

GLOBAL MEDIA CAMPAIGN • SmartSteel Innovation challenge
• Diversity drives innovation • BEING A GLOBAL GRADUATE •
METAL CUTTING AS E-LEARNING • Uncovering hidden galaxies

MEET #3-2018 SANDVIK

PICKING THE BEST

Tomorrow's manufacturing requires a different set of skills. What are they, who has them and how does Sandvik attract them?

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FUTURE TALENT

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How can Sandvik attract the right people?

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MEET SANDVIK: The Sandvik Group magazine

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THE FIGHT FOR BRAIN POWER

THE DIGITALIZATION OF society is leading to fierce competition between industries for talent. It is therefore becoming increasingly important for companies to strengthen their brand and offer potential employees an attractive workplace.

Sandvik is a company dominated by engineers, and this is not about to change, but we will also need to recruit people for new roles such as AI, digital offering experts and user experience designers. New and exciting positions will be developed that we are not even aware of today, and we are competing with companies like Google and Amazon to attract the right skills. The mining industry is a sector in which digitalization and automation are dramatically changing the way we work, and we are able to offer potential employees the opportunity to come on board and revolutionize an entire industry.

RECRUITMENT METHODS ARE also changing. We are increasingly using social media platforms such as LinkedIn when recruiting, and we work closely with a number of universities to identify people with the skills we need. Many apply to our Global Graduate Program, in which young graduates spend 18 months experiencing what it's like to work in various parts of our business.

Retaining talented employees is just as important as recruitment. We want there to be good prospects for professional development within the company, and one of Sandvik's strengths is that there are plenty of opportunities for job rotation between our different areas. We have an open job market in which all vacancies are advertised internally, and in 2017 more than 80 percent of managerial positions were filled by internal candidates.

In this issue you can also read about our first global brand campaign, which was a huge success. The film shows a driverless mine loader navigating its way through a glass labyrinth, and I had the pleasure of playing the lead in it! Hope you take the chance to watch it if you haven't already.

Björn Rosengren, President and CEO



A large red sandvik loader is positioned in the foreground on the left. The background features a complex glass labyrinth structure illuminated by numerous vertical light tubes hanging from the ceiling. The scene is set in a dark, industrial-looking environment.

FIRST GLOBAL CAMPAIGN LAUNCHED

A self-driving giant loader navigates a glass labyrinth without causing a single crack – until Sandvik's CEO takes the wheel.... The latest Hollywood blockbuster? No, a digital media campaign designed to strengthen Sandvik's image with key audiences.

[Read all about it →](#)



IN SEPTEMBER, SANDVIK'S first-ever global campaign under the theme "Let's Create" hit digital media in the form of a spectacular film showing an 11-meter, 38-ton mining loader navigating a labyrinth of glass – all by itself. To prove that no computer-generated imagery (CGI) was used, Sandvik CEO Björn Rosengren takes over the driving at the end of the film and crashes into the glass.

The film is distributed in partnership with a number of leading tech sites, says Sandvik Brand Manager Minna Rodling, explaining the purpose of the campaign.

"We have defined the target group as engineers and others with an interest in science and technology, plus their influencers," she says. "Existing and prospective customers are an important secondary target group, but our brand awareness is much stronger with them."

The initial results in terms of spread and engagement are excellent, with about 25 million video views and a very high engagement in social media.

Rodling points out that the ongoing

digitalization and automation of the mining and manufacturing sectors is fostering a need for new kinds of competency.

"Sandvik always needs to hire good engineers, particularly ones that are familiar with the digital world, a sub-category often with less awareness of Sandvik and little interest in large corporations," she points out.

Reaching out to future talent, Sandvik needs to be seen in new and different contexts. "We need to convey that we are a high-tech company with plenty of creative challenges, entrepreneurial spirit and cutting-edge solutions like self-driving vehicles, and to be seen in the sort of media our future employees are likely to use," Rodling says.

The choice of showing a self-driving loader is to take advantage of the current hype surrounding self-driving vehicles.

"We are able to deliver the message that Sandvik has been a leading supplier of automated vehicles for over 20 years – with zero accidents involving

people – continuously developing and refining the technology behind automation,” Rodling explains. “A benefit with autonomous systems is that we can move people from the underground environment to safe control rooms above ground, improving safety and productivity for our customers.”

AN INDUSTRY FIRST, Sandvik’s latest mining machines are also able to load material, transport and empty it all by themselves.

The campaign features a link to a landing page at home.sandvik/letscreate, where potential job seekers and others who are interested can learn more about automation, Sandvik’s culture of innovation, career opportunities and much more.

Sandvik has more than 43,000 employees globally, with approximately 2,600 working as researchers in some 50 R&D centers. From engineers to digital specialists, Sandvik aims to boost innovation with a blend of competencies that work together.

Looking ahead, Rodling says the Let’s Create concept will be used further with other suitable Sandvik applications in producing two to three films a year.

For CEO Björn Rosengren, the glass labyrinth test was obviously a special day at work. But the unique filmed feat also demonstrates Sandvik’s view on innovation.

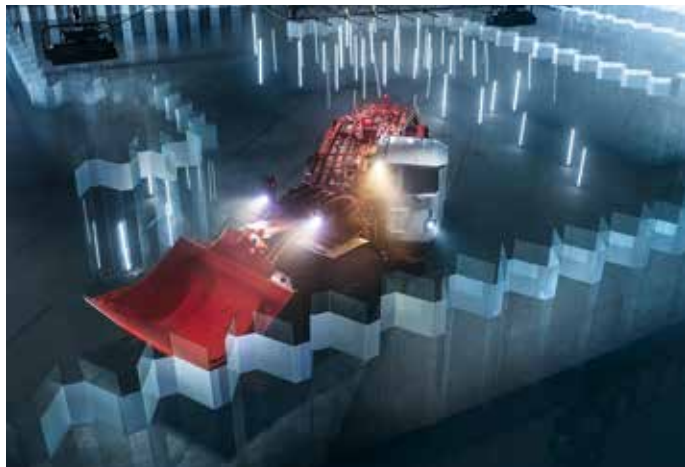
“Some of today’s most sophisticated technology is found within Sandvik’s different business areas,” says Rosengren. “We’ve always worked close to our customers, developing new products and technologies. Going forward, we clearly see digitalization as a key area. It will help both us and our customers to be more productive, efficient and sustainable.”



