

A photograph of a K+S Potash train car on tracks. The sun is low in the sky, creating a bright lens flare and casting a long shadow of the train car onto the tracks. The train car is blue and white with the K+S logo. The tracks are made of gravel and steel rails. The sky is a mix of blue and orange from the low sun.

# K+S Potash Canada Roundtable

SIMSA

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January 31, 2018



# Agenda

1. About the K+S Group
2. K+S Potash Canada and Bethune mine
3. Potash Market
4. KSPC Safety
5. Maintenance and Reliability
6. Capital Projects and Technology
7. Land and Sustainable Development
8. Procurement



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# About the K+S Group

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## About the K+S Group

- One of the world's leading suppliers of standard and specialty fertilizers
- World's fifth largest potash producer
- World's largest supplier of salt
- Production sites throughout Europe, as well as North and South America
- More than 14,000 employees worldwide



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# About the K+S Group

## K+S Group

### Potash and Magnesium Products Business Unit



### Salt Business Unit



### Complementary Activities

- Unique position in Europe and specialty fertilizers
- Bethune will strengthen our global presence
- Salt business to improve earnings substantially
- Ongoing cost reductions and efficiency improvements
- Dividend payout of 40-50%

# Shaping 2030



- K+S Group strategy launched in Fall 2017
- Phase 1: Transformation
- Phase 2: Growth
- Maximize production/  
minimize cost



# K+S Potash Canada and Bethune mine

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# Bethune Mine: Introduction

- Bethune mine is a greenfield solution potash mine.
- Saskatchewan's first new potash mine in over 40 years.
- Potash production began in June 2017 and we are on track to meet our 2018 sales plan.
- The gradual extension of the annual capacity to 2.86 million tonnes will occur in subsequent years.



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# Bethune Products

Once Bethune is in production, K+S Potash Canada will extract potash crude salt, which will be further processed to three different products of potassium chloride:

- MOP standard white
- MOP granular
- KCI 99 compacted

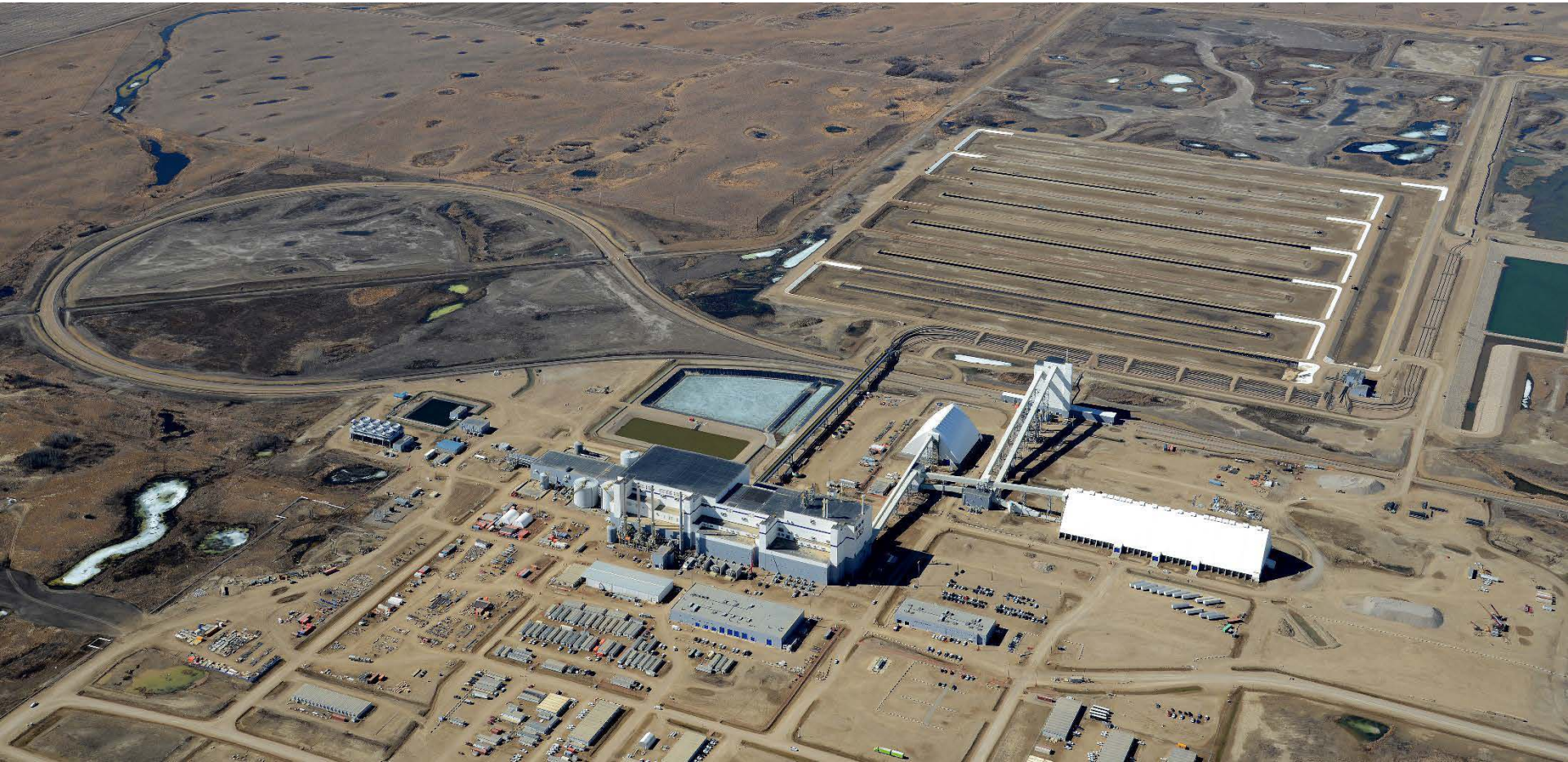
MOP granular and MOP standard are used as natural fertilizers all over the world; KCI 99 compacted is used in a variety of industrial applications.



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# Bethune mine



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# Partnership with Canadian Pacific



- To ensure a rail connection, KSPC partnered with Canadian Pacific (CP). Potash bound for port will be transported by CP from the Bethune mine.
- In spring 2017, CP completed the 30 km Belle Plaine subdivision, a new line of rail that links Bethune mine to existing CP track near Belle Plaine.
- KSPC also completed an additional 14 km of rail line that links CP's new track to a loop at the potash mine's loading facilities and 6 km of storage track adjacent to its line. This ~20 km of line is owned and will be operated by KSPC.



