We have entered 2019 with great enthusiasm

Railcare Group continue to progress, with growth and profitability in all our companies. Last year we were listed on Nasdaq Stockholm, signed a long-term transport agreement with Kaunis Iron and completed several kilometers of cable handling, ahead of the upcoming track replacement projects. Therefore it is with great enthusiasm that we enter 2019, which is the year our customers pre-determined rail investments commence in our home markets, Sweden and the UK, and will continue for many years to come. Maintenance on the railway has been neglected and Railcare, with our innovative solutions play an important part in enabling the railway to become more robust, with a high level of safety and quality, in an industrially efficient way.

Innovations are created by new intelligent machines, which we develop using both new and existing technology to find optimal solutions to become more efficient. Our new battery innovation is our latest development for 2019, where there is a strong focus on quality, sustainability, and the environment. It is a good complement to our machines. Development of our employees is very important to us. Machines are no better than the people operating them, and this applies to Railcare and our strong corporate culture, which we are very proud of.

Railcare is now well prepared for 2019, with a good foundation in the long-term contracts we have. In addition to our current snow removal contract in Sweden and the transport agreement with Kaunis Iron, new contracts have also been signed. One of them is the framework agreement for Trafikverket which was signed in early 2019, for the Railvacs to undertake the work confirmed in the national plan for Sweden. Another is the agreement that the Export segment have signed to build five generator wagons for Infranord.

With innovative solutions for the railway and with our staff as our primary resource, we build the Railcare of the future.

Read more about last year in this edition of Railcare News. This year we want to highlight our most important value, safety. Happy reading!

In May 2018 the Government made the decision on the national plan for the Swedish infrastructure. The plan extends from 2018 to 2029 and includes measures that represent an important step towards a modern and sustainable transport system. The railway is being upgraded, modernised and expanded.

The national plan includes an increase in infrastructure investments of SEK 100 billion to a total of SEK 622.5 billion compared to the previous plan.

“It has been broken down to an implementation plan for a 6-year period and it is that phase we are in now”, says Malin Holen, Maintenance Director at Trafikverket. The implementation plan includes various stages, analysis of risks and coordination of work that will be needed as the investment in rail maintenance increases by 50%.

**Increased reinvestments**

The basic maintenance is the foundation of continuous operation. It will ensure that the railway’s function is constantly maintained. It consists of both preventive and remedial maintenance, where the ambition is to make the proportion of preventative larger, in order to achieve the right balance from a life-cycle cost perspective. Reinvestments constitute the second major part of maintenance.

Trafikverket’s objective is to increase the proportion of reinvestments compared to basic maintenance in order to increase cost efficiency. There is a big requirement for reinvestment with a backlog of maintenance. The volume of reinvestment is planned to increase by SEK 2 billion annually, which will result in more track and rail replacements each year.

Challenges & Opportunities

In the next few years there will be major challenges for the coordination of traffic-affecting measures on the railway, where a strong focus and cooperation is primarily needed on the Stockholm–Gothenburg–Malmö triangle.

“There are two levels of challenges. One is the scope of the plan and obtaining the resources for the volume increase and the other is, with so many requirements, be able to balance between the train traffic and carrying out the work”, Malin says. But despite these challenges, Malin would rather focus on the possibilities:

“We now get a chance to increase preventive maintenance greatly. Collaboration within the industry is the key to maintaining the railway, and the ultimate goal of the plan is for people to be able to travel smoothly and safely in an environmentally friendly way.”

**High pressure on railway maintenance**

Malin Holen, Maintenance Director at Trafikverket. Photo: Trafikverket
In December 2014 the company Northland Resources filed for bankruptcy, and the two-year-old Kaunisvaara mine was closed. It was the beginning of a long and challenging process to find a sustainable solution for breaking iron ore in Pajala.

Per-Erik Lindvall has worked in the mining industry for almost 40 years. In 2016 he resigned from LKAB, but was not ready for retirement. He was then contacted and asked about the future profitability of the bankrupt mine.

“If you have worked within the mining industry in Sweden, you follow all the mining projects in the country. Therefore I had quite a lot of knowledge about what happened in Pajala before I started here. From the beginning I saw the potential and since summer 2016 I have been involved with this project”. In a private investment together with Carnegie Bank and 80 Swedish entrepreneurs, the necessary capital was raised and in autumn 2017 the bankruptcy administrator signed an agreement with the newly started company Kaunis Iron. Whom then became the owners of the bankrupt mine. Per-Erik became responsible for the start-up.

“There was a very small group who worked on the project then, and I was the one who had the most experience in running mines, so I was given the special assignment and responsible for the start-up”. In summer 2018, the mining started again in Kaunisvaara.

**New start**
Starting a mine is difficult, a lot can happen and at the same time it is capital intensive and requires a lot of both investment and working capital. Per-Erik stresses that it is important to plan well and have the right strategy when starting.

“You must do a good analysis, starting from the bottom, analysing the organisation, how the plant should look and all the technical issues. We decided to have a different concept to the other mining companies in Sweden. We wanted to run our business with a smaller owned organisation, and in principle have the larger parts of the business contracted out if possible. However, it took time, it was not easy to create this contract model and connect with the best partners”. All those involved worked at a fast pace during the winter 2017/spring 2018, and in the end Kaunis Iron managed to place all important contracts. Today they have contracting solutions for the entire mining production; the plant, the rail transport and a separate internal contract solution for road transport.

