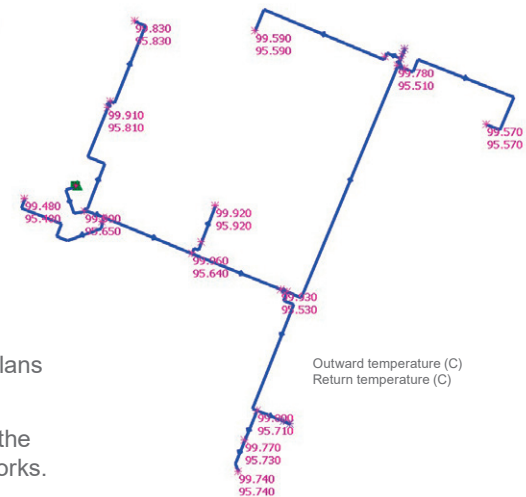


## TELERIS calculation characteristics

- > Automatic coupling of hydraulic and thermal regime calculations: the calculation converges towards the steady state solution with a double iteration process of the fluid-dynamic and thermal models until a solution is found.
- > Representing various kinds of user (domestic, commercial, industrial, etc.) and their respective energy requirements.
- > Users can insert pressure-controlled thermal power plants with target points that can be at the power station or at a remote point, and impose a pressure difference between forward and return lines at any point on the network.
- > It is possible to represent devices that raise or reduce pressure on both the forward and return lines.
- > The calculation engine can easily handle very large systems.
- > Very fast simulation times.
- > Simulating possible high demand scenarios where it is not possible to fully satisfy the power demand: in this case the software will indicate the percentage of heat demand that can be satisfied by the system while maintaining realistic pressure differentials.

## TELERIS applications

- > Analysis of existing district heating networks in order to verify operating flows and pressures and help engineers to optimize the regulation of the system.
- > Design of new district heating and cooling networks.
- > Development of management plans for different demand regimes.
- > Verifying the effects caused by the interconnection of several networks.



## The InfoWorks WS Pro interface

The InfoWorks WS Pro is a product and trademark owned by Innovyze. HR Wallingford provides this extra module that allows the use of InfoWorks WS Pro to analyse district heating and cooling networks. The InfoWorks WS Pro working environment is easy to use, quick and intuitive. The interface allows you to view networks in both plan and table formats, as well as longitudinal profiles for supply and return lines. Results are displayed with thematic maps and can be

easily interpreted. InfoWorks WS Pro can use, import and export files in industry-standard formats, such as AutoCAD, ArcView/ArcGIS, MapInfo, Access, XLS.

Large amounts of data from different platforms can easily be uploaded and integrated into a single environment, such as: map data, bill data, remote control information, pressure or temperature measurements.