

CF INDUSTRIES USE IPLAN TO HELP SUSTAIN PRODUCTION OUTPUT



CF Industries is the largest nitrogen producer in the world...

GOAL



CF has made asset maintenance & plant shutdowns part of their corporate strategy, a critical means to the sustainability of their record production levels

CF'S MANUFACTURING DIRECTOR, DAVID LITTLE EXPLAINS;

"Within iPlan we identified the following benefits over and above Oracle, Prometheus Group and RoserConsys;

Increase tool time on plant by using the same 'Software Systems' and workflow for both maintenance and turnarounds.

Standardising CF's approach & reducing CF's reliance on;

- Individuals memories for understanding relationships between pieces of equipment
- Microsoft's excel software as a means for individuals to deviate from a standard approach



SAME 'SOFTWARE SYSTEMS' AND WORKFLOW FOR BOTH MAINTENANCE AND TURNAROUNDS

RECORD VOLUMES

The CF team had a record-setting year in 2017. Gross ammonia production was a record 10.3 million tons, approximately 24 percent higher than the previous record set 2016. This level of production enabled our sales teams to deliver record overall sales volumes of nearly 20 million product tons and record export volumes of more than 3 million tons.



Reduce equipment being missed during a planned downtime window, because the equipment's process dependency is overlooked / unknown.



Improve business continuity from loss of equipment knowledge when personnel leave CF, at the same time through standardization enable a planner or scheduler to work on more than one plant area.

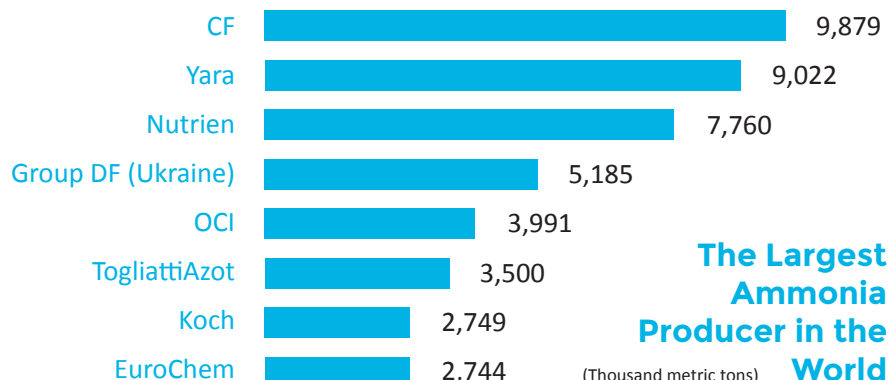


Reduce CF users involved in the maintenance process from having to log in to CFs ERP solution to change work order status.



Ensure when a job is closed all learning is captured and presented to CF users when the asset features in a future PM or defect work order.

- * Nitrogen fertilizers and chemicals manufacturing company, focused on North America
- * Largest production base and distribution network in North America with seven manufacturing facilities, 24 owned plus additional leased distribution facilities
- * Largest production base in UK with 2 manufacturing facilities



ABOUT



CF Industries is a leading global fertilizer and chemical company with outstanding operational capabilities and a highly cost-advantaged production and distribution platform.



Our 3,000 employees operate world-class manufacturing complexes in Canada, the United Kingdom and the United States.

We serve our customers in North America through an unparalleled production, storage, transportation and distribution network. We also reach a global customer base with exports from our Donaldsonville, Louisiana, plant, the world's largest and most flexible nitrogen complex.

Additionally, we move product to international destinations from our Yazoo City, Mississippi, facility, our Billingham and Ince facilities in the United Kingdom, and from a joint venture ammonia facility in the Republic of Trinidad and Tobago in which we own a 50 percent interest.

GLOBAL
CUSTOMER BASE



At our core, we remain a leading operator of chemical plants. Our focus on process engineering and plant operations and maintenance has delivered superior asset utilization as demonstrated by our record level of production during 2017.

Our commitment to and focus on operations and maintenance has ensured that our manufacturing system is among the most reliable in the industry. We leverage our scale to bring together tremendous expertise, allowing us to share safety processes along with operational and engineering knowledge across our network. This encourages continuous improvement

\$35 MILLION ANNUALLY

Following the acquisition and assumption of full operating control of CF Fertilisers UK, we have increased asset utilization by nearly 20 percent while delivering synergies in excess of \$35 million annually.