

# CCC - TECHNOLOGIES FOR THE ATTRACTIVE CITY

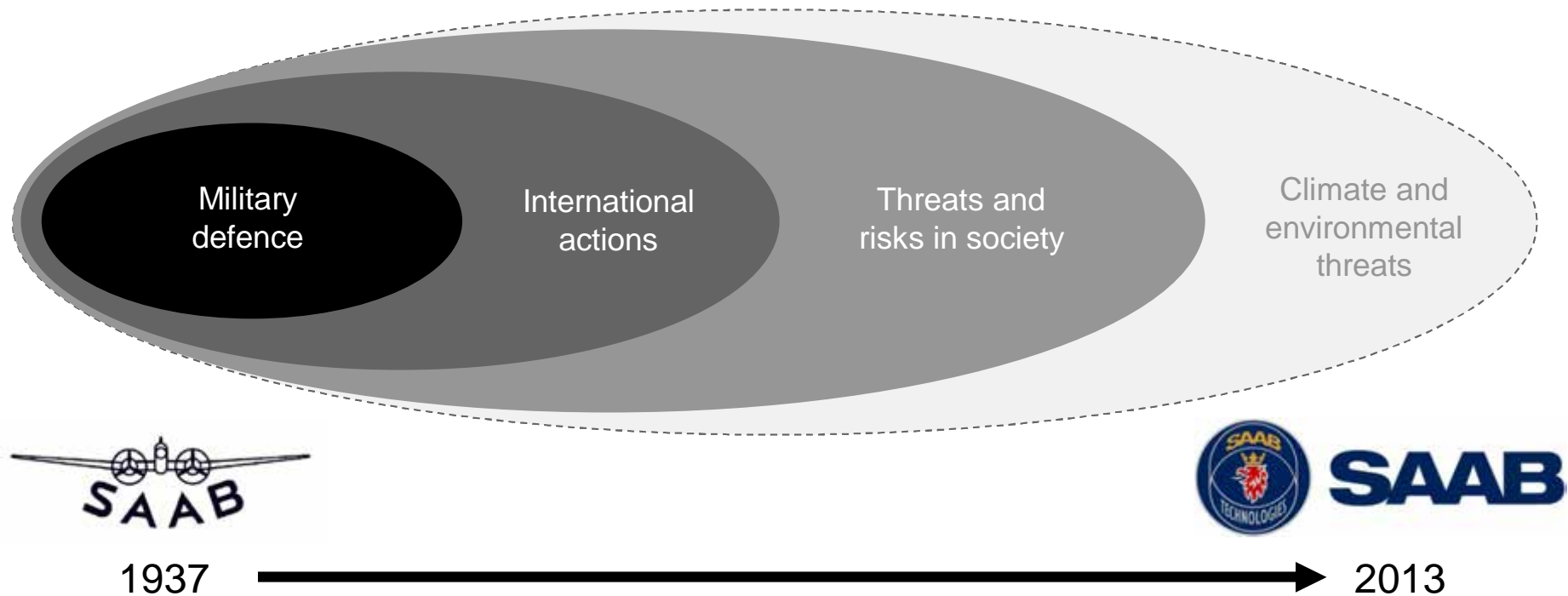
*SCOP, Background, Methodology and Implementation – Lkpg Demo*



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# BUSINESS CONCEPT



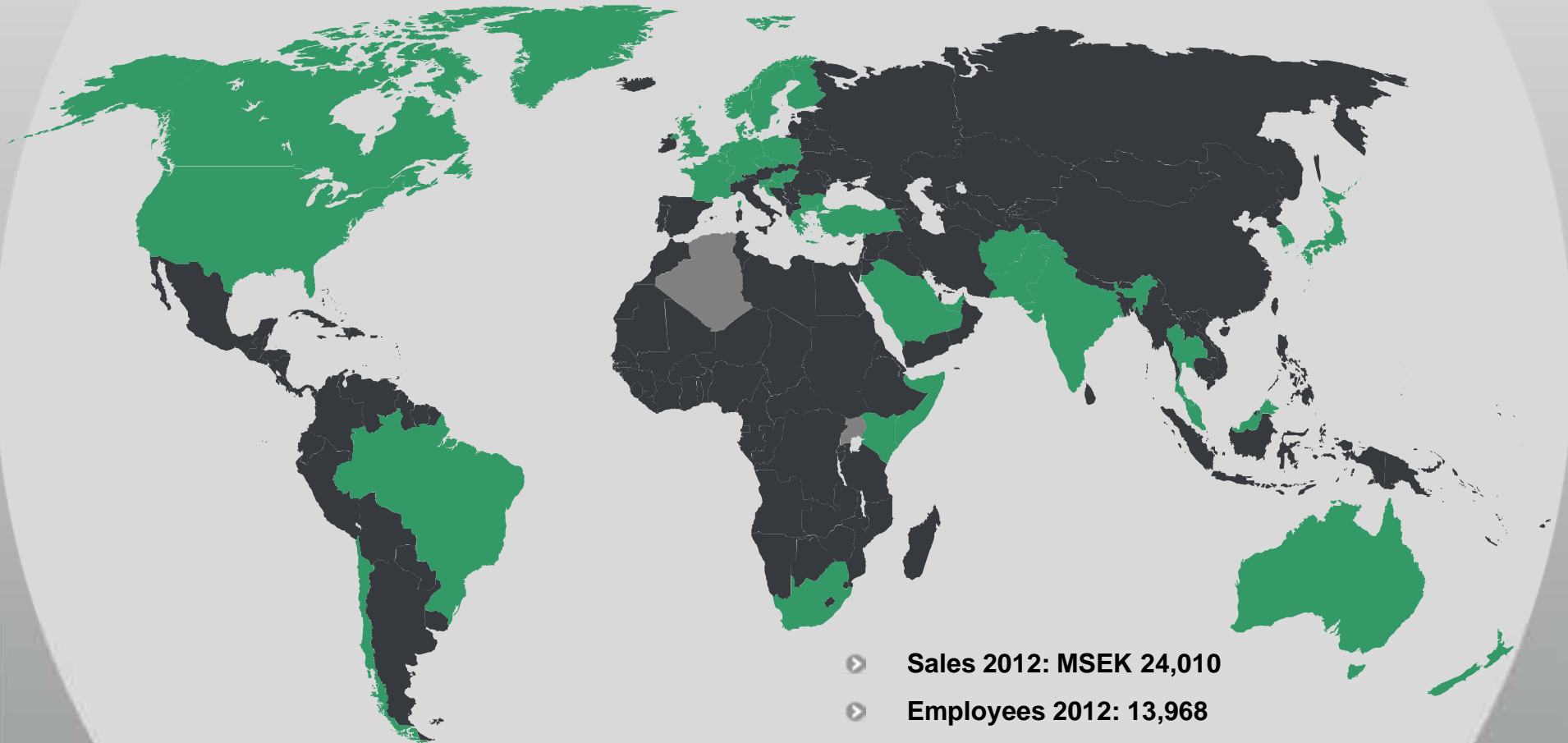
Saab constantly develops, adopts and improves new technology to meet changing customer needs. Saab serves the global market of governments, authorities and corporations with products, services and solutions ranging from military defence to civil security.

