

Honeywell Users Group 2009

Return on Imagination
Chris Stearns
Operations Excellence

Honeywell

Operations Excellence

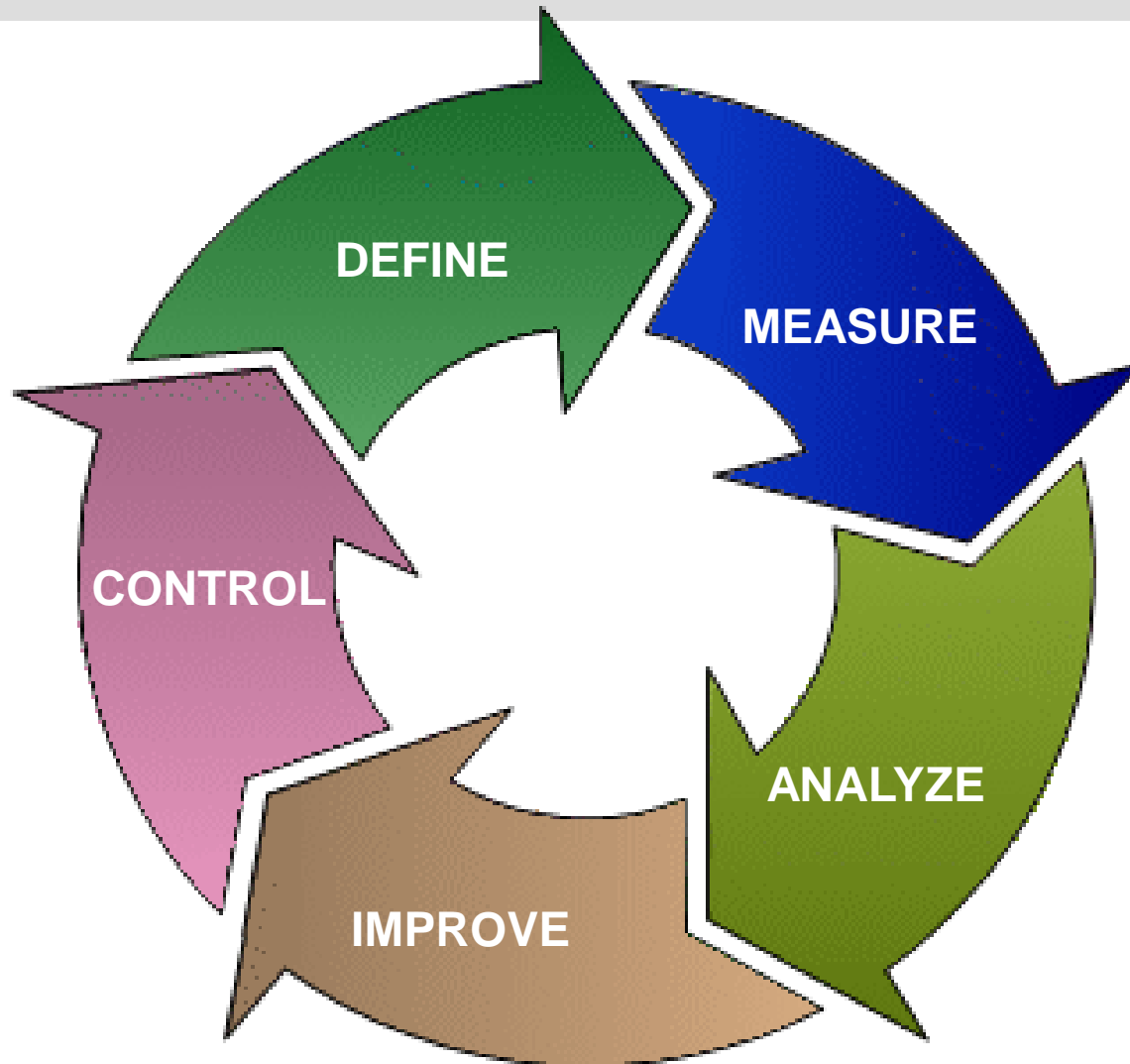


What is Operations Excellence?

Doing things well to provide a competitive advantage in the marketplace



What is Operations Excellence?



Why Operations Excellence?

Increased Capacity	5 %
Improved capacity utilization	3 %
Decreased unscheduled shutdowns and slowdowns	50 %
Improved productivity	10 %
Reduced fixed cost	15 %
Improved energy utilization	5 %

Gillard, C. F. "Creating plant operating excellence with measurable results." HYDROCARBON PROCESSING Apr. 2001: 57+.

Why Operations Excellence?

“For an average-sized refinery, these improvements should deliver an economic benefit of \$25 million/year”

Gillard, C. F. "Creating plant operating excellence with measurable results." HYDROCARBON PROCESSING Apr. 2001: 57+.

Why Operations Excellence?

