



# Forwood Critical Risk Management (CRM) CASE STUDY



## Leveraging Forwood To Deliver Strong Safety Performance

### ► The Client

Alcoa Corporation (Alcoa) is a multinational organization synonymous with operational excellence and leadership in the production of Bauxite, Alumina, and Aluminum products.

Over the last 130 years, Alcoa has played a pivotal role in changing the world with affordable, light-weight aluminum that has transformed many industries.

Recognized as the inventor of the aluminum industry, Alcoa has delivered breakthrough after breakthrough in best practices that lead to efficiency, safety, sustainability, and stronger communities wherever they operate.



### The Background ◀

Alcoa has a goal of zero fatalities and zero serious injuries (life-threatening or life-altering injuries and illnesses). This goal is unwavering and one that Alcoa will relentlessly pursue.

In 2016, Alcoa went through a major restructure, and the newly formed Alcoa Corporation was left with various systems, software, and reporting tools that were not fully integrated. Critical Risk data was not standardized, and a global view of critical risk management was limited.

The Alcoa Global Critical Risk team believed that a standardized approach to fatality prevention with advanced reporting capabilities and predictive analytics would greatly assist their journey to a sustainable fatality-free work environment.



THE POWER TO BE  
FATALITY FREE

## ► The Challenge

Achieving zero fatalities and zero serious injuries in a global organization that operates in many different countries with vastly different cultures is a challenging task. Alcoa needed a proven, robust system that delivered results. Specific solution requirements included the following:

- ✓ A laser focus on fatality prevention (not general safety modules that could be adapted)
- ✓ Seamless integration with the existing Environment, Health, Safety and Sustainability (EHS&S) solutions
- ✓ Incorporate online and offline capabilities so that the system could be used at all Alcoa operations, including those that have poor connectivity
- ✓ A simple, easy to use Mobile APP and Web Solution Interface that ensures every person can participate in fatality prevention
- ✓ Contain an action management tool and an advanced reporting tool that transfers key data to existing Alcoa systems
- ✓ The ability to be rapidly deployed (as the solution needed to be fully available in weeks, not months)
- ✓ Be able to assist Alcoa to move from reactive safety metrics to advanced proactive data analytics
- ✓ Contain Industry Best Practice Critical Control Checklists (content) and the ability to add custom Critical Control content, if needed
- ✓ Multi-lingual capabilities that included as a minimum French, English, Portuguese, Spanish, Norwegian, and Icelandic
- ✓ Be a cost-effective and sustainable approach that materially contributes to Alcoa achieving its short and long term safety goals

“ When you implement CRM, it makes a huge difference to your fatality prevention program. It breaks down barriers with language and the culture. Although there are vastly different cultures from site to site, CRM enables standardization through a common understanding of the fatality risks and their critical controls. Forwood CRM helps us achieve that unity of language and understanding in the control verification process. When everyone is doing the same thing, the fatality prevention program becomes far more effective. ”

**Belinda Stuckenberg,  
VP EHS & Risk,  
Alcoa Corporation**





## ► The Solution

After a thorough global assessment and external discussions with other corporations using the Forwood Critical Risk Management (CRM) System, Alcoa decided that CRM was the best solution to assist in preventing fatalities within their operations.

Forwood deployed the technical CRM system within six weeks and Alcoa immediately began conducting critical control verifications in high-risk areas of their business.

The Alcoa Safety and Operational teams underwent a 'train-the-trainer' program and was deployed across 25 sites in 9 countries in just over six months. With a standardized program, Alcoa and Forwood localized the delivery to each regional audience.

A key success factor in the rapid deployment of CRM is Forwood's turn-key solution. The system comes complete with preloaded world benchmark critical control checklists aligned to each site's risk profile. This approach accelerates the deployment and ensures more time can be spent on training and coaching rather than developing performance standards and critical control content over many months.



