



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY





ICAO

AAM 2024

ICAO'S FIRST ADVANCED
AIR MOBILITY SYMPOSIUM

9 — 12 September 2024

ICAO Headquarters, Montréal, Canada



In collaboration with



AAM Pillars of Impact

An Interactive Exploration of AAM Beyond Aviation

Vassilis AGOURIDAS – Pinar CAGLIN

UAM Initiative Cities Community (UIC2) – UN Habitat

10 September 2024

Montreal, Canada

Welcome & Introduction



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Why SDGs?

The 2030 Agenda for Sustainable Development is a plan of action for **people, planet, prosperity, peace and partnership.**

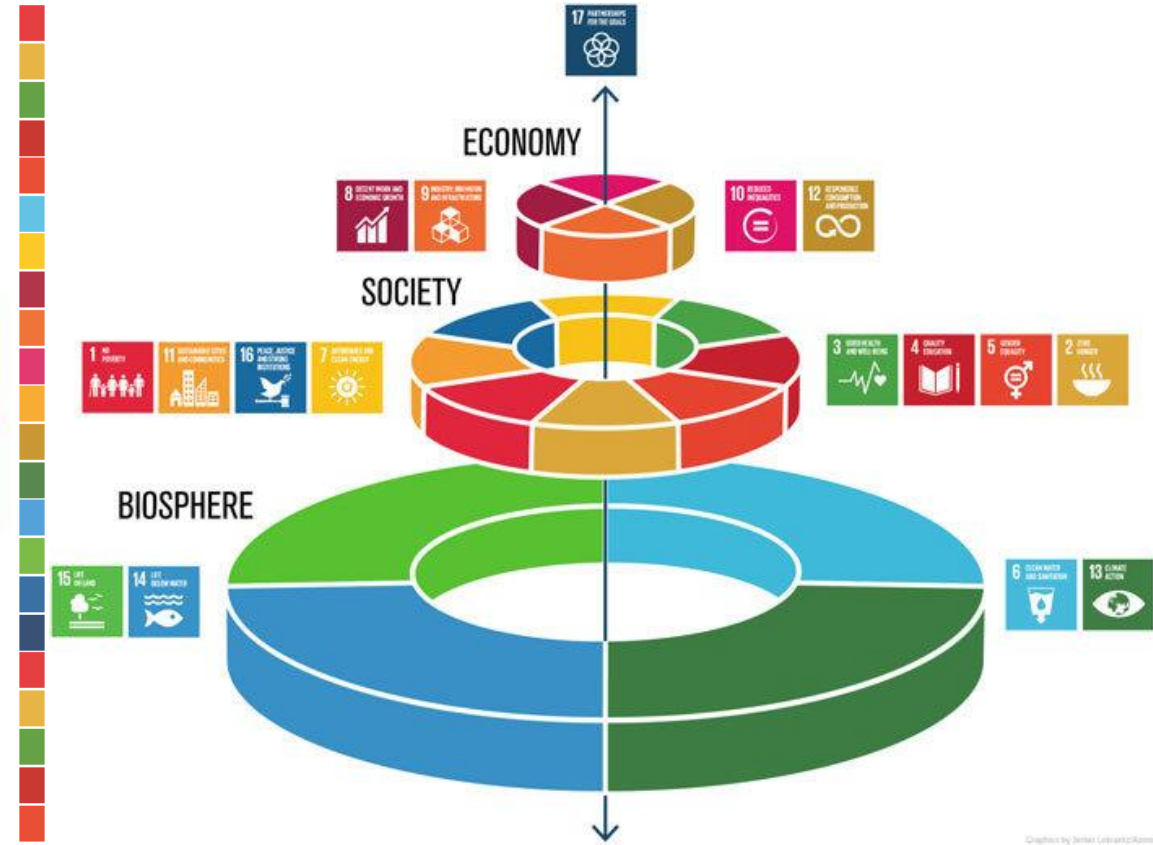
With the 2030 Agenda for Sustainable Development, Member States agreed on 17 **Sustainable Development Goals (SDGs)** with **169 global targets**, and **234 indicators** that will be monitored for the period 2015–2030.



SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	 SUSTAINABLE DEVELOPMENT GOALS

Sustainable Development Agenda 2030



Why Cities?

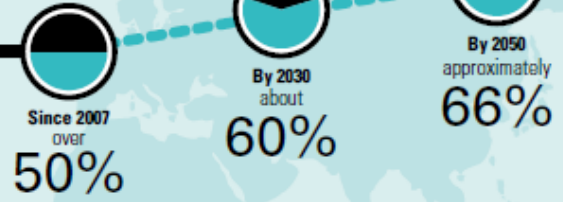
Today, cities are powerhouses of economic growth contributing about **80% of global GDP**, and functioning as catalysts for inclusion and innovation.

However, cities also account for about **70% of global energy consumption and 70% of global carbon emissions, as well as over 70% of resource use.**

Urbanization is an unstoppable phenomenon

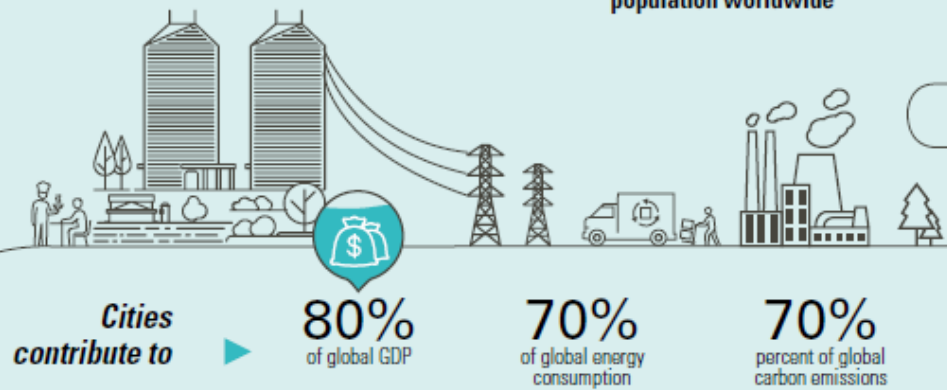
► *The world is rapidly urbanising*

The world's population living in cities or urban centres has risen steadily over the years



Urban areas will be increasingly critical for achieving all SDGs and integrating the social, economic and environmental goals set forth in the 2030 Agenda

Cities and urbanisation are both the problem and the solution!



How to turn urban threats and challenges into sustainable opportunities?

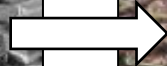
What is sustainable urbanism?

Poorly managed urbanization constitutes a major threat to achieving the SDGs either through **direct or indirect effects** on climate change, ecosystems, energy security, waste management, housing, urban mobility, etc.

Sustainable urbanisation is a driver of development and peace to **improve living conditions for all.**

Urban Transitions

Rapid responses and processes to guide investment and decision-making for physical and sustainable transformation of the built environment.



From objectives to indicators

COMPACT



CONNECTED



INCLUSIVE



VIBRANT



RESILIENT



Key aspect	Sub-Key Aspect
Efficient urban form	Urban density
	Infrastructure network provision
Proximity	Proximity to key service
	Proximity to variety of uses

