



# BUILDING FOR LIVING

Expertise, innovation and flexibility are our values. In its history and attachment to the French entrepreneurial culture, the Arching Group draws on the passion, creativity and thirst for challenges that enables our teams to provide optimized solutions for the most complex issues of our clients. Driven by innovative and visionary projects to improve life today with the technologies of tomorrow, this is precisely the vision shared by our 300 engineers, architects, urban planners, designers, economists and project managers, who mobilize our teams.







Our driving conviction is that people must be at the center of each project. The capital H in the very center of our name reminds of that every day. Anticipation of our clients' demands and the challenges of tomorrow are the driving forces behind our contribution to the quality of life. We design and realize each project by placing ourselves in the shoes of those who will be



To meet the needs of our clients and provide innovative solutions to the demands of their areas of work, Arching is continually on the lookout. Because the needs of end users are always specific and materials and techniques are constantly changing, Arching sees itself as a seed center of new technologies. We draw on this innovative force when listening to our clients and partners, but also in the essence of our work, which



We are convinced that in the light of current social and environmental challenges, we must provide intelligent and tangible solutions, for in the day-to-day, everyone can contribute to the protection of our resources. We place this conviction in the service we offer our clients, so that reflection will be evident in our innovative and « living » projects. We are developing solutions that bring the social, economic, technical and environmental aspects of the project into harmony.





## engineers

## stostidons) - Unitects



## **Q** Zouk Mosbeh, Lebanon

# NDU Medical Center

THE FIRST SUSTAINABLE DEVELOPMENT HOSPITAL OF THE MIDDLE EAST. ON THE HILLS OF BEIRUT, THE UNIVERSITY OF NOTRE-DAME-LOUAIZÉ PURSUES TWO OBJECTIVES: THE FIRST CONCERNS THE CONSTRUCTION OF AN INNOVATIVE AND EFFICIENT HOSPITAL FOLLOWING THE MODEL OF THE AMERICAN HEALTHCARE ESTABLISHMENTS, THUS TO COMBINE TEACHING, RESEARCH AND MEDICAL PRACTICE UNDER ONE ROOF; THE SECOND IS TO ALLOW EVERYONE TO BENEFIT FROM THE HEALTHCARE SYSTEM IN A DISADVANTAGED AREA.

## THE PROJECT

The university of Notre-Dame-de-Louaizé will soon be equipped with a state-ofthe-art hospital with excellent medical capacities, all in a modern and environmentally friendly structure.

The building is following the LEED American guidelines of sustainable development (Leadership in energy and environmental design) while targeting the highest, or Gold, level. Large patios of vegetation surround the bright and

ventilated architecture, 50% of its roofs are vegetated, while the clear concrete facades block or retain heat depending on the seasons. Sunshades are planned for the comfort of users. This hospital will host students, researchers and patients who will benefit from the imagery, pediatric, obstetric, neonatal, emergency, severe burns or even dialysis services.

#### **THE ARCHING +** Arching, a player in the hospital sector for many years, proved to be agile in the installation and implementation of complex projects with multidisciplinary and multicultural teams. Thanks to the constant monitoring of new evolutions, Arching contributes to make tomorrow's hospital and to offer innovative, adaptable and user-friendly services to promote the well-being of professionals and patients.





▲ Typical room



### THE ARCHITECT

▲ Areas for families

Following the feasibility study, we worked with the Group's engineers as well as with the Lebanese engineering team to define all of the aspects of this building. The particularity of this project lies in the fact that the design is French, the implementation Lebanese and the application of the American quidelines of environmental certification followed the LEED requirements. It is important to experience the culture of a country in order to be able to envision an ad hoc location. In addition to the very technical aspect of the hospital, we also thought about the well-being of the patients, personnel and visitors. Thus, the central street, equipped with shops on the ground floor, leads to the side where everything occurs. Also, the natural lighting plays a primordial role, especially the large patios.

Pierrick Lelard, architect, healthcare expert director

#### Charlotte Lemarchand, sustainable energy and building engineer

- Surface area: 48.000 m<sup>2</sup> Equipment: 440 beds Land: 40 hectares Completion date: 2019

- Architectural design, SUD Architectes Detailed design and Fire Prevention System Supporting the





### THE ENVIRONMENTAL ENGINEERING **PROJECT MANAGER**

he challenge consisted in integrating the set of criteria of America's sustainable development (LEED) on the sketches in order to start with good foundations. Since the specifications are very transversal given they include integration within the environment, energetic efficiency, water consumption, a selection of materials and resources, the quality of the air indoors, the exemplarity of the construction site or user awareness in terms of aood practice, we worked with all of the trades to make sure nothing was forgotten. We also conducted specific studies, such as on natural lighting, to better allow us to suggest optimal solutions.

