



OUR WARMEST THANKS TO OUR SPONSORS



DAY
1



THE IMPACT OF BIG DATA, TECHNOLOGY AND INNOVATION

TUESDAY OCT 15

MORNING



9:00 - 9:30 AM OFFICIAL WELCOME

9:30 - 9:50 AM PRESENTATION OF THE NEW BEIJING-DAXING AIRPORT

10:00 - 10:05 AM PRESENTATION OF THE 9TH EDITION OF THE SEMINAR

10:05 - 10:30 AM INTRODUCTION TO THE SEMINAR TOPIC: AN ACADEMIC PERSPECTIVE

10:30 - 10:45 AM NETWORKING COFFEE BREAK

10:45 - 12:00 PM INTRODUCTION TO THE SEMINAR TOPIC: AN OPERATIONAL PERSPECTIVE

12:00 - 1:00 PM NETWORKING LUNCH



OFFICIAL WELCOME

OFFICIAL WELCOME



Lynne Scroggins

Vice-Chairman

Aerotropolis Atlanta Alliance Board of Directors



OFFICIAL WELCOME



Mr John SELDEN

General Manager

Hartsfield-Jackson Atlanta International Airport



OFFICIAL WELCOME



Mr Franck MARGAIN

Paris Region Council

Chairman of Choose Paris Region





Franck Margain

Chairman of Choose Paris Region
Representative of the Paris Region Council

Paris Region : Europe's leading hub for business & innovation



**€ 660BN
of GDP**

Highest
Concentration
of 500 Fortune
in Europe

FDI

#1 in the world
for all FDI
projects

#1 in the world
for R&D FDI
projects

**8,000+
Startups**

#1 Startup Region
in Europe

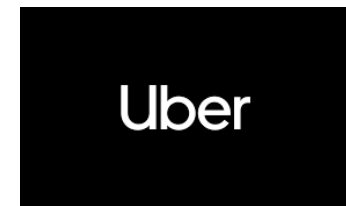
**1,200+
R&D Labs**

Europe's Largest
concentration of
Talent

**€ 20BN/y
for R&D**

#1 in Europe

**They have chosen Paris Region to set up
their R&D and innovation center activities**



Paris CDG Airport Area : a key role for France's economic leadership in Europe

1st European

Airport for Air Cargo (2.2 M tons)

1st European

Business Airport in Le Bourget

1st Continental Europe

Airport for PAX (72 M)

35 minutes from
downtown Paris by train



Sustainable Airports Areas: Impacts of tech, innovation and big data



Business

x2 passengers
by 2036

AI to improve passenger
experience, logistics and
aircraft flows at airports

Paris Region 2021 AI Plan

Sustainability

Lighter materials
Recycling
Propulsion models
Autonomous aircraft

Paris Region supports
green R&D projects for
aeronautics

Jobs

11,000 jobs impacted by
predictive maintenance
in aeronautics

Learning labs and new
talents



Thank you

Franck.Margain@ChooseParisRegion.org



NEW BEIJING – DAXING AIRPORT & BEIJING DAXING AIRPORT ECONOMIC ZONE

NEW BEIJING – DAXING AIRPORT & BEIJING DAXING AIRPORT ECONOMIC ZONE



Mr Boming LUO

Chairman

Beijing New Aerotropolis Holdings





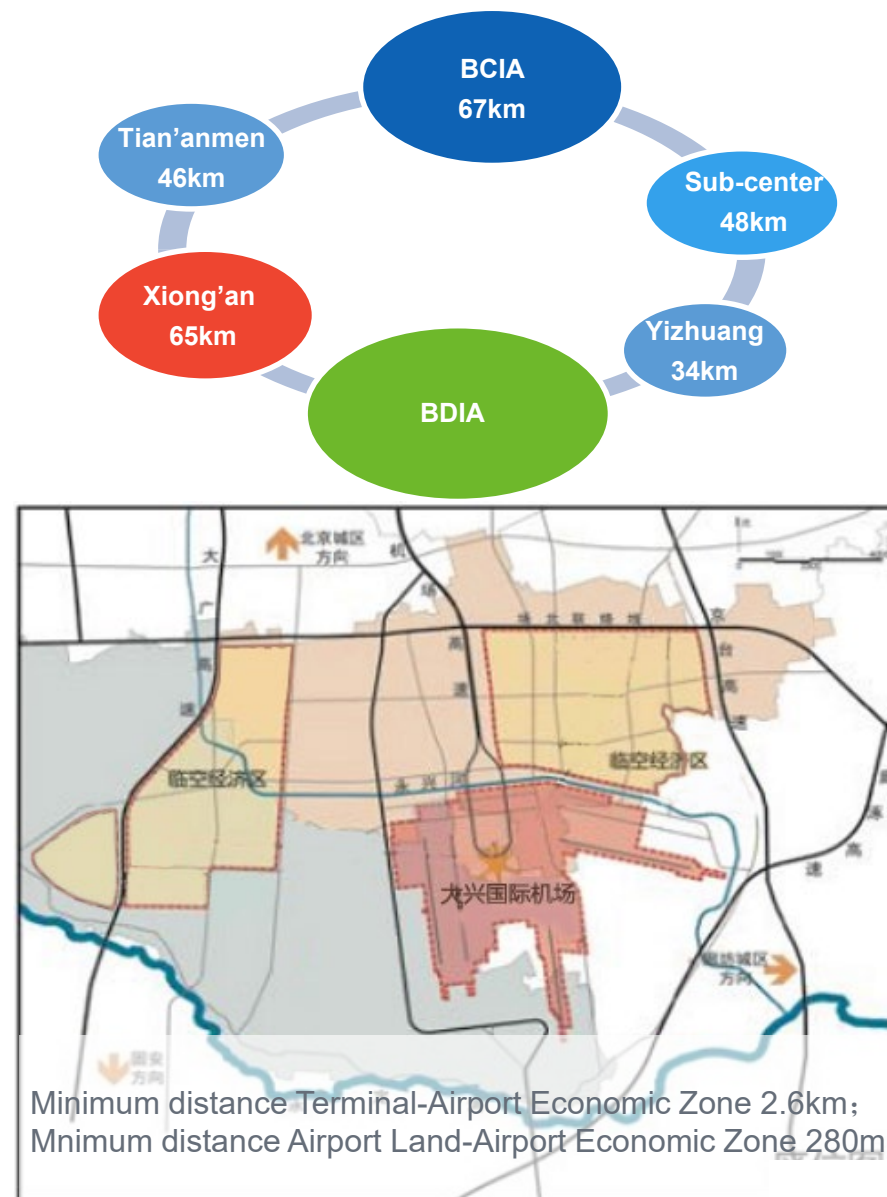
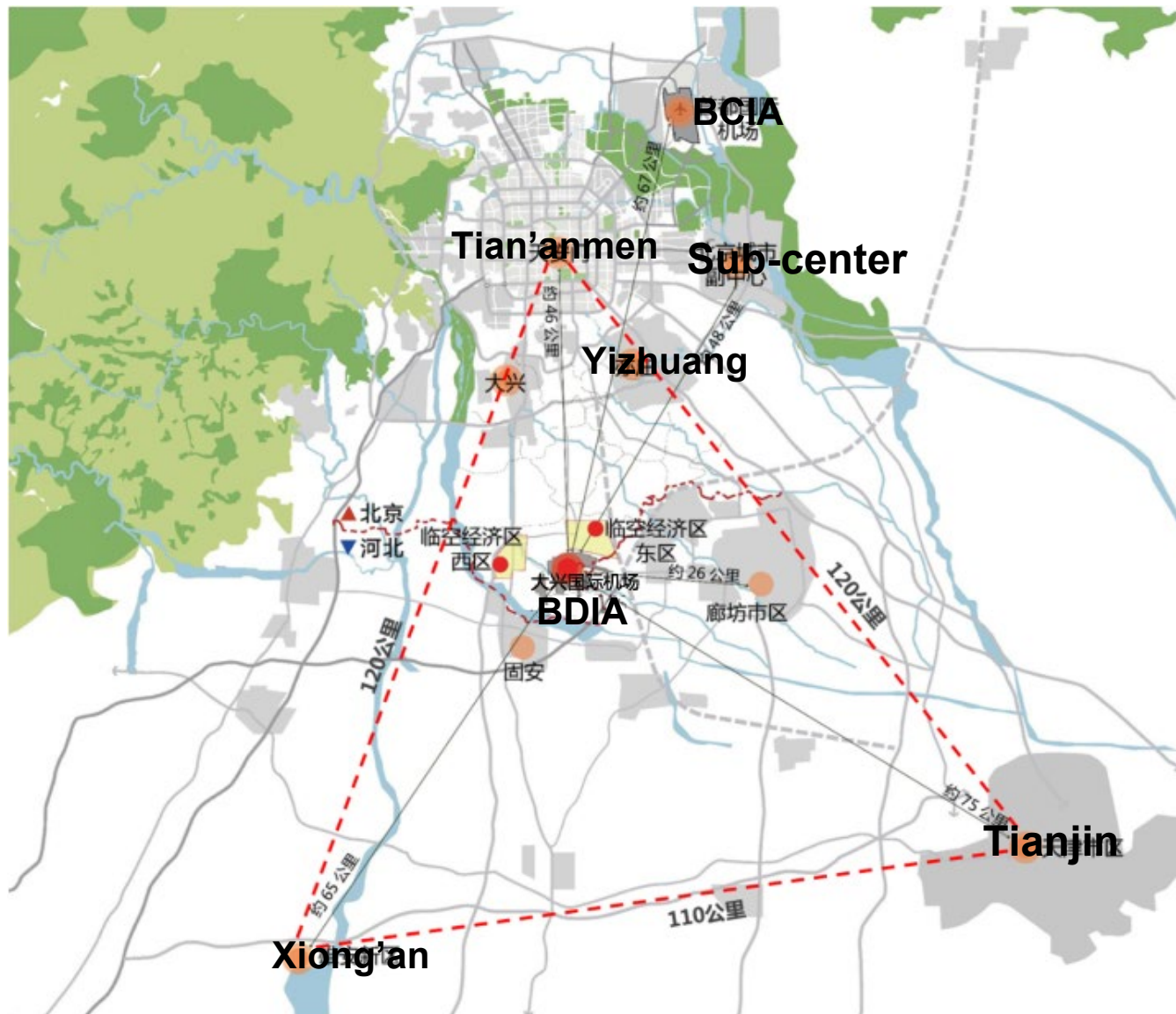
BEIJING DAXING INTERNATIONAL AIRPORT

ECONOMIC ZONE



Beijing Daxing International Airport

LOCATION



Beijing Daxing International Airport POSITIONING

1. A large international aviation hub airport
2. New source power of the country development
3. An integrated transportation hub supporting the coordinated development of Beijing, Tianjin and Hebei



Beijing Daxing International Airport

CONSTRUCTION PHASES



4 Runway 6

27km² Area 68km²

2 mil. Cargo 4 mil.

72 mil. Passenger 100 mil.



Beijing Daxing International Airport **ECONOMIC ZONE**



Spatial Planning of Airport Economic Zone - Scale and Layout

The Airport Economic Zone is located around the airport and across the Beijing and Hebei province.

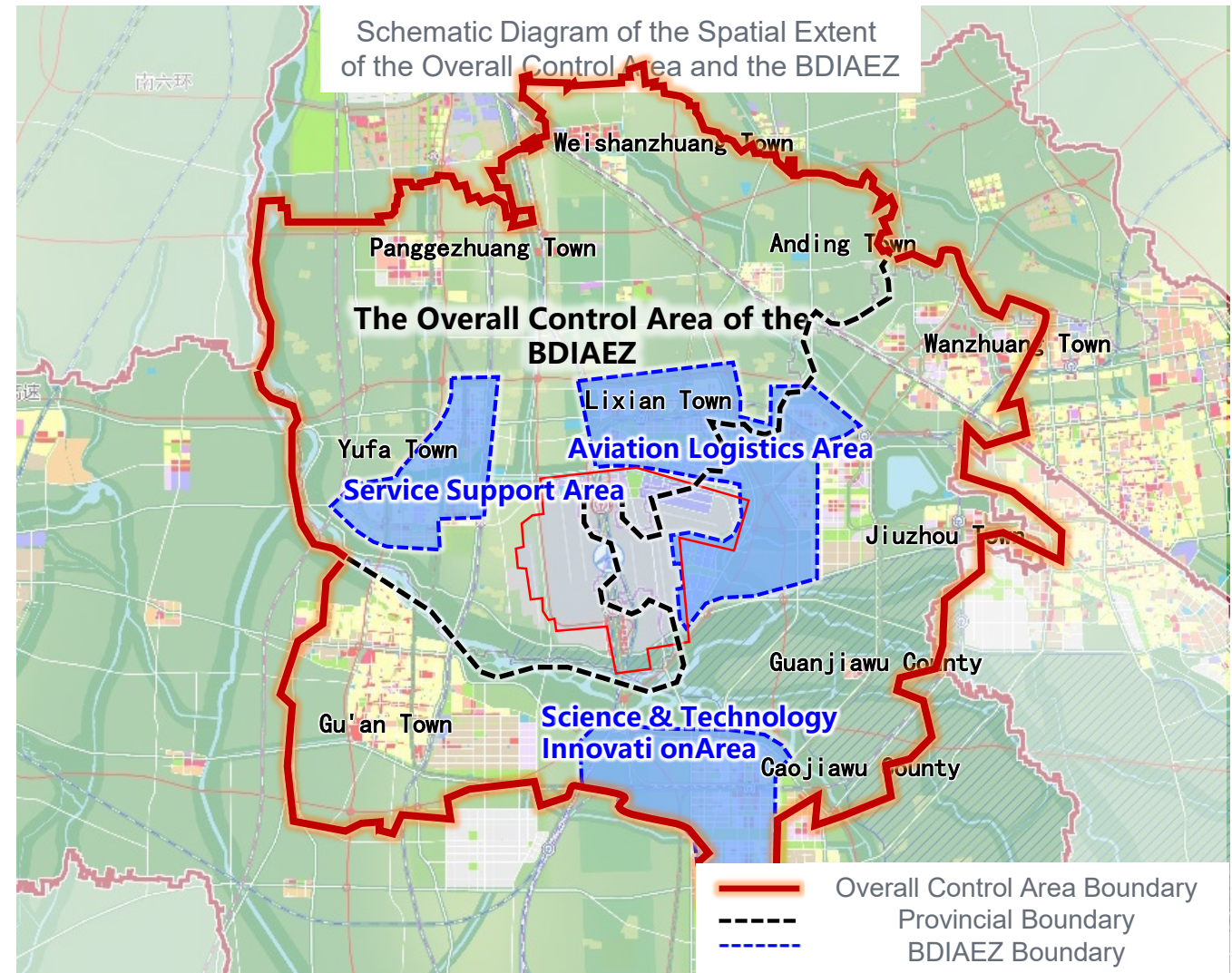
Airport Economic Zone: 150 km²

Beijing 50 km²

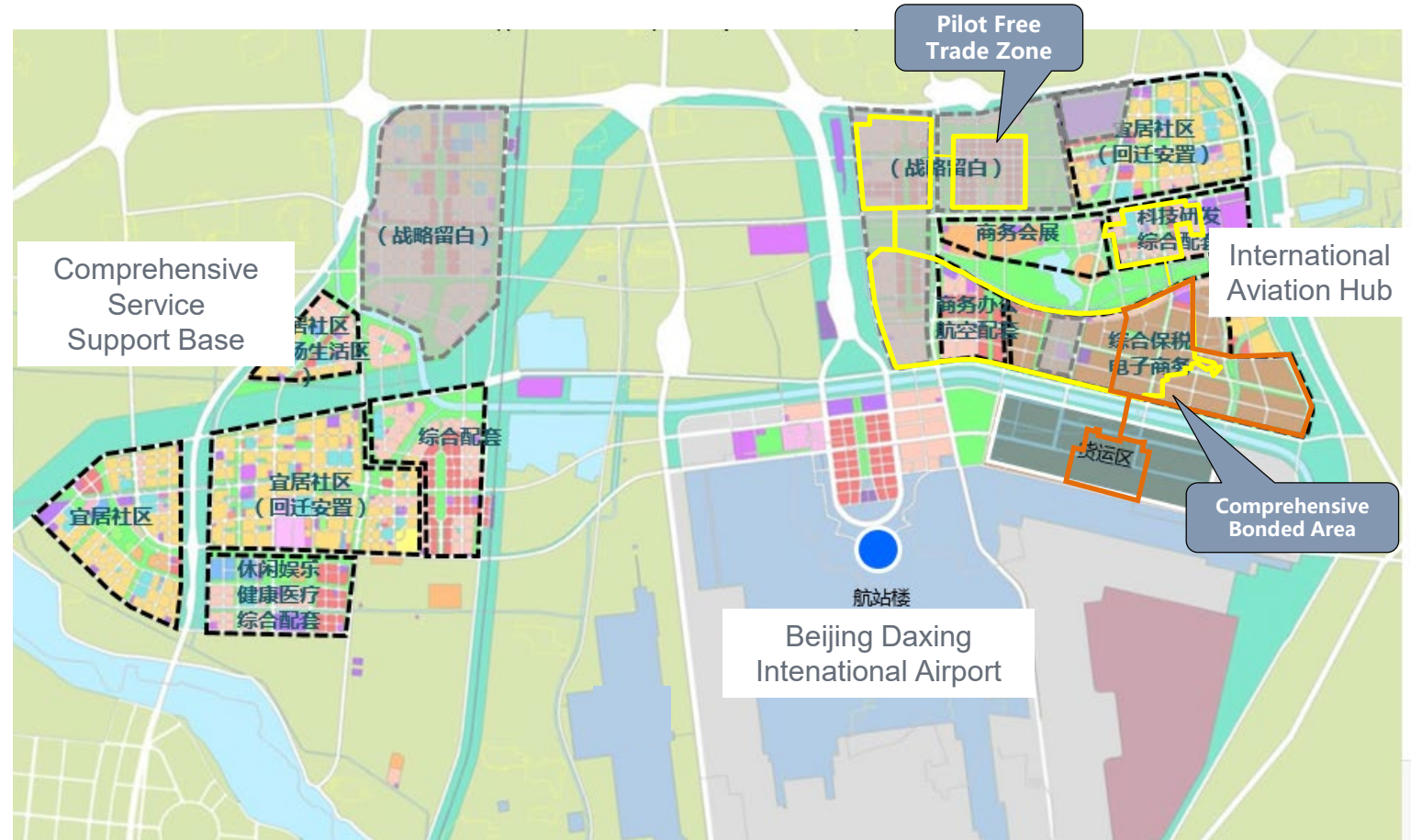
Hebei 100 km²

Strategic Positioning:

1. International Communication Center
2. National Aviation S&T Innovation Leading Area
3. Beijing-Tianjin-Hebei Collaborative Development Demonstration Zone



The planned scale of the above-ground building is controlled at around 28 million square meters.