***“...ensure
effective
management of
abnormal
situations.”***



ASM® Consortium Guidelines **Effective Operations Practices**

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Version 6.00, 3-Mar-09

Why Operations Excellence?

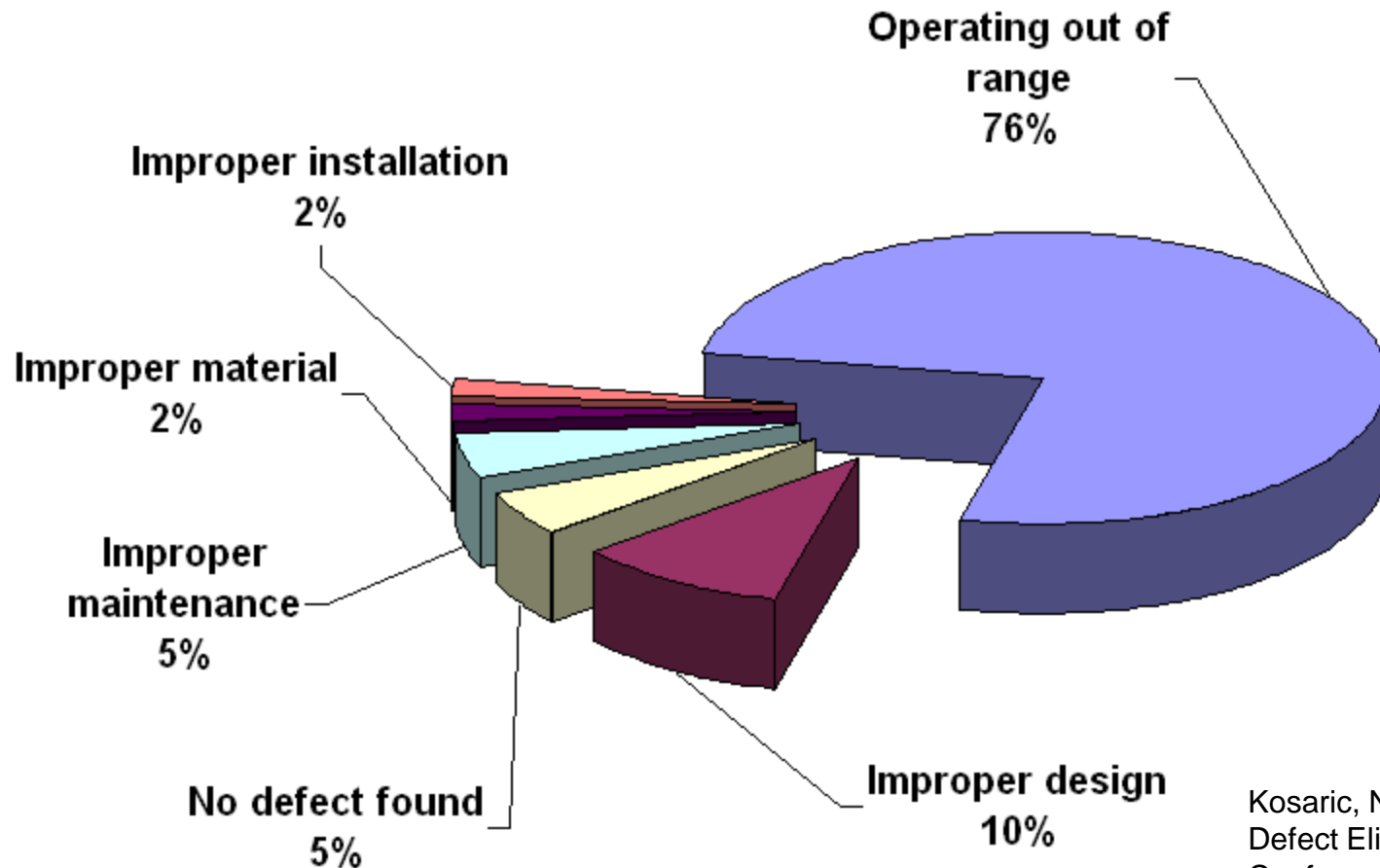


“the design of OEMS fully addresses, and in some respects goes beyond, the requirements of ISO 14001 and OSHAS 18001”

“Safety and environmental performance within Chevron’s operations has improved since the deployment of OEMS.”

