

A E R I A L
F U T U R E S

G R O U N D E D
V I S I O N S

SHAPING THE AIRPORT TERMINAL OF TOMORROW

OCTOBER 17–19, 2016

VENICE, ITALY



**A symposium on the
architecture of air travel.**

ORGANIZED BY PLANE–SITE
HOSTED BY THE EUROPEAN CULTURAL CENTRE

AERIAL FUTURES GROUNDED VISIONS

SHAPING THE AIRPORT TERMINAL OF TOMORROW

Welcome onboard the Aerial Futures Grounded Visions Symposium, where we will embark on a discussion about the current state of airport design—and venture into the possible futures of this emerging building typology.

Drawing on the expertise of prominent airport terminal designers, industry leaders and disruptive innovators, the symposium is a forum for knowledge sharing and exchange.

Organized by PLANE-SITE and hosted by the European Cultural Centre, the symposium is part of the 15th International Architecture Exhibition of la Biennale di Venezia's official collateral events, and conceived as a response to this year's Biennale theme, *Reporting from the Front*.

The number of people flying for business or pleasure has never been higher. Buildings responsible for facilitating their departure and arrival are now the subject of sophisticated design, global investment and even political contestation. Airports and the greater aviation industry find themselves working under the unprecedented circumstances of our information age, a rapid demographic shift and an ongoing technological revolution. Despite being among the youngest building types, airports are taking the lead as intricately designed, highly frequented and resource-intensive structures that will define how we travel, trade and connect with each other.



**There are
currently
one million
people in the air**

It is fair to claim we are entering a new golden age of airport design. If the twentieth century saw the rise of the airport as an identifiable form of public architecture and national infrastructure, the twenty-first century brings in a new era of airport architecture, functionality and culture that responds to the changing needs of populations across the globe.



**Streamlining
user experience**

The aviation industry is at a critical point of creative evolution, embracing new tools to manage its growth for the benefit of everyone from passengers to pilots, all the while reducing its negative impact on climate change with more efficient services and infrastructure.



Urban-scale engineering

Beyond transportation, the contemporary airport includes facilities for retail, leisure, national security and more. The role of the airport architect is thus closer to that of a city planner, designing for highly diverse populations while facilitating economic activity on a regional, international and even galactic scale.



The future perfect

The fantasy of flight and the dream of where it may take us have long fascinated our civilization. Air travel has inspired architects to dream up speculative visions for our future lifestyles, as well as the fantastic buildings that we would need to support them. Utopian or not, a dash of speculation may be the driving force necessary to rethink the airport of tomorrow.

Monday, October 17th, 2016

17:30—18:00

Welcome & Registration

Palazzo Bembo (Riva del Carbon 4793, Venice, Italy)

18:00—19:30

Now Boarding: Opening Remarks and Reception

Palazzo Bembo

Tuesday, October 18th, 2016

8:30—9:00

Morning Coffee & Italian Pastries

Palazzo Michiel (*Strada Nuova 4391, Venice, Italy*)

9:00—9:45

Opening Keynote:

Curtis Fentress, Fentress Architects

Palazzo Michiel

9:45—11:15

Fantastic Infrastructure: 21st Century Terminals

Palazzo Michiel

Christian Henriksen, Nordic Office for Architecture

Jonathan Ledgard, The Droneport Project / EPFL Lausanne

Prof. Wayne Place, NC State College of Design

Ashok Rajji, Arup New York

Moderator: **Donald Albrecht**, Museum of the City of NY

11:15—11:30

Coffee Break

Palazzo Michiel

11:30—13:00

Icons & Engines: Catalysts for Urban Transformation

Palazzo Michiel

Anna Gasco, ETH Zurich / Future Cities Laboratory

Max Hirsh, University of Hong Kong

Alex Sutton, Sevil Peach Architecture + Design

Andrew Vasey, Vasey Aviation Group

Moderator: **Andres F. Ramirez**, PLANE—SITE

19:30—22:00

Cocktails & Networking Evening

Naranzaria Bar (*San Polo 130, Venice, Italy*)

Wednesday, October 19th, 2016

8:30—9:00

Morning Coffee & Italian Pastries

Palazzo Michiel

9:00—9:45

Keynote II:

Nelly Ben Hayoun, NBH Studios

Palazzo Michiel

9:45—11:15

Getting to Departures: User Experience

Palazzo Michiel

Frank Barich, Barich Consulting

Tom Theobald, Fentress Architects

Seyhan Özdemir, Autoban

Martin Zangerl, UNStudio

Moderator: **George Kafka**, &beyond collective

11:15—11:30

Coffee Break

Palazzo Michiel

11:30—13:00

Landing in the World of Tomorrow

Palazzo Michiel

Miklos Deri, Drive Through Airport

Agatha Kessler, Embry-Riddle Aeronautical University

Tobias Nolte, Certain Measures

Ostap Rudakevych, Clouds Architecture Office

Moderator: **Lukas Feireiss**, Studio Lukas Feireiss

Opening Keynote

OCTOBER 18th, 2016

9:00—9:45

PALAZZO MICHIEL

Curtis Fentress

Fentress Architects

Denver, CO, USA

The Public Nature of Global Travel

The realization of public architecture is easier said than done—not only because of its scale and complex program, but also because it must satisfy a diverse range of users. Though the design challenge is intimidating, the potential for impact on a massive scale is unquestionable. Spanning four decades, Curtis Fentress' career is defined by public projects for millions of users: museums, convention centers, courthouses, and transportation hubs around the world.

People are at the heart of Fentress Architects' craft and they are always the point of departure for any large-scale public project. Public buildings should transcend their functional performance, and seize the opportunity to deliver architectural quality, environmental responsibility, and engaging experiences to people that use them on a daily basis.

Airports are simultaneously places of transition and meaningful destinations. They can incorporate the essential, everyday aspects of our contemporary lives in ways that other public buildings do not. A delicate balance of function and beauty, airports may be the most innovative public buildings of the twenty-first century.



Curtis Fentress is an American architect and Principal Airport Terminal Designer at Fentress Architects, an international design studio he founded in Denver, Colorado, in 1980. Fentress' airports have garnered recognition worldwide for design excellence and outstanding "airside-to-curbside" traveler experience. A protégé of I.M. Pei, Fentress has developed a reputation as a hybrid architect, developing iconic design and high-profile public architecture.

Fantastic Infrastructure: 21st Century Terminals

OCTOBER 18th, 2016
9:45–11:15
PALAZZO MICHEL

We are all familiar with current terminal paradigms, from Arrivals to Departures and all of the complex spatial gymnastics in between. What do advances in technology and contemporary demands on air travel infrastructure mean for the terminals of the future - and how do past projects inform current trajectories?

PANELISTS

Christian Henriksen
Nordic Office for Architecture

Jonathan Ledgard
The Droneport Project / EPFL Lausanne

Dr. Wayne Place
North Carolina State University

Ashok Raiji
Arup New York

MODERATOR



Donald Albrecht
Museum of the City of New York
New York, NY, USA

Donald Albrecht is the Director of the Museum of the City of New York. He has curated Now Boarding: Fentress + The Architecture of Flight for the Denver Art Museum and Green House: New Directions in Sustainable Architecture and Design for the National Building Museum, to profiles of individual design firms and artists—The Work of Charles and Ray Eames for the Library of Congress and Vitra Design Museum and Eero Saarinen: Shaping the Future for the Finnish Cultural Institute.

Christian Henriksen

Nordic Office for Architecture

Oslo, Norway

Designing for the Future and a Sense of Place

Norway's fjords and mountains make it especially dependent on aviation. While topographical conditions restrict travel by roads and railways, a strong economy enables and encourages Norwegians to travel. As airlines compete for airspace over Europe, Scandinavian airports are looking to expand and become international aviation hubs. Oslo International Airport plays a vital role for domestic flights, but also as an emblematic entry point to Norway and Europe.

Nordic Office for Architecture responds to shifting traffic forecasts and ever-increasing demands on revenue, security, immigration and implementation of new technology. Oslo International Airport's T2 meets traffic demands, as well as other vital requirements such as sustainability, consistency in layout, and flexibility for the future. Oslo's airport is a gateway that offers passengers a local sense of place and unique ambience. Architectural design should enhance passenger experience—even while the building is in full operation. This is how Oslo International Airport gained a reputation as Europe's most punctual airport.



Christian Henriksen is a Partner in Nordic — Office of Architecture. He has played a central role in airport projects conducted by Nordic Office of Architecture. He has worked on the Oslo International Airport Gardermoen T1 and T2 projects through all of its phases. He was Design Manager for the ongoing extension of the airport. He is currently heading the expansion of Nordic in the UK and India. He holds a Sivilarkitekt (Master) degree from Norges Tekniske Høyskole.

