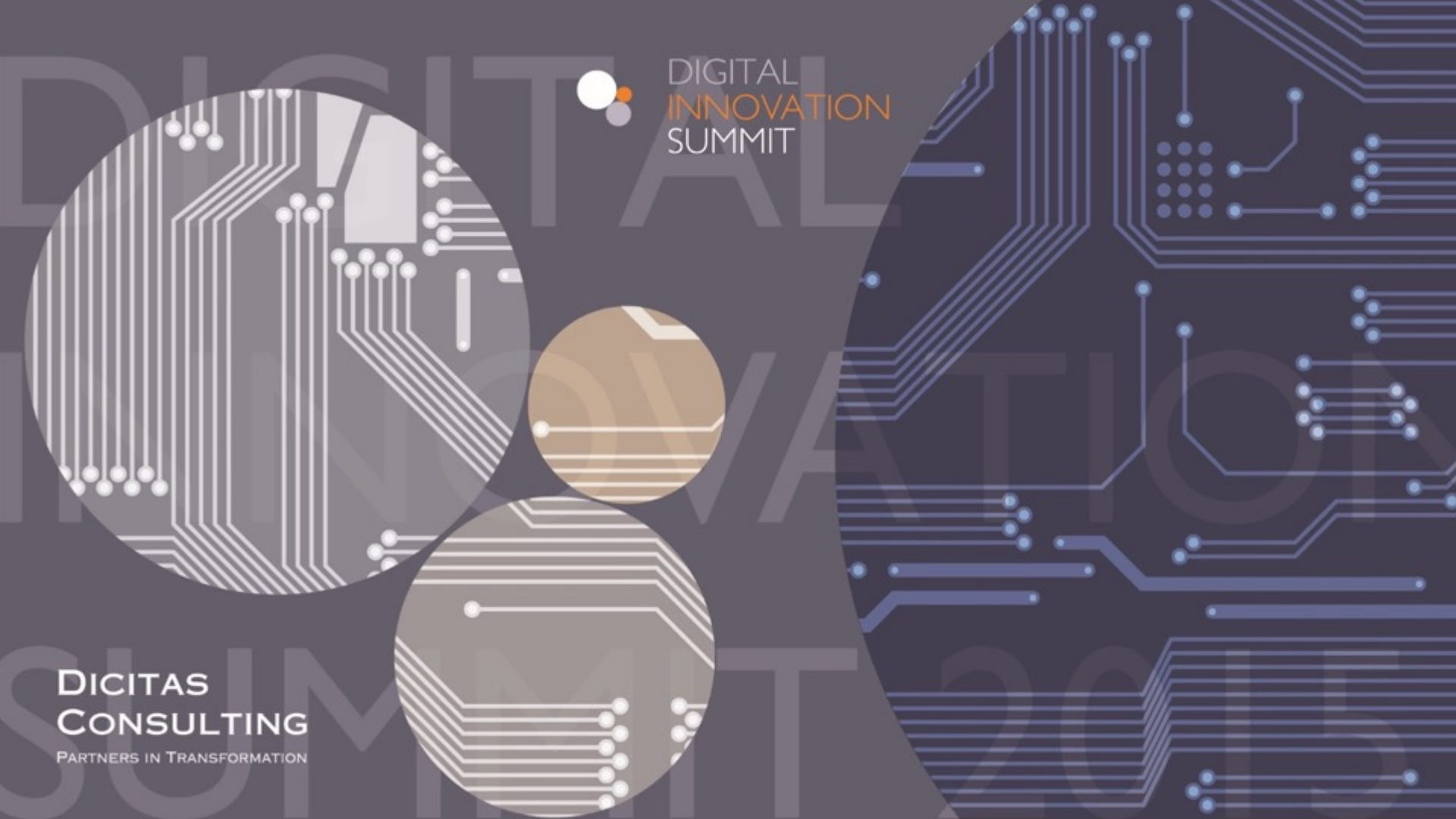
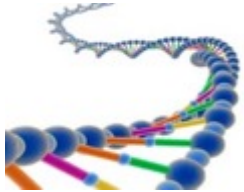

