SITOWISE

Data and the future of smart cities

Digitala Kartdagar

KALLE NIEMINEN, LEADING EXPERT

Sitowise

[SITOWAIZ] [SITOWISE]

Sitowise is a Nordic expert in the built environment with a strong focus on digitality.

We design smart cities and spaces for living where daily life finds a sustainable foundation.

We operate in three business areas: building design, infrastructure design and digital solutions.

A uniquely vast combination of expertise for the development of a built environment

Properties and buildings

- Structural engineering
- HVAC engineering
- Electrical design
- Architectural design
- Lighting
- Building automation
- Fire protection engineering
- Acoustics
- Project management
- Construction contracting
- Condition assessments and surveys

Infrastructure

- Road and street design
- Railway design
- Land use and urban development
- Landscape architecture
- Geotechnical planning
- Rock and tunnel planning
- Bridges and other structures
- Water services
- Transport and traffic
- Construction contracting services
- Urban design

Digital solutions

- Customer-oriented software development
- Software products
- Data management and visualisation
- Geographic data
- Expert services and strategic consultation
- Data Engineering & Data Science
- Service design

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Services from underground to the sky

Real estate and buildings

Infrastructure and urban development

Digital services

Transportation and traffic

Environment and water

Sustainable development

Strategies and operational development

Construction contracting, project management and supervision

Studies and surveys

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Expanding to Nordics

Our services in Sweden

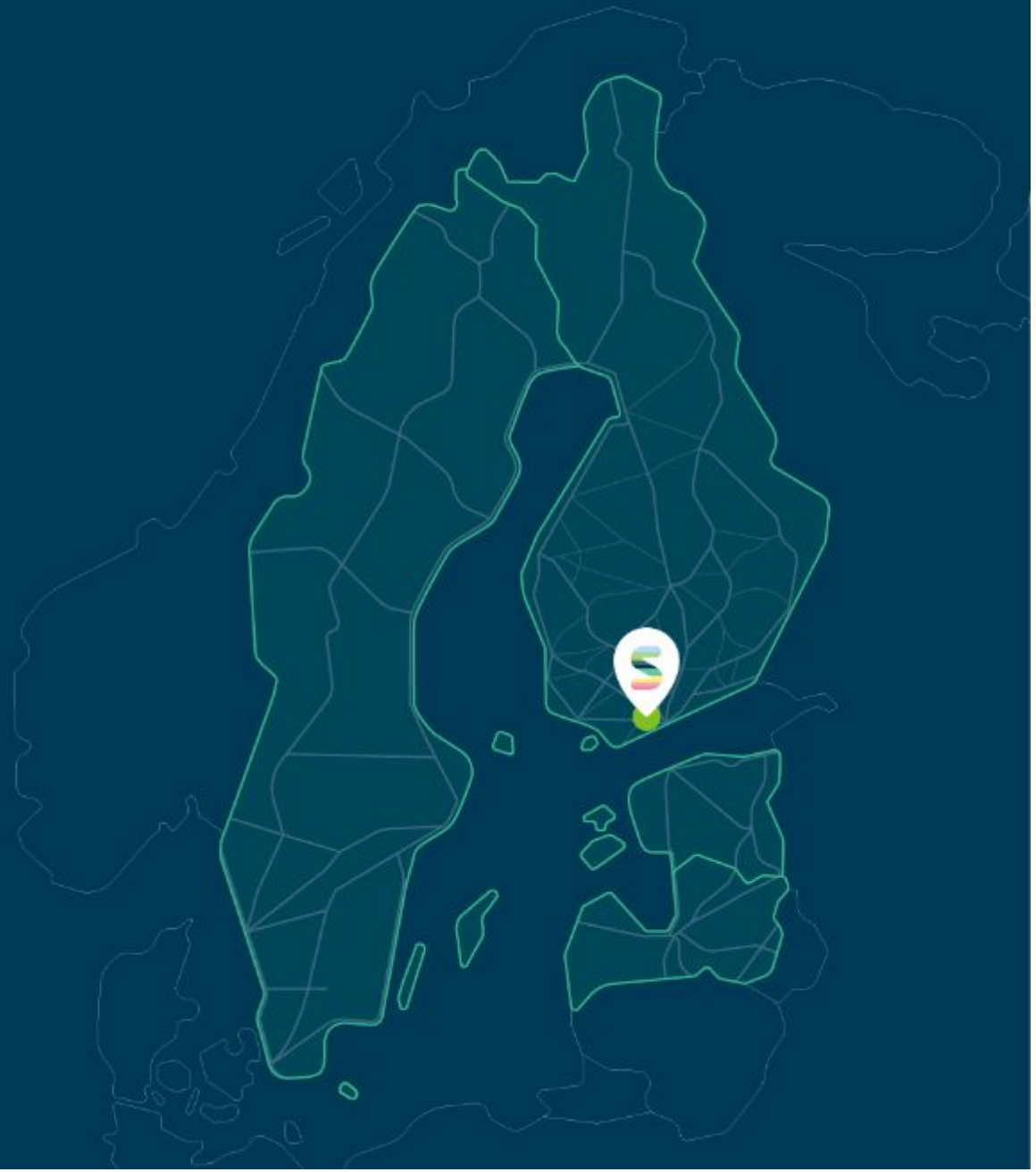
- Structural engineering
- Geotechnics
- Project management
- HVAC engineering for the infrastructure industry

