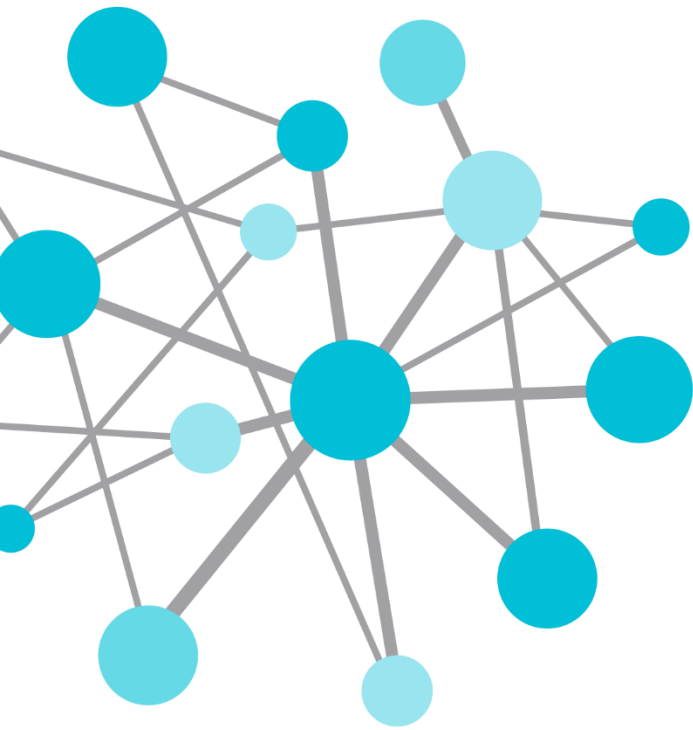




Innovation around the PI System

Presented by **Guillaume GALLON, Veolia Water**
Mahyar SEPEHR, Ysance



1. Introduction

SEDIF

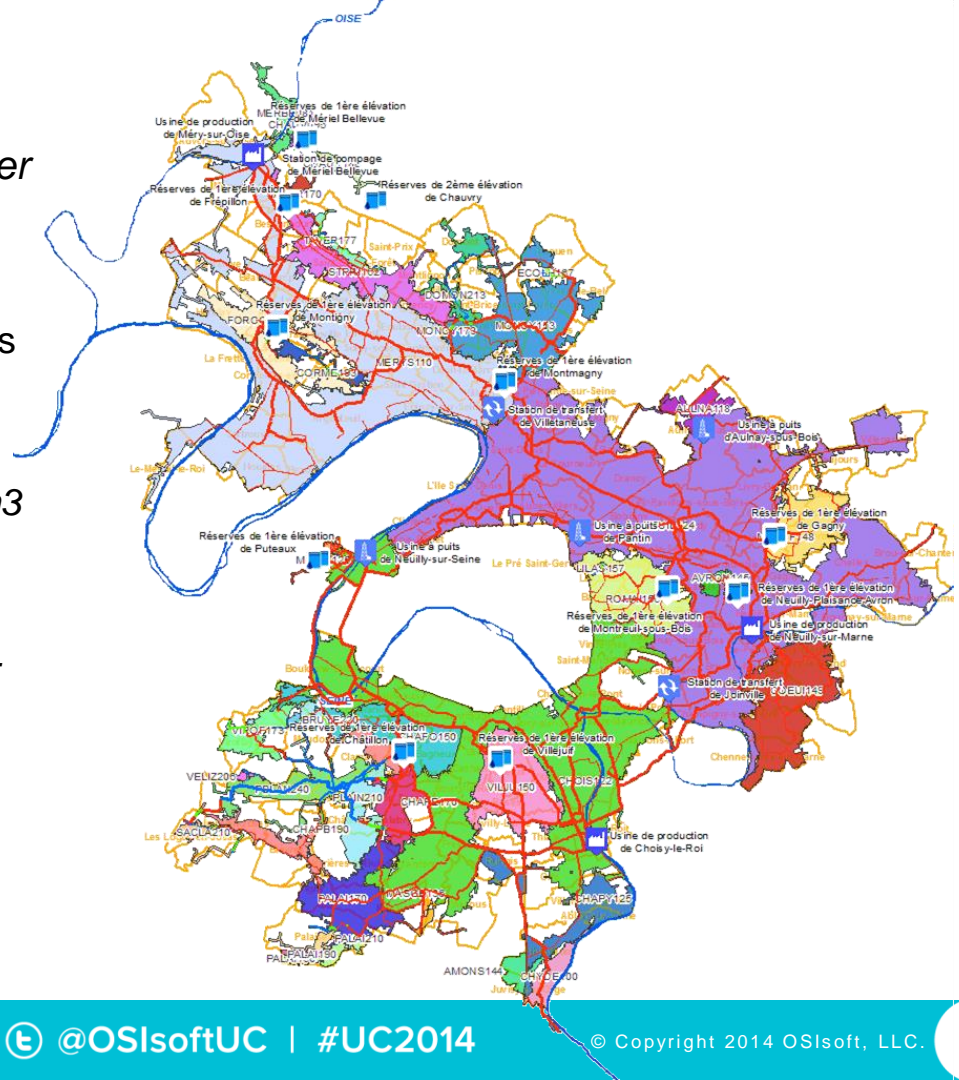
Founded in 1923 to produce and deliver drinking water

