

# PETRA ENERGY GROUP

## CORINIUM'S CHIEF DATA & ANALYTICS OFFICER (CDAO) MALAYSIA 2023

### Building a Data-Driven Culture: Overcoming Challenges and Seizing Opportunities

Mohd Hanapi Bisri. Group IT Head, PETRA

4 October 2023



# Presentation Overview



## Background

- Petra Energy Group Introduction
- Technological Transformation Roadmap



## Building Data-Driven Culture

- Realizing the power of data: moving from intuition to evidence-based decision making
- Organization Democratization: enabling everybody involvement
- Leveraging digital data and analytics for service innovation and business growth



## Benefits and Moving Forward

- Embracing Future Uncertainty





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PETRA





# Petra Energy Group

Upstream oil and gas industry



**THE GROUP'S VISION IS TO BE A  
SUSTAINABLE ENERGY COMPANY**

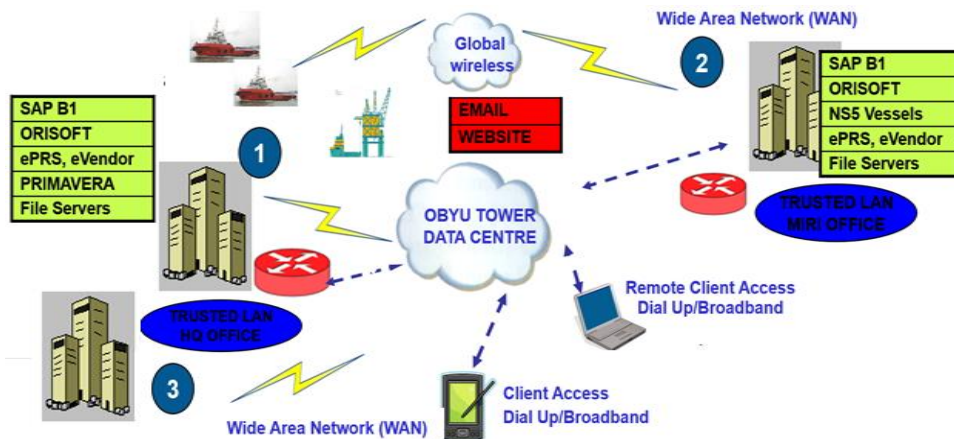
**What we specialized?**

- **Integrated Brown Field Engineering Maintenance And Offshore Marine Support Services**
- **Development And Production**
- **Marine Assets**
- **Fabrication Yards**
- **Competent Project Management Team And Skilled Workforce**

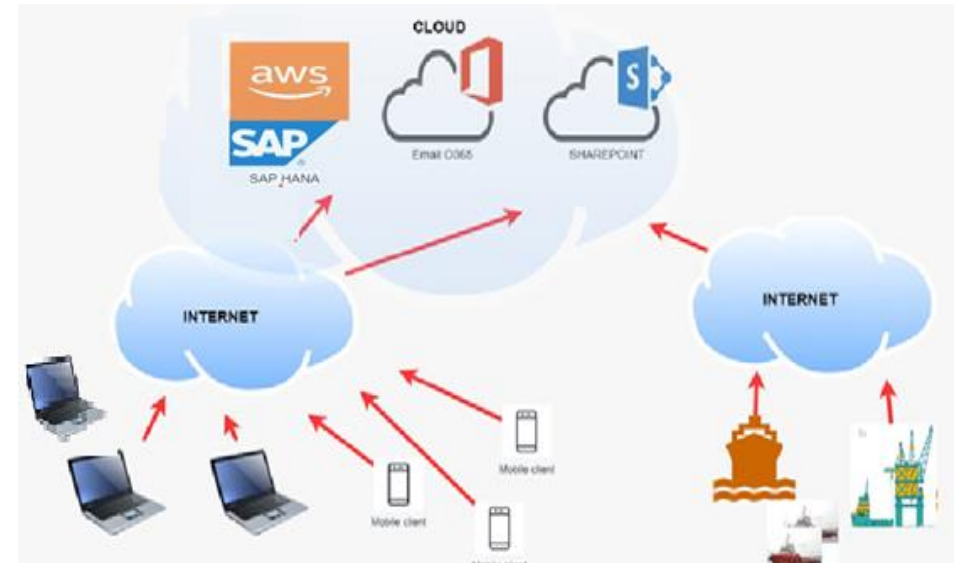
*More info:*

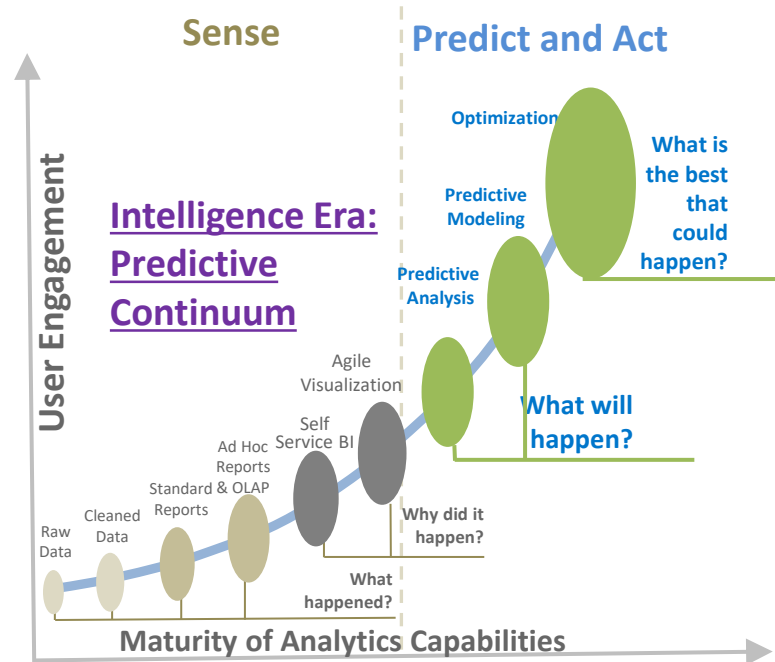
*<http://www.petraenergy.com.my/>*

## From Traditional hosting



## To Cloud Computing





**Building strong corporate governance within Sustainability Governance framework** with the aim of increasing competitiveness and to become a sustainable energy company