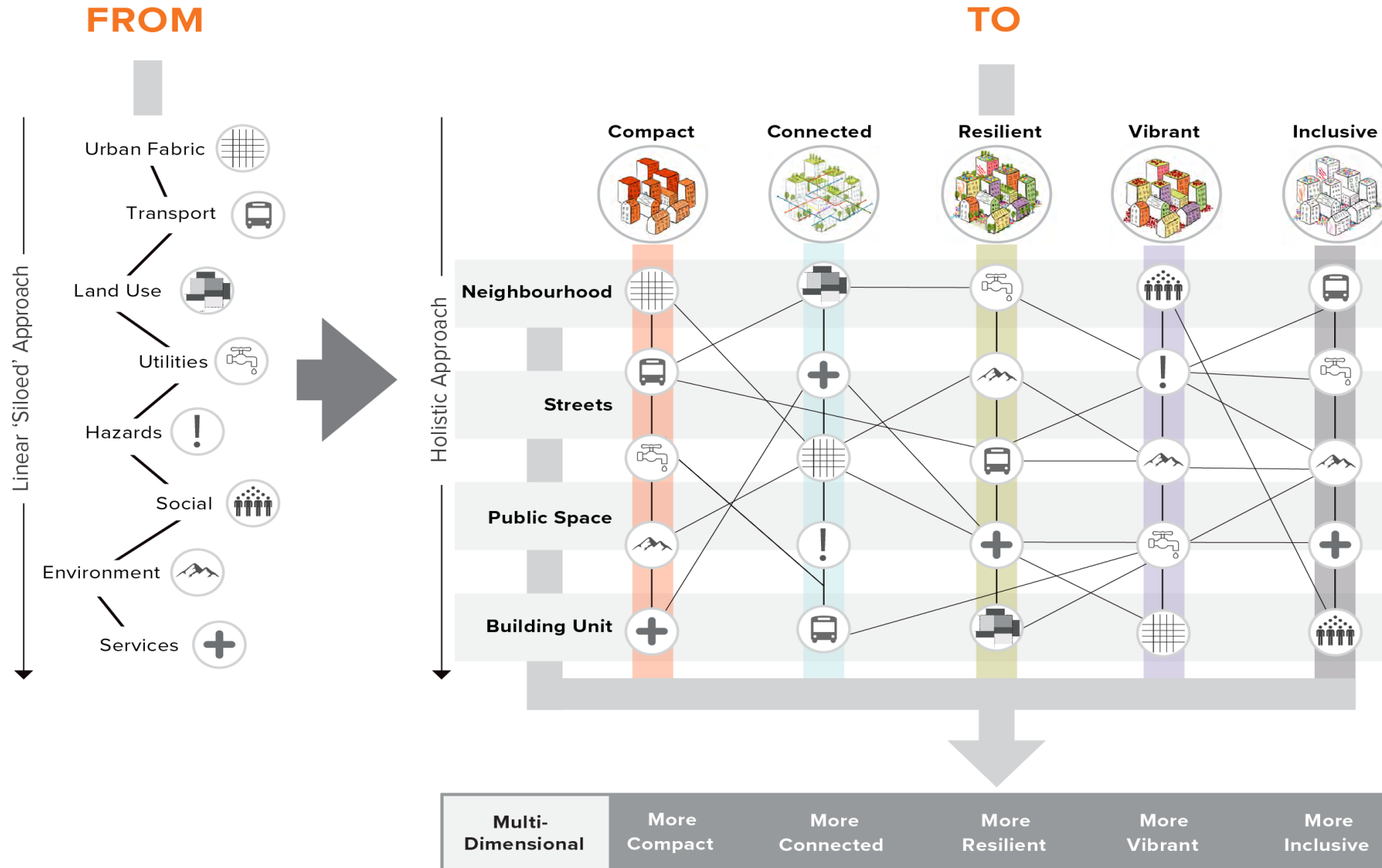
Key aspect	Sub-Key Aspect
Efficient road network	Road provision
	Road network permeability
Convenient multi-modal offer	Public transport network provision
	Public transport stops opportunity access

Key aspect	Sub-Key Aspect
Adequate physical housing conditions	Utility services access
	Living conditions
Equative right to the city	Equitable service provision

Key aspect	Sub-Key Aspect
Attractiveness	Activities agglomeration
	Activities strategic localization
Movement density	Pedestrian movement
	Pedestrian movement incentive

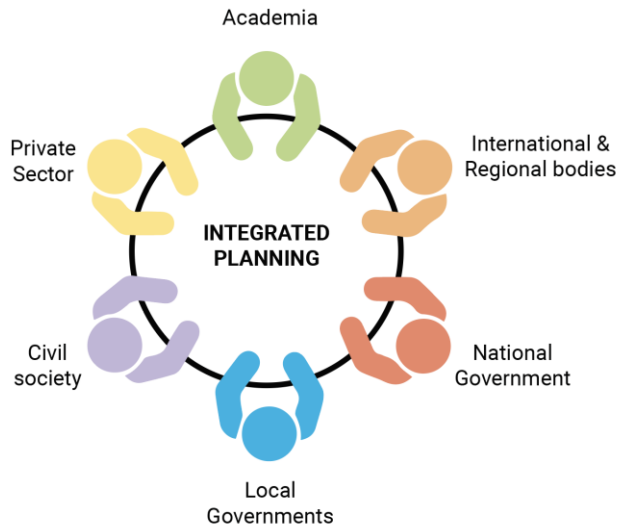
Key aspect	Sub-Key Aspect
Hazard occurrence	Exposure
Vulnerability	Sensitivity
	Cope capacity

