

# **Enabling Transformation into a Digitally Enabled Upstream Business**

Leveraging Schlumberger's Enterprise OSDU Data Platform

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# The strategic goals of PETRONAS make imperative the transformation of our E&P Data Management to enable current and future digital technologies...

#### **End-to-End Visibility**

Transparency of data and information across the value chain, breaking silos and enabling timely planning and better informed decision making





#### **Safety and Efficiency**

Leveraging historical, current and near real-time data to take more effective action and promote more timely and accurate intervention



Digital tools to automate manual tasks, freeing up teams across the business to focus on high-value output that is both creative and innovative





#### **Customer Experience**

Focusing on customer frictions to develop out-of-the-box solutions that delight customers and create a higher rate of customer returns

Source: PETRONAS Activity Outlook 2021-2023 P22



# ... Spanning across its value chain and tactically anchored in technical pillars to ensure secure operations, maximum value from data and solutions, while continuing strengthening our staff knowledge

**End-to-End Visibility** 

Safety and Efficiency

Workforce Productivity

**Customer Experience** 



#### Cybersecure Organisation

Embed cyber security standards and governance within our business processes, and enhance capabilities to monitor and preempt cyber threats/risks



#### Data-Driven Organisation

Streamline the way data is captured, curated and consumed, in a fast growing, complex data landscape across digital platforms; with a robust data science practice to derive maximum benefit from data analytics



#### **Enterprise Building Blocks**

Cloud computing, cloud-ready systems and infrastructure for enhanced connectivity at all locations, i.e. downstream plants, offshore platforms and offices to enable deployment of more digital tools and platforms

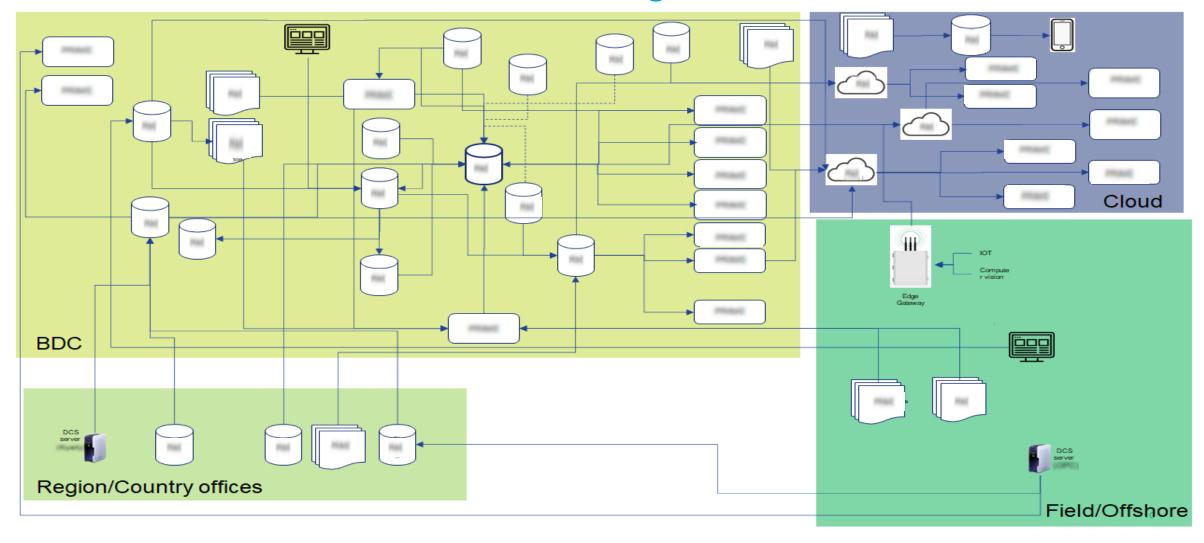


#### Capability Building

Beyond transformation, efforts to upskill and reskill staff are undertaken to ensure the ability to better scale and sustain digital efforts, as well as to be responsive to evolution in digital and technology



