

LISTEN.
THINK.
SOLVE.®

PlantPAx
Process Automation System

IAU
2009

PR03 – PlantPAx

系统扩展能力介绍

Process Solutions Team (China)



主题

1. 早期DCS转换

2. 先进控制 APC

3. 资产管理

4. 过程安全

Process Opportunities - Legacy DCS Inter-Operate / Replace with Rockwell Process system

Customer	Location	District	Industry	Legacy System	Date
AK Steel	USA	CLE - Cleveland	Metals	Emerson Fisher Provox	
Alberta Pacific Forest Industries Inc	Boyle-AB	WST - Canada West	Forest Products	Honeywell (Undesignated)	May-07
Algoma Steel	Sault Ste Marie, On , Canada	ONT - Ontario	Pulp&Paper	ABB Bailey Net90	
ALLEN-BRADLEY CANADA LIMITED		ONT - Ontario	Power Utility	Honeywell	April-07
ALLEN-BRADLEY CANADA LIMITED		ONT - Ontario	Power Utility	Honeywell	Feb-07
AMEC E&C Services Limited	Trail, BC	WST - Canada West		ABB	Nov-07
Applied Control Engineering	Newark, DE	RIC - Richmond	Food&Bev	ABB Bailey Net90	
Arkema Chemical		NAS - Nashville	Chemical		Dec-08
Arlington County WWT	Arlington, VA	RIC - Richmond	Water/Waste	ABB Bailey Net90	Nov-06
Axell Zinczero		MX (LA)		Fisher	Nov-08
Bayer Corporation	Baytown-TX	DAL - Dallas	Life Science	Siemens Moore APACS	May-01
Boise Cascade	Deridder, LA	LOA - Los Angeles	Pulp&Paper	ABB Bailey Infi90	
Bowater / Coosa Pines, AL	Coosa Pines, AL	NAS - Nashville	Pulp&Paper	ABB Bailey Net90	
BP EXPLORATION COMPANY	Colombia	COL-OFC	Oil&Gas	ProcessLogix	Feb-07
BRITISH SUGAR PLC	UK	UK	Food&Bev	Honeywell TDC3000 & 3001	May-07
Cami Automotive Inc.		ONT - Ontario		Bailey	May-08
Central Soya Company Inc	Remington, IN	CHI - Chicago	Food & Bev	Bailey	Oct-07
ChevronTexaco Corporation	Midway Sunset	LOA - Los Angeles	Oil and Gas	Rockwell PLX	Nov-06
COLOMBIANA KIMBERLY COLPAPEL	Columbia	COL-OFC	Pulp&Paper	ProcessLogix	Nov-07
Colonial Pipeline Company	Alpharetta, GA	ATL - Atlanta	Petroleum	Revsys	Oct-07
Colorado Springs Utilities	Colorado Springs, CO	SEA - Seattle	Water/ Waste water	Foxboro I/A	Mar-08
Colorado Springs Utilities	Colorado Springs-CO	SEA - Seattle	Power Generation	Fisher Rosemont System 3	Jun-07
Colorado Springs Utilities		Northwest	Water/ Waste water		Dec-08
Concept Systems/Collins Pine	Chester California	LOA - Los Angeles	Pulp&Paper	ABB Bailey Net90	
Conoco Phillips	Dallas Area	DAL - Dallas	Oil and Gas	ABB Bailey Infi90	May-05
Consolidated Papers Inc	Wisconsin Rapids-WI	MIL - Milwaukee	Forest Products	ABB Bailey (Undesignated)	Aug-05
Consolidated Papers Inc	Wisconsin Rapids-WI	MIL - Milwaukee	Forest Products	ABB Bailey (Undesignated)	Feb-05

Process Opportunities - Legacy DCS Inter-Operate / Replace with Rockwell Process system

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Consolidated Papers Inc	Wisconsin Rapids-WI	MIL - Milwaukee	Forest Products		Aug-04
Controls Elec Design Svcs Inc	Madison-AL	NAS - Nashville	Chemical	Honeywell Plantscape	May-08
Corn Products International	Argo-IL	CHI - Chicago	Food/Beverage	Foxboro IA	Sep-05
DENIM NORTH AMERICA LLC	Columbus-GA	ATL - Atlanta	Forest Products	ABB Advant	May-05
Denver Metro Waste Water		Northwest	Water/ Waste water	ABB	Dec-08
Dofasco	Hamilton, ONT - Ontario, Canada	ONT - Ontario	Metals	neywell TDC3000, GE Serie	Jan-05
Dofasco	Hamilton, ONT - Ontario, Canada	ONT - Ontario	Metals	ABB Bailey Net90	Oct-03
Dofasco	Hamilton, ONT - Ontario, Canada	ONT - Ontario	Metals	eywell TDC2000, PLC3, 177	Sep-05
Dofasco	Hamilton, ONT - Ontario, Canada	ONT - Ontario	Metals	GE Series 5 and Series 6	Jul-07
DuPont	Chicago Area	CHI - Chicago	Home and Personal Care	ABB Bailey Infi90	Sep-07
DuPont	Nashville Area	NAS - Nashville	Home and Personal Care	Honeywell (Undesignated)	May-07
DuPont	Cleveland Area	CLE - Cleveland	Home and Personal Care	ABB Bailey Infi90	Dec-06
Effem Foods-Mars	Chicago	CHI - Chicago	Food&Bev	ABB Bailey Net90	
Electrol Systems	San Antonio	DAL - Dallas	Other	ABB (Undesignated)	Sep-03
First District Association	Litchfield, MN	MIL - Milwaukee	Food/Beverage	Emerson Fisher Provox	Dec-06
Flowers Baking Co. Of Lynchburg, Llc	Lynchburg-VA	CHA - Charlotte	Food/Beverage	Vestinghouse (Undesignated)	Sep-06
Fording Coal Elkford	Calgary	WST - Canada West	Mining	Yokogawa/Modicon	Feb-08
Fording Coal Elkford	Calgary	WST - Canada West	Mining	Yokogawa/Modicon	Feb-08
General Mills	Minneapolis, MN	MKE- Milwaukee	Food and Bev		Jun-08
Godrej	India - South Asia	Vadodara	Chemical	ABB / Honeywell	Jul-08
GS Paper	Malaysia - SE Asia	MYS - Malaysia	Pulp&Paper	ABB	Jul-08
Guizhou Yuan Hao Co.,Ltd.	Asia	S-CQ	Chemical		Aug-07
Guizhou Yuan Hao Co.,Ltd.	Asia	S-CQ	Chemical		Apr-07
Haldor Topsoe Inc	Pasadena-TX	DAL - Dallas	Chemical	Rosemount RS3	Jun-07
Hershey Foods Corporation	Hershey-PA	BOS - Boston	Food/Beverage	Honeywell (Undesignated)	Mar-07
Hikal India Limited	India - South Asia	Mumbai	Life Science	Foxboro	Jul-08
Hindustan Zinc Limited	India - South Asia	New Delhi	Metals	ABB	Jul-08
HPI LLC		DAL - Dallas			Apr-08

DCS 转换项目案例

项目背景：

- 一家印度农用化学品生产商,并有很多国际客户
- 原来的三个车间用的是Foxboro IA 系统,每个车间各一套Foxboro 的冗余控制器,
- 同时也用到Rockwell的PLC5,用于车间之间的连锁和顺序控制
- Foxboro 在PLC5机架中安装了 硬件用于转换PLC5的信息到总线上.
- 共6台操作员站和1台工程师站

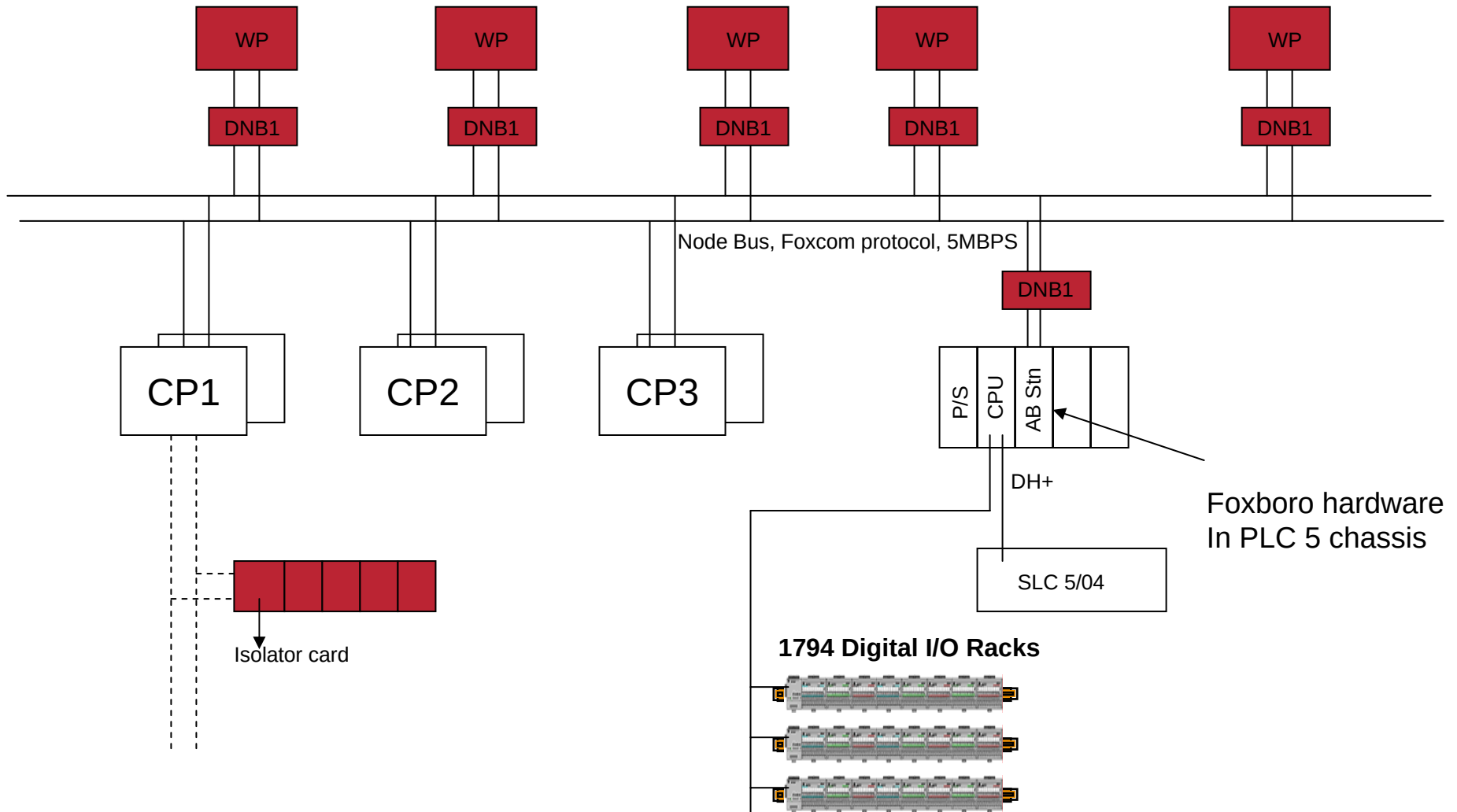
用户考虑到：

- 硬件过于陈旧,运行不可靠,任何故障都会导致全厂停车
- 原来的 操作员站和工程师站都基于 Unix操作系统,也很陈旧,不易操作.
- 面临严重的技术支持问题
- 由于工程师的变动,因此导致了有经验工程师的严重短缺

