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OCT 2011–APRIL 2014

68 PAGES ON THE MID SWEDEN REGION'S FUTURE GROWTH IN TOURISM SPORTS & THE OUTDOORS

SOCHI OLYMPIC COURSE TESTED IN ÖSTERSUND INTERNATIONAL
COMPANY ESTABLISHES PRODUCT DEVELOPMENT IN ÅRE YOUR
DIGITAL COACH BILLIONS IN TURNOVER FOR NATURE-BASED
TOURISM FLOW MOTION TECHNOLOGY GOES WORLDWIDE TOUGH
TESTS IN THE TEXTILE LAB PRODUCT DEVELOPMENT ON THE GO

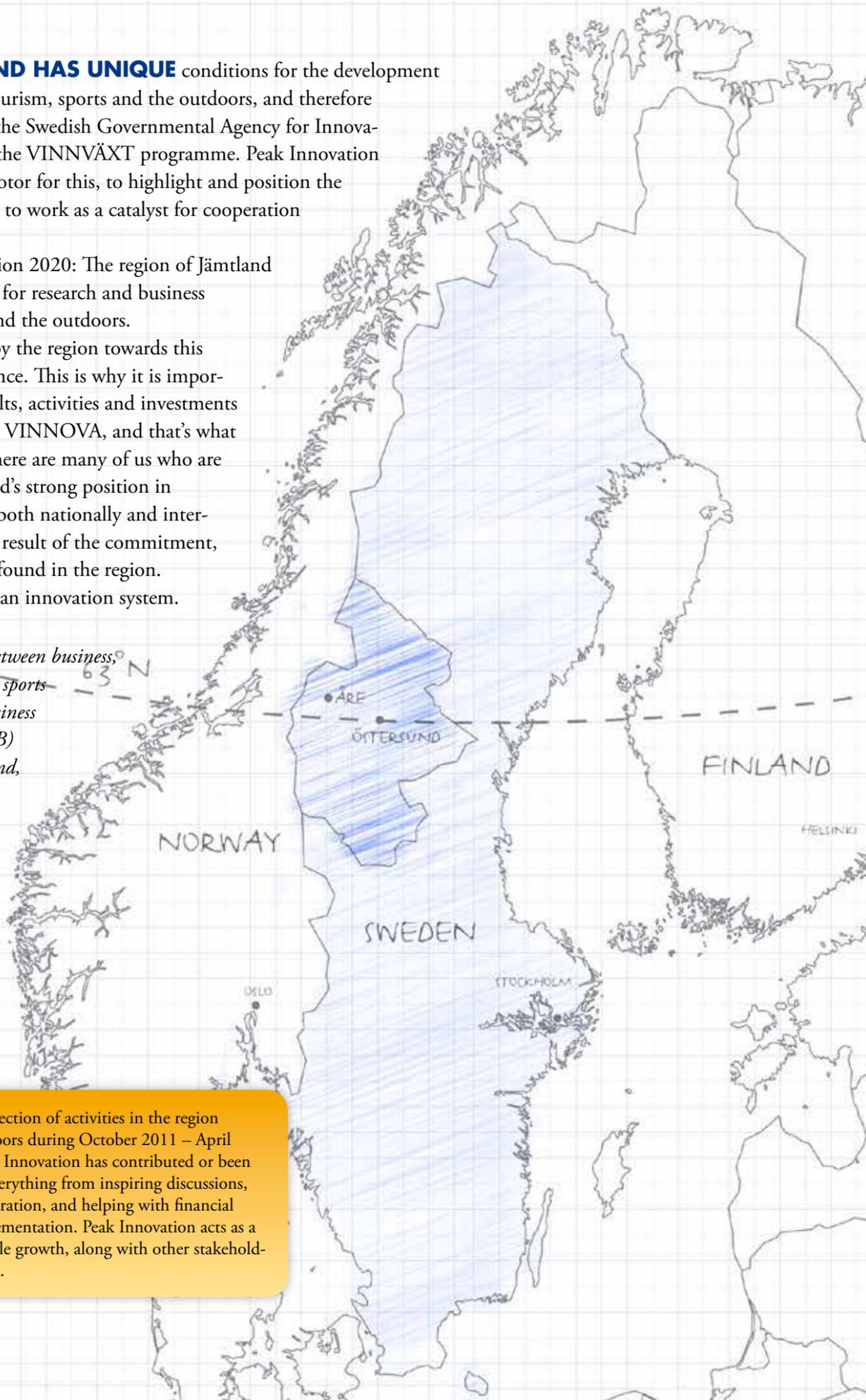
THE REGION OF JÄMTLAND HAS UNIQUE conditions for the development of its already strong position in tourism, sports and the outdoors, and therefore receives long-term funding from the Swedish Governmental Agency for Innovation Systems – VINNOVA – via the VINNVÄXT programme. Peak Innovation has been tasked with being the motor for this, to highlight and position the region within the focus areas, and to work as a catalyst for cooperation and sustainable growth.

This task is summarised in Vision 2020: The region of Jämtland is a leading international location for research and business development in tourism, sports and the outdoors.

It is the collective work done by the region towards this shared vision that makes a difference. This is why it is important to highlight the research results, activities and investments that are in line with the task from VINNOVA, and that's what we aim to do in this magazine. There are many of us who are making a contribution to Jämtland's strong position in tourism, sport and the outdoors, both nationally and internationally, and the successes are a result of the commitment, knowledge and expertise that are found in the region. This is just as things should be in an innovation system.

Peak Innovation is a partnership between business, academia, the public sector and the sports movement. The stakeholders are business (through Peak Business & Sports AB) Jämtland-Härjedalens Idrottsförbund, Mid Sweden University, the Municipalities of Östersund, Krokom and Åre, Regional Council of Jämtland and Jämtland County Administrative Board. Peak Innovation is run by a jointly-owned company – Mid Sweden Science Park AB.

THIS MAGAZINE HIGHLIGHTS a selection of activities in the region within tourism, sports and the outdoors during October 2011 – April 2014, including some to which Peak Innovation has contributed or been indirectly involved. These include everything from inspiring discussions, creating meeting places for idea generation, and helping with financial solutions, to supporting actual implementation. Peak Innovation acts as a catalyst for cooperation on sustainable growth, along with other stakeholders in the regional innovation system.



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OUR ATTRACTIVE REGION

The region of Jämtland/Härjedalen is a strong brand, both nationally and internationally. Increasing numbers of people are choosing to locate their businesses here, or just visiting the region and enjoying its scenery. To grow sustainably we need to work continuously on making the region even more attractive. Our spirit of innovation is a major driving force in this, and it's increasing in our key sectors – tourism, sport and the outdoors.

IN THE 1800S, VISITORS came to the region of Jämtland to breathe the clean mountain air. This is perhaps the real origin of the county's thriving tourism industry. Major sporting events have also become an important area of development, and our region arranges them professionally and hospitably. And then there's our strong outdoor industry; outdoor companies from our region have won more awards and nominations at ISPO – the world's largest sports and outdoor conference and exhibition – than any other region in the world, relatively speaking.

In the future, our strong sense of entrepreneurship will also have a major part to play, but we need more entrepreneurs, more innovators and more business people. This is where Mid Sweden Science Park comes in – a meeting place for cross-border cooperation. We are proud to say that women's entrepreneurship in the region grew twice as fast as the overall growth in entrepreneurship in 2013. That's the equivalent of a 3.3 per cent increase, the highest in Sweden.

Through the Swedish Winter Sports Research Centre, Mid Sweden University has become a world-leading ski research centre – in biathlon, cross-country and alpine skiing. Work is conducted in partnership with the Swedish Sports Organisa-

tion for the Disabled and the Swedish Paralympic Committee, which have chosen to locate their national centres for the development of winter sports in Östersund, with very close ties to the Swedish Winter Sports Research Centre and SportsTech. Additionally, ETOUR is one of Scandinavia's foremost tourism research institutes. The region's prominent position is further strengthened by the large number of research projects and new products and the development of business ideas in tourism, sports and the outdoors. A range of these are presented in this magazine.

It's wonderful that so many elite athletes, not least those in winter sports, have chosen to come and live in our region. We can't get greater approval than that. This is a place in which you can train, study, run a business and live with the lifestyle, activities, options and creativity you want.

We're proud to have been chosen by VINNOVA as a VINNVÄXT initiative, and we're honoured that the region's approach, "Smart Specialisation – small business development in sparsely populated regions", is being highlighted as a success story, both nationally and in the rest of Europe.



Anders Byström
Regional Director, Regional
Council of Jämtland



AnnSofie Andersson
Municipal Commissioner, Östersund Municipality
Chair of the Board, Mid Sweden Science Park



IN BRIEF

SOCHI REPORT

At the Turin Olympics in 2006 she won bronze in the giant slalom. This time, Anna Ottosson Blixth, project area director at Peak Innovation, was in Sochi with the Swedish Olympic Committee as expert for SOC's guests.

From Peak Innovation's perspective, the aim of the trip was to spread information to sports representatives and international companies about the initiative and the potential to be found in Jämtland in business and product development. Interesting discussions were held with H&M, among others, which has expanded its collections with training clothes, and Nordea, which is developing a concept aimed at sportspeople and performers.

One bonus, according to Anna Ottosson Blixth, was seeing that many of the products that have been developed using the research facilities at Mid Sweden University, such as the cross-country skiers' new suits from Craft and the alpine skiers' POC helmets, contributed to the successes.



Anna Ottosson, project area director at Peak Innovation, is a former elite alpine skier. Now she's reporting from Sochi.



Malin Åkerlund and Per Brännäng launch a new cross-country skiing clothing collection.

SWEARE

If Per Brännäng and Malin Åkerlund have their way, nothing will be the same again in the ski tracks. The Sweare company is investing in attractive, functional clothing for cross-country skiing, an area that has historically not been particularly fashion-conscious, but which has now attracted many design-aware amateurs.

"Interest in cross-country skiing is greater than ever before. The market is growing in Sweden and abroad, with China and Japan as just two examples. Quite simply, there's a need to take a fresh look," says Per Brännäng.

Malin Åkerlund has previously worked with designing clothing collections for Haglöfs and Norrona, and Per Brännäng is an engineer in the field of innovation and design. After living in the cross-country skiing Mecca of Holmenkollen, Norway, the founders chose to establish Sweare in Åre. Initially this was from a sense that it is a place where there could be creative partners and the opportunity to test products in a fashion conscious mountain environment. It's an added bonus that Åre is really investing in cross-country skiing, with the Årefjällsloppet race and expansions to the trail system. Per Brännäng says that they soon understood they'd made the right choice.

"When we came into contact with Peak Innovation and the incubator at Mid Sweden Science Park we quickly found lots of good contacts and got off to a flying start, including the Vinnande Sportdesign day and the opportunity to exhibit at Åre Kapitalmarknadsdagar. We've also now realised that Mid Sweden University has many good labs and testing environments that can contribute to future product development."

The new cross-country skiing collection will be launched in the winter of 2015/16.

EXPERIENTIAL PARTNERSHIP

Adventura, Aktivut, Tord Wiksten Event & PR and Kultur Resor all specialise in different areas, but what they have in common is that they have experiential products. In 2013, a number of experiential companies sat down together to see which common interests, needs and ideas they had, and if there was potential to work together on this. The idea is to create a business cluster that can provide knowledge, support and inspiration to other companies in the same business in the region. The hope is that this will increase the chances of companies growing and developing with good profitability.

IN BRIEF

CONTINUING INVESTMENT IN THE SKI AND BIATHLON UNIVERSITY

Östersund is the only place in Sweden where biathletes can combine higher education with elite sports. The Swedish Biathlon Federation therefore welcomes the new agreement between Mid Sweden University, the Swedish Ski Association, the Swedish Biathlon Federation, the City of Östersund and the Regional Council of Jämtland, which means that this unique opportunity to combine elite ski sports with studies at Mid Sweden University will continue until 2018.

Charlotte Kalla, Anna Ottosson, André Myhrer, Anders Södergren, Helena Ekholm, Britta Norgren, Ida Ingemarsdotter and David Ekholm are a few of the skiing stars who have studied at the ski university on Campus Östersund.

"The ski and biathlon university, along with the activities at the Swedish Winter Sports Research Centre in Östersund, is a strong environment that is an important piece of the puzzle behind the successes at the winter Olympics," says Mats Tinnsten, Pro-Vice-Chancellor, Mid Sweden University.



Campus Östersund

GET YOUR GEAR FROM – RENT A PLAGG

How can we make the mountains accessible to more people? Magnus Sellberg and Emelie Lundqvist asked themselves this question when they realised that there are people who choose not to holiday in the mountains because getting good equipment is too expensive. Using the concept that renting clothes should be as easy as renting skis, they started the Rent A Plagg company, which opened a store in Åre in February 2013.

"We live in a society with unsustainable consumption, and you don't need to own everything to have a good holiday. Instead, this is where you can rent clothes and high quality equipment," says Magnus Sellberg.

Customers include conference groups and families, as well as those who already own good equipment but left it at home in the wardrobe. There are also enthusiasts who want an easy way to test out new equipment.

"Our store functions as a showroom for our partners, and we have deliberately chosen to primarily boost local brands."

The offer has gradually increased with a laundry service and waterproofing for shell garments, all in accordance with the founders' strong conviction that reuse is the way forward. It wasn't by chance that they opened in Åre, as the destination's strong branding in the outdoor industry attracts many potential customers, but the aim for Rent A Plagg is to open in more places around Sweden and, eventually, internationally.

"Clothes libraries are a growing trend, leading to financial gains for the individual and environmental gains for society at large," says Magnus Sellberg.

In the autumn of 2013, Magnus Sellberg and Emelie Lundqvist received business development support via Mid Sweden Science Park as part of investments in Solab and Peak Innovation.



Emelie Lundqvist



Magnus Sellberg

TESTING FESTIVAL ACCESSIBILITY

The very first Åre Mountain Festival will be held on 6-10 August 2014. Dedicated mountain athletes and interested novices, young and old, are invited to try out all the activities the Swedish mountains have to offer: mountain biking, climbing, kayaking, hiking, parkour, slackline and paragliding are just a few examples. Peak Innovation is now investing in making Sweden's only alpine summer festival an event for everyone.

Over two days, four people with varied disabilities will test out activities and the festival's overall accessibility. The evaluation will be the foundation of an action plan that will hopefully result in a budget and investments to make the 2015 Åre Mountain Festival more accessible.

Åre Mountain Festival is hosted by Holiday Club in partnership with Åre Destination, Skistar and local activity organisers.

YRAN OUTDOOR CAMP

Last year's edition of the popular Storsjöyran music festival included Yran Outdoor Camp, where interested visitors could try everything from climbing and cable park rides to sailing, longboarding, kayaking, zorbing and yoga massage. The phenomenon is called "easy outdoors" and is a collective name for outdoor activities in or close to a city; a concept was created, consisting of several different activities next to the festival area. Peak Innovation and Storsjöyran wanted to demonstrate that the city of Östersund is a fantastic place to experience and do outdoor activities. The idea was also to boost established events such as Surfbukten, which created Östersund's coolest summer hangout for young and old.



Photo: Kajsa Agnarsson

OUTDOOR GYM FOR ALL

Autumn 2013, in collaboration with Friskis&Svettis (chain of gyms) in Östersund, students at SportsTech set about upgrading the classic outdoor gym. The students, in their third year of the Innovative product development course, were given the challenging task of creating a year-round, outdoor gym for all.

"We needed to get rid of any pre-conceived ideas so that we didn't get stuck in the normal way of doing things. Instead we had to start from the fundamental purpose of the project - easy and accessible training regardless of age and physique," says student Gustaf Bohman.

Three groups worked in parallel with different solutions which were then merged into a common concept, where they also developed detailed ideas for lighting, ground marking and so on. The goal was to create a training environment that was also accessible for people with physical disabilities. And Christina Raval, Manager of Friskis&Svettis in Östersund thinks the students succeeded very well:

"Many existing outdoor gyms aren't user friendly at all and they're only suitable for a narrow group of people. Our trainers provided expertise about training and body movement patterns, and that's helped create a very well considered gym that works for a wide audience. This is a superb model with many details that have been well thought-through, such as wind breaks."

A number of the students now hope to commercialise the outdoor gym via MIUN Innovation.

BIATHLON SUMMER SUMMIT 2014

With Olympic medallists living and training in the county, a top class biathlon arena and experience of arranging world championships and a large number of world cups, Östersund is among the best biathlon regions in the world. Now it's sending out invitations to a biathlon summit to discuss trends and tendencies, test products, train and talk future events.

