SECTOR BOOK

ENVIRONMENTAL ENGINEERING AND SUSTAINABILITY



THE PRACTICE

THE BOARD

GLOBAL REACH

THE PROCESS

SECTORS

AREAS OF EXPERTISE



The Practice

Founding Values

The history of the studio merges with the history of its founder, Miguel Saraiva, CEO and the architect conceptually responsible for each project design.

It was out of the passion that he has always had for architectural design, combined with a unique ideological vision to transform a small studio into a corporate structure able to take his idea of architecture abroad, that S+A became a world-scale auteur studio.

With the creative hub located in Lisbon, where more than an hundred of its employees work, it distinguishes itself for the capability to open to the world, adapting to each new market and to the challenges of an ever-changing society.

Today, with offices spread over several countries, S+A stands out for leaving a mark in different international landscapes.

Collective Intelligence

Since 2013, S+A's operations covers a widest range of services, comprising not only Architecture and Urban Planning, but also the areas of Design and Sustainability. This versatility became one of the Group strengths, which nowadays builds bridges of trust and preserves strong relationships with all the partners.

The studio understands architecture as a collaborative and cross-disciplinary exercise, with quality as the underpinning growth driver. Currently employs approximately 150 professionals who are led by partners, country managers and other business leaders. With a skilled and multidisciplinary team - besides architects, engineers and designers - S+A has a wide range of specialists, delivering experience and knowledge to each tailored and singular project.

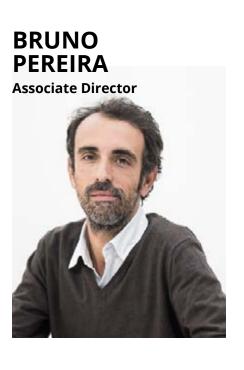


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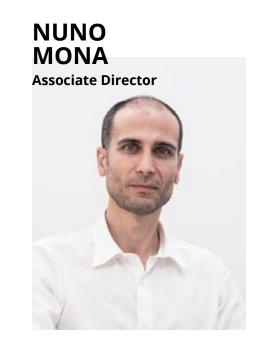
The Board



































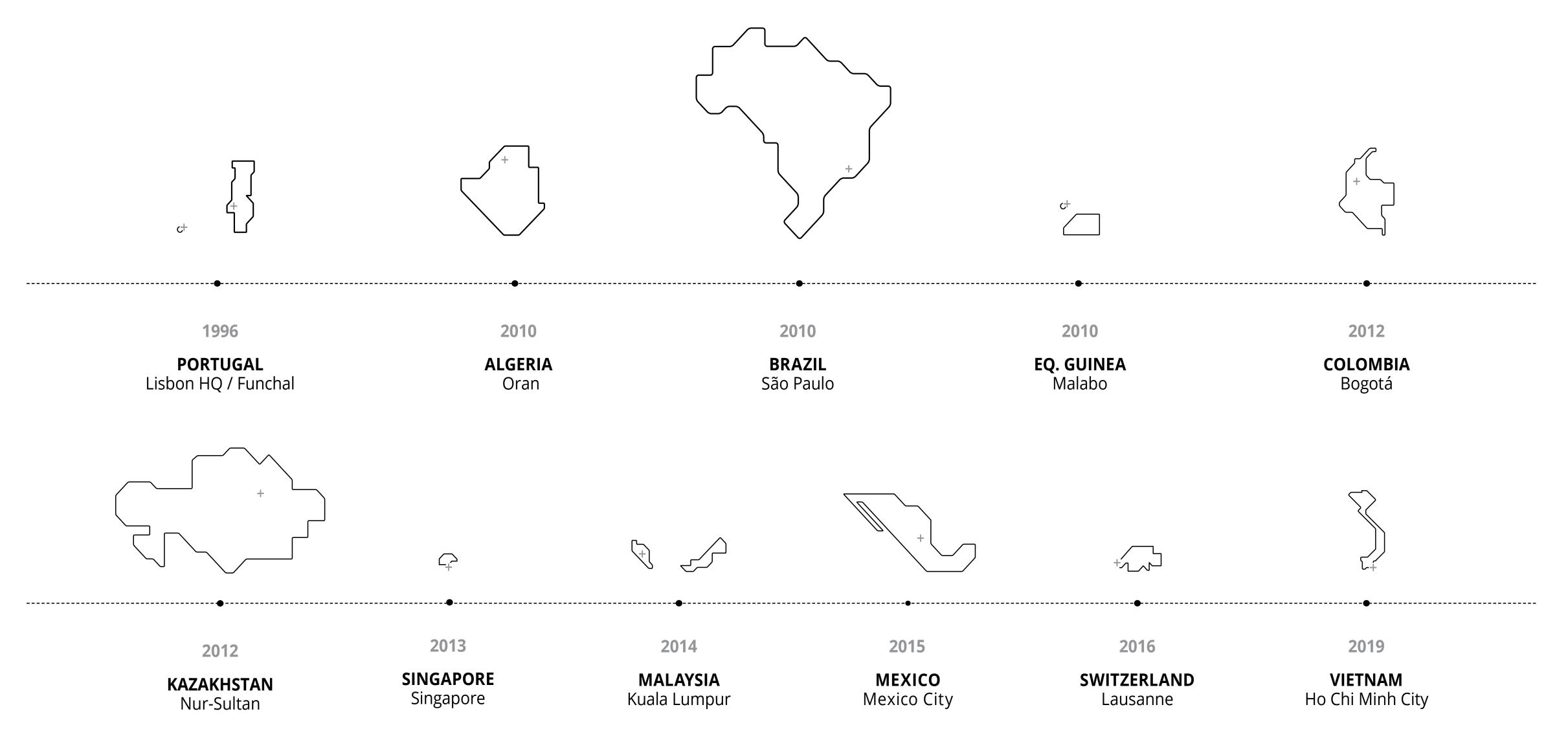








Global Reach



The Process

The design process is developed through synergies Collaboration with clients and goes far beyond the traditional service offering. It is clear that, today more than and Delivery ever, corporate responsibility extends beyond the conceptual quality, technical rigour and project identity to also include schedule performance and cost efficiency.

Holistic Design

By understanding the impact of architecture in today's society, our proposals incorporate **Services** sustainability values, applying bioclimatic principles to improve the overall performance of built environments. A human centered design that places comfort, functionality and aesthetics at the center stage, enhancing user satisfaction and improving the overall usability.

Our design solutions meet the requirements The Comfort of each market we are working in. As such, the practice has earned a very strong identity, setting of Experience itself apart as a global brand, which has necessarily brought with its agility and knowledge, to deal with the challenges on a world scale. S+A is developing local know-how, strengthening its experience on an international scale.

