

EDGE



A MAGAZINE FROM SECO
SPRING ISSUE 1.2020

GOING CIRCULAR

Recycling of material
is a win-win strategy

THE BLUE ECONOMY

Using ocean resources
in a sustainable way

SMART CITIES

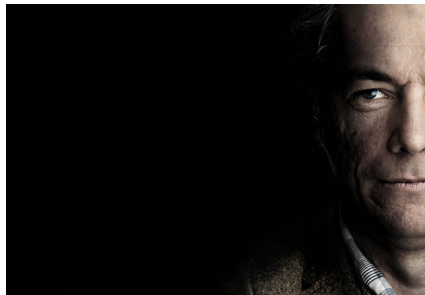
- and how to get there



Smart cities Technologies can help cities to meet rising challenges and deliver a better quality of life. *Page 4*



Slovenia snapshot Slovenia is a small nation by number of people, but it is a highly developed economy. *Page 12*



Increased productivity Mikael Lindholm is taking the Duratomic technology to the next level. *Page 16*



The sky is the limit The French company Mecaprec found that working closely with Seco helped it to grow tenfold. *Page 20*

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Meeting the smart challenges

In this issue of Edge, we take a closer look at Smart Cities, a term and a vision that has become increasingly frequent over the last ten years. The driving force in the Smart Cities movement is that more and more people are searching for a better life by moving to cities. It's estimated that in 30 years, two-thirds of the Earth's population will be living in cities

When millions of people move to live in a confined area, it puts a lot of stress on the environment - air pollution, water supply and energy consumption are just a few of the challenges. This development could make it harder to reach the 2030 sustainability goals set up by the United Nations.

Seco Tools can play an important role through our product and service offerings. We are working with sustainability in an active and structured way and can help customers in numerous applications to provide products that can meet the challenges of the Smart Cities.

Circular economy and recycling of materials is key to reaching our sustainability ambitions, and we have set a target to reach 90 percent circularity by 2030. One way to reach this target is our buyback program which enables customers to sell used equipment back to us. The material is then used to manufacture new products.

Also, our success as a high-performing organization is dependent on our ability to attract the exceptional people we need for our teams. The next generation of employees will simply refuse to work for a company that does not have a sustainable operation.

Fredrik Vejgård, CEO
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A LIVABLE FUTURE IN THE SMART CITIES

Urbanization is advancing at an unprecedented rate. By 2050, as many people will live in cities as lived in the whole world in 2002. Cities are choking under the burden of aging infrastructure, pollution and insatiable power needs. Smart technologies can help them to meet these rising challenges and deliver a better quality of life.

BY SANDRA WIDH | PHOTOS BY SHUTTERSTOCK







The smart city concept has rapidly gained traction around the world with its ultimate goal of increasing efficiency of services related to urban dwellers.

Data from connected devices and sensors can provide insights into managing and improving use of assets, services and resources such as traffic and transportation systems, accurate health care, sustainable energy supplies, resource-conscious waste management and enhanced safety.

By making real-time information available, residents can make more sustainable and efficient choices. Mobile apps such as Waze, Moovit and Transit allow users to avoid traffic jams, and apps such as AirMatters and AirVisual provide up-to-the-minute updates on the pollution level in a specific area.

The McKinsey Global Institute, in a

Above: Google's pioneering initiative Sidewalk Toronto is creating a global model for inclusive urban growth at Waterfront Toronto, an unexploited but highly attractive piece of land.

Digital Solutions

15% to 20% of commuting time could be cut by 2025 if cities deploy intelligent digital solutions.



Source: McKinsey Global Institute



IMAGE: BEYER BLINDER BELLE, HEATHERWICK STUDIO

report titled “Smart cities: Digital solutions for a more livable future,” predicts that if cities deploy intelligent digital solutions, residents will be able to cut average commute times by 15 to 20 percent by 2025. McKinsey also says the development could contribute to safer urban environments.

“Our findings show that deploying a range of smart technologies could help to reduce fatalities by 8-10 percent and lower crime incidents by 30-40 percent,” the report says.

Information and communication technology company Ericsson, in its Mobility Report, forecasts that 5G will cover up to 65 percent of the global population by the end of 2025. And the IT advisory firm International Data Corporation claims that 5G will be a key enabler of enterprise transformation, with more than 70 percent of all 5G connections stemming from business use cases by 2024. »

Sidewalk Toronto

Google’s pioneering initiative Sidewalk Toronto is setting completely new standards for city building. It is creating a global model for inclusive urban growth at Waterfront Toronto, an unexploited but highly attractive piece of land.

So what’s unique here? One claim is that the district will cut greenhouse gases by as much as 89 percent. To get there, the area will design an advanced power grid that uses solar energy, battery storage and real-time energy pricing. In addition, there are plans to build infrastructure for public transit, walking and cycling, with expectations that these modes will encompass more than three-quarters of all commutes. An additional aim is to eliminate energy waste through digital management tools to help optimize heating, cooling and power systems for buildings.

Google’s long-term vision is to use Sidewalk Toronto as a sandbox for how the urbanization challenge could be resolved on a global scale, and to explore how smart technology can facilitate a sustainable future for megacities.

www.sidewalktoronto.ca



Deploying smart technologies could lower crime rates by 30-40 percent.

McKinsey Global Institute

According to UN Habitat, today's cities consume about 75 percent of the earth's global primary energy and emit between 50 and 60 percent of the world's total greenhouse gases.