SEDIF today :

- Covers **149 towns** located in the suburbs of Paris
- Supplies **4 millions customers** (almost 40% of Ile de France)
- Produces 255 millions m³/yr (800 000 m³ distributed/day)

Main Assets :

- **3 water treatment plants** on the Seine, Marne, Oise (Choisy-le-Roi, Neuilly-sur-Marne, Méry-sur-Oise) rivers
- 49 pumping stations (relay plants)
- 65 tanks
- 38 chlorination stations
- **5219 miles of pipes** (8400 km)

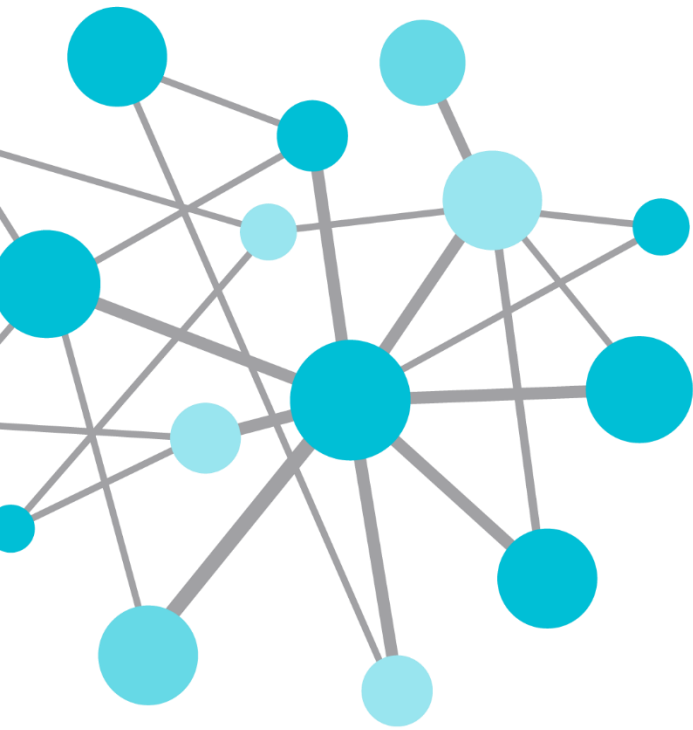


Goals : Innovations & Responsible Water

In June 2010, SEDIF, the water authority for the Greater Paris area, renewed its trust in VEOLIA Water.

New contract → Ambitious innovations for the best Water Services

- Design Next Generation and **Smart Water Services** (Project ServO)
- Increase **Security**
- Offer **more Services**
 - *Water Traceability* (Project Qualio)
 - *Smart Metering* (Project Teleo)
 - *Smart Leak Detection* (Project Res'Echo)
- **Reduce environmental impact**
 - Reduce electricity consumption by 6% by 2020 & move completely to Renewable Energy from 2013 onwards (Project PEEE)
 - Reduction CO2 emission (33%)
 - ISO 50001



