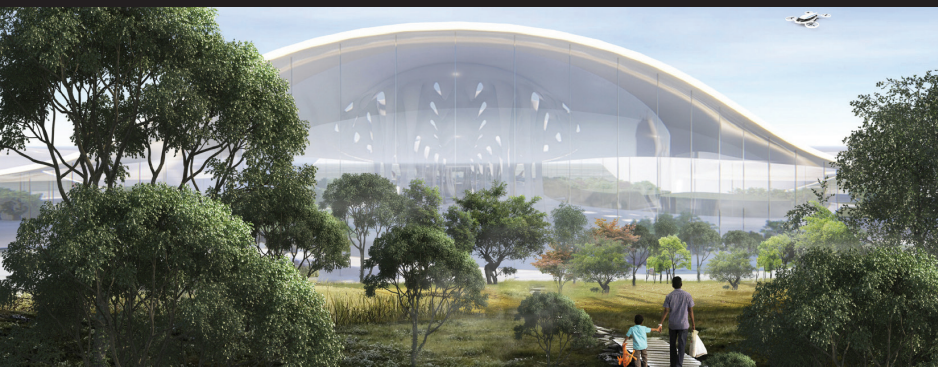
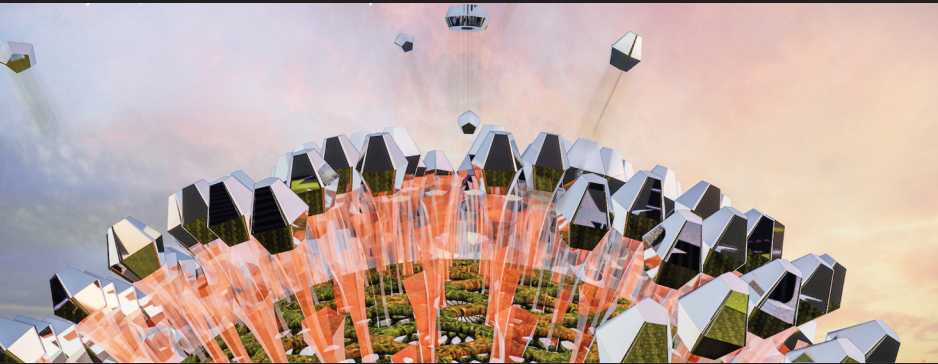


AIRPORT OF THE FUTURE

DESIGN COMPETITION FOR STUDENTS



2024 SHORTLIST
ANNOUNCEMENT
PRESS KIT

FENTRESS GLOBAL CHALLENGE 2024 SHORTLIST PRESS KIT

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Cover images, top to bottom:

- *Liyang Wang (2021)*
- *Michel Ghostine & Christian Ghanem (2016) – left image*
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- *Saba Mirmotalebi & Ali Dashti (2019)*
- *Carmina Ferreras & Oluwarotimi Osiberu (2021)*
- *Nikhil Bang & Kaushal Tatiya (2020)*

Fentress Global Challenge Shortlist Announced for 2024 University students around the world envision airport design in 2100

January 17, 2025 (Denver) – Fentress Architects is pleased to announce the shortlist of eight design concepts for the 2024 Fentress Global Challenge (FGC). The 2024 call to action to graduate students was to design an airport terminal for the year 2100 CE. Students were encouraged to consider projections such as site availability, climate conditions, modes and destinations for air travel, and more that could impact the design.

FGC is an international design competition launched in 2011 by Curtis Fentress, founder and principal in charge of design for Fentress Architects. Over the past thirteen years, the competition has attracted more than 1,000 submissions from university students and recent graduates around the world. Speaking about the 2024 FGC shortlist, Curtis Fentress commented:

“Every year I am inspired by the vision, creativity, and practicality of these talented young designers. The airport designs submitted in 2024 included highly theoretical visions as well as practical adaptations that could be implemented today. Viewed together, these innovative concepts show an awareness of evolving trends and the vision to create hypothetical solutions for the Airport of the Future.”

The final winners of the 2024 FGC will be announced in February 2025. Winning teams will receive the following awards: \$10,000 for first place, \$3,000 for second place, and \$2,000 for third place. In addition, two People’s Choice Awards will be selected via the Fentress Architects Facebook page.

2024 Fentress Global Challenge Project Shortlist

The eight 2024 FGC shortlisted entries include, in alphabetical order by project name:

Gen-Infinity – *Vision for a 22nd Century Airport in Japan*

- Designers: **Alap Parikh and Srinath Sivakumar** – North Carolina State University, USA
- Design Vision: A pioneering design that embodies the spirit of Japan’s technological and cultural heritage, Gen-Infinity reimagines air travel through decentralization, adopting a satellite approach that promotes efficiency and reduces congestion.

The Hetapod – *New Aviation Technology: Air Parking Garage*

- Designer: **Tianu Wang** – Harvard University, USA
- Design Vision: Just as evolution of the automobile drove changes in architectural design, future aircraft will do the same. The Hetapod will serve as a structure for housing aircraft of many kinds, with each level featuring specialized runways.