This development demands reliable power supplies and ubiquitous mobile network infrastructure. These are key pillars of a smart city, but increased connectivity means that security and privacy concerns are emerging issues. Connected devices are at risk of being hacked, which could lead to catastrophic effects. Thus it is of utmost importance how the networks and power grids are planned out and built.

With smart technologies and innovations, a detailed road map for a sustainable, efficient and resilient infrastructure, the challenges of urbanization can be tackled and quality of life will be enhanced. ✕

Above: The Stockholm Royal Seaport is an area comprising former harbors and industries adjacent to the city core. In 2009, it was selected as one of 17 cities in the test project "Clinton Climate Initiative".



Digital Solutions

75% of the earth's global primary energy is today consumed by cities.



Source: UN Habitat





IMAGES: WHITE ARKITEKTER

Stockholm Royal Seaport

Another premier model of urban sustainability and smart homes is the Stockholm Royal Seaport, an area comprising former harbors and industries adjacent to the city core. In 2009, it was selected as one of 17 cities in the test project “Clinton Climate Initiative” in collaboration with C40, a network of the world’s megacities committed to addressing climate change.

The goal was to create a test spot and global showcase for sustainable urban development. A decade later, the project is in full swing and is anticipated to be completed by 2030.

“The Royal Seaport district will have at least 12,000 homes and 35,000 workplaces,” says Karin Wanngård, mayor of Stockholm. “If the buildings are energy-efficient, it will reduce CO2 emissions. It is primarily the work with energy efficiency of buildings that will reduce CO2 emissions. In our district, public transportation plays an important role; footpaths and cycle paths are being built to meet local needs and help people commute to work. The district is designed to ensure that people who live and work in the district are close to the everyday amenities.”

To meet the goal of reducing greenhouse gas emissions by up to 80 percent, all properties are connected to a vacuum waste collection system, 100 percent of the kitchens have a waste disposal unit, 27 carpool parking spaces are available and 10 percent of all public parking spaces have electric vehicle charging points. To increase the production of renewable energy, the roofs are used to generate solar energy, and LED lights are installed in public spaces, reducing energy by 60 percent. And these are just a few of the steps toward a climate-positive development.

www.stockholmroyalseaport.com

The smart way forward

How we transport people and goods is a key factor in the development of the smart cities of the future. When urbanization results in congested streets, data, alternative fuels and autonomous vehicles need to be aligned in order to meet the challenges.

BY ERIK ARONSSON | PHOTO BY JOHAN KNOBE

The Swedish transport solutions company Scania aims to be a frontrunner in the shift towards a sustainable transport system. One of the key areas in this process is the transport of people and goods in cities, where more and more pedestrians, buses, cars and trucks fight for space in a confined infrastructure.

Markus van Horik, who works in Business Development of Autonomous Solutions at Scania, sees three main areas where future development will be crucial: data handling, alternative fuels and autonomous vehicles.

“Today’s digital technologies make it possible to track the real-time movements of both people and vehicles,” he says.

“By collecting and analysing

these data you will have a much better chance of using the city infrastructure in an effective way; for instance, by suggesting alternative routes when a certain area is hit by traffic jams. And during the hours when there are fewer people going to work, you can use smaller buses for the commuting.”

Another important area of development is alternative fuels, where van Horik sees electricity as one of the best ways forward. Scania is currently running a number of electric bus trials. One of these is in Switzerland, where Regionale Verkehrsbetriebe Baden-Wettingen (RVBW) has started operations with the new Scania electric bus along its bus line 8. The bus is ‘opportunity charged’ by pantograph at the

RVBW bus station in Wettingen, with a four-minute charge being sufficient for 12 kilometres of operations. At night, the bus is charged by cable at the depot.

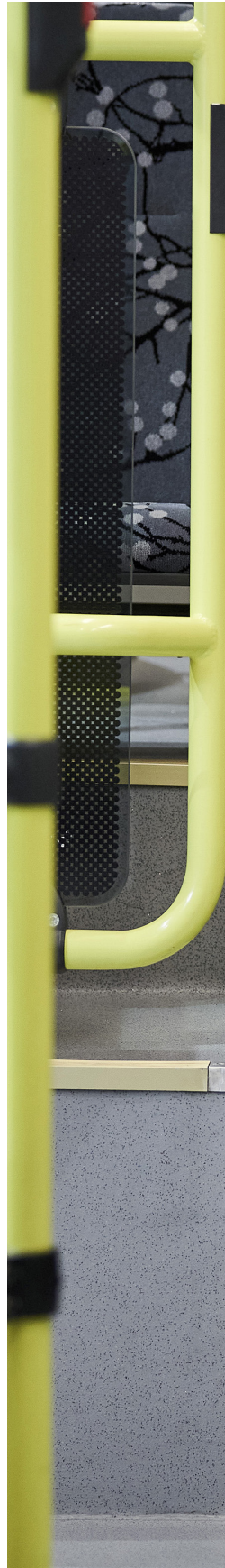
Van Horik is confident that this technology’s time has come.

“Right now, there is a very rapid development in battery technology, which will make electric vehicles even more competitive. And in addition to the non-existent emissions from these vehicles, you have the matter of noise levels. Electric vehicles are much quieter, which makes it possible to run deliveries at night when there is less traffic, without disturbing sleeping neighbours.”

