EMPOWER YOUR ANALYTICS WITH OPERATIONAL DATA
2019 OSISOFT MUMBAI SEMINAR

Using PI System in the field of Dredging

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OSIsoft.

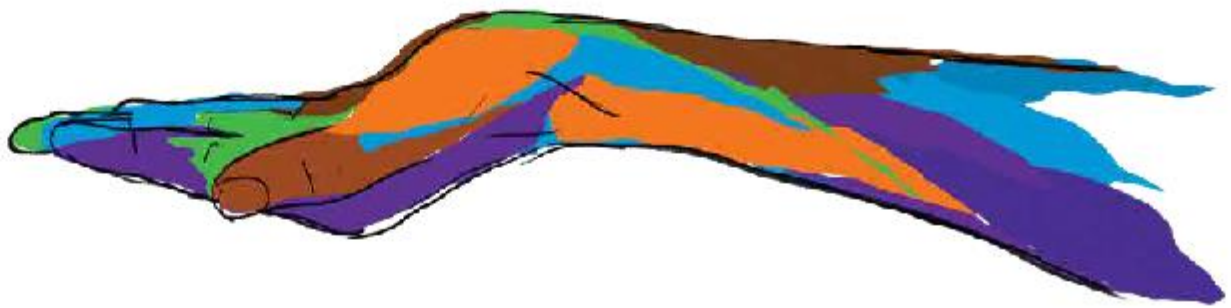
Using PI System in the field of Dredging

Content

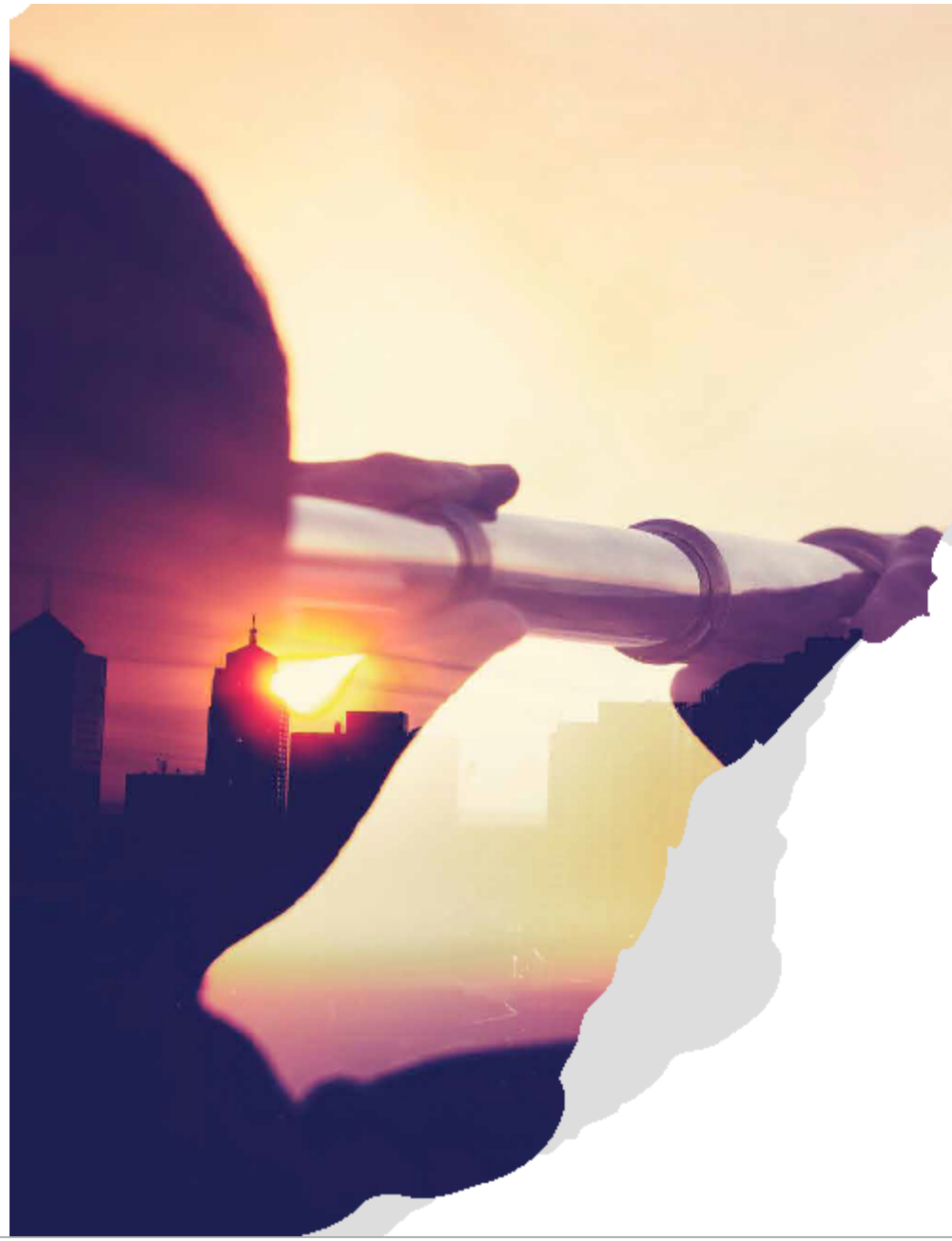
- Introduction
- Challenges
- Solution
- Use cases
- Goal

adani

Growth
with
Goodness



Adani Group Presentation



Actions that define a philosophy.