2008年6月转换为PlantPAx系统

DCS 转换项目案例

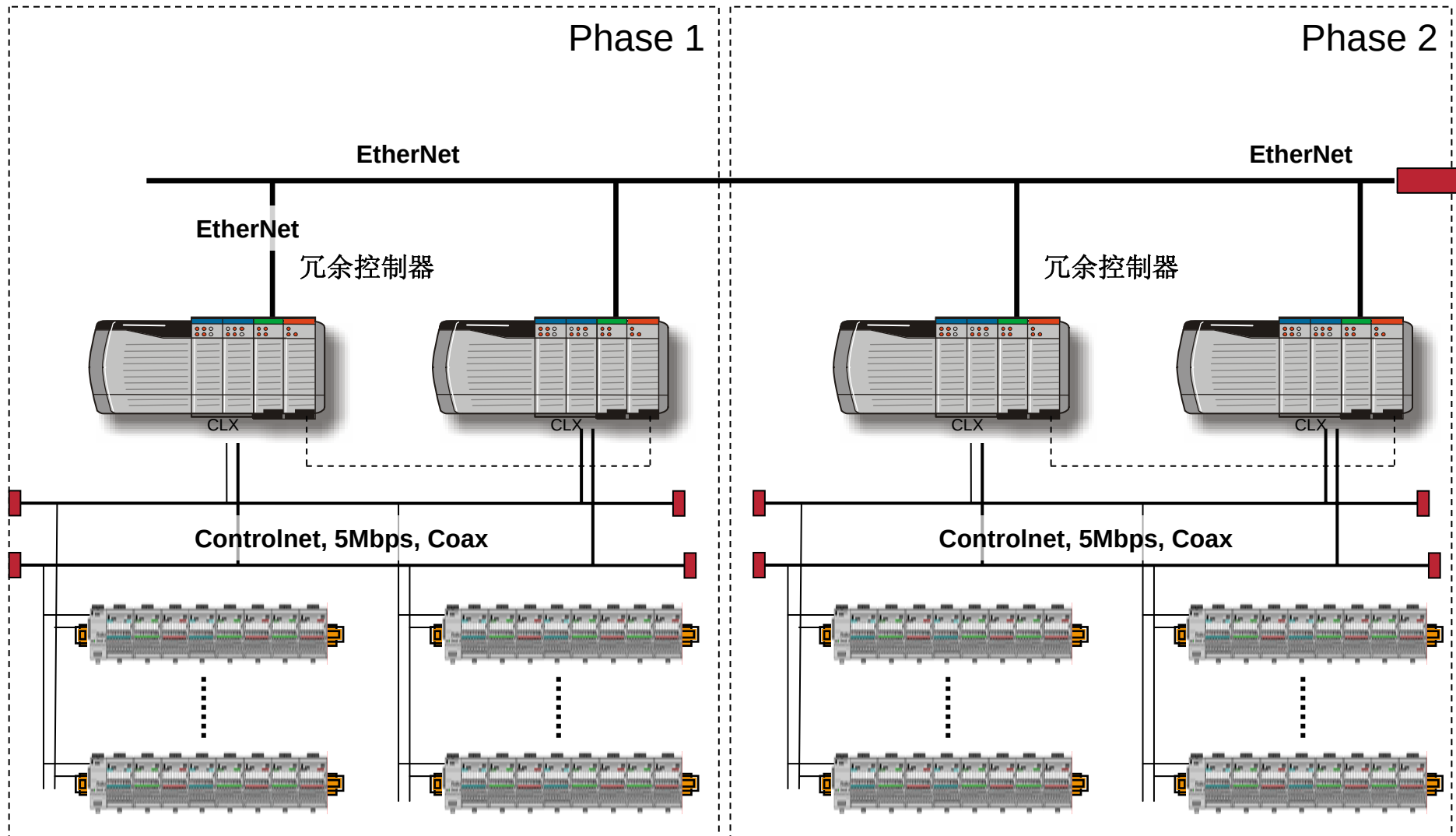
操作员站



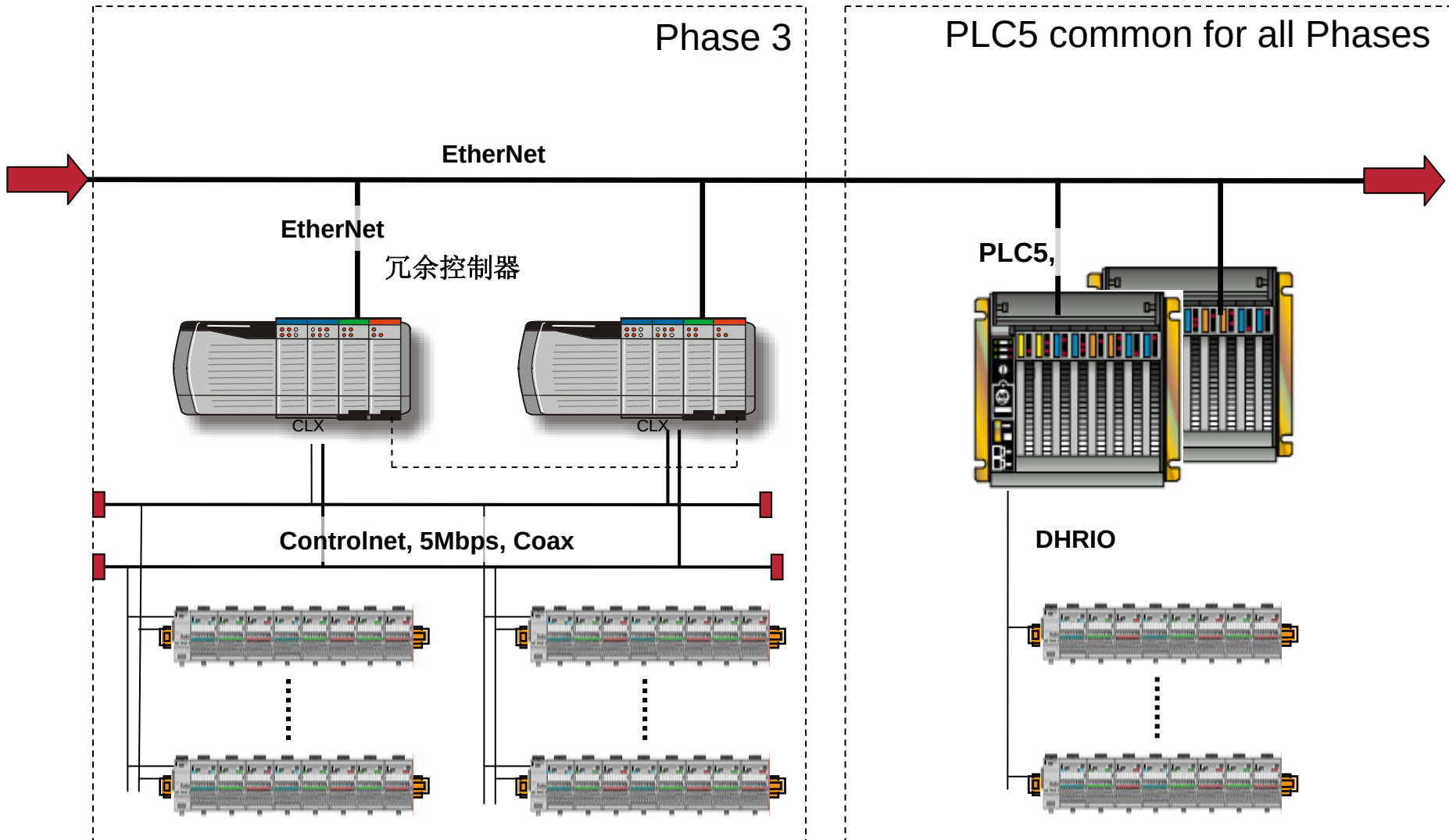
**Rockwell
Automation**

转换前：Foxbro IA 架构

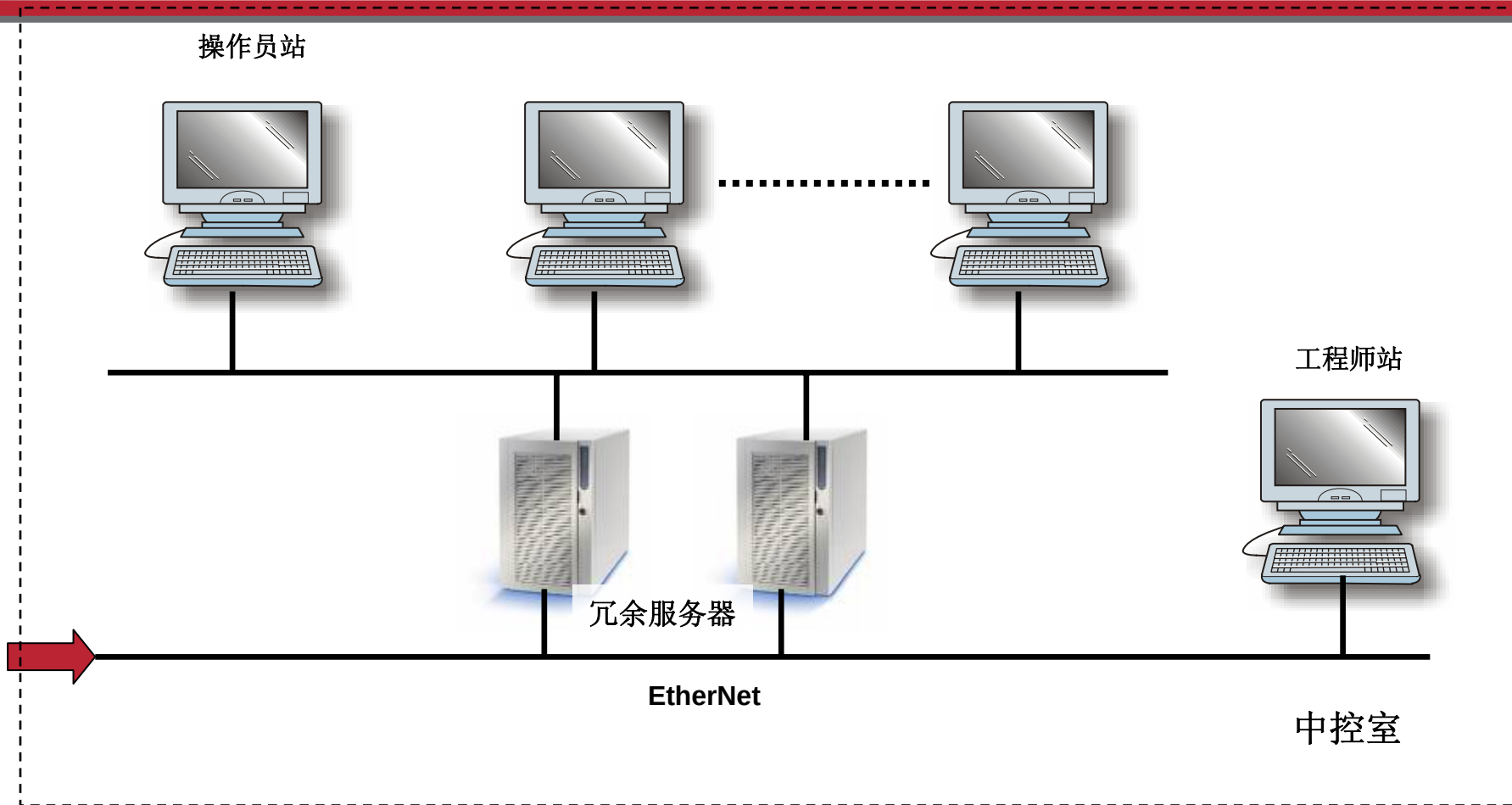
DCS 转换项目案例



DCS 转换项目案例



DCS 转换项目案例



DCS 转换项目案例

项目背景：

- 印度一家最大的肥皂原料生产商,
- 使用多家品牌的控制系统,给维护和管理来很大的困难,同时增加了备品备件库存成本
- 包括Rockwell, Honeywell 和 Emerson

Honeywell TDC-3000

DeltaV FF base Emerson Process

AB Control Logix Allen Bradley

AB Flex Logix Allen Bradley

AB Compact Logix Allen Bradley

AB PLC-5/60 Allen Bradley

AB SLC-5/04 Allen Bradley

984-680 AEG-Modicon

Series 90-70 GE-Fanuc

Series 90-30 GE-Fanuc

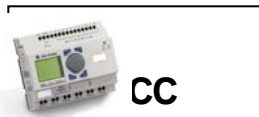
IPC 620-35 Tata Honeywell



2008年6月转换为PlantPAx系统

DCS 转换项目案例

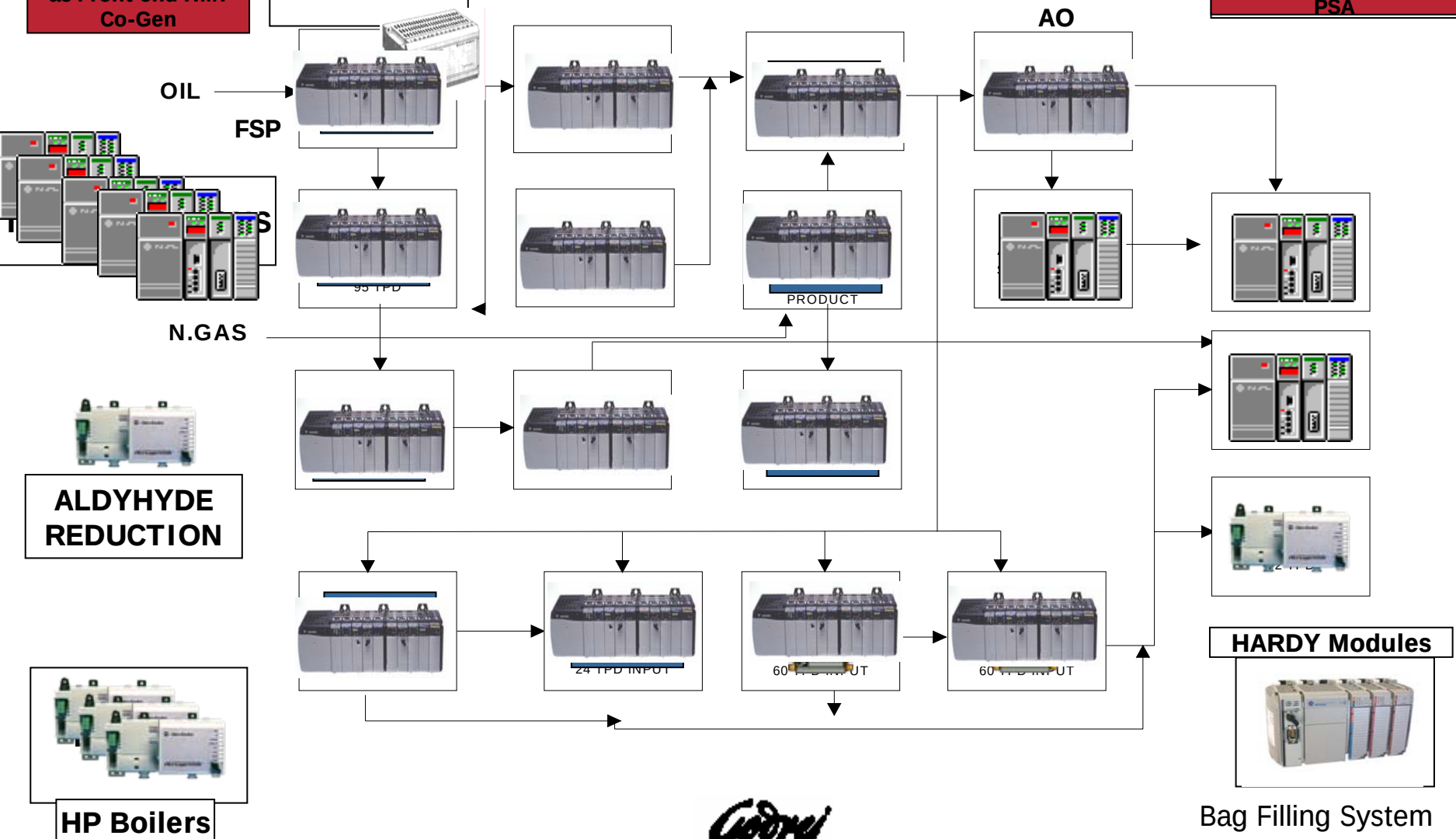
**GEFANUC PLC WITH
KEPSERVER
& RSView SE
as Front end HMI
Co-Gen**



CC

Process Flow Diagram

**MODICON PLC WITH
KEPSERVER
& RSView SE
as Front end HMI
PSA**



Godrey

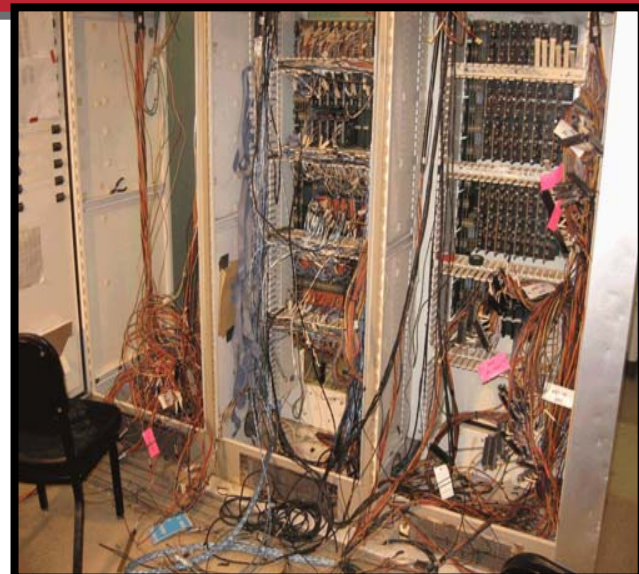
转换前后对比

- 工厂间,不同供应商产品通讯连接困难-换成PlantPAx,使全厂实现无缝连接
- 维护成本高 – 通用的硬件,降低维护成本
- 原来多各供应商软硬件不兼容 – PlantPAx 开发的统一的平台
- 尽可能在一平台实现多种控制 – 多种控制方式
- 尽可能的利用已培训的工程人员 – 统一的平台,统一的组态环境
- 希望提供资产管理 - PlantPAx 提供了资产管理
- 升级成本高 – 统一的硬件,较低的固定成本
- 原来的设备陈旧 – AB 产品有最大的使用周期.

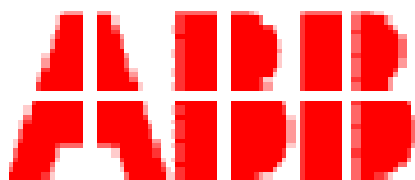


为什么需要转换

1. 系统超过20年
2. 网络支持能力有限
3. 没有保修
4. 技术服务能力弱
5. 不可靠的备件和服务
6. 停机频繁
7. 维护费用高
8. 陈旧电气设备的可靠性差
9. 无法与商业系统进行数据传输
10. 旧设备妨碍生产力的进一步提高



哪些系统能转换到 PlantPAX



BAILEY Infi 90®

TDC2000®

BAILEY Network 90®

TDC3000®

Fisher PROVOX®

Taylor MOD 300®

PlantScape®

Rosemount RS3®

Easy Migration with Rockwell Automation Conversion tools

Taylor MOD 300®

Siemens Moore APACS

Rosemount RS3®

Westinghouse WDPF

将来能转换的系统...

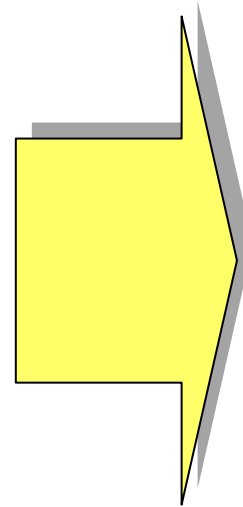
SIEMENS



ROSEMOUNT



Honeywell

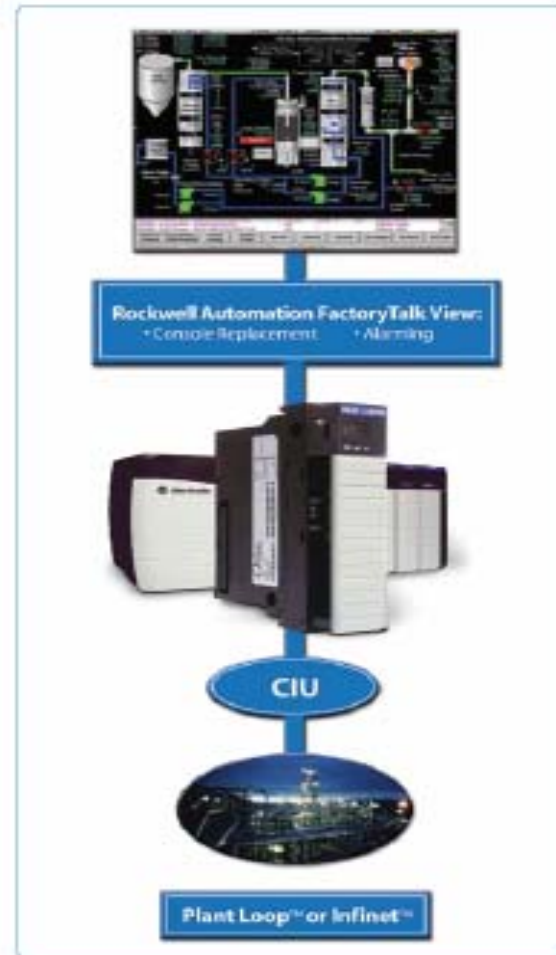
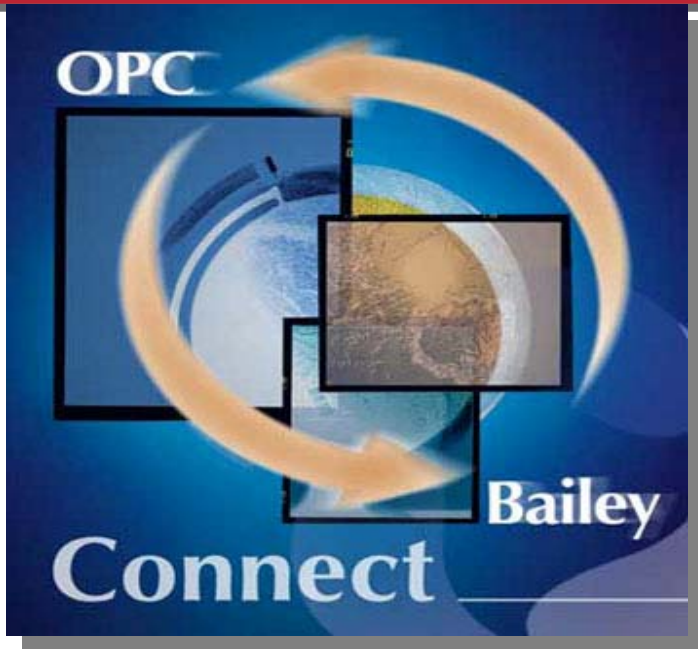


PlantPAX
Process Automation System

invensys®
FOXBORO



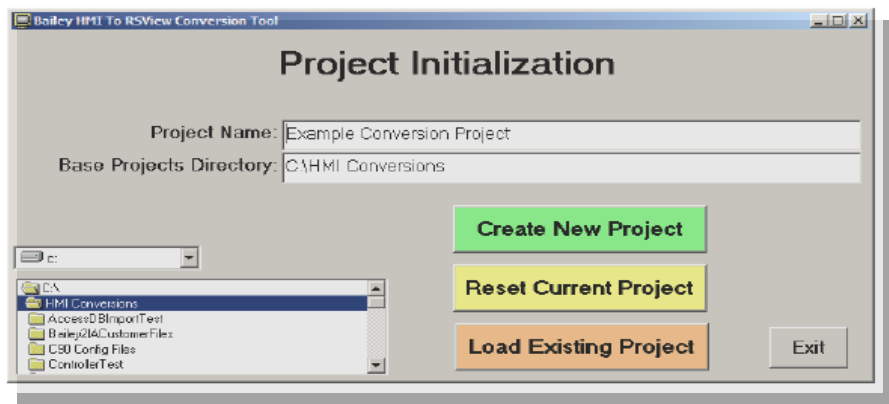
提供OPC 服务器



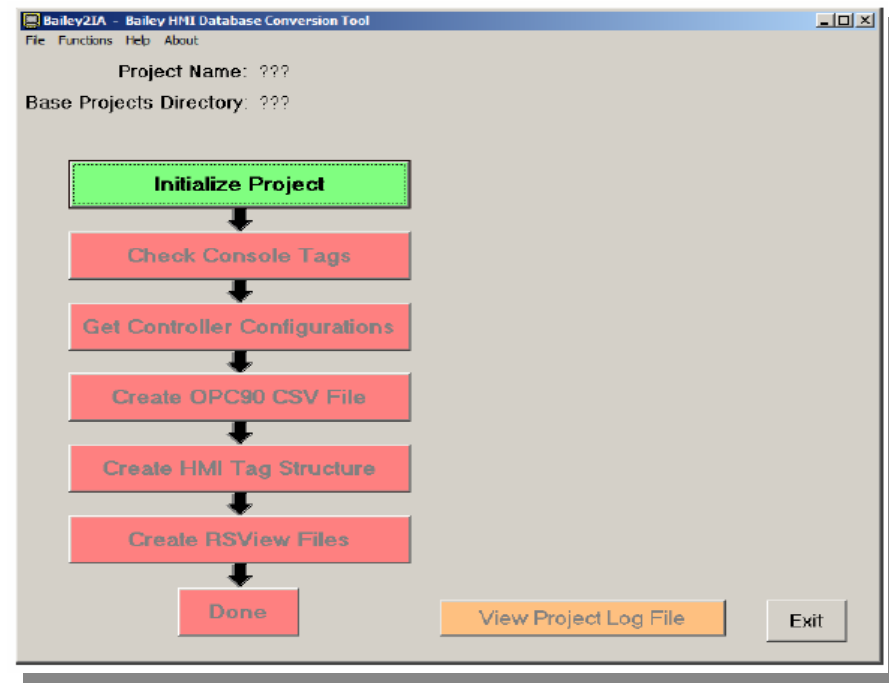
c-ATM-80090 appliances are specially designed and configured to connect the ControlLogix platform to ABB Bailey Inp 90 or Network 90 Legacy DCS Systems.

Bridging the Gap **Online**
DEVELOPMENT INC.

