



Driving Operational Excellence via Mobility

Unvired Inc.

# **Going Digital:** Driving Operational Excellence Leveraging Mobile Applications

The Digital Enterprise is upon us, and Mobility is at the forefront. Companies in all verticals from Finance to Healthcare to Manufacturing are embracing the brave new world of social, mobile, analytics, and cloud. The business drivers are enhanced customer engagement, new revenue models, better service, optimal asset utilization, and real time decision making. On top of all this, the Internet of Things (IoT) with the Connected Plant, the Connected Patient, and the Connected Asset promises to create disruptive innovation.

Asset Intensive industries like Utilities, Oil and Gas, Chemicals, Mining, and Manufacturing are leading the charge, and are focused on driving Operational Excellence by taking advantage of new technologies





## Transforming Operations via Mobile

#### **Communication/Collaboration**

Chat like Enterprise Collaboration: Reliability, Operations, Maintenance, Environmental, Safety, and Management all need to collaborate. Emails and phone calls make this an ineffective process lacking transparency. The future of enterprise collaboration is in a chat like applicatihon with a simple User Interface enables various that groups to communicate. Each group like Reliability or Operations could subscribe to a Channel, share information, take actions, and record them in SAP or Maximo.

Shift Handover: Mobile apps can reduce the Communication breakdown that can occur during the shift handover process. Operating personnel coming on-shift can be made aware of what happened at the previous\_shift,\_and\_any\_corrective\_actions they need to take during their shift. Any

#### Safety

**Electronic Logs:** Paper based Operator logs suffer from many drawbacks. An electronic log can capture significant Shift activities grouped by unit, owner, category, and equipment. It is also a tool for the shift handover work processes, demonstrates compliance, and provides data for hist`orical analysis. This can increase safety and compliance.

**Alerts:** Alerts and notifications can be sent to workers' mobile devices.

Safe Work Permits: Issue of Electronic Safe Work Permits for tagout/lockout procedures can enhance safety over paper based permits.

**Operating Procedures:** These can be viewed on mobile devices from Microsoft SharePoint or other document management systems, ensuring that only the most current version is viewed.

#### **Plant Uptime**

Operator Rounds: Mobilizing the Equipment Inspection process for Preventive Maintenance is a great way to get rid of paper. The operator can capture various inspection readings on their mobile devices in front of the equipment, and send it wirelessly to SAP, Maximo, or other systems. Captured readings can be validated with GPS location of the person to ensure proximity to the equipment. Quality of the readings and speed of corrective action can improve plant uptime greatly.

Work Orders: There is no need to print out a bundle of work order papers anymore. Maintenance workers can access their work orders data from SAP or Maximo on their mobile devices. Lead technicians can assign operations to the technicians. check Workers can equipment maintenance history and equipment operational procedure documents to get a better context of their work order. Workers can access operations, capture time, enter material, update status, capture digital signatures, fill compliance documents and close out the work orders. Notifications can be created, and pictures taken and attached to Notifications or Work Orders. Workers can spend more time on the job n than on paper work.

Audits: Auditors can download work orders on their mobile devices, and complete audits more efficiently, resulting in better compliance. Quality is enhanced as test results can be stored digitally, leading to better records management.

#### Worker Knowledge/Training

Mobile devices are a great training tool. Workers can view videos, and even leverage Augmented Reality for training purposes. Smart glasses allow for hands free on the job training.

#### Worker Retention

Workers, especially the millennials enjoy using mobile devices, and this can improve worker retention. This is especially critical as many industries like Oil and Gas, Utilities, and Chemicals transition to a younger workforce.

#### **Resource Utilization**

Scheduling production resources optimally in the face of unexpected changes is key. The Planner shares the Schedule for the week, and the next day, it changes. A mobile app that enables viewing of the schedule, and make updates can greatly improve operations.

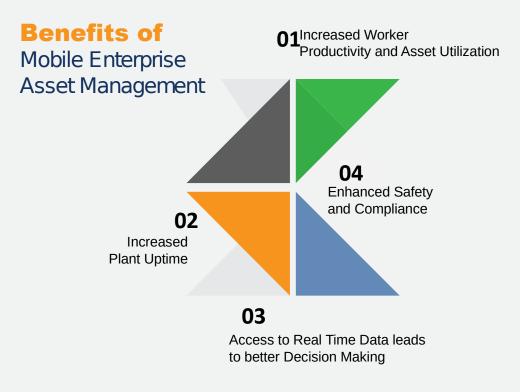
#### Analytics/Dashboards

Data Analytics to prevent and predict is key to operational excellence. Dashboards need not be viewed in the control room alone. With mobile devices, plant operators or technicians can view analytics on the floor/field itself, and make real time decisions. This is indeed where the future is taking us.

# The Future

Fom Preventive to Predictive leveraging the Industrial Internet of Things (IIoT)

The Vision and future for Operational Excellence is to move from Preventive to Predictive Maintenance. The Connected Plant with sensors on Equipment transmitting data to the cloud provides a wealth of machine condition data. This Big Data can be analyzed to detect patterns, and lead to much more intelligent scheduling of preventive maintenance leading us to being more predictive. Indeed, the adoption of IIoT will lead to disruptive innovation in Operational Excellence.



### Conclusion

Unvired has worked with customers like Pepsi Bottling Ventures, Kaneka, Sigma-Aldrich, and WEL Networks to enable them to achieve operational excellence by deploying mobile applications. They are reaping the benefits of going digital, and have improved their performance in Asset Management, Plant Operations, Field Services, as well as Sales, CRM, and Marketing.





# **THANK YOU**



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