DIGITAL
INNOVATION
SUMMIT
DICITAS
CONSULTING
PARTNERS IN TRANSFORMATION

Building the Digital Ecosystem for Tomorrow

Prof. Dr. Ir. Nico Baken
Fort Voordorp,
September 24th

The cITy Genome



Peter Drucker

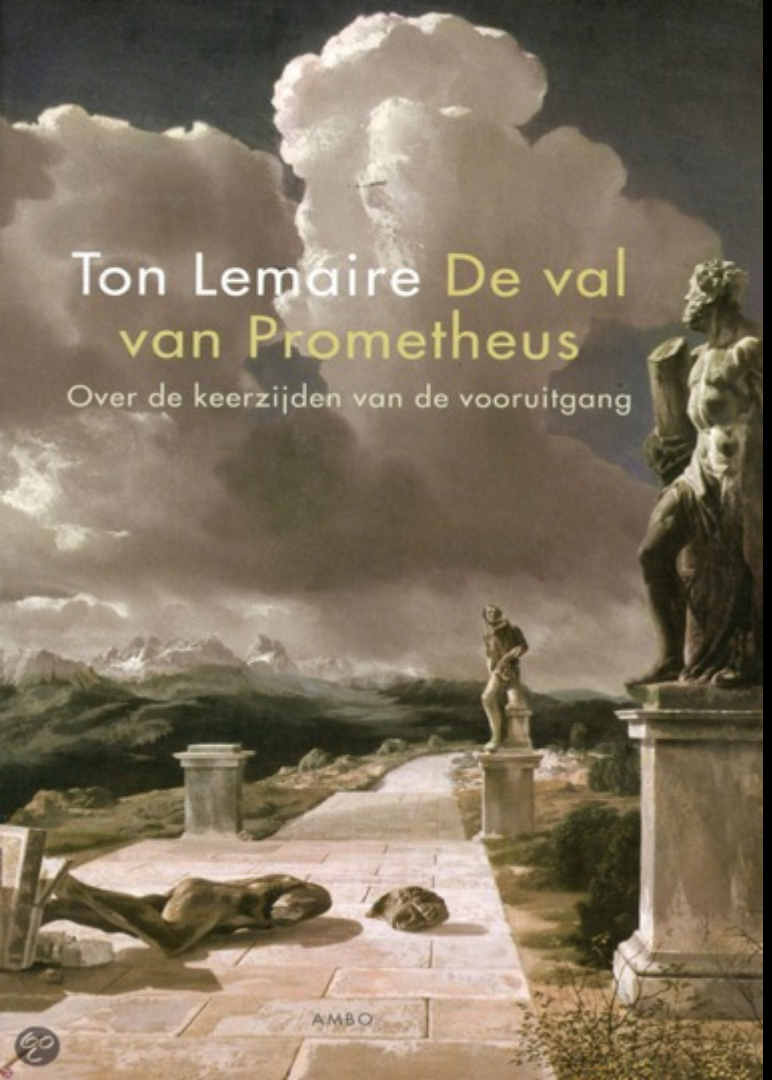
“The greatest danger in times of turbulence is not the turbulence,
it is to act with yesterday's logic”

What is the road(map) then to act well?

Do we really know what is going on in our society!?

Stretch your environment, your “zoësis”!

Build up new knowledge!



Read?

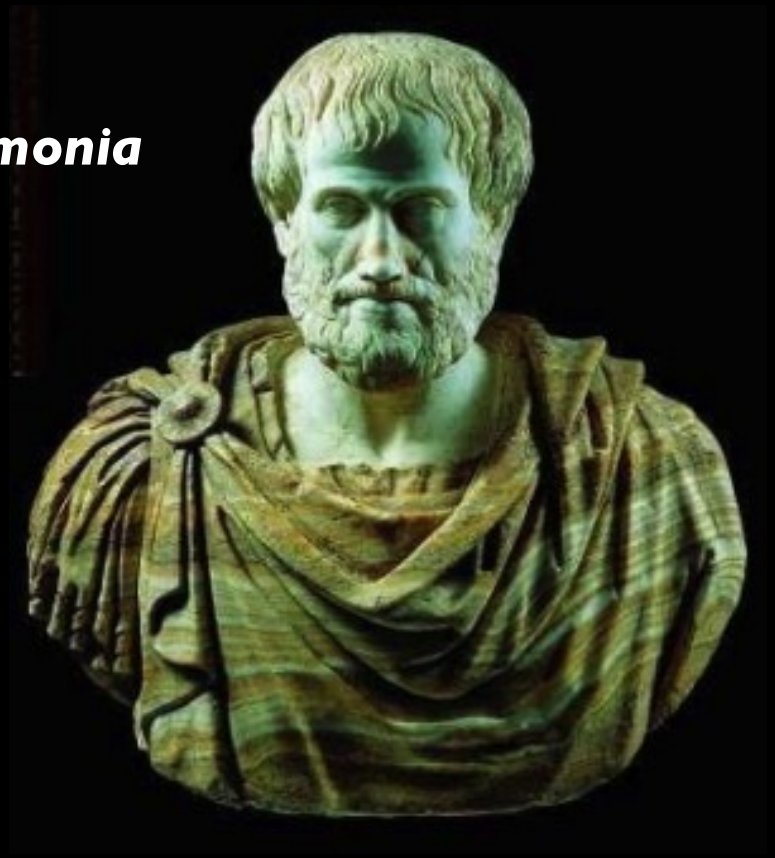
Progress

that makes Sense

… Pneuma!

