“Digital Twin to Virtual Twin Experience, how to leverage GeoSpatial to drive efficient, data driven, model based collaborative intelligence and execution at any scale”.

GISTC 2023

DASSAULT SYSTEMES

DATA SCIENCE AT THE HEART OF WORLD CHANGES ?

Data Intelligence is one of the key ingredients of the Industry Renaissance

Rethinking your activity in a data-driven way changes the order of magnitude of your impact

Middle-Age

Renaissance

Industry Renaissance

Key trends:

1. Changes in world representations - Virtual Twins, Metaverse, Data Visualizations
2. Scientific breakthroughs - Artificial Intelligence
3. New ways of trading - Intermediation economy, Usage-based business models
4. New means to propagate information - WWW immediacy, Social Networks, Communities

DASSAULT SYSTEMES

Our legacy

1981
3D
Design

1989
3D DMU
Digital
Mock-up

1999
3D PLM
Product Lifecycle
Management

2012
3DEXPERIENCE®
platform

2020
Virtual Twin
Experience
of **Humans**

VIRTUAL TWIN EXPERIENCE

SCIENCE:
MOD | SIM

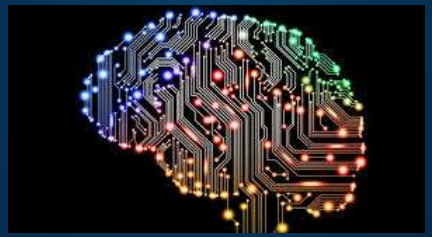
Enterprise in the Value Network

Production Sites

Products

+

SCIENCE BASED
Real World Evidence
BIG DATA+ARTIFICIAL INTELLIGENCE



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COLLABORATION

Structured

Unstructured

Short Long t'

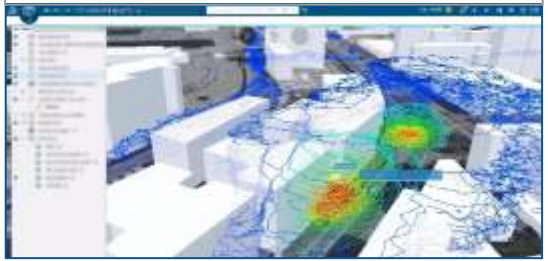
THE 3DEXPERIENCE PLATFORM FOR CITIES

FOSTER ALL FORMS OF GOVERNANCE, COLLABORATION & COMMUNICATION

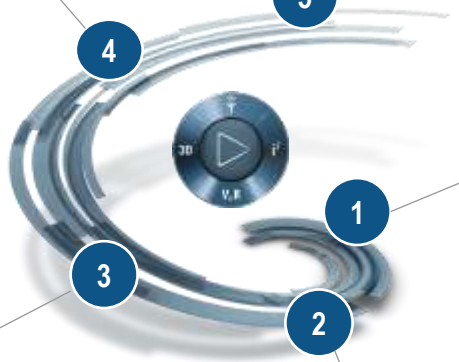
3D MODEL FOR DESIGN BUILD AND OPERATIONS OF THE CITY

DASHBOARD THE CITY AND REVEAL INFORMATION INTELLIGENCE

ANALYZE « WHAT IF » SCENARIO WITH SIMULATION



CITIES & PUBLIC SERVICES SOLUTIONS PORTFOLIO



CITIZEN ENGAGEMENT

COMMUNICATING WITH CITIZENS (INCL. VR)
LISTENING TO THEIR OPINION ON URBAN PROJECTS / PUBLIC POLICIES

URBAN TRANSFORMATION (MOD-SIM)

PLAYING SIMULATIONS / WHAT IF SCENARIOS
WITHIN 3D CITY VIRTUAL TWIN
(TRAFFIC, AIR QUALITY, FLOODING, 5G…)

A CLOUD PLATFORM

SOVEREIGN CLOUD

OUTSCALE

DATA-DRIVEN PUBLIC POLICIES

ELABORATING PUBLIC POLICIES STRATEGIES BASED ON DATA (MOBILITY, ASSET INVESTMENT PLANNING, ENERGY…)

EFFICIENT COLLABORATION IN PUBLIC ADMINISTRATION

TRANSFORMING COLLABORATION MODES

DASSAULT SYSTEMES

SUPPORTING URBAN TRANSFORMATION USE CASES

1. URBAN PLANNING

- Urban strategies
- Urban planning
- Project orchestration
- Development and construction

2. LAND USE GOVERNANCE

- Land use planning
- Public patrimony
- Public asset management

3. URBAN MOBILITY

- Walkability
- Urban cycling
- Traffic
- Urban public transportation
- Urban infrastructure