Vision

To be a world class leader in businesses that enrich lives and contribute to nations in building infrastructure through sustainable value creation.

Group values

Courage

We shall embrace new ideas and business

Trust

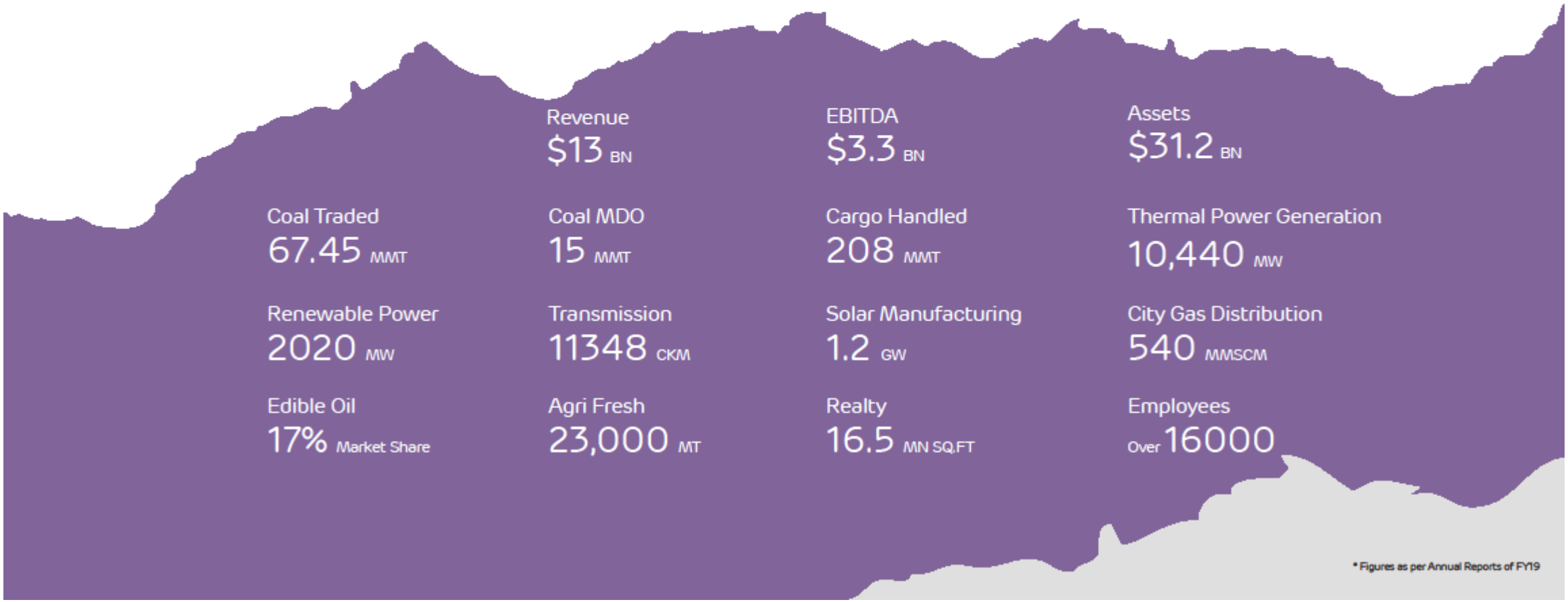
We shall believe in our employees and other stakeholders

Commitment

We shall stand by our promises and adhere to high standards of business

Uplifting lives in more ways than one.
Adani Group Portfolio

Contributing to the growth story of India - a quick glance at the Adani Group's performance for the financial year 18-19



Ports

Servicing 15% of the market share in Indian cargo/logistics with 10 domestic ports in six maritime states. The largest commercial port operator in India, bringing Indians closer to the world.