#### **TECHNICAL SHEET**

#### **University Hospital**

#### **ARCHING MISSIONS**

certifications of the plans and PC deposit Supporting the local teams during the implementation

#### ENGINEERING

HVAC-Fluids, structure, economy, environmentally friendly design

CUSTOMERS Apave Moyen-Orient, Université Notre-Damede-Louaizé

## **Q** Hekou and Hohhot, China

# FOOD UNION

FOR THE DESIGN AND IMPLEMENTATION OF ITS TWO NEW DAIRIES IN CHINA, ONE IN HEKOU, IN THE COUNTRY'S EASTERN PROVINCE OF SHANDONG, AND THE OTHER IN HOHHOT, IN NORTHERN INNER MONGOLIA, THE LATVIAN AGRICULTURAL-FOOD GROUP FOOD UNION SUMMONED EUROPEAN PROFESSIONALS, SOME OF THE ISSUES INCLUDED BEING ABLE TO ADDRESS THE HEALTH RISKS AND FOOD SAFETY IN CHINA BY RELYING ON THE BEST FRENCH AND EUROPEAN TECHNOLOGIES AND KNOW-HOW IN ISOLATED SITES IN ORDER TO ENSURE PRODUCTION WHILE OBSERVING THE HIGH LEVEL OF REGULATORY REQUIREMENTS IN THIS INDUSTRIAL SECTOR.

## THE PROJECT

#### The teams of Arching handled the design, parts and equipment of these two almost identical plants.

The same include the milk collection area, the yogurt and frozen production workshops, the storage, logistic and raw material areas, the offices and the workers' quarters on each site (since most plants are in isolated areas). Objective: integrating within the local economic environment and observing all of the constraints of an industrial site.

#### THE ARCHING + The strength of a truly multidisciplinary team was used in China for the French engineering and Polish architecture. A new 3D design tool, which allowed us to integrate everything, was used - plans, liquids, installations...



### THE ARCHITECT

First of all, it was a technical project; we thus designed the 'place' according to the technical data and quidelines of the group's engineers. It was a Group project and everyone cooperated at every stage and this worked very well. For these plants, the structures had to offer very large and flexible spaces in order to cover the process without hindering the installation of the machines. The customer relied on a European designer for the identity of his building and checked the quality of the file before its implementation. Work sites are implemented very quickly in China. The project lasted 2 years from the moment it was conceived to the moment it was completed, which is rather long on a Chinese scale.

Jocelyn Fillard, International Architecture Director



▲ Hohhot dairy plant

Our French and Polish teams worked with a Latvian manager, a Chinese subcontractor for the local applications and a Chinese end-user. It was a truly multicultural project, which is both why it was so complex and interesting at the same time. We thought about the process from A to Z, using a strong design developed according to the international standards and adjusted to the local regulations. liquids and state of the art equipment used in the production process. We integrated constraints on the air renewal and energy consumption systems in order to optimize the cost of operation.

## **TECHNICAL FILE**

- Dairies

**CUSTOMER Food Union** 



### THE PROJECT MANAGER

### Xavier Glardon, Engineering Director

 Surface area: 32,000 m<sup>2</sup> and 35,000 m<sup>2</sup> Production capacity: 750 tons/day Completion date: 2017

#### **ARCHING MISSION**

 Project management Building and process engineering Architectural design, SUD Architectes

## Railway Station and Galeria KATONICKA

KATOWICE IS THE LARGEST CITY OF UPPER SILESIA AND THE BIGGEST ONE IN POLAND. WITH A POPULATION OF MORE THAN 3.4 MILLION, IT'S THE COUNTRY'S TENTH CITY, AS WELL AS ONE OF THE MOST DYNAMIC ECONOMICAL CENTERS. THE URBANIZATION PLAN OF THE DOWNTOWN AREA. WHICH WAS INITIATED IN 2007, AIMED TO CREATE A MODERN AND DYNAMIC CENTER BY DEVELOPING NUMEROUS ACTIVITIES AND A REAL OUALITY OF LIFE THAT COULD ATTRACT NEW INHABITANTS AND MANY VISITORS TO TURN KATOWICE INTO THE SYMBOL OF A NEW AND RADIANT SILESIA.