All this to make sure the shift

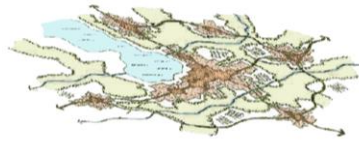


Integrated Urban and Regional Planning

Integrating stakeholders



Integrating scales



REGION



CITY



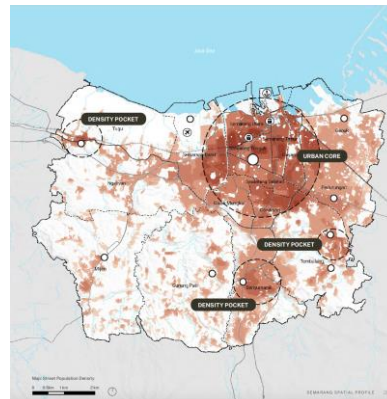
DISTRICT



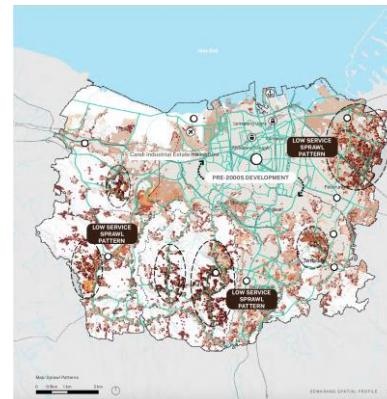
BLOCK

Integrating built environment systems

Population Density



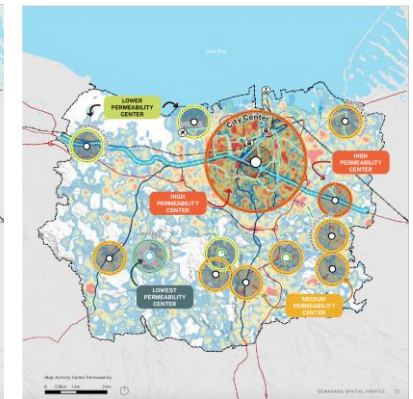
Sprawl Patterns



Permeability Patterns



Activity Centres



Sustainable Urban Development Goal 11 targets



TARGET 11-1

SAFE AND AFFORDABLE HOUSING

TARGET 11-2

AFFORDABLE AND SUSTAINABLE TRANSPORT SYSTEMS

TARGET 11-3

INCLUSIVE AND SUSTAINABLE URBANIZATION

TARGET 11-4

PROTECT THE WORLD'S CULTURAL AND NATURAL HERITAGE

TARGET 11-5

REDUCE THE ADVERSE EFFECTS OF NATURAL DISASTERS

TARGET 11-6

REDUCE THE ENVIRONMENTAL IMPACT OF CITIES

TARGET 11-7

PROVIDE ACCESS TO SAFE AND INCLUSIVE GREEN AND PUBLIC SPACES

TARGET 11-A

STRONG NATIONAL AND REGIONAL DEVELOPMENT PLANNING

TARGET 11-B

IMPLEMENT POLICIES FOR INCLUSION, RESOURCE EFFICIENCY AND DISASTER RISK REDUCTION

TARGET 11-C

SUPPORT LEAST DEVELOPED COUNTRIES IN SUSTAINABLE AND RESILIENT BUILDING

SDGs targets are interconnected: Example of Urban Development Goal 11



Target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

- **Indicator 11.2.1:** Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities

