March 2nd, 2017

Re: Digital Turnaround Implementation Project (DTIP)

Dear Orion Turnaround contractor,

To further improve safety and efficiency, Syncrude Canada Ltd. (Syncrude) will be undertaking a Digital Turnaround Implementation Project (DTIP) for its upcoming spring 2017 Orion Turnaround.

DTIP will see the use of Radio Frequency Identification (RFID) badges and wireless technologies to enhance worker safety and improve efficiency during the Orion Turnaround. This initiative reinforces Syncrude's commitment to the safety of everyone on site and our collective journey to achieving *Nobody Gets Hurt*.

The RFID badges can support unit evacuation and mustering activities and are also equipped with a panic button for emergencies. Badges will also monitor individual work schedule compliance to assist in fatigue management and provide near real-time location information of contractors and Syncrude employees within prescribed work areas during the Orion Turnaround. Location and other data sources, such as workforce schedules, will be combined and analyzed in collaboration with our DTIP implementation partner. This will enable us to identify and mitigate barriers, such as delays in permitting or congestion, workers may encounter during the Orion Turnaround. We know our turnaround workforce wants to be as productive as possible and this is a tool that will help achieve that.

Effective April 27th, all contractors and Syncrude personnel explicitly identified as supporting the Orion Turnaround will be required to wear an RFID badge as part of their mandatory PPE. Starting March 2017 and leading up to the commencement of the Orion Turnaround, contractors and Syncrude personnel will be receiving their RFID badges as part of the onboarding process with Syncrude. Contractors already on site will be identified and receive their RFID badge through contractor-specific DTIP project awareness sessions.

During the onboarding and awareness sessions, all contractors will receive an overview of the DTIP project prior to obtaining their RFID badge. At the conclusion of these sessions, workers will be requested to sign a Consent Form detailing how their personal information will be collected, used, protected, and disclosed. The RFID badge will be released to the contractor after the Consent Form has been signed. These devices have been used successfully at other oil sands operations and fit with Syncrude's long-term vision for improving our ability to safely and efficiently execute turnarounds.

Regards,

Steve Agar

Turnaround Event Manager

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The DTIP solution provides enhanced safety management and supports productivity improvements by incorporating employee, contractor and asset tracking technology, and analytics
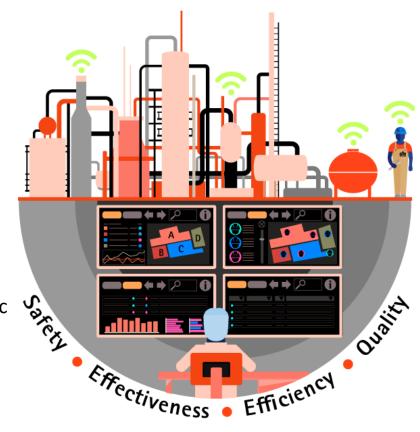
The Challenge to Solve

Safety risks heightened due to thousands being onsite conducting high volume work near operating units, and turnaround work efficiencies

The Opportunity

Enhanced Safety and Productivity Management on site:

- Real-time panic alarm monitoring
- Enhanced unit evacuation capabilities
- Support incident investigation
- Capture data to support tactical and strategic decisions to mitigate safety incidents and improve workforce productivity
- Fatigue Management: Analyze fatigue vs. incidents, evaluate fatigue/incident prevention

What is being implemented?

RFID badges, Wireless Access Points and a Turnaround Operation Centre

Who is impacted?

~4,000 contractors and a select number of Syncrude employees

When is this happening?

Design and installation of infrastructure is underway now. Go-Live set for April 27th

Where is this happening?

Conversion, Hydroprocessing, Utilities & Offsites as well as select buildings and entry points associated with the 2017 Orion Turnaround

Safety • Effectiveness • Efficiency • Quality

Frequently Asked Questions (FAQs)

1. What is RFID technology?

   RFID stands for radio frequency identification. RFID is a term used to describe technologies that use radio waves to identify people or objects. The technology used in this pilot uses two main components: wireless radios (also known as access points) and wireless badges.

