

# ARCHITECTURE AND FALL PROTECTION

SUPERIOR SOLUTIONS FOR WORK AT HEIGHT





# GROUND-BREAKING ARCHITECTURE WITH GROUND-BREAKING SAFETY

The face of cities changes through architecture. Buildings rise higher and have striking facades, or designs blend seamlessly with its surroundings. An architect's creativity is simulated by both local history and the city's future. While all buildings differ, there is one aspect that remains unchanged; the drive for the ideal combination of functionality and aesthetics.

A facet that arises with every new building is the application of safety measures, such as fall protection solutions. Users need to be protected from fall hazards during a building's construction and maintenance.

Including fall protection in the design phase of a building has several advantages. First off, taking fall protection into account early on, helps protect the aesthetic value of your design. Secondly, if you've thought about the integration of fall protection, installation will happen cost-effectively and without any problems. Thirdly, fall protection measures will be installed early on during construction, which means you've contributed to the safety on site in an early stage. And last, but

not least, you show your client your expertise in safety. After all, your client may not even be aware of their responsibility to provide a safe workplace at height, but you are proactive and help them before a problem arises.

Over the past two decades XSPlatforms has provided fall protection and facade access solutions for innumerable buildings throughout the world. As every building and every work situation is unique, we always adjust and customize our solutions. Together with you, we examine which system guarantees maximum safety and user friendliness, without affecting the building's or object's architectural value.

# OUR SERVICES TO ARCHITECTS

Producing an architectural design is an extensive process, in which different interest play a role and many decisions have to be made. We will do everything within our expertise to assist architects with the integration of a suitable safety solution in the design of a structure.



Frans strous - The Netherlands

## **Risk assesment**

XSPlatforms can make an inventory of work at height risks to map all the fall hazards of your design project. Using the subsequent evaluation, we offer complete advice for creating maximum safety on and around the building.

## **Safety advice and design**

Once a building is realized, it needs to be maintained and managed. This means people will have to work at height occasionally. Including fall protection solutions early on in the design process allows you to take control of costs, user-friendliness and aesthetic appearance. This also ensures that you won't be faced with unpleasant surprises later on. XSPlatforms is ready to advise you on the best safety measures for your project.

## **Specification texts and bim models**

XSPlatforms has a large file with specification texts and BIM models for a variety of XSPlatforms fall protection systems that you can include directly in the project specification or 3D model. These specification texts can be downloaded from our website [fallprotectionxs.com](http://fallprotectionxs.com). For complex solutions we can also provide you with customized specification texts.

## **ODIN**

Making an exact calculation for a lifeline system requires a lot of specific knowledge, regarding the applicable safety norms and calculation methods. XSPlatforms wants to make fall protection easier for everyone involved. That's why we developed our online calculation tool, ODIN ([odin-tool.com](http://odin-tool.com)). You can simply, reliably and quickly calculate the correct lifeline solution for your building by filling in the variables in ODIN. ODIN then calculates the project, eliminating the risk of miscalculation. If the system passes the safety tests ODIN provides you with extensive safety documentation of the system. The added value of this report is that you can once again show your expertise to your client.

**ODIN-TOOL.COM**

**ODIN®**  
Lifeline calculation tool



# OUR SOLUTIONS

*McCain Foods Holland BV, The Netherlands*

It's our mission to ensure that our solutions have no visual impact on the appearance of beautiful architecture. This is why XSPlatforms designs and delivers innovative, custom fall protection and facade access solutions. Our solutions not only guarantee the highest level of safety, but they also provide a perfect match for a building's design.

## **Unlimited possibilities**

The XSPlatforms produced both fall protection solutions and facade access equipment. Our fall protection product range consists of guardrails, rail systems, lifeline systems and single anchor points. The various products and their applications together form the basis of our customized solutions.

The facade access branch produces various models of roof cars, self-hoisting suspended platforms, monorail systems and gantries.

For every challenge that cannot be overcome by the products in our range, our in-house engineering department can develop a customized solution. They involve you in the process from start to end and ensure that the solutions meet your requirements and demands in the optimum way.

Our strength: we always think in terms of possibilities, never in terms of restrictions. Therefore we continue to discover new solutions and continue to surprise the world with innovations that no one thought possible.