Information Modelling modelling (BIM) in Portugal. BIM has transformed

BIM - Building We offer sound experience and recognition as seasoned users of building information ways of working within the construction industry, rendering and clarifying all of the information associated with the life cycle of a building. Sharing and integrating data has become a must when drawing up new protocols, activities and growth strategies.

Sectors

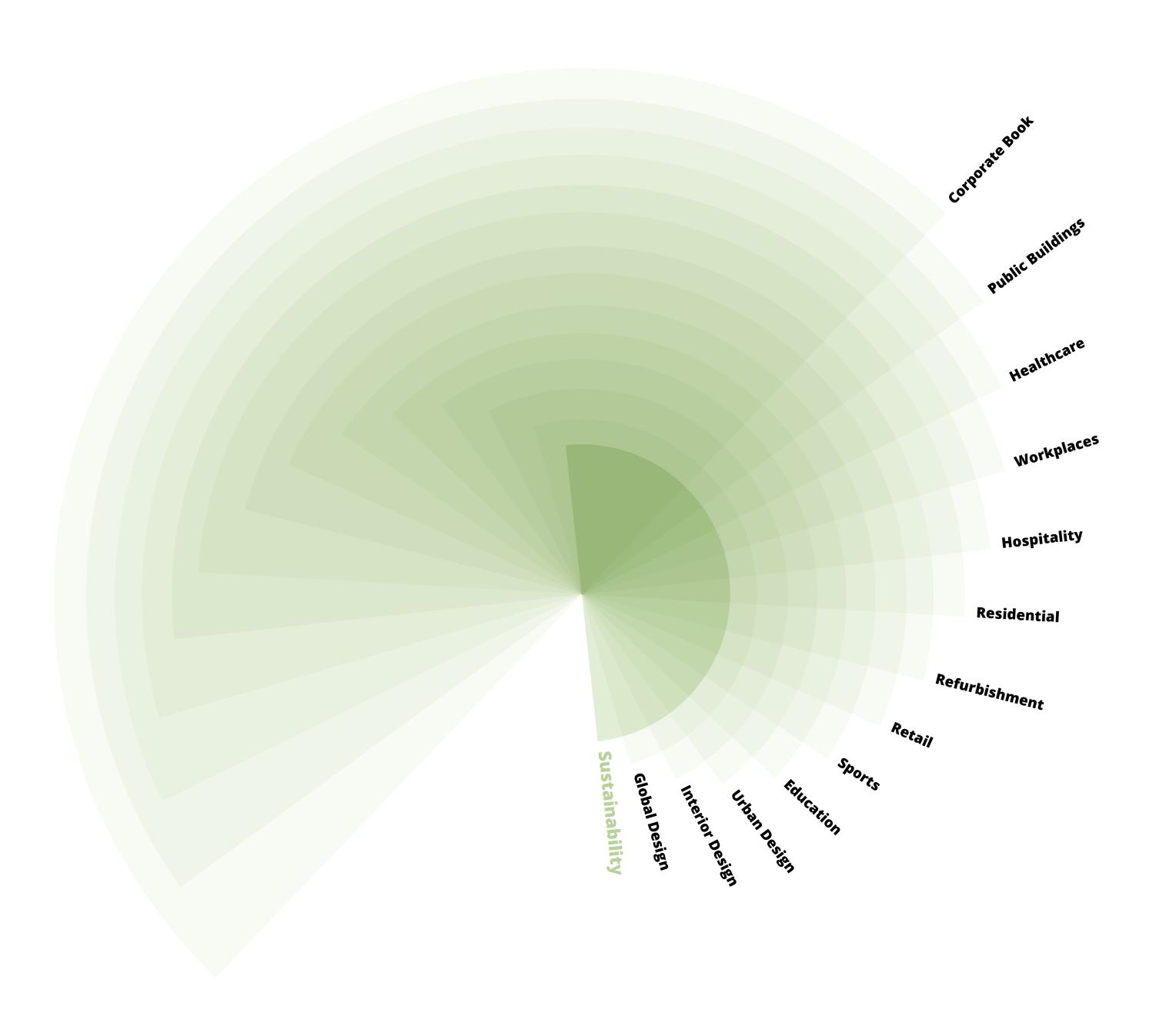
Engaging Across Several Functions

The studio's solid experience and knowledge acquired over the years enlarges its portfolio, both on private and public domains. On the other hand, through experts across several areas, our in-house production team has units focused on each particular market sector, creating effective and logical programmes. A full spectrum of service that meets the careful relation between local and global.

To learn more about our projects, services and culture read our remaining sector books. For a general overview please go through the Corporate Book.

«I aspire to develop integrated proposals where the presence of the architectural object as primal element of a whole coexists with the urban space, establishing qualitative links with societies.»