Jonathan Ledgard

The Droneport Project / EPFL Lausanne
Zurich, Switzerland

The Droneport Project

Most towns in the tropics will have a droneport before the year 2030. These buildings will fuel, store, load, route, repair, and birth a fleet of futuristic cargo drone craft.

The droneport will be a new civic building for the 21st century – an entirely new type of airport. Droneports will vary in size and form, but share rules laid out in the Redline droneport concept by Jonathan Ledgard, Norman Foster, Narinder Sagoo and others. This talk will illustrate the droneport and show how it will save lives and create jobs at scale.



Jonathan Ledgard is Founder of Redline Cargo drone network. Inventor of the Droneport concept. Leading thinker on advanced technologies and species survival in emerging economies. Director of Ledgard Labs, former director of Future Africa at EPFL, longtime foreign political and war correspondent for The Economist. Present work includes robots, AI, neuroscience, deep ocean. Separately, a novelist.

Dr. Wayne Place

North Carolina State University

Raleigh, NC, USA

Daylighting Strategies for Airports

Natural light and views of the outside world are crucial to creating the grand, airy spaces that help calm nervous passengers and inspire everyone who passes through an airport. Airports are built in open environments that allow for expansive, long views and for the optimal solar exposure. However, site constraints, such as runway orientation, can create challenges for orienting the building to the sun. Strategies are presented for view windows and daylighting configurations that will provide expansive views and ample illumination, with minimal glare and energy expenditure, regardless of site constraints on the building orientation.



Dr. Wayne Place is the Alumni Association Distinguished Professor at North Carolina State University. He has a PhD in Physics, a Master's Degree in Architecture, and had extensive graduate level education in mathematics and engineering. He is a registered engineer with a specialty in structures. Since 1986, he has been on the Faculty of the School of Architecture at North Carolina State University where he has focused his research on building systems integration, with an emphasis on daylighting, thermal systems, and structures. Since coming to NCSU, he has taught required courses on architectural structures, written a major textbook on architectural structures, and generated online versions of his structures courses. He has taught and written books on daylighting. He teaches graduate studios focusing on airport design and graduate studios focusing on tall-building design.

Ashok Raiji

Arup

New York, NY, USA

The Future of Air Travel

The Future of Air Travel research initiative is based around a series of forums that brought together visionaries from a wide range of complementary areas across the aviation industry: operators, planners, developers, engineers, economists and technologists. These forums encouraged a more detailed and current understanding of the drivers shaping the future of air travel across socio-cultural, technological, economic, environmental and political domains. The interactive and ongoing quality of these conversations has provided a contemporary view that embraces the high rate of change in this technology-driven environment.

Areas of focus included the passenger experience and how technology converges to affect the Future of the Airport, investigation of emerging trends and technologies and an assessment on the potential opportunities and roadblocks for global aviation development and how they will drive the entire travel experience from end-to-end along with key drivers such as passenger screening, the bag, the terminal of the future and the role of big data.



Ashok Raiji is a Mechanical Engineer and Principal in Arup's New York office. He has led the design of several airport terminals all over the world, including the new Mexico City Airport, Abu Dhabi Mid-field concourse, Bangalore Terminal 2, JFK Terminal 4 expansion for Delta Airlines and Terminal 2 at Raleigh-Durham. He has worked on the design and provided expert consulting services for aviation projects in 16 countries and airport terminals with a total area of more than 3 million square meters.



Icons & Engines: Catalysts for Urban Transformation

OCTOBER 18th, 2016
11:30–13:00
PALAZZO MICHEL

The 21st century has seen an increase in high profile terminals that act as economic engines and emblematic portals for cities. In an era of global competition between cities – in addition to nations – superior airports have a significant influence. Development –and redevelopment– play a critical role defining the urban and even regional dynamics beyond the airport. How can a single building have cultural, economic and political implications?

PANELISTS

Anna Gasco

ETH Zurich / Future Cities Laboratory

Max Hirsh

University of Hong Kong

Alex Sutton

Sevil Peach Architecture + Design

Andrew Vasey

Vasey Aviation Group

MODERATOR



Andrés F. Ramírez

PLANE—SITE

Berlin, Germany

Andrés F. Ramírez is a sociologist and urban planner, investigating the semantics of space and its socio-cultural implications. He works in projects with an emphasis on social processes and public space. He is co-founder and Managing Partner of PLANE—SITE, an agency devoted to the production and dissemination of original content for architecture and the built environment.

