unfuse

REBORN

Plan for Survival



Architectural ideas to overcome Earthquakes

https://**competitions**.uni.xyz



Img 1: Devastation Aftermath after a Earthquake

Premise

For centuries, **earthquakes** have been an inevitable phenomenon that bring destruction and devastation all around the world and **we aren't any more prepared or equipped to deal with them** than we used to be. This is a worldwide issue and although some countries like Japan are better prepared with the proper infrastructure to deal with these disasters, still many countries remain that are powerless in the face of these disasters. Countries like **Iran, Indonesia and Turkey** which are some of the countries that are most prone to earthquakes but don't have the necessary infrastructure to minimize the damages.

According to the IRIS (Incorporated Research Institutions for seismology) several hundred earthquakes happen all around the world each day but, major earthquakes (magnitude 7) happen more than once per month and great earthquakes, magnitude 8 and higher, occur almost more than once per year which is enough to bring irreversible destruction.



Img 2: A group of people gathering at the end of the day after earthquake (Source)

Buildup

One of the most **recent examples of these catastrophic earthquakes** is the one that happened in **Kermanshah, Iran** and another one of the most destructive ones was the **2003** Bam earthquake both of which resulted in severe loss of life and devastation during and after they happened. Calamities like these happen all around the world frequently and cost the lives and livelihoods of thousands of people, yet no major solutions have been put forward. This can be a reflection of **how powerless each individual person** feels in the face of these large scale natural disasters but humanities strength has always been the power of collective thinking and cooperation in the face of challenges.

By reaching a solution on how to manage these disasters and deal with their destruction and damages, we could potentially save many lives and prevent the loss of a notable sum of resources.

But the question still remains, **how do we approach this issue** that not only provides a solution for immediate relief after disaster strikes, **but also foresees steps and precautions that can be taken beforehand to lessen the damages and ease the process of rebuilding.**



Img 3: Pictures Clicked by Mahdi Barchian in the Iran Kermanshah Earthquake

Issue

The problem of disaster management and providing shelter and basic needs after a natural disaster has been a long lasting issue that hasn't had any significant progression. Today, **2 years after the earthquake in Kermanshah many people are still living in temporary containers and haven't been able to resume their ordinary day to day lives.**

After all, how do we provide a **large number of spaces for injured and traumatized people** in a short amount of time? How much can we plan a head? Or maybe find a way around this issue because for as far as we know earthquakes are bound to happen whether we are prepared or not.



Img 4: Picture Clicked by Mahdi Barchian in the Iran Kermanshah Earthquake

Brief

We have witnessed time and again cities, towns and communities left in ruins after an earthquake has struck. Different approaches to reverse the devastation and help people get back up on their feet have proven to be ineffective or at the very least insufficient. Basic temporary housing strategies are simply not adequate to deal with the environmental, social, psychological and financial havoc that earthquakes bring about.

The brief does not stop at only temporary housing solutions or ready-made objects or products that could be utilized after an earthquake, rather, we're asking for a broader solution and an approach to prepare a city and provide accommodation for the survivors of an earthquake.

Objectives



Reproducibility & Scalability



Fast & Easy Implementation



Native Workforce & Materials



Practicality & Feasibility

The following objectives can be a point of beginning to conceive this design. Participants can assume their own contexts and users before initiating their design process.

Iran

Iran is a country at the heart of the middle east and is one of the oldest countries in the world with a **rich history** proceeding **2500 years.** Previously now as Persia, the country as undergone many changes and has many different rulers and conquerors from Cyrus the great and Darius to Alexander the great, Genghis Khan, the Arabs and the Ottomans. An eclectic cultural elasticity has been said to be one of the key defining characteristics of the Iranian identity and a clue to its historical longevity. The **Iranian people** are some of the **most hospitable** and **most resilient people, enduring many wars, revolutions and natural disasters over the years.**

Iran is one of the most **seismically active countries in the world**, being crossed by several major faults that cover at least **90% of the country**. As a result, earthquakes in Iran occur often and are destructive. Since 1900, at least **126,000 fatalities** have resulted from earthquakes in Iran and **several cities have been completely leveled and rebuilt.**

