



COMPAGNIE INTERCOMMUNALE LIEGEOISE DES EAUX

Smart Water Networks :

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

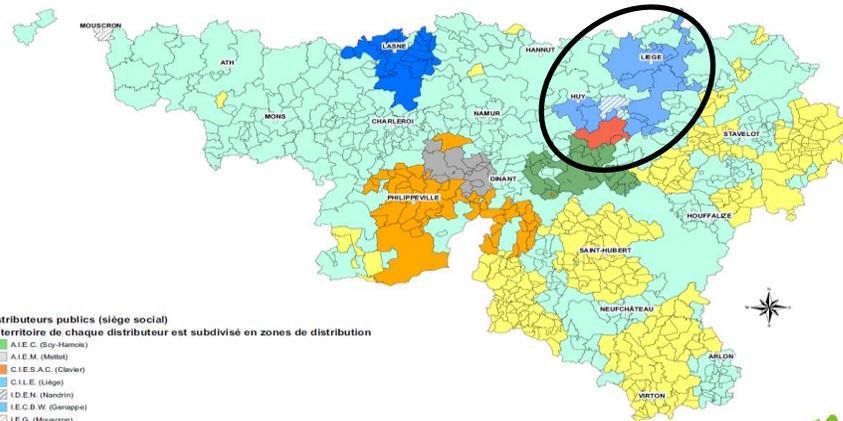
565.000 citizens

24 communes (± 1400 km²)

260.000 water meters (regulation)

80% total distribution yield

400 employees



Distributeurs publics (siège social)
Le territoire de chaque distributeur est subdivisé en zones de distribution

- A.I.E.C. (Sy-Hanock)
- A.I.E.M. (Motte)
- C.I.E.S.A.C. (Clavier)
- C.I.L.E. (Liège)
- I.D.E.N. (Nardin)
- I.E.C.B.W. (Gierppe)
- I.E.G. (Mouscron)
- I.N.A.S.E.P. (Philippeville)
- REGIES ET SERVICES COMMUNAUX
- S.W.D.E. (Verviers)

Données extraites de la base de données géographique de référence de la DGARNE
Direction des Eaux Souterraines - Septembre 2013