Anna Gasco

ETH Zurich / Future Cities Laboratory
Singapore

The Airport and the Territory

Since Changi Airport opened in 1981, Singapore's air traffic has grown at an astounding rate: passenger numbers have quintupled and airfreight tonnage has risen by a factor of ten. The increased airflows have been central not only to Singapore's development, but also—as this research reveals—to the growth of the greater Singapore-Johor-Riau (SIJORI) tri-national region.

Changi Airport exposes how Singapore's geographical conditions coupled with strong 'extra-territorial' and 'centralized' planning legislations contribute to Changi's built effects within and outside Singapore's border. Fieldwork conducted in Singapore, Johor, and the islands of Batam and Bintan, documents how Changi is a one of the key forces in regional integration, unifying SIJORI's territorial components.

Specifically, the research traces the regional cross-border flows of Changi and uncovers how this airport has significant urbanization effects and economic roles in Singapore's hinterland development. The research also reveals how, as these peripheral regions develop, the small airports they contain expand in support of correlated urban growth.



Anna Gasco is a postdoctoral researcher at the ETH-Future Cities Laboratory in Singapore. Chartered Part III architect (UK) and urban designer, she worked in practice for over seven years on visionary urban projects at multiple scales and locales. A native Italian born in Congo, her international career is juxtaposed with research that began in 2011, when she joined FCL. In this multidisciplinary research platform, she completed her dissertation on the urbanising effects of airports, particularly that of Changi Airport. Her research has been published with Routledge and her work exhibited at the Bi-City Biennale of Urbanism and Architecture in Hong Kong/Shenzhen, the Boston Society of Architects, Aedes Berlin and the Singapore Urban Redevelopment Authority.

Max Hirsh

University of Hong Kong

Hong Kong

Airport Urbanism: A New Approach to Airport Design

In 2015, Atlanta became the first airport in the world to exceed the 100-million passenger mark. What seemed unthinkable just a few decades ago will become a reality at airports worldwide in the coming years. With so many people passing through the terminal, how can architects and planners innovate the design process in order to offer a more targeted experience to an ever-expanding variety of passenger types? And how can the needs of travelers be better aligned with those of the airport authority—and of the communities located on the airport's periphery? Drawing on insights collected at more than 50 airports around the world, Max introduces the Airport Urbanism (AU) development model, explains the AU research method, and discusses how these tools can be used to tackle the key challenges facing airports today.



*Max Hirsh (PhD, Harvard) is a professor at the University of Hong Kong and a leading expert on airports, migration, and transport infrastructure. He is the author of *Airport Urbanism: an unprecedented study of air travel and global migration patterns that incorporates the perspective of passengers, airport designers, urban planners, and aviation executives. With a particular focus on the rise of Asia, the book sheds light on the exponential increase in global air travel and its implications for the planning, design, and operation of airports and airport areas.**

Alex Sutton

Sevil Peach Architecture + Design

London, United Kingdom

The City Terminal: Blurring Lines Between the Airport and the City

Anticipating a significant rise in air travel demand in the future, this project imagines a master plan for a city airport that fully integrates itself into an urban context. It imagines a time when aviation technology might be advanced enough so that airports, aircraft and cities can coexist at a more friendly level.

Micro-terminals could replace mega terminals that lack human scale, city wide baggage systems add efficiency to the process, personal rapid transit systems, and shorter runways could slot into an urban context. In order to satisfy demand and address the increasing importance of airports on local economies, capacity in the industry needs to increase. But airports are long suffering under the strain of this increasing demand and are now isolated processing stations, restricted from growth by its neighboring urban contexts. The negative effects of aviation on the environment and necessary security measures have caused this isolation.

Airports need to adapt themselves to become more attractive gateways, enhancing user experience and capture as much of the growing air traffic demand as possible to in turn drive their local economies.



Alex Sutton is an award-winning British designer. A graduate of the Bartlett School of Architecture at University College London, his work has been published globally through the international media, with features in Dezeen, Architizer, The Telegraph, The Daily Mail, and GQ Magazine. His speculative Stockholm Airport City project won the Jury Prize in the Architizer A+ Awards 2016, Unbuilt Transportation Category in New York, after capturing significant worldwide attention with its exploration on how an airport and a city centre may one day co-exist. He is currently a designer and project leader at Sevil Peach Architecture + Design in London.

