

EXECUTIVE INSIGHT

MAGAZINE

ISSUE #44



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EXECUTIVE INSIGHT MAGAZINE

EDITOR'S MESSAGE

Dear Valued Readers,

I would like to take the opportunity to wish all our readers a very prosperous 2019. It gives me great pleasure to introduce our first edition of 2019, Issue 44.

In this edition, we're working with one of the UK's largest ever mining project developments and investments, Sirius Minerals and their Woodsmith Mine. This project is having an unprecedented economic impact in the Yorkshire region creating jobs directly and indirectly through the local supply chain, furthering skilled opportunities for apprentices and mine workers as the mine goes into full future operation and benefitting the UK and European Agricultural sector.

The Follo Line Project in Norway is another Multi Billion Pound development covered in this edition of Executive Insight Magazine. The Follo Line is being developed by the Acciona and Ghella Joint Venture partnership, two industry leading and respected European Construction organisations.

After interviewing their Project Director Mr. Fernando Vara, it's important for me to mention what a feat of engineering this project truly is. It's like something no other tunnel project has seen before in terms of rock strength and strategy required to drill through, and their successes are inspiring.

Our coverage also includes my ongoing review into Supply Chain and Procurement leadership which covers a multitude of topics within the role which is the backbone of any business.

I have had the pleasure of working with and interviewing the Supply Chain leaders at Santos Oil & Gas Australia, Plexxus Healthcare in Canada and Gyproc Ireland, part of the world leading Saint-Gobain Group.

As we continue to grow as a world leading Business to Business digital publication, you're welcome to contact me to discuss how you feel your business could benefit by appearing within Executive Insight Magazine. Please contact me via editor@jsinternationalmedia.com

Sincere regards & best wishes,

Jay Benmehidi

Chief Editor

Executive Insight Magazine



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EXPO 2020 DUBAI, UAE



In terms of prestige, glamour, and its reputation for breath-taking conspicuous wealth, there are few cities to be found anywhere in the world that can rival the grandeur of Dubai. Alongside neighbouring Abu Dhabi, it is a symbol of the UAE's growing power and influence on the world stage, and a foremost power in its own right, thanks to its standing as one of the world's leading business hubs.

Although it was initially built using the proceeds of the UAE's incredible petro-riches, Dubai has long since broken its dependence on oil and gas, to the extent that oil revenues account for a fraction of the city's GDP – just 5%, according to experts. Instead of petro-wealth, Dubai's rapidly expanding skyline, made up of a forest of glittering skyscrapers, is soaring upwards and outwards, funded by the growth of its booming business and finance sector, as well as tourism and foreign trade – key areas of economy that account for nearly 60% of the city's US\$105.6billion GDP.

Against the backdrop of its stunning aesthetics and Alpha++ city status, not to mention its ever more fruitful partnerships with the world's foremost powers, such as the US, UK, India, and China, the time is nearing for the start

of the world's most high-profile festival of trade, relationship-building, and human ingenuity – Expo 2020 Dubai.

Granted, cynics might point to the fact there is still 900 days to go before the exposition begins, but the sheer size, scale and ambition of this highly anticipated international event means that efforts to ensure the smooth running and success of Expo 2020 Dubai are already at an advanced stage. According to forecast, it is expected that over the course of the event, more than 25 million visitors will visit the UAE to attend – a huge volume that will place great strain on even Dubai's first-rate infrastructure.

Of course, this eventuality has not escaped Expo 2020's planners, and as a result significant resources have been allocated to expand and improve Dubai's tourist infrastructure. Building new hotels to host guests is at the top of the agenda, and it has also been reported that all motorways leading to the exhibition will be improved with new overpasses and interchanges. Additionally, a new metro line will be operational by 2020, as will a new railway line and urban tram line will. And that's without factoring in plans to invest in a fleet of eco-friendly taxis and buses.



To date, nearly 50 construction projects, valued at over US\$3 billion have been approved to realise these plans, in addition to a 100 further non-construction related ventures. This stimulus for developing and strengthening Dubai will provide a great boost to the city's economy, and more than 200,000 new jobs. Going forward, this infrastructure development will create a world-class city transport network, capable of rivalling even the likes of London,

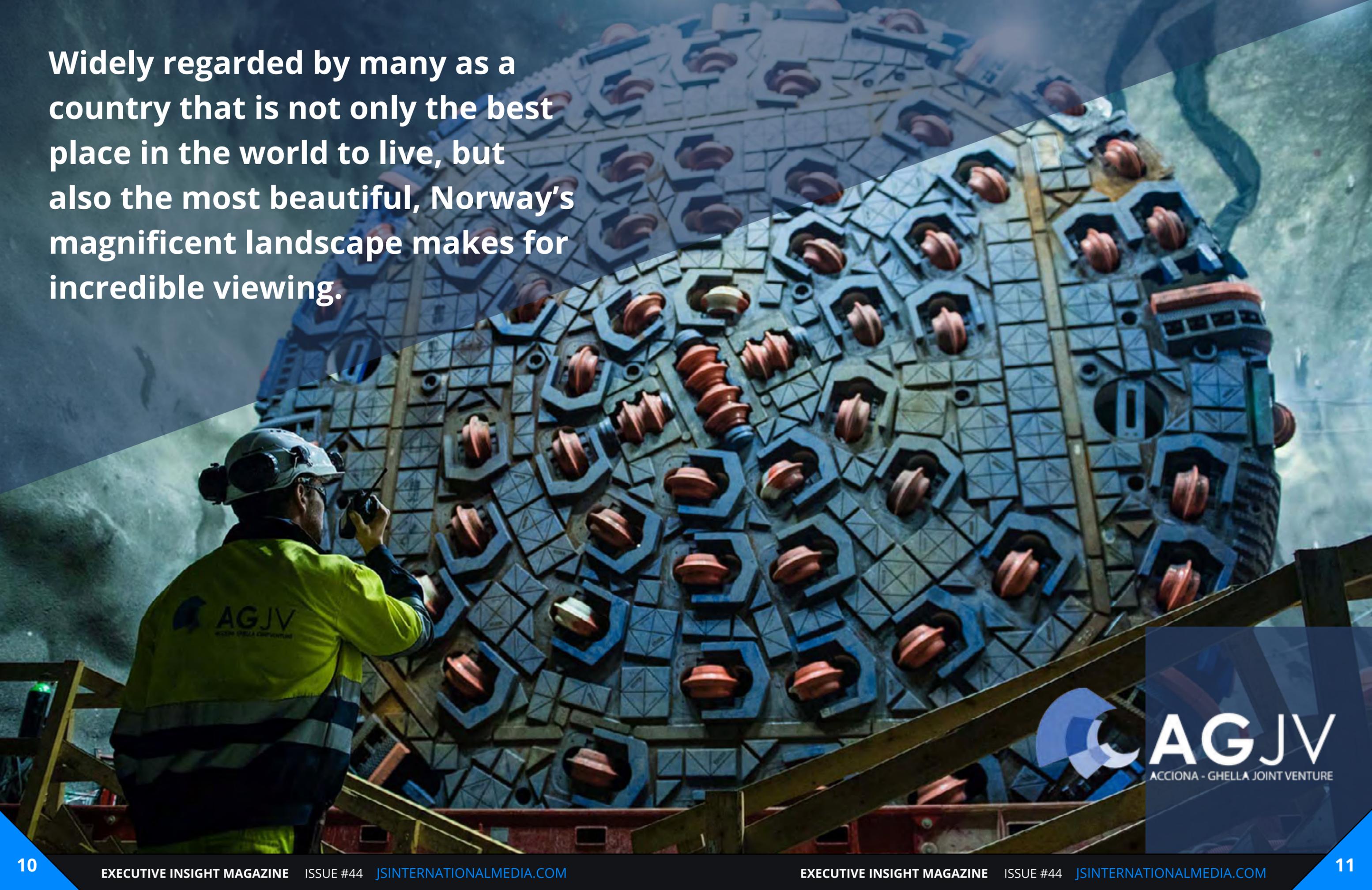
New York, Tokyo, and Singapore. The anxiety amongst Dubai's planners and rulers is understandable, because the world is quietly watching as the Arab world's first flagship event of Expo 2020 Dubai's magnitude takes shape. Huge amounts of money are at stake, as is Dubai's reputation – with over 150 countries expected to participate, there is pressure for the event to live up to its main event billing.

The success of this grand international exhibition – and there is little reason to believe it will be anything other than a roaring success – will have a significant impact Dubai, and indeed the region as a whole. Interest from foreign entrepreneurs in Expo 2020 has markedly increased, which is consequently leading to an increase in inflows of investment capital. More than this, however, it will send a signal to the world that Dubai, and the UAE, have truly arrived at the top table. In-

line with its objectives, 'connecting minds, creating the future,' and its goal of fostering creativity, innovation, and collaboration on a global scale, Expo 2020 Dubai will become a grand stage in the development of international relations. New doors to the markets of many countries will open, and new relationships built will be built, not only for Dubai and the region but for all participants.



Widely regarded by many as a country that is not only the best place in the world to live, but also the most beautiful, Norway's magnificent landscape makes for incredible viewing.



From dramatic and yet serene deep valleys, set against a backdrop of sheer, snow-frosted mountains, to the rich shades of green of its rolling hills and the charismatic architecture of the many small traditional villages that adorn them, Norway's natural wonders blend together to create an altogether fairytale setting. And, of course, this is without mentioning the UNESCO-protected fjords for which the country is so well-known.

However these wonderful topographical features that grant the country such beauty have also created a land that can be incredibly difficult to tame – just ask the many companies who have been tasked with successfully completing infrastructure projects here. Jutting rock faces and wild, snow-covered mountainous landscapes are easy on the eye, after all, but it certainly makes for a civil engineering headache. This being so, it is little wonder that infrastructure project directors in Norway have historically opted to go under rather than over, to the extent that the country is in per capita terms the most extensively tunnelled in the world – statistics show that there is 1.3m of tunnel for each of its inhabitants.