Our subsidiaries **TFIP** and **BTB Byggnadstekniska Byrån** operate in Sweden.

250 experts

10 offices

Net sales of approx. MEUR 31



OUR
VISION
The most
responsible
partner in
developing a
prosperous
environment

Big Picture

Smart City history

1974 – Los Angeles created the first urban big data project: "A Cluster Analysis of Los Angeles" report.

1994 – Amsterdam created a virtual 'digital city' – De Digital Stad (DDS) – to promote Internet usage.

2005 – Cisco put up $25m over five years for research into smart cities.

2009 – IBM unveiled $50m Smarter Cities campaign to help cities run more efficiently.

2012 – Barcelona deployed data-drive urban systems, including public transit, parking, and street lighting.

2013 – Mayor of London created Smart London Board to shape London's digital technology strategy.

2017 – EU-funded projects on Smart Cities

2020 – The OECD Programme on Smart Cities and Inclusive Growth

2020 – Sitowise The Smart City Company

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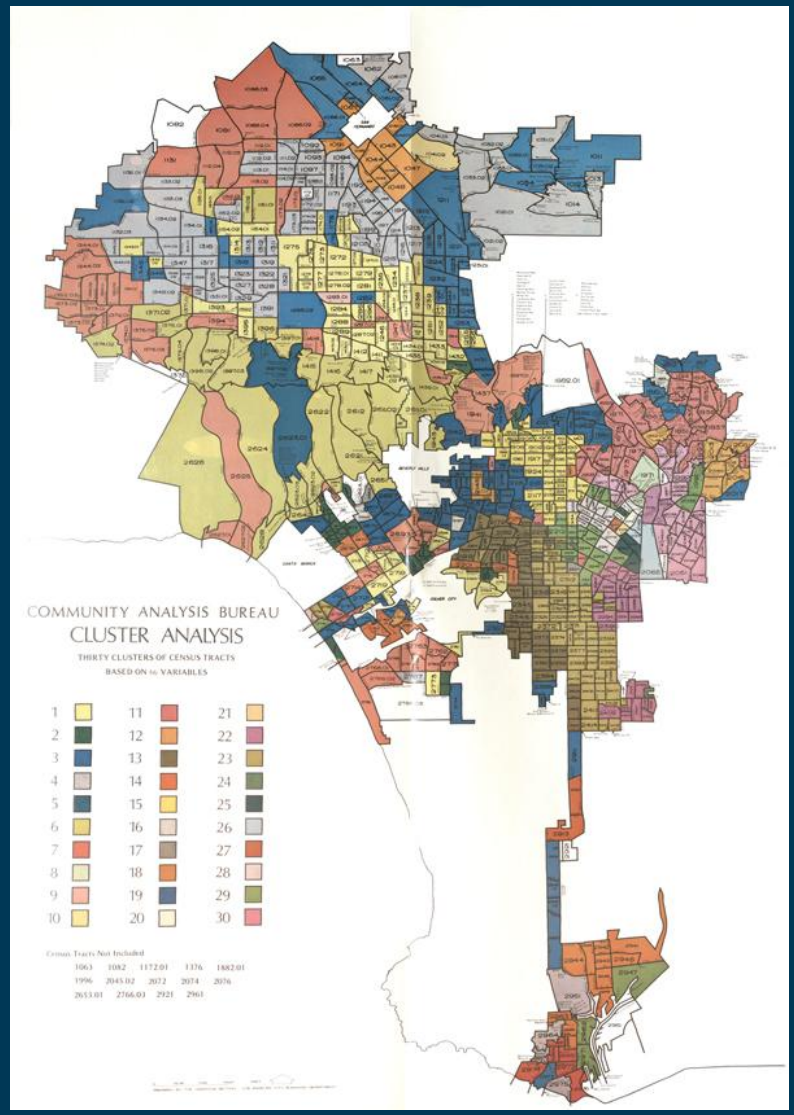
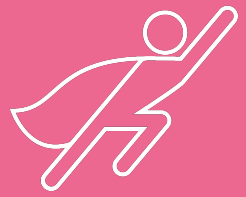