The third important area of development is autonomous vehicles. Self-driving trucks are only one element of Scania’s autonomous transport solutions. In fact, Autonomous Transport Solutions is a complete system that encompasses handling logistics, the assignment of tasks to vehicles, and information sharing between vehicles and infrastructure.

Scania has been working at full pelt on this area too. The company will run trials of autonomous full-length buses as well as new concept buses in different operating scenarios.

“These projects will provide a wealth of information on the further development of large autonomous buses before a full-



“Today’s digital technologies make it possible to track the real-time movements of both people and vehicles”.
Markus van Horik



scale introduction,” says van Horik.

Driving customer profitability through sustainable solutions and pursuing responsible business are complementary long-term perspectives for Scania’s goal of continuing being a profitable company.

“There is no single solution for transforming the transport system into a sustainable one”, says van Horik.

“What’s needed is a holistic approach which considers the specific transport assignment and the maturity of the transport and logistics infrastructure in different parts of the world, including the future smart cities.” ✕

Markus van Horik

Age 30

Lives in: Stockholm, Sweden

Background Career background in business development and digitalisation.

Works Business Development Manager for Autonomous Solutions at Scania in Södertälje, Sweden.

Current transport Commuter train and other public transport. “I don’t own a car.”

Hotspot Slovenia

Slovenia is a small nation by number of people, but it is a developed economy and is per capita the richest of the Slavic countries by nominal GDP. The country has also been a member of the Eurozone since 2007.

BY ERIK ARONSSON ■ PHOTOS BY SHUTTERSTOCK AND FLATICON



Green as far as the eye can see

Slovenia's terrain is predominantly mountainous. After Finland and Sweden, it has the third-highest forest coverage in Europe, at more than 50 percent. Despite the dominance of mountains, its more temperate regions boast 363 square kilometers of orchards and 216 square kilometers of vineyards.

Forging lifelong partnerships

Slovenian company Marovt D.O.O. has become a leader in the development and production of high-quality forging - a success that has been bolstered by a personal and longstanding partnership with Seco.

In mountainous Slovenia, family-owned and operated Marovt D.O.O. is getting ready to celebrate its 50th anniversary. Owner and CEO Tomaž Marovt explains that the company was founded by his father in Slovenia in 1971, and since then has involved his whole family. "Now my wife and I continue the tradition as CEO and Deputy CEO," he says.

Marovt's operations are focused on Tier 1 production of

forged and turning parts. With an automotive client list that includes Mercedes-Benz, Audi and Volkswagen, the company boasts "the most technologically advanced forging production in Slovenia and one of the most advanced in Europe."

Tomaž Marovt entered the family business straight out of university and took over in 1999 when his father retired. During Tomaž's time, the company has become one of the fastest-growing family-owned enterprises in Slovenia - going from 50 employees to more than 250. Revenues have also grown, from 2 million euros in 1999 to 31 million euros in 2019. »»



Small yet mighty

Slovenia has a proud sports history: it has only 2 million people, but since 1992 it has brought home 40 Olympic medals.



Pršut

Pršut is a dry-cured ham, served uncooked, similar to Italian prosciutto. Its particular flavor and aroma are the result of the mixture of sea and mountain air and beechwood burned during the drying process. The curing process includes salting with sea salt for about three weeks, pressing to remove excess liquid for about three weeks, and light smoking and drying in the cool mountain breeze for three months, followed by a maturing process. The whole cycle takes about a year.





Mountains make mountaineers

Mountaineering is a popular pastime in the country. Slovenian mountaineer Tomaž Humar shot to fame in 1999 when he completed a solo ascent of the south face of Dhaulagiri in the Himalayas – a climb with a 40 percent fatality rate. Humar has more than 1,500 other successful climbs to his name.

A checkered history

Due to its geographically important location, the Slovenian territory has been part of a number of former states, including the Byzantine, Holy Roman and Austro-Hungarian Empires. In 1918, it was a founding member of the State of Slovenes, Croats and Serbs (renamed Yugoslavia), and it remained part of Yugoslavia until its independence in 1991. In 2004, Slovenia became a member of the EU.



Hearty fare

Traditional Slovenian cuisine is a mix of Central European, Mediterranean and Balkan cooking, reflecting the country's history. There are more 40 distinctive regional cuisines. Its most traditional dishes tend to be one-pot soups and stews.



Tomaž's tenure as CEO coincided with the launch of Seco Slovenia and the hiring of Seco's very first employee in the country, Maks Potočnik. The close personal collaboration between Tomaž and Maks has been a vital part of Marovt's success.

Tomaž quickly realized the value of the working relationship between the two companies. "We had issues with our grinding process, so we brought in Maks and Seco," he recalls. "Maks suggested hard-turning with CBN as a solution for grinding, which was new to the sector at the time. We were able to get this operational very quickly, and we still use the process to this day."

This collaborative and solution-orientated approach has been key to the success of the partnership between Tomaž and Maks, and Marovt has become Seco Slovenia's biggest in-country client.

As both companies have grown, so too have the contacts between the technical and purchasing staff in both companies. But Tomaž still has a personal relationship with Maks. "If I have a problem, I can speak to him about a technical solution," Tomaž says. "Seco's support is always very fast, and we're always able to find solutions together."