The Good Life
Happiness: *eudaimonia*

1. Enjoy
2. Appreciation
3. Insight



psychès energeia kat' aretèn

Ton Lemaire: what is meaningful progression? What makes no(n) sense or sense...in our sectors?

Public sector
What does good governance mean?
When is an administation acting meaningful?
What does this mean for civilians?

Construction sector
What is good building / smart city?
What is a meaningful housing corporation?
What does this mean for tenants?

Telecom/ICT sector
What is good (tele) communications?
When is KPN a good and meaningful company?
What does this mean for employees

Innovate Innovation

1

Introducion

2

Environment complex world

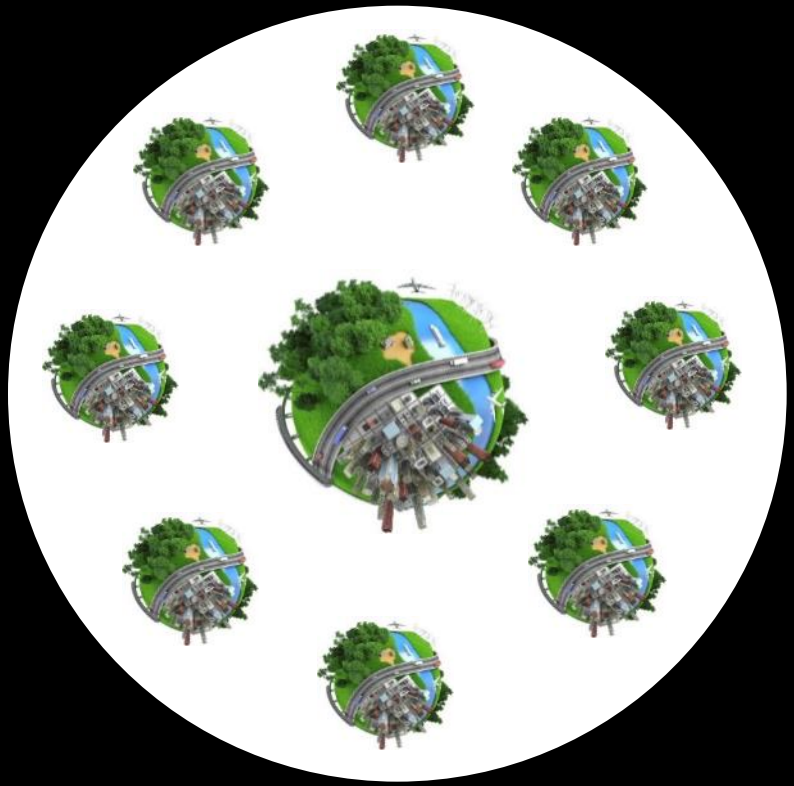
3

Transition in construction sector
Role of ICT

4

5

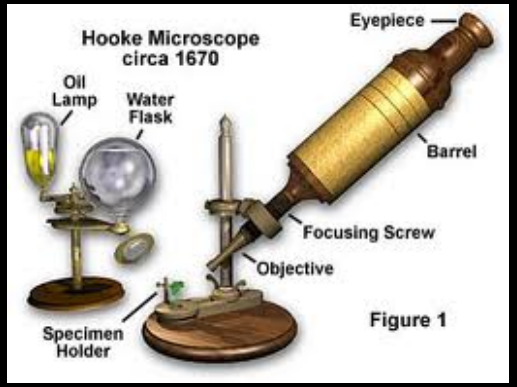
Challenge!

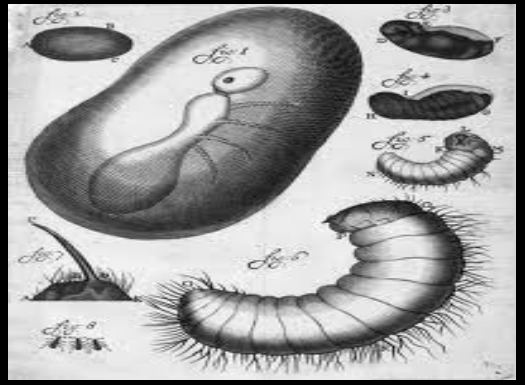


Suppose you are a IT/Smart-City expert …
What do you see in your environment?