On 25-27 July 2014, retailers and event organisers in biathlon, as well as the chairs, secretary-generals, coaches and some athletes from a number of international biathlon federations will gather in Östersund to enjoy what this biathlon city and the surrounding region have to offer.

The initiative comes from Peak Innovation, which has developed the concept along with the Swedish Biathlon Federation. The City of Östersund is also behind the project, as well as the tourist industry in Jämtland Härjedalen. Together, they want to take the next step in promoting the region as a true centre for winter sports and developments in technology, products and training, as well as events on "narrow skis".



Photo: Kjell Bollner/skisbytte.se

IN BRIEF

AWARD-WINNING SKI BORN ON THE WEB

In the off-piste category at the ISPO AWARD, Sweden's Extrem, and its Opinion model, won gold as the best product among all the world's ski brands. Extrem Opinion is a uniquely designed freeskiing ski, as it used open innovation and community development. It was developed by forum members on the Freeride.se skiing website, where everyone who wished to was given the opportunity to state their opinion about the design of the ultimate modern freeskiing ski. The forum thread rapidly became one of the biggest product threads ever, and after a year of development and many prototypes, the current version was finally built.

"Working in this way means that a relatively small brand, like Extrem, can be at the forefront of development, even compared to the biggest brands in the world," says Carl Geijer, managing director and part-owner of Åre Skidfabrik, which builds and owns the Extrem brand.

VISITING NORWEGIANS

Lillehammer Kunnskapspark (science park) and Peak Innovation have previously shared their experience and knowledge in the areas of tourism, sports and the outdoors.

On 26 February 2014 the Norwegians visited again, and this time they were interested in looking more closely at what's happening in each innovation environment and discussing potential international project collaborations and financing opportunities, including upcoming EU projects and planning ahead of Horizon 2020.

Bjørn Nørstegård, Managing Director, Lillehammer Science Park.



SEVEN SIGHTS

Karios Future, *international trend and analysis company*, has looked at trends that influence outdoor experiences in the new and upcoming 'thought society' – insights that benefit companies, investors and stakeholders active in the experiential industry.

1. From relaxation to getting in shape during your leisure time
2. Urbanisation – outdoor activities move into the city
3. Rectification – we want help
4. Digitalisation simplifies and reinforces
5. Atmosphere and socialising are important. Enemies: Waiting and the weather
6. Out is in in the age of helicopter parenting
7. Knowledge. Being outside improves thought processes. Time for another week on holiday!



Jämtland House gathered business people, as well as regional and national decision-makers, who listened to Marita Ljung from the Department of Trade and Industry (third from the right), among other speakers.

JÄMTLAND HOUSE

For the second year in a row, Jämtland has visited Stockholm under the heading of Jämtland House. Business people, financiers, researchers, government representatives and MPs, among others, gathered at the Engelen restaurant in Stockholm's old town on 15-17 October 2013, to listen to how the region can muster forces for increased growth and to contribute to a more attractive Sweden. Among other things, tourism representatives stated that strategic investments in tourism give results, but that these cannot be reduced if the positive development of tourism is to continue.

"We can't solely live off our incredible landscapes – there is a need for major investments that create reasons to travel," said Mats Svensson, Jämtland/Härjedalen Tourism.

POPULAR NÄTVERKSRRALLY CREATED BUSINESS AND NEW CONTACTS

New deals were done, partnerships started and a few dream contacts were made when Nätverksrally (network rally) once again took place at Mid Sweden University, Campus Östersund. A full day of meetings and socialising at which business-people, entrepreneurs, idea holders and students offered each other their best contacts and received coaching from experienced trade and industry figures. The first Nätverksrally was held in 2011 and again in December 2013, when it quickly filled up with 150 registered participants. Knowledge sessions, socialising and pitches alternated with lectures, including one from Simon Jaktlund, the man behind the world's first snow cable park, as well as from Andreas Ekström who examined Google, social media and the digital revolution.

Nätverksrally is a meeting forum that facilitates contact creation for business, researchers, students and idea holders. MLUN Innovation organises Nätverksrally in partnership with Mid Sweden Science Park/Incubator, Almi Företagspartner, the Swedish Tax Agency, Coompanion and the City of Östersund.



Photo: Therese Carlsson

"Taking the new Craft suit out of its packaging felt like a trump card even before the races started."

Read more about the new race suit that has been developed in cooperation with the Swedish Winter Sports Research Centre on page 24.

DID YOU KNOW?

- In 2013, Åre was named the world's fourth best cycling destination by *worldbikeparks.com*, only beaten by Whistler in Canada, and Alpe d'Huez and Les Deux Alpes in France.
- According to the international fashion and design magazine, *Wallpaper**, one of twenty reasons to love Sweden is the Elmacchina electric snowmobile, which is described as the "green alternative that should soon take over". 
- In May 2012, *Outdoor Magazine* in the US released its list of the 100 most influential inventions ever in sport and leisure. It included Bo Hilleberg's Kerlon fabric that was first launched in 1975. The heritage of the first Kerlon fabric lives on at Hilleberg the Tentmaker – the fabrics are still used in Hilleberg tents.
- Sportfack – Gear of the Year 2012 in the Newcomer of the Year category went to Elevenate, with the motivation: "We've never seen anything like it. Never before has a brand in such a short time reached a position where everyone else compares themselves to it."
- The Swedish Agency for Economic and Regional Growth is making significant investments in Åre as one of five Swedish destinations when marketing Sweden to tourists. The five destinations are sharing SEK 60 million over 2012-2014.
- That the Nordic School of Design has offered a distance course in sports design in Åre since January 2012.

A FREERIDER ON THE MOVE

– CLEVER SOLUTION HOOKED DYNAFIT

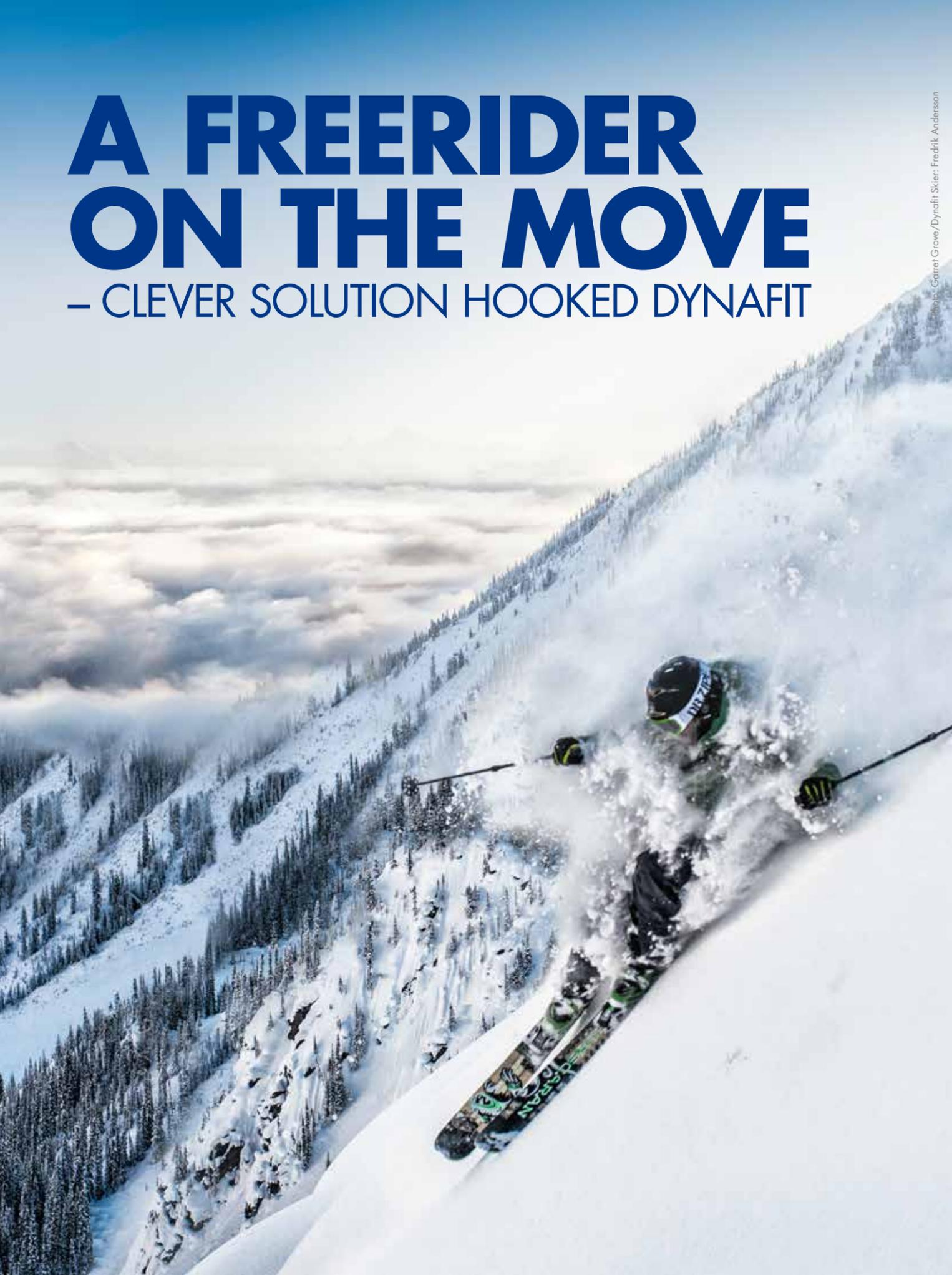


Photo: Garret Grove/Dynafit Skier: Fredrik Andersson



Photo: Garret Grove/Dynafit

Freerider Fredrik Andersson, an alumnus of the Sports Technology programme at Mid Sweden University in Östersund, is now an independent consultant for Dynafit.

As part of his thesis in Sports Technology at Mid Sweden University, Fredrik Andersson chose to develop a ski binding for freeriders. He sold parts of the solution to Dynafit in Munich and also landed a job as their product developer. When the company established a branch in Åre, he returned to Jämtland and is today working as a consultant – with Dynafit as his biggest customer. Not bad for a guy from the plains of southern Sweden.

THE FIRST EDITION WAS LIMITED to 2,500 individually numbered bindings, with a price in line with its exclusiveness and a name that says it all – Beast 16. When the new binding was launched in the winter of 2013/2014 it was the result of years of intensive work on developing the next generation of freeride bindings. Fredrik Andersson is satisfied. He has been on a journey that is only for the lucky few, and which can inspire others who have ideas that are ripe for development.

“There is a lot that has just fallen into place. My experience as a freerider in combination with a solid mechani-

cal engineering education is not so common. And I speak German,” says Fredrik, on why his cooperation with Dynafit has been a success.

The freerider’s dilemma is finding a light and stable binding that doesn’t prerelease on demanding descents. With his completed thesis in hand and a contact at Dynafit, Fredrik had the opportunity to supply the solution to a problem that Dynafit had already started to investigate. The rest is history, but the odds would have been worse without the support of Mid Sweden University.

“Through MIUN Innovation I received help with a novelty search, patent issues as well as a sales approach. As a recent graduate I did not completely understand how the business world worked. It was very helpful to have someone to discuss various issues with,” says Fredrik Andersson.

Fredrik describes himself as stubborn and goal-oriented with a desire to find new paths outside of proven frameworks, whether it's a summit trip in untracked terrain or in the function of a piece of equipment. He is also a practitioner who is more than happy to build his own skis and prototypes. It is no

“This is an exciting solution that has finally fallen into place thanks to an offer from Peak Innovation.”

coincidence that he ended up in Östersund, Sweden, studying engineering with a focus on Sports Technology, the only degree of its kind in Sweden.

“I wanted a mechanical engineering degree close to the mountains, so I could combine studying with skiing. It was

a bonus that the degree had a specialisation in my field and worked closely with companies in the outdoor industry,” he explains.

NEW BINDING PROJECT

When the Dynafit Development Centre Åre opened in the spring of 2013, he swapped Munich for Jämtland one week each month. New opportunities opened up with the mountains outside his window and research a ski's length away; one year later, Fredrik has started his own product development business with Dynafit as his biggest customer, alongside part-time employment as a research engineer at Mid Sweden University.

“This is an exciting solution that has finally fallen into place thanks to an offer from Peak Innovation. Dynafit was also a little extra cooperative as it didn't want to lose me,” he says with a laugh.

“Now I'm partly working on the further development of Beast 16, but particularly a new binding project that's underway,” he explains.

What once started as a fascination with the mountains and dramatic scenery has, via a few sharp turns, become an international career in the outdoor industry.



Product development in progress.



Photo: Garret Grove/Dynafit

PRODUCT DEVELOPMENT IN ÅRE BY DYNAFIT

The freerider's dilemma is finding a light and stable binding that doesn't prerelease on demanding descents, a dilemma that Dynafit has now solved thanks to Fredrik Andersson in Åre.

THE WORLD'S LEADING SUPPLIER of equipment for alpine ski touring and ski mountaineering, Dynafit, has established a product development centre in Åre, Sweden – the Dynafit Development Centre Åre – and is now represented in a total of eight locations worldwide, with headquarters in Munich. Dynafit shares offices in the Alpine National Arena with the Swedish Winter Sports Research Centre (SWSRC) Åre, which provides access to cutting-edge research and the opportunity to test products right on the slopes.

With the establishment of the Dynafit Development Centre Åre, Åre and surrounding region consolidates its position as an international alpine skiing centre, not only in sport, but also through the development of innovative new products and services. Dynafit's cooperation with SWSRC Åre, one of the world's three leading research environments in the field of alpine skiing, creates significant opportunities for synergies in product and business development.

“We develop our products close to the users and in environments that provide the best conditions for the profiling of our

brand. Therefore, the establishment in Åre feels very exciting. We look forward to being a part of Jämtland's aggressive investment in research and business development in the area of skiing,” says Edwin Lehner, Director of R&D at Dynafit.

Freerider Fredrik Andersson, an alumnus of the Sports Technology programme at Mid Sweden University in Östersund and previously a product developer at Dynafit in Munich, is now an independent consultant for Dynafit. He sees many benefits from its location.

“From an idea in the morning, we can produce a prototype by noon, test it in the afternoon and evaluate it in the evening.”

“It is a great advantage to be located directly in the research environment with a real test arena at the doorstep. From an idea in the morning, we can produce a prototype by noon, test it in the afternoon and evaluate it in the evening,” explains Fredrik Andersson.



Photo: Scampix Sweden/Bengt O Nordin Bonn

ON TOP OF THE WORLD

– SMART SPECIALISATION FOR GROWTH AND DEVELOPMENT

[smart specialisation], creating competitive advantage by identifying a region's unique qualities and resources, with regional stakeholders then making long-term joint investments on that basis.

Europe must take collective action on research and innovation strategies to keep up with global development, where large economies like China and India have pulled ahead. The future is in smart specialisation – identifying strengths and prioritising investments in areas where there are competitive advantages. In the region of Jämtland, this means research and business development in tourism, sports and outdoor activities, and the primary motor for this is Peak Innovation.

PRISTINE NATURE AND HOT WINTER and summer destinations, world class sports events and arenas, internationally leading research environments, cutting edge product development and some of the world's most reputable brands in the outdoor industry. It's no surprise that the rest of the world is showing increasing interest in what Jämtland has to offer in tourism, sports and outdoor activities. In addition, significant social groups are investing more and more time and money in sports, outdoor activities and health. We are living longer and staying healthier to a greater age; quite simply, there is huge potential for growth in tourism, sports and outdoor activities.

Peak Innovation's idea is to focus and prioritise resources and actions in research and business development related to tourism, sports and outdoor activities. Three main areas have been identified – Sport and outdoor activities, Health and training tourism and Event and sports arena development. The aim is that by 2020 the region of Jämtland will be a world-leader in exactly these sectors. It is already well on the way. In 2013, the Swedish Winter Sports Research Centre was number one in the world in ski research – cross-country, alpine and biathlon – as regards the number of international scientific publications.

The region is a renowned host for world championships and world cups in biathlon and alpine skiing, and bids have been submitted to host the Alpine World Championships 2019, Biathlon World Championships 2019 and O-Ringen 2017.

The Internet of Sports is no longer a vision for the future, but is a definite investment in which modern computer science is combined with biomechanics and coaches' hands-on experience in order to develop the next generation of intelligent training aids. Since its first hesitant steps in 2009, Peak Innovation, the region's investment in the future, has taken some giant strides forward, says Karin Mattsson Weijber, Chair of Sweden's National Sports Association and chair of Peak Innovation's Steering Committee:

“So far we are just at the beginning of creating an environment in which innovation and development project can grow strongly, but we can already see an increasing interest in coproduction among businesses and within research. Businesses from

near and far now use the expertise, labs and testing opportunities offered by the research centres.”

