

Dholera Smart City Experience Center

Overview of India's first smart city experience center at Dholera

Tagbin is an expert in creating a line of experiences through physical spaces. The smart city experience center at Dholera was our first big project. We set free a new world of experience for the companies' investors and others willing to understand the core intricacies of the project.

The whole design is centered on the grounds of BEC (Business and Exhibition Center), Gujarat to educate people about the plan fixated on its future prosperity. The project took almost 4 months to finally build a positive engaging platform. The basic idea behind its inimitability is based on building an emotional connection with the visitors.

Client: DICDL - Dholera Industrial City Development Ltd.

Location: Dholera Smart City, Gujarat.

Project Start Date: 26-09-2018

Project End Date: 24-01-2019

Type: Permanent Experience Center with Projection Mapping Show

Area: Approximately 10,000 sq. ft.

Video Link: <https://youtu.be/JSbLV0HeHBg>

What Is The Necessity To Create An Experience Center For Future Smart City?

Construction of the Dholera smart city experience center comes under the Authority of DSIR & DICDL - Dholera Industrial City Development Ltd. The Authority wanted to showcase how a smart city project will look like in the future.

The Dholera's smart city concept was raised to help people envision the glorified advantages behind its development. Especially for citizens who fear alterations on their land and the investors who are uncertain to invest in any new project. It was a challenge to make the investors and industrial tenants visualize how a smart city will look like in the future. Due to which attracting new funding's from investors or attracting industries was a task.

An immersive demonstration of the smart city plan was an intention drawn by our team of experienced engineers and talented designers. We made them visualize an advanced city out of

just dust and barren land. The center is curved into a series of interactive methods to connect with the modern day clientele. We have used innovative experimental tools and multi-sensory techniques for the purpose of giving people a summarized ideation of the future smart city plan in one tour. The Dholera's experience center stood alone and settled all uprising complications.

[Behind the Concept and Planning of the Project](#)

The creation of the entire plan is laid on the groundwork of serving people a connection to their old heritage. Being located next to Lothal (which is 35 km from Dholera) which is a part of 5000 years old culture of Indus valley civilization, the smart city plan in Dholera is a resemblance to Lothal's most ancient & advanced habitation. The theory behind building the experience center emerged to interrelate people on grounds of sharing a smart history. The uniform standard in structures, great archaeological features and smart housing plans of ancient Lothal leaves a smart disposition behind its rich development. Dholera's smart city plan is a fresh substitution to bring the people of Gujarat close to its old exquisite civilization of thousands of years.

Therefore, we have helped the center vocalize stories from then Lothal and now Dholera. Letting the visitors tread into the fields of art, architecture, science, engineering, pottery, and religion of then Lothal. Side-by-side to plunge them into the very bright future of modernized Dholera smart city.

For this purpose, the original data sources like plans and progress in the development of the smart city are obtained from Dholera Industrial City Development Limited (DICDL). Other data sources include both online and offline materials on Indus Valley Civilization and Lothal.

We have taken care of every minuscule detail. Though we faced certain space related issues but we considered every element virtuous and ensured to execute everything in place starting with fixating perfect lightening and sound facilities. Unlike just showing a video or a presentation of things we exposed the investors, industrialists & citizens to actually sense what a smart city feels like.

We handled many convoluted logistics on the battlefield of work. Everything needed from product procurement to its implementation involved efforts of our in-house team of planning, research, content, technology, fabrication, maintenance and support. Along with the purchase of technology like Projectors from OEMs.

[Take an Inside Tour: Dholera's Experience center](#)

We paid sufficient attention to the cognitive effects of space designing. The experience center is suppressed 1000 times smaller in its size to elucidate the layout of a smart city plan.

We have recreated the conventional sales approach and gave something extra to the Authorities. Our plan is executed in an about 6,400 sq.ft area of the land and constitutes zoning into 4 parts

i.e. the reception zone, transformational tunnel zone, Dholera's smart city projection mapping zone & the elaborative zone.

Zone 1. Reception area

In lieu of making people convivial with the concept. They are welcomed to the **reception area**. Then we take them for a walk inside the transformation tunnel. Here, we have littered all relevant information on the basic city amenities of old Lothal and explains all about it with quality graphic panels and through a bioscope.

Zone 2. Transformation tunnel

The **transformation tunnel** opens into a wide space, where the concept, basic characteristics and preparation of CDP (city development plan) is allocated. We have confined the whole city plan contained in miniature demographics known as the subset of the city.

Zone 3. Projection mapping zone

Multidimensionality of the **projection mapping zone** contributed in making of an effective layout. We have constructed a functional subset of the city development plan, giving a foundation of grids with tectonic plates and then divided the whole layout into different miniatures. We have infra-structured them into sub-categorized areas - industrial zone, residential zone, high access corridor, community facilities, physical infrastructure, open green space, tourism and resort zone and the recreation zone. The design is therefore functional, economical, modular and customizable in nature.

We have bolted a big LED screen panel on the backside of the mini-archeological layout. The combination of the structure, LED screens and the projection mapping (showering from above the panel), is the cornerstone of the plan. It's a 10 minutes show which allows 12-15 people to watch it at one time.

Zone 4. Elaborative zone

In the last **elaborative zone**, conferring to the visitors' interest, we have placed interactive touch walls inclusive of – 2 touch tables with a virtual 3D model installed inside. People can gather extra information about the USPs of the smart city model. Plus can seek information on any associated services or facilities, like transportation, social infrastructure, urban services and other environment specifics.

