

# Focus on Operation Excellence in the Context of Low Oil Price:

## Technology Innovations Enabling Business Transformation

Hisham Gouda  
Sr. Director, Oil & Gas Industry

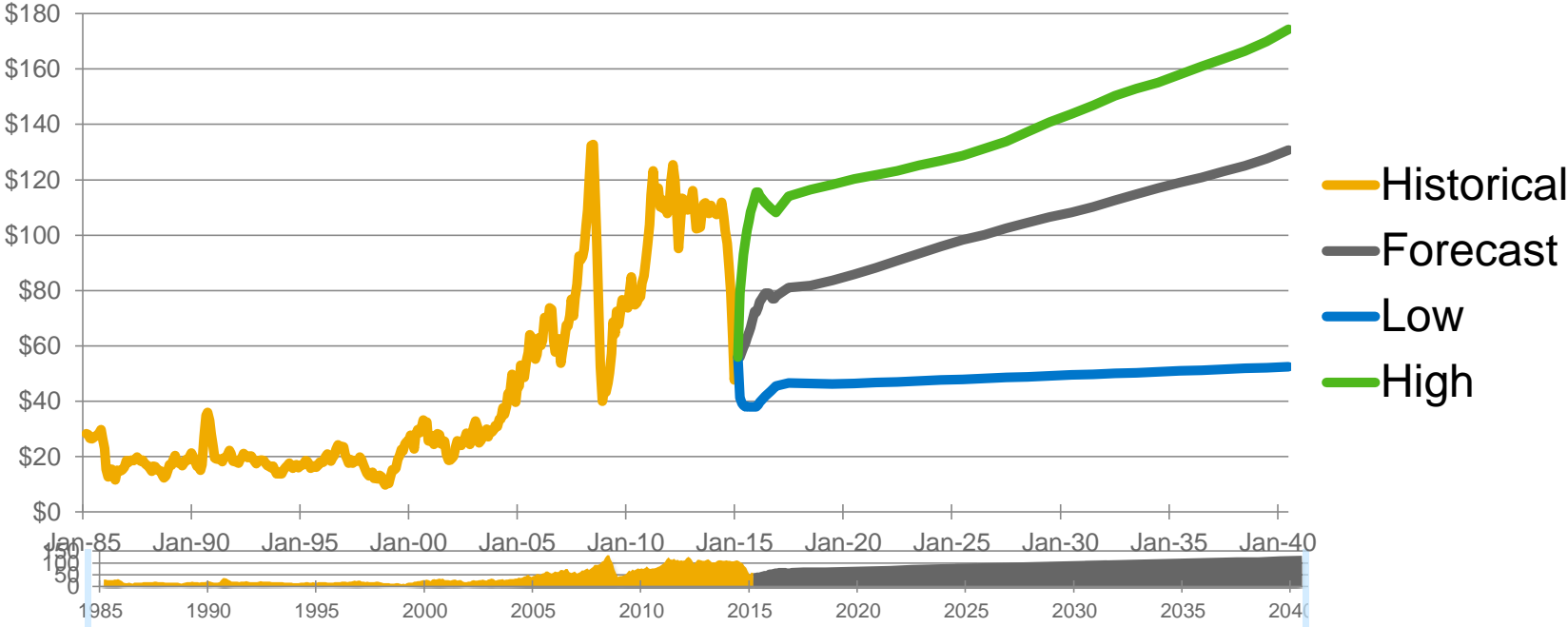
# Legal Disclaimer

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# A matter of perspective



Source: Energy Information Administration

# Increasing business complexity



**Functional**



**Process**



**Enterprise**



**Network**

# Some factors

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**Disciplined investment/cash flow**



**Cost control**



**Customer focus**



**License to operate**

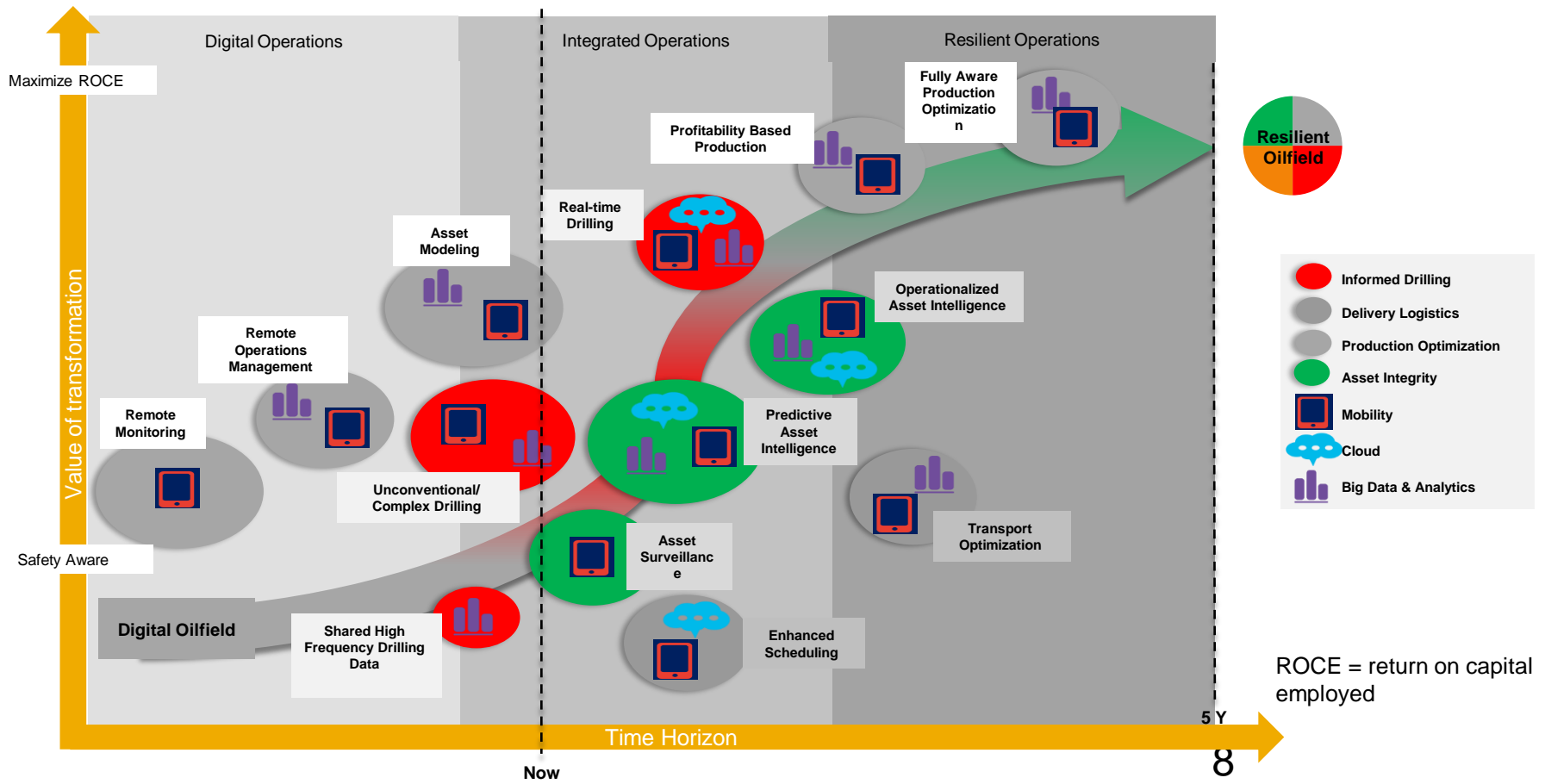
# Success = resilience

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re·sil·ience (noun) \ri-'zil-yən(t)s\

