

# Regulator as a Platform (RaaP) for Regulatory Excellence

## Target Energy Solutions

Ugur Algan



# Digital Economy

“ We digitize information, we digitalize processes and roles that make up the operations of a business, and we digitally transform the business and its strategy ”

Forbes

**DX**  **DE**

**Uber**

online transportation network



online rental service



online home service



online learning company



deliveroo

online food delivery



online shopping

**Shyp**

courier service

**FREELANCE  
PLATFORMS**



# Digital Economy Opportunities For Governments



Understand citizens better and achieve better outcomes



Provide services more effectively and efficiently



Find new solutions to policy challenges



Engage with external partners to develop new delivery models



Commercialize some public services and develop fresh sources of revenue



Predictive insights and informed decision making



Personalized services and targeted interventions



Increased transparency and accountability



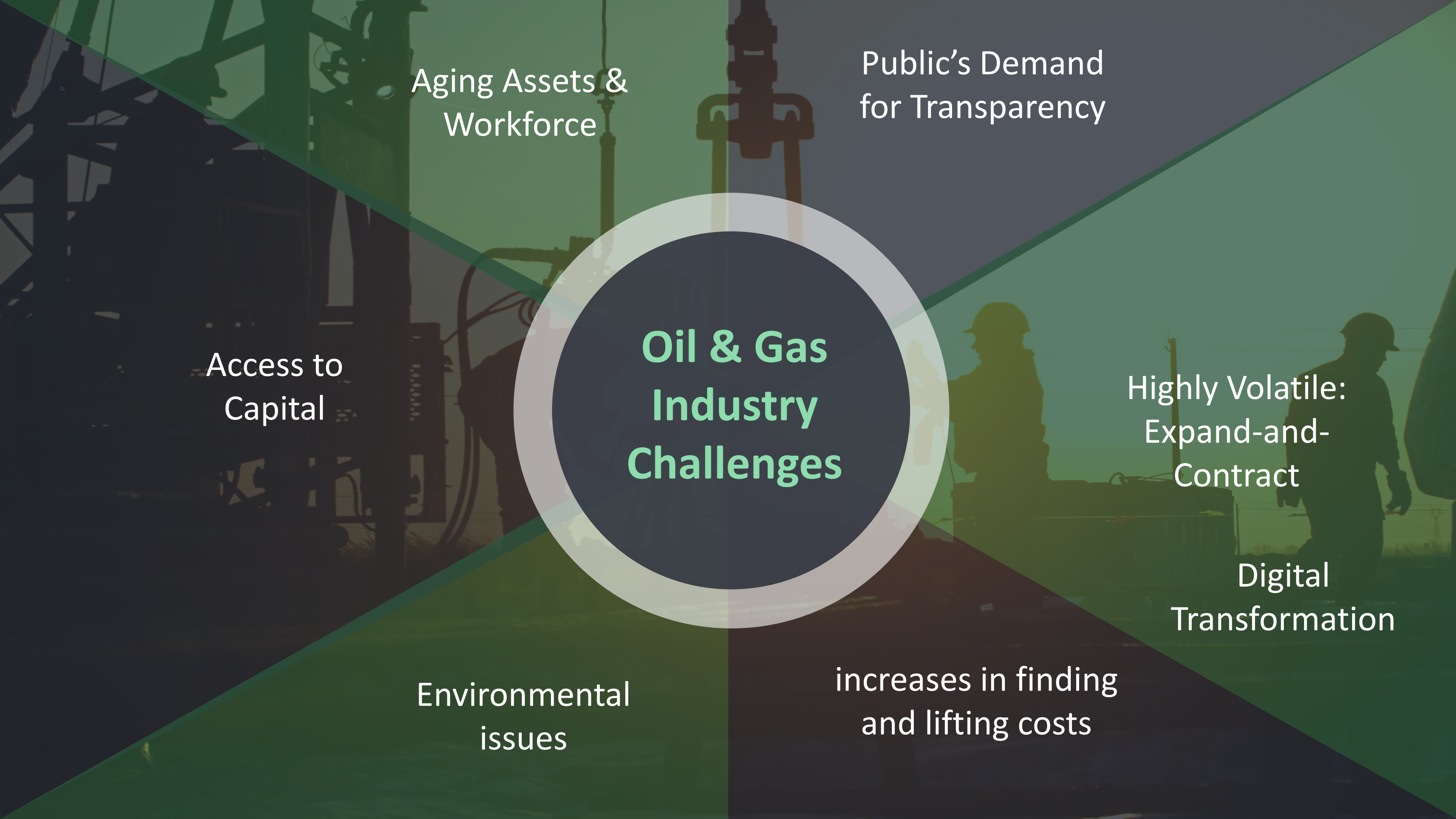
Greater public participation and trust



Reduced fraud & misuse of public services



Optimize resources and increase productivity

The diagram features a central dark blue circle with a light blue ring, containing the text "Oil & Gas Industry Challenges". This central element is surrounded by six triangular segments of varying shades of green and blue, each containing a challenge. The background is a dark, industrial scene with silhouettes of workers and equipment.

## Oil & Gas Industry Challenges

Aging Assets &  
Workforce

Public's Demand  
for Transparency

Access to  
Capital

Highly Volatile:  
Expand-and-  
Contract

Digital  
Transformation

Environmental  
issues

increases in finding  
and lifting costs



# Regulator's Mission

Establish and nurture the regulatory environment that facilitates the efficient and effective functioning of the regulated industry for the benefit of the society and all the participants (stakeholders) of the regulated industry.



- To fulfil this mission, the regulator needs to build and maintain a regulatory framework that is
  - Well governed,
  - Transparent
  - Communicated widely to all of the industry stakeholders

# Regulator Goals

Maximize the  
Sovereign Benefit

Minimize the  
Cost  
to Society

Inclusive  
Business  
Model

Data &  
Information  
as a  
Sovereign  
Asset





# How does Regulator Deliver Value

Regulator delivers value to the society and the regulated industry using the following mechanisms



**Provide Clarity to All Stakeholders**



**Maximize Asset Value**



**Promote overall wellbeing of the industry and its diverse participants**



**Ensure regulatory compliance and enforcement**

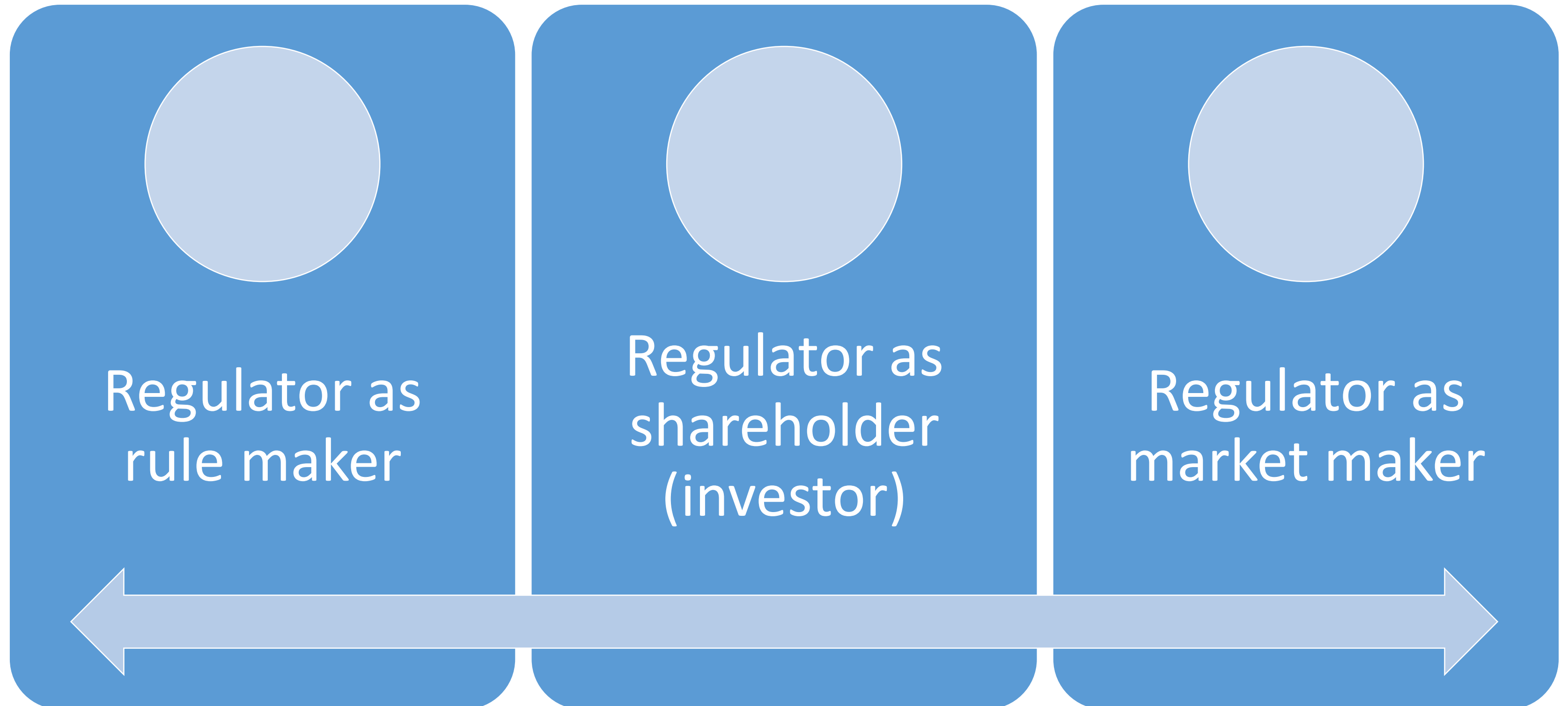


**Facilitate effective communication among all stakeholders**



**Evolve the regulation to remain relevant and useful**

# Regulator Value Streams





# Typical Regulatory Challenges



Lack of clear mandate



Lack of adequate and sustainable funding



Lack of effective information flow  
among different stakeholders



# Regulator as a Platform

Regulator as a Platform is a new business model; it helps the governments build an independent platform that is controlled by the regulator and works for all stakeholders. Regulator as a Platform is a new digital ecosystem with the following characteristics