Smart specialisation is nothing new, but it has gained currency as the concept has recently become central to political issues regarding economic development and growth in Europe. Romana Culjak, at the Mid Sweden European Office in Belgium, believes that the EU needs to gather its resources in the area of research and innovation to achieve the targets of Europe 2020:

“The EU and all EU Member States have become more innovative in recent years. As a result, the EU has closed half of the innovation gap towards the US. However, the differences in the innovation performance within the EU are still very high and diminish only slowly.”

BROAD REGIONAL COOPERATION

There is no doubt that smart specialisation is here to stay. Visits to the European Commission and the Cabinet for Regional Policy have resulted in Peak Innovation being highlighted as a role model and inspiration for other European regions that face similar challenges. So why is it that Peak Innovation is regarded by so many as a good example for the mobilisation of small

“This is one of the best examples I have seen of smart specialisation. It is this type of successful example that we want to highlight to inspire other European regions.”

Stefan Zotti, responsible for issues of regional policy in EU Commissioner Johannes Hahn's cabinet.

businesses for innovation and growth? The secret is broad regional cooperation. Business, research, sports and public bodies all participate in the work that has led development.

“It is positive that VINNOVA, which has national responsibility for developing innovation, is now investing even more in Peak Innovation, as Peak is working on developing one of the region's important areas for the future,” concludes Sven Winemark, Regional Council of Jämtland.

EXPERTISE PROVIDED

– STUDENTS AT ISPO SOLVE OUTDOOR CHALLENGES

When the doors opened on this year's edition of the world's biggest sports and outdoor trade fair in Munich, ISPO, 35 students from the SportsTech degree programme at Mid Sweden University were there. At a stand with the theme "Try our skills", they developed products for companies in real time, news of which rapidly spread to the exhibitors at the fair who queued for a session with the product developers of the future.



Product development on the go. Students from SportsTech work on innovative solutions in the exhibition stand at ISPO.

THANKS TO ITS MANY EVENTS and services, ISPO is considered the leading international sports business network. Every year, more than 2,560 international exhibitors present their latest products from the segments of Outdoor, Ski, Action and Performance Sports at ISPO MUNICH to over 81,000 visitors from more than 109 countries.

Over the last five years, students from Mid Sweden University's degree programme in *Sports Technology – innovative product development specialising in sports and experiences* have been given the chance to participate and have a stand at ISPO

to present their degree, but perhaps mainly to present themselves as tomorrow's workforce in the outdoor industry. They tested a new concept in 2012 – real time product development, below the heading "Try our skills". Companies received three hours of product development and the results in their hand – this was greatly appreciated and even in its first year it contributed to a number of degree projects and fixed-term contracts.

The rumour that the students were back again this year to offer free product development spread quickly at ISPO, and a number of companies came to look for the students at their

stand. Gustaf Bohman, in his third year of SportsTech, was responsible for coordinating the students' work at this year's ISPO. He thinks that the idea of on-site product development worked even better this year.

"We had no problems with filling up our sessions and managed a total of 10 cases during the exhibition days. We also noticed that a number of companies recognised us from last year. An Italian company that was three halls away even came to look for us," says Gustaf Bohman.

Röijk, Hestra, Skigo, Skhoop, Woolpower, Houdini and Bliz are a few of the companies that made the most of the chance to have new eyes look at their products. In the first year, Light my Fire brought a question to the "Try our skills" stand that

"Working with sponsors and other stakeholders provides a good understanding of how the business world works."

has now resulted in a new product for their range. The opportunity to do degree projects and get a foothold on the labour market is the students' main motivation for attending ISPO, but Gustaf Bohman says that the preparations are equally important.

"Working with sponsors and other stakeholders provides a good understanding of how the business world works, how long things can take and how many factors are involved. I feel better prepared for entering working life after working so hard with this event."

BUILDING BRAND

MIUN Innovation has provided a sounding board for ideas about the stand and presentations at the fair, which was appreciated by the students, as was the cooperation with Peak Innovation that helped with general project management and financing the stand. The entire ISPO project was made possible due to the region's cooperation with Scandinavian Outdoor Group, which backed it up and provided the right conditions for the region to participate in their shared stand for member companies, the Scandinavian Village.

"We help with the Scandinavian Village every year, but this year we could have more time in the stand, which meant a great deal. The biggest bonus is the contact with the companies; they give us a context and it's so much easier to make contact with them again after meeting them at the fair. We build our brand by being there," concludes Gustaf Bohman.

The students' participation at ISPO was possible thanks to financing from Peak Innovation, in partnership with Scandinavian Outdoor Group and with the support of MIUN Innovation.



Climbing and surfing are a couple of Gustaf Bohman's interests. He is currently doing his degree project at a company in Malmö that is developing a new collection of products for water sports. The idea is also to develop some of his product ideas via MIUN Innovation.

VOICES FROM THE REGION



ERIC NORDSTRÖM
EXTRA EVIL DISTRIBUTION AB

Jämtland has been a fantastic place for us to develop our company. We're close to our market in Östersund, close to the mountains and close to our retailers in the outdoors industry. We have developed the company from mainly selling, marketing and distributing other brands to starting our own collection two years ago, aimed at freeride snowmobilers. Peak Innovation put us in contact with the Nordic School of Design, which resulted in a successful design project and one of the students is now employed as our designer. Sales have exceeded expectations and in 2013 we were named company of the year in Jämtland.



JONAS MEERITS
ACTING MANAGING
DIRECTOR, KLÄTTERMUSEN

Klättermusen has developed rapidly since it moved to Åre and we now have more products and a larger market than ever before. Being in Jämtland means that we are close to the wilderness. Our product developers are in the environment in which our products are intended to be used, which benefits creativity and increases our brand's credibility. The outdoor cluster found in the region means that there is a broad network of people linked to the industry, everything from photographers and freelance designers to other companies we work with.

ISPO AWARD

The ISPO AWARD honours the most exceptional products in the sports industry. Year after year, Jämtland has brought home the world's most prestigious awards in the sports industry, and 2014 was no exception.

WOOLPOWER WON THE ISPO AWARD 2014 as Gold Winner in the category for Accessories in the outdoor segment. The prize-winning product is the company's newly designed felt insole made from recycled merino wool, an idea that builds upon a degree project by SportsTech student Kajsa Nilsson – read more on page 53.

THE ISPO AWARD 2014 WENT TO ÅRE SKIDFABRIK and Extrem who were Gold Winner in the category for off-piste skiing with the "Opinion" model – the world's first community-developed ski – see page 8.



The Brede jacket from Klättermusen.



POC Skull Orbic Comp.

THE ISPO AWARD 2013 AND 2014 WENT TO POC for the POC Skull Orbic Comp helmet, built using technology that provides optimal protection for alpine skiers. The helmet is the result of cooperation between POC and the Swedish Winter Sports Research Centre Åre at Mid Sweden University – read more on page 40.

KLÄTTERMUSEN WON GOLD AT THE ISPO AWARD 2014 with its Hagdal Hoddie jacket, and in 2013 for the Brede jacket.



IN SIGHT – TWO NEW WORLD CHAMPIONSHIPS

Photo: Tina Stafren

Jämtland is confirming its place as an international region for world cups and championships in winter sports. Åre and Östersund are currently bidding for new world championships in alpine skiing and biathlon.

THE ANNUAL WORLD CUP RACES in alpine skiing and ski cross have placed Åre, and Jämtland, on the international map. Åre hosted a successful Alpine World Championship in 2007 – an event that the chair of the International Ski Federation described as “a winter fairy tale”. The event in 2007, which had a turnover of SEK 500 million, resulted in major infrastructure improvements that are now being used to develop tourism activities in the resort, which is continually expanding.

Åre is bidding for a new FIS Alpine Ski Championship in 2019, and its rival is the Italian resort of Cortina. The focus and themes for Åre 2019 are innovation, climate-smart solutions and encouraging more people to try skiing.

“In international skiing, people know that Sweden and our region are incredibly good at organising professional events in a very welcoming manner. We also keep our promises, and that’s a

strength,” says Niklas Carlsson, director of the Swedish Ski Association.

In parallel with Åre, Östersund is bidding for the Biathlon World Championships in 2019. The world’s best biathletes have gathered here to start the season for many years.

SNOW GUARANTEE

The winter city of Östersund guarantees snow from 1 November, which encourages many people to locate their preseason training in the city – both elite athletes and enthusiasts. The snow guarantee is the result of storing snow every year to enable the Biathlon World Cup Premiere to be held. The biathlon organisers are working on developing the event and the stadium, making it a vibrant meeting place where the races are just one part of the whole event.

Östersund hosted the World Championships in 2008 and, like Åre, they were both a sporting and branding

success. Now, ahead of the 2019 World Championships, the aim is to beat the record for the number of participating nations; the message is one of simplicity and proximity – everything is available within 15 minutes. The stadium is being expanded with a new media building and the municipality and with local businesses are providing backing for the investments.

“Major sports events are one of the areas of development that we have in this region. They are a great catalyst for infrastructure developments, tourism and regional attractiveness,” says Per-Erik Rönnestrand, district sports manager for the Jämtland/Härjedalen sports association.

The decision about who will host the 2019 Alpine World Championships will be taken in Barcelona in June 2014, and August is when the host of the 2019 Biathlon World Championships will be decided.

WHAT IS IT THAT MAKES JÄMTLAND'S COMPANIES SO SUCCESSFUL AT ISPO?

“Jämtland’s companies have taken home more awards and prizes at ISPO Brandnew than any other region in the world, an unexplainably high percentage. Perhaps the reason is their long tradition in the outdoor industry, with many well-established brands, and local education, such as SportsTech, that produces tomorrow’s product developers and entrepreneurs. In combination with the unique labs and testing environments for product development, and demanding mountains as a test arena, maybe it’s not such a surprise that Jämtland wins gold.”

MARTIN KÖSSLER,
NORDIC REPRESENTATIVE FOR ISPO



FOOTBALL WORLD CUP IN ÖSTERSUND

ONE WORLD CHAMPIONSHIPS that will definitely be held in Jämtland is the Confia World Cup 2014, the football championships for countries that are not members of FIFA. Teams from Kurdistan, Sapmi, Quebeck and Dafur are among the twelve competing nations who will battle it out on the pitch in 2014. The last event was held in Kurdistan and attracted 35,000 visitors. It’s now up to the region, which does have a liking for football, to match that!





THE SWEDISH WINTER SPORTS RESEARCH CENTRE

The Swedish Winter Sports Research Centre (SWSRC) is a multidisciplinary sports science research centre in Östersund and Åre. In 2013, SWSRC was world-leading in ski research – cross-country, alpine and biathlon – as regards the number of international scientific publications. SWSRC is also Sweden's Olympic development centre for winter sports.

THE SWEDISH WINTER SPORTS Research Centre (SWSRC) has extensive international R&D cooperation, as well as close collaboration with leading players in the sports and outdoor industries. There are two main research areas at SWSRC: high performance sports, where SWSRC now leads the world in the field of cross-country skiing research, as well as the area of physical activity and health promotion. One of SWSRC's aims is to use knowledge gained in high performance sports in the area of public health. Development work is performed in close collaboration with the Swedish Olympic Committee and various sports associations and companies, such as Craft, Poc, Ski-Go and Qualisys. SWSRC is a national Olympic platform for education and testing.

A unique area of interest for SWSRC is conducting studies in which the two fields of knowledge, physiology and biomechanics, are integrated in order to achieve more comprehensive understanding. This is primarily performed using modern technology in the field of cross-country skiing, biathlon and alpine skiing. SWSRC is an important part of Peak Innovation.

Sochi Olympic gold medallist, Charlotte Kalla, in the super suit from Craft, designed in collaboration with SWSRC.

Photo: Nils Petter Nilsson/AP/TT

SOCHI COURSES

TESTED AT 1500 M ALTITUDE IN ÖSTERSUND

From early 2013, the Swedish cross-country and biathlon teams were able to train on the Olympic courses in Sochi, at altitude – without even being there. The Swedish Olympic Committee is one of the organisations behind the investments in simulated Olympic courses at the Swedish Winter Sports Research centre (SWSRC) at Mid Sweden University.

ONLY A FEW OF THE MOST RECENT World Championship and Olympic medallists had been on site in Russia, ahead of the Sochi Olympics, to form an opinion about the course profile and technical challenges. Instead, the course profiles were programmed into SWSRC's treadmills in the ski lab, simulating the courses using the right inclines and distances. The skier can see the course on a big screen because the video is synchronised with the GPS programming.

Advance technical work on gathering data took place in the winter of 2013 and gave the skiers the opportunity to ski most

of the Olympic courses in the lab at SWSRC. An entirely new feature in the simulated Olympic courses for 2014 was the simulation of the altitude at which the races were held, 1,500 metres above sea level. It has also been possible to evaluate performance based on a model in which times for various sections of the course were logged.

"This has made it possible for the skiers to be able to train using the gear that is most beneficial for creating speed and minimising time on the courses," says Glenn Björklund, manager at SWSRC.



Johan Olsson in training at SWSRC ahead of the Olympic Games.

QUOTES ABOUT SWSRC



Photo: Svenska Curlingförbundet

PEJA LINDHOLM

Federation captain for Swedish curling, which won silver and bronze medals at the 2014 Sochi Olympics.

"The Swedish Winter Sports Research Centre means a great deal to curling. We have carried out fitness testing and screening with our men's World Championship team and had the junior team there. Having access to a centre for testing and research is vital if Swedish elite sports are to make a mark internationally."



Photo: Svenska Skidförbundet/Skicross

ANNA HOLMLUND

Ski cross athlete who won an Olympic bronze medal in Sochi following an intensive period of rehabilitation.

"SWSRC is like my second home. I've trained there almost every day over the last year. I moved to Östersund to get the best training conditions I could, so SWSRC has meant a great deal to me. The test centre, with its own start ramp, has been fantastic in the build-up to the Olympics and when I was unable to ski."



Photo: Marcus Ericsson/Bilbyråen

JOHAN OLSSON

Cross-country skier who won a gold and a silver medal at the 2014 Sochi Olympics. He also has four World Championship medals and four previous Olympic medals.

"Access to SWSRC and its resources has meant a huge amount to me as an athlete. The elite gym and treadmill in the lab are elements that are fundamental to my training and have played a great part in my successes over the last few years."

14 OUT OF 15 MEDALS TO THE SWEDISH WINTER SPORTS RESEARCH CENTRE TEAM

SWEDEN WON A RECORD number of medals at the 2014 Olympics in Sochi. The total number was 15, with 14 going to the cross-country, curling and ski cross teams – all of which work with SWSRC in Östersund. Perhaps even ice hockey, which was the fifteenth medal, will be among SWSRC's customers by the next Olympics!

Out of the medallists, nine of them live and train in the Peak region of Jämtland. The Paralympics gave the Peak region another two medallists, which means that there are 19 actual medals from the 2014 Olympics hanging in homes in Jämtland.

"We are absolutely a strong region, perhaps the strongest, when it comes to having an environment that stimulates and attracts elite sportspeople," says Per-Erik Rönnstrand, district sport manager for the Jämtland-Härjedalen's Sports Association.



Photo: Tobias Röstlund/TT

THE SUPER SUIT

– THE SWEDISH TRUMP CARD IN THE HEAT OF THE OLYMPICS

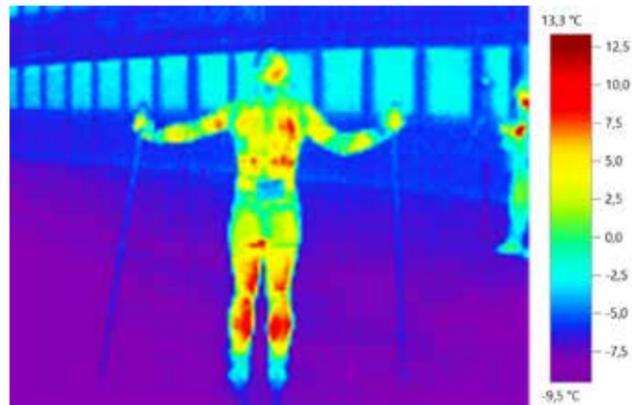


Photo: Craft

Cut-off arms and legs. Women skiing with just sports bras below their number bibs. It was hot in Sochi, but the Swedish skiers still skied in full-body suits during the 2014 Olympics. The secret? A completely new and unique race suit from Craft, designed in partnership with the Swedish Winter Sports Research Centre (SWSRC) and the Swedish Olympic Committee.

IT DOESN'T JUST HAVE A SHOWY NAME, as the Podium Suit is also cool in the truest sense of the word. The national team's new race suits are designed to be cool, and not just style-wise – they also helped keep the athletes from overheating in the hot Olympic weather.

