

Asset Performance Management System

Asset Performance Management Systems act to improve **reliability** and **availability** of physical assets while minimizing **risk** and **operating costs**



Top 4 Challenges for Organizations

Adhoc Usage of Resources

- Poor team planning creates more reactive work
- Time wasted chasing paperwork on work orders, inventory, etc.
- Missing clear instruction for maintenance tasks

Lack of Data and Information

- Lack of understanding increases downtime
- Wasted labor, parts and materials
- Aged Assets need excessive repairs
- Difficult to take Repair or Replace decisions

Improper Spares Management

- Stock-outs (not having the part you need when you need it)
- Stocking too many expensive parts or stocking expired parts
- Not having the parts you need when an asset stops working

Deficiency in Compliance

- Not staying up to date on compliance
- Undocumented preventive maintenance
- Losing compliance or lowering product quality, leading to fees, fines and insurance costs

How *Assetitude* Addresses these Challenges?

~~Adhoc Usage of Resources~~

- Automatic scheduling and Work Order creation
- Plan and prioritize WO
- Allocate WO to resources at work
- Solid, streamlined and mobile workflow
- Use mobile technology to access work

~~Lack of Data and Information~~

- Use asset barcoding/QR code scanning on assets to quickly bring up associated work & maintenance history
- Use reports to easily analyze reasons for downtime
- Make informed decisions for repair vs. replace

~~Improper Spares Management~~

- A system for parts management
- Accurate inventory
- Availability of parts across locations
- Automate reorder points
- Optimize using just-in-time inventory and ordering

~~Deficiency in Compliance~~

- Establish a compliance workflow with approval process
- Monitor progress of Work Orders
- Automated escalation rules
- Document Safety Practices
- Reliable data to prove compliance to your auditors

Benefits of using Asset Performance Management Systems

Moving from paper or spreadsheet-based approach to a computerized Asset Management System can offer incredible savings. Below are Industry statistics **

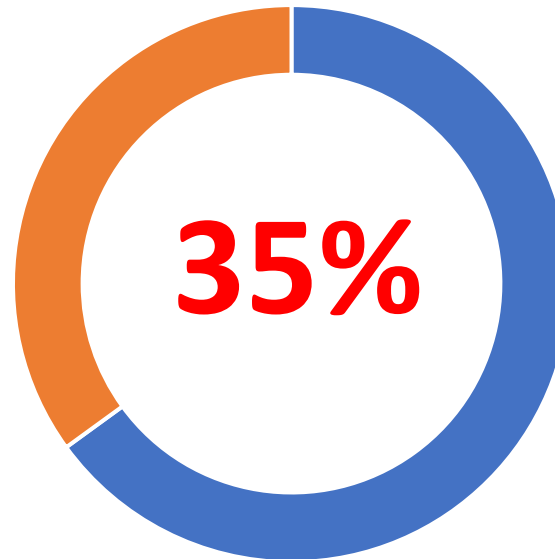
OPERATIONAL EFFICIENCY

Organizations that use computerized systems experience

Improvement in reliability of equipment	35-50%
Increase in maintenance productivity	28.3%
Reduction in equipment downtime	20.1%
Reduction in cost of maintenance, repairs, operation (MRO) inventory	17.7%