THE SDG 11 TARGET	LINKAGES TO OTHER SDGS	LINKAGES TO New Urban Agenda PARAGRAPHS
11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	1, 2, 3, 4, 5, 6, 7, 10	31, 32, 33, 34, 46, 61, 70, 99, 107, 108, 110, 112
11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations...	1, 2, 3, 8, 9, 10, 11	48, 50, 54, 113, 114, 115
11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	11	29, 39, 40, 41, 42, 92, 149, 155, 156, 157, 160
11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage	4, 5, 6, 10, 12, 13, 15	38, 63, 66, 121, 122
11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	6, 7, 13, 14, 15	65, 68, 69, 71, 73, 74, 75, 76, 77, 78, 119, 123
11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	6, 7, 13, 14, 15, 16	65, 68, 69, 71, 73, 74, 75, 76, 77, 78, 119, 123
11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities	1, 5, 8, 9	37, 53, 55, 56, 67, 100, 109
11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	10, 11	87, 88, 89, 90, 91, 158, 159
11.b By 2020, substantially increase the number of cities ... adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and ... disaster risk management ...	10, 12, 13, 14, 17	77, 78, 86, 94, 95, 96, 97, 98

What is sustainable mobility?

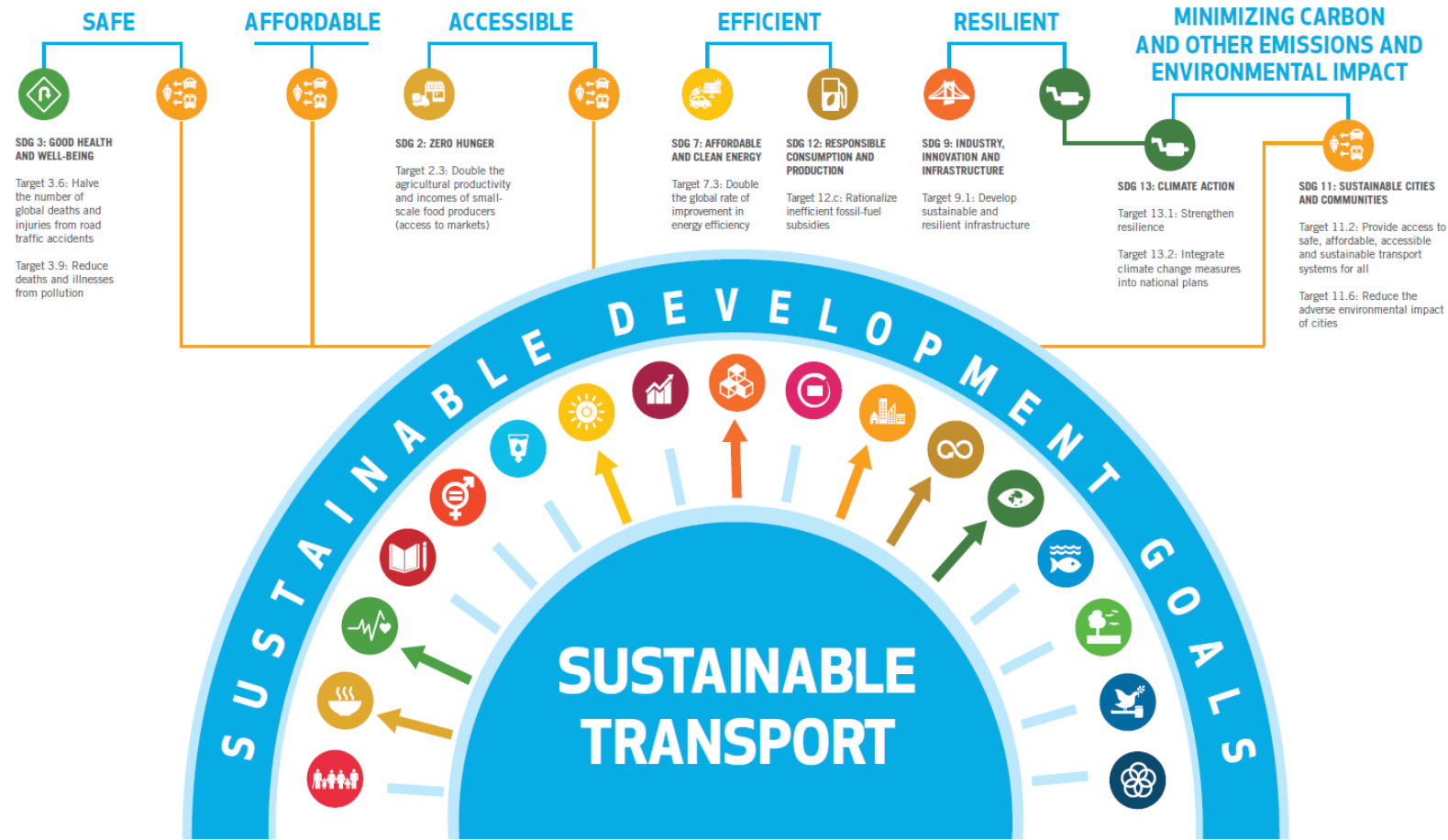
Urban planning and design should focus on **how to bring people and places together**, by creating cities that value accessibility, rather than merely adding urban transport infrastructure to increase the movement of people or goods. Simply put, city residents should be able to address their needs using **as little travel as possible**.

