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Smart Mobility & Innovative Solutions for Livable Future-Ready Cities

There's a common understanding about the importance and future priorities of urban mobility...

Future of urban mobility



European Green City Index

Assessing the environmental impact of Europe's major cities

A research project conducted by the Economist Intelligence Unit, sponsored by Siemens



Sustainable Urban Infrastructure

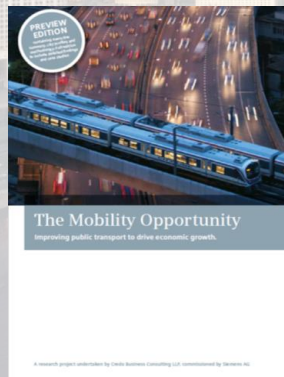
Munich Edition - path toward a carbon-free future



Sustainable Urban Infrastructure

Venice Edition - Role Model for Complete Mobility

A research project sponsored by Siemens



The Mobility Opportunity

Improving public transport to drive economic growth

A research project sponsored by Deloitte Business Consulting LLP, commissioned by Siemens AG

1 on mayors' agendas, most important driver for quality of life, key driver for urban competitiveness

Transport networks are under increasing pressure due to ageing, underdevelopment or being unable to cope with growing demand

There's a clear economic, social and environmental benefit of action as well as cost of inaction

Need for smart mobility solutions, in terms of technology, financing and governance

...but a need to quantify the benefits and to show that investments pays off: The "Mobility Opportunity" study

What are the key value driver of urban transport ?

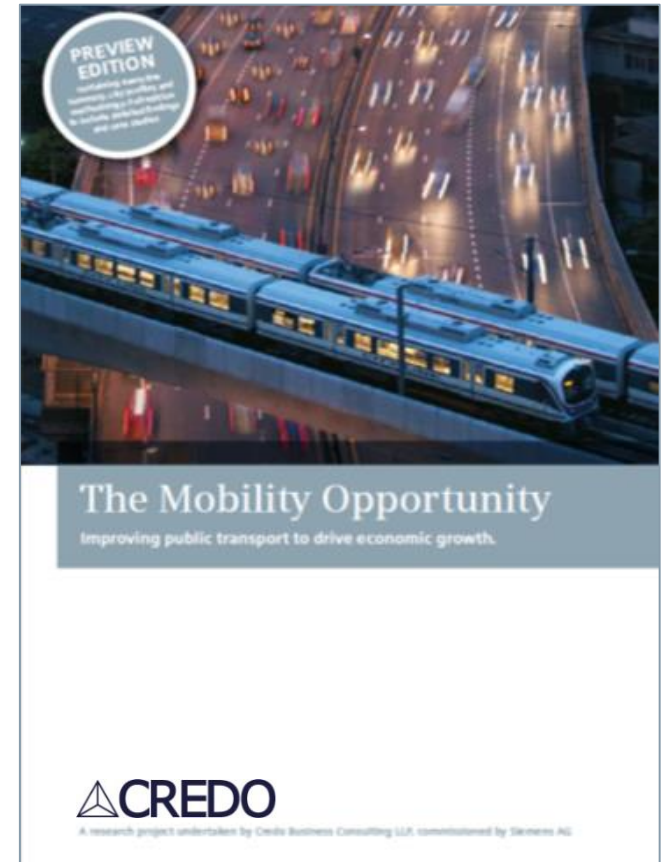
- 35 key commercial centers around the globe
- 12 metrics, 10,000 data points
- Incl. capacity, density, reliability, quality, technology, journey time

What is the size of the economic opportunity?

- Economic cost of inefficient transport: Annual cost of community as % of city GDP
- Wider economic benefits of investing in public transport

Does it pay off and how can it be realized?

- Indicative cost-benefit calculation: Annual value of overall economic benefit versus investment
- Guidance on investments and technologies that deliver value-add