# PORTFOLIO



# SAAB PRESENCE WITH PERSONNEL

(FULL & PART TIME)

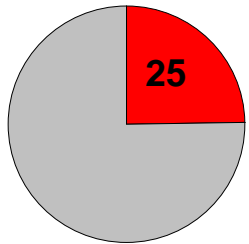


- Sales 2012: MSEK 24,010
- Employees 2012: 13,968
- Established on 32 markets
- Sales to 100 markets
- 73% of order backlog outside Sweden

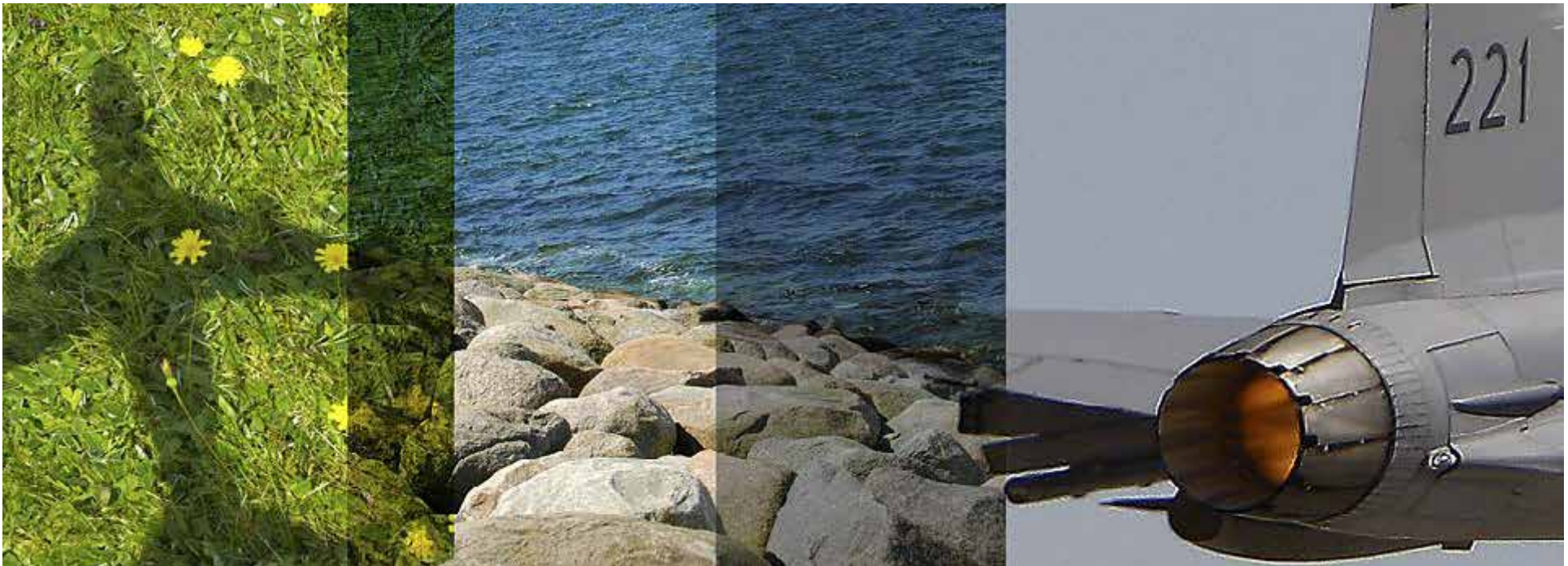




# THE GREENTECH BUSINESS CONCEPT



🔴 R&D as a percentage of sales 2012



# TECHNOLOGIES FOR THE ATTRACTIVE CITY BY SAAB

EFFICIENT, SECURE AND SUSTAINABLE

Renewable energy and smart grids: 1, 8, 10, 11

Waste to Energy: 8

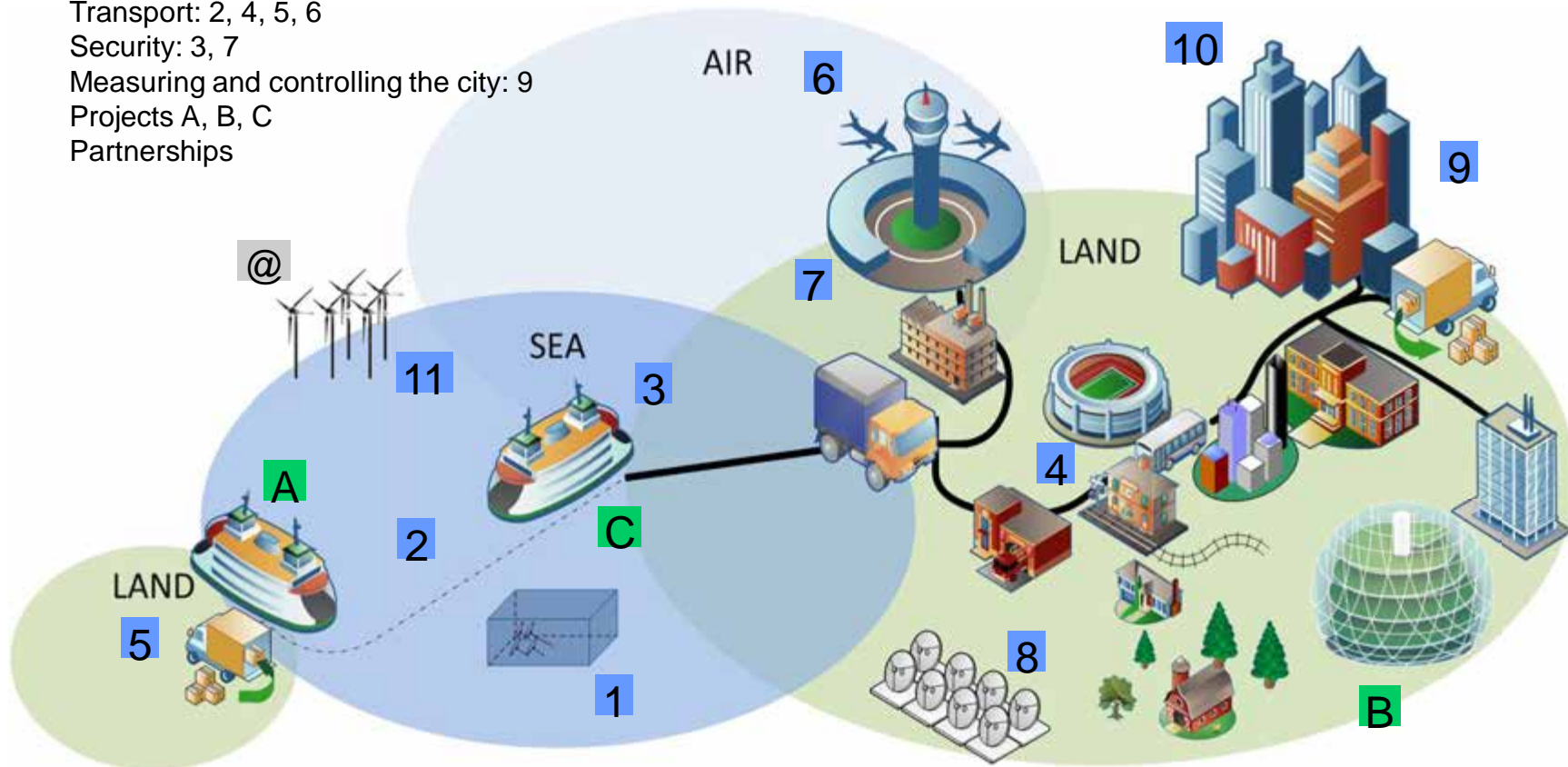
Transport: 2, 4, 5, 6

Security: 3, 7

Measuring and controlling the city: 9

Projects A, B, C

Partnerships





# BACKGROUND

- Measuring the City
- Communication
- Cooperation

How can a city coordinate and manage sustainable growth?

*...rapid urbanization, changed demographics, climate and environmental related difficulties, fiscal strains, ageing city systems...*

How can a city become more inclusive and transparent?

