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Designing a Cultural Center for 21st century Eco-cities

<https://uni.xyz/competitions>



Imq 1: Vision for Maidar Eco-City proposed by RSAA | [Source](#)

Eco-Cities

Richard Register first coined the term '**Eco-city**' in **1987** as "**a human settlement modeled on the self-sustaining resilient structure and function of natural ecosystems**".

Eco-cities can be understood as cities that adopt integrated urban planning and management tools to create a self-sustaining living for the citizens that aim towards the least impact on the natural environment such that they're preserved for the future generations.

As per a global survey*, **China was found to have the largest number of eco-city projects equalling to 25, followed by the USA with 17, and Japan and the UK with 17 each.**

*conducted by the University of Westminster in 2011



Img 2: Current view of the Sino-Singapore Tianjin Eco-City. | [Source](#)

Sino-Singapore Tianjin Eco-City

Sino-Singapore Tianjin Eco-city is considered to be **the first citywide testing ground for environmental standards relating to air quality and carbon emissions**. The scheme began in **2007** and is **a collaboration between the government of China and Singapore**.

The city is envisioned to be a place that is **socially harmonious, environmentally-friendly, and resource-efficient – a model for sustainable development**. In order to achieve this, the entire planning and development of the city are guided by a comprehensive set of **22 quantitative and 4 qualitative Key Performance Indicators (KPIs)**. Through this project, they intend to create a model for an eco-city that is **practical, replicable, and scalable**.



Ima 3: Lifestyle of people living in SSTECH.

Current Scenario

The construction for SSTECH began in **2008**. It's been over a decade since the project started, and **the city is now a home for 100,000 people and 7,700 registered companies and institutions**.

The city has **successfully adopted eco-friendly buildings, uses renewable energy, efficient waste and management systems, smart transportation, infrastructure, and services**. Infact, the schools in the city use this opportunity to teach the eco-friendly way of living at the kids as they believe that sustainability needs to be taught at the grass-root level.

This city is an excellent example that truly demonstrates how eco-cities can work.



Img 4: Traditional jars for tea- an example of the deep rooted Chinese Culture.

Issue

Eco-cities aim for creating an eco-friendly place for the citizens just like the Sino Singapore Tianjin Eco-city. However, **the Key Indicators that drive these cities often lack the larger idea of it belonging to a particular location and its inhabitants**, in this case- China.

Ceramics, music, literature, martial arts, cuisine, visual arts etc are some of the important components of Chinese culture. It is important to inculcate practicing sustainable living at a grassroots level. However, it is equally important that the culture of the community that dates back to thousands of years ago, is not forgotten.

How can architecture be used as an important tool to imbibe this ancient culture in the 21st-century eco-city?



img 5: This embroidery produced by the Chinese dates back to 1875-1900.

Brief

Design Challenge - Propose a **Cultural Center for Sino Singapore Tianjin Eco-City** that aims to encourage citizens to keep the culture of the community alive within this new kind of living.



Accessible

Design should be accessible for people from all age groups and cater to special needs as well.



Sustainable

The proposed intervention must abide by the [Key Indicators](#) of this eco-city.



Tourists

The center would also become an important Tourist location. Thus, design must cater this accordingly.