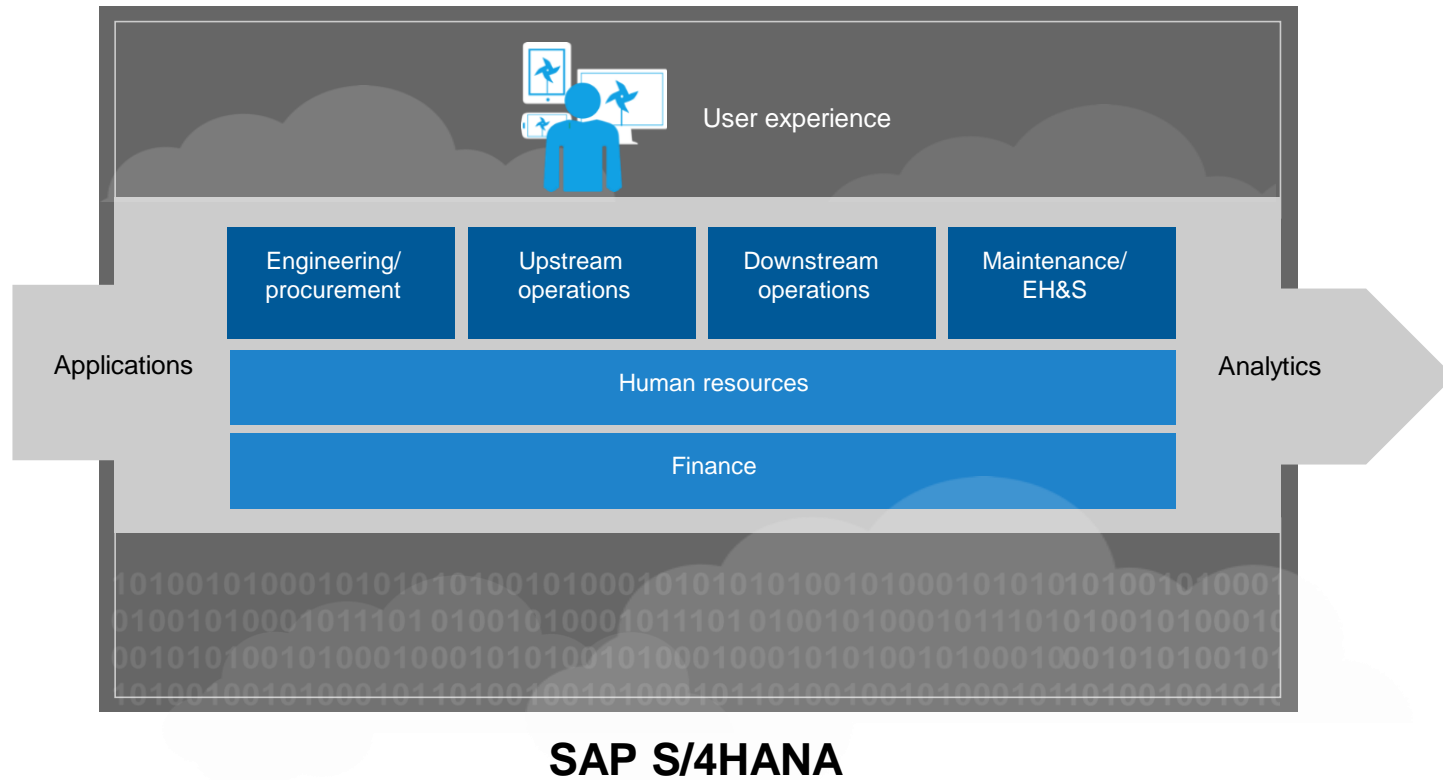
1. the **capability** of a strained body **to recover** its size and shape after deformation caused especially by compressive stress
2. an ability to **recover from** or adjust easily to **misfortune** or change

# Resilient Oilfield with Mash-Ups



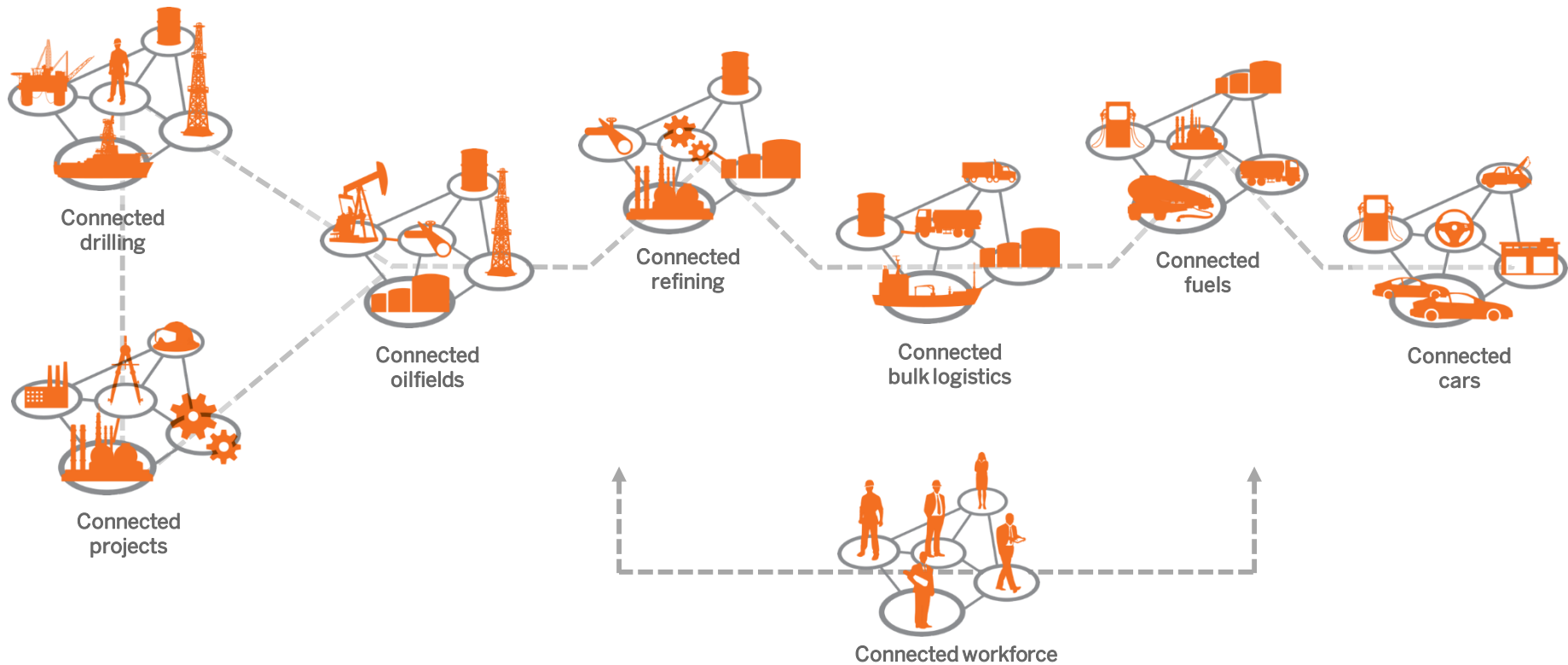
© IDC Visit us at [IDC.com](http://IDC.com) and follow us on Twitter: @IDC