Picture: NASA, NOAA



# BACKGROUND

CCC →

Service

Integrate

City Data



Picture: NASA, NOAA



# SAAB CITY COOPERATION CENTER PROJECT, SCOP



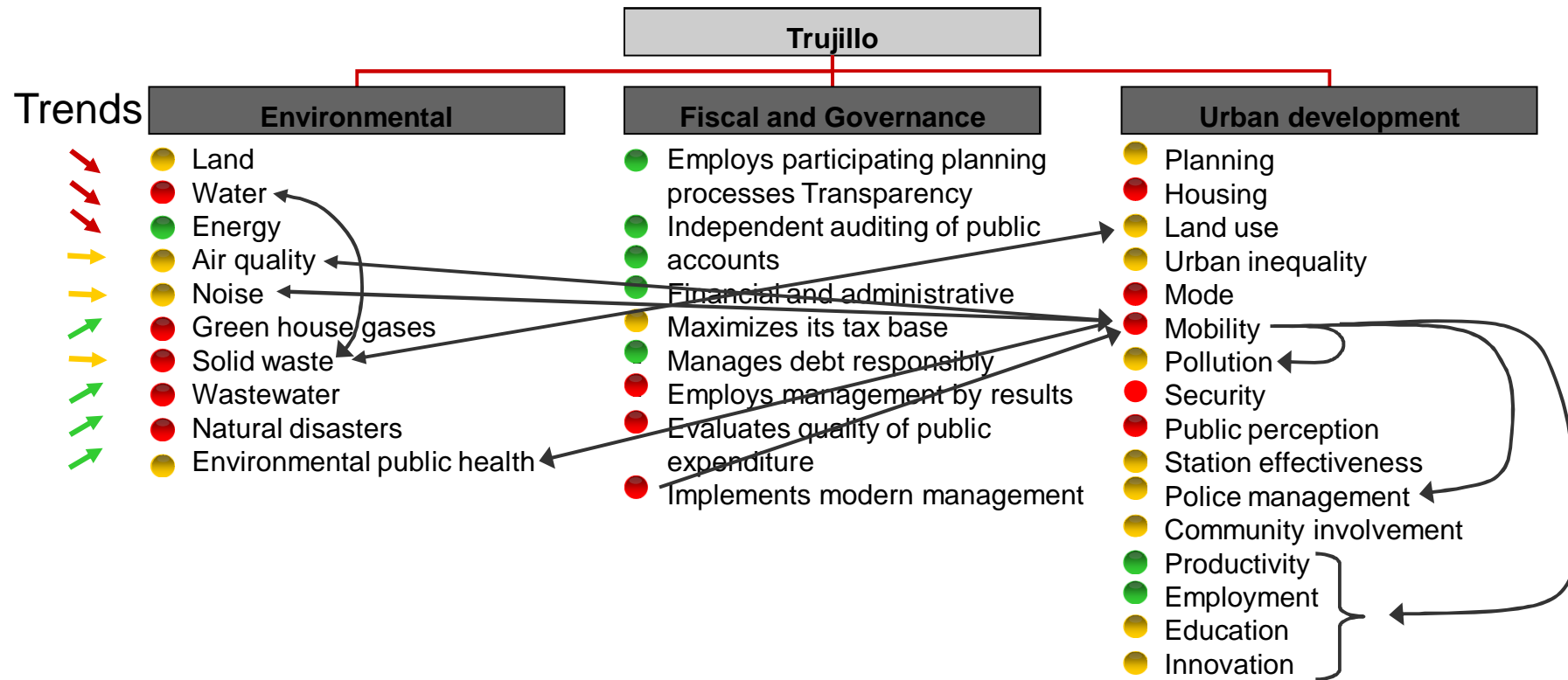
- Inter-American Development Bank, Swedish Energy Agency, Saab AB
- Linköping (SE)  
Joao Pessoa (BR)
- Mobility, Security, Energy and Environment
- How to implement?

# CCC Methodology

**We want to know where we are...**

**....To measure the city!**

# The methodology in Trujillo



## Main opportunities per pillar based on objective diagnostic

- No landfill (waste disposal)
- Low quality for water supply
- Low treatment of waste waters
- Outdated plans for natural disasters risk prevention

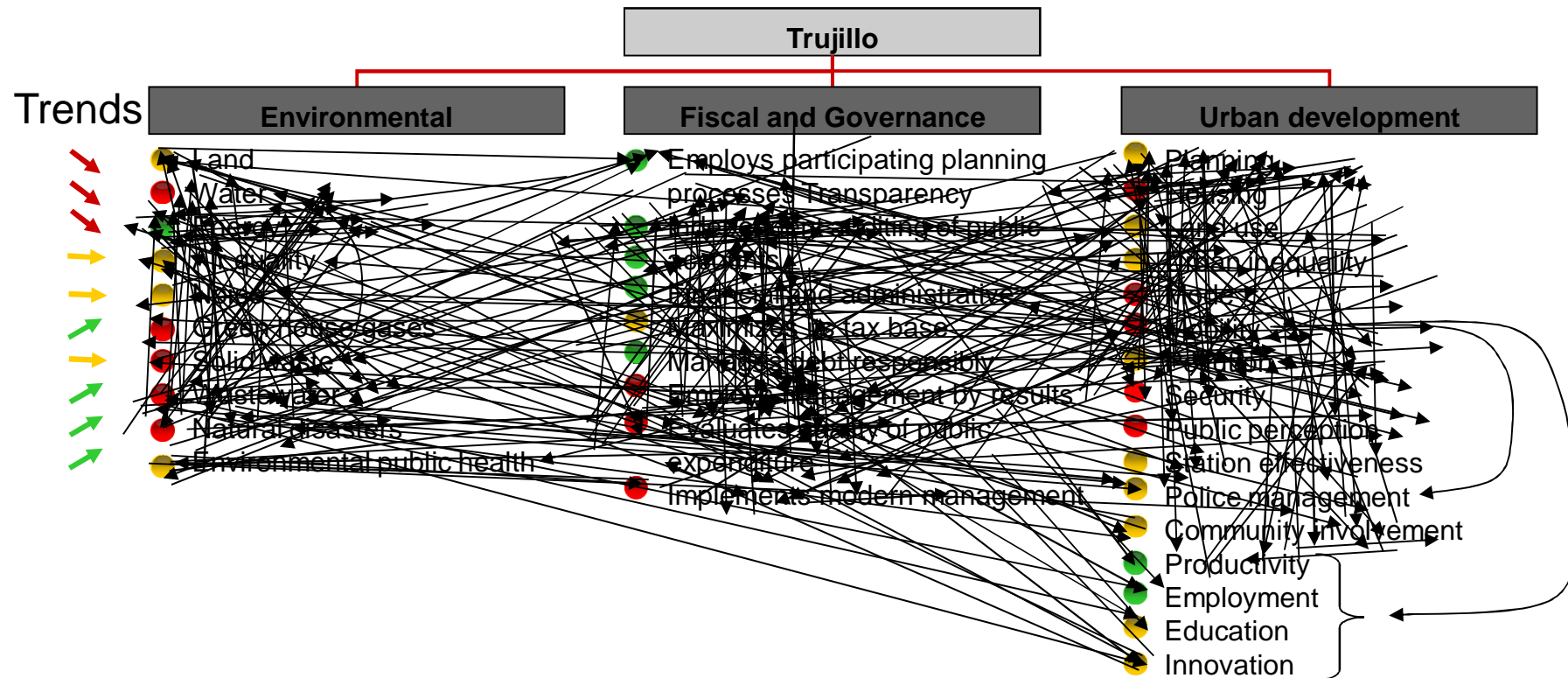
- Low tax base producing limited resources for investment
- Low transparency in fiscal management

- Informal/inadequate housing
- Suboptimal public transportation
- Security concerns (homicides)





