



Sustainable Urban Development

- new growth driven by cities

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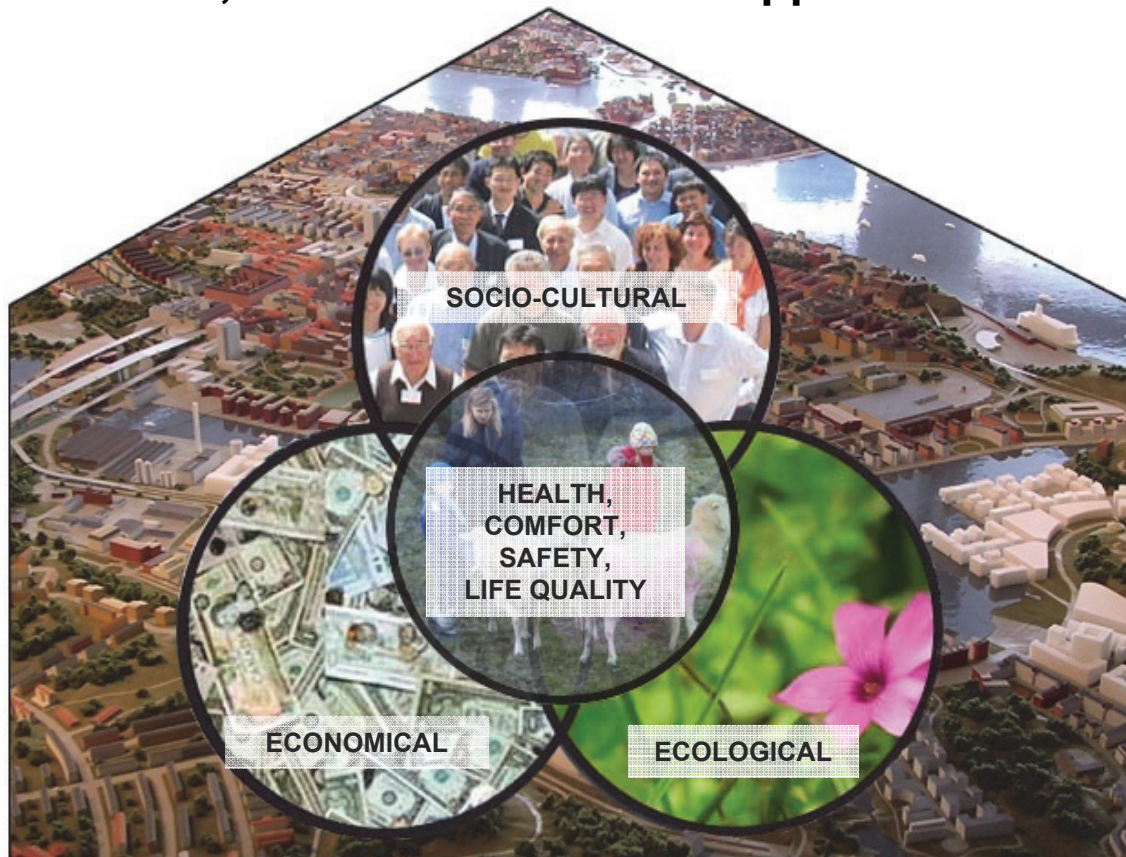
Future City seminar 2012-02-21



Cities have a huge potential to solve the problems

Cities are the engines for economic growth and generate the bulk of GDP

Cities offers services, economic and social opportunities



“Cities are not the problem – they are the solution”