Urban Mobility Challenges: A Wicked Problem



- Traffic congestion and parking difficulties
- Longer commuting
- Limited and aging infrastructure
- Rising urban populations
- Informality
- Public transport inadequacy
- Difficulties for non-motorized transport
- Loss of public space
- Environmental impacts and energy consumption
- Accidents and safety
- Land consumption

Role of Mobility in Sustainable Development

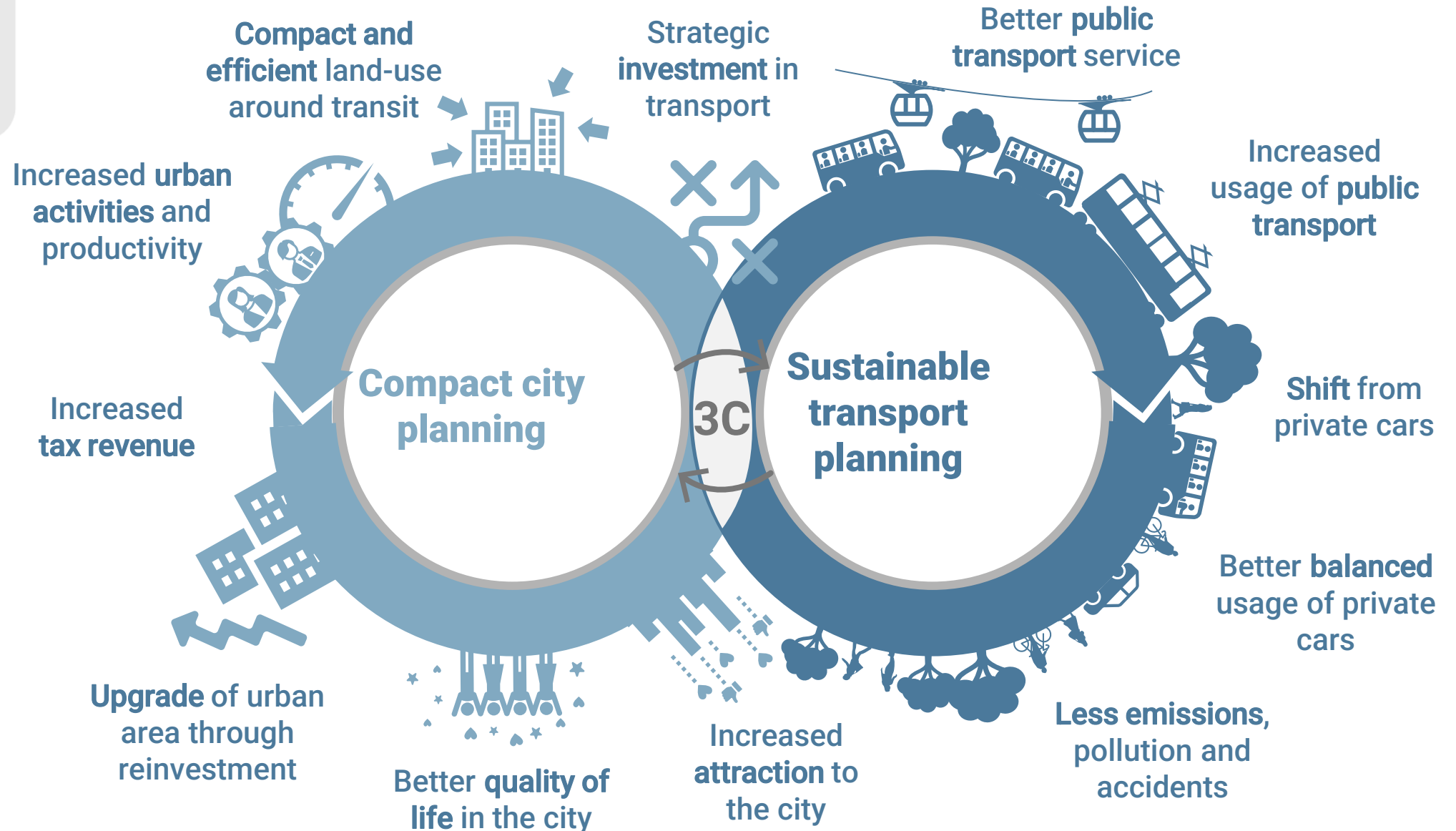


Mobility relates to myriad societal challenges.

Comprehensive and systematic Mobility planning required to ensure sustainable and equitable solutions.

Integrated Planning Approach for Transformation to sustainable urban growth

Compact
onected
ordinated



Advanced Air Mobility, if well planned, can play a transformative role in creating more connected, dynamic urban environments, enhancing economic opportunities, and **improving the overall quality of life for city residents.**

To summarise, UN-Habitat views mobility as an anchor in achieving multiple SDGs, with Advanced Air Mobility offering significant opportunities to enhance urban connectivity, economic vitality, and sustainability, **if embedded in wider urban goals.**

By integrating Air Mobility in a **people-centered smart city approach**, we can ensure that these technologies contribute to creating cities that are not only smart but also sustainable, resilient, and truly centered on the needs of the people.

Principles and Approach

based on the ongoing works of the ICAO AAM SG subgroup on AAM and its Impact on UN's SDGs

- The relationship between AAM and the SDGs underscores its potential to revolutionize aviation, fostering global sustainability and prosperity.
- These connections underscore AAM's pivotal role in reshaping the transportation, and wider urban, landscape and advancing progress.
 - ✓ *Indeed, the challenges in AAM extend far beyond safety, encompassing a multitude of sectors.*
 - ✓ *These include urban planning, agriculture, supply chain and logistics, emergency services, public health and safety, to name just a few, underscoring the inherently multidisciplinary nature of AAM.*

Principles and Approach

based on the ongoing works of the ICAO AAM SG subgroup on AAM and its Impact on UN's SDGs

- The primary objective is to embed sustainability principles and practices at the very core of AAM deployment, ensuring that:
 - ✓ *sustainability becomes an inherent and foundational aspect of the system,*
 - ✓ *making it naturally and fundamentally sustainable, or 'sustainable native'.*