# Dashboard



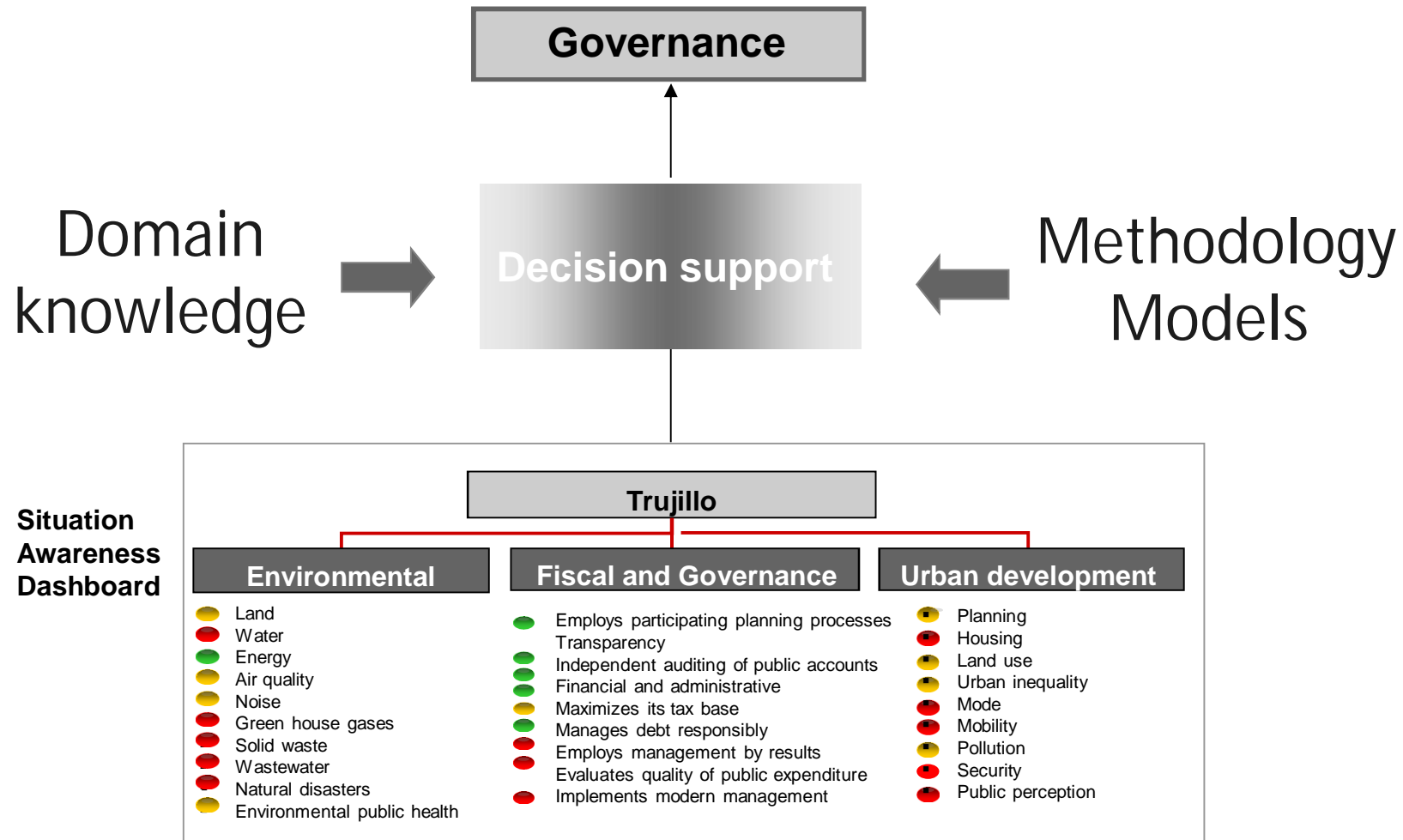
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# Decision Gap (Strategic Management)



# CCC Methodology

**City structures and Decision  
Processes ...**

**... To understand the City!**

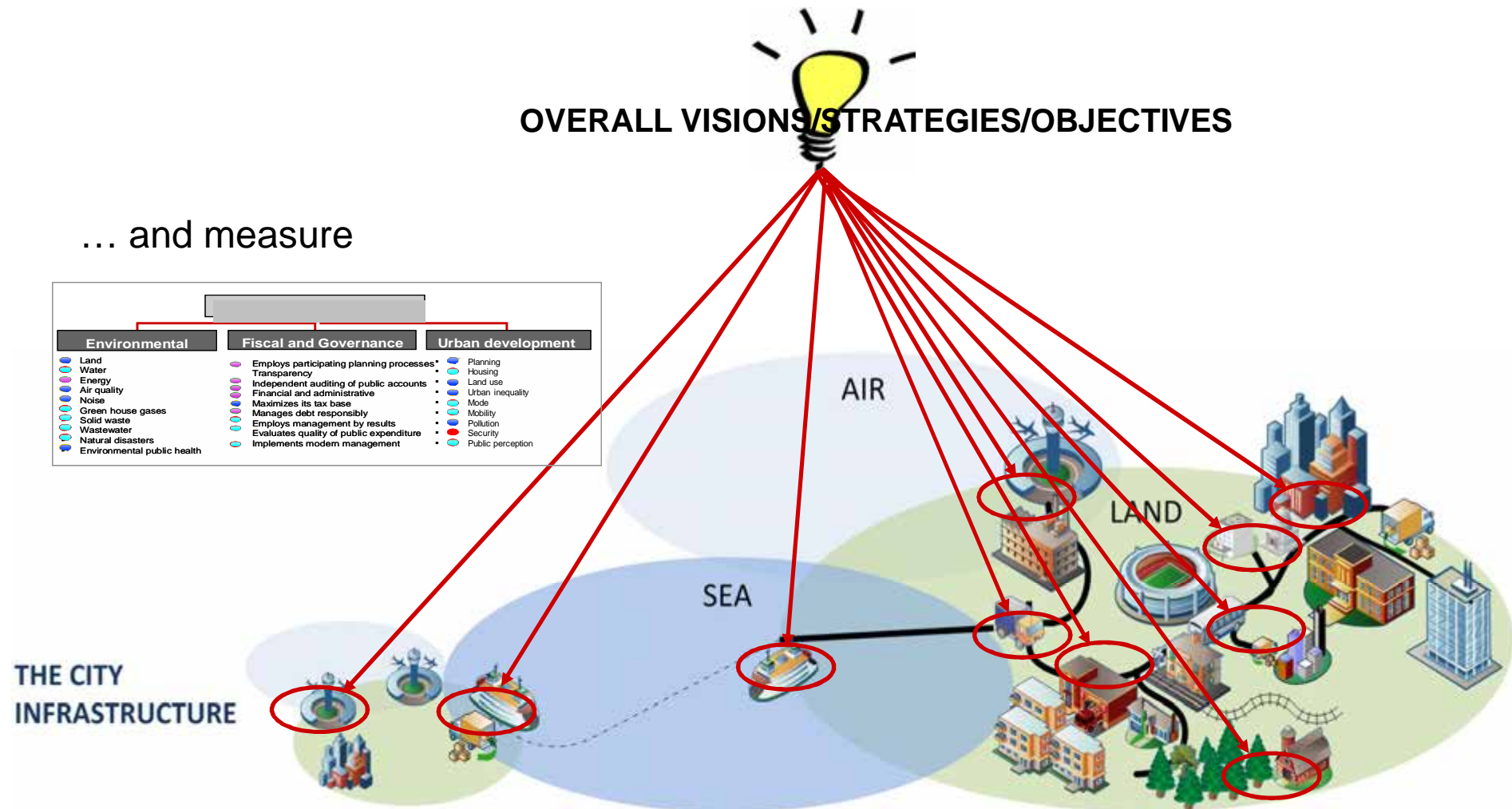


# DECISION PROCESSES

*The need for cooperation, coordination and collaboration are the same in each complex enterprise, from a larger project to full-scale activities in a region ...or a city. Can we control long term **Change**?*