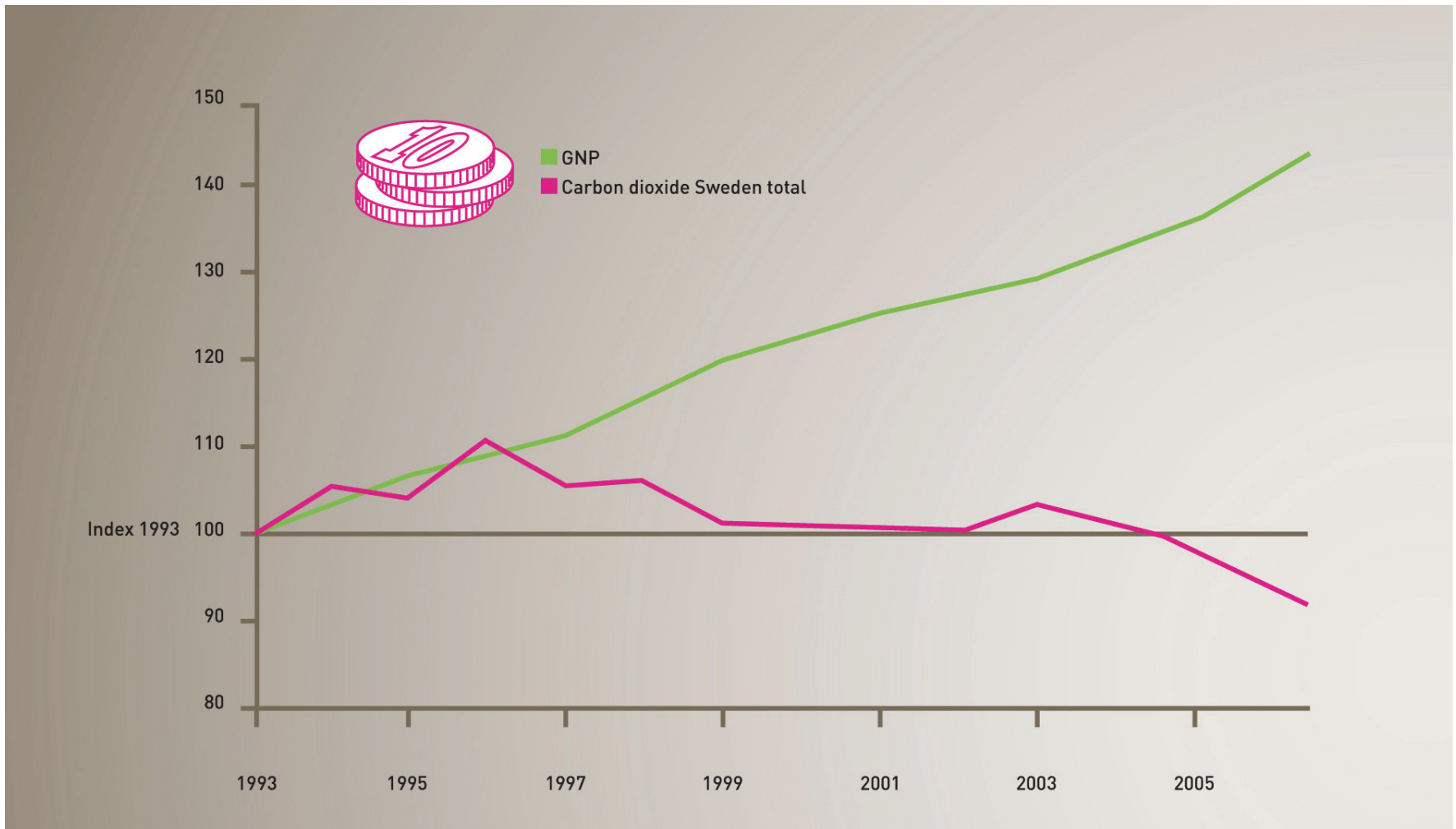
(Jaime Lerner, Architect, Former Mayor of Curitiba, Brazil)

Sweden

Considerable environmental improvements since the Stockholm Environmental Summit 1972