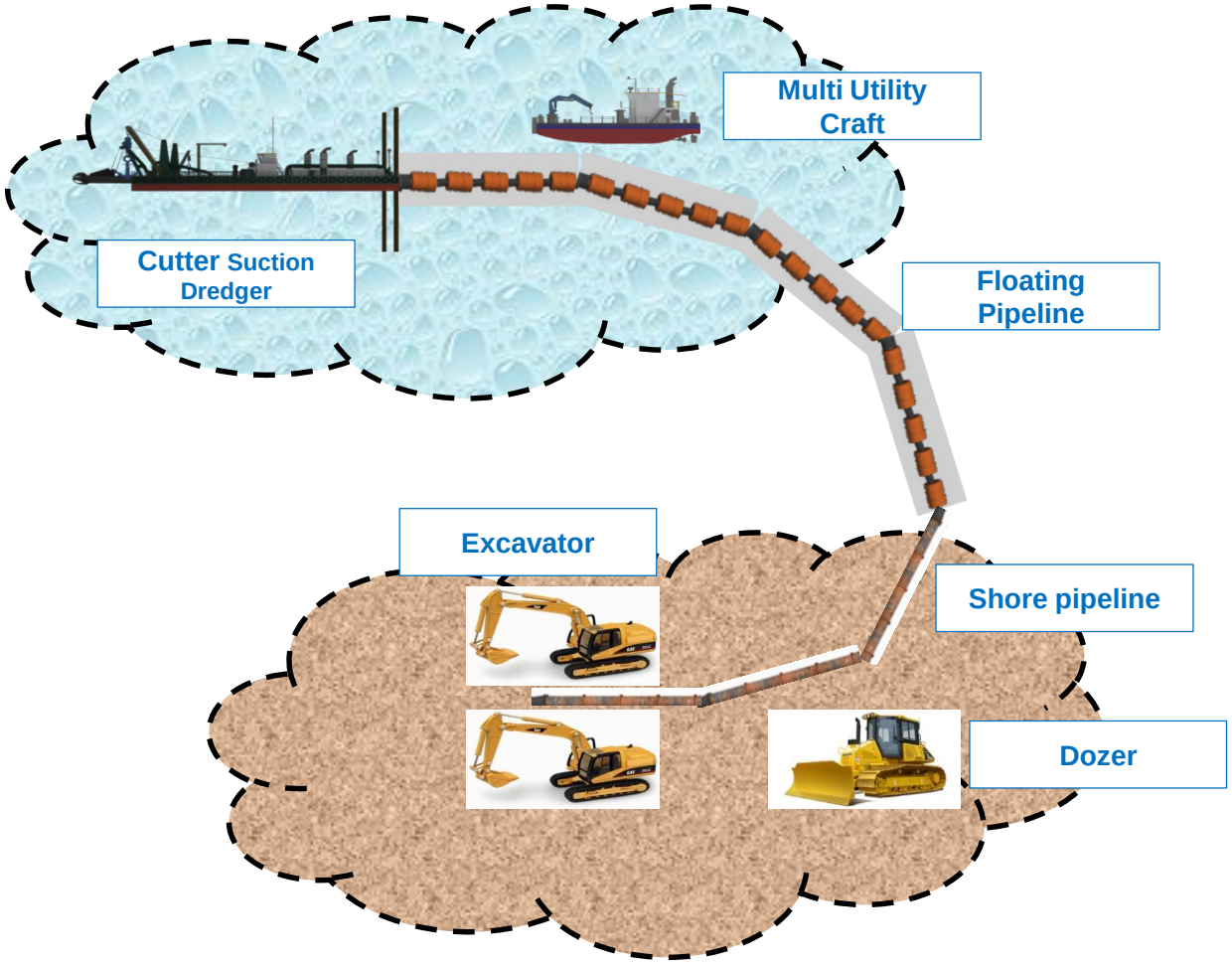
SEZ

Spanning across an area of 15,000 hectares, the Mundra Economic Hub is the gateway for Indian exports and imports. India's largest port based multi-product manufacturing zone.

Introduction to Adani Dredging

- Starting building Dredging fleet in 2005.
- Planned high-paced growth in the port sector was the reason to build fleet
- APSEZ currently owns a large fleet of 23 dredgers; the largest capital dredging capacity in India.
- APSEZ provides Dredging and Reclamation solutions for:
  - Port and harbour development
  - Maintenance of navigable areas of ports
  - Inland waterways dredging
  - Environmental dredging
  - De-siltation of Inland Water bodies