## Monolithic, Siloed on-prem technical landscape drains financial and technical resources into non value adding activities





# Impact on Business

## Investing into OSDU SaaS now will accelerate pace of achieving digitally enabled organization, and prepare PETRONAS for future challenges

#### **EXPLORATION**

- Improvement of Exploration portfolio and Development Funnel Health cannot wait years
- Capitalizing on technology partner
  5 years investment in selecting Digital Technologies for E&P will accelerate PETRONAS capabilities

#### EXTRACTING VALUE

- Extracting value with only OSDU can take 2 to 5 years to achieve
- Using DELFI as the initial platform will accelerate value realization

#### MARKET CONDITION

- Current market condition requires immediate action to be prepared for the coming competition
- More than 71% of the industry leaders "invest more or significantly more" in Digital technologies

#### AHEAD OF THE PACK

- DELFI with ready available capabilities will give a head start from OSDU only deployment
- Key features are
   Native Data
   Management
   Environment,
   Advanced Data
   Visualization and
   Analytics, Assisted
   and Automated ML
   on top of the Data
   Platform

#### DIGITAL READINESS

- Sustainability of our business and the viability of international investments and projects depends heavily on Digital readiness
- We cannot wait or take chances in this new turning point of our industry

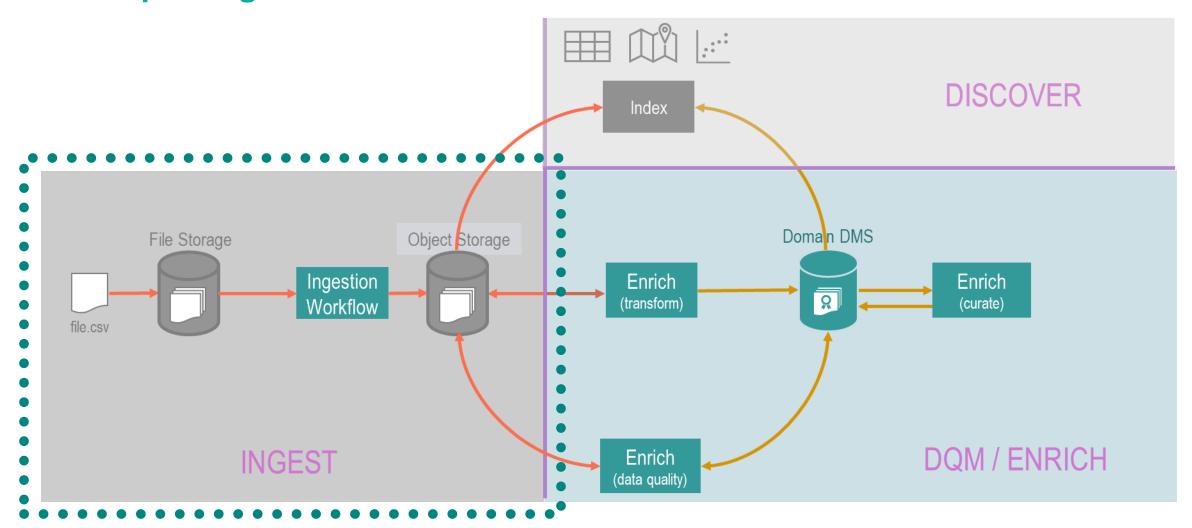
#### DATA DRIVEN

 Production optimization and critical production decisions at any oil price, must leverage larger and faster on data driven and cloud technologies now to hit the UPC

