Case study of a leading pharmaceutical company that has partnered with Crave InfoTech to initiate their digital transformation journey. The pharmaceutical company is striving to increase their process efficiency, improve their user experience, and ensure they meet all regulatory compliances through employing Crave InfoTech’s mobility solutions.

**Business Challenges**

- Regulatory compliance issues
- Documentation gaps with legacy SAP Plant Maintenance process due to manual errors
- Lack of user acceptance to the legacy system due to a cumbersome UI
- Complicated legacy system customization for changing business processes
- User friendly technological innovations were required
- Existing applications were technologically outdated and did not provide expected benefits
Objectives
Define a mobility roadmap to improve user experience and improve IT application acceptability through mobility solutions as part of the Digital Transformation journey

Proposed Solution
Crave Mobility Solutions for enterprise mobility – Plant Maintenance, CRM, HRM, and Enterprise Change Control Management

Benefits
- Improved operational efficiency through extending legacy processes to mobile applications
- Enhanced user experience and process compliance
- Upgraded process flow customizations to quickly respond to regulatory compliance needs
- Improved vendor experience with mobile solutions to manage vendor transactions
- Offline mobile capabilities to ensure seamless application use even without network
- Reduction in manual data handling resulting in more data accuracy
- Use of native features on mobile such as Photo, Scan, Print, Electronic Signature etc.

Why Crave InfoTech
- Mobility solutions that fit 70% of the business requirements out of the box
- Rapid deployment methodology to achieve faster implementation with reduced cost
- Configurable solutions that allow easy changes in the process flow
- Hybrid mobility solutions compatible with any mobile operating system (Android, iOS, Windows)
- Personalized customer service
- Round the clock (24X7) global support model
Overview

A leading pharmaceutical company based in Hyderabad, India is committed to providing affordable and innovative medicines for healthier lives. The company offers a portfolio of products and services including Active Pharmaceutical Ingredients (APIs), Custom Pharmaceutical Services (CPS), generics, biosimilars, differentiated formulations, and News Chemical Entities (NCEs) through their three businesses- Pharmaceutical Services and Active Ingredients, Global Generics, and Proprietary Products. Their major markets include India, USA, Russia and CIS, Germany, UK, Venezuela, S. Africa, Romania, and New Zealand.

The company is embarking on a Digital Transformation journey specially driven by mobility solutions to bring in a high level of process and operational efficiencies and support their growing business across the globe.

Enterprise Asset Management (PM and QM)

Crave’s maintenance mobility solution was configured for their maintenance and calibration processes and has been implemented for all of their 17+ plants.

Business Challenges

- Paper based data entry at maintenance location without validations causing compliance issues
- Unwieldy user interface stemming from the need to browse multiple screens in the SAP system for data entry
- Time consuming regulatory compliance customizations to the legacy system
- Inefficient remote maintenance sticker printing which increased the overall maintenance cycle time and equipment downtime.
- Paper based calibration result approval at multiple levels increasing efforts in document management
- Ineffective follow ups of incidents raised on calibration failures
- Lack of technology for Facility Maintenance
- Lack of personalized support service for the legacy maintenance system
- Indirect Impact on the production quality

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Solution

Crave has helped a leading pharmaceutical company to completely automate and enhance the maintenance processes for Calibration Maintenance, Breakdown Maintenance and Facility Maintenance. Due to the success of the implementation of these applications, the pharmaceutical company also implemented the Preventive Maintenance process.

Calibration Maintenance

- A complete calibration workflow is built inside Crave’s mobile app for engineering and business personnel. The functionalities include assigning work orders, capturing timestamps, capturing results, validating results, capturing necessary approvals for usage decision, capturing failure details, documenting materials consumed, equipment release, and label printing.

- The calibration application allows assignment of master instrument for each calibration point. Measurement readings are validated offline with the Master for planned and unplanned characteristics to comply with the Standard Operating Procedure.

- Integration with SAP PM and SAP QM module eliminates manual data entry process.

- Upon completion of calibration, the application automatically creates defects and gives predefined options for the replacement of instrument in case of calibration failure.

Breakdown and Facility Maintenance

- A single solution that caters to all maintenance requirements (Preventive, Corrective, Breakdown and Calibration)

- Specially designed for maintenance workforce to capture completion details and measurement details or update and create new notifications and work orders from the field.
Implementation Process

Crave and the pharmaceutical company worked together to ensure a successful implementation of all maintenance solutions. Due to the company’s urgent need for automation, the Crave team went above and beyond the agreed terms by providing digital transformation expertise in discussions to aid the company in refining their

Solution Value Drivers

- Mobile application covering end to end Standard Operating Process
- Works Online or Offline and Syncs real-time with any back-end system
- Pre-packaged app minimizing implementation timelines resulting in early realization of ROI to business
- Fully responsive and device agnostic application
- Fully configurable User Interface from the back-end
- Reduces total cost of ownership up to 80%
- Available in all major languages
requirements. The Crave team made complex design changes in the application to fit business requirements, aligning the product with business expectations. This solution was implemented with an ambitious timeline, and daily review calls were put in place to avoid a rework. Crave, through the complete stack of maintenance applications, paved a customized path for the pharmaceutical company to complete their digital transformation journey.