With an average temperature of 5°C in February, it was a challenge for Craft to design a suit that would help the skiers achieve success. In cooperation with SWSRC, the project has



A heat camera shows the sweat zones.

occupied a handful of people for more than eighteen months, and the athletes themselves were the test subjects.

One of the tests meant that the skiers swallowed a thermometer so it was possible to study how the body is internally affected by high temperatures.

“A heat camera allowed us to see where the major sweat zones are on the body and also how the body sweats at different loads and different temperatures – from when the skiers are at rest, to walking and all the way up to maximum effort,” says Billy Sperlich, Professor of Physiology at the University of Wuerzburg and currently working at SWSRC.

The research data was then used as a basis when choosing materials, seams and the location of ventilation holes, etc. The new suit is made from a very thin, high-tech polyester fibre that boosts cooling capacity and also holds its shape, providing a tightening push-back effect. The legs have mesh fabric insets.

“We had a very close and rewarding cooperation with SWSRC ahead of the Vancouver Olympics, and the new Olympic suit is a result of the follow-up to that project. We have received invaluable help from SWSRC's expertise and equipment. Our cooperation has even resulted in us now having our own Craft Research and Development Lab at SWSRC,” says Sofia Åberg, Product and Design Manager at Craft.

OPTIMISED SPORTS BRA

Sportswomen know that a good sports bra is important, but who would be prepared to run bare-breasted on a treadmill in front of a film camera to contribute to the development of the ideal sports bra? When Craft saw there was a need for a better sports bra, many women wanted to help.

The breasts' movement was filmed at the Swedish Winter Sports Research Centre (SWSRC) in Östersund, using a high speed camera that takes up to 2000 pictures per second in full HD. This clearly showed how the breasts bounce and move in different directions. The most interesting finding was that the breasts move in and out by about 25 per cent. The camera also showed that the bust's movement is transferred downwards and that people with larger breasts suffer from unpleasant bouncing in the stomach, meaning the test subjects ran more poorly or with poorer movements, which could lead to injuries.

Thanks to the completed tests, Craft has now been able to construct a new bra with a tight cup that combats the breasts' in and out movement. The new bra will be on the European market in the autumn of 2014.

“We are not researchers, we must keep it at a commercial level and we want to obtain the best possible result for creating good products. SWSRC has the expertise and understands that we don't want to do unlimited research, instead we want to find points that need improvement. We are in Borås and have a long journey to Östersund, so we could just as easily have chosen a testing lab in Germany, but we like SWSRC,” says Sofia Åberg, Product and Design Manager at Craft.

Investments via Peak Innovation in SWSRC's labs and staff resources meant the research could take place.



Photo: Mikael Swarén/SWSRC

ÅRE GOES DOWNHILL

In the autumn of 2011, the Swedish Winter Sports Research Centre (SWSRC) in Åre conducted scientific studies on Åre's challenging slopes in partnership with the Swedish mountain bike team.

They wanted to compare the best cross-country cyclists with the best downhill cyclists during downhill cycling, with the aim of characterising the differences between the disciplines. Measurements included pressure on the pedals, when and how the cyclists pedalled, lactate, heart rate, EMG (muscle activation) and speed. The study was a cooperation between SWSRC, the Swedish Olympic Committee and Swedish Cycling Federation and resulted in the publication of a number of scientific articles.



2,000 PICTURES PER SECOND

A product developer's wet dream? Imagine being able to study a product's function in detail, using thousands of crystal clear images – per second. Ahead of the Sochi Olympics, athletes in the Swedish snowboard, ski cross and alpine teams were filmed using a high speed camera that takes up to 2,000 pictures per second in full HD. The material was then analysed at the Swedish Winter Sports Research Centre in Åre (SWSRC).

Mikael Swarén, laboratory engineer at SWSRC Åre, was in charge of the filming:

“Using the high speed camera, we examined how snowboarders started their rotations when they jumped, alpine skiers' turning technique and how their skis behaved during a run. Then we analysed the material in detail along with athletes, coaches and technicians.”

Peak Innovation and SWSRC Åre are jointly responsible for purchasing the high speed camera and, along with the Swedish Olympic Committee and the Swedish Ski Association, analyses were conducted ahead of the Sochi Olympics. The high speed camera has also been used in tests for the cross-country skiing team, impact and durability testing for POC's helmets and for studies of downhill mountain biking.

Peak Innovation initiated SWSRC in Åre and has invested SEK 1.6 million in high tech equipment. It finances operations along with Mid Sweden University and SWSRC Östersund.

INTERNET OF SPORTS – THE NEXT KLONDIKE

The Swedish Winter Sports Research Centre (SWSRC) at Mid Sweden University, is investing in a new segment – the Internet of Sports. The world is now awaiting mobile tools for sporting performance, wellbeing and experiences.

Emil Jönsson, elite skier and Olympic bronze medallist in Sochi.

SPORT NOW HAS A TURNOVER worth around SEK 80 billion in Sweden alone, and interest in amateur sports and health is greater than ever, with record numbers participating in races such as Vasaloppet. So far, Sweden has few exports of sporting goods and services despite the huge level of interest. The use of smartphones has exploded and the wearables product segment, i.e. online gadgets that are worn on the body, is growing strongly.

SWSRC has established a number of research environments to enable development in the Internet of Sports. This includes working with putting sensors on people – international athletes, amateurs and spectators.

“Athletes want immediate feedback about whether their skiing technique is effective, for example. We also know that ‘mass follows class’ and that a large number of enthusiasts also want to adopt the same technologies and tools as the elite as quickly as possible,” says HC Holmberg, professor and head of development at SWSRC.

This new research has two perspectives. One is to see how internet-based technology can improve sporting performance for elites and amateurs, another is to examine how the experience changes for elite athletes, amateurs and spectators – during and after training, events and competitions. Sporting performance often deals with speed and efficiency, while subjective values are

what are tested when it comes to the experience. For example, how can a ski resort use digital technology to provide more individual information for its guests and to create added value for visitors? A good experience may mean that the guest returns.

INNOVATIVE TECHNOLOGIES

As part of the Internet of Sports, SWSRC works closely with the Swedish Institute of Computer Science (SICS) and Mobile Life, a VINN Excellence Centre in Kista that has expertise in mathematical modelling. This cooperation involves a “dream team” of the most experienced sports researchers in the world in biomechanics and physiology, Sweden’s best cross-country skiers and its foremost experts in advanced mathematical modelling.

“The big challenge is to rapidly process a large amount of data and convert it into simple information so the user can adjust and optimise his or her movement. Sometimes we talk about the ‘digital coach,’” says Professor Christer Norström, Managing Director at SICS.

“We see this cooperation as an excellent opportunity to use new and innovative technologies in a fun and timely application. The challenge of working with the very best – researchers, coaches and athletes – is particularly stimulating. There are no margins here, it’s all about hundredths of a second,” he adds.

HC Holmberg sees great potential in combining knowledge of physiology and biomechanics with the latest sensor technology to take training and results to the next level. To further develop the Internet of Sports and boost SWSRC’s position as regards the elite, it has employed Lars Nelson, Olympic gold medallist from Sochi 2014, to continue its work on intelligent training tools.

The Internet of Sports project is financed by the European Regional Development Fund, Östersund Municipality, Mid Sweden University, SICS via VINNOVA and Peak Innovation.

DID YOU KNOW...

...that in the spring of 2014, SWSRC is organising a workshop with the region’s IT companies to bring them closer to research and give them the chance to commercialise the tools? A large international conference is planned for the autumn of 2014, with the aim of investigating the potential of the digital arena – how can the spectator experience be improved through the use of mobile tools, for example?

MYSKILAB – YOUR DIGITAL COACH

ONE RESULT OF THE COOPERATION between SWSRC and the Swedish Institute of Computer Science (SICS) on the Internet of Sports is an app that WEMEMOVE will be launching in the Appstore in the winter of 2015. The app is a digital coach and provides immediate feedback on how the skier is moving, as well as customised technique and training advice.

“We are opening a marketing channel for intelligent training tools and the MySKILAB app is first. SWSRC are our experts and are participating in development and the verification of our products and services,” says Magnus Jonsson, Managing Director of the newly started WEMEMOVE, which is one of very few companies in this segment in Sweden.

Together, they have found a method for measuring and analysing skiers’ movements and skiing technique. The app can gather information in two ways. One is via a movement sensor in a belt that sends information to the app, or the skier puts his/her mobile phone in a vest that is worn on the chest. The sensor data that is captured is sent via the internet for processing and then immediately sent back to the skier or coach. Skiers can see how their work is transformed into forward force, i.e. what their skiing efficiency is like.

“It is an exciting new tool that provides fantastic potential for developing and optimising training. A central issue is that of finding good skiing efficiency,” says Rikard Grip, head coach for the Swedish cross-country team.



THE CLIMATE LAB

IN THE AUTUMN OF 2014, the Swedish Winter Sports Research Centre (SWSRC) will be expanded with a new laboratory – a climate lab. The lab will be able to adapt to altitude (oxygen level) and temperature, which is unique. This, combined with the lab being large enough for roller skiing, means that SWSRC further reinforces its position as one of the world's best research environments in winter sports.

“Most climate rooms available today are very small, with enough room for a bike but no more. In our climate lab we will be able to have several people there at the same time – one can ski and the

other can be double poling,” says Glenn Björklund, manager at SWSRC.

Ahead of the 2014/2015 season, the climate lab's equipment will be in place at SWSRC in Östersund, allowing oxygen levels to be lowered and the temperature reduced to -15°C.

Initially it will be Swedish Olympic athletes that can use the lab, but space will soon be made for international textile and sports businesses to test their products. For example, companies can test how heat regulation takes place in a functional garment at various temperatures and levels of effort. Craft, Woolpower and others are eagerly awaiting the climate lab, and see

that it can be an important tool in their product development.

“The new lab will allow us to increase our knowledge of altitude and cold. This will be good for our elite athletes and the textiles companies we work with. We already have a visiting professor from Germany here, conducting physiological studies linked to textiles,” says Glenn Björklund.

Peak Innovation, Mid Sweden University, Campus A4 and Östersund Municipality are responsible for the investments in the climate lab.

BOULDER AND JÄMTLAND – RESEARCH PARTNERS

IN 2012, THE SWEDISH Winter Sports Research Centre (SWSRC) began a major research partnership with the University of Colorado in Boulder (UCB), USA. The partnership looks at several areas in order to investigate body movement during running and skiing, to be able to optimise training and for other reasons.

“This research provides important knowledge about body movement, which will boost SWSRC's competitiveness and international position,” says Professor HC Holmberg, research leader.

UCB is interested in the new technology that SWSRC is developing with the Swedish Institute of Computer Science (SICS) and in being able to transfer it to running. This would open up new opportunities because the number of

practitioners is considerably larger, something that would also benefit SWSRC.

“The technology can be adapted to many sports, which has enormous business potential. And having the results in a mobile phone makes training more enjoyable for more people,” says HC Holmberg.

This partnership also relates to research into the various techniques of classical cross-country skiing, such as the situations in which skiers swap between these techniques, the body's centre of gravity, pole position and the gliding phase. Some of this research has already been used in the development of the MySKILAB training tool.

The researcher in charge in Boulder is Professor Rodger Kram.



Photo: Tina Ståhlén/SWSRC

HC HOLMBERG

Professor and Head of Research at the Swedish Winter Sports Research Centre.

Colorado the Jämtland of the US, with winter, mountains, cycling and skiing. The university in Boulder is a world-leading innovative hub with strong research in integrative physiology and kinetics. Boulder, like Åre and Östersund, also has many interesting companies in the sports and outdoor industries. The hope is that this can grow in the future and benefit both regions, Jämtland and Colorado.

IN BRIEF



All photos JOE: Pär Hägglund

JOE – JÄMTLAND OUTDOOR EXPERIENCE

Jämtland Outdoor Experience is a collaboration between the county's five biggest outdoor brands: Klättermusen, Lundhags, Hilleberg, Woolpower and Trangia. The idea is that this will strengthen links to stores in Europe by allowing retailers to test products on site in the mountains of Jämtland, winter and summer.

Participants can visit every company and go on a mountain tour with three overnight stays. In the winter they use snowshoes and skis and in the summer they walk, giving them the opportunity to test gear in authentic conditions, knowledge that they can then take home to their customers. During the five years of JOE's existence, a large number of retailers from Scandinavia and the rest of Europe have participated in these sometimes rather adventurous mountain trips.



ÅRE FASHION WEEK

Åre is a place where some of the leading ski brands were born, and is still a place for emerging ski brands and a community dedicated to design and technical development in ski fashion. The idea behind Åre Fashion Week is to create a global platform for Scandinavian and international ski brands, just like the traditional fashion weeks in Paris, Milan, London and New York.

Its purpose is to display the leading and edgiest ski brands to the most important media and buyers in the world. Peak Innovation has commissioned a pilot study and, if everything falls into place, you can book 10-12 December for the coolest catwalk of the year. Peak Innovation is a member of the steering group for the event, along with Åre Destination, Copperhill and Skistar, among others.

VOICES FROM THE REGION



NICLAS SJÖGREN BERG DESTINATION MANAGER, SKISTAR ÅRE

Tourism, sports and the outdoors are extremely important to Åre and the entire region. We are continually working to put Åre on the map as a leading and authentic ski resort with high quality, nationally and internationally.

SkiStar is one of the main players in Åre's candidacy to host the FIS Alpine World Ski Championships 2019. A World Championships would bring great potential for developing the ski slopes and Åre as a resort, whilst also providing a platform for reaching out to future skiers and new international guests.

CARL GEIJER VD ÅRE SKIDFABRIK

Åre ski factory has been manufacturing high-quality skis in Jämtland for more than 30 years. We have very competent employees and our people live right in the product development environment, where they can go out and test a ski directly from the factory.

There's a good business climate and for anybody looking to start up or run an outdoor company, Jämtland is absolutely the best place. There's a positive attitude, good role models and established contacts. In the long term, I believe that it's better to be closer to the product development than to be close to the final customer.

MORE COOPERATION WITH MID SWEDEN UNIVERSITY

With a holding company to support the commercialisation of research results and a rapidly expanding department for third stream activities, Mid Sweden University captures the needs of companies, researchers and students. Sweden's youngest university wants to be a regional player for growth and employment.

MID SWEDEN UNIVERSITY, with campuses in Östersund, Härnösand and Sundsvall, is just over halfway up Sweden, past the hot growth zones of the big city regions. As a young, relatively rural higher education institution, it is natural for it to work for regional development, according to Robert Pettersson, head of third stream activities at Mid Sweden University.

"The university should provide benefits. Third stream activities are more important than ever, as established by the government in the new national innovation strategy. It is of extra importance for us, as we can't take employment and growth for granted in this region."

MIUN Innovation, which is part of Mid Sweden University's department for third stream activities, and MIUN Holding AB are two examples of supporting functions for the commercialisation of research results and making new research more accessible. To make it easier for companies and organisations to dare to invest in new ideas, they have produced the Idébanken and Easy Access tools, where ideas are for sale or licence, or can even be taken over for free.

"It doesn't always have to be the researcher or student who actually ensures that goods or services make it onto the market, an entrepreneur is needed for that. The tools are therefore important in being able to find the best method for commercialisation," explains Robert Pettersson.

VINNOVA and the Swedish Research Council were recently tasked with producing models for measuring universities' third stream activities, something that also affects how funds are allocated. From commercialisation previously being regarded as an effect of research and education, third stream activities

now have a higher status in academia. Mid Sweden University's department for third stream activities is now being moved from administration to reporting straight to the vice-chancellor.

"This means that third stream activities will have an even better position within the university. On the whole, the conditions are better than ever for external interaction, and there are initiatives like Peak Innovation that are excellent arenas for third stream activities and strong competition," concludes Robert Pettersson.



Marina Minetti, Cecilia Schenk and Irene Hofling in Östersund wanted to organise a snow boarding competition for women. So did Karin Långström and Maja Lotterberg in Åre. Thanks to MIUN Innovation, they were put in touch with each other and got together to arrange the competition.

Photo: Emma Dahlquist/Östersunds-Posten

STRONG FORCES FOR DEVELOPMENT

MIUN INNOVATION – part of the Fyrklövern innovation office, one of Sweden's twelve innovation offices, supports students in their development of business ideas and works to promote an atmosphere at the university that makes commercialisation and entrepreneurship attractive choices.

MIUN HOLDING – commercialises research and knowledge produced at Mid Sweden University and makes it available externally.