2. Approach

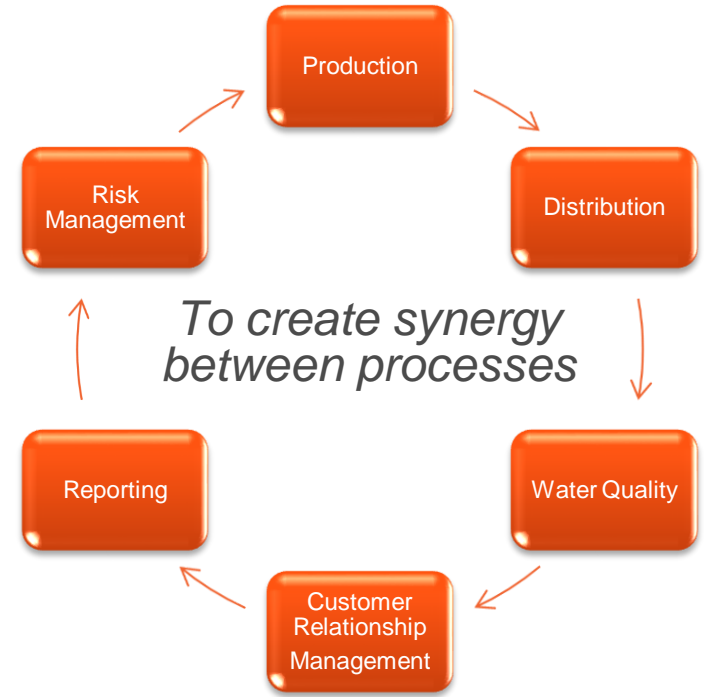
Major Transformation Program

- Context !
 - Competitive context
 - Financial optimization
 - Reduction team etc.

Major idea must be able to address all these innovation (ServO, Qualio, Res'Echo, Teleo) with **one & the same approach**