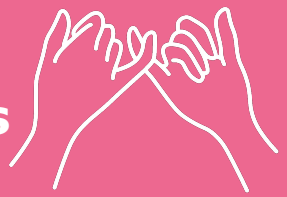
Megatrends behind the smart cities

Technology will steer our future

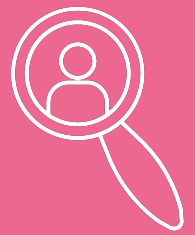


Sustainable development is the only option

Next moonshots are made in cities



Data decade



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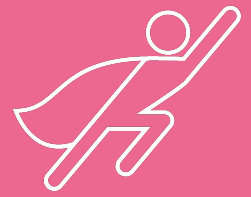
Megatrends behind the smart cities

Technology will steer our future



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Technology will steer our future

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1 2 3 4 5 6 7 8 9

1 2 4 8 16 32 64 128 256

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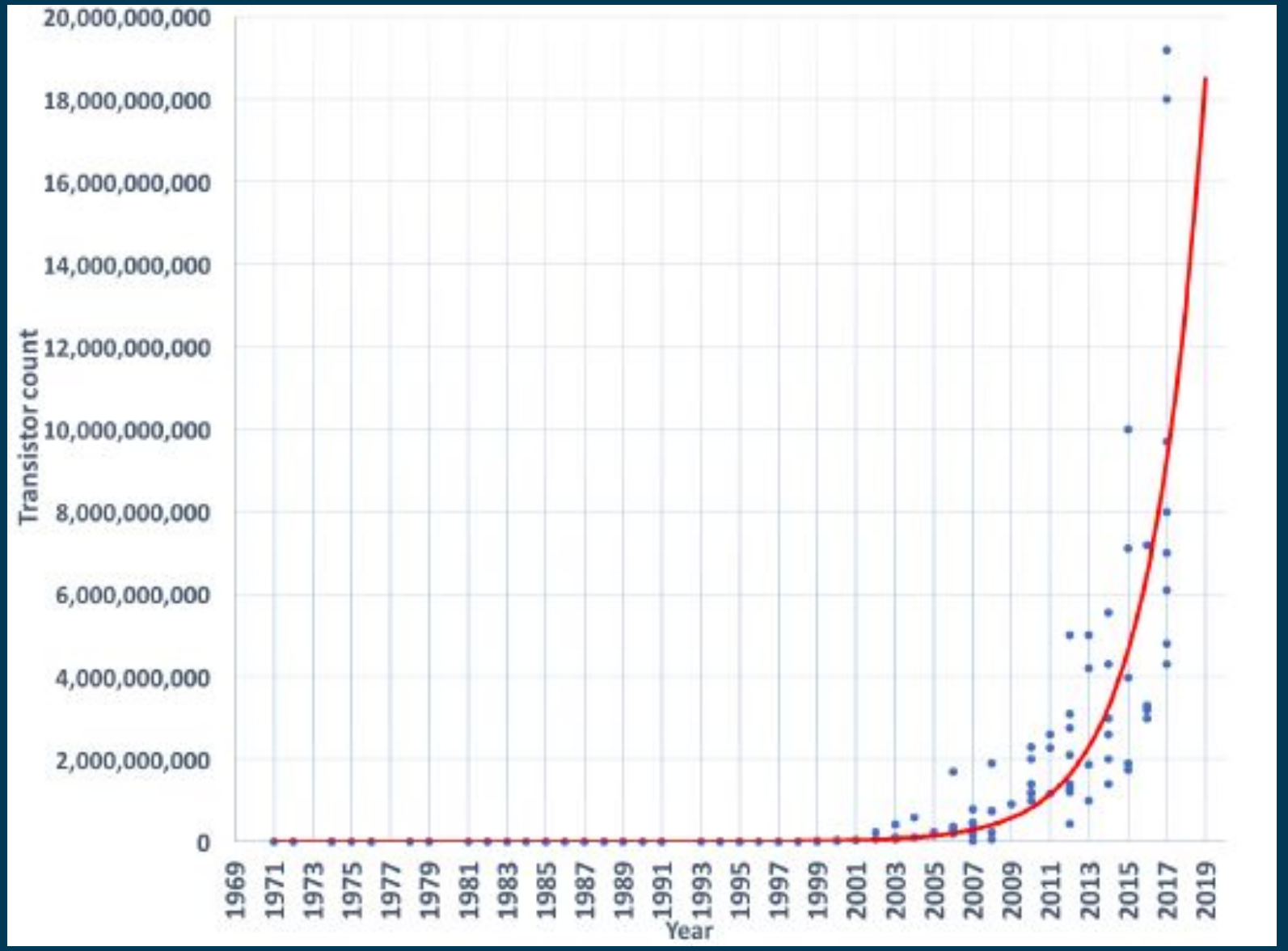
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0
Transistor count
1969
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1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
Year