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# Potash Market

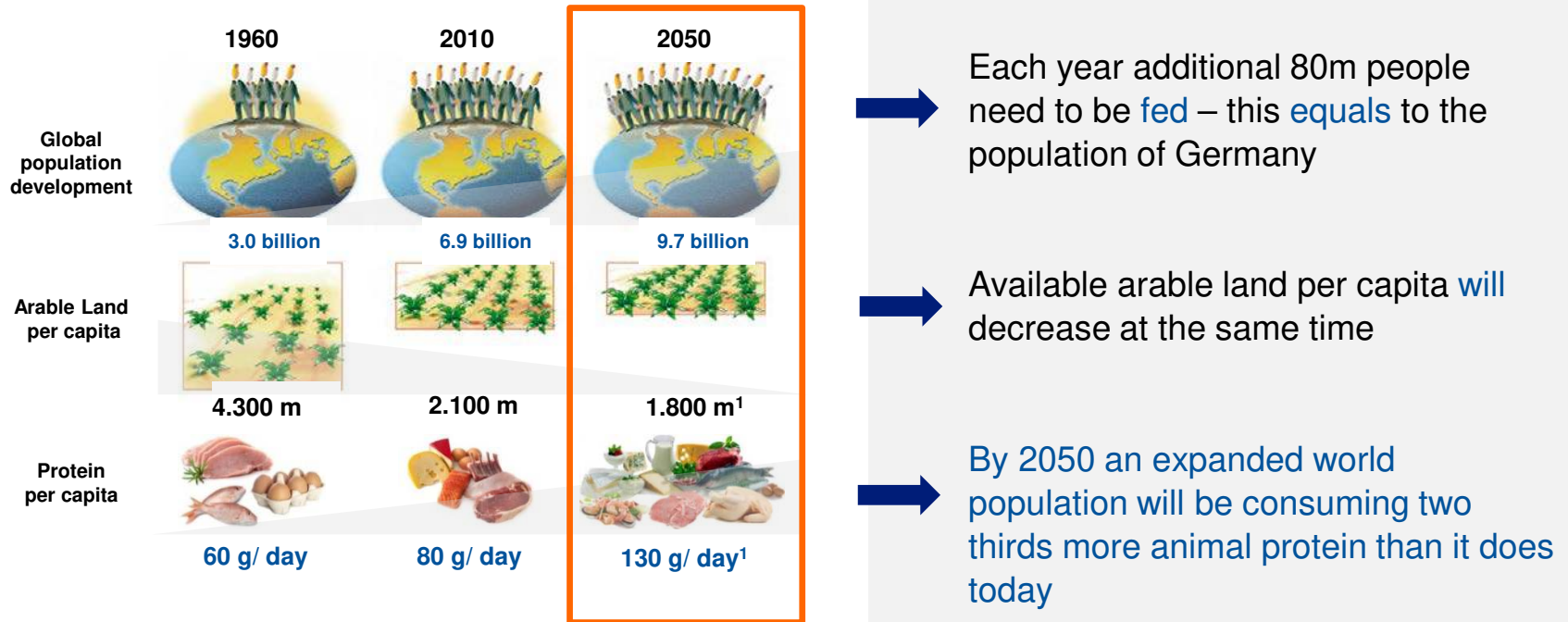
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# Long-Term Dynamics Positive for Fertilizer

## Less arable land – but more protein consumption per capita



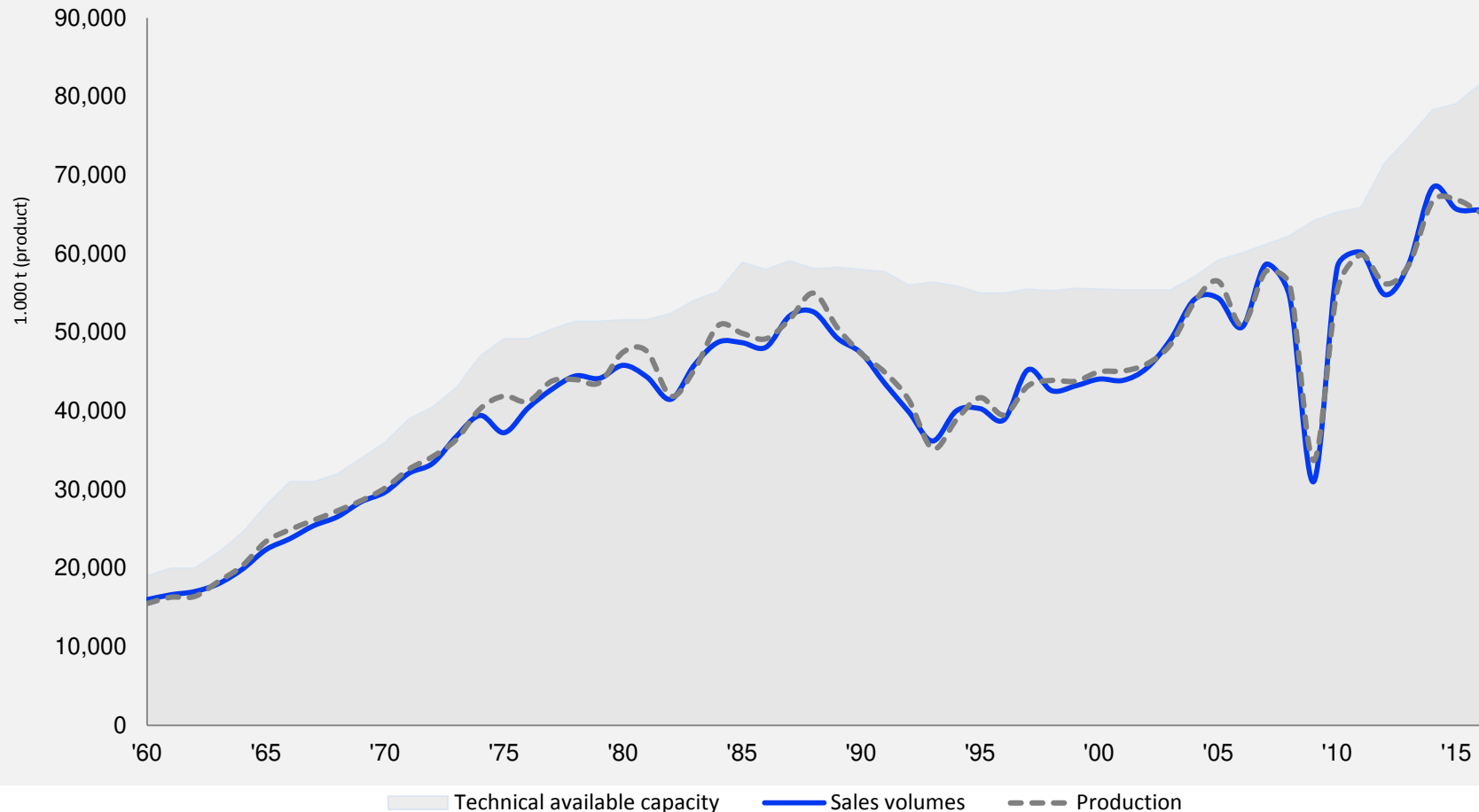
**In 2050, only roughly a quarter of a soccer field will be available to feed one person year round - 80 percent of future growth in crop production will come from yield advancements**