Seco is already part of Marovt's next chapter of growth into new areas, helping the company to reorganize production, be more flexible and optimize processes. "We've been focused in the automotive industry for many years, but now we're expanding into the medical and defense sectors," Tomaž says. It's an ambitious future, but one made easier with a key partner in the mix. ✕



Tomaž Marovt,
owner and CEO of Marovt D.O.O.



PHOTO: UNSPLASH

Seoul to become hyper-connected

The Metropolitan Government of Seoul in South Korea is planning to deploy a city-wide Internet of Things (IoT) network. It is part of a larger plan by the city to increase its connectivity offerings and create one of the world's first hyper-connected cities by 2022.

The main objectives of the Smart Seoul Network, or S-Net, project, are the establishment of a municipal broadband network, deployment of free-to-use Wi-Fi networks and increased integration of IoT infrastructure.

Following the network's completion, several applications will be implemented, including smart parking using IoT sensors to connect city lots and connected street lighting solutions that automatically report to police upon detecting an emergency.

Safe driving in Auburn Hills

The technology company

Continental has taken a big step toward creating safer, smarter cities: a Smart City Mobility and Transportation Hub in Auburn Hills in the U.S. state of Michigan. At the center of this Smart City Mobility and Transportation Hub are two intersections made intelligent thanks to Continental sensors and

intelligent software integrated into the infrastructure. Ultimately, this technology will have the potential to improve traffic flow, add convenience, reduce pollution and, most importantly, significantly increase the intersection's safety by communicating hidden dangers to approaching connected vehicles and pedestrians.

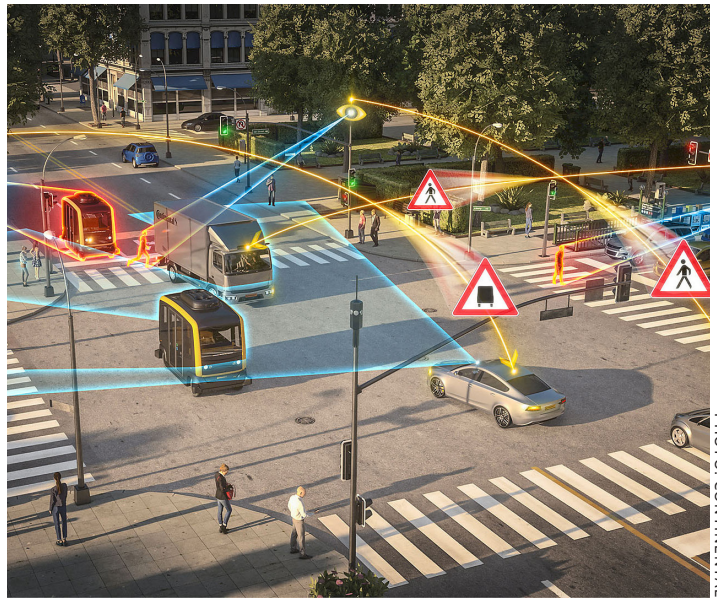


PHOTO: CONTINENTAL



PHOTO: VILLE DE PAU

WORLD'S FIRST HYDROGEN BUS FLEET ROLLS OUT IN FRANCE

The world's first hydrogen-powered bus rapid transit (BRT) system has been deployed in the city of Pau in the south of France. Dubbed Fébus, the new service will see eight Van Hool buses, each 18 meters (59 feet) long, operate on a six-kilometer (3.7-mile) dedicated line in the center of Pau.

French public transport operator Keolis has worked in partnership

with local transport operator Société de Transport de l'Agglomération Paloise on the project launch and is providing technical assistance for the operation of the eight hydrogen BRTs. This new service is part of a major upgrade to the city's public transport system. Built by the Belgian manufacturer Van Hool, the buses produce their electricity on board, using a hydrogen fuel cell.



Duratomic turning grades offers outstanding performance and reliability. Thanks to the chrome colored used edge detection, no unused edges will be wasted.

Duratomic - still the new black

As Seco's patented insert coating technology Duratomic enters its second decade, the company has released three new grades specifically for stainless steel turning. Among other things, the new TM grades offer customers used-edge detection technology, resulting in increased productivity.

BY TSEMAYE OPUBOR | PHOTOS BY JONAS GAUFFIN

More than a decade ago, Seco R&D specialists realized that nanoscience could be harnessed to develop highly sophisticated coatings that offered thermal and chemical resistance, which could be extremely strong and durable, and which could be designed at an atomically thin level.

The result of their work was a patented insert coating technology that brought a combination of wear resistance and edge toughness to maximize insert grades in the prevention of cracks and breakage. They called it Duratomic.

In this, the very first development of Duratomic in 2006, Seco R&D addressed the texturing of atomic layers in critical parts of the coating.

“There are different ways to manipulate the various parts of the coating, and different translations of upper, bottom and center layers for various usages. Knowing when and how to do it is what would I call the essence of Duratomic,” explains Mikael Lindholm, product manager, General ISO Turning.

An early example of the technology proved that the coatings on steel offered a solution in the area of thermal inertia, which was an opportunity for Seco Tools’ automotive industry customers to improve their productivity in the turning area.

In particular, the evolution to new technology platforms have increased productivity, tool life predictability and process reliability. These benefits, along with the chrome colored used-edge detection, help customers prevent insert waste.

“After Duratomic was introduced to the market ten years ago, we saw an exceptional increase in performance capabilities,” says Lindholm. “And today, by using a Duratomic TP1501 grade, commonly used in the automotive industry, our customers have seen, on average, a further 25 percent improvement in their performance.”