MIGUEL SARAIVA



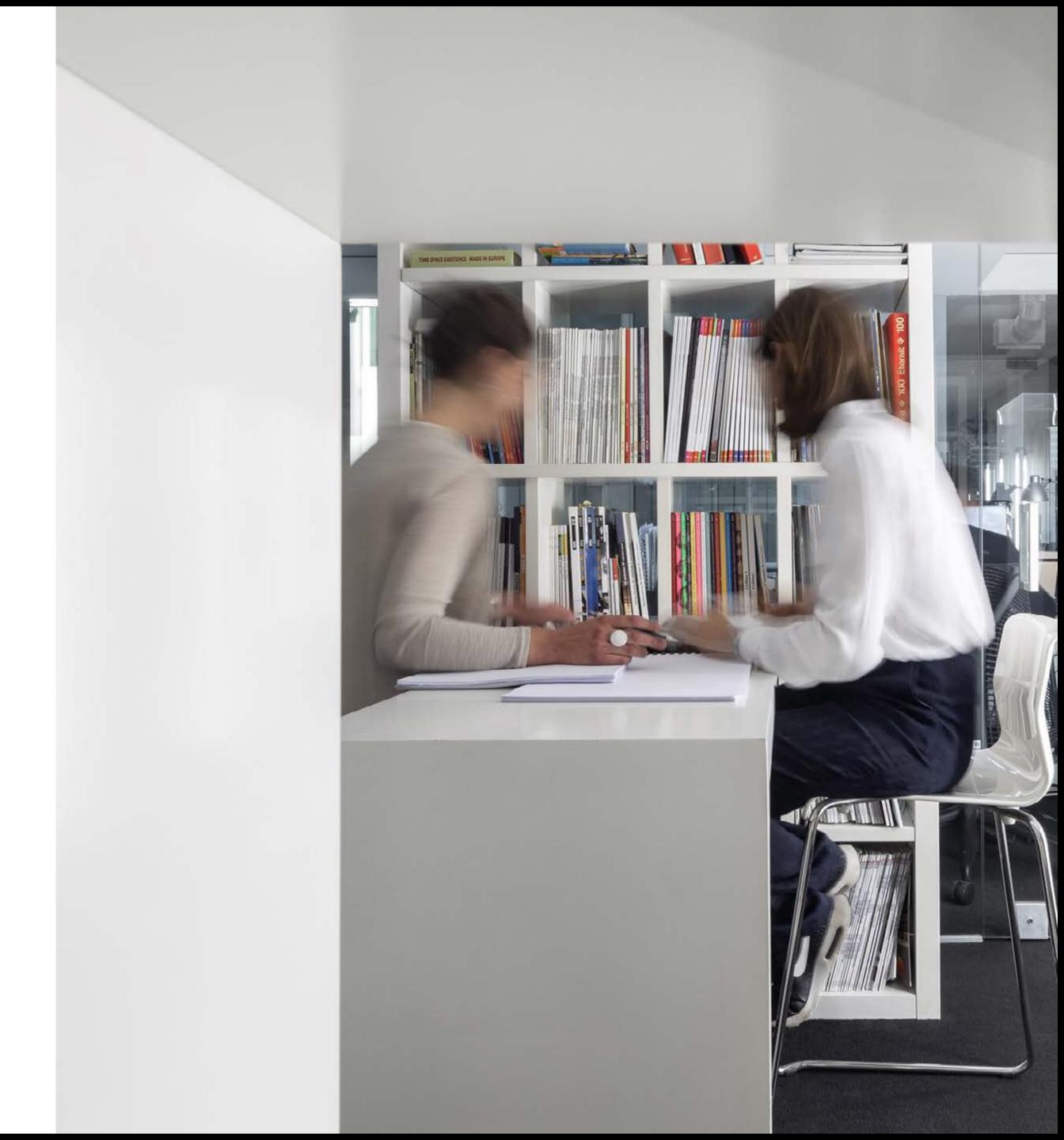
ARAIVA + ASSOCIADOS

Areas of Expertise

Architecture & Urban Planning

S+A's operations have widened to cover a vast spectrum of services, encompassing not only architecture and urban planning, but also the areas of design and sustainability.

Our buildings are inspired by their surroundings and are shaped by the fundamental principles of the S+A Group: technical and conceptual quality; innovation and efficiency; and sustainability and adaptation to the local reality. With this vision and our long-standing experience, we provide architectural solutions that are at once functional and commercial, with a specific focus on the needs of our clients. Designing built environments means effectively combining three factors: art, technology and economics.



Areas of Expertise

S+A Interior Design

We believe that architecture must offer a unique, emotional experience. Our aim is to catch the attention of every individual from the exterior design of the buildings to the interior details that guarantee the distinctiveness, functionality, quality of materials and touch of genius which characterise our brand. Our broader, more motivated technical, creative and design team is tasked with developing niche programmes to suit each client's requirements on an intimate scale. This allows us to offer turnkey projects, taking architecture to the highest level, creating spaces which are highly pleasant, visually appealing and compliant with good environmental practices.

S+A Green Lab

For the past 15 years, sustainability has been a central theme for S+A Group, reflected in an increasing overall offer of sustainable and bioclimatic projects and in providing several other sustainability services, such as LEED and BREEAM certifications. This company is made of consultants, engineers and passive design architects that aim to capitalize sustainability and to grow the Group portfolio in this segment by creating innovative solutions for building design, urban built environment and ecomaterials. Our mission is to continuously incorporate sustainability value into our clients' products and projects, enabling S+A Group to become increasingly recognized as a sustainable trademark.

S+A Concept Design

This company provides an exclusive global design service based on two aspects: firstly, the capacity to consider and reflect on the life of spaces at the level of their programmatic content; and secondly, the capacity to relate buildings to one another, making them sensitive to their surroundings, while also granting them a sense of belonging to the public space of which they are an inextricable part. This focus allows us to provide a truly holistic service that can, to a large extent, be applied across the international market, with a particularly strong uptake in areas relating to culture, content generation and design for museums and exhibitions.

S+A Capital

S+A Capital provides investment services to the public and private sector through a unique integrated solution that includes consulting, capital raising and investment management. The company prepares market studies, economic/financial feasibility studies, business plan preparation, and technical advice during the various phases of the project. The company also provides investment support services, capital raising and financing line negotiations through its extensive international network of institutional investors and banks, with an extensive international experience in real estate investment in London and New York and a multidisciplinary background in investments, architecture and urbanism.