**Effective  
Governance &  
Fair Access**



**Transparent &  
Digital First**



**Sharing Economy  
& Engaged  
Regulator**



**Data as Sovereign  
Asset & Responsive  
Regulator**



**In Control &  
Innovative**



**Automated through  
Machine Learning  
& Industry Market Place**



**Collaborative &  
In-Country Value**



**Community Hub &  
Life-of-Asset**



**Connected**



**Accessible**



**Insightful**



**Personalised**



**Predictive**



# Platform Enablement

  
Container  
Orchestration

  
Cloud Enabled

Infrastructure

  
Data Sources

  
Legacy  
Applications

  
Sensors and  
Devices

Data

Information  
Management

  
Data Factory

  
Data Catalog

Cognition

Big Data Stores

  
Data Lake Store

  
SQL Data  
Warehouse

  
Document Data Store

  
IoT

Machine Learning  
& Analytics

  
Machine  
Learning

  
Data Lake  
Analytics

  
Stream  
Analytics


Smart


  
Cognitive  
Services


  
Bot Framework


Dashboard  
Visualization

Intelligence

  
People

  
Web

  
Mobile

  
Bots

Microservices

Apps & Access



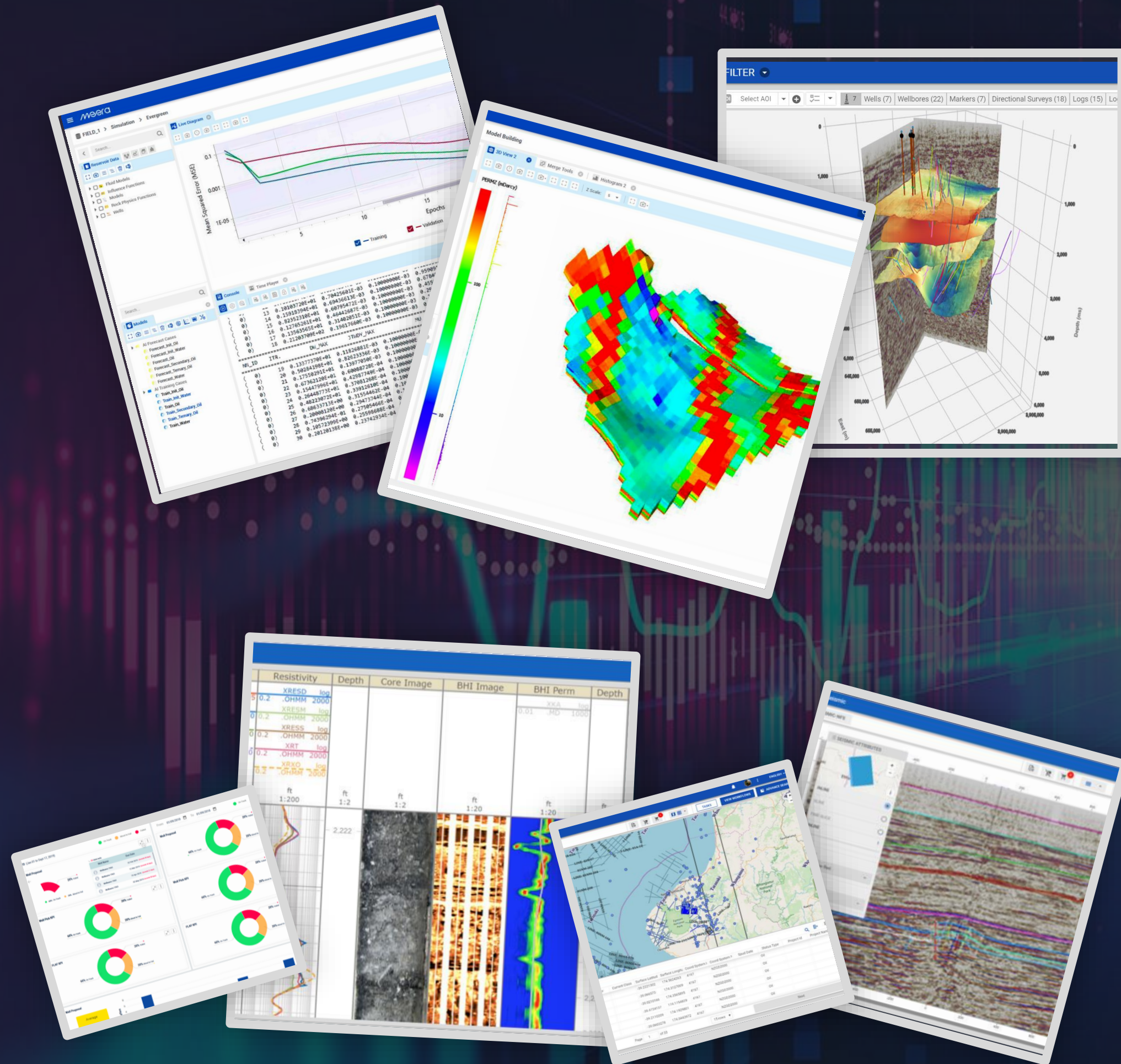
# Stakeholders





# Data as National Asset

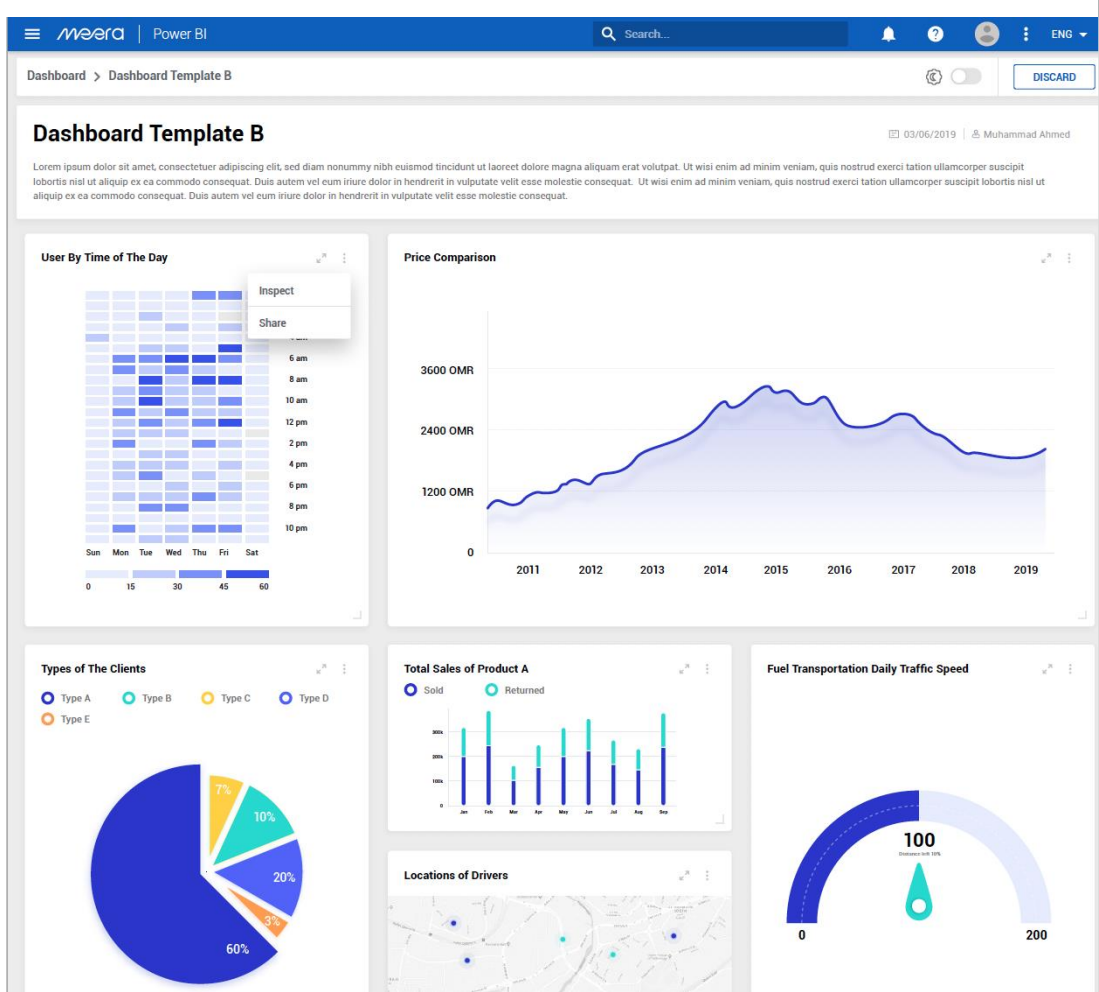
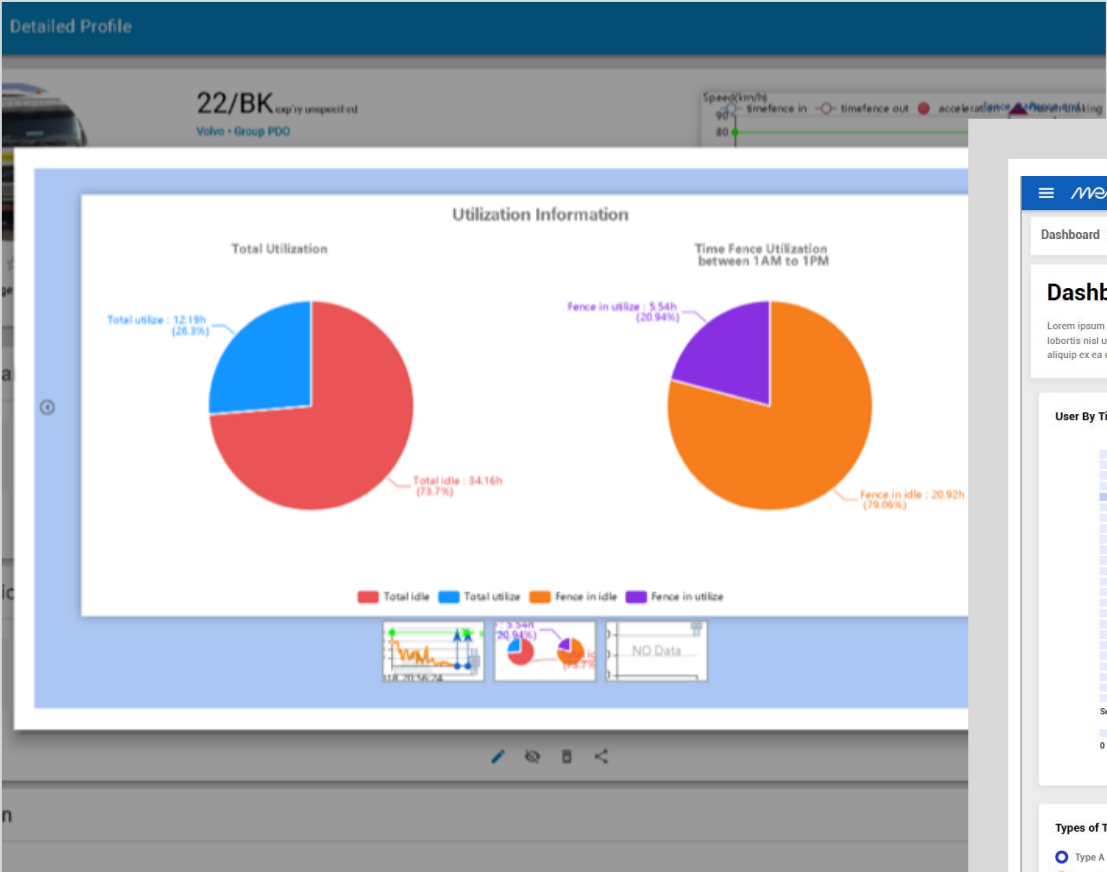
Petrotechnical Data Management, Wells Data  
Management, Seismic Data Management, Geospatial  
Maps, Production Data, Reserves Data