With this in mind, it is telling that even in a country so tunnelled as Norway that the Follo Line project, a high-speed rail project that will link Oslo Central Station to the municipality of Ski, south of Oslo, has captured so much interest.

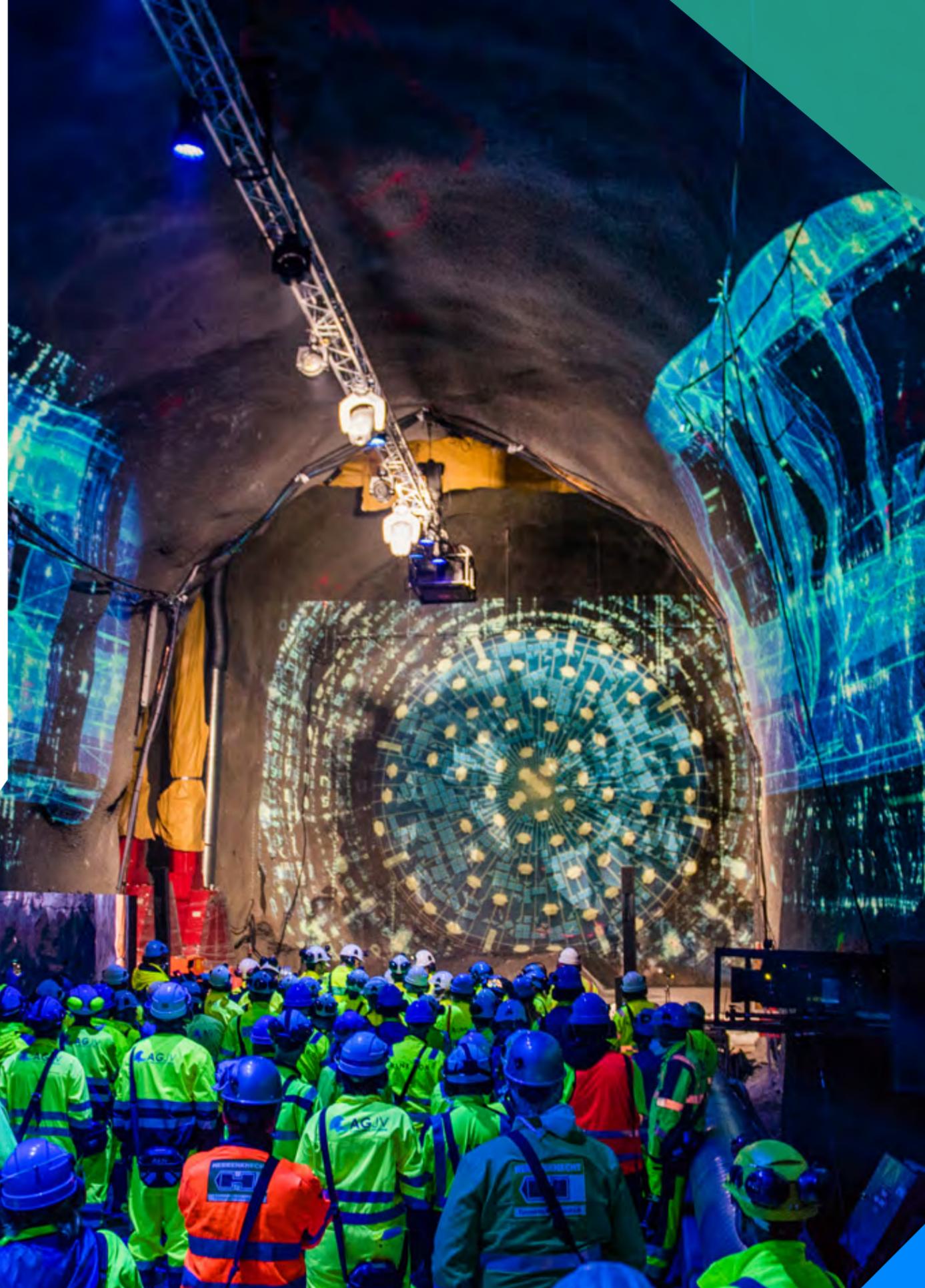
Forming the core of a larger InterCity development south of Oslo, the Follo Line Project – short for Follobanen – is currently the largest transport project in Norway, and certainly one of the larger infrastructure projects under construction today. Commissioned by Bane NOR, the Norwegian government's agency for railway services, Follo Line consists of a 22km new double track railway line that will feature a

20km tunnel running beneath Ekebergåsen. Upon completion of the line, it will be the country's longest railway tunnel, and the 17th longest in the world.

The task of constructing the main part of the long tunnel has fallen to Acciona-Ghella Joint Venture (AGJV), a collaboration between two of Europe's most well-regarded civil engineering companies. Through utilising the experience and know-how of both parties, AGJV has succeeded in overcoming the complexities and challenges posed by a project that is revolutionary in Norway.

"Acciona and Ghella first signed the contract in 2015 and since then we have been able to achieve the expectations of this very complex project. This is the biggest infrastructure project in Norway, and upon its completion the Follo line will have the longest tunnel system in Scandinavia – Norway, Denmark, Sweden.

According to the client, Bane NOR, the new 22km rail line and its 20 km long tunnel will reduce total travel time between Oslo Central Station and Ski by half, from 22 minutes to 11 minutes. It really has, and will change the way people travel from the north to the south and south to north. This connection will make the south of Oslo a much more desirable location to live for Oslo residents because reaching the centre of the city will become much easier," explained AGJV Project Director, Fernando Vara, conducting the largest part of this huge infrastructure project.



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The Norwegian Follo Line Project in total is a model for how future similar rail infrastructure projects will be completed because for a number of reasons it is unique. The project's US\$2.35 billion price tag goes to show that while the likes of China, Saudi Arabia, the UAE, and Qatar still have a monopoly on grandiose infrastructure spends, European countries still have the will and capability to invest in their own large projects when needs be. More than this, however, Follo Line's high cost is testament to the project's scale and complexity.

Let's go back to Norway's aforementioned topography, a moment – the mountains, cliffs, rocks, and earth that define this land. Are they beautiful? Yes. Are they difficult to dig through? Certainly. In geological circles, Norway is known for the hardness of its rock, especially a particularly hard type of rock called gneiss that is prevalent in the Oslo area. Tunnel excavation in Norway is mainly achieved by using a traditional drill and blast method.

Fernando explained: "The means of excavating the tunnels was decided by the client who wished for the excavation to be achieved using TBMs, that have long been used in other parts of the world. TBMs have been used previously in Norway in the 70's for projects, mainly hydropower tunnel projects, but not again since the 90's. Tunnelling projects in Norway have traditionally used blast methods – explosives. However, our client felt for this EPC contract of the Follo Line project the use of Hard Rock Double shield TBMs would be better suited, because of the length of the tunnel and out of respect for our neighbours. Using Double Shield TBMs for the first time in years will allow us to do the lining of the tunnel as you do the excavation.

We have plenty of experience in this area, so we procured four TBMs capable of



FERNANDO VARA
AGJV PROJECT DIRECTOR

breaking through tough rock that we are using to excavate the 18.5 km of tunnel. So far, we haven't had too many difficulties due to the rock hardness."

This change of tack with regards to the method of excavating the tunnel as part of the Follo Line using TBMs has a number of benefits over the traditional drill and blast method, in that it is more efficient and creates a less disruption to the surrounding area – a very important factor, bearing in mind the project's metropolitan setting. As opposed to needing up to seven jobsites for explosive tunnel excavation, and the difficulties this would create in getting supplies onsite, instead, this TBM solution only requires one central site, Åsland, from which to work.

Described in Fernando's words as a small city in itself, with over 500 employees active, a massive number of installations and facilities, and linked to the E6 highway, Åsland is connected by two large 900m access tunnels to two underground caverns below-ground. It is from here that tunnelling work first commenced, with two TBMs boring south toward Ski and the other pair north to Oslo Central Station.

“When you have four TBMs starting from the same point, the same location, from a logistics perspective, we needed to setup a large number of facilities and installations at this central starting point that have to be integrated and working 24/7. On top of the complexity of this situation, due to weather conditions - with snow and temperatures below -15 C - and environmental requirements - dust and noise measures - all the facilities have been covered”, explained Fernando.

He continued: “We started tunnelling work in September 2016, when the first TBM started boring toward Oslo on the 5th. We have achieved an average excavation rate of 14m a day, which is very good, taking into account the hardness of the rock and the pre-grouting we’ve had to do – that’s where you do some grouting ahead of the TBMs in case you have water. These kind of factors mean that the TBMs move slower, but even with this progress has been very good and we have succeeded in achieving breakthrough 6 months ahead of contractual milestones. This project has been capable in demonstrating that you can tunnel using TBMs even in Norway, where the rock is amongst the hardest to be found anywhere in the world.

In terms of the tunnel itself and the complexity, I think we’ve done a really good quality job, in spite of the difficulty of breaking through the Norwegian rock. We are very satisfied with that.”

So far, so good for the TBM tunneling project, but Fernando is quick to point out that the success of the project so far would not have been possible without the support of AGJV’s Norwegian business partners and suppliers, particularly in the area of minimising the project’s environmental impact.

As a world leader in sustainable development, particularly in the field

of environmental sustainability, for any company engaging in an infrastructure project of Follo Line’s scale it is critical to show respect as far as these issues are concerned. Prior to tunnelling, AGJV performed comprehensive research work and studies toward ensuring that the project is environmentally sound. Additionally, the company has invested millions of Euros to improve innovation in this area, and worked in partnership with a number of local companies to get a local flavour in terms of environmental regulations.