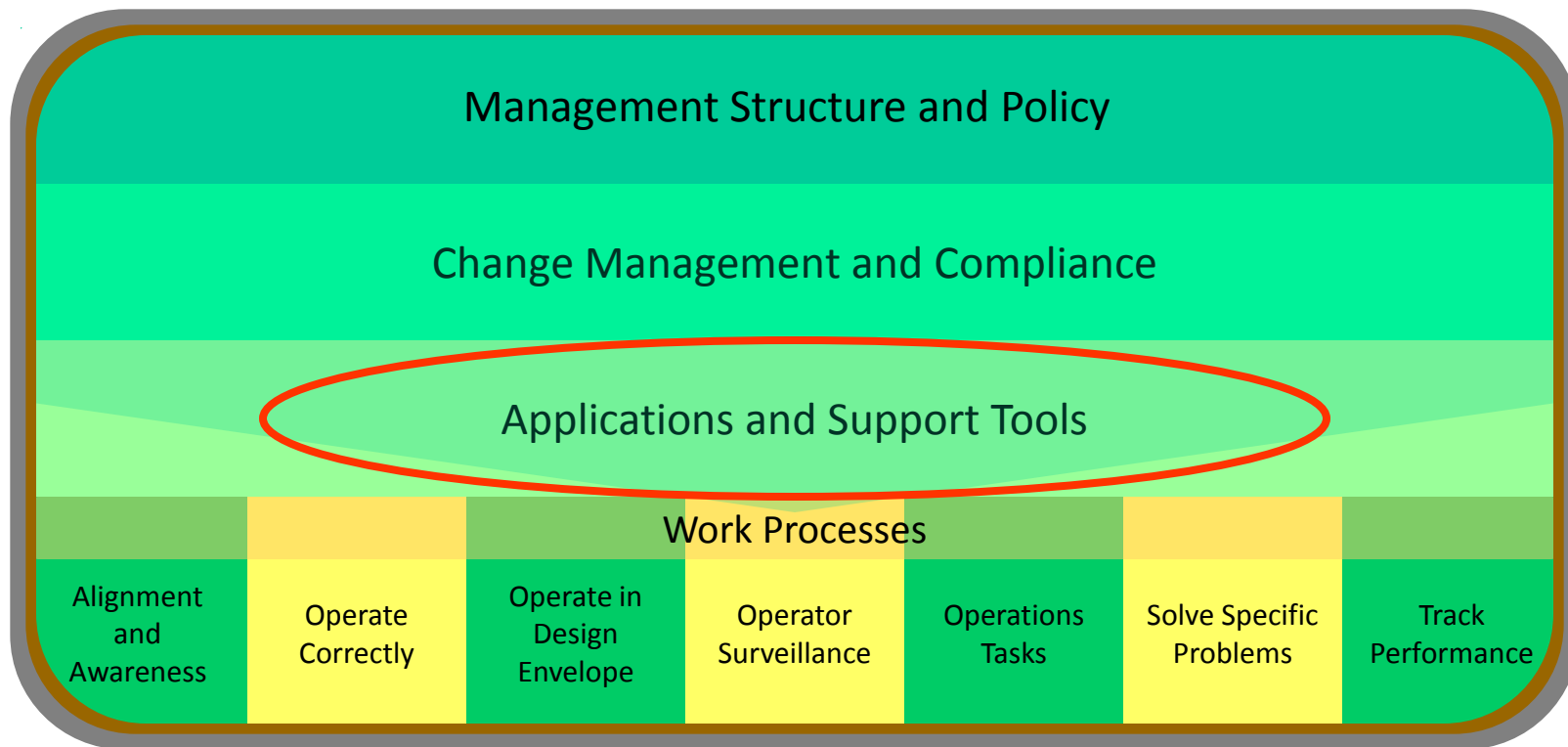
Why Operations Excellence?