“Basically, we could say that we got exactly what we wanted, we obtained competent entrepreneurs to participate in this game and we found a business model that we all believe in, so it was very interesting”.

**Beyond expectation**
From the beginning, most things have gone even better than the original plan for Kaunis Iron.

“We have a demand for our product that is larger than we thought when we outlined the project, we have a better price, and a better dollar exchange rate. We have so far produced more than planned and at a lower cost than expected”. When asked what the risks are, Per-Erik answered:

“We are an organisation that cannot influence the price of our product. It is the world market that sets the price of iron ore. We have our own control on quality, cost and quantity, but things can change, and suddenly the prices are different or have a machine breakdown, so it is important to be on our toes all the time”.

In Pitkäjärvi the iron ore is loaded from the mine in Pajala to the transshipment terminal in Pitkäjärvi, outside Kiruna.

In the Narvik harbour, the iron ore is loaded onto the train, which travels 220 km to Narvik. Each train consists of 2 locomotives and 36 wagons and carries an average of 3100 tonnes.

**The future**
The goal for Kaunis Iron is to double production from today’s two million tonnes a year to four million tonnes, and Per-Erik hopes this will be a reality in the next couple of years.

“The facility in Kaunisvaara is designed for double the production achieved today. There are two production lines and we are running one that were complete before Northland’s bankruptcy”.

The plan for new mining is also clear.

“We are working on a permit for a mine we would like to open. We expect the permit application will be sent before July 2019”. Kaunis Iron’s unique iron ore quality, which has already proved to be in high demand among the world’s steel industry, has a clear market position with its favorable environmental benefits.

“It is a niche product, not a bulk product. It is unique within the iron ore market; therefore, it is priced above average. We get premium because it is so high-quality and sought-after”. •

Large amounts of water are added to the primary crusher. The iron ore is removed by using a magnetic separator. In vertical grinders, secondary grinding takes place. After another magnetic separation, iron ore concentrate is transported by lorry from the mine in Pajala to the transshipment terminal in Pitkäjärvi, outside Kiruna.
The Hanover Waterloo branch in Scotland runs from the north end of Kittybrewster Junction to Waterloo quay area of Aberdeen. Babcock International approached Railcare and asked if they could help with the delivery of a project involving the removal of life-expired ballast and the installation of new ballast over approximately 1700 metres.

The project had been deferred on many occasions due to the location, being a single line construction, the presence of Japanese Knotweed and the route being laid over the bed of an old canal making this a particularly difficult project. Steve Mugglestone, Project Manager at Railcare met with Hugh Beeton and Graham Gilmartin, Babcock International to discuss the project and devised a plan to complete the excavation and re-ballasting works.

The works
Two Railvac machines and Railcare’s new Ballast Feeder System worked on the project, in a series of single 12-hour shifts during five weekend blockades. With the Railvac’s excavating the track on the first shift, Babcock’s and McCulloch’s installing new track panels and the Ballast Feeder System distributing new ballast on the subsequent shift, this was then followed up with tamping to complete. As the first week commenced some difficulties became apparent, the material being excavated was particularly heavy clay with a layer of large boulders varying in size throughout, and the Railvacs had to travel almost two miles to the spoil designated discharge point and return. This resulted in lower outputs being achieved at approximately 80 metres. After evaluation it was agreed the best solution would be for Railcare to provide both extra operator cover and site personnel to assist operators for 24 hours working. This resulted in the project running much quicker and Railcare completing over 200 metres per weekend, exceeding the planned excavation rates.

A success
Graham Gilmartin at Babcock International said: “Re-planning major work on a weekly basis is difficult for all involved and the potential for mistakes increases exponentially. However, it should be noted that the full specification yardage for both plain line and drainage was delivered despite the site constraints, Japanese Knotweed, haulage issues and the logistics of working 150 miles from home base. “Railcare staff should be commended for their work ethic and flexibility when reacting to changes to the plan. They, and all involved, should be rightly proud of delivering the biggest job in CP5 contract in the UK. Throughout the nearly 350,000 man hours worked, there was not one reported personal accident, an amazing statistic and testament to the commitment to the safety culture practised by all involved”. Graham continued “From my personal perspective I would not hesitate in using Railcare in the future and given their performance on the site, recommending them to others within the industry”.●

Investing in Scotland

Douglas Craig has worked for Network Rail since 2009 when he started as a graduate. He now has the role of Programme Manager in the Works Delivery department for the Scotland route. This involves leading six internal depots including Inverness, Perth, Edinburgh, Glasgow, Motherwell, and Irvine, whilst overall ensuring he delivers work to maintain and extend the life of the asset.