   Wireless Access Points (APs) are placed in and around the plant site. The APs connect to one another through a wireless local area network. The APs form a 2.4 GHz wireless network that communicates with the badges.

   Each badge has a unique media access control (MAC) address and communicates with the wireless radios to provide the badge's MAC address, battery status and panic alarm location, if activated. This information is sent to the wireless radio network and is encrypted before being sent to a server on-site. The server takes the information then calculates location and other events based on the information received. The information is then displayed through a secure web application which displays the information in dashboards.

2. Why is Syncrude doing this?

   Two primary factors:

   a. *To implement enhanced safety processes for turnaround activities*
   b. *Identify and remove barriers resulting in improved workforce productivity*

3. Is the RFID badge a GPS tracking device?

   No. GPS (or Global Positioning System) devices rely on communication with satellites over a wide geographical range. The RFID badges being used for this application are only capable of communicating with wireless access points, and the communication footprint is limited to where the wireless access points are installed.

4. Is wearing the RFID badge mandatory for the Orion 2017 TA work sites?

   Yes. The RFID badge is considered part of your standard PPE. If observed not wearing your RFID badge while working on the Orion Turnaround you will be requested to stop work and obtain your RFID badge before resuming work again.

5. Is the tracking system linked to my pay?

   The system's primary purpose is to support safety processes and removal of productivity barriers. However, the system has the capability of tracking hours worked against the hours submitted and invoiced. Syncrude reserves the right to leverage this data and capability to identify discrepancies with invoices.

6. Is Syncrude partnering with an external organization to assist with this project?

   Yes. Accenture, a global consulting firm, has been engaged as an implementation partner.

7. What information am I required to disclose about myself or my company to participate?

   Your name, company name, Syncrude ID number and craft will be registered in the tracking system. Information will be provided by Syncrude's security team to its implementation partner team (Accenture) for configuration in the tracking system(s).

8. Can this track the quality of my work?

   No. The technology and services cannot assess, validate or verify quality of work. It is capable of tracking productive time at the workface, but this does not necessarily correlate to quality.

9. What are the metrics being captured?

   Three core items will be tracked during the course of the Orion Turnaround:

   1. *Safety – Panic Alarm monitoring and response*
   2. *Productivity – Time in and out of the workface*
   3. *Progress Performance – Earned time*

10. Will the DTIP replace or modify Syncrude's corporate policies or protocols?

    No. All of Syncrude's corporate policies and protocols will remain in place, and will be enforced.

11. How will compliance issues be dealt with?

    The Turnaround Operations Centre will inform the contractor company of contractors who are not wearing badges at the start of each shift. The Turnaround Operations Centre will also inform Syncrude Turnaround Supervisors of any Syncrude employees who are not wearing badges.

    The badges are considered mandatory PPE, and non-compliance issues will be treated the same as any other PPE non-compliance. Contractor companies will be responsible for dealing with their workers who are not compliant.

12. At the conclusion of the turnaround will recorded metrics be used to remove employees or contractors from future turnaround work or general site work?

    No. The intent is not to use this project to penalize or remove employees or contractors from participating in future turnaround or general site work.

13. May I have access to my personal information during or after the project?

    Yes. You may contact Syncrude's Privacy Commissioner at 780-790-7688 or privacy@syncrude.com to make this request.

14. I understand there will be daily meetings with contractor representatives. What information will be disclosed at these meetings?

    The following information will be in scope for disclosure during daily contractor meetings:

    - *Monitoring and ensuring workplace safety*
    - *Providing emergency response to panic alarms*
    - *Investigating and following-up on incidents*
    - *Monitoring fatigue (work schedule, overtime and consecutive days worked)*
    - *Measuring efficiency and productivity – this information is provided at a summary level and will not include individual information. Contractors will not have access to individual productivity data.*
    - *Identification of barriers and opportunities and plans to address*
    - *Reconciling invoices*

15. Is Syncrude's entire plant being covered by wireless access points and can I be tracked in all areas of the plant?

    No. Only the Conversion, Hydroprocessing and Utilities and Offsites locations explicitly defined for the 2017 Orion Turnaround have been outfitted with wireless access points and RFID badge tracking capabilities. This also includes entry/exit points, walkways, trailers, buildings, laydown yards and other physical locations where contractors or Syncrude employees may frequent during the turnaround event.