Andrew Vasey

Vasey Aviation Group

Indianapolis, IN, USA

Airports & Urban Development

Airports have become major drivers in economic development for cities around the globe. In many cases they also are the civic "front door", introducing new visitors to a city and the region every day. Airports bring jobs and payroll to cities and regions, which contribute to sales and VAT, as influencing local economies directly and indirectly.

Understanding the economic impact of an airport had been more art than science prior to the crisis of 2008. Community and political leaders could understand the finances of a new manufacturing facility or a business better than the economics of five or ten more daily flights.

As the airlines significantly reduced flights at airports during the wave of recent mergers, community and political leaders began to understand the impact of reduced air service and fewer non-stop destinations. Local businesses, the local convention and visitor organizations felt the effects and raised the issues with the local political leaders. New ways of thinking about airport development is driving a new wave of planning, financing and design alternatives within the dynamics of the aviation industry.



Andrew Vasey is the president and founder of Vasey Aviation Group, providing advisory, operational, strategic and infrastructure advisory services to private equity funds, airlines and airport operators. Mr. Vasey has over thirty years of experience with the financing, planning, design, construction and operation of airport facilities across the US, Europe and Russia. He most recently was the senior advisor to Oaktree Infrastructure Fund and the Chief Development Officer on the \$615 million acquisition of the airport in San Juan, Puerto Rico.

Keynote

OCTOBER 19th, 2016

9:00—9:45

PALAZZO MICHIEL

Nelly Ben Hayoun

NBH Studios

London, United Kingdom

Designing the Impossible

Designer Nelly Ben Hayoun creates a space for thoughts, debate and provocation around the sociological and critical impact of new technologies. As a pioneering Designer of Experiences, Ben Hayoun questions the meaning of information today, and in global hubs such as airports. Her work demonstrates how the human condition can prevail over technology. Pledging for Greek Tragedy, she believes that innovation often comes from 'multidisciplinary conflicts'. Looking at the challenges in her own practice, Ben Hayoun defies and designs in the gravity of the hyper real—a world where fiction is as truthful as reality. Large-scale projects such as The International Space Orchestra and Disaster Playground, introduce the public to her 'hammering and total bombardment' philosophy.



Dubbed the 'Willy Wonka of Design and Science,' Nelly Ben Hayoun is an award winning explorer and director, a fearless and passionate provocateur. She is the Designer of Experiences at the Search for Extraterrestrial Intelligence (SETI) Institute, Head of Experiences at We Transfer, a Wired Innovation fellow, Advisor to the United Nations Virtual Reality Lab, a member of the International Astronautical Federation and in 2013 Icon Magazine touted Ben Hayoun as one of the 50 international designers "shaping the future." She works with leading scientists to devise subversive events and bring chaos and critical thinking amongst members of the public and institutions.

Getting to Departures: User Experience

OCTOBER 19th, 2016

9:45–11:15

PALAZZO MICHIEL

Architecture facilitates the intricate transition between airspace and passengers' much anticipated destinations. Moving through time and space in airport terminals is still often perceived as more of an obstacle than an enjoyable experience. As interaction with terminal infrastructure increases in frequency and engagement, airports can offer travelers choices to relieve the stress of travel. How should architects balance functional design, digital interfaces, place specificity and comfort to heighten user experiences across the board?

PANELISTS

Frank Barich

Barich Consulting

Tom Theobald

Fentress Architects

Seyhan Özdemir

Autoban

Martin Zangerl

UNStudio

MODERATOR



George Kafka

&beyond collective

London, United Kingdom

George Kafka is a writer and researcher based in London. Formerly an editor at uncube magazine, George has written on architecture and cities for Metropolis, The Architectural Review and Cartha, among others. He is a founding member of editorial collective &beyond and is currently working towards a PhD in Urban Studies at University College London.

Frank Barich

Barich Consulting

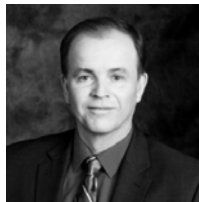
Richmond, TX, USA

Help Yourself! Integrated Passenger Self-Service

As the aviation industry continues to rapidly adopt passenger self-services, there is a growing need to design and deploy these functions in an integrated process across the entire passenger journey. This presentation provides a focus to the airport operator, airline, and key airport stakeholders in improving the passenger's journey through the entire air-travel experience.