Jizzakh International Airport – *Where the Whole World Meets*

- Designer: **Asal Makhmadkarimova** – Tashkent University of Architecture and Civil Engineering, Uzbekistan
- Design Vision: Drawing on Uzbekistan's deep-rooted history as the heart of the ancient Great Silk Road, this design envisions the country as a central hub for global travel and cargo, re-establishing it as a meeting point between the East and West.

LAX Droplet – *Vertical Take-Off and Landing*

- Designers: **Laura Hedrick and Matthew Phillips** – North Carolina State University, USA
- Design Vision: This new LAX terminal is dedicated to vertical take-off and landing. Design goals included reducing strain on land-side transportation, improving passenger mobility, and providing an immersive experience inspired by water.

Manchester T4 – *A Sustainable Gateway to Space*

- Designer: **Connor Meighan** – University of Manchester, UK
- Design Vision: As the UK positions itself at the forefront of space tourism, this airport concept envisions a pioneering transport hub that combines space tourism, green aviation technologies, and sustainable architecture.

Para-Isla – *Ninoy Aquino International Airport*

- Designers: **S Lee, Shanea Lim and Darla Sengco** – University of Santo Tomas, Philippines
- Design Vision: Para-Isla combines Filipino culture, advanced technology, and sustainable design to enhance passenger experience. The triangles within the form embody the three main island groups, namely, Luzon, Visayas, and Mindanao.

Socotra Floating Eco-Airport – *A Nature-Interconnected Airport*

- Designers: **Muhammad Aqil Mohd Amran and Nurul Hazirah Naim** – College of Built Environment, Universiti Teknologi MARA, Malaysia
- Design Vision: As VTOL technology takes hold, Socotra Island becomes a strategic location for a global transit hub. The futuristic airport floats along the coastline, blending advanced infrastructure with nature to harness 100% renewable energy.

Sponge Airport – *Don Muang Area*

- Designers: **Josua A. Widjiyanto, Chintya and Yoshua D. Tarigan** – Parahyangan Catholic University, Indonesia
- Design Vision: Adapting to rising sea levels, this airport is based on the concept of a sponge plot to create amphibious structures. An integrated mass rapid flight typology accommodates the needs of air travel while also revitalizing public spaces.

2024 Fentress Global Challenge Esteemed Jury

The 2024 FGC jury was comprised of select professionals who have distinguished themselves in the realms of architectural visioning and aviation innovation. These jurors, listed below, are highly recognized for their noteworthy contributions:

Dr. Alan Stolzer

Dean and Professor, College of Aviation, Embry-Riddle Aeronautical University

Alan is an experienced pilot and aviation safety expert. He joined the Embry-Riddle faculty in 2008 and is currently dean of the College of Aviation School of Graduate Studies. His distinguished career as a professor, author, and aviation authority spans 37 years. Alan's many awards and recognitions include his election as a Fellow of the Royal Aeronautical Society and the Federal Aviation Administration Air Transportation Centers of Excellence Outstanding Faculty of the Year Award.

Holly Miles

Editor, International Airport Review

Holly is editor of International Airport Review, the leading media source for the airport community focusing on passenger experience, innovation, operations, revenues and sustainability. Since joining the brand in 2020, Holly has increased the outlet's global reach and brand awareness and is well known in the airport sector. She holds a Bachelor of Arts in English Literature from Queen Mary University of London.

Bradford C. Grant

Interim Dean and Professor, Howard University

Bradford is a registered architect and distinguished educator. He has extensive experience in community design, contemplative practices in design education, and environmental justice in architecture. In recognition of his work, research on African American architects, and teachings on "Drawing as Meditation," he has received two American Institute of Architects (AIA) Awards – Honor for Education and Honor for Collaborative Achievement.

Dr. Agatha Kessler

Chairman, Fentress Architects

Recognized for her strategic thinking and fearless creativity, Agatha is Chairman of Fentress Architects and the non-profit Aerial Futures. Prior to this, she worked as an executive in finance and technology for 35 years with industry-leading companies such as VISA and Hewlett-Packard. With a keen interest in the future of air and space travel, Agatha earned her Ph.D. in Aviation from Embry-Riddle Aeronautical University and an MBA from Warwick Business School.

