

# Architecture II: Al Wasl Plaza

**NOON SALIH:** If you've ever owned a car, then it must have broken down at least once. And with that comes a trip to your local car shop.

But fixing a car requires lifting it up. And because mechanics aren't The Hulk, they can't exactly lift it with their own bare hands. Instead, they use a specific device that propels it up.

That mechanical device is called a hydraulic jack. It pumps oil into a cylinder to help lift the car.

Now, imagine instead of a car, you're lifting a giant dome. And instead of one hydraulic jack, you have sixteen massive ones.

That dome is Al Wasl Dome, the centerpiece of Expo 2020 Dubai.

## MUSIC

**NOON SALIH:** The journey of Al Wasl, the beating heart of Expo, lasted five years — from conception all the way to the moment it was crowned. But in the last 10 hours before the grand reveal, something unexpected happened.

**AHMED AL-KHATIB:** "So I decided to go and take a quick nap and come back. And then, by the time I reached, I got a call that we have a problem. I was like: "What?" They said, "One of the hydraulic jacks around Al Wasl — we had 16 of them — was leaking." And it was really early morning, so I say, "Okay, I'm coming back." Came

back, and I saw a waterfall, not a leak. The amount of oil that was leaking, it was just massive. So I said, definitely we shouldn't continue. And we should wait and fix the hydraulic jack."

**NOON SALIH:** This is Ahmed Al-Khatib, the Chief Development and Delivery Officer of Expo 2020 Dubai's physical site. Before this moment, he was up for nearly a day.

Despite this hiccup, Al Wasl Dome, is now standing in all its glory. At 67.5 meters tall and 130-meters wide, it's the world's largest 360-degree projection surface.

In this episode, we'll hear from the masterminds that brought Al Wasl to life.

I'm Noon Salih and this is Inside Expo, an official podcast of Expo 2020 Dubai, where history is being made.

### **[INTRO STING]**

**NOON SALIH:** Domes have a long architectural history. Today, we see them over houses of prayer. Like mosques or churches or temples. We see them over large government buildings. Like the U.S. Capitol. But what makes Al Wasl so distinct is that it isn't just a dome. It's also a plaza. A place of gathering.

**GORDON GILL:** The difference between Al Wasl and I think most spaces, for example, when we talk about Rome and we talk about amphitheaters, or we talk about gathering spaces, physical buildings, is that typically they're not public. You have to prepare to arrive, enter through a door and engage the space inside. Al

Wasl is a gift to the people of Dubai and anyone who passes through that place. It's very simple. It's yours and it's yours to engage. And it's yours to engage on your own terms.

**NOON SALIH:** This is Gordon Gill. He's an architect. He's also a design Partner at Adrian Smith + Gordon Gill Architecture. A Chicago-based firm that was chosen to design Al Wasl Plaza. Gordon is no stranger to ambitious architectural projects. He was the mastermind behind many global firsts. Like the first zero-energy skyscraper in Chicago.

And so right at the beginning, the Expo team decided to hold an architecture competition. Gordon's team proposed Al Wasl Plaza. And their vision made the cut.

**AHMED AL-KHATIB:** All of those different architects, they came with different proposals and the winning one was Al Wasl Plaza that gives you just a very unique, immersive experience that you see it, you feel it; you have to be inside it to know what it is.

## MUSIC

**NOON SALIH:** Al Wasl means connection in Arabic. It is the heart of the Expo site. It links all of Expo's three petals, or thematic districts: sustainability, mobility and opportunity. And in many ways domes are the crown to spaces that congregate.

**GORDON GILL:** The physical form of the plaza itself was kind of realized in the original master plan. It was, you know, five or six, maybe seven streets that come into the central hub. And so it was a circle. The dome certainly is recognizable

historically in the region. But also throughout the Expo history and legacy, domes or spheres have always been part of that identity.

**NOON SALIH:** Domes have been central to Islamic architecture for centuries. But they were also a regular feature of other ancient empires. Like Mesopotamia, Persia, Ancient Greece, China, the Byzantine Empire, and also of indigenous building traditions throughout the world.

And there's a reason for that: domes have been seen by many empires to symbolize the heavens.

## MUSIC

**NOON SALIH:** Through Al Wasl, Gordon and his team of architects were keen on paying homage to the history and heritage of Dubai, and the region as a whole.

**GORDON GILL:** The arches, the idea of, you know, being under a fabric tent, the notion of the patterns of geometry that create fabric, that create everything from carpets to physical structure. Mashrabiya. You know, the notion is evident, not literally, but certainly evident in the history of Dubai.

**NOON SALIH:** Al Wasl's shape is inspired by the Saruq Al-Hadid gold ring from Dubai's Iron Age, thousands of years ago. The ring was excavated by archeologists in the UAE desert and it has become a symbol of Emirati heritage. It actually inspired the Expo 2020 logo.

## MUSIC

**NOON SALIH:** Al Wasl was also inspired by the concept of a salon — which means “living room” in Arabic. Similar to the UAE majlis.

In Arab or North African households, a salon is a space that’s reserved for guests. It’s where political discussions take place, where marriages are announced, and where people congregate. It’s where we bring tea and desserts for guests. It’s the symbol of hospitality and congregation in its purest form. It’s one of the most intimate areas of a home. And Gordon wanted to bring that same warmth to a public space like Al Wasl.

