Ngee Ann Polytechnic
Implementing a new pumping system with Simcenter Flomaster
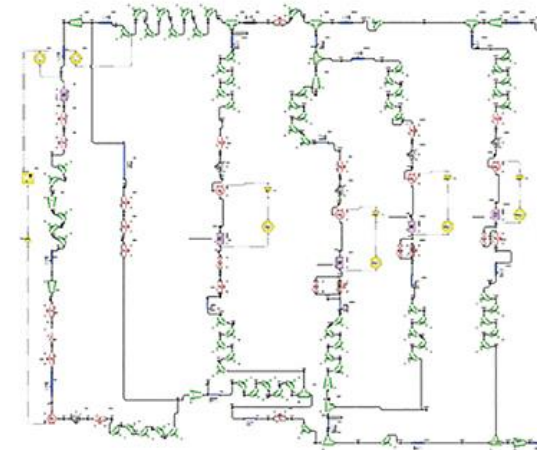
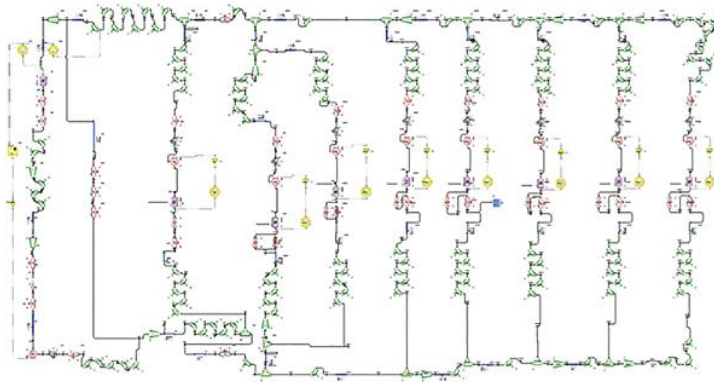**SIEMENS**
Ingenuity for life

Using 1D CFD tools such as Simcenter Flomaster is one of the fastest and most cost effective methods when looking to design a new building
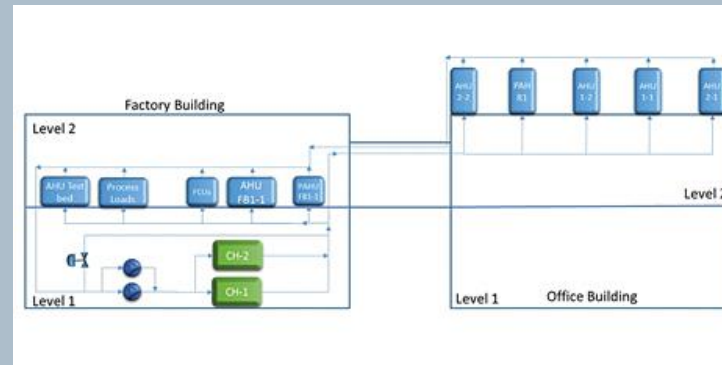
55%

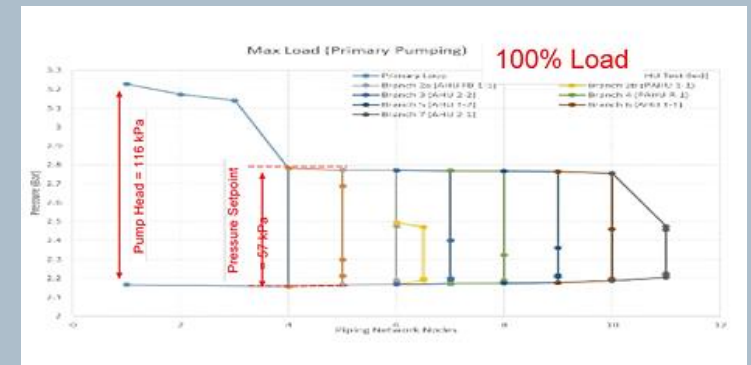energy savings with the new primary-coil secondary pump system

Siemens Digital Industries Software

Ngee Ann Polytechnic
Implementing a new pumping system with Simcenter Flomaster

Implementation of a new distributed chilled water pumping system for AC systems

P-only chilled water pumping system

Pressure profile of P-only systems at 100% load

- Achieved a solid understanding of the system behavior so that system controls could be introduced

- Determined that using a Primary-Coil Secondary pump system greatly improved the overall efficiency even for a smaller chilled water system

- The new primary-coil secondary pump system allows to save over 55% of pumping energy

"It is important to understand that maintaining temperatures inside of a building is a dynamic process. One of the fastest and most cost effective methods for looking at these designs is the use of 1D computational fluid dynamics tools such as Simcenter Flomaster."

Sam Lam K. H., Senior Specialist, Ngee Ann Polytechnic