PREVENTIVE MAINTENANCE

Regular preventive maintenance can extend the life of your assets by 35%



PREDECTIVE MAINTENANCE

Regular preventive maintenance can extend the life of your assets up to

15%



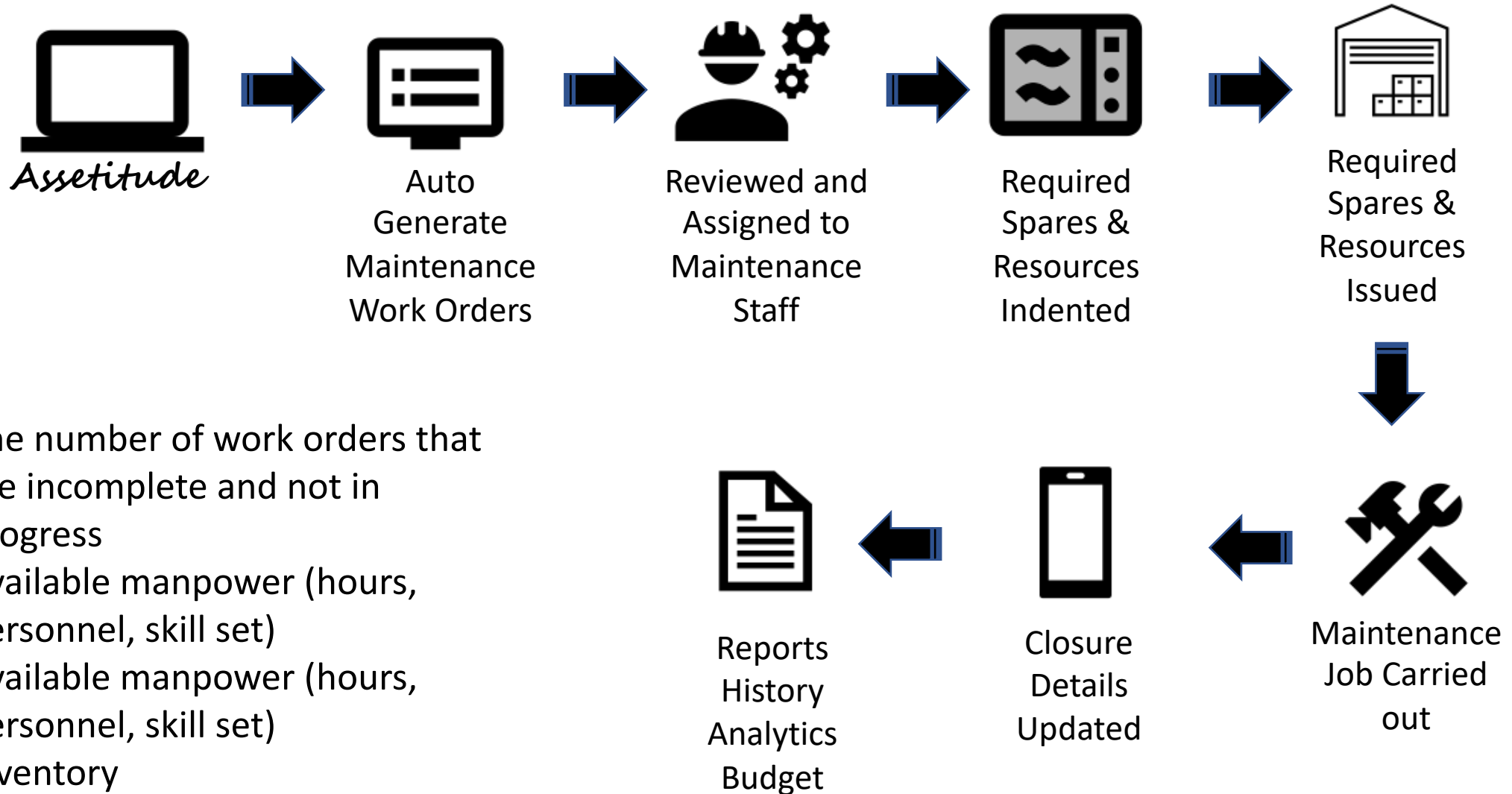
Savings in maintenance cost and downtime