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virtualisation, digitalisation, artificial intelligence, robotisation, nanomaterials, biotechnology, pharmacology, energy technology, global platform economy, blockchain

More data

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Technology will steer our future

- Will humankind change more in the next 30 years than in the past 300 years?
- Technology will have huge impact not only in economy but in human, social and cultural aspects
- Technology and human?

Those who speak the language of technology will determine the direction for the future

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Megatrends behind the smart cities

Next moonshots are made in cities

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Next moonshots are made in cities

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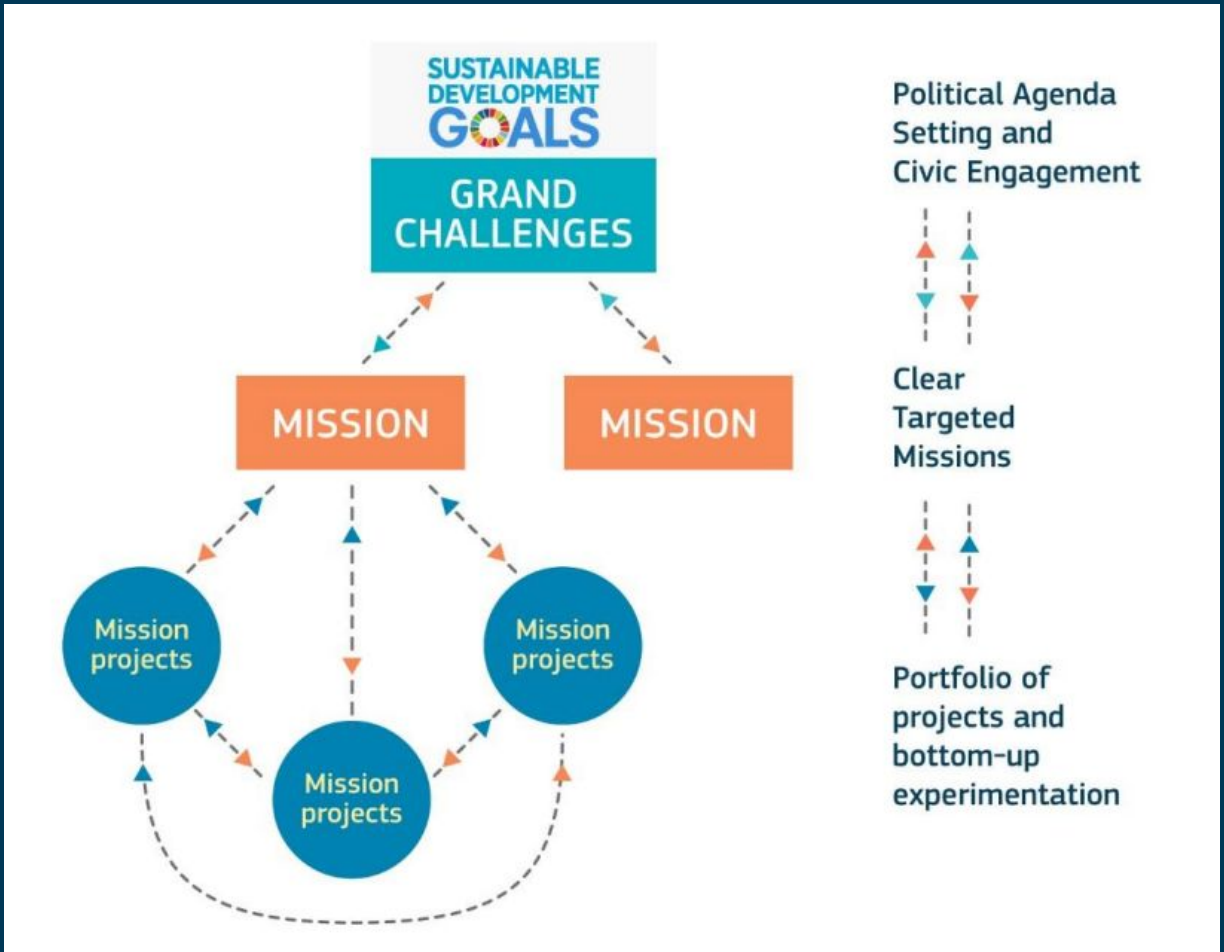
Mission oriented innovation