16. Where does RFID tracking physically begin and end at the facility?

    Tracking will start at the primary entry point(s) of where contractors and/or Syncrude employees swipe their Syncrude ID card at the start and end of a shift. This may include security gates, turnstiles or building entrances.

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17. Where is my personal information stored and who has access to it?

    Personal information for the DTIP will be stored in the state of Virginia in the United States.

    Personal information will be secure and protected and pnly authorized Syncrude employees and members of its implementation partner team (Accenture) will have access to it.

18. Will other contractors or my own contractor representative be able to see my personal information?

    Not under normal work circumstances. If a SHE (safety, health or security) incident arises Syncrude's corporate policies governing these areas will apply. If deemed necessary, information regarding the employee, contractor company or individual contractor(s) will be disclosed as part of an investigation process.

19. I understand there will be a Turnaround Operations Centre where RFID badge information will be monitored. Is this centre accessible to anyone who wants to see it?

    Yes. You are welcome to stop by the Turnaround Operations Centre in building 1055. The area will be open 24/7 for the duration of the turnaround.

20. Where can I get more information about the RFID badges?

    Specifications and other product information can be found at the following website: http://www.extronics.com/tracking/aeroscout_products/t2_wifi_rfid_tag

21. How long will information be stored?

    Information will be stored according to Syncrude's data retention policy or based on an explicitly defined duration for the project.

22. Who do I talk to or where do I go If I have questions or concerns prior to the turnaround starting or while the turnaround is underway?

    Your supervisor should be aware of the DTIP project. Speak with them first. If further information is required, you may go to the Turnaround Operations Centre located in Building 1055 where a Syncrude employee and/or representative will answer any questions or concerns or write to the following address: DTIP@syncrude.com.

23. Will there be people checking if I am wearing my RFID badge?

    Yes. Much like how Syncrude has conducted turnarounds in the past, there will be observers who will not only be monitoring the progression of the turnaround, but will be observing for RFID badge

compliance. Additionally, members of Syncrude's SSH&E team, and contract company leadership will be enforcing RFID badge compliance.

24. When I arrive onsite will someone verify my RFID badge?

    No. Your RFID badge will auto-register with the system upon entry into the site. If you are scheduled to be onsite and your badge does not appear on the system, someone will contact you to correct the problem.

25. When I leave site will someone verify my RFID badge departure?

    No. The RFID badge will check itself out after exiting the site.

26. What happens if I lose my assigned RFID badge?

    Upon gaining access to the site, and prior to going to the workface, advise your supervisor that you do not have your RFID badge. Your supervisor will arrange getting a replacement RFID badge for you. If you find your lost RFID badge, please bring it back to the management representative. You must remember to bring your original RFID badge back prior to the conclusion of your work as it will be de-activated, and you do not want your contractor company to be held accountable for the replacement cost of the RFID badge if it is not returned.

27. Will I or my contractor company be responsible for replacement costs for a faulty or broken RFID badge?

    No. We understand the work environment can be tough on electronic devices. While the RFID badges are designed for industrial applications, breakage or faulty badges can be encountered. Simply return the badge to the Turnaround Operations centre in Building 1055 for a replacement.
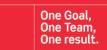
28. Is there a cost to me or my contractor company if I do not return my RFID badge?

    There will be no cost to you individually, but Syncrude reserves the right to seek reimbursement from your contractor company. Post-turnaround a reconciliation of all the RFID badges will be conducted. If your badge(s) are not returned, your contractor company may be levied a $225 charge for each unreturned RFID badge.

29. What happens if I forget to bring my assigned RFID badge to site?

    Upon gaining access to the site, and prior to going to the workface, advise your supervisor that you do not have your RFID badge. Your supervisor will arrange getting a replacement RFID badge for you. You must remember to bring your original RFID badge back to your supervisor or place it in one of the available drop-boxes at contractor exit points or at camp prior to the conclusion of your work as it will be de-activated, and you do not want your contractor company to be held accountable for the replacement cost of the RFID badge if it is not returned.

