

We are very pleased with our decision to use Nevron Diagram as our diagramming platform, the product is excellent and the support outstanding

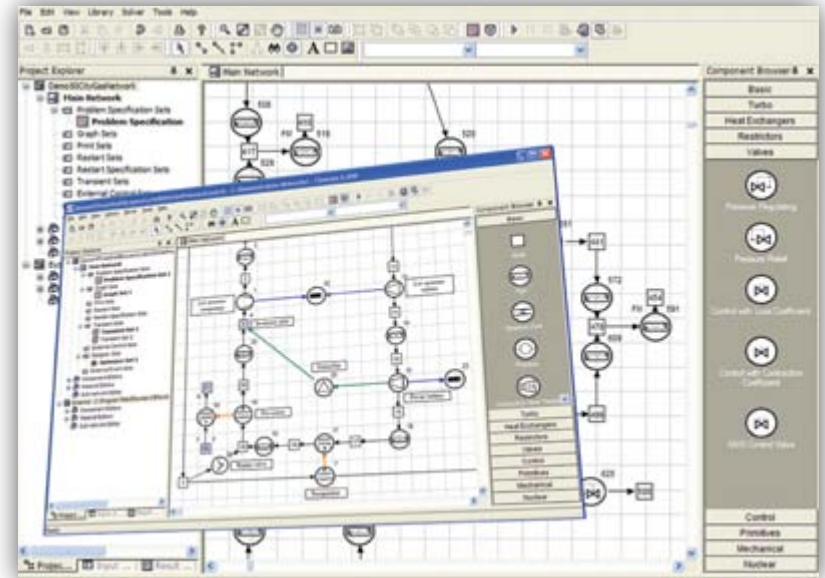


M-Tech Industrial (Pty) Ltd. a dynamic ISO9001 accredited multidisciplinary engineering company with about 45 full-time engineers. The company is headquartered in Potchefstroom, a beautiful regional city located in the North-West Province of South Africa about 120 km south-west of Johannesburg.



Flownex dynamic systems CFD

One of M-Tech Industrial's main expertise or focus areas is the design, analysis and optimization of complex thermal-fluid systems such as coal, gas and nuclear power plants, compressed air networks, water reticulation networks, gas networks, heat pumps, refrigeration systems, turbo machinery, heat exchangers, mine cooling systems, HVAC systems, desalination plants and test facilities. M-Tech industrial is the design authority of Flownex, a dynamic systems CFD simulation code. M-Tech also supplies and maintain training simulators in all these areas by integrating Flownex with the actual plant DCS and SCADA systems.



Diagramming Requirement

The user interface of the above mentioned simulation software is mainly diagram based. To successfully implement an extendible diagram based simulation platform, a versatile, well structured and proven diagram platform was needed. Nevron Diagram proved to be all of this and more. Since we selected Nevron Diagram as our diagram platform, we haven't looked back.

Nevron diagram is used as the base for the engineering diagrams as well as the operator interfaces with real time feedback elements such as animation and graphs, and operator input components such as buttons, sliders, text input etc.

Below are two case studies of our simulation software, focusing on Nevron Diagram views, active in real life scenarios.