With the TBM tunnelling for the Follo Line Project operating ahead of schedule, broadly speaking, in terms of the tunnel excavation rate of the TBMs, which are expected to break through around February-March 2019 time, there is a general feeling that the investment and hard work since 2015 has been worth it. In Fernando’s view, the project is like a big machine monster that takes a long time to run, but is unstoppable once its running, “We’re on track, and the way we’ve achieved this is through focusing on innovation and through the reputation, and reputation we’ve built doing business in Norway. I think we are in a very good position with the tunnelling at the Follo Line – we are ahead of schedule, we are achieving milestones, and there is a good level of satisfaction from our clients. There is an ambiance onsite which relieves pressure on people when things sometimes fall behind.

The collaboration between Acciona and Ghella has been always very good. We have worked before in other projects around the world and we know each other very well. Through this collaboration, which has staff from both companies together, we’ve brought to bear the right technology, innovation, and experience we’ve managed to work successfully on what is a very complex project – there were real initial doubts about the TBMs and how they would



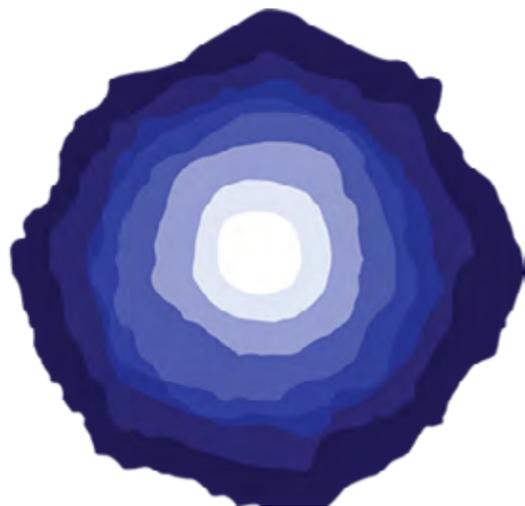
perform in Norway, and the final outcome has been far better than anyone expected. It has set a precedent for future projects of this kind in Norway.

For sure, we’ve put in a lot of effort, activity and hard work, and it has been very satisfying when you achieve a milestone and you can see the client is happy. Doubly so bearing in mind the complexity of the project.”



SIRIUS

MINERALS PLC



As the birthplace of the industrial revolution, the UK has a centuries-long mining heritage that remains deep-rooted in the national psyche even to this day.

The British Empire, on which the sun never set at its zenith, was built upon steam engines and machinery; steamships and railways, and in turn these industrial marvels were built upon coal. Vast amounts of it, it should be added. Today, however, much like the days of empire, mining in Britain is seen by most as a relic of a bygone era, unfit for and incompatible with a leading global nation with low-carbon aspirations.

Whilst it is not out for the count, per se, the UK mining sector has very much taken a backseat role as far as generating wealth and employment opportunities are concerned. In equational terms, the UK has substantial deposits of minerals and metals beneath its soil but, in today's globalised world, it is simply not economically

feasible to extract resources like iron ore, copper, and other essential metals and minerals when it can be imported from China, Chile, and Brazil, among other nations, at a fraction of the cost.

And yet whilst its mining heyday is behind it, the mining sector lives on in the UK, albeit it on a smaller scale. Coal is out, of course, but the complex geology of its earth and rock combined with a level of capability that is world-class, if not world-leading, means that UK mining still has a few tricks up its sleeve.

Something of a renaissance is taking place in the UK, with an example being in Cornwall where former tin and tungsten mines are being regenerated and redeveloped. Initially, this very British renaissance appeared as if it would not extend to the north of England, the former ironstone heartlands of the country, but a recent and entirely unplanned turn of events means that the region appears set to return to its mining roots once more.

In north Yorkshire and Teesside, areas of the country that are synonymous with mining and industry, a mineral once regarded as a geological oddity is set to put UK mining back on the map.

"Polyhalite is unique, in that it is a naturally-occurring mineral made-up of four of the six macronutrients required for plant growth: calcium, magnesium, potassium, and sulphur. It is a ready-made natural fertiliser, available in such abundance here, in North Yorkshire, that it can make a substantial impact on the global fertiliser market," explained Maurice Rankin, General Manager of Corporate Communications at Sirius Minerals.

He continued: "Farmers typically use a multitude of different fertilisers to help improve yield and crop growth. This product brings a four-in-one option that will replace and enhance current fertiliser blends, resulting in more efficient, effective, flexible and sustainable fertiliser practices. This is essential in a world with a fast-growing population and diminishing agricultural resources."

The number of trials on POLY4, the commercial name for Sirius' polyhalite product, now stands at 372, on 41 crops in 27 different countries. The research has shown improved yield on a wide range of crops, compared to other potassium-based fertilisers. Sirius say it will be the most dynamic, exciting and disruptive new fertiliser product to enter the market in some

time, and it is no stretch to say that its effect on the agricultural sector could be transformative. It is little wonder that, already, Sirius Minerals has already signed supply contracts with clients in North America, South America in Brazil, China, and a number of other countries in South-East Asia and across Africa.

For many years, polyhalite was a geological oddity – known about, but not widely understood or studied. Its existence in the north east of England had been discovered in the 1930s, as a result of exploratory drilling for oil, gas and potash, but nobody had thought to seriously consider exploiting it as a fertiliser because it is usually only available in small quantities. However, by pure chance, the UK is swimming in it - 2.66 billion tonnes of it, to be precise. The seam in north Yorkshire is an average of 25 metres thick, going up to 70 metres at its thickest point, and it also happens to be astonishingly pure.

To extract this mineral treasure, work is currently underway to build the Woodsmith Mine in Whitby – the first deep mine in the UK in 40 years. Unsurprisingly this has not only captured the attention of the business community and investors, but also the imagination of many living in communities that for generations were centred around the mining and heavy industrial developments in and around the region, such as the now-closed Redcar steelworks.

Woodsmith Mine will be comprised of two one-mile deep mine shafts that will access the polyhalite seam running across north Yorkshire and out into the North Sea. These will connect to a 23-mile tunnel featuring a conveyer belt system that will transport the mineral to Teesside for processing and shipping around the world.

“It’s a pretty big infrastructure project - one of the biggest in the UK, in fact,” says Maurice. “It will provide thousands of jobs for people living in the region during the construction phase and then for decades to come once the mine is operational. It will also provide the country with export revenue valued at £2.5 billion per annum, providing benefits for many years to come for the UK.”

The company raised US\$1.2bn in 2016 to start construction, through a mixture of equity, convertible bonds and a royalty investment from Australian firm Hancock Prospecting. It expects to raise another US\$3.5bn, mainly through debt financing, in early 2019 to complete the project.

“That will be enough to sink the mineshafts, build the tunnel, build the factory and port facility, and put in place the capability to produce up to 10 million tonnes per annum,” he states. “We’re targeting first polyhalite by late 2021 and get up to a production level of 10 million by 2024. Then the expansion to 20 million tonnes will be sourced from operational cashflows.” The Woodsmith site development will be made-up entirely of long-life infrastructure, which will assure the project’s long-term, high-volume and low-cost production viability and capability. The mine itself will be made-up of two deep shafts - a

production shaft and service shaft, which will both access the polyhalite shelf seam.

Upon its completion, the shaft will reach a depth of 1,594m - equivalent to five Shard skyscrapers -and be fitted with a Blair multi-rope (BMR) winder with two 39-tonne capacity skips and rope guides capable of hoisting 6.7 million tonnes per annum. The shaft will have skip loading facilities at 1,520m and skip unloading facilities closer to the surface at 360m, where polyhalite will be transferred to the mineral transport system’s tunnel (MTS) conveyor, an impressive system and a feat of engineering in its own right.

“The mineral transport system came about because of the position of the mine under the North York Moors,” Maurice explains. “We had always committed to transporting minerals from the mine in a way that would have the lowest possible environmental impact, and the best way to do that was to dig this tunnel with a 23-mile conveyer belt in it. The additional benefit of the tunnel is that it provides a very reliable, safe, and low-cost method of transportation that we are in complete control of. Most mines around the world will rely on either road transport or long railways to transport their minerals to a shipping facility. That wasn’t something that we were going to rely on.





The mineral transport system represents a major engineering undertaking, but it's using very tried, tested, and reliable technology familiar to any large mine around the world. It will be capable of providing economies of scale and efficiency for many decades to come."

The story of Sirius Minerals and the development of the Woodsmith project is a fascinating one, but no more fascinating than the man responsible for making it all happen, Chris Fraser - the company's founder and CEO is 'the man behind the mine.' Since his re-discovery of the polyhalite seam in 2010, Chris has been persistent, to say the least, in his efforts to bring the Woodsmith project to life against difficult odds. The word 'difficult' perhaps being an understatement - persuading the authorities to green light the building of a mine in a national park is hard enough, and that's without factoring in the 400 landowners he also had to charm and cajole into signing up mineral rights.

Much like the 19th-century pioneers who tunnelled through the soil and rock of Britain in search of iron and coal, before then throwing up railways, bridges and viaducts to transport it, Chris Fraser is an old-school pioneering sort who is nothing if not determined. An investment

banker by trade, Fraser decided to go his own way after working as the lead advisor on a US\$2.5 billion fundraiser for Australian miner, Fortescue Metals, in 2006. He began to scour the world for promising deposits in developed nations and it wasn't long before he heard talk of large potash deposits in North Yorkshire that had been mined at Boulby since the 1960s. Further investigation revealed not only sylvinite deposits, the source of traditional potash, but polyhalite, and in unprecedented quality and quantity. The rest is history, as they say.