s+a green lab think.act

Embracing a Sustainable World

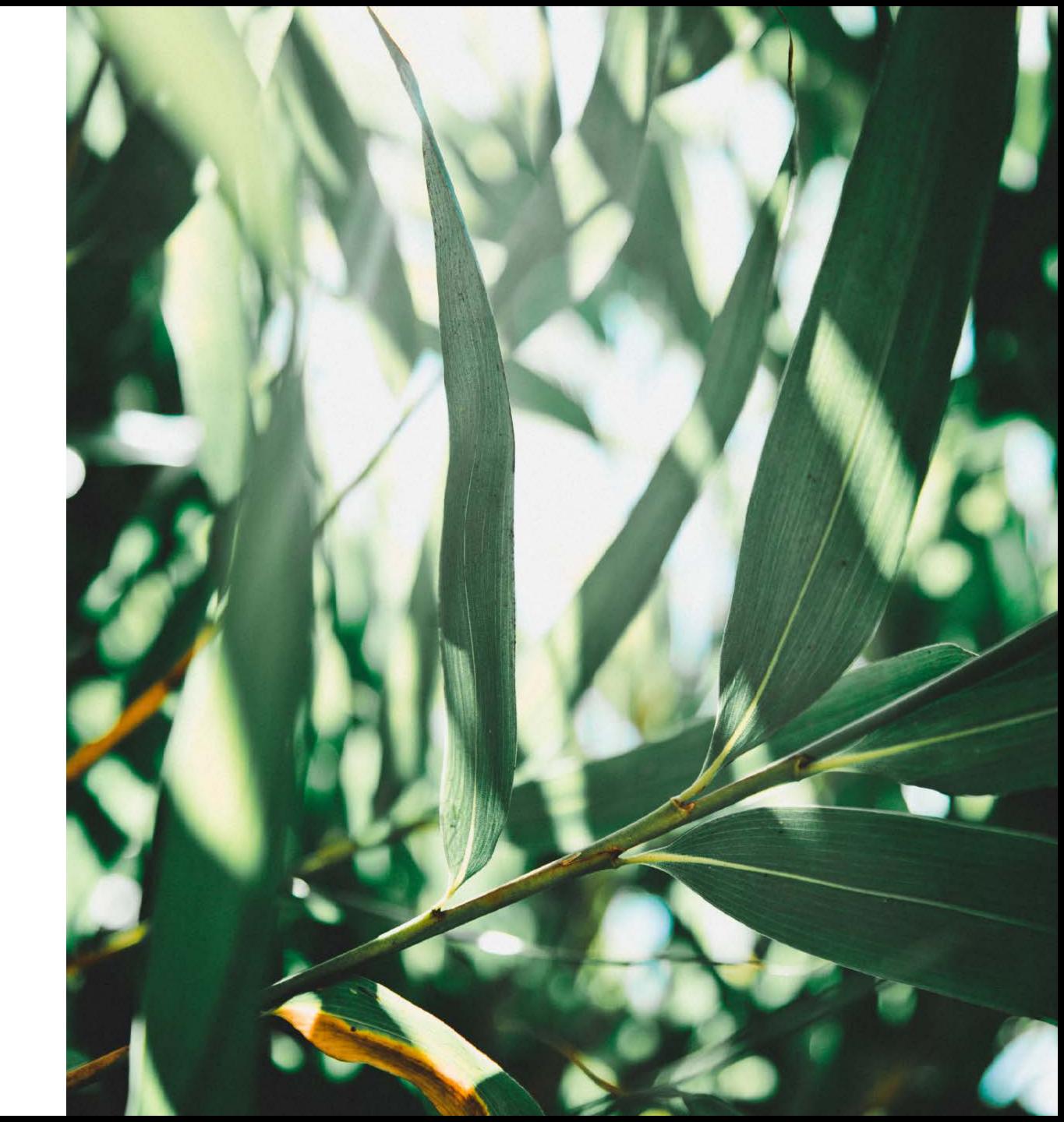
ECO-SERVICES FOR THE BUILT ENVIRONMENT

S+A is a world-leading architecture practice with a clear vision of its role in society, guided by values such as creativity, innovation and environmental responsibility.

For the past 10 years, sustainability has then been a central theme for S+A Group, reflected in an increasing overall offer of sustainable and bioclimatic projects and in providing a several other sustainability services. S+A Green Lab team is made of consultants, engineers and passive design architects that aim to capitalize sustainability and to grow the group portfolio in this segment by creating innovative solutions for building design, urban built environment and eco-materials.

Our mission is to continuously incorporate sustainability value into our customers' products and projects, enabling S+A Group to become increasingly recognized as a sustainable trademark.

We apply the appropriate measures that empower clients to overcome the most challenging sustainability issues designing solutions for construction, wellness, ecology, materials, water and energy. We offer innovative services and solutions, such as, LEED and BREEAM sustainable building certifications, environmental impact studies and environmental engineering projects.



Why should the built environment go Green?

It's cost effective in a building life cycle.

Investments are in average less than 2% and energy operation costs are reduced in 15 to 40%.

WGBC, 2013

Green buildings and infrastructures have higher commercial value.

Up to 38% attractiveness in sale cost.

MCGRAW-HILL CONSTRUCTION, 2013

A Sustainable built environment promotes health and well-being.

This means improvements in work productivity, sales, learning or health recovery rates.

WGBC, 2013

Because climate change is happening and we need to take action.

A sustainable building can represent up to 66% less CO₂ emissions.

BRE, 2016

SUSTAINABILITY IN BUILDINGS

TAGUSGÁS HEADQUARTERS

SUSTAINABILITY IN URBAN ENVIRONMENT

GREEN QUARTER CITY

SUSTAINABILITY IN MATERIALS

QUICKBUILD MODULAR HOUSE

SUSTAINABILITY IN ENERGY

ALCÂNTARA OFFICE BUILDING





REFERENCE PROJECTS / SERVICES

Sustainability in Buildings

Development of consultancy and assessment services of projects according to BREEAM, LEED, SBTool or other internationally recognised sustainable construction certification systems.

Our work is developed continuously during project and construction stages, offering our clients the most applicable and cost efficiency solutions to each project.

BREEAM and LEED Accreditations

Development of Building Performance Simulations (BPS) to assess energy performance, daylighting, air renovation and thermal comfort, as well to identify improvement solutions both to improve energy efficiency and to optimize indoor conditions.

Dynamic Simulations

Net Zero Energy Buildings Implementation of ZEB & NZEB (Zero Energy Buildings & Near Zero Energy Buildings) concepts. The Energy Performance of Buildings Directive requires all new buildings in EU countries to be NZEB by the end of 2020. This means very efficient energy performance buildings and the use of renewables to remaining energy needs.

Bioclimatic Design

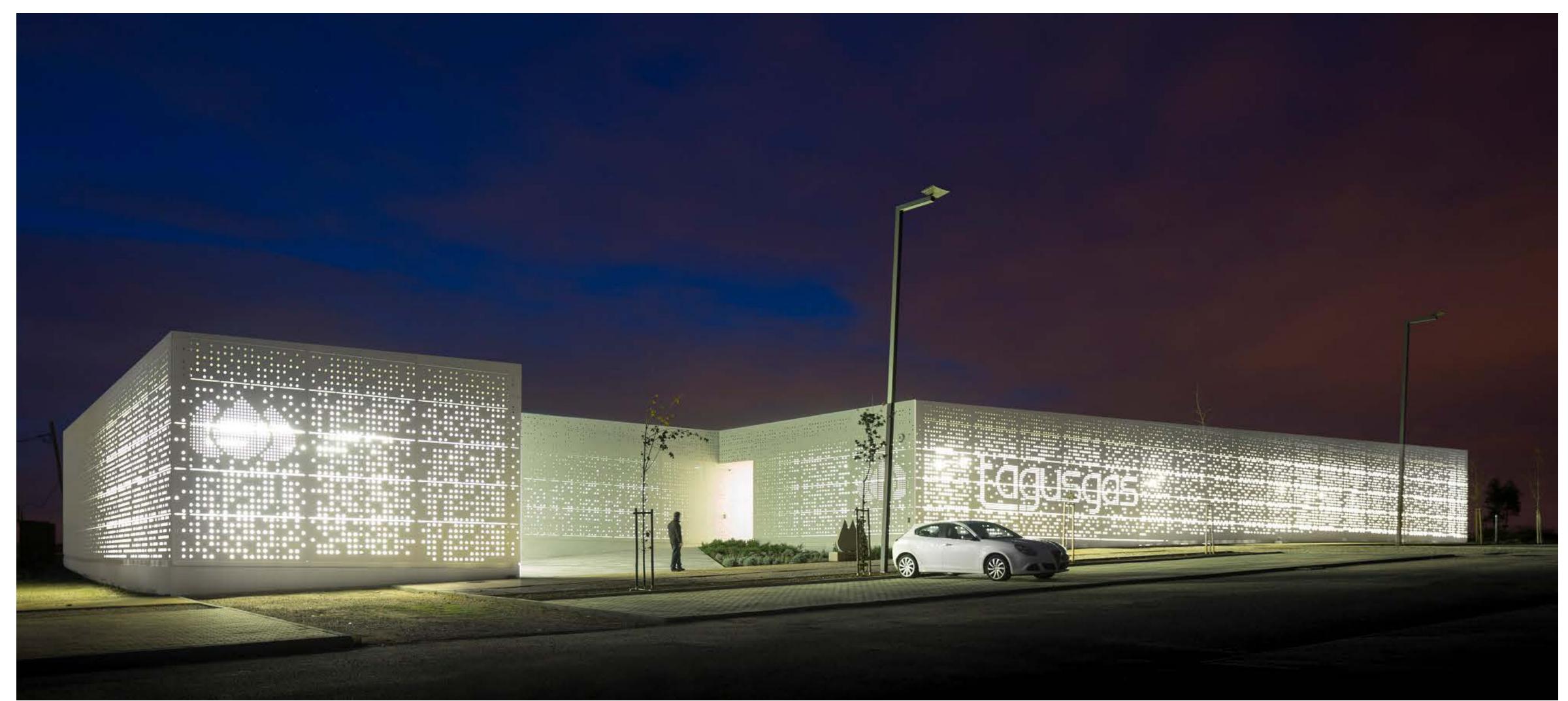
Optimization of passive architecture based on bioclimatic principles towards sustainable, comfortable and energy efficient buildings. Passive design solutions are defined according to local conditions such as temperatures, sun shading, dominant winds, etc. and according to each building uses.

