



COMPAGNIE INTERCOMMUNALE LIEGEOISE DES EAUX

General strategy of the Company
regarding water safety:

**Current situation and challenges for the
future**

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General overview : CILE (Belgium)



2nd biggest water op. in Wallonia

35 Mill. m³ per year water

5 different production sites

128 Mill. €: turnover

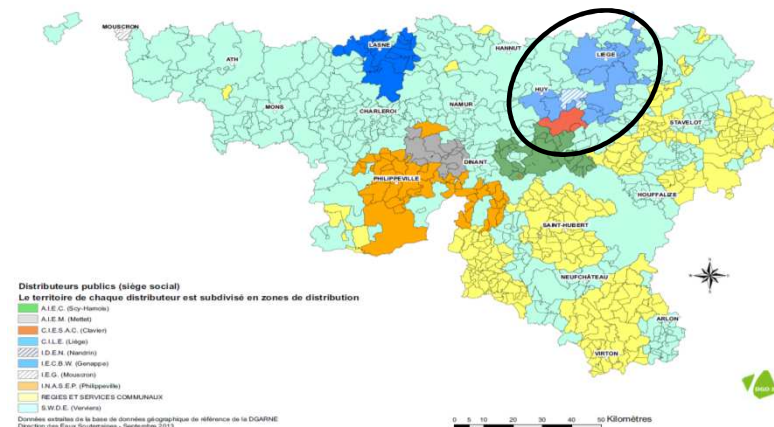
565.000 citizens

24 communes (± 1400 km²)

260.000 water meters (regulation)

80% total distribution yield

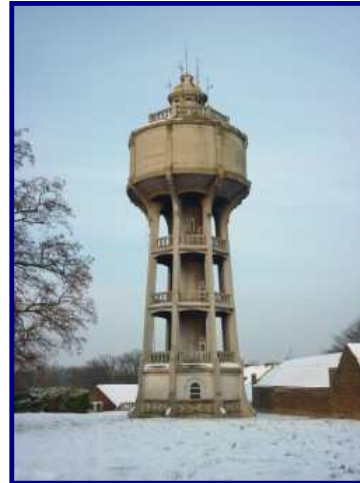
400 employees



Property assets



325 engineering structures
104 electrical pumping stations
3.500 km water pipes





History

After the tragic event in the US in 2001, decision taken by the Company to:

- **Analyse all assets in detail in order to implement better protection against intrusion (including telemanagement),**
- **Develop together with the other Belgian Water Operators solutions to optimise the general production network and its securing,**
- **Share in the experience of the bigger European Water Operators (such as Eau de Paris) through partnership,**
- **Perform continuous technological scanning of smart solutions to accelerate access to information.**



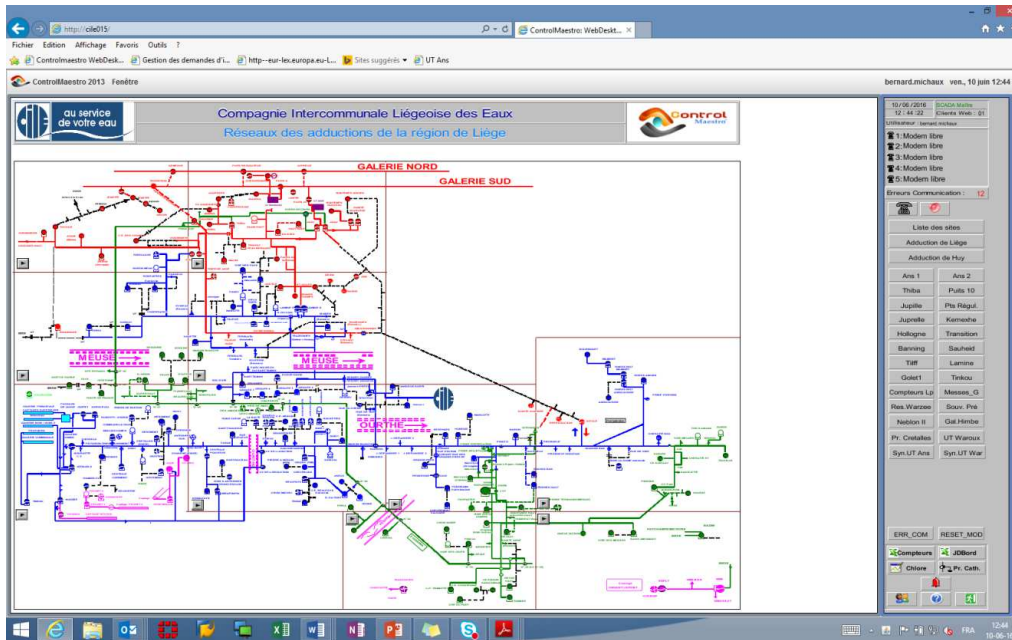
Large investments

On a total of 171 million € (250 million AUD) between 2010 and 2015

- Securing 38 million €
- Treatment units 31 million €
- Telemanagement 1,5 million € (2001-2015)
- Source of funds : 50% on equity, 50% by bank loans with EIB