Unity makes Strength



Many Projects but a Small Team

VEOLIA
Eau d'Île-de-France
Délégataire du SCDIF

ysance

OSIsoft®

Business
Team

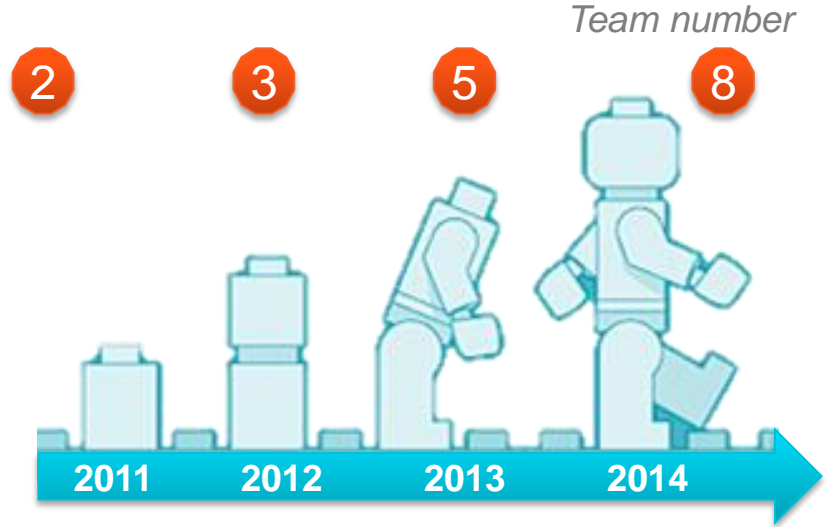