The accessible city of **INTERMODAL TRANSPORTATION**

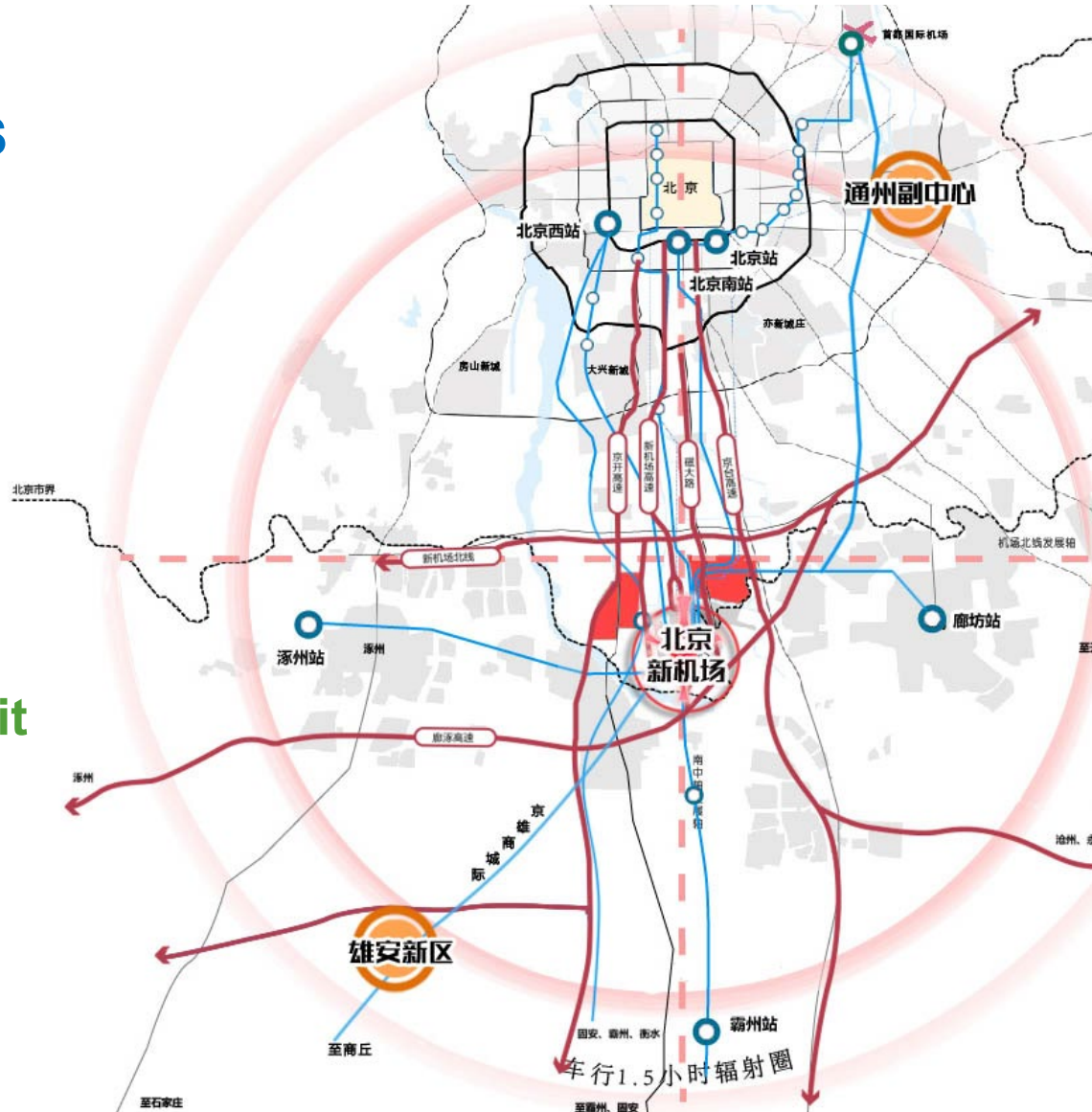
6 TRACK LINES

6 HIGHWAYS

Perfect trams

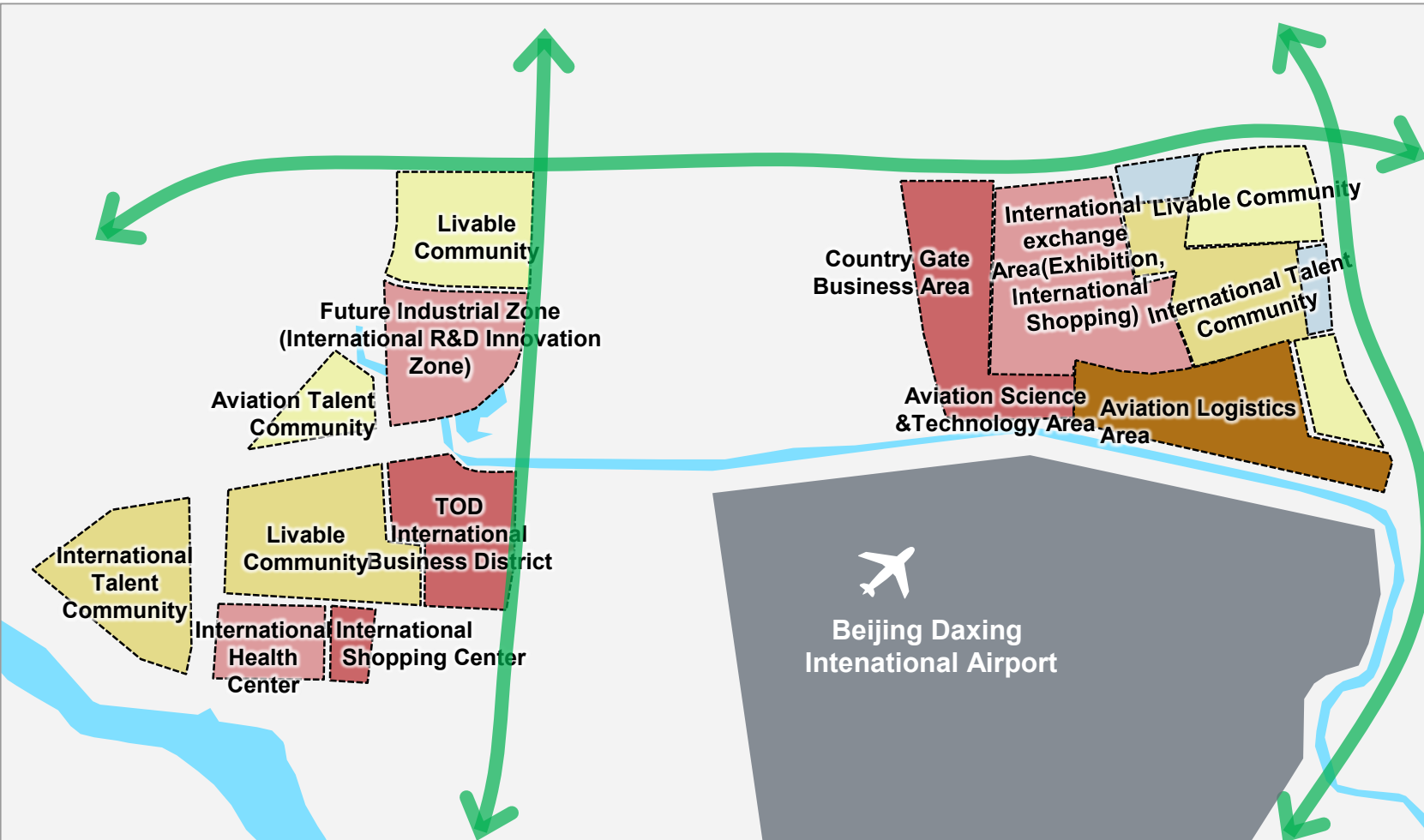
Bus rapid transit

Slow traffic





BDIAEZ Industry Planning **SPATIAL LAYOUT**



East Area

International Aviation Logistics Hub

Establish a free trade zone and a comprehensive bonded zone with the functions of aviation logistics, business finance, exhibition and trade, and aviation headquarters.

West Area

Comprehensive Service Support Base

Livable community, international education, international medical and other life supporting industries, technological innovation, science and technology innovation.

REVIEW



第八届 机场地区可持续发展国际论坛 为可持续发展建立特殊驱动力

中国·北京 BEIJING·CHINA

INTERNATIONAL SEMINAR
ON SUSTAINABLE AIRPORT AREAS 8TH EDITION
**BUILDING ON DISTINCTIVE DRIVERS
FOR A LONG-TERM SUSTAINABLE SUCCESS**
2018.10.25-26

主办单位 / Host

北京大兴国际机场建设大兴区规划办公室
Beijing District Planning Office for the New Beijing Airport

承办单位 / Organizers

Hubstart
www.hubstart.com

协办单位 / Co-organizer

中国民航
CAAC

支持单位 / Sponsors

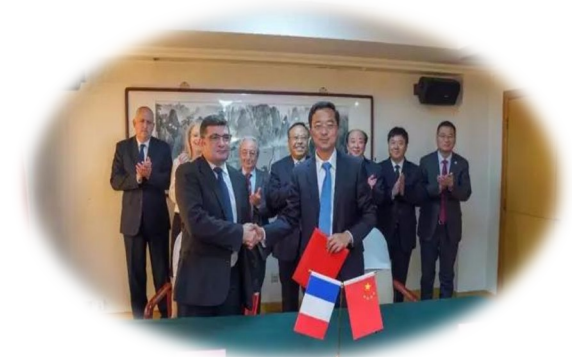


GIPEMPOI

北京大兴国际机场
Beijing Daxing International Airport

In October 2018, the 8th Edition International Seminar on sustainable airport areas was held in Beijing, China.

The theme of the seminar was Building on Distinctive Drivers for a Long-term Sustainable Success.





**ECO-GREEN
CITY**

**SMART
CITY**

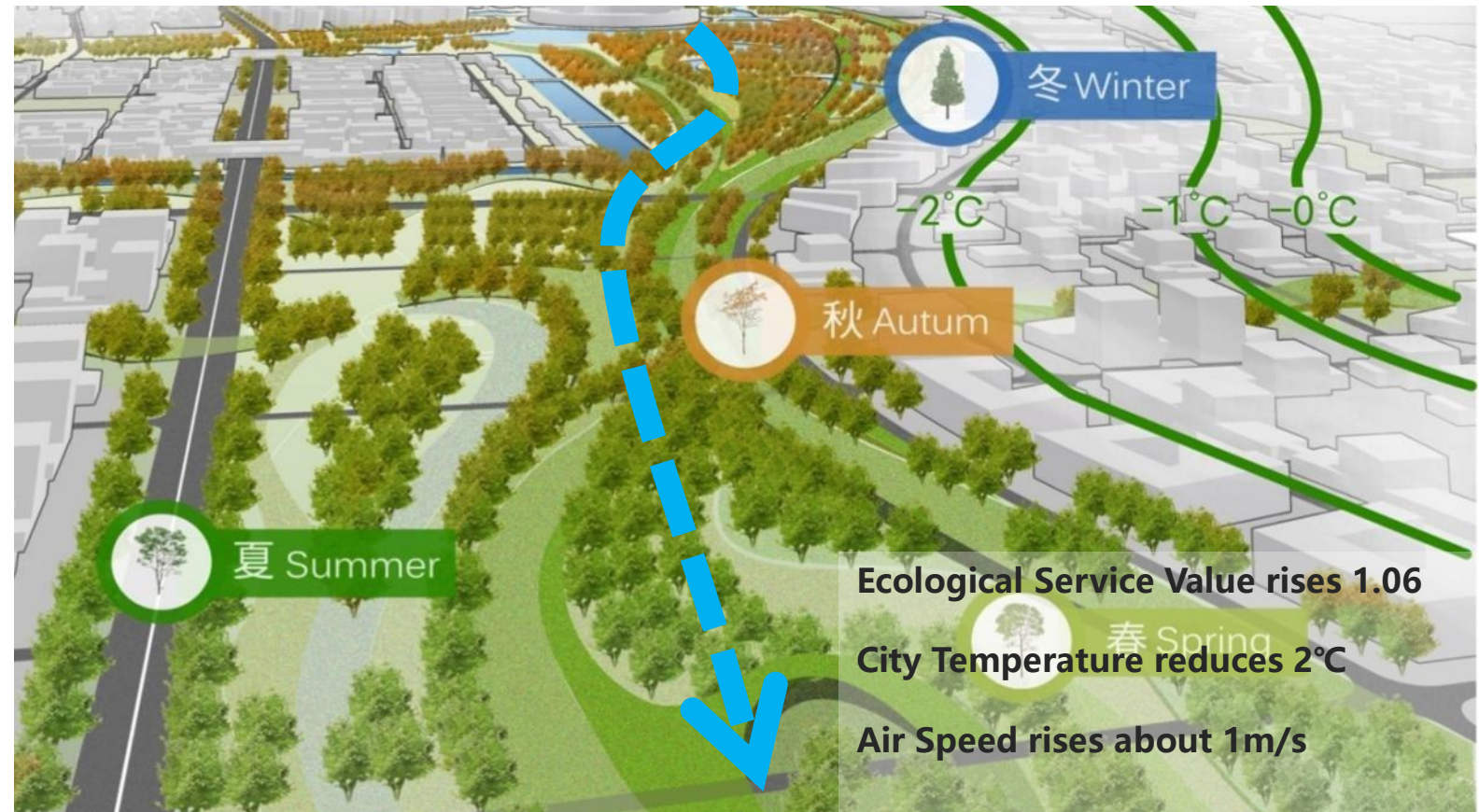
**MULTICULTURAL
ENVIRONMENT**



Development Concept of ECO-GREEN



A utility tunnel is planned and constructed by employing the design concepts of an intelligent city, a sponge city and a forest city, so as to create a beautiful park with no borders, no age and four seasons.