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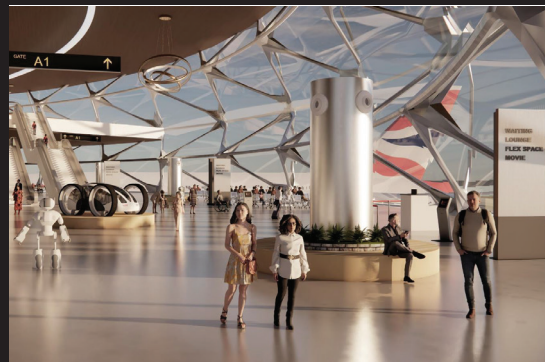
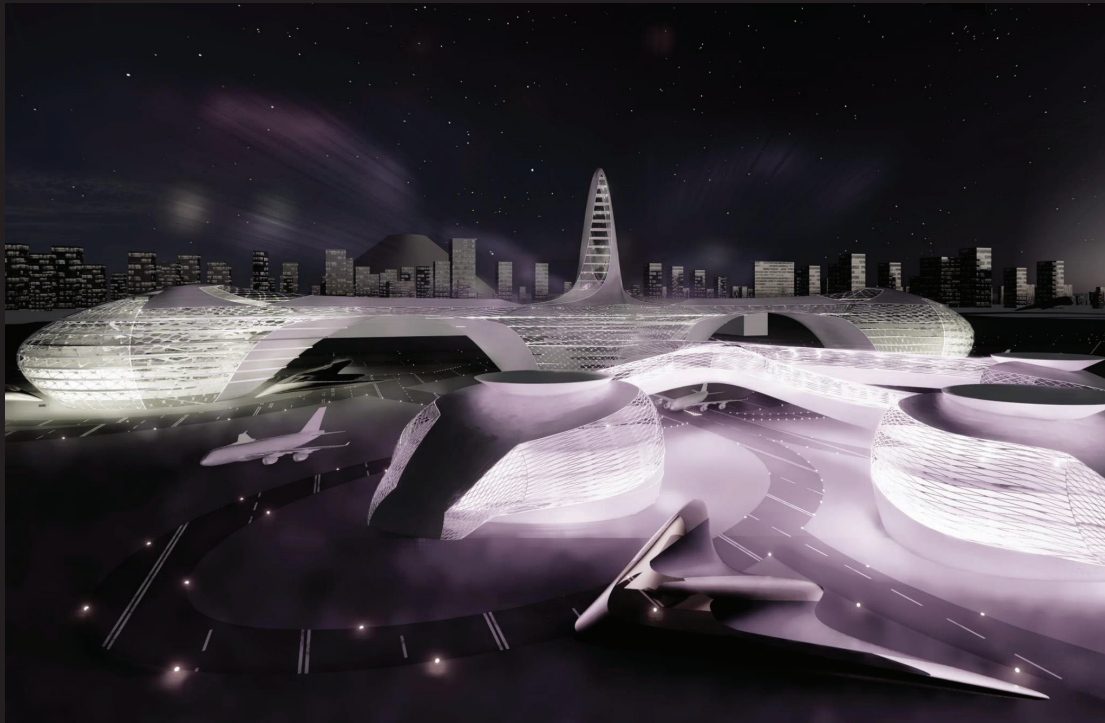


Gen-Infinity

Vision for a 22nd Century Airport in Tokyo

Alap Parikh & Srinath Sivakumar

North Carolina State University
Raleigh, North Carolina, USA



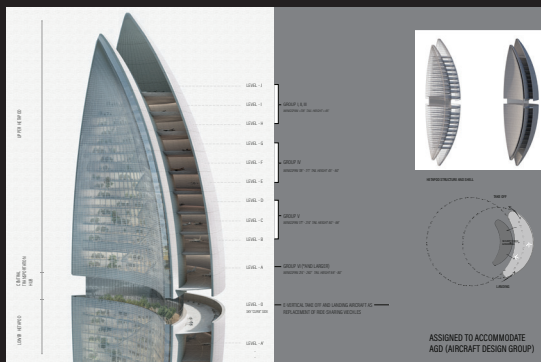
Fentress Global Challenge 2024 – Shortlisted Design Concept