IT Team



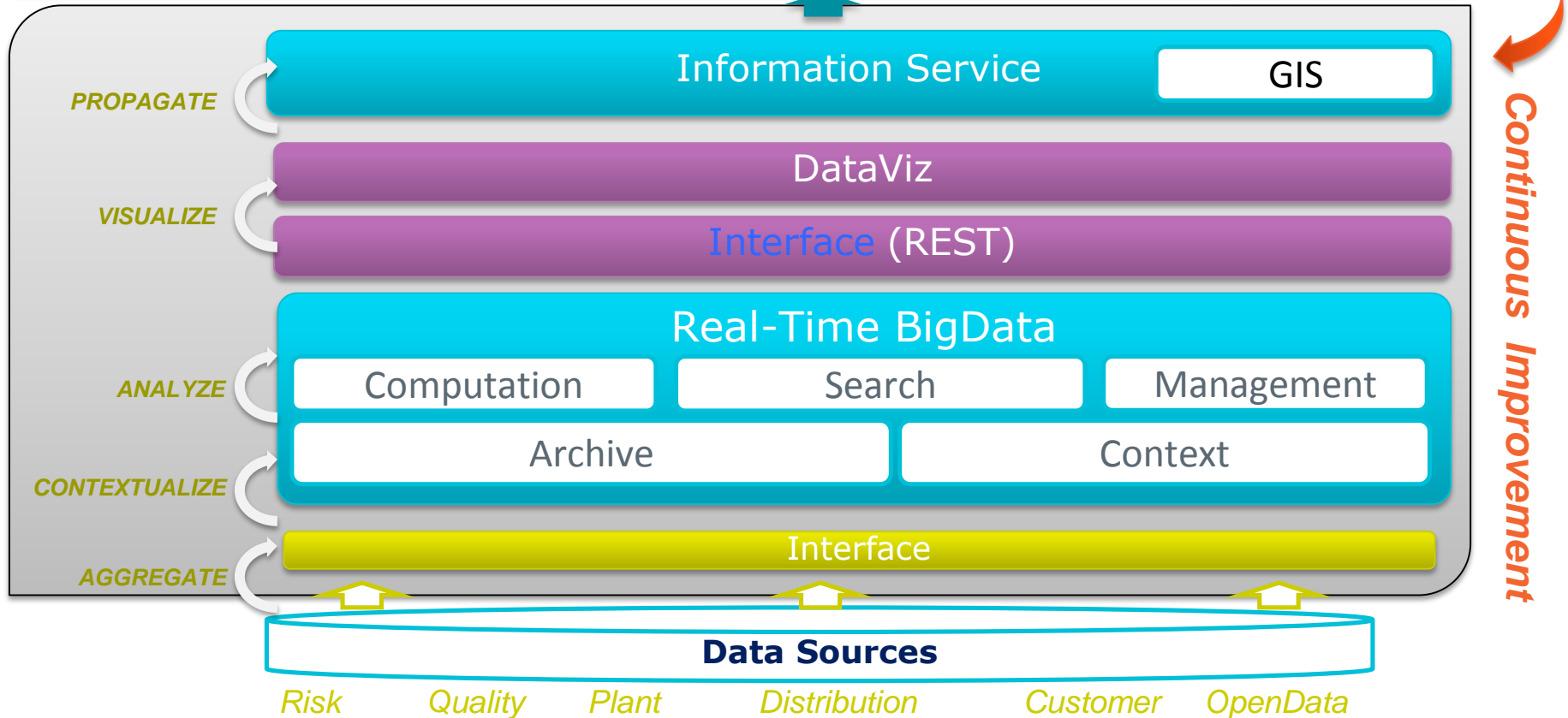
Support
Team

EXPERTISE
TEAM PLAY
INVENTIVE

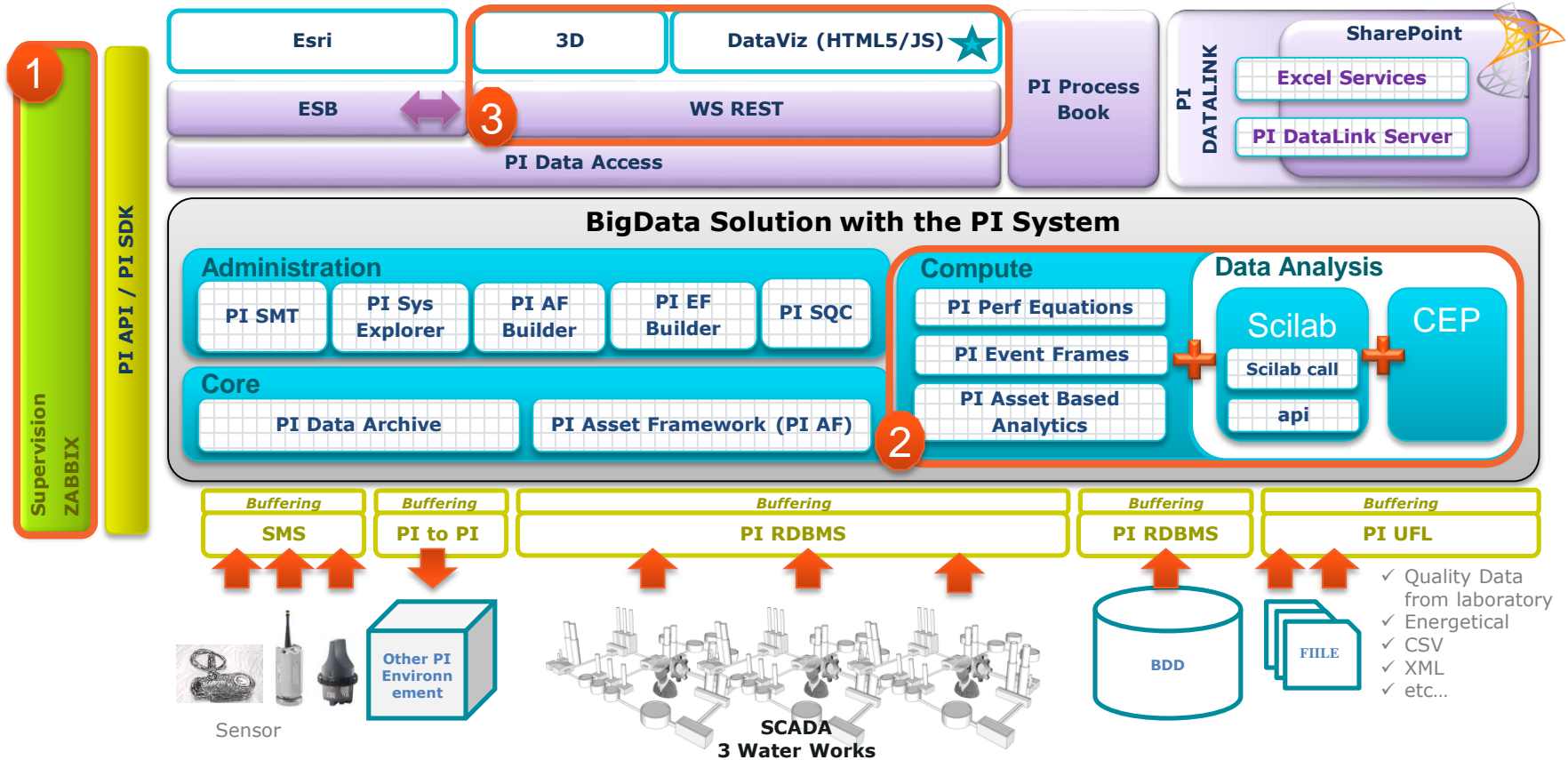


Young, enthusiast *but*
skilled Team !