Minna Rodling
Sandvik Brand
Manager

THIS IS HOW IT WORKS

Sandvik’s automated system means that its loaders and trucks learn the safest and most efficient route the first time they enter a tunnel. Guided by a set of lasers, the vehicle’s intelligent system maps out and records a path. Sandvik’s patented algorithms, together with the loader’s sensors and gyroscopes, ensure that it knows where to go underground, where GPS is not possible.



NEWS



MEET SANDVIK – NOW ALSO A PODCAST. Get new perspectives on Sandvik by listening to the podcast Meet Sandvik. The podcast is in English and can be found on Spotify, Podcaster (Apple), Acast, Stitcher and Tunein. Type “Meet Sandvik” to find the podcast.

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Self-driving is not new to Sandvik, whose automated loaders and trucks have been working in mines for over 20 years.

That’s more than 2 million operating hours of self-driving underground and there have been zero accidents involving people.

NEW SANDVIK MOVIE PREMIERES

SANDVIK HAS LAUNCHED

a new corporate movie entitled The World of Sandvik. The movie focuses on areas such as innovation, digitalization, sustainability and Sandvik as an employer. It is a mix of film, digital animations and infographics, adding to the feeling of Sandvik as a digital frontrunner.

"We want to portray Sandvik as an innovative, customer-focused, sustainable company that is good to own and good to work for. The ambition is to visualize Sandvik as the exciting frontrunner we truly are," says Jessica Alm, EVP and Head of Communications at Sandvik. "We also had the ambition



Watch the movie at youtube.com/Sandvik and share the film.

of making an ‘uncorporate corporate movie’, meaning a movie that feels authentic and genuine.”

INCLUDING ACTUAL Sandvik employees in the movie is a way

of creating this authenticity.

The movie has been finalized in English, Swedish, German, Italian, French, Chinese, Portuguese and Polish. There will also be a version in Spanish. Watch the movie at youtube.com/Sandvik

SANDVIK RECONFIRMED

SANDVIK HAS BEEN reconfirmed as a member of the prestigious FTSE4Good Index Series in its 2018 semi-annual review. The index measures the environmental, social and governance performance (ESG) of companies worldwide. Sandvik has been a constituent for 14 consecutive years.

A sustainable business strategy and business

model is key to successful corporations. Sandvik is proud to be reconfirmed into FTSE4Good, not only because of the prestige of the recognition, but also because ESG performance is truly business critical.



FTSE4Good

INNOVATION AWARDED

SANDVIK COROMANT'S CONNECTED TURNING solution Silent Tools™ Plus was recognized as the "most innovative product" at IMTS (International Manufacturing Technology Show) in Chicago in September.

Silent Tools™ Plus is developed for internal turning where long and slender tools are required. In this application type, one of the main challenges is knowing how the machining process is proceeding inside the component. The solution visualizes information from the cutting process, enabling better decision-making and increased process security.

IMTS is one of the world's largest and most significant manufacturing fairs with more than 115,000 visitors.



Real-time data from the machining process is sent from the connected Silent Tools™ Plus adaptor, enabling the operator to better understand the machining process.

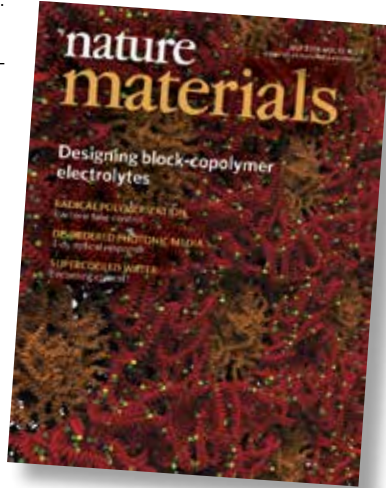


PRESTIGIOUS SCIENTIFIC PUBLICATION

SANDVIK'S BO JÖNSSON has co-written an article that has been published in the prestigious scientific journal *Nature Materials*. The article looks at the challenge of avoiding corrosion at high temperatures, a growth area in which Sandvik excels.

"It's a great honor to be published in the *Nature Materials* journal," says Bo Jönsson, Senior Expert, high-temperature corrosion at Sandvik's product area Kanthal. "Even though Sandvik is recognized as a material expert, we are very seldom published in this kind of journal. The publication

strengthens our claim as world-leading within high-temperature corrosion research."



Tomorrow's technologies typically involve increasingly higher temperatures, which means that there is a need for materials that can withstand extreme heat without corroding or deforming.

Nature Materials is a multidisciplinary journal aimed at bringing together cutting-edge research across the entire spectrum of materials science and technology.

TOP SUSTAINABILITY ACHIEVER

ONCE AGAIN, SANDVIK has been selected as a member of the prestigious Dow Jones Sustainability Index. The top 10 percent of the most sustainable companies in each respective industry are included. Sandvik continues to score with a percentile ranking of 92, which means the company performs better than 92 percent of the assessed companies in its industry.

"Sustainability is a natural and integrated part of our business strategy," says Björn Rosengren, President and CEO of Sandvik. "It's enabling us to help our customers become safer, more efficient and productive."

The Dow Jones Sustainability Index was launched in 1999. It assesses the world's 2,500 largest companies and is one of the most respected independent sustainability

ranking indices in the world. The assessment includes a detailed analysis of management practices and performance measures within areas such as corporate governance, risk management, anticorruption, innovation, climate-change mitigation, sustainable supplier management and labor practices.