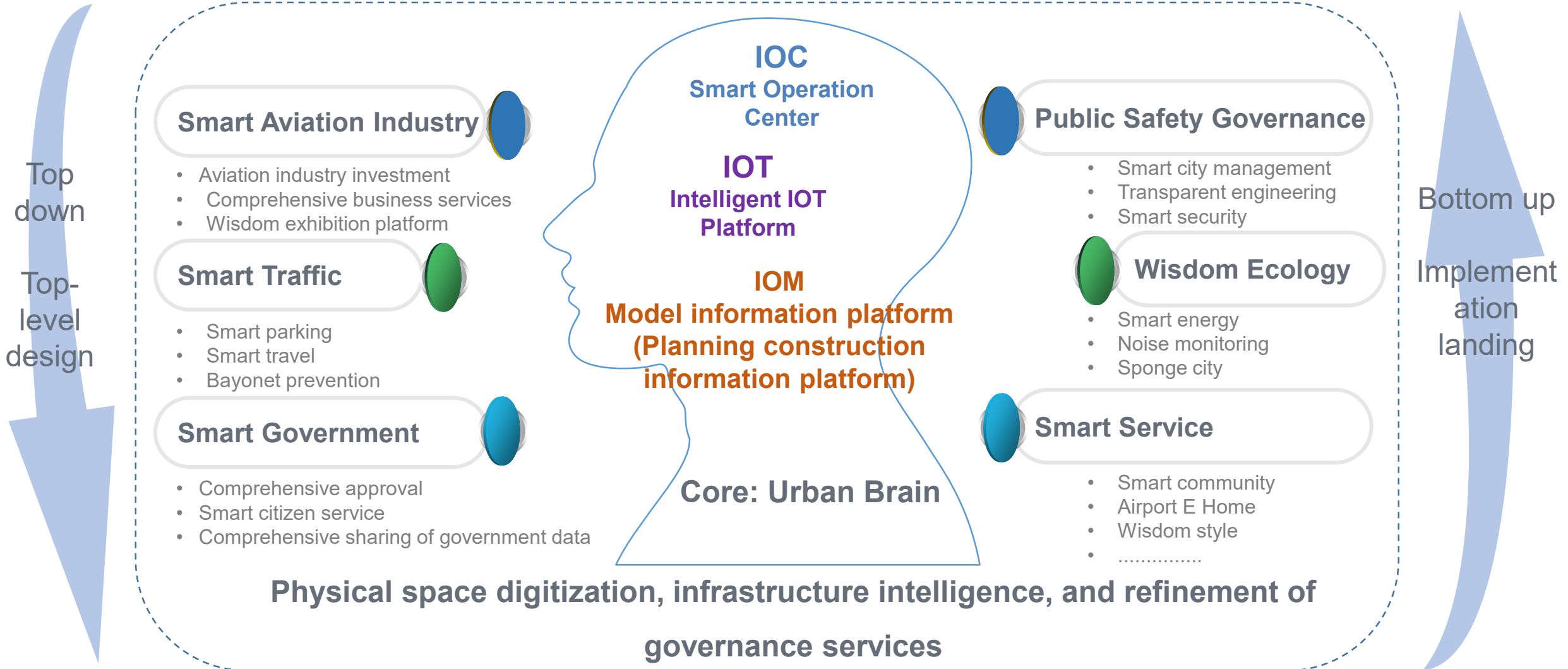


A beautiful park with no borders, no age and four seasons



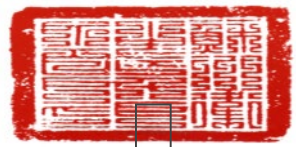
SMART CITY

Building a digital twin city in the airport economic zone to realize "Digital Economic Zone, Smart Aviation City"



Open and inclusive **MULTICULTURAL ENVIRONMENT**

1. People-oriented: international schools, international hospitals, international talent community
2. Ecological livability: ecological and environmental protection, cultural diversity, safe and livable
3. Infrastructure, software services



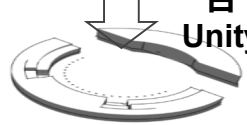
信
Faith



China's Messenger City



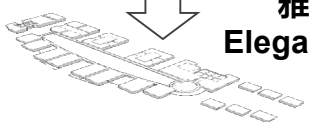
合
Unity



National Convention Center



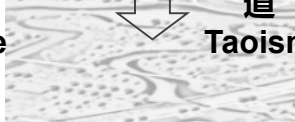
雅
Elegance



National Exhibition Center



道
Taoism

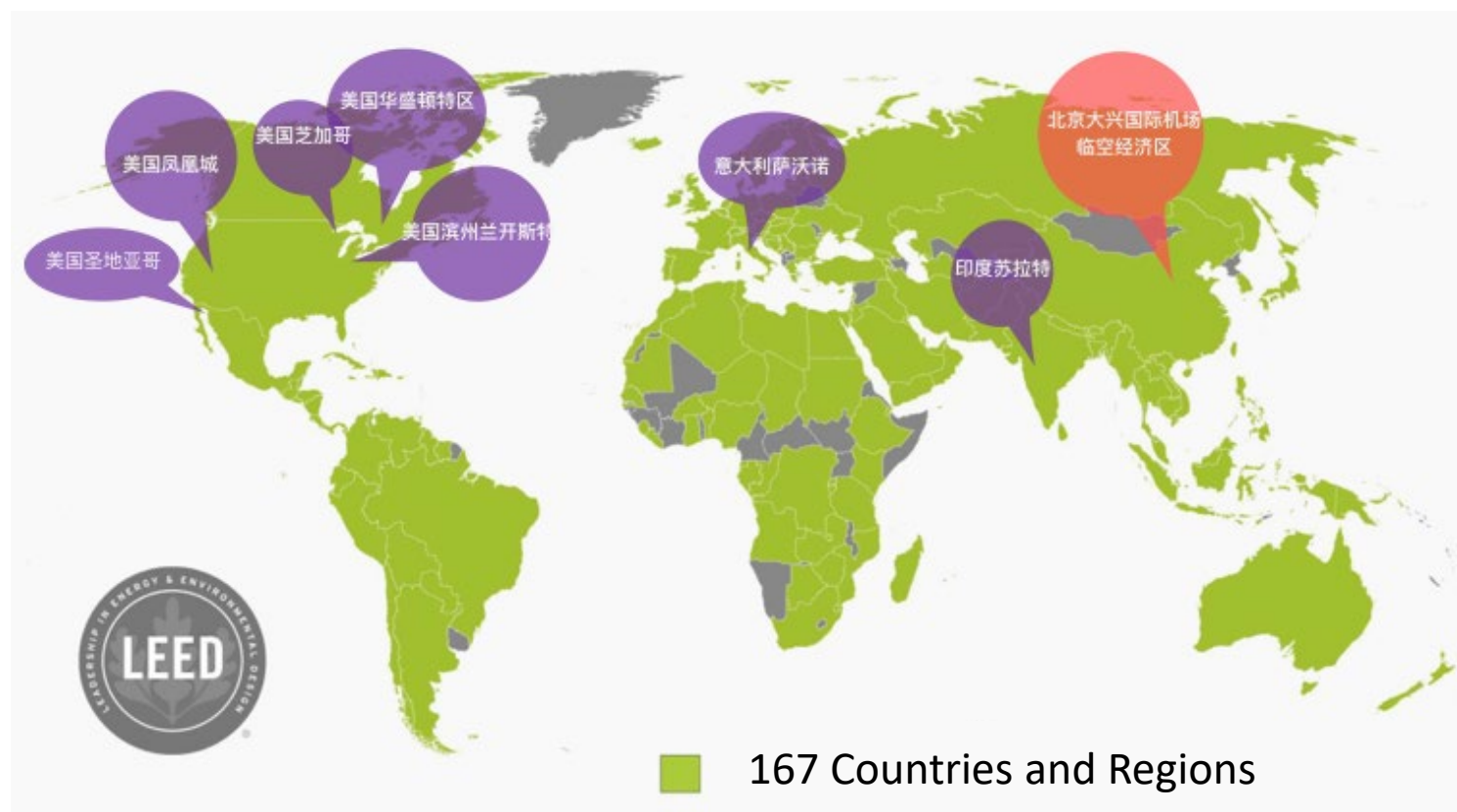


Central Park



LEED for CITIES Certification

On September 28th, 2019, LEED for Cities Platinum Level Certification of the Airport Economic Zone (Beijing part) was obtained.



SAAIS 2019

THANK YOU

THE ROLE OF BIG DATA



9th ANNUAL **SUSTAINABLE AIRPORT AREAS** **INTERNATIONAL SEMINAR**

SUSTAINABLE AIRPORT AREAS INTERNATIONAL SEMINAR



Elisabeth LE MASSON
Hubstart Alliance



Shannon JAMES
Aerotropolis Atlanta Alliance



Gerald McDOWELL
Aerotropolis Atlanta CIDs

SUSTAINABLE AIRPORT AREAS INTERNATIONAL SEMINAR

A leading seminar



Space of exchanges and
debates



Between experts,
professionals and local
decision makers



From Airport areas around
the world



In favor of sustainable
development

This year



41
Speakers



14
Airport
Areas



8
Start-ups



200
Participants

SUSTAINABLE AIRPORT AREAS

INTERNATIONAL SEMINAR

9th

An inspiring topic

- DISRUPTION -

THE IMPACT OF BIG DATA, TECHNOLOGY AND INNOVATION FOR BUILDING
SUCCESSFUL SUSTAINABLE AIRPORT AREAS

4 Panels to share and debate on it

1

Using Big Data and new technologies to enhance the environmental sustainability in airport areas

2

How Big Data and new technologies will impact jobs, skills and education

3

How Big Data and new technologies will help in transforming airport areas into smart, resilient and attractive communities

4

Using Big Data and new technologies to transform airport areas into tourist destinations

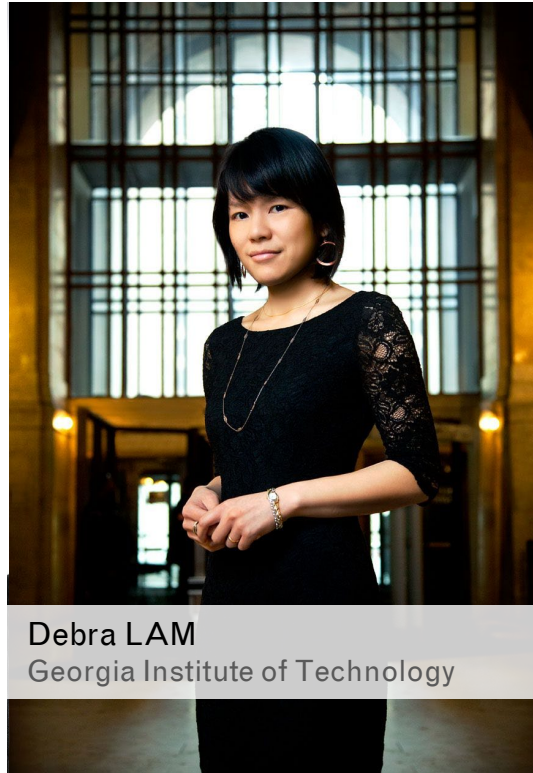


INTRODUCTION

AN ACADEMIC PERSPECTIVE

INTRODUCTION

AN ACADEMIC PERSPECTIVE

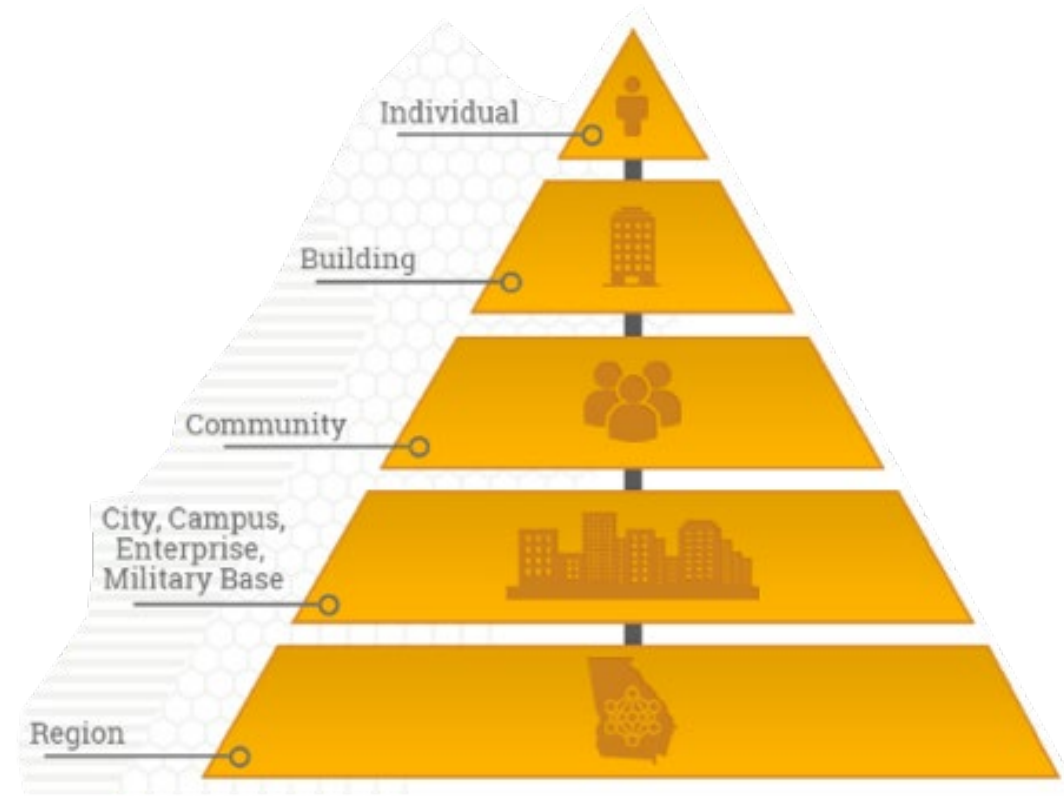
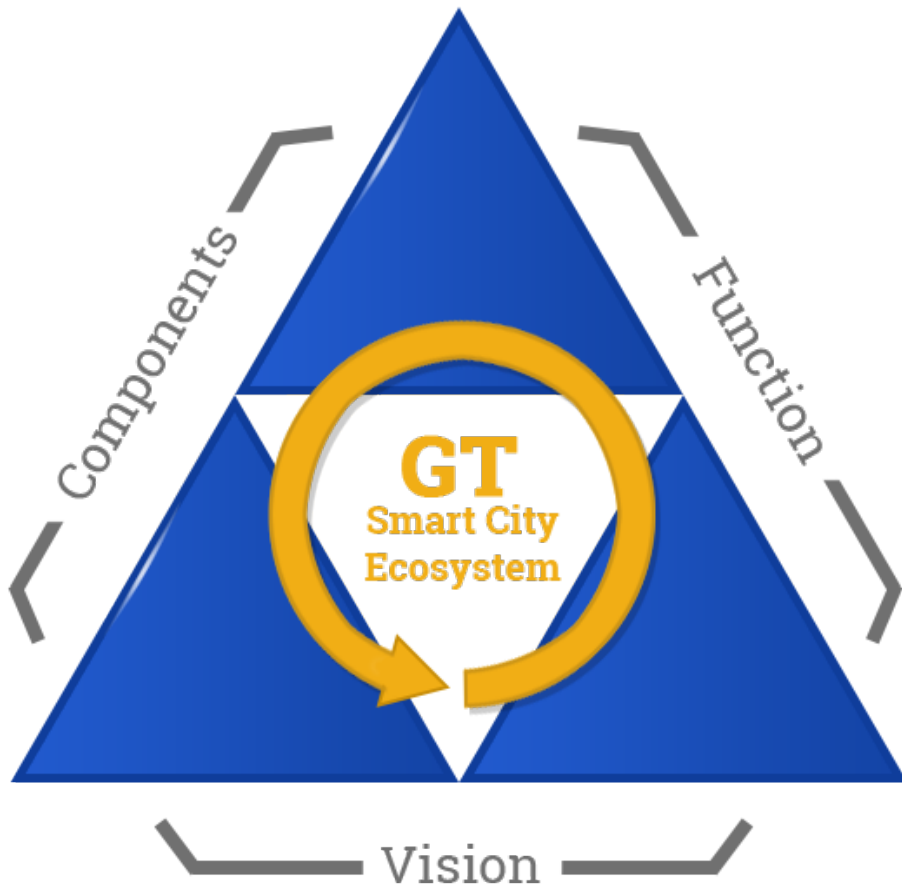