Fast forward to 2020: Duratomic has gone from strength to strength and is present in turning, drilling and milling applications.

“Seco Tools has always been expected to provide exceptional grade performance,” says Lindholm. “We are now in

the second generation of Duratomic grades within milling. We recently released our Duratomic MP2501 and MP1501 grades, as well as three new grades within turning - TM1501, TM2501 and TM3501 -- which are specifically for stainless steel turning.”

All these new Duratomic grades are designed to meet customers’ needs and feature the company’s most recent generation of the technologies, with the possibility of access to chrome used-edge detection. The Duratomic TM turning grades improve productivity in a range of materials, from easy, often austenitic stainless steel to demanding high-alloyed, super-duplex stainless steels. The chrome colored used-edge detection makes it easier to detect any used edge and reduce potential waste.

“Used-edge detection was a challenge that was first identified more than five years ago,” says Lindholm. “A manufacturing customer in Germany asked us how they could make sure that they use all the edges before they recycle the products. We got to work on a solution.”

It was clear to the team at Seco Tools that there customers were focused on achieving the same high performance in their operations while also reducing waste, with sustainability in mind. The development of the used-edge detection answered this demand.

Duratomic continues to evolve. “Continuous innovation is needed,” says Lindholm. “We have customers around the world: in the EU, North America and Asia, who all have different needs, and we need to meet those today, as well as forecast what they will need in the future.”

New ways of recycling have become one area that R&D is exploring. “In the stainless-steel industry, it’s very common to see recycling, and we would like to offer that support to our customers,” says Lindholm.

“There are so many variables, and we have endless opportunities to meet customer requirements,” he continues. “It’s really necessary to understand how to connect the technologies to customer demand and their expectation of an outcome. Our sales units are instrumental in this process, and so is R&D.” ✕

“Duratomic technology
changed the coating area,
and we saw a sudden and
exceptional leap in the
performance capabilities.”

*Mikael Lindholm, product
manager, General ISO Turning*



FLYING HIGH

Aeronautics is a demanding sector, with no room for error. The French precision machining company **Mecaprec** found that working closely with Seco helped it to grow tenfold in a decade while supplying parts for the world's biggest aerospace companies.

BY ANNA MCQUEEN | PHOTO: SHUTTERSTOCK & AUDREY BARDOU





Mecaprec is supplying parts to customers such as Airbus, Boeing, Dassault and Embraer.

Mecaprec

Opening date:

1986

Takeover:

2008

Location:

Lavelanet,
Arriège, France

Size:

6,500 square
meters

Machines:

35

Employees:

75

Nestled in the foothills of the Pyrenees in southwestern France is the small town of Lavelanet. The town is home to Mecaprec, a precision machining company with clients that include some of the world's biggest aeronautics businesses. It's also the hometown of company CEO Jean-Marc Gomez.

"I acquired the company in 2008," Gomez says. "At the time, it employed 12 people and had annual sales of some 780,000 euros. I was very keen to invest in my hometown and provide employment for local people, so it was a natural fit. Around that time, I also met Christian Gil. He told me that if I took the company over, he'd come in as my workshop manager, and he's been there ever since. He's passionate about machine tooling, too, and together we have built an amazing team of people - we love what we do!"

Mecaprec was a company with genuine expertise in terms of hard metal machine tooling. Gomez soon realized that with new aircraft coming to market, such as the Airbus A350, there was going to be increased demand for hard metal parts and that could be a profitable area to explore. "But back then," he says, "Mecaprec wasn't certified for the aeronautics industry, so our primary focus was to obtain EN9100 certification, which we achieved in 13 months."

Then recession hit, and sales dropped 40 percent. "But we came through thanks to some loyal customers and by expanding our production to include some finished products," Gomez says. This led Mecaprec to invest in a series of Makino machines, which then brought Seco Tools to their attention. "They had the tools we needed for a big contract that we landed in 2011 for Aubert & Duval, a world leader in upscale metallurgy. The distributor was too expensive, so we were happy to work directly with Seco, and the rest is history." Since then, the two companies have worked together closely, adopting new tools as they have been developed, which has helped Mecaprec to further expand its product range while reducing unit costs. Since then Seco has been the company's biggest supplier of cutting tools. »



Mecaprec is mainly working with milling of titanium, inconel and stainless steel.

Today Mecaprec employs 75 people and has annual sales of 10.5 million euros, supplying parts for such customers as Airbus, Boeing, Dassault, Embraer and Airbus Helicopter, along with tier-one suppliers such as Figeac Aero, Aubert & Duval, PCC France, Artus and Mecachrome. Some 98 percent of Mecaprec's work is in the aeronautics industry, mainly working in titanium, inconel and stainless steel. The company mills parts in dimensions ranging from 10 millimeters by 10 millimeters up to 1,500 millimeters by 1,500 millimeters, turning out some 80,000 units each year.

"Our biggest challenge is optimizing our prices while ensuring irreproachable quality," Gomez says. "The aeronautics industry is a zero-fault sector, so we need to adopt all the industry 4.0 automation and data exchange tools we can to compete with low-cost countries, and that is what we are doing."

Problem: Mecaprec wanted to expand its range with new machines while keeping machining costs to a minimum.

Solution: The company bypassed the distributor, forging a close relationship with Seco to find the right tools for each job at the right price.