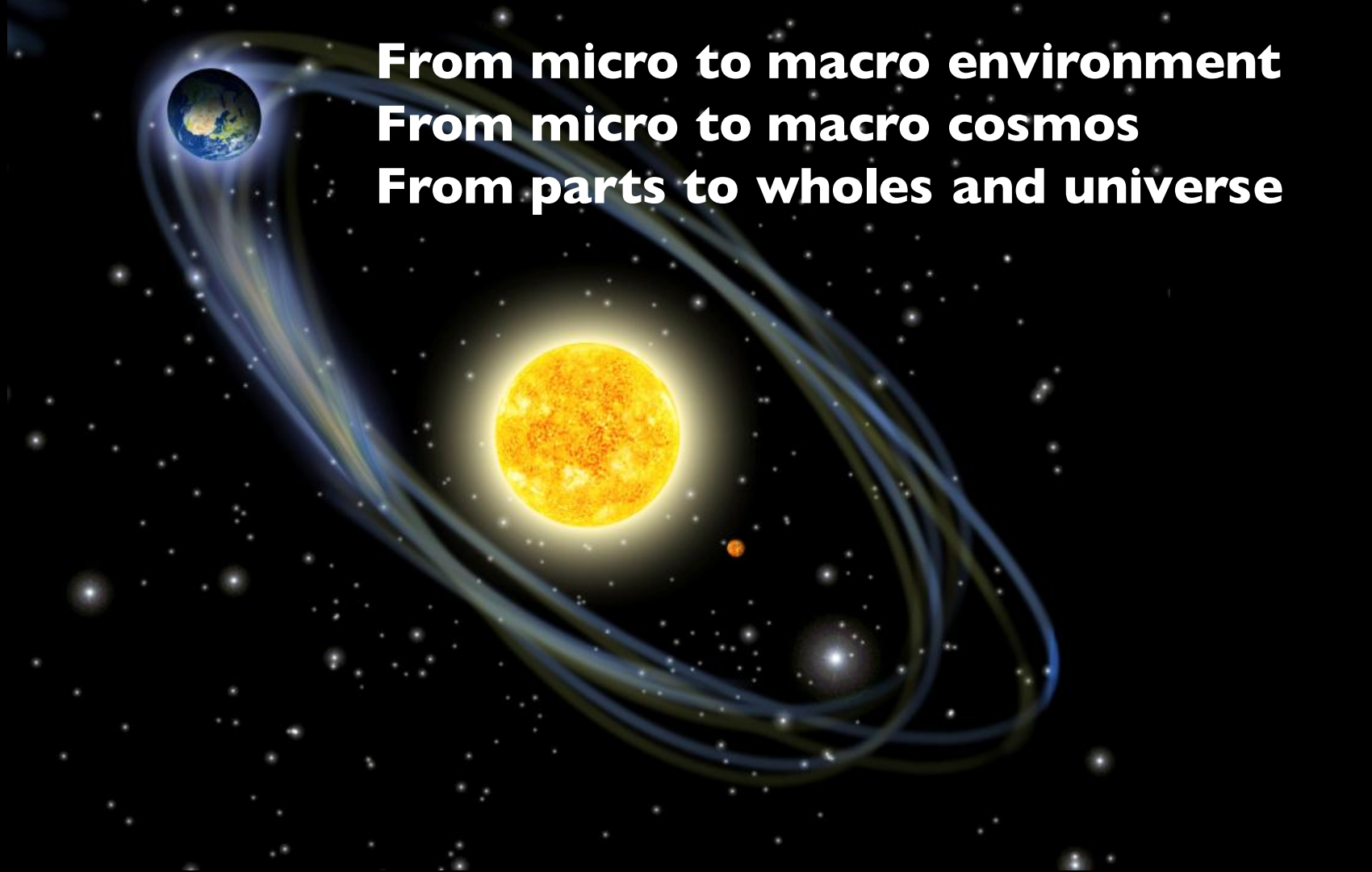
More IT/Smart-City experts of …

What do we see in our environment?





Unpretentious<-> Abundance, opportunities


From micro to macro environment
From micro to macro cosmos
From parts to wholes and universe

From micro and macro spatial environment to time

1 hour = 100,000 years

The last two minutes... humanity

The last two seconds

1967
1970
1980
1981, 1983
1994-2004
2004-2014

what's next?

What boundaries can we cross in cities...
And what does this mean?