STERLING CURLING SPONSORSHIP

SANDVIK IS THE new sponsor of Team Hasselborg, winner of the Olympic gold medal in curling in Pyeongchang in 2018. This ambitious young team will work full-time over the coming years toward the goal of winning additional gold medals in the future.

"We want to put curling on the map and show that it isn't a sport that only takes place every fourth year," says Sara McManus, who until recently worked within Sandvik's Human Resource organization. "Also, if we can be an inspiration in showing that it is possible to do a full-time commitment, even in a smaller sport like curling, it would make us happy."



Team Hasselborg – Agnes Knochenhauer, Sara McManus, Anna Hasselborg and Sofia Mabergs – will focus on curling full-time.

In addition to Sara, the team consists of Anna Hasselborg, Agnes Knochenhauer and Sofia

Mabergs. The sponsorship is shared with power company Vattenfall.

FINDING A FINGERPRINT FOR STEEL

STEELMAKER SSAB and Sandvik have launched the SmartSteel Innovation Challenge in order to find the best ideas for tracking steel products over their entire life cycle.

"Discovering a viable fingerprint technology for steel would definitely open up new doors for Sandvik," says Mattias Klockars, Head of Strategic Research Labs at Sandvik. "The fingerprint would work as a quality stamp, containing useful information about material,



"We are very excited to innovate together with others," says Mattias Klockars at Sandvik.


safety and sustainability, among other things."

What would a fingerprint look like? It might be digital, or it might use artificial intelligence. It might be a chemical solution or a mechanical one. Companies and research groups of all sizes are welcome to share their ideas, and the winner will have the opportunity to develop the idea in a long-term partnership with SSAB and Sandvik.

The winner will be announced on December 12.

FOCUS

SKILLS THAT SHAPE TOMORROW



Automation, globalization and digitalization are changing the nature of work as we know it. Going forward, we can expect to see a significant shift in the types of skills that are most in demand, as well as the types of companies that are able to attract people with in-demand skill sets. Companies need to define a strategy and position themselves to attract and retain key people.



THE SKILLS REQUIRED in the workforce have been changing over the past 15 years. Now, with the rise of automation and artificial intelligence technologies, this shift is speeding up. A recent report from McKinsey Global Institute identifies technological skills and social and emotional competencies, including leadership and teamwork, as those set to grow in importance. At the same time, the report predicts that the need for basic cognitive and administrative abilities and physical and manual skills will decline.



EY's Magnus Kuchler says the notion of a "job for life" will be less relevant in the future, while the ability to retrain will become a competence in itself.

As more of the routine job tasks that were previously the responsibility of manual laborers become automated, there will be more competition for highly-skilled workers with a mix of technical and social competencies. The report says that, going forward, companies will need both to recruit new people and to leverage external resources, such as contractors, to secure access to in-demand skill sets.

THIS IS A VIEW shared by Magnus Kuchler, a partner at consultancy firm EY, which has published the report "Making the future of work, work – Innovation matters: insights on the latest disruptive technologies". He says some 46 percent of workers in mature economies are expected to be self-employed 10 years from now.

"Companies will be looking to secure access to competence, but it won't need to be located in a specific geographical location," says Kuchler. "More teams will be virtual, composed of remote resources contributing with their specific, cutting-edge skill set on a contract basis." He adds that EY has already built up a global skills network comprising more than 10,000 freelancers.

"More teams will be virtual, composed of remote resources contributing with their specific, cutting-edge skill set on a contract basis."



"Creativity, teamwork and soft skills will be the essential skills for the vast majority of employees in the future, even in manufacturing," says Bjørnar Jensen at Deloitte.

Kuchler maintains that the notion of a "job for life" will be less and less relevant in the future, while the ability to retrain will become a competence in itself. He says the most sought-after employees will not only be willing and able to learn new skills – they will demand it of their employers.

"Smart people want to develop, and the most successful companies in terms of retention will be those that empower them to grow and learn," Kuchler says. "This applies even more to so-called millennials, who are

expected to change roles more frequently than previous generations.

"But," he adds, "changing roles won't necessarily need to mean changing companies – as long as the job remains varied and challenging."

Bjørnar Jensen, Managing Partner Consulting, consultancy firm Deloitte Switzerland, agrees that soft skills will be key in the future, in addition to the obvious increase in demand for experts in areas related to automation and digitalization.

"The number of people doing nonstandard, interactive work that requires them to solve complex problems and interact with teammates, stakeholders and clients will continue to increase," he says. "Creativity, teamwork and soft skills will be the essential skills for the vast majority of employees in the future, even in manufacturing."

DELOITTE HAS PUBLISHED a report entitled "What key competencies are needed in the digital age? The impact of automation on employees, companies and education."

Deloitte's research indicates that employees with advanced levels of complex problem-solving skills will account for as much as 71 percent of the Swiss workforce by 2030. Meanwhile, the proportion requiring advanced social skills, such as negotiation, persuasion or social perceptiveness, will rise from 44 to 52 percent.

While employers will always need to offer competitive packages to talented people, Jensen says the importance of salary should not be overestimated.

"Younger jobseekers have low confidence in business these days," Jensen says, "so now is an ideal time for companies to differentiate themselves from the competition. And while pay and culture may attract these people, diversity, inclusion and flexibility will increasingly emerge as the key to keeping them happy and loyal." ■

SECURING SANDVIK'S BRAIN POOL FOR THE FUTURE

From automation to globalization, artificial intelligence and the Internet of Things, modern companies have a host of challenges to contend with as they prepare to meet the demands of the future. At Sandvik, recruiting and retaining the right people and skill sets is a crucial success factor.

SANDVIK HAS 43,000 employees – from engineers to digital specialists, and the company is constantly seeking to boost its innovative power by attracting the right blend of cutting-edge competencies.

Johan Kerstell, Head of Human Resources at Sandvik, says the rapid march of technology in the past couple of decades has been a game changer. “Looking back just 20 years, most of our employees had no idea how to use the internet or email,” he says, “so our competence needs have shifted quite a bit.” Looking forward, Kerstell says he expects these needs to continue to shift.