Causes of Poor Asset Performance



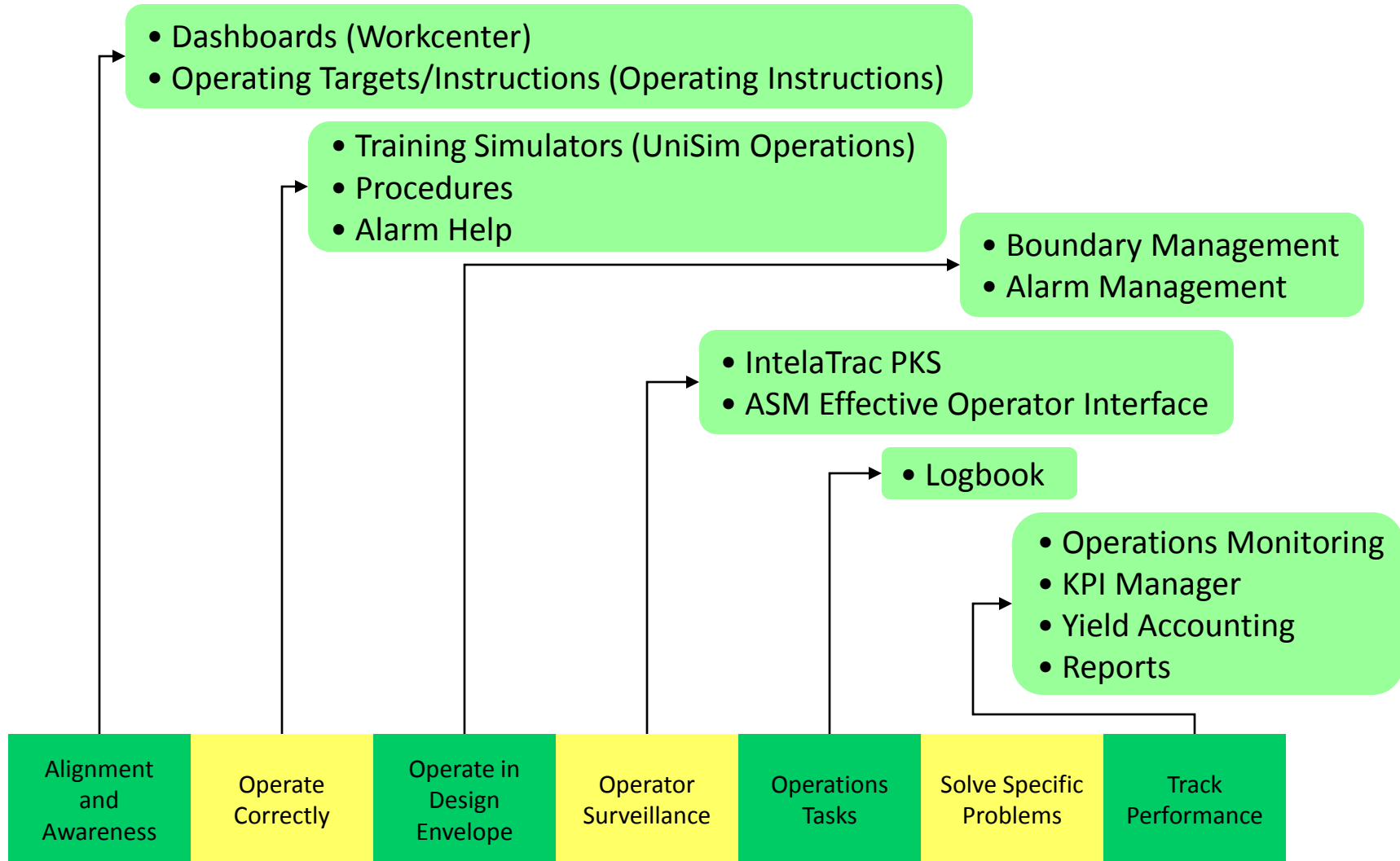
Kosaric, Namik; Petronas.
Defect Elimination
Conference. 2005.

How Does Honeywell Support OE?



Gillard, C. F. "Creating plant operating excellence with measurable results." HYDROCARBON PROCESSING Apr. 2001: 57+.

How Does Honeywell Support OE?



Operating in the Design Envelope Today

The Road Ahead.



Your Driver.



The Result.