The sector of Health, micro- en macro

Human being

Systems

Organs

Tissues

Cells

Cell components

DNA

Zeros and ones

The sector of Health, micro- en macro

Human being

Systems

Organs

Tissues

Cells

Cell components

DNA

Zeros and ones

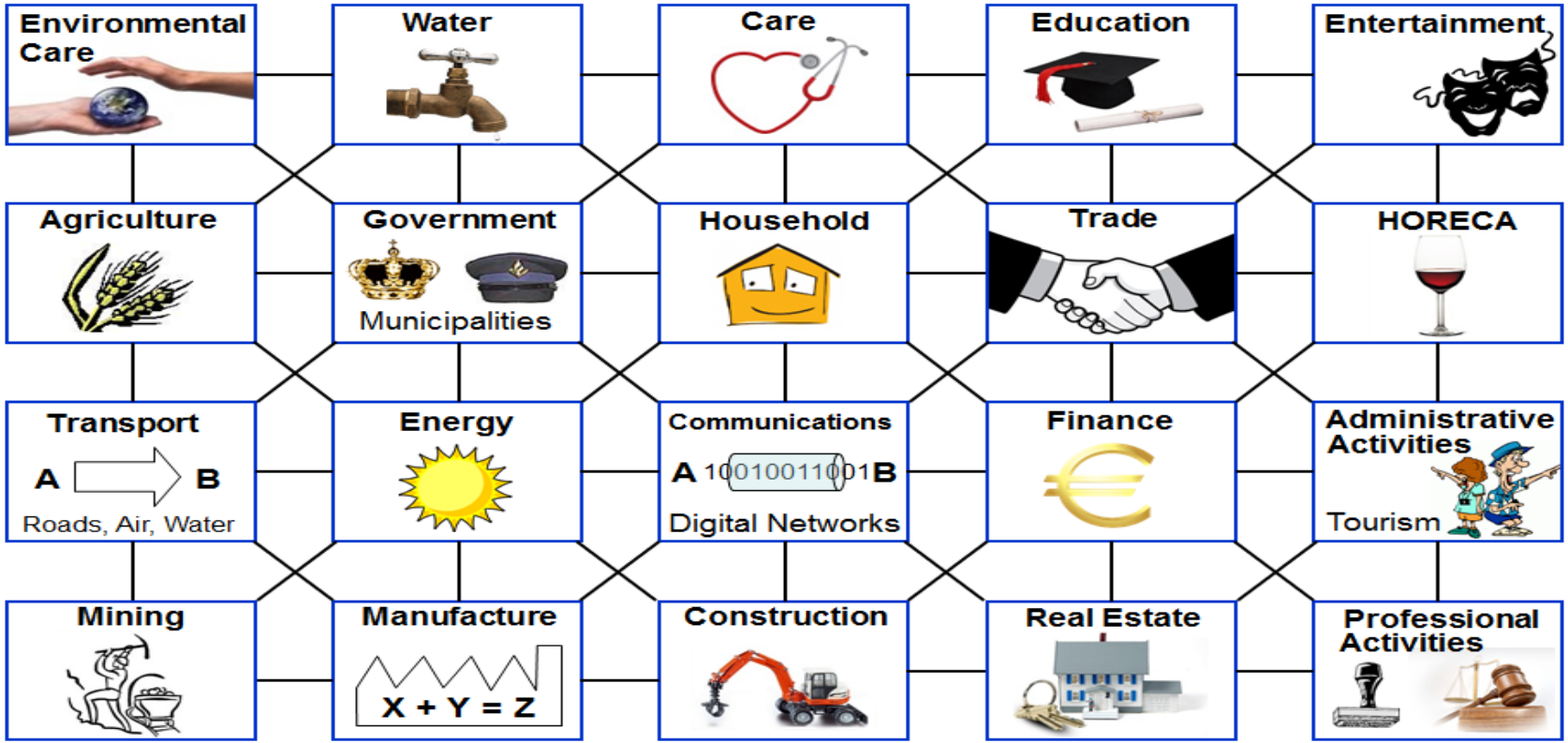
a city-hologramme generated by the city-genome

Micro and macro cosmos in construction sector

***digital genes* of all construction elements**

A complex network of sectors, Whole > Σ Parts (sectors)

What does the decomposition, the parts and the wholes look like in other sectors?



Status Quo Holarchys

Only sustainable innovation leads to new growth

Prosperity

Stagnation

Decay

The polis,

The intelligent community is…

Evolution and transition of sectors

on the way to healthy holarchies

Care… Health-Connect

Transition from disease to health management

Rebuild/Recreate … Construct-Connect

Transition from archaic to modern construction: Smart Living, digital genomes

Transport… Transport-Connect

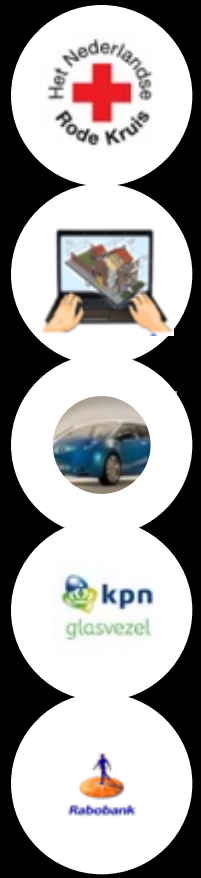
Transition from mono to multi modal: Smart Travelling