Public and Inclusive Innovation

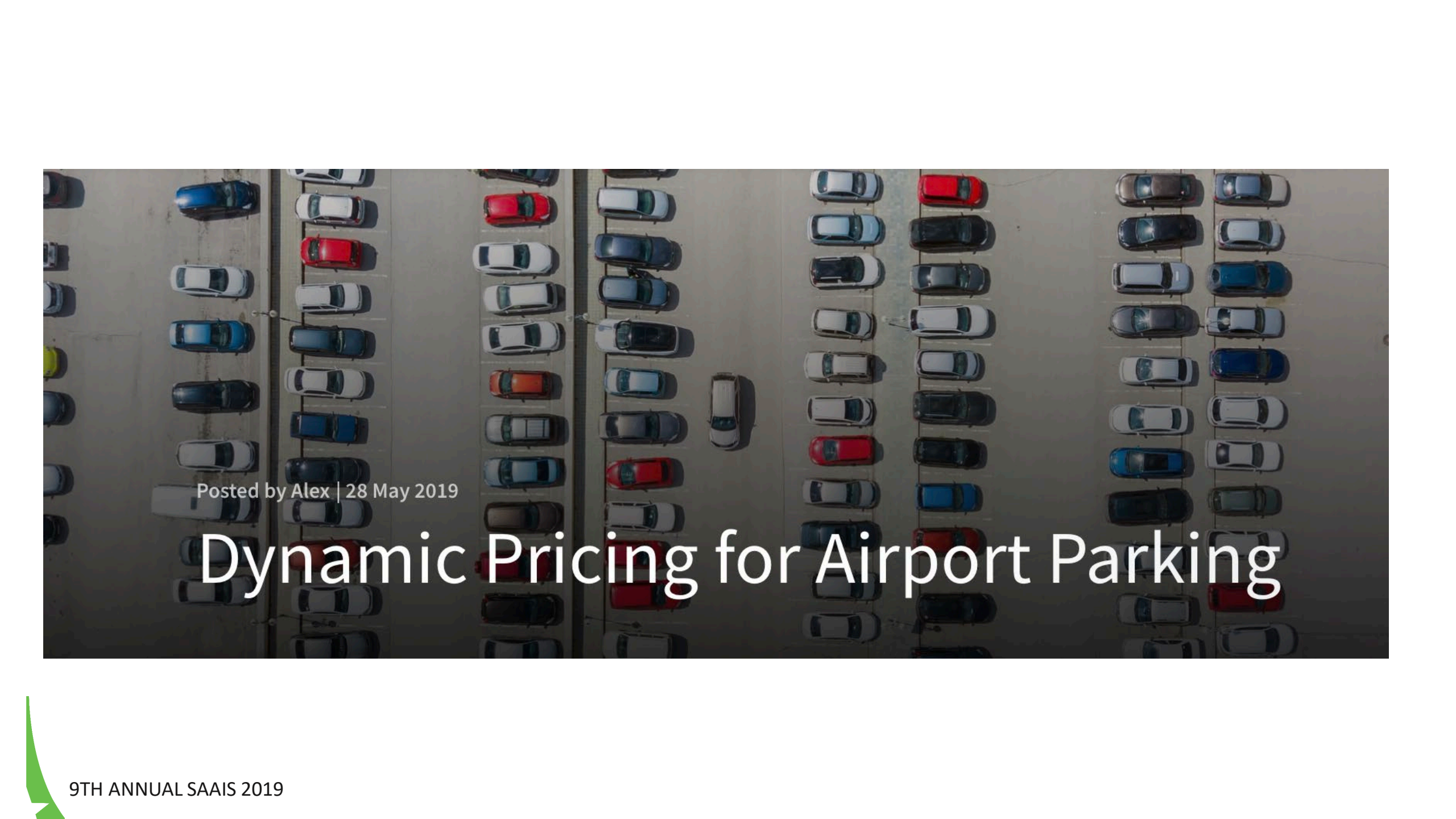
Creating a new era for partnership

Debra Lam
SAAIS 2019
15 October 2019



GT Smart Cities and Inclusive Innovation Framework





Posted by Alex | 28 May 2019

Dynamic Pricing for Airport Parking

ENVIRONMENT

**BEFORE THE FLOOD:
AIRPORTS
DANGEROUSLY
CLOSE TO SEA LEVEL**

HEATHROW 2.0
**CARBON NEUTRAL
GROWTH ROADMAP**

The Telegraph

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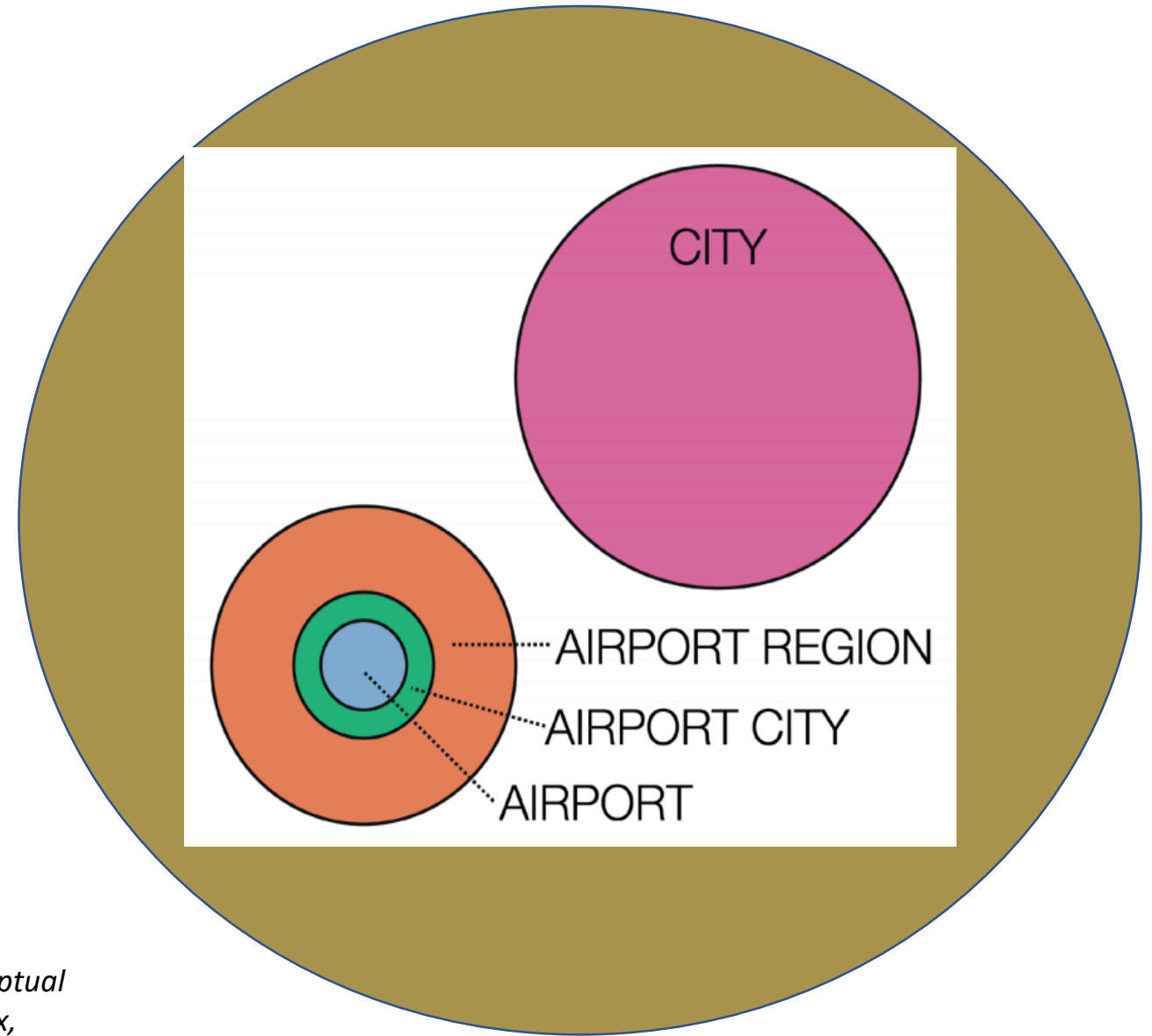
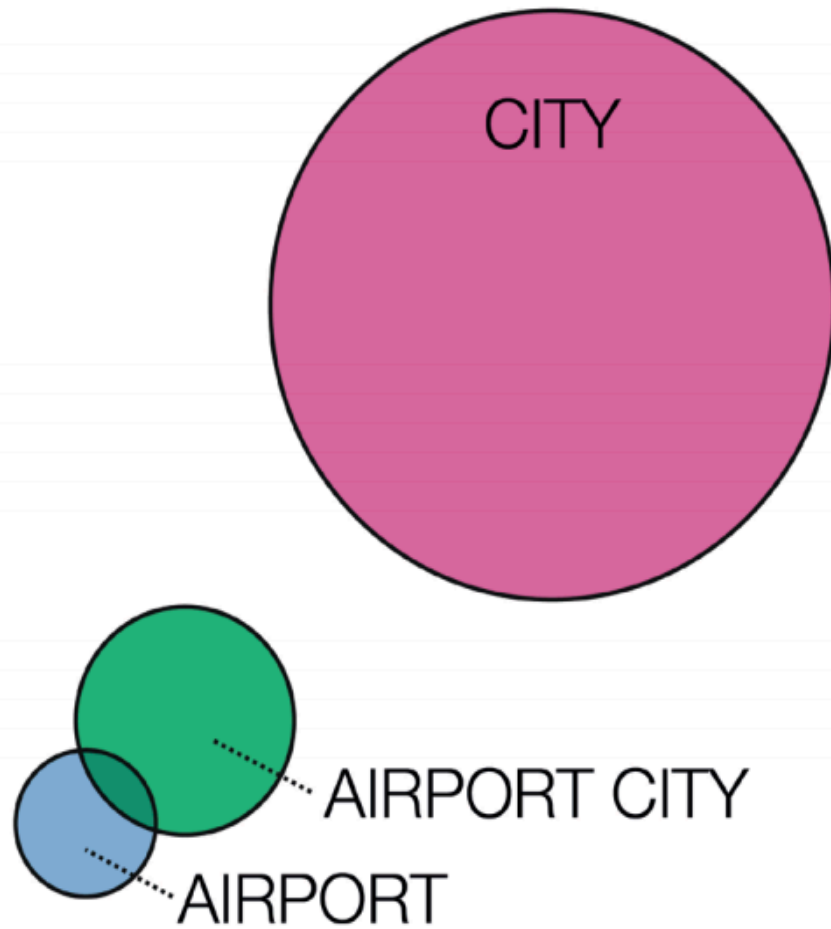
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[Middle East](#)
[Australasia](#)
[Africa](#)
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[Central Asia](#)

HOME » NEWS » WORLD NEWS » NORTH AMERICA » USA

How the wrong type of wind is to blame for slower flights from Britain to the US

Flights from London to New York are taking eight hours - about half an hour longer than usual - because of unusually powerful headwinds caused by the jet stream

Airport-City Ecosystem



Source: Future of Airports and Real Estate Opportunities. 2016. Arup. Conceptual Scheme of Airport-Based Real Estate. Source: Knippenber, Ute and Wall, Alex, "Airports in Cities and Regions, Research and Practise", KIT Scientific Publishing, p.115, 10th July 2009



“AV technology is one of those innovations we see as having the potential to improve employee safety, the customer experience and operational performance, and this partnership will help us explore all of those possibilities.”

Gil West, COO, Delta



GEORGIA SMART COMMUNITIES CHALLENGE

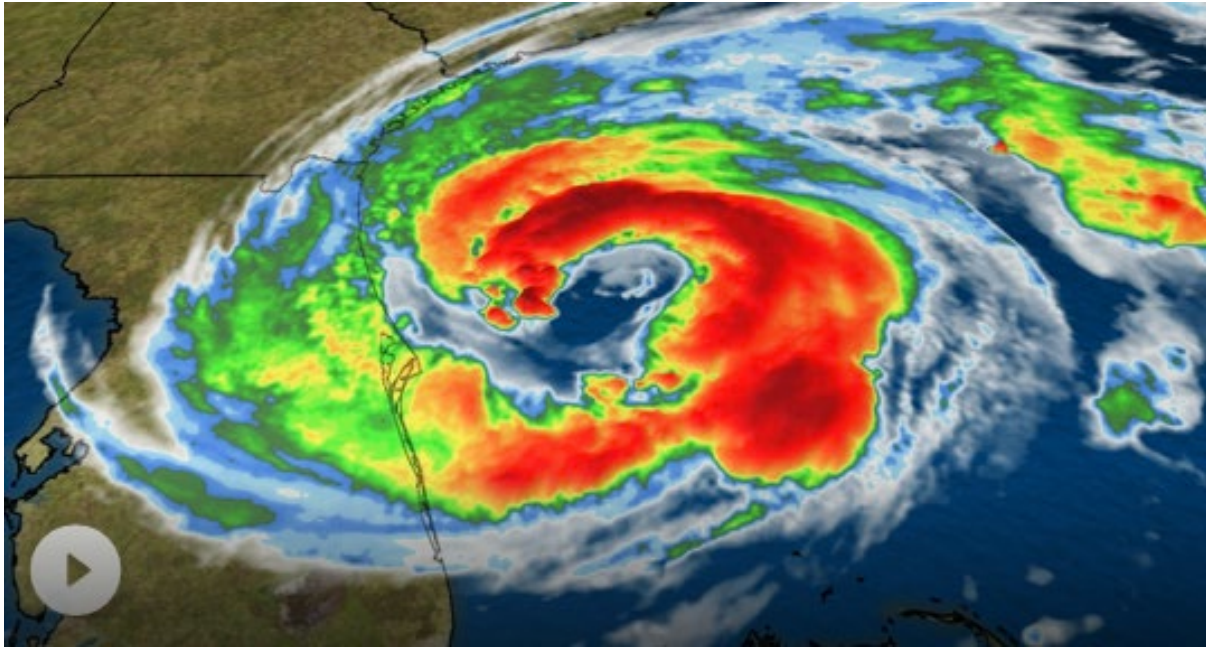
Enabling Resiliency and Sustainability through
Academic Research and Public Sector Collaboration

The Georgia Smart Communities Challenge is a **first-of-its-kind** Grant Challenge for communities of any size in the state of Georgia to:

Empower communities to envision and plan for their
Smart and Connected Future

To spur smart community development throughout GA
To position GA as a smart community leader
Build a workforce that can lead in technological advance and
data-driven decision-making





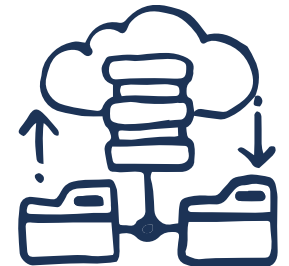
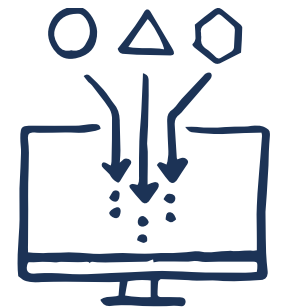
Workforce Development

Smart Community Corps Civic Data Science

5 Student interns embedded in communities
10 Student researchers supporting projects

Strategic Energy Institute- EPI Center | Center for Serve-Learn-Sustain | Center for
Career Discovery & Development | Student Government Association

6,000 Hours of project support



Making it Happen
develop a smart process
together, we look at a set of
steps that focuses on a present
problem while looking for a
sustainable process that grows
and adapts over time.

Understand Your People.

Building a smart and
connected community
starts with the people
and understanding
their goals for their
community.

Identify the Data.

Data are central to the
smart and connected
community. A smart process
relies on knowing what data
you have, what data you need,
and how to connect the right
people to the right data.

Create Partnerships.

Partnerships are built
on a united vision and
strong understanding of the
roles and responsibilities
of the respective parties.
They are cemented on trust
and knowing the parties are
committed to the long run.

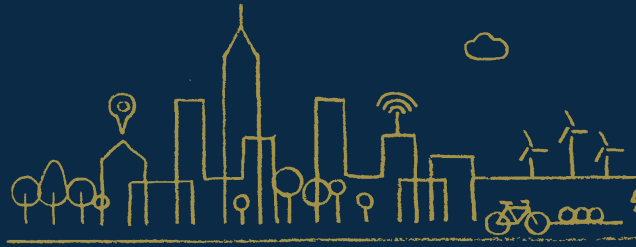
Through
stage
research
make the
and g
tech

Macon-Bibb Giving the People Better Access to Local Government

Macon-Bibb County has
several existing mobile
applications and browser-based
smart solutions, but these services
are currently out of reach of
economically disadvantaged
neighbors who lack access
to high-speed internet or
smartphone devices.
SmartNeighborhoodsMBC
promotes equity in economically
stressed neighborhoods by
placing Smart Kiosks in strategic
locations such as community
centers, libraries, recreation
and public buildings to help
underprivileged citizens
better access and engage local
government departments.

GEORGIA SMART COMMUNITIES CHALLENGE

Enabling Resiliency and
Sustainability through Academic Research and
Public Sector Collaboration



FIELD GUIDE

Partnerships
Working with partners
is a process to figure
out when to make
decisions. As a project matures
it offers to different
stakeholders to sustain in the long
term. Management needs to
be a careful transition.



Chatham Piloting To Help Stakeholders During Natural Disasters

Chatham County will design,
develop, and test a pilot sensor
network for measuring sea level
flood risk in order to inform
government officials and other
key stakeholders in real time
during natural disasters
and storms. This project
depends on the partnership
between different people:
community groups, local and
county government officials,
and those helping with K-12
education initiatives. The team
is conducting research with
help from Georgia Tech's Earth
and Atmospheric Sciences
department as well as the
Computing department. The
pilot network will help to improve
flood warnings, emergency
response action plans, and
prepare for future
disasters.