Introduction to Adani Dredging



Basic Dredging & Reclamation Operations through CSD

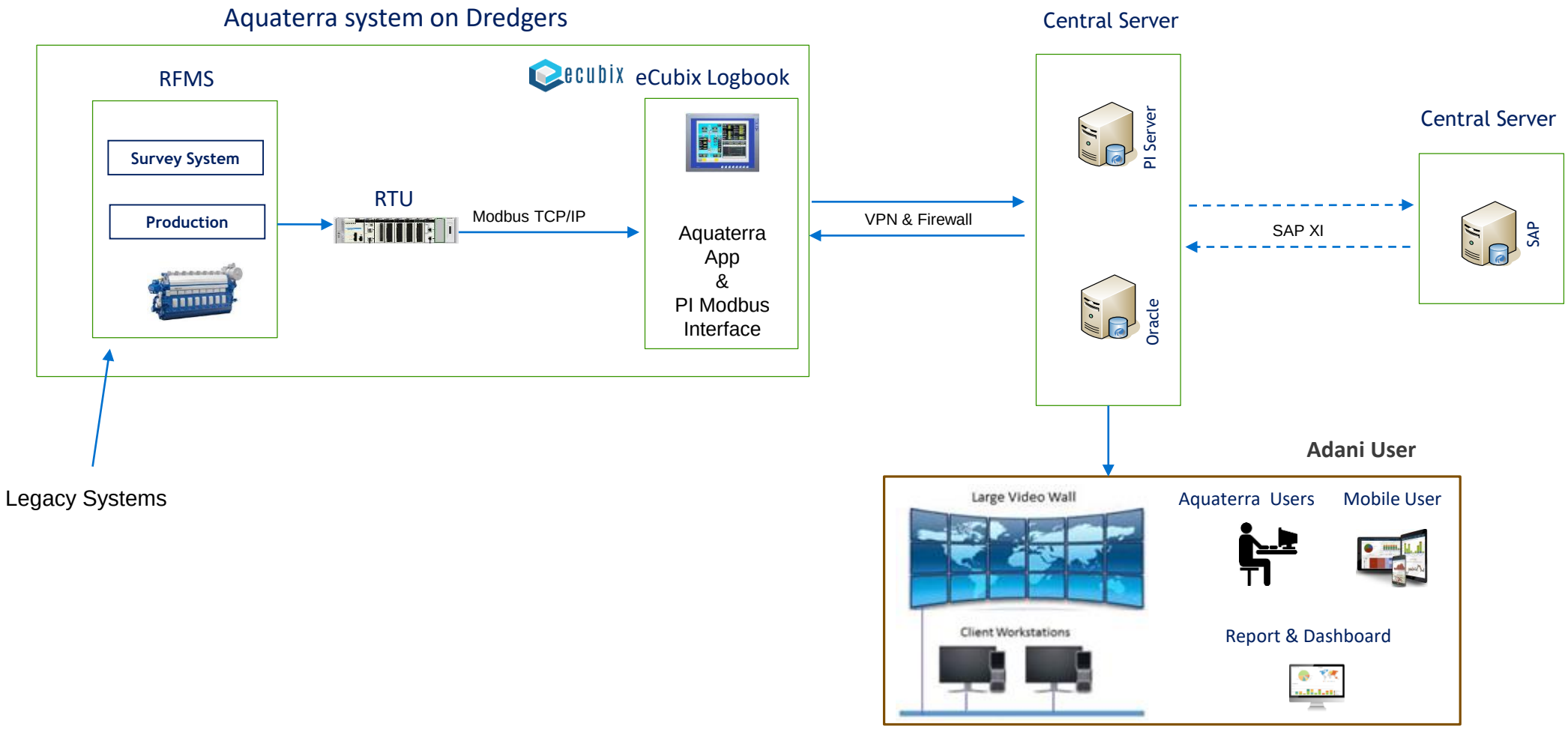
Problem Statement

Challenges faced from an Operations Excellence Perspective

- Isolated Platforms
- Real time visibility of the operations; operator and equipment performance
- Elimination of human error
- Single source of true data
- Proper utilization of resources
- Identification of actual location of work
- Equipment failure
- Planned Maintenance/ Breakdown
- Integration of Legacy systems
- Fuel Consumption data vs operational conditions