0 5 10 20 30 40 50 Kilomètres



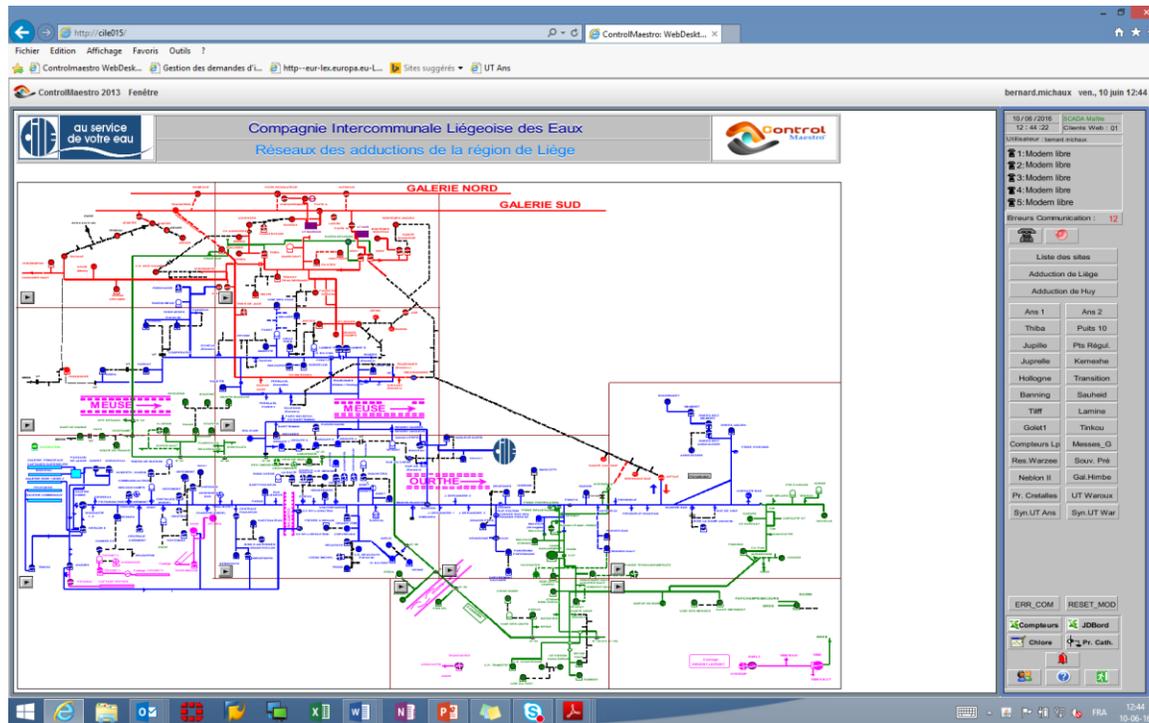
Property assets



325 engineering structures
104 pumping electrical stations
3.500 km water pipes



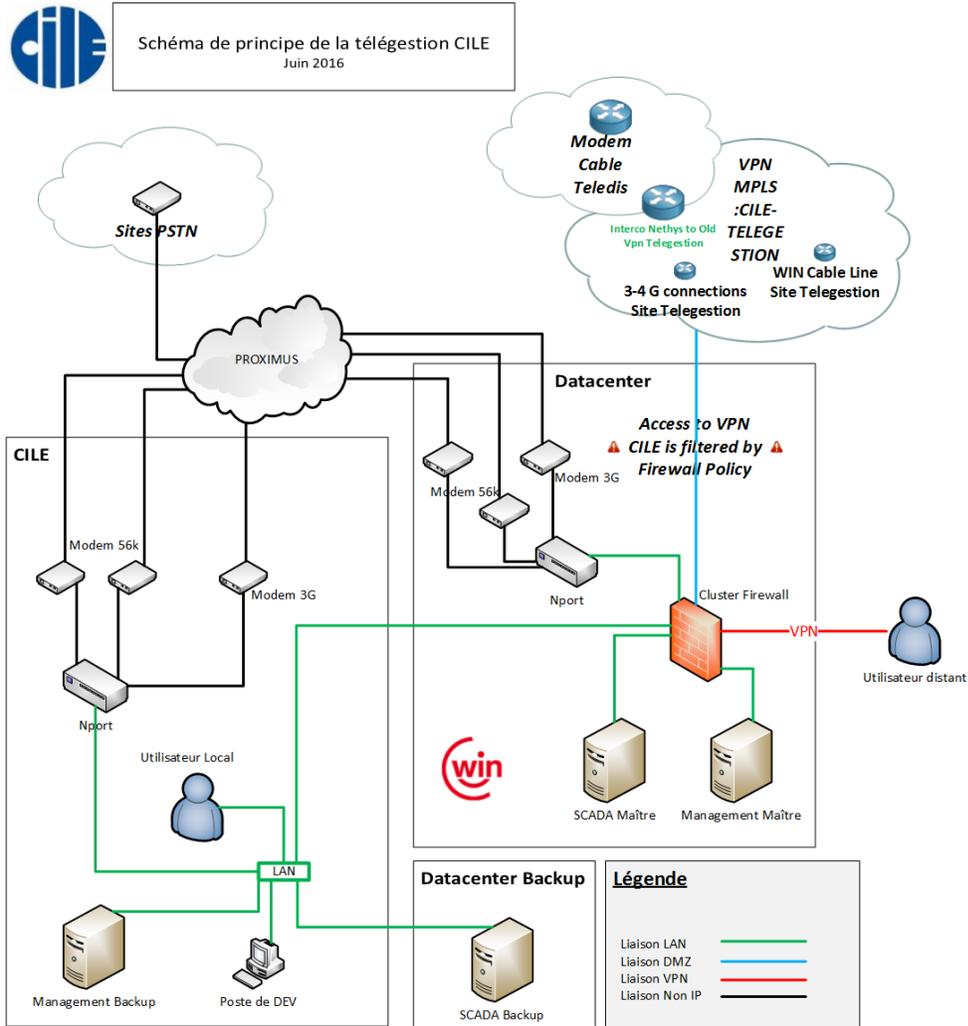
Telemanagement



- More than 250 connected sites
- PLC (T-BOX)
- Continuous transmission of the 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 the consumption values for more than 400 distribution districts including the night flow



Telemanagement



- 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.

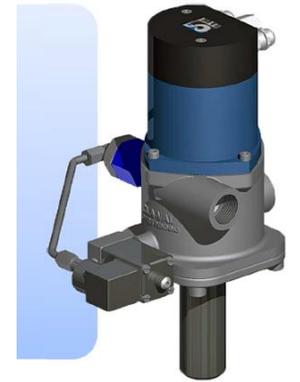


Challenges

On the water distribution network

- Increasing of the number of flowmeters in order to improve the global performance of the network
- Alternative power supply by recovering of 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 with the installation of monitoring stations

Full Pipe Electromagnetic Flow Meter



Challenges

On the 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 network)
- Coupling smart meters with automatic valves (reverse flow or prepaid)
- Improvement of the service with a quicker answer to customers in case of leaks and/or to optimize the performance of the private consumption and of the public distribution network