IDÉBANKEN – businesses or organisations can access ideas and results from academia. These could be research results that the researcher wants to sell or licence and so create social benefits.

EASY ACCESS – Easy Access IP, intellectual property, is a way of drawing up quick and easy agreements between researchers, businesses and organisations. The agreement regulates how a company or organisation may have free access to research results.

IN BRIEF



Happy prize-winners – Sissi Kewenter, Skhoop.

Photo: Fotograf Göran Strand/Guldgalan.

PEAK INNOVATION AWARD

The award is given to a person and/or a business that has contributed to making the region of Jämtland a leading international environment for research and business development in tourism, sports and outdoor activities by 2020. The prize is awarded at Sweden's biggest business gala – Guldgalan – in Östersund. 2013's winner was Sissi Kewenter, Skhoop. With her passion for the outdoors and sport, and with unique attention to detail, she has taken her brand far outside Jämtland. The winner in 2012 was Marsblade (read more on page 32) and in 2011 the Peak Innovation Award went to Bracke Systems.

WINNING SPORT DESIGN DAY

Fredrik Dahl's story about his journey from Peak Performance, via North Face, to the position of head designer at J Lindeberg was one of many popular happenings at the Vinnande Sport-design-dagen on 25 March 2014.

The many visitors to Mid Sweden Science Park's premises could also listen to the Åre-based Rent A Plagg company and Jethwear, which designs clothes for snowmobilers, as well as to information about Mid Sweden University's investments in a unique wind tunnel for testing materials and equipment in realistic conditions. A number of the region's outdoor companies attended, along with designers, clothing companies, students and entrepreneurs. The design day is a partnership between Peak Innovation and the Regional Design Centre as part of Mid Sweden Science Park.



Fredrik Dahl, head designer at J Lindeberg.

Photo: Jörgen Ringstrand

VOICES FROM THE REGION



BENGT JONSSON
MANAGING DIRECTOR,
TRANGIA

Ninety years ago, my grandfather started a business in Trångsviken, a village between Åre and Östersund. The company has grown since then, and we now export our Trangia stoves to more than 35 countries around the world. Our customers appreciate that our production is in Jämtland, as we are proud to use the Made in Sweden label. Jämtland is the base for numerous outdoor companies, and we know each other personally and often work together on contacts with international retailers, for example on customer visits to the region.



SISSI KEWENTER
FOUNDER, SKHOOP

My company is in Jämtland because I love the surroundings. It is an incredibly creative place, with every opportunity for an active lifestyle which gives my products credibility. Åre is a small village, but in the tourist season there is a great deal of outside influence with visitors of many nationalities; every week there are new people to provide influences and ideas. The mountains bring me energy and inspiration for designing new products.

Winner of the 2014 Scandinavian Outdoor Award and 2013 Peak Innovation Award.

MARSBLADE ROLLS OUT AROUND THE WORLD

An inline skate using Marsblade's Flow Motion Technology is on the way to an international launch, and a forthcoming ice skate with the same patented technology is now being tested by several of Sweden's best ice hockey players. If the men behind Marsblade get their way, skates with Flow Motion Technology will be as much a part of the skate industry as the carving ski is in the alpine world.



Photo: Marsblade

"THE BENEFITS OF THE CHASSIS are so numerous that there is no reason not to use it," says one of Sweden's best-ever ice hockey players, almost sounding surprised as he describes the feeling of skating on Marsblade's ice skate. And he's not alone. Over the past year, NHL stars, elite players, enthusiasts and cool kids have tested the new chassis and they have all said the same thing – this is better than what is now on the market.

Hans Victor, Managing Director at Marsblade, and innovator Per Mårs are more than satisfied with the positive response. After a few years of intensive product development they are now about to roll out their first product internationally, an inline skate with Flow Motion Technology. Work on testing and verifying the ice skate is continuing in parallel.

"We've come a long way with the ice skate and it's been tested by a number of Sweden's best ice hockey and bandy players. All of them are impressed by the technology," says Hans Victor.

There is no doubt that an ice skate with a rocking motion has the potential to be huge. The market for inlines and ice skates is gigantic and difficult to conquer alone. In just the US more than 10 million inline skates are sold every year, and at least as many millions of ice skates are sold in Russia annually. Marsblade's business strategy is therefore based on licencing the Flow Motion Technology to the entire skate industry. However, their own products are launched under the Marsblade brand.

"All the product groups in which Flow Motion Technology is applicable each have a market worth billions," says Hans Victor.

They are currently in dialogue with several players on the market. Both Bauer and Reebok have done initial tests on the chassis and are very interested in the new technology. Smaller players have also got in touch and want to start cooperating.

IMPROVE PRESEASON TRAINING

The story of Marsblade began in 2008, when innovator Per Mårs, who played ice hockey for Brynäs and was drafted by the Columbus Blue Jackets in the NHL, decided to do something about his idea for an inline skate that provides the same feel as skating on ice, in order to improve preseason training. Without any experience of running a business, he had no idea of what was actually necessary. A contact with what was then the Business Incubator in Östersund got him started and he got help

with news monitoring, patent applications and producing a prototype. After a few meetings with potential partners, Hans Victor appeared – a business angel with a great deal of experience of start-ups.

"I realised at an early stage that this could be applied to more products," says Hans Victor.

The first stage was to acquire the capital to finance the company, with the aim being that Per Mårs would be able to work full-time with the business. The County Administrative Board contributed funding and a share issue was carried out, meaning resources were available for developing prototypes that could be tested and verified.

Per Mårs, who has studied sports science and SKARP business and product development at Mid Sweden University, sees great advantages in working in a region in which the development of sport and outdoor products is a priority.

"Our product development has received support from the Swedish Winter Sports Research Centre and SportsTech via Peak Innovation. In the early stages, the need for development

"We've come a long way with the ice skate and it's been tested by a number of Sweden's best ice hockey and bandy players. All of them are impressed by the technology."

financing and external expertise is critical, and Peak also supported us and helped us to apply for VINNOVA funding as part of Forska & Väx," he says.

Marsblade has been an Incubator company for three years. Last year they received SEK 2.4 million from VINNOVA to invest in product development.

"We've now located our production in Jämtland and hope to generate jobs in the region. A positive spin-off effect," says Hans Victor.

New product groups have been added as the technology has developed. Ahead of the Sochi Olympics, a cross-country binding using Flow Motion Technology was tested as a means of improving the transfer of force to the ski. It's not entirely unlikely that the ground will be rocking and rolling below the world's skaters and skiers within a few years. Flow Motion Technology is here to stay.

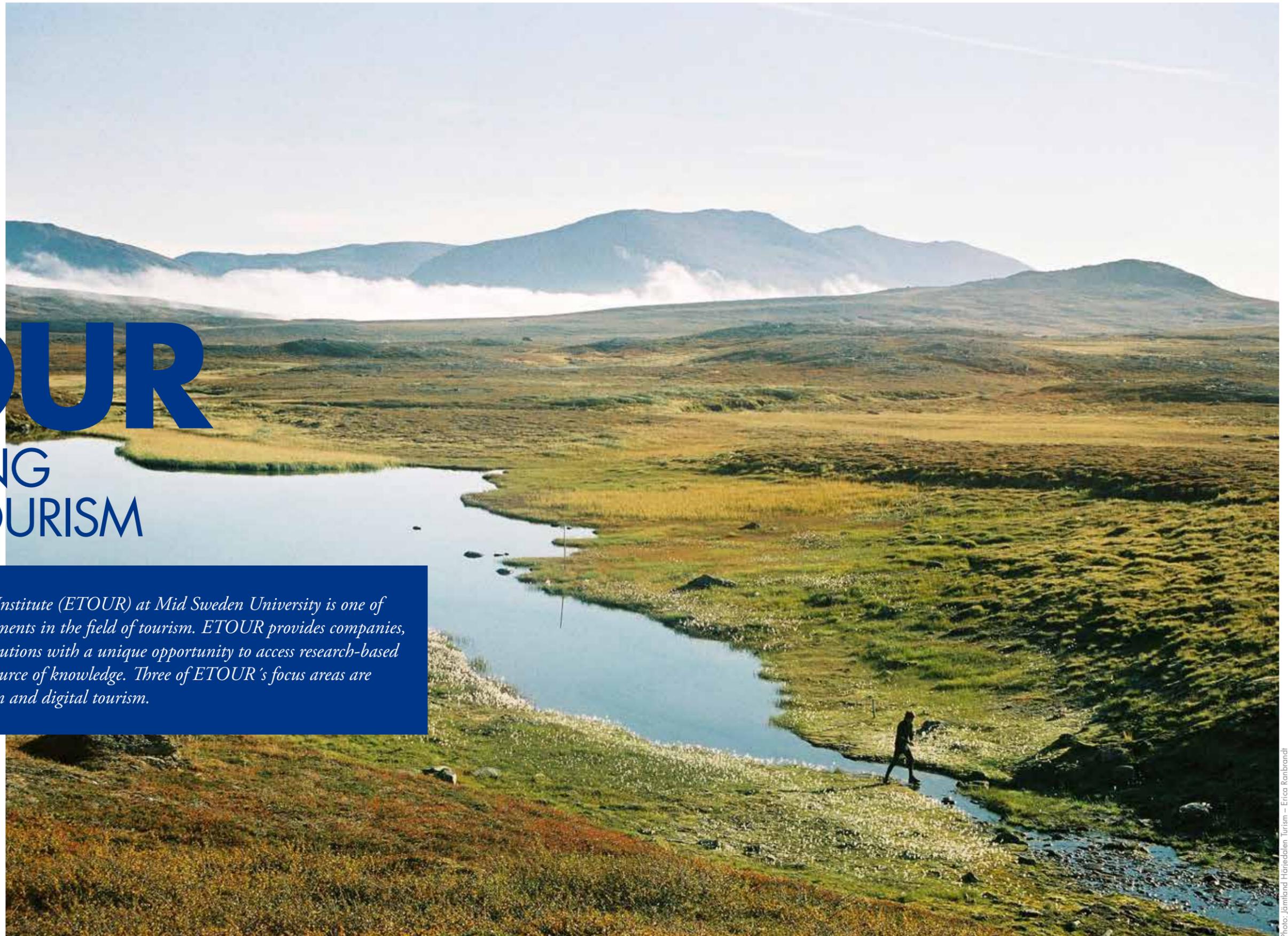


ETOUR

DEVELOPING FUTURE TOURISM

The European Tourism Research Institute (ETOUR) at Mid Sweden University is one of Europe's leading research environments in the field of tourism. ETOUR provides companies, authorities and educational institutions with a unique opportunity to access research-based knowledge and use visitors as a source of knowledge. Three of ETOUR's focus areas are destinations, nature based tourism and digital tourism.

*Jämtlandstriangeln
– a hiking trail in Jämtland.*





THE EVENT COMPASS™

– A GUIDE TO SUCCESSFUL EVENTS

Big events can be enormously important motors for growth, but how are they evaluated and how can they grow? The Event Compass™ from ETOUR, the tourism research institute at Mid Sweden University, is the first tool for measuring, evaluating and developing events and has been jointly developed by the events industry, researchers and regional authorities.

“COMPETITION IS HARD IN EVENTS, but there is great growth potential in strong events. We already know that around half of all those that aim to become annual events fail due to poor planning and follow-ups. Using The Event Compass™, we hope to be able to professionalise the processes around events,” says Robert Pettersson, event researcher at the ETOUR tourism research institute.

There has long been knowledge of customer satisfaction, the financial effects and risk aspects of events, but this has never before been linked to an actual tool for improvement.

“Often, a report is written to summarise the economy, visitor statistics and other figures, but then it’s usually difficult to draw the right conclusions from the figures. Years of event research is now coming to practical use. The Event Compass™ is a way of showing what works well and what can be done better,” says Robert Pettersson.

The model’s working method can be divided into three phases, which are “Evaluation”, “Recommendation” and “Certification”. After an evaluation, a bespoke package of methods is presented, to help the event achieve its full potential as an activity and as a motiva-

tor for positive social change. The values are presented in eight dimensions where strengths and weaknesses are clear.

BIATHLON FIRST

A first test of the tool was carried out in association with the biathlon World Cup in December 2013. The organisers tested two elements, partly a self-evaluation survey based on the Event Compass’s eight dimensions and partly a study among the visitors. The test was very successful.

“I would absolutely recommend The Event Compass™ to other organisers. It is always valuable to get feedback,

regardless of what you thought was the case beforehand, but it is good to have it confirmed and also get new insights. In practice, we learned that we should sell tickets in more places and make our marketing consistent all the way into the stadium,” says Patrik Jemteborn, head of the Biathlon World Cup in Östersund.

“External partners and stakeholders can use The Event Compass™ to quickly see what strengths our event has, which makes us more professional,” says Karin Stolt Halvarsson, who is head of the Alpine World Cup in Åre and part of the industry reference group.

ETOUR will continue to test The Event Compass™ in Sweden and abroad in 2014. The UK, Canada and Australia have already got in touch and want to use the tool.

Peak Innovation is supporting the project, along with Östersund Municipality.

PEAK EXPERIENCES

– INVESTING IN THEME PARKS IN A NEW PROJECT

IT’S ALL ABOUT KNOWING your customers and what they appreciate and want. Five researchers at Mid Sweden University have taken this idea and developed a product called Peak Experiences. Using modern technology to measure the movement patterns of visitors in the tourist industry, for example, means that businesspeople or destinations can obtain interesting information about visitor experiences. These facts can then be used to develop and improve what’s on offer.

It all started when the research group and a range of players in Åre were discussing what they actually knew about their visitors. They wanted a boost as a summer destination, and the cooperation with Peak Experiences resulted in three clear target groups being identified: the excursion family, the downhill biking tourist and the seeing the village visitor. This meant that the destination was able to customise experiences based on their needs. Peak Experiences has also used this method during the Biathlon World Championships, the Storsjöyran music festival and Destination Åre’s winter season.

Funding from the Knowledge Foundation has allowed the continuation of research as a three-year project, Ex-track. The focus here is another segment: experiential and theme parks in partnership with Park and Resorts, which runs Gröna Lund, Kolmården and Skara sommarland. An app has been developed and is easy to use on the test subject’s own smartphone.

Looking ahead, Robert Pettersson and his research colleagues can see that there is a demand for this type of product and that it can be commercialised.



The music festival Storsjöyran in Östersund.

OUTDOOR & NATURE-BASED TOURISM – UNIQUE CONFERENCE IN SWEDEN

ETOUR, The Tourism Research Institute at Mid Sweden University, first gathered researchers in outdoor activities and nature-based tourism from around the world for an international conference in Sweden, Stockholm, in 2012.

The 6th International Conference on the Monitoring and Management of Visitors in Recreational and Protected Areas (MMV 2012) was organised in Stockholm. The conference’s theme was Outdoor Recreation in Change – Current Knowledge and Future Challenges.

CLOTHING & EQUIPMENT

INCREASINGLY IMPORTANT IN THE OUTDOORS



Photo: Piotr Drosz

SEK 13,000 – THIS IS HOW MUCH money the average Swede invests every year in skiing, hiking and other forms of outdoor activities. Equipment and clothing are the biggest costs and the outdoor industry is dramatically expanding. This is shown in the results of a research programme at ETOUR, Mid Sweden University: Friluftsliv i förändring (Outdoor Recreation in Change).

Revenue for businesses in the industry doubled over a five-year period at the start of the 2000s, and since then it has continued to increase. There are several different explanations for this.

“Outdoor activities have become more niched. You don’t just go skiing on your winter holiday, instead you do ski alpinism, slalom and ski touring. Each activity has different equipment and its own fashion,” says Peter Fredman, professor of nature-based tourism at Mid Sweden University.

OUTDOOR ACTIVITIES MAY COST

More people now live in large cities, far from the countryside. Greater distances to nature make it easy to believe that you need more clothes and equipment when you do go out there.

“We can also see that those who were rarely out in the countryside as children put more money into equipment as adults than those who have more experience of being out there,” says Peter Fredman.

In total, Swedes spend almost SEK 100 billion on outdoor activities, of which three-quarters is spent in Sweden. Our consumption for outdoor activities amounts to around one per cent of GNP and researchers have calculated their effect on employment in Sweden to be more than 75,000 jobs.

The research is financed by the Swedish Environmental Protection Agency.



Friluftsliv i förändring (Outdoor Recreation in Change) is a six-year national research programme that includes 15 researchers at Swedish higher education institutions. The programme is led by the ETOUR tourism research institute at Mid Sweden University. The research should lead to new knowledge of outdoor activities and nature-based tourism in Sweden, and is financed by the Swedish Environmental Protection Agency.