“As society continues to evolve, it is up to us to make sure our company has access to the right skill sets to enable us to stay at the cutting edge of technology,” he says. “This also means that our employees need to continuously learn and develop new skills and competencies.”

In the coming years, Kerstell foresees that a variety of roles that did not even



Johan Kerstell
Head of Human Resources
at Sandvik.

“Our employees need to continuously learn and develop new skills and competencies.”



Sandvik cooperates with several prestigious universities, such as KTH Royal Institute of Technology in Stockholm, to target graduates with specific skill sets and profiles.

exist just a short time ago will become more and more critical to Sandvik.

“In addition to developing our own staff we need to recruit AI [artificial intelligence] experts, digital offering specialists and user experience designers, and we’re competing with the likes of Google and Amazon to find them,” he explains. “Most of these roles were unheard of in our business ten years ago. Going forward, one thing that’s certain is that there’ll be a lot of new, exciting jobs that will evolve even faster than we’ve seen to date.”

“People with cutting-edge skills in AI, digitalization or automation can choose either to work in the digital sphere or use their expertise to transform an entire industry,” says Kerstell. “The work we do in, say, mining or manufacturing has the potential to revolutionize the way that industry will operate in the future.”

RECRUITMENT METHODS ARE also changing. Sandvik uses social media platforms such as LinkedIn to post job ads and scout for potential employees, as well as working with a number of

universities, where it targets graduates with specific skill sets and profiles.

“We have a strong social media profile, with more than 211,000 followers on LinkedIn,” says Kerstell, “but even more importantly, we have committed employees. They are our best ambassadors and proof that this is a great place to work.”

SANDVIK ALSO PERFORMS well in employee development and retention. Available positions are made public, enabling everyone to find new opportunities within the company. In 2017, more than 80 percent of top management vacancies were filled internally. In the same time period, more than 500 Sandvik leaders participated in the company’s various programs to hone their leadership skills.

“We invest in our people and already have a fantastic competence base,” says Kerstell. “Going forward, we’re confident that we can continue to build a challenging, inclusive, progressive environment that will attract the kind of top talent we need for the future.” ■

DIVERSITY DRIVES INNOVATION

Putting people from different cultures together to solve problems results in a greater degree of trust and openness, says Kavya Patnaik who moved from India to Finland to head up a multicultural R&D team that develop digital solutions.

THE WORLD OF digitalization and automation is evolving rapidly, and staying ahead of the knowledge curve requires access to cutting-edge expertise.



The global Sandvik team headed by Kavya Patnaik (bottom right) includes members from Finland, Hungary, India and UK.

Kavya Patnaik and her team are tasked with developing OptiMine®, an intelligent, data-driven solution providing real-time visualization of the mine environment, allowing Sandvik's mining customers to oversee, manage and optimize both their manual and

automated processes.

Originally from Visakhapatnam in southern India, she studied electrical engineering at Jawaharlal Nehru Technological University in Hyderabad, before completing a master's degree in embedded systems at the University of Leicester in the U.K.

"Digital solutions improve efficiency, productivity and decision-making, ensuring worker safety and boosting the entire value chain of the mine," Patnaik says.

MINING IS ONE of the oldest industries known to man, but it is one of the last to embrace new, digital technologies. However, in recent years, automation and data-driven solutions have started making a predictive and proactive mining environment a reality, leading to a host of new business opportunities for forward-thinking players.

"As technology evolves, so does the need for relevant competence," says Patnaik. "We're constantly on the lookout for people with the right mix of technical know-how, along with varied exposure, flexibility and adaptability."

“Believing and communicating that diversity is key is the mindset of my team.”

Patnaik explains that her team is kept up to date through close coordination with local universities and with Sandvik’s internal research teams, as well as cross-functional competence sharing.

“I believe diversity in any form brings an element of disruption to the working environment,” says Patnaik. “Innovation springs from the constructive dialogue that takes place around that disruption.”

Patnaik says she experiences this constructive clash on an almost-daily basis. Her team is made up of 16

engineers from Finland, Hungary and UK, as well as a virtual team of five people based out of India. In her view, putting people from different cultures together to solve problems results in a greater degree of trust and openness. “Believing and communicating that diversity is key is the mindset of my team,” she explains. “What I can see is that, regardless of whether people are in India, Finland, or the USA, they want to deliver and win – and together we are better equipped to focus our energies in the right direction.”

FINNISH COMPANIES HAVE their own distinct operating style, but Patnaik admits she appreciates the priority given to work-life balance and consensus-based decision-making.

“I’m incredibly grateful for everything I’m learning from my Finnish colleagues,” she says, “and I think they also appreciate my distinct perspective. I believe in leading by example. I push myself hard, and those around me follow suit. The result is a dynamic, driven team that is helping to redefine the way mining companies conduct their operations.” ■



Kavya Patnaik
 Manager, product development
 at Sandvik

"A FANTASTIC OPPORTUNITY"

To Sauptak Banerjee, Sandvik's Global Graduate Program brought many rewarding insights: "I'm ready for anything now," he says.

Sauptak Banerjee

Global Graduate Program 1, also known as "The Thrilling Thirteen"

Age 29

Hobbies Travel, cooking, reading, photography.

Motto "I value doing any task correctly, with a spoonful of passion, a dash of creativity and a personal touch."

Favorite quote "Every story I create creates me. I write to create myself." Octavia E. Butler

“A chance to be truly global and become exposed to multiple cultures, people and lifestyles.”

“THE LEVEL OF acceptance and the confidence that people show in you makes all the difference here,” says Sauptak Banerjee, a graduate of the very first Sandvik Global Graduate Program, an 18-month program that started in 2014.

Banerjee came into the program with a master’s degree in marketing from the UK and a bachelor’s in electrical engineering from India. What made him apply?