Solution Architecture

Solutions – Aquaterra Architecture



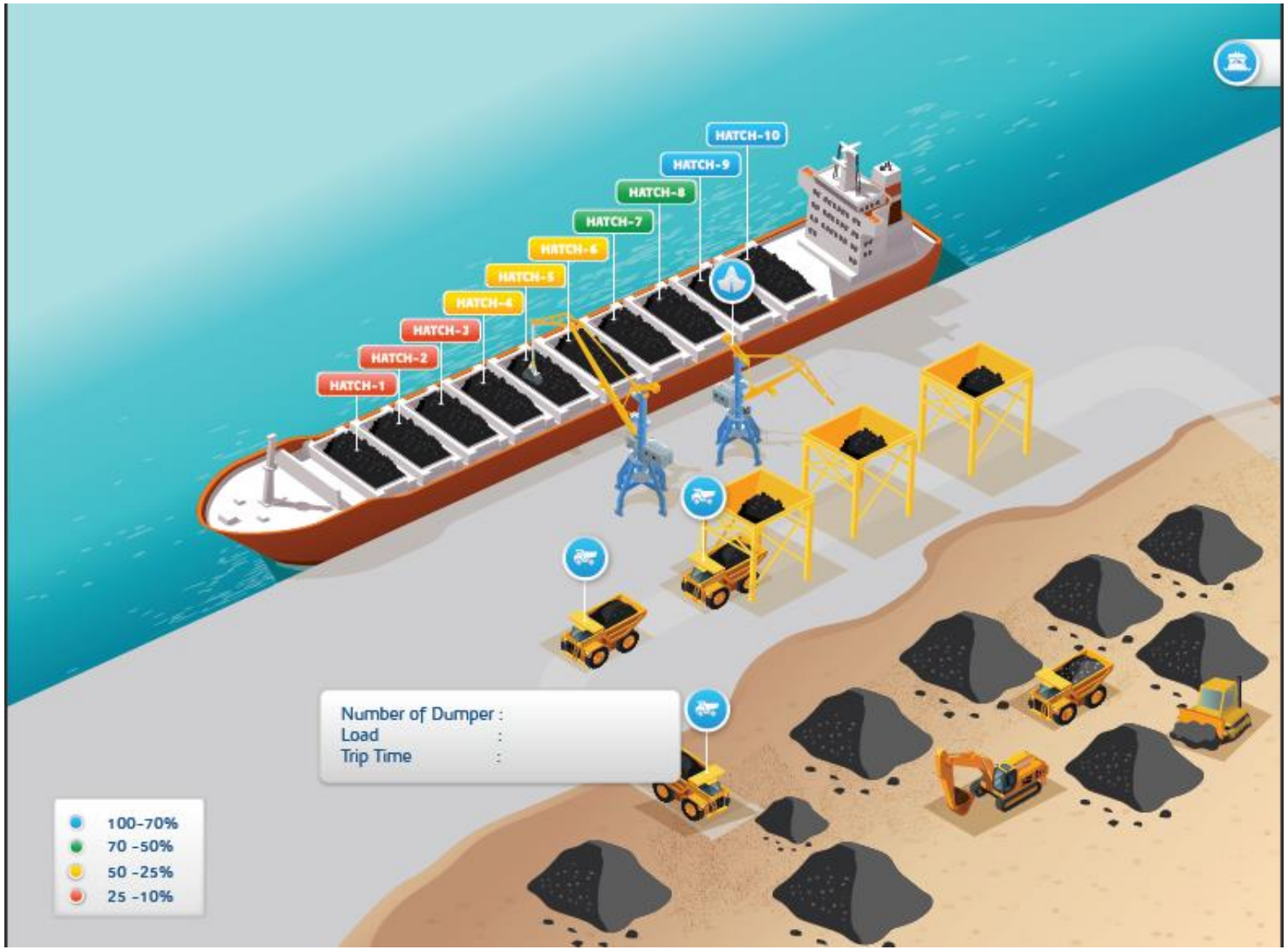
Realtime Dashboard

What is it / capabilities
• Graphical representation of entire operations • Live status reporting • Easy to grasp colour coded visuals • SMS / Email Notifications on alerts • Accessible anywhere on Adani Network

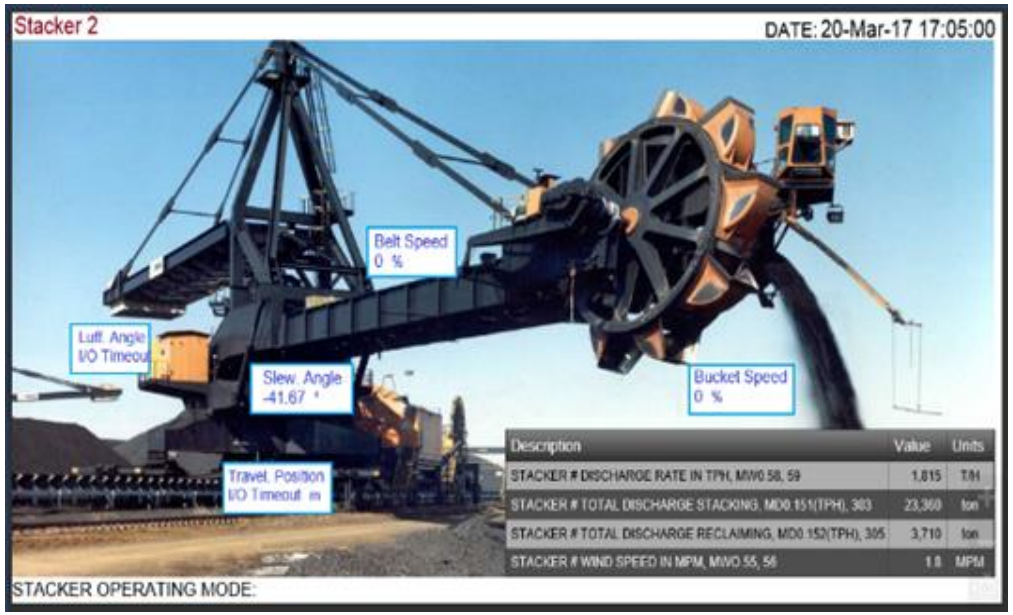
Benefits
• **Live Status: Real Time Data on fuel consumption and production data** • Glance at KPIs quickly • No need to call individuals/operators and check. They can be called if a discrepancy is found • People can focus on core ops activity rather than spending time on calling up / checking / coordinating and providing data fetching operations/Equipments data on mobile