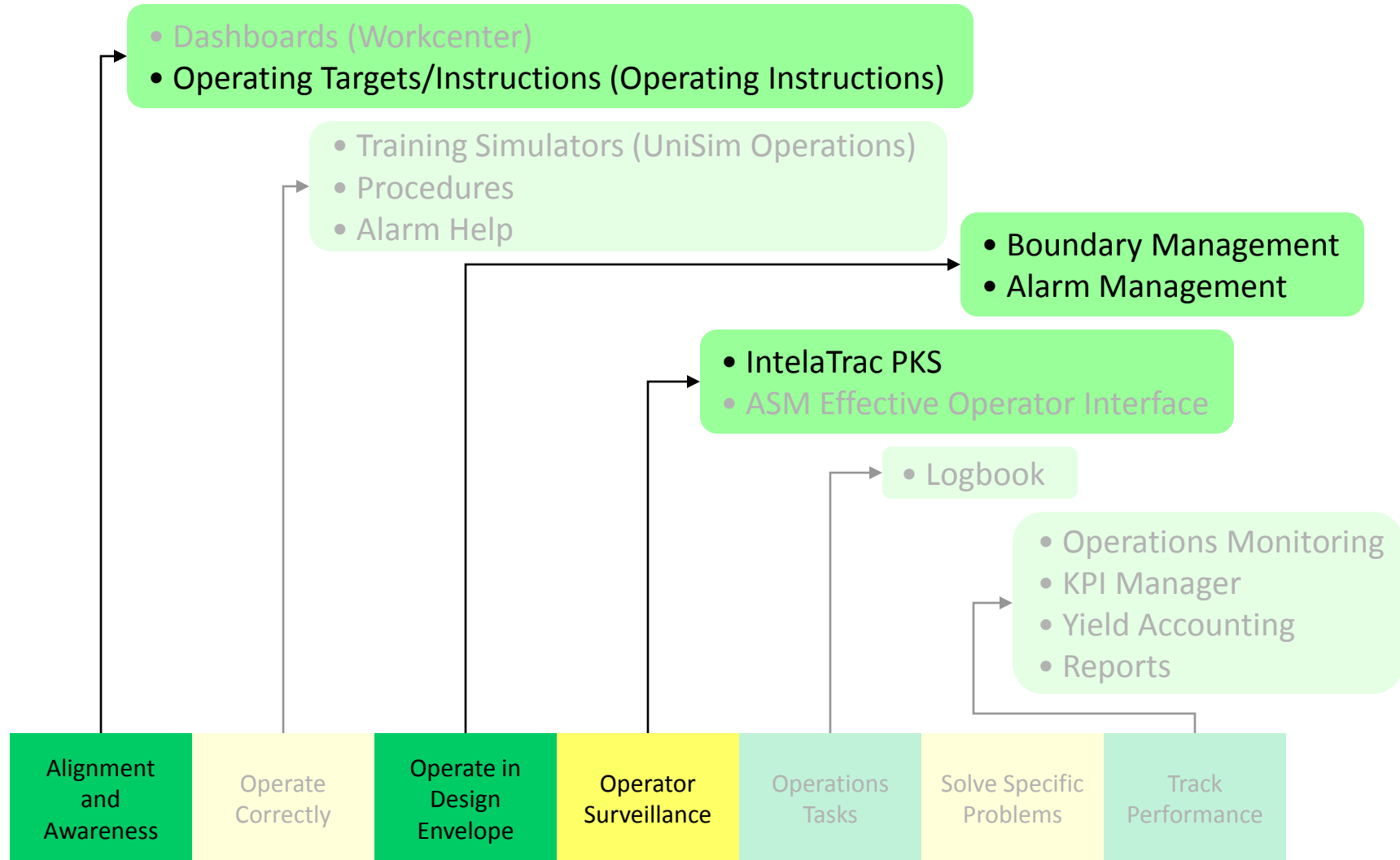


The Process.

The Operator.

The Result.

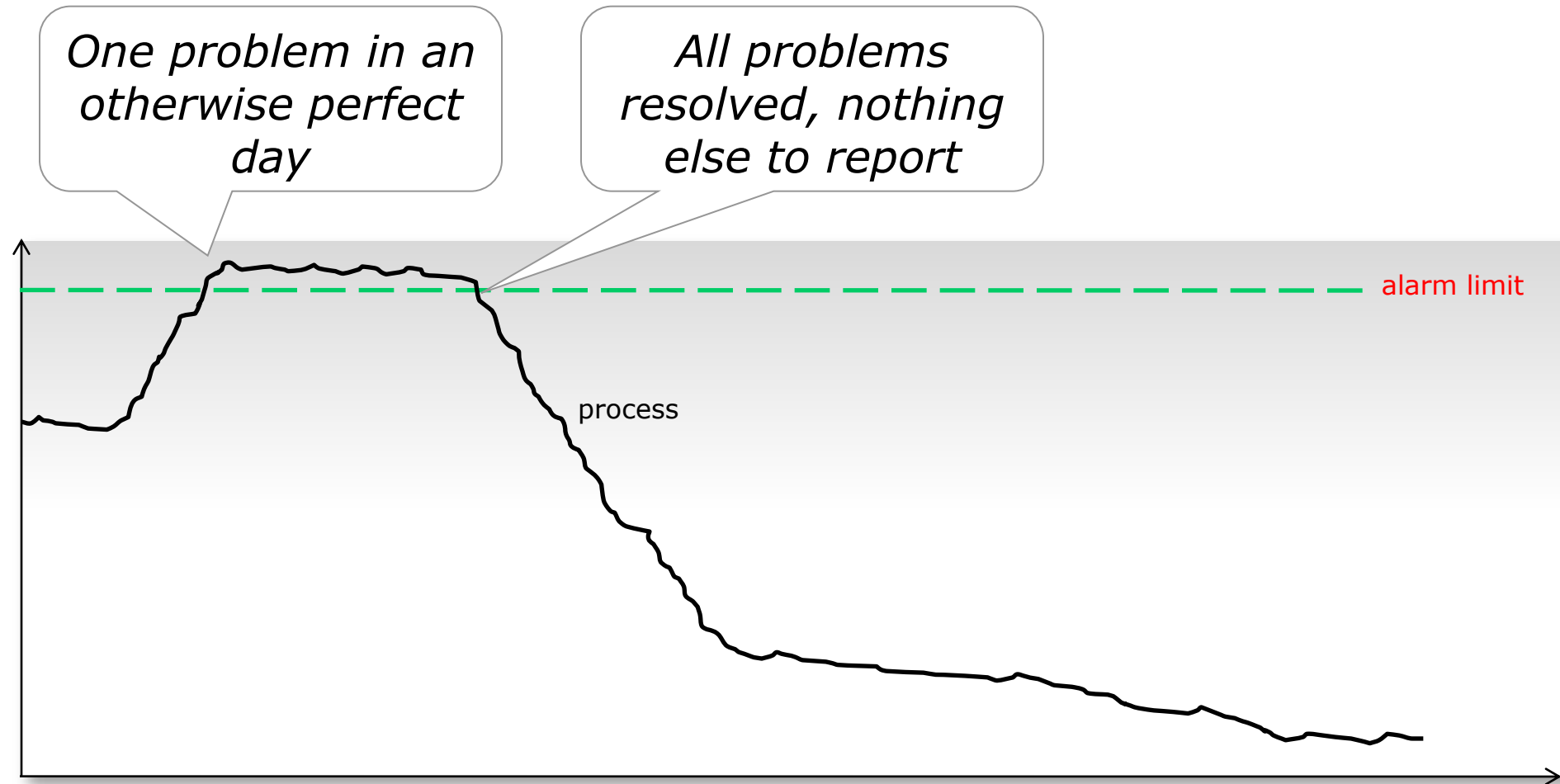
How Does Honeywell Support OE?



