

ProMoVis is available as open source and is designed for use in industry and academia.

## Background:

- Industry processes consist of a large number of interconnected variables.
- Control loops have to be closed between sensors and actuators to achieve a desired performance.
- Interactions between control loops result in oscillations and loss of performance.
- Simpler control structures derive in less design and maintenance efforts.

## Problem Formulation:

- Find the simplest control structure which can yield a satisfactory performance.

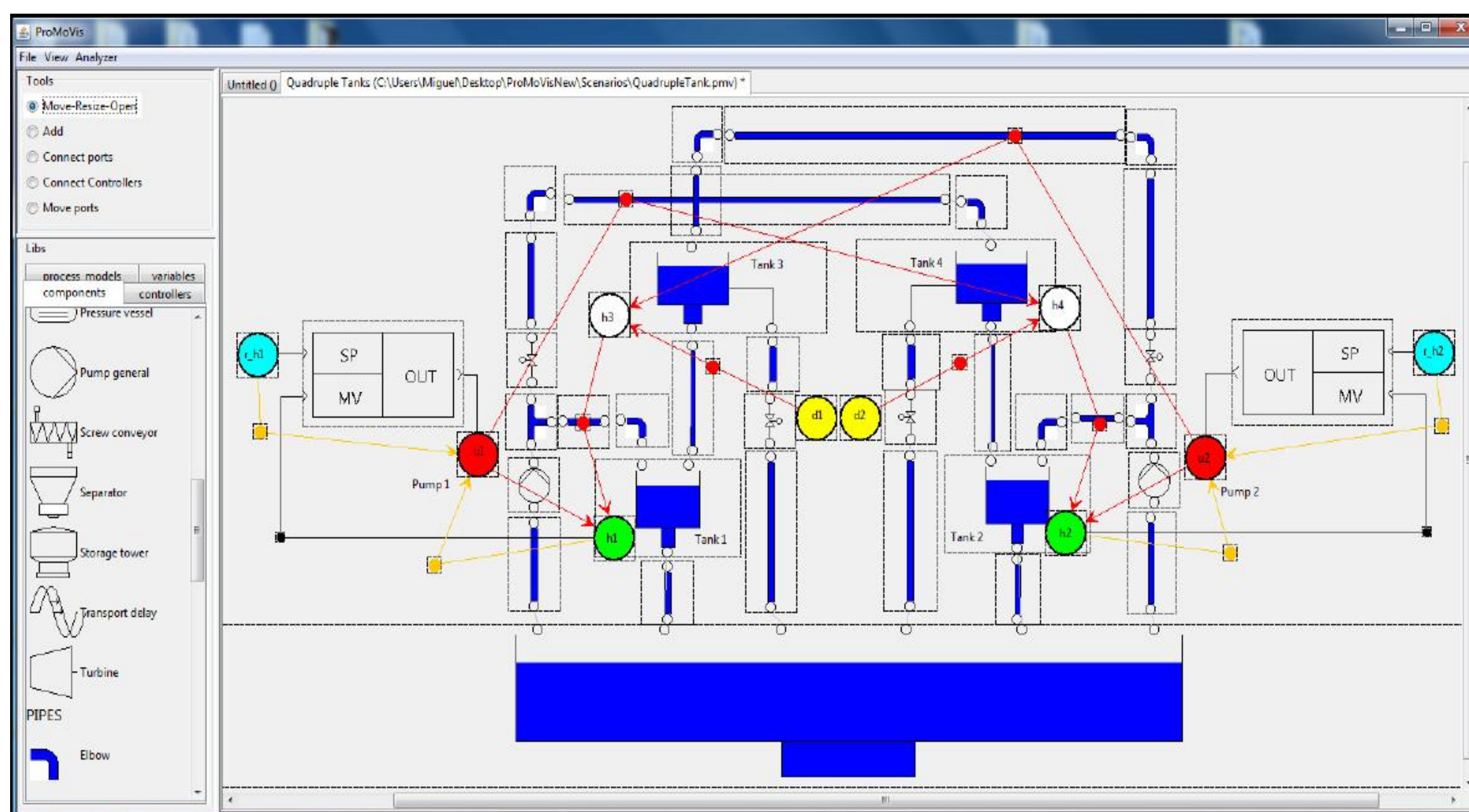
## Solution:

- Identify which dynamic connections between sensors and actuators are important for improving the process performance, and use them to derive the structure of the controller [1].