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CHALLENGE**



The HETAPOD *New Aviation Technology – Air Parking*

Tianu Wang
Harvard University
Cambridge, Massachusetts, USA



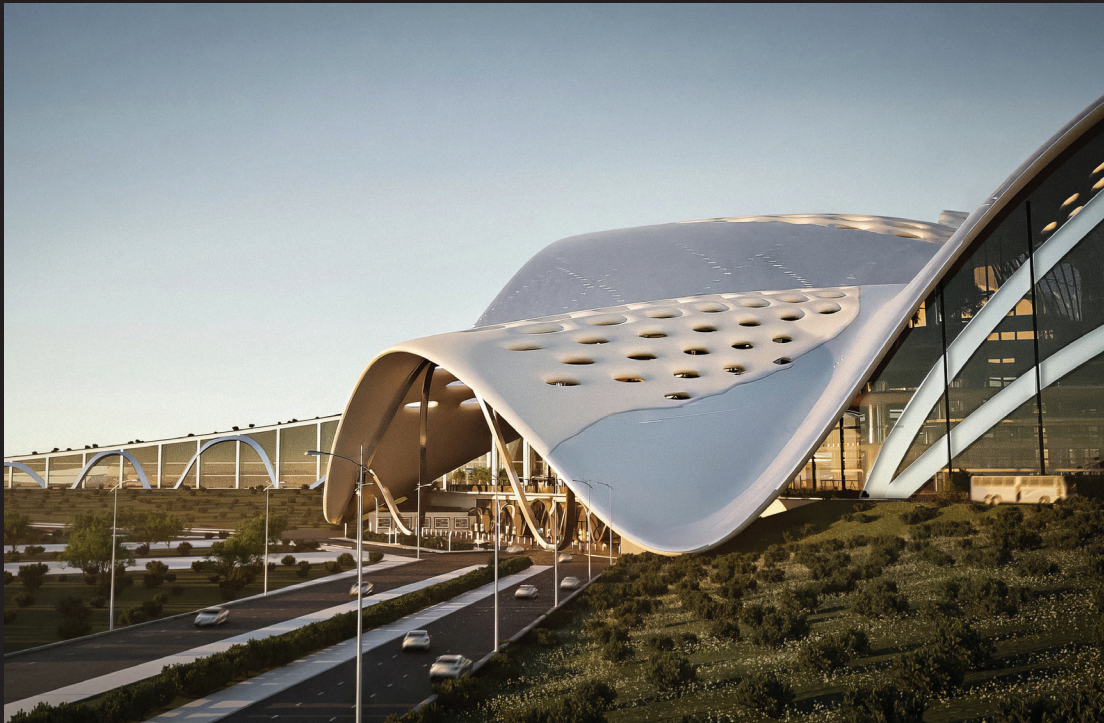
Fentress Global Challenge 2024 – Shortlisted Design Concept

**FENTRESS
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Jizzakh International Airport *Where the Whole World Meets*

Asal Makhamadkarimova
Tashkent University of Architecture and Civil Engineering
Tashkent, Uzbekistan



Fentress Global Challenge 2024 – Shortlisted Design Concept

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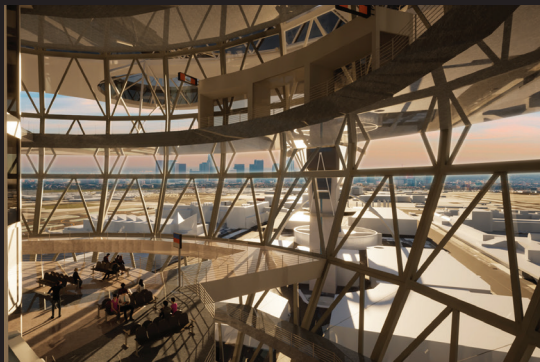
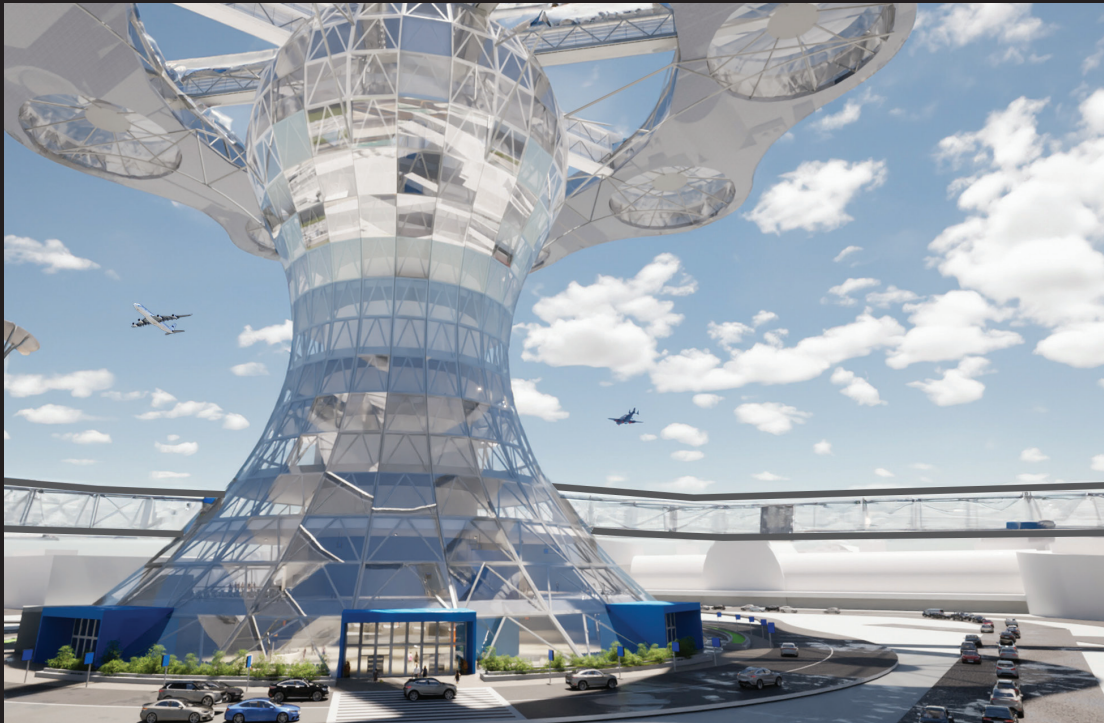