# Resilience comes from simplicity

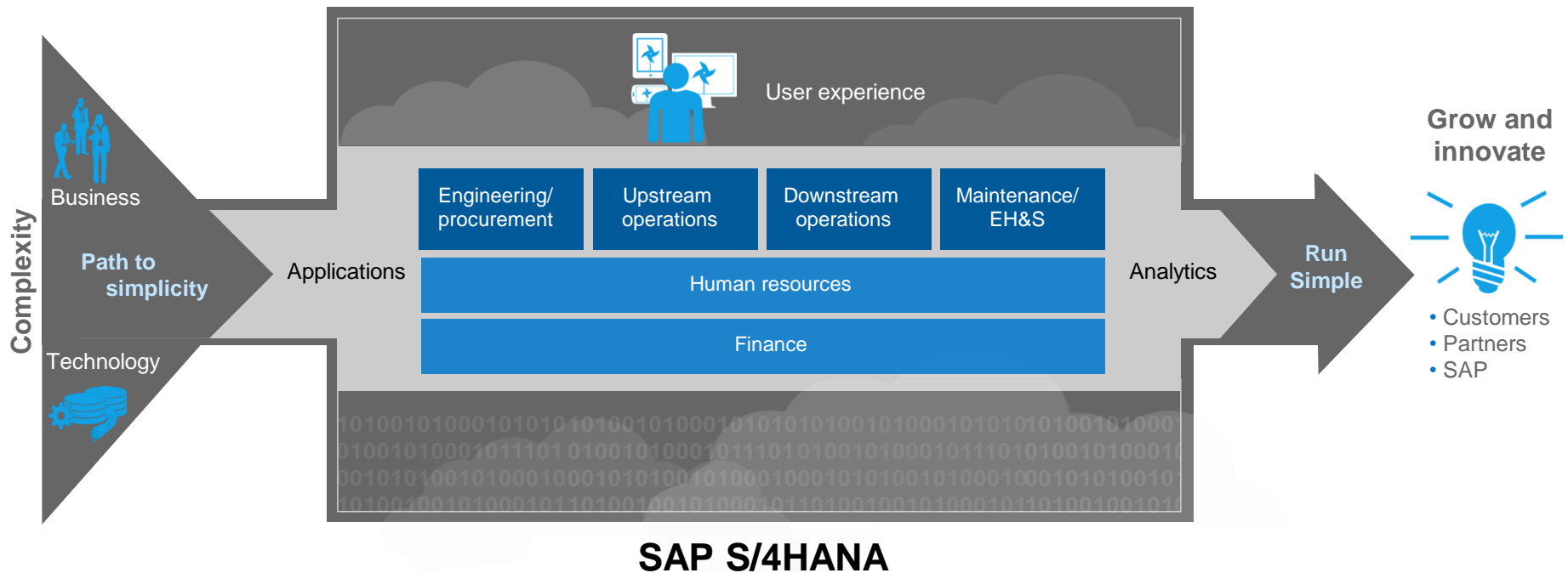




# Our connected future

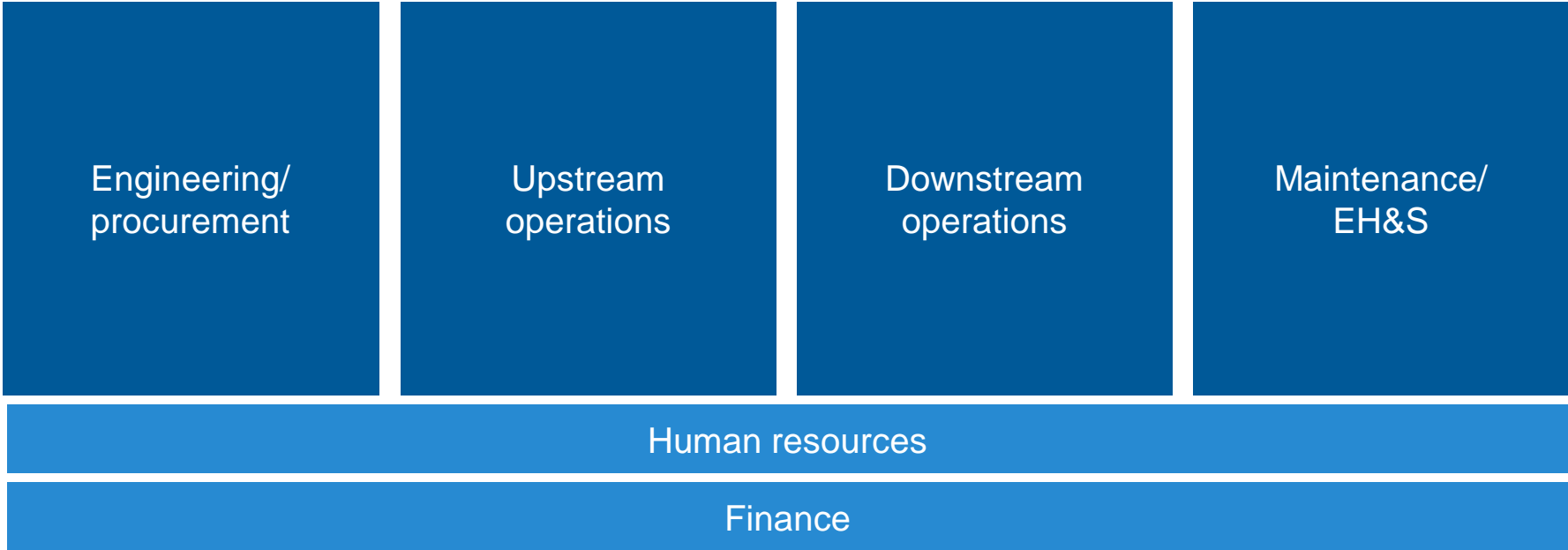


# A resilient platform and path to simplicity



# An integrated & focused business process model

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# An integrated & focused business process model

	<b>Capital and Effectiveness</b>	<b>Integrated Digital Oilfield Operations</b>	<b>Hydrocarbon Supply Chain</b>	<b>Operational Integrity</b>
	Capital Planning Portfolio and Project Management Strategic Sourcing and Supplier Management Procure to Pay and Business Network	Hydrocarbon Production Management Hydrocarbon Revenue Management Field Logistics	Hydrocarbon Supply and Distribution Hydrocarbon Processing Visibility Commercial Sales and Marketing Secondary Distribution and Fuels Retailing Convenience Retailing	Risk Analysis and Governance Workforce Competency Asset Integrity Environment, Health, and Safety
<b>Enterprise Information Management</b>	Data Architecture and Integration	Information Governance	Content Management	Information Archival
<b>Human Resources</b>	Core Human Resources and Payroll	Talent Management	Time and Attendance Management	Workforce Planning and Analytics
<b>Finance</b>	Financial Planning and Analysis	Accounting and Financial Close	Treasury and Financial Risk Management	Collaborative Finance Operations Enterprise Risk and Compliance Management
<b>Platform and Technology</b>	Enterprise Technology	Analytics Technology	Mobile Technology	In-Memory Technology

# Focusing on Production

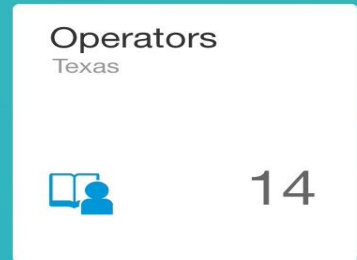
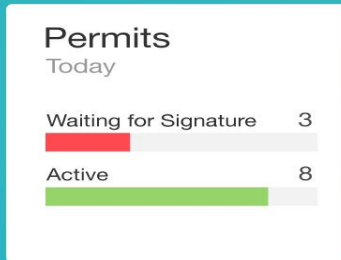
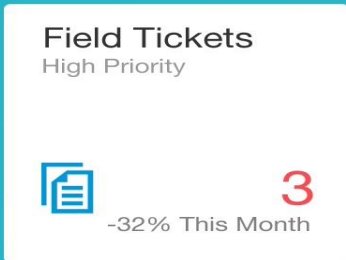
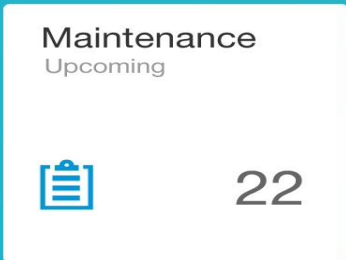
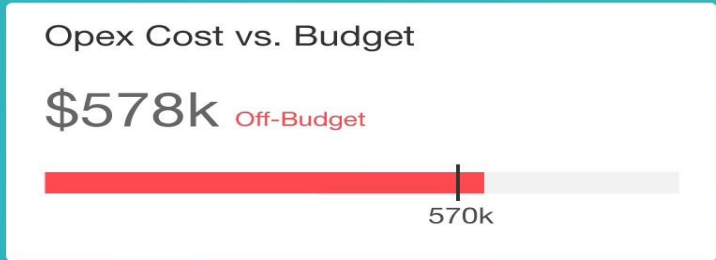
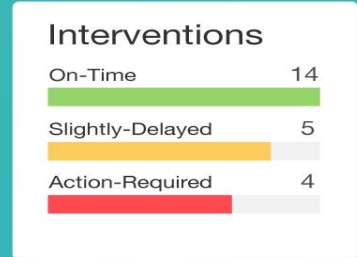
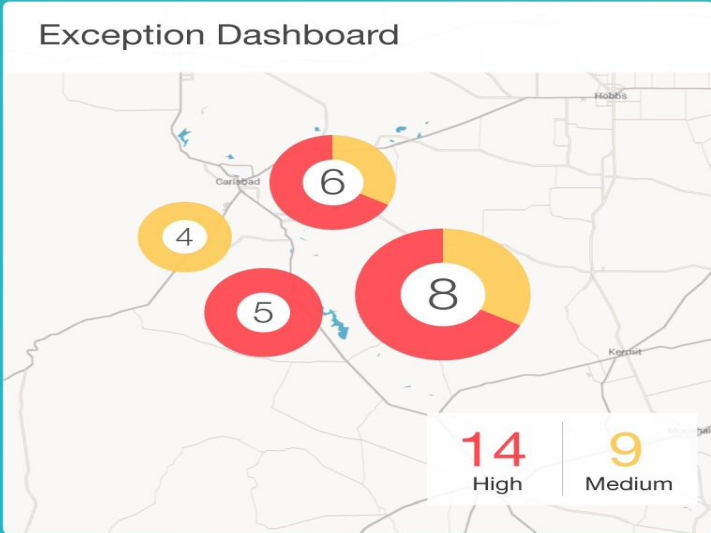