Glaze… Fiber-Connect

Transition to optical bandwidth: NG Smart Networks, Grids

Value… Value-Connect

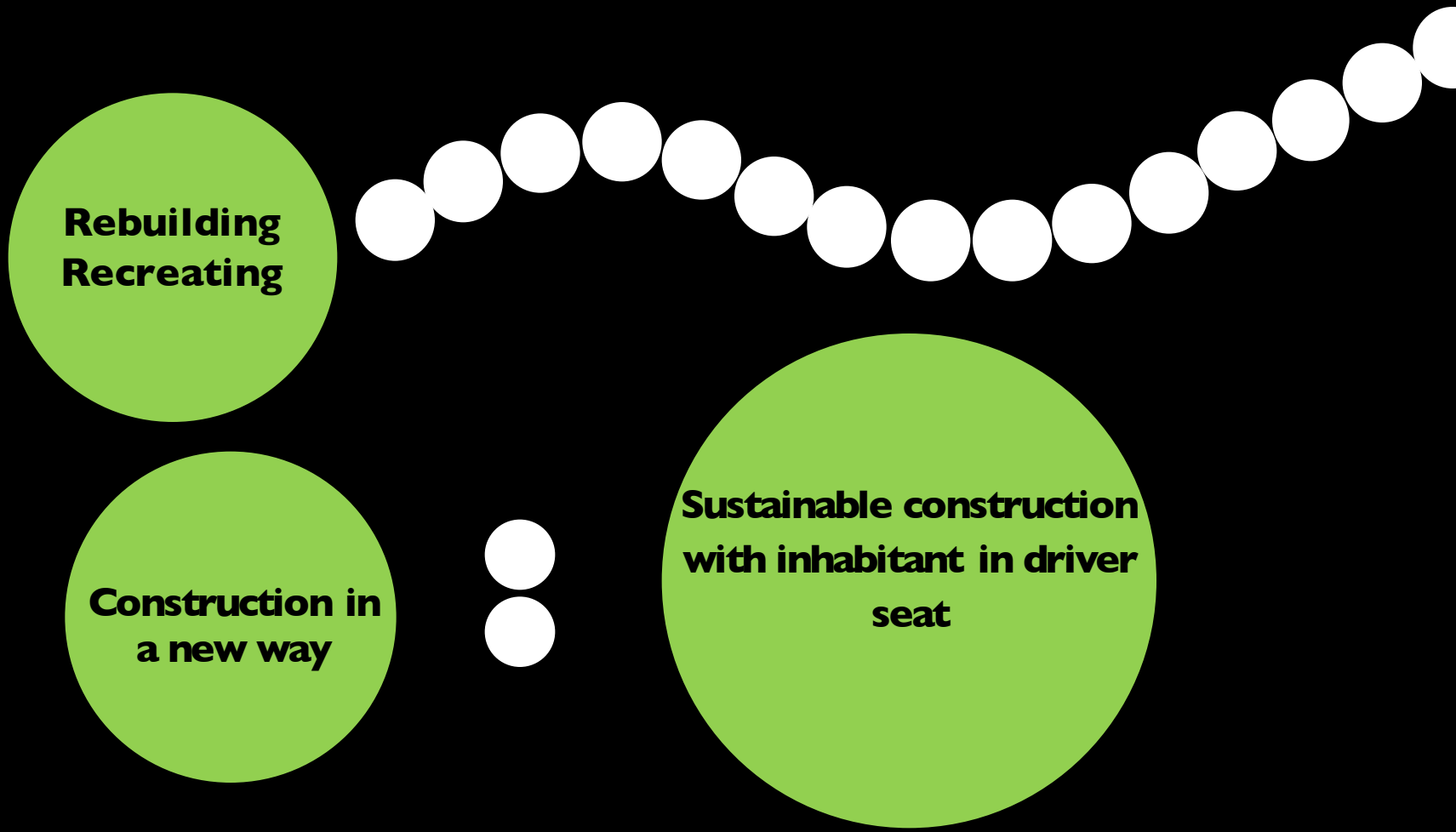
Transition to…: **NG Smart Value-Grids**



Transition to an optical infrastructure (Fiber-Connect): everything will flow towards us

πάντα ῥεῖ
by fibre towards us

Complex ICT (eco) systems, IoT


Rebuilding
Recreating
Construction in a new way
Sustainable construction with inhabitant in driver seat

Micro and macro cosmos in construction sector

***digital genes* of all construction elements**

Everything is known from the digital genes

- **All macro parameters (m3, ventilation capacity, energy label, environmental label, etc.)**
- **Renovations can be directly visualized and calculated**

Construction
Energy
Healthcare
Security
…

…it's about **humans** above all!

…connecting for a connected society

…it's about **humans** above all!