# Compliance & Reporting

## Enforcement



meera | Pulse

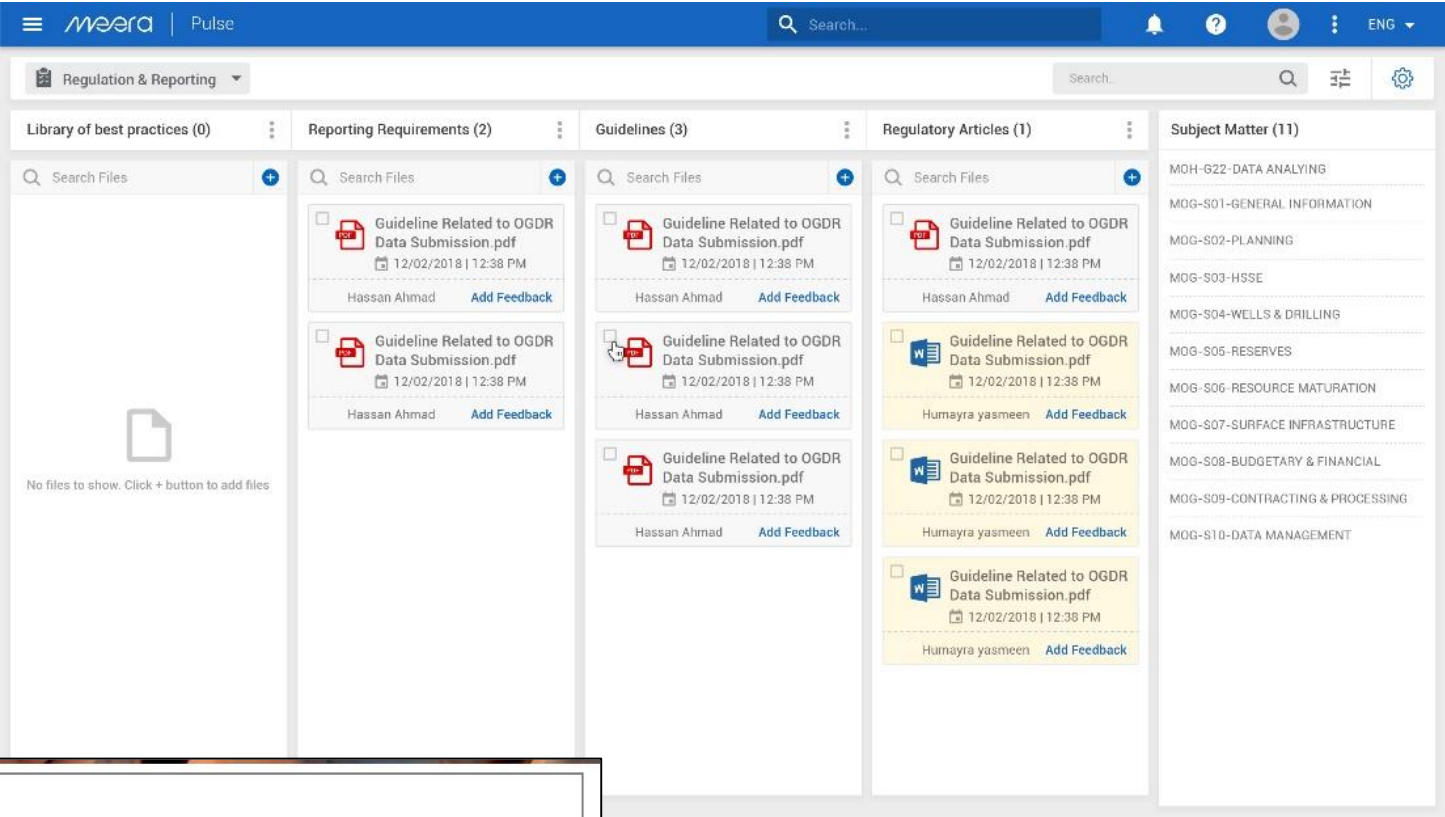
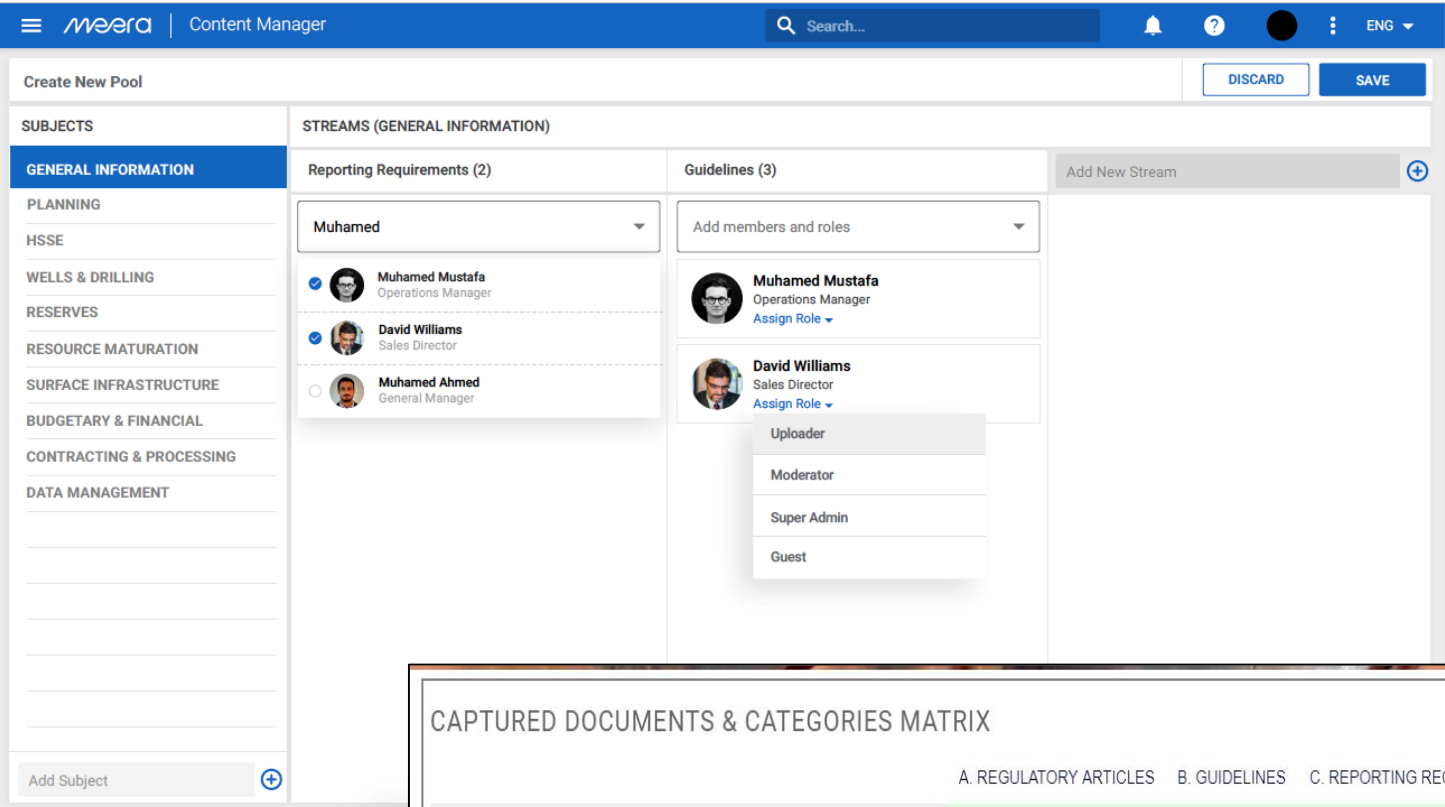
Regulation & Reporting

Library of best practices (0)	Reporting Requirements (2)	Guidelines (3)	Regulatory Articles (1)	Subject
Search Files	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	MOH-G... MOG-S... MOG-S...
	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Humayra yasmeen <a href="#">Add Feedback</a></div>	
No files to show. Click + button to add files	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Humayra yasmeen <a href="#">Add Feedback</a></div>	MOG-S03-HSSE MOG-S04-WELLS & DRILLING MOG-S05-RESERVES MOG-S06-RESOURCE MATURATION MOG-S07-SURFACE INFRASTRUCTURE MOG-S08-BUDGETARY & FINANCIAL MOG-S09-CONTRACTING & PROCESSING MOG-S10-DATA MANAGEMENT
	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Hassan Ahmad <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Humayra yasmeen <a href="#">Add Feedback</a></div>	<div>Guideline Related to OGDR Data Submission.pdf 12/02/2018   12:38 PM Humayra yasmeen <a href="#">Add Feedback</a></div>	

## Reporting

## Regulations

# RaaP: Regulations Library

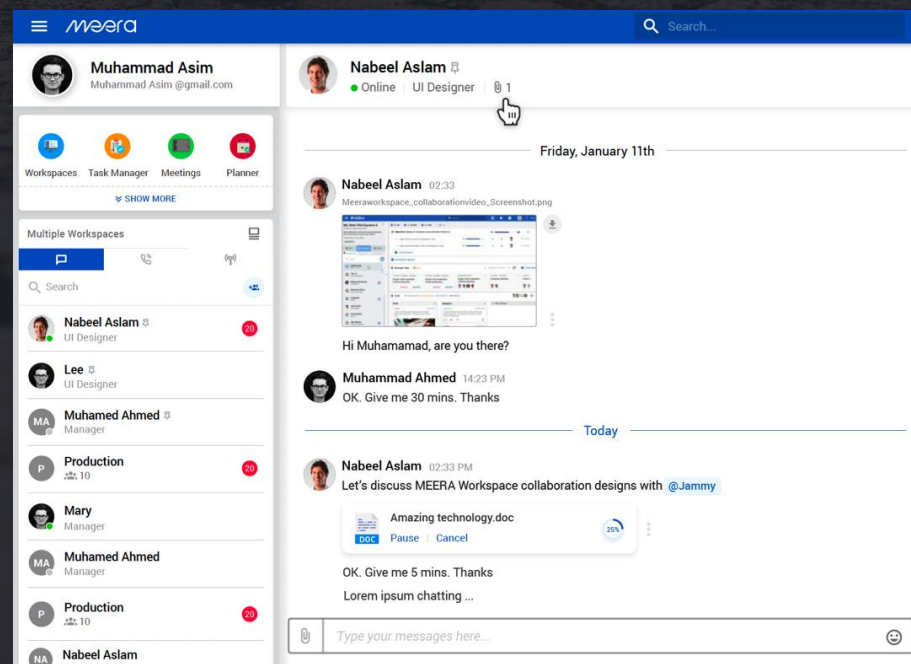


CAPTURED DOCUMENTS & CATEGORIES MATRIX

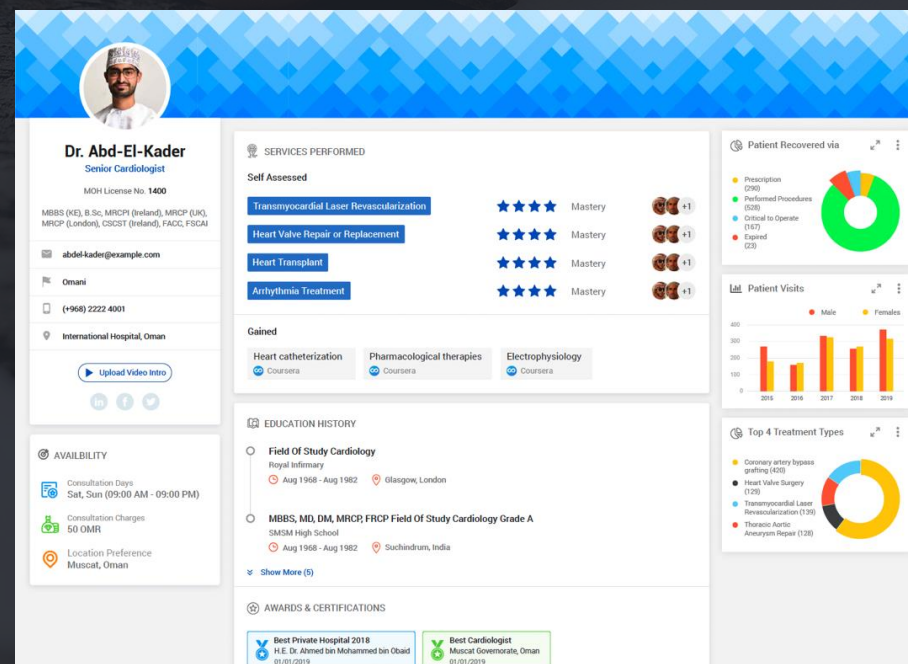
	A. REGULATORY ARTICLES	B. GUIDELINES	C. REPORTING REQUIREMENTS	D. LIBRARY OF BEST PRACTICES	E. OPERATING MODELS	F. FEEDBACK	H. GENERAL FILES
MOG-S01-GENERAL INFORMATION	1	1	1	8			2
MOG-S02-PLANNING	1		7				
MOG-S03-HSSE	1	2	5	26		2	
MOG-S04-WELLS & DRILLING	1	3	7	76		1	
MOG-S05-RESERVES	1	2	2	3		1	
MOG-S06-RESOURCE MATURATION	1	3	13	12	1		
MOG-S07-SURFACE INFRASTRUCTURE	1		4	54		1	
MOG-S08-BUDGETARY & FINANCIAL	1		6	34			
MOG-S09-CONTRACTING & PROCUREMENT	1	2	10	27			
MOG-S10-DATA MANAGEMENT	1	3	2	3			
MOG-S11-INVENTORY & ASSET DISPOSAL	1	4	4				
MOG-S12-CORPORATE HUMAN RESOURCE	1	5	6	14			
MOG-S13-CORPORATE GENERAL & ADMIN	1						
MOG-S14-HYDROCARBON MARKETING & EXPORT	1	2	2				
MOG-S15-CONCESSIONS & INVESTMENTS	1						
MOG-S16-CORPORATE SOCIAL RESPONSIBILITY	1						
MOG-S17-IN COUNTRY VALUE	1		1				