数据库转换工具



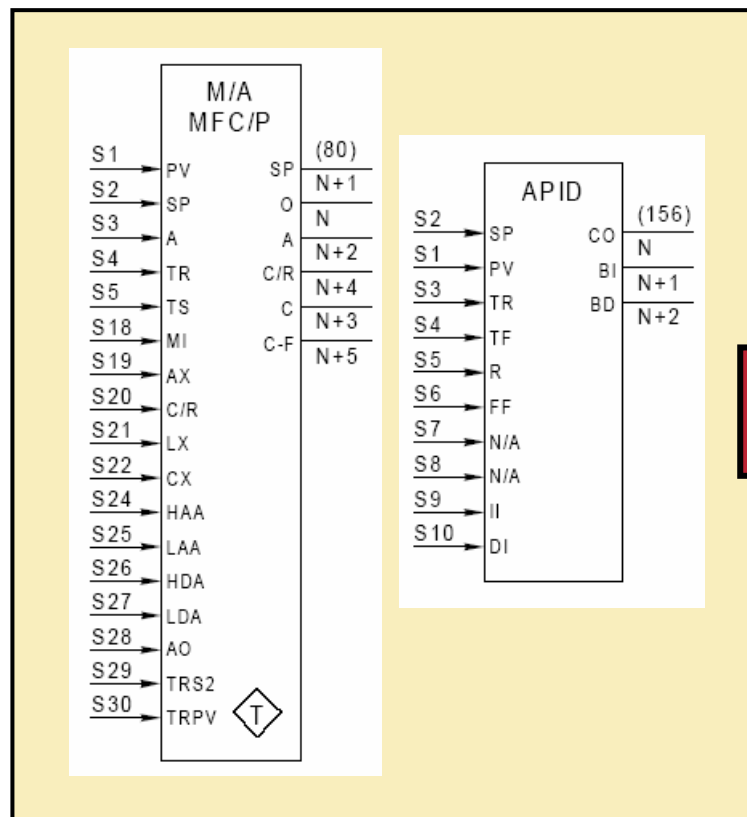
- 标签数据库转换
- OPC Server 连接



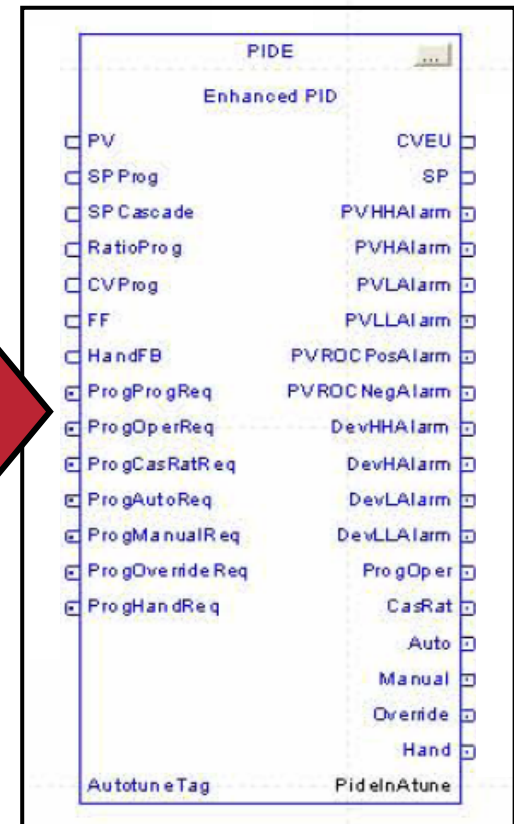
降低风险
减少工程时间

控制策略转换库

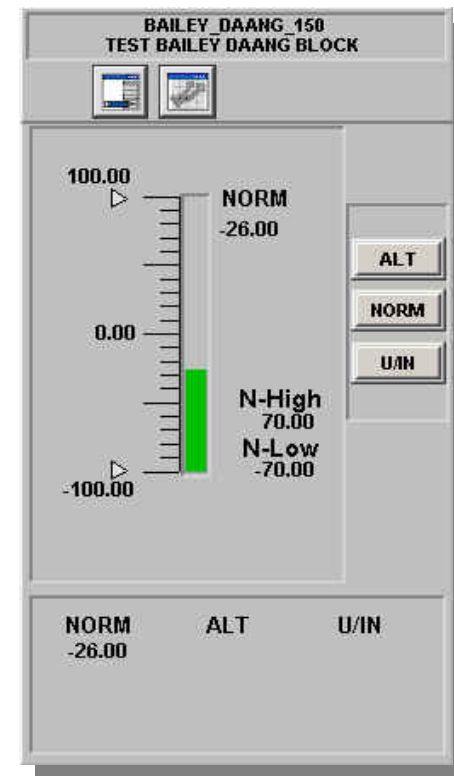
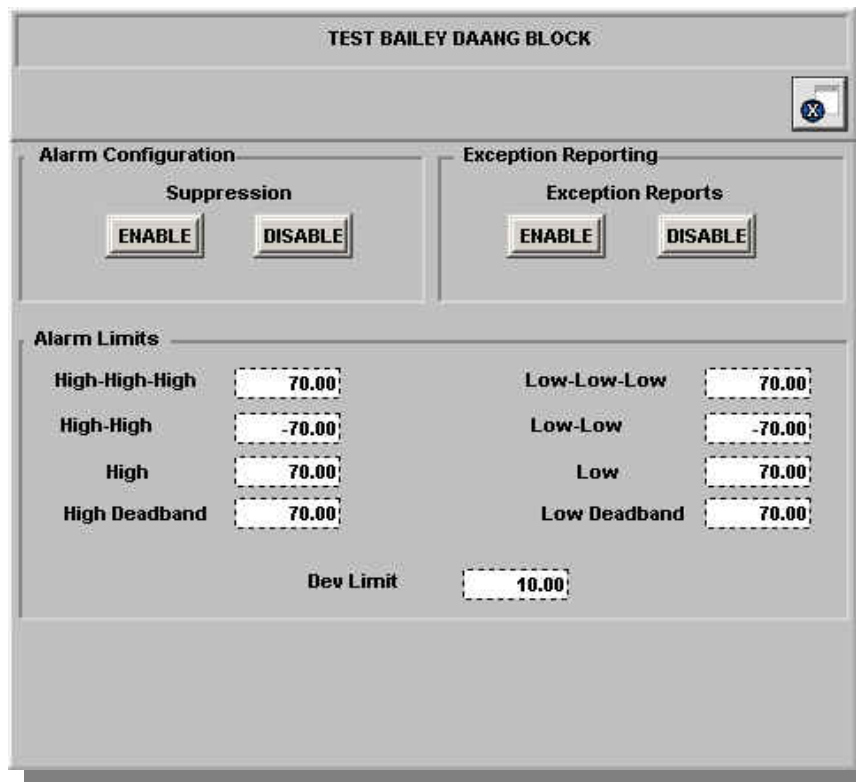
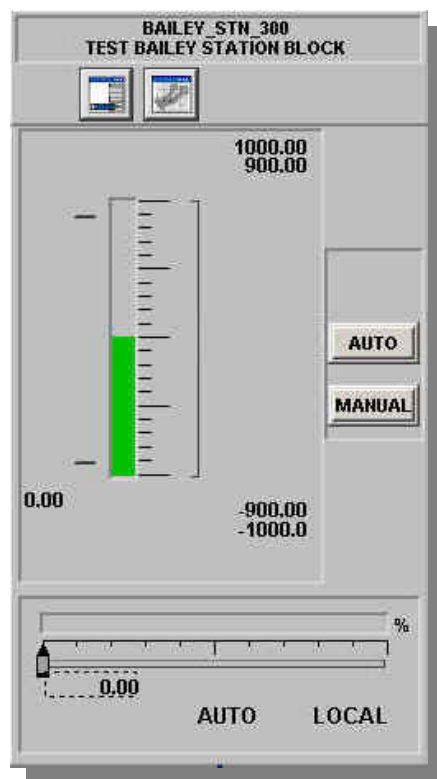
Bailey PID