Sources: UN, World Population Prospects, 2012 Revision, UNDP, 2013; FAOStat 2014

<sup>1</sup> FAO 2014 - forecasts based on the expected increase in animal protein

# World Potash Supply and Demand

Production is driven by demand despite continuous excess capacity

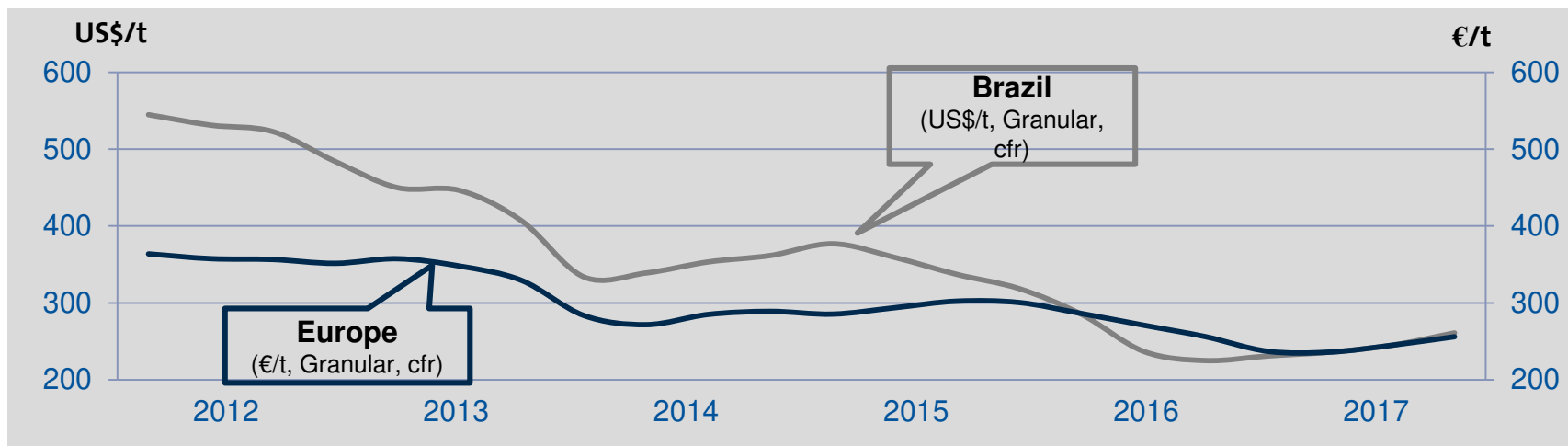


Quelle: IFA (preliminary), K+S; incl. sulphate of potash and low grade potash of about 4 million tonnes eff. (product)