Outdoor activities are popular in Sweden and contribute to many people’s quality of life. Research shows that almost all Swedes take part in some sort of outdoor activity and that this is worth about SEK 75 billion, just in Sweden.



Photo: Sandra Lee Pettersson

Researchers at ETOUR discussing future development.



Photo: Piotr Drosz

BILLIONS IN TURNOVER FOR SWEDISH NATURE-BASED TOURISM

SWEDISH COMPANIES in nature-based tourism have an annual revenue of SEK 3.6 billion. This was shown in research from ETOUR, which carried out the first national survey of companies that wholly or partly live off tourism focusing on nature-based experiences. One in three companies says that they are in a growth phase.

“Guided activities in the countryside and accommodation are regarded as the most important business operations, while fishing, kayaking and canoeing/white-water rafting are the most important outdoor activities on offer,” says Peter Fredman, professor at the ETOUR tourism research institute at Mid Sweden University, which carried out the survey along with doctoral student Lusine Margaryan.

Nature tourism in Sweden largely deals with different forms of activities linked to water, which is also primarily a summer activity. 60-80 per cent of all respondents felt that the summer months, June to September, are the most important season.

“The results indicate that it is likely that nature-based tourism will grow in the future. 37 per cent of the companies say they are in a growth phase and just 8 per cent say they are seeing a decline,” says Peter Fredman.

CUSTOMISED EVENTS

The survey shows a diversified industry which combines many different activities. It identified around 1,800 companies, which is estimated to be about two-thirds of all the nature-based tour-

ism companies in Sweden. Average annual sales are just over SEK 2 million, which means that the nature tourism industry has a turnover of at least SEK 3.6 billion per year. Jämtland is one of the counties with the most nature-based tourism companies.

“The report absolutely reflects the situation we are in. We are growing and are, for example, getting more enquiries about walking. Also, many companies want customised events in the wilderness,” says Sofie Jugård Löfgren, managing director at

“We are growing and are, for example, getting more enquiries about walking. Also, many companies want customised events in the wilderness.”

Aktivut, which was once an Incubator company and is now a limited company that organises walks and open-air events.

The survey was conducted as a questionnaire with a representative selection to a total of 1,821 companies, of which 648 provided valid responses. It covered themes such as seasonal variations, geographic spread, influence of other land users, the importance of national parks, nature and animals, infrastructure, accessibility, environmental responsibility, sales and costs, etc.

The report, which was presented in March 2014, is called “The supply of nature-based tourism in Sweden. A national inventory of service providers”.

REVOLUTIONARY HELMET MAKING ALPINE SKIING SAFER

Both 2013 and 2014, POC Sweden AB won the prestigious ISPO Award for its POC Skull Orbic Comp helmet, which is constructed using new technology that provides optimal protection for alpine skiers. The helmet is the result of a collaboration between POC, Swedish Winter Sports Research Centre in Åre, the Royal Institute of Technology and support from Peak Innovation.

AFP PHOTO: Alexander Klein

ALPINE SKIERS ARE EXPOSED to high speeds and great physical loading during a run. There is a constant risk of serious injury and the helmet is among the most important equipment for protecting alpine skiers from injury. Research shows that helmets can be damaged by the many repetitive impacts they receive in giant slalom, as well as in the super G and downhill disciplines. The force of the gates as they hit the helmet weakens the material in traditional helmets, resulting in a reduction in the helmet's protective properties. In accordance with its mission to save lives and reduce the consequences of injuries, POC contacted SWSRC and research engineer Mikael Swarén to propose a collaboration.

The aim was to produce a helmet that was optimised to withstand repetitive impacts and to provide maximum protection from falls. A testing rig to simulate repetitive impacts on alpine helmets was built in the lab at SWSRC Åre.

"Simulating impacts from gates has allowed us to research new and innovative materials and material combinations. The result is a helmet that noticeably reduces the stresses due to gate impacts and which provides noticeably better protection for the head when compared to existing helmets," explains Mikael Swarén.

COMBINATION OF MATERIALS

The POC Skull Orbic Comp builds upon technology that uses an outer material to reduce the force of gate impacts, while also protecting the helmet's inner core which must absorb the energy of a major fall. The combination of materials is unique and has raised the development of alpine helmets to a new level.

"Thanks to the collaboration with SWSRC and Mikael Swarén we have been able to access new expertise and additional resources for developing protection. This means that we can take enormous steps forward when it comes to renewal,

improvement and innovation, which benefits user safety," says Stefan Ytterborn, Managing Director of POC Sweden.

The helmet has been developed in collaboration between POC, Mid Sweden University's Swedish Winter Sports Research Centre (SWSRC), and the Royal Institute of Technology, with support from Peak Innovation. At ISPO in Munich, the world's biggest sports and outdoor fair, the POC Skull Orbic Comp won the ISPO Award 2013 for helmets. The helmet was launched on the market, and today it's used by the Swedish national ski team, Bode Miller, Julia Mancuso and others.

"Simulating impacts from gates has allowed us to research new and innovative materials and material combinations."

"For products developed by a leading alpine company in collaboration with the newly established alpine research centre in Åre to win such a prestigious prize is proof that our investment is already bearing fruit, which is wonderful. I am convinced that this is just the start of a fantastic journey in which world-leading research, new training methods and new alpine products will be developed in Åre.

SWSRC Åre has unique potential because the research centre is located in the National Alpine Arena, which is also home to the Swedish Ski Association's alpine section, World Cup Åre AB and Åre Slalomklubb," says Tomas Ekström, Peak Innovation.



Bode Miller heads down the slopes in Sochi, protected by the POC Skull Orbic Comp helmet.



Photo: Frida Röhming

Yran Outdoor Camp was one of many popular activities in Östersund during the summer of 2013.

SUMMER TOURISM IS GROWING IN JÄMTLAND-HÄRJEDALEN

Tourism is predicted to have potential for growth that exceeds that of other industries. A 54 per cent increase in revenue for the county's tourism in the last decade gives the region a unique position in Sweden. Investments are now being made in more new activities to further develop the summer months.

THE COUNTY'S TOURIST industry has set high growth targets for the coming years. By 2020, annual revenue should increase from SEK 4.3 to 6.0 billion. One big challenge is that of continuing to develop the summer months, where the range of available activities has hugely expanded in the last ten years; the number of walking and cycling days combined have multiplied from 15,000 to 50,000 from 2000 to 2011 in Åre alone. "Our summer season continues to attract more and new guests. The destination and its companies are working together to develop existing and new experiences, where there is a special focus on

nature-based experiences combined with food," states Karin Gydemo-Grahnlöf from Jämtland Härjedalen Turism (JHT). The countryside is the biggest reason to visit, with walking, fishing and a variety of activities for two visitor groups in particular: active families with children older than five and healthy older people with good finances. JHT has also worked to make existing products available to people with disabilities, including by providing advisory services to businesses at the various destinations. "We can see trends among our foreign guests, where wildlife watching is one growth area. Myskoxcentrum in Funäs-

fjällen and Bear's Den in Lofsdalen have been good at designing products," says Karin Gydemo-Grahnlöf. **NATURE AND SPORT** Other trends that are here to stay are downhill cycling and trail running. They are also concrete examples of how tourism, sports and the outdoors go hand in hand. "Both Åre and Lofsdalen have had success with bike parks and can make better use of their facilities throughout the year. Åre has also been named the world's fourth-best bike park. Funäsfjällen has developed trail running in a good

way, using the popular walking routes as a basis; it is also good at pulling different stakeholders together and creating interesting offers, such as in fishing," says Karin Gydemo-Grahnlöf. West Jämtland's summer tourism has also felt a positive impact from trail running races, such as Jämtlandstriangeln Unplugged, Skutan Runt and Salomon Trail Tour. In 2013, Team Nordic Trail organised two fully booked training camps. Åre Extreme Challenge is another event and has become Sweden's biggest adventure race, and the AXA mountain marathon in Bydalsfjällen has become a fully-booked highlight.

IMPORTANT ROLE In Åre, demand for exclusive packages has resulted in new types of products, where the visitor stays at Copperhill, Buustamon or Tott, for example, and takes trips using the cable car to explore the mountain with a guide, also enjoying great cuisine. Karin Gydemo-Grahnlöf believes that food has developed a prominent role in tourism because people are now daring to highlight cultural activities more.

"Our guests want an overall experience, 'just' the landscape isn't enough, but we can provide fantastic experiences by combining it with food and culture. No one can be more clearly Jämtland Härjedalen than us. Good food makes satisfied visitors very satisfied, and it affects everything, from organic sustainability and economy to social and cultural factors," explains Karin Gydemo-Grahnlöf.

SPORTING ACTIVITIES The importance of food is confirmed by Anna Wersén, Managing Director of Destination Östersund. She sees a clear trend among visitors from Norway, as well as the Netherlands and Germany, who increasingly want an overall experience with restaurant visits, hotel night and activities. A steady increase of guest nights can be seen, with an average of 10 per cent since 2008. "People don't just come to shop. As the variety of what's on offer has increased and there is more locally produced food, interest in food has risen among our guests. They have also re-evaluated Jamtli, the biggest attraction

in Östersund, from 'just' a museum to being an experience." Östersund is now investing in being more of an activities' city, by offering many sporting activities and making use of its location close to the mountains. "We are 'the little city in the mountains'. Many of our guests combine a stay here with a few days walking or biking in the mountains. And if we have a great range of food, we know that they choose to stay a few extra days," says Anna Wersén.



Photo: Jämtland Härjedalen Turism - Sandra Lee Pettersson

TOURISM IN FIGURES

In the last ten years, tourism in the county has seen a 54 per cent increase in revenue. In Sweden as a whole, this number was 40 per cent. The county's tourism is equivalent to ten per cent of the gross regional product, i.e. the sum of all goods and services produced in the county. 17 per cent of tourism's total revenue in the county, which is SEK 4.3 billion (2013), comes from activities. Tourism in Sweden currently has a turnover of SEK 275 billion. The forecast for the total turnover in the tourist industry in 2020 is SEK 407 billion. Food in Sweden is estimated to have a total press value of SEK 750 million. Of this, one-third - about SEK 250 million - has come to Jämtland-Härjedalen thanks to investments in Matlandet Sverige (Sweden - the new culinary nation), among other things.

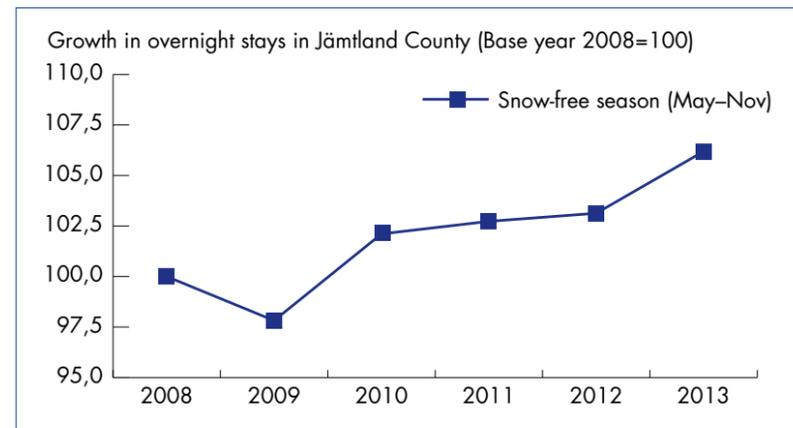


Photo: Jämtland Härjedalen Turism - Erika Ranbrandt

SPORTSTECH

– CREATING THE NEXT GENERATION OF SPORTS PRODUCTS

Sports and outdoor recreation is a billion krona industry in Sweden, with a massive need for better equipment and technical materials. Mid Sweden University is the only university in Sweden that offers education and conducts research in Sports Technology. At SportsTech, the next generation of sports and outdoor products are created.

SPORTSTECH AT Mid Sweden University is a unique Swedish environment for the engineering branch of sports technology. Its main focus is product development and verification in sports and outdoor gear, and its main areas of activity are Biomechanics and Performance Optimisation, Human and Equipment Interaction and Additive Manufacturing and Materials. The group's expertise forms the basis of degree programmes from the first to third-semester levels. Research topics cover an extremely wide field, from basic research on snow friction to active protective safety devices lowering injuries in sports. Multidisciplinary research teams are formed to address research questions in the best way.

SportsTech's cooperation with the business community and foreign universities is vitally important for continued development in the area. Links to manufacturing businesses and equipment users are extremely valuable for research and for learning. Many of the researchers are also active athletes themselves. The research focus on design and innovation also helps in developing regional opportunities, in a region where small and medium enterprises dominate.

There is also a very clear connection between product development competence and success for manufacturing companies in this region. Development is also closely linked with research work at an elite sports level. This is a profound base on which to build a world leading position in sports such as cross-country and alpine skiing.

CUSTOMER-ORIENTED RESEARCH

Sports technology has to cope with extremely complex dynamic interactions between the human body and the equipment during fast-changing external conditions. Properties of the materials and mechanisms (both static and dynamic) are also studied in several other disciplines. These two research areas alone are big and complex. So, research in sports technology is, by its nature, a multidisciplinary undertaking.

The SportsTech research group also aims to continue more in-depth development of knowledge and practices in customer-oriented product development. Additionally, the group plans to continue the highly in-demand business focused investments in (additive manufacturing) technology.





Photo: Tina Ståfrén/Mittuniversitetet

A programmable washing machine is used to test how repeated washes affect properties such as colour fastness, tear strength and waterproofing.

TOUGH TESTS IN THE TEXTILE LAB

THIS MODERN LABORATORY offers a central, easily accessible resource for testing textiles' mechanical properties. The laboratory opened in the late spring of 2011 and, in addition to the research opportunities it provides, it offers extremely valuable support to companies in the outdoor sector that work with textile-based products. The properties that can be tested are abrasion resistance, waterproofing, air permeability, UV resistance and tensile-tear

strength. The equipment for testing tensile-tear strength is also used for testing the strength of plastics and metallic materials, and has also been specially designed so it can test the mechanical properties of materials at temperatures down to -70°C. A programmable washing machine is used to test how repeated washes affect properties such as colour fastness, tear strength and waterproofing. Products that contain a membrane such as GoreTex can also be tested for vapour

transmission. In addition, there are also several industrial sewing machines and optical and electron microscopes with cameras for documenting test results.

The Textile Laboratory was established by the Sports Research Group in cooperation with Östersund Municipality, and companies including Klättermusen, Lundhags, Woolpower and Hillebergs, with the support of European Regional Development Fund.

LOCAL TEXTIL LAB

"Opportunities to work with the university are growing, and this enhances competences in the local textile industry. Having a lab locally is so valuable, it means we don't have to send materials away to Stockholm or Borås," says Peter Askuly, designer and founder of Klättermusen in Åre.



Photo: Håkan Wilke

LUNDHAGS ON BLACK ICE

AS MORE AND MORE enthusiasts take to long distance ice-skating, Lundhags sees an opportunity to develop and improve its range of long distance ice-skating gear. Stephen Copp previously worked in product development at Lundhags. Thanks to a cooperation between Lundhags and Peak Innovation, he has been hired as a research engineer for a project at SportsTech at Mid Sweden University. His mission is to take a holistic approach to the entire segment, from skating boots to accessories.

"Over the last years ice-skating has been attracting younger people than previously, and that has brought new trends in the skating technique. Today, skaters are tending to copy the high-speed skating technique, with their centre of gravity right over the skating contact surface to give more energy efficient skating," explains Stephen Copp.

SportsTech provides the ability to work practically with the structure and function of the skating boot by using 3D modulations, amongst other things. There was a lot of focus on the positioning of the bindings and how the blade mounting should be attached.

"It's been a challenge joining two substances, steel and aluminium, that don't usually go well together, so that we can create a sustainable structure. But I've been working with some of Sweden's best long-distance skaters, and also had the researchers at Sportech to bounce my ideas off. The result has been received really well," says Stephen Copp.

Lundhags new ice-skating range will be available in stores in autumn 2014.



STUDENTS BEHIND NEW HAND STRAP AT OLYMPICS

WORK CARRIED OUT by SportsTech students at Mid Sweden University was the foundation for a new cross-country pole hand strap that was used during the Olympics in Sochi 2014. Sprint medal winner Teodor Peterson is one of the Swedish skiers who used the students' new innovation. It started with a research project in spring 2013, which the company SKIGO gave to two students. Arvid Larsson and Fred Sundström came back with an idea to use a new kind of closing mechanism on the hand straps on cross-country ski poles. Instead of using Velcro, the new strap uses a swivel buckle with wire locking.

"We made and tested a whole load of prototypes in the textile laboratory in

Östersund, and had contact with hand specialists for the orthopaedic aspects," says Arvid Larsson.