In the end, there is created a feedback wall on which the projection mapping is done. Here, the visitors can pen down their views about their experience at the center. The feedback wall comprises of the thoughts of the people written on the wall, which talks about different improvement areas of work and appreciation of the innovation that is brought to the city.

[Read about the Techniques used in the Making](#)

Our team worked combining the analogy of software and hardware to keep everything efficient in terms of production. We have built everything in-house. We integrated multiple techniques to easily connect with the audience sensing ability. We played the LED show adjacent to the subset of the architect. We have highlighted the importance of air, water and hydraulic facilities with 'coming-out-of-the-screen' effects. This 60 feet LED wall is built in a curved structure and the projection mapping installed has outgrown its job here. We blended the edges of the projectors to cover the entire subset of the architecture and mapped it. The projection mapping on 3D model is done the exact same way as we feel things in the real world. Other elements like touch wall is planned to interact with the wall and 3D viewer allows one to zoom in and communicate pretty well.

For each installation we did testing on a controlled setting under inspection of senior engineers before the final execution. Especially the projection mapping of 3D city model is done for the first time in India. We did double testing before it went for execution. A simulation of mapping inside the software was taken duly care of before we took it to the ground. We then framed a subset of the city at our Research Labs and did the mapping to eliminate any future on-site issues.

We used different tools like Unity Engine for 3D applications and 3Ds Max for 3D model development with an accountable input of languages such as Python, C# and C++. Everything was well-built as we used a modular approach, a flattering base on which the 3D model is placed is a Plug & Play module was assembled on the site. Every restructuring possibility was considered, be it environmental impact on the structures or the one-click startup of the entire experiential center. And today, the entire Experience Center can be turned on just using a single button.

[Take an Inside Tour: Dholera's Experience center](#)

The zoning aims at the creation of an economically and socially balanced, new age city with world-class infrastructure and a high quality of life. The phasing plan inculcates urban design regulations. Every aspect of the urban design for Dholera SIR is carefully planned. The design is accounted for the various aspects of a human life embedded in a master plan. Dholera SIR ought to be anything more than everyone will live, work and play for in an equal measure.

The plan also incorporates sewage treatment plant, common effluent treatment plan, 60 kv sub-station, 22kv substation solid waste management site. The Dholera special investment region span in an approximately 920sq. km encompassing 22 villages of Dholera taluka. DSIR is strategically located between industrial cities of Baroda, Ahmedabad, Rajkot and Bhavnagar. It is also connected to Delhi and Mumbai via NH8 and DMIC. DSIR provides access to both the domestic and international markets.

The Impact of the Project on Society

After the launch of the experience center, many guests made a business tour to Dholera. The center is visited by various renowned industrialists and received a great level of gratitude. In fact, a well-known china based Tsingshan invested Rs. 21,300 Crores in the project, along with its local partner Chromeni Steels (ISCON Group), for which the company has been allotted 500 acres of land which is expected to be commissioned in coming three years.

The positive popularity of the center, has now started attracting visitors from different parts of the world. The center has not only lowered the communication gap, but has also set a benchmark to vision a smart city future. Self-explanatory and self-exploratory nature of the experience center allow visitors to easily understand the USP's of the city as well as the whole plan of its development.

We have built a Smart City Experience Center to offer a complete visibility to visitors into its schemes, policies and overall evolution. We have kept in mind the needs of the citizens whose life might get affected by the change brought by the smart city development. We have embed all possible angles to reduce any option of social disturbances that might arise due to development in the region.

Learnings you gather from its Execution

We have learnt about a variety of aspects which connects to India's significance. The Dholera's Smart City is one amongst of the biggest Green Field Smart City plans of India - in the world. Thus, this project is one best way to showcase India's future smart city prospectus to investors, Urban Planners, Students and General Public.

Feedbacks

Experience center of Dholera was developed taking feedbacks from all types of people whether it is general public, democrats or bureaucrats. The journey was very interesting as the feedbacks of all transformed into the making of an experience center.

Jagdish Salgaonkar, Programme Director of Dholera Smart City said - *"My first reaction is it's awesome. This type of experience is never been done in India before. When we planned Dholera 5 years ago, I had been to some foreign countries where they had such kind of experience and I always wanted to do something like this in India. Dholera is next to Lothal which is part of a 5000 year old culture of India. So, this experience center of how we are migrating from a 5000 year old culture to a 21st Century City, I think its good transition. It's a good way to easy a person through a tunnel. It's a nice 2 mins walk that makes you prepared of what's coming up in future. So, it's a very well laid out transition. "*

Future Scope and Environmental Change

Many companies and government authoritative are reluctant about a fact that by showcasing the vision of a smart city plan to people can actually swift the workflow and help in swift execution of the plan. Indirectly Dholera experience center is a way of accelerating the growth of a smart city plan which plays a vital role in creating a city of sustainable ecosystem and green environment. Self-explanatory and self-exploratory nature allow visitors to learn about the USP's of the city development.

The urban scheme of the smart city plan for people make residents more engaged in their environment. We have simply designed a reliable & tactile smart city plan to personally allure people's interest. The age of experiential space is today and it is likeable to evolve in the near furfuture. A touch of emotional interaction only help them to fill in the gap of social communication. We have provided a curve to technological angle towards placing it nearer to their heart by bringing them close to things and their environment. The main crux of a smart city plan is in understanding the scheme which will provide residence to 96 thousand citizens with a total 76 jobs.