1. In-Memory Technology on Hybrid Infrastructure Platform
2. Integrated Online system for Petra to act on what is the best that could happen
3. Future uncertainty via scalability and Hybrid Architecture



# Petra's Group IT Technology Transformation Roadmap



## Information Technology alignment with Business Digitalization



### SAP S/4 HANA Rollout



FINANCIAL

LOGISTIC



Business Community leverages the core business system and applications for strategic decision making and operational efficiency with aim of increasing PEB Group competitiveness so as to remain significant in the future and leader in the industry

### Cybersecurity



PANDA

TM

HUMAN SHIELDS



Build our resiliency against the ongoing threat of cyber attacks by strengthening our technology, process and control to protect systems, networks, programs, devices and data from cyber attacks. This includes human firewall and protection against the unauthorised exploitation of systems, networks and technologies

### Intelligent Intranet with Single Sign On (SSO), KM & eForms



MICROSOFT



Break down information siloes and drive organizational efficiency with a shared place to publish and easily search for the content. Enable secure access to Petra Energy Berhad's core business applications using a single ID and password to ease user experience and improve daily productivity.

### Modernization of Work



AWS

SAP ITSM



Continuous improvement and modernization of the way we work by driving usage and adoption of cloud technology through Technology Adoption & Work From Home. Simplify on-premise Datacenter, reduce server footprint and energy use, and ease server management under a single pane of glass. Disaster Recovery (DR) and Business System high availability.

### TCO and Technology Refresh



Data asset's total cost of ownership long term value during its useful life spanning from the purchase planning, implementation, operation to its disposal. Upgrade outdated versions of Server OS to reduce risk and meet security compliance requirements.. Protects and secure the Servers by introducing IPS Security solution that continuously monitors a network for malicious activity and takes action to prevent it. Ensuring that the core systems and applications is secured and finding out by trying to exploit for loopholes or vulnerabilities by performing a Penetration Test

### Audit Governance & ISO



Surveillance audits of regulation, policies, procedures and controls to meet Information Security three objectives of Confidentiality, Integrity & Availability

# Petra Sustainability and Digitalisation in meeting ESG target

To be a sustainable energy company and achieve full Digitalisation aspirations by 2050



The increased use of technology often plays an essential role in supporting these Net Zero

There are 5 levers to support the strategy

Lever 1: Storage and processing of data in the cloud

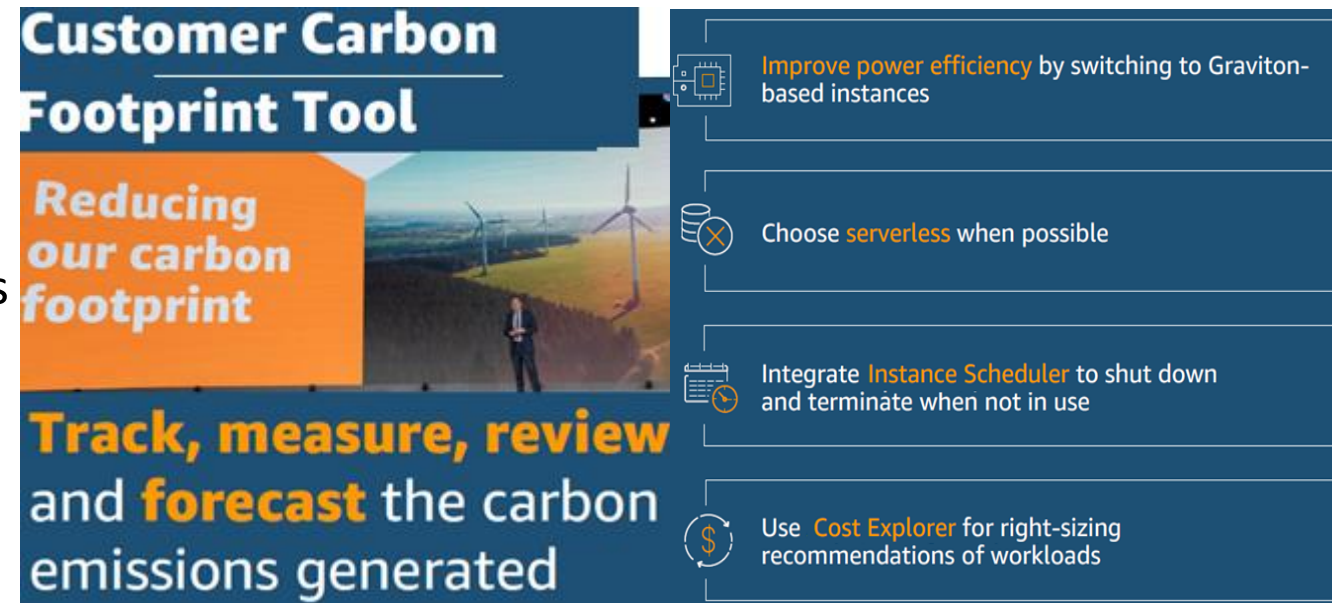
Lever 2: Efficient and effective operated applications