REAL-TIME DECISION MAKING



Software Architecture

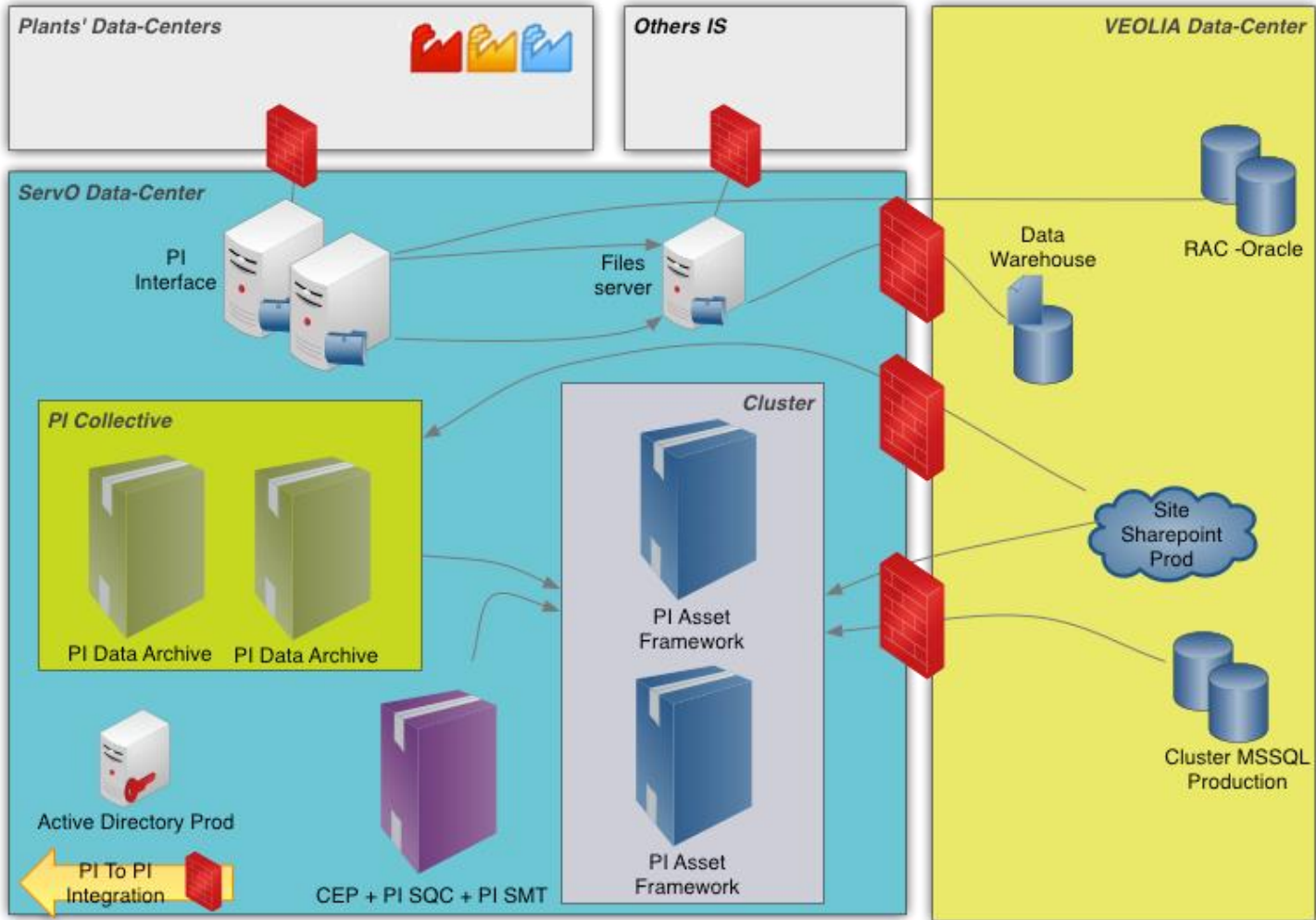


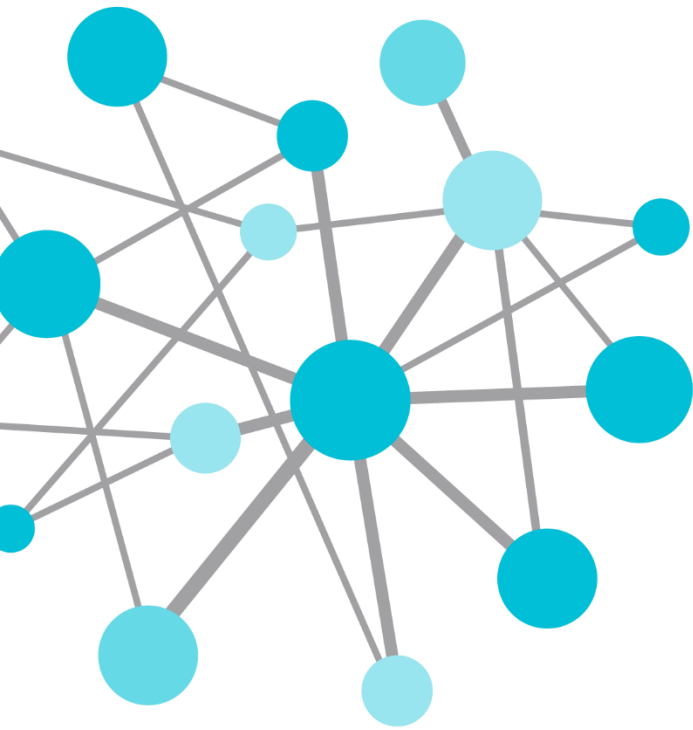
IT Infrastructure

Today :
400.000
Tags

In study :
12 Million
Tags

Simple
&
Effective





3. Achievement

Tools for Monitoring and the Optimization

Reducing electricity consumption by monitoring

- Water Works
- Remote sites
- Energy billing data

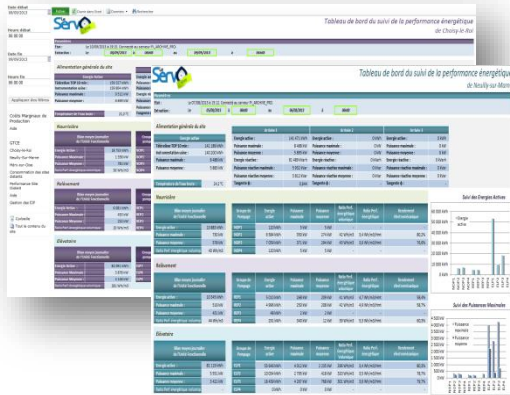


6%

Consumption Reduction



- **Correlations** between hydraulic configuration and energy consumption help identify issues.
- Create a **baseline** for future years