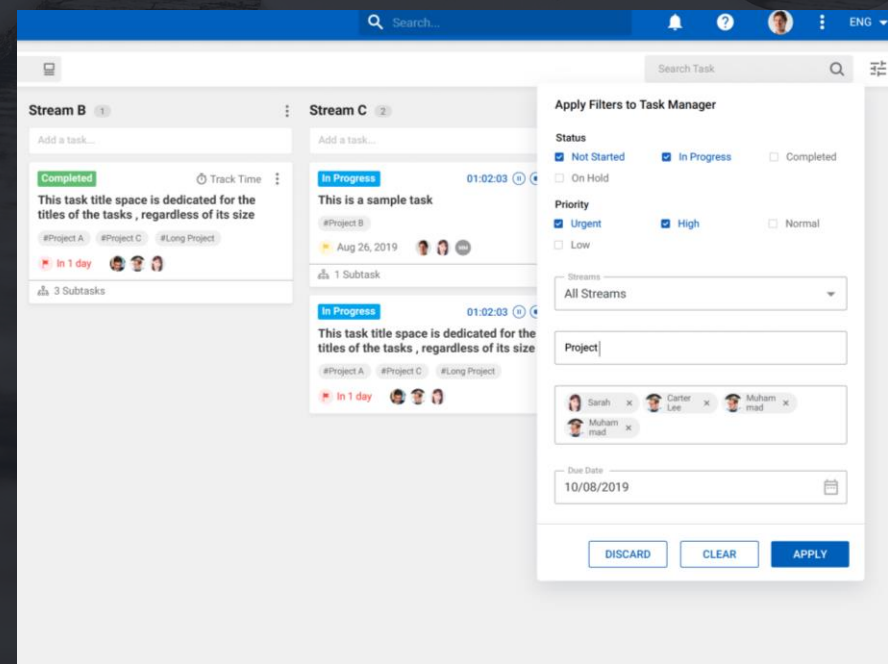
# The Community Portal



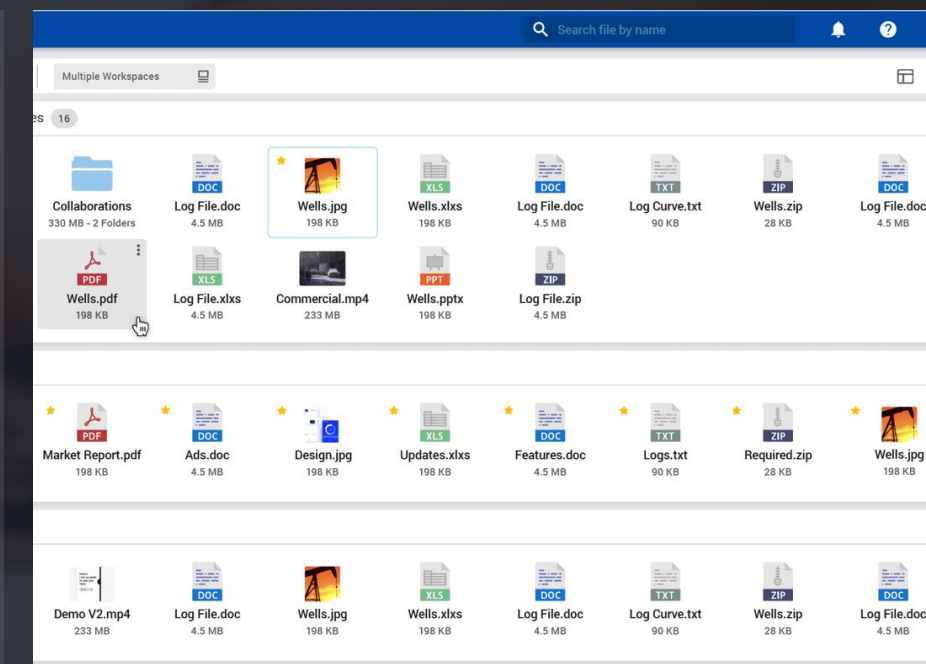
Collaboration



Dynamic Profiles



Work Management



Data Sharing



# Operations

## Permitting – HSE – Flaring

MEERA

Permits

Search

Project Applications > Summer Valley & Resorts > Historic Process

Developer

Ben Johnson

12/06/2019 05:33 PM

Created Health Care Development Center Plan V1-1

Ben Johnson

12/06/2019 05:33 PM

Resubmitted Health Care Development Center Plan V1-1

Ben Johnson

02/06/2019 05:33 PM

Created Health Care Development Center Plan V1

Ministry of Transportation

Ted

12/06/2019 05:33 PM

Approved Health Care Development Center Plan V1-1

Ted

05/06/2019 05:33 PM

Under Reviewed Health Care Development Center Plan V1-1

04/06/109 - 11:00am - 11:30am

Planning Meeting A

Muscat Municipality

MH

Muhamed Ahmed

Marketing Manager

JF

John Ford

Sales Director

BC

Ben Carter

System Administrator

MH

Muhamed Ahmed

Marketing Manager

MH

Muhamed Ahmed

Marketing Manager

Ted

12/06/2019 05:33 PM

Approved Health Care Development Center Plan V1-1

Lee

05/06/2019 05:33 PM

Approved Health Care Development Center Plan V1-1

04/06/109 - 11:00am - 11:30am

Planning Meeting A

MEERA REACH

Fuel Transportation

Trucks Trailers Stations Orders Depots Reported Orders Sheet Optimize Dispatch List

MOG Dashboard (Calculated vs Actual)

TODAY

ABC Pvt LTD.

Total Filling Stations : 330

Total Vehicles: 190

Total Fuel Delivered: 100,000 Liters

PROVIDED		CALCULATED	
141.5 KM	7.3K OMR	141.5 KM	7.3K OMR
DISTANCE	COST	DISTANCE	COST

ABC Pvt LTD.

Total Filling Stations: 330

Total Vehicles: 150

Total Fuel Delivered: 100,000 Liters

PROVIDED		CALCULATED	
191.8 KM	8.9K OMR	198.5 KM	9.2K OMR
DISTANCE	COST	DISTANCE	COST

ABC Pvt LTD.

Total Filling Stations: 330

Total Vehicles: 150

Total Fuel Delivered: 100,000 Liters

PROVIDED	
131.2 KM	6.5K OMR
DISTANCE	COST

Filling Stations

Type filling station name here

Total Shipments: 321

Total Distance Covered: 3,545 KM

Total Fuel Delivered: 12,982 Ltr (Mogas)

Current total registered transport capacity vs Utilization

Capacity Utilization

Driver Nationality

Service Providers(25)

Stations	Total Shipment	Total Volume
30	12	3K

MEERA

Well Engineering

Search

Well Sequence Optimisation

Scenario 1

Cluster A

Aqeeq Bahja Wafra Halma Bahja

RIGS SCHEDULING

Search Rig

Rig ID

SWERIG01

Current Status Idle

SWERIG02

Current Status WellName1966

SWERIG01

Current Status Idle

SWERIG02

Current Status WellName1966

SWERIG01

Current Status Idle

SWERIG02

Current Status WellName1966

SWERIG01

Current Status Idle

SWERIG02

Current Status WellName1966

SWERIG01

Current Status Idle

SWERIG02

Current Status WellName1966

SWERIG01

Current Status Idle

SWERIG02

Current Status WellName1966

November, 18

Week 01

Week 02

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Wellname197

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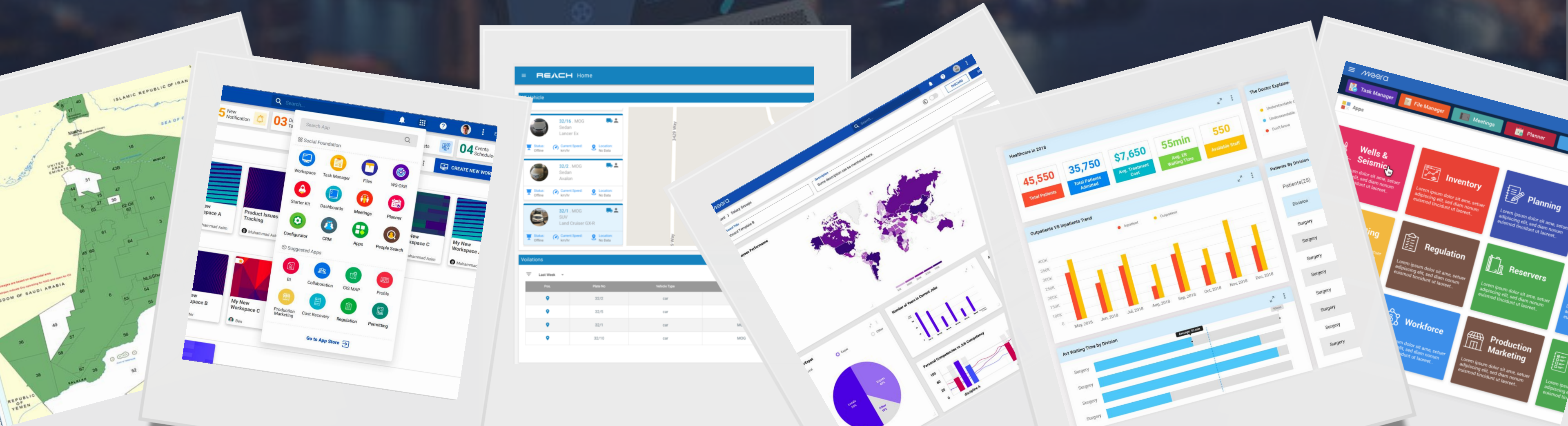
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Wellname300

