ASEAN SMART CITIES INITIATIVE

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RAMBØLL Bright ideas. Sustainable change.

RAMBOLL IN BRIEF

- Bright ideas. Sustainable change.

- Founded 1945 in Denmark. Independently owned by The Ramboll Foundation

- Independent engineering and design consultancy, management consultancy – focus on crafting sustainable and liveable societies

- **15,000+ experts,** 330 offices, 35 countries
  - **600+ Asia Pacific**
  - **200+ Australia – Sydney, Newcastle/Hunter and Perth**

- EUR 1.5 billion revenue

RAMBOLL

Content

1. About Smart
2. Work Plan
3. Project approach examples
4. Case examples
5. Q&A

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Different urban development strategies

Copenhagen

1950

1995

Today

Many cities

1950

1984

Today

SMART TECHNOLOGY – OF COURSE

BUSINESS MODEL

Vision · Goal · Planning · Partner · Management · Marketing · Strategy · Growth · Revenue

Rainfall

Lighting

Temperature

Water Usage

Access

Acoustic

Energy Usage

Vibration

People Counting

Vehicle Trips

SMART TECHNOLOGIES ENABLING SMART VISIONS

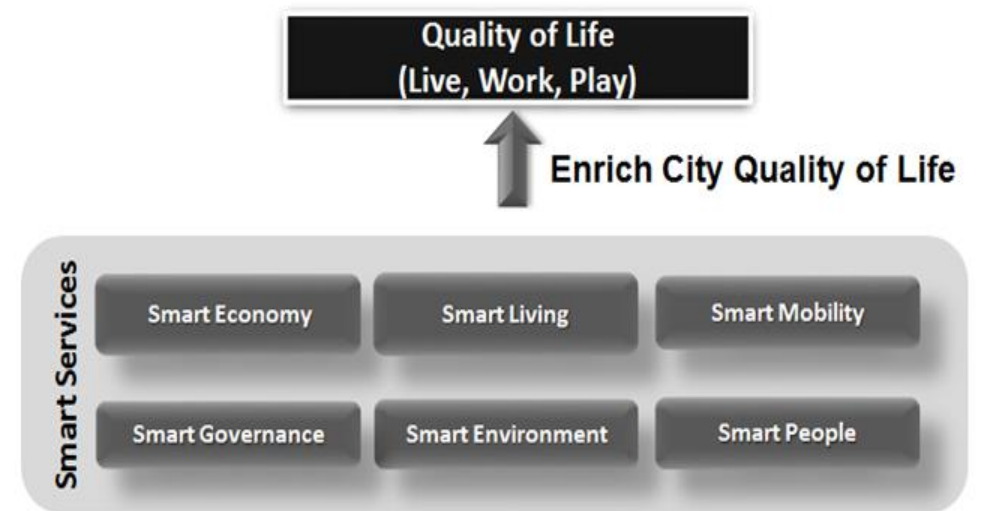*"A truly SMART society is about people"*
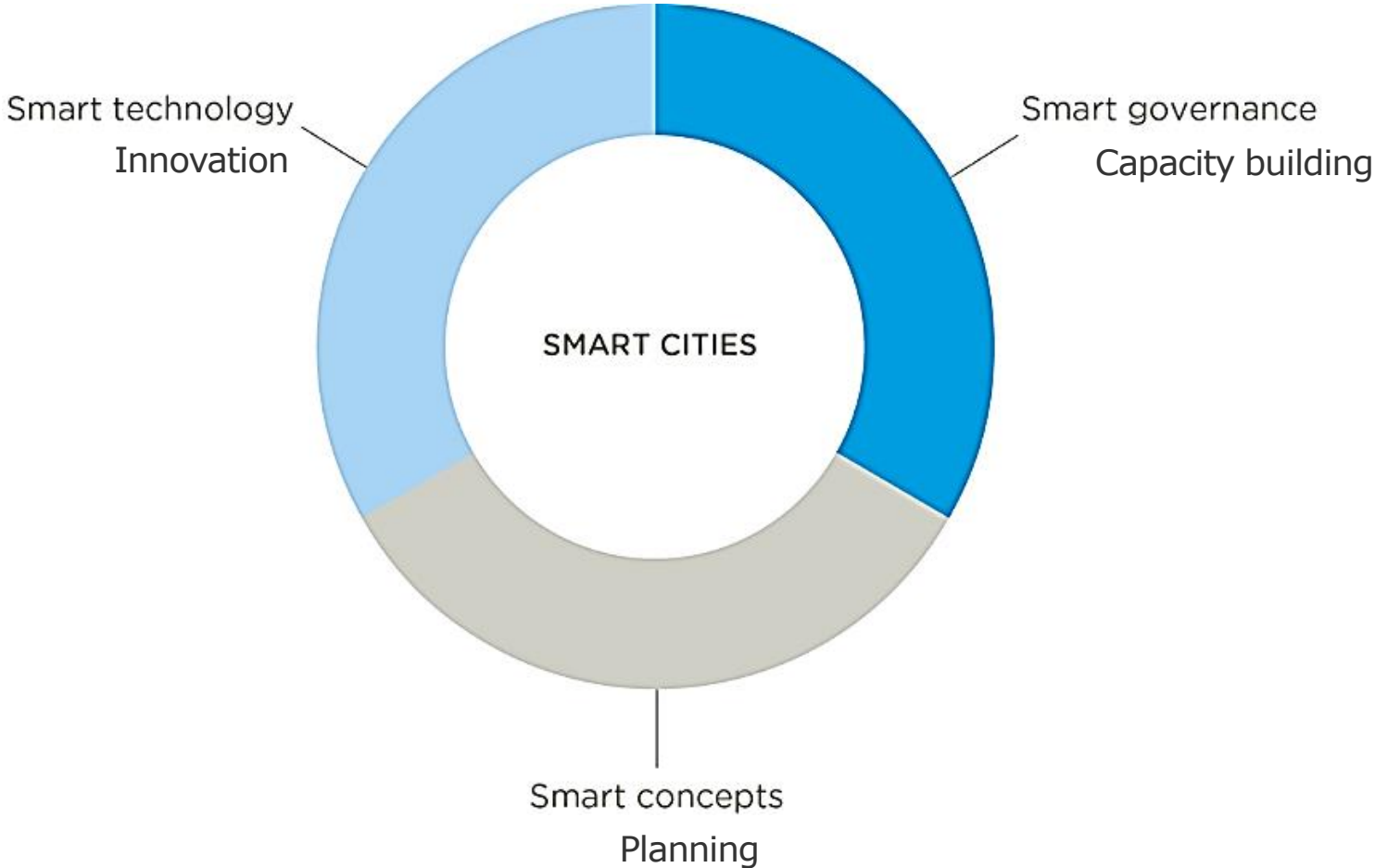
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RAMBOLL'S APPROACH TO ENABLING SMART CHOICES