Use cases examples

SUPPORTING URBAN TRANSFORMATION USE CASES

4. ENERGY USE AND EFFICIENCY

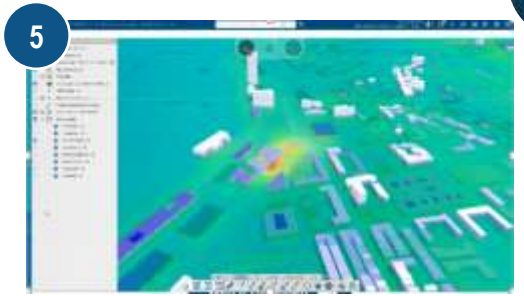
- Energy efficiency in buildings
- Urban energy consumption

5. CLIMATE AND SUSTAINABILITY

- Urban flooding
- Air and noise pollution
- Urban heat islands

6. CRISIS ANTICIPATION

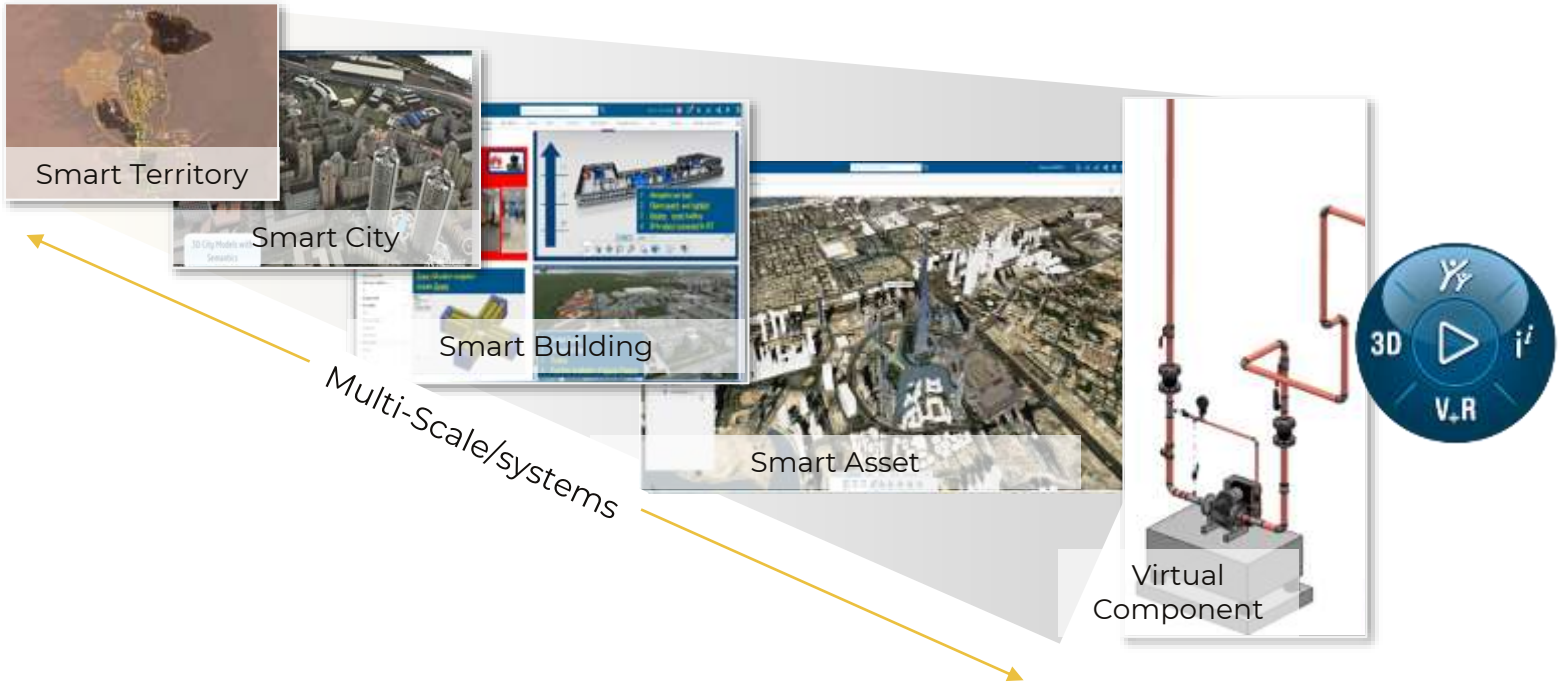
- Public health management
- Chemical risk
- Indoor ventilation