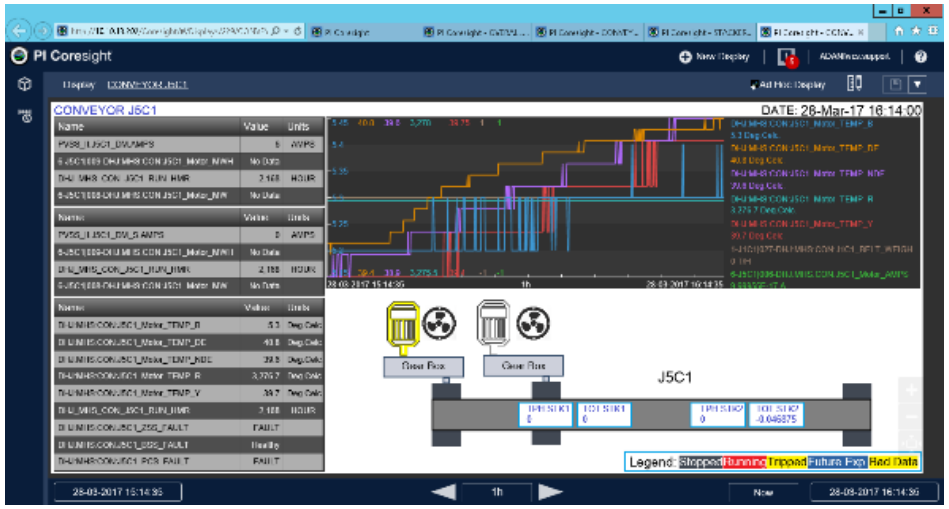
Realtime Dashboard

Realtime Dashboard



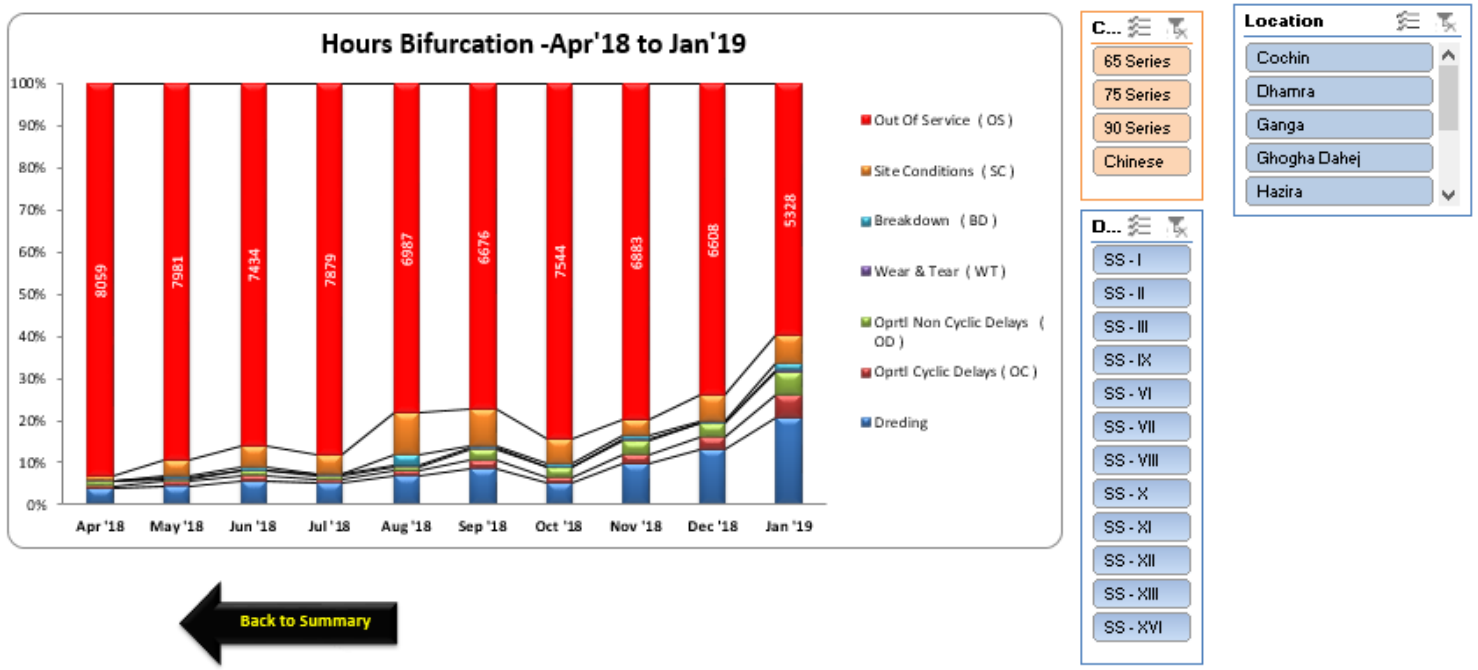
Realtime Dashboard



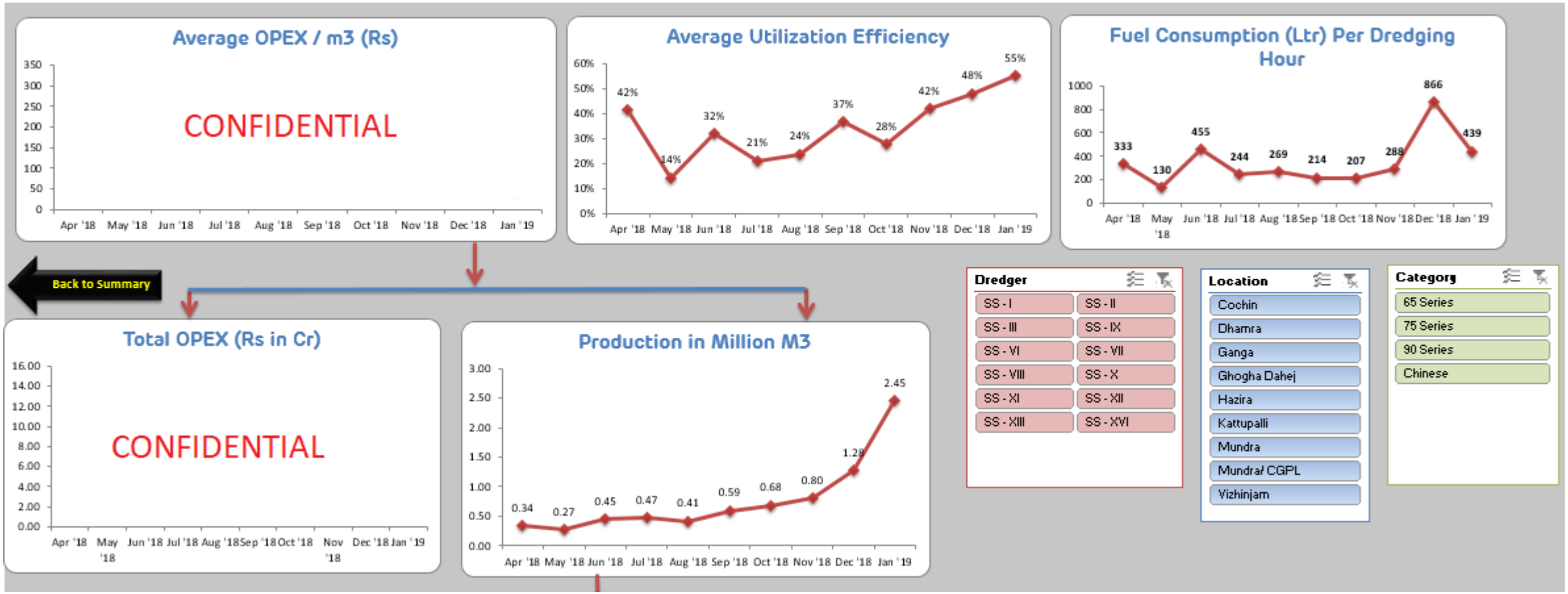


Management Dashboards

- Reports available on One-Click
- Regular reports on operations data
- Choose from pre-defined parameters to generate reports
- Access from anywhere on Adani intranet
- Faster reports generation: savings of man-hours
- Analyse trends / Compare performance
- Visualize average vs Peak operational statistics
- Store reports on local drive for future reference



Management Dashboards



Digital Logbook

- Logbook is a application for capturing working information
- Integration with the PI System
- Real time information about equipment deployment and operator efficiency
- Provides details on dredger operations
- Records delays / stoppages in operations and reason thereof in real time
- Provide dredger-based operator-wise efficiency
- Elimination of manual entry by on board personnel
- People can focus on core operations instead of recording / keying in data
- Analyse reasons for delays / stoppages and improve thereupon
- Alerts and notifications provided for any abnormality in Operations and Equipment

Main Page – Operator login

Digital Logbook

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Level 2 delays

Digital Logbook

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Aquaterra Digital Logbook being used for Daily functioning