“I knew about Sandvik from working with Siemens in Pune, India,” says Banerjee. “After completing my master’s, I was looking for interesting and challenging opportunities. I saw the program posted on LinkedIn, and it looked pretty exciting – like a fast-track pro-

gram that helps you integrate into a company in a quicker and cooler way.”

Banerjee and 12 others – they called themselves “The Thrilling Thirteen” – were selected from among thousands of applicants. The program was 18 months long and took participants to various Sandvik offices around the world, including Italy, Sweden and India. Looking back, Banerjee says he feels the setup delivered on its promises.

“It was a good and interesting program,” Banerjee says. “It gave me an amazing opportunity to look into what is happening all around the Group, something you don’t get when applying for a spe-

cific position and then staying there. As a Sandvik Global Graduate you have a chance to be truly global and become exposed to multiple cultures, people and lifestyles.”

Banerjee says he learned something new every day. “At times it seemed that our brains could not comprehend the abundance of knowledge shared,” he says. “We received knowledge in so many forms, ranging from hard-core industrial learning to softer management tactics and basic people skills. You name it, we touched upon it.”

SINCE COMPLETING THE program in 2016, Banerjee has been based at Sandvik in the Netherlands, where he works on the Group Internal Audit team, a posting that provides a platform for exponential learning about the daily business of Sandvik and sees him frequently traveling around the world. (Read more about Group Internal Audit on page 23.) His next stop will be to Sandvik’s sites in Japan.

Banerjee says that his time at Sandvik has helped him grow as an individual. “One of the things I have



The sky is the limit for the first round of Sandvik Global Graduates, who worked at various Sandvik offices around the world, including Italy, Sweden and India.

learned is that I can be put into any unknown situation and deal with it, adapt to it and come out okay at the end," he says. "The experience has broadened me into accepting different challenges. Even though my formal background is marketing and engineering, I am comfortable way outside my bubble these days."

BANERJEE ENJOYS THE diversity and says he'd rather be a jack of all trades than an expert in a particular field. "My time at Sandvik has allowed me to explore several different paths and areas of interest,"

he says. "I like the fact that having a certain background doesn't lock you into working only within that specialization."

IN BANERJEE'S VIEW, it's important to have a set of shared values when working on virtual, global teams. "I have seen it in action," he says. "In any kind of job at Sandvik you are interacting with people from all over the globe. Sandvik is very focused on its core values, and these are integrated really well. Everybody follows and respects them. The values have developed into behavior

and everybody speaks the same language. Everyone brings a unique personality, yet there is a Sandvik culture."

What, exactly, is "the Sandvik culture"? "It's more a feeling than something I can put into words," Banerjee says. "But the open-door culture is a good example. There is no hierarchical way of working here. The senior managers are very open to you coming in and having a chat or discussing your problems. Being inclusive is deeply seated within the DNA of Sandvik and reflected by every employee." ■

BECOME A GLOBAL GRADUATE

Do you want to experience the world? Are you driven by a desire to make a difference? Do you hold a master's degree in engineering or business administration? If so, Sandvik wants to hear from you!

THE GLOBAL GRADUATE Program offers young professionals the opportunity to explore various parts of our operations during 18 months.

Now it's time to apply to Sandvik's Global Graduate Program no. 4. Applicants are being sought within the following countries: China, Finland, India, Sweden and USA.

Please visit <https://www.home.sandvik/en/news-and-media/newslist/news/2018/10/application-to-global-graduate-program-no-4-are-now-open/> The program is not available to existing Sandvik employees.

Do you want to know more? Contact Anna Larsen, phone: +46 26 26 63 97 or email anna.larsen@sandvik.com

THE PROGRAM PROVIDES challenging and rewarding opportunities in which participants will be enabled, and expected, to actively contribute to Sandvik's innovative environment. They will take part in projects of strategic importance, while gaining knowledge about Sandvik and obtaining practical experience of its way of doing business. ■

THEY HELP BUSINESS IMPROVE

Working in the internal audit function is much more than you might think. It challenges Sandvik's business processes and it's also a school for future leaders, providing great networking opportunity.

THE INTERNAL AUDIT function reviews Sandvik's operations and provide relevant improvement recommendations to the business.

"The purpose is to ensure that our operational model is working as intended and [that we] have the correct controls to mitigate operational risks to better enable the business strategy in line with what the board has decided and the shareholders expect," says Rolf Spjelkavik, Head of Sandvik's Group Internal Audit team (GIA). "An internal audit function gives assurance to the shareholders that at the end of the day their invested capital is handled in a correct and efficient way in the business."

Internal audit at Sandvik used to be performed by an external partner, but the task was taken over by an in-house team a few years ago. Spjelkavik explains the upside of this strategy:



Rolf Spjelkavik
Vice President
Group Internal
Audit

"Internal auditors who are employees accumulate more knowledge about Sandvik and insight into our different businesses than an external consultant would do, which adds greatly to the quality of the audit," he says. "Moreover, GIA serves as a school for individuals with high potential to become future leaders."

SAUPTAK BANERJEE IS currently a member of the GIA team and explains what his job is like:

"We are three teams of onsite auditors," he says. "Every month a team visits a new Sandvik unit, where we perform an end-to-end process audit in fields ranging from corporate governance, human resources and manufacturing to sales and marketing, purchasing and financial reporting. We analyze the business processes and identify potential gaps or risks involved."

While improving Sandvik's operational efficiency is the overriding goal, there are other benefits, such as knowledge sharing, to be reaped, he says.

"Having an internal audit team allows for best-practice sharing across business areas and units," says Banerjee. "If a certain unit manages to handle risk in an exceptional way, we help spread that practice across the Group. We are not there to judge anyone's way of working, but rather to help people improve." ■

TARGETING SPECIALISTS ON SOCIAL MEDIA

Long gone are the days of scouring newspaper or magazine classifieds for a new position. Today most job seekers turn to LinkedIn and other online platforms. At Sandvik, social media is playing an increasing role in attracting and recruiting talent for the future.