Scotland is one of the three largest routes, with a higher budget for CP6 than previously, to deliver works including re-ballasting and a drainage work bank, which Douglas would like to utilise Railcare’s Railvac machine for. “It has always been a positive experience using the Railvac, good interaction with both the operators and the team, all jobs have been completed successfully. The main advantage is being able to re-ballast with the track in situ at a greater production rate”. Looking at the safety aspect he agreed there is less risk to the asset along with fewer people being required on the track, subsequently increasing the safety. “The Railvac eradicates these safety issues making it a safe method to use”. CP6 begins in April this year, and Douglas says it is an exciting time for him and his team, they have increased resources and are ahead with the planning. He explains: “A big challenge is obtaining the correct access and haulage, and why planning further out is very important”. Working together with planning and attending site visits is also key in assuring works were delivered well. “Performance is paramount, ensuring the hard back of each site is done well, with no issues, allowing trains to run as they should”. New way of working
The main targets for his team in CP6 are to deliver works safely, reduce the number of accidents/incidents, and deliver the volume at the cost specified, whilst thinking differently and innovatively to develop new solutions. Douglas is keen to use Railcare’s latest innovative machines including the Ballast Feeder System and the Spoil Handling System. “They would definitely be a great benefit, reducing cost, and increasing safety”. He explained one of the advantages of the Ballast Feeder System is allowing a more precise control of the output of ballast and the Spoil Handling System being a “game changer”, for an improved way of working. “Using all three machines together, giving Railcare more control of the operation was definitely an efficient and new way of working”. Douglas believes the future for Network Rail and the railway is positive, with a lot of change, more people using the railway, therefore a greater opportunity to deliver more work. “It is important to find new and different ways of delivering work quicker, safely and successfully”.●

Ground breaking works in Scotland

The Hanover Waterloo branch in Scotland runs from the north end of Kittybrewster Junction to Waterloo quay area of Aberdeen. Babcock International approached Railcare and asked if they could help with the delivery of a project involving the removal of life-expired ballast and the installation of new ballast over approximately 1700 metres.

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04-02-2019
A night with Railcares snow machines

Since Railcare developed the first snow melter in 2011, the requirement for strategically placed machines has only increased. Today there are seven machines which are always ready to remove snow between November and March. Here we give an insight on how one night in February can look for Railcare’s snow machines.

Time: 00.45
Both snowploughs are called from Östersund for track clearing. SR200-1 remains on the line between Singsån-Bispgården and SR200-2 track clearing between Bispgården-Graninge.

The snow depth varies from 20-28cm. Transport back to Östersund at 04.15. Watch the SR200 removing snow on Railcare’s YouTube channel via the QR code to the right.

Time: 03.00
SR700-2 stationed in Hallsberg, removing snow on the track within the marshalling yard. Snow depth between 25-30 cm. Empty the tank with the melted snow and decommissioned at 12.30.

Watch the SR700 removing snow on Railcare’s YouTube channel via the QR code to the right.

Time: 18.45
Snow removal on the tracks with 17-22 cm of snow. Also including the adjacent snow walls of 50-65 cm snow. Decommissioned and parked at 00.15.

Time: 16.00
Remove snow from switch blade and snow walls and the tracks. Switched off and parked at 18.00.

Time: 23.00
The SR300 starts work with the snow removal of priority-1 switches between Älvsjö and Solna. Transport back to Älvsjö at 03.50 for a fault repair with one switch and the emptying of the melted snow at 05.10.

Watch the video of the SR300 via the QR code to the right.
Robert Röder, CEO Strukton Rail AB and Chairman of the Board of FSJ (The Association of Swedish Rail Contractors) speaks about FSJ and how the industry organisation works with safety issues.

Our industry has always worked with safety issues, whether there be a monopoly, deregulation, or before FSJ existed. It can probably be linked to the fact that there have always been safety rules in the railway industry since the train traffic is regulated by safety rules.

An active security group
In the past, regulations were never really intended for the people who worked on the track, they were there to protect the train traffic only, and this is something that can still be seen today. The security group within FSJ, which most companies in the industry are actively involved in, has worked together for almost 25 years in various combinations. When it was a monopoly, we worked together on both the security and working environment issues. It was at this time that the security group was formed by those who were Security Managers within the industry companies.

Working with the conditions
In my opinion, Sweden is at the forefront when it comes to transparency and openness, security issues, working environment and being able to work together. However, I would say some parts of Sweden are behind in learning the lessons of the consequences of closing rail traffic to meet the need for planned maintenance. The challenge is for management to take responsibility and provide the conditions both in procurement and the execution of work. The same applies to the train traffic only, and this is something that can still be seen today.

"The management must be able to meet the required level of security to work on the track"

I think we have made good progress in both safety and working environment issues and have very competent employees. The challenge is for management to take responsibility and provide the conditions both in procurement and the execution of work. The same applies to customers, they must have the best possible conditions to be able to do the right thing. It is completely different to systematically always make mistakes and fail than not being able to provide the best possible conditions for success. It is FSJ’s role to design the best possible conditions, so that they are commercially and technically feasible, but also for being able to allow intensive train traffic.

Our own Safety Day
2017 was the first year we had our own security day. There were many different events that a lot of people are involved in, and we felt we should take an industry-wide perspective. At the engineering level, there is a commitment to wanting to do the right thing and follow the rules, but then the question becomes, can one always, or are the rules reasonable? The technicians are on board, however we notice the management did not always understand what it was about. If you are not working within the railway industry, you may not know how important the entire quality journey is along with the technical competence and delivery. The goal is company management and it is still the target group that we are aiming for today, whilst trying to find a strategy that everyone can work from. Everyone works differently and equally, some have security controls and others follow rules in their own way.