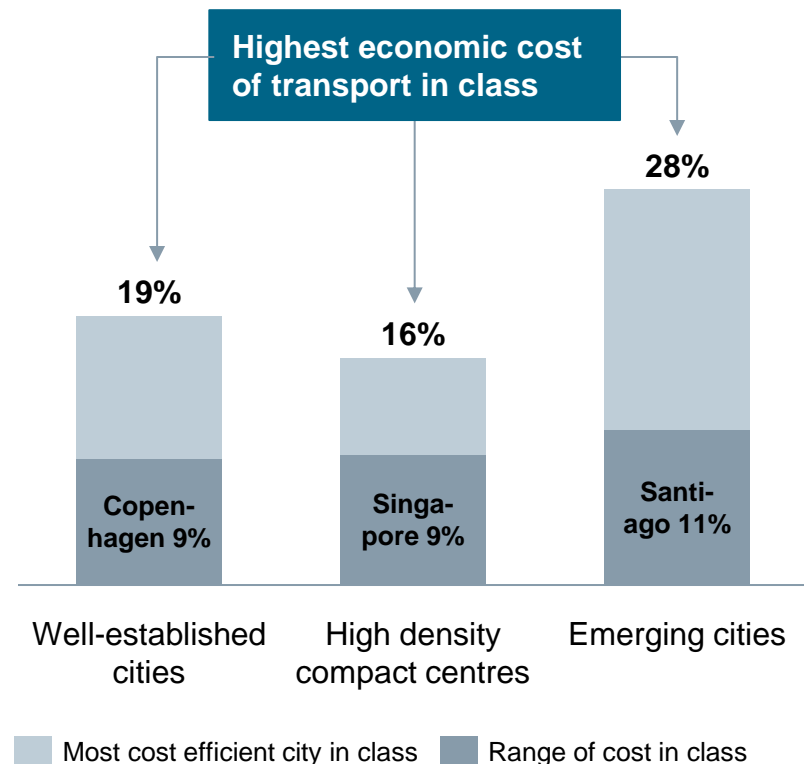


Launch of the study "The Mobility Opportunity" on June 2nd at the WCS Singapore

The most cost efficient transport networks are in Copenhagen, Singapore and Santiago

The most cost efficient transport networks

Cost of a commuter's transport as % of city GDP per capita



What makes them category leaders?

Copenhagen

- Investment in capacity, use of automated trains, high level of user functionality
- Encouragement of modal shift to bicycles to take pressure of peak public transport

Singapore

- High capacity system and high levels of user functionality
- Integrated long term planning and governance

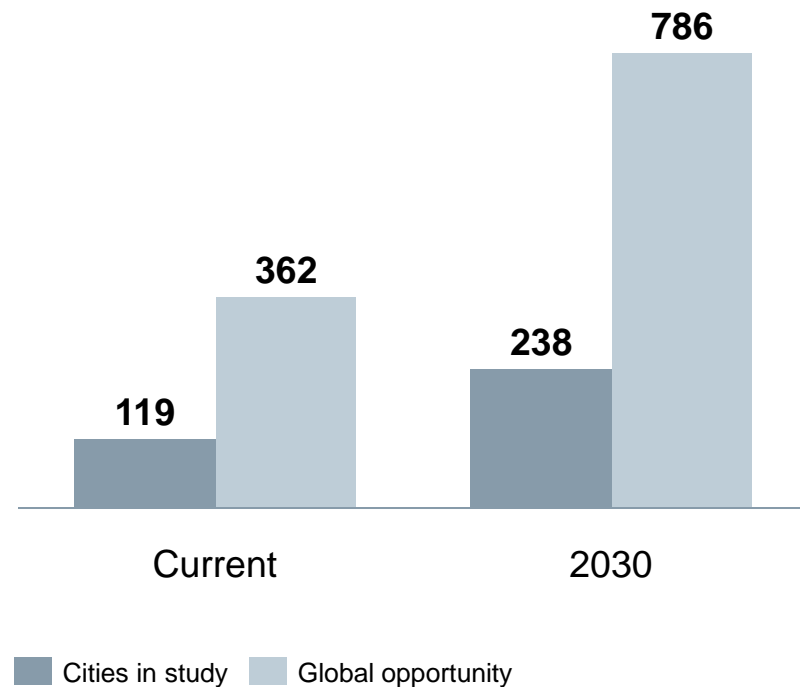
Santiago

- Capacity and coverage of metro system developed in line with city growth
- Bip! payment card system integrates bus and metro

Within the 35 cities analyzed, the potential annual benefit from investment will be ~ \$240bn by 2030

Total economic opportunity: Cities in study & all cities over 750k popul.

Annual economic opportunity [in \$ bn]



Note: Calculations include *known* and *potential* investments

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Example: Grand Paris Express Metro Extension (200 km)

Investment (current \$) ~ \$27bn

Change in economic cost of transport (% GDP per capita till 2030) 13.6% → 12.5%

Annual value of benefit (by 2030)

Direct	\$1.6bn
Wider economic Impact	\$1.1bn

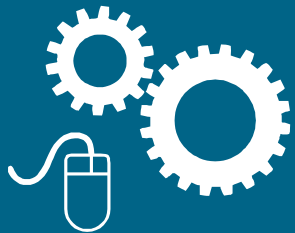
Years to pay back (including wider economic impact) ~10

Economic value add (value over life post payback) \$55bn

Summary and Way Forward



First research of its kind to quantify the economic benefits on a global scale and to show that **investment in public transport pays off**



Automation and IT technologies can often maximize the potential of existing networks in an cost-efficient way and thereby lower the needs for large-scale investments into new infrastructure



More detailed research is required on a city-by-city basis to detail the optimal strategies in terms of level and kind of investments