LAX Droplet

Vertical Take-Off and Landing

Laura Hedrick & Matthew Phillips

North Carolina State University
Raleigh, North Carolina, USA

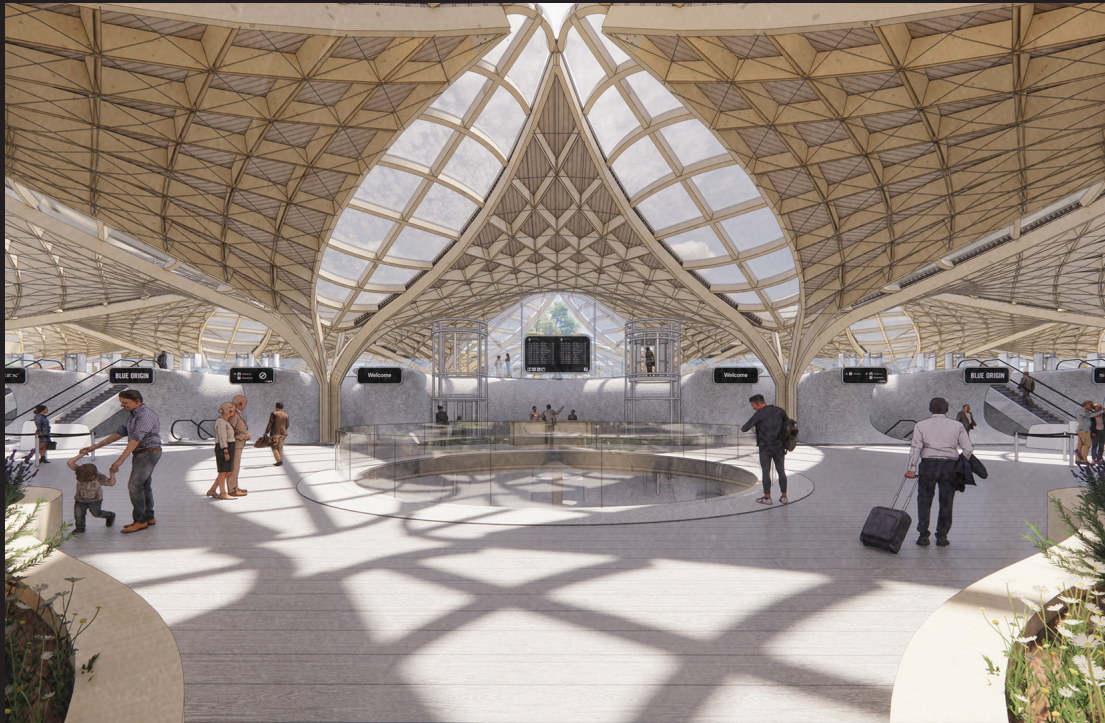


Fentress Global Challenge 2024 – Shortlisted Design Concept

**FENTRESS
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Manchester T4
A Sustainable Gateway to Space
Connor Meighan
University of Manchester
Manchester, England



Fentress Global Challenge 2024 – Shortlisted Design Concept

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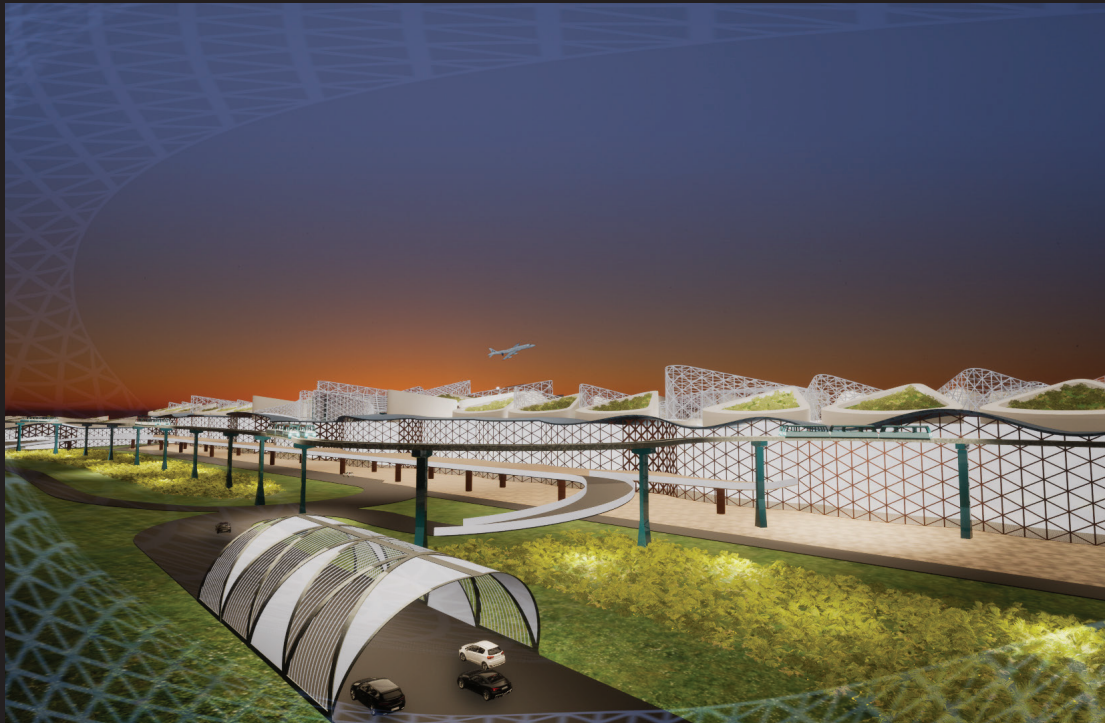