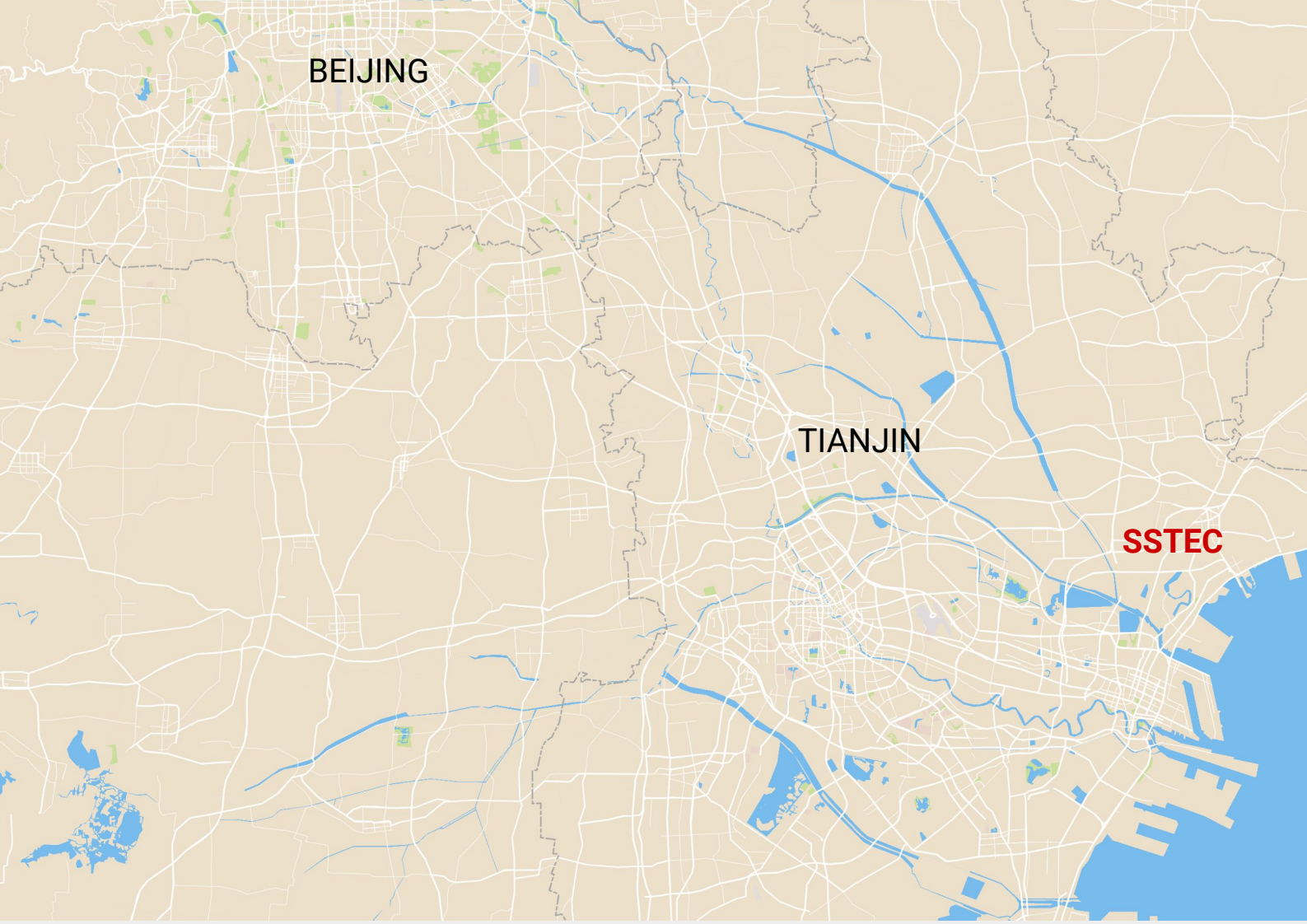


Cultural Display

The proposed intervention should aim for becoming an enriching point of the city for everything that Chinese culture has been known for.

Objectives

Participants can use the suggested objectives to begin their design. However, this is not an exhaustive list.



Img 6: Location of the SSTECH with respect to the neighboring cities.