DELFI is the opportunity for PETRONAS to collect sooner the benefits of OSDU

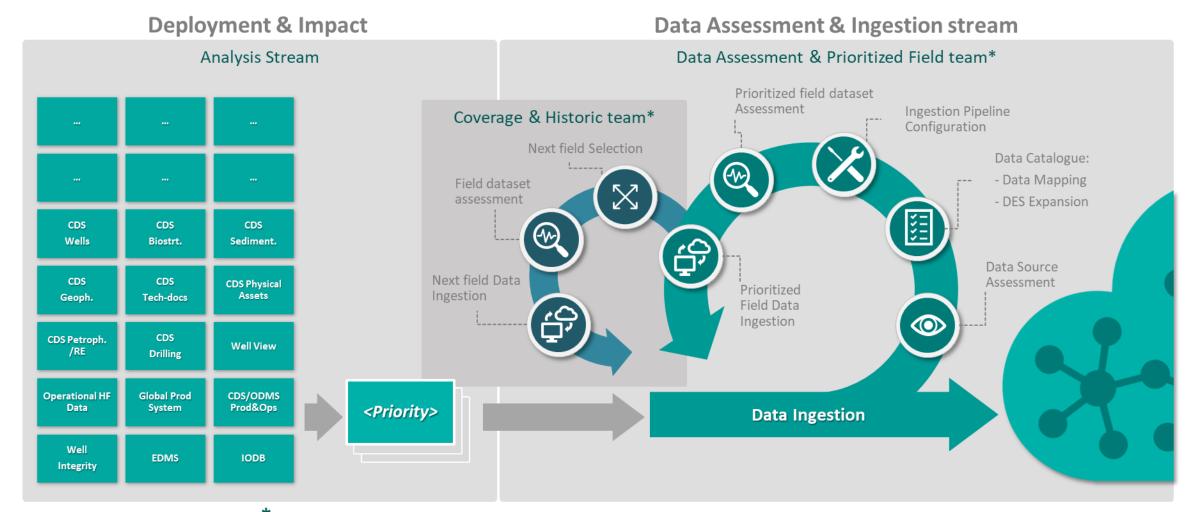


## Using the Ingest-Enrich-Discover framework we maintain cohesiveness while exploiting the value of the individual workflows





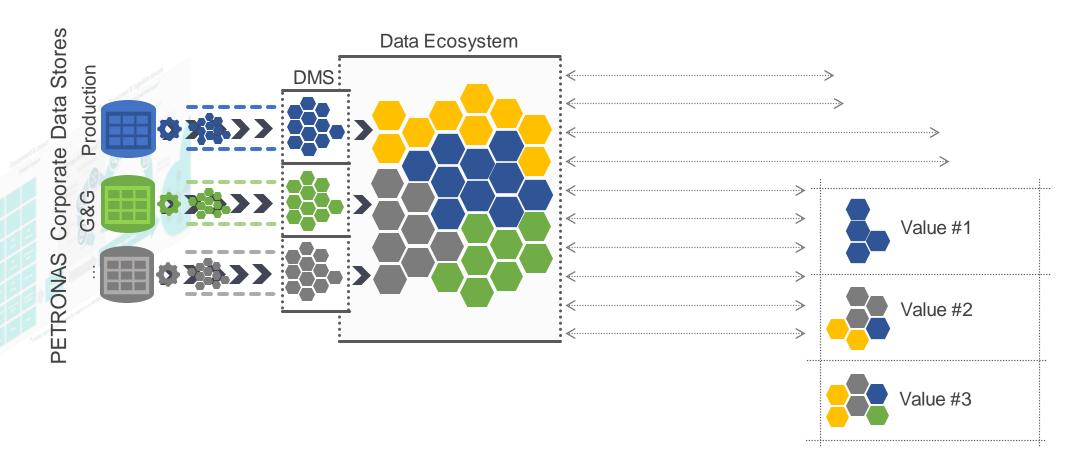
## The OSDU SaaS data ingestion is anchored on Prioritisation, Efficiency and Elasticity...





