

The background of the entire slide is a dark blue gradient with a white wireframe pattern of jagged mountain peaks. A dark blue rectangular box is centered in the upper half of the image, containing the text 'RFID JOURNAL' in white. Below this box, the words 'DIGITAL SUMMIT' are written in a white, sans-serif font.

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Proximity / Contact Tracing: Meeting challenges head on



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About Nutrien's NPK Operations



Nitrogen Operations

Key Facts:

- Third largest global nitrogen producer
- 14 facilities in Canada and the US
- Large-scale facility in Trinidad is well located to serve key import markets



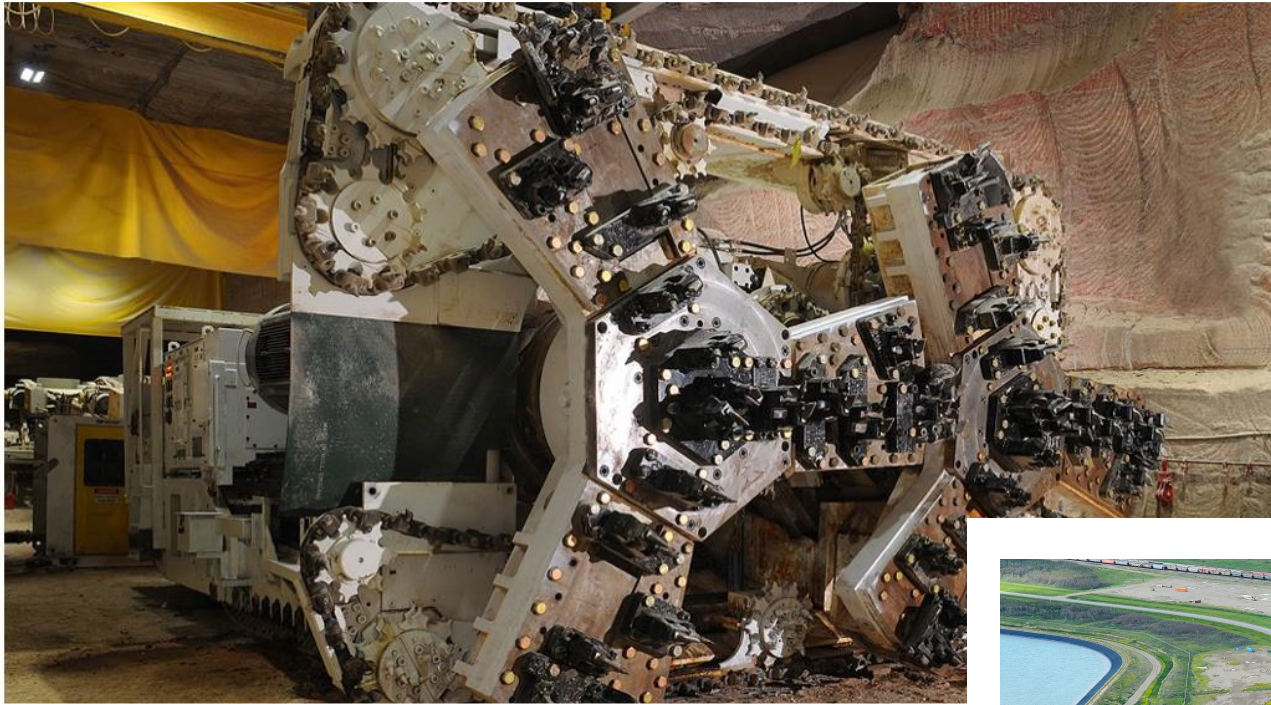


Phosphate Operations

Key Facts:

- Second largest North American phosphate producer with nearly 3 million tonnes of phosphate finished product sold annually.
- 2 large phosphate facilities in the US with integrated mining, in addition to 4 smaller upgrading facilities





Potash Operations

Key Facts:

- Largest global potash producer with ~18 million tonnes of production capacity.
- 6 underground mines + 1 solution mine
- Extensive distribution system in North America; partner in Canpotex, a premier global potash exporter



Objective

Implement a proximity monitoring / contact tracing solution across Nutrien that meets business and technical requirements and provides a safe working environment for employees and contractors.

Requirements Included:

- **Capabilities** - Provide contact tracing and social distancing features. Audibly notify personnel when within 6 feet of another tag. Able to report when tags have been in close contact for a specified duration to provide contact trace reporting when required
- **Technology** - Meet technology and cyber requirements for deployment – intrinsically safe, cyber approved, technology supported
- **Ease of implementation** - Minimal setup, configuration and support
- **Scalable** - Ability to be deployed at all N&P locations including Corporate Offices
- **Expandable** - Ability to expand proximity tracing into Connected Worker platform. (preferred)

Objective | Challenge | Solution | Outcome

Challenge

Below were some of the challenges we faced:

- Implementation of technology across all our sites in short timeline
- Deployment of systems with company travel restrictions
- Management of systems with limited support resources onsite
- Support 2 large Turnarounds (Plan Maintenance Outages)
- Organizational Change Management

Objective | **Challenge** | Solution | Outcome

Solution – Triax Proximity Trace

Proximity Trace is a solution that consists of a wearable sensor (**TraceTag**) to detect close contact interactions. A flashing red visual alert and audible alarm is triggered on a worker's **TraceTag**. As an optional feature, the alarm gets progressively louder if the worker neglects to correct their distance. Workers also have the ability to disable the alarm for a period of time for acceptable close contact work. All worker interactions, including duration, time and date, are passively collected on the **TraceTag** and transferred to the cloud via **Gateway's** setup at the site and digitally.



Features: Visual and audible alarm when within 6 feet; alarm can be programmed to get progressively louder; no connection to IT infrastructure; remote battery life monitoring; custom reports support

Benefits with solution:

- Quick implementation
- Custom reporting
- Supports Connected Worker platform
- Not new to industry. Core business
- Long battery life (6-8 weeks)



Objective | Challenge | **Solution** | Outcome

Outcome

There were many successful outcomes from the deployment of our Proximity / Contact Tracing solution.

Highlights:

- Implemented a solution that provided a safer working environment for our employees and contractors
- Eliminated inefficiencies with the initial manual process of contact tracing
- We rolled out this new technology and transitioned to support in record time
- Rolled out the solution across 18 Nitrogen and Phosphate sites, 1 Potash Site and 4 Corporate Offices by distributing and managing 9,000 plus trace tags
- Safely and efficiently supported 2 large turnarounds

Objective | Challenge | Solution | **Outcome**

THANK YOU

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