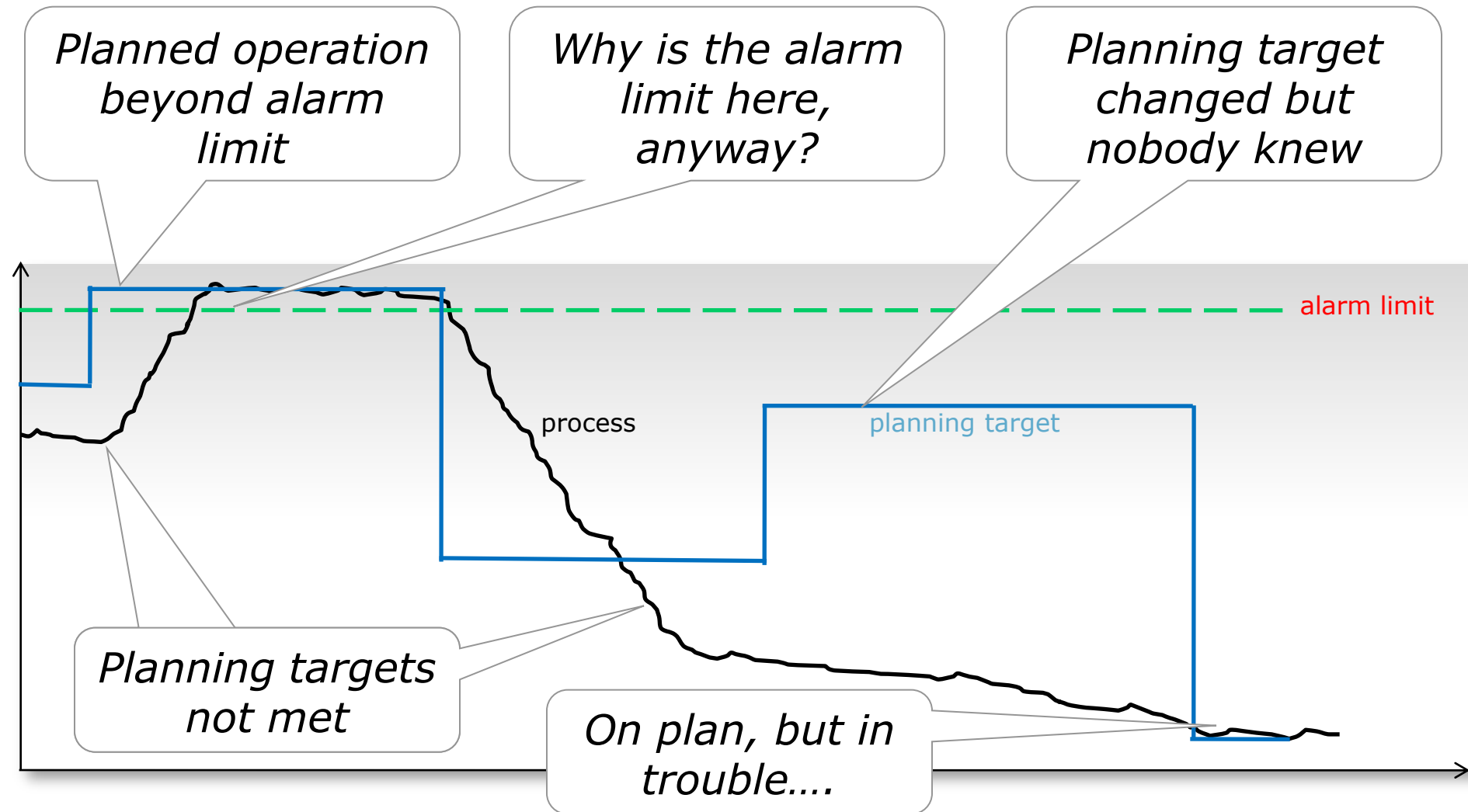
Current Practice – No Alarm, No Problem

One problem in an otherwise perfect day

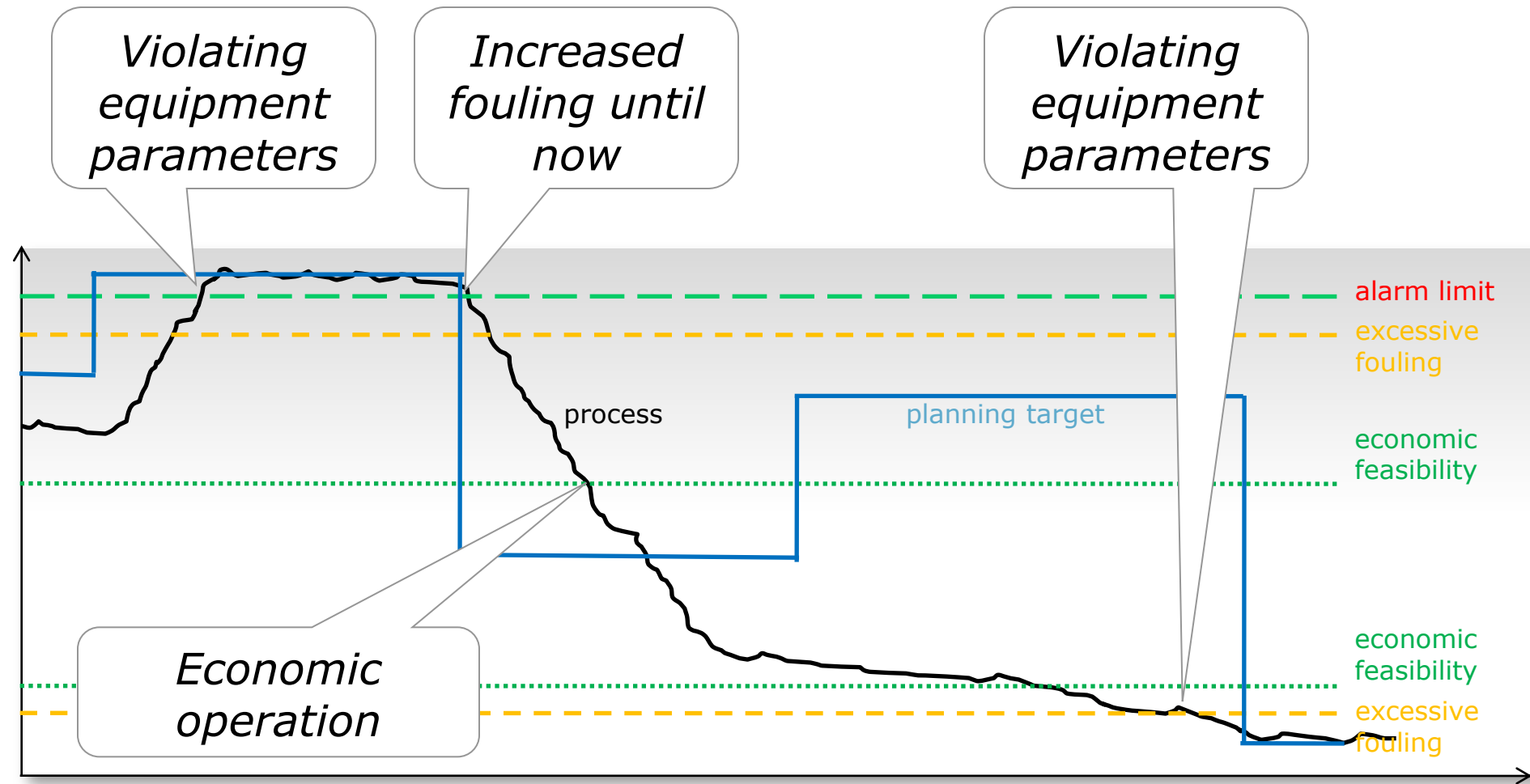
All problems resolved, nothing else to report



Know Your Limits



Know Your Limits



Boundary Management

ACMOperator - Windows Internet Explorer

http://asceaf:8000/desktop/ACM/VariableExplorer/ACMOperator.aspx?var=03FC2001.DACA

ACMOperator

View Help

03FC2001.DACA

Console	Tag Type	EU	State	State Changed	Changed By	SD Post Alarm	SD Bypass	Operating Mode
Tower	DCS	BPH	Released	6/16/2008 5:39:14 PM	ASCEMO\pks_user	N	N	Normal

Variable Entity Notes:

Purpose of measurement
Primary Feed into the tower

Verification
Verify with output from upstream equipment

Note

If No Boundary, Alarm, or Alert, why not?

Boundary, Alarm or Alert strategy
Urgent and Normal alarms and Operating Target Boundaries are built for demo purposes.