Sino-Singapore Tianjin Eco-City

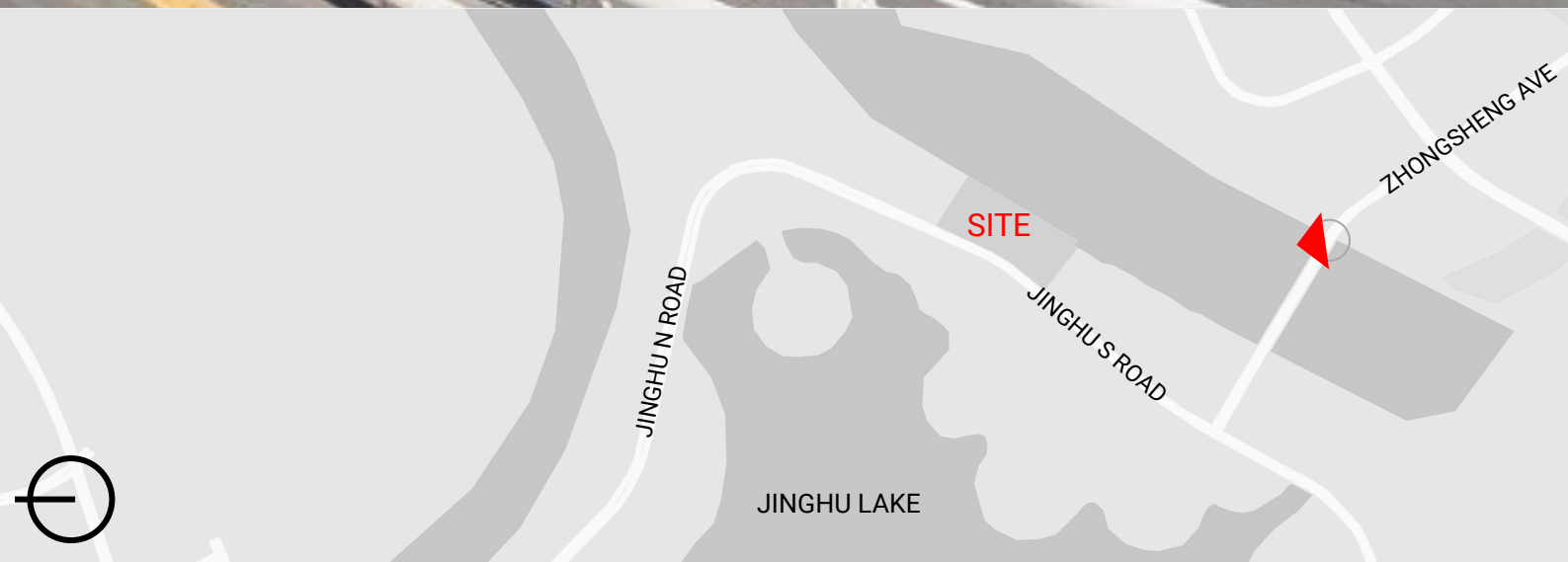
The SSTECH zone is located in an important strategic coastal region for China's national development, **45 kilometers from Tianjin's urban areas, and 150 kilometers from Beijing**. It is **sited on non-arable land**. Prior to development, the site of the Eco-city was one-third saltpan, one-third deserted beach, and one-third water, including a 270-hectare wastewater pond.

A key concept in the Master Plan for the Eco-city is the **Eco-cell system**. Eco-cells are basic building blocks and each of them is about 400 m by 400 m. Four Eco-cells make an Eco-neighbourhood, and several Eco-neighbourhoods form an Eco-district. There are four Eco-districts in the Eco-city. **The Eco-cell system encourages walking as 400 m is generally accepted as a comfortable walking distance.**



Site Area- 39022 sqm | Built up Area (Maximum)- 3500 sqm
Site Coordinates | FAR - 0.75
Height Restrictions - 15m | No basement floors





Ima 6: View of the Site from a Flyover perpendicular to the site.

Site Details

The site for intervention lies in the Eco-core area which lies in approximately the center of the city. The site shares one side of its boundary with the Jhinghu Lake. **As per the masterplan, the chosen site is allocated for Culture and Recreation.**

Space	Units	Area	Total
Entrance / Foyer			
1. Ticketing Counter	10 Counters	5	50
2. Security Check	1	200	200
3. Decontamination	1	100	100
4. Baggage counter	1	50	50
5. Entry	1	100	100
6. Reception Hall	1	40	40
7. Waiting Area	20 Seats	1.7	30
Admin			
1. Helpdesk Counters	5	2	10
2. Office Area	1	80	80
3. Executive Rooms	5	10	50
4. Server Room	1	10	10
5. Utility Room/Housekeeping	1	8	8
6. File and office supplies room	1	8	8
7. Meeting room: Small	2	10	20
8. Meeting room: Large	2	25	50
9. Pantry	2	5	10
10. Restrooms - 4-5 Persons each	3	12	36
Cultural Spaces			
1. Reception Hall	1	50	50
2. Exhibition Spaces	1	1000	1000
3. Gallery	1	100	100
4. Food Court	1	100	100
5. Restroom	1	50	50
6. Landscaping	1	300	300
7. Store Rooms	3	50	150
8. Workshop	1	200	200

The area programme is suggestive and can be changed, added, modified if desired based on your design. Participants are free to interpret/alter/combine/break these functions based on how their project demands in the design phase.

