

Enhanced Reality

Ensuring consistent execution of
procedures in industrial operations

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Complete automation in industrial operations is impossible

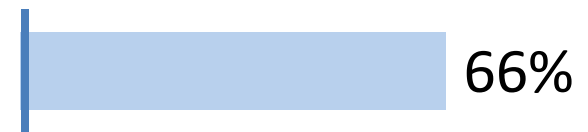


Are we working on the right things?

CATEGORIES OF LOSSES

1. Changeover, no demand, rate/quality losses, production planning
2. Poor operating practices, failure to operate the equipment or process in limits, inconsistencies in shifts due to capability issues
3. Equipment Failure

PROPORTION OF LOSSES ACROSS INDUSTRY



Reliability is about people, not only equipment



- Relating written SOP to reality
- Access to information
- Inadequate training
- Taking shortcuts
- Memorizing checklists
- Executing tasks out-of-sequence
- Environmental factors

Field operators have a stressful job in a high risk, high value, challenging environment

How can we help you go...

...from this

XYZ Corporation

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Procedure	Gas Oil Unit – Change from bypass to intercooler		
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Approved by	Sarah Verhaeghe	Date	09/11/2014

To be signed on procedure execution start

Date: _____ Shift supervisor: _____
Field operator: _____

Procedure

Gas Oil Unit – Change from bypass to intercooler.

Purpose

The purpose of this procedure is to change the gas oil flow from bypass line (initial state) to intercooler line (final state).
Note that the standard operation state of the unit forces the gas oil to pass through the intercooler. Thus, this procedure will be applied when returning from a maintenance state to the standard operation state.

Warning

- Safety must be first at all times.
- Individual protection equipment must be used according to NUP-052-f, NUP-054-b and NUP-055-e.
- Shift supervisor must be reported any deviation should arise.

1. CHECK INITIAL STATE

Check that by-pass automatic valve 04F27CV is open.

Check that gauge SP is reading 60-95%.

Note: Values under 60% might be due to an inappropriate state of the gas oil flow or even a falling valve. Report shift supervisor.
Note: Values over 95% are allowed but not desirable. Report shift supervisor.

Check that gauge L is reading 0%.

2. OPEN INTERCOOLER VALVES

Open intercooler input valve HBV-417.

Warning: HBV-417 opens the gas oil flow to the intercooler, but it will not flow until intercooler output valve HBV-418 is open.

Open intercooler output valve HBV-418.

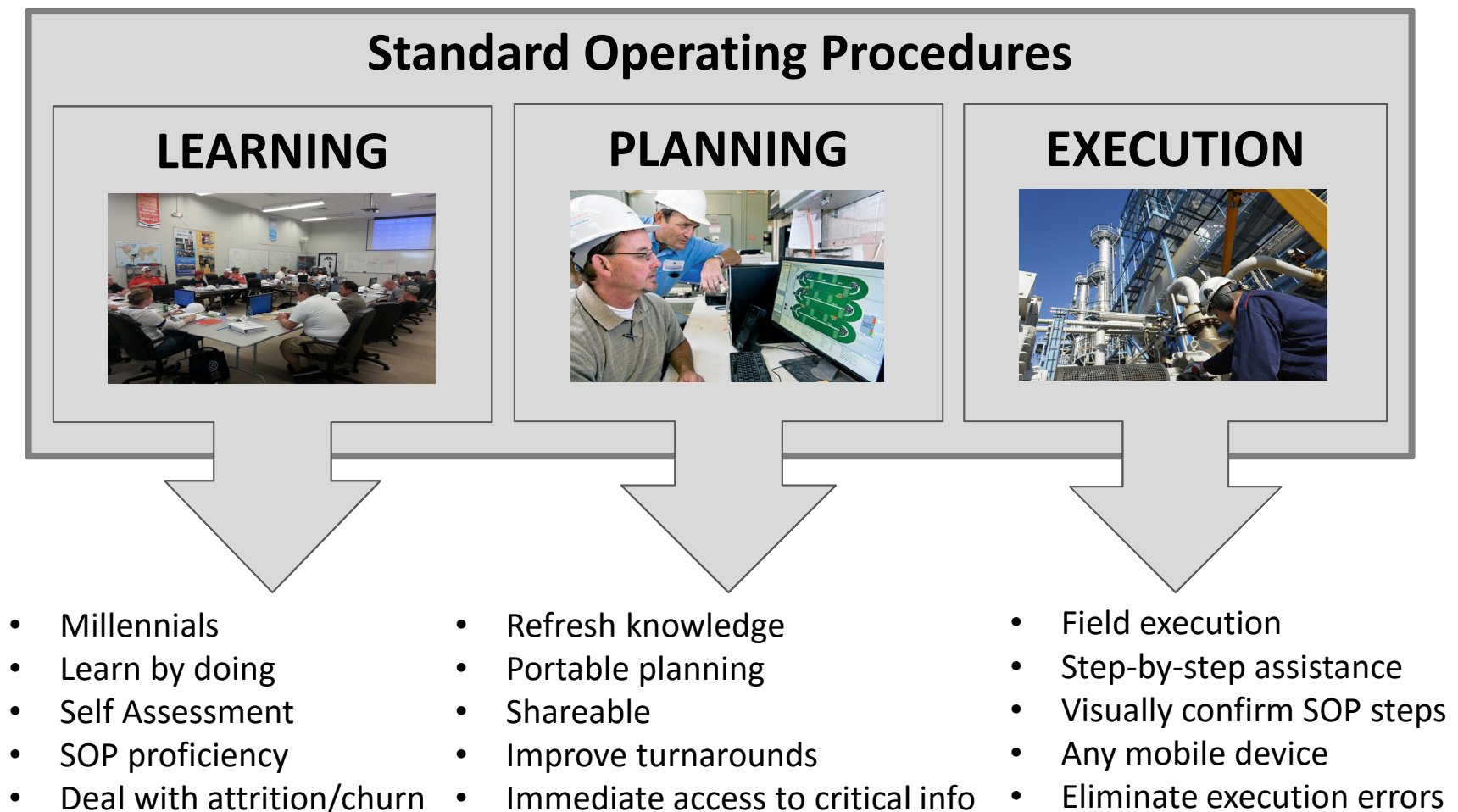
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...to this?