TAGUSGÁS HEADQUARTERS

CARTAXO • PORTUGAL



1.430 sqm **Area**2014 **Year**Built **Stage**Tagusgás **Client**





Sustainability was a focus of the project owner since the definition of Tagusgás Headquarters project's program, being the project management developed by the sustainability team according to BREEAM (Building Research Establishment Environmental Assessment Method) guidelines that were followed in all project stages.

Occupants comfort was a design priority namely in daylighting, glare control and acoustic performance. Another distinctive aspect was the use of natural gas system for the climatization of the building, besides other energy efficiency measures and a passive design optimization that result in energy consumption levels below the project estimations.

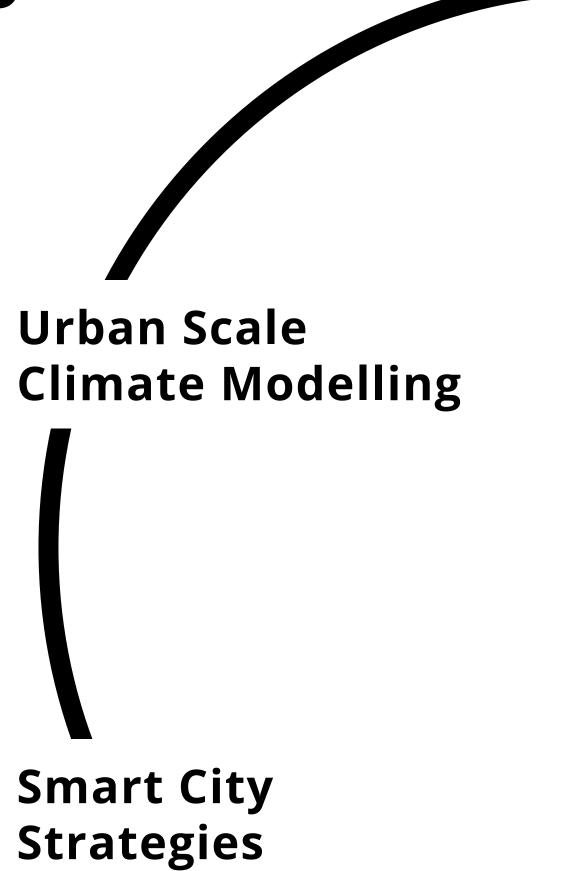
Tagusgás Headquarters is a reference project in the national context being the first new office building obtaining the BREEAM Certification in Portugal.

Sustainability in Urban Environment

Development of CFD (Computational Fluid Dynamics) Simulations for the assessment of local microclimate conditions such as temperatures, wind speed and patterns or sun shading. This modelling provides data for city planning and to identify local areas of discomfort or risk.

Creation of Smart City development strategies that integrate sustainability, technology and data processing concepts into urban and regional governance for the improvement of urban infrastructures. Smart Cities provide adapted and adaptable environments that better respond

to sustainable development challenges.



Adaptation to Climate Change

Natural risk assessment associated with climate change events and development of strategies for the response to this challenges since building design recommendations, resilience planning, infrastructures and urban measures for the mitigation of climate change.

Environmental Diagnosis

Development of sustainability diagnosis and strategies for municipalities as well as Environmental impact assessments (EIA) or other Environmental management projects (waste management plans, landfill sites design, etc.).

Sustainable Energy Plans Sustainable Energy Plans (SEP) settle a framework to improve energy consumption at regional level and to reduce CO_2 emissions. Previous to the SEP development, a detailed inventory on energy consumption needs to be developed identifying priority sectors of action and measures to be implemented.

GREEN QUARTER CITY

ASTANA • KAZAKHSTAN

900.000 sqm Area
2013 Year
International Competition Stage
Samruk Client
BAZIS Partnership





Based on a modern system of resources management, developed according to LEED and BREEAM sustainable building certification schemes, this masterplan allows an efficient control of energy and water consumption, traffic and emergency services. The proposal considered a masterplan of 3.895 dwellings, two hotels of 180 rooms, several schools, police stations and other public services vital to the correct operation of a brand-new city. The services and infrastructures were designed to have a smart central system that controls all functional aspects and where technical facilities are centralized on an underground network. All in all, this proposal gives corpus to the Third Industrial Revolution's idea in which we believe green and smart cities are not about the future, but the present.

Sustainability in Materials

Reduction of products' environmental impacts throughout its entire life cycle by improving the product development and defining eco-design solutions.

Eco-Design and Industrial Ecology Strategies

To assist manufacturers and other entities in acknowledging the effects of their activities upon global warming and water resources, so they can pursue measures to mitigate their negative impacts.

Carbon and Water Footprints

Life Cycle Assessments

Life Cycle Assessments (LCA) of materials, construction solutions, products or processes (lines or production techniques), for the environmental analysis, characterization and improvement measures identification.

Environmental Product Declaration

Development of Environmental Product Declaration (EPD), according to the international standards ISO 14025: 2006 and EN 15804: 2012, with the use of LCA studies.

