The CoSMo Company

Break the Silos.  Predict the Unpredictable
Complexity is everywhere!
### Impact of new transport infrastructures in Versailles

#### CONTEXT
- 80,000 + habitants
- 3 major transport projects
- Dynamic simulation of the impact
- KPIs: GHG, quality of life, noise, population density, congestion

#### ISSUE
- Optimizing the dimensioning of two transport projects over 30 years

#### SOLUTION
- A systemic urban planning application dedicated to cities
LAND USE

DISTRICTS, AREAS, BUILDINGS

OCCUPATION RULES

NEW BUILDINGS & INFRASTRUCTURE

LAND USE MODEL
TRANSPORTATION NETWORK ORGANISATION

ROADS
PUBLIC TRANSPORTS
GHG DIFFUSION
RULES
NOISE

TRANSPORT NETWORK MODEL
HOW DOES INVESTMENT FIRMS BEHAVE?

- Offer & Demand
- Investment Rule
- Different Socio-Economics Needs

Investment Model
HOW DOES THOSE THREE MODELS INTERACT?

COUPLING THE 3 MODELS
BREAK THE SILOS – BUILD INTEGRATED MODELS
EXISTING AND PLANNED INFRASTRUCTURE
VISUALIZE AND ANALYZE THE RESULTS

DENSITY EVOLUTION (2010-2030)
RUN DIFFERENT SCENARIOS AND CHOOSE THE MOST EFFECTIVE ONE

SCENARIO 1
GHG evolution without public transport incentivisation

SCENARIO 2
GHG evolution with public transport incentivisation

EVIDENCE BASED DECISION
The Magic Behind CoSMo

SYSTEMS

MODELS

SIMULATIONS

ANALYSIS

DATA

Scenario N

Scenario A

Scenario B
Systemic predictive maintenance optimization

**CONTEXT**
- 100,000 km of line
- 9000 employees
- $1 Bn annual OPEX & CAPEX
- 1 million operations over 50 years

**ISSUE**
Passing the wall of investments

**SOLUTION**
A systemic planning application dedicated to electrical transport networks
Dynamic Water Network
Reconfiguration for Resiliency

**CONTEXT**
- 5 million + people
- 163,000 buildings
- 72,000 valves
- 235,000 pipes
- Less than 4 hours to act

**ISSUE**
Preparing for failure in major water production sites in Paris

**SOLUTION**
A dynamic network reconfiguration application to optimize crisis preparation and management
They Trust Us for Understanding their Critical Systems
The CoSMo Company

- Year of creation of CoSMo: 2010
- Number of employees: 42
- Offices in Lyon (France) and San Francisco (US)
- Series A in 2014: $5.2 M
- Person.year of development: 150
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