



"With GuiXT, we were able to accumulate more data to create the reports we needed to meet our reliability goals",

- Jason Moore, Business Analyst, Marathon Oil

Marathon Oil Corporation (MOC) is an international, independent energy company engaged in exploration and production, oil sands mining and integrated gas. Based in Houston, Texas, the company has a strong portfolio of assets delivering defined growth leveraged to crude oil production with exploration upside. The company's operations are located in the United States, Angola, Canada, Equatorial Guinea, Ethiopia, Gabon, Kenya, the Kurdistan Region of Iraq, Libya, Norway, Poland and the United Kingdom.



THE CHALLENGE

Marathon Oil's strong and stable base assets are the foundation for the company's current production which generates substantial free cash flow. High operational reliability, disciplined investment and a competitive cost structure capture value from these assets.

High operating reliability is central to Marathon's ability to profitably grow production. Since 2009, they have seen a direct linkage between this key aspect of operational excellence and increased production and revenues. As part of this initiative, the long-term mechanical reliability of key process equipment needed to be optimized in order to support operational excellence to drive profitable production growth.

MOC has a strong commitment to both HES (Health, Environment, and Safety) requirements and Net BOE (Barrels of Oil Equivalent) growth. From a maintenance standpoint, they needed a well-oiled machine which meant capturing the right data so they could plan and schedule activities to prevent or predict failures and keep assets and processes operating. Scheduling

maintenance personnel needed to be done based on the importance of the work in relation to production requirements, the duration of machine downtime and its consequent effects on production.

Ensuring all the required tools, permits and materials are available is also a critical part of scheduling maintenance work. And other than expanding the labor force, experienced technicians and operators were scarce in South Central Texas, so they needed to use their resources in the most effective way possible.

Maintenance

- Capture real relevant coding from predefined catalog
- Setup standard tagging conventions and meaningful hierarchy
- Shift from reactive to preventive to predictive
- Maximizing uptime while minimizing costs

Materials

- Minimize warehousing costs with on time delivery and critical spares
- BOM's

Labor

- Making the most of maintenance teams' valuable time
- Charging time and materials to appropriate partners on a well to well basis

Planning and Scheduling

- Determining the job priorities, ensuring that required tools, permits and materials are available

START WITH THE BASICS

MOC learned from their international production offshore operations that they needed something for onshore with less complexity. They needed to capture meaningful data points such as failure codes, effect on system, detection method, priority, etc., but wanted to get away from long text when doing maintenance on an asset.

They started the onshore project by asking questions like what a casual user would need when using SAP. They came up with 3 common areas of Plant Maintenance—Notifications, Work Orders, and Equipment hierarchy. They needed the technicians to request work, view work, and interact with the equipment and functional location hierarchy quickly and efficiently.

Offshore to onshore

Platforms are different than onshore well facilities.

Reduced complexity

The level of detail required on a regular basis isn't as necessary.

Capture data

Failure codes, effect on the system, detection method, priority, etc. NOT secondhand long text notes.

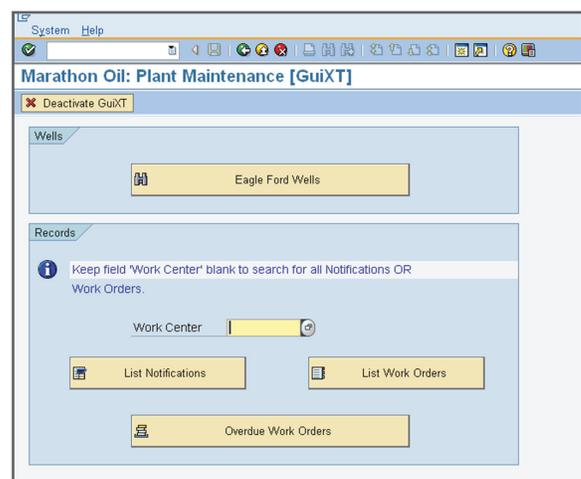
MOC not only looked at it from a first-timer perspective but also wanted it intuitive enough to minimize training. Doing this also helps build user acceptance. With little effort, MOC used GuiXT to simplify a few screens, and received immediate approval, even though they were capturing the same data as the Offshore plant!