Definition for Danish Ministry of Planning and Urban Affairs

- A smart city is a city which through **technological, architectural and administrative** innovations form the basis for sustainable development to **ensure quality of life** for the citizens

- A smart city is **interconnecting across sectors, citizens, businesses and public organizations** through open data availability and ICT infrastructure

- A smart city supports a connected and intelligent infrastructure to **improve economical, political, social and cultural life and performance**

Quality of Life
(Live, Work, Play)

Enrich City Quality of Life

Smart Services

Smart Economy	Smart Living	Smart Mobility
Smart Governance	Smart Environment	Smart People

SMART CITY FUNCTIONAL SETUP

Smart technology
Innovation

Smart governance
Capacity building

SMART CITIES

Smart concepts
Planning

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SMART, SUSTAINABLE AND LIVEABLE
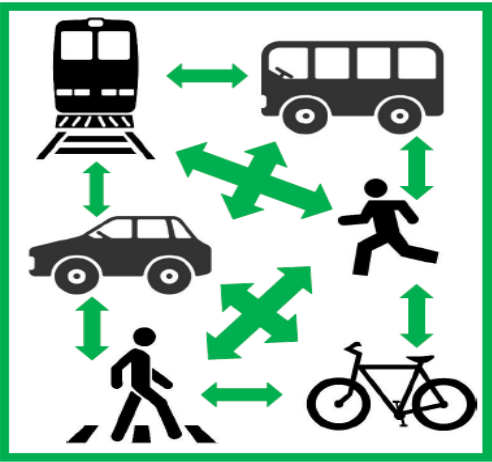
Best practice to next practice