** www.eepformance.org/uploads/8/6/5/0/8650231/o_m_guide_2004.pdf

Maintenance Maturity Model

Stage	Description	How <i>Assetitude</i> Supports the Stage ?
1	Reactive – Allow assets to run until failure before repairing	<ol style="list-style-type: none"> 1. Records incident with details and pictures 2. Work Order Released and assigned on top priority 3. Records repair details, costs and root cause for the issue in Asset maintenance history
2	Preventive – Complete routine inspections and full or partial completion of service on fixed schedule	<ol style="list-style-type: none"> 1. Calendar of maintenance routines maintained for each Asset 2. Automatically generates Work Orders 2 weeks prior to due date 3. Facilitate allocation of WO to technicians and monitor progress and completion 4. Completion details with observations and costs recorded in Asset maintenance history
3	Condition based Monitoring – Closely monitor one or a few vital parameter of critical assets and trigger preventive maintenance activity	<ol style="list-style-type: none"> 1. Gathers data on Asset performance routinely and monitors exceptions with alerts 2. Preventive maintenance activities are triggered based on alerts 3. Asset Maintenance History is compiled for further analysis 4. Prepares the base for Predictive Maintenance
4	Predictive – extending automated monitoring to all aspects of an increasing number of assets	<ol style="list-style-type: none"> 1. Integration of Digital Data collection devices for direct data collection from sensors and IoTs planned 2. An AI/ML based Predictive Maintenance Model is planned for next phase
5	Prescriptive – predicts failures and probable solutions to the problem	<ol style="list-style-type: none"> 1. A more matured AI/ML based prescriptive maintenance model is part of our future plan