Para-Isla

Ninoy Aquino International Airport

S Lee, Shanea Lim & Darla Sengco

University of Santo Tomas
Manila, Philippines



Fentress Global Challenge 2024 – Shortlisted Design Concept

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CHALLENGE**

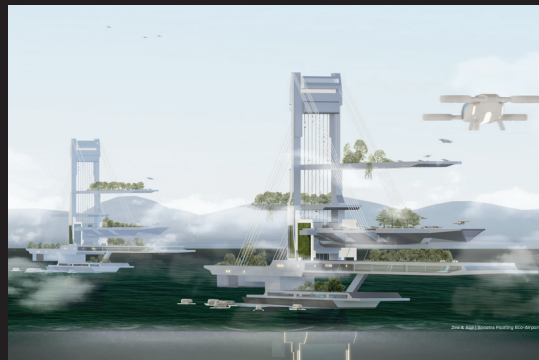
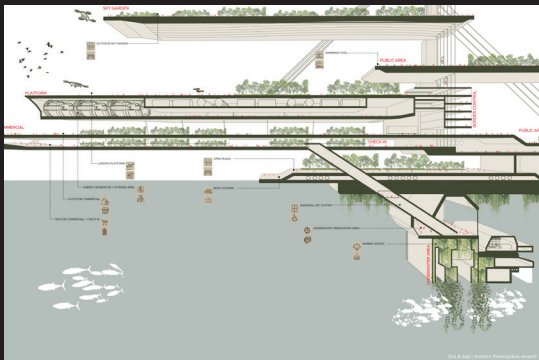


Socotra Floating Eco-Airport *A Nature-Interconnected Airport*

Muhammad Aqil Mohd Amran & Nurul Hazirah Naim
College of Built Environment, Universiti Teknologi MARA
Perak Darul Ridzuan, Malaysia



Zira & Aqil | Socotra Floating Eco-Airport



Zira & Aqil | Socotra Floating Eco-Airport

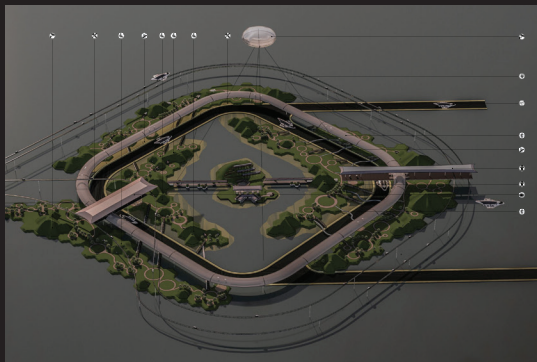
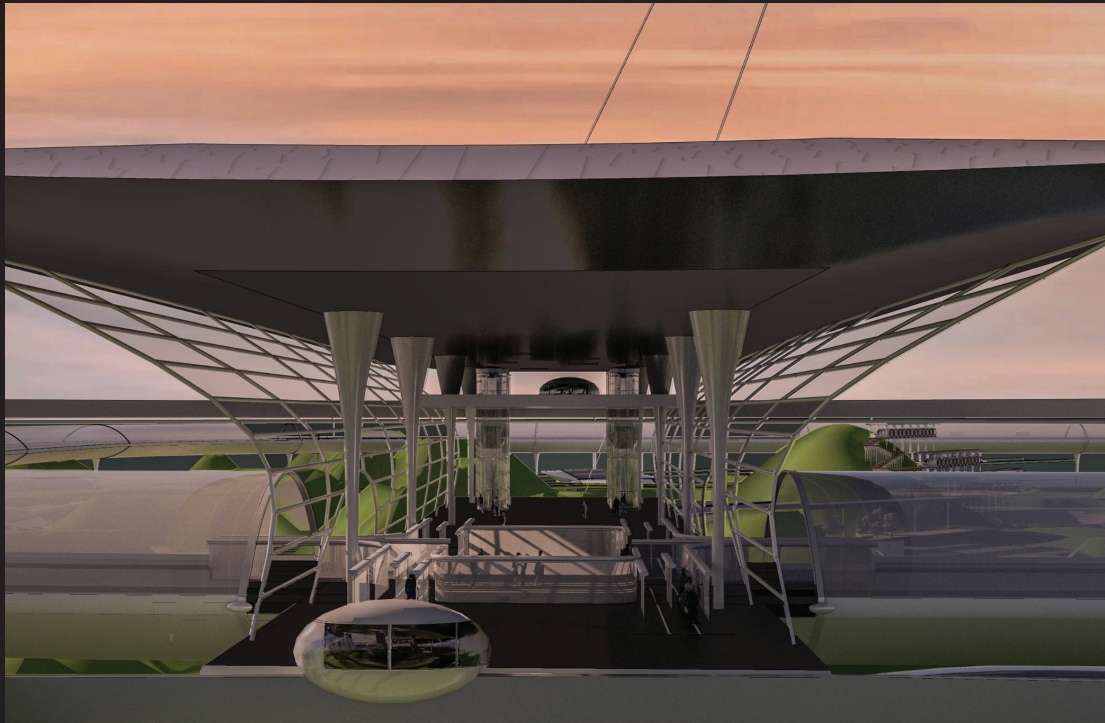
Fentress Global Challenge 2024 – Shortlisted Design Concept