AquaTerra – Salient features

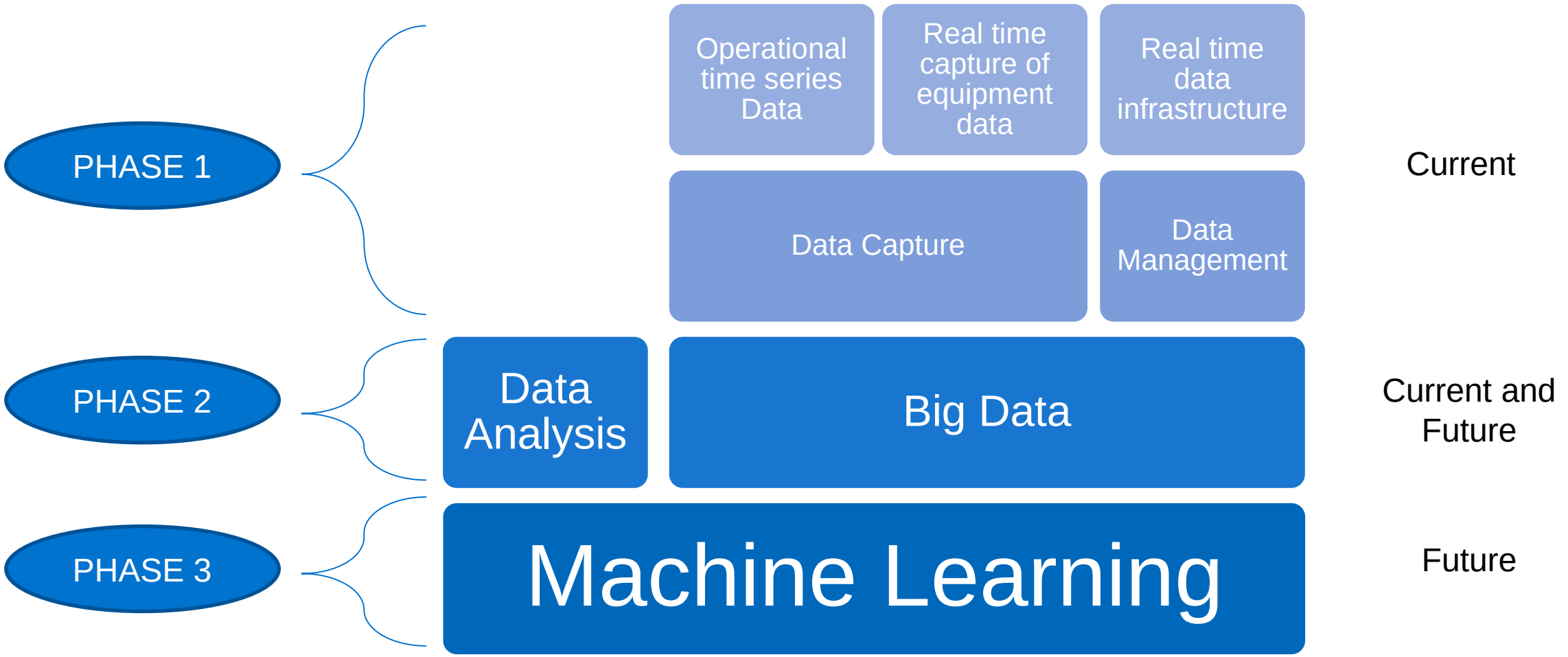
- Helps achieving Operational Excellence by monitoring and analyzing performance in real time
- Provides historical and comparative statistics on dredgers performance
- Allows operator and dredger performance
- Integration of legacy systems onboard the dredger, Oracle and SAP
- Allows for trend analysis, benchmarking and regression analysis
- Provides a live feed to the Central Command Centre with real time alert notifications
- Accessibility on hand held devices

Use Case

Business Challenges	Solution	Benefit
- Disparate data sources scattered across multiple locations - Real time fuel consumption data visibility - Manual entries leading to unreliable data - Equipment failure	- Real time data infrastructure implementation through PI System by integrating legacy systems implemented on dredger and delay capture systems - Single platform and user experience for remote monitoring of dredger operations from any location	- Single source of truth - An easy-to-use system to monitor all assets, giving users clear indications on current operational dynamics - Reduce fuel consumptions and improve operator efficiency - Real time alerts based on user defined conditions

Way Forward

Aquaterra – Goal



Extent of PI System in Adani Ports

- 5 ports: Mundra, Dhamra, Dahej,

  Hazira, Goa, Vishakapatnam

- Tugs : 20 +

- Dredgers : 10 +

- Adani LNG terminal - Mundra

adani

Ports and Logistics

Solutions Partner

VCS

the growth catalyst

15 + Countries

500 + Projects

$ 350 MN Saved by VCS Products

Thank You

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OBRIGADO
شكرا
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SIPAS JI WERE
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MATUR NUWUN
FALEMINDERIT
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