…connecting for a connected society

Connecting for a connected society

Demand		Supply
Groceries		Car
Car		Driver
Driver		Groceries

Connecting for a connected society

The key: connecting supply and demand

Driver

Car

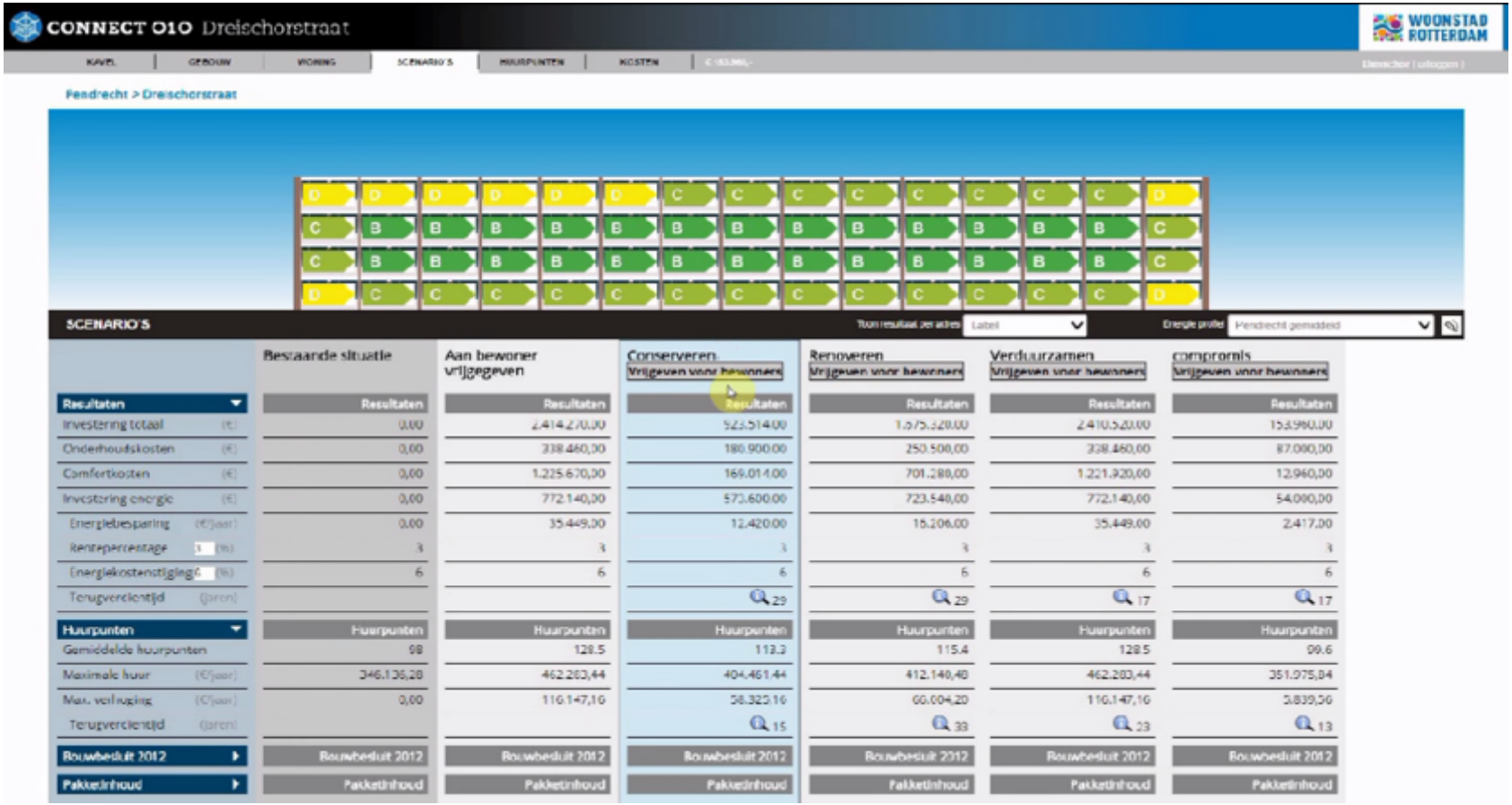
ICT in and across all sectors

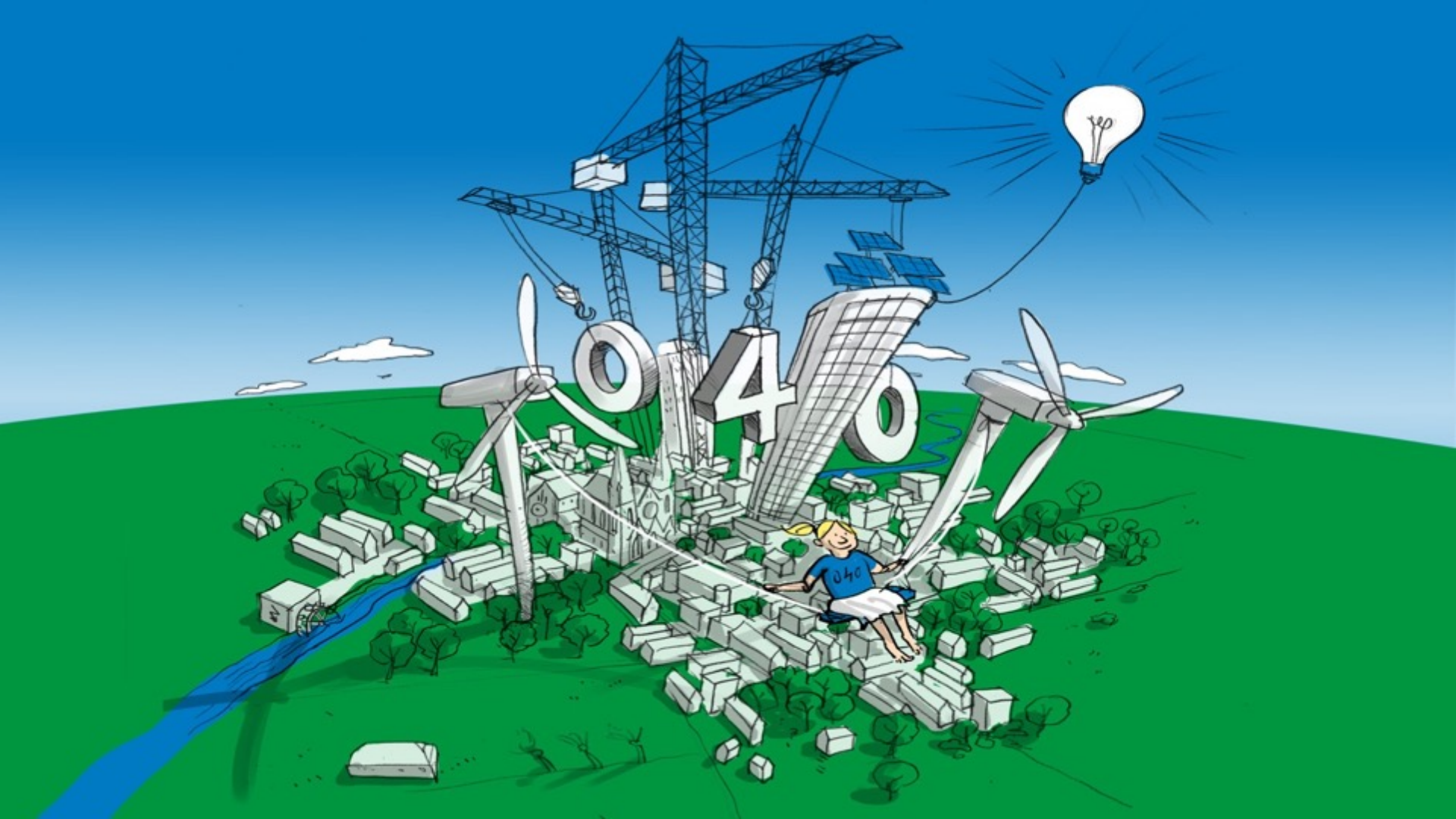
Groceries

Connected neigbourhood, district and city...

…it's about **humans** above all!

CONNECT-NL


CONNECT 010 Dreischorstraat
WOONSTAD ROTTERDAM
KAVEL
GEBOUW
WONING
SCENARIO'S
HUURPUNTEN
KOSTEN
Dordrecht > Dreischorstraat
SCENARIO'S
Bestaande situatie
Aan bewoner vrijgegeven
Conserveren
Renoveren
Verduurzamen
compromis
Vrijgeven voor bewoners
Resultaten
Investering totaal
Onderhoudskosten
Comfortkosten
Investering energie
Energiebesparing
Rentepercentage
Energiekostenstijging
Terugverdientijd
Huurpunten
Gemiddelde huurpunten
Maximale huur
Max. verhuging
Terugverdientijd
Bouwbesluit 2012
Pakketinhoud


2040

End goal: all Dutch homes directly under one button!

- Building environment
- Public space
- National -> International
- Construction sector -> trans sectoral
- How?

- **Geno type of NL mapped => map of home**
- **Feno type of NL mapped => map at home**

Shift happens, from yesterdays' logic to today's logic

Central	Decentral
Hierarchical control	P2P and self-control
Linear and incremental	Circular and disruptive
Profit, ownership	Shared values: PPP + Pneuma
Product, construction drawing	Service, 3D experience from genome
End users and silos	Prosumers and networks
Partial rationality	Integral systemic thinking
Intra sectoral	Intra sectoral and trans sectoral
Survive	The good live, cooperate
Business case	Value case
Operational excellence	Operational and innovative excellence
Competitors	Co-operative stakeholders
(Unconscious) part	(Conscious) part and whole
Determinism (Newton)	Uncertainty (Heisenberg, ESW)

Challenge for
smart cITy stakeholders

- **Facilitating transition from left to right (mechanism design)**
- **Initiate and learn to work with the digital city genome**

You can only see it, once you've got it!

Johan Cruijff

nico.baken@kpn.com
manifestnicobaken.nl