Mariana Mazzucato, The Entrepreneurial State, 2018

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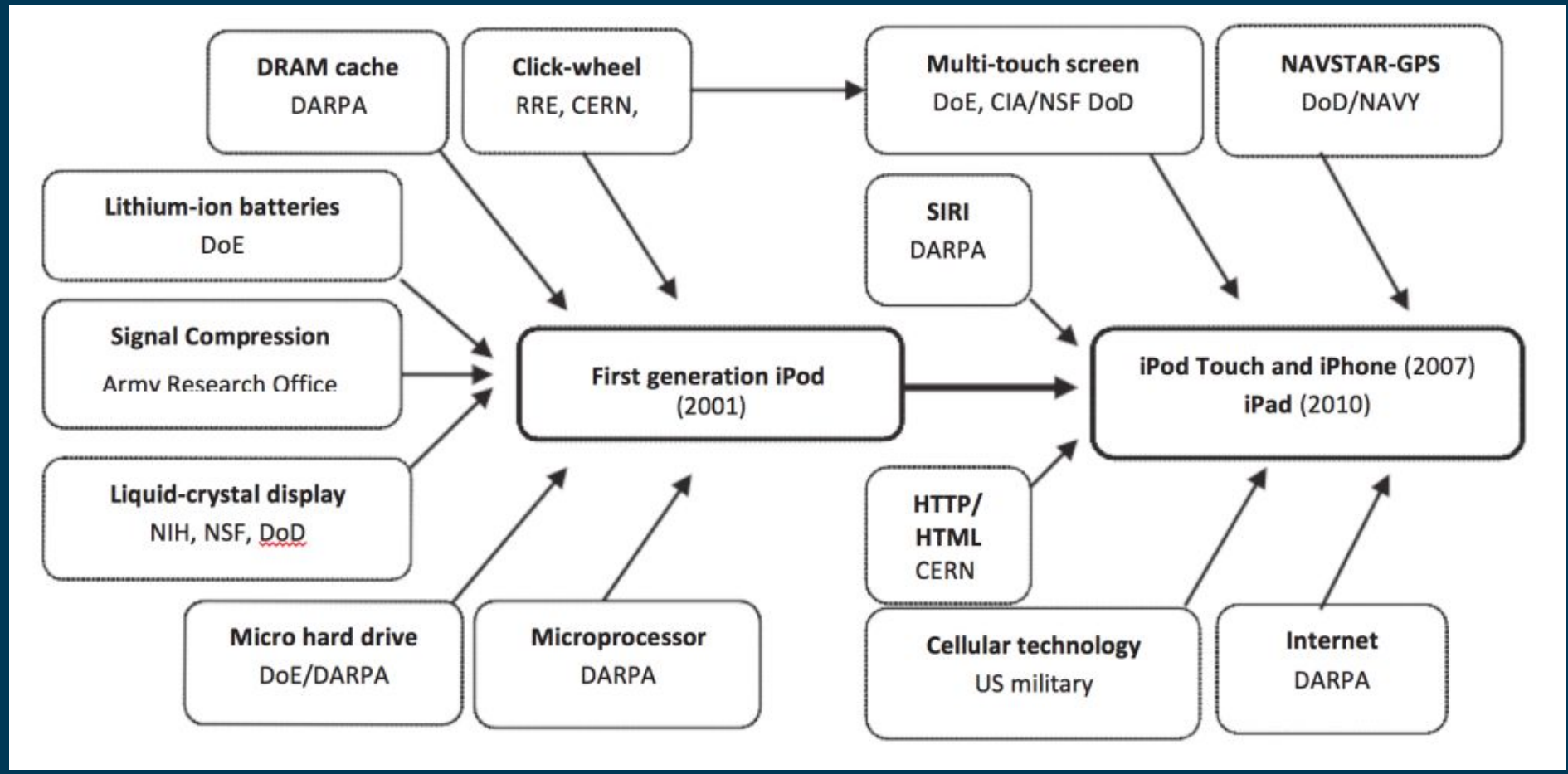
All the main parts of iPhone are funded by the government