PI and Real Time Data Analysis

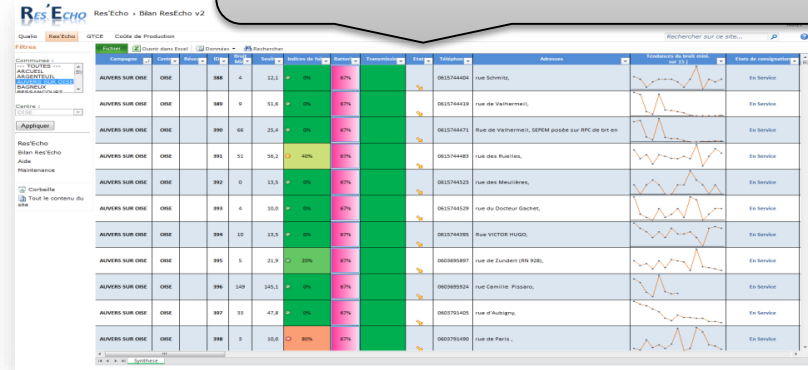
A new generation of tools, technology agnostic, for a better and automatic understanding

Leak Detection **on demand**

- Analyze every sensor in **Real-time**
- Put Data for **analysis** in SQC and Scilab
- compute proximities between the signals to determine the best location of leaks



+ 7% Detection of Leak
between 2012 and 2013



GIS an intuitive interface to access multiple data

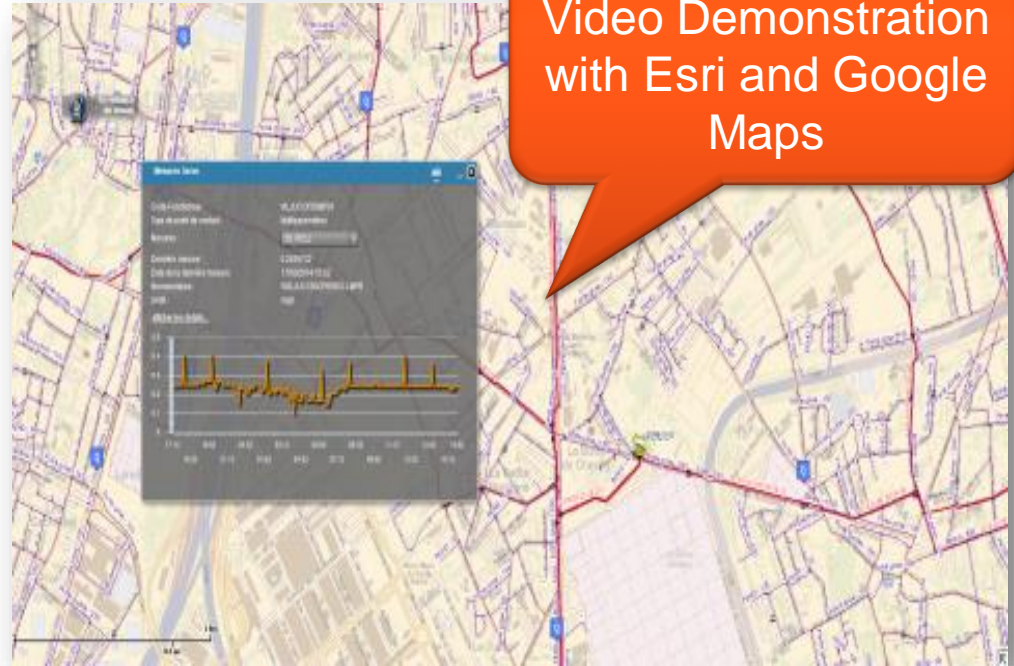
Mixing multiple data sources while providing better **consolidation** and **readability**



Better **understanding** of situations

Allows a **synoptic** overview across the whole territory

Intuitive!