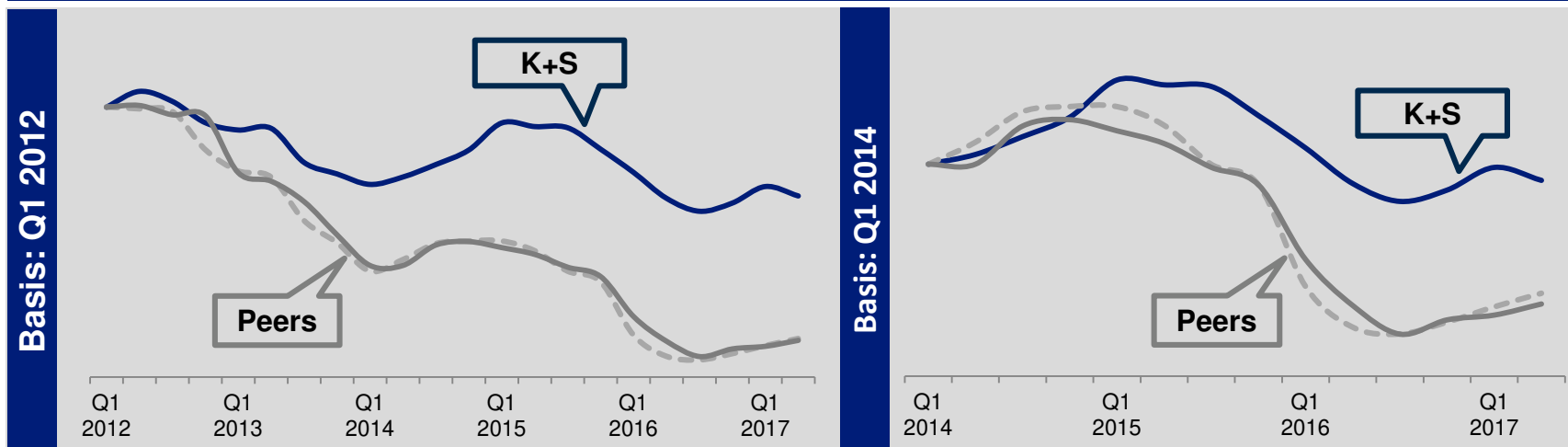


# Potash Price Comparisons

## MOP gran. Europe vs. Brazil (Source: FMB)



## K+S average selling price versus selected peers



# KSPC Safety

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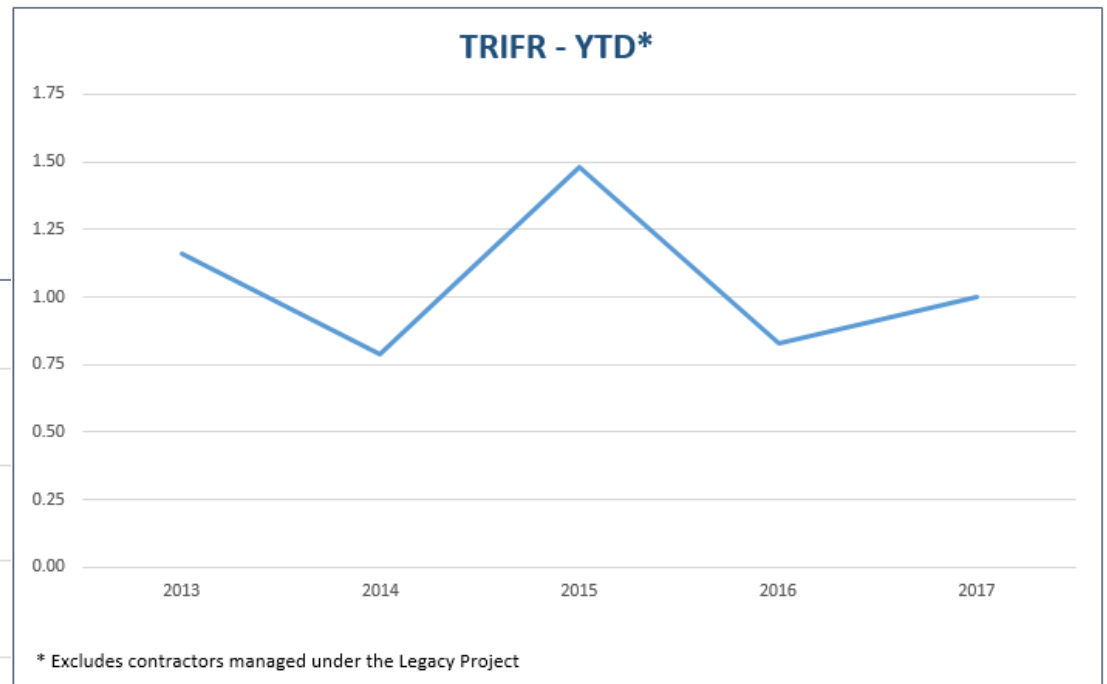
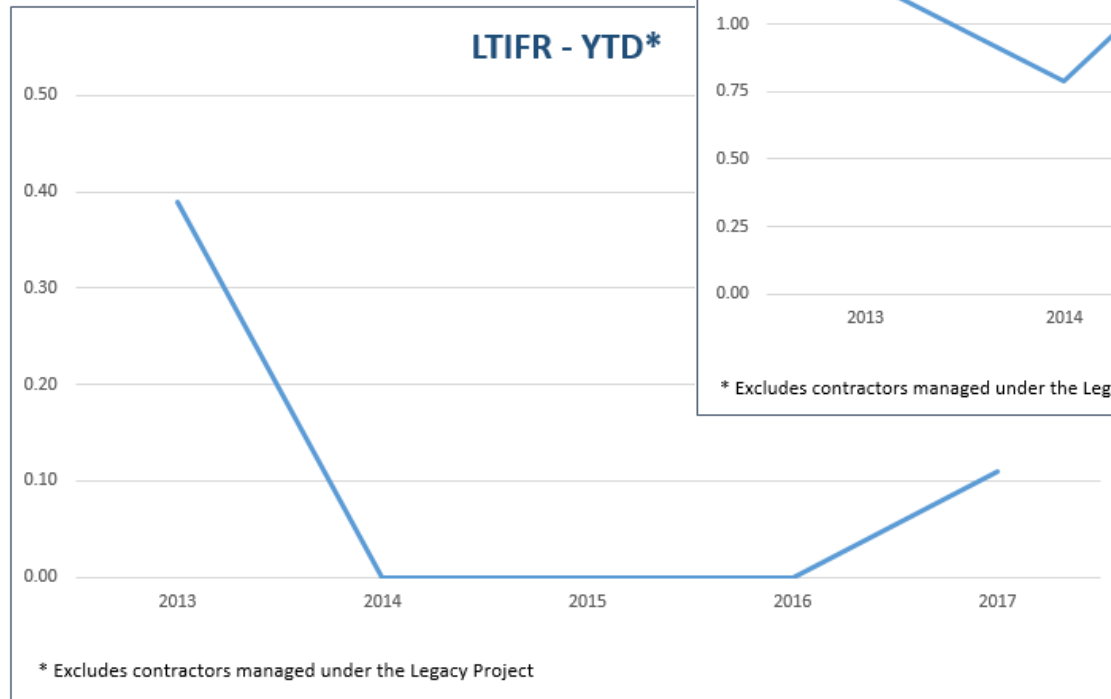
# Safety our top Priority

- SMA Safety Award past four years
- Committed to Mission: Zero
- Excellent safety performance during Legacy Project and Port construction
- Safe transition from construction through commissioning and into operations



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# Safety – Our Top Priority



# Contractor Management

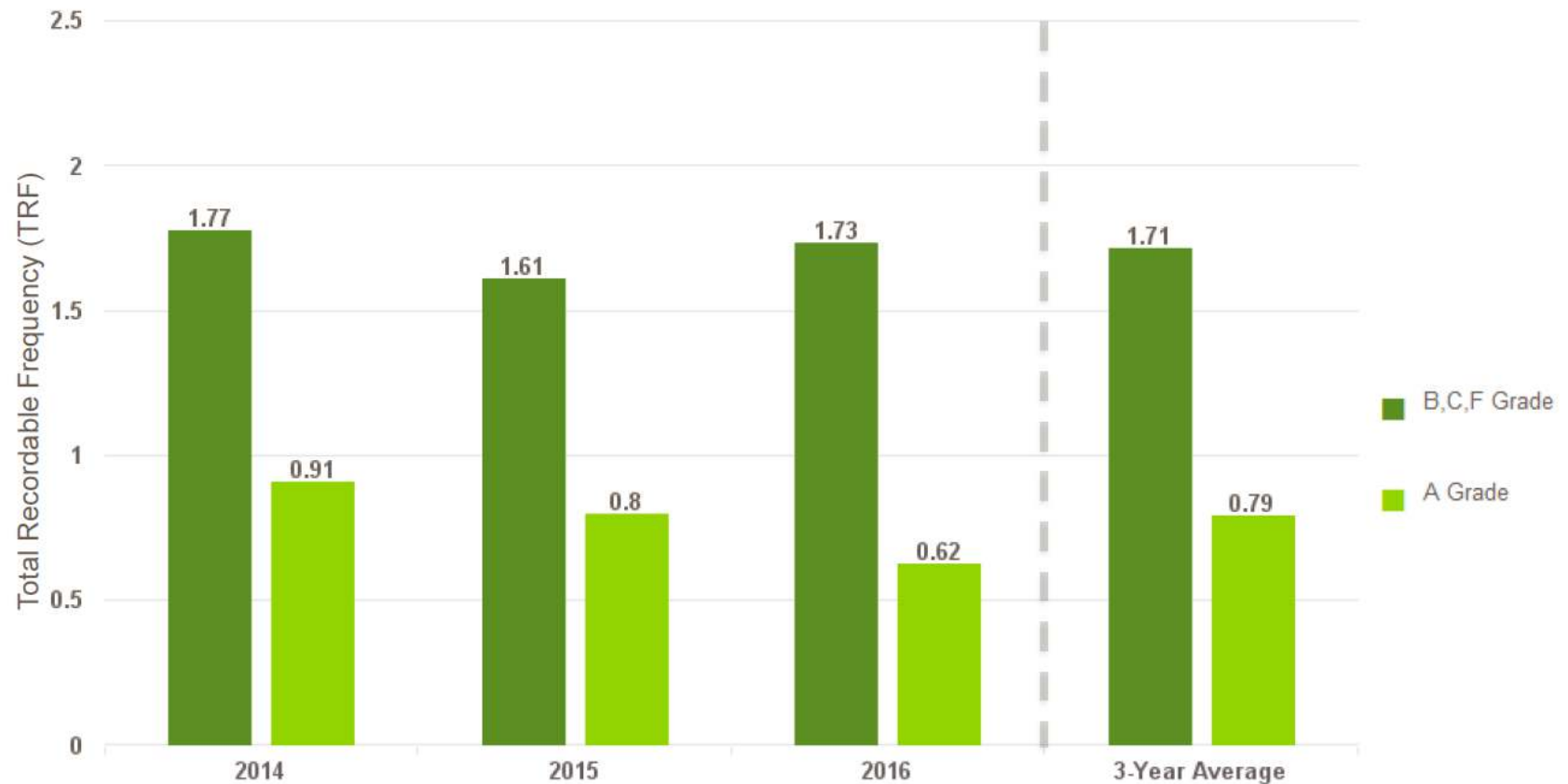
- Health and safety management and performance a primary component of contractor pre-qualification
- ISNetworld for pre-qualification
- > 65% of ISN registered contractors had TRIFR below 1.00
- KSPC managed contractors TRIFR in 2017 was 0.98