HOW TO GET THERE

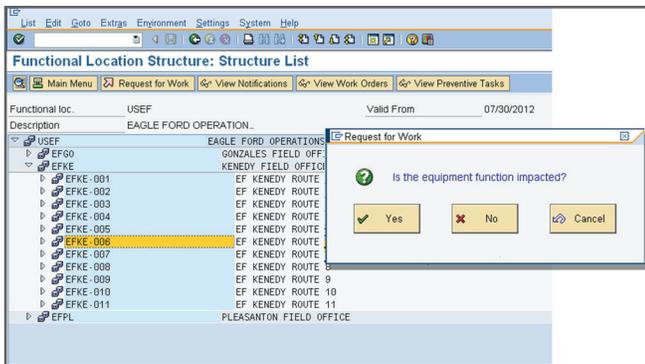
Simplifying the SAP screen required showing users a business process that made sense to them, which was easy to navigate with big push buttons. They wanted to customize based on user roles which was tied to work center or security role of the plant. Based on their user role, when logging into SAP, it will present a specific home screen. This one screen was developed in 20 minutes by a Business Analyst using the GuiXT Developer Toolkit. The Business Analyst had no programming background, but created this launch pad to provide instant access to any transaction, eliminating the need to memorize codes and save time.

The menu bar is simplified and meaningless buttons that intimidated the user were removed. Selecting the Eagle Ford Wells button will take the user right into their functional location hierarchy. The List Notifications and Work Orders screens were based on the user's plant as a default, or the user can type in a different work center to use specific notifications and work orders to that work center. Any important technician criteria from the normal SAP screen can also be added.

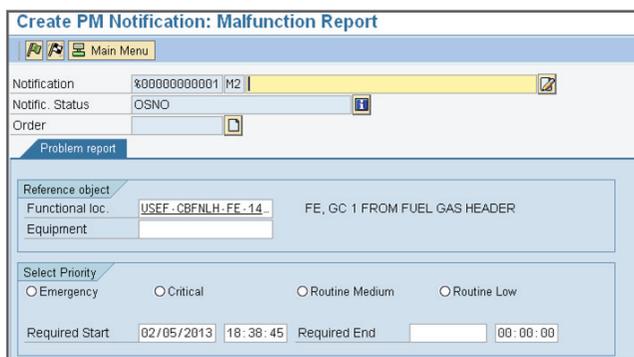
A new button called Deactivate GuiXT was created to easily render the original SAP screens for users that were not familiar with the more complex screens.



If the "Eagle Ford Wells" button is selected, the functional location hierarchy appears. The menu bar was simplified and buttons were added for Request for Work, View Notifications, View Work Orders and View Preventative Tasks, which helped the user understand the screen better. A technician can simply select a specific functional location and "Request for Work". When this happens, a pop-up is displayed that asks if the equipment function is impacted. Depending on what the technician chooses, there is conditional logic that will take the user to the right screen.

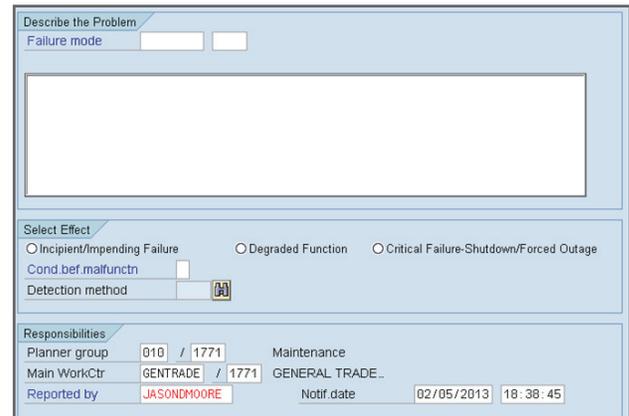


For the Breakdown Notification, radio buttons were created for simplicity instead of typing in long text. The technician simply chooses the priority and "Required End" date.