Variable **Area**

QUICKBUILD MODULAR HOUSE

SETÚBAL • PORTUGAL

2015 **Year**Built **Stage**Amorim Cork Composites, Itecons, Dreamdomus, Ecochoice **Client**





Quickbuild (QiB) is an innovative project consisting of a modular prefabricated building system with high sustainability rates and low cost throughout its life cycle. It's the result of a three years R&D project developed in a consortium of several Portuguese companies and institutions. Some of the main characteristics of the QiB solution are its simple, appealing and adaptable Design; comfort due to the good thermal and acoustic behaviour; reduced costs, impact on site and time to construction; its thermal and energy efficiency and; the selection of materials with low ecological footprint. QiB materials were carefully selected, considering its impact on the overall building performance and also according to Life Cycle Analysis that was carried to

all materials.

Assessment of the energy profile of buildings and defining costeffective procedures to reduce the overall energy consumption and associated costs. Development and implementation of energy saving plans (using ESCO Models when applicable).

Energy Efficiency

Solar Energy

Identifying solar energy potential for thermal energy and/or electricity production and dimensioning the most applicable system to each installation as well as the most adequate regime (auto-consumption, microgeneration, etc.).

Indoor Air Quality Assessment

Energy Auditing

and Certification

Energy auditing services for operating facilities according to legal requirements and creation of energy rationalization plans. Development of energy certification for new or existing buildings.

Indoor air quality assessment, focused on the parameters that influence occupants' health and well-being, while identifying the most probable contamination sources and implementing solutions to mitigate air quality degradation.

ALCÂNTARA OFFICE BUILDING

LISBON • PORTUGAL

37.100 sqm **Area** 2017 **Year** Technical Design **Stage** BNP Paribas, Grupo SIL **Client**





The office buildings are composed by 8 built stories, with multiple accesses to the surrounding spaces, connecting the sidewalks to the green areas. The office areas present a modular conception that guarantees the necessary flexibility and an easy adaptability to future needs. The buildings' design is under a BREEAM assessment processes were energy efficiency has a determinant role. A Low or Zero Carbon Technologies study is under development to assess the best solutions for providing renewable energy. There's also under development a thermodynamic simulation study to, according with the building use, occupation and energy consuming systems (climatization, lighting, others) identify the energy profile of the building and the most feasible energy efficiency solutions. The building also aims to have a high energy certification rate of, at least, A level, according to the Portuguese energy certification system.

UNIVERSITY OF LISBON STUDENT RESIDENCE

PARK INTERNATIONAL SCHOOL ALFRAGIDE

VILLA NATURE

MIRPURI ACADEMY CENTRE

NATIONAL RESEARCH ONCOLOGY CENTRE

CALÇADA GALVÃO

BOM SUCESSO

K-TOWER

VERDE LAGO RESORT

CASCAIS MARINA

SELECTED PROJECTS / SUSTAINABILITY

UNIVERSITY OF LISBON STUDENT RESIDENCE

LISBON • PORTUGAL

45.354 sqm **Area**2018 **Year**Competition (1st Place) – Preliminary Design **Stage**University of Lisbon **Client**



PARK INTERNATIONAL SCHOOL ALFRAGIDE

LISBON • PORTUGAL

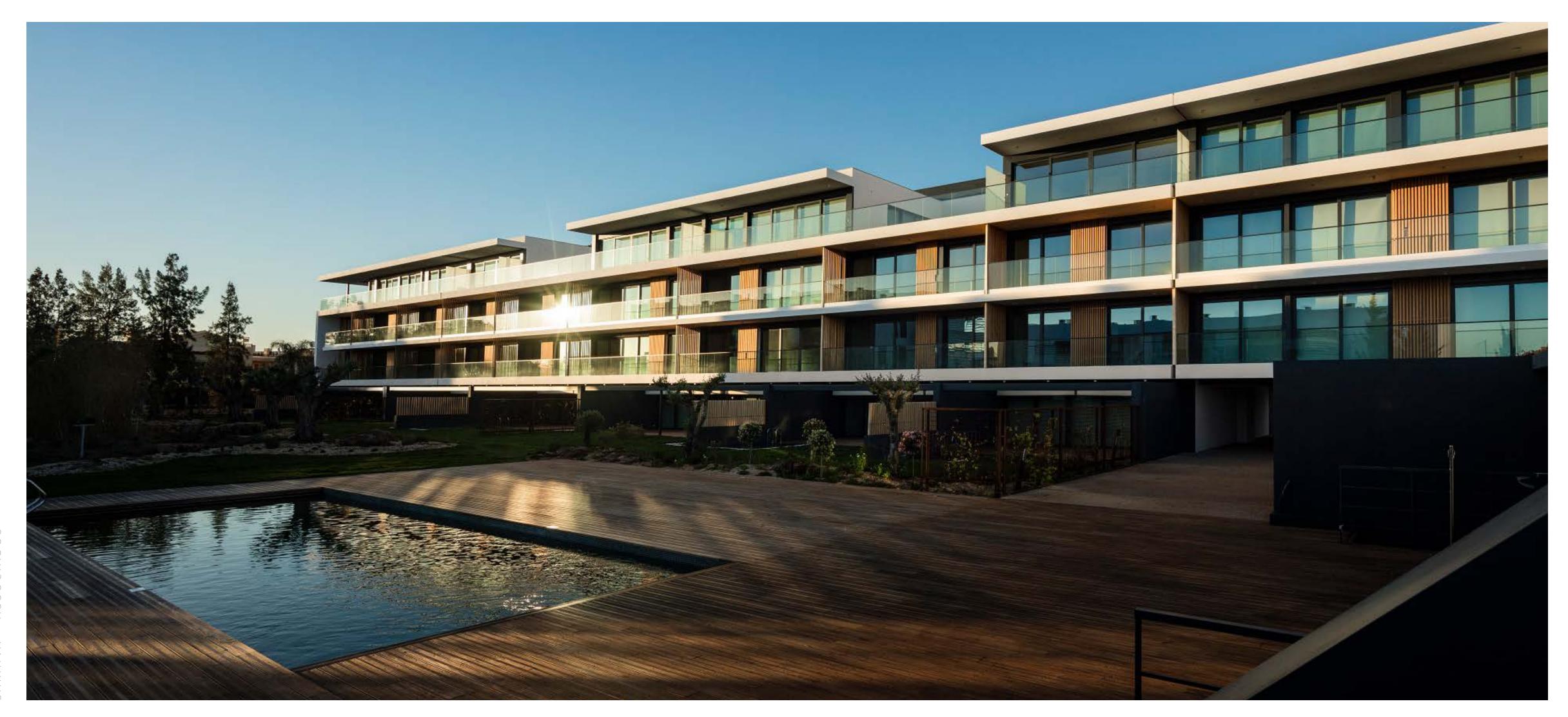
11.000 sqm **Area**2017 **Year**Under Construction **Stage**PaRK International School **Client**