Home



Tom Scarvo

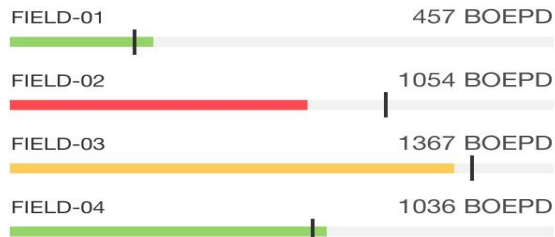
## Exceptions & Interventions



Customer Innovation & Strategic Projects

Summary List

## Production by Fields

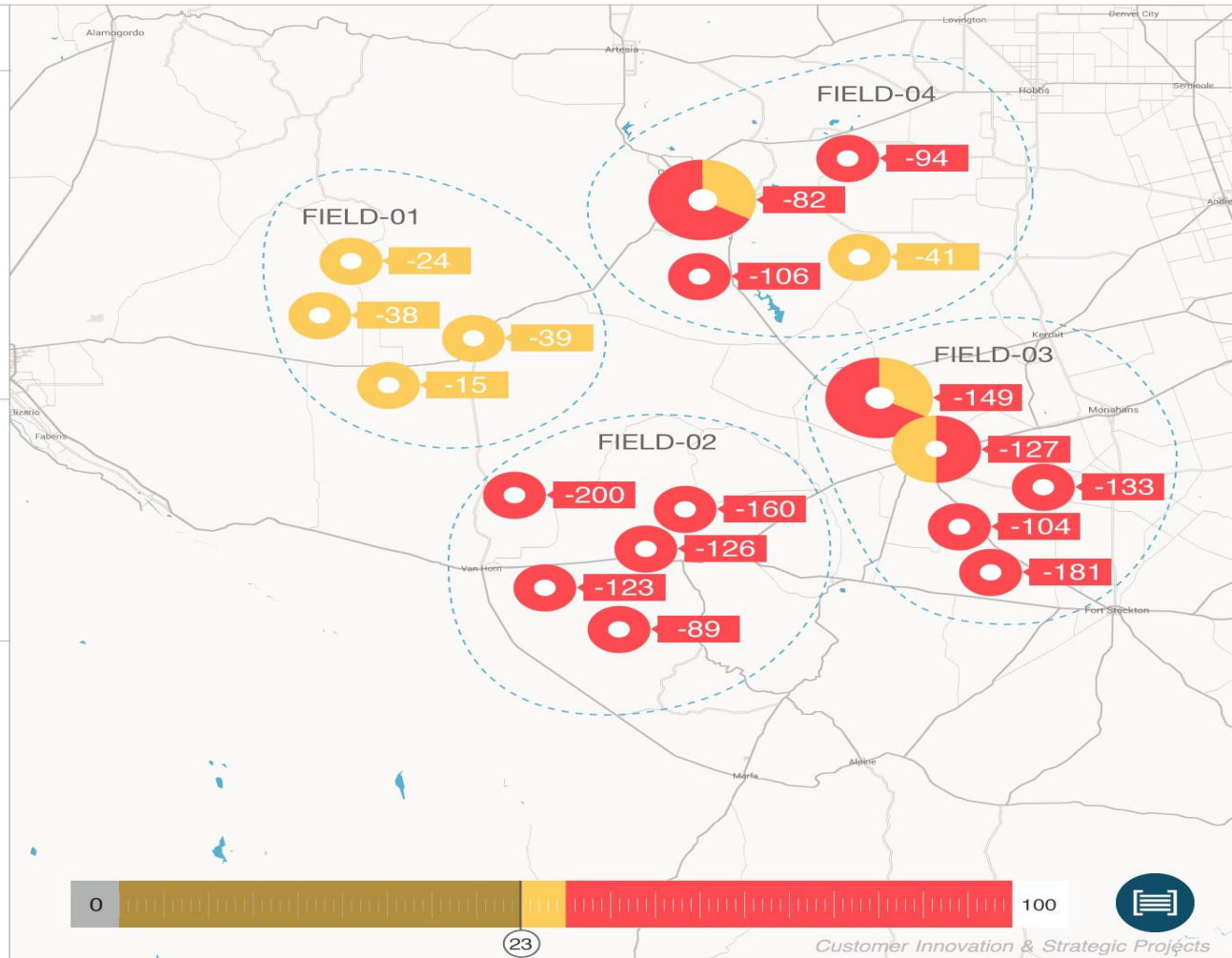
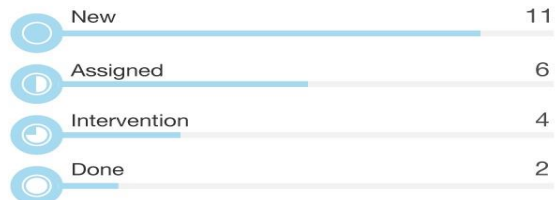


## Exception Count

**23** ▼3.2% This Month



## Exception Status



Default ▾ Filters(4)

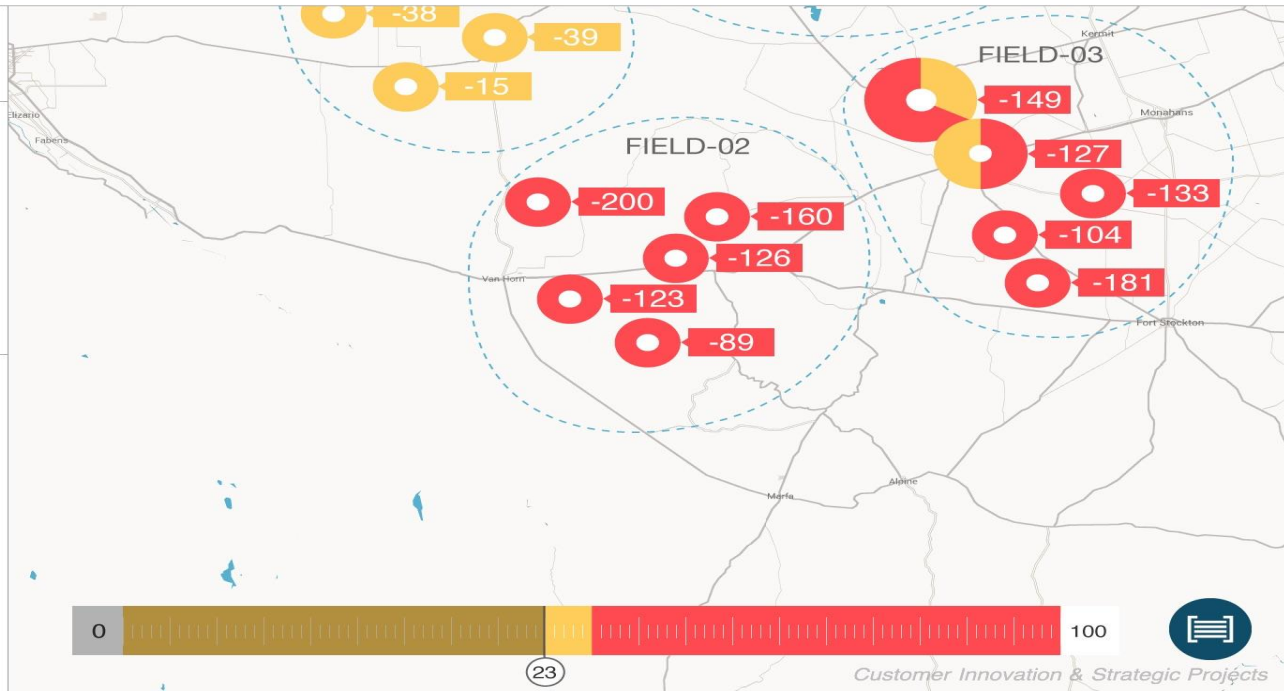
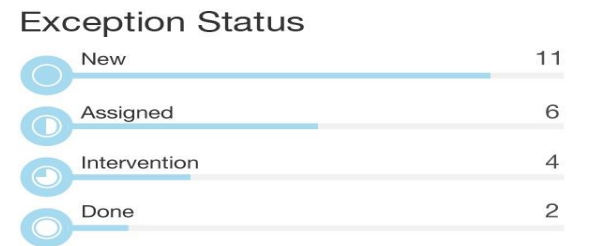
23 Results Go