Lever 3: Sustainable lifecycle management of end

Lever 4: Responsible employees

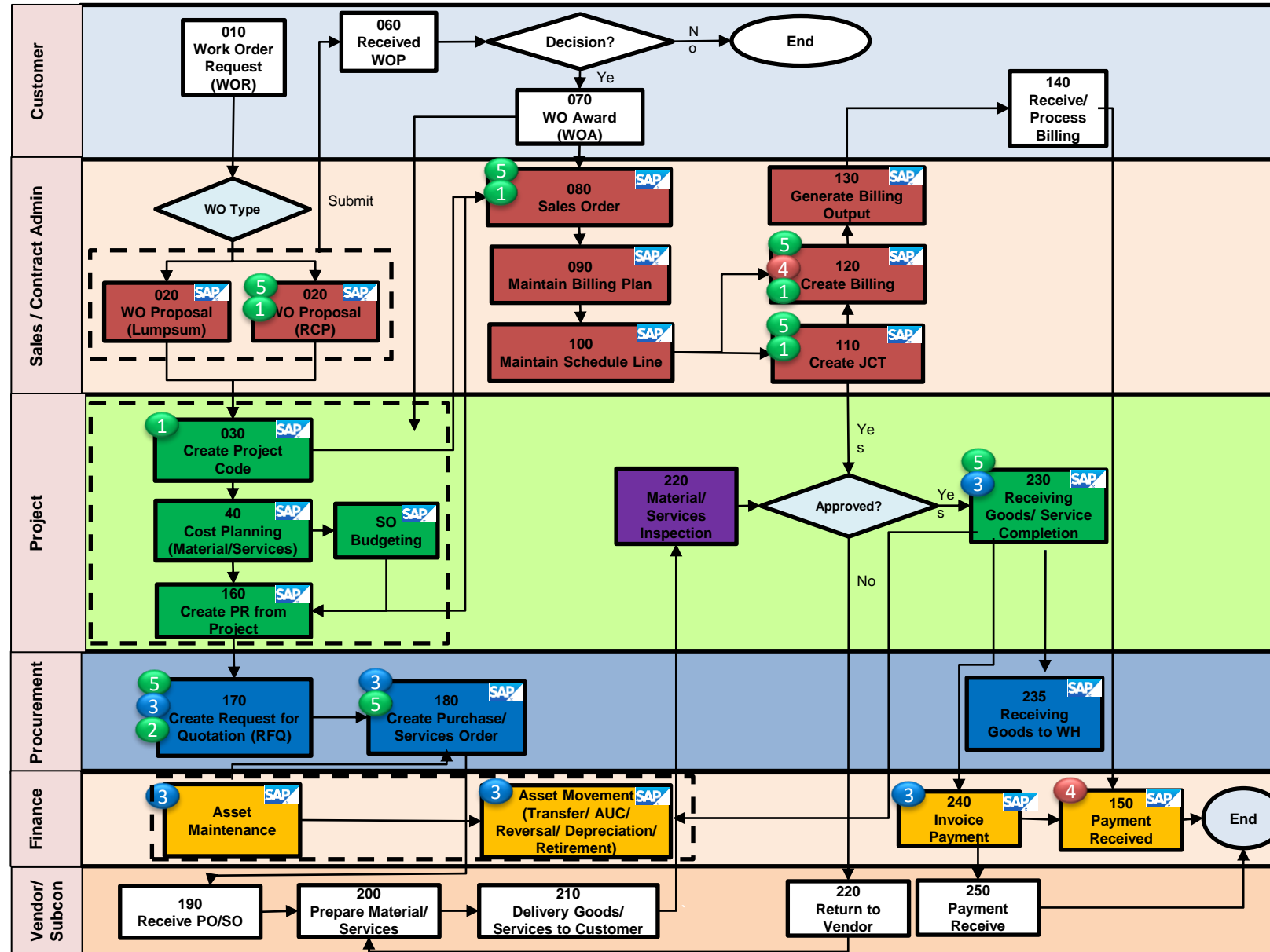
Lever 5: Enabling sustainability with technology