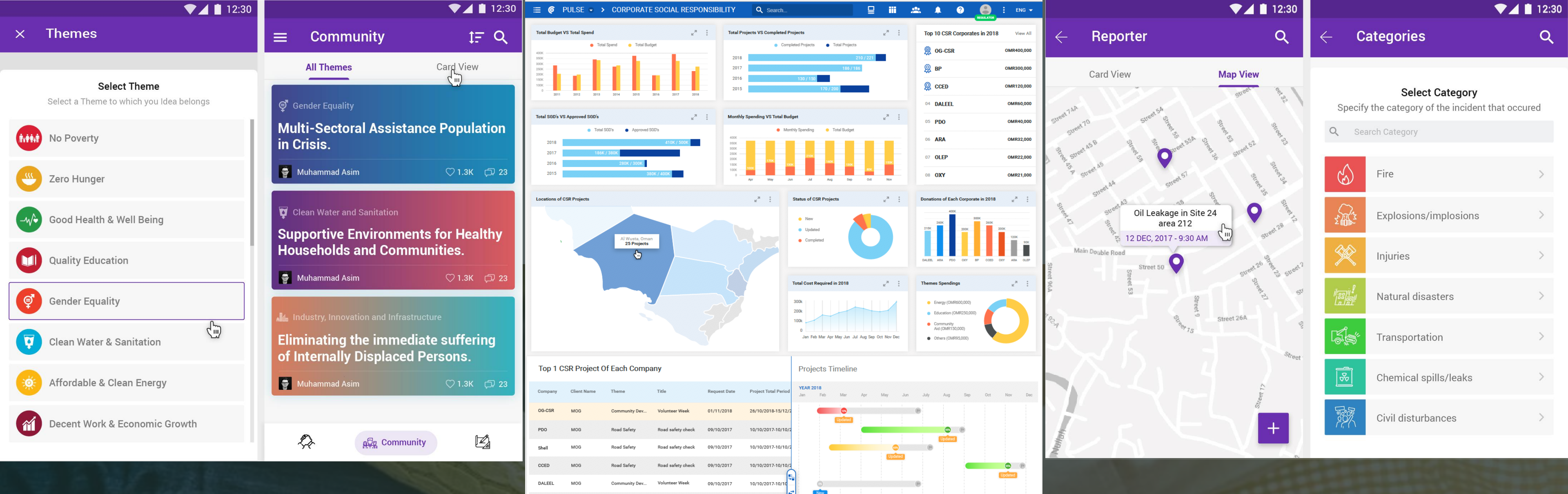


# Marketplace

Data Room- App Store-Logistics- Human Capital- Inventory







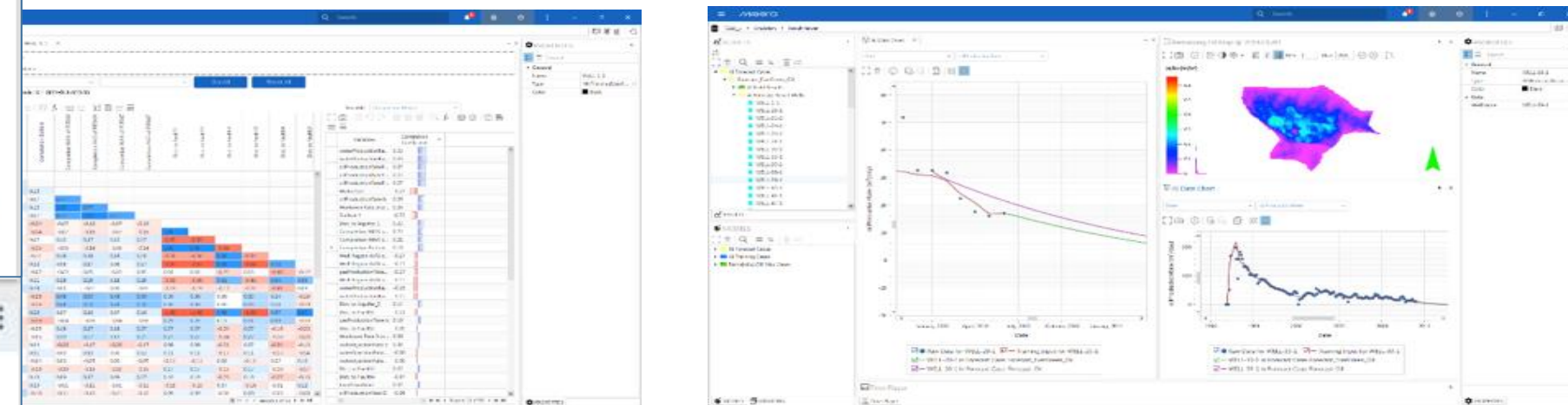
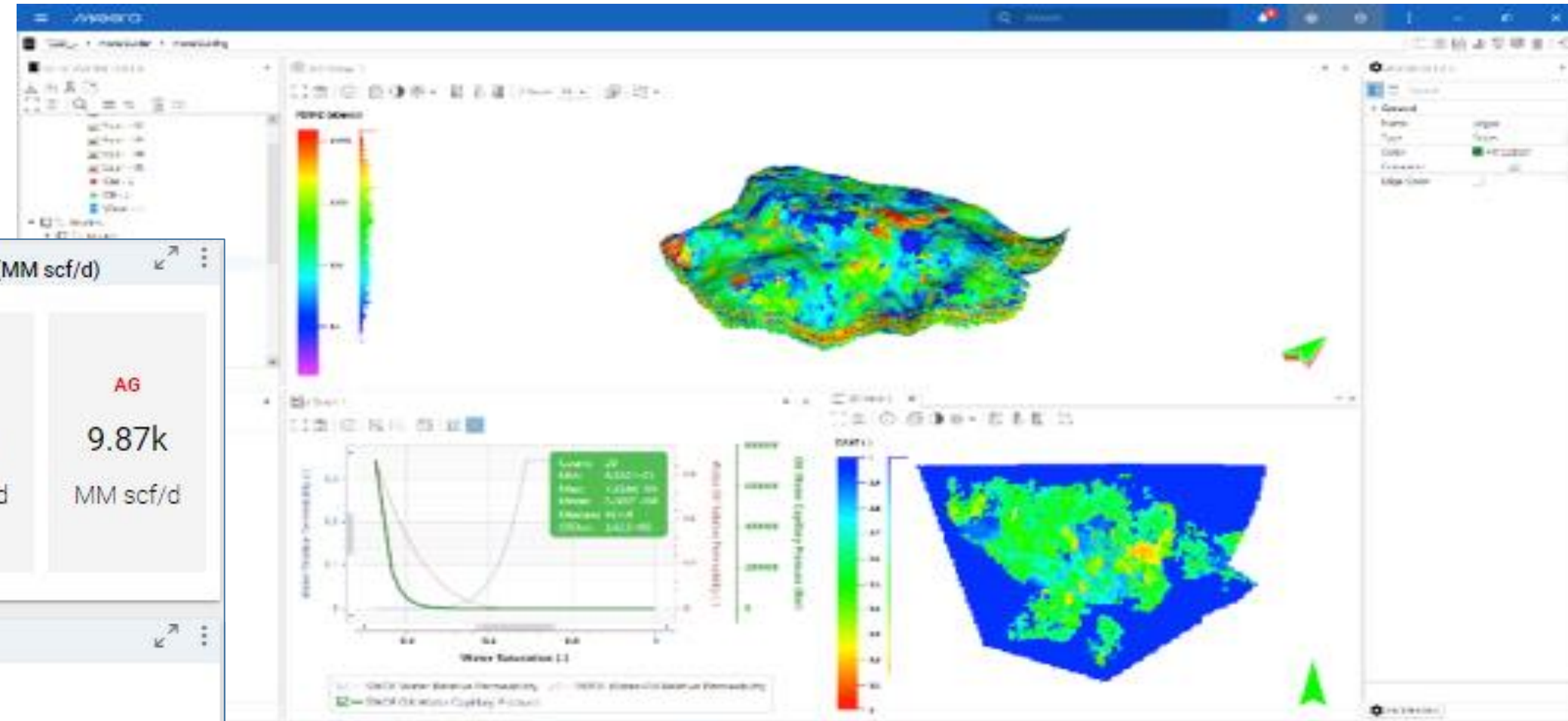
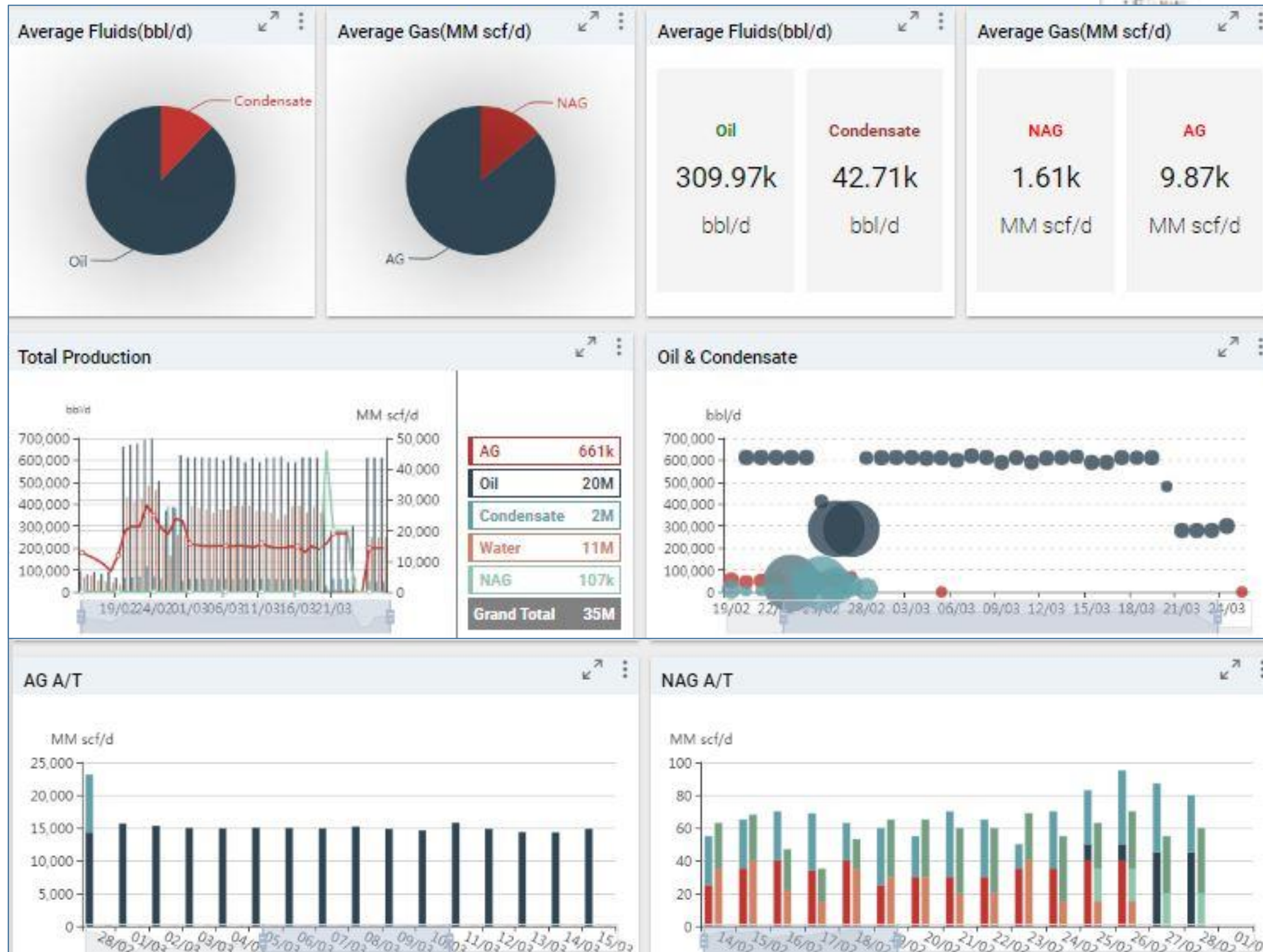
# Corporate Social Responsibility-Incident Reporting-Public Consultation