Asset ID  
 ▾

Type  
 Deficit Flow  High Battery  Pressure ▾

Status

Occur Time  
 Today



Summary

List

**Deficit Flow** of Well TEX-01

**-200** MCFPD

1d 1h ago Assigned

**Deficit Flow** of Well TEX-85

**-41** MCFPD

1d 2h ago Assigned

**Deficit Flow** of Well TEX-49

**-181** MCFPD

2d 3h ago Assigned

**Deficit Flow** of Well TEX-22

**-126** MCFPD

2d 14h ago New

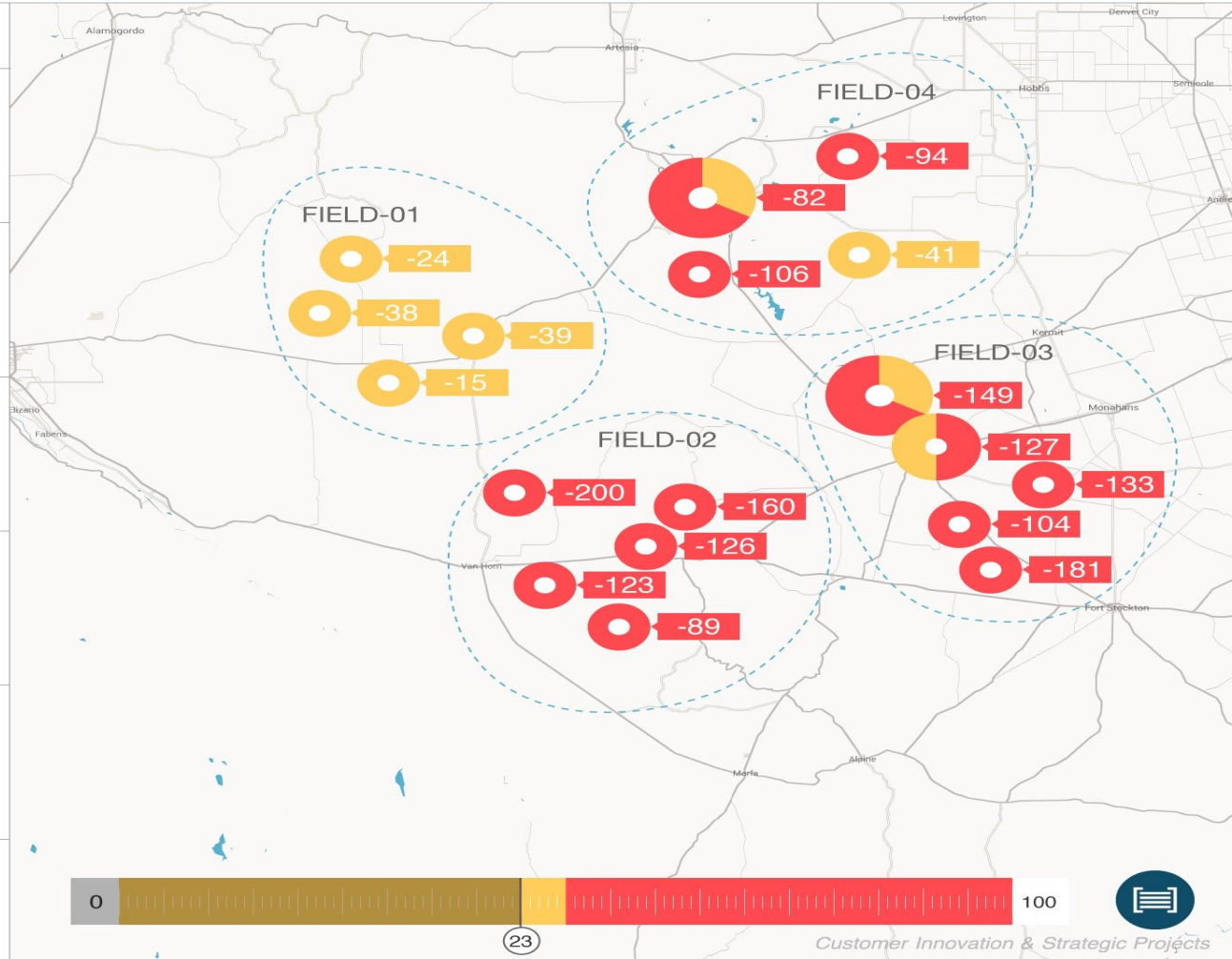
**High Battery Level** of Well TEX-17

**692** Cubic Foot

2d 15h ago New

**High Battery Level** of Well TEX-19

**657** Cubic Foot





Summary

List

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1d 1h ago Assigned

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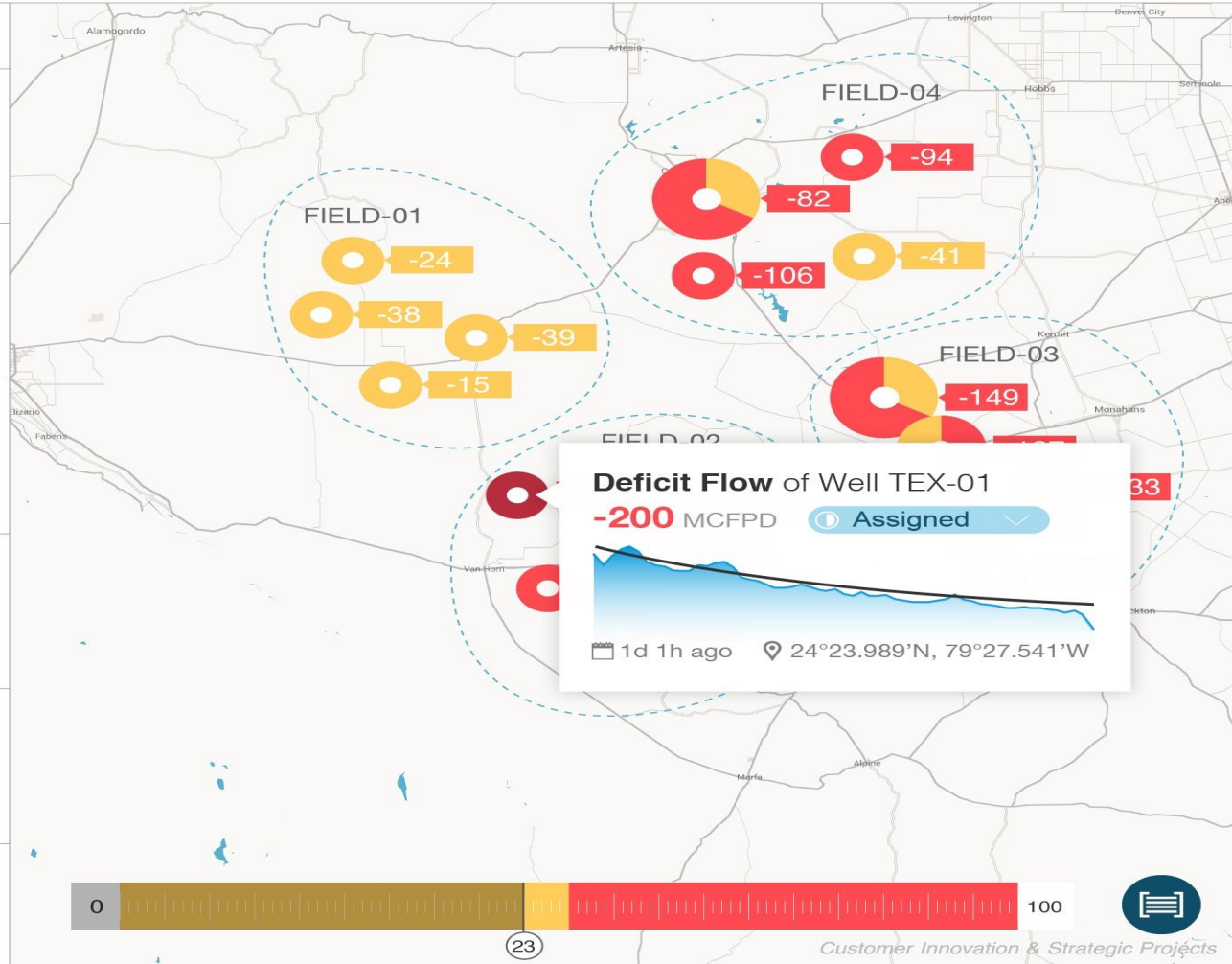
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2d 14h ago New

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**692** Cubic Foot

2d 15h ago New

**High Battery Level** of Well TEX-19  
**657** Cubic Foot

← Map

**Deficit Flow** of Well TEX-01

1d 1h ago 24°23.989'N, 79°27.541'W

**-200**  
MCFPD

Assigned

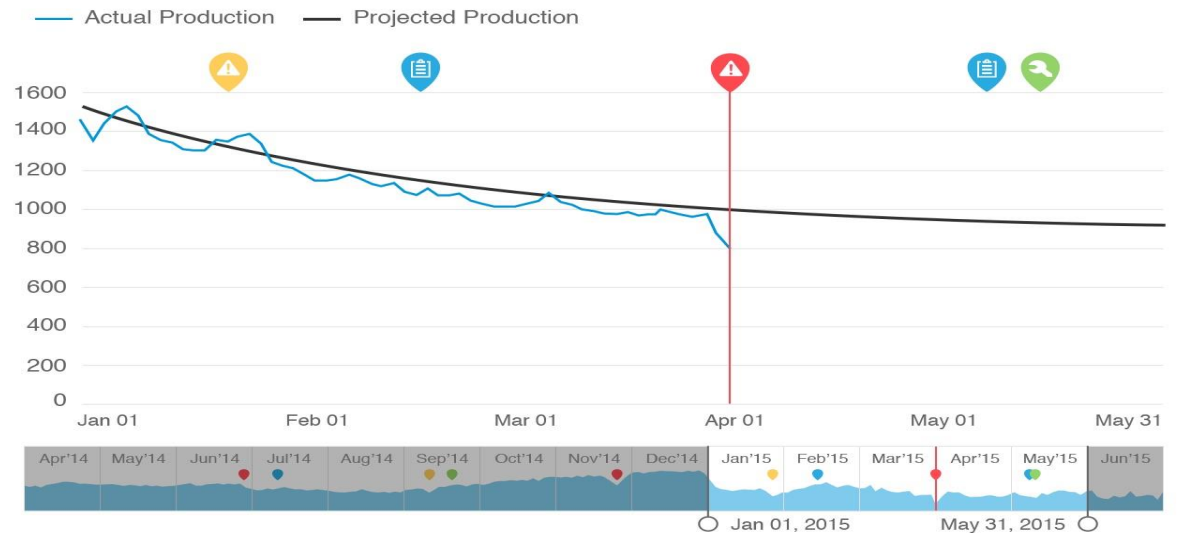
Trend

Schematics<sup>3</sup>

Timeline<sup>8</sup>

Possible Solutions<sup>6</sup>

Actual vs. Projected Production



Upcoming Activity (2)