CLX PIDE



定制控制面板



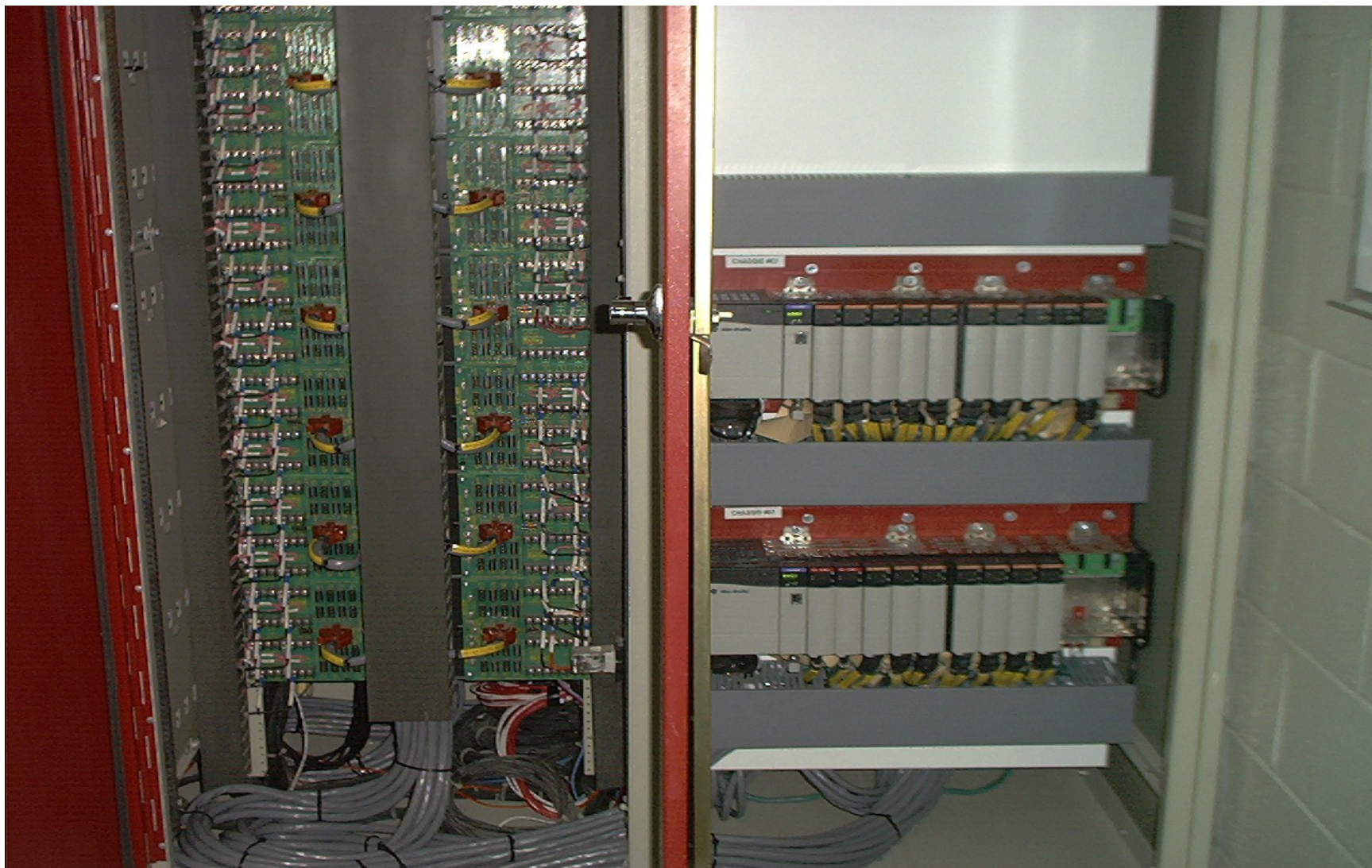
可以创建与原系统风格一致的控制面板

定制电缆



不需修改现场接线，节省工程时间

定制电缆方案



I/O 扫描模块



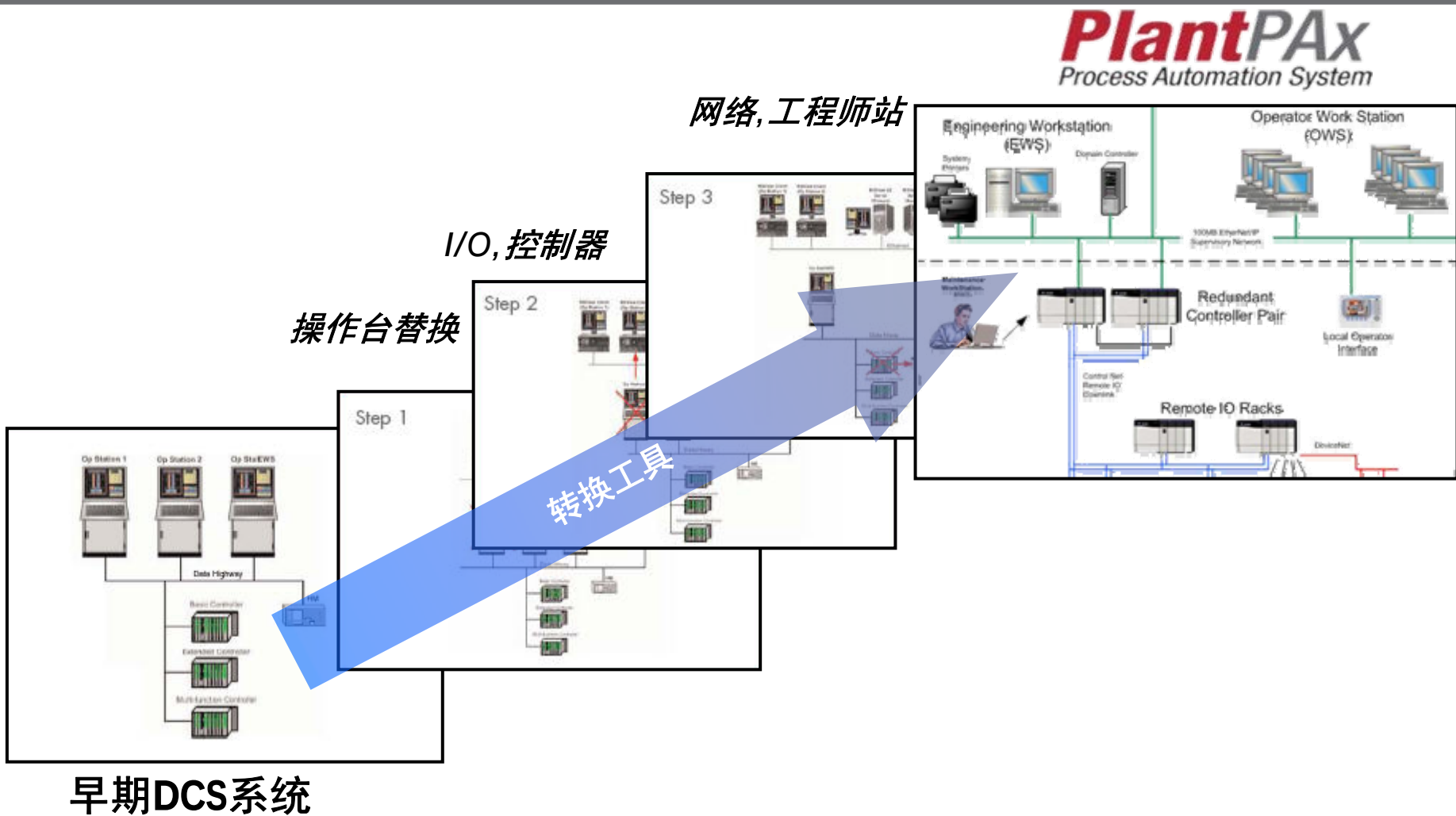
PROVOX S10/S20 I/O



Honeywell
IPC620 I/O

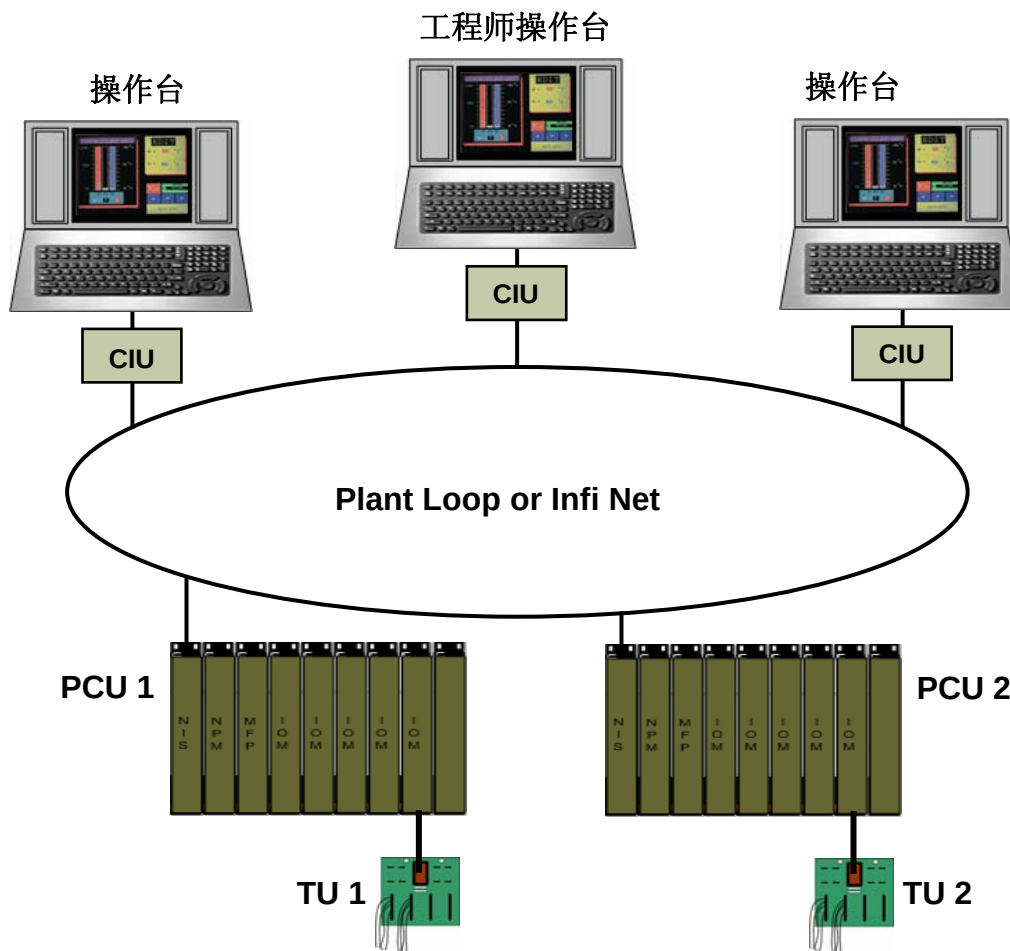


如何转换-分阶段转换

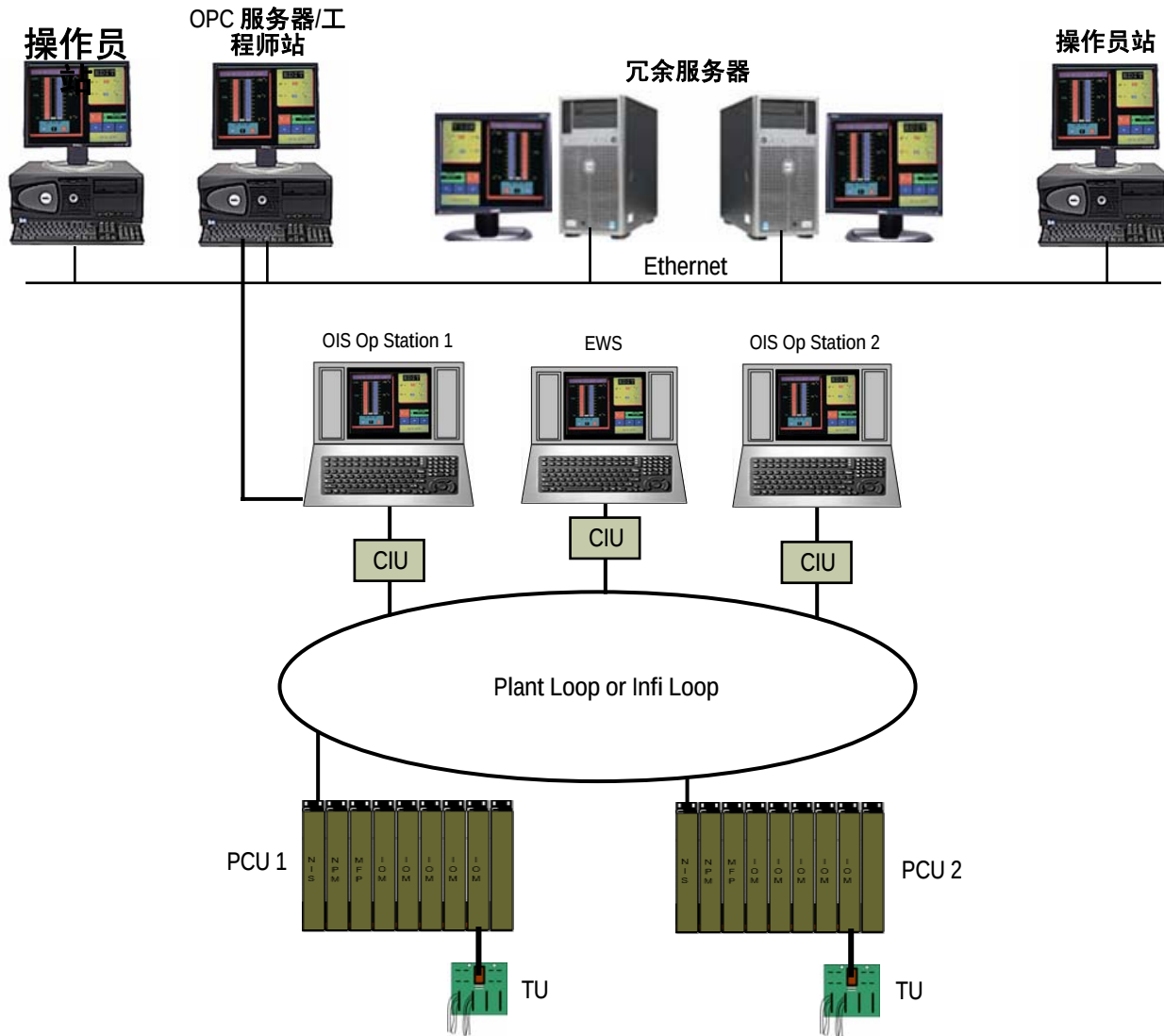


分阶段转换 尽可能地减少生产停车

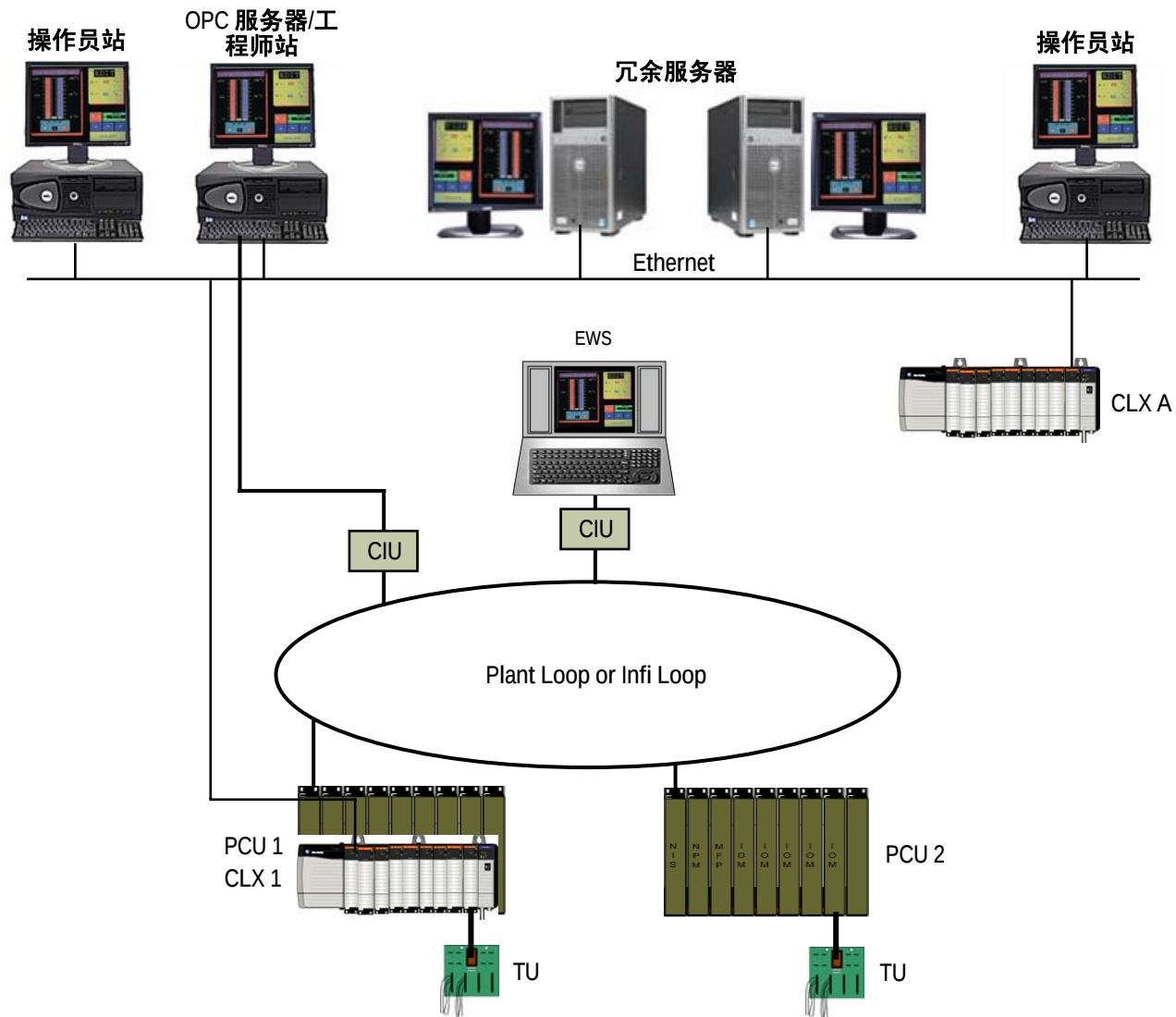
分阶段转换



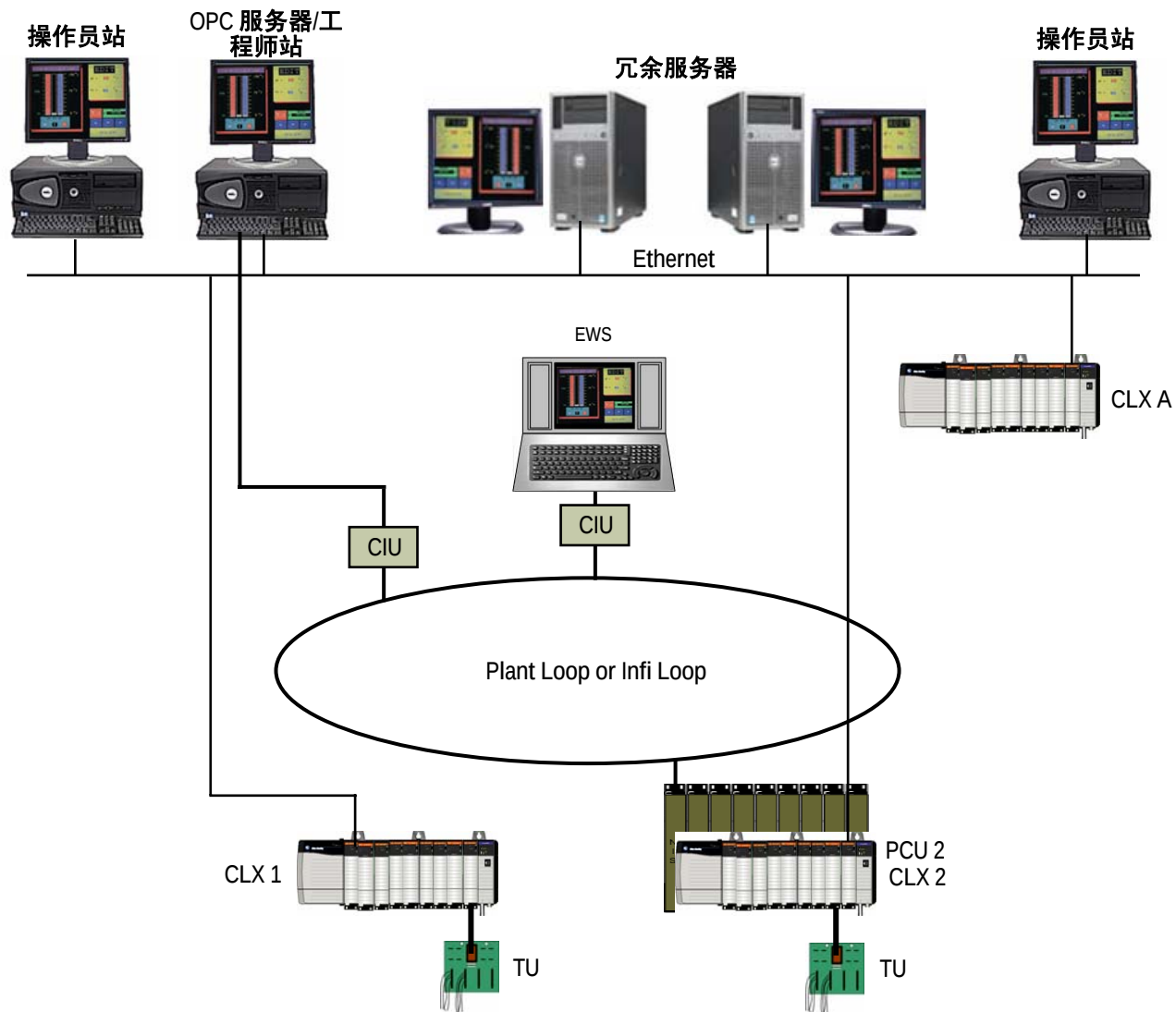
Bailey Net90 / Infi90 – 阶段 1



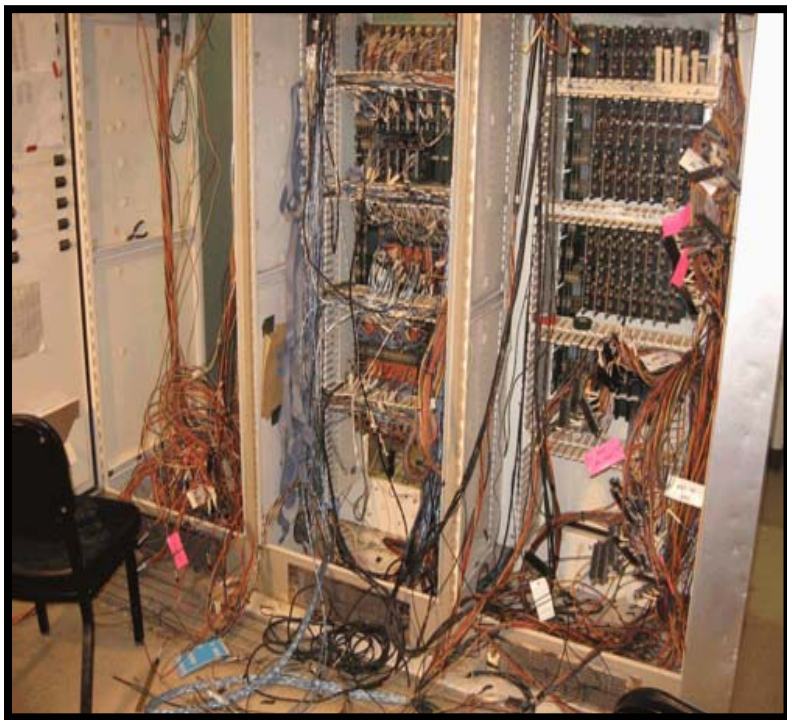
Bailey Net90 / Infi90 – 阶段 2



Bailey Net90 / Infi90 – 阶段 3



转换前后对比



工程实施

工程服务

- 项目评估
- 项目管理
- 系统架构设计
- 材料采购
- 硬件设计成套
- 控制系统组态
- 操作画面编辑
- 信息系统集成
- 技术文档
- FAT/SAT
- 系统安装调试
- 现场服务

Solution Providers
MPS CSM



Primary Lead:

MPS Delivery (capability exists today)

MPS Delivery (Desired Manufacturer)

3rd Party Delivery (No Primary 3rd Party ID'd)

3rd Party Delivery (Preferred Industry Partner identified with strong presence)

CEM based delivery

Not applicable

Functional area	Manufacturing area													Food & Beverage										Pharmaceuticals				
	Visualization		Process Optimization				Historian		Batch		Controls		Conversions						Building	CIP	Treatment	Design						
	SCADA/HMI	Simulation	MAP Assessment	Brewhouse Solution	Mixing	Blending/Syrup Room	Routing Control	Historian	FTBatch	Phase Manager	Compact Batch	Hybrid	Continuous	Siemens S5	Siemens S7	Siemens S7-1200	Siemens S7-300	Fisher	Moore	Rosemount	Westinghouse	Yokogawa	Rockwell PLC	Invenays (Foxboro Ix)	QBAS	Clean-in-place Systems	Water/Waste Water	Modular Design Apparatus eng.
Manufacturing area	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process	Process
Prepared Food (Global)																												
Receiving/QA Inspection																												
Batch Pre-process																												
Product Making																												
Cooking/Baking																												
Freezing																												
Canning																												
Packaging																												
Baked Goods (Global)																												
Ingredients																												
Dough Mixing																												
Molding/Proofing																												
Baking																												
Cooling																												
Finish/Packaging																												

Green = Available today

Yellow = Developed in '09

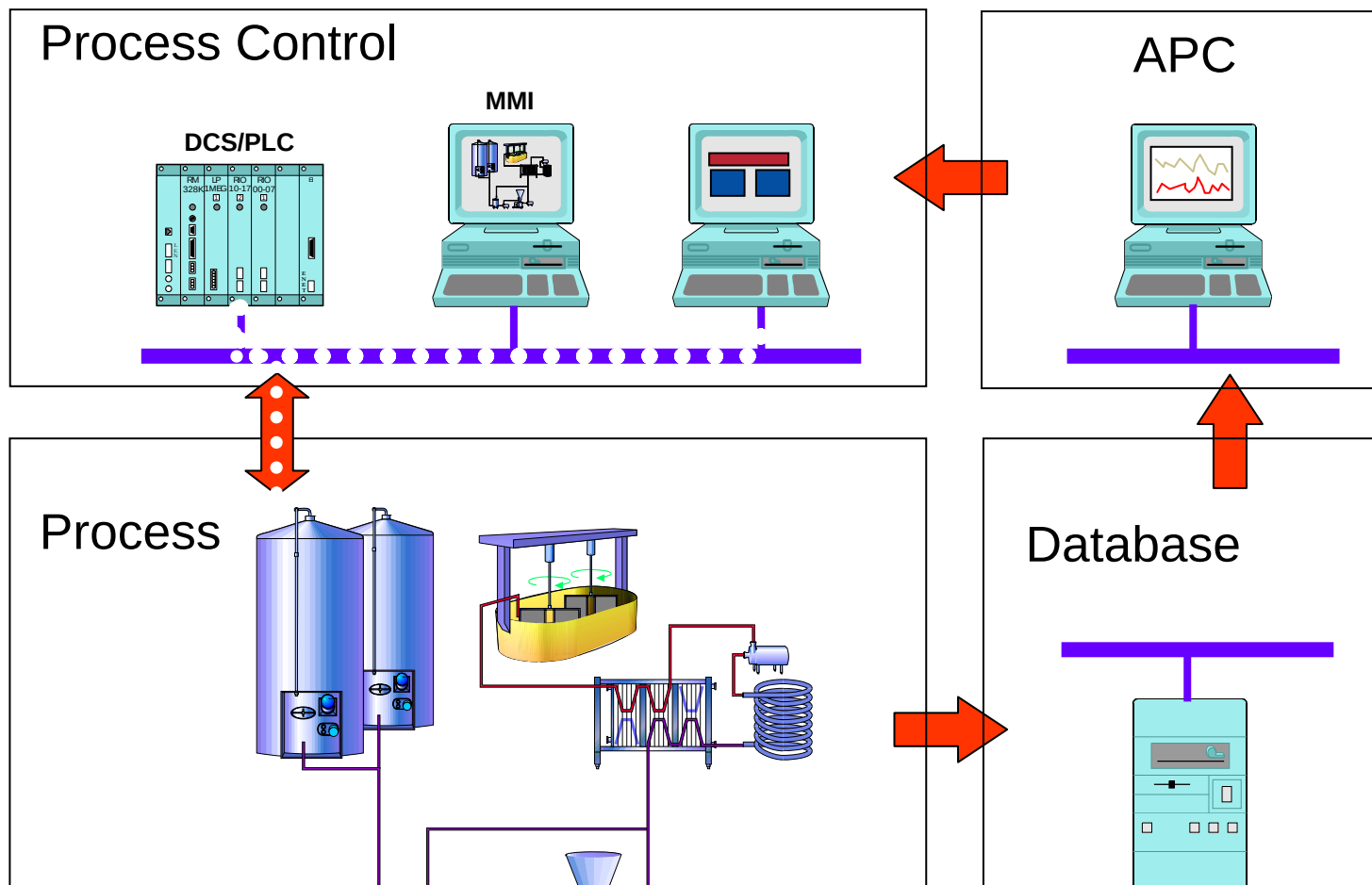
	Bailey Net90/Inf90	Honeywell TDC/TPS	Fisher PROVOX	PLX/PlantScape	Moore APACS	Westinghouse WDPF	Rosemount RS3	Foxboro IA	Rosemount RMV9000	Taylor MOD300	Emerson Delta V	Yokogawa Micro XL
OPC 服务器软件	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
数据库转换工具	Green	Green	Green	Green	White	Green	White	Green	White	White	White	White
定制连接电缆	Green	Green	Green	Green	Green	Green	White	White	Green	White	White	White
控制策略应用库	Green	Green	Green	Green	White	Green	White	Green	White	White	White	White
在线开发应用模块	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
图形界面库	Green	Green	Green	Green	White	White	White	White	White	White	White	White
IO扫描模块	White	White	Yellow 09	Yellow N/A	White	White	White	White	Green	White	White	White
画面转化服务	White	White	White	White	Green	White	White	White	White	Green	White	White

1. 早期DCS转换

2. 先进控制APC

3. 资产管理

什么是先进控制



先进控制技术(Advanced Process Control, APC), 是对那些不同于常规单回路控制, 并比常规PID控制有更好控制效果的控制策略的统称

为什么要用先进控制

应用先进控制技术是提高经济效益的重要手段

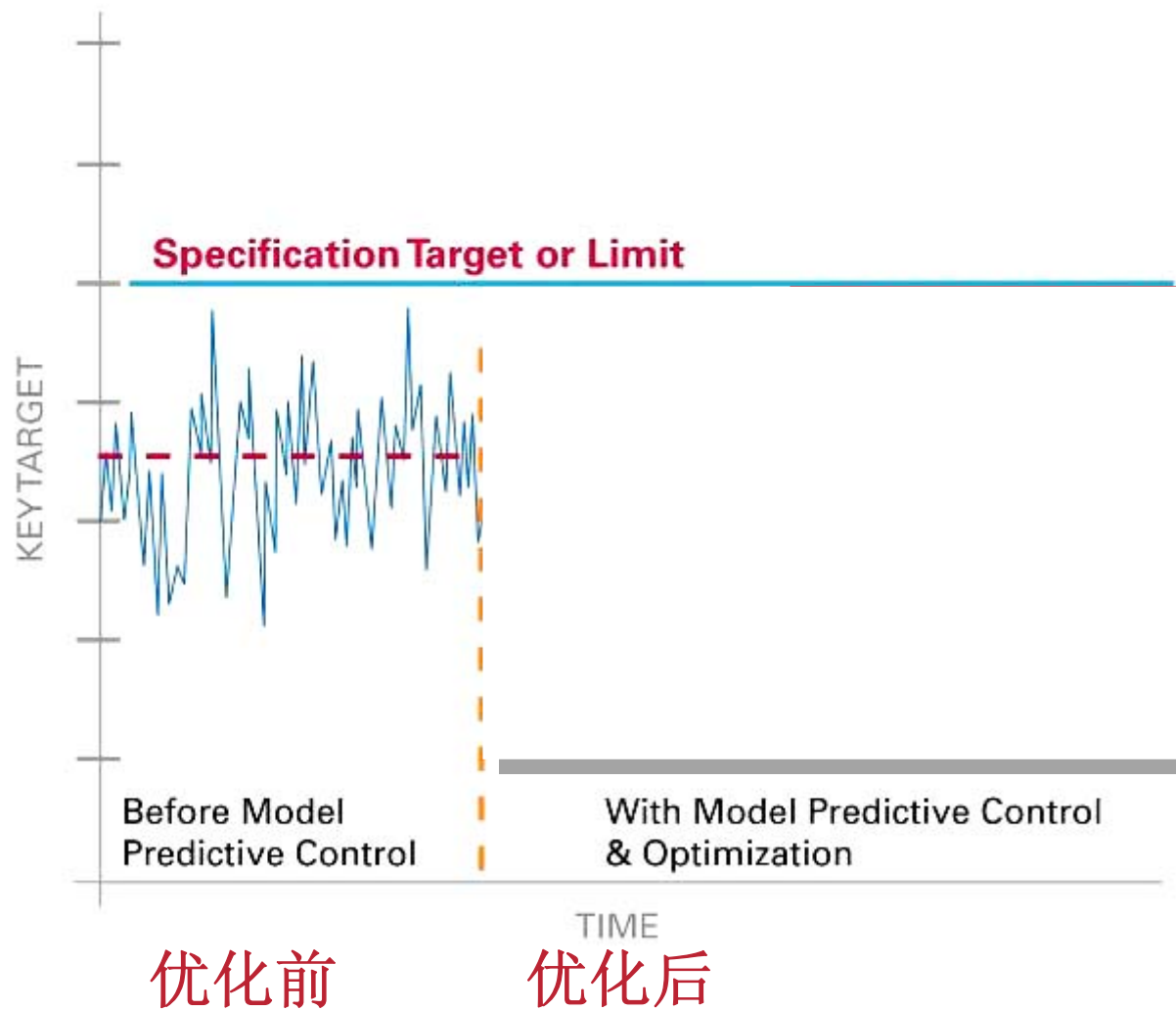
改善控制效果

提高产品档次和质量

降低能源和原材料消耗

现代复杂的工业生产过程，通过实施先进控制，可以大大提高工业生产过程操作和控制的稳定性，改善工业生产过程动态性能，减少关键变量的运行波动幅度，使其更接近于优化目标值，从而将工业生产过程推向更接近装置约束边界条件下运行，最终达到增强工业生产过程稳定性和安全性，保证产品质量的均匀性，提高目标产品的收率，提高生产装置的处理能力，降低生产过程运行成本以及减少环境污染等目的。