Result: In a decade, the company has seen revenue grow tenfold, and it is looking to expand even further.





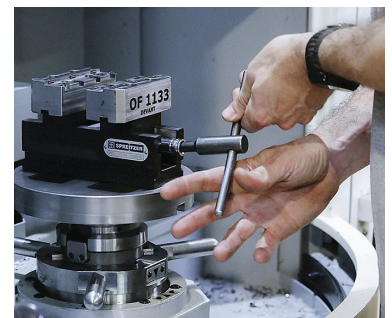
And while there are many suppliers out there, what Mecaprec is looking for are true partners. “We want suppliers who will bring us their new technologies, supply us seamlessly, train our people, listen to our needs and keep us at the cutting edge - in Seco’s case, literally!” says Gomez. “We have a great relationship with Seco, and we look forward to that relationship continuing long into the future as we grow.”

Mecaprec has just expanded its site, adding 2,000 square meters of space (bringing the total

up to 6,500 square meters) and invested some 24 million euros in 35 new machines. Thus, says Gomez, the company is looking to diversify over the next few years. “I’d like to see Mecaprec’s expertise extending into different industries such as automotive and oil and gas,” he says. “It’s never good to keep all your eggs in one basket, so diversification will be our focus in the short to medium term. I’m looking forward to seeing what exciting new projects the future has in store.” ✕

“We want suppliers who will bring us their new technologies, supply us seamlessly, train our people, listen to our needs and keep us at the cutting edge.”

CEO Jean-Marc Gomez



Seco has been Mecaprec’s biggest supplier of cutting tools since 2011.

WHAT GOES AROUND...

Recycling plays an important role in realizing Seco's sustainability goals. A target has been set to reach 90 percent circularity by 2030. It's a win-win for both Seco and its clients.

BY ERIK ARONSSON | ILLUSTRATION BY SEDKI ALIMAM



The circular economy has been described as the next industrial revolution. Designed to almost eliminate waste by using products, parts and raw materials for as long as possible, this new economic model is gaining traction among governments, businesses and consumers looking for an alternative to the current linear system of “take, make, dispose” that is now recognized as being unsustainable.

One of Seco's strategic focus areas

is sustainability. Circular economy, including recycling of materials, is key to reaching these sustainability goals, and in October 2019, Seco's executive management set a target for the company of 90 percent circularity by 2030.

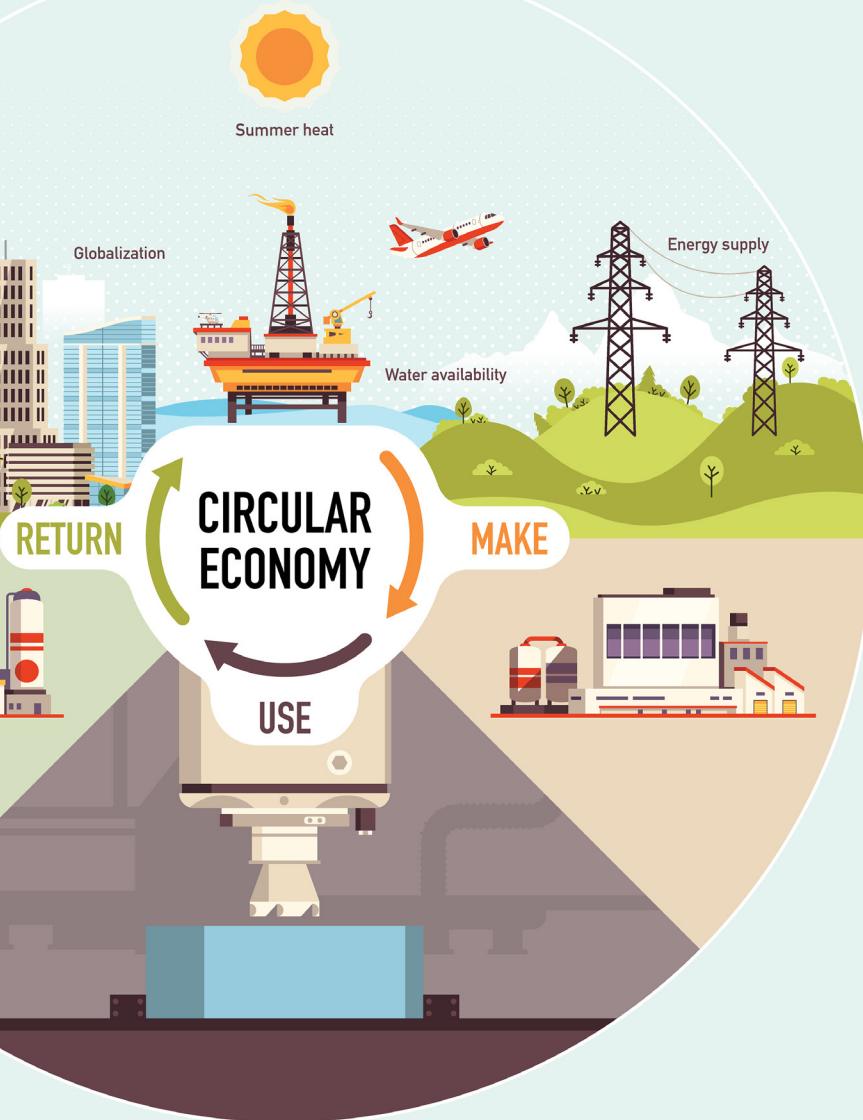
“This means that everything we produce, like inserts, tools, etc., should on a total level consist of at least 90 percent recycled material,” says Ted Forslund, sustainability coordinator at Seco. “Today we are at 74 percent, so

we have a journey in front of us.”