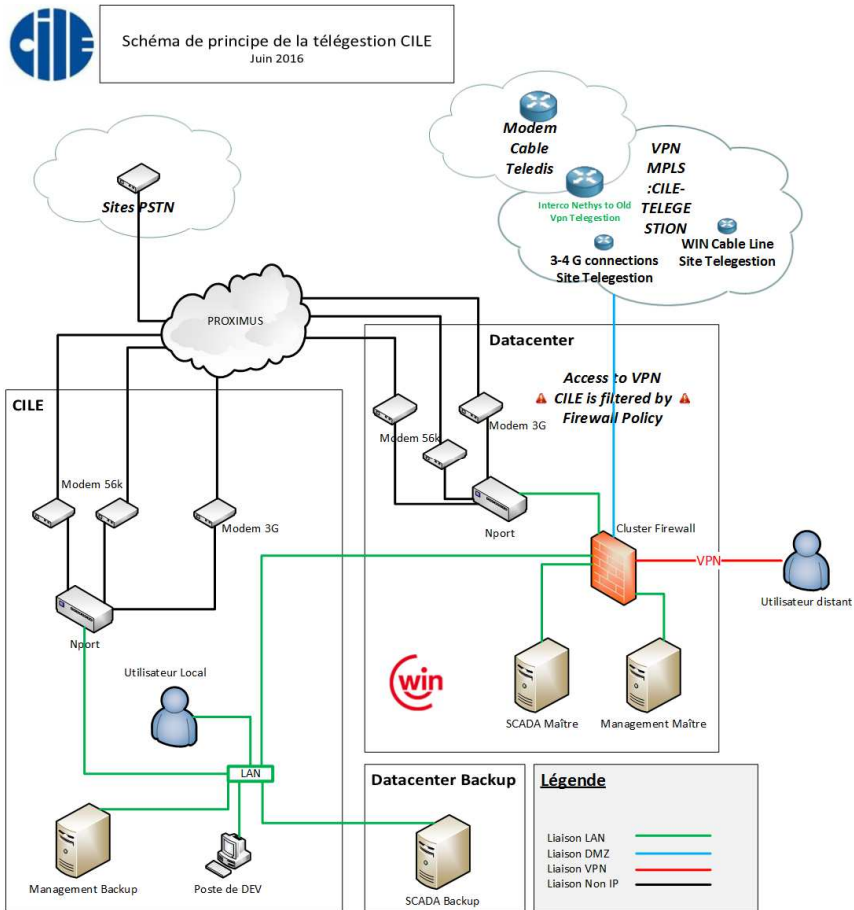
Telemanagement - SCADA



- More than 250 connected sites
- PLC (T-BOX)
- Continuous transmission of data by 3G/4G technology or phone or coaxial cable
- Supervision software (CONTROL MAESTRO)
- Transmission of alarms 24/7
- A team of 2 qualified people + 4 electricians
- Daily reporting of consumption values for more than 400 distribution districts including night flow