RESEARCH SHOWS THAT, for some 60 percent of people, social media presence plays a part in why employees choose their workplace.

“At Sandvik, we’ve found that social media – and LinkedIn in particular – is a great tool for showcasing our company and promoting our employer brand,” says Gill Peden, Employee Experience Expert at Sandvik. She explains that LinkedIn is the world’s leading professional network, with more than 546 million members worldwide, of whom some 211,000 follow Sandvik.

“In addition to this, more than 15,000 Sandvik employees are on LinkedIn, giving us a first-degree connection to more than 1.2 million members,” she says. “Every content post on the Sandvik company page, from corporate videos to success stories or any other kind of update, has the potential to reach a huge number of people.”

Apart from posting all its vacancies on

“We work with content to show that Sandvik is a great place to work,” says Gill Peden.

LinkedIn, Sandvik also uses tools such as Pipeline Builder and Sponsored Updates to generate leads for specific roles – especially those that are difficult to fill – and to build connections to future talent.

Sponsored Updates, Peden explains, is targeted content aimed at moving future talent through the candidate journey – from a lack of awareness of Sandvik through to becoming aware of the company, considering what it might be like to work there, taking an active interest and, eventually, applying to a recruiting ad.

“Throughout this process our recruiters can see who is engaging with the company page and then manage the pipeline from there via personal contact with the candidate,” she says. “When we talk about generating leads we are talking about trying to engage



“It enables us to connect with those hard-to-reach passive candidates.”

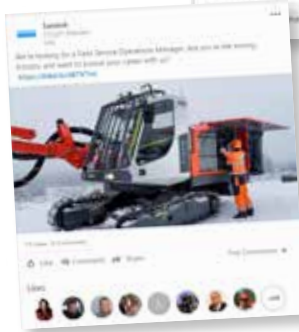
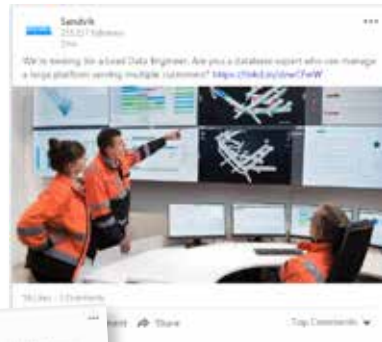
with future Sandvik employees. It’s about making sure that there is awareness of our brand, that we are seen as an employer of choice and that we work with content to show that Sandvik is a great place to work.”

LINKEDIN PROVIDES OPPORTUNITIES

to reach very specific target audiences, for example “automation engineers in the UK with at least 15 years of experience.” When recruiting for a particular skill, LinkedIn Groups also provides access to thousands of professional networks within specific sectors and skill segments.

In fact, more than 54 percent of Sandvik hires in the past twelve months were influenced by some kind of LinkedIn investment or activity. These hires covered a broad spectrum, with about 7 percent of hires at the level of director or above, 8 percent manager and 85 percent individual contributor level.

“Social media recruiting is no longer a novelty,” says Peden. “It’s a must for any successful recruiting strategy. It not only allows us to target active job seekers but it also enables us to connect with those hard-to-reach passive candidates, many of whom



have sought-after skill sets, and while they may not be actively looking for a new role, they might consider a change if the right opportunity came along.”

LINKEDIN MAY BE

the largest, but it is not the only online recruitment platform. Sandvik recently experienced great success using online developer community Stack Overflow when recruiting for its Additive Manufacturing team.

“I would always encourage those working with recruitment to be creative and pragmatic in how they attract talent,” says Peden. “Recruiters working in different countries or hiring for specific, hard-to-find competencies should assess their needs, investigate what is available to them and then use the social media platform that best fits those needs.” ■

NEW PLATFORM SECURES COMPETENCE BUILDING

Structured knowledge transfer between employees, personalized career building and interdisciplinary competence fusion are some of the benefits of Tube Academy.

TUBE ACADEMY is a learning management platform for the 4,600 employees worldwide who work within Sandvik's Tube division. It is also a strategic initiative to secure Sandvik's leading position.

Other business areas offer similar systems and there are also group-wide training programs.

"Competence development is nothing new to Sandvik, but we saw the need to become more systematic and methodical," says Veronica Magnusson, Global Competence and Development Manager.

A driving force has been the need to ensure that expertise held by senior employees is transferred to a new generation. "We cannot source this kind of training externally, since much of it is proprietary and unique to Sandvik."

Some of the training offered on Tube Academy is designed for specific roles, while training in business strategy and corporate values is available and in fact mandatory for all. The courses offered also

depend on which "job family" the employee belongs to, and what he or she actually does. "The structure allows each employee to map a desired career path within Sandvik and verify what sort of training is required to pursue that path."

The training is offered in classrooms as well as through e-learning, using a variety of media and setups, from video tutorials, online seminars and webcasts to so-called nano-learning – intensive short sessions that are accessible whenever there is a bit of time to spare.

LOOKING AHEAD, the industry of the future will likely require very different skills in the wake of digitalization and automation. This raises a need for what Magnusson calls "hybrid competencies." She points to Sandvik's intelligent tube system, Sentusys™, as an example. "Developing this solution takes a mix of skills from very different areas, from metallurgy to coding, user interface design, artificial



intelligence and cloud-based solutions," she says. "Tube Academy is a platform that merges in-house knowledge with the new skill sets required in Industry 4.0."

Many courses are offered in several languages; topics include basic metallurgy, production and automation technology, corrosion physics, alloys and more. Know-how obtained in cooperation with customers, research institutes and polytechnic colleges is also integrated.

"Tube Academy helps us identify skills gaps and secure access to the competencies needed in the future," concludes Magnusson. ■



E-learning helps students bridge the gap between the workshop and the real world.

"STUDENTS PREFER INTERACTIVE LEARNING"

The Sandvik e-learning program Metal Cutting Technology helps students gain the in-depth knowledge they will need out in the real world.