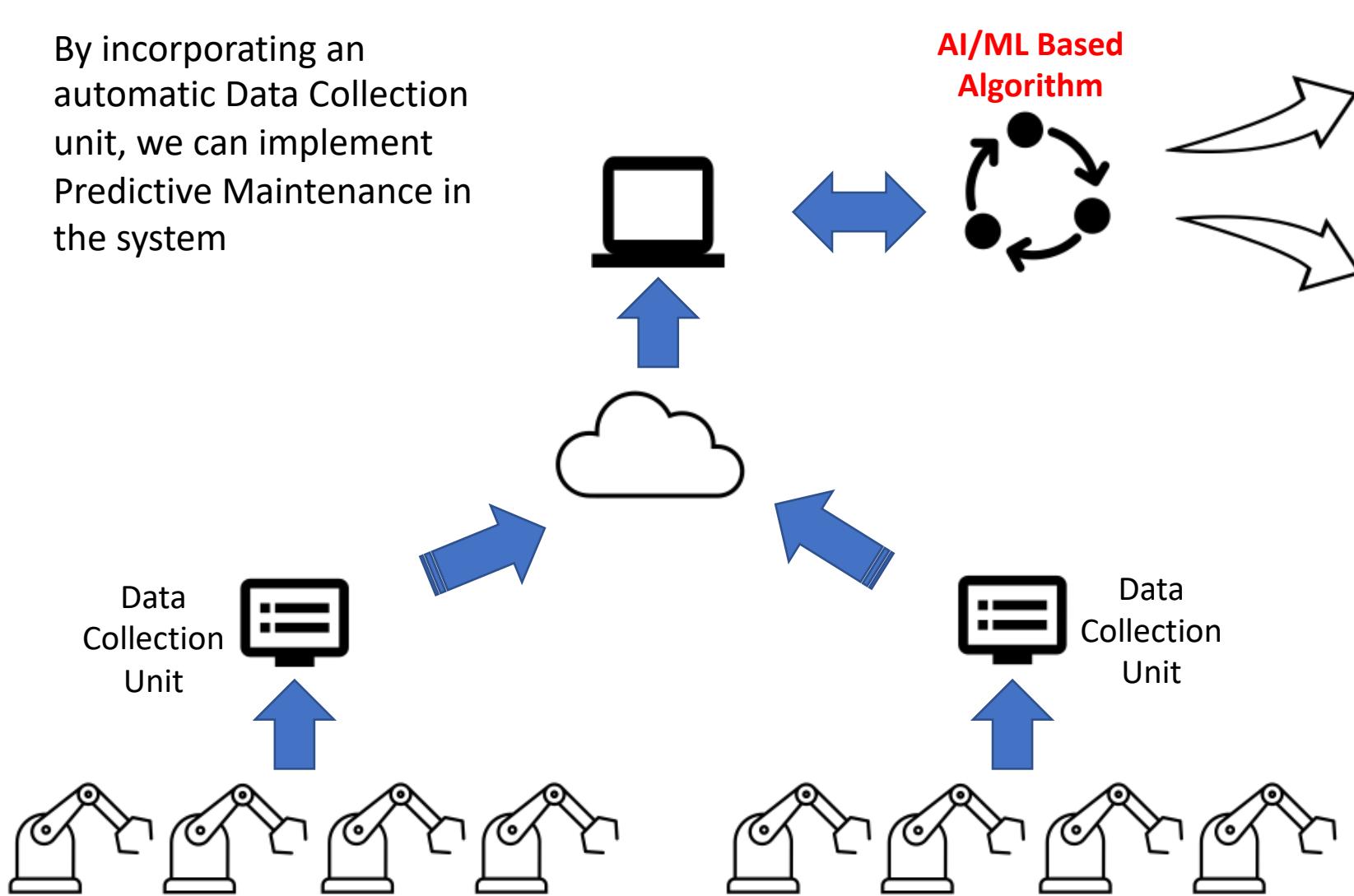
Automated Maintenance Flow



- The number of work orders that are incomplete and not in progress
- Available manpower (hours, personnel, skill set)
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- Inventory

Predictive Maintenance Design

By incorporating an automatic Data Collection unit, we can implement Predictive Maintenance in the system