Results - Business Value Delivered

- **Improved Operational Efficiency** - The Head Engineer stated, "We have achieved a key milestone and the applications are helping immensely to streamline our maintenance processes and are a considerable improvement in the overall efficiency of the maintenance personnel. The solution is easy to use with complete workflow mapped on the mobile with required validations as per the legacy system."

- **Ease of Use** - The mobile applications have given the required comfort to maintenance engineers with simple and user friendly screens. “This application is a major milestone in the way maintenance process works at,” stated a Maintenance Engineer.

- **Customized Automation** - The mobile applications have provided the flexibility to customize maintenance workflows as per the required changes to be made to the Standard Operating Processes.

- **Significant Time Savings** - All maintenance records sync with the backend SAP system in real time. This has completely eliminated the need for paperwork and has automated a great deal of data entry.

- **Flexibility & Security** - The solution has provided the flexibility to re-assign work orders to different engineers as needed. Furthermore, the solution uses a strong user authentication, which ensures strong access security. It has SMP level as well as backend user authentication, making it a completely secured solution.

- **Responsiveness & Support** - Their team has been delighted with the post go live customer service support by Crave’s round the clock Support Center. The feedback received from a plant maintenance user says it all, "They are a very responsive group. I like the fact that the team works 24 hours a day and they respond to our queries within a few hours. Even the few application issues identified after go live were fixed in no time. The Crave team is also flexible to address small enhancements which we missed during the initial phase."
Supply Chain and HCM Mobility Solutions

After evaluating the success and value gained from the Maintenance Mobility solutions, the pharmaceutical company partnered with Crave to extend the mobility to Vendor Management (CRM), Employee Performance Management (HRM), and Enterprise Change Control Board (CCM) as well.

- **Vendor Management** - Vendor Management is an application used for vendor management processes such as Request for Quotation, Purchase Order, Automatic Shipping Notification, Invoicing, Goods receipt confirmation etc. The pharmaceutical company had the Vendor Management application on their desktops.

Crave InfoTech helped with a mobile solution, extending the key workflows of the legacy system on mobile to improve the Vendor experience. Vendors could now receive notifications of any changes to their account on mobile.

- **Employee Performance Management** - Employee Performance Management is an application used to track Employee Goal Setting, Goal Approval, Mid-Year Performance Reviews, Annual Performance Reviews, etc. The pharmaceutical company had the Employee Performance Management application called WebDyn Pro.

However, this legacy system was not very user friendly. Thus, Crave InfoTech developed a complete mobile based user interface for the EPM application which was more user friendly and available anywhere on the mobile. The mobile solution helped in aligning the employees to use the system and making sure the performance evaluation process was completed on time.
Each variation requires documentation until the final resolution. Hence, any changes in protocol would take the pharmaceutical company as long as 6 months to implement. To reduce this timeline to 2-3 weeks, Crave InfoTech designed a CCM mobility app. The solution provided a lot of advance features such as Dashboards, Notifications etc. The complete User Interface was made attractive and self-explanatory so that users could browse through the workflow easily.

All the required changes in the workflow as part of the process refinement were handled through the User Interface screens. The entire application was built to make it a configurable solutions to quickly respond to future changes.

**Change Control Management on Mobile** - CCM is an application that documents and manages any changes within an organization mandated by Regulatory Authorities or internal process standards. The Life Science industry regulations require detailed process for every change in protocol.

**Warehouse Management** - Most processes in the warehouse are not being tracked efficiently resulting into inventory mismatch and manual paper based processes resulting in increased turn-around time and higher overheads. Life sciences industry need warehouse management mobile application with batch and serialization functionality to track materials movement effectively and keeping organization compliant with the regulations.

Crave pre-packaged application had all these functionalities inbuilt in the base product. In addition to this the application was configurable to work with SAP IM, WM or EWM. This made it easy for us to switch to higher level of functionalities without rebuilding the app or additional investments.
The app has all the standard functionalities to make warehouse functional including:

**Inbound**
- Goods Receipt
- Goods Reversal
- Goods Return
- Put Away

**Outbound**
- Reversal
- PGI
- Pick & Pack

**Physical Inventory**
- Create Physical Inventory
- Inventory Counting
- Inventory Difference Posting

**Internal Transfer**
- Bin to Bin Transfer
- Internal Goods Issue
- Stock Overview
- Storage Overview

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**About Crave InfoTech**

Crave InfoTech is an Independent Software Solutions Vendor (ISSV), SAP Value Added Reseller and member of Global SAP Partner Edge Build program. We provide services in SAP UI_UX, SAP ERP, Cloud Enablement, IoT, Enterprise Mobility, Machine Learning, Blockchain, and Healthcare.

Crave InfoTech has earned a place for itself in the Life Sciences; Pharmaceutical and Healthcare industry by developing an in-depth knowledge in this sector and providing multiple home-grown solutions using SAP Mobility. Crave believes in becoming a partner to the client organization by taking ownership of their digital transformation and reducing total cost of ownership by up to 80% using an agile and rapid innovation model.