## In-Country Value Tracking



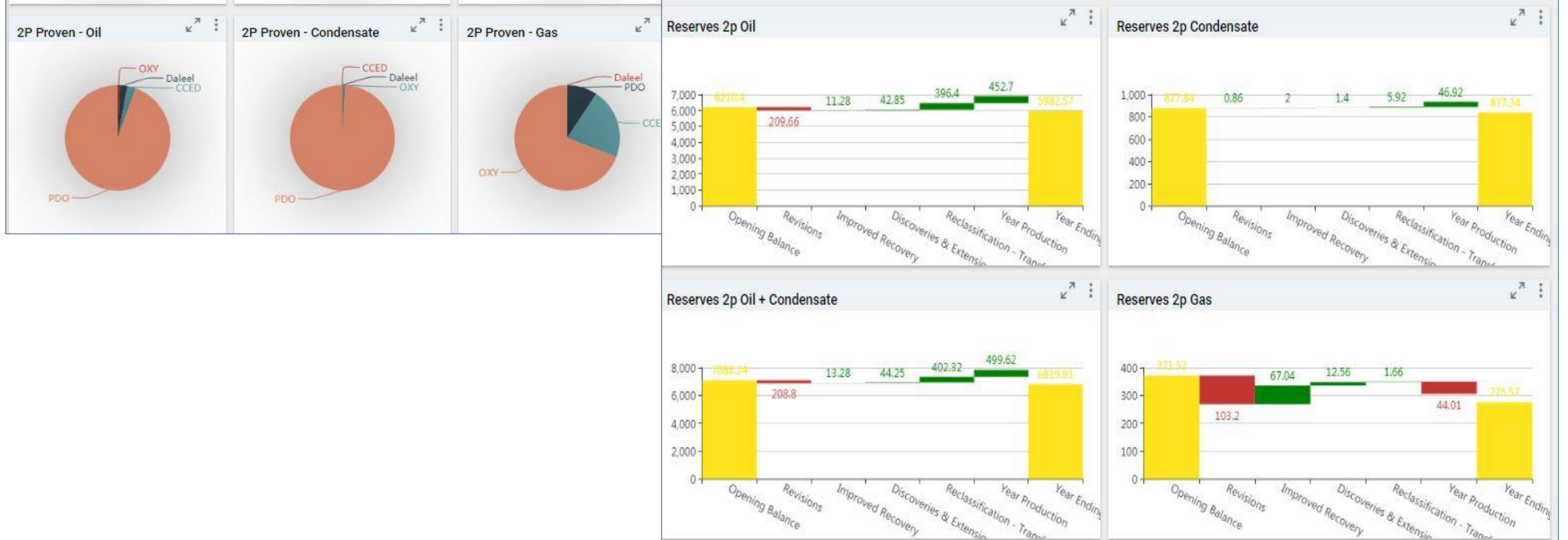
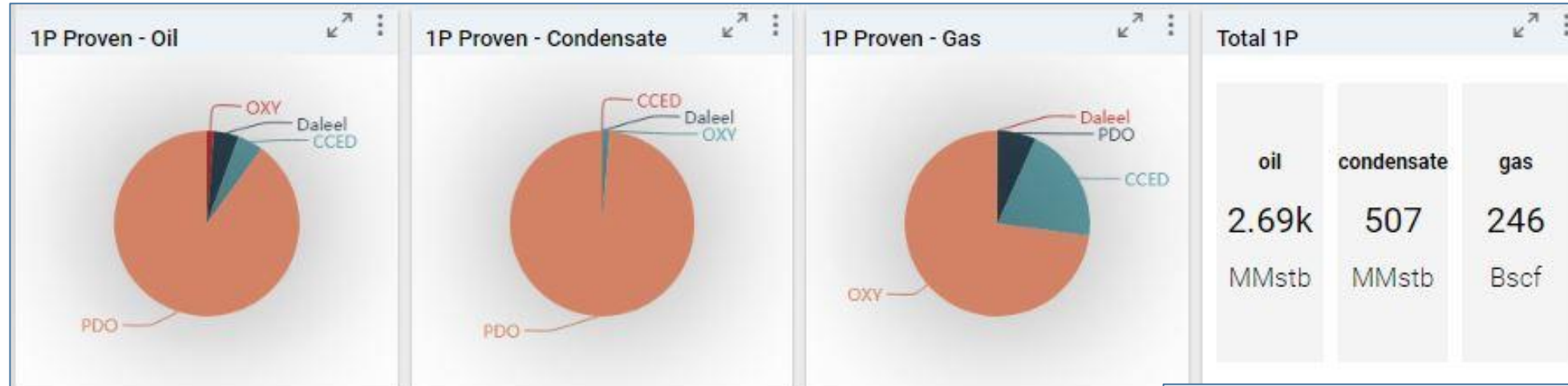
# RaaP: Production Reporting & Forecasting

- Daily & monthly production reporting
- Production Forecast with machine learning
- Remaining oil maps





# RaaP: Reserves Reporting





# RaaP: Economic Evaluation, Scenarios & Forecasts

meera | Economics

Case > Create New

DISCARD SAVE

PROFILE

My New Profile A

My New Profile B

My New Profile C

My New Profile D

My New Profile E

PSC

Search column

Look in all columns

Main Category	Source	UOM	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Oil_rate	Data Source	mbblpd	-	-	-	-	-	-	-	0	0	0
gas_rate	Spreadsheet	mmscfcd	-	-	-	-	-	-	-	0	0	0
Condensate_rate	User Input	mbblpd	-	-	-	-	-	-	-	-	-	-
Exploration_Cost	User Input	mbblpd	-	-	-	-	-	-	-	-	-	-
Appraisal_Cost	Spreadsheet	MMSUSD	-	-	-	-	-	-	-	-	-	-
capex_pre_FID	Spreadsheet	MMSUSD	-	-	-	-	-	-	-	-	80	57
capex_dev_drilling	Spreadsheet	MMSUSD	-	-	-	-	-	-	-	-	0	0
capex_wellpads	Data Source	MMSUSD	-	-	-	-	-	-	-	-	0	0
capex_CPF_water...	Spreadsheet	MMSUSD	-	-	-	-	-	-	-	-	0	0
capex_infield_flo...	Data Source	MMSUSD	-	-	-	-	-	-	-	-	0	6