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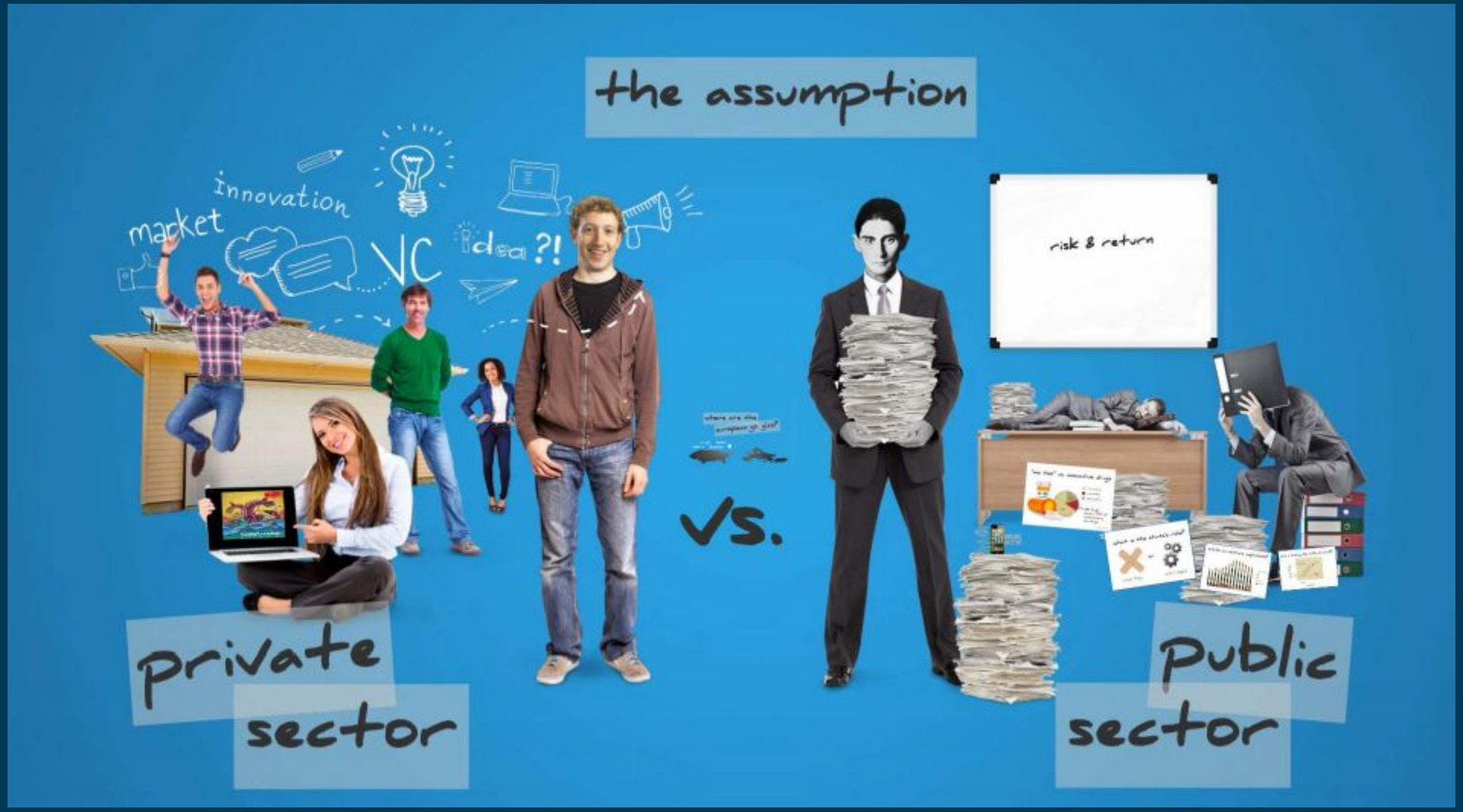
the assumption
market
innovation
VC
idea ?!
vs.
risk & return
private sector
public sector

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Next moonshots are made in cities

- **Cities are the platform for innovation**
- **Urbanization brings more power to cities**

Visions for the future are needed

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Megatrends behind the smart cities

Sustainable development is the only option

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Kestävällä kehityksellä ei ole vaihtoehtoja