# FALL PROTECTION SOLUTIONS

XSPlatforms solutions are characterized by their attractive, and durable, design and high reliability. They are easily integrated into a building's design and provide unequalled user-friendliness. Smart innovations also ensure that our solutions have minimum impact on the (roof) structure.



## GUARDRAILS

A simple yet efficient solution that guarantees maximum safety for an unlimited number of people. The stylish design, the use of high-quality materials, and the possibility for color customization ensure that XSPlatforms' guardrails are consistent with a building's design.

### Properties

- Available in fixed or removable and foldable versions
- Available in every desired color
- Manufactured from durable aluminum and stainless steel
- Offers safety for all



## HORIZONTAL RAIL SYSTEMS

The XSPlatforms' rail system offers users maximum safety, without impacting the appearance of a building. Users attach to the rail with a special runner and can work safely along the rail trajectory.

### Properties

- Suitable for almost all types of roofs, walls and overhead structures
- Can be integrated into the structure of a building
- Limited deflection, which requires less fall clearance
- Manufactured from durable aluminum and stainless steel



### HORIZONTAL LIFELINE SYSTEMS

The XSPlatforms' lifeline systems offer you an extremely safe solution with no impact on the appearance of the facade. After attaching to the lifeline, users can work safely at heights in all circumstances.

#### Properties

- Suitable for almost all types of roofs, walls and overhead structures
- Flexible and modular system
- Minimum impact on the structure in the event of a fall
- Manufactured from durable aluminum and stainless steel
- Multiple lifelines available on one system with the LinkedPro



### SINGLE ANCHOR POINTS

XSPlatforms' single anchor points are permanently installed on the surface of the structure and have a minimum effect on the aesthetics of a structure. The user is secured directly to a 360° anchorage eye and can move about around the anchor point.

#### Properties

- Suitable for almost all types of roofs
- Can be equipped with extra modules
- Minimum impact on the roof structure in the event of a fall
- Manufactured from durable aluminum and stainless steel

Jewel Tower, Dubai



# FACADE ACCESS SOLUTIONS

XSPlatforms facade maintenance systems offer a safe work environment for those working on facades. As no single building is the same, we develop solutions that are adapted entirely to the facade structure, the design and the work activities that have to be performed. Whether it concerns stone, glass or concrete facades, whether they are straight, sloping or round, we manufacture the best solution to match your building.

Our facade maintenance systems, also called Building Maintenance Units (BMU), excel in safety and ease of use. They are manufactured with the greatest precision and offer complete access to all of the facade. Additionally we ensure the machines have a minimum visual impact on a building's aesthetics. Machinery is often only visible when it is put into operation.

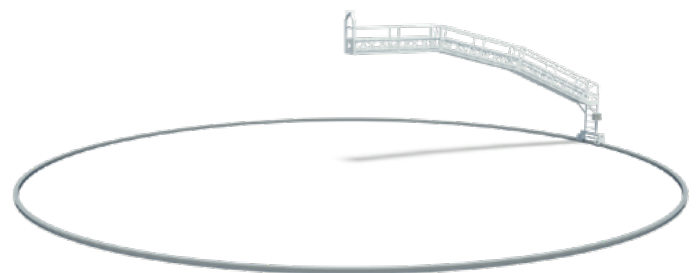
Our solutions can be equipped with several innovative functions to make working on a facade easier. For example our roof cars and monorail systems can be equipped with a hoist to lifting glass panels which makes window replacements much easier.

To read the about our complete range of facade access equipment visit [FacadeXS.com](https://www.facadeXS.com)



### ROOF CARS

These custom machines help position gondolas in front of the facade. This way users can access facades for cleaning, maintenance or repairs. The functions of the machine determine the range of the system.