先进控制





ESTIMATED BENEFITS

% IMPACT

提高产量
增加收益

5 - 10%
0.6 – 1.5%

减少能耗

2 – 4%

减少原材料浪费

0.6 – 1.5%

提高设备利用率

总收益: USD 120K/Year~400K/Year

水泥行业



ESTIMATED BENEFITS

% IMPACT

提高产量

2 – 10%

减少能耗

2 – 20%

提高设备利用率

5 – 20%

总收益: USD 250K/Year~600K/Year

聚合物/化工行业



ESTIMATED BENEFITS

% IMPACT

提高产量
提高产品质量

2 – 10 %
10 – 50 %

减少催化剂,原材料用量

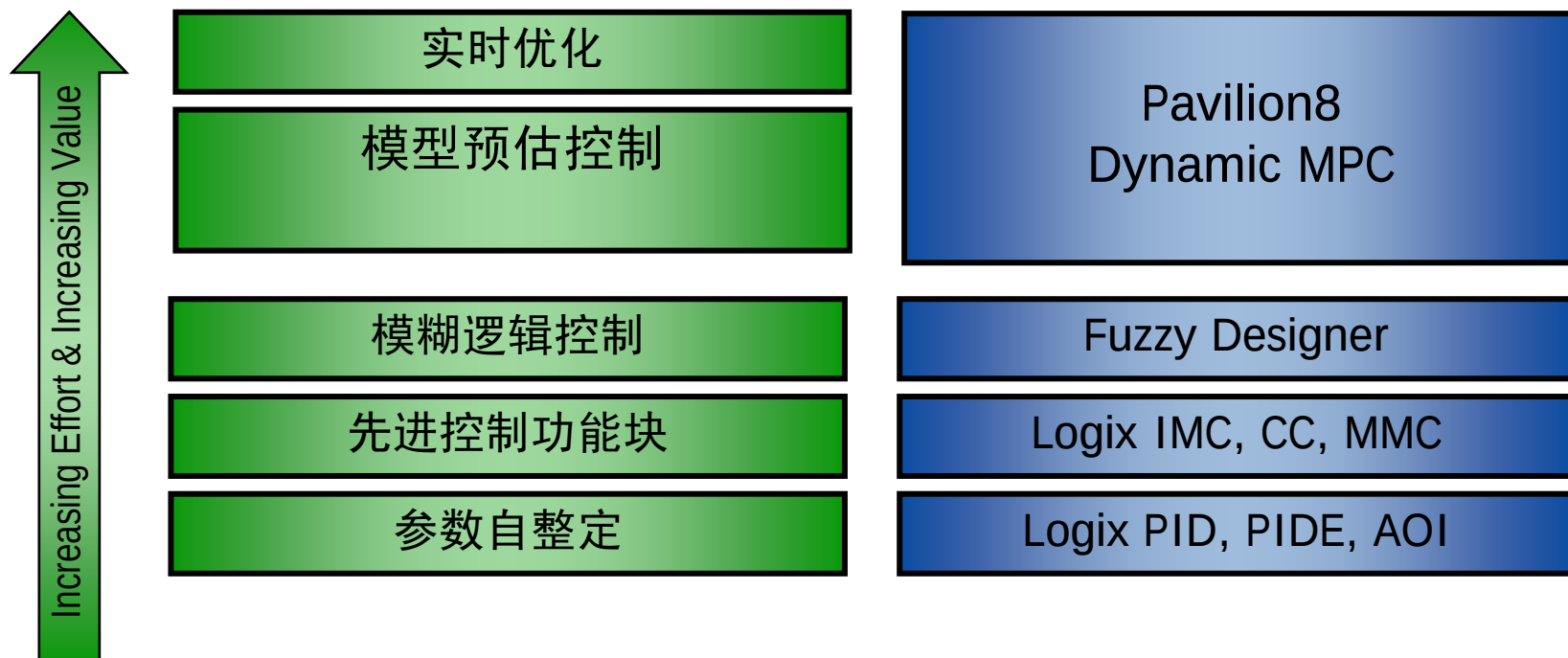
2 – 5 %

提高设备利用率
减少副产品

5 – 20 %
2 – 10 %

总收益: USD 500K/Year~1000K/Year

PlantPAx – 先进控制



多级回路参数自整定

■ 基本回路调节

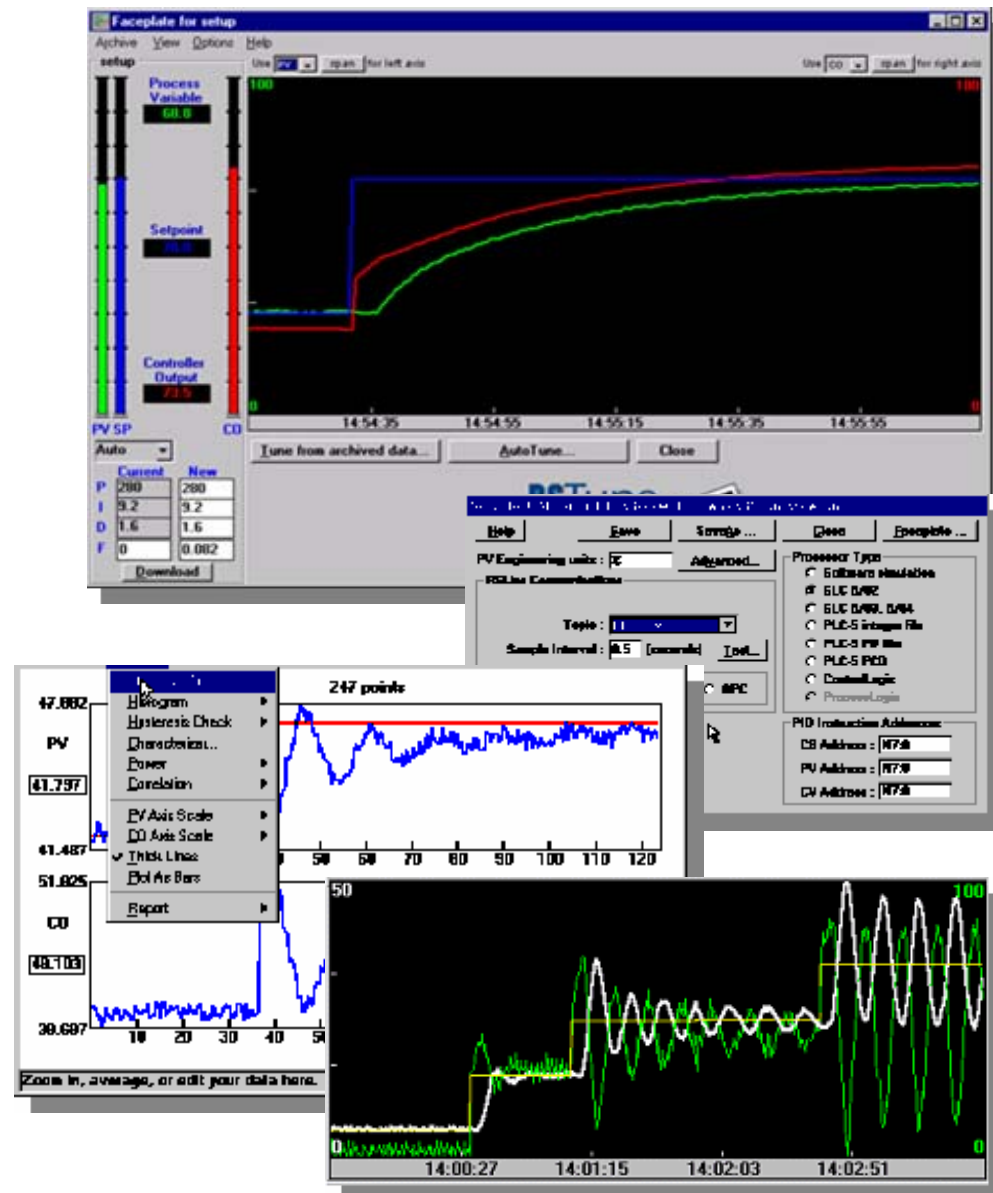
- 开环调节
- PIDE功能块内嵌的参数自整定功能

■ RSTune

- 基于计算机的开环或闭环自动参数自整定

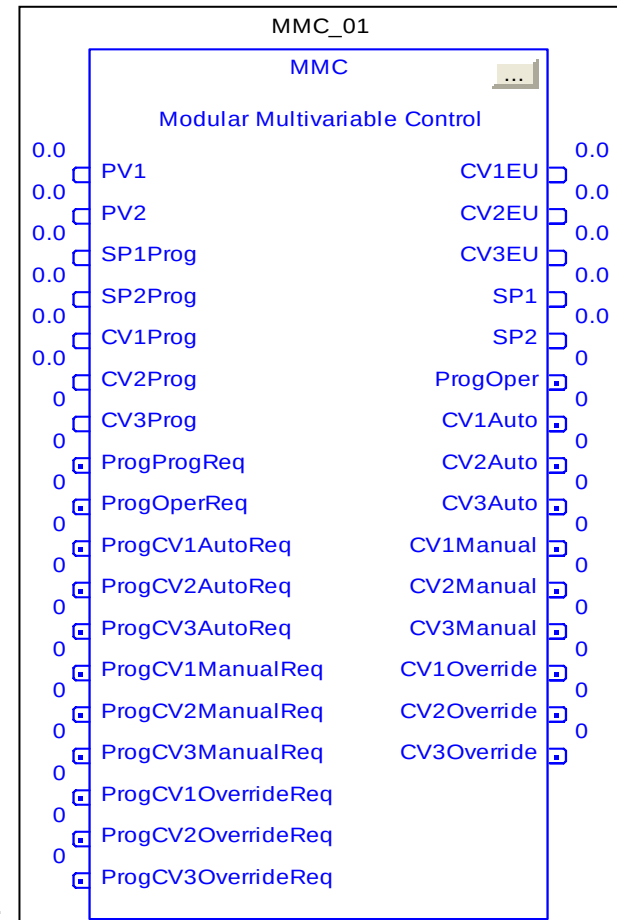
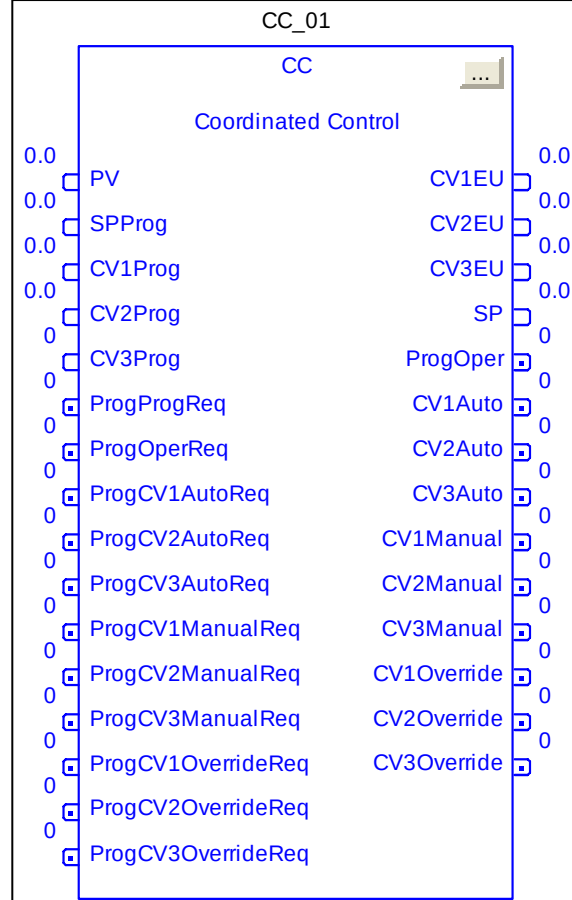
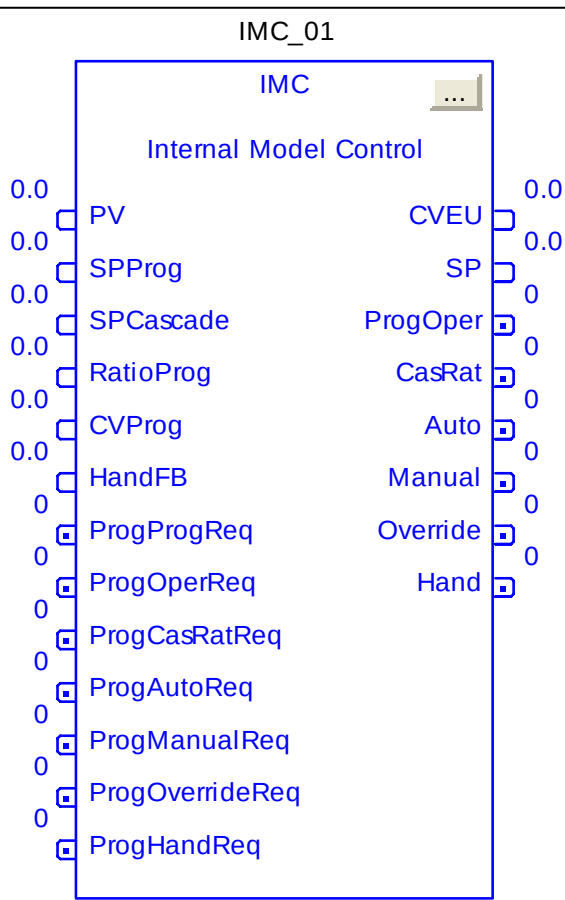
■ RSLoopOptimizer

- 基于计算机的高级回路自整定和回路分析



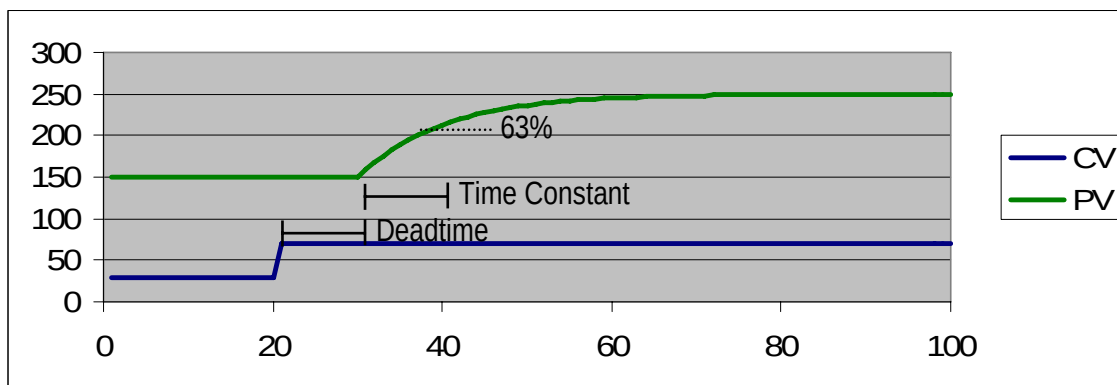
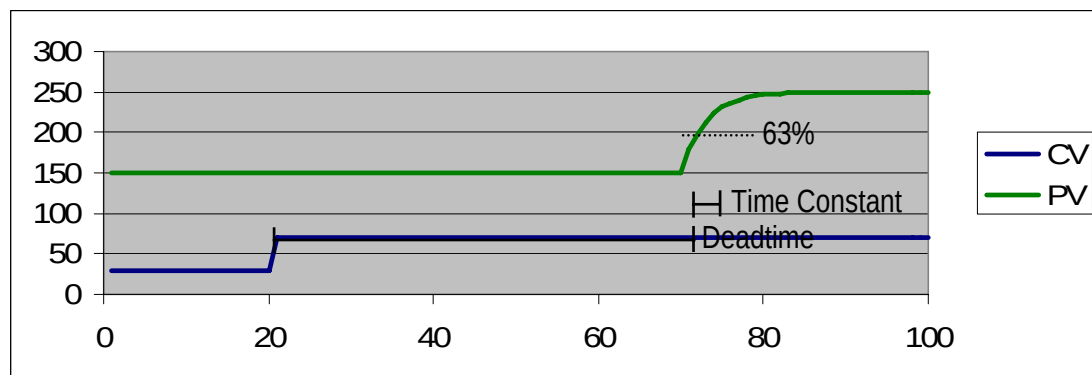
先进控制功能块

- 内模控制 (IMC)
- 并行协调控制 (CC)
- 多变量解耦控制 (MMC)