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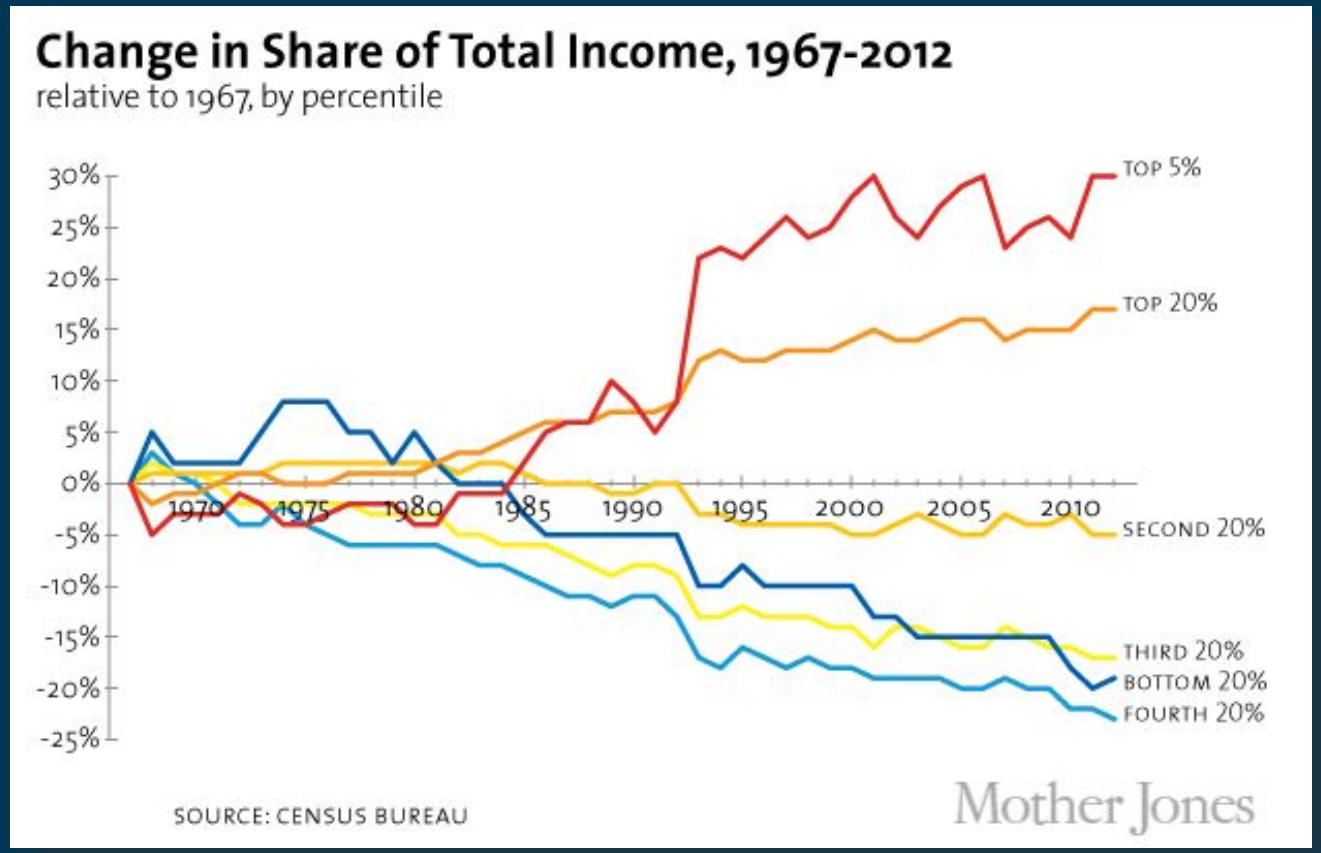
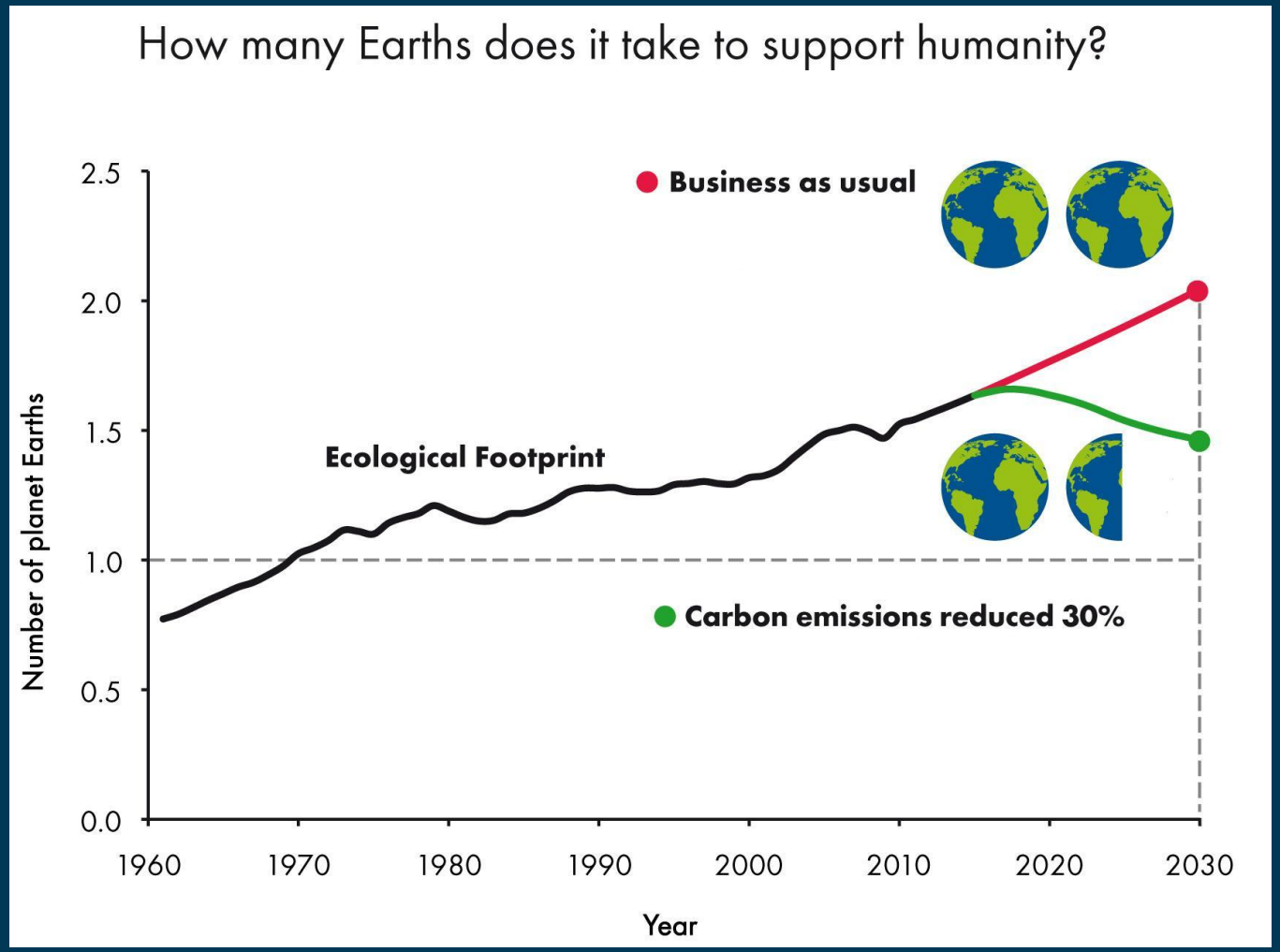
Kestävällä kehityksellä ei ole vaihtoehtoja




How many Earths does it take to support humanity?
Business as usual
Ecological Footprint
Carbon emissions reduced 30%
Number of planet Earths
2.5
2.0
1.5
1.0
0.5
0.0
1960
1970
1980
1990
2000
2010
2020
2030
Year

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Sustainable development is the only option

- **Sustainability is also a business opportunity**
- **Future genarations will measure our organiztions based on how sustainable they are**

Only sustainable organizations will survive.

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Megatrendit älykaupunkikehityksen takana

Data decade

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Datan käytön kohtalon vuosikymmen

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Data decade

- Can we set european values and models for fair and sustainable data economy?
- Data and decision making

We are living the decade of data.

?

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Complex

- Constantly changing and higlt complex environment, where cause and effect relationship could be only found in retrospect.

- Probe – sense - respond

Complicated

- There is a clear relationship between cause and effect, but not everyone can see it.

- Sense – analyze - respond

Chaotic

- No cause and effect relationship can be found

- act – sense - respond

Cynefin Framework, Dave Snowden

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The Smart City Company

Experimental culture

Service design

User led design

Open data

Foresight

Dialog

Fasilitation

Sustainability

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Tack!

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SITOWISE.COM – THE SMART CITY COMPANY

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