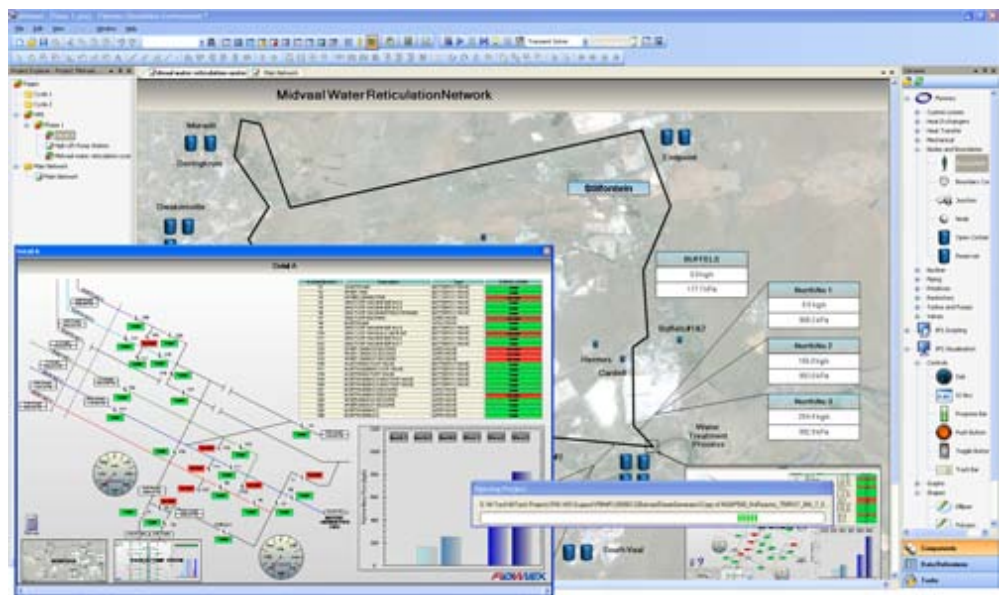


www.nevron.com

Midvaal Water Distribution Network

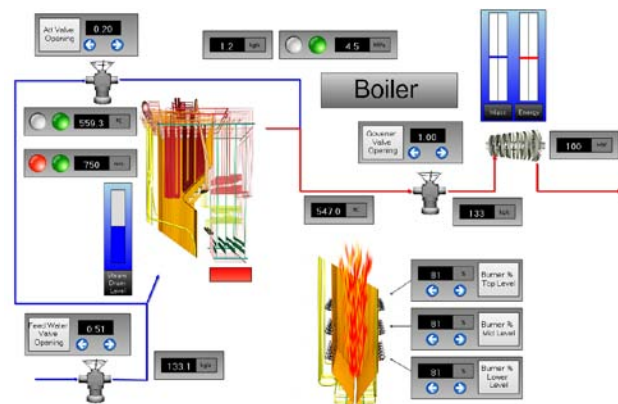
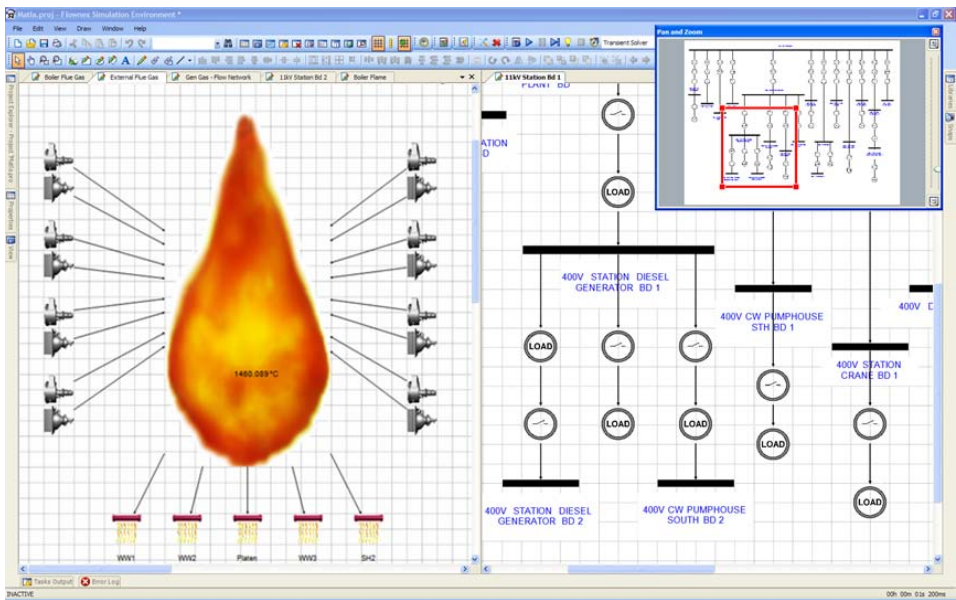
Midvaal Water Company is a water utility which provides service to an area of about 900 km², this covers residential as well as mining and industrial undertakings.

A thermal hydraulic network was created in Flownex and this basis model was used for pump scheduling, identifying problem areas and the creation of a Human Machine Interface (HMI). Nevron enabled M-Tech Industrial to create a HMI in Flownex Simulation Environment that fulfilled the client's needs to create a dynamic and interactive HMI. The HMI is used to enable casual users of the model to effortlessly do engineering studies and operator training. Twenty two diagram pages were used, of which only two operator interfaces are shown below.



Matla Power Station Simulator

An operator training simulator for Matla coal fired power station, containing over 100 diagram pages. The simulation include, among others: thermo hydraulics, electric networks, coal handling and beneficiation and DCS (Distributed Control System). In setting up the large number of diagrams, Nevron diagram's ease of use resulted in significant engineering cost savings. Some engineering pages are shown below.



M-Tech Industrial (Pty) Ltd.
<http://www.mtechindustrial.com/>