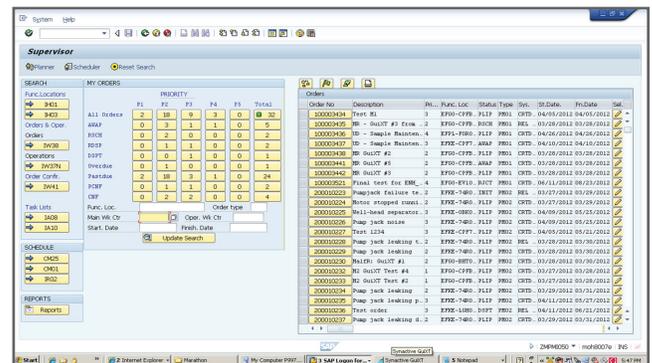


In the Select Effect box, radio buttons were created, along with a Condition or Malfunction field. The biggest impact to this screen was the Detection Method, which is usually found on the second tab under Notifications, and consists of a grid. This was intimidating to users who would often assume it was similar to a spreadsheet

and try to fill it out. With the new screen, there is just one button that goes right to their catalog for the user to choose the detection method.



For planners and schedulers, interpreting and analyzing work orders can be daunting. This customized screen pulls together all the information a Supervisor needs to make decisions faster, improving overall efficiencies and driving more value from SAP. The commonly used transactions are on the left, and the work orders are organized as a matrix of buttons by priority level and work order stage. For more detail, simply select any button and the work orders will be listed. For mass printing, mass material availability checks, mass permit checks and mass changes, multiple work orders can be selected and with one button, these actions can be performed.



With all the data a Supervisor needs on one screen, planning and scheduling of work orders can help prevent any backlog.

THE RESULTS

Aggressive Schedule

- Initially started developing in-house
- In order to meet deadline brought in Synactive professional services

Simple Inputs

There are differences between:

- Tabs and one page
- Drop downs and radio buttons
- Clutter and relevant cleanliness

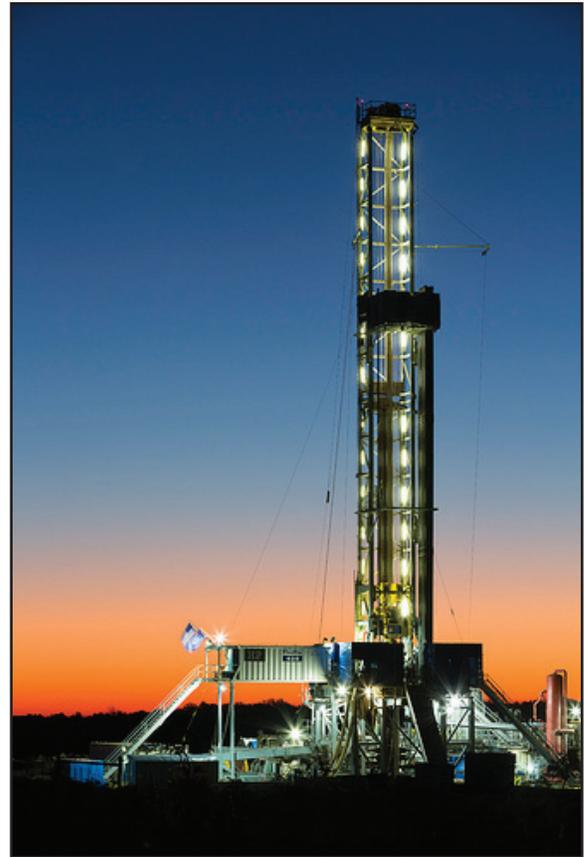
Relevant Outputs

- Still capture the necessary data
- Easier for the user to select an appropriate button than to type anything

Some of the key requirements for the project were to collect the data needed for Plant Maintenance, but also to have a solution implemented in a one month window before the system would be live. Aggressive growth was the key for the company, and with all the new hires, the system needed to be in place. The initial screen was created by a Business Analyst and then finished off by an internal developer with the help of Synactive professional services to meet the deadline.

Very simple inputs were required to make collecting data as easy and quick as possible. Radio buttons instead of long text were leveraged. Additionally, one tab for notifications with the catalog codes as the obvious choice further streamlined the process for the technicians.

For Marathon Oil, the Asset Reliability Team needed convincing that SAP was the right choice. The Business team drove the effort by having a few mock ups created to receive buy-in. The next step was to get the approval of the Asset Management Group who required additional justification. Showing the native SAP screens vs. the role-based views where a technician would only see the launch pad and a couple of screens proved valuable. Immediate buy-in was approved.



The schedule was also a critical factor because a production ready system was required in less than a month. Using the GuiXT tools, Marathon Oil was able to reach its goal and when the initial rollout took place, it only took 30 minutes for the Lead Operators to learn to input notifications.