VILLA NATURE

VILAMOURA • PORTUGAL

8.145 sqm Area 2018 Year Built Stage Lusoproa Client



MIRPURI ACADEMY CENTRE

CASCAIS • PORTUGAL

7.958 sqm **Area**2018 **Year**Building Permit **Stage**Mirpuri Foundation **Client**



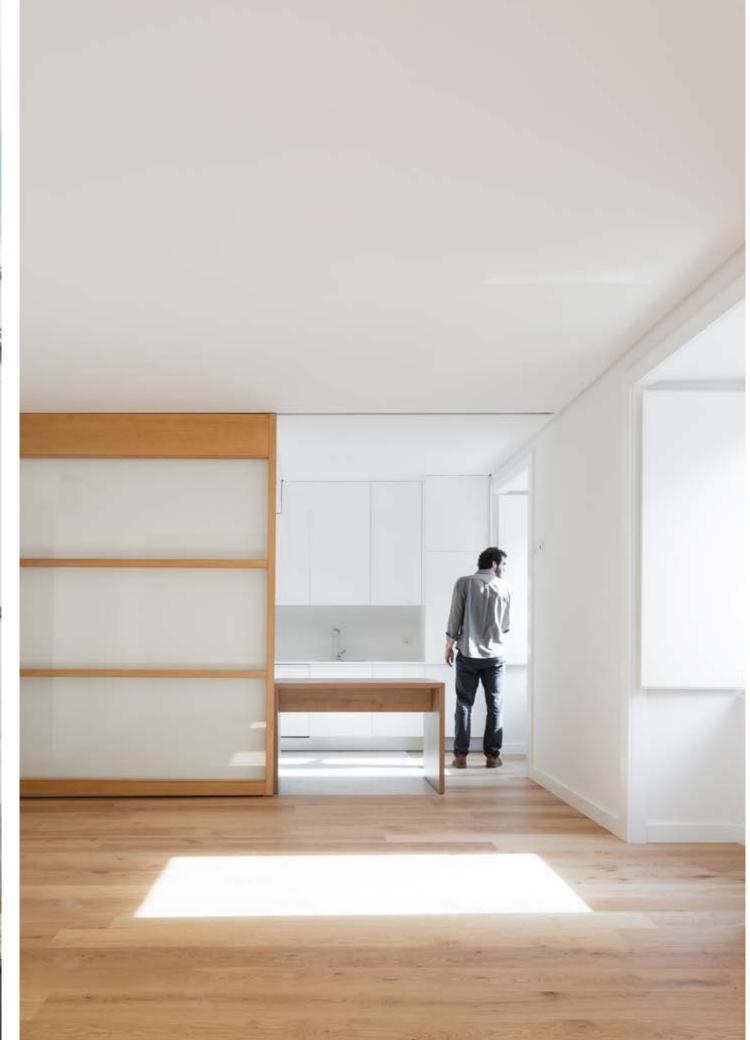
NATIONAL RESEARCH ONCOLOGY CENTRE

ASTANA · KAZAKHSTAN

90.000 sqm (200 Beds) Area
2016 Year
Detail Design Stage
VINCI Construction Client
BIM D'OR 2018 International Prize







11.105 sqm Area 2018 Year Under Construction Stage Vogue Homes Client

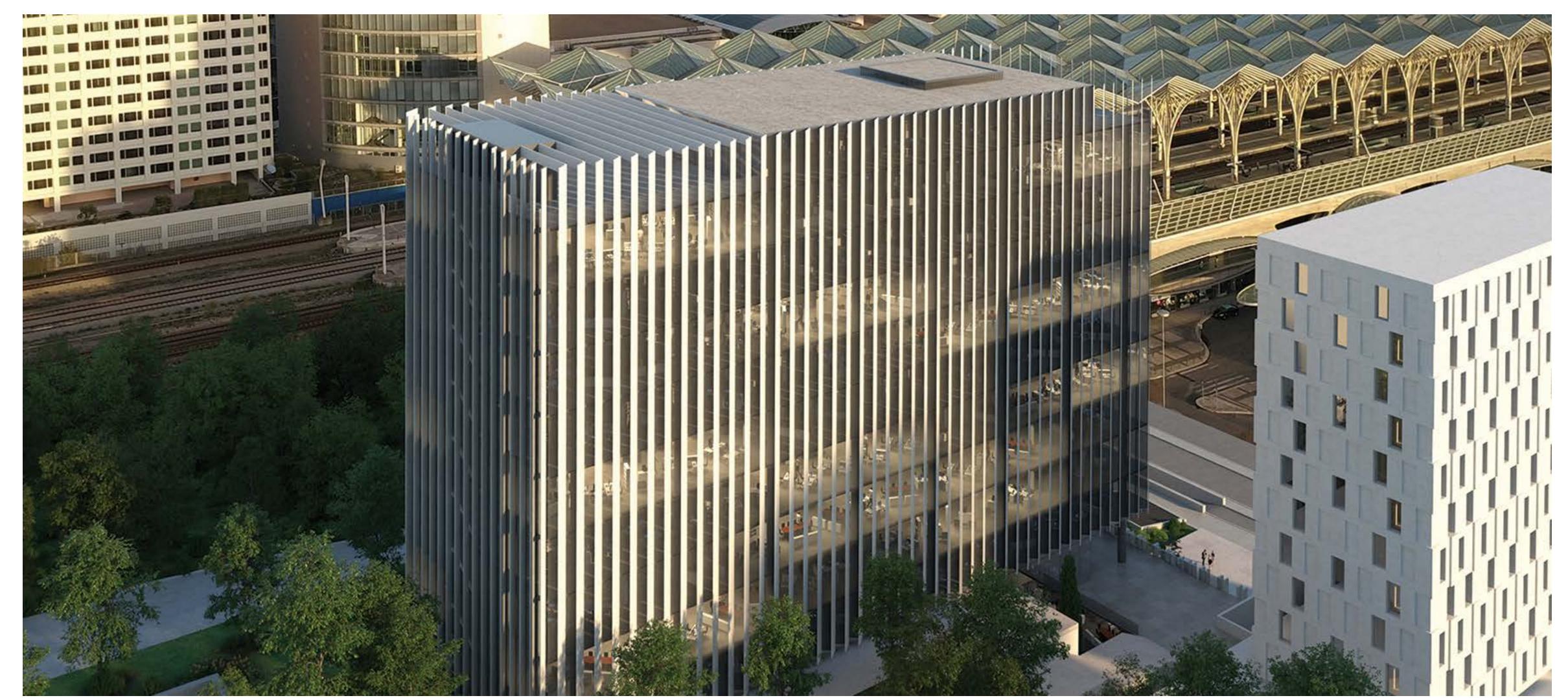
LISBON • PORTUGAL



K-TOWER

LISBON · PORTUGAL

14.685 sqm Area 2018 Year Building Permit Stage Krestlis Client Metro Urbe Partnership