Source: Andreas Pages, 13 June 2022, Capgemini



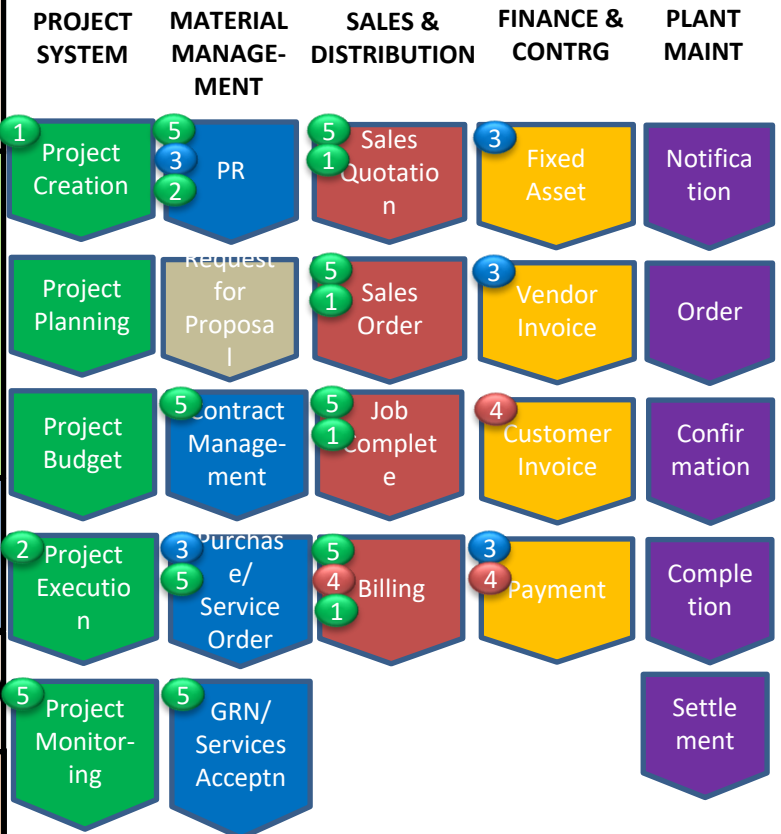


# Digital Transformation: End to End Data Sources



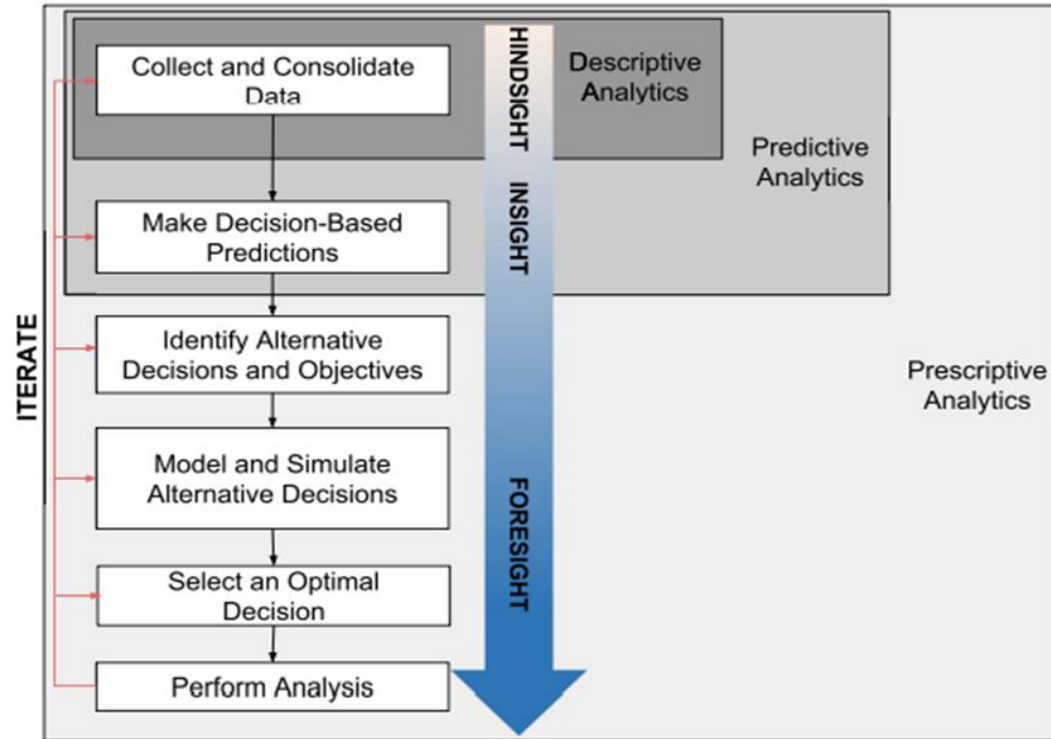
An integrated online system that provides **integrated process** that takes a system or service from beginning to **end** and delivers a complete automated solution.

**SAP S/4HANA**

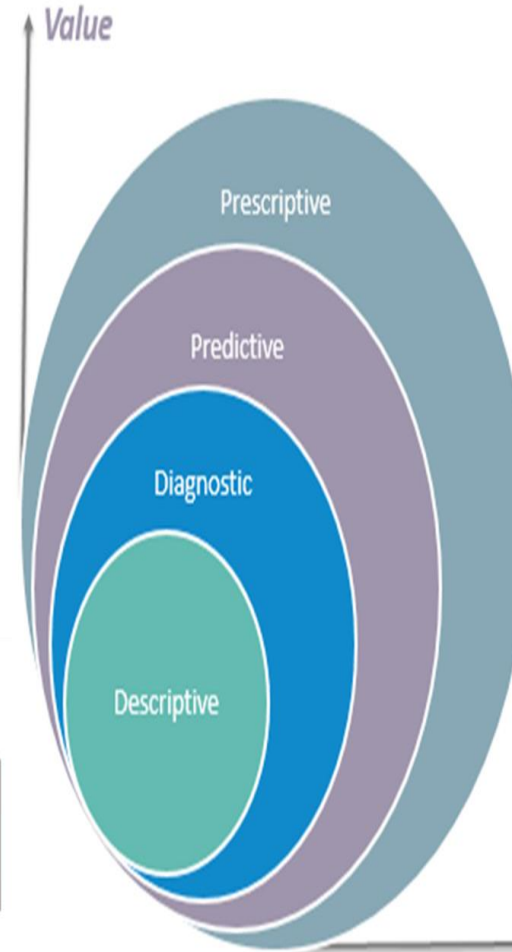


# Strategic Intelligence and Forward Looking Framework

How Petra Energy explore and transform data to modernize and transform

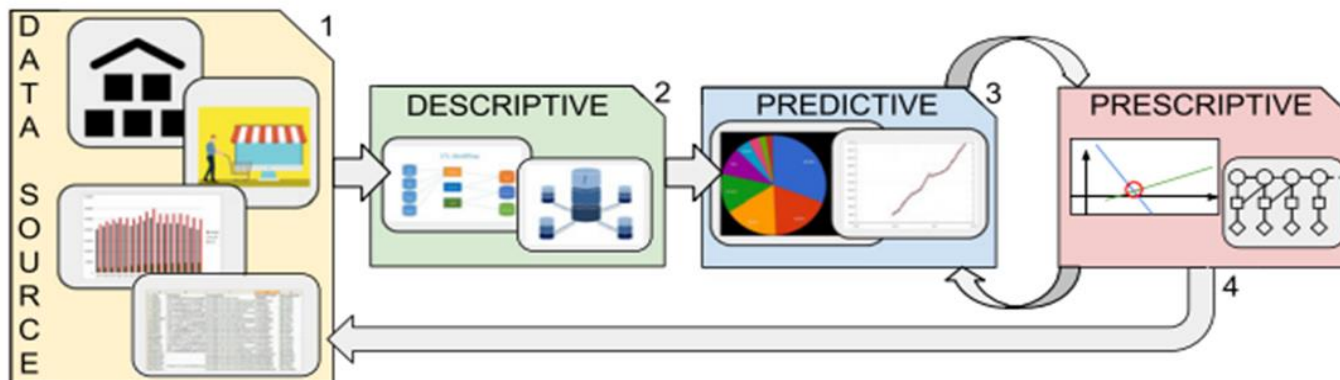


## 4 types of Data Analytics



### What is the data telling you?

- ✓ **Descriptive:** *What's happening in my business?*
  - Comprehensive, accurate and live data
  - Effective visualisation
- ✓ **Diagnostic:** *Why is it happening?*
  - Ability to drill down to the root-cause
  - Ability to isolate all confounding information
- ✓ **Predictive:** *What's likely to happen?*
  - Business strategies have remained fairly consistent over time
  - Historical patterns being used to predict specific outcomes using algorithms
  - Decisions are automated using algorithms and technology
- Prescriptive:** *What do I need to do?*
  - Recommended actions and strategies based on champion / challenger testing strategy outcomes
  - Applying advanced analytical techniques to make specific recommendations



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## Building Data-Driven Culture