## Technology transfer:

- Delivering solutions in the shape of a software tool, allows direct use in industry of state of the art research.
- ProMoVis can be used as a platform to implement other analysis/design methods for complex processes.

## ProMoVis Interface:



Available as  
open source:

<http://sourceforge.net/projects/promovis>

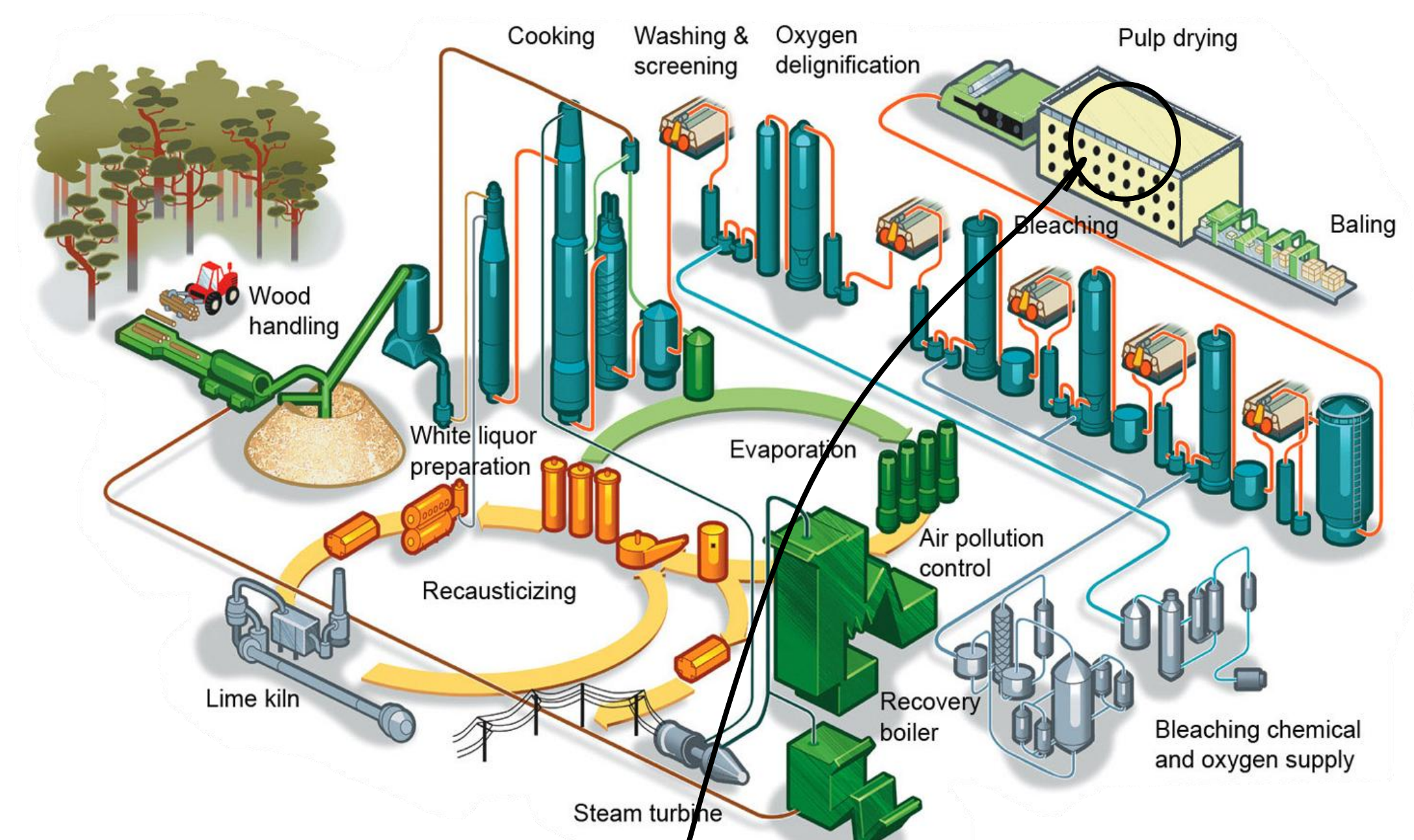
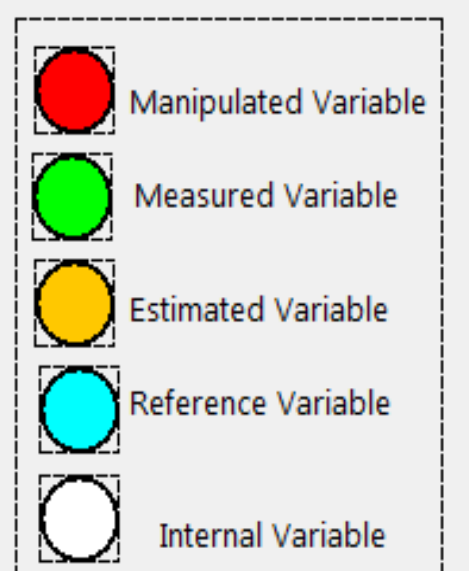
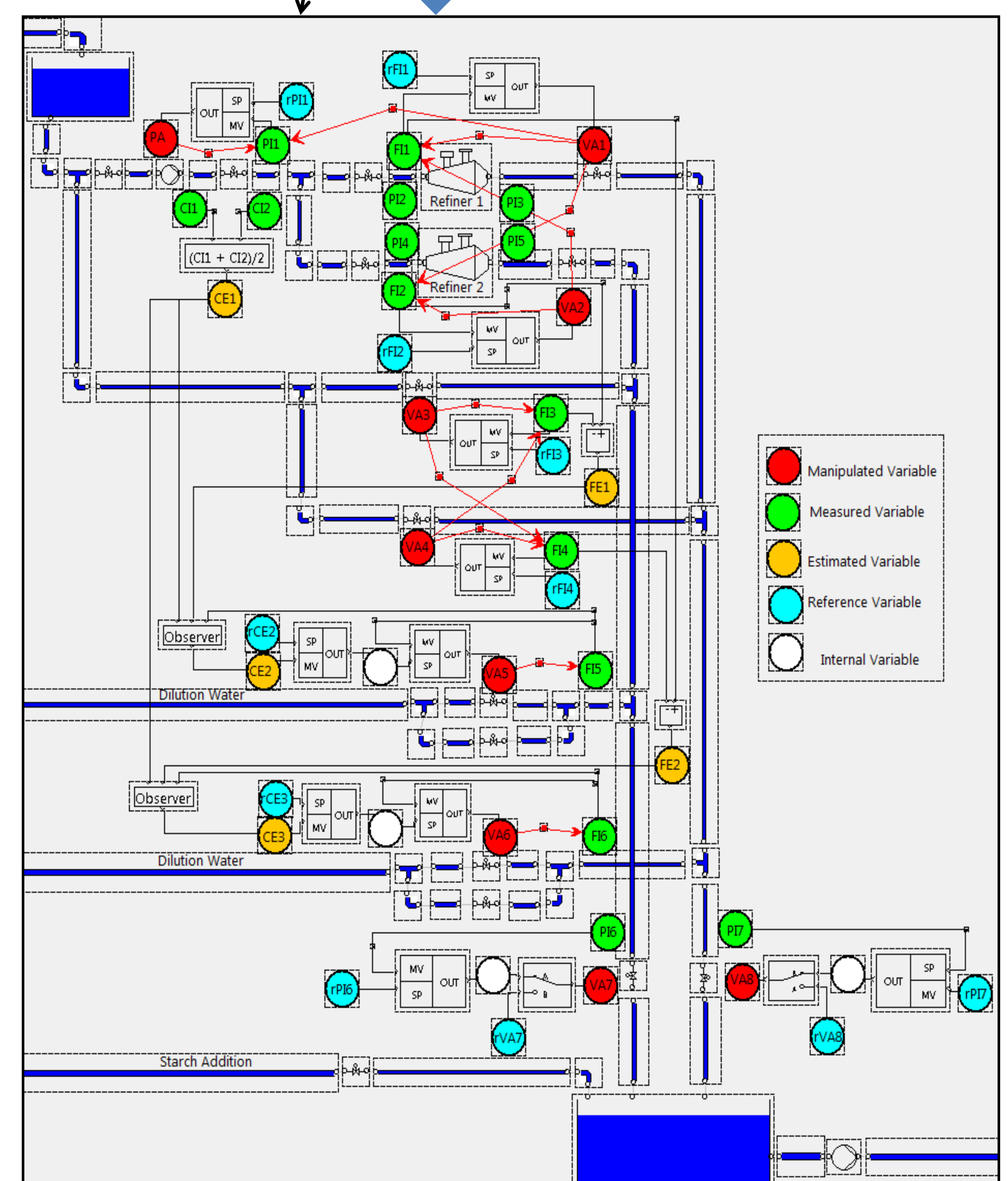
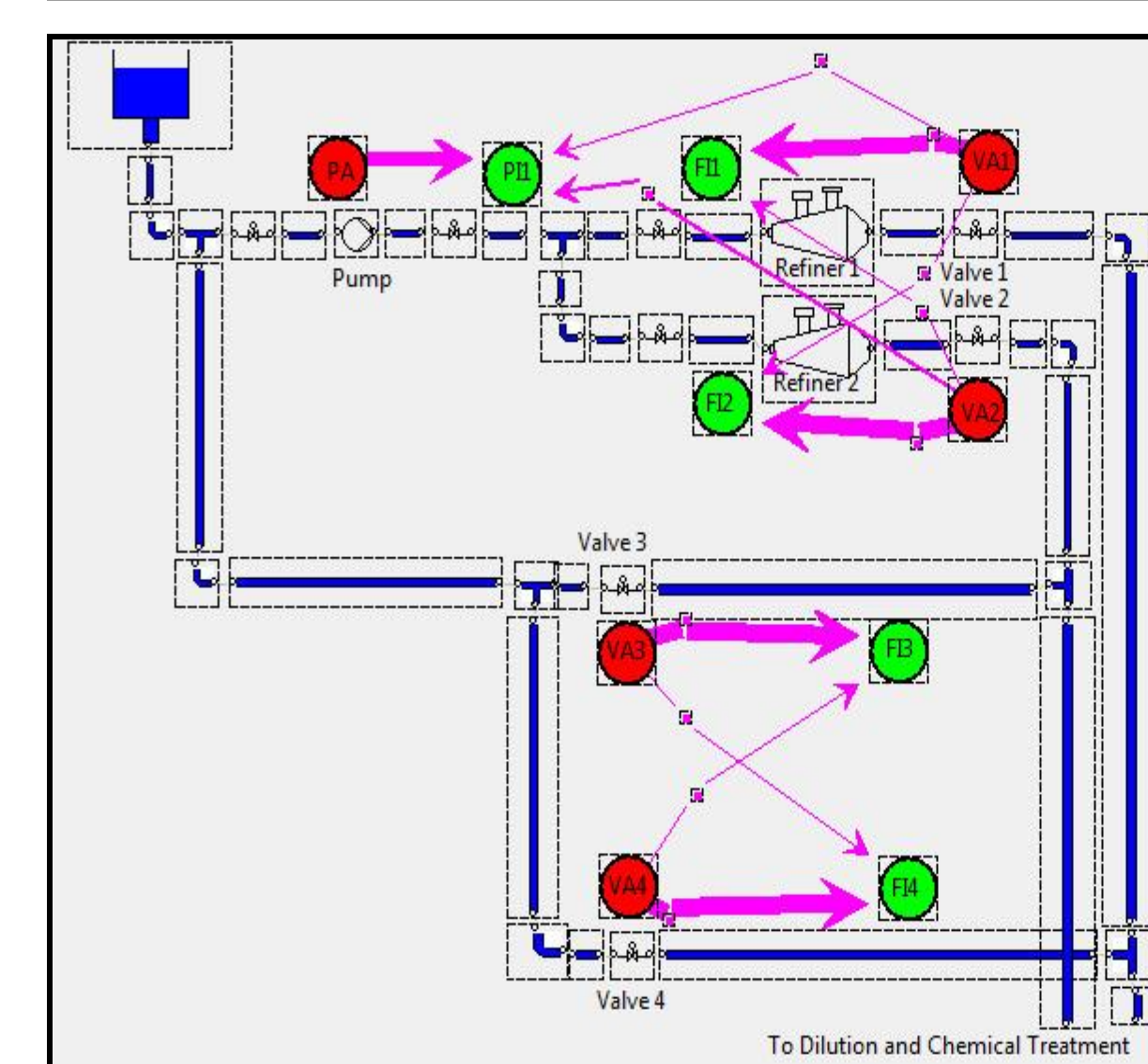