Name	Vendor	Start From	Customer	Duration	Plan & Strategy	Cost	Projects

Summary

List

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1d 1h ago Assigned

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**657** Cubic Foot

Map

**Deficit Flow** of Well TEX-01

1d 1h ago 24°23.989'N, 79°27.541'W

**-200**  
MCFPD

Assigned

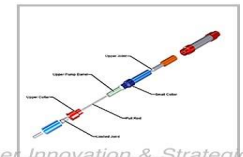
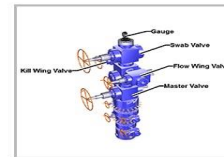
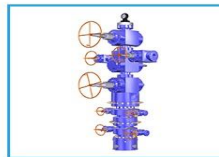
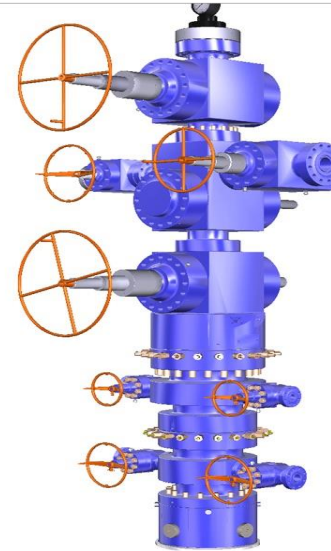
Trend

Schematics<sup>3</sup>

Timeline<sup>8</sup>

Possible Solutions<sup>6</sup>

Christmas Tree



Customer Innovation & Strategic Projects

Summary

List

### Deficit Flow of Well TEX-01

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**-126** MCFPD

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### High Battery Level of Well TEX-19

**657** Cubic Foot

← Map

### Deficit Flow of Well TEX-01

1d 1h ago 24°23.989'N, 79°27.541'W

**-200**  
MCFPD

Assigned

Trend

Schematics<sup>3</sup>

Timeline<sup>8</sup>

Possible Solutions<sup>6</sup>



**Mike Delfino**  
Operator

10:50 AM  
April 03, 2015

Well vented and plunger lift settings have been adjusted accordingly, but the production is still low.



**Mike Delfino**  
Operator

9:05 AM  
April 01, 2015

Four (4) sticks per day.



**Mike Delfino**  
Operator

8:50 AM  
April 01, 2015

Production rates for TEX-01(gas well) continue to decline after we installed the plunger lift mechanism last month.



**Tom Scarvo**  
Production Engineer

Type a note...



**Tom Scarvo**  
Production Engineer

8:15 AM  
April 04, 2015

I'm going to create a swabbing intervention.



**Tom Scarvo**  
Production Engineer

9:20 AM  
April 01, 2015

Ok. Vent the well to atmosphere (to clear out loaded wellbore) before adjusting plunger lift settings to increase the shut-in time. If that doesn't improve, I will schedule swab rig.



**Tom Scarvo**  
Production Engineer

8:45 AM  
April 01, 2015

What are the current plunger lift settings? How much surfactant (soap sticks) are added to the well each day/week?

*Customer Innovation & Strategic Projects*

Summary

List

**Deficit Flow** of Well TEX-01

**-200** MCFPD

1d 1h ago

Assigned

**Deficit Flow** of Well TEX-85

**-41** MCFPD

1d 2h ago

Assigned

**Deficit Flow** of Well TEX-49

**-181** MCFPD

2d 3h ago

Assigned

**Deficit Flow** of Well TEX-22

**-126** MCFPD

2d 14h ago

New

**High Battery Level** of Well TEX-17

**692** Cubic Foot

2d 15h ago

New

**High Battery Level** of Well TEX-19

**657** Cubic Foot

← Map

**Deficit Flow** of Well TEX-01

1d 1h ago 24°23.989'N, 79°27.541'W

**-200**  
MCFPD

Assigned

Trend

Schematics<sup>3</sup>

Timeline<sup>8</sup>

Possible Solutions<sup>6</sup>



**Performance Analysis**

Ad hoc analysis of historical events and sensor data



**Create Intervention**

Quickly plan and create tickets



**Contact Operator**

Mike Delfino  
+1(325)691-1533



**Add Surfactant**

Increase Surfactant by 10%  
Estimated Cost  
750 USD



**Adjust Plunger Lift Settings**

Increase Shutting Time  
Estimated Cost  
820 USD



**Swab Well**

Schedule Workover Rig  
Estimated Cost  
5200 USD

Summary

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1d 1h ago Assigned

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2d 14h ago New

**High Battery Level** of Well TEX-17

**692** Cubic Foot

2d 15h ago New

**High Battery Level** of Well TEX-19

**657** Cubic Foot

← Detail

## New Intervention

### General

Intervention ID\*

Description

Well ID\*  24°23.989'N, 79°27.541'W

Production Engineer\*

Date\*

### Plan

Swab Well

Start From: Apr 13, 2015  
 Duration: 15 hours  
 Estimated Cost: 5200 USD  
 Vendor: Field Service Co.  
 Stakeholder: Mike Delfino

Delete

Modify

Cancel

Submit

Summary

List

### Deficit Flow of Well TEX-01

**-200** MCFPD

1d 1h ago Assigned

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2d 15h ago New

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**657** Cubic Foot

← Detail

Search for a template

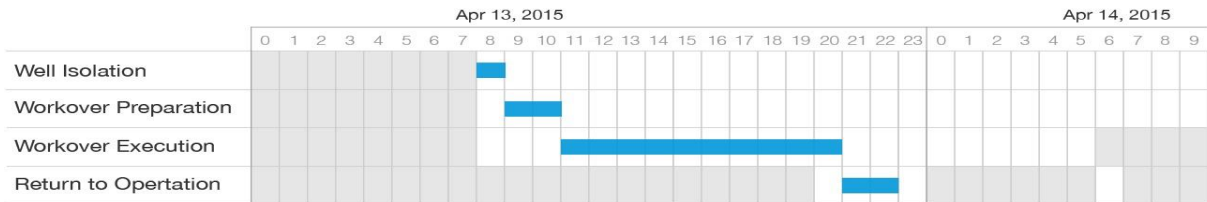


### Swab Well

Start From: Apr 13, 2015  
 Duration: 15 hours  
 Estimated Cost: 5200 USD  
 Vendor: Field Service Co.  
 Stakeholder: Mike Delfino

Delete

Modify



Name	Vendor/ Stakeholder	Start From	Duration	Cost
Well Isolation	Mike Delfino	Apr 05, 2015 7:00AM	1 hour	0
Workover Preparation	Mike Delfino	Apr 05, 2015 7:00AM	2 hours	0
Workover Execution	Field Service Co.	Apr 05, 2015 8:00AM	10 hours	5200 USD
Return to Operation	Mike Delfino	Apr 05, 2015 9:00PM	2 hours	0

Cancel

Submit

Summary

List

**Deficit Flow** of Well TEX-01

**-200** MCFPD

1d 1h ago Intervention

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**Deficit Flow** of Well TEX-01

1d 1h ago 24°23.989'N, 79°27.541'W

**-200**  
MCFPD

Intervention

Trend Schematics<sup>3</sup> Timeline<sup>8</sup> Possible Solutions<sup>6</sup> Intervention<sup>1</sup>

Workover Rig-TEX-01-04132015

Well ID: TEX-01 24°23.989'N, 79°27.541'W  
 Production Engineer: Tom Scarvo  
 Created At: 20:25PM April 04, 2015

Swab Well

Start From: Apr 13, 2015  
 Duration: 15 hours  
 Estimated Cost: 5200 USD  
 Vendor: Field Service Co.  
 Stakeholder: Mike Delfino

Delete

Details



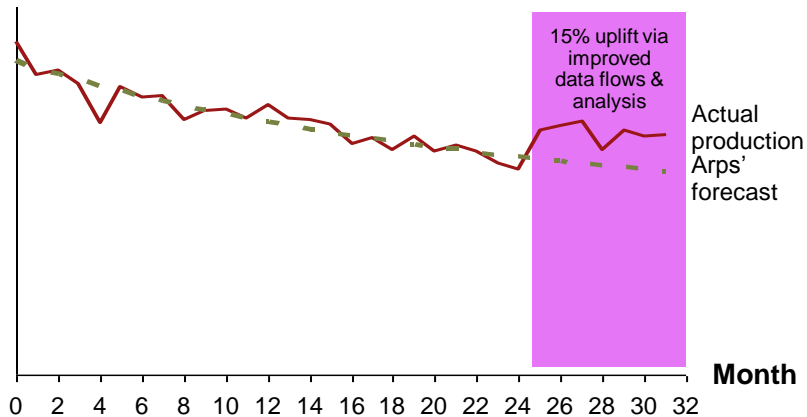
# Improved data flows and analytics can statistically improve production rates by 5-15% depending on data availability