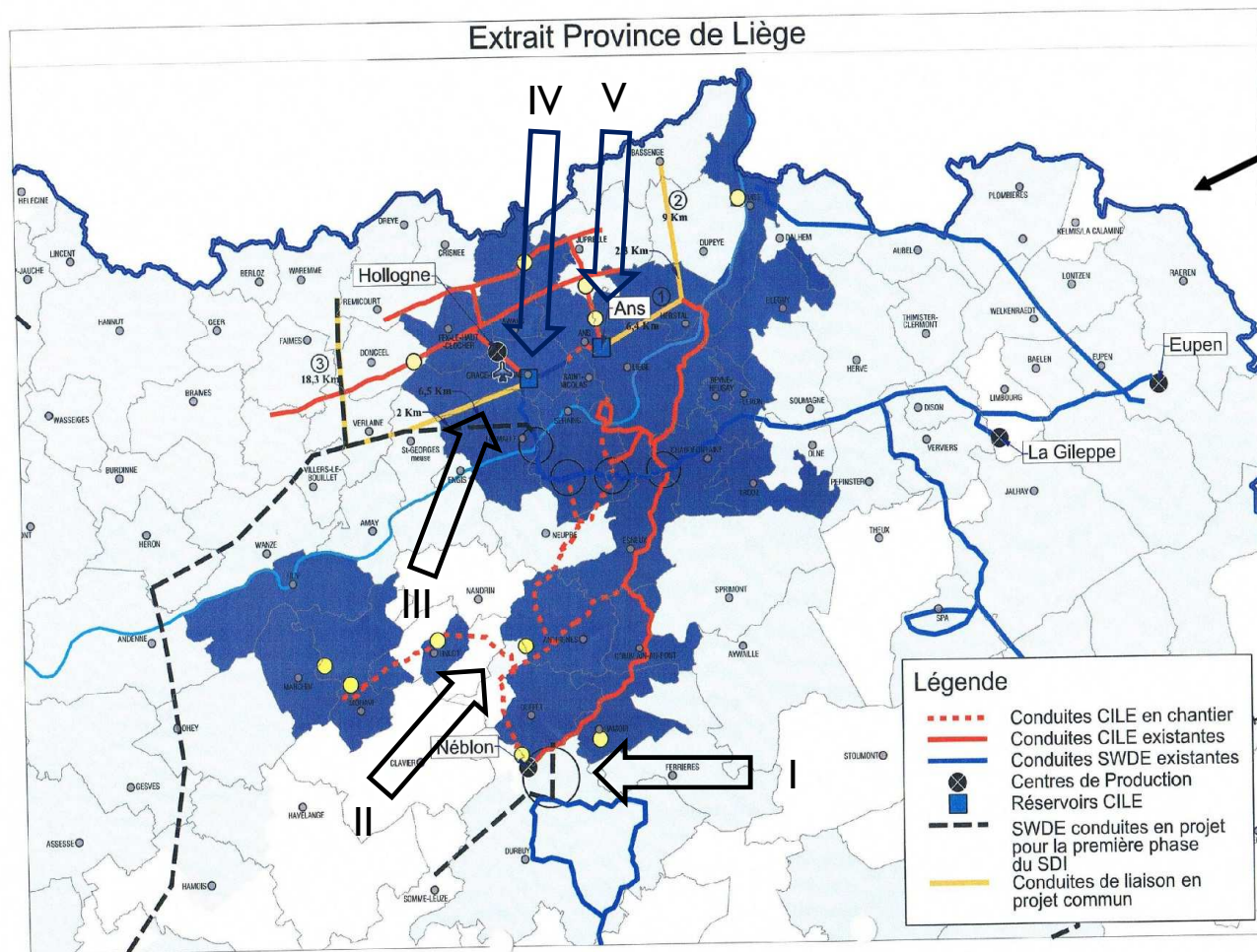
Telemanagement - SCADA



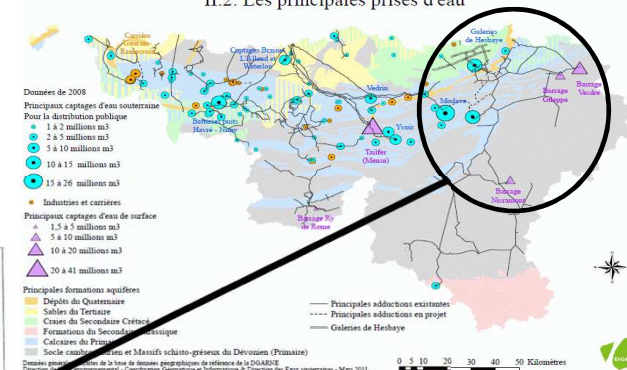
- Completely integrated in the IT structure of the Company
- Secure VPN access
- SLA contract with a supplier in charge of all the communication lines, including backup.



Securing water supplies



II.2. Les principales prises d'eau



I : connexion between 2 production networks (CILE/SWDE)
→ lower investments

II : connexion between 2 production networks (VIVAQUA/CILE)
→ securing

III : connexion between 2 production networks (CILE/SWDE)
→ securing

IV : mixing of waters (CILE/SWDE)
→ lower investments

V : 2 treatment units
→ maintaining the quality



Smart metering

With the collaboration of APE (Aqua Publica Europea) and in partnership with Eau de Paris and 5 other European Water Utilities (BE, IT, ES, HU). Supported by 6 Expert Organizations (IT, FR, ES, BE).

- Participation in a PCP (Pre Commercial Procurement) called SMART.MET
- On the Horizon 2020 (Research and Innovation Framework Programme) of the EC
- To drive the development of new technologies to manage smart metering, data collection and management
- Budget : 4 million € (0,5 million € for CILE) – European funds
- Duration : 48 months

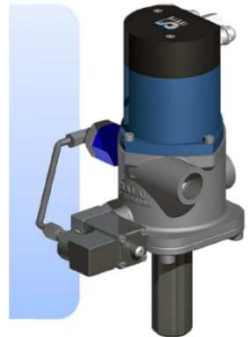


Challenges

For the water distribution network

- Increasing the number of flowmeters in order to improve the global performance of the network
- Alternative power supply by recovering the expansion energy in a small water turbine (50l/min at 0.6 bar -> 14W stored in a 12V & 24V DC battery)
- Continuous quality control through the installation of monitoring stations + IOT

Full Pipe Electromagnetic Flow Meter



Challenges

On a domestic scale

- Smart metering with the mutualisation of the costs of communication with other partners (such as companies in charge of electricity or gas distribution networks)
- Coupling smart meters with automatic valves (reverse flow or prepaid)
- Improvement of the service with a quicker response to customers in the case of leaks and/or to optimize the performance of private consumption and of the public distribution network