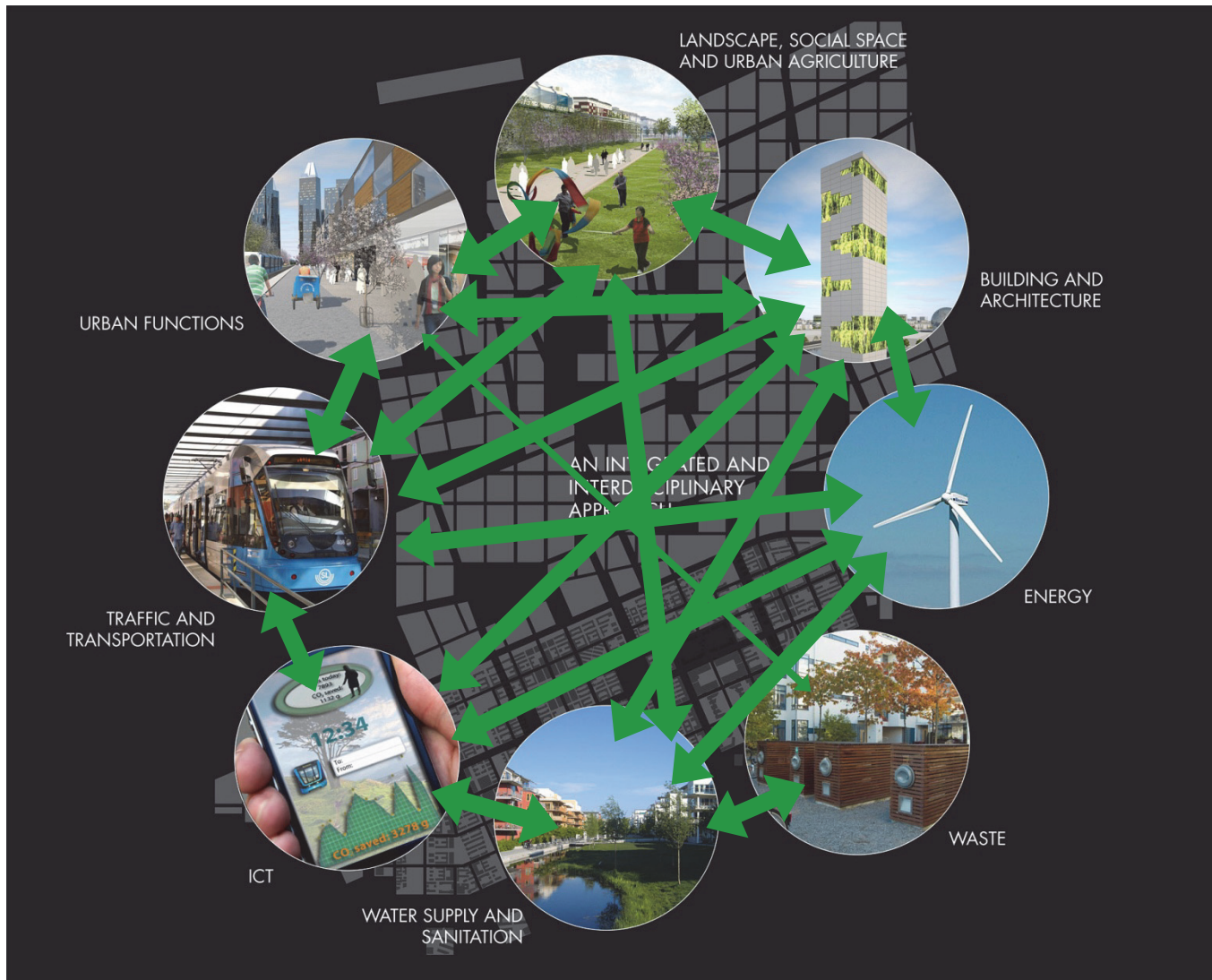


Reduced carbon dioxide emissions and increased GNP

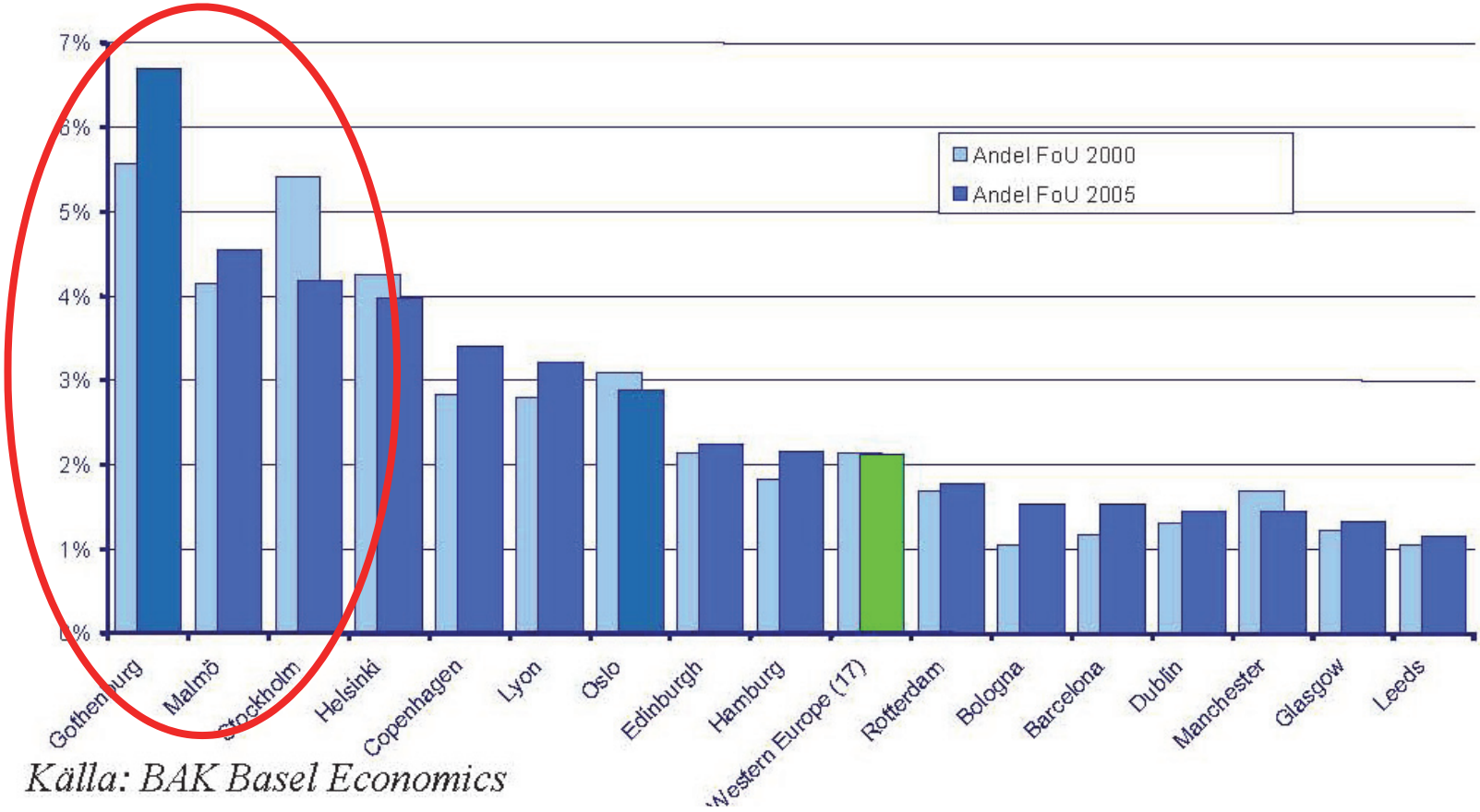


Source: www.symbiocity.org

The integrated approach in full operation



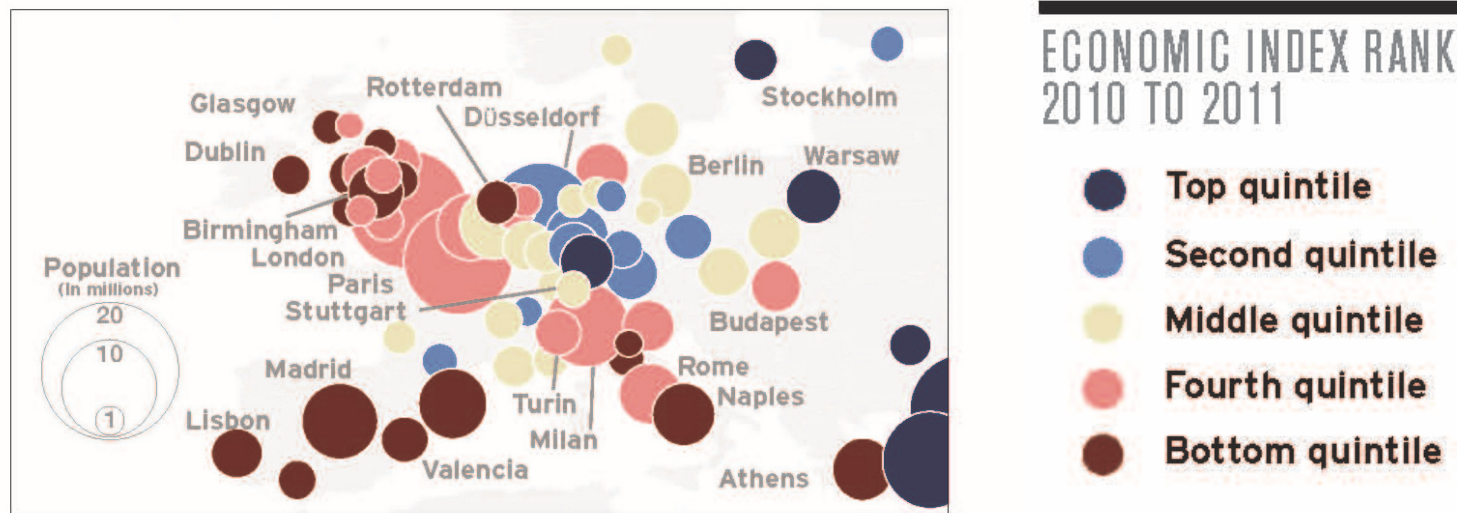
High and efficient expenditure on R& D in cities is crucial for economic development – three Swedish Ciities have high share of RD investments/ GRP



Economic Performance of Swedish Cities

90% of the world's top performing cities outside Europe and North America – except from Stockholm and Stuttgart in Europe

GDP/capita Stockholm nr 8 in the world



GLOBAL METROMONITOR 2011
VOLATILITY, GROWTH, AND RECOVERY

Kista Science City a world leading ICT-cluster

70 000 employees and 125 000 residents

25 000 employees within 1000 ICT-companies

60% of the main offices of the nordic countries in Kista



Urban centres – no major demographic challenges and a balanced age distribution. Increasing population driven by migration and immigration.

The rest of Sweden – many regions undergo major changes with an ageing and decreasing population.