### MONORAIL SYSTEMS

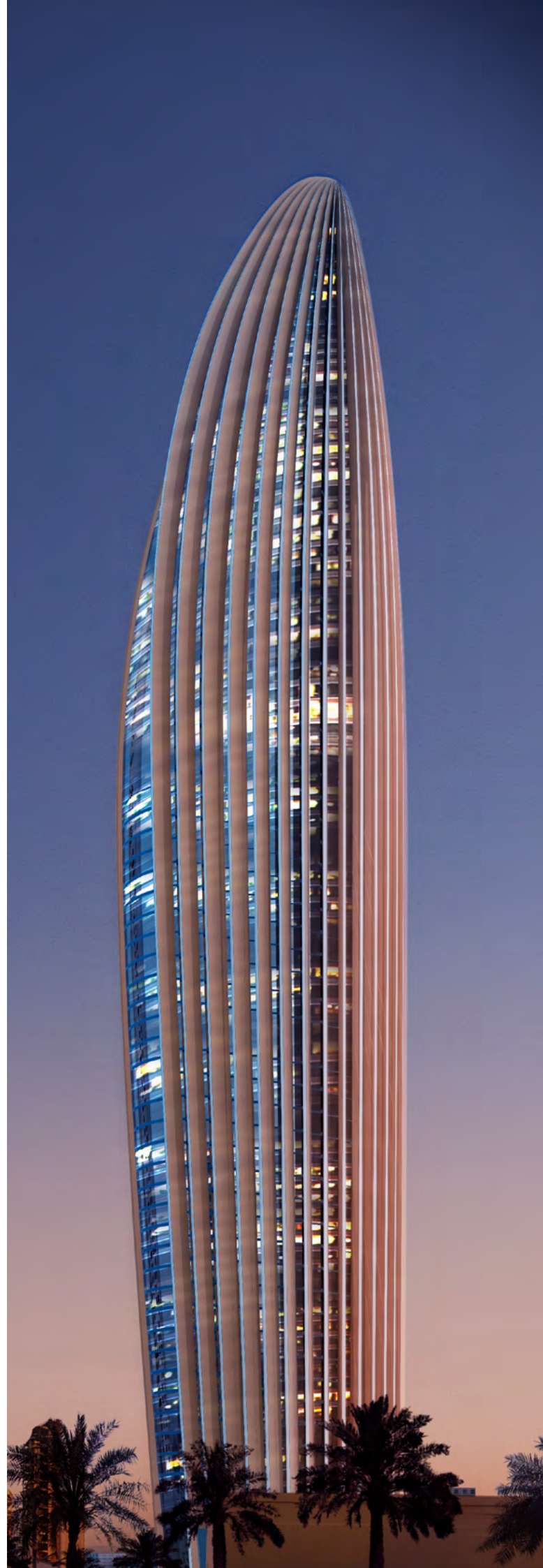
Monorail systems are suitable for both indoor and outdoor use. They are ideal for medium-rise buildings with hard-to-reach facades. These systems consist of a rail track and a trolley which moves over the rails to guide the gondola.

### GANTRIES

Gantries are the perfect solution for the cleaning of glass atriums that are difficult to access. Gantries are suitable for both exterior and interior use. We offer customized solutions to minimize visual impact.

# REFERENCES

XSPlatforms works with leading parties in the homes and utilities sector. Our knowledge and innovative products enable us to always offer the right solution for all situations and requirements. We have already provided many buildings with high-quality solutions for safely working at heights. A selection from our portfolio:



# NATIONAL BANK OF KUWAIT

The National Bank of Kuwait is one of the most represented banks worldwide, with 170 branches spread over the world's leading financial centers such as London, Paris and Singapore. With 62 stories, its iconic headquarters in Kuwait is part of the bank's commitment to provide the best service to the growing number of customers in the United Arab Emirates.