Together we are stronger
As an industry, we want to set basic standards, however they are difficult to set. In some tendering documents, we see that projects will not work from a good security perspective and with what we as the industry have set up as guidelines. After the Kimstad accident, and for many other reasons we said as an industry that we want 70 km/h speeds on adjacent tracks when we work. The management must be able to stand up for everyone, to be able to meet the required level of security to work on the track. It can be our contribution, to do it together. Together, we are stronger. If everyone complains about the speed at the site at the tendering stage, it will not work.

FSJ – For a safer, more attractive and profitable industry

Robert Röder, CEO Strukton Rail AB and Chairman of the Board of FSJ (The Association of Swedish Rail Contractors) speaks about FSJ and how the industry organisation works with safety issues.

For a safe working environment

Safety work within Railcare is conducted operationally and administratively according to the requirements set by various EU regulations and the national requirements imposed by, for example, The Swedish Transport Agency and Trafikverket. The administrative part describes how Railcare complies with the requirements imposed on a railway company and the ECM (Entity in Charge of Maintenance).

“Operatively, the safety work is carried out with traffic safety instructions, followed up with periodic training and traffic safety regulations tests” says Thomas Brunberg, Safety Officer at Railcare T.

A well-made organisation

In addition, Railcare carries out risk assessments, risk analyses and external audits of its subcontractors. Through external audits and follow-ups from the European Railway Agency, the Swedish Transport Agency and Trafikverket, Railcare works with and monitors the safety management in its own operating system, QMS.

Kristoffer Henriksön, Security Officer at Railcare T continues.

“What works best in our security work is that we have a well-made organisation, short lead times and all documentation is easily accessible within the QMS. The challenge is that, geographically, we have a huge area with safety functions placed in many different locations in the country, which places high demands on planning.”
During a press conference at Epiroc’s facility in Örebro, the collaboration between them and Railcare was presented. The plan: to manufacture a battery-powered working vehicle for the railway.

Multi-Purpose Vehicle, or MPV, is a working vehicle with a versatile field of use in rail maintenance. The vehicle is equipped with self-propellers, vacuum pumps, hydraulics and control cabins so that it can be used as a battery-powered addition to Railcare’s Railvac, snow melter, and as a towing vehicle for ballast wagons, for example, during track work.

“We are happy for the collaboration with Railcare, for Epiroc it is a natural step to work together with the technology we have developed for our underground mine machines” says Helena Hedblom, Epiroc Mining and Infrastructure Manager.

Epiroc’s history
Epiroc has its roots in Atlas Copco, which was founded in 1873 in Stockholm. Atlas Copco started manufacturing rock drills in 1905 and 50 years later, the company AB växlar och signaler were purchased in Örebro, and in 1992 rock drills were manufactured. In 2010, Epiroc began work on electrifying its products, and in 2016 the first product line was introduced. “We learned a lot during this time, among other things energy consumption and capacity. Two years later we were presented with the second-generation battery-powered mining machines with 14 different models,” says Erik Svedlund, Head of Marketing at Epiroc.

Collaboration
Railcare’s MPV will be built and tested in 2019 in Railcare’s workshop in Skelleftehamn and is expected to be completed during the second half of the year. Epiroc’s development platform for battery operation, together with ABB and Northvolt, are important parts in Railcare’s work to produce the world’s first and largest battery-powered vehicles on the railway track.

“We continue to have a high level in our innovations and are proud of the results in our collaboration with Epiroc” says Daniel Ohlom, CEO of Railcare Group AB. We will use their scalable battery technology platform when we launch our first battery MPV.

For Epiroc, there is also a great advantage in finding new markets for battery operation at an industrial level: “Collaborating with ambitious companies around battery technology is important for increasing volumes and reducing costs. This will speed up the pace of the electrification process,” says Helena Hedblom.

Why battery power?
The requirements for reduced emissions from fossil fuels will increase, not only to protect the global environment but also for health and safety reasons. “For Railcare, this can also meet the requirements set, for example, for jobs in tunnels, mines and city centres, where exhaust and emissions are a big problem” says Daniel Ohlom. “The future is electric, the question is just how fast we can get there” Erik Svedlund concludes.

“The future is electric, the question is just how fast we can get there”
A historical listing

During the majority of 2017 and the first quarter of 2018, Railcare worked intensively with the Stock Exchange listing, involving many employees from the company and external advisers. The success of the project was not only a result of the many hours worked, but also the teamwork between internal and external parties.

Thanks to Railcare’s fantastic staff and the highly knowledgeable external advisers, Railcare succeeded in completing a very large project in parallel with the company’s usual activities, which requires time. This is something that I am extremely proud of,” says Daniel Öholm, CEO Railcare Group AB.

On the 3rd April 2018, Railcare’s CEO, Daniel Öholm rang the Stock Exchange bell and Railcare Group AB’s shares were then listed on Nasdaq Stockholm Small Cap under the name RAIL.