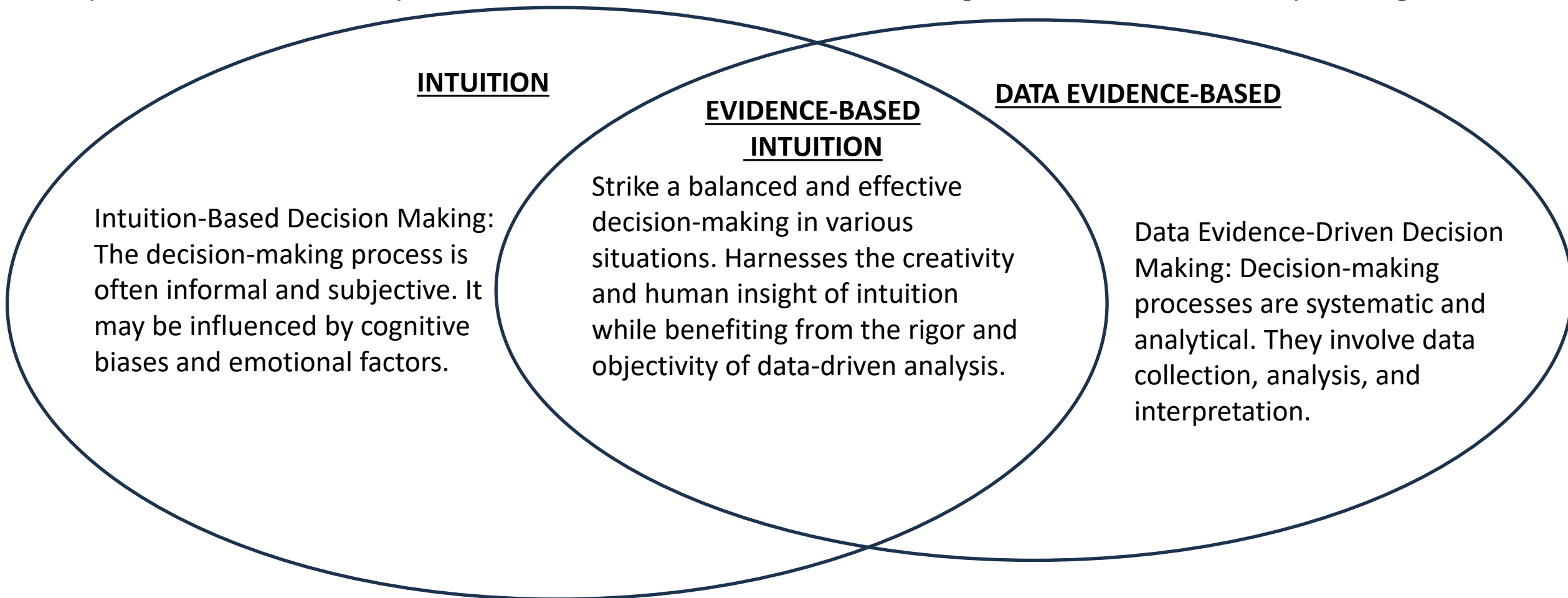


- Realizing the power of data: moving from intuition to evidence-based decision making
- Organization Democratization: enabling everybody involvement
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# The power of data: Intuition vs evidence-based decision making

While intuition-based decision making has its place, data-driven decision making is increasingly favored in modern organizations due to its objectivity, accountability, and ability to reduce risk. Data-driven decisions are founded on empirical evidence, which provides a more solid foundation for making informed choices and optimizing outcomes.



# The power of data: The New Core Capability of Digital Society

While conversant in the “people, process and technology” capabilities of business change, most Executives and Professionals do not “speak data” fluently as the new critical capability of digital society

“Digital transformation is about people, process, and technology!”  
<- not quite. Data is literally at the heart of it says Gartner