## Business case for improving data flows & analytics

Client Examples

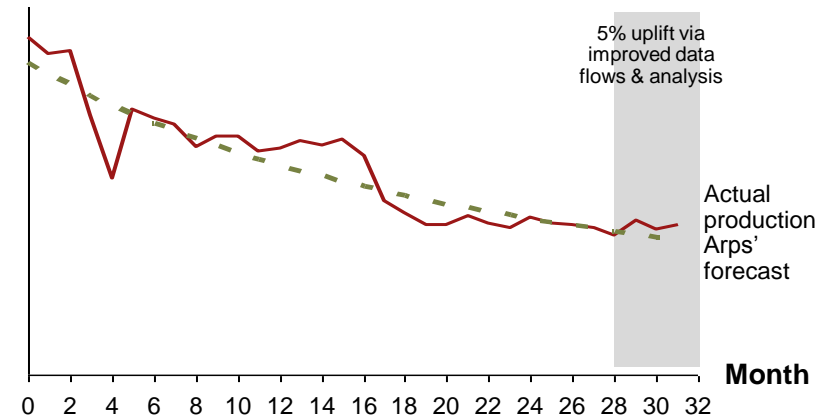
### Improvement for gas-producing assets<sup>1</sup>

Monthly  
Production



### Improvement for liquids-producing assets<sup>1</sup>

Monthly  
Production



One operator generated more than \$1.0 bn in shareholder value from improved information processing across its asset base for an investment of only \$50 mn!

Note 1: These results were for matured oil & gas fields in the United States and Canada and leveraged existing SCADA applications in the field; differences in results between gas and liquids-producing assets is largely explained by differences in data collection methods typically employed across North America.

Source: A.T. Kearney

# Focusing on Uptime

**SAP** Search Michael Smith

← STO Project: 300000033

**STO Project: Refinery STO2015** **80.2 M** USD Project ID: 30000033 Project Manager: Kate Jacob  
Start: 21 May 2015 End: 30 Jun 2015

**MOCK-UP ONLY**

**Project Structure**  
300000033  
Next Milestone:  
Scope Challenge

**11** Milestones

**STO Scope**  
500000055  
Status: In Preparation

**342** Scope Items

**STO Work Orders**

**4809** Work Orders

**STO Work Packages**

**300** Work Packages

**Project Budget**  
Sanctioned to Date

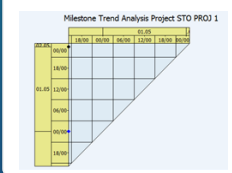
**85M** USD

**Cumulative Totals**  
Expenses ( M USD)

Actual and Target

3.5 8.2

**Milestone Trend**

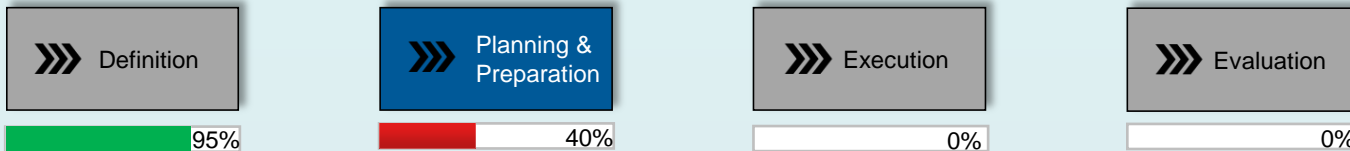


**Project Progress**

**31%**

STO Project: 300000033

MOCK-UP ONLY


 My Activities  Sort by Due Date 

Activity	Status	Due
<b>HL Scope Sign Off</b> Agreement on High Level Scope among all stakeholders	21.03.2015 Mark Brown	In Process >
<b>Prepare Detailed Scope</b> Prepare detailed scope in collaboration	31.05.2015 Mark Brown	Not Started <input type="checkbox"/>
<b>Long lead materials &amp; services</b> Prepare list of long lead materials & services	06.06.2015 Armin Schwarz	Not Started <input type="checkbox"/>
<b>Order long lead materials &amp; services</b> Place orders for procurement	10.06.2015 Armin Schwarz	Not Started <input type="checkbox"/>
<b>Prepare for scope challenge</b> Setup the scope challenge meeting and invite stakeholders and voting members	10.06.2015 Mark Brown	Not Started <input type="checkbox"/>

Refinery STO 2015  
In Scoping Phase

Start Date: 28JUNE2015  
End Date: 30JUNE2015  
Project Manager: Kate Jacob

**MOCK-UP ONLY**



4  
Equipment



2  
Functional  
Locations



Equipment no	Description	STO Owner	Added on	Edit	Remove	Select
10014284	Motor	XYZ	08/31/14			<input type="checkbox"/>
10014285	Turbine	ABC	12/10/14			<input type="checkbox"/>
10014288	Tanker	MNS	07/31/14			<input type="checkbox"/>
10014289	Super Motor	JKL	09/20/14			<input type="checkbox"/>



Equipment

Details

Search

Equipment  
90035638

Plant 0001

Equipment  
90035670

Plant 0002

Equipment  
90035637

Plant 0003

Equipment  
800065387

Plant 1000

## Equipment 90035638

Plant 0001

Functional Location IN-BLR-03

Workcenter: **Mechanik**

Person responsible 38089

Status Available

Address: Plant 2A

Company code 0001

Cost center: 645876489

[Add to Scope](#)[Maintain Work Item](#)**MOCK-UP ONLY**

← Work Items of Equipment 90035638

MOCK-UP ONLY

Status:  Scope Item:  Plant:



Work Items (4)

Work Item	Description	Phase	Offset Account		
0001	Before STO	Preparation		<input type="checkbox"/>	
0002	During STO	STO		<input type="checkbox"/>	
0003	After STO	POST		<input type="checkbox"/>	
0004	General activities	Cleaning		<input type="checkbox"/>	



← Operations of Work Items 0001 of Equipment 90035638

MOCK-UP ONLY

Status:  Scope Item:  Plant:

Operations (4)

Operation No	Task list	Operation description	Control Key	Workcenter			Offset Account
0010	50000021	Isolate the equipment	PM01	100450003		<input type="checkbox"/>	
0020	50000043	Scaffolding	PM02	200776544		<input type="checkbox"/>	
0030	41000051	Erection	PM03	000678332		<input type="checkbox"/>	
0040	65120003	Remove scaffolding	PM01	000322235		<input type="checkbox"/>	



# Overview of SAP road map for Oil & Gas

## Road map highlights

### Recent innovations

- Integrated financial planning
- SAP Fiori apps – dashboards for CFOs
- SAP Upstream Operations Management application enhancements
- SAP Joint Venture Accounting application optimized to run on the SAP HANA platform
- Transactional availability for remote sites
- Retail fuel network operations
- SAP solutions for customer engagement and commerce (SAP Cloud for Customer solution)
- SAP Master Data Governance application, enterprise asset management extension by Utopia
- Usability improvements in SAP Enterprise Asset Management

### Planned innovations

- Ariba Network enhancements
- Fieldglass/Ariba software integration
- SAP Production and Revenue Accounting enhancements (SAP HANA platform optimization)
- SAP Upstream Operations Management application enhancements (forecasting and revenue integration)
- Traders and schedulers workbench enhancements (SAP HANA optimizations, SAP Fiori)
- Natural gas transmission
- Further Enhancements for SAP Predictive Maintenance and Service solution
- Risk assessment improvements to SAP Environment, Health, and Safety Management

### Future direction

- Total workforce – creation of integrated solution to manage end-to-end workforce lifecycle for both contingent and own labor
- Simplified project management and portfolio management in the cloud
- Managed cloud for upstream operations management
- Global revenue accounting
- Managed cloud for downstream
- Continue downstream transformation (for example, SAP HANA optimizations, simplifications)
- Using predictive and real-time analytics to improve safety and risk management
- Collaboration in the cloud for asset information



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- SAP Fiori apps – dashboards for CFOs
- SAP Upstream Operations Management application enhancements
- SAP Joint Venture Accounting application optimized to run on the SAP HANA platform
- Transactional availability for remote sites
- Retail fuel network operations
- SAP solutions for customer engagement and commerce (SAP Cloud for Customer solution)
- SAP Master Data Governance application, enterprise asset management extension by Utopia
- Usability improvements in SAP Enterprise Asset Management