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## K+S Contractor Grades vs. TRF

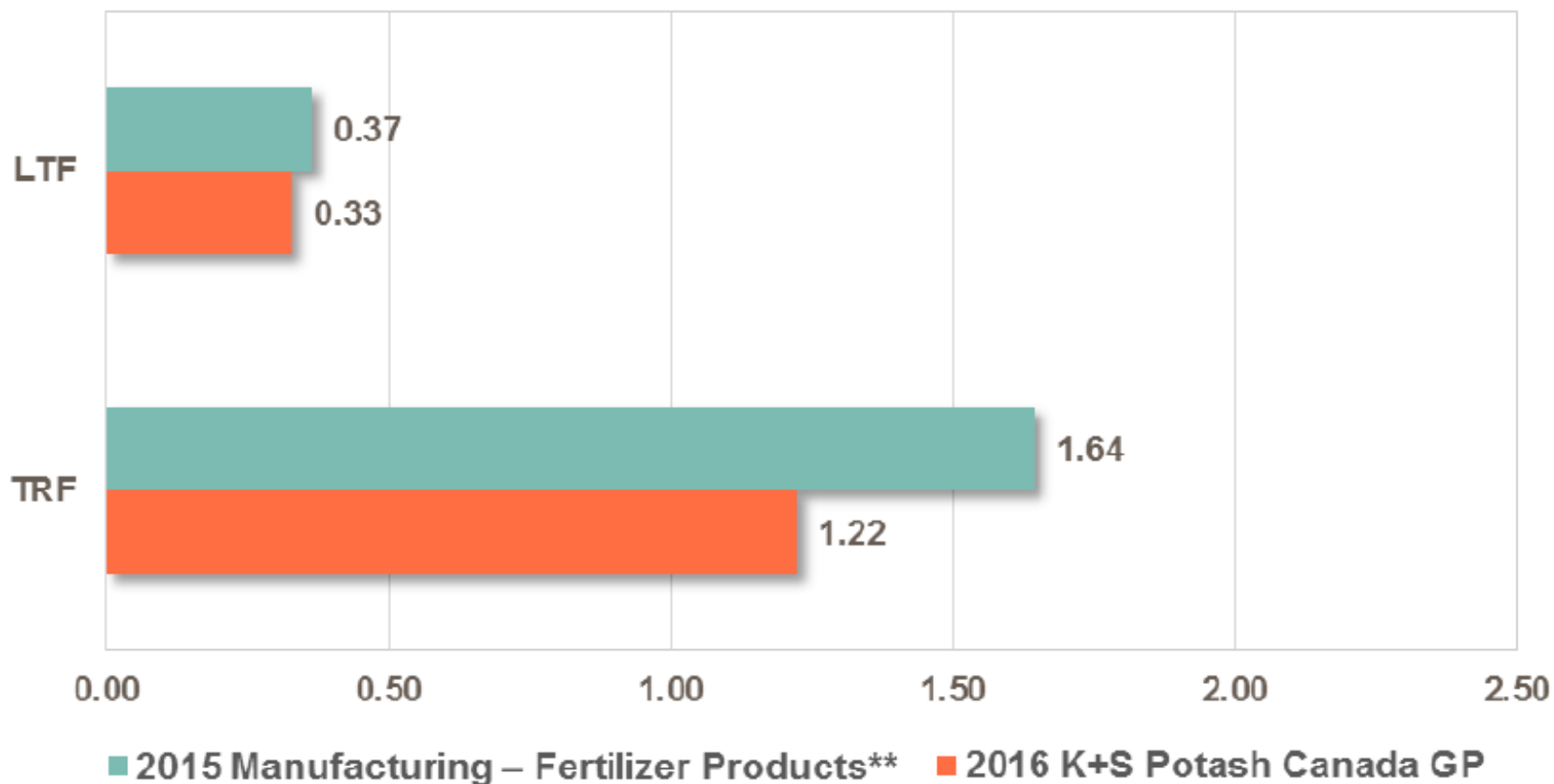
(547 Contractors: Saskatchewan High/Medium Risk, Vancouver High Medium Risk, Pre-Insurance)



In 2016, K+S High/Medium Risk & Pre-Insurance contractors with an A Grade had a **65% lower TRF** than contractors with a Grade of B, C or F.



## Key Metrics Comparison with Industry Average



# Maintenance and Reliability

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# Maintenance and Reliability Vision

- To be world-class in maintenance and reliability performance
- To be transparent and collaborative partners
- To focus on practices that are safe, people-centred, innovative and sustainable.
- To perform an asset management optimization with all necessary technical administrative and managerial actions to maintain the Bethune plant in a safe and sustainable manner.



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# Maintenance and Reliability Mission

- To perform an asset management optimization with all necessary technical administrative and managerial actions to maintain the Bethune plant in a safe and sustainable manner in order to produce potash:
  - In an efficient way (93% equipment availability – 8150 hrs./y)
  - At the best price (1.8% Replacement Asset Value - RAV)
  - In conformity with regulations and policies.



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# Maintenance and Reliability

In order to be successful we need to perform **Proactive Reliability Centred Maintenance** (RCM) instead of traditional reactive maintenance.