New ways are now available!

Access data with simple RESTful Web Services

Live ! Demo

HTML JavaScript !

Web-based application with Search Engine to navigate through data, view and extract reports

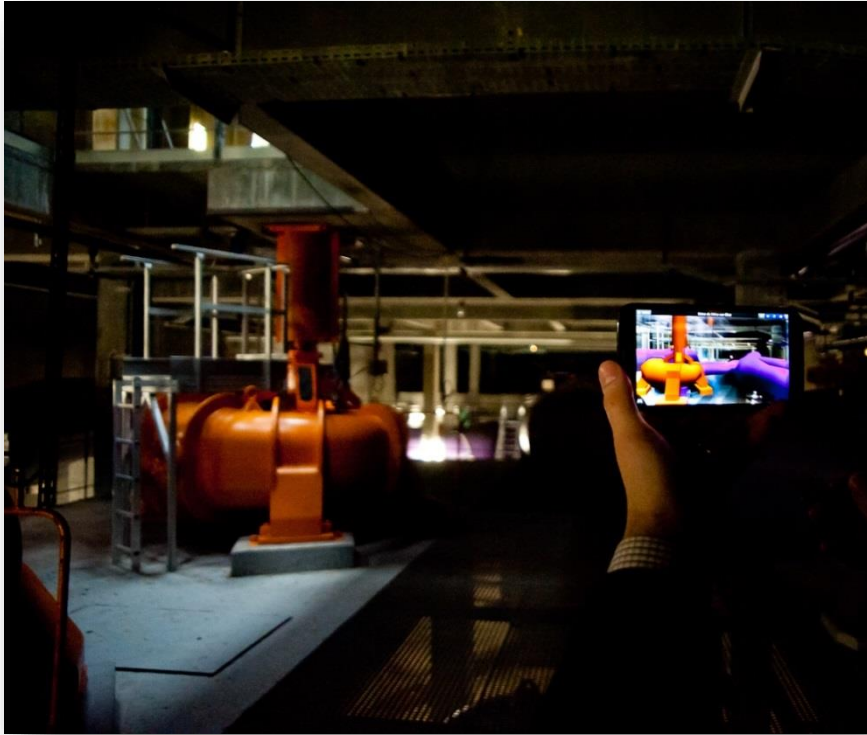
New ways are now available !

Create new solutions
for **Mobility** !

With the web **standard**
(here JSON) you can
use your data
everywhere



Use the power of your data anywhere !



And let's imagine ... the
next generation for
the factory !

Guillaume Gallon

guillaume.gallon@veolia.com

Veolia Eau d'Ile-de-France

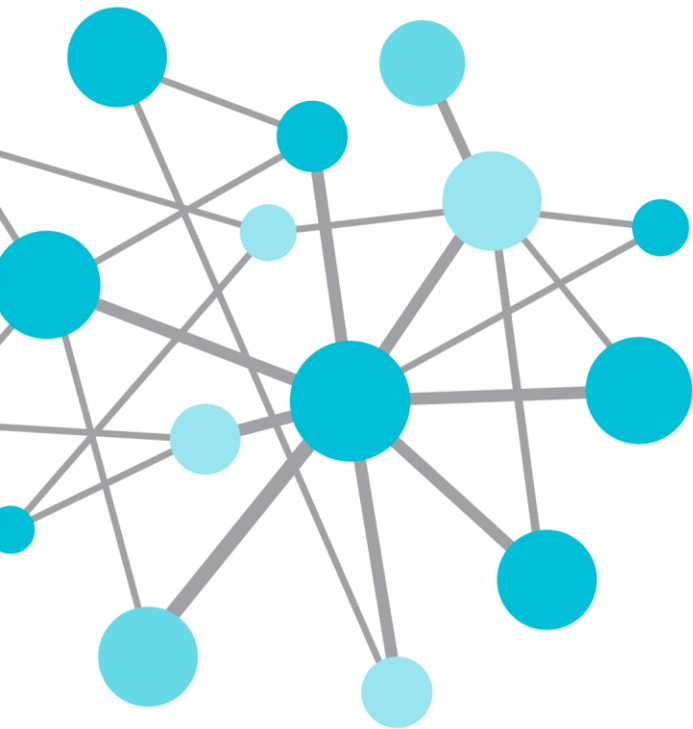
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