Management

### Future direction

- Total workforce – creation of integrated solution to manage end-to-end workforce lifecycle for both contingent and own labor
- Simplified project management and portfolio management in the cloud
- Managed cloud for upstream operations management
- Global revenue accounting
- Managed cloud for downstream
- Continue downstream transformation (for example, SAP HANA optimizations, simplifications)
- Using predictive and real-time analytics to improve safety and risk management
- Collaboration in the cloud for asset information

# Overview of SAP road map for Oil & Gas

## Road map highlights

### Recent innovations

- Integrated financial
- SAP Fiori apps – c
- SAP Upstream Op
- application enhanc
- SAP Joint Venture
- application optimiz
- HANA platform
- Transactional avai
- Retail fuel network
- SAP solutions for c
- and commerce (SA
- solution)
- SAP Master Data (
- application, enterp
- management exte
- Usability improvem
- Enterprise Asset M

### Planned innovations

- Ariba Network enhancements
- Fieldglass/Ariba software integration
- SAP Production and Revenue Accounting enhancements (SAP HANA platform optimization)
- SAP Upstream Operations Management application enhancements (forecasting and revenue integration )
- Traders and schedulers workbench enhancements (SAP HANA optimizations, SAP Fiori)
- Natural gas transmission
- Further Enhancements for SAP Predictive Maintenance and Service
- Risk assessment improvements to SAP Environment, Health, and Safety Management

### on

- integration of integrated
- end-to-end workforce
- ingent and own labor
- management and
- t in the cloud
- stream operations
- unting
- ownstream
- n transformation (for
- optimizations,
- real-time analytics to
- sk management
- loud for asset

# Overview of SAP road map for Oil & Gas

## Road map highlights

### Recent innovations

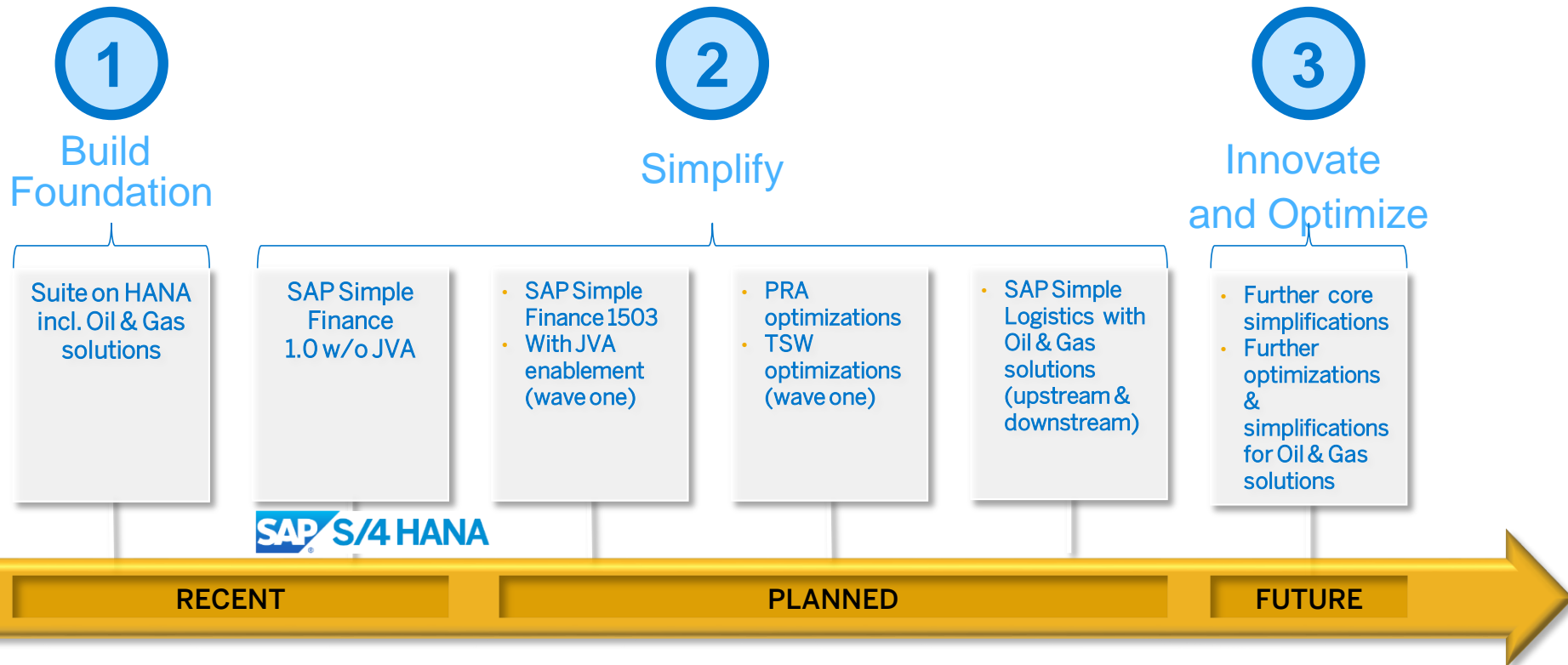
- Integrated financial planning
- SAP Fiori apps – dashboards for CFOs
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### Future direction

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# Product Roadmap - SAP S/4HANA for Oil & Gas

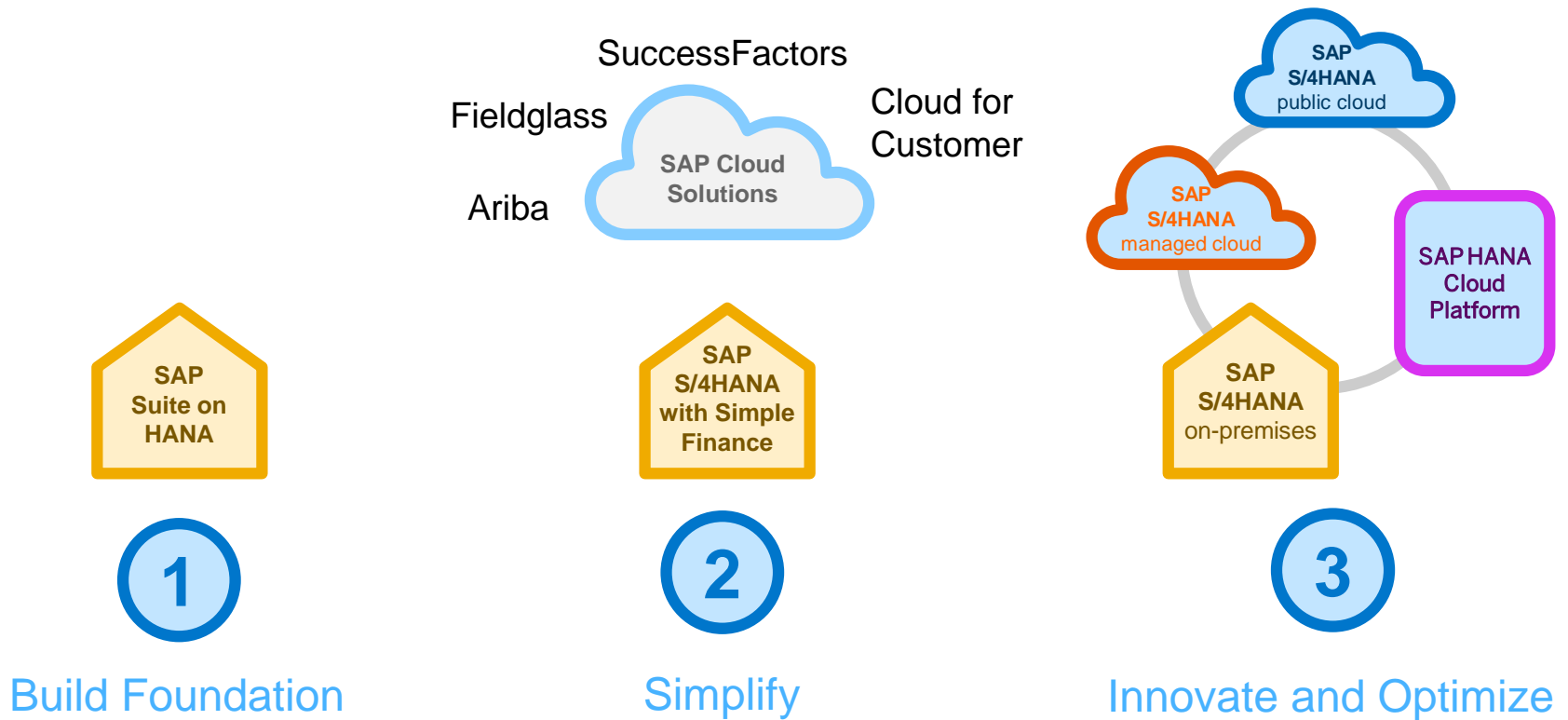
SAP LABS PREVIEW



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# Customer Path to Success with S/4HANA



# Time to value



► Provides for quick time to value

► Maintains momentum and enthusiasm



**Thank you**

**شكرا جزيلاً**

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