For that:

- 70% of our load will be Preventative and Predictive maintenance.
- 20% of our load will be planned Corrective maintenance
- We will have only 10% of unplanned Emergency work



# Contractor Strategy – 80/20 Approach

Target = 80% KSPC employees vs 20% Contractor

## KSPC Employees

- Millwright/Industrial Mechanic
- Machinist
- Electrician (high/medium voltage and motors)
- Instrumentation expert
- Programmer/PCS
- Pipefitter
- Welder
- Overhaul equipment (partial, small and frequent)



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# Contractor Strategy

## Contractor requirements

- Scaffolding
- Painting and sandblasting
- Belt repair – vulcanization
- Insulating
- Rubber lining (with expertise in-house)
- FRP (with expertise in-house)
- Lighting job
- Refractory
- Gas Turbines (with expertise in-house)
- Elevators
- Overhead doors
- HVAC (heating, ventilation & air conditioning, gas fitting)
- Truck and mobile equipment maintenance
- Carpenter
- Boilermaker
- Road and yard maintenance
- Overhaul equipment (big and infrequent)
- Big shutdown



# Organization – Roles and Responsibilities

The maintenance and reliability department is divided in five pillars:

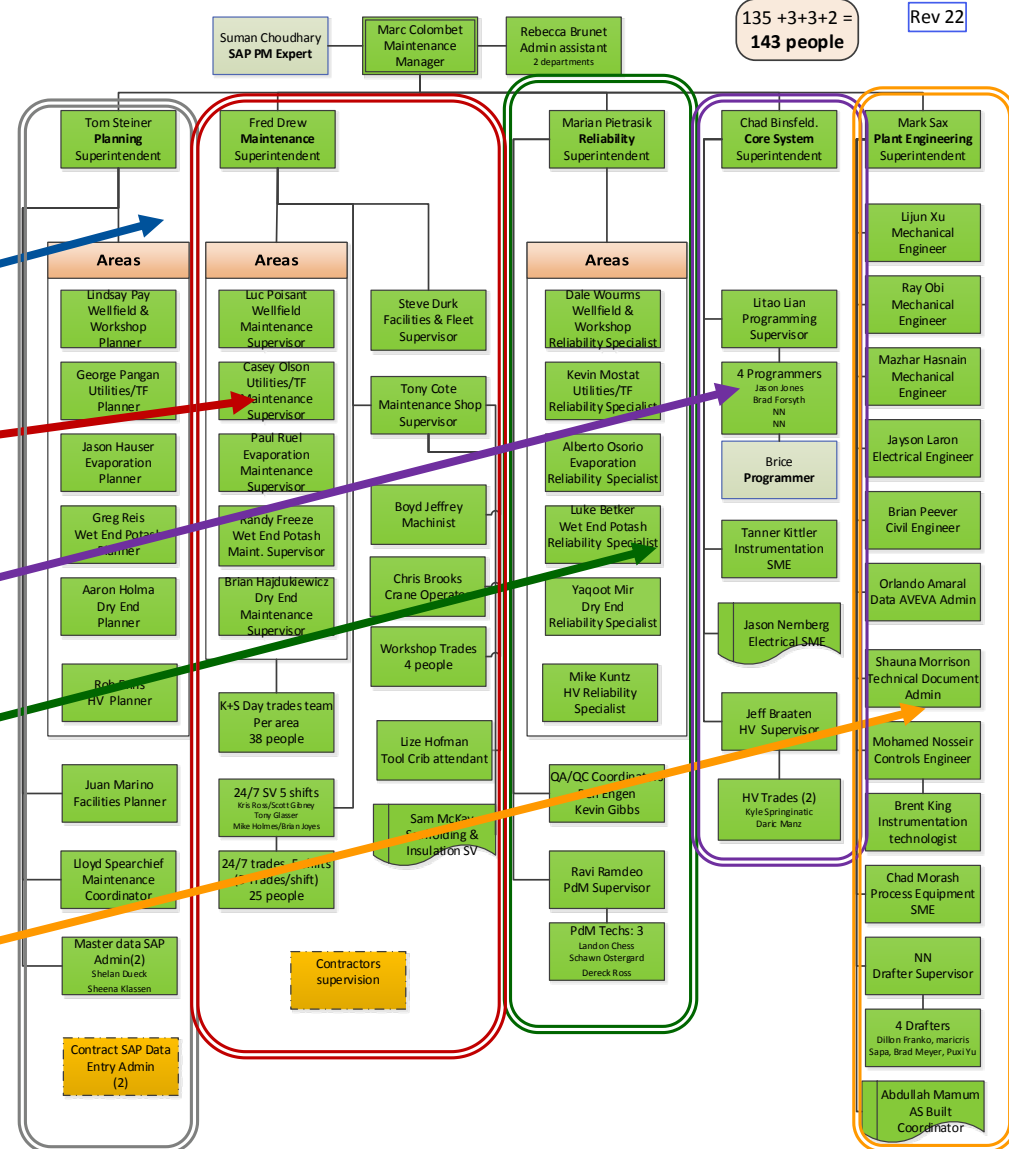
**Planning group**

**Execution group**

**Core System group**

**Reliability group**

**Plant engineering group**



# Capital Project and Technology

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# Capital Projects and Technology



- Major Capital Projects are executed by the Projects and Technology Team
- Team is located in Saskatoon and at the Bethune mine
- Project Responsibility for Bethune mine and Port Moody
- Acting as contact to headquarters in Germany as center of excellence



# Project Execution

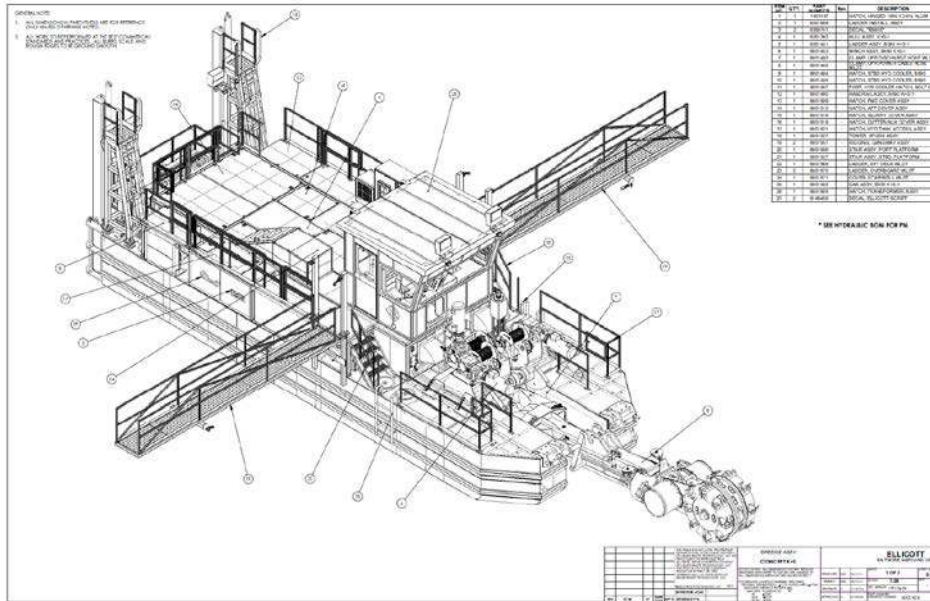


- Stage gate approach
- Engineering (FEL Stages) in-house with third party support if required
- Secondment strategy preferred
- Project execution with core team third party support