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30. At the end of my shift can I leave my RFID badge in my coveralls in my contractor company storage area until my next shift?

No. Your RFID badge must remain with you at all times. The RFID badge registers itself when you arrive onsite at the contractor entrance, and unregisters itself when you leave at the contractor exit. If you leave your RFID badge in your coveralls at site it will trigger a "dwell" alarm, which may result in a response from Emergency Response Service. Leaving the badge at site will also impact evacuation and mustering activities since you will be recorded as being at site potentially putting others at risk.

31. Is Syncrude just tracking people or are assets such as vehicles and equipment being tracked too?

Both people and physical assets are being tracked via RFID badges.

32. Are RFID badges only being worn by contractors or will Syncrude employees be wearing them too?

Syncrude employees directly associated with the turnaround will be wearing the RFID badges.

33. Will every contractor and Syncrude employee onsite be required to wear an RFID badge?

*No. Only contractors and Syncrude employees **directly** involved and **explicitly** registered in the 2017 Turnaround resource roster will be required to wear an RFID badge.*

34. Will RFID badges be mandatory to work onsite post-turnaround?

No. RFID badges will be returned to the Syncrude Turnaround Operations team as employees and/or contractors conclude their work.

35. Within what range will I be tracked?

The system is designed to track contractors, employees and physical assets within 50 feet.

36. Can the system tell what level I am on if I am working at height?

No. While wireless access points will be installed at varying levels of the workface, and will connect with your RFID badge, the system is not capable of showing what floor or height you are working at.

37. Does the RFID badge need to be worn externally?

The RFID badge will be attached on a lanyard or to your Syncrude security badge lanyard. It can be worn externally, inside your coveralls or placed in a pocket.

38. Do the RFID badges work outside the plant?

    No. The badges are configured to work in dedicated areas in the Hydroprocessing, Conversion and Utilities & Offsites locations only.

39. The RFID badge has a panic alarm button that can be used to summon Emergency Response Services; does this replace Syncrude's normal Emergency Response protocols?

    No. The panic button is an enhancement to Syncrude's Emergency Response protocols. The panic button should never be used as the primary method of requesting emergency response.

40. How do I activate my panic alarm?

    1. *Grasp the RFID badge*
    2. *Pull back on the yellow tab*
    3. *Press the orange button two (2) times within 3-seconds*

41. What happens when the panic button on the RFID badge is pressed?

    Upon activating the panic button an alarm will be triggered in the Turnaround Operations Centre. The alarm will be captured and the Syncrude representative in the Turnaround Operations Centre will contact Emergency Response Services to activate Syncrude's emergency response protocols. A full response from Emergency Response Services will be conducted.

    In all cases every panic alarm will be logged, followed-up on and documented regardless of validity.

42. What happens if the panic button on the RFID badge is pressed by accident?

    As the RFID badge is housed in a plastic holder which has a sealed tab protecting the panic button, the likelihood of a false alarm should be small. However, if an alarm is triggered by accident, the outlined emergency response procedure will be initiated. You must wait for Emergency Response Services to reach you to verify the alarm is indeed false.

    All false alarms will be logged and documented.

43. Aside from the panic button, can the RFID badge help in other emergency or plant operation situations?

    During an alarm and/or emergency situation location data can be used to understand where groups are in relation to the alarm/emergency. If an individual remains unaccounted for during an alarm/emergency, his or her point-in-time location information can be used to ensure the worker is safe.

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From an operations perspective, location data can be used to ensure areas where heavy lifts, X-Rays or other activities being conducted are clear prior to work commencing. Location data can also be used during an evacuation to account for all individuals.

44. If I hit the panic alarm and I am working at height, how will someone find me?

    The dispatched Emergency Response Services team will conduct a ground search of the area first and will work their way up.

45. Does the RFID badge work in confined space areas?

    No. Confined space coverage is not part of the DTIP scope. You must follow Syncrude's confined space entry protocols and procedures. If you do have your RFID badge with you, please note the following:

    - *In most confined space areas the RFID badge will drop out of coverage and the badge will be held at its last known location until you emerge from the confined space.*

46. I am working as the confined space lookout/watch, if a worker encounters an emergency, and their RFID badge is sitting outside the confined space area, can I hit their panic button?