We must think *beyond* training to execution



Visual demo: how a realistic replica of your assets can boost productivity and consistency

20 minutes of visual demos will be shown, some of which you can find on:

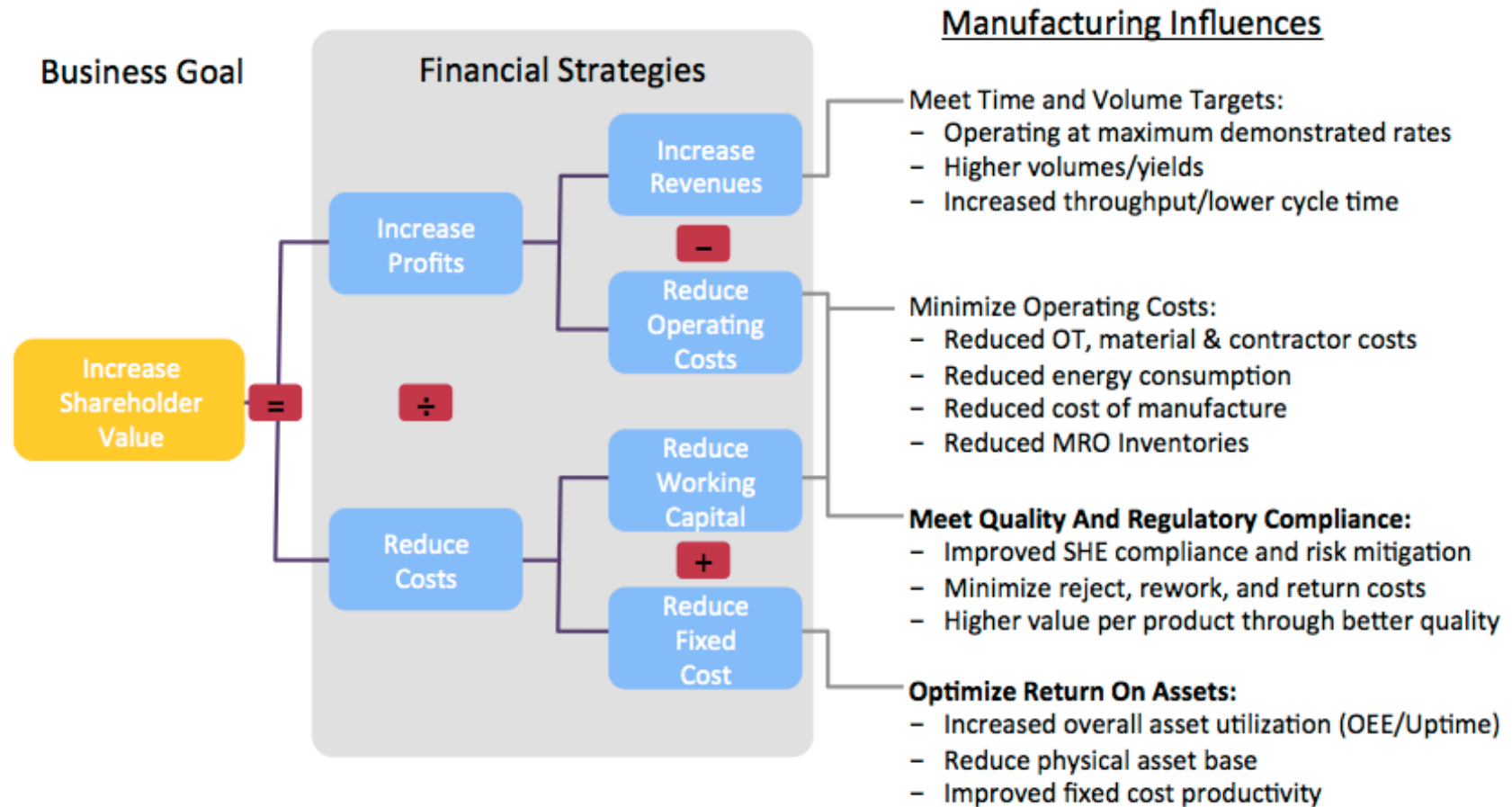
www.voovio.com

We will show some specific Instrumentation & Electrical demos in refineries and petrochemical facilities

Tablet devices will also be used

- Immediate access to site information
- Consistency & clarity in communicating tasks
- Practice any procedure on any screen as if you were on site = SOP proficiency
- Visual checklist on site using mobile device: verify every step
- Avoiding doubt or uncertainty: relate what you read to reality
- Have the confidence that you are executing everything correctly
- Know exactly where your lockout locations are
- Indirect and direct safety implications
- Retain knowledge within your organization
- Deal with attrition and churn

Let's work on the right things including human reliability



Helping our field operators will help our shareholders

Thank You... Are There Any Questions?



ENHANCED REALITY

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