Powered by



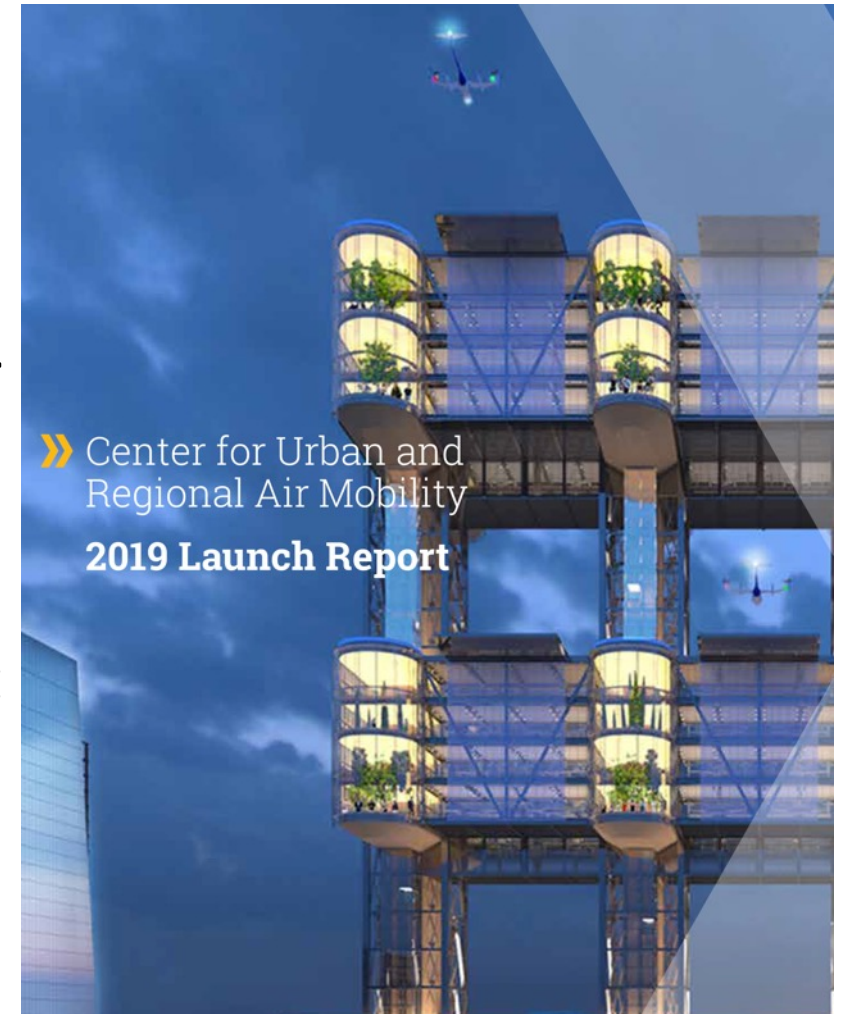
Georgia Tech Center for Urban and Regional Air Mobility

UAM requires new research and policy to overcome the many barriers to implementation.

GT has formed the Center for Urban and Regional Air Mobility (CURAM) as a focal point for research, education, and economic development activities related to UAM.

Focus areas include operations research, aircraft technologies, market assessments, and policy assessment.

Directed by Profs. Brian German and Laurie Garrow, with engagement of over thirty Georgia Tech faculty.



INTRODUCTION

AN ACADEMIC PERSPECTIVE





A Customer-Focused Approach to Airport Technology

Dr. Max Hirsh (PhD, Harvard)
University of Hong Kong / Urban Experts

Airport Urbanism



INFRASTRUCTURE
AND MOBILITY IN ASIA

Max Hirsh

What is Airport Urbanism?

Dr. Max Hirsh (PhD, Harvard)

hirsh@post.harvard.edu



airporturbanism.com

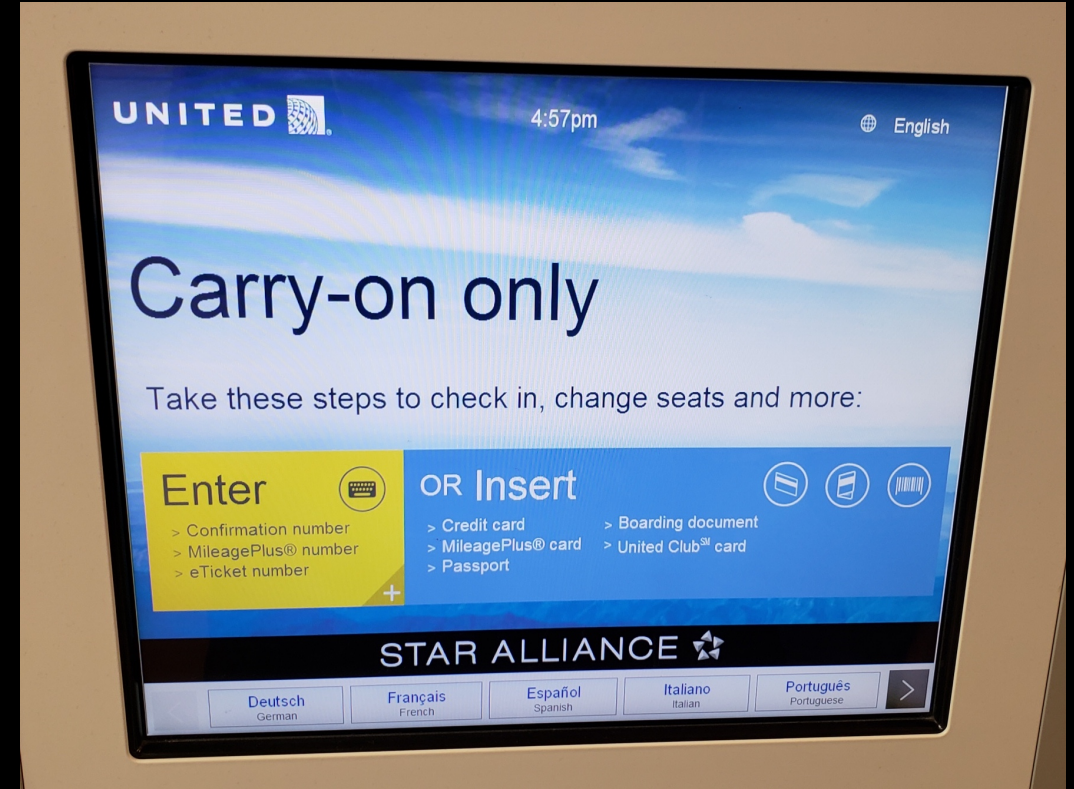
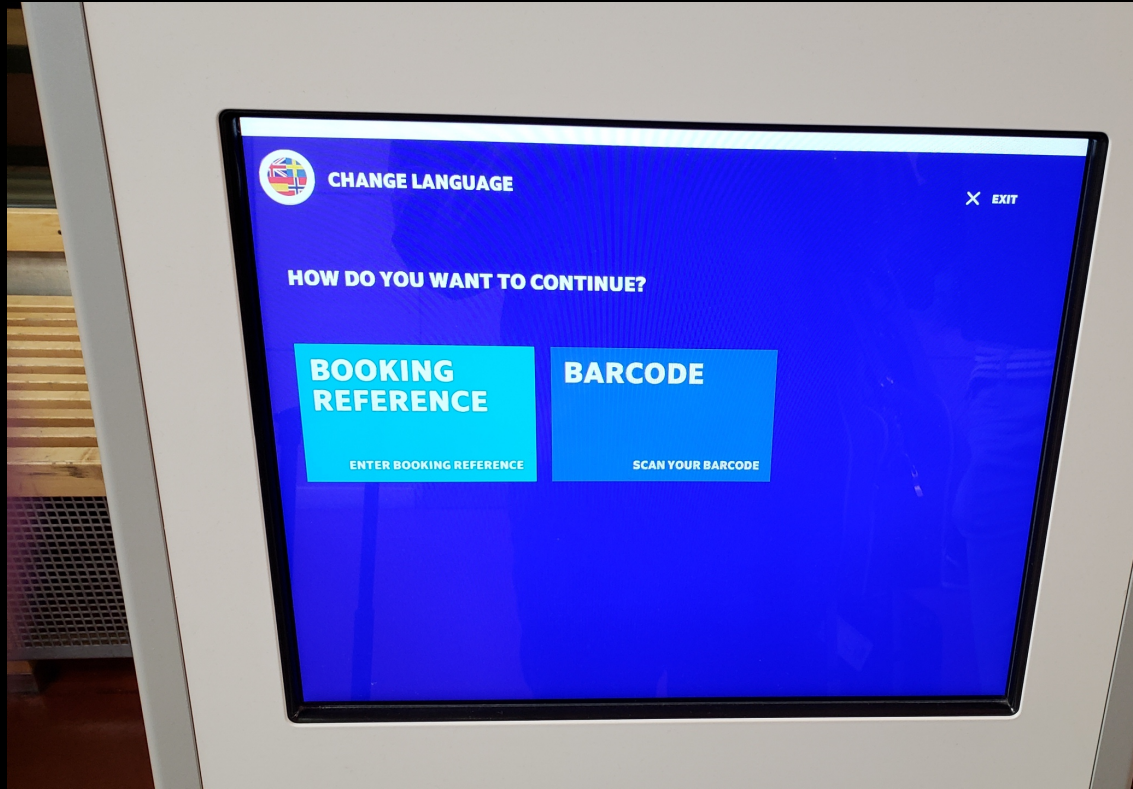
- How can technology improve the customer experience at airports?
- How can technology improve the customer experience in airport areas?

“walking audits”





bad technology



2019 PASSENGER IT INSIGHTS

SITA

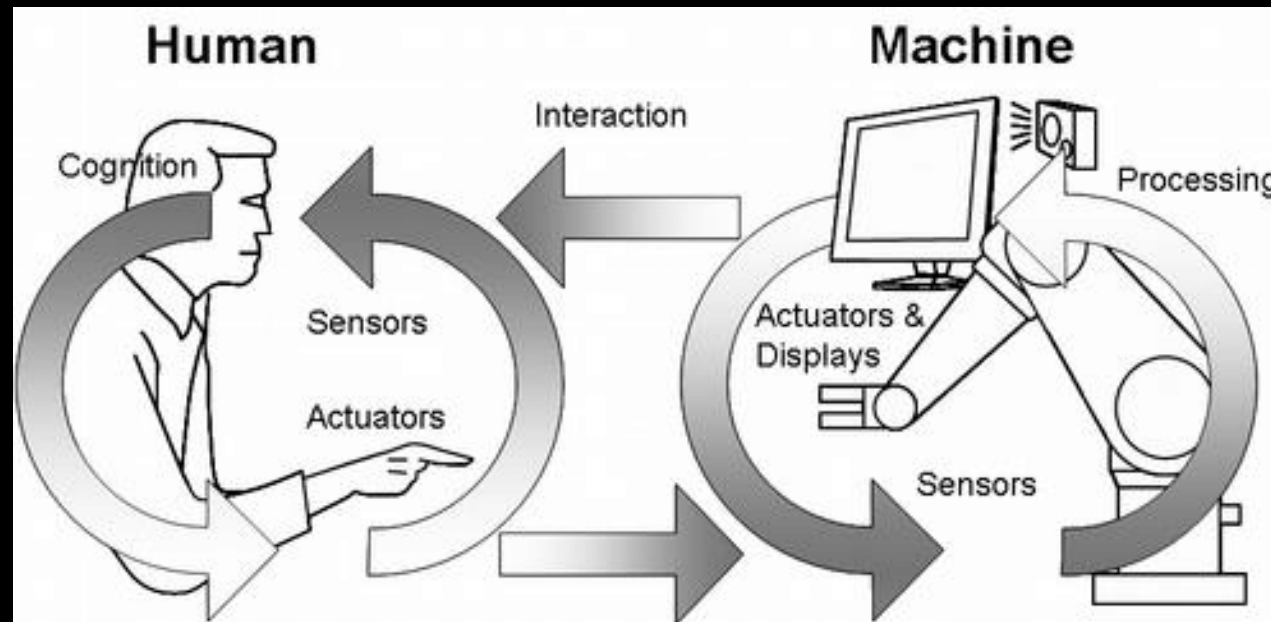


Enter

bad management



- Focus on customers
- Rethink the customer-technology relationship











A problem has been detected and windows has been shut down to prevent damage to your computer.

DRIVER_IRQL_NOT_LESS_OR_EQUAL

If this is the first time you've seen this Stop error screen, restart your computer. If this screen appears again, follow these steps:

Check to make sure any new hardware or software is properly installed. If this is a new installation, ask your hardware or software manufacturer for any windows updates you might need.

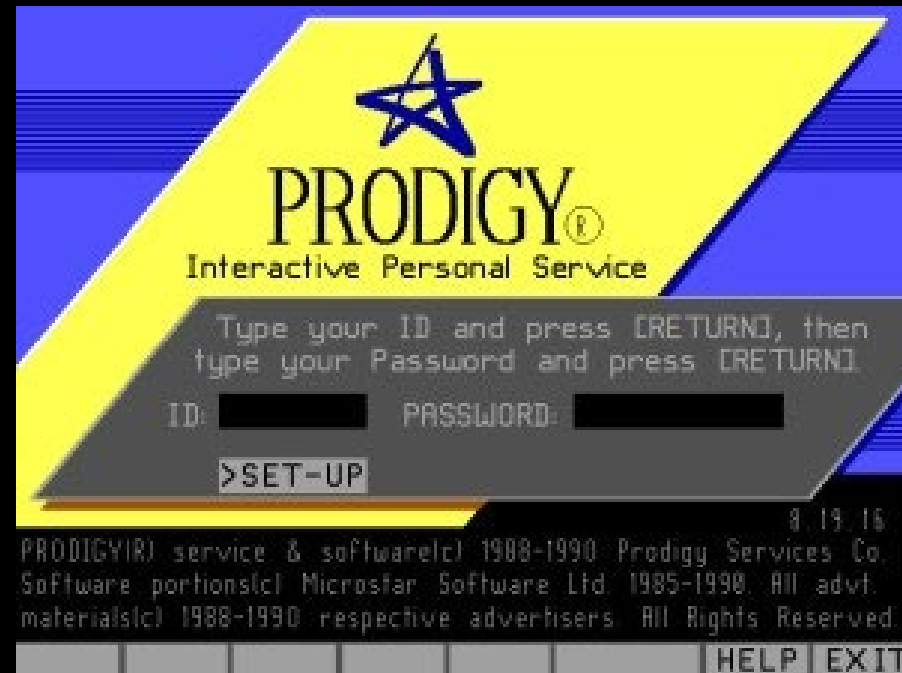
If problems continue, disable or remove any newly installed hardware or software. Disable BIOS memory options such as caching or shadowing. If you need to use Safe Mode to remove or disable components, restart your computer, press F8 to select Advanced Startup Options, and then select Safe Mode.

Technical information:

*** STOP: 0x000000D1 (0x2C844204, 0x00000007, 0x00000000, 0xF63B1E61)

www	- Address 2C844204 base at 2C844204, DateStamp 00000000
www	- Address 00000007 base at 00000007, DateStamp 00000000
www	- Address 00000000 base at 00000000, DateStamp 00000000

beginning dump of physical memory



Airport City and Aerotropolis Schematic



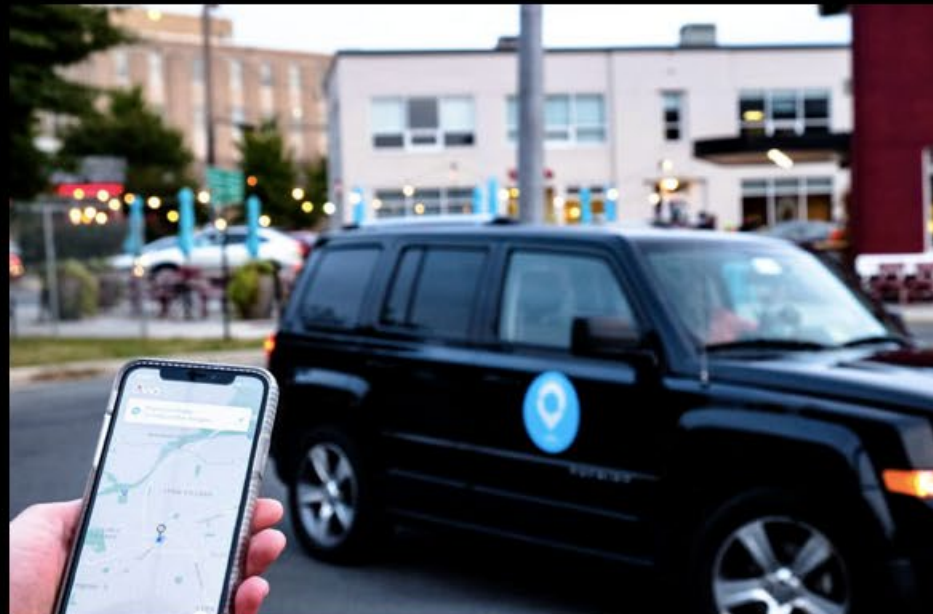
Dallas-Fort Worth (DFW)