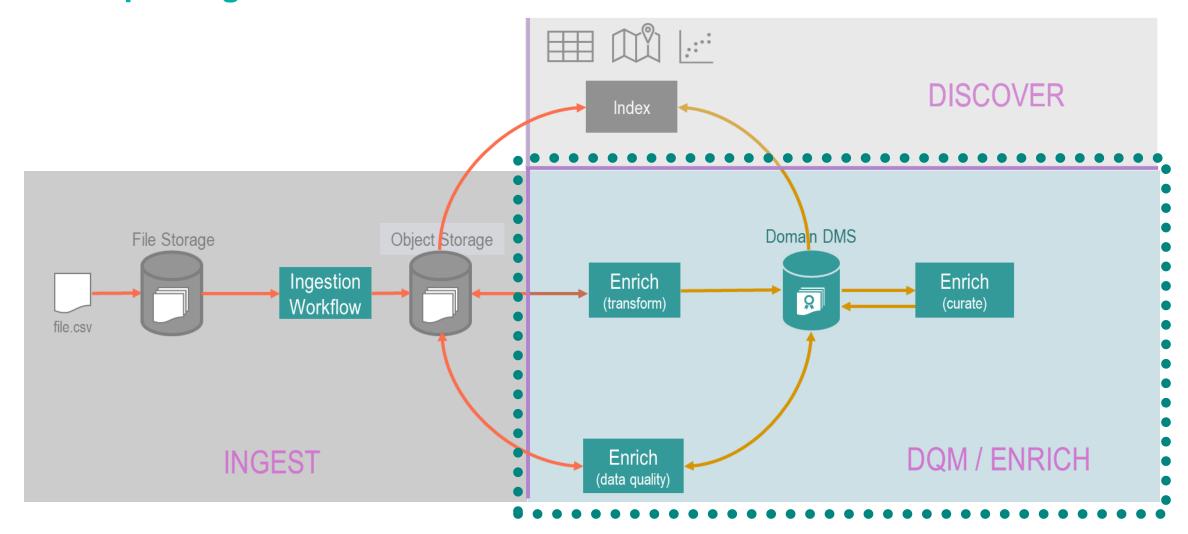


### ... making available ONE data ecosystem where multiple domains coexist and value is extracted from this



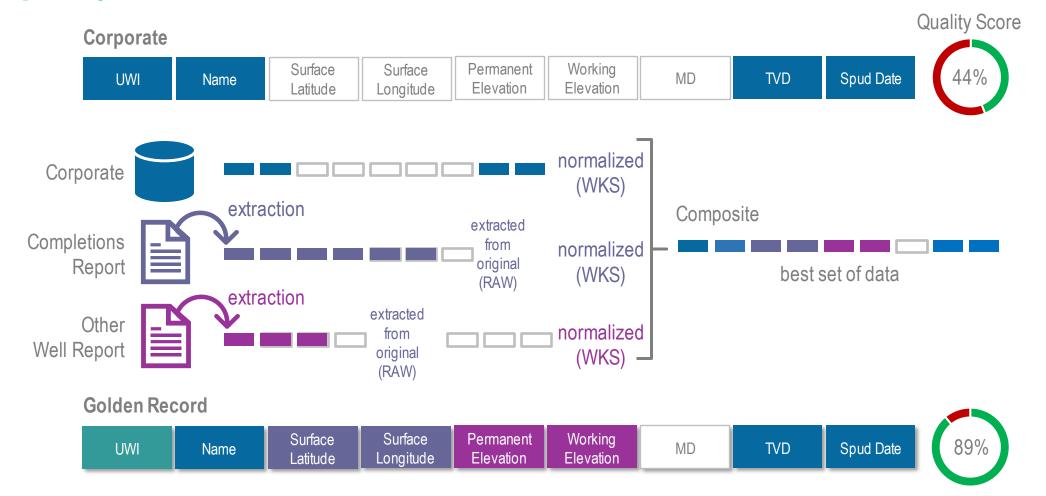


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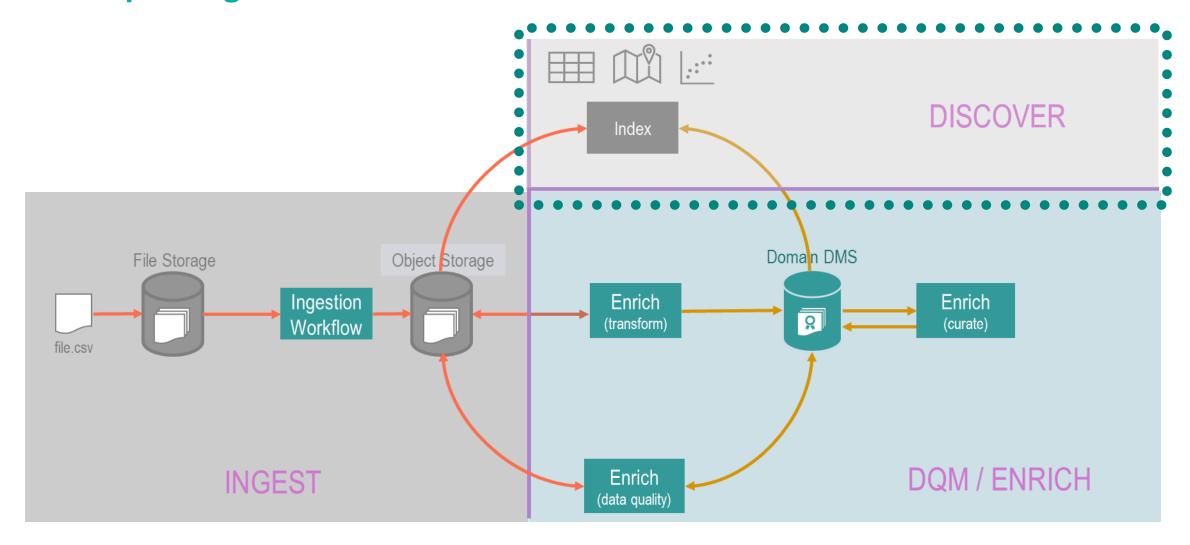


# One example of our Enrichment workflows in the new Data Platform is based on ML for extracting facts from unstructured documents to improve the quality of our data



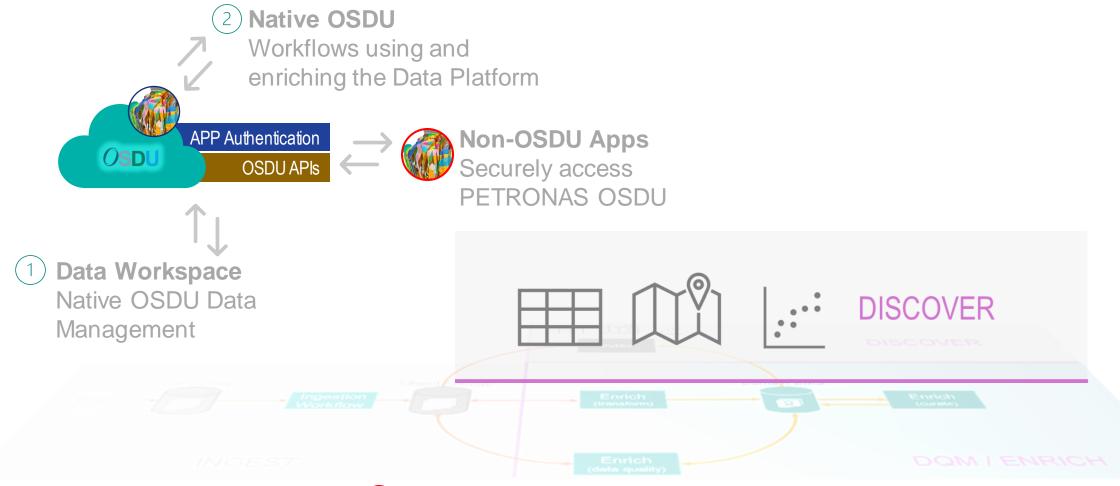


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## By having a standardized, open environment we enable applications from different vendors to coexist, applications to interoperate and foster cross domain workflows







# The PETRONAS Upstream Data Ecosystem enables Value Creation for End Users based on Data Supply & Consumption, under one Governance, enabled by one Data Platform