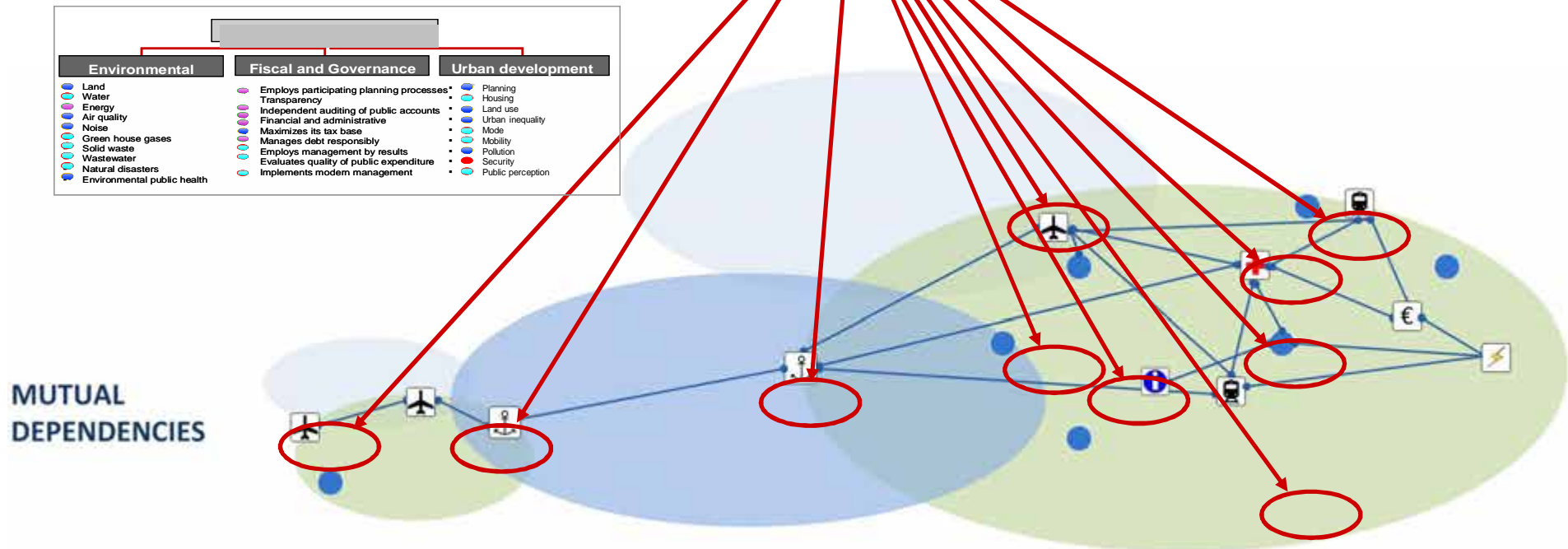
# DECISION PROCESSES - Structured Strategies



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OVERALL VISIONS/STRATEGIES/OBJECTIVES