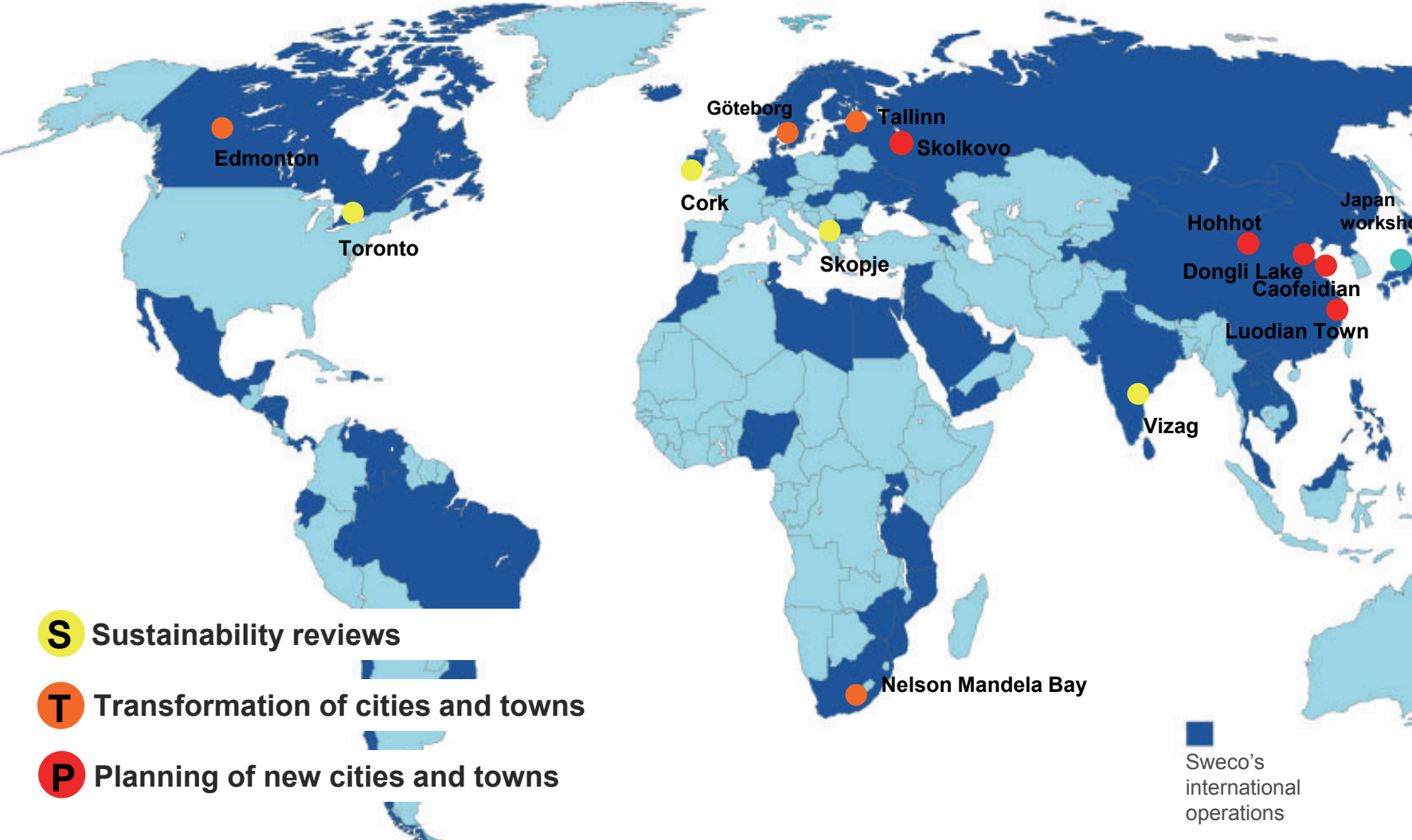


Elderly Care in Sweden

- Municipalities are responsible to provide elderly care
- Elderly care is funded by municipal taxes and government grants
- Private health care costs are subsidized.
- Most elderly are in good health but special accommodation is offered for sick or disabled elderly