In considering the passengers' journey as a seamless process, the Airport Operator can better understand impacts to facility areas, while also improving revenue opportunities. The presentation specifically describes the requirements and benefits of a well-established integrated passenger self-services program.

Check-in kiosks have been a part of the check-in process since the early 90s. Since then, "self-service" has been simply approached as an extension of the process it is a part of, and in the area in which the service was conducted. Case in point, the kiosks were traditionally found in or around the airport check-in hall. However, with advancements in mobile technology, self-service no longer requires the need to always perform the service in the expected location.



Frank Barich is founder and Principal Consultant of Barich, Inc.; a business consulting firm serving the aviation industry. He has over 30 years' experience in his profession and currently serves in project leadership and consulting roles. During this time, he has had the privilege of helping to advance North American airport initiatives in key strategic areas such as passenger processing, airport operational technologies, and common use.

Tom Theobald

Fentress Architects

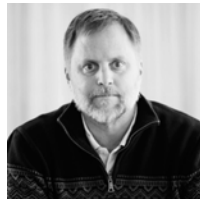
Denver, CO, USA

Relax: Enjoy Your Time at the Airport

As the airline industry and its infrastructure ages, the glamour and excitement of travel has been lost. In most instances, the travel experience has become a stress-filled event tolerated by the traveler, but not enjoyed.

Designers of today need to reverse this trend. While some processes are outside the control of the designer, we must embrace the overall experience—including security checkpoints and passport control—and thoughtfully design the spaces within these terminals to reduce stress wherever possible. One of the best ways to do this is through communication. Technology allows us to keep the passenger informed at each critical moment. The building form should augment this information with intuitive way finding, control of day lighting, and material selections. Together, technology and form allow for environmental interest and help make the traveler comfortable during their time in the airport.

These approaches can be successful in new buildings and in renovated structures. By paying close attention to every space and process the passenger interacts with, we can re-engage them in the excitement of travel.



Tom Theobald is a principal at Fentress Architects and co-director of the firm's aviation practice. Prior to joining Fentress in 1992, he worked with Kevin Roche John Dinkeloo and Associates. Tom has over 20 years of aviation expertise, and has completed over 17 million square feet of international aviation work with such notable projects as Doha, Charleston, Raleigh-Durham, Portland, Sacramento, Tom Bradley International Terminal and Alaska Airlines' Terminal 6, both at LAX. He has a keen understanding of aviation trends, airport operations and specializes in complex problem-solving and phasing. He has presented at ACI and Passenger Terminal World conferences.

Seyhan Özdemir

Autoban

Istanbul, Turkey

Defining a New Experience Through Hospitality

When Autoban was commissioned to create a new international terminal for the Baku airport, the brief was to create an airport like no other...

Autoban set out to do just that, devising a warm and thought-provoking contemporary vernacular that defied traditional airport design. Taking inspiration from Azerbaijani hospitality, Autoban's Red Dot award-winning design spans the entirety of the terminal's passenger spaces, and includes striking custom-made wooden 'cocoon' structures that create a sense of welcome and discovery, and opportunities to either meet or retreat.

Favouring a muted colour palette and natural, tactile materials such as wood, stone and textiles over more commonly used industrial materials, Autoban created a unique sense of intimacy within the cavernous 58,000-square-metre space.

Varied ceiling heights and a series of triangular, cocoon-like structures within the terminal add a sense of theatre. Thanks to the construction of smaller spaces within the airport's large internal volume, a human scale has been created that has in turn helped this project redefine the meaning of the conventional airport.



Seyhan Özdemir is co-founder of Istanbul-based multidisciplinary design studio Autoban, founded in 2003 together with Sefer Caglar. Autoban works across architecture and interiors, product and experiential design, forging a reputation for thoughtfulness and experimentation. Their work has redefined Istanbul's cityscape, including numerous hospitality, residential and public realm developments, and is also found in London, Madrid, Hong Kong, Moscow and China, as well as Azerbaijan.

Martin Zangerl

UNStudio

Amsterdam, The Netherlands

The Characters Are The People

When designing transfer-hubs we focus on people: they pass through these hubs 7 days a week, 365 days a year. The quality of space in urban mobility projects is strongly connected to engagement at a human scale within a larger volume of spaces.

Various user groups require responsive solutions in which to bridge individual circadian rhythms and life patterns. These solutions look to create microclimatic conditions of space within a very specific local context. As designers who advocate for unique sensory experiences, our main challenges are the means by which design can influence perceptions of space and what architecture can do to bring human experience to the fore.