New Category

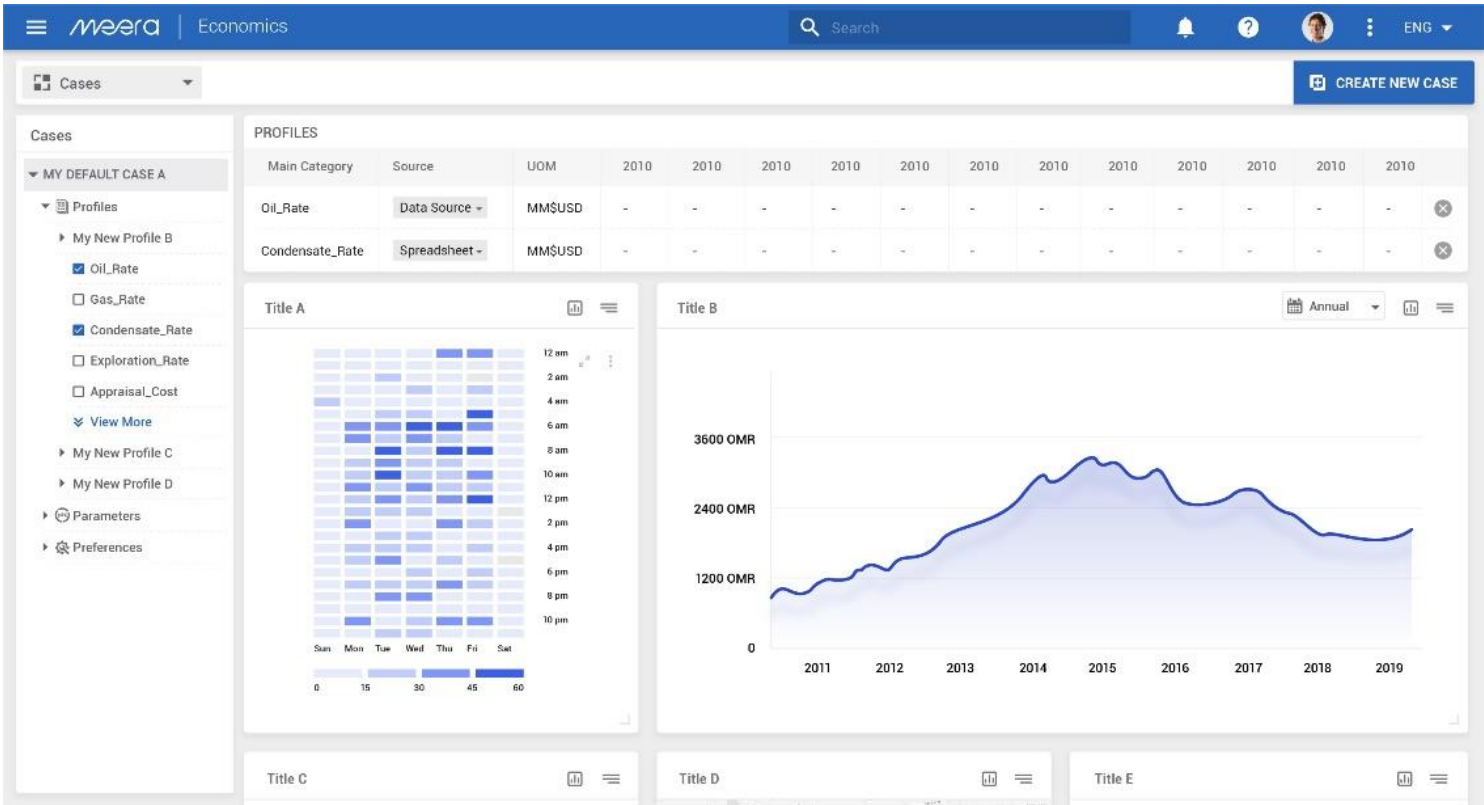
Previous

Page 1 of 10

10 rows

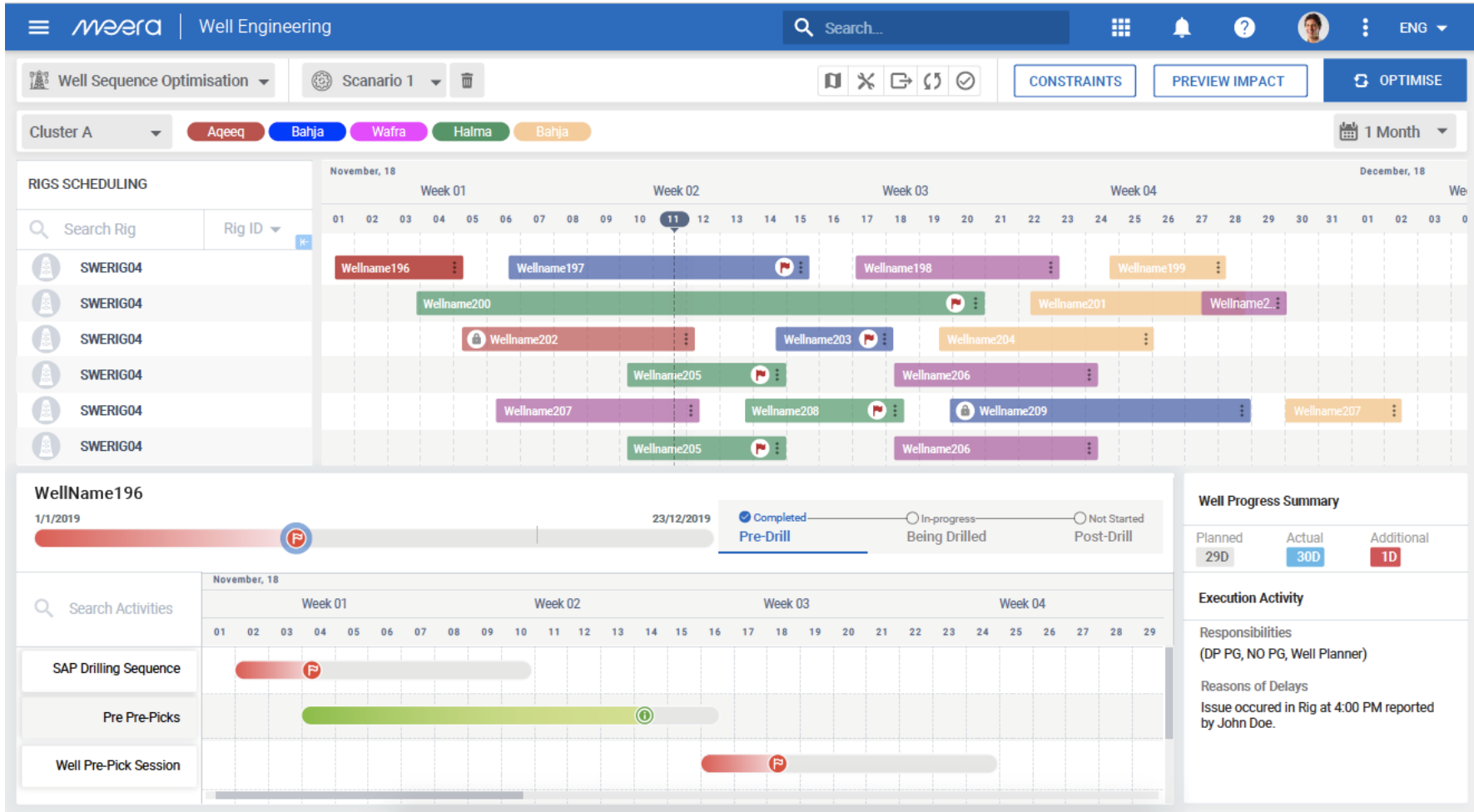
Next

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

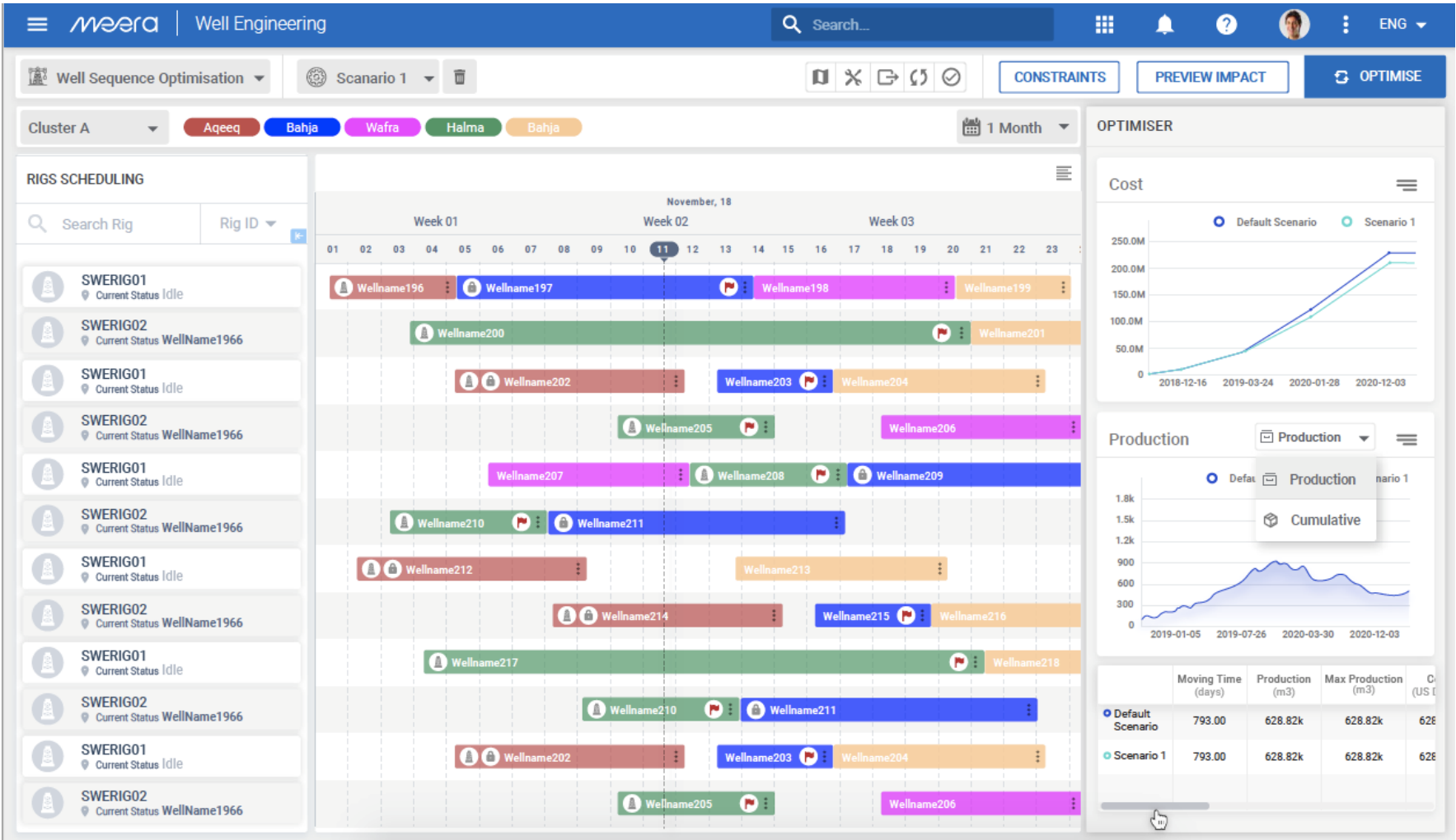




# RaaP: Country-wide well sequence optimization for early production & cost reduction



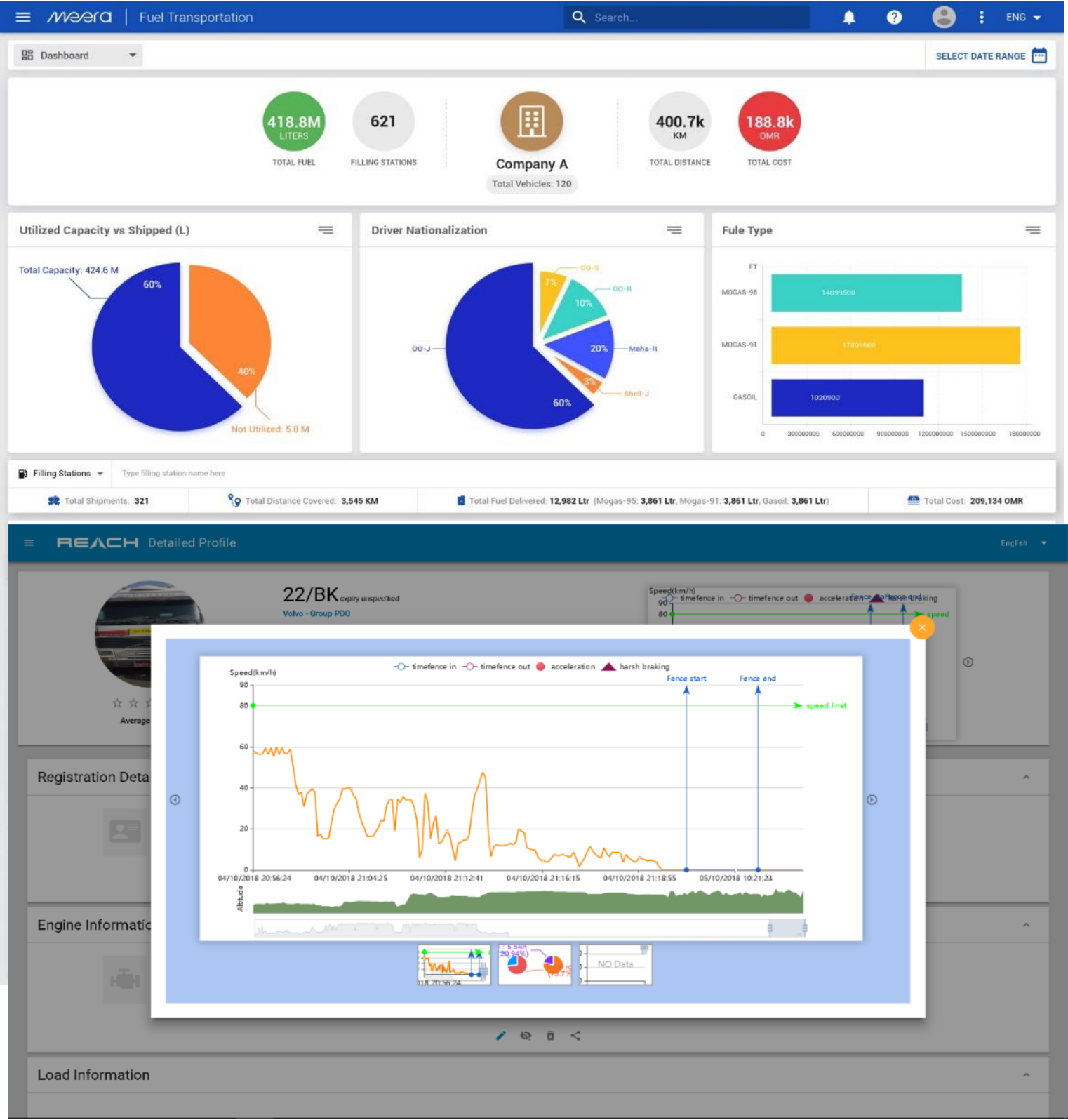
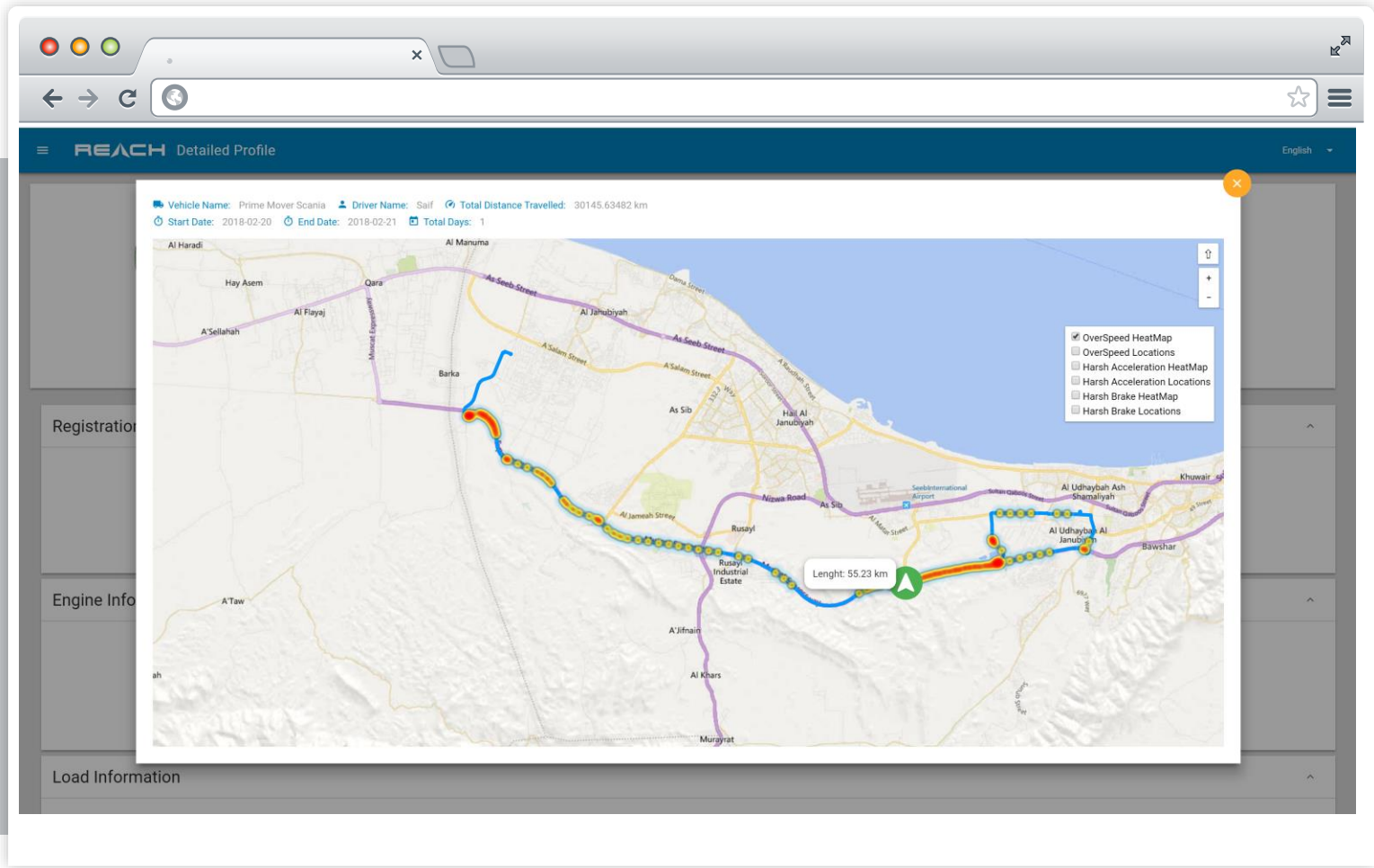
26/09/2019