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Sponge Airport *Don Muang Area*

Josua A. Widjiyanto, Chintya & Yoshua D. Tarigan
Parahyangan Catholic University
Bandung, Indonesia



Fentress Global Challenge 2024 – Shortlisted Design Concept



2024 Competition Brief

Despite a multitude of technological advances including video conferencing and drones, the proliferation of airports worldwide continues to be spurred on by global commerce and an unrelenting demand for travel.

While the airport terminal—conceived a century ago—is a relatively new architectural typology, they have held equal importance with quintessential civic buildings: city halls, courthouses, libraries, museums, and theaters. Yet, airports are uniquely complex and are more than simply high-volume transportation hubs. Increasingly, airports are also workplaces, centers of commerce, recreational outlets, and cultural resources.

Fentress Global Challenge (FGC) is an international student design competition. Since its inception in 2011, entries from more than 160 countries have competed for top honors. FGC represents an extraordinary exploration into the future of architecture and transportation, and in so doing, continues to advance the pursuit of innovative design.

Eligibility

FGC is open to graduate and undergraduate students currently pursuing architecture or engineering degrees in an accredited university program, as well as recent graduates (within the last four years) with a degree in architecture or engineering. Current students must provide proof of active enrollment status: a scanned copy of their student ID and current course schedule. Recent graduates must provide a scanned copy of their diploma.

Participants in the FGC are allowed to go solo or team with a maximum of three team members. In the case of team submissions, awards will be split between team members. Participants are encouraged to choose the collaboration format that best aligns with their vision and design goals.

Guidelines

1. Participants are challenged to envision an airport in the year 2100 and create a new terminal building concept. Entrants are encouraged to utilize forecasts for population, environmental conditions, modes of travel, potential destinations, and other data to develop their design. Concepts must:
 - Improve at least one primary factor influencing airport terminal building design. Entrants are encouraged to make projections about the factors that will most influence airport architecture in the future. Examples include mobility, urbanization, globalization, technology, flexibility, security, project feasibility, and passenger experience.
 - Achieve sustainability and resiliency. Sustainable design is the creation of places that are environmentally responsible, healthy, equitable, and profitable. Resilient design can adapt to changing conditions, as well as maintain or regain functionality in the face of natural and humanmade disasters.

Image above left – *Michel Ghostine & Christian Ghanem – FGC 2016*

Image above right – *Ridwan Arifin – FGC 2020*



- Employ Fentress Architects' second *Touchstone of Design* – Use Context to Create Identity: “Context is more than an intellectual consideration of the history or physical appearance of a neighborhood, city, or state, and it’s more than the way new will live with old. Context draws on the senses, the sights, smells and memories that define a place and make it unique. Context grows from community, and people respond to it.” More information about Fentress Architects’ *Touchstones of Design* is available here: www.fentressarchitects.com/design-philosophy.

1. Participants must choose one of two site options:

Option 1: Establish the new terminal at an existing airport that requires expansion. Participants have the flexibility to select any airport of their choice.

Option 2: Site the new terminal at a location of your choice where an airport does not yet exist. Participants should consider sites where an airport could serve as a catalyst for economic and social development.

2. Participants must use clear, concise language to convey ideas, key points, and design solutions. Photographs, diagrams, renderings, animations, collages or other visualizations are encouraged to help explain the concept. Please label all graphics.

