our Business Development team has and will continue in 2022 actively sought clients pursuing sustainable work, many of whom using existing sustainable certifications as a benchmark. To keep track of projects that are certified or seeking certifications our Business Development teams have been at work to develop an in-house value system to measure the sustainability of our projects. Although this value system is still in the development process, we are currently evaluating our projects through what we call PDAs (Post Deadline Actions), which require project leadership to include specifics on the sustainable certifications of the project. These certifications and sustainable attributes of the project are recorded in a digital library, allowing our teams to assess the sustainable elements of our projects.

Our in-house BIG Sustainability team will be continuing to develop our in-house Life Cycle Assessment tool that helps assess the carbon footprint of our buildings throughout the building lifetime. In 2022 our goals for the tool development is targeted towards the European context and for the tool to be applied for Danish building context of counting CO2 in January 2023. Our long-time vision is to further develop the tool to be able to assess projects in concept stage, globally. Due to the global nature of our work, understanding the global warming potential (GWP) of all of our projects is a difficult task that we look forward to continue to take on, as the assessment of GWP varies from region to region. We have found that getting global data on products can be challenging due to local standards are different. Utilizing the LCA tool during the concept phase will enable our design teams to make the right low carbon emission decisions early on, and give clients an informed choice on material and energy performance.

We know that it is not possible to build carbon neutral projects, but we know that we can design projects with low carbon materials, powered by renewable energy and highly energy efficient buildings. We take on all our projects with a global-local perspective, combining global knowledge with local building methods and site-specific energy performance. That also means an extensive knowledge about local building materials and old ways of building. Our goal for 2022 is to build a material knowledge bank across the offices of biobased regional materials.

We have also seen an increasing demand for designing for climate change and resilience, as more and more sites are experiencing 50-100 year climate events more frequently. These events range from rainwater outburst to drought, sea level rise or an increase in the frequency of storms. BIG Sustainability, our R&D and simulations team, support our design teams with simulation studies ranging from solar radiation to complex CFD wind analysis. To do this they have built their own supercomputer from old, discharged computers at our office, which will continue to grow. These simulations help teams and their clients make informed design choices in the concept stage, where the foundation of the design is laid. Designing for climate and resilience is supported by our BIG Landscape team, who combine resilient design with social, biodiverse spaces that become multigenerational destinations.

Additionally, our BIG Engineering structures team has been researching different tools that can assess the GWP of the structures already in concept design, because structure is around 66% of an average building's collected GWP. Right now, the BIG E team is using SCOR, a British based tool for structural engineers. The BIG E team has also developed a tool that quickly can assess structure in a concept building, this can help inform design teams on structural dimensions very early in concept. We will be looking at combining or incorporating this tool with our LCA tool.

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We always look for opportunities to give a gift back to the community in the areas in which we work. This can be the gift of giving surplus energy from our geothermal storage back to the surrounding community, public access to roofs and amenities, or a new park. Because for us social sustainability is just as important – projects that are loved last longer emit less CO2 in the long run.

2022 ACTIVITIES

In 2022 we will continue to allocate resources toward the below tools, methods, and development of skill sets. We are currently implementing the below approaches in our Copenhagen office and aim to do so in all of our offices globally within the next two years.

Within BIG Sustainability: We will employ a coordinator to ensure that we can gather a biobased material library, this knowledge will be embedded into our LCA tool for users all over offices to use. We will employ an energy engineer with programming skills to help support the LCA tool and inform the early concept stage.

Tools:

- Further implement a digital toolbox with low-resolution simulation tools to assist design teams during the design process. This includes sunlight, shadow, solar radiation, daylight, and more.
- We will continue to build and test our internal Life Cycle Assessment tool in our Copenhagen office, aiming to expand the use of the tool to our NYC office in 2022. Over the next 2 years our goal is to be able to do this in all offices, our goal is for all projects in the concept stage to be assessed for GWP, ultimately laying the ground work at the beginning of the project, and ensuring the project's success in future phases of work. We understand that the LCA tool is only successful if its potential is fully understood and realized by its users.
- ADELE – Physical cloud computing for complex simulations e.g. wind, thermal, daylight. In addition we are currently developing a tool for UTCI (universal thermal climate index) to be able to analyze outdoor comfort at large scale for early involvement in concept stage.
- Simulation software development (e.g. Energy shoebox models, Daylight autonomy etc.)

Methods:

- Analyzing the structure of our design process and our design teams, including the involvement of different specialists and how they contribute to our projects.

Skills:

- We will be educating our design teams in the use of the tools, but also the importance of sustainable metrics. BIG will implement tutorials on materials knowledge, as well as general knowledge on sustainable design accessible for all BIGsters as part of our internal BIG School program.
- Our hiring practices will reflect the sustainable goals that we have outlined for our practice.



DATA PRIVACY AND PROTECTION

INTRODUCTION

Personal data and data in general have a bigger impact on people and organizations than ever before. The data organizations collect, process, and stores has increased concurrently with the general digitalization of the world, which has put an increased focus on organizations and their employee's ability to handle data. BIG collects, keep and processes many types of data, and it is important for us, that our employees and stakeholders have trust in our handling of this data.

POLICY

Our data ethics principles apply in all aspects of the purchase, implementations and process of technologies that uses any kind of data. We strive to only use, collect, and process data necessary to fulfill the desired tasks in focus. It is always considered whether it is possible to achieve the same purpose by collecting anonymized data instead of personally identifiable data. The data processing must always comply with the applicable law, hence why BIG requires processing of personal data to act in accordance with the General Data Protection Regulation (GDPR).

Personal data is only processed for purposes that are proportionate, taking into account the individual's rights, including the right to privacy. Therefore, a proportionality assessment is always performed, before starting new treatment activities, or before implementing and / or designing technologies to process data, including in particular personal data. If the proportionality assessment shows that the treatment is not proportionate, the treatment activity must not be initiated.

Technologies that are processing data, in particular personal data, must be designed to comply with BIG principles of data ethics as well as the principles described in GDPR. This includes, but not limits, the design that ensures correct and timely deletion of data in accordance with BIG retention policies for the data of subject. Data is processed consistent with the intentions of the issuing party, expectations and understanding.

RISKS & ISSUES

An adequate level of security is implemented in and around the technologies used to process data at all times. The security measures include technical as well as organizational measures, and the necessary level of security is determined on the basis of a risk assessment of the specific processing activity and the technology used to process the data.

Data at BIG is always processed in a way that ensures transparency, especially in cases where algorithms and automated processes are used for data processing. We also do a subsequent human review of the results when a data processing activity includes automated decision-making regarding decisions that can have significant impact.

In the processing of data and the design of the technologies used for data processing, we always seek to ensure that human rights are respected. For example, at BIG, we ensure that the processing of data or the use of technologies to process data is not be biased, to eliminate risk of discrimination, marginalization or stigmatization of individuals.

We are always working to stay compliant, with regular audits, maintaining certifications, and sharing tools and information to strengthen BIG's compliance.



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