## LOCATION

KUWAIT CITY, KUWAIT

## YEAR

2018

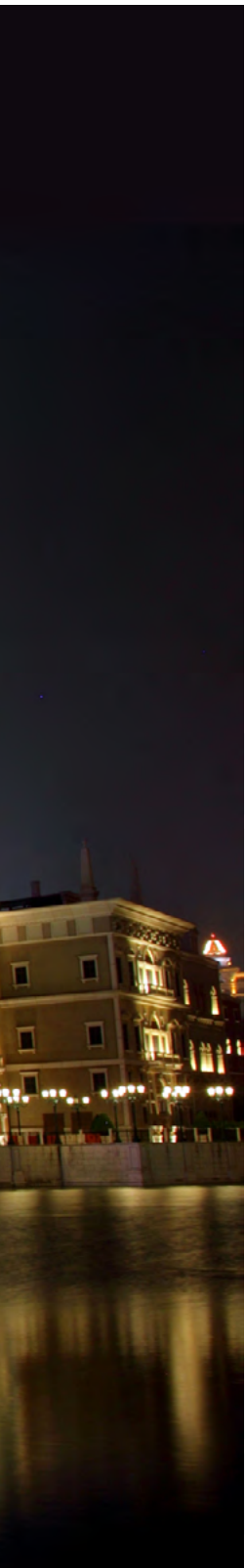
**NUMBER OF UNITS** 1 FIXED CROWN UNIT, 2 TRAVERSING KNUCLE JIB ROOFCARS

## SPECIFICATIONS:

- > World's heaviest (123.300 kg) and most complex BMU
- > 1 x crown unit
  - Fixed jib
  - Max. horizontal outreach of 31,8 m (104,2 ft)
  - Telescopic base height of 38 m (124,7 ft)
- > 1 x two-part knuckle jib with reach of 16 m (52,5 ft)
- > 1 x three-part knuckle jib with reach of 14 m (45,9 ft)
- > 3 x Glass replacement unit with a max. load of 1300 kg (2866 lbs)
- > Ladder from level 41 to top
- > Aerial working platform
- > Various hoist units
- > Rope access points on top







# THE VENETIAN

The Venetian Macao is the largest single-structure hotel building in Asia. The hotel and casino resort is owned by the Las Vegas Sands Corporation. The 980,000 square meter (10,500,000 square foot) Venetian Macao is modelled on its sister casino resort and is the seventh largest building in the world.

|                 |       |
|-----------------|-------|
| <b>LOCATION</b> | MACAU |
|-----------------|-------|

|             |      |
|-------------|------|
| <b>YEAR</b> | 2006 |
|-------------|------|

|                        |                       |
|------------------------|-----------------------|
| <b>NUMBER OF UNITS</b> | 3 TRAVERSING ROOFCARS |
|------------------------|-----------------------|

## SPECIFICATIONS:

- Fixed jib with outreach of 21,5 m (70,5 ft)  
Max. luffing angle of 140 degrees
- Pantograph gondola with reach of 2 m (6,6 ft)

|             |      |
|-------------|------|
| <b>YEAR</b> | 2011 |
|-------------|------|

|                        |                       |
|------------------------|-----------------------|
| <b>NUMBER OF UNITS</b> | 2 TRAVERSING GANTRIES |
|------------------------|-----------------------|

## SPECIFICATIONS:

- 1 rotating gantry over a 25 m (82 ft) dome
- 1 traversing gantry with a length of 11,6 m (38 ft)







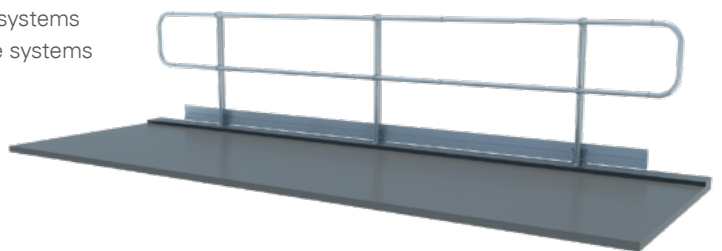
# JOHAN CRUIJFF ARENA

Since its name change in 2018, the Johan Cruijff Arena has been undergoing a true metamorphosis. Both the inside and outside of the biggest soccer stadium, which also functions as a concert venue, in the Netherlands will receive a whole new look. The facade, for example will switch from concave to convex. Construction work is in hand of Ballast Nedam and is set to be completed before the start of the European Championship in 2020, which will be partly hosted at this stadium.

|               |                                              |
|---------------|----------------------------------------------|
| LOCATION      | AMSTERDAM, THE NETHERLANDS                   |
| YEAR          | 2018                                         |
| INSTALLATIONS | GUARDRAIL AND<br>HORIZONTAL LIFELINE SYSTEMS |

## SPECIFICATIONS:

- Approx. 115 m (377 ft) custom-made, permanent guardrails along the inner walkways
- Various wall mounted horizontal lifeline systems installed above the windows in the corridors
- Various overhead horizontal lifeline systems
- Two roof mounted horizontal lifeline systems for security camera maintenance