Last-mile problem

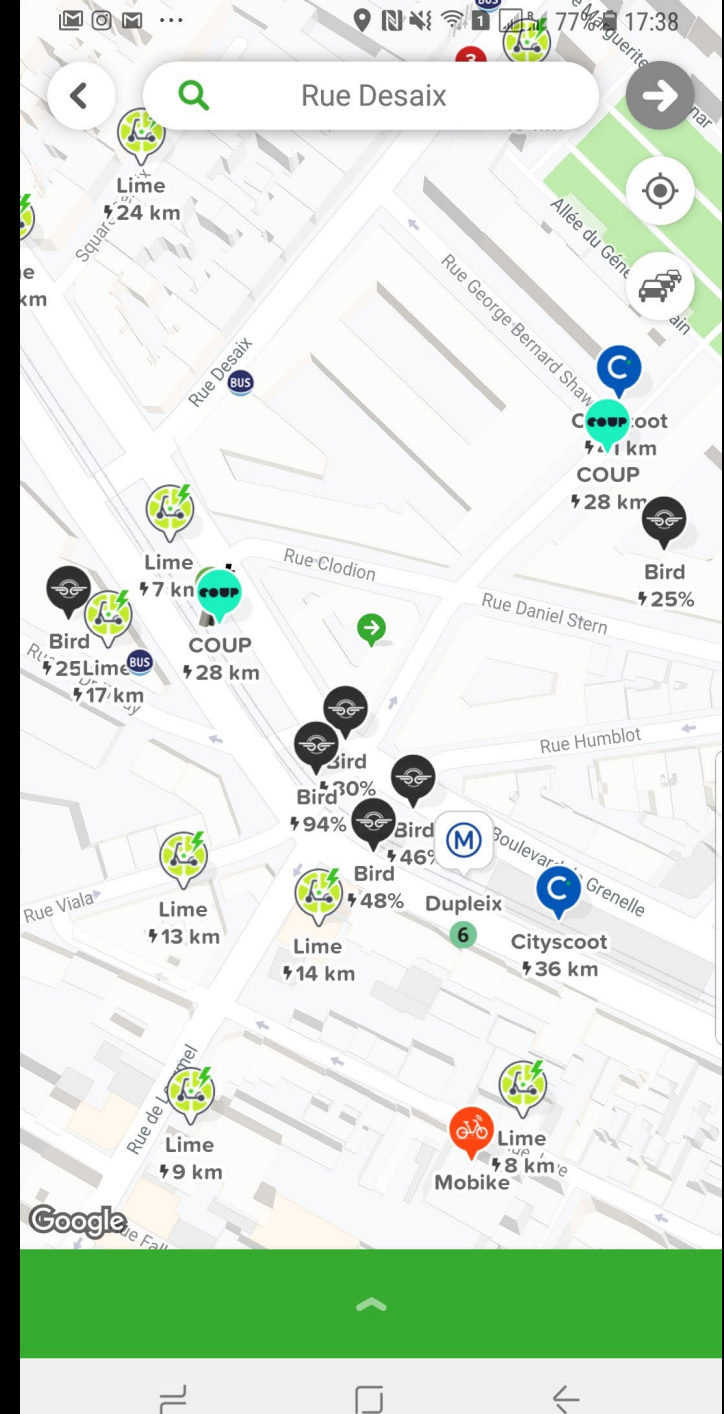
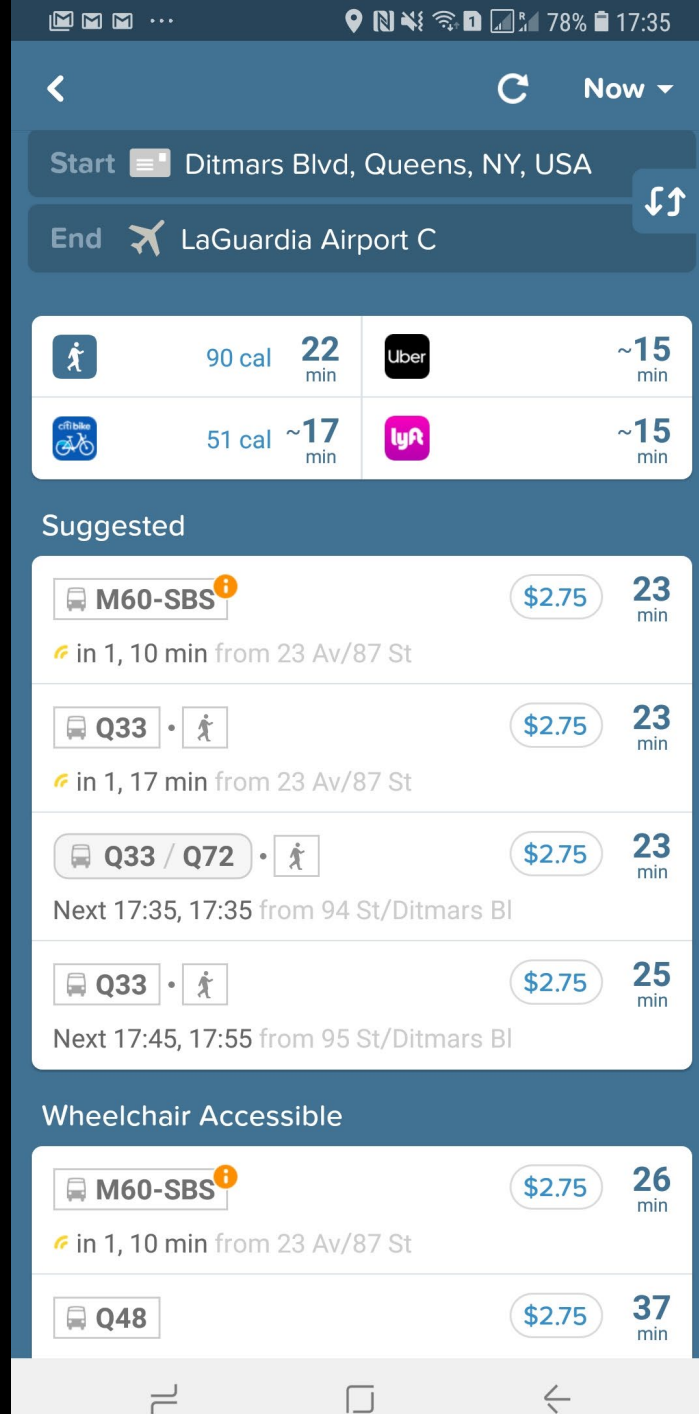
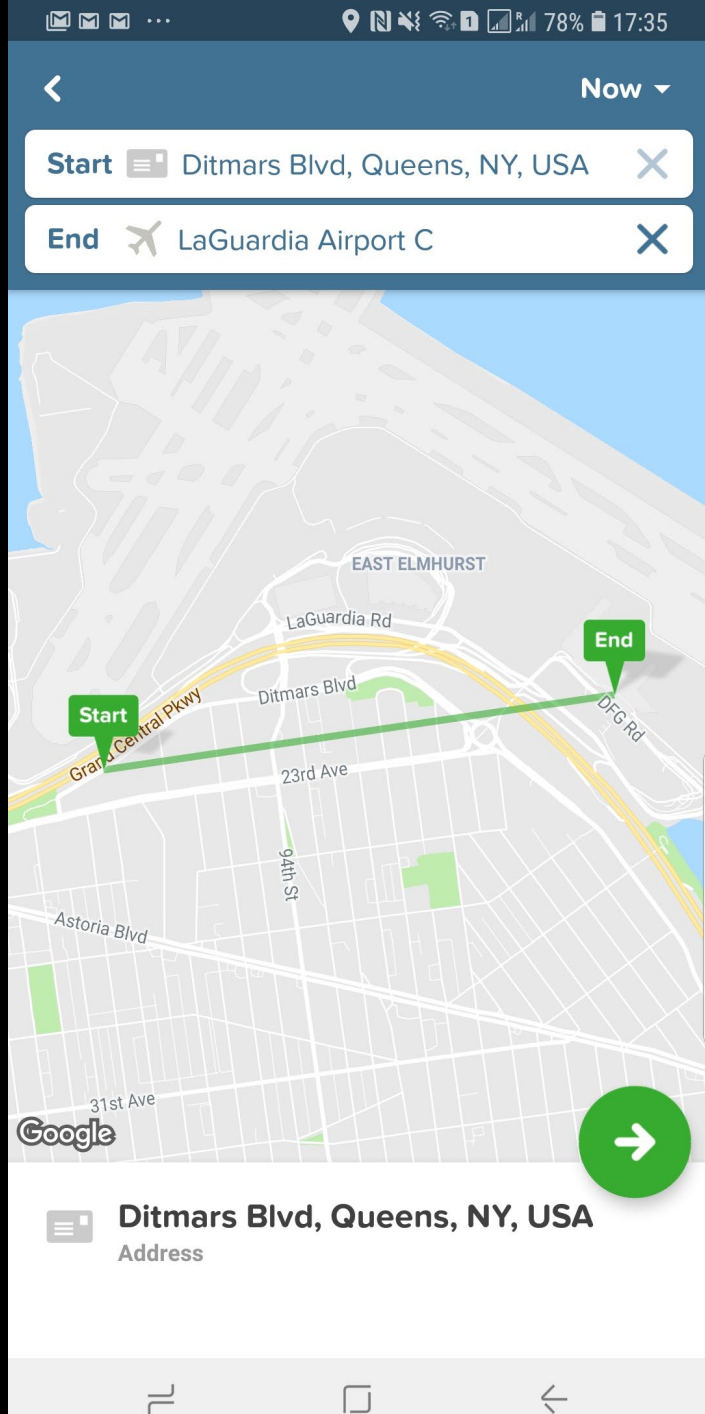


Source: City of Arlington, TX



Arlington, Texas





1. Impact on customers?

1. Impact on customers?

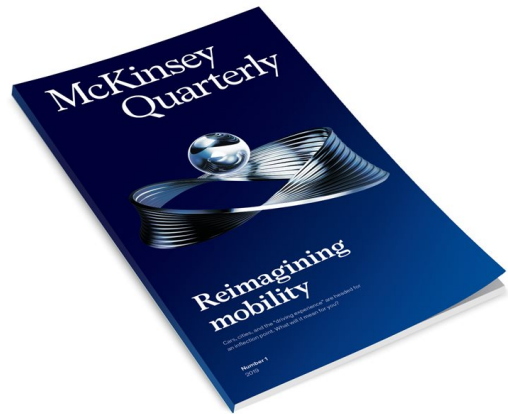
2. Will it save money?

1. Impact on customers?

2. Will it save money?

3. Manage transition?





Scenario 2: Unconstrained autonomy
 Robo-taxis and autonomous shuttles make it onto city streets, but there is little support, in terms of regulation or infrastructure.

AVs can navigate the central business district.

As travel gets easier, demand rises.

As more vehicles go electric, GHG emissions fall and air quality improves.



Car	Bus	Train	Walk/bike	Robo-taxi	AV shuttle
15	5	40	5	25	10

Use of private cars decreases; robo-taxis and AV shuttles account for over a third of passenger-kilometers.

Thank you!



airporturbanism.com



max@airporturbanism.com



[@airporturbanism](https://www.instagram.com/airporturbanism)



SAAIS 2019

NETWORKING COFFEE BREAK



Meet the Start-ups



15 min

OUR WARMEST THANKS TO OUR SPONSORS





INTRODUCTION

AN OPERATIONAL PERSPECTIVE

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AN OPERATIONAL PERSPECTIVE

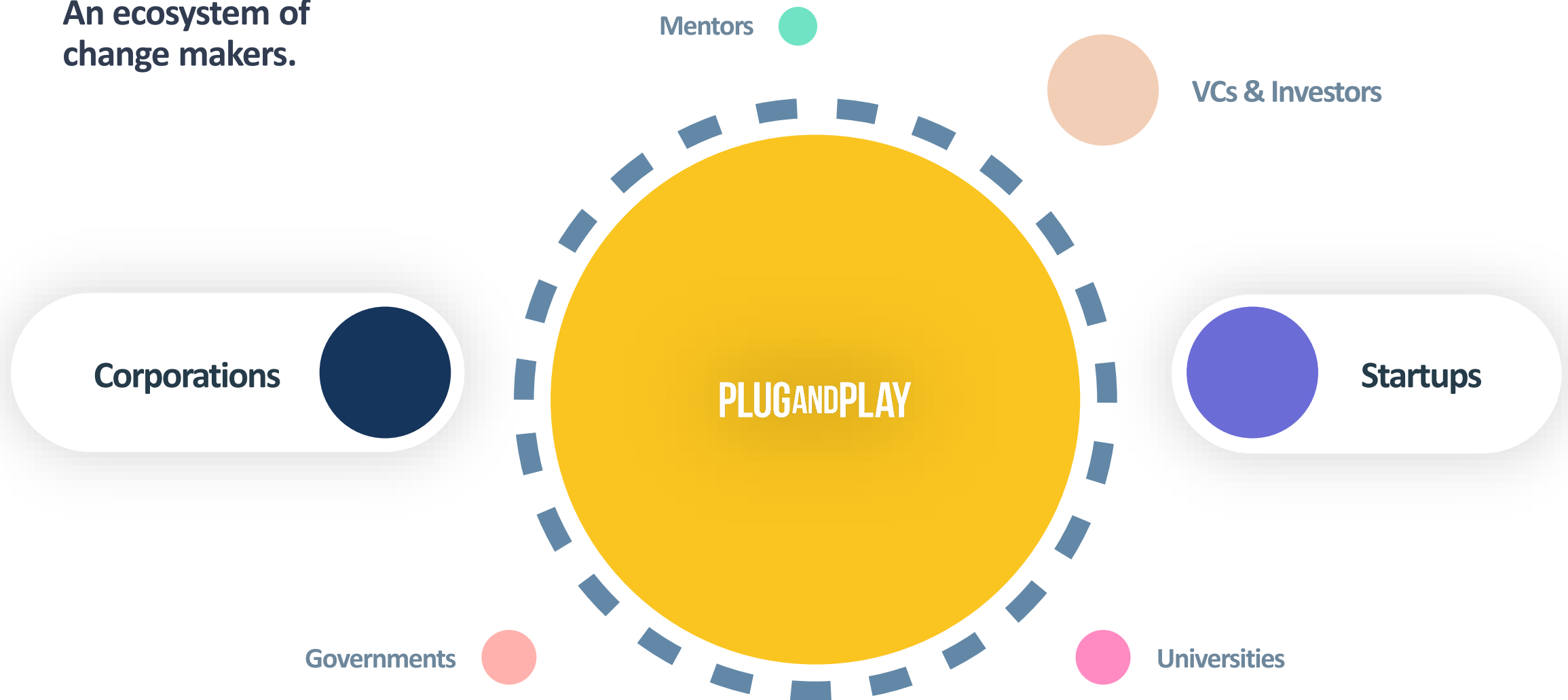


PLUGANDPLAY

The ultimate innovation
platform.



**An ecosystem of
change makers.**



A global sourcing platform tailored to you

STARTUP ECOSYSTEM

15,000

▲ 1,500 per year

GLOBAL LOCATIONS

28

▲ 1 per quarter

INDUSTRIES COVERED

16

▲ 1 per quarter

Our innovation platform.

ACCELERATOR PROGRAMS

We run over 50
accelerator programs a
year in most major
industries and cities

CORPORATE INNOVATION

We supercharge the
innovation of over 300
major corporations from
every continent

VENTURE CAPITAL

We invest in over 220
companies worldwide
every year and co-invest
with 180 VCs

A team of startup experts dedicated to you

EMPLOYEES

450+

VENTURES ASSOCIATES

100+

OPERATIONS

70+

NEW



B2B Distribution



Energy



Mobility



Travel

NEW



Smart Cities



Supply Chain



IoT



Fintech



Cybersecurity



Health



Real Estate



New Materials



Enterprise 2.0



Brand & Retail

We give you line-of-site across different industries.

Travel and Hospitality Corporate Partners

ANCHOR & ECOSYSTEM PLUS












ECOSYSTEM



Our Investment Portfolio - 1000+

ACTIVE POSITIONS

EXITS

\$1B+	  	   
\$100M+	      	  
	      	  
	      	  
	    	  
\$25-100M	         	 
	         	 
	        	 
	        	 

NOTE

Companies in our portfolio have raised over \$10 billion in additional funding

Travel & Hospitality - Investment Portfolio



Our Focus Areas

BEYOND LOYALTY/PERSONALIZA TION

Personalizing the travelers experience to enhance loyalty, increase direct bookings, and enable traveler stickiness.

SEAMLESS JOURNEY

Creating a frictionless experience from inspiration/booking to post trip.

NEW REVENUE STREAMS

Looking outside of core service offering and increasing customer wallet-share by tapping into new ancillary revenue streams.

Our Focus Areas

SECURITY & SAFETY

Leveraging new solutions impacting the physical, cyber, and information security ecosystems: Protecting people, protecting data, and protecting infrastructure.

OPERATIONAL EFFICIENCY

Lowering cost and increasing productivity through automation technologies.

DISRUPTION

Identifying industry changing business models like the Shared Economy transforming current markets.

Plug and Play's Perspective on Big Data and New Tech for Travel

HARD TO
IMPLEMENT

Machine Learning
Mobile Collaboration
Dynamic Pricing
Service Worker Engagement



Blockchain
Smart Cities
Loyalty and Incentives
Connected World



EASY TO
IMPLEMENT

E-Commerce
Predictive Analytics
Passenger Experience
Travel Disruption



Behavioral Science
Wellness
Saving More \$
“Hacking” °F / °C



EASY TO EXPLAIN

HARD TO EXPLAIN

The three phases of open innovation

1

EXPOSURE & EXPLORATION

Scouting, meeting, and deep diving into the startup ecosystem on a global scale.