The circularity target is also closely related to Seco's climate footprint, as some 27 percent of the company's impact is related to the raw materials it uses. “So if we can transition from using virgin material to [using] recycled material, we will have a great impact on lowering our climate emissions,” Forslund says.

One important measure in reaching the 90 percent circularity target is the

CHALLENGES



Seven selected goals

The 2030 Agenda for Sustainable Development was adopted by all United Nations member states in 2015 and is aimed at providing a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals, which are an urgent call to action by all countries in a global partnership.

Seco has selected and set targets for seven of these goals, which are the most relevant for Seco's business, manufacturing and role in society.

- The selected UN goals are:
- Good health and well-being
- Gender equality
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation and infrastructure
- Responsible consumption and production
- Climate action

Read more about the UN Sustainability Development Goals:

<https://sustainabledevelopment.un.org/?menu=1300>

supply of material to recycle. In order to secure this, Seco has a buyback program that enables customers to sell used equipment back to Seco. The material is then used to manufacture new products.

“We can see that more and more customers are interested in this option,” says Forslund. “In addition to the financial benefits of the program, it helps customers to reduce their own environmental impact by being part of a circular system, and they can confirm

their sustainability goals. It's truly a win-win situation.”

One example is a Seco client in Norrköping, Sweden - a production unit with businesses in the aerospace and automotive industries. Seco in Norrköping has set up a solution where the client can send used hard-metal drills for sharpening in packaging that is also used to transport the drills back to the client.

“We also have training and monthly

meetings with the client to raise awareness of recycling and reconditioning,” says Forslund. “This has resulted in a 5 percent decrease in waste during the fourth quarter of 2019.”

Forslund stresses the importance of pushing the environmental benefits of recycling. “Our calculations show that for each ton of recycled carbide tools, we can save approximately 10 tons of greenhouse gas emissions” - a 60 percent improvement over virgin material. ✘

Is Blue the New Green?

The “Blue Economy” is no fleeting fad. Our oceans could be the key to unlocking future economic growth and managing the impact of climate change, but this requires a careful balance of governmental policies, business interests and sustainable stewardship.

BY ROSS KEATLY | ILLUSTRATION BY SEDKI ALIMAM



The “Blue Economy”, says the World Bank, is “the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, while preserving the health of ocean ecosystems”.

The oceans’ value is estimated at 3 trillion US dollars - the same size as the world’s seventh-largest economy.

However, pollution and acidification of the oceans, along with climate change, are endangering coastal communities and destroying fragile marine ecosystems, primarily due to oil and gas extraction, shipping, fishing and mining. This careless exploitation is the driving force behind the Blue Economy movement, and there is increasing recognition that sustainable ocean policies are the only way forward.

The Blue Economy is a holistic and inclusive model that is used mostly in coastal countries, which have the most to win or lose from our oceans. But the model’s sustainable approach is a big ask, particularly for developing nations in regions such as South East Asia where populations are growing, land is limited and resources are scarce. Often ocean exploitation is a logical route to economic expansion.

However, Bangladesh, a nation with a maritime territory equal to that of its land area, is turning this big ask into an opportunity. Supported by the World Bank and the European Union, Bangladesh has identified 26 potential Blue Economy sectors for fishing, mineral extraction, renewable energies, desalination and carbon-sequestration projects.

Government and academic partnerships are crucial in this approach. In 2016 in South Africa, a country with a 3,000-kilometre coastline, the Nelson Mandela University launched FishFORCE in partnership with the Norwegian Government. The project has created a global model of training, compliance and enforcement to tackle “fisheries crime”.

But it isn’t only academics and big nations at the forefront of this movement. SIDS (small island developing states) that are reliant on tourism and fishing are emerging as global leaders in the Blue Economy. The Seychelles is promoting eco-friendly tourism and diversifying its economy and is offering the world’s first “blue bonds” to attract investment.

The archipelago nation of Palau has designated 80 percent of its waters as “marine sanc-

“The Blue Economy is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, while preserving the health of ocean ecosystems.”

tuary” and is using cultural, sport and nature activities to entice high-value tourists. Palau is working with its local coastal communities, learning from their sustainable reliance on the oceans and at the same time protecting their traditions.

Looking towards a “blue future”, the Blue Generation Project, funded by Iceland, Liechtenstein and Norway, aims to get 40,000 young people into Blue Economy jobs by 2023. The EU reports that employment in offshore wind energy has grown from 20,000 in 2008 to 210,000 in 2018, and notes the vast potential for new jobs and economic growth in Blue Economy emerging and innovative sectors.

Doing nothing is not an option. Marine litter costs 11 billion euros each year; half of the world’s coral reefs have already died; and costs to manage coastal flooding are set to rise from 12 billion to 40 billion euros by 2050 in the EU alone - where 214 million people, 45 percent of the population, live in coastal regions.