23

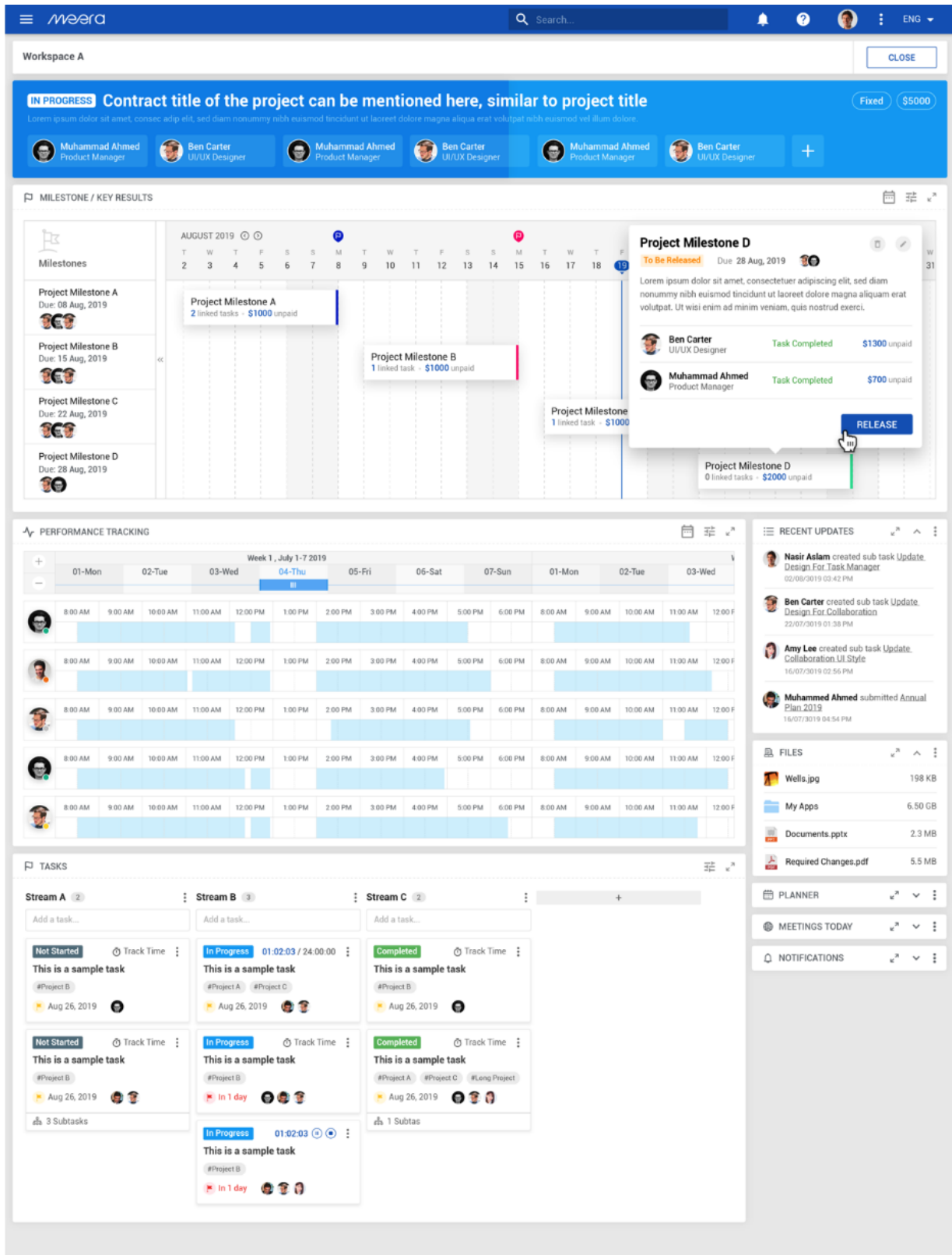
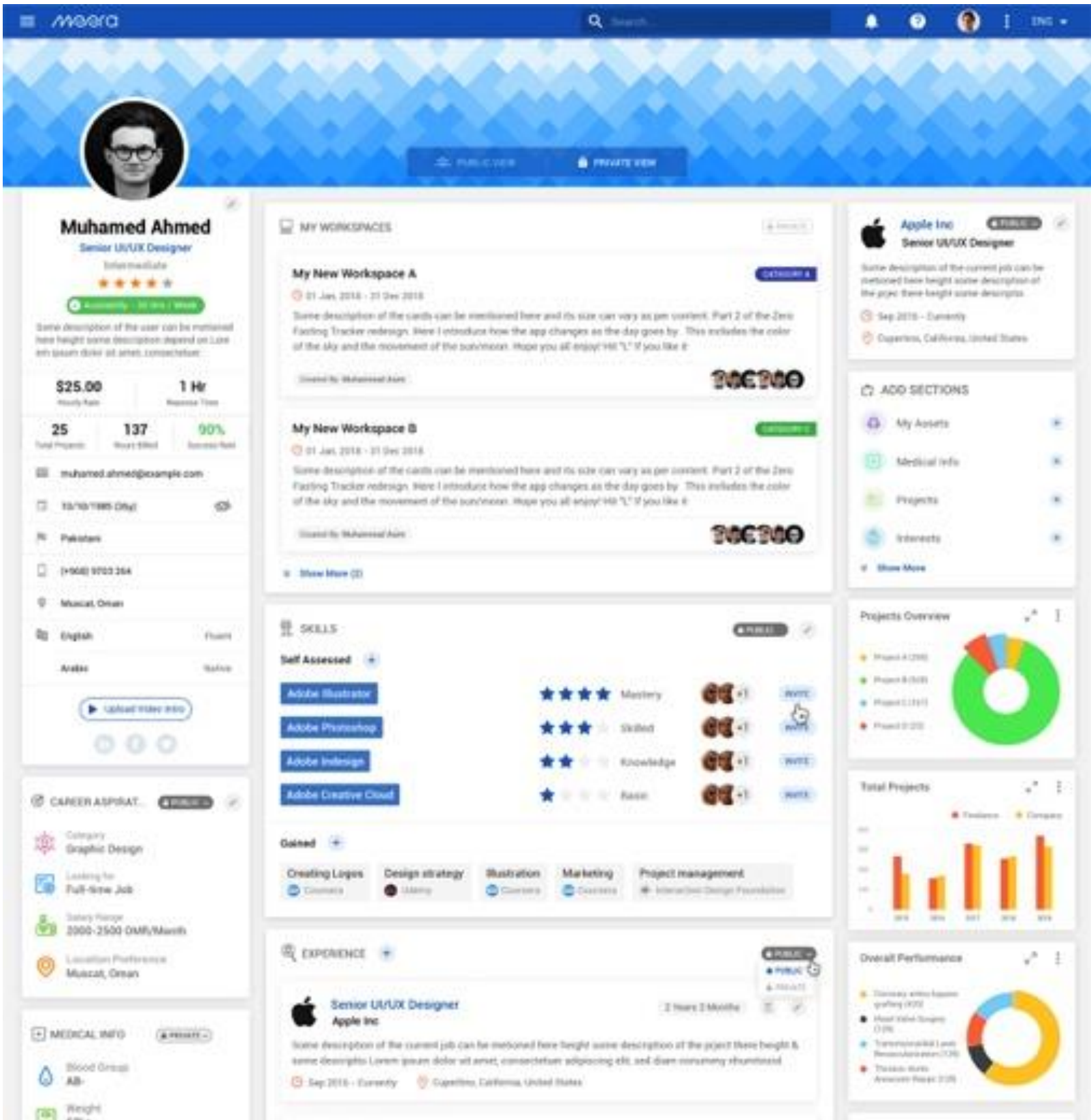


# RaaP: Logistics management & optimisation





# RaaP: Human capital development





# A holistic approach to establish an ultimate Industry Data Foundation



## Automated Collaborative Data Ingestion

- Data upload by data providers based on leveraging business rules and automated QC
- Relevant Data manager review QC reports and exceptions
- Integration of Meta Data to update and commit to various repositories
- Data owners pushes interpreted data to cloud and is available to all relevant members of the community.



## New Value from Disconnected Data

- Build an Integrated System of Record for high value data that is currently unmanaged.
- A system that provides a business object compiler that installs high level objects that simplifies the process of populating different repositories.
- Enable easy data loading, transcription and editing.



## Creating a Data Federation

- Maintain a Standard industry data ecosystem, continuously integrated from your different stakeholders to provide an evergreen data foundation.
- Use Business Rules, Processes, Roles to ensure that data governance is implemented, enforced and monitored.

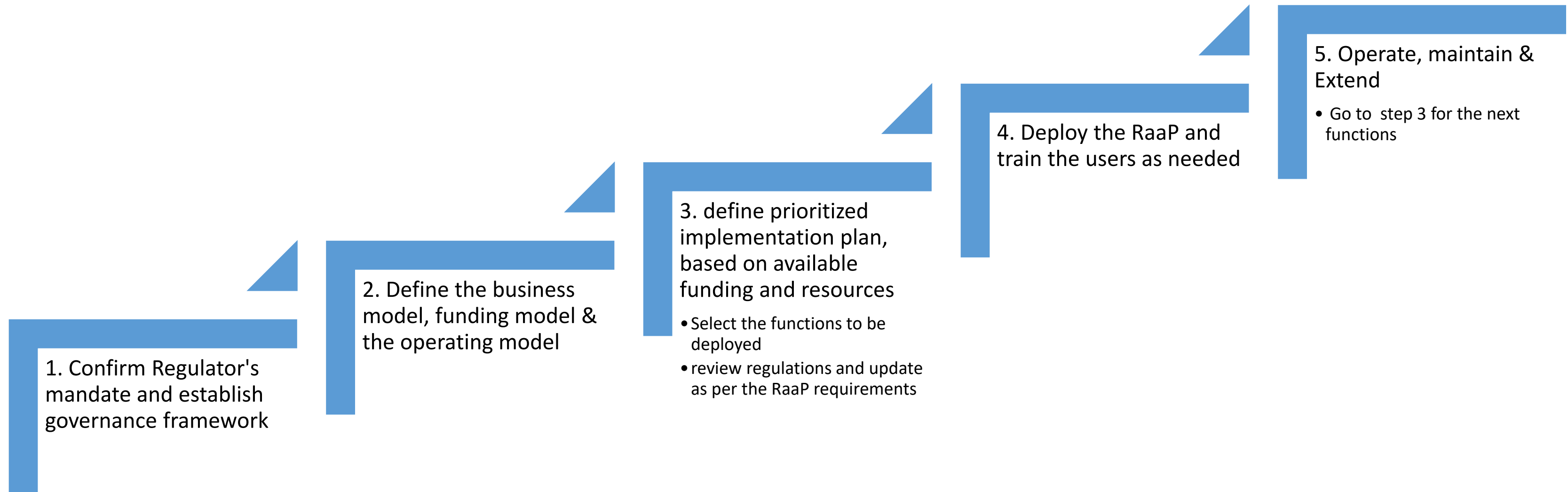


## Putting Your AI to Work

- Build Trusted-data repository as a foundation to launch your AI projects into Production.
- Connect your AI science projects to operational data and enable them to be used on any assets.
- Connect through to legacy data warehouses for unified reporting or as part of data migration.



# How to build the RaaP





# Summary

- Regulators need to take holistic view of all the needs “beyond NDR”
- In the digital era, an open, neutral and standard platform is required to service the needs of all the stakeholders
- Regulator as a Platform enables the digital transformation of the regulatory ecosystem in a sustainable manner
- Systems to implement RaaP exist today
  
- Thank you
- [ugur.algan@target-energysolutions.com](mailto:ugur.algan@target-energysolutions.com)