2

VALUE CREATION

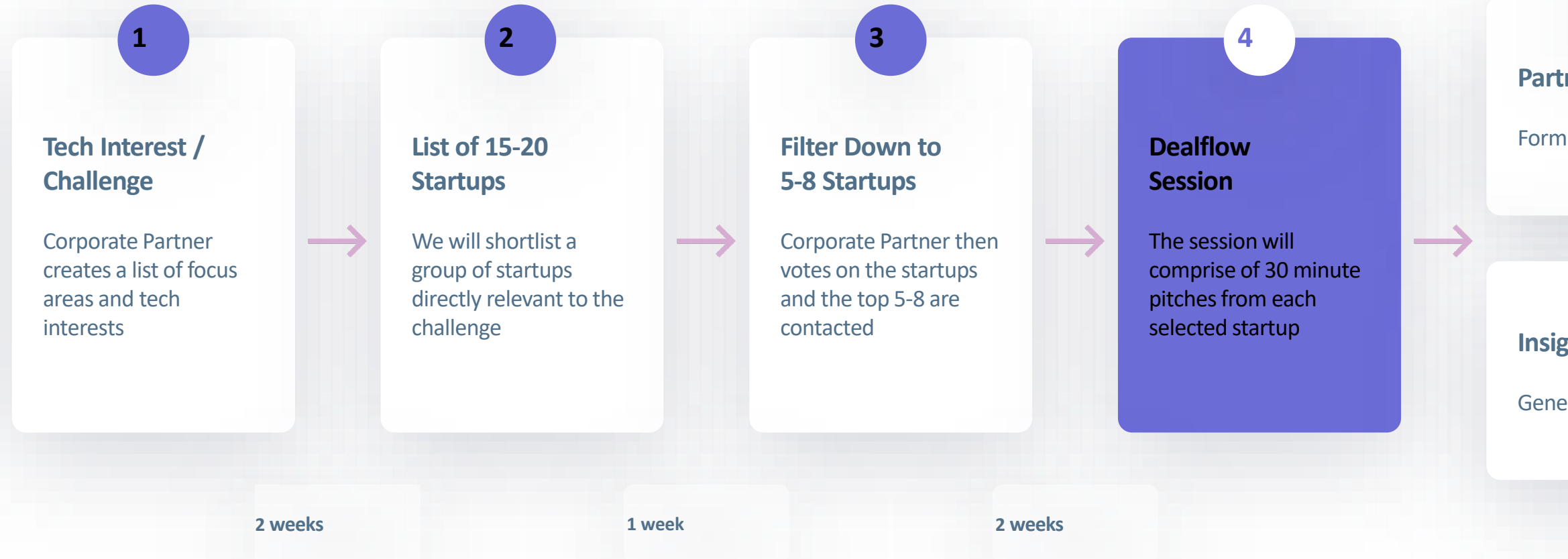
Launching POCs and pilot projects with a set of clearly defined solutions.

3

TRANSFORMATION & CULTURE

Exhibiting value generated success stories by permeating the whole company.

How dealflows work



How dealflows work



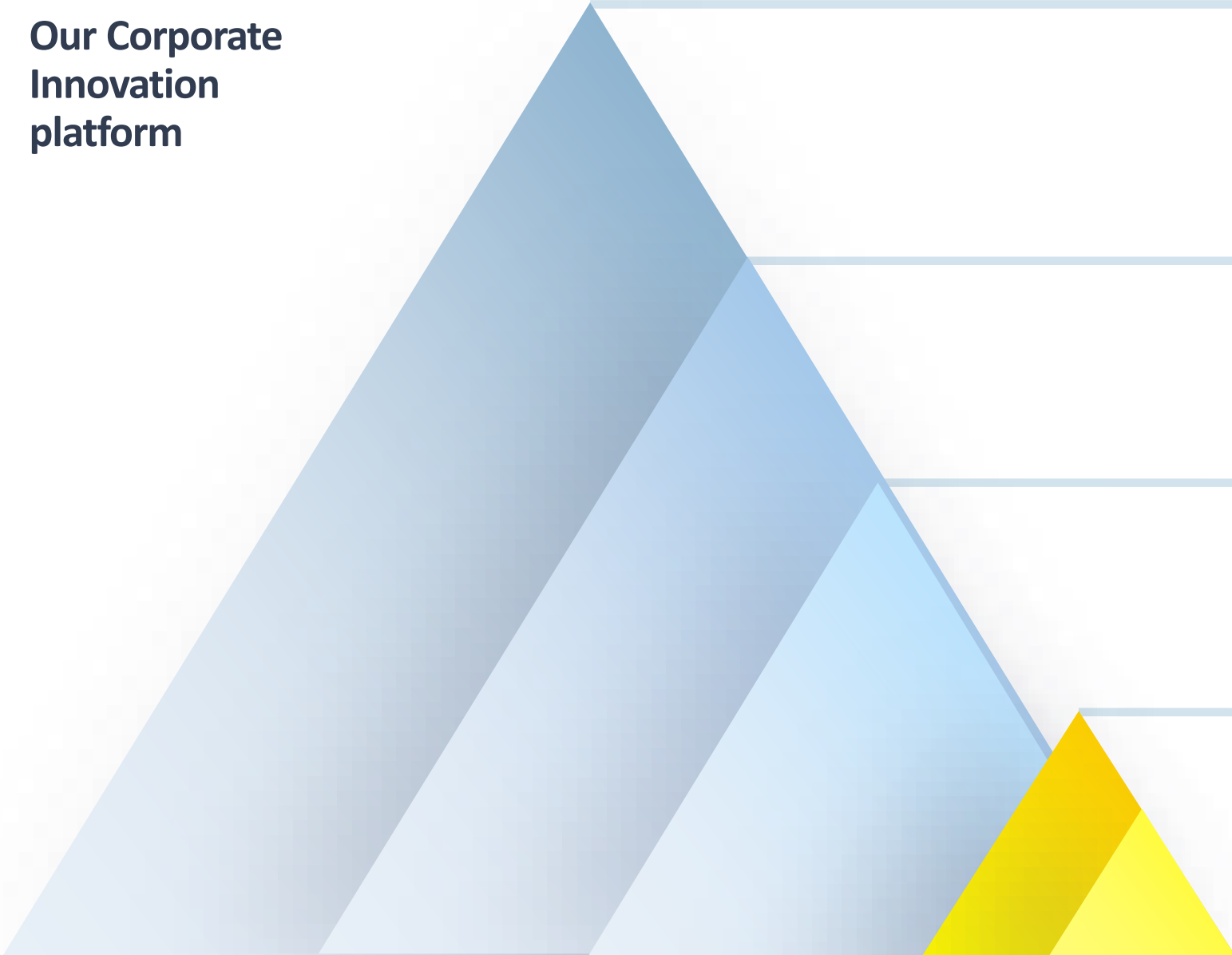

Saving Money

I FOUND A WAY TO
SAVE A MILLION
DOLLARS BY SPENDING
ONLY \$10,000.



THE \$10,000 WOULD
COME OUT OF MY
BUDGET BUT THE
SAVINGS WOULD GO
INTO SOMEONE ELSE'S
BUDGET. IT'S NOT
FEASIBLE.





Our Corporate Innovation platform

Assessment

Identify the markets
Industry challenges
What are the trends?

Market Mapping

Business models
Technologies
Solutions

Identification

Team
Technology
Traction

Action

Pilot projects
Proof of concepts
Investments, M&A

INTRODUCTION

AN OPERATIONAL PERSPECTIVE





PIONEERING NEXT FRONTIERS

SUSTAINABLE AIRPORT AREAS INTERNATIONAL SEMINAR

2019

“

HOW EMERGING new MOBILITIES
will REVOLUTIONIZE
AIR TRANSPORT & CITIES
to make them more SUSTAINABLE

”

TUESDAY 15TH 2019


SUSTAINABLE AIRPORT AREAS INTERNATIONAL SEMINAR

PLANNING & URBANISM

EMERGING & INNOVATIVE TRANSPORT SYSTEMS


ACCESS | MOBILITY | CONNECTION | TRANSPORT

From avantgarde to uneXplored applications




Demographic Shift

Global ageing population to increase by 60 percent




Rising Demand

Global energy demand to rise by almost a third




Economic Expansion

Global economy to double in size to about \$150 trillion




Hyperconnected Earth

Connected devices to surge eightfold reaching 125 billion




Ecological Overshoot

Human ecological footprint will demand 2 planets Earth




Mega Urbanisation

Another 15 cities will have populations above 10 million




Resource Scarcity

Half of the global population to face severe water shortages




Multipolar Globalisation

Emerging economies (E7) will overtake developed ones (G7)



Artificial Intelligence

Computer power to match the intelligence of humans

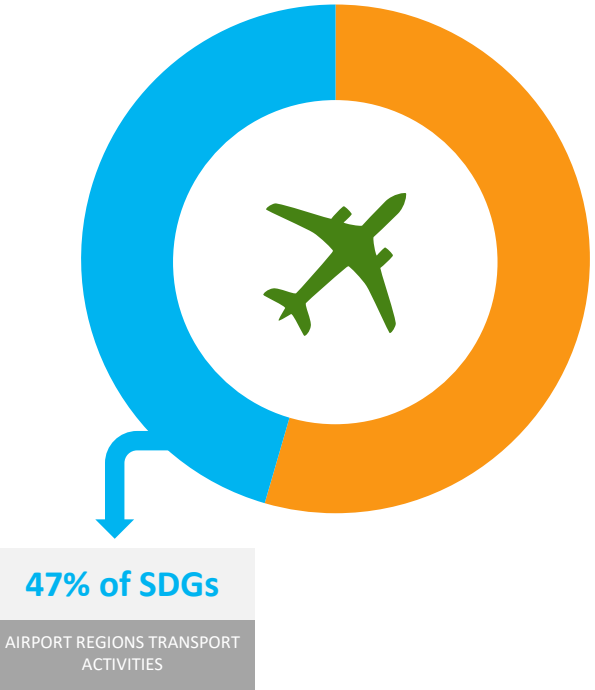


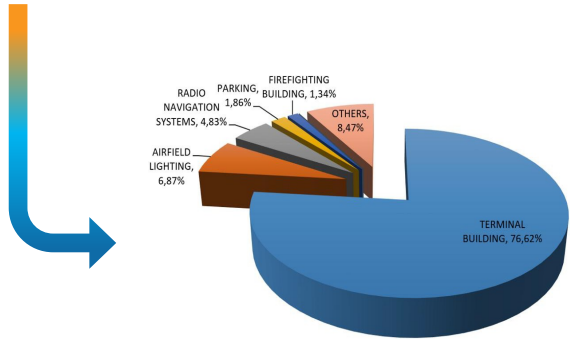
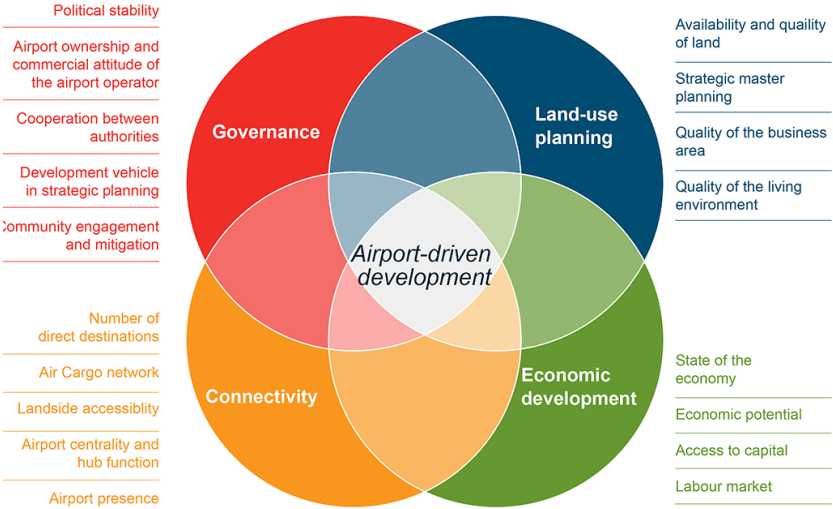
Climate Change

Global temperatures to rise by about 1.5 degrees celsius



SUSTAINABLE DEVELOPMENT GOALS





Source Energy consumption at Santander airport, Spain

Airport area electric consumption

84 000 000 MWh

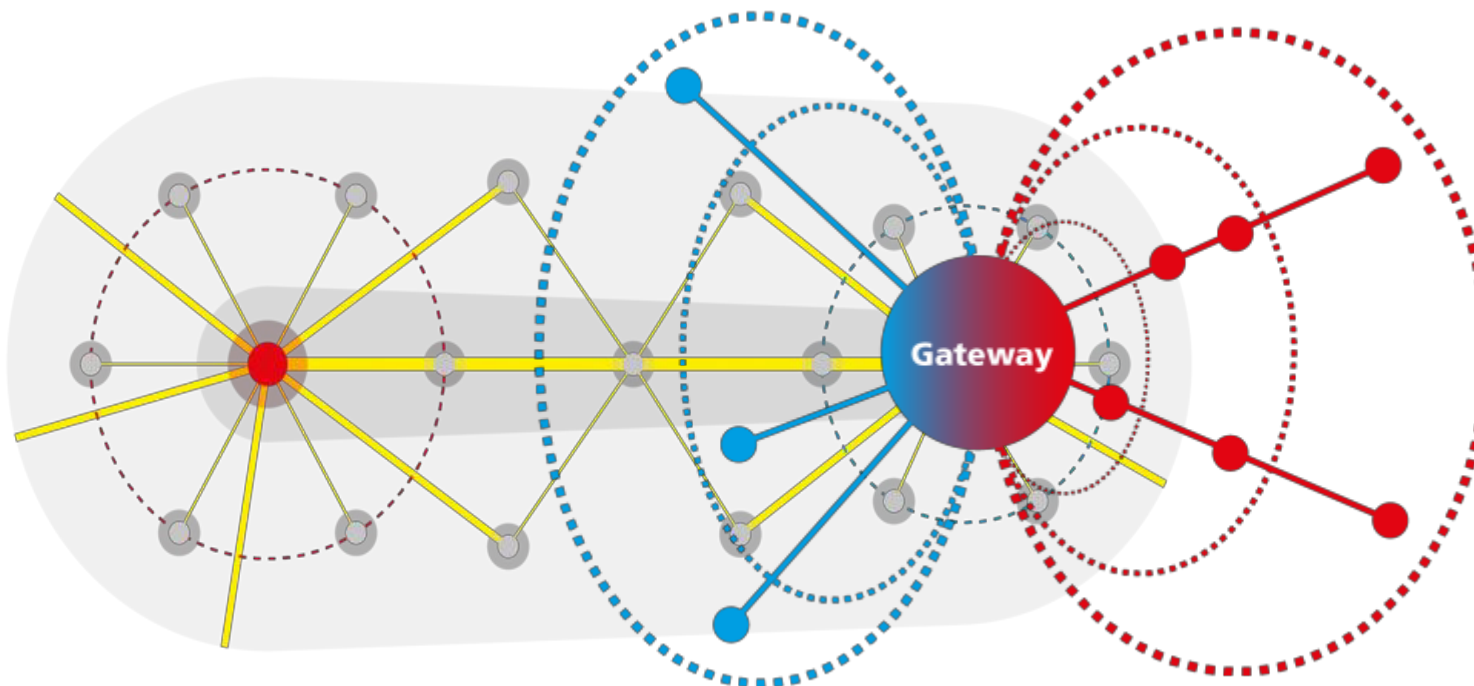
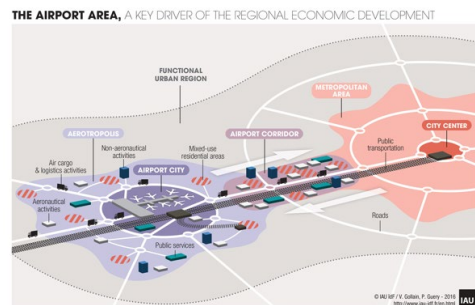
Airport electric consumption

30 1408 MWh

Total region

160 TWh

Average Large Airport Electric Consumption 80 – 100M PAX / yr
Source AVAIRX research and analysis