- **Best practice is retrospective**
- **Cities last for the next 100s of years**
- Best practices don't consider SMART - autonomous cars, e-trade, 3D printing, social medias, migration, climate changes etc.
- Best practice has been sustainability
- **Next practice is liveability**

Liveability is main objective

- Primary **tools** are:
  - Smart city
  - Sustainability
  - Mobility
  - Viability
  - Resiliency
  - Coherency
  - Flexibility
  - And………

Tianjin, China

BEST PRACTICE - SYSTEM CENTRED SECTORIZED SOLUTIONS
NEXT PRACTICE – HUMAN CENTRED MULTI-FUNCTIONALITY

AGENDA

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WORKPLAN IN GENERAL for ADB SMART CITY INITIATIVE

Planning

Service delivery

Finance Management

SMART CITIES CORE TEAM

Developing smart concepts

Overall management of the project and reporting

Preparation of Task Orders for studies and pilots

PROOF OF CONCEPT	CAPACITY BUILDING	PREPARATION OF INVESTMENT	IMPLEMENTATION OF PROJECTS
Initially 9 focus cities and 9 focus studies **Compliancy with ASUS** **Design of pilots**	**Urban innovation labs** **Peer-to-Peer knowledge** **City twinning** **Cross cutting synergies** **Conference** **Study tours**	**Align with ASUS framework** **Feasibility** **Bidding and contract**	**Managing investment projects** **Knowledge capture and sharing** **Performance monitoring** **Supervision and QA**

Cross cutting issues

- **Inclusion** – Equality of access, disability provisions, accessibility, public amenities/offices/institutions
- **Climate change** – SLR, saline intrusion, flooding, heat islands, bush fires etc.
- **Private sector** – trigger private sector, enable innovation, attract investments, create green smart businesses
- **Gender** – equality, equity, accessibility, safety/security
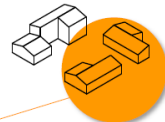
SMART GREEN AND LIVEABLE – TIANJIN

SMART RE-SETTLEMENT IN METRO MANILA

TURN KEY CONCEPT

BACOOR CITY SETTLEMENT

DISTRICT
- Residents: 2 500 – 3 000 individuals.
- Each district consists of 55 housing units.
- Each district has a centrally located *Local Center* (gathering point in the immediate environment).

LEARNINGLAB
- Learning Lab functions as the communities primary gathering point.
- *Club, Clinic, Classroom* suggested the first and main elements of basic mental infrastructure
- These three elements will be taller and wider than the surrounding construction.