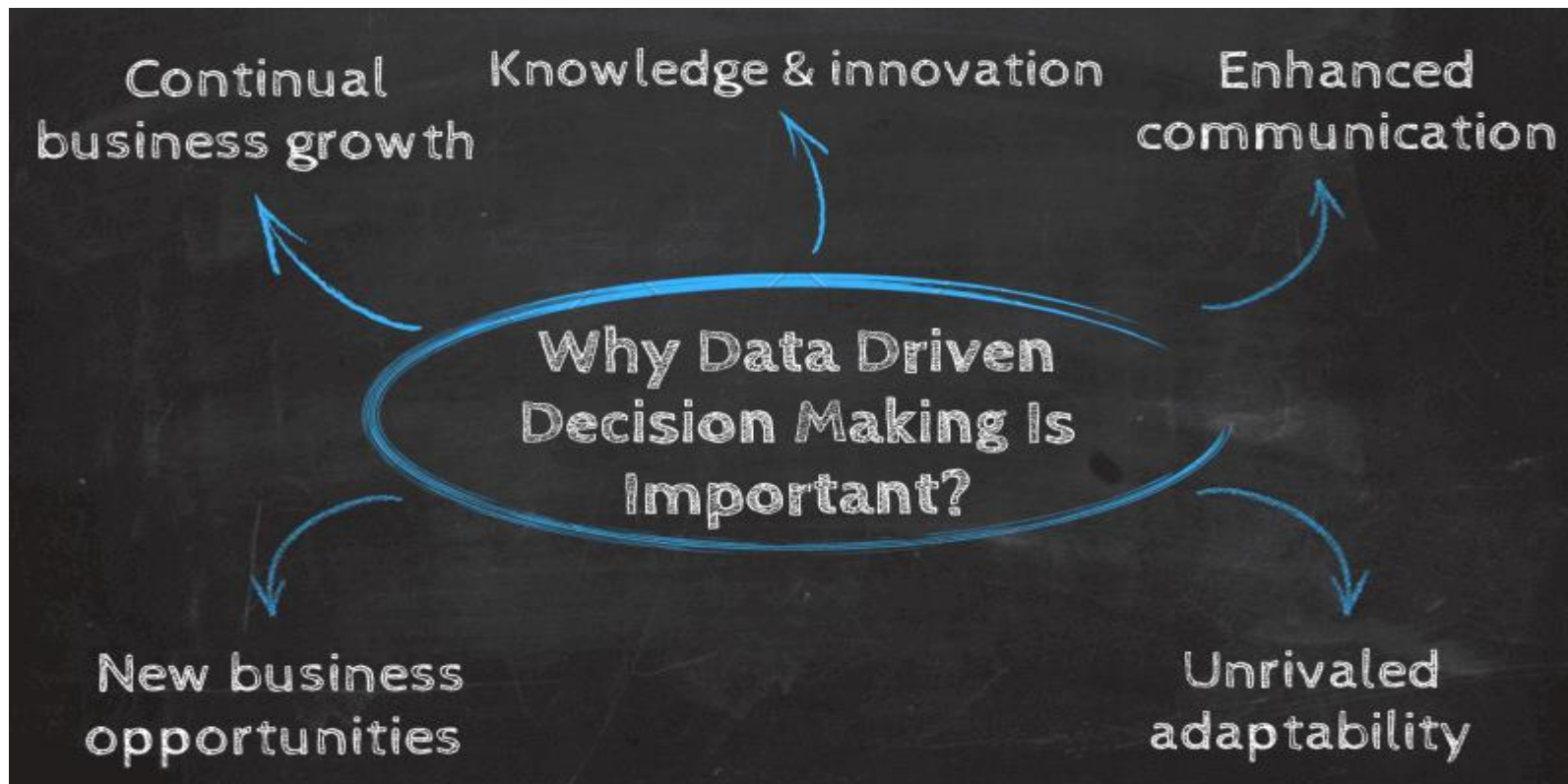
Gartner®

**Gartner formally defines data literacy as:** The ability to read, write and communicate data in context, including an understanding of data sources and constructs, analytical methods, and techniques applied, as well as the ability to describe the use-case application and resulting value.

**Informally ...** do you “speak data”?

# The importance Data Driven Decision Making

Data based decision making provides businesses with the capabilities to generate real time insights and predictions to optimize their performance. Through this, they can test the success of different strategies and make informed business decisions for sustainable growth.





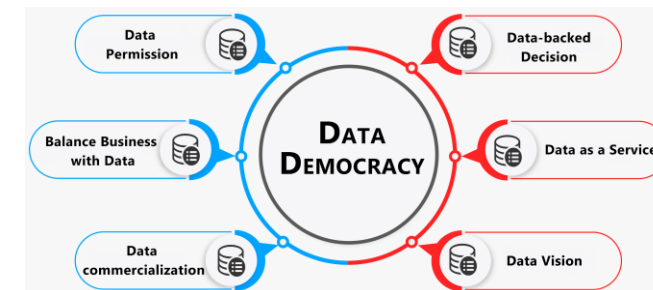
# Democratization Factor in Organization



PETRA

- Organization democratization is the ongoing process of *enabling everybody* involvement, irrespective of their technical know-how, to work with comfortably, to feel confident talking about it, and, as a result, make well-informed decisions and build experiences powered by data
- Democratization effort lies broadly across organization — by using data to inform big swing decisions and by *getting everyone involved* – organization has a higher chance for a successful organization transformation.
- 4 ways to democratize in organization;
  - Focus on problems or opportunities with the highest level of *strategic benefit*.
  - Develop “we care” *across the organization*.
  - Reprioritize* efforts and *requirement*.
  - Develop and communicate a *broad vision* of Data-Driven Culture

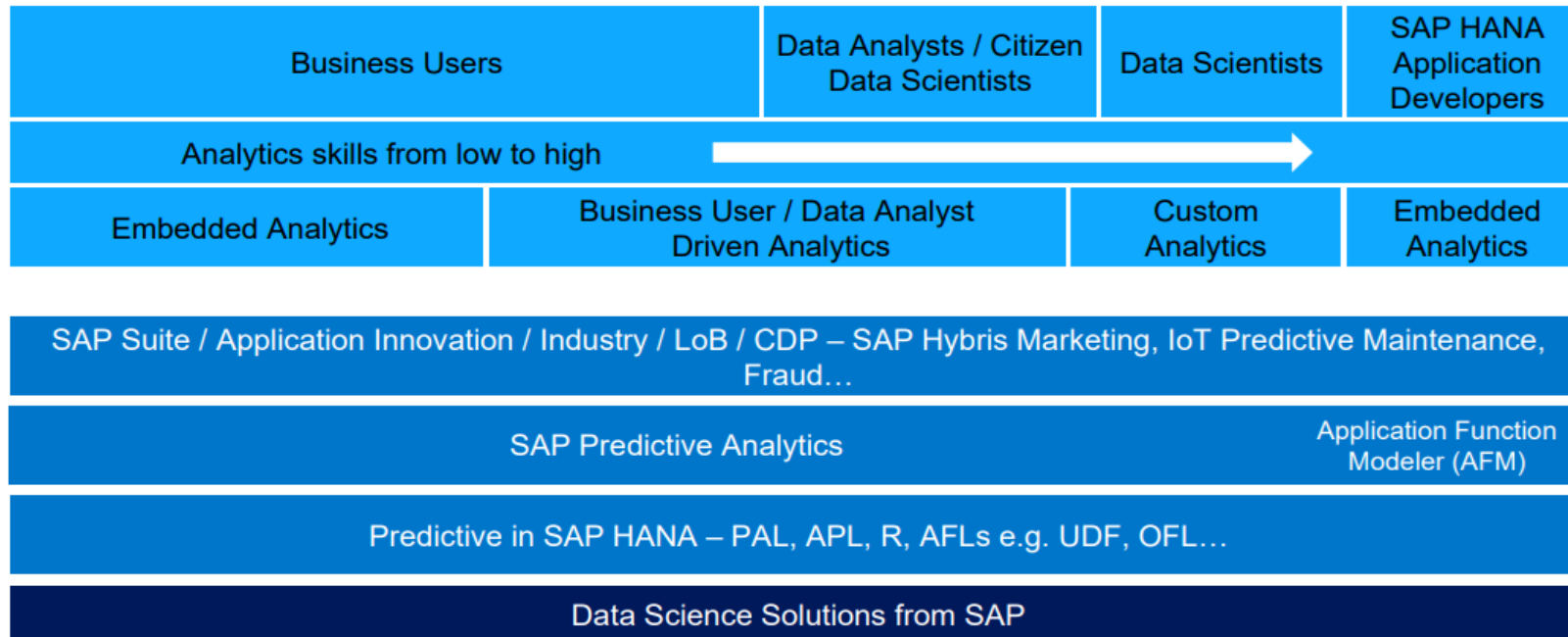
Source: Thomas C. Redman and Thomas H. Davenport. Harvard Business Review HBR. March 08, 2021