Railcare Group AB is one of few companies based in the northern region of Sweden listed at Nasdaq Stockholm and also the first railway company. Niclas Holmberg, Managing Director, Global Listing Services Nasdaq Stockholm explains more: “We think it is great and Nasdaq Stockholm is, despite the name, of course a marketplace for companies throughout Sweden. We constantly work to broaden ourselves and a large part of my job is to travel around Sweden and meet companies in their everyday lives. For me it is obvious that it is only when you meet companies in their home environment that you can gain an understanding of how we at Nasdaq can help them in the best way.” Niclas continues:

“It is great that Railcare is listed as the first railway company with us”

“As a stock exchange operator, our task is to help companies grow. With the help of a listing and raising funds, we can help companies reach the next level. I am convinced that to be able to succeed with this, it is good to understand the companies’ everyday life, then adapting our offer in the best way. We participate annually in some activities in Northern Sweden, including the Åre Business Forum, and my ambition is to increase the number of visits to the northern region. Nasdaq Stockholm is a diversified marketplace with companies from a variety of sectors, which I think is a huge strength. We obviously think it is great that Railcare is listed as the first railway company with us, and we look forward to supporting Railcare for many years to come.”
Anna Helmersson grew up in Kiruna and has lived there all her life except for five years in Gävle. However, becoming a train driver was more of a coincidence.

“When I moved home to Kiruna, Green Cargo were searching for train drivers for the transportation to the company Northland. They ran two rounds of training and I joined one of these. When the mine closed, I continued to drive for Green Cargo in Kiruna.”

During Anna’s maternity leave, train drivers received advanced notice about the redundancy at the mine, but she waited and followed the development of the Kaunisvaara mine. When it re-opened, and it was to be Railcare T transporting the iron, the local driver was used to the type of transport that was at the top of Railcare’s list.

“It was an interesting interview where Railcare really sold itself as a company” says Anna. She then became one of 12 train drivers for the project.

The railway line between Kiruna and Narvik goes through the mountains with beautiful scenery and Anna thinks this is one of the best things about driving the trains.

“I have lived in this countryside since childhood and it is nice to be able to view it when I work. It’s like home to me.”

The Spoil Handling System is Railcare’s new innovative solution for the handling of the spoil generated by the Railvac during the excavation process, in a time-efficient, safe, and productive way.

The current method requires spoil to be emptied on the side of the track and the requirement of RRV’s to remove it. The main disadvantages of this are the additional risks that this process brings to the various projects and infrastructure, extra manpower, the interaction of plant working together in close proximity, and shorter possession times. Subsequently, increasing costs, reducing production times and most importantly a higher risk to safety.

The solution Railcare have demonstrated the new innovative Spoil Handling System (SHS) to the rail industry to work in conjunction with the Railvac and the Ballast Feeder System as a full re-ballasting/excavation system that can work easily on single lines or with an Adjacent Line Open (ALO) and under live Overhead Line Equipment (OHLE).

The system is based on container flat wagons fitted with powerful side lifting hydraulic arms that can place the purpose-built containers along the 6ft and cuss of the track as the loco shunts the wagons.

The Railvac can then discharge spoil directly into the containers and when full they can be loaded back onto the wagons, secured and taken away directly to the appointed Network Rail materials handling depot for recycling. “Railcare has the technical solution for the problem on the railway to remove the spoil after changing the ballast. Now we can excavate the old ballast with the Railvac, replace with new using the Ballast Feeder System and remove the spoil with the Spoil Handling System all within possession time, optimising the time and all in a complete industrial way” says Daniel Öholm - Managing Director.

Handpicked for the job
Robert Dahlgren
The racing icon from Skellefteå

Robert Dahlgren is one of Sweden’s most experienced racing drivers. Despite his age, his career extends over 30 years. Railcare News has met him and spoken about his career.

Robert started driving the go-cart when he was 9 years old and by the age of 12 had won the Nordic Junior Championships in Denmark. He was then contacted by the world’s largest go-cart manufacturer at that time, Italian CRG.

“They wanted me to drive in the Junior European Championship in Portugal for them. I finished in 6th place, they were happy and asked me to continue driving for them and I thought it sounded great”, says Robert. Between the ages of 13 and 16, I commuted from Skellefteå to Milan approximately every two weeks.

During these years Robert raced in all the major competitions around the world, the European Championships, the World Championship, and the World Cup.

Up to Formula Ford

In 1995, after successful years in karting, the then federal captain of the racing national team, Hans Wängstre, contacted Robert and asked what his future goals were.

“I wanted to become world champion in Formula 1, however Hans said it wouldn’t happen if I just drove the go-cart. He said I should start driving for Formula Ford. Said and done”. At that time, the top three in each country were invited to the British Formula Ford Championship, which counted as a world final. Three years later he won the British final. “It was actually on the last race, the last lap in the second-last turn, against the worst competitor. After that I took the step up to Formula 3, which was then the step before Formula 1. I was part of the final group through with Toyota, Renault and Jordan. At Renault and Toyota, I ended up in the final group of their junior program”.

The change of course

The costs are high in racing and in the junior classes there was no salary.

“Being able to race is like being at a theme park and needing to buy a wristband, though you drive a racing car instead. If you are good you pay less to drive however you do not receive any money to drive, you are broke”. At the same time as Robert’s Formula options declined, he received an offer from Volvo that would mean a change of course in his career.