MARKETPLACE
- Fish market as the 'ambassador' to the community and visitor from outside
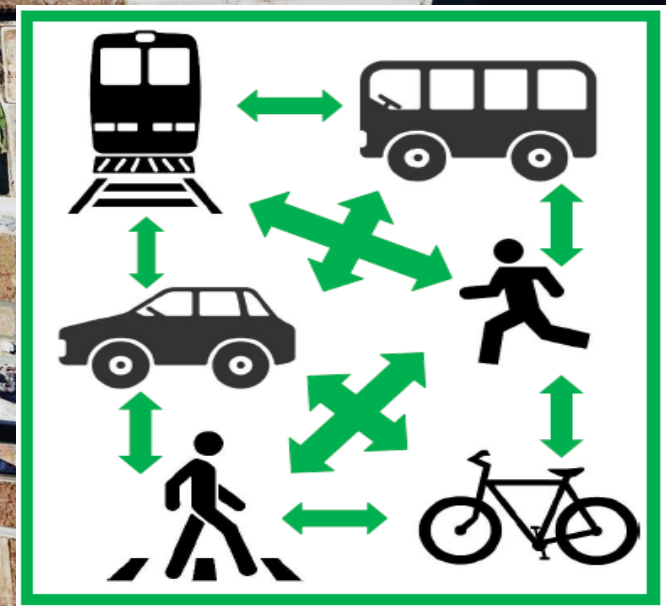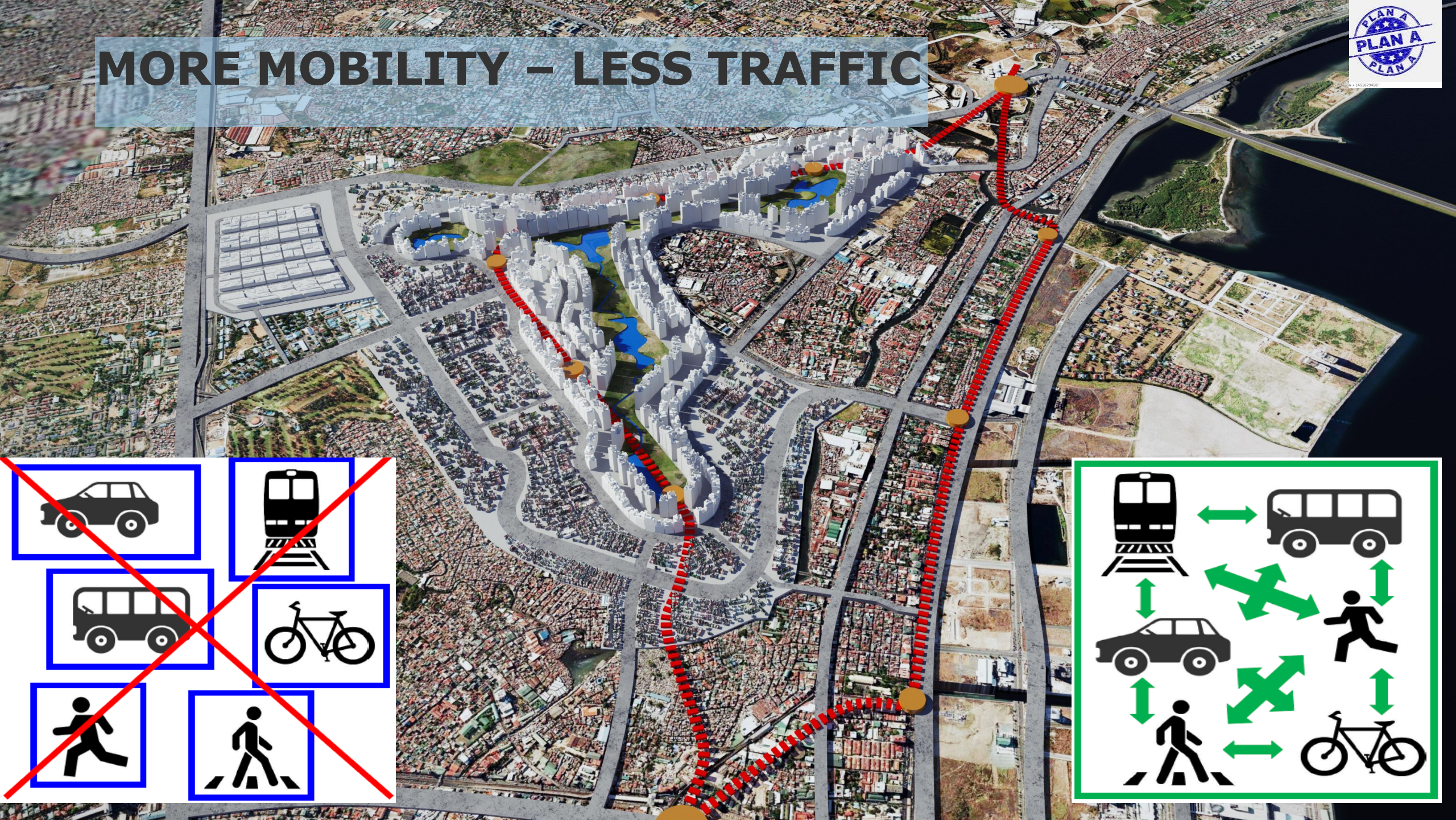- Market placed by the entrance of the settlement.

URBANCORE

The URBANCORE method springs from a planning principle which attempts to improve the *mental infrastructure* by catalyzing content of socio-cultural fabric into the community framework.

The *mental infrastructure* is by Urbancore described as an 'socio anthropological and entrepreneurial' approach to the city development, that in equal relation, acts as a counterpart to the physical infrastructure.

- The Urbancore basic core goals is to create *socially, culturally and economical self-sustainable local communities* through centralization of the most important element of the city structure.

- Urbancore works accordingly to the UN Sustainable Development Goals primarily: *3: Health and well-being / 4: Quality education / 9: Industry, Innovation and Infrastructure.*
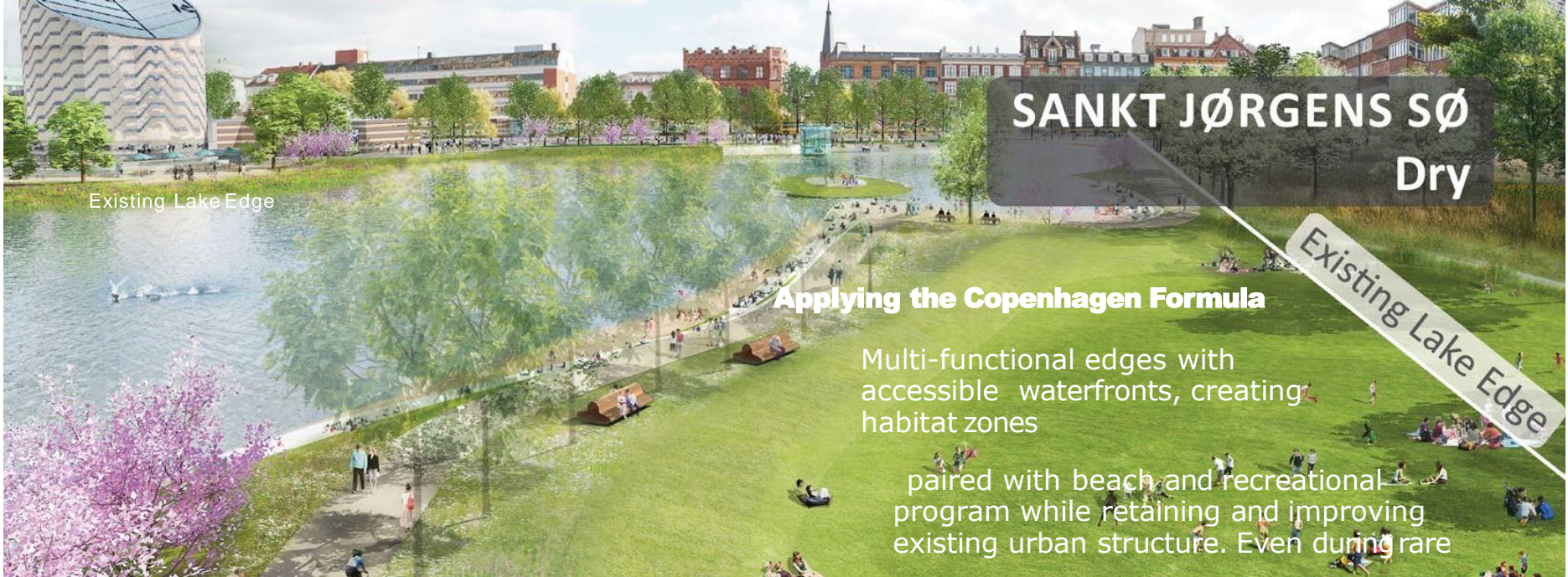
3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

PLAN A

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MORE MOBILITY – LESS TRAFFIC