The strap, which has been further developed by SKIGO, is now manufactured by Lindevalls Industri AB in Östersund.

"We frequently sub-contract out to students, not least in Östersund, where we have test labs, education and businesses that can take on the manufacturing. It's really valuable for us to get feedback from the students which can lead to new products and innovations," says Andreas Karlsson, product developer at SKIGO and a former student at SportsTech.

Today the hand-strap is only available on the most advanced kinds of poles, but



GÖRAN SVENSK MANAGING DIRECTOR, HILLEBERG THE TENTMAKER

Jämtland offers us the ideal conditions for developing our products in the right environment. It's fantastic when we meet customers and can offer them a 100% genuine experience of Jämtland with magnificent nature, equipment from local outdoor companies and good food from the county's food artisans. Our products are associated with a complete overall experience. We also benefit greatly from Mid Sweden University's SportsTech programme, which functions as a basis for recruitment, and from its research environment, the Textile Lab. We have learned a great deal about textile tests and now have the opportunity to do our own quality assurance tests so that our tents live up to our high demands on durability in extreme conditions. Peak Innovation is a good platform for discussing marketing activities and the JOE (Jämtland Outdoor Experience) initiative, in which we work with other companies to share our experiences and customers, has worked excellently.

in a year or so it might reach a broader market. Teodor Peterson, Lars Nelson and Calle Halvarsson are three of the skiers in the Swedish national team who use the strap.

"Our students illustrate that our education programme is of a very high level, and that contributes to its positioning as a unique course in a unique environment that puts a lot of effort into collaboration. This type of co-operation is incredibly important for us and creates additional value both for our students and our businesses," says Lars-Erik Rännar, the programme leader.

NEW MIND-BLOWING WIND TUNNEL

From the outside it just looks like a big box, but inside is a unique and highly technological research environment, like no other in the world, where materials and performance are tested under realistic conditions. It's going to be tough-going in Mid Sweden University's new wind tunnel.

IN THE LABORATORY skiers will be able to do tests on a treadmill that can be programmed to produce a specific course profile, at wind speeds of up to more than 50 km/h.

The treadmill's speed will be governed by the skier's speed, as will the fan-driven headwind that the skier feels in the wind tunnel. As wind produces an opposing force in the downhill movement, it will also be possible to simulate course sections with downhill slopes where the skier will have recovery periods. The size of the treadmill will allow two skiers to be positioned one behind the other on the treadmill. This allows measurement of the drafting effect that occurs during a race. It will also be possible to conduct

a range of physiological measurements during the test situation, such as oxygen uptake, blood lactates and more.

Another area of use for the laboratory is testing fitness for purpose in outdoor products made from a range of materials. This makes it a valuable complement to the Textile Laboratory, where the mechanical properties of materials included in these products are tested.

One example of this type of testing is the "final testing" of an outdoor jacket. Usually the fabric, zips, press studs, thread, etc. have been tested separately and deemed to be up to standard. However, this does not guarantee that the finished jacket will function as intended. Seams must be strong and waterproof,

fabrics must be compatible and zips and press studs must work in the conditions which the jacket is designed for. To verify this, the finished product needs to be tested in a new way, perhaps under physical loading where the jacket is worn with a rucksack in the relevant weather. The latter is achieved by adding artificial rain during testing, for example. The laboratory will be ready during the spring of 2014.

The Wind Tunnel Laboratory is established in cooperation with Östersund Municipality and partly financed by European Regional Development Fund.

ADDITIVE MANUFACTURING LABORATORY

THE ADDITIVE MANUFACTURING machine has enabled the development of completely design-adapted products that cannot be manufactured using conventional manufacturing methods. The additive manufacturing laboratory was established in 2003 and today it is the most comprehensive university laboratory for additive manufacturing in Sweden. The machine, and its successors, has also given the research group the opportunity to support regional businesses in the sports sector, and provide experience for their product development process by using prototypes.

SportsTech also has access to a unique additive manufacturing machine used for designing advanced products in materials like steel or titanium. This opens up new opportunities for making functional prototypes and one-off productions for the sport and experiential industries, as well as for implants. This advanced technology creates new opportunities for optimising the design of a product in terms of its strength, weight, volume, material and more.

Additive Manufacturing Laboratory is supported by VINNOVA and the Regional Council of Jämtland.



Photo: Tima Stafrián/Mittuniversitetet

EFFECTIVE LOWER-LEG PROSTHESIS FOR CROSS-COUNTRY SKIERS

TRADITIONALLY, skiers with a lower-leg prosthesis have solved their desire to ski by using a regular walking or running prosthesis in a skiing boot, that is then fixed to the ski as normal. During their time at SportsTech at Mid Sweden University, Tommy Mellberg, Robert Isaksson and Per Skoglund came up with a new solution. As part of a NUCM Winter sport project they developed a solution where the boot is removed completely and instead, the prosthesis fits directly into the ski binding. It gives greater stability when

skiing, something elite skier Håkan Axelsson can attest to:

"I haven't enjoyed skiing this much in 20 years!"

Helene Ripa also used the prosthesis when she won the World Championship in Sollefteå in 2013. It hasn't been approved by The International Paralympic Committee for Paralympic games yet though. The three product developers have since started the company Ableway (see page 57) which has taken over the development of the lower-leg prosthesis. The focus now is to create a more cost-

effective model as well as getting it EU-certified with support from SportsTech student Sebastien Lång.

NUCM Winter sport project was funded by the European Regional Development Fund, Mid Sweden University, Jämtland-Härjedalen Sports Organisation for the Disabled, Jämtland County Health Authority, Östersund Municipality, Savings Bank Foundation and the Swedish Sports Organisation for the Disabled.



Photo: Private

Skier Håkan Axelsson participated in the 2010 Paralympics in Vancouver.

GOOD VIBRATIONS

Researchers from MIUN have proven that friction-induced ski and snowboard vibrations may have a positive impact on gliding efficiency. Self-induced vibration of cross country skis has previously been observed, however, recent research has proven undoubtedly that it has a significant effect. Unlike motion-induced vibration from alpine skis and snowboards, which has been well studied and is known to have a negative impact,

vibration in cross country skis, jumping skis and snowboards may have a positive effect and decrease average friction forces by up to 30 percent.

Friction is one of the major factors preventing good gliding, so controlling ski and snowboards' natural ability to vibrate, for example by introducing special design features, can help to significantly improve gliding. Comprehensive studies of the friction-induced vibrations both in the field

and in the laboratory, have contributed to our better understanding of: how such vibrations occur; what are their properties; and what influences their frequency and intensity.

The results of this research have been presented at several international conferences. SportsTech and Mid Sweden University will place further priority on this research.

ÅRE CAPITAL MARKET DAYS REACH NEW HEIGHTS

1500 participants over three days is a new record for Åre Kapitalmarknadsdagar (Åre Capital Market Days), which was held at Copperhill in Åre for the fifth year in a row. Gilded by sport and skiing personalities, the event has assumed a clear position as one of Sweden's best meeting places for future financing, business and companies.

"THIS YEAR, THE BEST THING was probably the election year debate with business spokespersons from four Swedish parties. It was humorous, solid and full of energy," says the initiator of Åre Kapitalmarknadsdagar, Jens Edlund.

The programme was packed, with more than 54 speakers and a broad mix of business leaders, entrepreneurs, politicians, investors and researchers. The names included Minister for Trade Ewa Björling, Kristina Persson from Global Utmaning, Ida Backlund from Rapunzel of Sweden and Pär Nuder, from the Third Swedish National Pension Fund.

The grand old man of Swedish business, Michael Treschow, now chairman of the board for Unilever, participated for the first time, taking part in a panel debate about sustainability.

"There is a lot happening here now. It is exciting and enjoyable to see the energy among the entrepreneurs and the mix of the different product proposals that are presented. As regards the issue of sustainability, it's now apparent that we have to act and that it is business that has the solutions and must push the issues," says Michael Treschow.

Åre Kapitalmarknadsdagar originally started with the objective of attracting more business and investment to the region. Peak Innovation's business community platform has been an active partner since the very beginning.

INTERNATIONAL SKI STARS

One of the critical success factors has been the forum's strong linkage to sport and international sporting events. This year, the televised Swix Ski Classics final – Åre Mountain Race (Årefjällsloppet) – also took place in conjunction with the meetings. Many national and international ski stars graced the event with their presence, both at Copperhill Hotel, and in the ski tracks.

Åre Kapitalmarknadsdagar's goal is to become Scandinavia's answer to the World Economic Forum in Davos, but with a focus on business and investment. The event is already well on its way. This year, the business elite from all over Sweden, as well as Norway and Denmark, participated in the meetings.

PITCH EVENT SUCCESSFUL AT INCUBATOR ARENA

THE WINNER OF ALMI and Incubator Sweden's pitch event, C LindheXtend, received standing ovations and SEK 100,000 for its business idea of extra mobile prosthetic legs. Nineteen incubator companies from around Sweden participated. They presented a jury with their business ideas and how much money they need to expand. Marsblade from Mid Sweden Science Park's Incubator reached the final and Addmovement reached the semi-finals.



Marsblade in the final.

Photo: Tommy Andersson



Top: Ida Backlund, CEO Rapunzel of Sweden; below: Kristina Persson, founder and chair of the board Global Utmaning; right: Minister for Trade, Ewa Björling. Top right: Christoffer Lindbe, winner of Almi and Incubator Sweden's pitch event.



Above left: Pär Nuder, Chairman of the Board, Tredje AP-fonden; middle: Alice Teodorescu, opinion leaders and labor law expert at Företagarna; right: Jens Edlund, initiator of Åre Kapitalmarknadsdagar.

Photo: Tommy Andersson

BUSINESS ON THE SLOPES

With an office a ski-length from some of Europe's best slopes, business meetings have been known to take place on snow. This is a delightful bonus for companies in Åre and one of the reasons why Åse Angland Lindvall chose it as the basis for an international business.

MANY PEOPLE DREAM of quitting their jobs and changing their lives. Åse and her husband, Jakob Lindvall, are among those who have really done it. Both of them had good jobs in Norrköping, Åse as product manager at SMHI and Jakob as the managing director of Norrköping Science Park, but they were thinking of doing something new – and it was Åre that was tempting them.

“To test our idea and see whether the potential was there, we made a list

“Åre and the entire region is extremely dynamic.”

of around 50 people that we met before making a decision, both to listen to what they had to say and to create a good network. After an Easter break in Åre in 2009, we took a decision. On the Wednesday we both handed in our notice and told the school and nursery that the children were moving. Before

the end of the day we had also registered our first company,” says Åse.

The company was a consultancy with services in strategy, processes and business development, but there was also an urge to do something bigger.

“We asked ourselves what we can really do and are good at? What do we give to our customers? In doing this we saw the solution to a problem we often met. Making ideas visible in an organisation and being better at including more people who can have innovative ideas. This was the basis for the cloud service, WIDE, that we now supply,” explains Åse.

But what is it really like to arrive in a new place and start up a service company from nothing?

“Åre and the entire region is extremely dynamic, with many entrepreneurs who help each other and try to build good networks. The destination also attracts people from around the world, which creates interesting potential. Two international airports within a couple of

hours' drive means that the next deal is never far away,” says Åse.

Since last summer, the company has also invested in an international focus and now has an international manager.

“The county has great potential and we have to dare to let in the rest of the world. Personally, we mobilised a great deal of motivation by moving. We have put ourselves in a situation in which we simply have to have good results. Why not do this in a region that offers so much more quality of life if you like mountain sports and the outdoors,” says Åse Angland Lindvall.



Photo: Silina Svanberg

FACTS

WIDE is a web-based social system for idea management, the first of its kind in Sweden. The cloud service is for organisations, companies and public bodies who want to work in a structured and systematic manner with their innovation work to develop new products and services. Idea2Innovation has offices in Åre, Stockholm and Norrköping.

Photo: Gösta Fries

WOOLPOWER'S WASTE LOSSES BECOME CLIMATE-SMART INCOME

Thanks to regional cooperation, manufacturing waste that used to be a costly environmental burden is now turned into climate-smart insoles worth millions. New products and new business opportunities are being created.

WOOLPOWER IN ÖSTERSUND has produced warm and functional clothing for outdoors enthusiasts and the military for more than 40 years. Its garments are now sold in 25 countries and demand is continually increasing. Production creates around 40 tonnes of waste, which so far the company has paid to send for combustion, giving rise to questions within the company.

“It's a resource that we are throwing out instead of using, which sits badly with the company's other values,” explains Pål Dufva, head of products and purchasing.

There had long been thoughts about transforming the waste into new products, but it wasn't until January 2012 and ISPO, the world's biggest sport and outdoor fair in Munich, that the idea could be realised. Students on the SportsTech engineering degree at Mid Sweden University were offering their services at a 'skills stand' and Woolpower asked: What can you do with our waste? This resulted in a cooperation in which a student, Kajsa Nilsson, chose to look more closely at the issue for her degree project. Financing came via the Incubator at Mid Sweden Park and Peak Innovation, so Kajsa Nilsson could then have a fixed-term contract with Woolpower to complete a pilot study.

“The study showed that the waste can be needle-felted to make a material from which new products can be made. We have also received help with testing the material for wear, pilling and durability at the textiles lab at Mid Sweden University, which has been very beneficial,” says Pål Dufva.

NEW SOURCE OF INCOME

The collaboration has been fruitful. Now, eighteen months later, the costly waste can be transformed into insoles. Woolpower's aim is to be able to sell 400,000 pairs per year, which will make them a new source of income for the company. Now they have to find sales channels to the shoe industry.

“We currently have no ways in there at all, but the Incubator at Mid Sweden Science Park will help us with sales contacts,” says Pål Dufva.

According to Pelle Simonson, business developer at Mid Sweden Science Park, Woolpower's insole project is a perfect example of how collaboration should work. Public bodies, including the County Administrative Board and the university, along with businesses, have created sustainable regional growth. One plus one has made three.

“The study showed that the waste can be needle-felted to make a material from which new products can be made.”

“This is exactly what we're working for – for business and high education to meet and solve business and social problems. It also provides the students with important experience,” concludes Pelle Simonson.



The result of Kajsa Nilsson's degree project at SportsTech – award winning insoles from Woolpower.

OUTDOOR BUDDIES

The cooperation between Scandinavian Outdoor Group and the region of Jämtland is a happy union. Its results include several international conferences, competence-raising efforts focused on member companies and increased exchange between the industry and Mid Sweden University.

SCANDINAVIAN OUTDOOR GROUP (SOG) is composed of around 50 Nordic outdoor companies that export their products. The outdoor industry is tough, and to remain competitive on an international market companies need to cooperate with research and education and other innovative environments more than ever before. This is also the starting point for Martin Kössler, SOG, in his cooperation with Peak Innovation:

“In just a short period of time, conditions for supporting companies’ R&D have received a real boost in the Jämtland region. From having been relatively anonymous, the region is now established as a development partner for many of SOG’s companies,” says Martin Kössler.

In addition to R&D projects, another example of cooperation is the annual ISPO trade fair in Munich, the world’s biggest sports and outdoor fair, a must for everyone in the business. For several years in a row, the region has been represented in SOG’s Scandinavian Village and the Cross-Country Skiing Village, where both SportsTech and its students and the Swedish Winter Sports Research Centre have natural places. During

this period, two major international conferences have also been held, as well as the Scandinavian Outdoor Award Jury Event at which the leading outdoor journalists in Europe could experience Åre’s wilderness.

PARTNERSHIP WITH THE RESEARCH CENTRES

Another appreciated event was the Key Account Buyer workshop at Bever Zwerfssport, one of Europe’s biggest outdoor chains, shared his experiences with the suppliers. Preview Order Days is an attempt to make joint use of the companies’ sales channels for larger and earlier orders.

“SOG has given us signals about which needs the companies have, while we’ve also been able to offer interesting development projects in partnership with the research centres at Mid Sweden University. It’s been a mutual exchange that has benefited both parties,” says Tomas Ekström, head of operations at Peak Innovation.

SOS ÅRE 2013

Over 80 participants, from Norway, Germany, Holland and Great Britain, took part in this year’s Scandinavian Outdoor Summit at Fjällgården in Åre. The future of the outdoor industry was discussed with a focus on new knowledge, expansion and internationalisation. It was organised by Scandinavian Outdoor Group and Peak Innovation.

“The meeting was really rewarding. I have held discussions with a number of Scandinavian companies that are looking to the UK market and hopefully contributed to their export plans. It’s the first time I’ve been here and I’m very impressed by Åre as a place, the scenery and the excellent infrastructure,” says Andrew Denton, General Secretary, Outdoor Industry Association in the UK.