    Yes. However, if you have radio contact available to Emergency Response Services you should follow all Syncrude emergency response protocols first. If access to Emergency Response Services is not available, pressing the panic button on your RFID badge or one of the RFID badges held in the confined space watch area will send the alarm back to the Turnaround Operations Centre for response.

47. I am a contractor working for a large contractor company and will be attending the primary onboarding center. Where do I go to obtain my RFID badge?

    When you arrive at the primary onboarding area a representative from Syncrude's ID team will provide you with your RFID badge at the same time as your LENEL security badge.

48. I am a contractor working for a small-to-midsized contractor company and will not have access to attend the primary onboarding center. Where do I go to obtain my RFID badge?

    Once you obtain your LENEL (security) badge from the ID Station, immediately present yourself to you Turnaround Leader, Front Line Leader (FLS), or other management representative. The management representative will take your information and attend the Turnaround Operation Center in Building 1055 where they will request an RFID badge for you.

49. My work time has ended, where do I return my RFID badge?

    Upon completion of your work at the 2017 Orion Turnaround you must turn your RFID badge back to the following people or locations:

    - *Your company foreman or supervisor*
    - *The badge administration offices located at building 1055*
    - *Secure drop-boxes located at exit points and in the camp.*

50. Am I responsible for turning my RFID badge on and off at the start and end of each shift?

    No. There is no ON/OFF switch on the RFID badge.

51. What happens if my RFID badge breaks or fails to operate?

    Take the broken or faulty RFID badge to the Turnaround Operations centre in Building 1055. Someone will assess the RFID badge and either correct the problem or provide you with a replacement.

52. Is the RFID badge waterproof or heatproof?

    The RFID badge is waterproof. However, it should not be submerged in water.

    Although design for industrial application, prolonged exposure to high-intensity heat has the potential to damage the device.

53. How do I know my badge is working?

    A green light blinks on the badge to indicate operation.

54. Will information from this project ever be shared outside of Syncrude and its Joint Venture partners?

    Syncrude reserves the right to disclose general information related to the project to external entities.

    At no time will information related to individual contractor workers or Syncrude employees be disclosed.

55. How is fatigue measured? Does the RFID badge measure anything related to biometrics?

    Fatigue monitoring is completed through comparing a contractor's time on-site with pre-defined daily maximum hours and consecutive days on-site. There is no biometric capability on the RFID badges that monitor physical fatigue levels.

56. I was involved in an incident at site. What details will be shared from the system and with whom?

Syncrude's security and safety protocols, and relevant policies will be activated to guide the disclosure of any personal information collected from the Digital Turnaround system(s).

57. Does my union have information on the DTIP and RFID badges?

All Union representatives have received detailed communications and have attended awareness meetings about the DTIP and the RFID badge requirement.

58. Has this technology been used before? For what projects? What were the outcomes?

Yes, this technology and overall service offering has been used across multiple industries including mining and in the oil sands with Shell and Suncor, including on turnarounds.

Outcomes were extremely positive resulting in numerous barriers being removed to enhance safety and efficiency for all parties involved. The technology also contributed to increased dialogue and collaboration with contractors and employees to establish further improvements for future turnaround activities.

59. Are the wireless access points a permanent or temporary installation?

The implementation of the wireless access points is permanent. There may be some access points that are removed and transitioned to other areas post-turnaround

60. Can I use the wireless access points to connect my smartphone, tablet or laptop to the Syncrude corporate network or to a guest Wi-Fi service?

No. While the wireless access points are capable of providing access to Syncrude's corporate network and internet services, their current configuration is not intended to accommodate these services.

61. Are the wireless access points intrinsically safe?

Yes. The wireless access points are intrinsically safe and are designed to work in the operating conditions present at site.

62. Are the wireless access points CSA certified?

Yes. The wireless access points have been verified to be CSA certified. CSA certification references can be found on a decal affixed to the wireless access points, and on the back of each RFID badge.