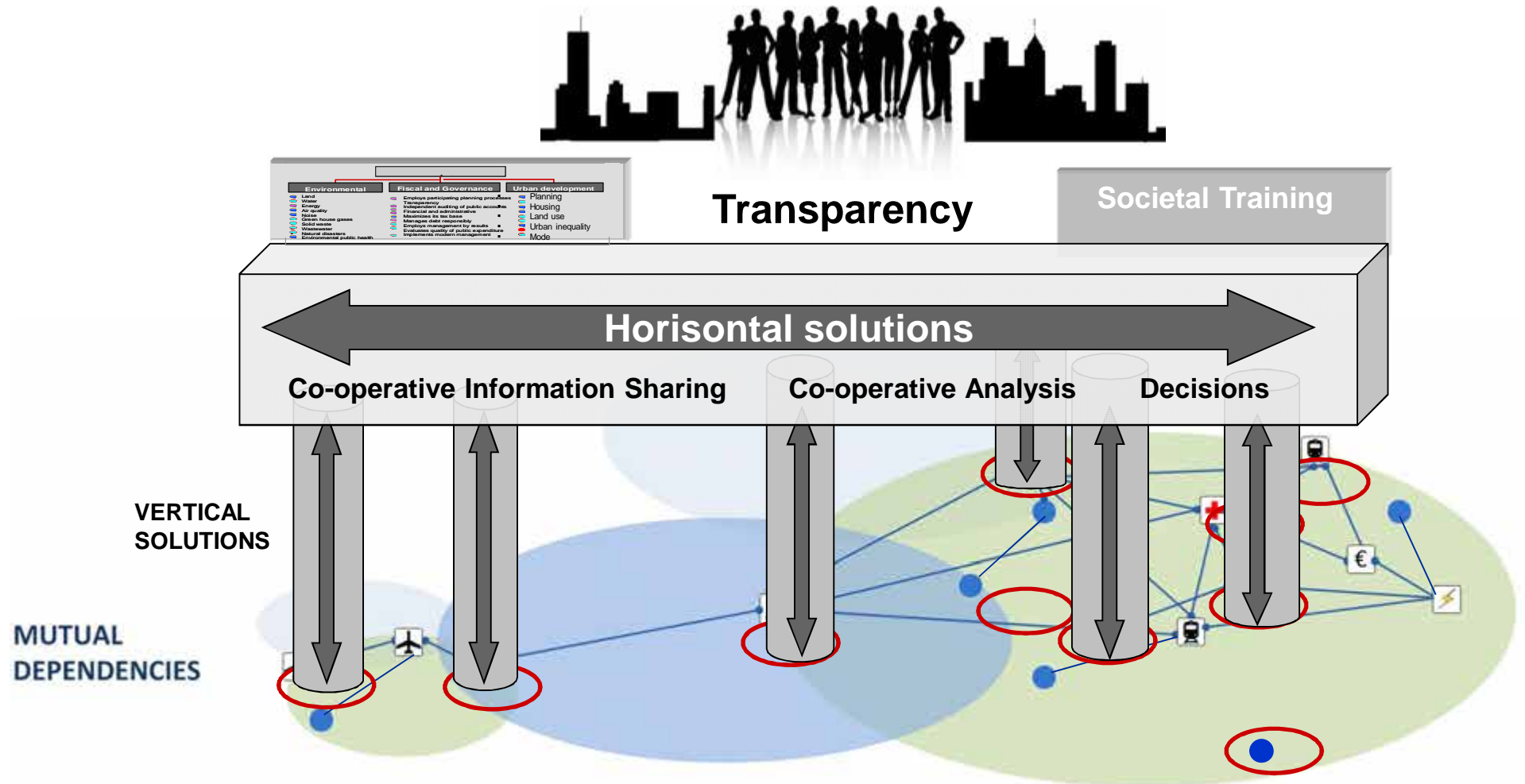
... and measure





# CCC - CITY INFORMATION MODEL

Include Vertical and Horizontal Dimensions - Co-operate and Act



# Saab Horizontal Solutions - CCC

## Rapid 3D Mapping – Virtual City



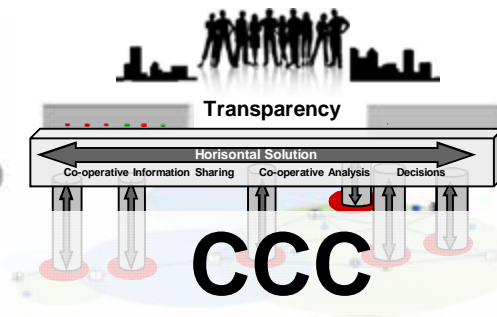
## Volunteer s



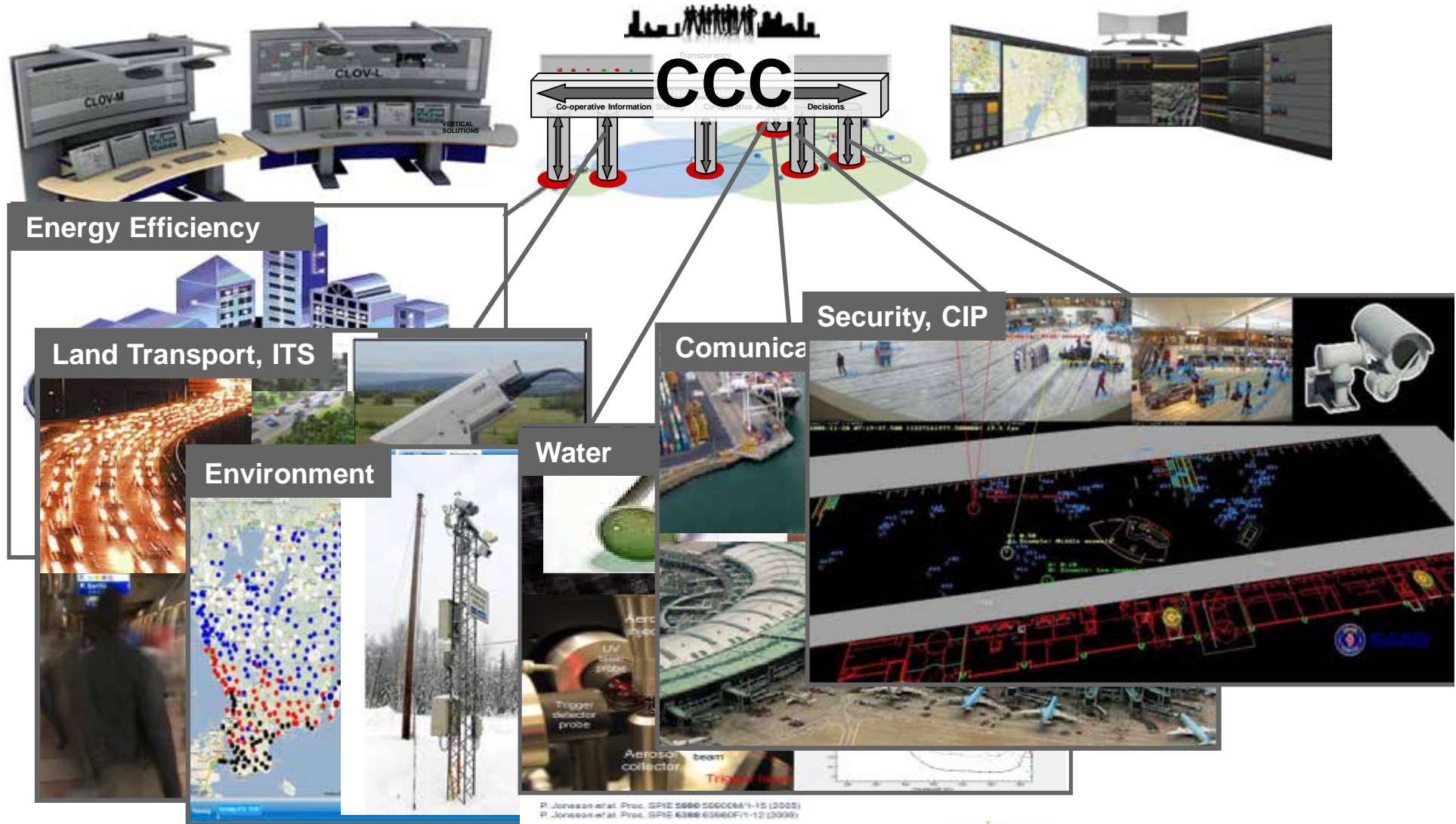
## Information



## Command & Control Resource Management



# Saab Verticals Solutions







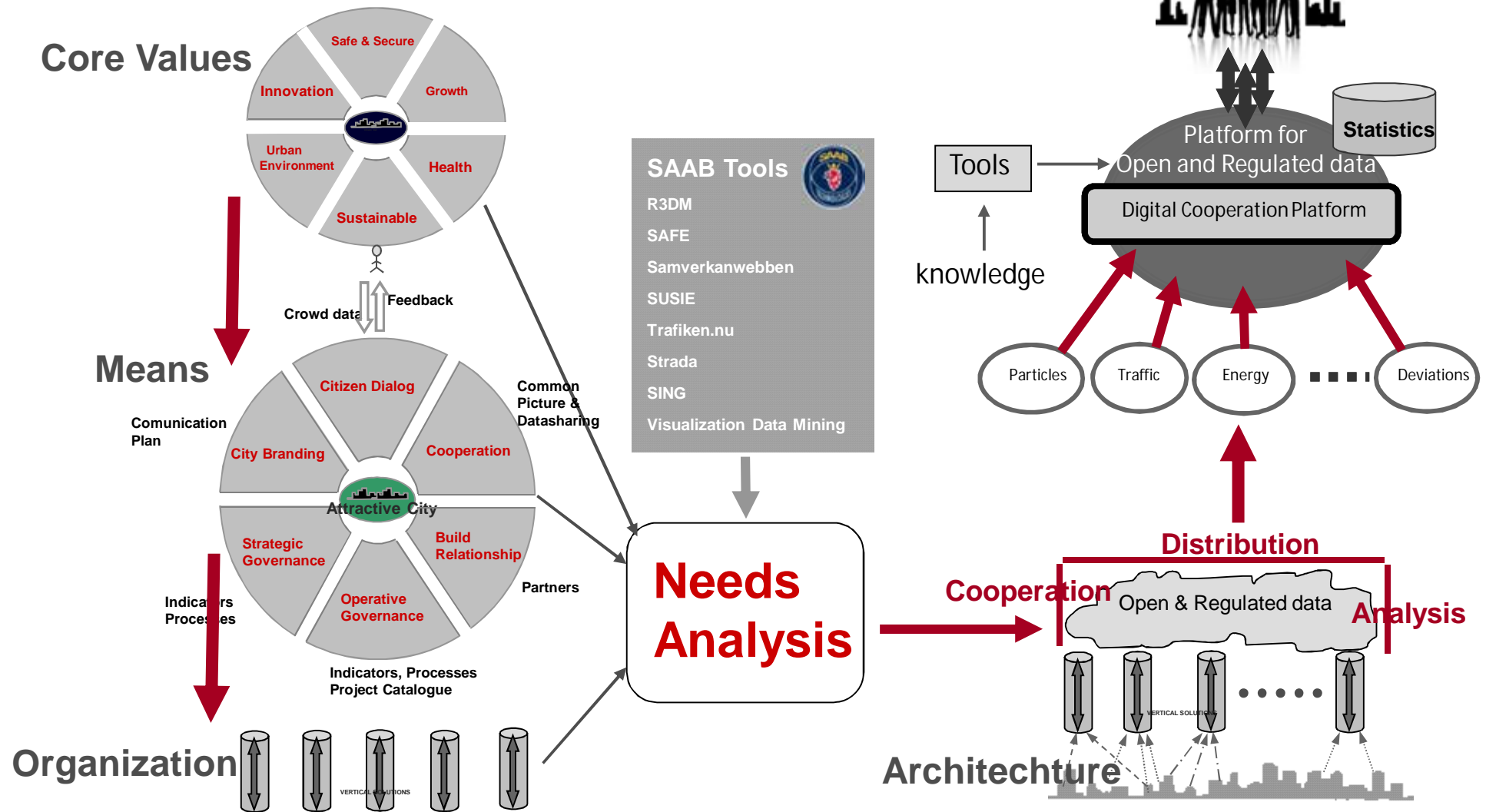
# Demonstrator in Linköping



Workshops, Domain Meetings and Feedback....