“I would drive for Volvo’s factory team in the Touring class. Competing and being involved in the testing and developing of racing cars and passenger cars. I was a little sceptical at first, as I was supposed to be going into Formula 1. I thought it was a step down in the picture of how my career would look, however I would get paid so I accepted, and I never regretted it for a second.

From the time Robert started working with Volvo in 2004, he was involved in the development of both the Volvo S60 and C30, both as passenger cars and racing cars.

New role

In Robert’s words he was living the dream. However, after a while, it became everyday life and involved lots of travelling.

“From 2010, except for 2014 when I lived in Australia for one year, I was travelling between 180-210 days a year. I had become a dad during this time, and we lived in Skellefteå, so there was a lot of travelling and being away from my family.

After the 2016 season, I decided to make a change”. Robert started at Norrlands Bil in Skellefteå and was asked by Seat’s dealer team, PWR Racing, to drive for them.

“It was a completely different type of role, I no longer competed and if the cards fall right then I can probably stay for a couple more years”.

Driving on home turf again

In June 2019, the touring car circus comes to Skellefteå. The midnight race is run on the newly-built track in Fällfors, which is Scandinavia’s longest racing track.

“It is totally crazy. The last time I competed at home was in 1996, then I drove the SM go-cart. Other than that, I can’t remember the last time I competed in a race at home” Robert says. I hope a lot of people come to watch, people who do not necessarily follow racing think it is a great spectacle”.

On the question of the future, Robert remains open-minded.

“Peak age in touring car racing is usually 35-40 years old. However, what is usually the Achilles heel, is often the motivation because you have been waiting for a long time to get to that point. Who knows, right now I like it very much and if the cards fall right then I can probably stay for a couple more years”.

THE BATTERY-DRIVEN RACING CAR

In 2017, PWR Racing, together with its partners Skellefteå Kraft and Höganäs, developed a battery-powered racing car. On 22nd September, the prototype PWR001 was presented, which is a 100% battery-powered racing car with 612hp. Demonstrations were run at Mantorp Park in connection with the STCC final 2018.

FACTS

- Top power: 450 kW / 612 hp
- Top torque: 1080 Nm
- Max engine speed: 8000 rpm
- Battery capacity: 41 kWh
- Battery weight: 366 kg
- Total weight of car: 1510 kg
- Top speed: 300 km/h
- Max engine speed: 8000 rpm
- Battery capacity: 41 kWh

Photos: Jakob Larsson, PWR Racing
**The Egg method**

A major culvert on road 50 in Vasselhyttan, Sweden, was in a very poor condition and required repairing. The stream concerned was deemed to have a potential for biodiversity and was situated in a deep valley. It was the start of a test project for Trafikverket together with Railcare to renovate a culvert with lining, using a new method.

The culvert was made of concrete with a diameter of two meters. It had largely come apart in most joints, which meant material from the road had fallen in. Damage as a result was found on the road also, and holes had appeared which required repairing.

“There were two main options for repairing the culvert, replacement or lining” says Morgan Gustafsson, who works as a Construction Manager for Trafikverket and has a lot of experience renovating road culverts. “Different aspects must be considered when choosing between these. The large disruption to the traffic that a regular culvert change would entail, along with the traffic safety risks. These factors increase in importance as the culvert is below a high road bank”.

The solution for the re-lining of the culvert was not obvious as the maximum diameter was 1.8 meters. The decision was to insert molded foam in the surrounding gap, something that Railcare came to call the “Egg method”. The flow area decreases slightly, but the smooth surface of the lining means a greater flow rate at high water levels compared to concrete, which compensates for the area reduction. There were also other requirements for restoring the environment around the culvert. When we determine which culverts must be repaired, an application is sent to the local authority. Conditions can be set on how the environment should be restored. In the case of Vasselhyttan, proposals were made to allow fish migration and create favourable conditions for aquatic organisms”, says Morgan.

**Success with the “The Egg”**

**Strategic agreement with Trafikverket**

For approximately a year, discussions were had between Railcare and Trafikverket regarding the planning and resourcing for the upcoming year’s track replacements projects. The framework agreement has been designed for both parties’ interests. Railcare will be contracted directly to Trafikverket, helping to ensure all work is achieved in the national plan. The target for Trafikverket is to complete the preparatory work at least one year before the track replacements projects begin. This also allows Railcare to be able to plan its resources better and allocate them more evenly over the years. “The agreement is completely new, meaning you do not really know what will happen during the work process. It is a completely new way of working with cable handling and track replacements projects”, says Adam Sundin, Vice Business Manager Railcare AB.

“For us, the business model becomes more stable, with the ability to influence more ourselves, which was not possible previously”.

**Two Ballast Feeder Systems for Sweden**

Railcare AB invests in wagons for the Ballast Feeder System. It is developed by Railcare and currently there is one machine in operation in the UK. The system itself guarantees safer vehicle movement on the track, together with the front conveyor belt providing material distribution with better precision. “Our aim is to always be at the forefront and do everything a little better, which resulted in us developing our own machinery” says Jonny Granlund, Operations Manager Railcare AB.