METAL-CUTTING STUDENTS are often more interested in practicing their skills in the workshop than in reading theoretical textbooks. So for schools educating the workforce of tomorrow, finding ways to combine theory and practice can be quite a challenge. At Kirklees College in Huddersfield, UK, students are using the e-learning program Metal Cutting Technology (MCT), developed by Sandvik Coromant, to help develop the skills and knowledge they will need in the future.

"This program helps bridge the gap between the workshop and the real world," says Dylan Wannan, one of about 30 mechanical engineering students who are using the MCT

e-learning program at Kirklees this year.

Engineering lecturer Paul Cartwright introduced MCT three years ago. He was looking for a way to complement the college's teaching material with an interactive learning tool that could get students more interested in the theoretical aspect of metal working.

"It's interactive, and I think students prefer this way of learning," Cartwright says. "There's something happening all the time, and it's an intuitive system that makes them think. It helps them focus on understanding the process and developing the in-depth knowledge they need."

The program is free and teaches theory and application in areas such as turning, threading,

milling and drilling. At Kirklees, engineering students spend about 2.5 hours per week in metal-cutting class, which is a mix of workshop activities and classroom learning through MCT. For schools working on a limited budget, it's a perfect way to teach students how to use more advanced materials and tools that aren't available in their own workshop.

"People often focus only on the tools they use at work, and this program allows them to get a wider scope and understanding of things they don't work with every day," Cartwright explains.

THERE IS CURRENTLY a shortage of skilled workers in the metal-cutting industry. E-learning tools such as MCT help students see that there are good reasons to be excited about a future in the industry.



Metal-cutting students are facing a bright future.

"I like the fact that when I build something, it can go anywhere in the world," says Chris Briggs, another of Paul Cartwright's students. "It's a way of leaving a legacy."

FLEXIBLE LEARNING FOR AMERICAN SCHOOLS

The Sandvik Metal Cutting Technology e-learning program has become an increasingly popular educational tool around the world.

IN THE US, SCHOOLS and companies are using MCT to help students and employees keep up to date with the latest methods and concepts. The e-learning program was introduced seven years ago in the United States and is used today to introduce theoretical concepts in engineering and design classes, as well as for practical applications in production.

"Some schools use it as a prerequisite to their machining classes," explains JoAnn

Mitchell, senior project leader at Sandvik Coromant. "Some educators assign various sections and chapters as homework, and some use it to supplement and expand on the in-class discussion. The program is very flexible in supporting the overall knowledge needs of both the students and the teachers."

BY USING MCT, schools get an educational tool that is built by the industry leader and is available for free online. But

the benefits go well beyond the ease of access. "The program reflects the current needs of industry and gives both students and educators access to the knowledge they need to be successful, both in education and in their careers," Mitchell says.

JoAnn Mitchell
Senior project leader at Sandvik.



"A FANTASTIC YEAR"

Three questions to Sandvik CFO Tomas Eliasson.

Looking back at 2018, what are the main takeaways from your perspective?

"2018 has been a fantastic year, with record sales and earnings. The balance sheet has strengthened and gives us more freedom to operate and invest in areas where we can drive growth and profitability. Also, the decentralization of head office functions has been completed successfully."

Sandvik increased the pace of M&A activity during the year with several acquisitions. What do you think will be the key to successful integration of the new companies?

"The key to successful integration is to give full responsibility to our business leaders out in the market to run and integrate our acquisitions. They partic-

ipate and lead the acquisition process as such, and they also take full responsibility to create a return on the investment. This is fully in line with how our decentralized company works. All acquisitions are different. Some will be kept as separate stand-alone units, some will be fully integrated in existing organizations, and some will be somewhere

in between. It all depends of the purpose of the acquisition."

Looking forward, are more acquisitions on the agenda for Sandvik?

"Absolutely! We have sold off assets and also strengthened our balance sheet. Soon we may be debt-free, but that is not the target. The target is to create a stronger balance sheet so we can acquire more companies and develop Sandvik even further."



Tomas Eliasson, CFO

SUMMARY Q3 2018

DEMAND ON HIGH LEVEL

- Strong growth in all business areas
- Large oil and gas industry orders in Sandvik Materials Technology
- Record-high earnings and margin at 18.9%
- Strong balance sheet
- Net gearing at low 0.27
- Strong cash flow

AWARD-WINNING PRODUCTS & SUSTAINABILITY RECOGNITION:

- IMTS award: Coromant Silent Tools™
- Inclusion in Dow Jones Sustainability Index

Capital Markets Day 21-22 May 2019 in Tampere, Finland

VALUE-CREATING OFFERING

Sandvik is a high-tech and global engineering group offering products and services that enhance customer productivity, profitability and safety. In 2017, the Group had approximately 43,000 employees and sales of 91 billion SEK in more than 150 countries.

BUSINESS AREAS



SANDVIK MACHINING SOLUTIONS

A market-leading manufacturer of tools and tooling systems for advanced metal cutting, expanding in additive manufacturing and digital manufacturing.

SHARE OF REVENUES 39%
SHARE OF ADJUSTED OPERATING PROFIT 55%



SANDVIK MINING AND ROCK TECHNOLOGY

A leading supplier in equipment and tools, service and technical solutions for the mining industry and rock excavation within the construction industry.

SHARE OF REVENUES 40%
SHARE OF ADJUSTED OPERATING PROFIT 38%



SANDVIK MATERIALS TECHNOLOGY

A leading developer and manufacturer of advanced stainless steels, powderbased alloys and special alloys for the most demanding industries.