Source: National Board of Health and Welfare

Applications of the SymbioCity Concept



1 LIVEABLE City Skolkovo, Russia



Concentrated - small scale - mixed use



2 - INNOVATIVE City Tangshan Bay Eco-City



STOCKHOLM



SUSTAINABILITY CENTRE in CAOFEIDIAN



GOTHENBURG

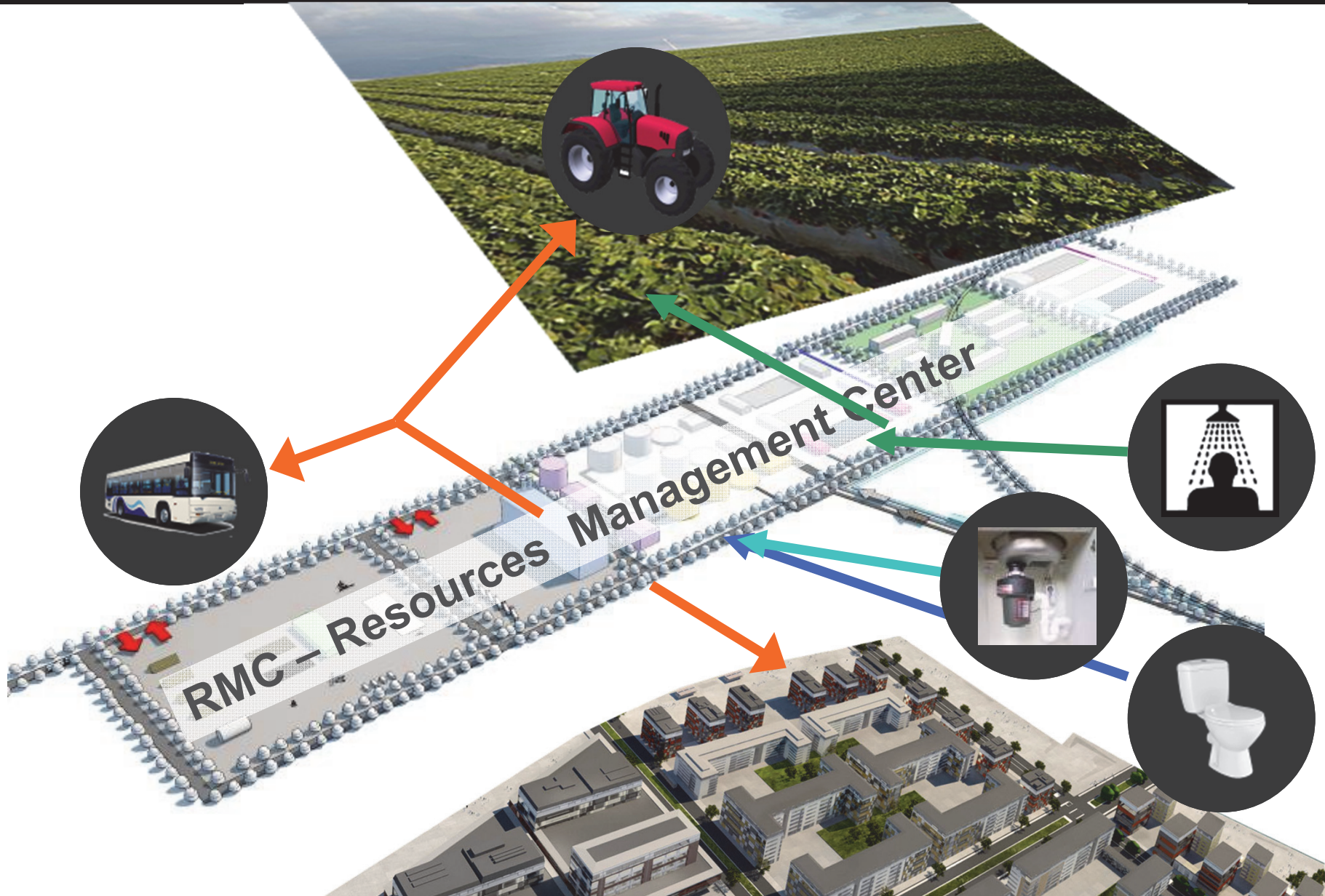


MALMOE

Inspiring & creative Environment

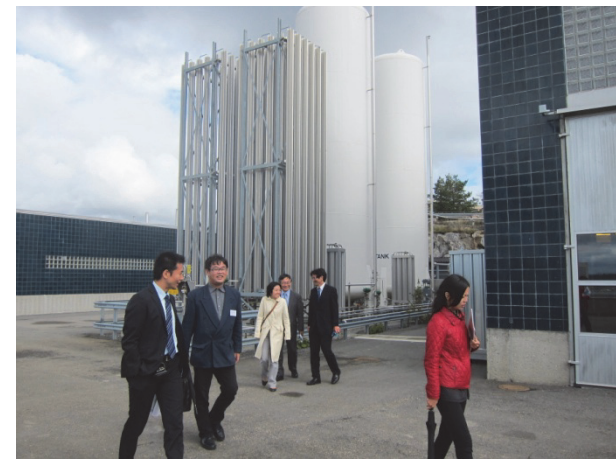
Innovative System solutions

6 RESOURCE EFFICIENT City Tangshan Bay Eco-City



9 COMMUNICATION– Transdisciplinary collaboration

SymbioCity Collaboration Mitsubishi Research Institute – SWECO
Yamada and Matsumoto