**Needs analysis and implementation**

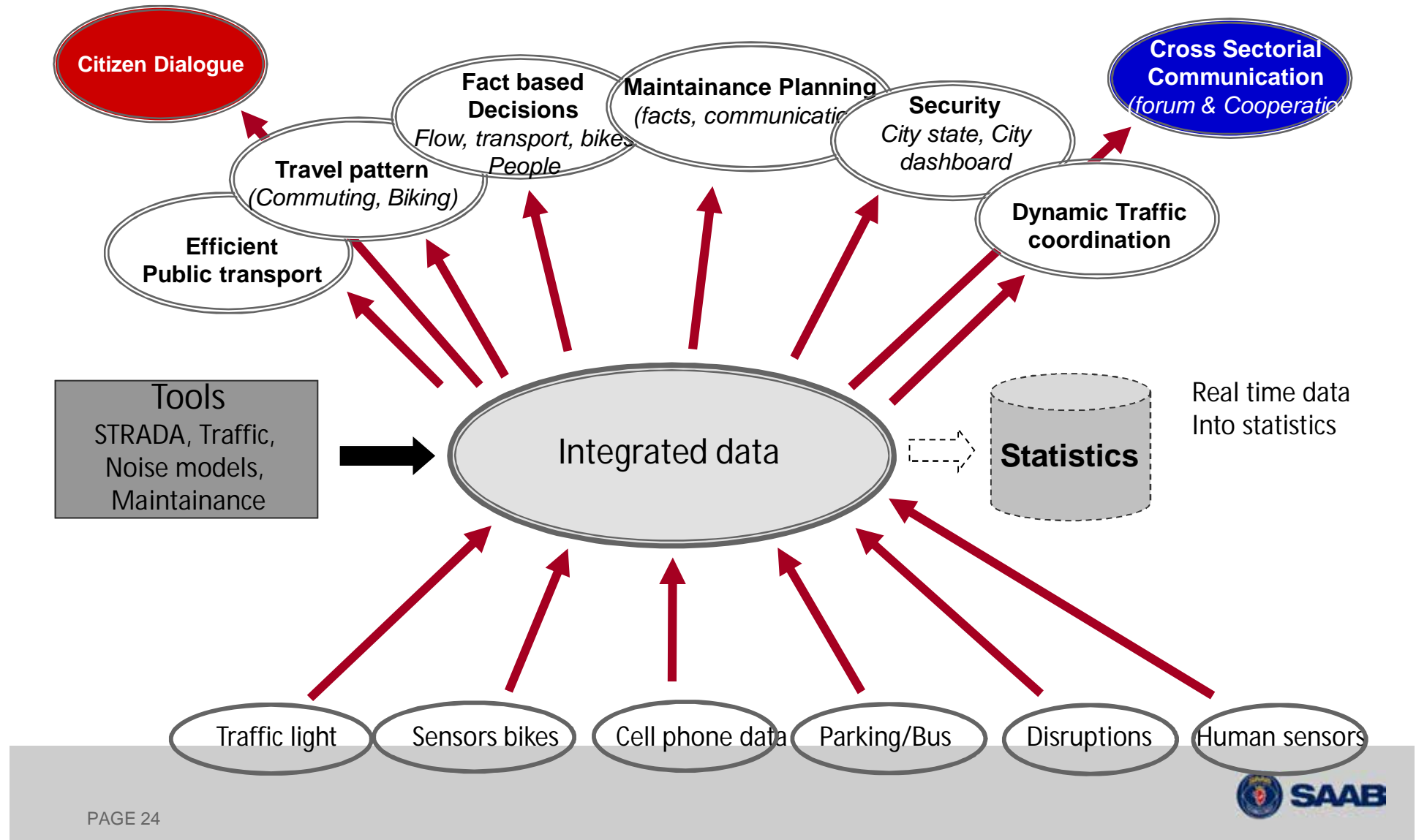
# Needs Analysis



# Observations

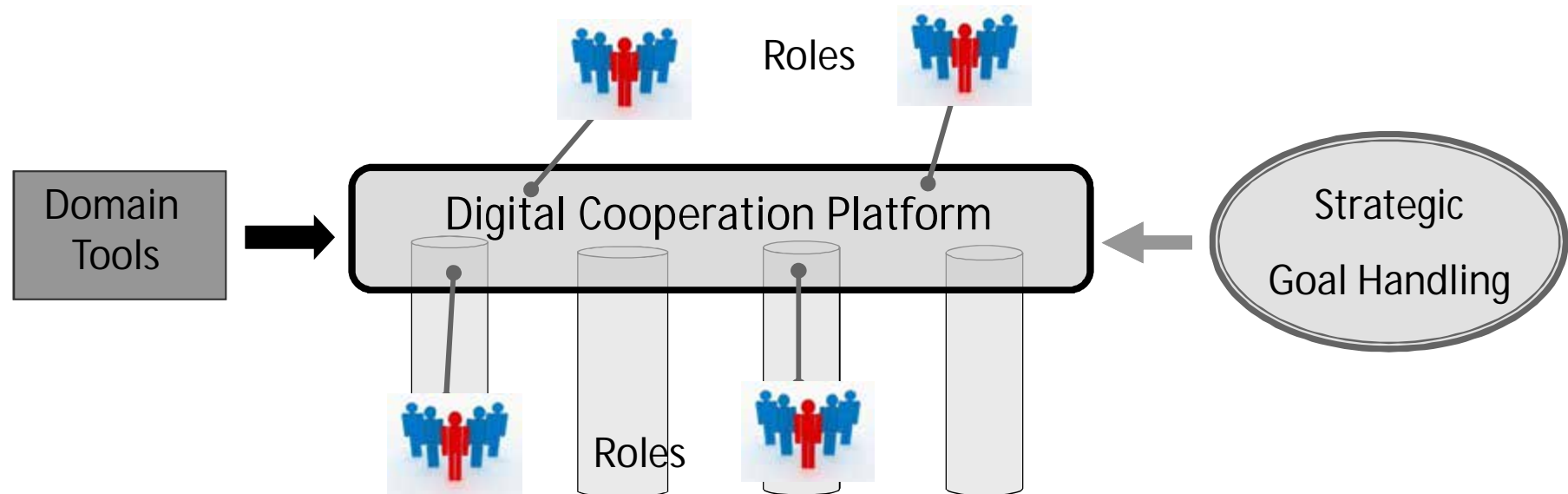
- Measurements relates to several domains
- Use measurements for cross sectorial benefits
- Citizens dialogue is one key input and output in each domain
- Live data/Statistics enhance fact based decision making but is rarely used
- The power of cross sectorial cooperation may be underestimated
- Hence:
  - Valid structure: ***Measure, Cooperate, Analyze and Distribute*** (Citizens and professional users)
  - Central access of data from a common platform with open arcitecture and open interfaces – promotes growth
  - Based on this...Sharp and Smart solutions are "easy" to implement
    - Smart citizen dialogue and much, much more

# Needs analysis - Traffic, Energy, Environment & Water





# Cooperation: A Flexible Digital Platform



A cooperation group can be initiated in order to solve cross sectional issues and decision making

- **Environment:** Coordinate open data on a local and regional level.
- **Water:** Stakeholder cooperation in water drainage areas
- **Energy:** Stakeholder cooperation in energy reduction programs
- **Traffic :** Stakeholder cooperation in maintainance opeartions etc.