**GORDON GILL:** It became the living room, or as we refer to it: “the room for living.” And so once we understood that as the kind of gathering space and that it would have this role beyond being just a place that you pass through, but maybe somewhere that you pause or even ultimately being a destination, this idea of being a room for living means that you can converse in Al Wasl and engage a variety of people in Al Wasl without actually even speaking.

**NOON SALIH:** But compared to a typical salon, which is permanently fixed, Gordon wanted to make this “room for living” dynamic, a space that is constantly evolving.

**AHMED AL-KHATIB:** It’s an urban theater. It’s a closed room. It has a garden in it. It’s not a flat land. It’s more of an experience, like a contour up and down. It gives you different levels of experience.

**NOON SALIH:** And part of its dynamism means it meshes with nature. Gordon describes this harmony as having a “micro-climatic design.” It basically means that

the plaza is designed in a way that creates a comfortable environment for its visitors.

**GORDON GILL:** For example, in a space as high as 67 meters, we're creating thermal environments when the space is full of people, versus when it's empty. When the winds are coming through at a certain temperature in the streets, with the way that the buildings are shading Al Wasl, for example.

**NOON SALIH:** It also means using a variety of plant species to cool the temperature inside the plaza during hot weather. Or finding innovative ways to protect the area from sandstorms.

## MUSIC

**AHMED AL-KHATIB:** So if we specifically talk about the steel, the main contractor was from Italy: Cimolai. And of course, the steel was from Eastern Europe, from Slovakia, from Hungary, from, Poland, from Spain. And the main work happened in Vernone, in Italy, close to Venice. The fabric came from the US. We shipped the fabric to China to cut it the way you see it cut in a very beautiful shape. And then we sent it back to Dubai.

**NOON SALIH:** Implementing this vision was a massive endeavor. And over 800 specialists worked to bring it to life. This required a huge amount of coordination all over the world.

## MUSIC

**NOON SALIH:** Another huge part of the vision was to build a dome that was structurally dynamic. As Khatib mentioned, Al Wasl is a dome that doubles as a 360-degree laser projection surface, making it the largest projection surface in the world. But making that a reality was not easy. And securing those projectors wasn't easy either. They had to be delivered from abroad.

But, when the time came for the shipment to take off, something unexpected happened.

**AHMED AL-KHATIB:** And it was time to deliver the projectors — the parts — from Mexico. And, the plan was to deliver them through the sea. And the ships were ready, everything was ready, but mother nature wasn't ready.

They had a massive hurricane in Mexico. And they said that it will stay for a week. Unfortunately, it stayed for three weeks and the parts were ready and couldn't move.

**NOON SALIH:** Those weren't even the most challenging moments. The more difficult parts came later, when Al-Wasl was being constructed on site.

While the project itself lasted five years, construction took only 18 months.

**AHMED AL-KHATIB:** It was maybe the biggest challenge, to be honest, to build Al Wasl Dome, because of the complexity of it, because of the location of it — it's in the middle of the master plan. The logistics of it, how to actually deliver all the steel in the middle, while everything was in a more advanced stage of the construction. The scale of it is huge: lots of work at heights, challenges on the actual site. And just

to give you an idea for people who don't know, Al Wasl actually starts from underground.

**NOON SALIH:** Because safety was a huge priority, Ahmed and Expo's engineering team used tunnels to transport machinery and building material. These tunnels were built underground as part of Expo's legacy plan.

**AHMED AL-KHATIB:** So under Al Wasl, there is another city. So Al Wasl starts from underground.

So you just imagine the scale. It's crazy, you know? It's not crazy to build it. It's crazy to build it with the type of logistical challenges and the timeframe remaining.

**NOON SALIH:** But what made building Al-Wasl even more difficult was having to think about its two lifetimes. Gordon and the rest of the team had to plan for a site that would host Expo 2020, and they had to plan for what comes next, after the Expo wraps up at the end of March.

**GORDON GILL:** So in the future, the goal is that the park would be completed and the space would be landscaped. And that it becomes this kind of hub, that you simply have a sandwich in, or bring kids in a school bus to engage with the plants, or look at the butterflies or come in the evenings and see a show. It might be educational. It might be informative. It may just be fun. But if you live here, you simply walk right through it.

## MUSIC

**NOON SALIH:** And after months of pressure, stress and aborted crises, it was time for the big reveal. Remember that hydraulic jack leak I mentioned in the beginning



of the episode? Well, luckily Ahmed and the rest of the team managed to bring that under control.

Finally, they could heave a sigh of relief.

**AHMED AL-KHATIB:** You know, I'm so happy that God gave me the strength to handle all those things, like really. The moment when we turned the projectors on for the first time, tears were everywhere. Seriously.

**GORDON GILL:** It is a kind of truly democratic space, much like a plaza, but yet it's this room. And so it walks this fine line between building and space. Garden and technology. You know, the single and the crowd. The individual and the crowd. It has these personalities that are varied and rich and open to everyone. It doesn't matter if you're rich or poor. It doesn't matter if you're old or young, it doesn't matter. It doesn't matter. It's just there for you. And, that's what I love about it.

**NOON SALIH:** Inside Expo takes you behind the scenes at Expo 2020 Dubai, sharing our stories and others across the 170-year history of this global event. Learn more by visiting [VirtualExpoDubai.com](https://virtualexpodubai.com).

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