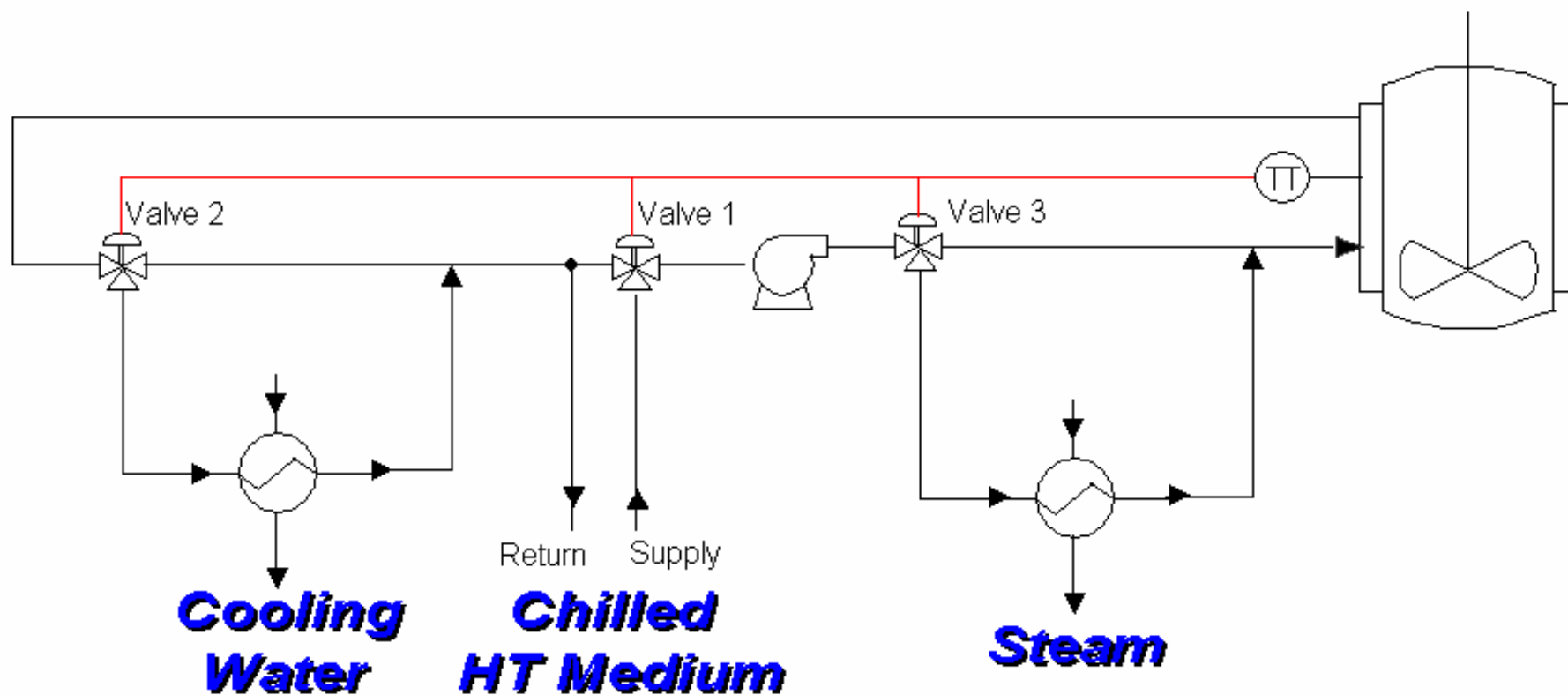
先进控制功能块 - IMC

内模控制 (IMC)-适用于存在大范围死区（传输滞后)的过程



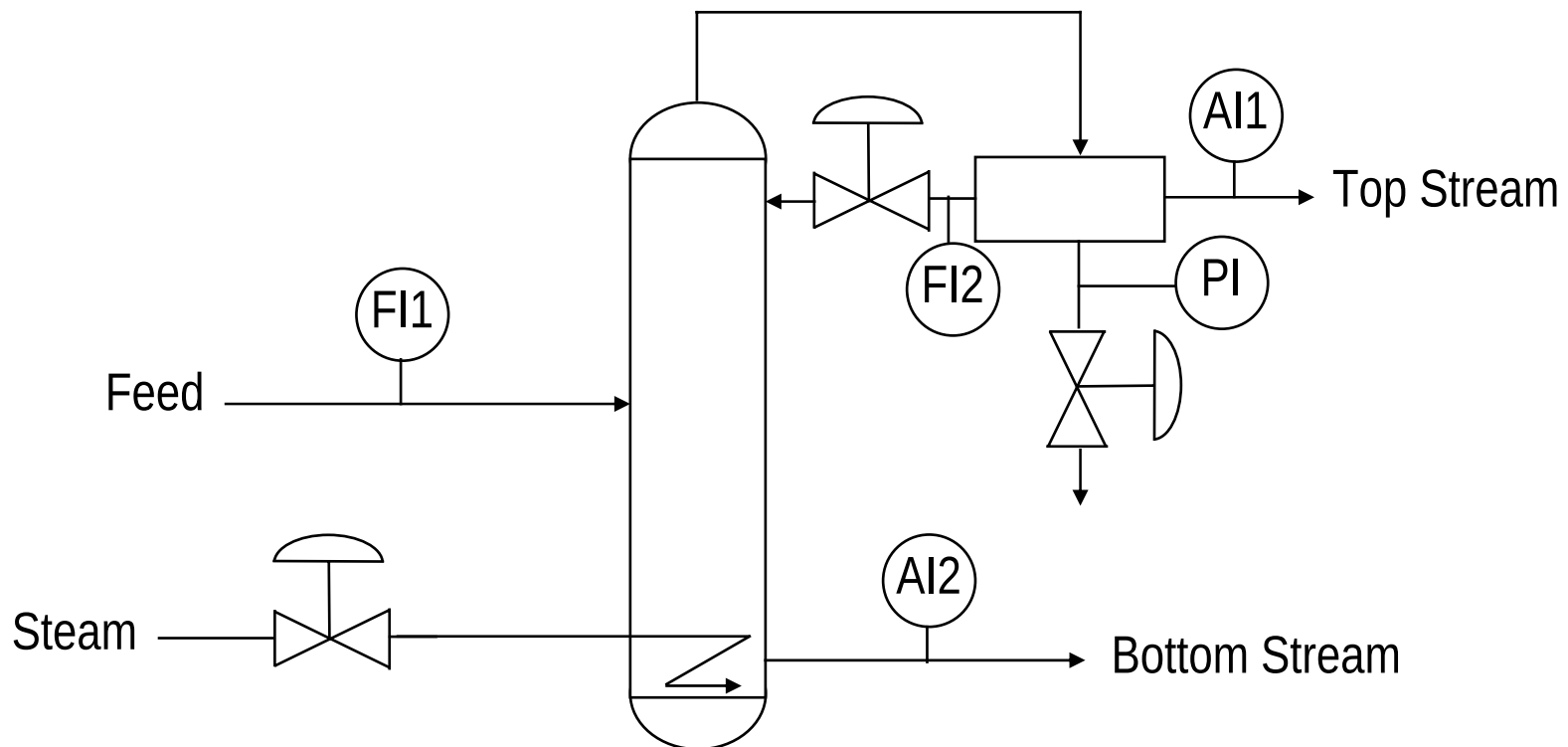
先进控制功能块 -CC

协调控制 (CC)适用于只有一个被控变量多个操作变量的较大系统



先进控制功能块 - MMC

多变量解耦控制 (MMC)-适用于两个被控变量，三个操作变量的系统；主要目的是消除过程变量的耦合并达到系统的最优化



• 分裂蒸馏塔

模糊控制 - FuzzyDesigner

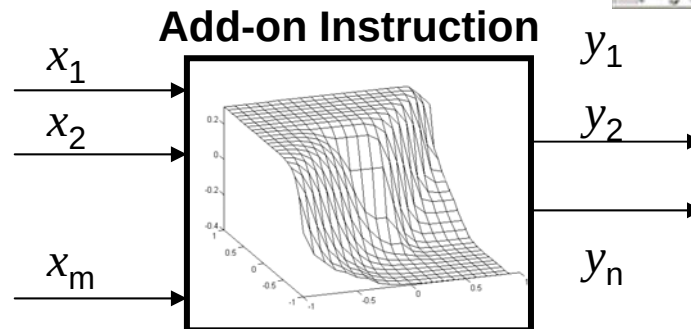
From

Expert knowledge
if x_1 is low and x_2 is medium
then y_1 is fast

FuzzyDesigner



Generates



IF	Temperature	IS	High	AND	Humidity	IS	High	THEN	Speed	IS	Medium
IF	Temperature	IS	Medium	AND	Humidity	IS	Very_High	THEN	Speed	IS	High

模糊控制是一种基于模糊数学理论的新型控制方法。模糊控制中的模糊量描述是以模糊集合为基础的,模糊控制的核心在于模糊控制器



Pavilion Technologies

PAVILION
TECHNOLOGIES
A ROCKWELL AUTOMATION COMPANY

	生物燃料	水泥	化工	奶制品	矿产冶金	制药	聚合物	制浆造纸	精炼
	Biofuels Solutions	Cement Solutions	Chemical Solutions	Dairy/CPG Solutions	Minerals & Metals Solutions	Pharma Solutions	Polymer Solutions	Pulp & Paper Solutions	Refining Solutions
APPLICATIONS	Dryer Control	Pyroprocessing Control	Reaction Control	Dryer Control	Mill Control	Multi-Variable Data Analysis	Reactor Control	Sheet Property Prediction Application	Distillation Control
	Distillation Control	Raw Material Preparation Control	Purification Control	Evaporator Control	Kiln Control	Continuous Online Monitoring	Extruder Rate Maximization Control	Emissions Monitoring	Reaction Control
	Mole Sieve Control	Cement Grinding Control	Utility System Optimization	Utility System Optimization	Flotation Control	Dryer Control	Extruder Quality Control	Environmental Compliance and Reporting	Fuel Feed Maximization
	Fermentation Control	Utility System Optimization	Inventory Quality	Real-time Environmental Management	Grinding Control	Sterilization Control	Silo Control	Production Performance Management	Real-time Environmental Management
	Thermal Oxidizer Control	Real-time Environmental Management	Real-time Environmental Management	Predictive Emissions Monitoring (PEMs)	Furnace Control	Powder Blending Control	Transition Control	Production Performance Management	Predictive Emissions Monitoring (PEMs)
	Real-time Environmental Management	Production Performance Management	Predictive Emissions Monitoring (PEMs)	Production Performance Management	Reaction Control	Tableting Control	Real-time Environmental Management	Production Performance Management	Production Performance Management
	Predictive Emissions Monitoring (PEMs)		Production Performance Management		Utility System Optimization	Production Performance Management			
	Production Performance Management				Real-time Environmental Management				

Pavilion 客户

Cement



Minerals & Metals



Chemicals / Polymers



POLIMERI EUROPA



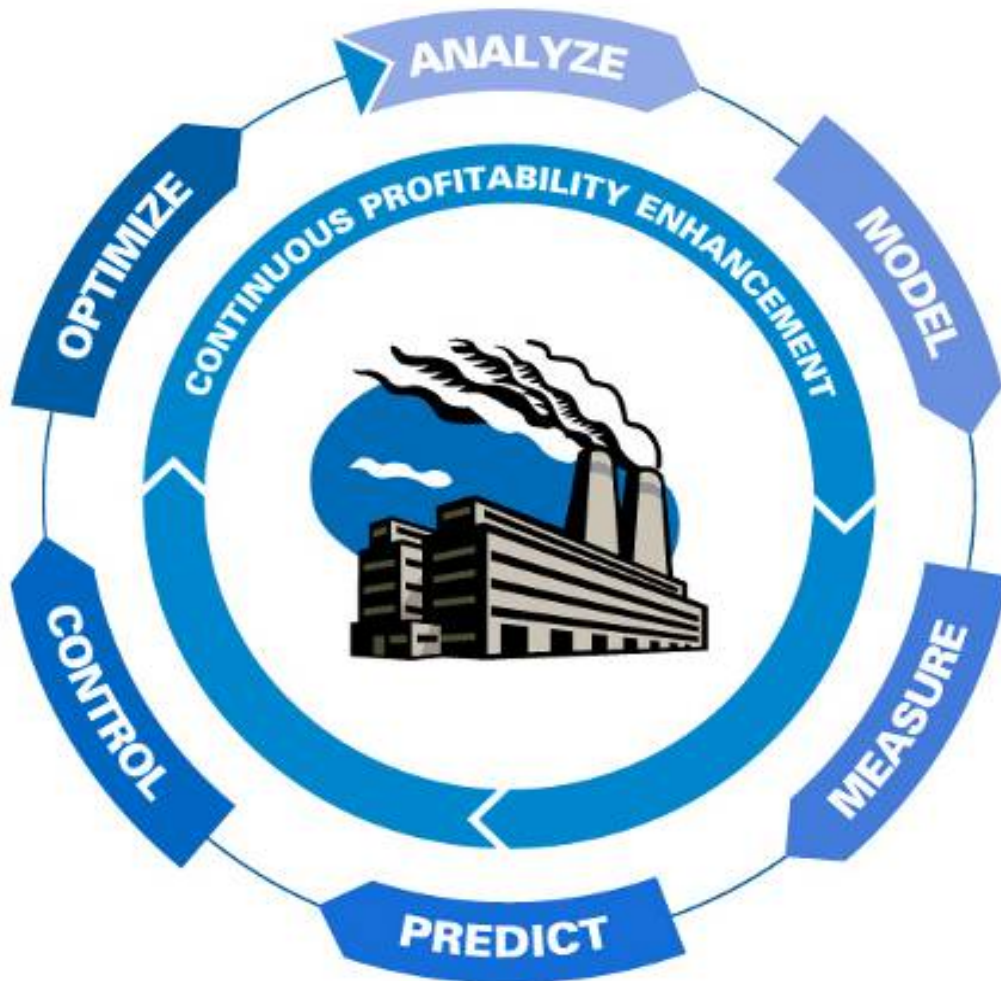
Biofuels



Consumer Goods



Pavilion 价值



提高收益

降低运行成本

- 减少原料浪费
- 减少能源消耗

提高产品质量

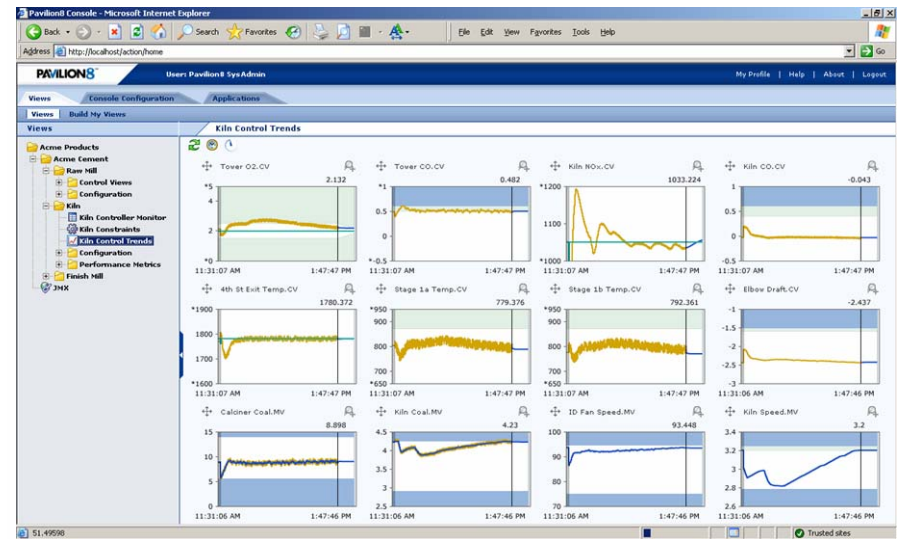
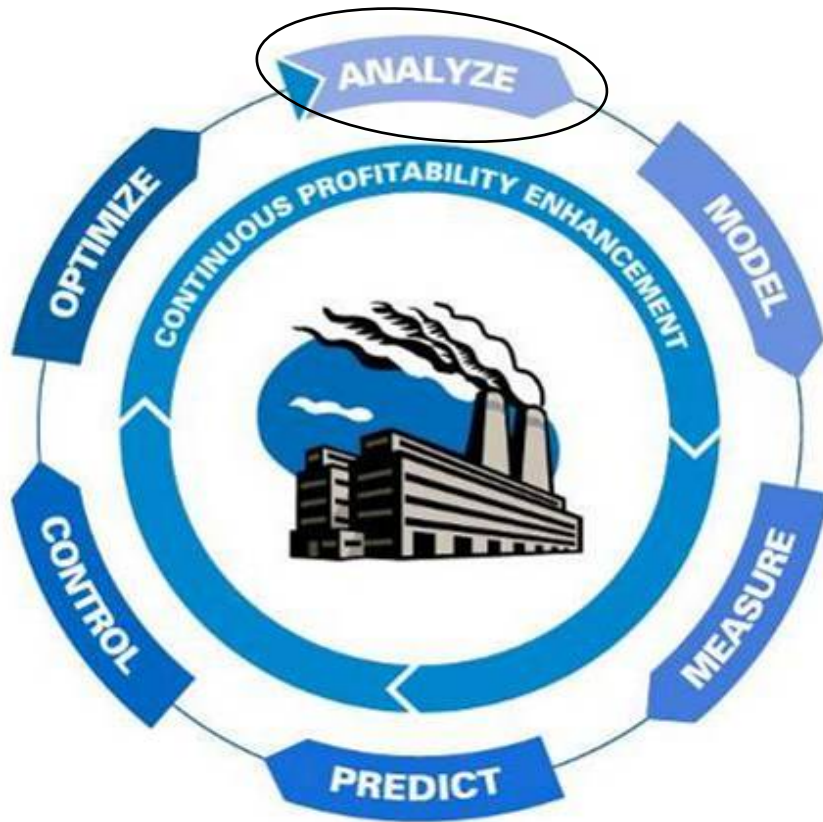
- 生产运行波动最小化
- 降低废品率

提高生产力

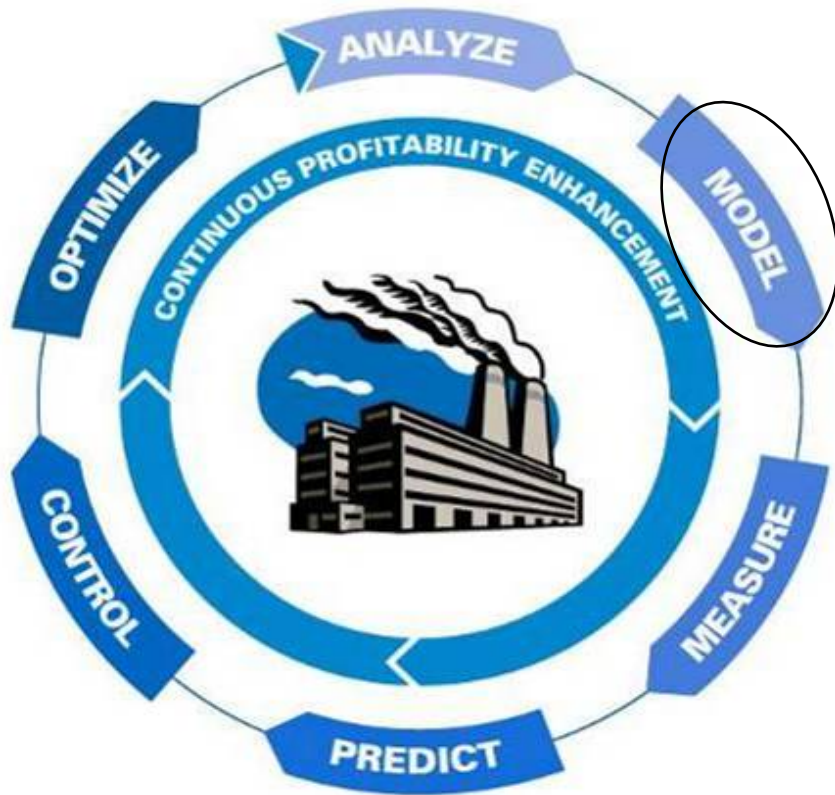
- 充分利用设备生产容量
- 生产量最大化

减少环境污染

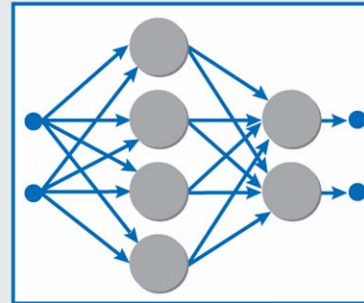
Step 1 – 分析



Step 2 – 建模



Empirical & Neural Net



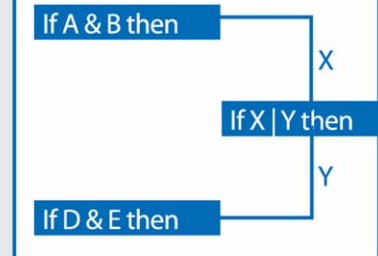
Calculation & Aggregation

```
T1=moveavg (T2, 100)
P=T1*sin (3+T1)
if (P>100.0) x=5
else      x=7
Y = integrate (X*T1)
```