3. Plagiarism and cheating will result in disqualification.

Evaluation Criteria

- **Creative Approach and Presentation**
The design approach is innovative and inspiring. Both the concept and design solution are presented through unique and compelling graphics.
- **Response to Site**
The design honors the physical attributes of the site’s context and culture. The design strategy matches the global and local demographic requirements of the location. As noted above, use context to create identity.
- **Sustainability and Resiliency**
The design minimizes negative impacts to the wellbeing of humans and the natural environment. The overall design strategy also addresses vulnerabilities related to natural and humanmade disasters.
- **Functionality**
Planning for building organization and operations is clearly expressed and appropriate. The design solution is well-defined and well-articulated through the structural, technical, and constructible rationale.
- **Innovation and Technology**
The design envisions the advancement of aviation and technology with innovations that improve building performance and passenger experience, such as efficiency, safety, comfort, health and wellbeing, sustainability and resiliency, amenities and entertainment, cost savings, and more.

Image above left – *Liyang Wang – FGC 2021*

Image above right – *Saba Mirmotalabi & Ali Dashti – FGC 2019*



Awards

- 1st Place US\$10,000
- 2nd Place US\$3,000
- 3rd Place US\$2,000
- 2 People’s Choice US\$1,000 each

Schedule

- 2023.11 Competition Announcement
- 2024.10 Design Submission Deadline
- 2025.01 Shortlist Announcement
- 2025.02 Winners Announcement

Submission Requirements

Participants must register and upload competition materials to their profile page at www.fentressglobalchallenge.com no later than October 1, 2024 (23:00 GMT).

Mandatory Formatting:

- Official language is English
- Official system of measurements is United States customary units
- File must be saved as a PDF and named as follows: “2024_team name_design concept name.pdf”
- File may contain no more than: Eight (8) single-sided, 11-inch x 17-inch, landscape-format pages
- File size may not exceed 100MB

Mandatory Content:

- Title of design concept
- Description of design concept (400-700-word maximum)
- Profile of entrant (individual or team)
- Supporting images to include diagrams, plans, sections, and/or perspectives
- In a separate PDF, current students must provide a scanned copy of their student ID and current course schedule. Recent graduates must provide a scanned copy of their diploma.

Jury

FGC entries will be judged in two stages. A first-round jury will establish a shortlist of design concepts, from which a final jury of distinguished experts will select the 1st, 2nd, and 3rd Place Award Winners. Members may include airport directors, futurists, behavioralists, sustainability and resiliency experts, airport architects, and Fentress Fellows.

All shortlisted entries will also be eligible for the People’s Choice Award, which will be judged on Fentress Architects’ Facebook page. The two submissions receiving the most “likes” will win a prize of US\$1,000 each.

Image above left – *Carmina Ferreras & Oluwarotimi Osiberu – FGC 2021*

Image above right – *Assem Attia – FGC 2021*



Rules and Regulations

Acceptance of Terms and Conditions

By participating in Fentress Global Challenge (FGC), participants agree to abide by all guidelines, requirements, rules and regulations related to the competition. Participants are encouraged to carefully review these to ensure compliance with all FGC terms and conditions.

1. **Entry Submission:** No changes are permitted to an entry after submission, except with explicit approval from Fentress Architects.
2. **Intellectual Property:** Participants affirm that all materials submitted are their original work and do not infringe upon the intellectual property rights of any third party. Fentress Architects is not liable for any infringement, and participants indemnify Fentress Architects against third-party claims. Plagiarism and cheating will result in disqualification.
3. **Usage Rights:** Participants grant Fentress Architects and competition sponsors non-exclusive reproduction rights for advertising, promotion, exhibition, print publication, and internet purposes related to the competition. Fentress Architects is not responsible for unauthorized use by third parties.
4. **Media Approval:** All published and online media related to the FGC must be reviewed and approved by Fentress Architects.
5. **Prize Terms:** Winners may not transfer, assign, or substitute prizes.
6. **Personal Data Processing:** Entrants acknowledge that personal data may be processed, shared, and used for contest-related purposes. Participants can access, review, rectify, or cancel personal data by contacting Fentress Architects.
7. **Validation and Disqualification:** Fentress Architects has the right to verify the validity and originality of entries and entrants, disqualifying any entry not in accordance with the rules. Failure to enforce rights at any stage does not waive those rights.
8. **Rule Changes:** FGC rules and regulations are subject to change without notice.
9. **Contest Integrity:** If the contest is disrupted due to factors beyond Fentress Architects' control, including computer viruses, tampering, or technical failures, Fentress Architects may disqualify individuals tampering with the process or modify, cancel, terminate, or suspend the contest.
10. **Online Voting:** To ensure fair competition, the use of click farms on the People's Choice Awards voting platforms is strictly prohibited.
11. **Legal Jurisdiction:** Any claims related to participation in the competition must be brought in Denver, Colorado, USA, and will be governed by the laws of the State of Colorado. The contest is void where prohibited.

Image above left – *Nikhil Bang & Kaushal Tatiya – FGC 2020*

Image above right – *Yuval Soffer, Shir Stav & Maya Arber – FGC 2019*