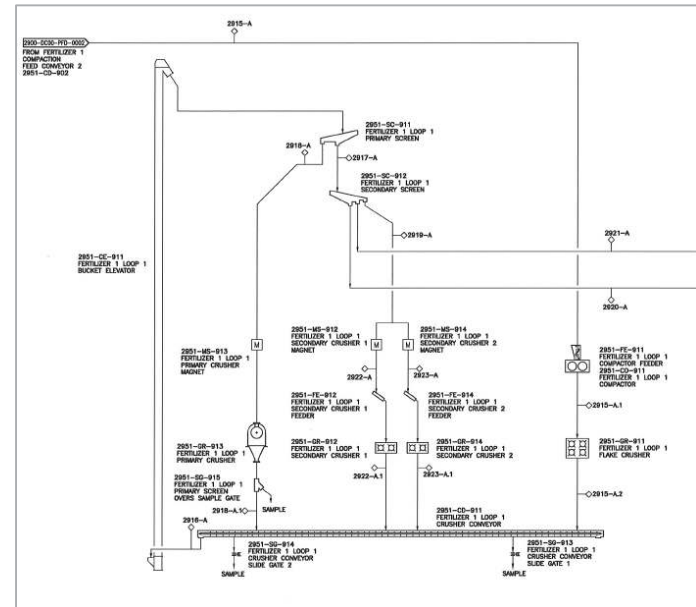
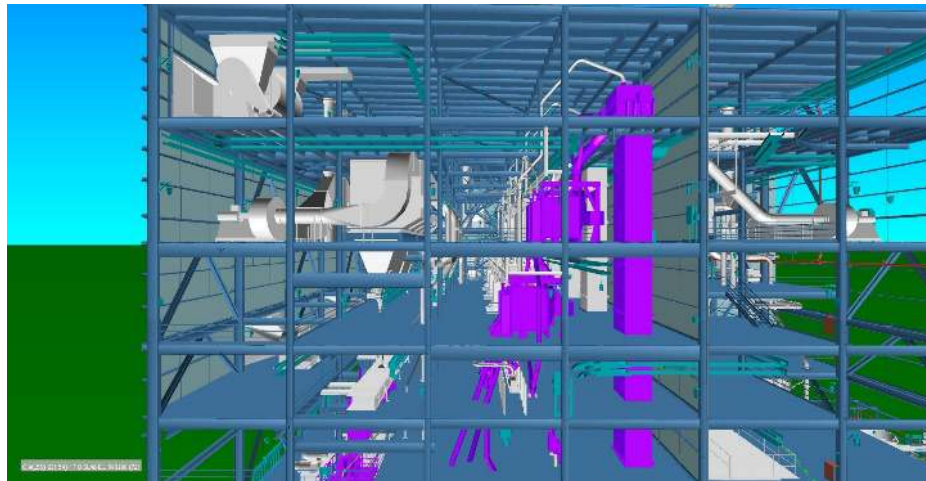




# Future Major Capex Projects



- Wellpad program
- 4<sup>th</sup> compaction loop
- Secondary mining
- Ongoing optimization
- Expansion projects
- Feasibilities





# Continuous Improvements



- Continuous improvement of product quality and reliability
- Increase plant flexibility to react to fluctuating market conditions
- Increase production rate
- Project support for Bethune mine and Port Moody



# Wellpad Program

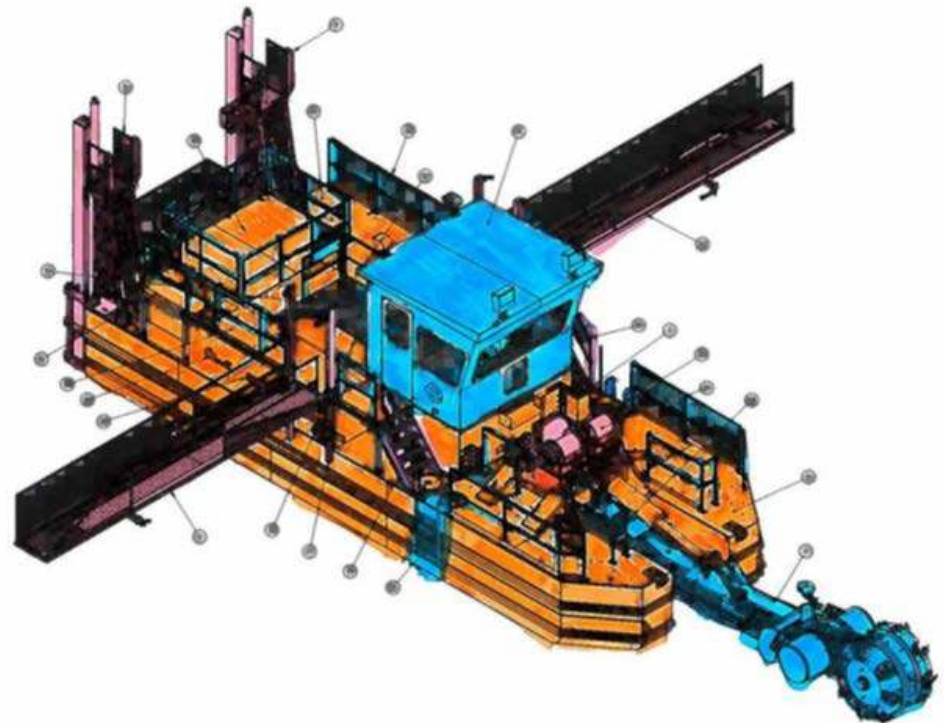
- Ongoing pad construction
- Long-term approach is one pad per year
- Further design improvements
- Engineering in-house
- Execution with third party support





# Summary

- Pad program
- Continuous improvements
- Secondary mining
- Base Capex
- Logistics



# Land and Sustainable Development

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## Responsibilities include:

- Permitting
- Environmental monitoring and compliance
- Land management: stewardship, purchase, leasing and sales
- Mineral rights acquisition: leasing and sales
- Unitization
- Geology
- Community, industry and government liaison
- Indigenous employment and contracting support





# KSPC Policy (Adopted May 2012)

- targeted efforts to be inclusive of indigenous people in employment and contracting

## Employment

### Corporate Objectives:

1. To be an employer of choice for Indigenous people.
2. To create a respectful and representative workforce that supports diverse values and cultures.
3. To actively attract, recruit, develop and retain Indigenous people.
4. To educate all KSPC employees about cultural diversity in Saskatchewan through Indigenous Awareness training.
5. To inform KSPC contractors about Indigenous labour force development programs and services.