Space	Units	Area	Total
Covered Performance Areas			
1. Lobby	1	50	50
2. Stage	1	200	200
3. Seating	250	1.66	450
4. Restroom	4	25	100
5. AV Room	1	50	50
6. Backstage Area	1	75	75
7. Housekeeping rooms	1	25	25
8. Multipurpose Rooms	2	110	220
9. Ticketing	1	50	50
Marketplace			
1. Foyer/Entrance Area	1	30	30
2. Shops	50	10	500
3. Food Court	1	100	100
4. Flea Market Space	2	30	60
5. Live Crafts / Artisan Area	1	100	100
6. Toilets	4	20	80
7. Store Areas	3	50	150
8. House Keeping Rooms	2	15	30
Services			
1. Parking: Equivalent Car Spaces	800	12.5	10000
2. Security Station	1	30	30
3. Vehicle Checkpoint	3	20	60
4. Solid Waste Management	1	100	100
5. Transformer and Generator Room	1	50	50

Circulation and Services can be considered 30% of the programme. Landscaping and other open areas are separate and are not included in builtup area calculation.

The area programme is suggestive and can be changed, added, modified if desired based on your design. Participants are free to interpret/alter/combine/break these functions based on how their project demands in the design phase.

Guidelines

You have to deliver an design outcome on the following site, based on the given outlines.

- Recommended number of sheets/presentation images/boards:

5 (Five) of size [**2800px x 3500px**] in portrait digital format (**JPEG only**).

Minimum 3 (Three) & No maximum sheet limit. Each image should be less than **15MB**. (Do not submit PNG format)

Minimum requisite submission are sheets/boards + Cover image containing:

- Site plan (Compulsory)
- Key conceptual sections x 1 (Minimum)
- 3D views x 4
- Additional cover image of 2000px x 1000px
- Write a article story (of about 700-1000 words) answering the questions given in the Additional Resources.

#The Articles have to be answered in the project submission portal as instructed in the FAQ document in the 'additional resources folder'.

Deadlines

Discover the competition schedule and deadlines on the competitions page or on this link - [Schedule](#).

Resources

This competition contains additional resources that contains a set of files useful to complete the competition submission. This folder is made available on your profile dashboard automatically as soon as you register.

This additional resources folder of this competition contains: Submission Format files in PSD | AI | InDD, FAQs, High Res maps and CAD file of the site plan.

Rules

- + The competitions is open for **students and professionals** from all the disciplines of design.
- + The team limit for this competition is **4 members maximum per team**.
- + You can register more than one team but they have to be registered separately.
- + Ensure that the final sheets submitted **do not include your name or any other mark of identification**. Your submission is linked to your user account which stands as your identification.
- + This is a design **ideas challenge only**. There is no built commission/realization associated with the problem.
- + In case of publication in yearbook we will reach out separately for selected entries.

Pro-Tips

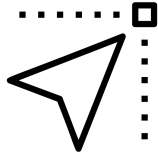
- + Use exploded views to discuss multi levelled conceptual models better.
- + Mention sheet number on corner of every sheet.
- + Plagiarism of any idea / form / design / image will be disqualified with a notice.
- + All the sheets or images will be viewed on a digital device. **e.g.** Laptop screen or projector. Uploaded sheets or images will not be physically printed for evaluation. The submission hence should be prepared for digital viewing only.
- + Submit JPEG images only. (PNG will not function)



Awards

Grants of up to a total of **24,000\$** can be won on this challenge. Learn more about the full conditions on the competition page [here](https://uni.xyz/competitions).

The entries will be judged by an international jury of the competition on the following criterions:



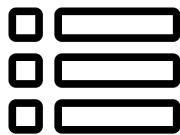
Presentation

The fundamental to a good entry is a good presentation.



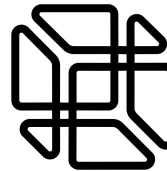
Concept/Idea

Quality of thought and intent in pre-design phase.



Spaces/Programme

How the spaces are calculated and ordered.



Design Outcome

The final architectural outcome of the solution.

Judging Criteria

The judging panel can also add other criterions based on their internal discussions - which will be in line with the problem statement. Participants are advised to fulfil above given criterions first in their design.

About

unfuse™

Unfuse serves as a unit for **Uni** in the field of Architecture. It intends to break the fusion of traditional design barriers and methodologies by making it a platform for experimentation and conceptual exchange of ideas in architecture, urbanism, society, culture and ecology. It is a research initiative dedicated to providing opportunities for designers from all domains to explore ideas that go beyond the boundaries of architectural discipline and enrich our built environment; thereby opening up possibilities for promotion of architectural thought at a global level.

Queries: support@uni.xyz

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