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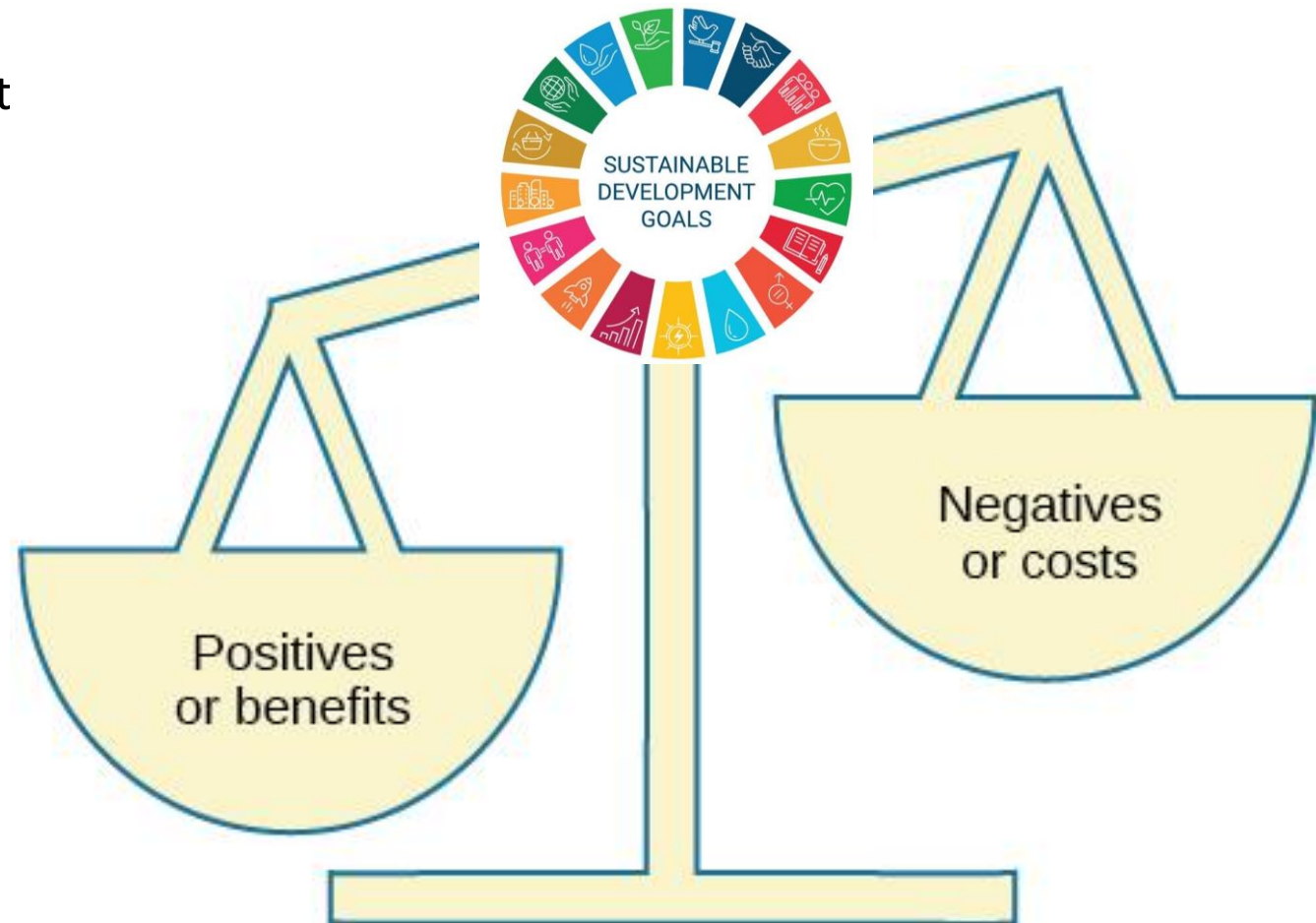
Emerging AAM Impacts

Navigating positive and negative aspect through the lens of the UN's SDGs

Slido QR code

ICAO team to create a slido session using the questions found at the last slide.

Then to insert the slido QR code here



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Takeaways ...

... and Way Forward!



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Thank You!

Slido questions – to appear on the screen sequentially

Note to facilitators: 2-5 mins per question, to respond and to comment; Aim to use a min of 8 questions and a max of 10 questions

Taking the role of representing your Global Region or Community ...please respond to the questions of this Slido session:

1. What is AAM (Advanced Air Mobility) for you?
2. Whom is AAM for?
3. ..and for what?
4. What are the potential Negative impacts we will need to mitigate as a societ to adopt AAM in a sustainable way (if possible, refer to the relevant SDGs)
5. How can we start gathering the needed data to test those mitigations strategies ahead of deployment?
6. What are the potential Positive sustainability impacts that AAM will bring to adopting communities (if possible, refer to the relevant SDGs)
7. Considering the explained 5 sustainable city concept, how can AAM help cities to be more compact, better connected, more inclusive, vibrant and environmentally resilient?
8. What data can governments and industry be gathering now to prove these positive assumptions.
9. What roles need to be played by federal and state governments to make sustainability a core feature of preparing smart policies for AAM?
10. What roles need to be played by local governments (regions, cities) to make sustainability a core feature of preparing and implementing smart policies for AAM in the context of multilevel governance?

@ ICAO team:

If possible please insert this graphic for each question of Slido



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