Where appropriate KSPC will:

- Build relationships with Indigenous communities, First Nations and Métis employment agencies and Tribal Councils, and Métis regions and locals to source qualified candidates
- Support KSPC affinity groups
- Present at post-secondary institutions
- Utilize KSPC summer student employment and co-op programs
- Utilize KSPC scholarship and bursary initiatives
- Participate in Indigenous related conferences and symposia



# Employment of Indigenous people can be:

- Direct – KSPC employees at site or corporate offices
- Contractual (long- or short-term) companies selected through a competitive bidding process. Companies may be Indigenous-owned or non-Indigenous-owned companies with a large presence of Indigenous employees.



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# Sustainability

Resource companies must be sustainable *economically, environmentally and socially.*

They must:

- Operate at a profit
- Safeguard the environment by complying with or exceeding all environmental laws and regulations.
- Be socially acceptable to the community at large.



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## KSPC Initiatives

- Replacement of disturbed wetlands through contribution to Ducks Unlimited for wetlands conservation (\$2.8M)
- Replacement of disturbed natural grassland to Nature Conservancy Canada (~\$1M)
- Local community partnerships:
  - RM of Dufferin – road paving joint initiative – ~\$5 million from KSPC
  - Village of Bethune – sewage lagoon expansion (>\$5 million)







# Community Investment

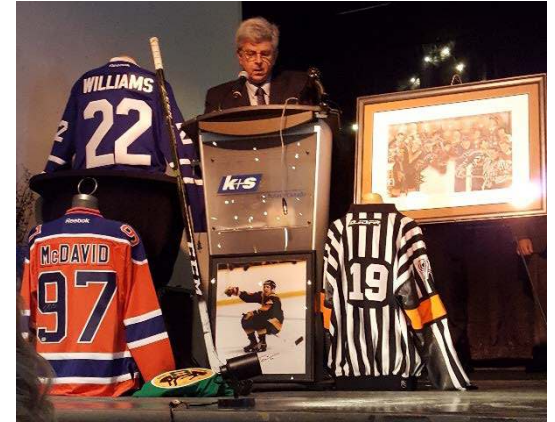
- KSPC has given over \$3.5 million to communities through sponsorships and donations since 2012
- More than \$1.5 million has been invested into Indigenous communities since 2012
- Over 200 organizations have been supported since 2012



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# Community Investment Highlights



# Procurement

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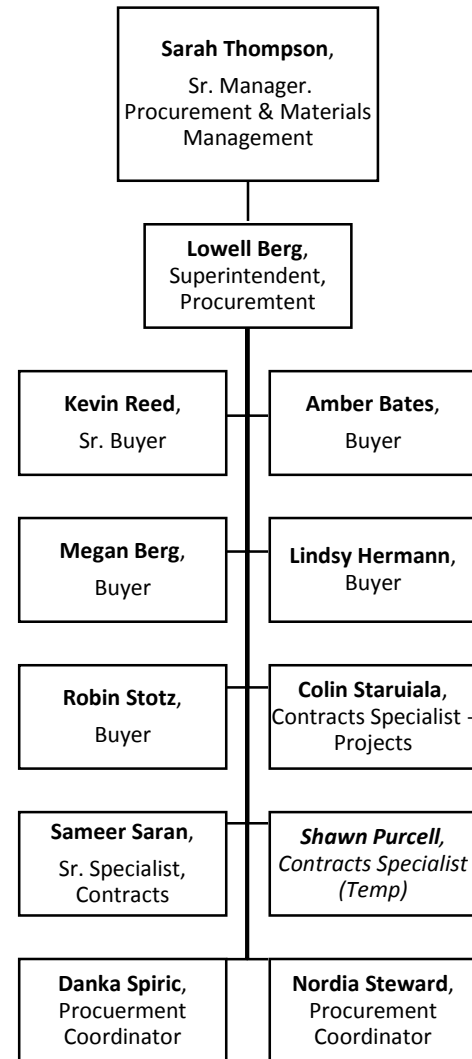


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# KSPC Procurement Team





# Procurement KPIs

- Safety and Environment: Track the number of incidents
- Procurement Cycle Time: Measure of time between release of purchase requisition to release of purchase order
- Supplier Delivery Compliance: Measures the % of late deliveries compared to original quoted delivery dates
- Spend on Contract: Value of supplier spend on contract
- Savings: savings compared to budget and negotiated savings over lowest original quoted price



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# Procurement Agreements

We intend to leverage vendors and contractors to help us maintain our facility.

We are in the process of tendering and awarding Master Service Agreements and Fixed Pricing Agreements. Terms will vary from one to three years with the option to extend.

All agreements are being or have been competitively bid with the exception of when OEM parts or services are required to maintain warranties.



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# What does K+S value in a Supplier?

- Safety
- Quality product or service
- On-time delivery
- Competitive pricing
- Indigenous content
- Local content
- Value-add initiatives





# Insurance Requirements

- 5M CGL (Commercial General Liability) insurance is our standard requirement.
- \$5M Professional Liability/E&O (Errors & Omissions) insurance is our standard requirement.
- ISN will always maintain our standard limits and coverage requirements.



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# Indigenous Content Requirements

K+S values bidders and suppliers who have meaningful involvement with Indigenous entities and demonstrate they have real and substantial involvement by Indigenous people through:

- contracting
- ownership
- employment
- other arranged commitments in a manner which is seen as positive initiatives which enrich the lives and well-being of Indigenous people.



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# Indigenous Contracting

All contracting is in accordance with KSPC guidelines, directions, and requirements of quality, competitive pricing, community factors and overall value.

Where appropriate, KSPC will:

- Take proactive approaches to identify and match contracts with Indigenous businesses
- Provide positive consideration in bid evaluations for Indigenous content
- Develop internal support measures for Indigenous procurement policy







# Local and Indigenous Spend 2017

- **526** local contractors and suppliers were engaged
- **\$290 million** + was awarded to local companies
- **\$84 million** + was awarded to companies with Indigenous involvement



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# Contractor Labor Tracking

[illegible]

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# The Legacy “Yellow Pages”

- Indigenous and local contractors are asked to submit “one pagers” outlining their company and the work they do.

[PROCUREMENT@ks-potashcanada.com](mailto:PROCUREMENT@ks-potashcanada.com)

These one pagers are put into the KSPC Yellow Pages.

- Larger contractors are recommended to propose how they intend to subcontract to local and Indigenous vendors.
- Smaller vendors are encouraged to join forces to take on projects they may not otherwise be able to manage.



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# Questions?

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