“The Ballast Feeder System is also more reliable. Initially two Ballast Feeder Systems will be built, then we will identify if any more are required. The machines will be built in Railcare’s workshop in Skelleftehamn with a planned delivery for spring 2019.”
Planning ahead on the LNW route

The LNW route is one of the three largest routes and Works Delivery has a £200 million budget for CP6, approximately £25 million of that is attributed to the S&C works which include re-ballasting work. Terry worked with Railcare and the Railvac on projects around the Liverpool area last year, and he described the team as professional and the Railvac performance as good, saying “overall it has been a good experience and a good relationship, the Railvac has always met the required outputs promised”, he says.

Advantages
He explained the advantages of the Railvac are how it is non-intrusive, meaning there is no need to take the track out, and that it offers a good complete package of works, “it comes on a train to site with its own experienced operators, has good technology, and no hidden extras” he says. Commenting on its versatility and being able to work with several different projects, Terry agreed “it offers different solutions and can work with potential ALO opportunities, enabling trains to be kept running on some lines, whilst utilising the Railvac on the other line, ultimately benefiting the passenger”.

The Challenge
CP6 begins in April 2019 and the five-year plan sees Network Rail becoming more locally-focused. Terry explained, “This will be beneficial as it allows for more control for the routes, enabling decisions to be made quicker and easier with more collaborative working and increased visibility”. He explained “The planning for CP6 is coming together really well, CP6 has the most challenges but also the most opportunities. The biggest challenge is efficiency versus access. With costs and passengers increasing and access decreasing, it is important to plan and understand the whole work bank, securing the resources and access ahead of time. Maintaining an old asset whilst railway traffic is increasing is another challenge, therefore the big investment in CP6 will give us a good asset for the future”.

Targets
The LNW route have several big projects planned for the Railvac in CP6 and Railcare want to continue to play an integral part in assisting Network Rail to reach their targets. Terry explained the benefit of completing big pieces of work with two Railvacs on a single project would consequently cause less disruption to the train operators and the passengers. “We don’t want the cheapest product, we want the product that is going to give us the best output for the best value. Re-ballasting is a huge part of both CP6 and CP7 and a big opportunity for Railcare to demonstrate what they can do”.

NETWORK RAIL ROUTES

Terry concluded, “CP6 will be an exciting challenge, with planning being key and collaborative working being so powerful. Bad planning results in bad performance, advanced planning is not only vital but also safer; ensuring everybody goes home safe every day”.

A better railway
Railcare’s new Ballast Feeder System is being used on one of LNW’s first jobs in CP6. Terry is hoping the combined working of both the Railvac and the Ballast Feeder system will be an added benefit to the project, “getting the job completed quicker, reducing downtime, increasing safety with less machinery and people on the track which inevitably reduces the risk element”. Terry agreed adding Railcare’s Spoil Handling System, generating a complete industrial concept would be great for shorter possessions and ideal for drainage projects. Terry believes the future for Network Rail holds “a better railway, more passengers, more satisfaction, and more trains running on time. Train performance is very important, we have the problem to give the asset the best life expectancy, and Railcare has the solution”, he says.
A focus on wellness

In November 2018 the Swedish Gymnastics and Sports Academy presented a study that showed that almost half of all Swedes in work had poor fitness levels with serious implication for their health. The fact that employees are the company’s most important resource is nothing new and, at Railcare, health and safety for employees is something that is highest on the agenda.

The study reported that the technological development of the last few decades have increased our television viewing and other screened activities, reducing the opportunity to be active. Changes in working life also mean we are more sedentary during much of our day. This has not influenced the amount we exercise or train but has greatly reduced our everyday activity.

At Railcare, a challenge was initiated to motivate employees for more movement. It consisted of registering steps during the period from 1st January to the end of March, which in turn generated raffle tickets where great prizes could be won. Pedometers were sent to all employees so that they could keep checking their steps every day.

“We wanted to find something that everyone could participate in and encourage everyday movement” says Ulf Marklund, Vice President of Railcare Group. “It was also important for us to indicate that it was not a competition where the one with the most steps wins. Everyone who registered steps had the chance to win a prize in the draw”.

Another measure to promote health was raising the health care contribution to the maximum tax-free limit.

“It is obvious that we as an employer should contribute as much as we can to promote our employees physical and mental health. It also ultimately ensures that we can work safely in our jobs” says Daniel Öholm, CEO of Railcare Group.

Loco renovation to VIDA

In late autumn 2018, Railcare T’s locomotive workshop in Långsele received confirmation from the sawmill group, VIDA to renovate their newly purchased diesel locomotive, TMX 1024.

VIDA is a global supplier of manufactured products. The group has approximately 1050 employees at eighteen production plants, including nine sawmills. Production is mainly focused on construction timber for several different markets. The industries are strategically located near the owners of forests in Småland, Skåne and Västra Götaland.

“In recent years, we have focused on various areas within the company to reduce costs for an increasingly competitive global market. Major investments have been made in logistics including, our own trains, distribution warehouses and sales offices in a number of countries over the last few years” says Lars Dahl at VIDA.