# Identifying the Ideal Data Analytic Stakeholders Profile

*There are 3 different role profiles which can be undertaken by a dedicated or non-dedicated person which forms part of stakeholders team.*

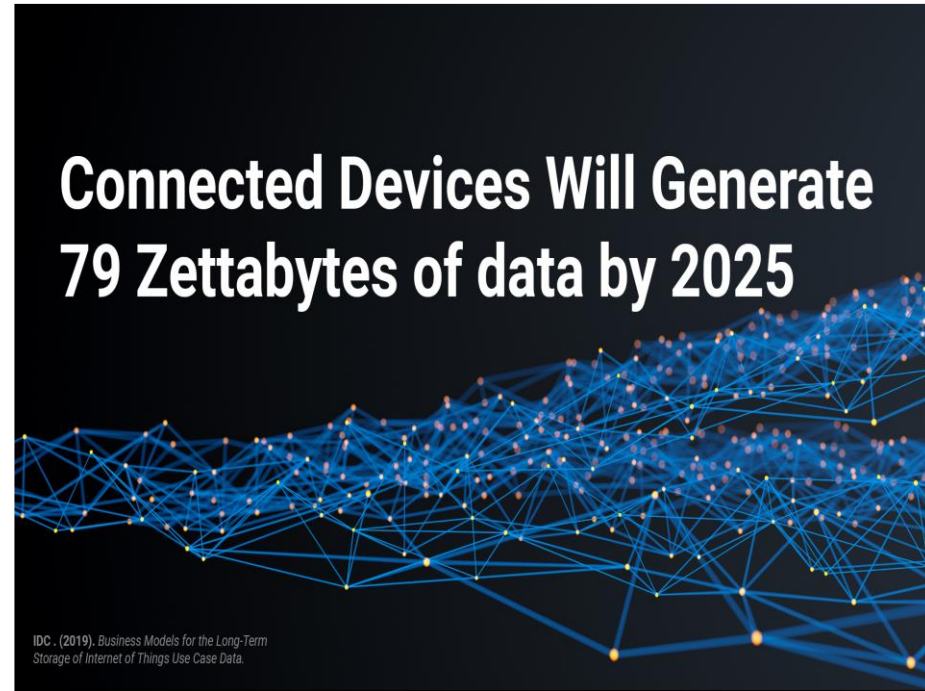
- ✓ **Business Representatives:** The key stakeholders requesting the analysis for their needs.
- ✓ **IT Team:** Delivery Implementation in a viable way so that the output can be repeatedly used by any business user.
- ✓ **Data Analyst:** Transforming business ideas and requirements into a feasible predictive analytics.  
SAP Predictive Analytics' automated interfaces enable users with average mathematical knowledge to work effectively.



# Digital & Data Analytics for Innovation and Business Growth

## Digital Transformation: Leveraging Data as a Fuel for Business

- ✓ According to Forbes, by making 10% more data accessible, a typical Fortune 1000 company will see an increase of \$65 million in net income. Imagine what a business could achieve if 50% more data was available? What if 80% more data was available?
- ✓ Data can help companies make smarter business decisions, whether they are solving challenges in real time or predicting future outcomes. Companies to explore the challenges of today's ever-growing data, big data management solutions, cost-effective ways to save money, and how this can lead to a successful digital transformation for the organization.
- ✓ According to IDC, connected devices will grow to nearly 75 billion by 2025, with IoT platforms accounting for the largest share. Furthermore, the data generated by these devices will reach 79.4 zettabytes by 2025, primarily from video and security surveillance. Now, more than ever, it is important to find a solution to store vast quantities of data, including archiving and managing them for the short- and long-term.