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63. Is there a risk for the wireless access points or RFID badges to interfere with pre-existing systems or services in the plant?

   No. Both subject matter expert input and an RF Interference study were included in advance of installing and activating the wireless access points and RFID badges.

64. How do I know if my RFID badge is/is not working?

   You will not know. The system will alert the Turnaround Operations Centre if it cannot locate you and you are part of the day or night shift roster. The Turnaround Operations Centre will also receive alerts if RFID badges are encountering errors or if there are issues with their batteries.

65. How long does the battery last in the RFID badge?

   The average battery lifespan of the RFID badges is 6-months.

66. Can a contractor or Syncrude employee change the battery on the RFID badge?

   No. If the RFID badge is deemed to be inoperable due to a battery issue or any other defect, the RFID badge must be returned to the Turnaround Operations Centre in Building 1055. If the RFID badge is opened by anyone other than the original manufacturer, the device will no longer be certified as being intrinsically safe.

67. Could other networks pick-up the RFID badge information?

   Other networks can pick up badge messages, but the messages are limited to 15 bytes (characters) of information. These messages do not have any personally identifiable data, such as location. The APs calculate the location from the 15-byte message.

   The wireless badges only transmit information to the configured APs that are set up in Conversion, Hydroprocessing, and Utilities & Offsite areas. While other networks also use the 2.4 GHz range and could pick up the badge information, the information will be automatically discarded since other networks are not specifically configured for it. In the event that other systems are active in the area, the badge will automatically avoid transmitting the data to those channels to avoid network congestion.

68. Is the RFID technology used in the DTIP the same as the RFID found in credit cards for 'tap and pay'?

   The RFID used in credit cards is passive RFID and differs from the RFID used in the DTIP. The RFID badges in the DTIP are active RFID which requires it to be powered (in this case by batteries) and use the 2.4 GHz wireless band. The credit card tap and pay RFID does not have batteries and is configured to only communicate information when in close proximity to the powered reader (i.e. debit card machine) and communicates on the 13.56 MHz wireless band.

Consent for the Collection, Use and Disclosure of Personal Information from Wireless Badges

I understand that when I am working or when there is a possibility that I might be assigned to work within and around Syncrude's Mildred Lake base plant operations in the Regional Municipality of Wood Buffalo for the spring 2017 Orion Maintenance event or Turnaround (including pre and/or post event work, if applicable) (the "Syncrude Operations"). I will be required to wear a wireless badge that provides location tracking information and is equipped with a panic button (the "**Badge**").

I understand that the Badge and my Syncrude security access card will collect my personal information, including: my name; my Syncrude identification number; my Badge identification number; my location and movement within and around the Syncrude Operations; and my gate security information (including my access and departure times) (together, the "**Personal Information**").

I understand that the Personal Information will be collected, used and disclosed for the following purposes:

- to monitor and ensure workplace safety;
- as part of an emergency response;
- as part of an incident investigation and follow-up;
- Invoice reconciliation; and
- to measure efficiency and productivity (however individual productivity data will only be used and disclosed at a summary level) (the "**Purposes**").

I authorize Syncrude Canada Ltd., its third party service provider Accenture Inc. ("**Accenture**") and my employer, (if my employer is not Syncrude), to collect, use and disclose my Personal Information for the Purposes.

I understand:

- that the Personal Information collected by Syncrude and Accenture will be shared with my employer, (if applicable), as outlined above in connection with the Purpose;
- that the Personal Information will be stored in the United States;
- why I have been asked to disclose this Personal Information, and the consequences of consenting or refusing to consent to the collection, use and disclosure of the Personal Information for the Purposes (including the denial of access to the work areas that require the use of this mandatory PPE); and
- that if I have any questions about the collection, use, disclosure or storage of the Personal Information, I can contact Syncrude's privacy commissioner at: 780-790-7688, or privacy@syncrude.com.

I consent to the collection, use and disclosure of my Personal Information, as described above. I confirm that a photocopy, electronic copy or electronic data confirmation of this signed consent shall be as valid as the original.

Signature: _____

Print Name: _____

PLEASE PRINT CLEARLY

Date: _____

Employer: _____

Syncrude ID No: _____