Introduction to Iran

Img 5: Tabriz Bazaar, Iran

Tabriz, Iran

Tabriz is the capital city of **East Azerbaijan Province, in northwestern Iran.** Tabriz Bazaar, once a major Silk Road market, is a sprawling brick-vaulted complex selling carpets, spices and jewelry. Due to its convenient location and it's proximity to Europe it has been a business hub in the region and today it's one of **Iran's most important industrial centers**. In the last two centuries it has been the origin of many cultural, social and industrial movements in the country. The climate is continental: hot and dry in summer and severely cold in winter. The city lies in a valley surrounded by hills on three sides. **It is in an earthquake zone that is liable to frequent and severe shocks.**

Area - 240 km^2 (90 sq mi)
Site Coordinates - **8°03'28.6"N 46°18'02.7"E**



Tabriz has had **119 recorded major earthquakes** and **8 great earthquakes** where the city was **completely ruined and rebuilt each time.** Starting from **858 AD these quakes have devastated cities** and killed thousands time and again. With the last one happening in 1780 these earthquakes seem to have a period of 200 years and even though it's been almost 300 years since the last one many still believe that it could happen any day and bring catastrophic results, yet we aren't any more prepared than we were when the last one happened. There have still been many significant earthquakes around the world and in Iran with the last one happening abou**t 2 years ago in the winter** in a rural area in

Kermanshah with an extremely cold climate which had about **700 casualties and 12000 injuries.** The immediate relief efforts and accommodation for the survivors was nowhere near enough what was needed and many more lost their lives because of this and had it not been for volunteers and private citizens help and donations, hundreds more would have lost their lives.

Infographic - Seismic Hotspots



Img 6: Picture Clicked by Mahdi Barchian in the Iran Kermanshah Earthquake

Crisis

Tabriz has had 119 recorded major earthquakes and **8 great earthquakes where the city was completely leveled and rebuilt each time.** Starting from 858 AD these quakes have devastated cities and killed thousands time and again. With the **last one happening in 1780** these earthquakes seem to have **cycle a period of 200 years** and even though it's been **almost 300 years since the last one** many still believe that it could happen any day and bring catastrophic results, **yet we aren't any more prepared than we were when the last one happened.**

There have still been many **significant earthquakes around the world** and in Iran with the last one happening about **2 years ago in the winter in a rural area in Kermanshah** with an **extremely cold climate** which had about 700 casualties and 12000 injuries. The immediate relief efforts and accommodation for the survivors was nowhere near enough what was needed. Many more lost their lives because of this and had it not been for volunteers and private citizens help and donations, hundreds more would have lost their lives.

Tabriz

Seismic Map

Very High Risk

High Risk

Medium Risk

Low Risk

Very Low Risk

Competition SIte

Baghe-Shomal

This historical piece of land, located on the southern part of Tabriz, has had many different functions over the course of time. It used to be one of the most important and largest gardens in Tabriz called Baghe Shomal (Northern Garden). In the early 1900s the government of the time took control of this land and turned it into military site where they placed several industrial sheds that remain to this day. In recent years the military base has moved to another location, leaving this land empty and without use. This space is one of many locations in Tabriz that could be used for pre-earthquake preparations and post-earthquake accommodation.

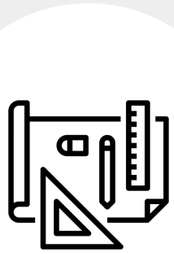
38°03'34.2"N 46° 18'05.9"E

Tabriz

East Azerbaijan Province, Iran

Competition Outcomes

The competition aims for realistic results that can be used on Site in Tabriz. These results can be in either the form of innovative housing ideas (not necessarily temporary containers or tents that are already being used), preparation plans and arrangements, combination of both or something entirely new.



Architectural Design Ideas

This can be architectural ideas or solution that not only stop at housing, but setting up structures or buildings. These should enable people to get back up on their feet faster than before - or can be a set of essential supplies or activities that helps the city to continue run on its critical functions.



Transient / Quick Relief

This category ideas should be - **in disaster situation** - how can we alleviate people from grief, shock, pain, trauma - while covering their basic needs of housing, sanitation and food. The aim extends to qualitative aspects Eg. Dignity, Gender Sensitivity, etc. - and not just makeshift shelters



Action Plan / Preparation

This section of ideas can be as **escape-exit level** ideas to how **resources could be mobilized to or fro site** in **pre-during-post disaster scenario.** The roadmap can also involve **building code level recommendations** for **Tabriz** or **policy changes** that can help citizens to mitigate life and property loss.

Overlap

Permanent

During Disaster

Policy

The vision should be conceive ways to **reduce the damages and effects of an earthquake** or **accelerate and optimize the recovery process**. The brief expects a **broad range of single or overlapping results between** the above **three major domains** - while blending a broad sense of rationality and practical thinking.