VERDE LAGO RESORT

CASTRO MARIM · PORTUGAL

74.551 sqm Area 2018 Year Preliminary Design Stage Verde Lago Client

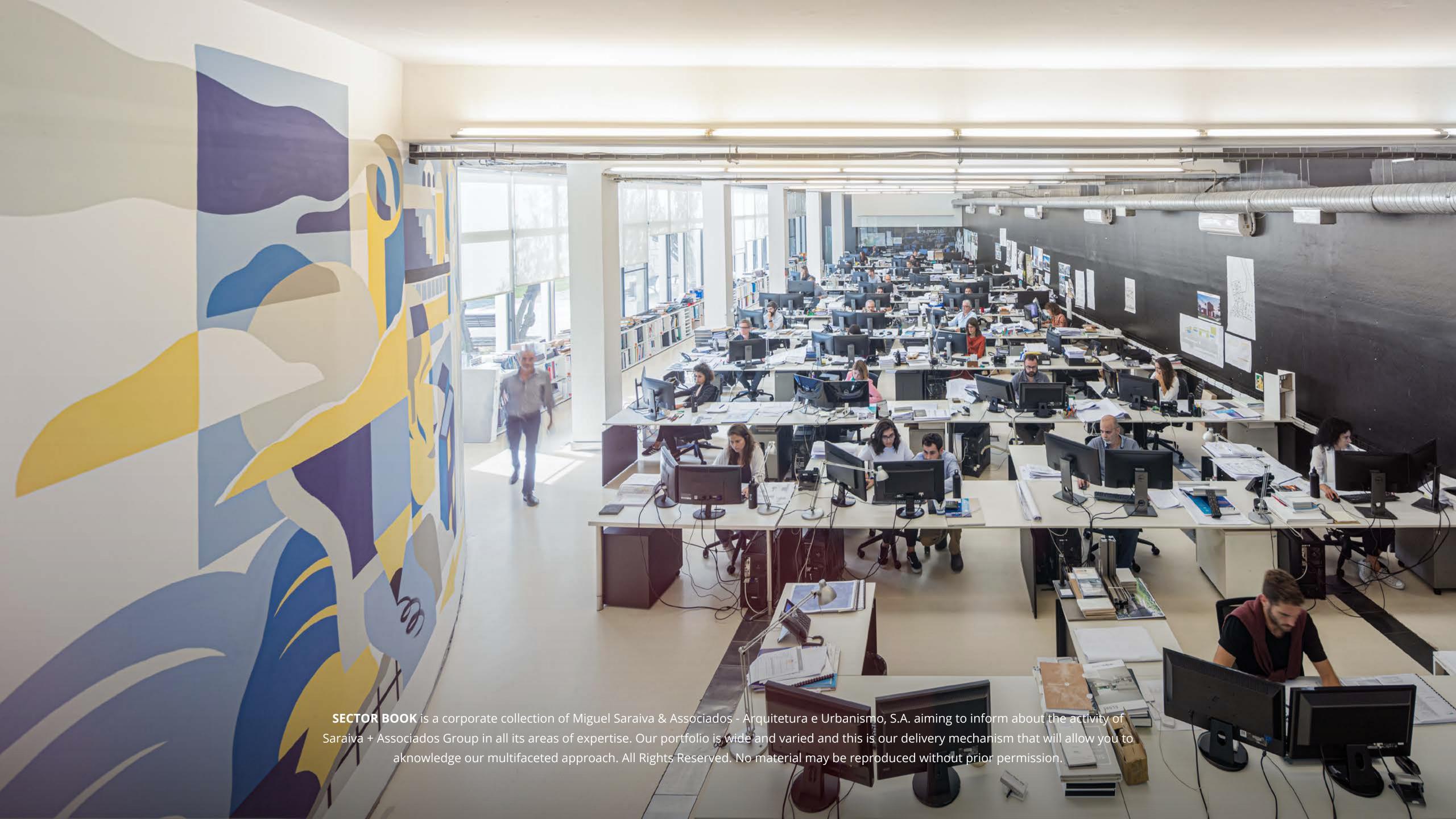


Company Awards

AWARD	YEAR
WA100 - 9th world's largest practice in the residential market sector by Building Design Magazine	2020
WA100 - 94 th world's largest architecture practice by Building Design Magazine	2020
Best Architecture Firm by Construir Magazine	2019
BIM D'OR 2018 - National Research Oncology Centrel Project by Le Moniteur	2018
SIL Career Distinction: Arch. Miguel Saraiva by SIL	2015
Best for Urban Planning & Award for Innovation in Healthcare Architecture by Build Awards	2015
Best Practice: Saraiva + Associados by Construir Magazine	2013
Personality of the year in Architecture: Arch. Miguel Saraiva by Construir Magazine	2013
Best Architecture Firm by Construir Magazine	2011
SME Leader and Excellence by IAPMEI	Since 2008

Architecture Projects Awards

PROJECT	AWARD	YEA
Villa Nature	Best Private Project by Construir Magazine	2019
Vila Vita Parc Resort & Spa	Best Destination Spa Resorts in the World – 3 rd Place by Condé Nast Traveller US Magazine	2019
Villa Nature	Real Estate Awards – category: Sustainable Architecture by Expresso Newspaper and SIC Notícias	2019
Hovione Research Centre	Sapa Awards 2018 by Sapa	2018
Pico's Middle and High School	Sapa Awards 2018 by Sapa	2018
Forte Bank Headquarters	Best Form & Function by Astana Architecture and Business & Design Dialogue	2016
Furnas Boutique Hotel Thermal & Spa	Construction Rehabilitation Award - category: Tourism by Construir Newspaper and Anteprojectos Newspaper	2015
Continuing Care Unit MJNP	Best Real Estate Project in Commerce and Services	2013
Continuing Care Unit MJNP	Best Private Project by Construir Magazine	2013
Controlled Cost Housing Arroja	Public Tender – 1st Place. Public Space Arquitecture Award by Odivelas Municipality	2009
Justice Campus of Lisbon	Best Office Building by Construir Magazine	2009
Quinta de Óbidos Country Club	Residences Overseas Award – category: Off-Plan Top 20 by Homes Overseas	2009
Avenida Building	Eugénio dos Santos – category: New Buildings by Alcobaça Municipality	200
Controlled Cost Housing Relva	INH/IHRU Awards - category: Municipality Promotion - Honorable Mention by Ponta Delgada Municipality	200



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