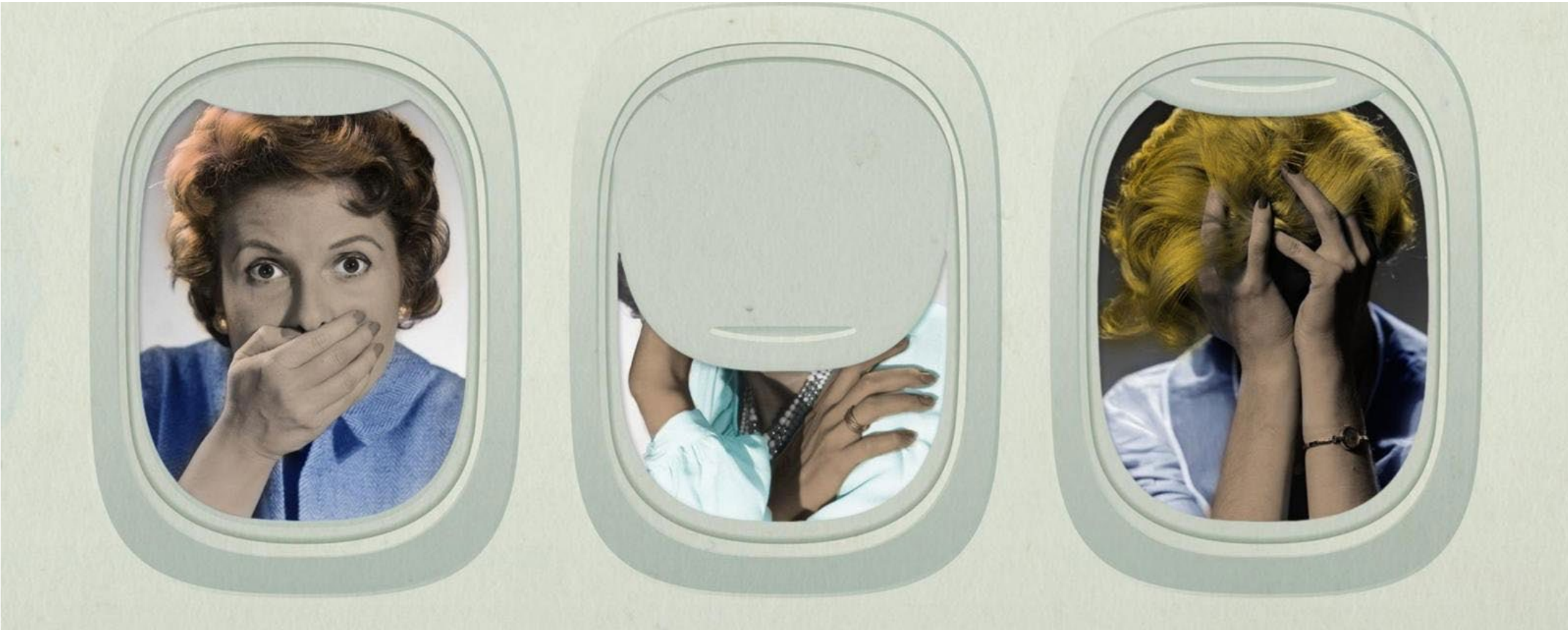


Image courtesy of BBC all rights reserved



AVANTGARDE CHALLENGES

CSR in recent developments

- / Community involvement
- / Customer care
- / Ethical conduct

- / Employee care
- / Environment
- / Sustainability (of which mobility 360°)

YOUR FORESIGHT = YOUR ACTS



WHAT'S EMERGING IN CITIES & REGIONS?

APPLICATIONS | PLATFORMIZATION | SYSTEMS

AVAIRX

PIONEERING NEXT FRONTIERS

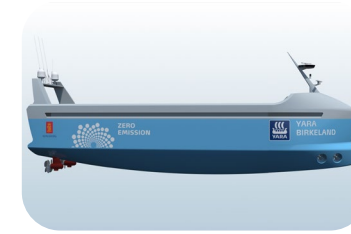
FROM MICRO PHV Lab to VTOL APPLICATIONS

FORESIGHT & AWESOME APPLICATIONS

- / Private Hire / carpool / ridehailing
- / 4-seater robot
- / Autonomous shuttles and automated systems
- / People Rapid Transit
- / ROBOATS
- / VTOL drones UAV
- / Travel assistants

→ CASEP:

- CONNECTED
- AUTOMATED (« autonomous »)
- SHARED
- ELECTRIFIED
- PERSONALIZED



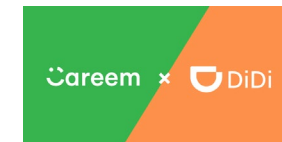
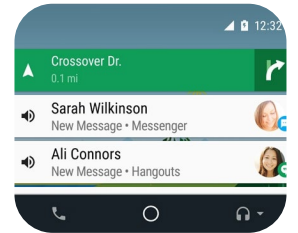


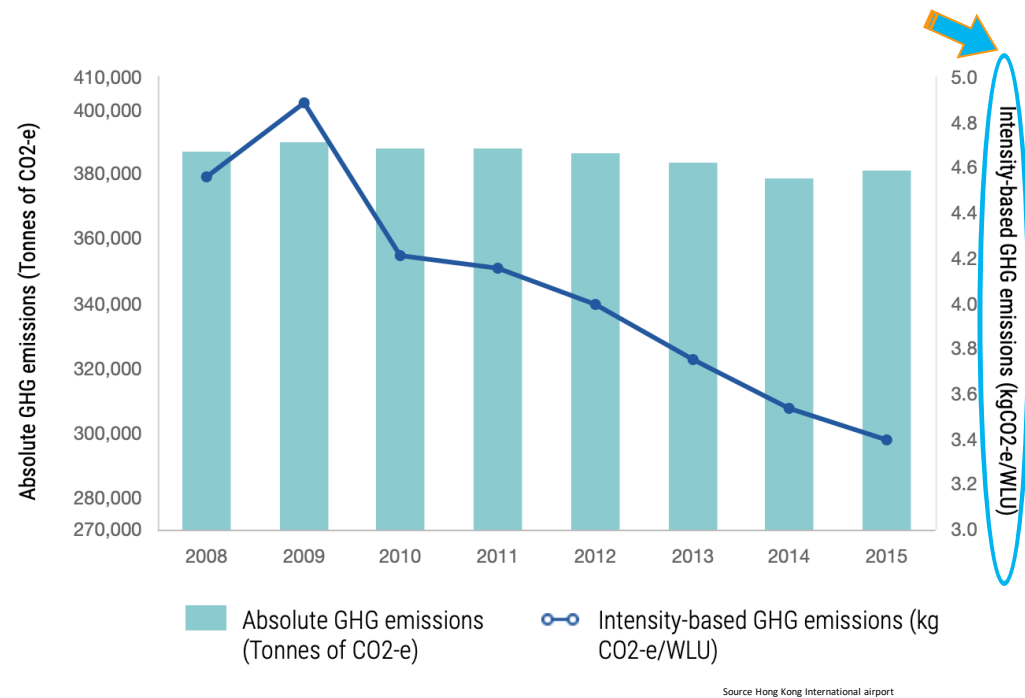
COMPANIONS TAKE the LEAD in MOBILITY

PLATFORM EDGES

→ CASEP:

- CONNECTED
- AUTOMATED (« autonomous »)
- SHARED
- ELECTRIFIED
- PERSONALIZED





AIP Eligible Fuels	O ₃		NO ₂	SO ₂	PM	CO
	VOC	NO _x				
Electric	★	★	★	★	★	★
CNG	●	●	●	●	●	●
LNG	●	●	●	●	●	●
Propane	●	●	●	●	●	●
E85	●	●	●	●	●	●
M85	●	●	●	●	●	●
Hydrogen	★	★	★	★	★	★
B100	●	⊘	⊘	★	●	●

⊘ = worse ★ = better ★ = best
Scale is in comparison to baseline emissions from conventional fuels

Source Airport Improvement Program USA



HEAVY STUFF AHEAD

ENERGY & PLANNING towards CARBON NEUTRAL OPERATIONS

- / Coping with Mobility and Transport Services
- / Emerging mass e-transport
- / Micro vs megagrids (local or regional)
- / Requests of Millennials (instant, inspirational travel)
- / Ecosystem edges and consumption
- / New business models

Mobility is a driving force for economic activity enabling access to jobs, education, health, as well as the production of goods and services

Seizing opportunities through new operations and regional reach



AIRPORT AREA OF THE FUTURE

PLATFORM EDGES

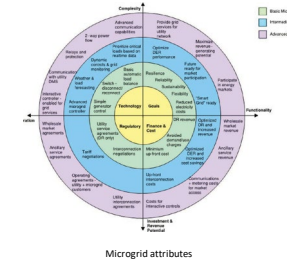
- / Innovate at the edges or risk irrelevance
- / Be a « vessel » for sustainable commerce
- / Reaching carbon neutrality and secure resilience
- / Explore micro - « mega » grids to explore new energy mobility business
- / Develop environment quality programmes ⇔ low impact mobility
- / Incentivize zero local emissions
- / Connect cities with new mutualized modes MaaS and AI

PERSPECTIVES (Hyperloop examples)

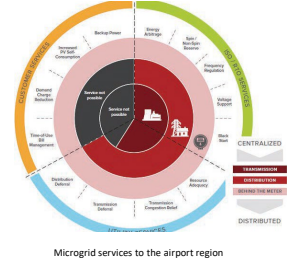
- ➔ <177 kWh / Km (3 times < air travel)
- ➔ Cost per passenger : $0.75\text{kWh} / 24\text{hr/day} = 0.03\text{kWh} / \text{hr} / \text{pax}$
- ➔ For 6 passengers (the maximum per HL capsule) = $0.18\text{kWh} / \text{hr} / \text{trip}$
- ➔ At \$0.15 / kWh the cost is 2.8 cents / hour for a full capsule



Renewable 360°



Microgrid attributes



Microgrid services to the airport region



Renewable energy certificates





PIONEERING NEXT FRONTIERS

6 bis, boulevard Pereire, 75017 Paris – France

MAGELLAN

Acceleration Office Station F

+33 6 89 84 84 82

manuel.chaufrein@avairx.com

www.avairx.com



@AVAIR_X



START-UPS THEIR SOLUTIONS

START-UPS

THEIR SOLUTIONS



Jean Christophe MIFSUD
Rubix



Jean-Christophe LAMBERT
Ascendance



Sustainable Airport Area International Seminar



RUBIX contribution to sustainable development

OUR VISION is to make the world a **SAFER** and **HEALTHIER** place by delivering real-time environmental and wellness monitoring solutions.

OUR MISSION is to empower organizations and individuals with smart technologies that **MONITOR** environmental and health factors, **IDENTIFY** health and safety risk sources and **REMEDiate** through programmable triggered actions.



RUBIX outdoor and indoor on-line monitoring solutions

The environmental foot print of airport activity is more and more scrutinized

Indoor and outdoor nuisances are multiple (gas, odors, noise, particles, allergens, ...)



They can strongly impact health and productivity of co-workers (sick days, turn over, burn out, ...)

They can also strongly impact well being and comfort of passengers (stress, bad image, impact on sales, ...)



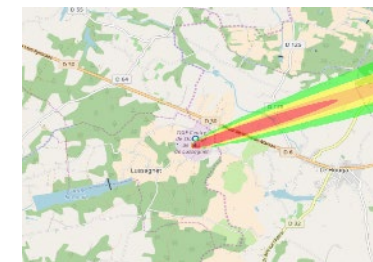
Indoor Monitoring



Outdoor Monitoring



On-line dashboards



Neighbourhood impact



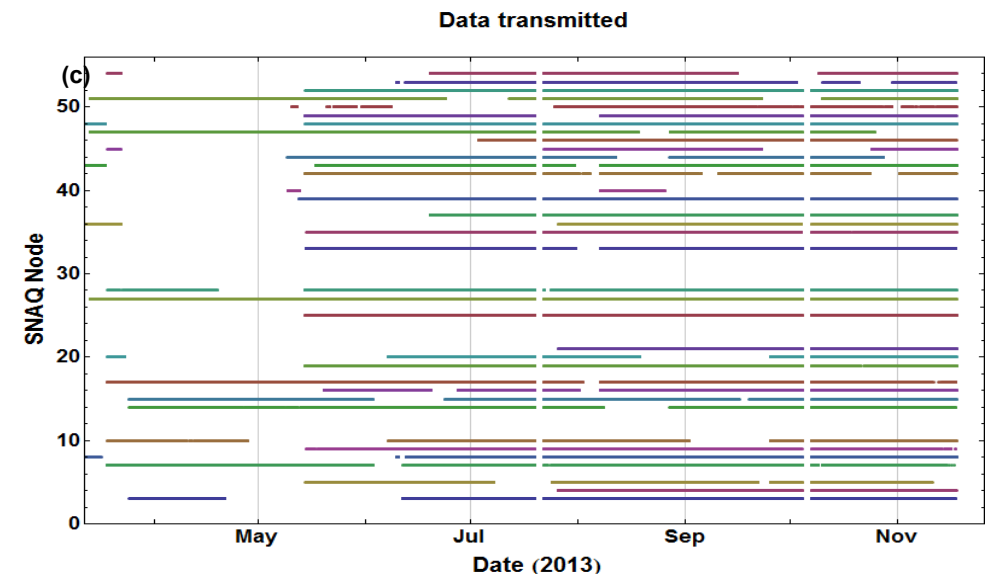
Customer satisfaction

HEATHROW Airport sensor network system

- 40 sensor nodes (airside/landside)
- Real time data transfer (GPRS)
- NO, NO₂, CO, SO₂, O₃, CO₂, VOCs, PM, Odors, Noise
- Software sensor network calibration



- >9 billion records....



START-UPS

THEIR SOLUTIONS



Jean Christophe MIFSUD
Rubix



Jean-Christophe LAMBERT
Ascendance



Ascendance

Flight Technologies

Ascendance: becoming a leader in the \$60bn urban air taxi market by dominating first the airport shuttles

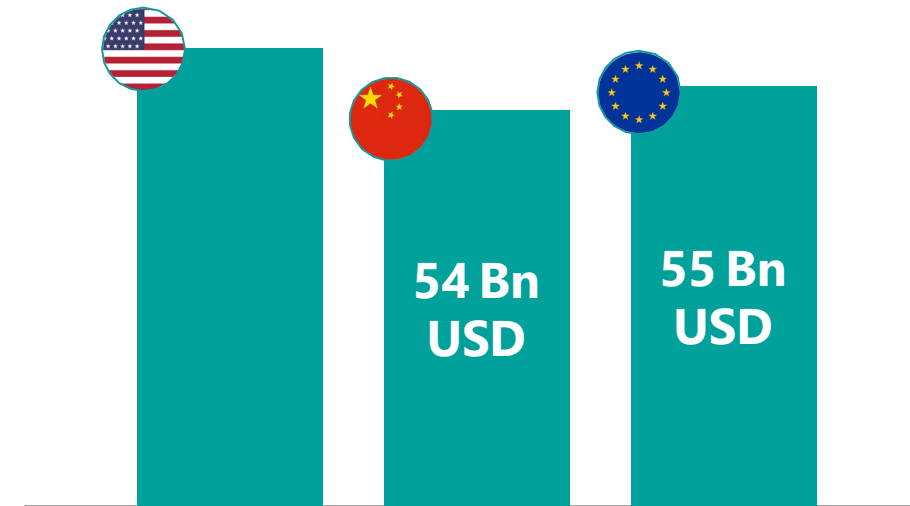
We need to act now upon traffic congestion

Because of its huge social and economic costs



370 days

Average time lost stuck in traffic in a working lifetime⁽¹⁾



c. USD **55 Bn**

Employer economic loss due to traffic in 2019⁽²⁾

An aerial photograph of a city skyline at dusk, with a traffic light in the foreground. The traffic light is a vertical pole with a green light illuminated. The city skyline is filled with numerous skyscrapers, some of which are illuminated with blue and white lights. The city is surrounded by water, and the sky is a mix of orange and blue. The text "LET'S OPEN THE SKY" is overlaid in large white letters, and "and democratize Urban Air Mobility" is overlaid in smaller white letters below it.

LET'S OPEN THE SKY

and democratize Urban Air Mobility

Our Market Focus

Be leader on the airport shuttle market to scale up to the mass market



Helicopter passenger
transport market

Existing market &
customers

2019



Airport Shuttles
Helicopter

ASC revenues
55M EUR

2024-2025

Expansion

Airport shuttle
Intercity

ASC revenues
325M EUR

2027

Mass market
Intra-city
Airport shuttles
Intercity

ASC revenues
1Bn EUR

2030

Our Board & Founding Team

from Airbus E-FAN electric aircraft to Ascendance

Board



Alain CASSIER

Former CTO of Airbus Helicopters & E-FAN Chief Engineer



Agnès PAILLARD

Board Member of European Institute of Innovation & Technology



Olivier SIRI

Former CEO of VoltAir, Airbus subsidiary developing E-FAN



Founders



CEO

Jean-Christophe LAMBERT

E-FAN 1.1 Project Manager
E-FAN 2.0 Project Manager



CTO

Benoit FERRAN

Hybrid & Electric Aircraft Expert
- 3 Developments



**Ho
Propulsion**

Clément DINEL

E-FAN 2.0 Elec propulsion
modelling & simulation



**Ho
Air Ops**

Thibault BALDIVIA

E-FAN 2.0 System architect
Embedded systems





Meet Atea

A unique and patented hybrid VTOL aircraft

Ecosystem & partners

They support us:





Get ready for take-off

Contact:

Jean-Christophe LAMBERT - Co-founder & CEO

jcl@ascendance-ft.com

SAAIS 2019

NETWORKING LUNCH TIME



Meet the Start-ups



1 hour

OUR WARMEST THANKS TO OUR SPONSORS