# BRESC B.V.

Bresc is a chilled products specialist producing (European) gourmet foods for culinary professionals. The conservation of the aesthetics of the new company location in Werkendam, The Netherlands was an important factor for the client in selecting safety measures. To ensure window washers have safe access to the large windows above the main entrance a custom-made rail system was installed.

|               |                                                    |
|---------------|----------------------------------------------------|
| LOCATION      | WERKENDAM, THE NETHERLANDS                         |
| YEAR          | 2018                                               |
| INSTALLATIONS | HORIZONTAL RAIL SYSTEM<br>AND SINGLE ANCHOR POINTS |

## SPECIFICATIONS:

- > 24 XSGlobe anchor points
- > 5 anchor points serve as anti-pendulum anchors in the corners of the roof
- > A temporary lifeline with a max. span of 20 m (65 ft)
- > Approx. 21 m (69 ft) of custom-made horizontal XSRail



# ABOUT XSPLATFORMS

Our core values:

SAFETY ABOVE ALL

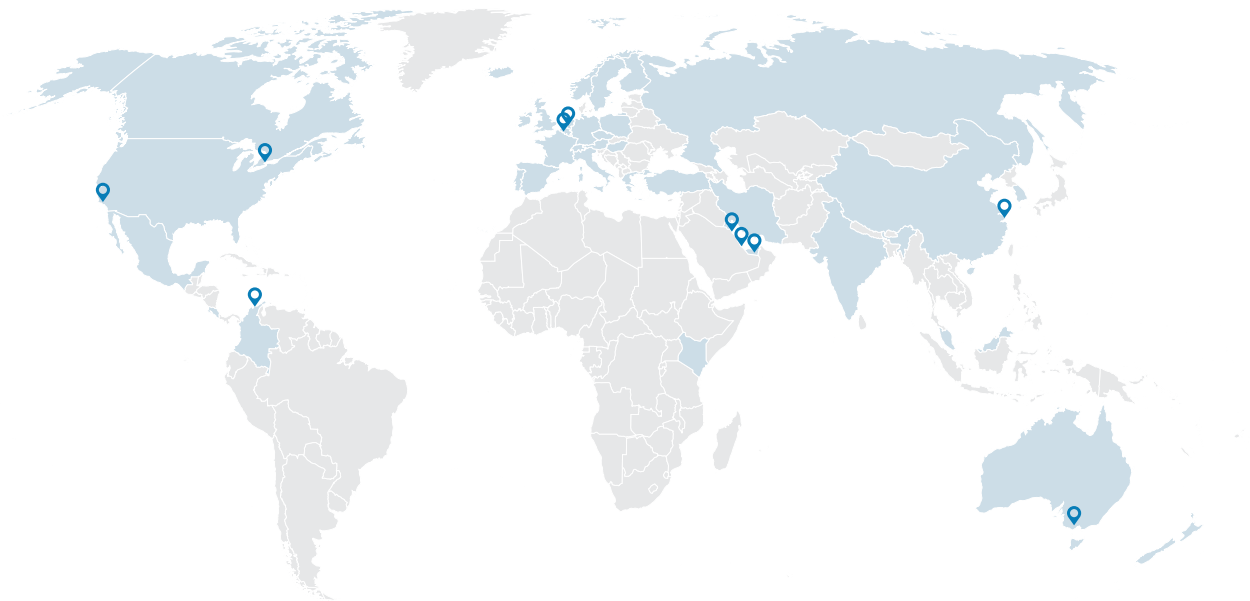
FOCUS ON THE CUSTOMER

SIMPLICITY DEFINES QUALITY

THE BEST ISN'T GOOD ENOUGH

THERE'S NO SUCH THING AS A PROBLEM

XSPlatforms develops ground-breaking solutions for safe and efficient working at heights; from design and production to installation, inspection and maintenance. Our solutions excel in safety and ease of use, while also blending in with the building's architectural value. We keep setting higher standards to make working at heights safer and easier, following our core five values.



- XSPlatforms Certified Partners (countries/regions with)
- XSPlatforms branches



Facade Access Equipment  
[FacadeXS.com](https://FacadeXS.com)



Fall Protection  
[FallProtectionXS.com](https://FallProtectionXS.com)



Suspended Platform Systems  
[SuspendedXS.com](https://SuspendedXS.com)



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