SHARE OF REVENUES 15%
SHARE OF ADJUSTED OPERATING PROFIT 4%

RECOGNITION AND MEMBERSHIPS



MEMBER OF
Dow Jones Sustainability Indices
 In Collaboration with RobecoSAM



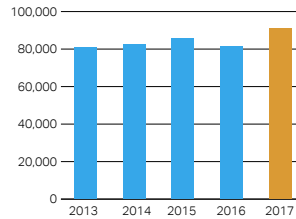
ROBECOSAM
 Sustainability Award
 Bronze Class 2018



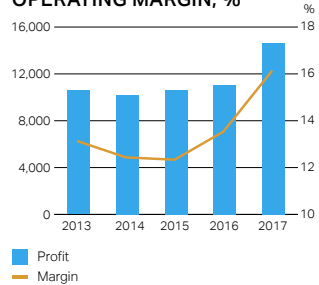
1) Adjusted for items affecting comparability of -450 million SEK in Q2 2017 and +3,910 million SEK in Q4 2017

THE GROUP

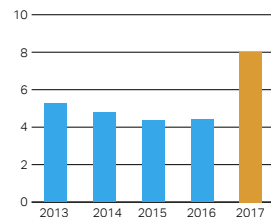
REVENUES, MSEK



ADJUSTED OPERATING PROFIT, MSEK AND ADJUSTED OPERATING MARGIN, %¹



ADJUSTED EARNINGS PER SHARE, GROUP TOTAL, SEK¹



MAIN CUSTOMER SEGMENTS**MINING**

We deliver drill rigs, rock-drilling tools and systems, mobile and stationary crushers, load and haul machines, tunneling equipment, continuous mining and mechanical cutting equipment, as well as various solutions to increase automation, safety and customer productivity.

SHARE OF REVENUES 31%

**ENGINEERING**

Our tools and tooling systems for metal cutting as well as advanced materials and components are used in engineering industries worldwide, improving productivity, profitability, quality, output, safety and environment. Sandvik is also a global leader in high-alloy metal powder for different applications.

SHARE OF REVENUES 24%

**AUTOMOTIVE**

Our tools and tooling systems for turning, milling and drilling in metals raise productivity when manufacturing e.g. engines and transmissions. Our stainless and high-alloy products are found in, for example, safety belts, airbags, brakes, air conditioning and various instruments.

SHARE OF REVENUES 13%

**ENERGY**

Sandvik offers solutions for all forms of energy production, including clean and renewable energy. We supply high-alloy products, such as seamless stainless steel tubes as well as tools and tooling systems to satisfy the industry's metal-cutting needs.

SHARE OF REVENUES 11%

**CONSTRUCTION**

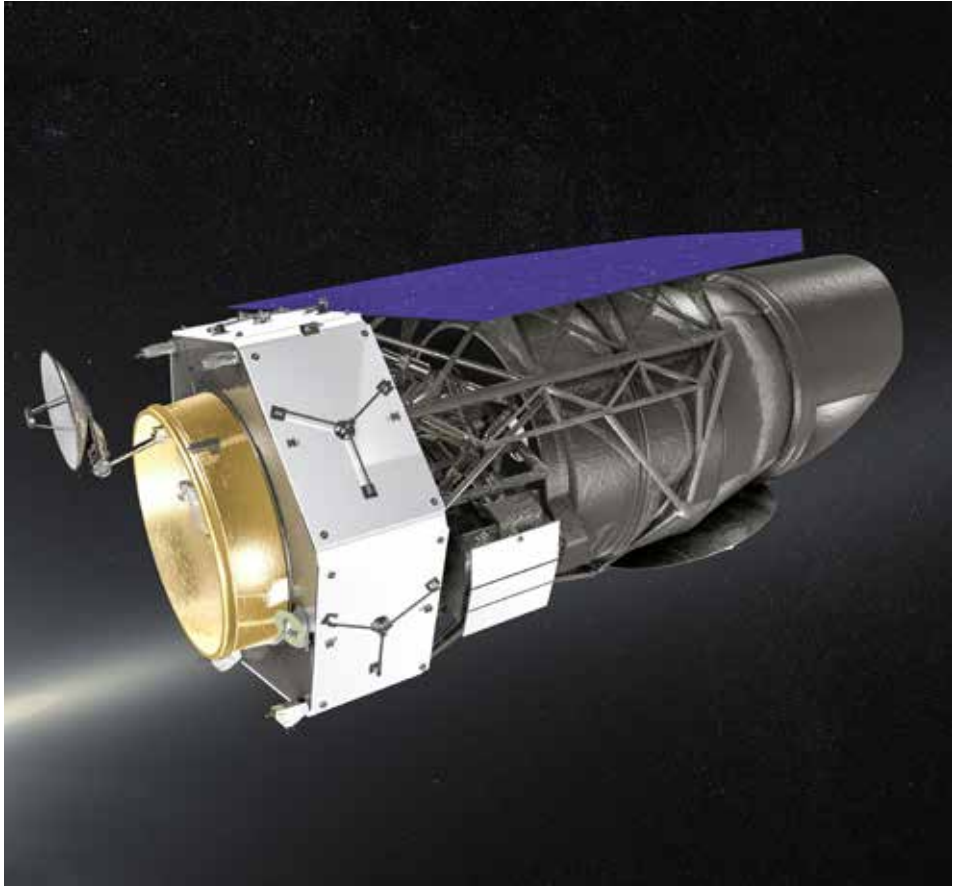
We offer products and services that increase safety and customer productivity in the breaking, drilling, tunneling, crushing and screening niches of the construction industry.

SHARE OF REVENUES 11%

**AEROSPACE**

Sandvik works closely with the world's aerospace companies. As they apply new materials to manufacture airplanes that are lighter, safer and more fuel efficient, advanced tooling solutions and light-weight materials from the Group are critical.

SHARE OF REVENUES 6%



THE OBJECT | Sandvik in deep space

The Wide Field Infrared Survey Telescope (WFIRST) from NASA will enable astronomers to image an incredible 100 times the field of view of the famous Hubble Space Telescope, in the process providing images of millions of previously unseen galaxies and allowing scientists to improve their understanding of dark energy.

Sandvik's controlled expansion (CE) alloys Osprey™ are at the heart of the satellite's focal plane, which is the main area of the instrument for taking images of space.