ABOUT THE CHALLENGE FROM RAILCARE’S STAFF

JOHAN LUNDMARK, RAILCARE AB
“For me, the challenge came as an additional incentive to lose weight. A good initiative by the company does not have to be so extraordinary, I think it gave many people including myself extra motivation to exercise”.

SANNA LUNDGREN, RAILCARE GROUP
“I work in a sedentary job, and thanks to the pedometer I have become more aware of how little I walked and how much better I now feel from daily exercise, even improving my sleep. It has been fun to support each other at work and taking more walks at lunchtime than previously”.

Big improvements
Since 2005 Vida has owned one locomotive and in 2018 invested in another. The locomotive was relatively run down on arrival in Långsele and its condition was in many ways unknown with inadequate information about previous audits. Railcare T’s initial task was to secure the operation of the locomotive for the next coming years. Additionally, the workshop was commissioned to renovate and improve several parts of the locomotive. The project is expected to be complete by spring 2019, with renovated bogies and cabins, along with a new 24V system and an improved interior and exterior.”
Safety visions

Always Safe - or not at all!
This is Railcare’s proud motto when it comes to their safety at work attitude. The railway is a dangerous environment for everybody, not least for contractors. When contractors work on the railway the work is often done alongside regular traffic, therefore it is paramount that all rules and regulations are applied according to Network Rail Safety Central and the Health & Safety at Work Act. One of the main safety advantages of the Railvac is the reduction of manual handling, consequently requiring fewer people on the track.

Railcare require all employees and sub-contractors to work safely at all times, ensuring that others around them work safely too. This includes complying with site rules, all site-specific procedures and instructions. Railcare continuously educate all employees and always enforce their motto, leading to very few incidents or accidents.

Network Rail - Everyone home safe every day
“Whatever the role, and however experienced any individual is in working with us, there’s one safety vision we are all required to share. Everybody has a responsibility to behave safely and challenge unsafe behaviours and conditions when we see them. This underpins our promise to safely transport more people and goods where they need to be on time, every time” says Network Rail.

There is no other form of transport safer than rail and Network Rail is determined to maintain this record, not only for passengers, but for the people who work on the tracks, night and day, delivering a safe, reliable and efficient network. Keeping the railway safe remains one of Network Rail’s top priorities.

Network Rail complies with their ten lifesaving rules, which consist of the most common causes of injury and loss of life on the railway. The rules are in place to keep every individual safe and must never be broken.

Vision Zero
Vision Zero is Trafikverket’s main safety objective. It is a policy innovation, with a focus on preventing accidents. The project aims to achieve a traffic system with no fatalities or serious injuries. Although first established in Sweden the project has now been implemented internationally.
Vision Zero is an ethical approach, but also a strategy for constructing a safe transport system. In 2012 Trafikverket stated a new objective for the traffic safety, specifying that the number of fatalities on the railway will be halved by 2020.

Infrastructure investment in Norway

Sweden’s national infrastructure plan 2018–2029 (read more about it on pages 2 and 3), describes how the railway in Sweden should be equipped, modernised and expanded. Norway has similar plans presented in the National Transport Plan 2018–2029. The Government of Norway will invest more than NOK 400 billion in roads, railways, coastal infrastructure and aviation during the period 2018–2029. As a result, funding in the coming years will increase by 37 per cent over 2017 levels.

Innotrans, Berlin

In September 2018 it was once again time for one of the largest transport exhibitions, Innotrans in Berlin. Railcare was there with the exhibition container and met a continued stream of old and new friends.

Innotrans is one of the world’s largest transport fairs with over 3000 exhibitors from 61 countries, showing products and services for the industry. Alternative driving systems, battery and fuel cell-driven trains and buses were one of the main themes at this year’s exhibition.

Some 160,000 people had visited the exhibition during the four hot days.

“Our stand had an optimal location between the larger halls and the track area, we received visits from both old and potential new customers”, says Janne Billberg, Managing Director at Railcare Export AB.

New workshop for locomotives in Pitkäjärvi

Railcare T has been transporting iron ore for Kaunis Iron between Kiruna and Narvik since autumn 2018, (read more about Kaunis Iron and the mine’s logistic chain on pages 4-5). To be able to handle the servicing and maintenance of the locomotives and wagons which transport the iron ore, a workshop has been built in Pitkäjärvi.

The facility is owned by Kaunis Iron and is rented to Railcare T and Kiruna Wagon. There are two tracks, one for locomotives and one for wagons.

“Having a warm workshop at the terminal is essential for performing servicing and maintenance on the locomotive. It is also a great benefit to be able to defrost the locomotive during the winter months”, says Johan Hansén, Vice Business Manager at Railcare T.
In January 2019 Railcare received an order from the state-owned railway company Infranord for five generator wagons, QAC.

The generator wagons will power up ballast wagons and one QAC will be able to connect up to 10 ballast wagons. “We are pleased with this collaboration with Infranord as they give us the confidence to build generator wagons that meet Infranord’s high demands in the adaptation of today’s working environment”, says Daniel Öholm, CEO of Railcare Group AB.

Delivery of the wagons will begin in autumn 2019, with a final delivery in 2020. “The unique thing for Railcare is that we build a product, which we ourselves do not use in our business”, says Daniel Öholm.

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