Traffic Light

- Machine Stoppage
- Alerts on Exceptions

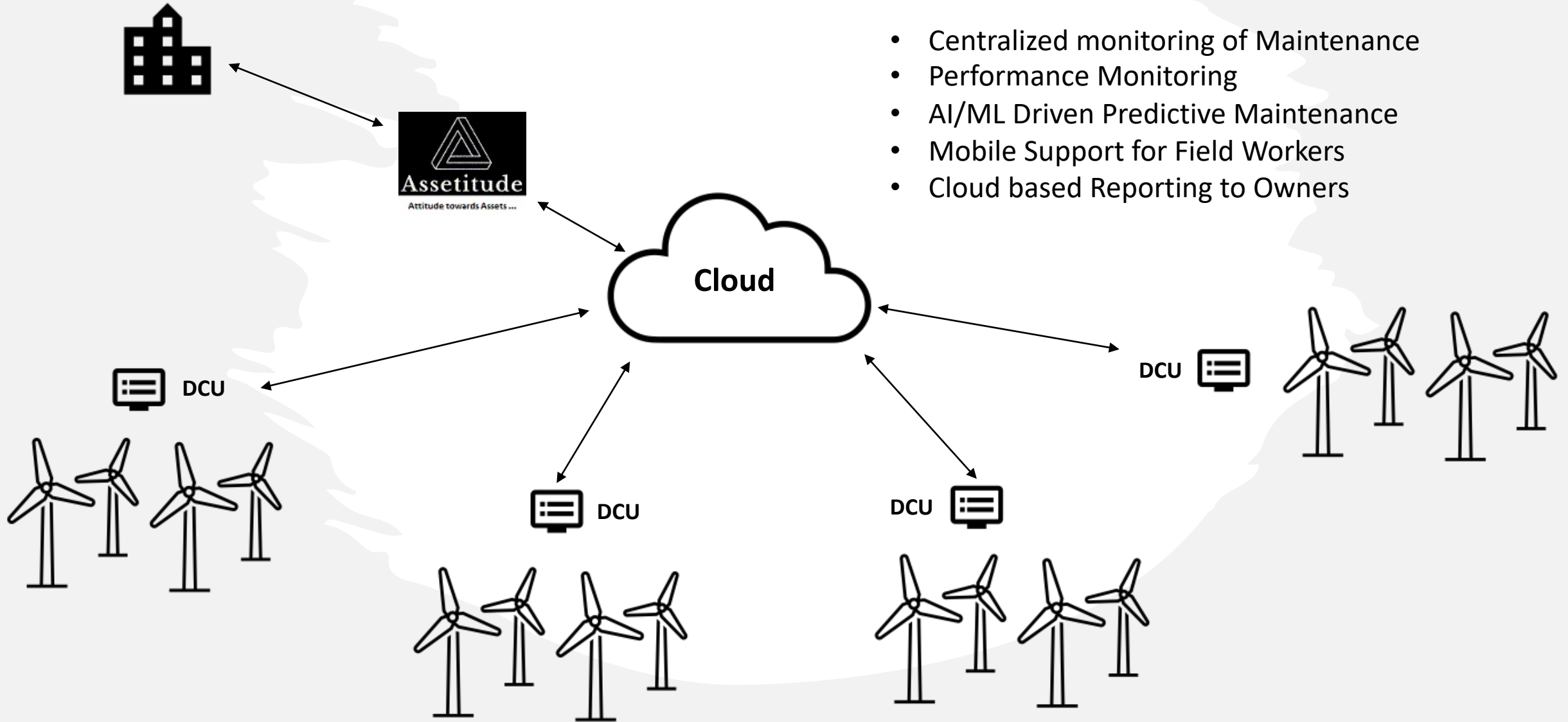


Emergency Orders

- Predictive Orders
- Immediate Fixes

Based on the outcome the system will throw alerts on exceptions and/or create emergency Work Orders to take care of anticipated breakdown