Alarm Enable Status:

Boundaries and Alarms:

Boundary Name	Priority Param	Alarm Priority	Trip Point	Value	Reason for Value	Potential Impact	Inside Action	Outside Action	Escalation / Notification	SD Pre-Alarm
Critical_Hi	PVHHALM.PR	Urgent	PVHHALM.TP	4,209	Extreme high tower charge	Tower flooding, possible tower damage	Reduce charge immediately			
Standard_Hi	PVHIALM.PR	High	PVHIALM.TP	3,400	High tower charge	Possible tower flooding	Slowly reduce charge			
Target_Hi				3,150	Operating Target Boundary	Outside Planned Operating Range	Check that Operating Instruction is correctly set.			
Target_Lo				2,850	Operating Target Boundary for Normal Mode	Outside Planned Operating Range	Check that Operating Instruction is correctly set.			
Standard_Lo	PVLOALM.PR	High	PVLOALM.TP	2,700	Low tower charge for Normal mode	Low production rate	Slowly increase charge			
Critical_Lo	PVLLALM.PR	Urgent	PVLLALM.TP	1,000	Extreme low tower charge	Possible tower trip	Increase charge immediately			Y
Critical										
Standard	BADPVALM.PR	Low								

Done

Local intranet 100%

Operating Instructions

Operations Management - Operating Instruction

Logged in as Jack Sparrow
English (United States)

Production ▾ Instruction ▾ Monitoring ▾ Shift Summary ▾ Task ▾ Comment ▾ LIMS ▾ Go to... ▾

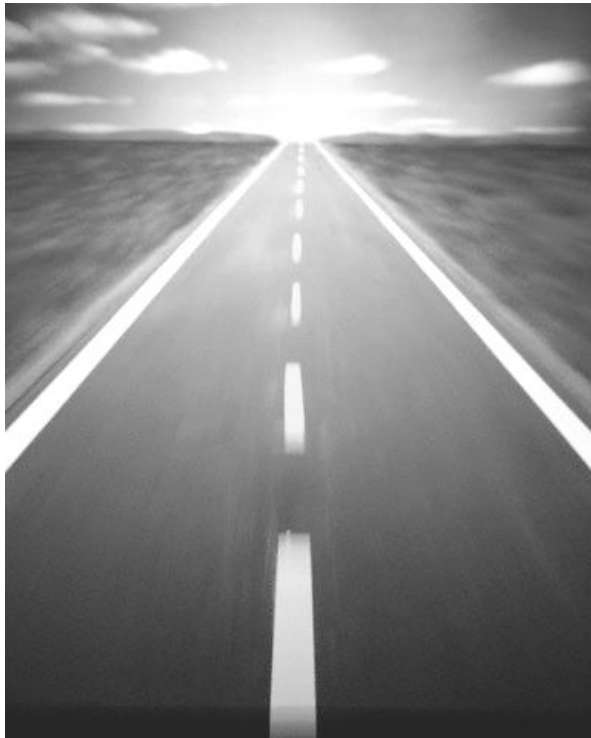
Summary	Instruction	Event Summary	Formulation	Comments	Compare	ACM				
<div> REFINERY << Step By Day >> START: 4/16/2008 12:00 AM END: 4/16/2008 11:59 PM </div>										
<div> New Copy Validate UnAuthorize Activate Previous Return Next Compare </div>										
Equipment: U10CDU										
Instruction	Status	Auth	Act	Start	End	Duration (Hours)	Mode			
REF-CDU-MAXDIST-400019		<input checked="" type="checkbox"/>	<input type="checkbox"/>				U10CDU_MAXDIST	CRUDE		
REF-CDU-MAXDIST-400019 Instruction is being compared with REF-CDU-MAXDIST-400009 Instruction.										
Scheduled Start		4/16/2008 10:11 AM								
Template:		T-U10CDU-MAXDIST								
Status:		PENDING - AUTHORIZED								
Entered By:		TOTALPLANT								
Authorized By:		TOTALPLANT								
Procedural Operation:										
Link:										
Attribute 2:										
Attribute 4:										
Description:		Maximize distillate production								
Note:		User:Sparrow, Jack (MALIBU\Administrator); Date:4/16/2008 10:16:08 AM; Note: Steady charge today. Rates will increase tonight.								
Detail Name	Description	Tag	Units	Max	Focus	Min	Avg	Avg Status	Snapshot Value	Recent AVG
T10F001	CDU 10 FEED VO	10F001	MBPD		150					

Operator Surveillance



Now, let's go for that drive....

The Road Ahead.



Your Driver.



The Result.



The Process.

The Operator.

The Result.

OE Addresses Industry Challenges

Safety

**Protect People, Assets
and Process**



**Billions lost per year
in Petrochem Industry**

Reliability

**Improve Availability
Reduce Downtime**



**Millions lost per year
due to unplanned
production losses**

Efficiency

**Improve Productivity
Reduce Cost**



**Fewer people
can make better
decisions, faster**