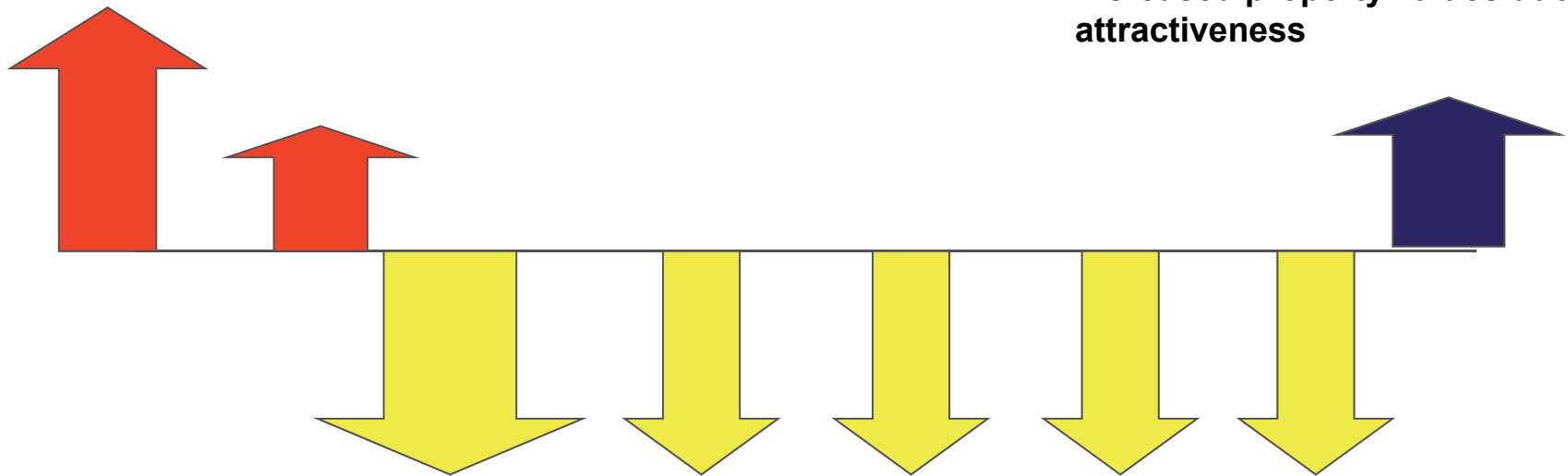
Ulf Ranhagen KTH/SWECO feb 2012

10 PERFORMANCE Life Cycle Costs

The Swedish SymbioCity approach reduces the ecological footprint and contributes to favorable economic and social impacts

Extra investments in planning and construction

Increased property values due to attractiveness



Energy costs
(due to increasing oil prices)

Environmental costs

Health care costs

Social costs

Management, operation and maintenance costs

3-5 years ROI low energy buildings

10-15 years ROI waste water and waste

Some overall benefits of the SymbioCity Approach

