Production Improvement & Optimisation System

The **Blue-Print** model of plant's own performance is complex, because it must reflect true operation of a technology. By just using the core **Blue-Print** model, it might not be obvious to the plant engineer what kind of improvements could be achieved at the plant

The Production Improvement & Optimisation Tool is "human interface" between the **Blue-Print** model and the engineer, making the model comprehensive and easy to operate by members of the plant personnel.

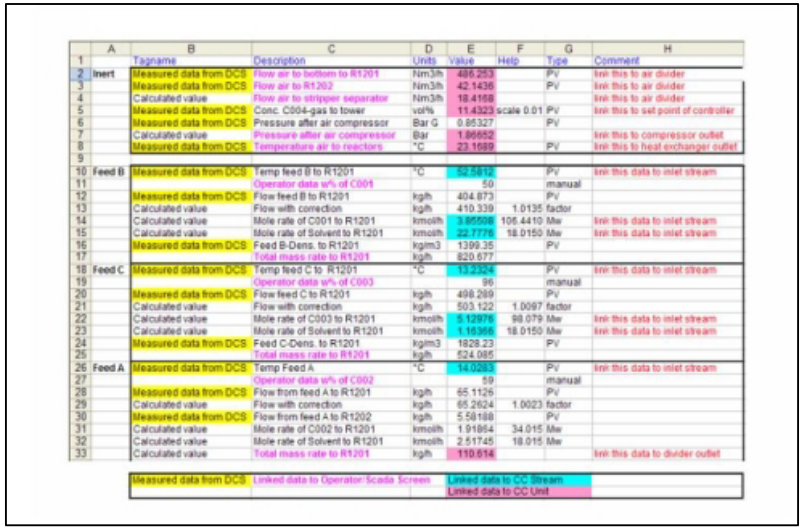
The Production Improvement & Optimisation Tool is custom analysis solution and software, developed by Nor-Par for each client and together with each client to fully address the unique demands and specifics of the customer.

Nor-Par together with the client build "What-If" database that lets the users test their concepts and ideas of improvements to the plant performance right in the PC that result in economical and technical optimisation of the plant's performance..

The Production Improvement & Optimisation Tool can run the **Blue-Print** model in acceleration of 2-20 times with regard to real time, which allows seeing the near future consequences of modifications to the plant. The acceleration makes it possible to run many analyses in short time.

Benefits from using the Production Improvement & Optimisation Tool are:

- All benefits of the **Blue-Print** model as described before are now easily accessible without necessity of advanced training
- "What-if" studies can be run to analyse the effect of multiple process parameters on the plant performance
- The user will identify the equipment that needs modifications by studying the plant performance under varying set of process conditions
- Studies of interaction and performance of control loops
- Studies of performance of critical equipment (reactors, distillation columns)
- All adjustable parameters (process & control) are visible at a glance in the User Interface and can be modified by the user
- All calculated process parameters are visible in the User Interface
- Time saving and understandable reports for management



	A	B	C	D	E	F	G	H
1		Tagname	Description	Units	Value	Help	Type	Comment
2	Inert	Measured data from DCS	Flow air to bottom to R1201	Nm3/h	486.253		PV	link this to air divider
3		Measured data from DCS	Flow air to R1202	Nm3/h	42.1436		PV	link this to air divider
4		Calculated value	Flow air to stripper separator	Nm3/h	18.4168			link this to air divider
5		Measured data from DCS	Conc. C004-gas to tower	vol%	11.4323	scale 0.01	PV	link this to set point of controller
6		Measured data from DCS	Pressure after air compressor	Bar G	0.85327		PV	
7		Calculated value	Pressure after air compressor	Bar	1.86652			link this to compressor outlet
8		Measured data from DCS	Temperature air to reactors	°C	23.1689		PV	link this to heat exchanger outlet
9								
10	Feed B	Measured data from DCS	Temp feed B to R1201	°C	52.5812		PV	link this data to inlet stream
11			Operator data w% of C001		50		manual	
12		Measured data from DCS	Flow feed B to R1201	kg/h	404.873		PV	
13		Calculated value	Flow with correction	kg/h	410.339	1.0135	factor	
14		Calculated value	Mole rate of C001 to R1201	kmol/h	3.85508	106.4410	Mw	link this data to inlet stream
15		Calculated value	Mole rate of Solvent to R1201	kmol/h	22.7775	18.0150	Mw	link this data to inlet stream
16		Measured data from DCS	Feed B-Dens. to R1201	kg/m3	1399.35		PV	
17			Total mass rate to R1201	kg/h	820.677			
18	Feed C	Measured data from DCS	Temp feed C to R1201	°C	13.2324		PV	link this data to inlet stream
19			Operator data w% of C003		96		manual	
20		Measured data from DCS	Flow feed C to R1201	kg/h	498.269		PV	
21		Calculated value	Flow with correction	kg/h	503.122	1.0097	factor	
22		Calculated value	Mole rate of C003 to R1201	kmol/h	5.12976	98.079	Mw	link this data to inlet stream
23		Calculated value	Mole rate of Solvent to R1201	kmol/h	1.16366	18.0150	Mw	link this data to inlet stream
24		Measured data from DCS	Feed C-Dens. to R1201	kg/m3	1828.23		PV	
25			Total mass rate to R1201	kg/h	524.085			
26	Feed A	Measured data from DCS	Temp Feed A	°C	14.0283		PV	link this data to inlet stream
27			Operator data w% of C002		59		manual	
28		Measured data from DCS	Flow from feed A to R1201	kg/h	65.1126		PV	
29		Calculated value	Flow with correction	kg/h	65.2624	1.0023	factor	
30		Measured data from DCS	Flow from feed A to R1202	kg/h	5.58188		PV	
31		Calculated value	Mole rate of C002 to R1201	kmol/h	1.91864	34.015	Mw	
32		Calculated value	Mole rate of Solvent to R1201	kmol/h	2.51745	18.015	Mw	
33		Calculated value	Total mass rate to R1201	kg/h	110.614			link this data to divider outlet
		Measured data from DCS	Linked data to Operator Scada Screen		Linked data to CC Stream			
					Linked data to CC Unit			

Comprehensive interface for running optimisation and "What-If" studies that provides clear reports for the plant management

Some businesses such as specialty chemical batch producers need to develop new product and put it in the production fast, using their standard equipment. **The Production Improvement & Optimisation Tool allows them to replace a great deal of the product development and production scale-up right in the PC, reducing the cost of development and need for field tests.**