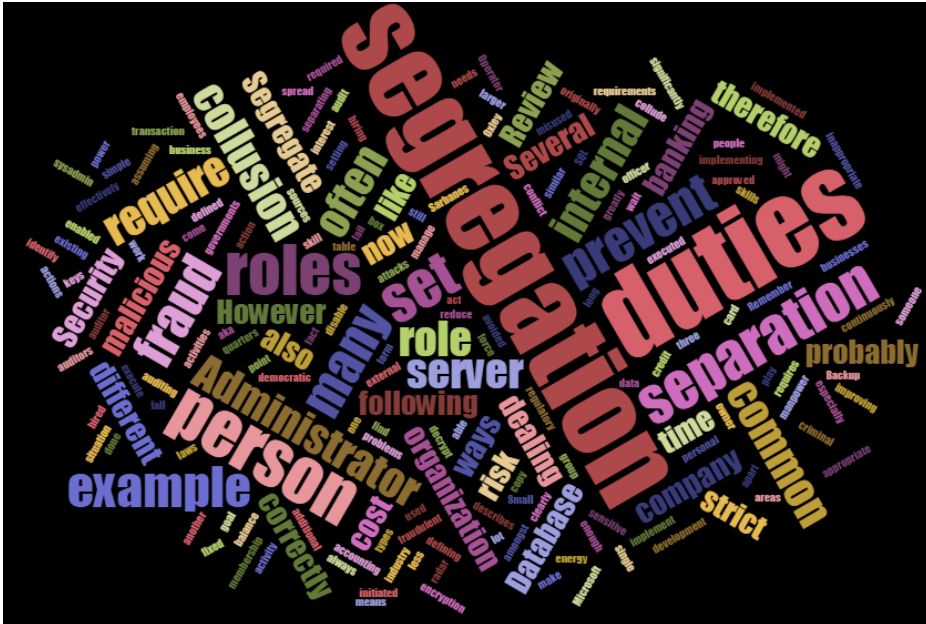




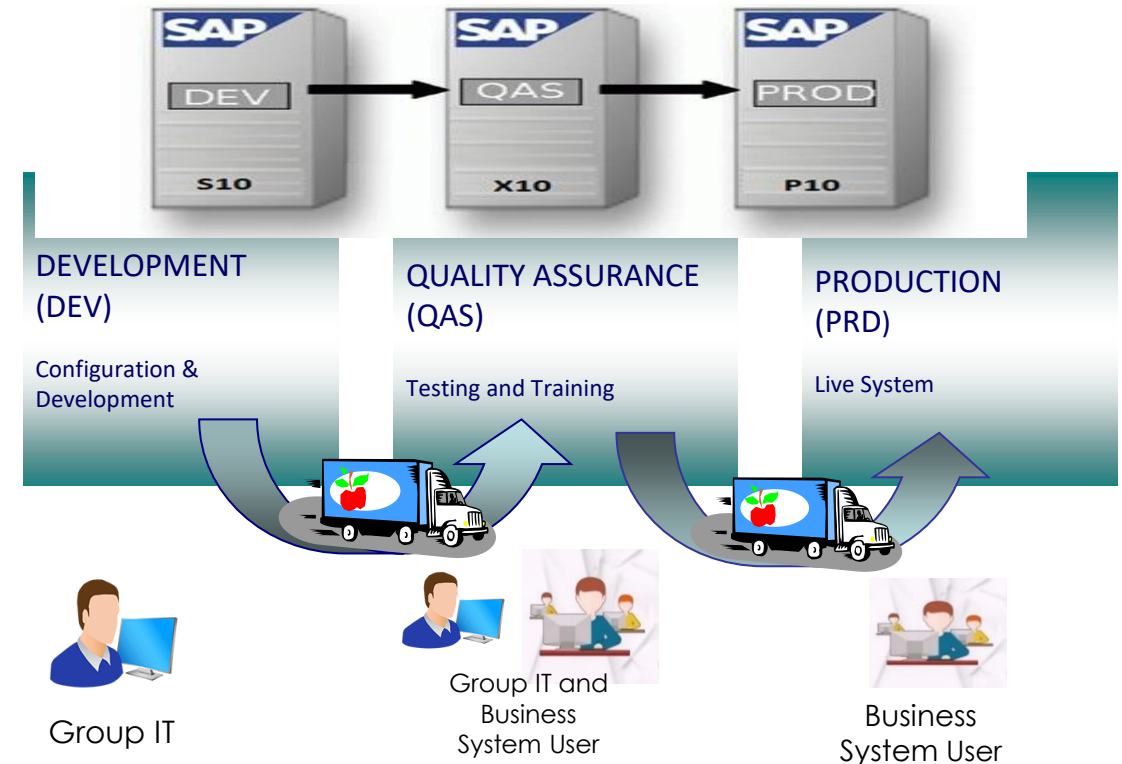
# Access Control (SOD) and System Development Lifecycle (SDLC)



Authorised Access Control with Change Management Route for SDLC change across the system landscape



SOD is the concept of separating "incompatible duties", so that one person does not have all duties:  
i.e Maker, Checker & Approver



Change management when the situation arises that follows full System Development Lifecycle (SDLC) Implementation cycle.

# Human Factor: Main Ways Data Asset at Risk Being Given Away

CYBERSECURITY AWARENESS PROGRAM



## Social Engineering Attacks

The weakest  
Risk link  
is..



**PEOPLE**

the

**Human Factor**



- Email Spoofing / Business Email Compromise
- Phishing (Electronic)
- Vishing (Voice Phishing)
- Smishing (SMS Phishing)
- QR Code (QR Code Scanning)
- Clickjacking (Webpage element)
- Drive by Download / Malvertising
- Pretexting (Scam Artists Story)
- USB Drop (USB auto Malicious Codes)
- Malicious Chargers

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# Seizing the Benefits from Data Driven Culture



Simplified complexities and streamlined business processes



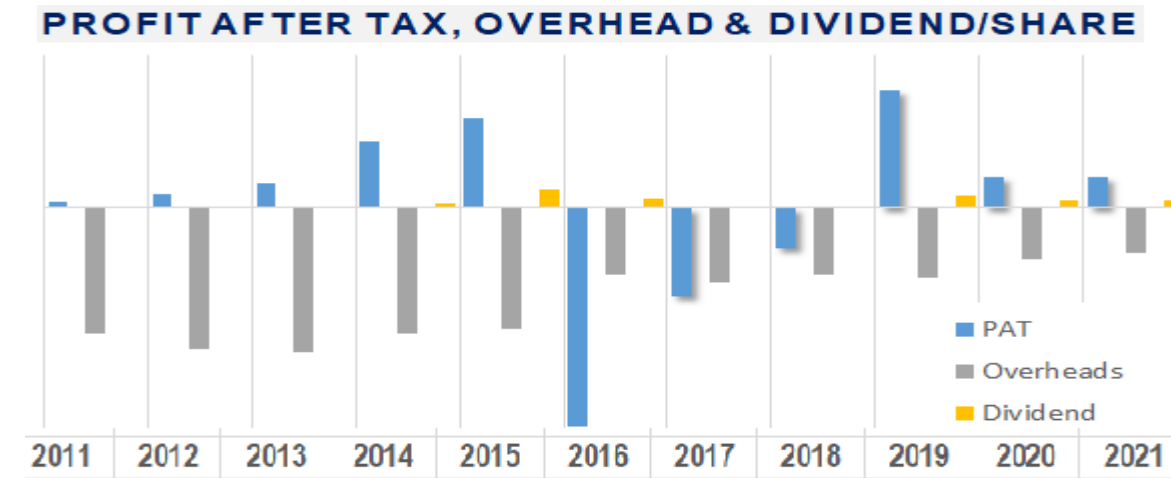
Reduced risk governance and ensured Audit as well as ISO Standards compliance



Enhanced business operation with available, reliable, confidential, accessible & data integrity

# PETRA remained resilient and robust

Solid balance sheet, Robust financial position | cost savings & cost management a continued priority | financially ready to support client's planned activities



- PETRA emerges stronger from the past challenging years
- Sustained profit and reduced overhead
- The Company is in an ideal position for growth and capacity building.
- Strong credentials to raise funds for growth and expansion, if required.
- PETRA continues to pay bonus and dividend

# PETRA ENERGY BERHAD



# THANK YOU



25 JULY 2023