MODEL

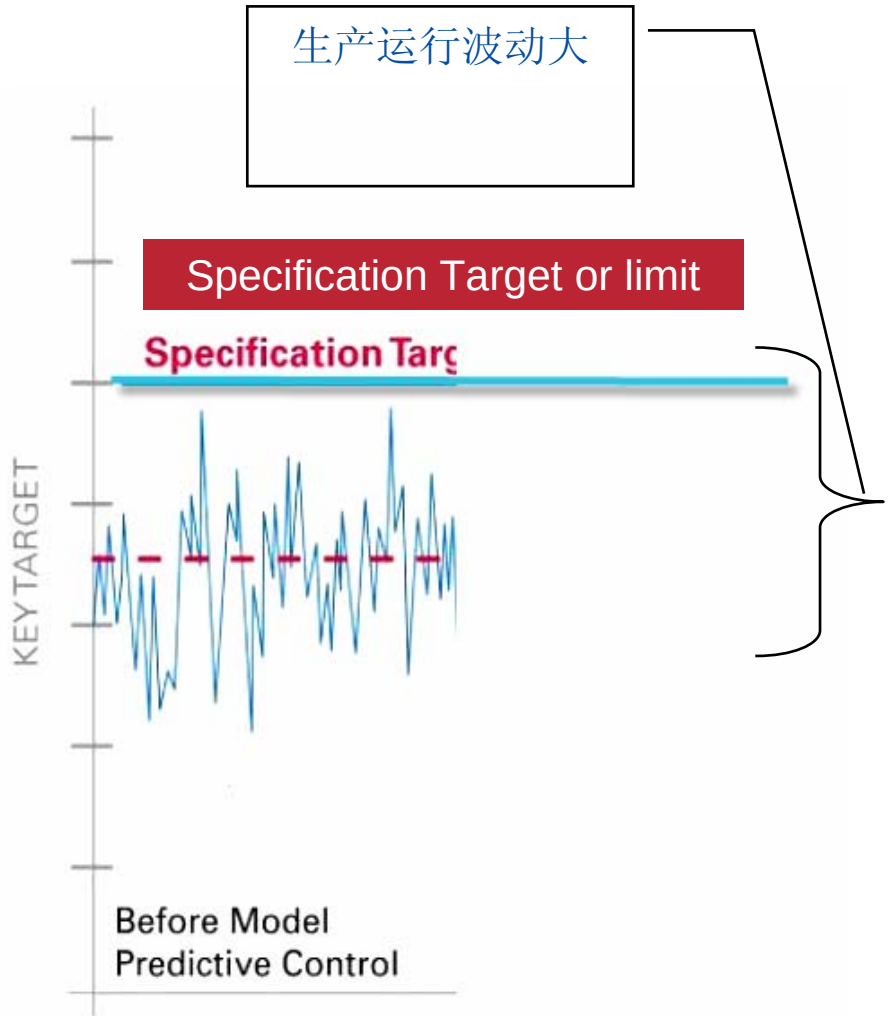
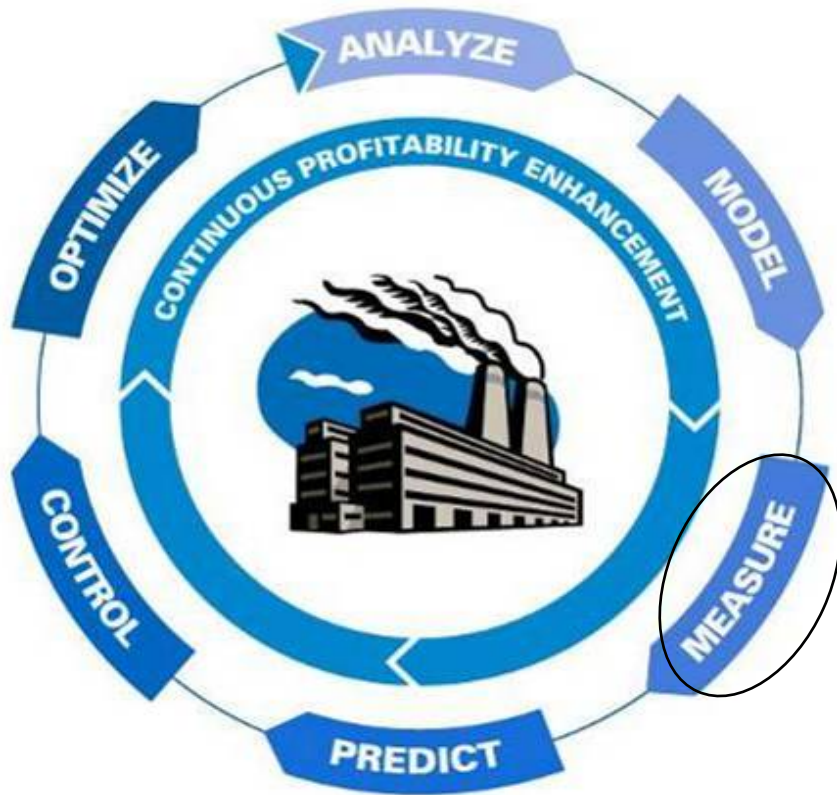
$$\frac{\partial u}{\partial t} = c^2 \frac{\partial^2 u}{\partial t^2}$$
$$\frac{U_0}{2c\sqrt{\pi t}} \int_{-1}^{+1} \left\{ \frac{(x-u)^2}{4c^2 t} \right\} dv$$

Fundamental & First-Principle

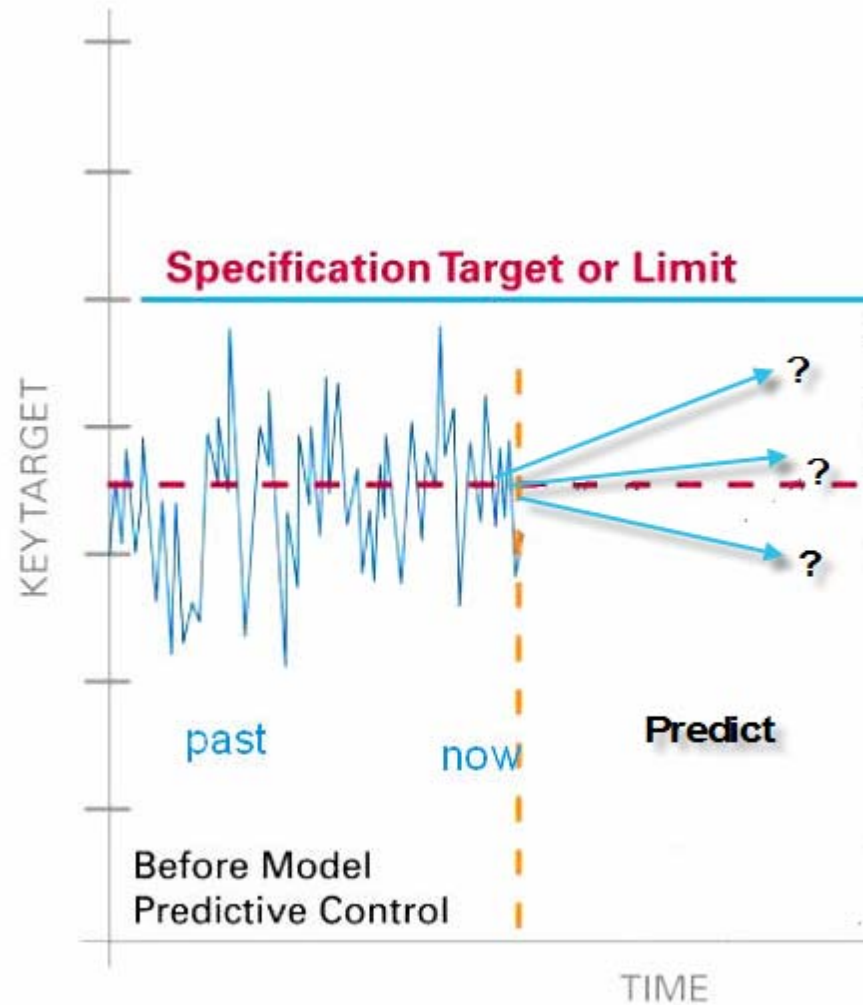
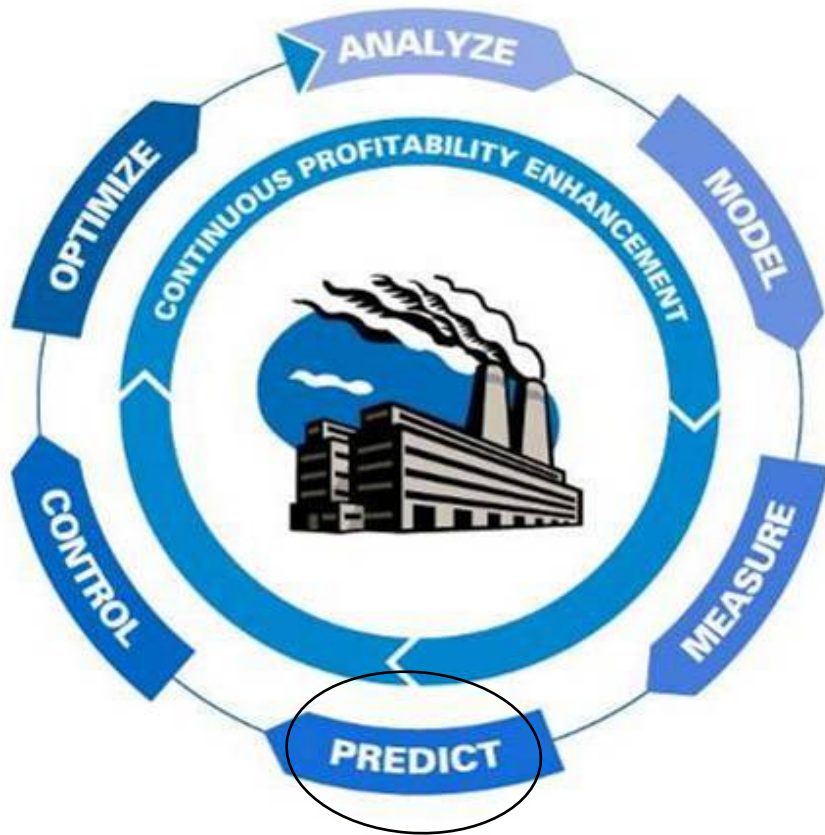


Rule Logic & Process Flow

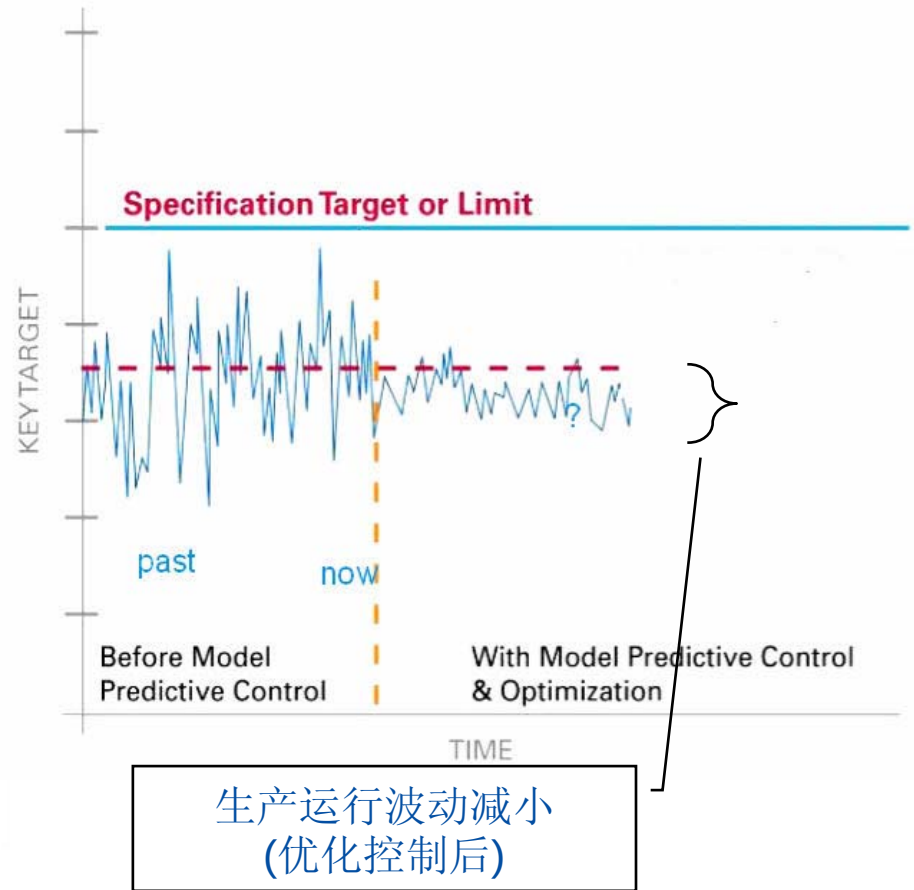
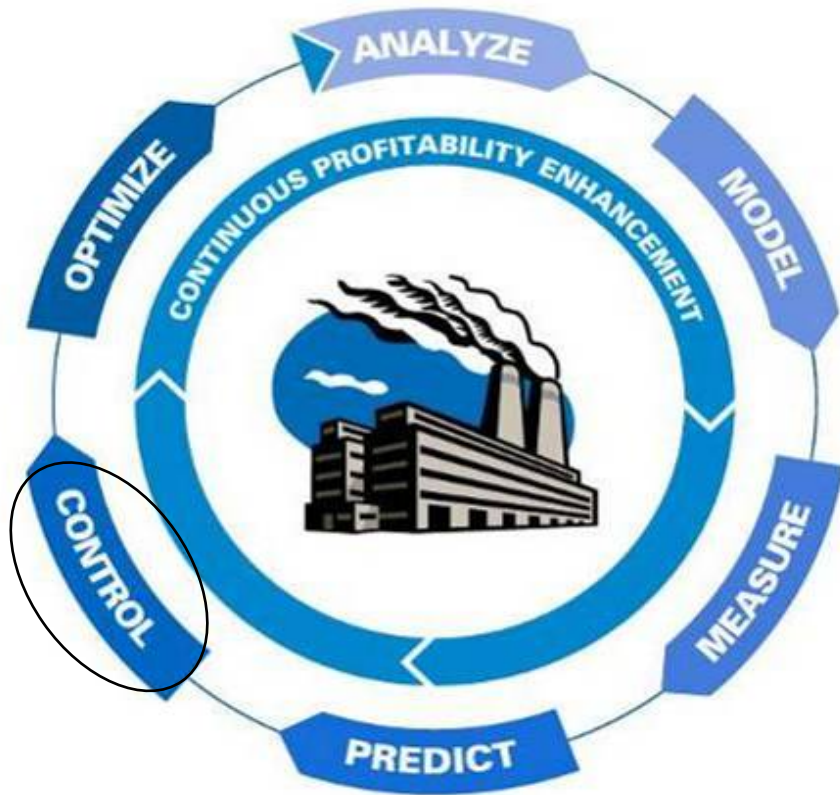
Step 3 – 测量



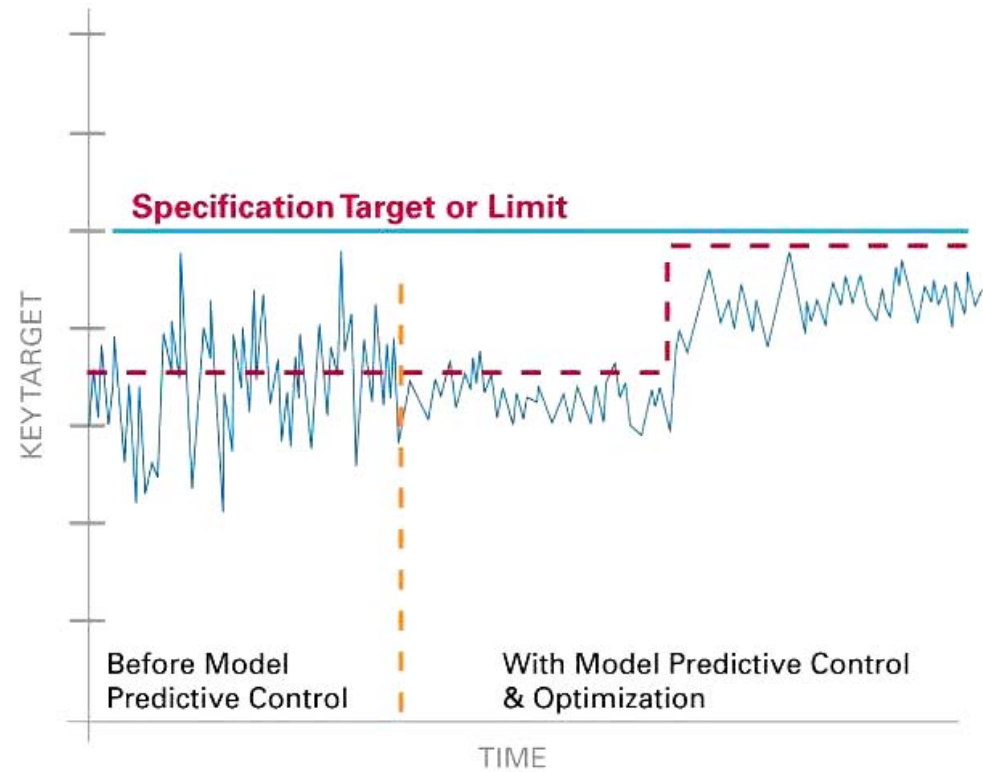
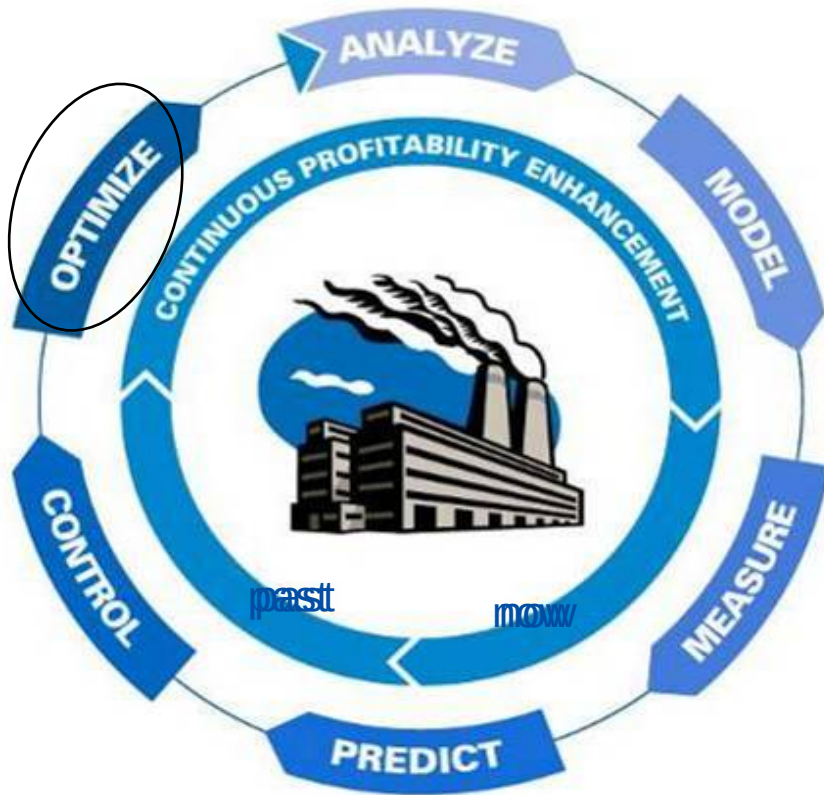
Step 4 – 预估



Step 5 – 控制



Step 6 – 优化



主题

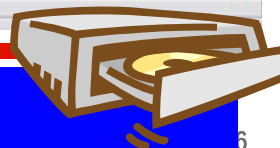
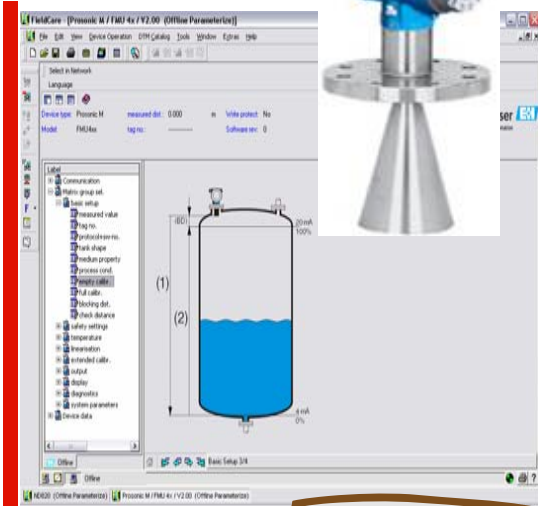
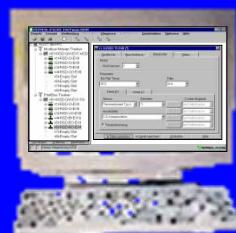
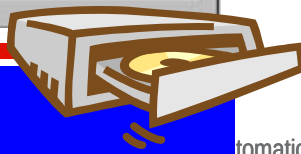
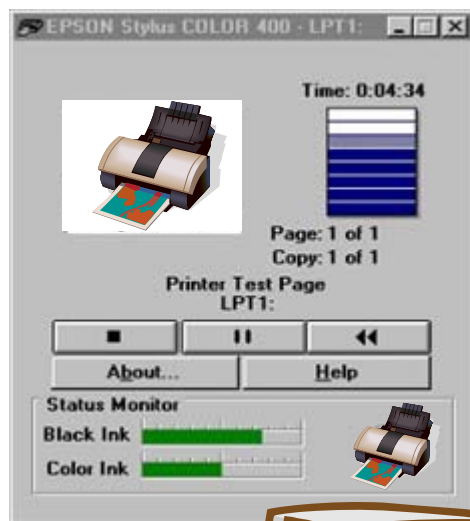
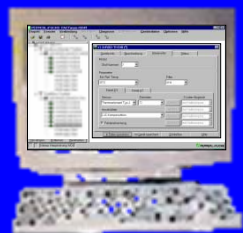
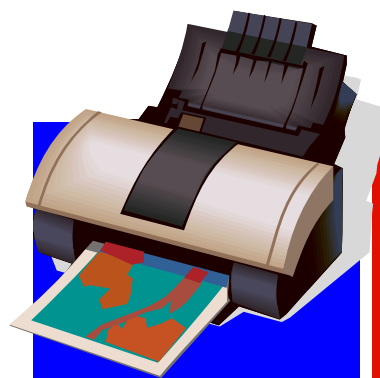
1. 早期DCS转换