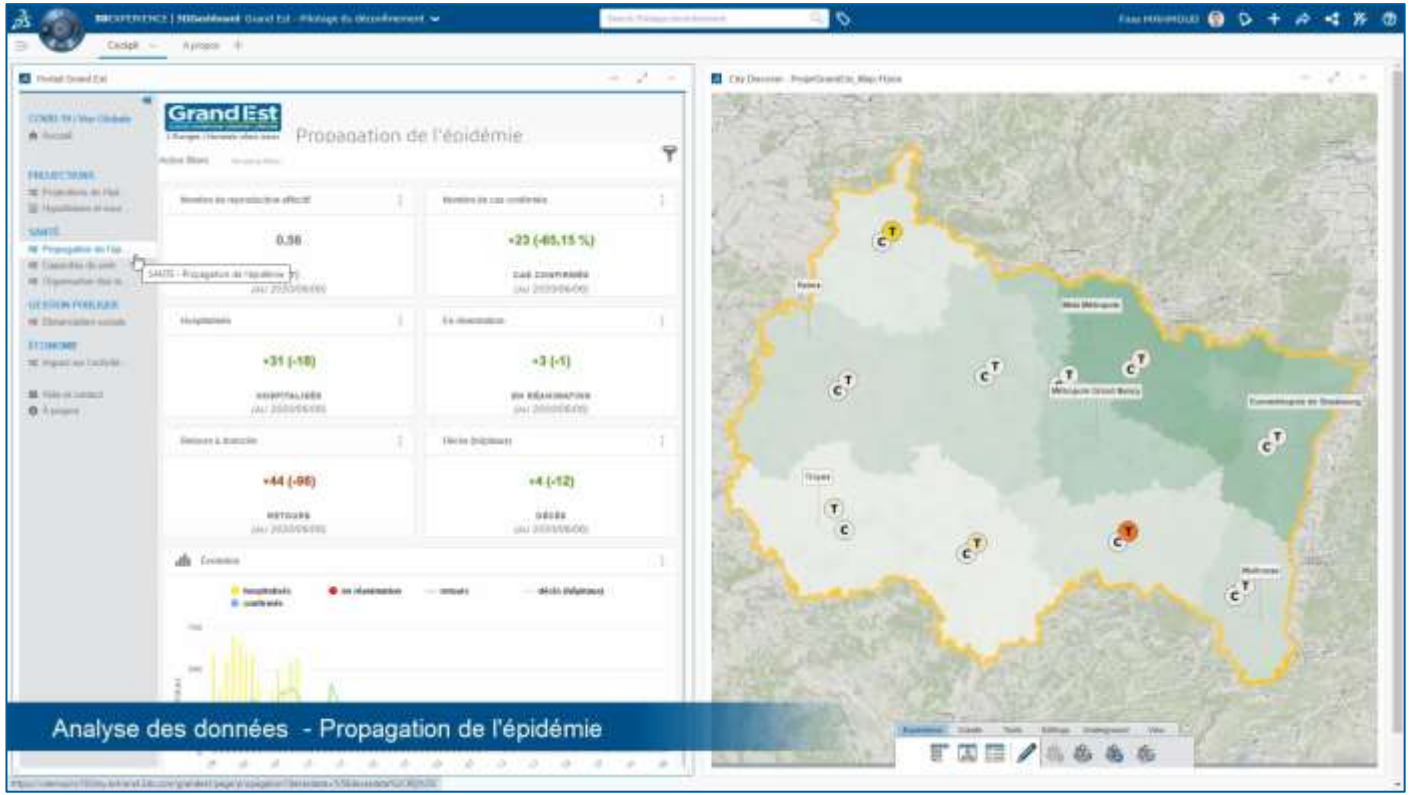
Use cases examples

DIGITAL TWINS : MULTI-SYSTEMS

A multi-scale/systems solution, from virtual territory to virtual component, with enrichment of metadata to enable specific use-cases



DATA DRIVEN PUBLIC POLICIES



REGIONAL COVID STEERING DURING CRISIS - 2020

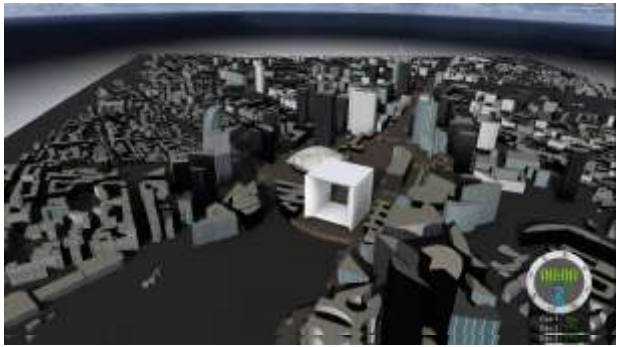
URBAN TRANSFORMATION W/ VIRTUAL TWINS

MODELING

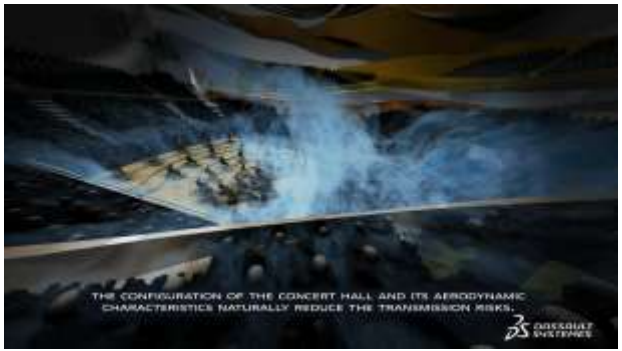
Zenata 3D Virtual Twin

Rennes Métropole 3D virtual twin

SIMULATIONS



Paris La Défense – toxic gas simulation



Philharmonie de Paris – air flow simluation