Martin Zangerl is an Architect and Associate at UNStudio. He received his degree from the University of Applied Arts in Vienna. Before joining UNStudio Martin worked for several architectural offices in Austria, Germany and the USA. Martin is an all-round architect, specialized in parametric design. He has worked on several major projects, such as the Abu Dhabi Media Zone for twofour54, the UIC mixed-use high-rise towers in Shenton Way, Singapore, and the Qatar Integrated Railway, a large-scale infrastructure development for the new Doha Metro Network in Qatar.

B10	11:05am	On Time
D01	11:15am	Boarding
B12	1:30pm	On Time
C03	11:05am	Boarding
E83	3:00pm	On Time
E83	2:00pm	On Time
D09	11:00am	Boarding
E70	11:10am	On Time
B7	11:09am	On Time
		Boarding

Landing in the World of Tomorrow

OCTOBER 19th, 2016
11:30–13:00
PALAZZO MICHIEL

A bit of speculation is essential when we consider the future of airports. Trends and demographic shifts may help forecast the future of air travel and infrastructure. If change is constant on all are fronts, what are the critical considerations when projecting future scenarios? How will architecture adapt to transformations in the aviation industry and the culture of global travel over the next century?

PANELISTS

Miklos Deri

Drive Through Airport

Agatha Kessler

Embry-Riddle Aeronautical University

Tobias Nolte

Certain Measures

Ostap Rudakevych

Clouds Architecture Office

MODERATOR



Lukas Feireiss

Studio Lukas Feireiss

Berlin, Germany

Lukas Feireiss attained his graduate education in Comparative Religious Studies, Philosophy and Ethnology, where he specialized in the dynamic relationship between architecture and other fields of knowledge. He is the curator and editor of numerous books and exhibitions and teaches at various universities worldwide.

Miklos Deri

Drive Through Airport

Vienna, Austria

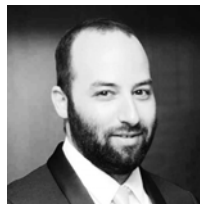
TIME vs. SPACE

Within the next decade the amount of aviation passengers could double. It has been widely admitted that today's airports cannot cope with demand. Future expansion will create additional terminals causing bigger distances to travel, more congestion, pollution and increasingly slower handling times.

Larger parts of the operating costs of the entire air transport system revolve around the aircraft. Therefore, the tendency has been to stimulate technology breakthroughs in aircraft design to reduce overall costs. With this perspective, airports have responded to the airplanes as the primary solution rather than focusing on new typologies.

As a result, contemporary airport layouts are determined by vast parking spaces, where aircraft are laid out endlessly side-by-side. Optimizing terminal buildings through densification requires a new concept. A drastic reduction in the size of airports would not only simplify ground handlings, but would also significantly reduce its environmental impact.

Drive Through Airport (DTA) is a groundbreaking design that will redefine airport operations, resulting in a time, space and cost efficient airport with half the footprint of a conventional facility.



Miklos Deri is an architect and the creator and driving force behind Drive Through Airport. A graduate of the University of Applied Arts Vienna, he worked for more than six years at award-winning international architecture firm UNStudio. In 2013, he submitted a proposal to the UK Airports Commission to respond to a forecast capacity shortage in aviation. Since 2015 he has been working as Senior Architect at Berger + Parkkinen Architects in Vienna, Austria.

Agatha Kessler

Embry-Riddle Aeronautical University

Daytona Beach, FL, USA

Aviation's Disruptive Cousin: Driverless Cars

What made the horse drawn carriage obsolete did not look like a horse. What will be changing the aviation industry has no wings.

The confluence of mobility and technology will change how we move, and how we travel. With the unprecedented movement of people globally, we are at the tipping point of airport redesign to completely rethink the passenger experience. The driverless cars have the potential to be the disruptive technology to launch this avalanche.

While the automotive companies think of driverless cars as cars with extra software, the tech companies see them as software on wheels. Is it a matter of technology, user-centric trends, business or design? And what does the aviation industry think? This movement may take a big bite of their sky.



Agatha Kessler has worked as an executive in the worlds of finance and technology, building international businesses in emerging products with VISA and Hewlett-Packard. Energized by the intersection of technology, business and design, in 2007 Agatha joined Fentress Architects as CEO. She holds an MBA and has lived in many cities around the world. Currently, as Chairman of Fentress Architects, Agatha serves on a number of boards, including Opera Colorado and the Design Futures Council. With a keen interest in the future of air travel, Agatha is pursuing a PhD in Aviation at Embry-Riddle Aeronautical University.