WITHIN THIS CONTEXT, THE POLISH RAILWAY COMPANY PKP WANTED TO REVITALIZE KATOWICE'S RAILWAY STATION AND ITS DISTRICT. THE OBJECTIVE WAS TO MODERNIZE THIS CENTRAL INFRASTRUCTURE OF KATOWICE AND TO REVITALIZE A DESERTED CITY CENTER THAT SUFFERED FROM A BAD IMAGE; THUS TO RENEW MOBILITY, THE LIFESTYLES AND SERVICES. THE STATION WAS THE STARTING POINT OF THIS METAMORPHOSIS.

## THE PROJECT

The architectural division of the Arching group, « SUD Architectes », won the architectural tender along with the Spanish developer Neinver thanks to an attractive and quality large-scale project that included a series of different use opportunities.

It was also one of the only teams that proposed to preserve the station's historic architecture. Over 6 years, the urban restoration operation occurred in several phases: redistribution of the road work and public space, demolition and reconstruction of the station, implementation of a parking lot and of an underground bus station, design of a mall and leisure area, implementation of a business center and access to the district. Result: synergy of functions, easy access, fluidity of traffic, historical building modernized with its 16 concrete "chalices" (or umbrellas) that support the central hall and its spectacular glass facades.

THE ARCHING + In addition to its contribution in improving the quality of life of the inhabitants of this major agglomeration in Poland, Arching brought the culture and expertise of major urban projects. Its legitimacy in Poland, whether dealing with authorities, historic preservation or decision-makers, is real. The group, through its architectural branch, became one of the major players of urban renovations in Poland.







### THE ARCHITECT

We wanted to design and coordinate the project from start to finish. For this 70-year old station, typical of the rough and important architecture of the local culture, we made sure to reproduce its organic forms and to use rough materials. Another challenge was to free up space for the construction of the bus station and of all underground roads. With its 12 million passengers a year, this site, a real anthill, also lent itself to the implementation of a shopping center.

Jocelyn Fillard, International **Architecture Director** 

▲ Shopping mall

his great project, which focused around the station, boosted the city's development. Although the inhabitants left the district during the works, life quickly resumed. They adopted this modern, functional and safe equipment. The coherence of an infrastructure that reflects the identity of its city and that meets its needs is the key of this renovation aimed to improve the quality of life and economical development. This flagship project helped establish "SUD Architectes" and its expertise in the country.



of 8 rooms

▲ Railway station

### THE PROJECT MANAGER

#### **Nicolas Roques, International Operations Director**



and restaurants, multiplex





The best stories are always born of great meetings. The story of Arching is one about the coming together of two areas of work, being the fruit of the association between the industrialist Leon-Jacques Salmon and the architect Bertrand de Lagarde.

In 2006 these two men, both former students from Northern France, found themselves being driven by the same idea: a better world could be built by making an innovative offer that brought together engineers and architects with a French culture. Synergy of ideas and shared ambitions... the points of view and the motivations came together. In that same year the Manufaktura project, which transformed an old 27-hectare disused industrial site In Poland, implemented by SUD Architectes, (2008 ULI prize for the best European Business Center in the "very large" category), saw the light of day and confirmed the importance of bringing together architects and engineers as well as the efficiency of that formula. From that idea, Arching was born.

Those who work in our group's companies continue to rewrite this story day after day, expressing our vision to clients the world over. With their talents, sensitivity and work ethic, they help spread the Arching spirit far and wide.



Vy Our synaptic network organisation is an asset for continuing our development in France and abroad by giving us proximity to societal issues on the ground, always driven by the enthusiasm and pride of using our expertise for the benefit of all, to improve lifestyles and preserve the history of our societies.

Benoit Faucherand, CEO Arching Group

AREAS OF WORK Ingineering Architecture Urban planning Interior design Project management

**AREAS OF ACTIVITY** Industry, laboratory & health / Urban projects, mixed use & transports / Retail, leisure & hotels / Residential / Offices & public facilities

Warsaw Reirut Hong Kong Shanghai

#### Our expertise is expressed through the competence of our three brands: SUD Architectes, our architectural signature, TEM Partners, our experts in all aspects of engineering and Voxoa, our consulting and project management assistance branch.



ATARI World Headquarter - France



Résidence des Pins, refurbishment of the French Ambassador's Residence - Lebanon



Pilot Pen, european production plant - France



Manufaktura, refurbishment of a listed 27-hectare industrial site into a mixed-use project - Poland. ULI 2008 Prize for the best European shopping center in the "Very Large" category.

contact@arching.com - www.arching.com

SUD TEIII VOXOA

MSD (Merck) vaccine production factory - France









Turnover 201



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