The Woodsmith-inspired return of mining to the north of England, an area which has been blighted by de-industrialisation, is almost certainly going to have a transformative effect on the socio-economic fabric of north Yorkshire and Teesside. Hundreds of jobs have already been created for the ongoing construction and development of the site, with a total of 1700 construction jobs expected to be created over the course of the build. 1,000 long term direct jobs will be created across both regions for school leavers, graduates, and other potential employees with the skills and passion when the project has been completed and is running at full capacity.





The UK's mining industry inactivity in recent decades means that in terms of technology and advanced mine construction know-how, Sirius has at times had to take a global approach to finding elite technical staff and engineering support. However, where Sirius can 'go local' and make sure that local people, local businesses, and local communities benefit first from the project, it will, according to Maurice:

"We are very determined to make sure local people benefit from this project as much as possible in terms of jobs and economic benefits. In the long term we hope to have a workforce that is around 80% local. To get Woodsmith Mine built, we have relied as much as possible on local labour, and we have a strong local supply chain using local suppliers and local companies, ranging from relatively large engineering and supply firms to very local small businesses.

Of course, for some of the very highly skilled and technical jobs we have here in terms of mine construction, we have to look further afield for personnel. There are some specialist companies that we have brought in like Bauer from Germany, and in terms of digging the mine itself, we have formed a partnership with Canadian company, DMC - a big industry player who have dug deep mines all around the world. We're working with them because they represent the cutting-edge of mining technology, allowing us to excavate the mine shafts faster and more safely."

Of course, building a mine is one thing. Building a mine in an area of outstanding natural beauty in a national

park in Yorkshire is quite another. The legislation protecting green belt land in the UK is legendary for its intransigence, so sustainability and low environmental impact is absolutely at the heart of Sirius Mineral's operations.

Maurice elaborated: "We are really leading the way in how mining can be more sustainable, and this is going to be crucial for the future of the mining sector over the years to come in a world where populations are increasing and space is diminishing. If we are to feed and supply a growing population and continue to deliver a standard of living where people can benefit from a modern, urban developed lifestyle, we will require more mining and materials. This in turn will require an innovative way of thinking and more sustainable ways of doing things.

Our mine has been designed to be low-impact. The mining infrastructure below ground will not be seen, the surface buildings will be low-rise and the entire site be wooded and landscaped, so as to not impact the beauty of the North Yorkshire countryside. The only way you will be able to see any indication of its presence is if you fly over it in a helicopter.

Throughout the construction phase, the company must follow very strict rules to make sure there is as little impact on local communities as possible. Limits on light pollution, noise, watercourses, transportation and caps on the number of vehicles that can come in and out of the mine every day, are all in place to minimise the impact of the project in every possible way.

"In addition, we are able to sell our product with zero chemical processing. One tonne of polyhalite ore produces one tonne of polyhalite fertiliser - the only thing we do is crush it and reform it into pellets - so we have sustainability running through every facet of what we're doing here.

With a projected mine lifespan of more than a century, even after 20 to 30 years mining Sirius Minerals will only have ventured a few kilometres from the mine-head. The polyhalite seam stretches out into the North Sea, as far as the coast of Denmark, Germany, and Poland. The only limit on how much mineral can be mined is an economic one - at what distance will it become

uneconomical to mine mineral from the mine-head? One day out at sea, no doubt, but certainly there's enough down there to last a long, long time.

This project is unique, and it is fitting that the project that will put the UK mining back on the map is in a region so synonymous with mining. Maurice concluded on this point, saying: "It is exciting that Woodsmith Mine is being developed in North Yorkshire, where there is a long history in the development of mining stretching back to the 18th century and 19th century. We're very proud of that industrial heritage, and we're proud that our project will help bring that back to the UK."





THE QUALITIES OF A SUCCESSFUL PROCUREMENT LEADER

The future of supply chain management has moved beyond cost reduction and the timely delivery of goods to include an increasingly complex landscape dominated by legal matters, sustainability issues, and technological advances-- all of which are forcing businesses to rethink the way they operate and brand themselves.

The gate keeper at the center of this transformation is the procurement leader. Of all the challenges that can disrupt the supply chain, having the wrong person in this key position sits at the top.

The successful procurement leaders of today need an unusual mix of skills and

experience. Not only must they have technical procurement expertise and be able to manage and support suppliers, staff and an increasingly complex mix of stakeholders, but they must also be fluent in the evolving big data strategies and the technology that are reinventing the procurement process. As the dynamics of procurement evolve, procurement leaders must develop several key qualities in order to fulfill their roles effectively:

They have an understanding of the different viewpoints along the supply chain. Collaboration has always been important for procurement leaders, but today it's even more essential as the workforce becomes more global and

diverse. These leaders need to work well with a wide variety of people possessing different viewpoints, skill sets and goals and be able to build collaborative relationships. A good procurement leader understands where suppliers are coming from and figures out what is important to them. He or she is credible with senior stakeholders and knows how to speak their language. Finally, effective procurement leaders are also in touch with the major departments and category teams, picking up on strengths and weakness and anticipating staff challenges.

They take a holistic approach to procurement. When it comes to sustainability, procurement activity must be aligned with the core business goals and needs. Procurement leaders need to consider the big picture of the procurement process and how it fits into the functioning of the business. For this reason, cost reduction is not always an organization's number-one goal. Sometimes the most important factor is keeping supply chain disruption to a minimum or looking for suppliers that can provide loyal commitment.

They proactively respond to change. Procurement leaders need to be able to operate in a dynamic world in which companies and functions are constantly evolving. The emergence and continued development of artificial intelligence, machine learning, as well as data mining,

analysis and management coupled with advancements in communications technologies, have turned the business world on its head. Never before have so many basic operational business functions seen so much disruption in such a short amount of time. Procurement leaders must know how to make strategic decisions throughout the transformation and put systems in place to allow those decisions to happen quickly and effectively.

They are constantly learning. With every new technology and business process that is introduced to the organization, the role of the procurement leader changes. Procurement leaders need to have their fingers on the pulse of this change and know when it's time to seek out additional advice, knowledge or training. Without such an awareness and an openness to learning, these professionals risk being out of the loop, and if that happens, it threatens to hold the whole organization back.

Though it takes a significant amount of skill, talent, and expertise to effectively fulfill the role of procurement leader, there are many professionals out there who could make suitable candidates with the right training. The investment is worth it. A good procurement leader may not be as well-known as the company's CEO, but this person is practically the cornerstone of a well-run organization.



Doing business, whatever the level, is a competitive and challenging undertaking – this is stating the obvious. When the business in question is a national market leader in its field as Gyproc Ireland is, the demands that come with holding your place at the top of the pyramid amplify these challenges ten-fold. And when, yet again, your market-leading business happens to be a subsidiary of a company like Saint Gobain, a prestigious multinational with a global reach spanning every continent, the bar is set even higher still.

What is there to say? Quite simply, Gyproc Ireland is the first name in its field, and an important European component of Saint Gobain's Construction Products division – a world-leading business operation that, thanks to its unique portfolio of products and services, boasts a 46,000 workforce and a 62-country footprint. Gyproc provides innovative, cost-effective and reliable products that meet the demands of the construction industry. Having first opened its doors for business in 1936, Gyproc has been manufacturing in Ireland for over 80 years and is the market leader in plaster, plasterboard and drylining systems, providing innovative and sustainable design solutions.

With this in mind, the company has naturally been involved with many of the biggest and most prestigious commercial building projects in Ireland, including The

Google Building, The National Convention Centre, 3 Arena, The Aviva Stadium, and the landmark, Terminal Two at Dublin Airport. The company will continue to lead the way in terms of innovation and the ability to provide sustainable design solutions for the buildings of the future. Not that Gyproc is resting easy, however – as the old saying goes, getting to the top is the easy bit, staying there is an altogether more difficult matter. Another important factor is the use of recycled material within their manufacturing process. Working with a leading supplier who installed world class recycling equipment has significantly reduced their waste and increased efficiency.

Gyproc's long-running success and market leadership is built upon the stable foundations of internal operational excellence. Gyproc Ireland's Supply Chain department is an authority on this, and over the course of seven years has directly led the ever-evolving changes in strategy that have taken place inside the business to ensure that operations remain fine-tuned. Most recently, such changes have been as a result of the implementation of the company's STREAMLINE initiative.

"STREAMLINE is an internal construction products initiative programme focused on Supply Chain process improvements, measured in working capital improvement and customer experience improvement across 31 countries," explained a company spokesman.





ABOUT US

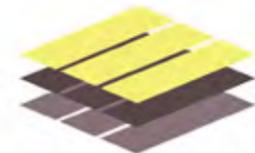
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Since 1986 Eglinton (Timber Products) Ltd, an ISO 9002 company has been at the forefront in the production of many types of quality environmentally friendly, wooden products. Our wooden pallets are supplied to customers from all over the United Kingdom, Ireland and Europe.

Established in 1986, Eglinton (Timber Products) Ltd is now one of Ireland's premier manufacturers of timber pallets. The company began with just 4 employees making pallets using conventional nail guns. Today the company has a workforce of 70 and will produce in excess of 2 million pallets annually.

As with all progressive companies, Eglinton (Timber Products) Ltd have concern for "green" issues and endeavour to use suppliers who help and not hinder the environment.

Investment in training, machinery, haulage, storage and drying facilities will continue, with the aim of producing a quality product at a competitive price.



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"We focused from the start on the customer experience – we already had strong working capital performance due to good practices but also on our inherent warehousing constraints. STREAMLINE addresses our product portfolio - rationalisation and focus, customer service offering - defining what exactly is your SLA, Sales forecasting - a key part of the S&OP process, manufacturing efficiencies - for example Production Schedule Adherence, rapid system update, and Supply Chain efficiencies, which centres around supply plans and improving warehouse efficiencies. All of this leads to great improvements in the customer experience.