Figure source: Metso

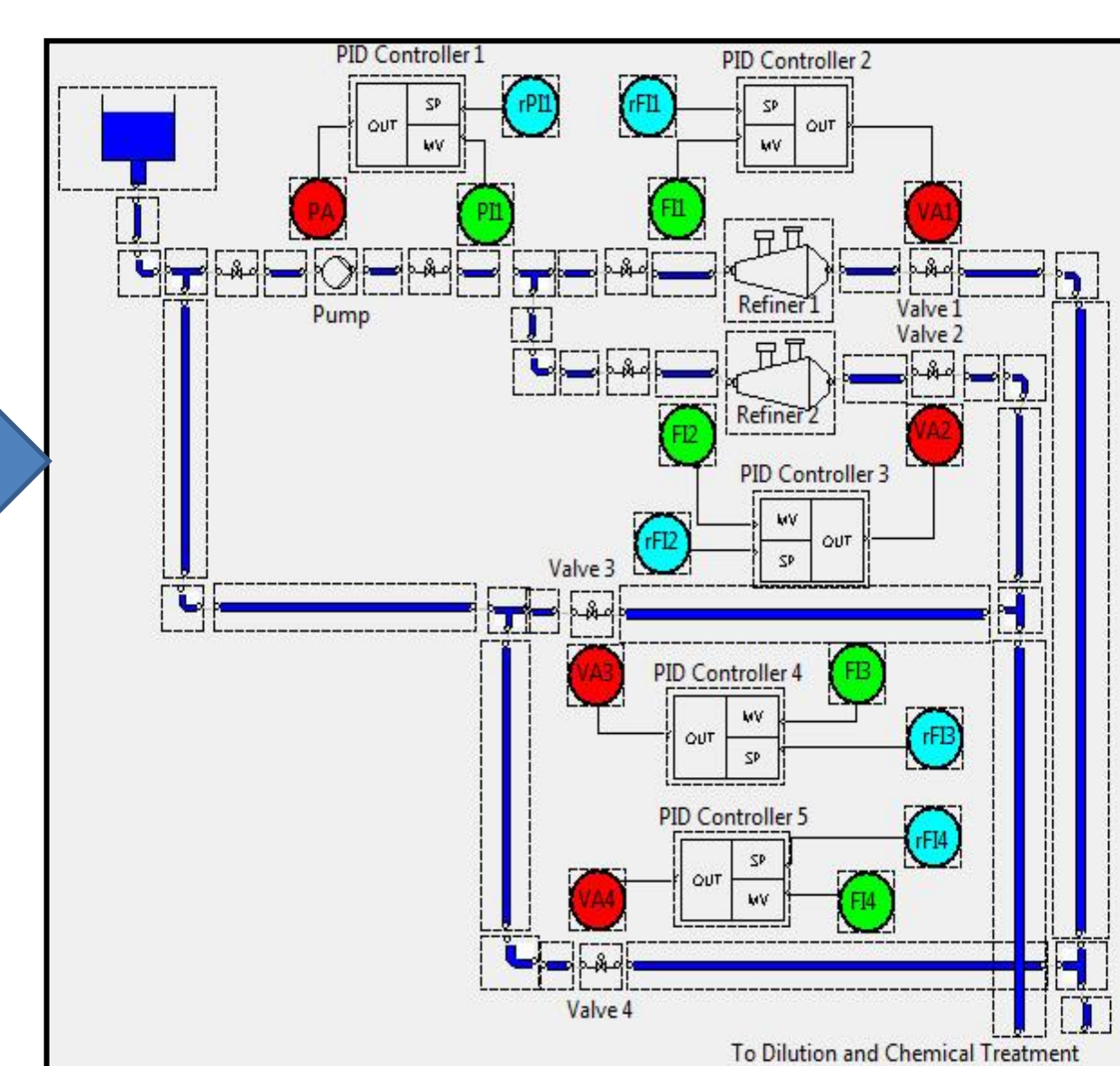
Select a sub-process and visualize it with ProMoVis  
Visualization = process construction + process models + control system



Select a subset of actuators and controlled variables and analyze the strength of the resulting interconnections



Select a control structure which uses the most important interconnections



[1] M. Castaño, W. Birk, New methods for interaction analysis of complex processes using weighted graphs, IFAC J. Process Control (2011).

ProMoVis is the product of joint work involving University, process industry and consultants in control systems.

### Project participants:

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### Industry Partners:



### Funded by:

