DESIGNING CITIES FOR THE FUTURE

BUSINESS & INVESTMENT FOR NATURE-BASED SOLUTIONS

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1 Enormous challenges present enormous opportunities

2 Examples of public, private and civic collaborations and investments

3 Where do we go from here?
1

Enormous challenges present enormous opportunities
GLOBAL CITIES THE PLACES WHERE WE...

MOVE

CONSUME

INVEST

PRODUCE

SPEND

POLLUTE

ENGAGE

LIVE
THREE MILLION

PEOPLE MOVE INTO CITIES EVERY SINGLE DAY
GLOBAL CITIES

THE CHALLENGE & OPPORTUNITY

CITIES REPRESENT...

80% OF GLOBAL GDP

75% OF GREENHOUSE GASES
13% URBAN POPULATION
Lives in Low Elevation Coastal Areas

200 MILLION RELOCATED
Due to climate migration worldwide by 2020

90% OF URBAN MIGRATION
In Africa and Asia over the next three decades

25 MILLION PEOPLE
Predicted to move from Africa to Europe in the next 10 years
RESOURCES

80% OF RESOURCES DEPLETED
Within the next 80 years at a 2% global GDP growth rate.

20% URBAN DRINKING WATER
Is contaminated. While 40% of all surface water is polluted.

3.2 MILLION ANNUAL DEATHS
Currently die prematurely each year due to air pollution.
GLOBAL GDP GROWTH

In 2014. Compare with China and Africa at 10%. For the past decade, growth in Asia and Africa has surpassed Western World.

GLOBAL DIRECT INVESTMENT

€468 BILLION
In 2014 to the developed World. With about half to EU. Investments to the developing World were €690 billion in 2014.

MEGA TRENDS

OPPORTUNITY

WESTERN WORLD 2%

€53 BILLION IN SMART CITY
2
Examples of public, private and civic collaborations and investments
OUR CITIES ARE DESTRUCTIVE & PRODUCTIVE
GLOBAL CHALLENGE

BUILDINGS

BUILDING CONTRIBUTES 33% OF GLOBAL GREENHOUSE GAS EMISSIONS

ACCOUNTS FOR 40% OF GLOBAL ENERGY CONSUMPTION

10% OF GLOBAL GDP
BUILDINGS CONTRIBUTES 33% OF GLOBAL GREENHOUSE GAS EMISSIONS

ACCOUNTS FOR 40% OF GLOBAL ENERGY CONSUMPTION

RETROFITTING BUILDINGS SAVING OF 280 BILLION TO 1 TRILLION EURO PER YEAR TILL 2050 & REDUCE ENERGY CONSUMPTION BY 1/3

10% OF GLOBAL GDP
GLOBAL CHALLENGE

BUILDINGS

PROBLEM

WASTED POTENTIAL FOR
RESOURCE EFFICIENCY

OPPORTUNITY

RETROFITTING + GREEN
BUILDING STANDARDS

KEY CONSIDERATIONS

DIVERGENT STAKEHOLDER
INTERESTS – PROPERTY
DEVELOPER VS. OWNER
GLOBAL CHALLENGE

TRANSPORT

CONTRIBUTES
22% OF GLOBAL
GREENHOUSE
GAS EMISSIONS

TRANSPORTATION

CONGESTION COSTS EU 1% OF ANNUAL GDP

IN LONDON, 20% OF COMMUTERS SPEND MORE THAN TWO HOURS TRAVELLING TO AND FROM WORK
GLOBAL CHALLENGE

TRANSPORT CONTRIBUTES 22% OF GLOBAL GREENHOUSE GAS EMISSIONS

CONGESTION COSTS EU 1% OF ANNUAL GDP

CONGESTION CHARGE IN LONDON REDUCED LOCAL TRANSPORTATION COSTS BY 30-40%

IN LONDON, 20% OF COMMUTERS SPEND MORE THAN TWO HOURS TRAVELLING TO AND FROM WORK
GLOBAL CHALLENGE: TRANSPORTATION

PROBLEM: CONGESTION + IMPACT ON QUALITY OF LIFE

OPPORTUNITY: POLICY + CONGESTION CHARGES

KEY CONSIDERATIONS: IMPLEMENTATION ACROSS VARYING POLITICAL CONTEXTS
GLOBAL CHALLENGE

ENERGY

FOSSIL FUEL SUBSIDIARIES ARE 13.6 BILLION EURO PER DAY
More than national governments’ global health expenditure

GLOBAL ENERGY CONSUMPTION IS PROJECTED TO GROW WITH 56% BETWEEN 2010 AND 2040

EU IMPORTS HALF ITS’ ENERGY & ALMOST 90% OF CRUDE OIL
FOSSIL FUEL SUBSIDIARIES ARE 13.6 BILLION EURO PER DAY

More than national governments’ global health expenditure

GLOBAL ENERGY CONSUMPTION IS PROJECTED TO GROW WITH 56% BETWEEN 2010 AND 2040

EU REGULATIONS 1.5% REDUCTION IN END-USER ENERGY CONSUMPTION

EU IMPORTS HALF ITS’ ENERGY & ALMOST 90% OF CRUDE OIL
GLOBAL CHALLENGE

ENERGY

PROBLEM

DEPENDENCY + VULNERABILITY – BOTH POLITICAL & ECONOMIC

OPPORTUNITY

REWARD STRUCTURE FOR REDUCED USAGE

KEY CONSIDERATIONS

IMPLICATIONS ON PROFIT & ENERGY TAXES
3

Where do we go from here?
Cities are where problems are confronted & solved – with the proper support mechanisms of governance & finance
In 1987, there is a call for growth within the environmental limits.

**NEO-LIBERAL ECONOMIC GROWTH POLICIES**

**DEREGULATION AND GLOBALISATION OF MARKET**

**INCREASED CONSUMPTION**

Longest period of uninterrupted growth with low inflation since the Great Crash in the 1920's.

**OVERUSE OF NATURAL RESOURCES**

Ineffectual responses to global warming and a lack of focus on social justice.
CIRCULAR ECONOMY

CHARACTERISTICS

- Balances economic development with environmental and resource protection
- Optimizes systems rather than components
- Closed loop & scaling
- Restorative rather than merely protective
- Design to re-design
- Decouples economic growth from natural resources and environmental degradation
Understanding the critical interplay between disciplines and sectors to test & catalyze solutions for today’s toughest urban challenges.
THE CHALLENGE

REMAKING CITY GOVERNANCE & FINANCE

CHRONICLE

city-led problem solving
in collaboration with select sectors

RETHINK

the division of powers,
resources, and responsibilities

CATALYZE

the new wave of smart
city governance & finance
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FIRST PHASE

Copenhagen City & Port Development was created as a privately-run public-owned company to raise capital for developing the Copenhagen Metro System by rezoning and selling off valuable land in the new urban neighborhood of Ørestad.
SECOND PHASE
The old port of Copenhagen was taken over by Copenhagen City & Port Development for development that could raise capital for developing the second phase of the Copenhagen Metro.
Development of the Northern Harbour will also finance a road tunnel and metro. The next €4 billion lines will be financed via:

1/3 Development of Northern Harbour
1/3 Future ticket income
1/3 Cash from owners
SINGAPORE

BISHAN-ANG MO KIO PARK
Challenge
Densely populated housing area
Limited recreational space
Area prone to floods
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Solution
Flood management
Water quality improvement
Urban planning and design

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Solution
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Urban planning and design

Effect
River capacity improved
Prevention of large scale flooding
Create recreational areas

SINGAPORE

BISHAN-ANG MO KIO PARK