2. 先进控制APC

3. 资产管理

什么是资产管理

资产管理是面向资产密集型企业的信息化，制造业信息化，企业信息化解决方案的总称。它以提高资产可利用率、降低企业运行维护成本为目标，以优化企业维修资源为核心，通过信息化手段，合理安排维修计划及相关资源与活动。通过提高设备可利用率得以增加收益，通过优化安排维修资源得以降低成本，从而提高企业的经济效益和企业的市场竞争力



PlantPAx 资产管理能做什么

统一的过程控制平台和资产管理, 提高设备可用性

设备管理

- 智能仪表管理
- 可靠,安全的电子文档库

⇒ 提高维护效率, 降低维护成本

状态检测

- 信息集中管理, 预测和预防性维护

⇒ 提高设备运行时间, 降低停车

变更管理

- 安全的, 可靠的组态信息存储, 版本管理

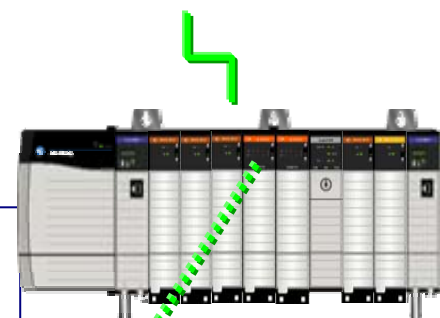
⇒ 可追溯 & 灾难恢复

安全审核

- 用户登陆信息记录, 操作记录

过程设备

- 设备调校管理
- 设备组态(支持FDT/DTM标准)



成熟的资产管理解决方案

未来



第三方合作伙伴

可选择



灾难恢复— Siemens S5/S7



校验管理



过程设备组态配置



灾难恢复— Motoman Robots



灾难恢复— Fanuc



灾难恢复—RA 资产

核心



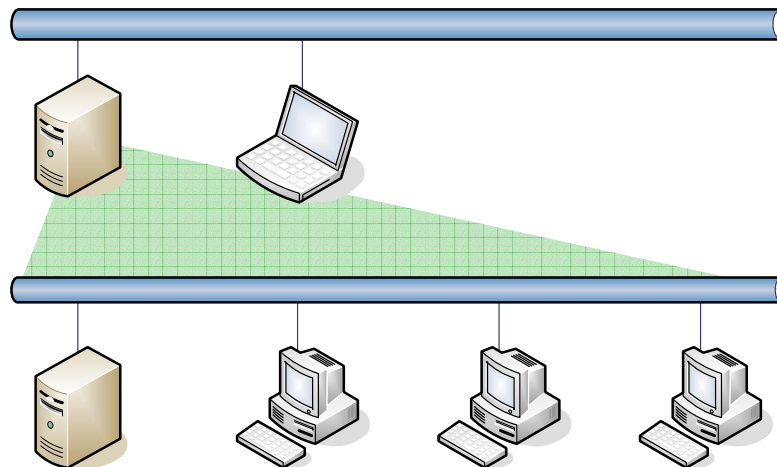
FactoryTalk® AssetCentre Server

- 从多个供货商中选择最好的设备
- 设备供应商能够提供功能丰富的DTMs，提供维护和诊断能力。
- 保护已安装设备的开放式技术
- DTM（设备类型管理器）
 - 来自设备供货商的软件模块
 - 包括所有与设备相关的数据、功能和GUI
- FDT（现场设备工具）
 - 关于把现场设备集成到控制系统或设备管理工具的界面规范
 - 不受制造商的约束

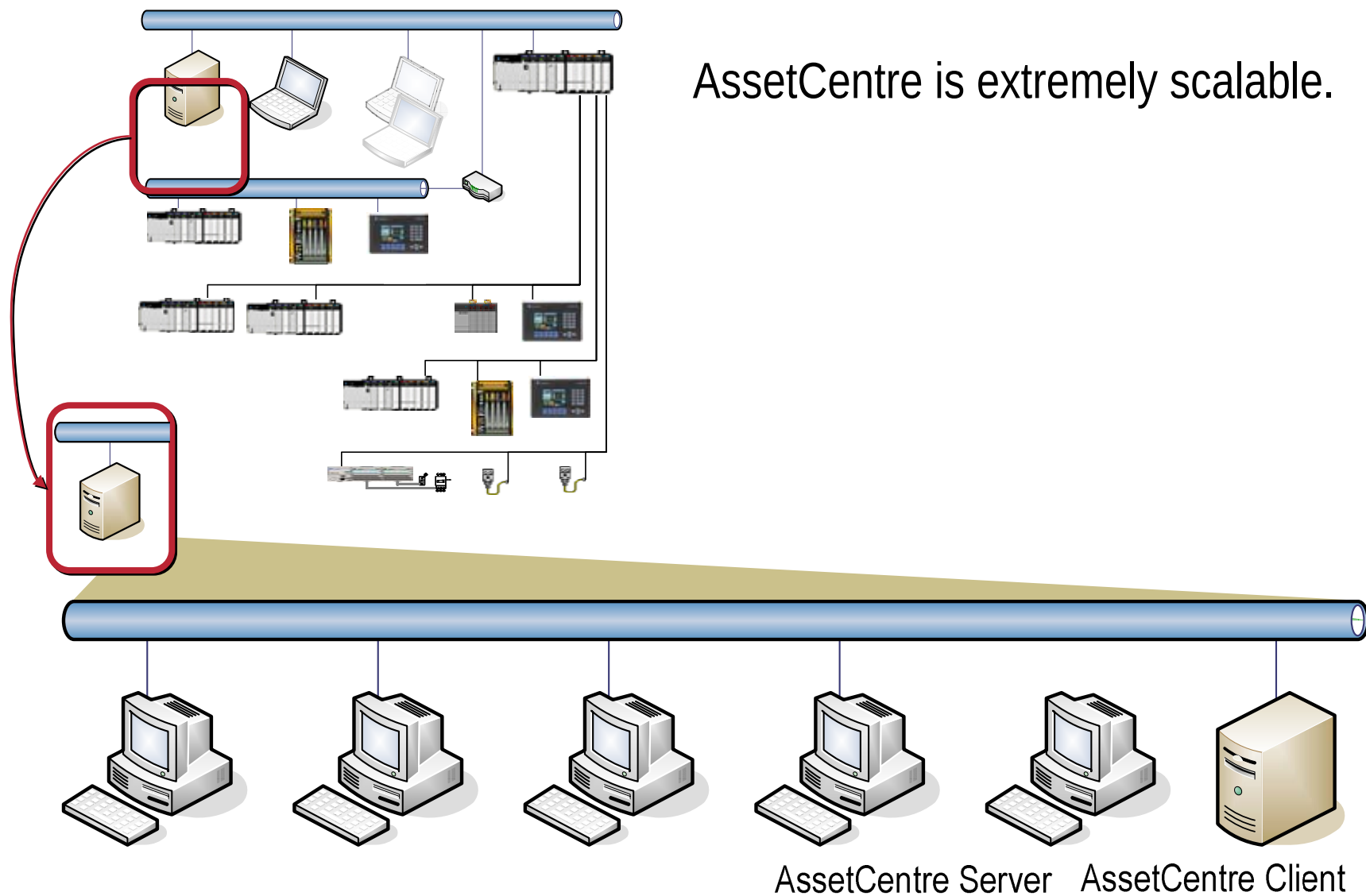
集中管理过程自动化资产和操作的以资产为中心的管理工具套件

PlantPAx资产管理的好处

- 提高有效工作时间10-20%
- 降低库存成本10-25%
- 减少设备停机时间10-20%
- 增加设备使用效率20-30%
- 延长设备生命周期超过10%
- 备件库存准确率超过95%



PlantPAx资产管理结构



资产管理界面

FactoryTalk AssetCentre

File Edit View Tools Windows Help

Asset View

- AssetCentre Demonstration
 - Line 2
 - Line 3
 - Line 1
 - Area A
 - Cell c
 - CLX One
 - CLX Two
 - RADrive One
 - Cell b
 - Cell a
 - PLC5 One
 - PLC5 Two
 - CNC Machine

Application_63270594879671875

Log Viewer

Event Log Audit Log Diagnostics and Health Log

Audits - Showing up to last 100 records.

Logged Time	Occurred Time	Source	Location	Resource	Username	Message Summary
12/19/2005 3:51:5	12/19/2005 3:51:5	SDSClientHost	ASSETCENTRES	RNA://\$Global/As	Administrator	Added area [Cell c] t
12/19/2005 3:51:5	12/19/2005 3:51:5	SDSClientHost	ASSETCENTRES	RNA://\$Global/As	Administrator	Added area [Cell b] t
12/19/2005 3:51:4	12/19/2005 3:51:4	SDSClientHost	ASSETCENTRES	RNA://\$Global/As	Administrator	Added area [Cell a] t
12/19/2005 3:50:4	12/19/2005 3:50:4	SDSClientHost	ASSETCENTRES	RNA://\$Global/As	Administrator	Added area [Area A] t
12/19/2005 3:50:1	12/19/2005 3:50:1	SDSClientHost	ASSETCENTRES	RNA://\$Global/As	Administrator	Added area [Line 3] t
12/19/2005 3:49:0	12/19/2005 3:49:0	SDSClientHost	ASSETCENTRES	RNA://\$Global/As	Administrator	Added area [Line 2] t
12/19/2005 3:48:5	12/19/2005 3:48:5	SDSClientHost	ASSETCENTRES	RNA://\$Global/As	Administrator	Added area [Line 1] t
12/19/2005 1:14:4	12/19/2005 1:14:4	SDSClientHost	ASSETCENTRES	RNA://\$Global	Administrator	Added application [A
12/19/2005 1:13:1	12/19/2005 1:13:1	SDSClientHost	ASSETCENTRES	RNA://\$Global	Administrator	Added application [A
12/19/2005 1:04:4	12/19/2005 1:04:4	RSAssetSecurity	ASSETCENTRES	Network	Administrator	Successful login of u
12/16/2005 5:21:3	12/16/2005 5:24:2	RSAssetSecurity	ASSETCENTREC	Network	Administrator	Successful login of u
12/16/2005 5:21:2	12/16/2005 5:24:1	RSAssetSecurity	ASSETCENTREC	Network	admininstrator	Login failure of user
12/16/2005 5:21:1	12/16/2005 5:24:0	RSAssetSecurity	ASSETCENTREC	Network	admininstrator	Login failure of user
12/16/2005 4:53:5	12/16/2005 4:53:5	RSAssetSecurity	ASSETCENTRES	Network	Administrator	Successful login of u

Logged at: 12/19/2005 3:51:44 PM
 Occurred at: 12/19/2005 3:51:44 PM
 Source: SDSClientHost
 Attachments: 0

Location: ASSETCENTRESVR
 Username: Administrator
 Resource: RNA://\$Global/AssetCentre Demonstration/Line 1/Area A

Message:
 Added area [Cell a] to area [RNA://\$Global/AssetCentre Demonstration/Line 1/Area A]

Logged in User : [Administrator]

Run Mode

资产管理界面

The screenshot displays the FactoryTalk AssetCentre application window. On the left, the 'Asset View' tree shows a hierarchy: AssetCentre Demonstration > Line 2 > Line 3 > Line 1 > Area A > Cell c > CLX One, CLX Two, RADrive One, Cell b, and Cell a (selected). Below this are PLC5 One, PLC5 Two, CNC Machine, and Application_632705948796718750.

The main area is a 'Sort Order' dialog box. It has a 'Select Data Source' dropdown set to 'Events'. Below it is a table with columns: Include in Results, Sort By, Group By, Distinct, and FieldDisplayName.

	Include in Results	Sort By	Group By	Distinct	FieldDisplayName
	☒	☐	☐	☐	Date/Time Logged
	☒	☒	☐	☐	Date/Time Occurred
	☒	☒	☐	☐	Location
	☒	☐	☐	☐	Message
	☒	☐	☐	☐	Severity
	☒	☐	☐	☐	Event Source

Below the table, there is a 'Sort Order' list box containing 'Date/Time Occurred' and 'Location'. To the right of this list are buttons: 'Move Up', 'Move Down', and 'Remove'.

On the right side of the dialog is the 'Query Options' panel. It includes a 'Select Column' dropdown (set to 'DateTimeLogged'), a 'Select Condition' dropdown, and a 'Compare Value' text box. Below these is an 'Add Condition' button. At the bottom of the panel is a large text box containing the query: 'Date/Time Occurred is Greater Than 12/01/2005 AND Location contains 'Plant Floor''. To the right of this text box are buttons: 'And', 'Or', 'Not', '(', ')', 'Remove', and 'Clear'.

At the bottom of the dialog are buttons: 'Help', 'Save', and 'Set Security'. The status bar at the bottom left shows 'Logged in User : [Administrator]' and the bottom right shows 'Design Mode'.

资产管理

File Edit Reports Lists Help

Current Company: Quality Lab Inc

View Reminders View Notifications [3] ProCal Explorer

Advanced Query Name

Instrument ID: TEK-001 Description: Tektronix Digital Scope Ch2 Last Cal Date: 1/01/2006 Next Cal Date: 1/31/2007

General Info Calibration Points Additional Info User Defined PM Info Notes Documents/Reports Approvals

Test Point Group 1 of 5

Group Name: Channel 1 Volts/Div # Cal Pts: 7 Test Type: [Dropdown]

Input Signal

Input Type: mV/div In Res: 1 In Low Range: 0 In High Range: 0 Input Tolerance: +/- 0 Correlation to Output: Manual

Output Signal

Output Type: mV Out Res: .0001 Out Low Range: 0.0000 Out High Range: 0.0000

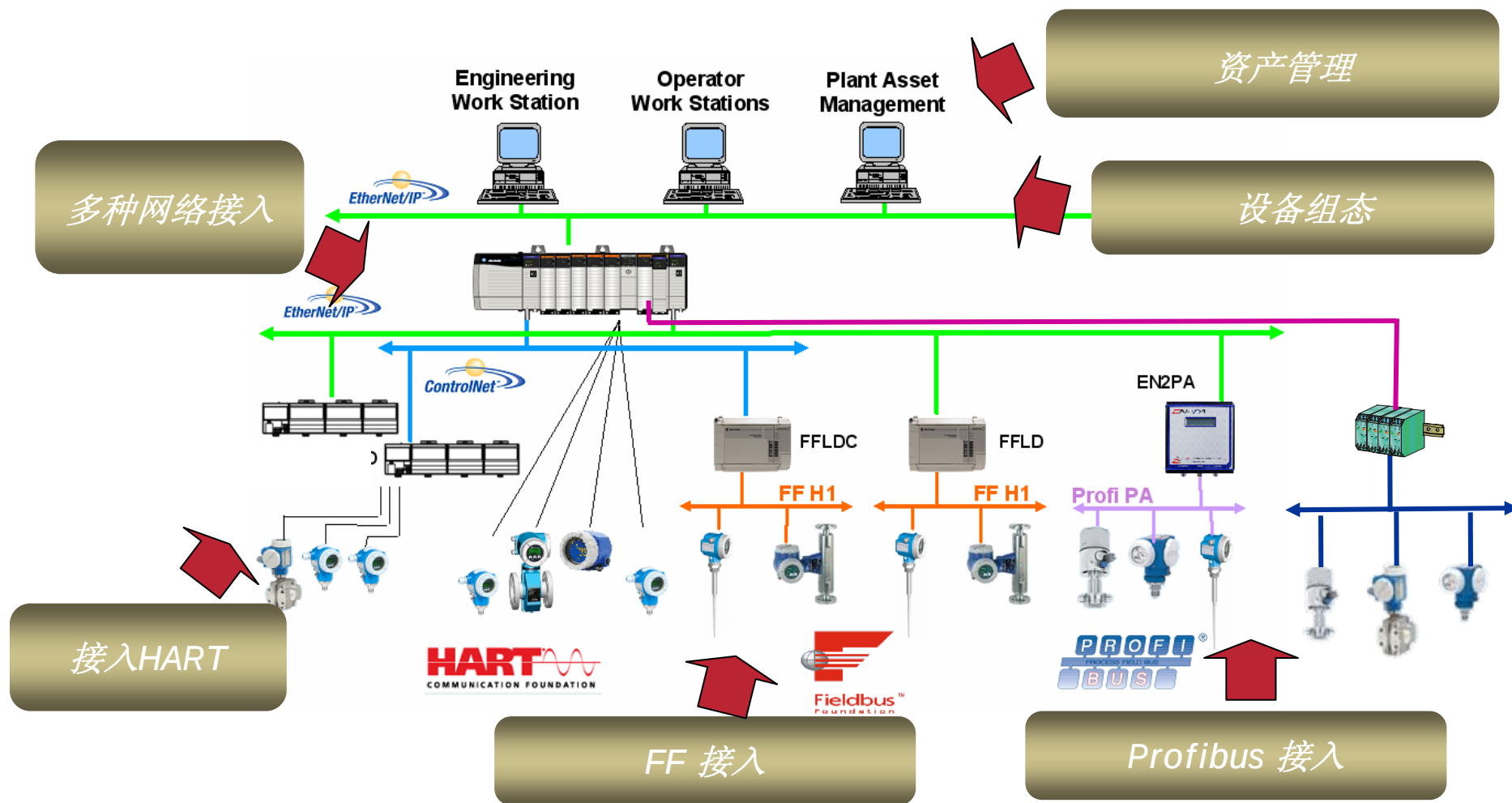
Control Limits

☐ Use Control Limits Control %: 80.0%

Calculate Restore Defaults

Input Specifications				Accuracy				Output Specifications		Spec Limits		Des	
In Val	In Type	In +/-	In Res	Std Accy	Rng %	Rdg %	+/-	Out Res	Out Val	Out Type	Low		High
1	V/Div	0	1	Plus / Minus	0.000...	0.000...	0.9	.1	98.0	V	97.1	98.9	
200	mV/div	0	1	Plus / Minus	0.000...	0.000...	0.12	.01	8.40	V	8.28	8.52	
50	mV/div	0	1	Plus / Minus	0.000...	0.000...	19	1	-600	mV	-619	-581	
50	mV/div	0	1	Plus / Minus	0.000...	0.000...	19	1	-900	mV	-919	-881	
0	mV/div	0	1	Plus / Minus	0.000...	0.000...	14	1	300	mV	286	314	Delta 900-60
10	mV/div	0	1	Plus / Minus	0.000...	0.000...	5.4	.1	60.0	mV	54.6	65.4	
5	mV/div	0	1	Plus / Minus	0.000...	0.000...	8	1	-990	mV	-998	-982	

现场总线与资产管理



集成过程总线设备和资产管理

Endress+Hauser战略联盟



■ 技术革新

- **价值:** Endress+Hauser过程仪表和罗克韦尔自动化集成架构之间的无缝集成

■ 集成的资产管理

- **价值:** 实现过程控制关键组件之间的无缝信息流，从现场仪表到企业信息商务系统

■ 现场设备互操作性

- **价值:** 范围广泛的包括预测试、标准化测量技术、自动化和信息解决方案

合作的三个战略领域！

设备管理

FactoryTalk AssetCentre

File Edit View Tasks Tools Windows Help

Logs Address Book Scheduler Search Definition Archive

Asset View Scheduler Logs iTemp / TMT 162 [ONLINE Parameterize]

Save Offline Configuration Select in Asset View Switch to Offline Parameterization Upload from Device Download to Device

Language

DeviceType: iTemp - TMT 162 Software rev: 10 PV: 23,75 degC
Model: TMT162 Tag: RICK AO: 7,409 mA
Device status: 0

Endress+Hauser 
People for Process Automation

Label

- Group Select
 - Measured values
 - PV
 - AO
 - PV value in %
 - Value Sensor 1
 - Value Sensor 2
 - RJ value
 - Standard set-up
 - Sensor 1
 - Sensor 2
 - Output
 - Safety settings
 - Display
 - Diagnosis
 - Identification
 - Service functions
 - Device Data



PV: 23,75 degC
AO: 7,409 mA
PV value in %: 21,309 %
Value Sensor 1: 0,00 degC
Value Sensor 2: 0,00 degC
RJ value: ?

Online Measured values

Execute

LISTEN.
THINK.
SOLVE.®

IAU
2009

谢谢!