All of the hard work from the team has paid off - we won the Best Improver award

out of all 31 countries. It's been a good few years. This year, the major focus has been on SAP/system efficiency improvements; this will allow our teams to do more, much more efficiently, improving their work experience and ultimately, leading to an improved service level for Gyproc customers."

Gyproc's engine room, so to speak, is its manufacturing facility in Kingscourt, County Cavan, a site that has been in continuous operation for more than eighty years, providing sustainable long-term employment locally to over 200 employees. It is from here that Gyproc provides quality wall-board and performance board, and bagged plasters to the construction industry in Ireland. By adopting the principles of



WCM (world-class manufacturing), a series of concepts and techniques that ensure manufacturing is lean, cost-effective, efficient, and flexible, Gyproc can maintain a competitive edge over industry rivals.

“We use world-class manufacturing, we are a world-class manufacturing site. What does that mean on a day-to-day level within Supply Chain? It’s about helping the team to reduce hours, warehouse organisation, efficiencies, simplicity, breaking things down. It’s about putting the right foundations in place. Streamlining is a big part of this. Last year, it was really about not trying to put in unnecessary solutions UNLESS when you’ve already got the basics done properly.”

World-class manufacturing is a philosophy first developed by Japanese manufacturing that, through the implementation of techniques such as ‘make-to-order, streamlined flow, collection of parts, doing it right first time, quick replacement, zero defects, cross-functional teams with multi-skilled employees, and statistical process control, among other things, will increase operational efficiency and reduce wastage exponentially. As a result of Gyproc’s adoption of WCM, the company is capable of impressively high productivity levels, not only in quantitative terms but also qualitatively.

Of course, such robust control techniques are but part of the story. The key drivers of WCM are quality, cost-effectiveness,



Hadley Group is a world leader in advanced cold rolled steel technology, with manufacturing facilities in Europe, the Middle East and Southeast Asia, delivering innovative solutions across sectors as diverse as construction, industrial and agriculture.

Our technical, structural and design abilities, coupled with our unsurpassed expertise in cold rollforming, have resulted in an extensive range of innovative products. From steel profiles and steel framing to innovative, market leading solutions like our internationally patented UltraSTEEL® process. This cold rollforming technology has enabled customers from different industries around the world to improve product efficiency, save weight and reduce the use of raw materials.

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LIGHT GAUGE STEEL: A HADLEY GROUP EXPERTISE

Hadley Group is a world leader in advanced cold rolled steel technology, with manufacturing facilities in Europe, the Middle East and Southeast Asia, delivering innovative solutions across sectors as diverse as construction, industrial and agriculture. Our internationally patented UltraSTEEL® process is a cold rollforming technology that has enabled customers from different industries around the world to improve product efficiency, save weight and reduce the use of raw materials.

Our technical, structural and design abilities, coupled with our unsurpassed expertise in cold rollforming, have resulted in an extensive range of innovative products including our light gauge steel profiles. We provide solutions for the most progressive architecture projects serving different markets including health, education, residential, leisure, commercial and retail.

There are many benefits to using light gauge steel framing in construction projects and its use can have a significant impact on build time and project costs. Manufactured to precise lengths from cold-rolled steel, light gauge steel profiles can be pre-assembled in a factory before being delivered to site, in the correct installation sequence. This saves time on site while also reducing the need for extra storage space for building materials. Our profiles have multiple uses in offsite construction from providing a weathered envelope at an early stage of a project through to facilitating column free interior space which delivers flexibility when it comes to layout requirements.

We work hand in hand with our industry partners to deliver products designed to streamline construction, enhance performance and maximise sustainability.

Enviro Grind designed, built and installed its first Gypsum/Plasterboard recycling plant at the Gyproc Ireland manufacturing facility in Kingscourt, County Cavan in 2004. Enviro Grind continues to own/operate the plant to this day.



Enviro Grind's 'Gypsum Recycling Solutions' utilise unique milling and screening technology designed to break down gypsum waste while minimising the breakdown of paper and maximising the percentage of recovered gypsum.

Each stage of the process prepares the material for the next step in a non-aggressive manner, thus guaranteeing the highest quality and quantity outputs at the lowest cost per ton processed.

Simplicity and quality of design are key elements. With over 25 years' experience in the field of processing difficult waste streams, the people at Enviro Grind understand the challenges presented by gypsum waste and use this knowledge and their skills to offer a system unrivalled anywhere else in the industry.

From concept to design and installation, we deliver a complete turnkey system. While the core system is common to all sites, we work with each site operator to ensure the bespoke design and subsequent installed system is configured to best suit their individual needs and requirements, including through-put and footprint.

As specific gypsum waste processors, we not only supply the best possible equipment but with our knowledge and commitment to developing process solutions we can provide the customer with long term support and access to the latest developments in this industry.

We look forward to continuing our work with Gyproc Ireland and wish them well in their future developments.

Enviro Grind brings to the market 'Gypsum Recycling Solutions' specifically designed for the processing of gypsum based waste streams and the recycling needs of the individual client.

Turn-key installations currently in operation across Europe & Australia.

For more information, visit our website or contact us directly.

Enviro Grind Limited
Pettigo, Co Donegal, Ireland

www.gypsumrecyclingsolutions.com
info@gypsumrecyclingsolutions.com

Tel: 00 353 (0) 7198 61772



flexibility, efficiency, and innovation, but safety also plays an integral role in ensuring operational excellence.

"Saint Gobain takes the criticality of safety as the number one priority. The importance of safety in our operations cannot be overstated. In the last two years, the bulk of capex spend within Supply Chain has been focused on safety improvement projects which can be broken into two categories: Firstly, risk reduction through pedestrian and vehicle segregation – this is the greatest source of safety risk on site. We delivered a project

in 2017 with a 24,000 risk points reduction through designing and implementing a yard segregation plan with barriers, gates and electronic barriers. Secondly, we have delivered a number of 5S projects under our WCM programme – this has covered all of our warehouses and has safety as the number one focus, but then focuses on optimised use of warehouse space to improve use of space and also to improve the efficiency of put-away and picking/loading activities.

Looking to 2019 and beyond, we have capex approval for phase one of a strategic

site development plan, which will provide a sustainable and scalable site inventory and logistics movement strategy. This will deliver demarcation between customer focused logistics - sometimes called forward logistics - and our raw materials and manufacturing activities, giving us safety, space utilisation, material handling, material accuracy, warehousing and loading efficiency, and cost improvements.”

Understandably, Gyproc is largely buoyant about what the future holds. The Supply Chain is strong and increasingly fine-tuned from the inside-out as a result of the initiatives that are being deployed, to the extent that operational efficiency continues to improve. The opening of a national distribution centre capable of servicing all of Ireland with a next-day delivery service for full loads anywhere in the country, and a two-day delivery service for half loads anywhere in Ireland as well, north or south, was a game-changer. Business is recovering well, and Gyproc continues to go from strength-to-strength, and yet there are potential storm clouds on the horizon that are causing anxiety to not only Gyproc but the entire business world in Ireland, the UK, and Europe at large.

Bearing mind that roughly 80% of Gyproc’s business is with customers from the south of Ireland, the outcome of the UK’s Brexit negotiations with the EU are at the front of the company’s mind. On this, Gyproc’s spokesman said: “We

need to look at potential solutions for our customers in the north of Ireland. Potentially in a no deal situation you could be looking at us having to do warehousing in the north of Ireland to ensure that our customer’s needs are met. That’s the worst-case scenario.

Our worst-case scenario in relation to a no deal on our incoming raw materials would be our suppliers having to warehouse in the south of Ireland, and who would pay for that eventually? We would – we’ll have to pay the bill for the warehouse.

In a no deal situation we would potentially be facing significant disruption, or more likely significant cost around stocking. It’s still hard to imagine a no deal but the prospect has certainly become more likely in the last few months.”

The outcome of Brexit will have a significant impact on Gyproc’s fortunes over the year to come, but not an existential one. This aside, the company is in rude health and with the backing and resources available from its parent company, Saint Gobain, the means are in place to ensure that the company will not merely hold its place as market but thrive. A worst-case Brexit outcome might mean that, in the short-term, Gyproc has an uncomfortable year or two but over the medium to long-term its commitment to achieving the highest standards of quality, innovation, and operational efficiency means that the company will remain market leader for the foreseeable future.



“Irish National Haulier of the Year 2019”

PROUD PARTNER TO GYPROC SAINT GOBAIN

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Dublin based Toner Transport & Logistics were recently crowned the much-coveted title “Irish National Haulier of the Year 2019” at the industry leading annual Fleet Transport awards.

For over 85 years The Toner Group have been providing a professional no nonsense transport, logistics and warehousing/storage service on a B2B basis across the 32 counties of Ireland.

Toner Transport & Logistics are very proud to be a fully Irish owned and operated business, to be based in the capital of Ireland, to be on the 4th generation of the same family and to employ 60 people on a full-time basis across the country.

The TT&L team run a fleet of over 45 vehicles and 110 trailers, with the main emphasis being placed on giving the best possible customer service to a loyal customer base, whilst always remaining focused on priorities such as Health & Safety and Environmental Issues.

To this end, we are very proud to be associated with such a prestigious company as Gyproc Saint Gobain, who we have been working with very closely since 2008. We are their main haulage contractor in Ireland, a position that we very much value. Over the years with our strong association, we have worked very closely with John Crosse and found him and his team to be extremely professional on all matters logistics with particular emphasis placed on Health & Safety.

Paul Toner: “As working relationships go, this relationship would be very hard to beat, and we look forward to many more years of the same.”



GEOFF BIRD
GM Supply Chain at Santos

Sixty years at the forefront of O&G Supply Chain



Santos



Blessed as it is with a rich abundance of seemingly every key resource that global markets crave, from minerals and metals such as iron ore, gold, uranium, and rare earth metals, to name but a few, to timber and agricultural exports, it is perhaps understandable that Australia is overshadowed, to some extent, as a potent oil and gas producing nation.