The first Sustainable Blue Economy Conference, which took place in Nairobi, Kenya, in 2018, attracted 18,000 participants from 184 countries - recognition that responsible management and stewardship of our oceans is something no one company, organization or government can do alone. ✕

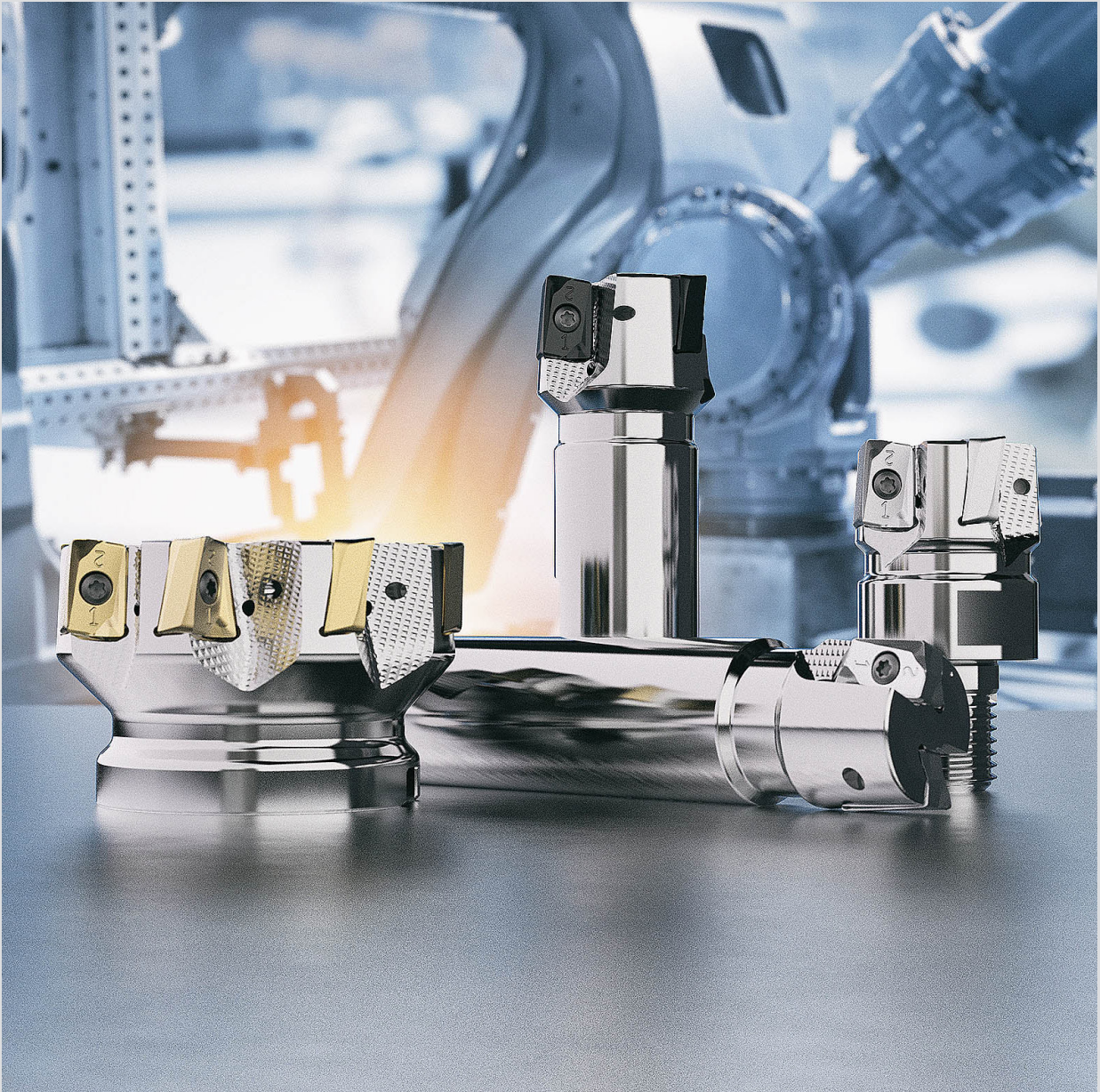
It pays to be blue

Why the Blue Economy and our seas matter

- Our oceans generate 50 percent of the world’s oxygen.
- They can sequester up to five times more carbon than tropical forests - a staggering 30 percent of global CO2 emissions.
- They contain up to 80 percent of all life on earth and account for 99 percent of all living space.
- They have huge untapped energy sources: wind, waves and tides produce 300 times more energy than humanity currently uses.
- They produce food for more than 1 billion people.

The scale of the challenge

- 90 percent of global goods are shipped using our oceans.
- 31 percent of fisheries are over-fished, endangering populations.
- 93 percent of the additional heat created through climate change is absorbed by the oceans - increasing extreme weather, damaging eco-systems and speeding up the melting of polar ice.
- 8 million tonnes of plastic are dumped into our oceans annually.
- Sea levels have already risen by an average of 10 to 25 centimetres in the past 100 years.



Turbo-charged

Seco's new Double Turbo insert provides lower power consumption, smoother cutting and longer tool life by using the most positive helix cutting angle geometry on the market. Benefits for the user include:

- Possibility to eliminate finishing operations
- Lower power consumption thanks to the high helix angle
- Fewer vibrations as a result of smooth cutting geometry
- Reduced downtime which boosts material removal rate with a depth of cut capability up to 15 mm (0.59")
 - Good accuracy and high surface quality with 90° angle
- Reduced cost thanks to double-sided inserts with four cutting edges
 - Easy insert indexing