# Overview

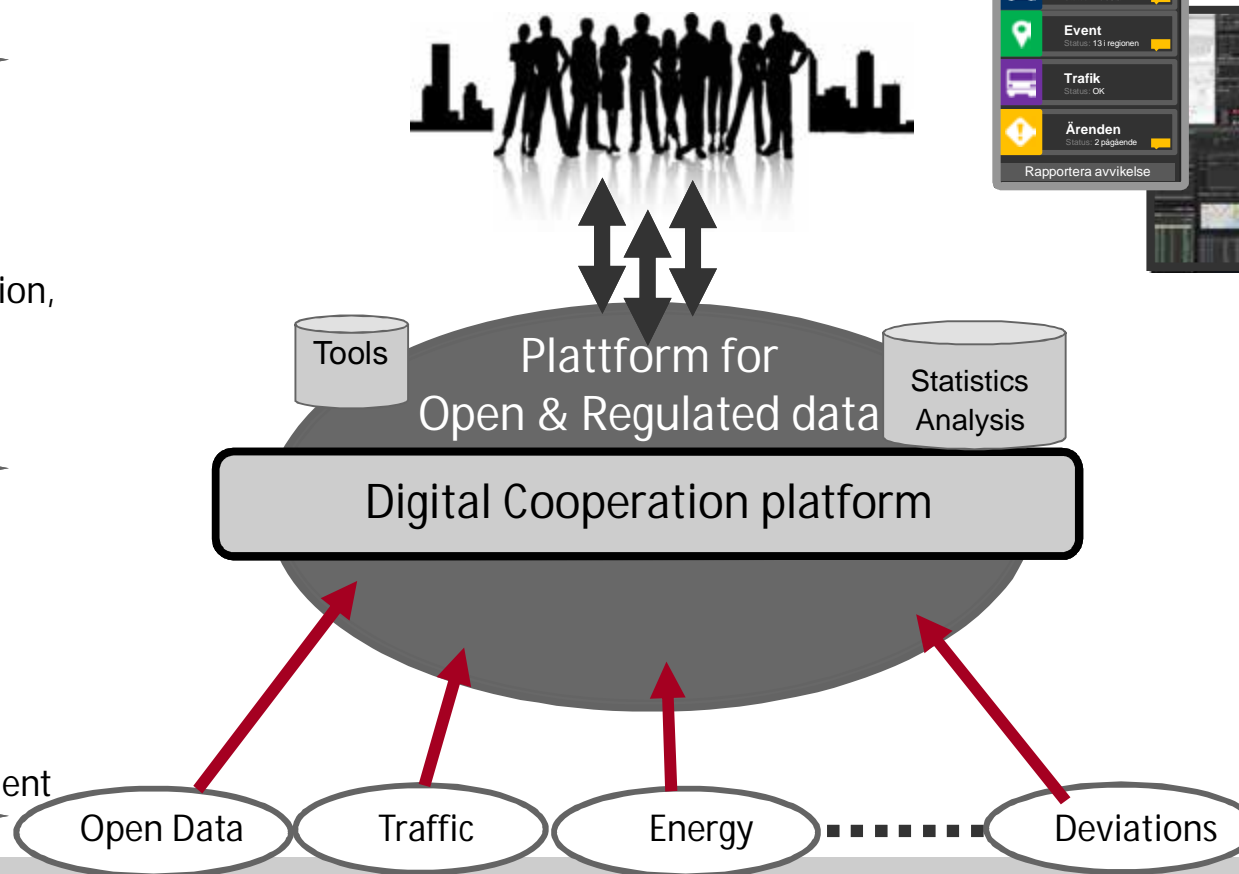
## SCOP City Visualization and management system and interface

### Interface

Dialogue Platform

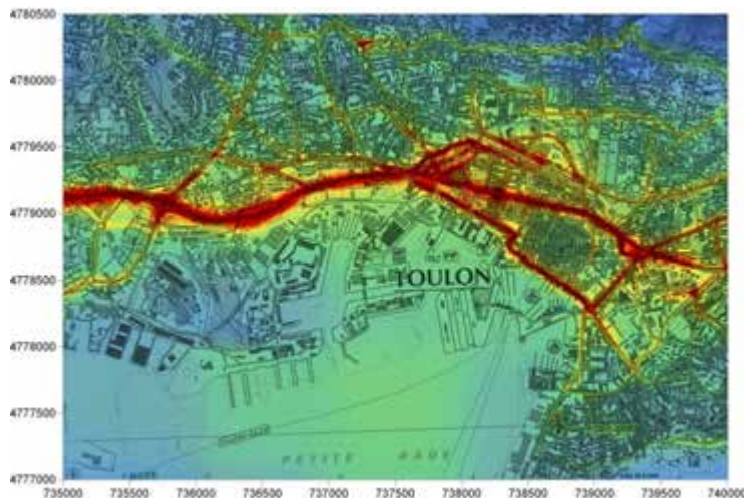
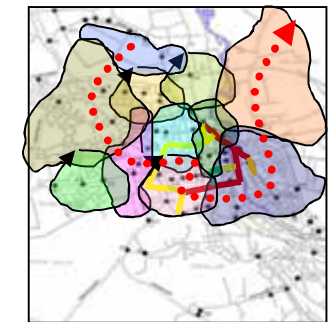
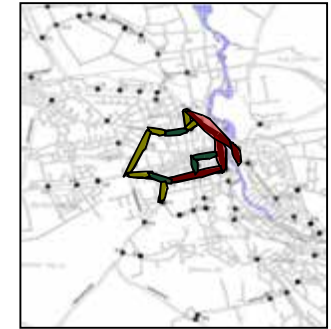
Platform for  
Information integration,  
analysis, statistics,  
indicators,  
Cooperation

Real time measurement



# SCOP Linköping Demonstration

- ▶ Traffic application,
  - Traffic flows, Disturbance info, Travel patterns, Particle model,
  - Bicycle info, position based (promotes a better cycling city)
- ▶ Scenario "the connection Environment-Health-Energy"
  - Energy consumption per neighborhood,
  - Total CO2 emissions (energy + transport). Monitoring of air pollution, estimate particle levels in the city and forecasts.



# SCOP Linköping Demonstration

## ➤ Citizen Dialogue

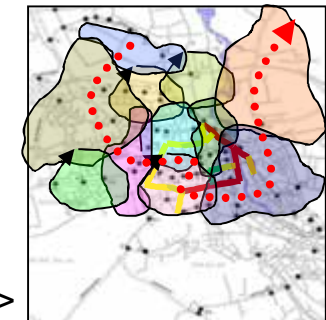
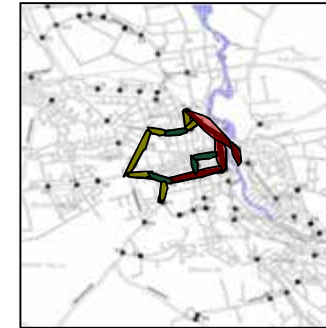
- Package information, surveys, crowd sourcing – App, Webb

## ➤ Strategic City Management

- Indicators, Analysis, Assessment & Feedback

## ➤ Loops:

- Energy production management -> involve citizens -> behavioral change -> profit sharing
- Traffic -> SMHI -> Emissions -> Citizens -> Tracking of health
- Emissions -> Dynamic parking pricing -> involve citizens -> change in traffic pattern
- Particles -> Local Emission -> Change Operations -> Emissions reduced ?
- ...





# JOÃO PESSOA – PARAÍBA

## THE BRAZILIAN CITY

- **Population:** 723.515 (inhabitants)
- **Area:** (Km<sup>2</sup>) 211,475
- **Population density** (inhab/Km<sup>2</sup>) 3.421,30
- **Mayor:** Luciano Cartaxo – PT (Workers Party)
- **Main challenges identified:**
  1. *Urban Mobility*
  2. *Civil Security*
  3. *Environment Management* (water quality, risk and vulnerability analysis)



# JOÃO PESSOA – PARAÍBA

**Saab and IDB meeting with João Pessoa Mayor- Mr. Luciano Cartaxo**

**Technical Mission to João Pessoa, 4-8 Nov 2013.**



*Picture: Representatives from João Pessoa, IDB and Saab.*



**SAAB**

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