25 Sites



9 Countries



6 Months



*“ The Forwood technology and implementation teams are what separates Forwood from a lot of other companies in their ability to support their customers. With many out-of-the-box applications, you get the application and the box, and nothing else. With Forwood, the customer service is what you would expect from a member of your own team. ”*

**Ben Maxson,  
Global Critical Risk Manager,  
Alcoa Corporation**



**THE POWER TO BE  
FATALITY FREE**



## ► The Results

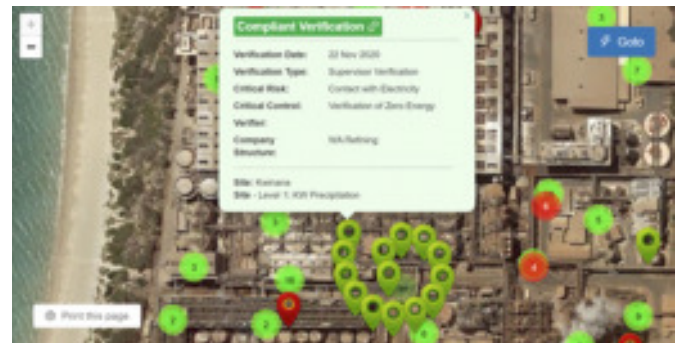
Alcoa Corporation set bold targets for critical control verifications in 2020. After conducting 48,000 verifications in 2019, Alcoa more than tripled this number the following year. CRM enables standardization through a common understanding of the fatality risks and their critical controls.



### Increase in the number of high-quality Critical Control Verifications

In addition to increasing the number of high-quality critical control verifications (task-based coverage), Alcoa also ensured that adequate numbers of verifications were conducted geographically (work area coverage).

This strategy provides Control Owners with data to sample and evaluate the effectiveness of Critical Controls by area. Accidents can happen anywhere, so control compliance and control effectiveness also need to be assessed by area. This data is then accessed by accountable managers and risk owners to action and build strategies to reduce non-compliance.

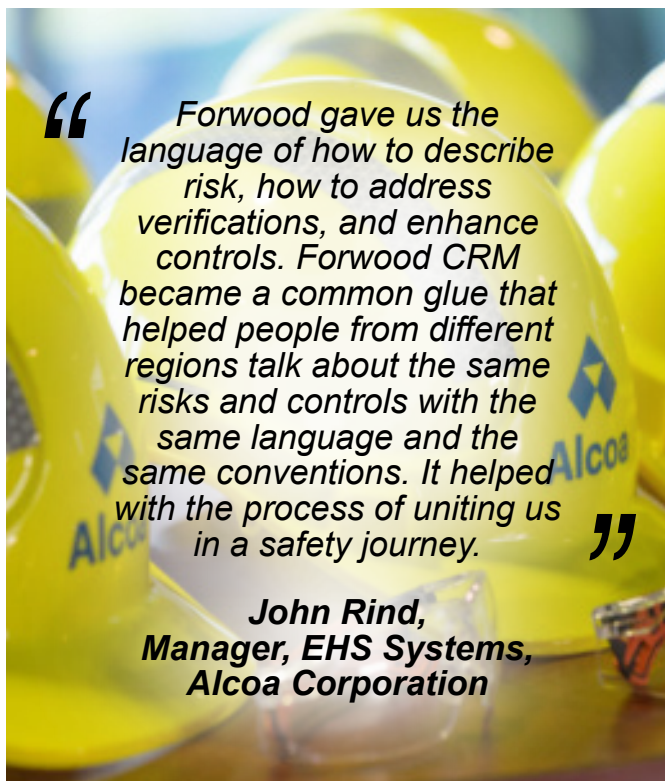


### Coverage throughout all areas of an Alcoa Process Facility

CRM promotes safety engagement at all levels of the organization. High-quality data from each tier provides deep insights into risk exposures, enabling leaders to intervene with actions that prevent failures. Alcoa has also found that CRM has increased control effectiveness so that in the event of an unexpected failure, controls are more likely to fail safely.

Alcoa's investment in CRM paid significant dividends in early 2020 when the COVID-19 pandemic hit. Alcoa immediately used Forwood's Verification System to conduct COVID Safe Checks and keep operations running in hard hit areas like Brazil. This CRM for COVID success story was presented by Alcoa to the International Council on Mining and Metals (ICMM) in August 2020. The presentation can be viewed and downloaded at the Forwood [website](#).

There have been many benefits from implementing CRM, but from a fundamental perspective, Alcoa now has a common risk language among all employees and contractors. Forwood CRM has helped not only unify, but further reinforce Alcoa's commitment to preventing worker fatalities.



**John Rind,  
Manager, EHS Systems,  
Alcoa Corporation**