By measure of oil and natural gas reserves alone, Australia does not sit at the top table alongside more well-known countries, such as the US, Russia, and Saudi Arabia, but certainly it is there or thereabouts as an upper-middle tier producer. But of course, assessing a country's hydrocarbon credentials by measure of supply alone is a black and white way of painting a picture. Size is not everything; more does not always equal better.

As the catastrophic fall from grace of Venezuela and its once booming oil and gas sector in recent years has shown us, petroleum riches are no guarantee of wealth without the efficiencies and innovation that come as a by-product of effective private sector management.

Australia, as one of the world's leading pound-for-pound, mixed-market advanced economies, has a thriving oil and natural gas sector that in many respects punches above its weight. Over the past decade, the sector has contributed more than AU\$300billion to the coffers of the national economy – a figure which could increase markedly over the decade to come, following

Australia's entry into the LNG market.

Santos, Australia's second-largest independent oil and gas producer, has itself contributed vastly to the regions in which it operates, generating wealth and helping to create jobs at both a regional and local level, and social benefits within the communities that host it. As a proudly Australian company, this is something that Geoff Bird, Santos' Supply Chain General Manager is particularly proud of, stating:

"We really pride ourselves on our interaction with communities, we're committed to the people and places in which we operate.

We want to make meaningful, long term contributions that make a real difference to our host communities and, in partnership with them, we want our activities to generate positive economic and social benefits. So yes, we definitely work closely with local businesses to identify and provide them with opportunities, and that includes targeted Indigenous employment and training, and pursuing opportunities to support local Indigenous business participation. This is certainly a focus area for the Supply Chain group.

Oil and Gas is an international business so there will always be a need to source some materials and services from international suppliers. However, those international suppliers who are successful in Australia have set-up regional offices employing local staff."



from international suppliers. However, those international suppliers who are successful in Australia have set-up regional offices employing local staff.”

From the get-go, when the company was established in 1954, Santos quickly acquired a pioneering reputation for resourcefulness and innovation. These attributes helped sustain the company over the space of a decade until it made its first major discovery of natural gas in the Cooper Basin with the Gidgealpa 2 well in 1963, and the Moomba 1 discovery later in 1966 – breakthroughs that both confirmed the region as a major petroleum province, and Santos as a leading Australian industry player in the making.

More than six decades on, during which it has grown from being a plucky local startup into one of the Asia-Pacific’s leading industry operators, the Santos brand remains one which is synonymous with innovation and operational excellence. The company feels strongly that its historic pioneering values remain integral to its modern-day success, but equally the company has consistently maintained its standing as a leading independent producer through its ability to stay ahead of the curve, technologically speaking.

“The biggest difference in procurement between 10 years ago and now is that technology has really moved along. People are used to buying things on consumer websites such as Amazon and eBay. So it’s shocking when business to business procurement systems are a decade out of date.

A key pillar of our Supply Chain strategy is to provide tools and systems which are simple, easy to use and intuitive, with examples being the implementation of a new eProcurement Platform at Santos, and our use of virtual robots for performing routine repetitive tasks. However, we are only scratching the surface of what we can automate with robotics or streamline with modern cloud-based procurement systems.

One of the biggest changes in Procurement over the past 10 years is how we now think about our ERP system (SAP/Oracle). The trend now is for ERP systems to sit in the background as a database repository and then we use applications, some of which we can develop and customise ourselves, to perform tasks and get data in and out of the ERP system e.g. Catalogue inventory search.”

Santos

Sixty years is a long time in business, and naturally the Santos of today is a different animal to that of its forbear. Where once Santos' core business almost exclusively centred around oil and gas discoveries in central Australia, today, the company is a far more multi-faceted outfit. Having made a number of large discoveries, mainly spanning the hydrocarbon-rich North Western and Eastern territories of Australia, Santos now acts also as a supplier and distributor of sales gas to all mainland Australian states and territories, ethane to Sydney, and oil and liquids to a domestic and Pan-Asian customer base. Taking into account the country's huge size, procurement and logistical efficiencies and excellence are paramount so as to ensure that products and services reach customers in the right place, at the right time.

"The Santos Procurement Function is organised along category purchasing lines with category procurement plans in place for all major goods and services we buy. Our category leaders know their market, the main suppliers and who we are likely to source from in the future – that's their job," explained Geoff, who continued: "On the supplier side it requires good old-fashioned business development. Meeting with people in the Santos business to explain the services/goods they offer. I'm not a big fan of prequalification systems, which I don't think really work. Although I do see a role for registration systems to highlight smaller, local and indigenous suppliers which are sometimes hard to identify."

In his view, the foremost objective of a Supply Chain Function is to deliver

value to the business, otherwise Supply Chain is, in his words, just an overhead: I don't think quality and reducing cost are at odds with each other, not if you are focused on long term, sustainable cost reduction and your sourcing is aligned with this approach. I do however agree that when contractor selection is made, the less tangible 'quality' creates some debate versus the very tangible purchase cost. We are very clear in our processes that we want lowest overall total cost which includes less tangible factors."

In order to deliver value, the Supply Chain Function must be good at managing internal stakeholder relationships, relationships that are built on collaboration, trust, and mutual respect. As with any internal relationship, it can be difficult to get the balance right – the Function cannot be subservient to its customers, but neither can the tail wag the dog. Getting the right balance is not always easy, but when done well is fundamental to creating a modern Supply Chain Function that can significantly contribute to real bottom line value.

In light of past disasters, the oil and gas sector is now one which places great emphasis on protecting the safety of the environment, local communities, and employees. Whilst care is taken to ensure that they are neither cumbersome nor restrictive, qualification and consultation processes are conducted before suppliers are engaged, who are expected to comply with a Santos Code of Conduct, which incorporates our environment, health and safety policy and standards of business conduct.



In this regard, there is no sitting on the fence – on environmental and safety matters, there is a "go"/"no go" line in the sand for all Santos partners and suppliers, in that if they do not satisfy rigorous minimum safety or environmental standards, doing business is simply out of the question. "We simply don't work with them," Geoff said, forthrightly.

"Regular supplier performance meetings are held with our contracted service providers. Based on an assessment of risk and contractor performance, the meetings are held monthly, quarterly or six-monthly. The standard agenda includes a review of environmental, health and

safety performance, activity levels and forecasting, quality planning and review, and reliability."

In terms of what the future holds, Geoff is optimistic about the coming year. He concluded by telling us: "We've had a number of wins in 2018 such as the re-outsourcing of accommodation camps and travel management, the self-perform approach to onshore coal seam gas project execution, delivering over AU\$50M of bookable savings. A few wins like these then gives the Function a licence to challenge other areas of the business where costs can be reduced, using a strategic sourcing approach."



Plexxus

LEADING THE WAY IN HEALTHCARE SUPPLY CHAIN

In a fast-moving, fast-changing business landscape, Plexxus has carved out a reputation as an organisation that can generate efficiencies for its members and customers. Jason Rude, Director of Distribution & Logistics at Plexxus, told us more about how this shared services organisation and its operations in the Canadian healthcare sector.



Thanks to the effective combination of superior standards of patient care, cutting-edge tech, and an impressive capacity for achieving cost and operational efficiencies, the Canadian healthcare system is first-rank by any international measure – something which is no-small point of national pride in the country, it should be added.

Naturally, the provision of a comprehensive publicly-funded healthcare service to 36 million people, of a standard matching what's on offer in the UK, Sweden, and Switzerland, doesn't come cheap. As in other advanced economies in the western world, Canada is facing the dual-challenges posed by its ageing population, and the growing strain on resources that it is placing on a

healthcare system that is becoming increasingly costly with each passing year.

Bearing in mind that Canada outspends nearly every other country in the world in terms of healthcare spending, equivalent to 11.5% of national GDP, employing effective strategies to manage costs without compromising on quality of patient care is a foremost objective of both the government and third-party healthcare sector operators. In the province of Ontario in particular, achieving operational excellence and cost-effectiveness is of the utmost importance. And as the region's leading shared services organisation, Plexxus is at the vanguard of such efforts.



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For nearly 150 years, Halyard has continuously sharpened its focus to meet and exceed customer needs through the introduction of innovative products and services. At Halyard, our Total Value is built on three fundamental strengths:

Reliability: to avoid disruptions in care across the entire supply chain

Standardization & Efficiency: to drive long-term cost savings to your business and operations amidst an increasingly complicated industry

Knowledge & Expertise: to empower you and your staff to prevent infections across the continuum of care.

And these three elements are inextricably linked, building on each other to move CARE FORWARD*.

The company's commitment to excellence combined with its rapid response capabilities and integrated supply chain ensures both product reliability and availability without added expense to its customers. In addition, Halyard's standardization and efficiency strategies provide important cost savings to its partners. By combining best practices with a dedication to learning its customers' businesses, customizing efficiency plans for its customers and delivering standardized solutions that reduce complexity, Halyard keeps customer costs down. And because Halyard is much more than a supplier, its solutions and interventions include research, product innovation, education resources and in-service training.



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When cost-cutting isn't enough, choose Halyard clinical expertise, efficiency and reliability to create sustainable value for your hospital.

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Halyard, now part of the Owens & Minor family, is focused on advancing health and healthcare by delivering clinically-superior infection prevention and surgical solutions. Halyard sells its recognized sterilization wrap, facial protection, gloves, surgical drapes and gowns in more than 100 countries, and holds leading market positions across the portfolio. For more information, visit www.halyardhealth.com

Halyard's KNOWLEDGE NETWORK* empowers healthcare facilities with the critical information needed to help prevent infections all across their health systems. With an experienced sales force, on-site training and support, and a staff that is actively engaged in various standards committees, Halyard stands ready as a catalyst to help move its customers' care forward.

of these two factors on Plexxus and the industry in which it operates will in Jason's view be transformational. The business case for the Plexxus-Mohawk Medbuy collaboration is strong, and will ultimately provide significant financial benefit to both Mohawk Medbuy and Plexxus members by making the distribution network stronger and more sustainable.

However, beyond just the savings that can be gained through pooling resources, staff and infrastructure and operating under one warehouse roof, the sourcing collaboration that Mohawk Medbuy and Plexxus are working on will also be strengthened.

"Our sourcing leaders at both Plexxus and Mohawk Medbuy have met and are strengthening their partnership, and having a single warehouse allows them to approach the vendor community with a lot more buying-power.

So that, those two elements are at the heart of the business case that we use to support going forward with the integration. We're almost done with the integration, we only have four more hospitals to 'onboard', two of these are going to be onboarded next week. Any while the integration hasn't necessarily been painless, I would describe the fact that our operations are still very effective, delivering a level of service that our members and customers expect. We hope that by the middle of October we will be completely done with the onboarding and be ready to move onto more of a stabilisation phase."

In terms of what the near to medium future holds for the company, these are exciting times for Plexxus and the distribution business at large. In-line with the organisation's Strategic plan 2017-19, which was developed in partnership with Price Waterhouse Cooper, efforts to improve 'functional excellence' will continue.

Improving distribution functional excellence, for example, is a key objective of Jason's over the coming 18 months – one which will see Plexxus create a more streamlined, simplified delivery model that will help the organisation lower its cost-base. Additionally, Plexxus is set to introduce new metrics that will enable it to measure different parts of the business.

"We've always measured our fill-rate and accuracy, but we're now also trying to get more precise in measuring on-time delivery among other things that are important to customers. We're halfway through that strategic plan and we feel that we are progressing quite well on defining functional excellence, and introducing new measures to show our progress toward functional excellence. All-in-all we're doing well."remove uncertainty from the supply chain. I believe that part of our success is to collaborate both upstream with suppliers and downstream with customers to remove uncertainty out of the supply chain."

"Plexxus is a shared service organisation and we are owned by our members, which are hospitals in the greater Toronto area. We are a not for profit organisation - we are owned by our members, and we work to create strategies that are in clear alignment with the strategic objectives of our members. We provide the services that will ultimately benefit them.

These include procurement and sourcing, transactional purchasing, accounts payable and, the piece that I'm responsible for, distribution and logistics," explained Jason Rude, Director of Distribution & Logistics for Plexxus.

He continued: "The distribution services we provide are daily deliveries of medicines, drugs, and other products and equipment to our hospitals, members as well as customers. We've now expanded our distribution network to include non-members.

To put it simply, we run a 'just-in-time' type of program where the hospital supplies that are distributed from our warehouse are delivered directly to the unit where they will be used on patients. The hospital doesn't need to receive them into any kind of central stores or central distribution point within the hospital as they traditionally once were, they are already in packaged and ready to go the unit where they are needed."

Catering to nearly 50 hospitals in the Toronto area, Plexxus is the largest shared service organisation of its type in the province, but it would be

incorrect to say that the company sets itself apart by size and scale alone. In addition to having the facilities, staff numbers, equipment and reach, Plexxus possesses other strengths that are less tangible, perhaps, but no less important.

Innovation, expertise, and the adoption of technologies to generate supply chain efficiencies are, in Jason's eyes, at the heart of the organisation's success with the implementation of end-to-end supply chain accountability being one such example. On this, Jason elaborated:

"As well as our staff here at Plexxus, the in-hospital logistics folks actually report in to me as well. In addition to having responsibility for the warehouse, I and my department have responsibility for the entire supply chain, from the warehouse up to the point where it's actually put away on the shelf in the hospital and is available for the nurse or physician to use on their patient.

Having that end-to-end supply chain accountability, which is quite unique among any of the other SSO's, does indeed set us apart. It also gives us an advantage because it's so important for the in-hospital logistics teams to work collaboratively with the distribution centre, whether its finding efficiencies or scanning orders at a more opportune time, whether it's an advantage for the hospital or whether it's an advantage for the distribution centre, we can take a more holistic and strategic view of those types of supply chain challenges."



RVH Royal Victoria Regional Health Centre | Centre régional de santé Royal Victoria

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In terms of what the near to medium future holds for the company, these are exciting times for Plexxus and the distribution business at large. In-line with the organisation’s Strategic plan 2017-19, which was developed in partnership with Price Waterhouse Cooper, efforts to improve ‘functional excellence’ will continue.

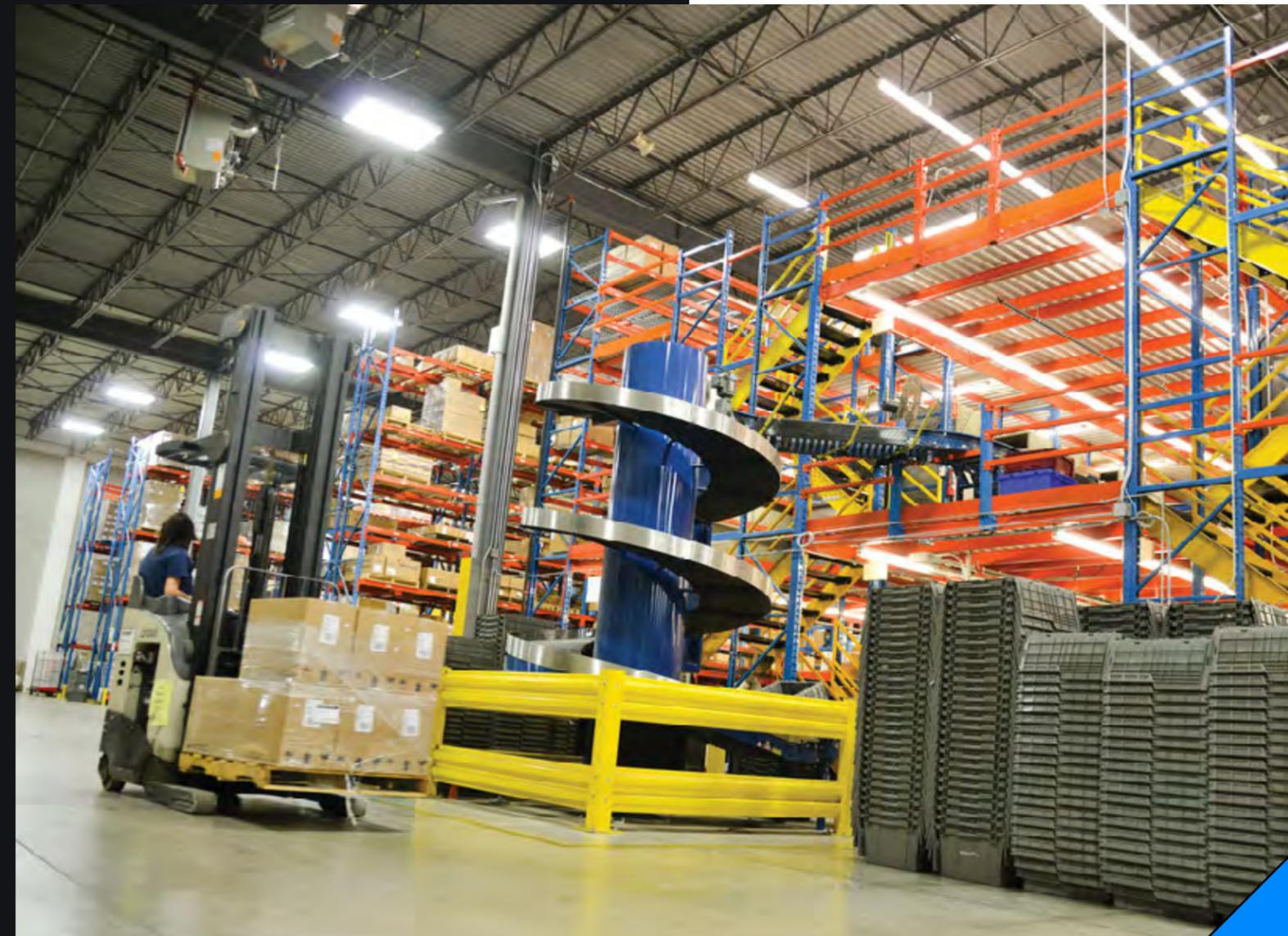
Improving distribution functional excellence, for example, is a key objective of Jason’s over the coming 18 months – one which will see Plexxus create a more streamlined, simplified delivery model that will help the organisation lower its cost-base. Additionally, Plexxus is set to introduce new metrics that will enable it to measure different parts of the business.

“We’ve always measured our fill-rate and accuracy, but we’re now also trying to get more precise in measuring on-time delivery among other things that are important to customers. We’re halfway through that strategic plan and we feel that we are progressing quite well on defining functional excellence, and introducing new measures to show our progress toward functional excellence. All-in-all we’re doing well.”

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Jason concluded, saying: “It’s an exciting time to be in the distribution business because there’s a lot of innovation that is exciting as a supply chain leader. For me, I believe strongly in supply chain collaboration and so it’s an exciting time to utilise the different data tools that are now out there – collaboration portals and tools, to enable us to remove uncertainty from the supply chain. I believe that part of our success is to collaborate both upstream with suppliers and downstream with customers to remove uncertainty out of the supply chain.”



The RioTinto logo is displayed in white serif font on a red rectangular background.

**DIAVIK
DIAMOND
MINE**

INVESTING FOR THE FUTURE...