Submission

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

• A maximum of 4 boards / sheets. – **[2362px** x **3544px]** or **[400mm x 600mm** in **150 dpi]** in portrait digital format (JPEG).
• Each image should be less than **15MB**
• You can find the preset PSD, AI and INDD template files in the 'additional resources folder and here.

This additional resources folder contains: Cad Site Map, High Res maps

Minimum requisites in the sheets are 3 sheets/boards + Cover image containing:

• Site plan (Compulsory)
• Key conceptual sections x 1 (Minimum)
• 3D views x 4
• Cover image/Thumbnail of size 2000 x 1000 px or larger in aspect ratio 2:1.
• Floor plans, images, sketches (if any) can be added to support the entry in the form of additional images.
• Answer 6 FAQ questions in the discussion section as given on the 'additional resources folder'.

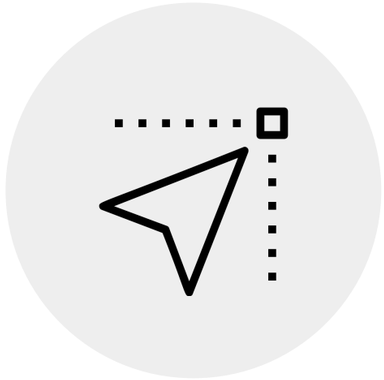
+ The team limit for this competition is 4 members maximum.
+ Use exploded views to discuss multi levelled conceptual models better.
+ Ensure that the final sheets which are submitted do not include your name or any other mark of identification.
+ Mention sheet number on corner of every sheet.
+ This is a design ideas challenge only. There is no built commission/realization is associated with the problem
+ Plagiarism of any idea / form / design / image will be disqualified with a notice.

Registration page here: http://competitions.uni.xyz/reborn

Discover the competition schedule and deadlines here: Schedule

Judging Criteria

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.



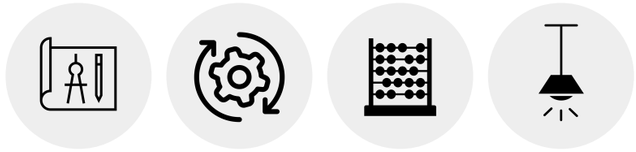
Spaces/Programme

How the spaces are calculated and ordered.



Design Output

The final architectural outcome of the solution.



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.

(Ad) Institutional access:

We believe in a world more collaborative.

And we think academia is where it can begin.

Institutional Access™ is world's only cross institution competition programme. You can make this challenge more meaningful by bringing it to your classmates and professors working together. There are a lot of perks by entering this challenge with your institution. Follow the link to learn more.

Institutional Access™

Curator



Kourosh Hajizadeh

Principal Architect,
Hajizadeh & Associates, Iran

HAJIZADEH & ASSOCIATES

Kourosh Hajizadeh was born on June 30th, 1975 in Tehran. Iran's culture and civilization impressed him so much that in the year 2001 he published a book called "Dooman" which was about lost culture and historical values of Tabriz which included many of his sketches on this matter, and was written in verse. He collaborated with famous and important architects such as "Bahram Shirdel" and "Seyyed Hadi Mirmiran" from 2002 to 2007. After many experiences, he founded his personal office called "Hajizadeh & Associates". By reason of his distinguished mentality, he participated in various competitions, and the result was winning various titles in more than 30 architectural competitions. In 2013 he won " the Architect of the Year " prize in Middle East Architect Award 2013 and Architect Magazine selected him as one of the " 50 Most Influential People " in the architecture of Middle East in 2014 till 2018. He has been teaching for 14 years in a number of universities such as "Tehran University", "University of Science and Technology" and "Islamic Azad University-Dubai branch. He has also had several lectures on his architectural works and the design process in his works. In his architectural experiences, his significant aim is to localize architecture and to connect architecture with people and the city by the language of world contemporary art.

About unfuse



Rewards

Grants of up to a total of **20,000$** can be won on this challenge. Learn more about the full conditions on the competition page here.

Unfuse serves as a unit block 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
Discover other competitions: http://competitions.uni.xyz
Facebook: https://www.facebook.com/unidesigntogether/
Instagram: https://www.instagram.com/uni.xyz/
Discover FAQ's about this competition on our help forum here: http://help.uni.xyz/

unfuse

REBORN

Helping **humanity** overcome **earthquakes**.

Available on:
Institutional Access™

https://**competitions**.uni.xyz