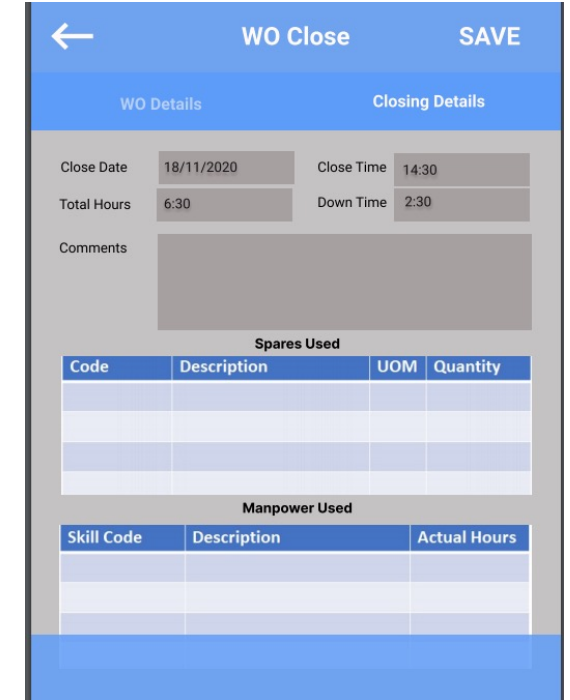
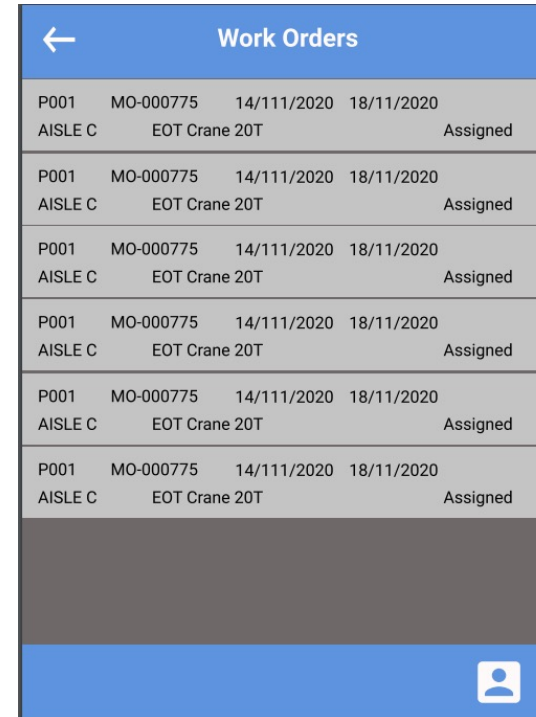
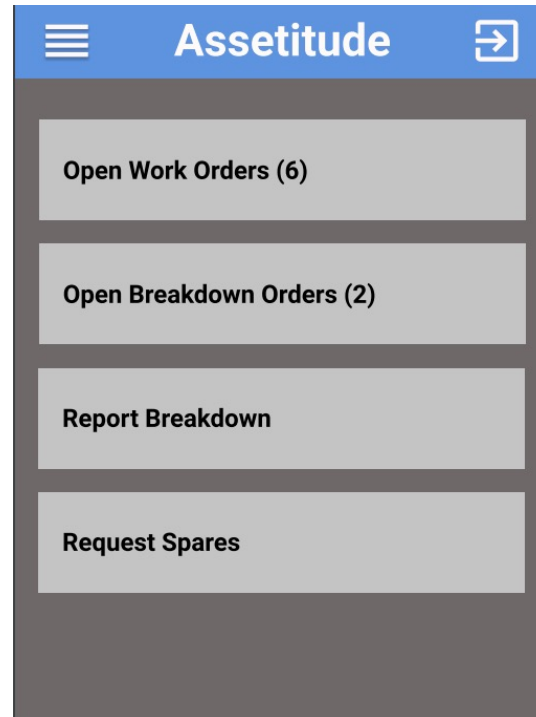
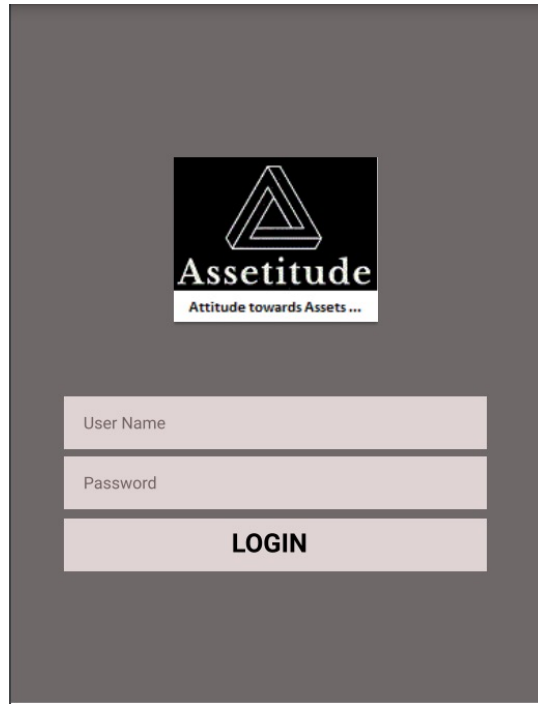
Deployment of *Assetitude* in Wind Farms



Assetitude Advantages

- Enterprise-Level Application. Supports
 - Multi Site
 - Multi Warehouse
 - Multi Currency
- Ease of deployment – Can be deployed on cloud and on premise
- Visibility and control of Inventory across Organization
- Automated workflow approach with tracking of activities
- Dashboard of Key Parameters and Alerts on Exceptions
- Adoption of Barcodes, IoTs and Mobile technology
- Supports mobile workforce through mobile apps
- Budget and Cost Management
- Built on agile platform to deliver changes and additional requirements quickly
- Predictive Maintenance

MOBILE APPLICATION SUPPORT



Assetitude Advantages

- Enterprise-Level Application. Supports
 - Multi Site / Multi Warehouse / Multi Currency
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Thank you...

Contact: sales@caftius.com

For details