With the increase in global demand of high-end diamonds, the Diavik Diamond Mine is achieving and demonstrating what it takes to produce some of the world's most pure and exquisite diamonds. Patrick Boitumelo, President and COO of Diavik Diamond Mines tells us why they're leading the way in regional business development and how investing for the future is benefiting local communities to thrive way beyond their mining operations.





PATRICK BOITUMELO
COO of Diavik Diamond Mine

As President and Chief Operating Officer of the Diavik Diamond Mine, Patrick Boitumelo is responsible for delivering value to stakeholders by leading the Diavik team in the safe production of diamonds from the mine. Key priorities include successfully bringing the A21 pipe into commercial production, building strong, consultative and respectful relationships with communities, and ensuring there is a strong focus on the people who make Diavik the special organisation that it is today.

Patrick has more than 20 years' experience in the mining industry with extensive operational, stakeholder management and corporate strategy experience at a senior level across

several businesses including diamonds, soda ash, salt, nickel, iron ore, copper and copper by-products. Patrick has previously worked at Debswana, the world's leading producer of diamonds by value.

The Diavik Diamond Mine is a joint venture between Rio Tinto (60%) and Dominion Diamond Mines (40%), with Rio Tinto being the operator of the Diavik diamond mine. The Diavik mine is Canada's largest diamond mine producing between 6 and 7 million carats of diamonds each year. Since mining began in 2003 Diavik has produced over 100 million carats of diamonds.

Diavik diamonds are high end and predominantly white gems with a provenance that is clean and pure thus making them strong in demand. Diavik diamonds are ideal for the bridal markets of all established and emerging markets, including China. In China Rio Tinto has a strategic partnership with Chow Tai Fook who sell Diavik diamonds into their bridal markets in Hong Kong and mainland China. Diavik diamonds also find their way into heirloom pieces of jewellery, for sale in the most exclusive luxury diamond salons in the world.

With Diavik being one of the worlds most remote mines, Patrick explains what it takes for the team to excel at what they do best.

"The challenges of operating a diamond mine in a sub-Arctic environment are many and varied, dominated by the extreme weather conditions and lack of year-round road access to the site.

Today at Diavik we are mining three pipes underground at the same time using two different mining methods. It's a very complex, technical and demanding operation that requires, for example, permanent pumping of water out of the mine, because the

orebody was below the lake. Initially, two rockfill dikes were built to safely hold back the waters of Lac de Gras to allow open-pit mining of these three pipes. Though the open pits are directly above the underground mine, water still enters the mine through natural cracks and fissures which extend out to the lakebed. Diavik pumps around 30,000 cubic metres of water to surface per day."





Diavik is also one of the only mines in the world that you must heat the operation. They keep the temperature in the mine underground between 4 to 5 degrees Celsius, so it doesn't freeze and to achieve this, they rely on massive heating and ventilation systems inside the underground tunnels.

Their fourth pipe and recent substantial investment, the A21 pipe, is very close to the other three pipes and is the smallest of the four pipes. The A21 pipe is being mined as an open pit operation and commercial production commenced earlier this year.

With the operations being one of the worlds most unique workplaces, Patrick went on to explain more about how the staff and how they house such a workforce in the northern wilderness of Canada. "It takes a village to run a mine like Diavik and the 1100 strong workforce is very diverse in terms of genders, nationalities and skills. There are underground miners, engineers, heavy equipment operators, environmental technicians, information technology staff, health and safety advisors, and process plant operators as well as people working in human resources, finance, administrative, and communities and communications and many other areas".

"One important aspect is our commitment to hiring northern Indigenous residents. We've put in place significant training and

apprenticeship programmes to give access to employment at the mine to Indigenous people. This is really a part of the success of the mine – this connection that we've been able to create".

Other skilled production workers are flown to the Diavik site for two weeks on/two weeks off rotations, living in what is essentially a self-contained city. Some employees work a four days on/ three days off rotation and accommodation at the mine includes private bedrooms, a fully equipped fitness facility, a running track, a squash court, weights room and an indoor sauna, critical facilities when winter lasts for eight months of the year.

There is a camaraderie that comes from living and working in this remote location – the challenge, the excitement and the knowledge that they are engaged in something very special.

There is also a culture of safety and respect for each other and for the environment. Around a quarter of our workforce is Indigenous and almost half live in the Northwest Territories. The team is largely Canadian with some workers commuting from as far away as Newfoundland and British Columbia. Several have moved from their home countries to the Northwest Territories to work at Diavik including people from Australia, Austria, the United Kingdom, India, Zimbabwe, and Namibia.

When speaking with Patrick it's clear that Diavik and Rio Tinto are committed to the development of local indigenous workers and opening opportunities for careers within the local mining sector, however there will always be areas that need experience. "A test for mining companies in the North will always be accessing a skilled labour base from such a small and widely distributed population base".

"To overcome this challenge, we carefully built relationships with governments, and local Indigenous communities to focus on training and employment – even creating a Northwest Territories Mine Training Society. Developing a Northern workforce takes time but today, almost a quarter of Diavik's workforce is Aboriginal and 50 per cent of our team is Northern. This is a great success story and the development and operation of our fourth pipe, A21, presents another opportunity for Northerners to gain employment".

In terms of customers and Rio Tinto's channel to market for Diavik diamonds, it is important to note that they are an upstream supplier of rough diamonds and sell their diamonds as rough in regular sales to a stable customer base of diamond traders and manufacturers. These customers then add value to the product through their own cutting and polishing and jewellery manufacturing.

Rio Tinto have a global reputation of not being afraid to invest where needed when it comes to their operations and this goes without saying for Diavik. With the mine only having another 7 years life span left, they invested \$350m USD into the A21 pipeline project which will ensure production will remain consistent. Production is scheduled to decrease as operations move deeper underground in the three pipes and production from the A21 pipe will offset this. The A21 pipe

will therefore be an important source of incremental supply over the next four years.

Rio Tinto have a commendable approach on the environment and maintaining that strict international mining environmental regulations are met. They have invested a further \$31m USD into what is a first for them, and that's a renewable wind energy facility. With the temperatures reaching subzero, the wind facility is using state of the art technology and expertly manufactured lubricants to stop the turbines from freezing, it truly is an incredible approach on being self-sufficient.

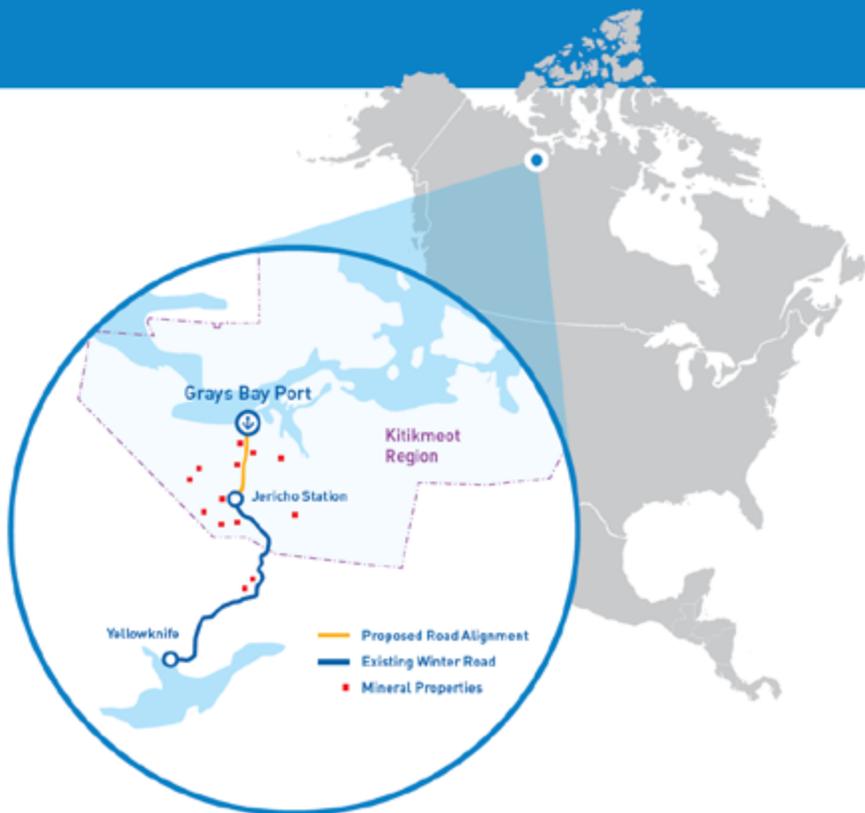
Patrick explains that strong and respectful partnerships are at the heart of everything they do at Diavik. "The way we operate reflects an empathetic relationship with the land, its people and their legacy".

"We have Participation Agreements with five indigenous groups that oversee our community activities during the operation of the mine. Additionally, we have a Socio-Economic Monitoring Agreement with the Government of the Northwest Territories and the five Indigenous organisations. This Agreement outlines Diavik's commitments to local employment, economic benefits, cultural and community well-being, and the monitoring of these requirements by a Board of community, government and Diavik representatives".

With Diavik being renowned in diamond production, it's safe to say that their legacy after 2025 will continue to be spoken of for generations to come. The passion of the entire business in giving back to the local population is incredible and its morals are something businesses all over the world can certainly learn from.



A new road in northern Canada. A massive opportunity.



The proposed Grays Bay Road and Port is an Inuit-led project on Inuit-owned land in western Nunavut.

It will give mining companies lower cost access to a mineral-rich region via a 230 km all-weather road and deep water port on the Northwest Passage. The known geology of the area is much like Canada's mineral-rich Abitibi region (Timmins, Val d'Or and Rouyn Noranda)—when it opened up 100 years ago. This represents a significant opportunity for the people of Nunavut and the mining industry to work together.

All enquiries welcome.

Please email info@gbrp.ca



Find out more about the Grays Bay Road and Port.
It's Nunavut's road to a sustainable future.

gbrp.ca