Tobias Nolte

Certain Measures

Cambridge, MA, USA

Berlin, Germany

Big Data and Design

Today, spatial design—of buildings, campuses, and cities—increasingly requires a data-informed and technology-accelerated strategies. Scientific precision is no longer optional—insight into complex design issues requires designers who are fluent in data. In this session we will present recent design projects of Certain Measures exploring image recognition technology, pattern-matching and machine intelligence to gain insight into large sets of data to create a more complete and quantitative picture of unique and ambitious design problems. With about 8000 instances on the planet, the airport is one of the few architectural (and landscape) typologies that we can exhaustively catalog, compare, quantify, and map.

And the future of the Aerosphere is not only about a handful of leading global city nodes but also the thousands of remote airstrips or intermediate terminals, which make the entire ecology of air travel. We propose using machine vision to more completely understand, compellingly map, and perhaps learn from the deep structures, family resemblances, and typological invariants of the complete family of every airport ever built: in short, a new way to automatically classify building type.



Tobias Nolte is a co-founder of Certain Measures—an office for design science. Prior to founding his own practice, he was a Director at Gehry Technologies in New York where he led a team of architects and engineers in the implementation of parametric and computational methods in design and construction. He was previously a director at the Europe office of Gehry Technologies in Paris where he has worked with a variety of leading international design firms including Gehry Partners, Zaha Hadid Architects, Snohetta, UNStudio, Coop Himmelb(l)au and several others.

Ostap Rudakevych

Clouds Architecture Office

New York, NY, USA

Aerostead: Inhabiting the Third Sphere

Our atmosphere is a vaporous cyan tinted film enwrapping our planet, protecting it from the harsh hazards of outer space. With a thickness of only 1/2000th the diameter of earth, the atmosphere provides several vital functions: it sustains terrestrial life with a gaseous mix of nitrogen and oxygen, while shielding earth's surface from harmful radiation.

Since before the time of Icarus, humanity has been obsessed with flight. We fly in our dreams, freely moving about in three-dimensional space, looking down onto the earth below. We gaze up at the stars and wonder what worlds we might find up there. Flight and verticality are somehow built into our DNA.

The presentation will consider the atmosphere as site, as we challenge the ground and its normative relationship to architecture. How can architecture be delaminated from the surface of the earth and made to inhabit the atmosphere?



Ostap Rudakevych is a registered architect and founding partner of Clouds Architecture Office. He is a professor at Pratt Institute and has been an invited critic at various universities. He holds a Master of Architecture degree from Harvard University Graduate School of Design. His most recent awards include first place in NASA's Mars Habitat Challenge, and consecutive AIA Honor awards for built projects in New York City. His speculative work engaging the atmosphere has been exhibited and published worldwide.

The Aerial Futures symposium explores the current state of airport design and the future of this rapidly evolving architectural typology. The symposium brings thinkers and practitioners to Venice for two days, and is open to the general public.

Drawing on the expertise of prominent airport terminal designers, industry leaders and disruptive innovators, the symposium will be a forum for knowledge sharing and exchange. Keynotes, presentations and panels will showcase leading thinking and projects related to terminal creation and operation, from components to user experience.

Donald Albrecht Museum of the City of New York **Frank Barich** Barich Consulting **Nelly Ben Hayoun** NBH Studios **Miklos Deri** Drive Through Airport **Lukas Feireiss** Studio Lukas Feireiss **Curtis Fentress** Fentress Architects **Anna Gasco** ETH Zurich / Future Cities Lab **David Gilmore** Design Futures Council **Christian Henriksen** Nordic Office for Architecture **Max Hirsh** University of Hong Kong **Agatha Kessler** Embry-Riddle Aeronautical University **Jonathan Ledgard** The Droneport Project **Tobias Nolte** Certain Measures **Seyhan Özdemir** Autoban **Dr. Wayne Place** NC State College of Design **Ashok Raiji** Arup New York **Andres F. Ramirez** PLANE—SITE **Ostap Rudakevych** Clouds Architecture Office **Alex Sutton** Sevil Peach Architecture + Design **Tom Theobald** Fentress Architects **Andrew Vasey** Vasey Aviation Group **Martin Zangerl** UNStudio

www.aerialfutures.org



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