MULTI-FUNCTIONAL
URBAN SPACES

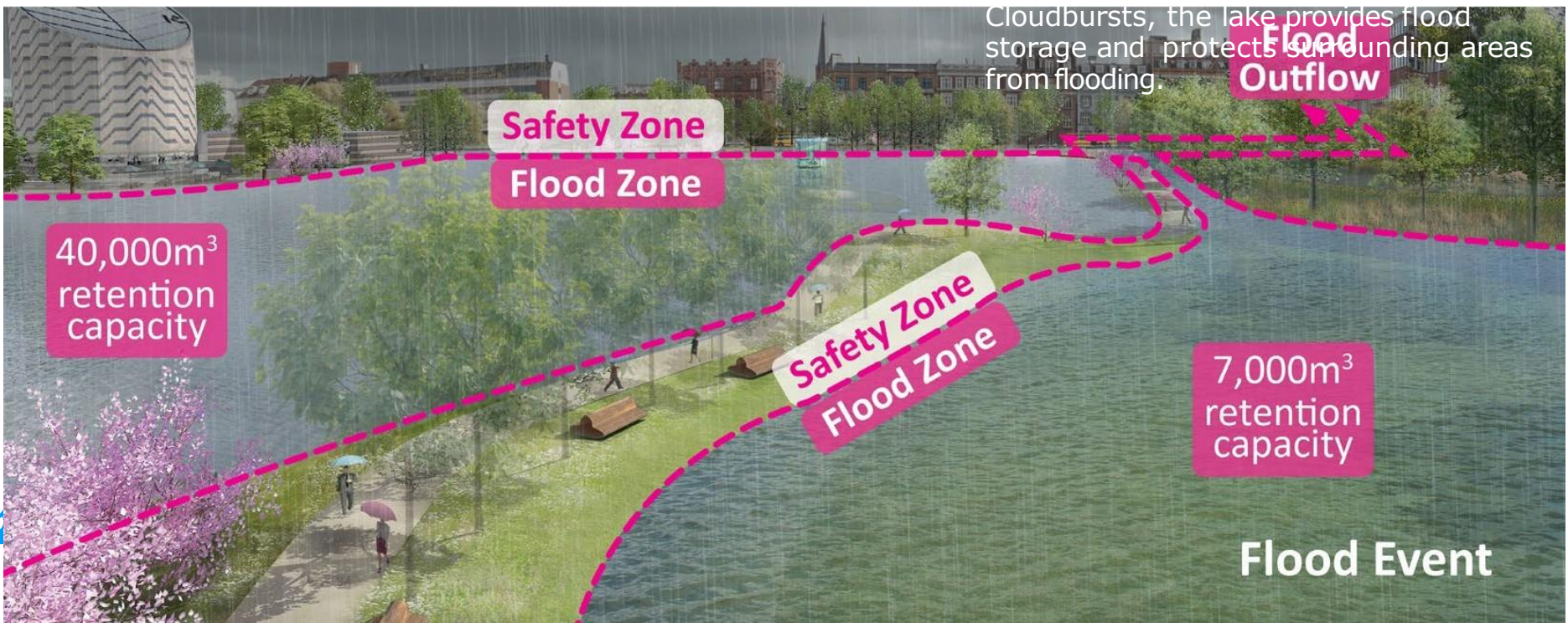SANKT JØRGENS SØ
Dry

Existing Lake Edge

Existing Lake Edge

Applying the Copenhagen Formula

Multi-functional edges with accessible waterfronts, creating habitat zones

paired with beach and recreational program while retaining and improving existing urban structure. Even during rare Cloudbursts, the lake provides flood storage and protects surrounding areas from flooding.

Safety Zone

Flood Zone

Flood Outflow

40,000m^3 retention capacity

Safety Zone

Flood Zone

7,000m^3 retention capacity

Flood Event

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SMART, SUSTAINABLE, LIVEABLE - RIO

Strategy to improve quality of life in Rio de Janeiro - focus

- o Create the overall strategy for Rio

- o Identify stakeholder networks – locally and with twinning cities

- o Identify peer projects and funding

- o Design of peer projects

- o Capacity building in Favelas

- o Implementation

Sustainable Dialogues

PLAN A

Rio de Janeiro, Morro da Providência · Photo © Mauricio Hora

SMART, SUSTAINABLE, LIVEABLE - RIO

Confirmed peer project

- o Solar panel project 100 M USD
- o Biomass plant 300 M USD
- o Creating an SPV for investment
- o Creating framework plan to identify best location
- o Renovating properties for vocational training
- o Installing solar PV on schools, public buildings, escalator and cable car.

Confirmed Investments:

Solar Energy
US$ 100 million

Biomass
US$ 300 million

Stakeholders
The Municipality of Rio de Janeiro
Rambøll
Instituto Canta Gente Boa
Jenny Wood, investor representative

Proposed Stakeholders, to be confirmed
The Municipality of Copenhagen
Real Dania

Future Stakeholders
London
Munich

Partners
Cph Facilitation
Unesco Schools
2030NOW
Álborg University
By og Havn
The European Council

Legal tools / Trust / SPV
Luiz Borges, Lawyer, former BNDES
Santander
Investors

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