EOS STOCKHOLM 2013

The European Outdoor Summit is a rotating event organised by the European Outdoor Group in cooperation with the industry’s different national associations. The first region is Scandinavia, where the event was hosted by the Scandinavian Outdoor Group, supported by European Outdoor Group, with partners like ISPO, W.L Gore, Thule and Peak Innovation. The European Outdoor Summit took place in Stockholm in October 2013. For two days, 300 people from the outdoor industry was gathered to discuss and shape the future, together with internationally renowned speakers, experts and futurologists.

SOA JURY EVENT ÅRE 2012

Up to 20 products from Scandinavian Outdoor Group member brands are nominated every season to compete for the Scandinavian Outdoor Award. Twice a year, the best new Scandinavian outdoor product is recognised by an independent international jury consisting of outdoor journalists and product experts. In the summer of 2012 the winners were announced in Åre; an international jury was present to examine each product thoroughly and decide the overall winner. As a bonus they got to enjoy Åre’s beautiful scenery and the region’s investments in health and training tourism and walking. Other organisers included ALMI/Globala rummet and the tourism industry via Åre Destination and Jämtland Härjedalen Turism.



Chris Townsend, the UK’s best-known outdoor journalist from The Great Outdoors magazine, thoroughly tested the nominated products.



Photo: John Reppes

EXPERIENCES AND HEALTH FOR ALL

Everyone should be able to enjoy outdoor pursuits and participate in physical activities. This is the foundation of Sweden4all, which wants to make the region a unique destination and meeting place for people with disabilities.

JONAS DANVIND is a senior lecturer in SportsTech, Mid Sweden University, whilst also working with equipment development for the Swedish Sports Organisation for the Disabled and the Swedish Paralympic Committee. Along with Fredrik Andersson, Jämtland-Härjedalen Sports Organisation for the Disabled, Jonas Danvind will develop Sweden4all via Peak Innovation.

“We want to further develop our earlier work in the NUCM winter sports project. That was a cooperation between education/research and sport. Now we’re creating a platform with two more elements: tourism and health,” explains Jonas Danvind.

The NUCM winter sports project ran from 2010 to 2013; one of its aims was to create networks to increase the number of winter athletes with disabilities. They also succeeded in establishing Sweden’s foremost centre for winter disciplines in disability sports.

“For example, athletes in the winter Paralympic sports conduct physical testing here at the Swedish Winter Sports Research Centre at Mid Sweden University. We can use existing structures in a beneficial way,” says Jonas Danvind.

“We are working to make the region an international hub for the winter Paralympics movement.”

NEW REASONS TO TRAVEL

One component of NUCM was to develop more customised equipment for winter athletes with various types of disabilities.

“We have been in direct contact with the athletes for help with customised equipment. For example, we have developed lower leg prostheses for cross-country skiing, a hand support for a cross-country skier, the lower part of a curling delivery stick, and we have made a talking heart rate monitor for Zebastian

Modin using technology that is already on the market. Helene Ripa used one of our prostheses when she won the World Championships last year. One important cog in the development of equipment has been the talented SportsTech students, who have conducted a great deal of product development,” says Jonas Danvind.

Sweden4all is now taking the next step. There is great potential for being world-leading in an area where there are currently few players.

“We believe that the region can make use of this and create new reasons to travel in this niche. We can spearhead the link between sport and research and tourism and health. Totalskid-skolan, a disability ski school in Åre is an example that creates many guest nights when skiers, relatives and others come to the resort. Combined with research and the experiential industry, successful key factors could be transferred to other activities, such as hiking, hunting and fishing, to create more experiences for everyone,” says Jonas Danvind.

COOPERATION IS NECESSARY

Adding the health aspect, such as rehabilitation and healthcare, means there is more potential.

“It is a great match with the work on public health being done in the region. The county council’s child rehabilitation unit wants to use sport to create methods for children with ADHD and autism to enjoy physical activity. Cooperating with Sweden4all allows a link to a research study in health science at Mid Sweden University, providing scholarly depth,” explains Jonas Danvind. Eventually it could be possible to identify key factors for success that can be used in tourism to create globally unique activities for this target group.

Jonas Danvind points out that cooperation is necessary to be able to create experiences and health for everyone.

“We have to make sure we do the best we can with the resources we have. It’s not just about doing what’s politically correct. We need to have a mentality in which more people ask themselves what they can do to make a contribution through their business. This will be important for the development of the region and business.”

SWEDEN4ALL WORKS TO:

- Demonstrate that disability sports and activities for people with disabilities are an important development factor for inclusion, health, jobs and economic growth.
- Promoting physical activity for everyone in sports, leisure and tourism. This results in increased physical performance in outdoor activities, exercise and elite/amateur sports, leading to better health.
- Increase the sense of community for everyone through sports and physical activities
- Improve access to customised and fit-for-purpose equipment by using the excellent regional cooperation between individuals, Mid Sweden University and businesses.

SIGHTS SET ON THE NEXT PARALYMPICS

Ableway has niched itself in the target group of active people with a disability. Their first product, a sit-ski sled for cross-country skiing, will be launched on the market in the autumn 2013 along with at least two to three new prototypes. The company currently works with product development and the manufacturing and testing of sports and leisure equipment. At a later stage, activities will also be offered in combination with the products.

“We quickly realised that there’s a gap in the market for this type of product. During development we’ve had a great deal of help from Jämtland Härjedalen Disability Sport Association, which has lots of knowledge about the market. Helene Ripa, Olympic medallist in Sochi has given us feedback about our products, which is very valuable,” says Per Skoglund.

Three former students from SportsTech, an adventurer who is a double-amputee and an innovator with an engineering background are behind the business. This wasn’t an obvious grouping, but chance led to them meeting and it works well. Right now the company is at a stage where it is looking for financing.

“Our dream is to employ someone who can work on developing the company faster. We currently all have full-time jobs and don’t have time to work with it at the rate we’d like to,” says Per Skoglund.

Ableway has its sights set on the 2018 Paralympics in South Korea, where they hope that its products will help bring gold medals home.



Photo: Tatjana Breda-Gullbrandson

Bengt-Åke Fastesson, Geir-Arne Hageland and Per Skoglund.

MISSION: TO MAKE SWEDEN MORE INNOVATIVE

VINNOVA is the Swedish governmental agency for innovation systems, which sits under the Department of Trade and Industry. Its mission is to promote sustainable growth by improving the conditions for innovation and needs-based research.

VINNOVA IS TASKED with supporting research and development that leads to innovative, successful products and services and raises the level of innovation in Sweden. This is done through a number of different programmes that stretch across several sectors of society and business. The programmes have three main directional themes: strategically important areas; level of innovation of specific target groups; and co-operation across boundaries.

One of these programmes is VINNVÄXT whose objective is to promote sustainable growth in Sweden's regions. It does this by developing internationally competitive and attractive research and innovation environments within specific growth areas. This is known as "smart specialisation". The goal is for the various VINNVÄXT initiatives to become internationally competitive in their respective areas of strength, within 10 years.

In 2008, Peak Innovation became a designated VINNVÄXT winner, and thereby received a national mandate to become world leading in research and business development in the tourism, sport and outdoor sectors. A total of fourteen VINNVÄXT initiatives were crowned and Peak Innovation's funding runs over eight years.

In June 2011, VINNOVA conducted an international evaluation of Peak Innovation's first three years of operation. They decided to continue to finance the initiative motivated by Peak Innovation being "an engine for growth in a region of good growth potential." Additionally, it was noted that the initiative's new working approach created good opportunities for growth. Peak Innovation has an important role as an engine in the work of motivating the region's stakeholders to concentrate efforts on its strengths.

VINNVÄXT WINNERS

THE BIOREFINERY OF THE FUTURE

Building the biorefinery of the future based on raw materials from forests and energy crops.

FIBER OPTIC VALLEY

Cutting edge expertise in fibre optics, with a focus on fibre optic products for the engineering and communications industries.

GEO-LIFE REGION, FPX

Raising awareness of the benefits of geographic information technology for new areas of use, such as in public health.

GÖTEBORGBIO

Cultivates cutting edge research for innovations and applications by developing products in biomaterials and cell therapy, as well as cardiovascular and metabolic disease.

HÄLSANS NYA VERKTYG (NEW HEALTH TOOLS)

Develops new products and services to meet the increased need for care in the future. The focus is on effective care based in the home.

INNOVATION I GRÄNSLAND

Increases returns on capital invested in the food industry, through innovations that creates products and services with a high level of added value.

PAPER PROVINCE 2.0

Developing and renewing the traditional forestry industry, and creating a new competence hub for forestry-based bioeconomy.

PEAK INNOVATION

Developing the region of Jämtland to a leading international location for research and business development in tourism, sports and the outdoors.

PROCESS IT INNOVATIONS

Brings the region's process and engineering industries together with its ICT players in academia and business.

ROBOTDALEN

Develops robotics for industry, logistics and the health sector. The research and development project is run with companies and researchers. Supports new ideas from prototype to finished product.

SMART HOUSING SMÅLAND

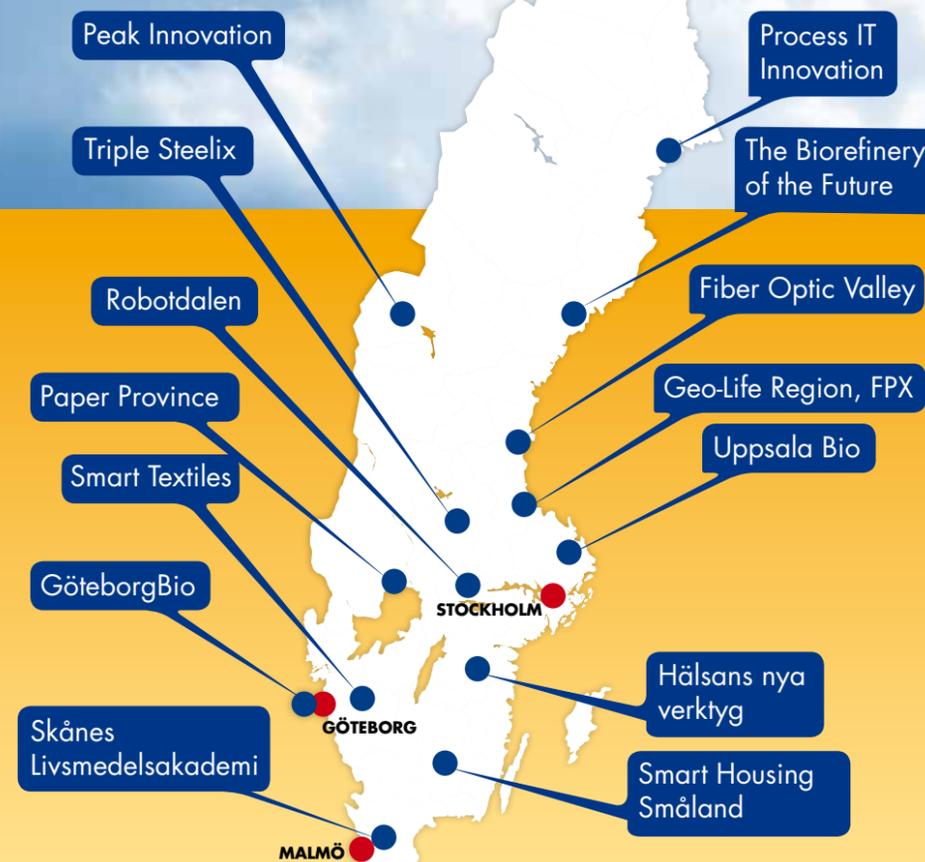
Creating smart housing and sustainable built environments both for the Swedish market and for export.

"It is wonderful to see results like those in Sweden, ones that actually mean something, that make a difference. Something that initially had low odds of being able to work wonders, has in the end become a miraculous machine for regional growth."

Victor Bostinaru, Rumania, Social Democratic MEP, about Peak Innovation, in association with Peak Innovation's visit to Brussels and the European Parliament in the spring of 2013.

ABOUT VINNOVA AND VINNVÄXT

- VINNOVA is a Swedish government agency under the Ministry of Enterprise, Energy and Communications and contributes to increasing growth and prosperity throughout the country.
- VINNOVA's particular area of responsibility is innovations that are linked to research and development, in other words, innovative, successful products, services or processes with a scientific basis.
- VINNOVA has around 200 employees and an annual budget of about SEK 2,7 billion.
- VINNVÄXT is an inter-regional competition that started in 2001. The aim is to promote sustainable growth by developing internationally competitive research and innovation environments.



SMART TEXTILES

Establishes the west of Sweden at the international forefront of the design, development and production of the next generation's textile products.

TRIPLE STEELIX

Bergslagen now has a considerable number of material processing industries and steel firms which, along with technology and service industries, form a strong steel cluster.

UPPSALA BIO

Creates new ways to provide long-term strength in the life science sector's competitiveness and growth in Uppsala, in close partnership with industry, academia, healthcare services and the community.

A HUB OF INNOVATION AND DEVELOPMENT

Mid Sweden Science Park is for idea-holders and entrepreneurs who have the courage to be innovative and want to do business. As the science park becomes an arena for regional development, Peak Innovation is able to increase its focus on creating benefits for stakeholders in sports, tourism and outdoor activities.

CAMPUS ÖSTERSUND'S U building has an open door to Mid Sweden Science Park. People are sitting chatting in the atrium, just inside the door, and a spontaneous meeting between a couple of the businesspeople in the building is happening by the coffee machine. It is steaming with life, visitors are coming and going, and someone calls on one of the business advisers in the Incubator upstairs. More people arrive and the premises fill with entrepreneurs, business people and students.

Mid Sweden Science Park (MSSP) supports innovation through knowledge, financing and cooperation. The main idea is to drive innovation processes and give innovators and entrepreneurs the best possible conditions for a good start. It isn't by chance that MSSP is located on Mid Sweden University's campus, as there are many idea-holders among the students.

The MSSP company was founded in 2008 on the initiative of Peak Innova-

tion and the stakeholders in the partnership. As in other locations for higher education, there was a need for a shared arena in which business and public bodies could work together and take responsibility for regional innovation strategies.

CREATING NEW BUSINESS

Activities started in the spring of 2012 and a managing director was appointed – Magnus Burvall.

“We are taking some of the load off Peak Innovation, which is now free to work more specifically on creating benefit and competitive advantages for the region as an international arena in the fields of tourism, sport and outdoor activities. We also offer somewhere for industries outside Peak Innovation's focus areas. It's a way of clarifying roles,” explains Magnus Burvall.

The Incubator has been under Mid Sweden Science Park's flag since 2013,

after previously having an uncertain existence as a project with a range of principals.

“The politicians took a strategic decision to move from funding the Incubator as a project to creating a more lasting structure. This also shows a change in attitude that corresponds well to the national innovation agenda.”

Magnus Burvall thinks that MSSP has now found the right forms and methods for its activities by involving more industries, creating new business areas and constellations.

“As a region with trade and industry comprised of many small companies, it is absolutely critical to have a creative meeting place for making contacts and building networks. We need to involve businesses and jointly use all the forces available for driving the development of innovation,” concludes Magnus Burvall.

A SINGLE COMPANY CAN sometimes find it difficult to complete resource-demanding development projects or to give its staff the opportunity for skills development. It could lack the necessary financial muscle or the time and resources for more comprehensive training. In a region with many small and micro businesses alongside larger, better established players, one solution may be to form business networks known as CATs – Cluster Action Teams.

In the spring of 2012, a group of product developers from some of the region's outdoor companies gathered with the aim of boosting development among the group's

members. The idea was to find partnerships where the sum of the work put in could be greater than a company could have achieved alone. Pål Dufva, head of product development at Woolpower, is one of the initiators of the network, along with Peak Innovation, and regards the group as vital for the region of Jämtland in remaining competitive on the international outdoor market:

“We need to be able to maintain a steady pace of development. If companies can drive certain issues together, everybody gains from that. I believe that networks contribute to creating a more attractive region for employment, establishing businesses and investors.”

In addition to ten or so outdoor companies, including Hilleberg the Tentmaker, Klättermusen, Elevenate, Åre Skidfabrik, Woolpower, Lundhags and Segebaden, Mid Sweden University is also represented in the team via SportsTech and Jegrelius – the Institute for Applied Green Chemistry, and Designcentrum Jämtland. This group forms a resource bank in which they can help each other to progress by using each other's expertise and experience to find solutions to shared problems.

During the first year the network's activities concentrated on efforts to increase the level of knowledge. These included

three one-day seminars on “Make the most of your international deals”, negotiating techniques in English adapted for outdoor companies, which was a course designed with the support of Almi, the County Administrative Board and the Regional Council.

“The regional cluster teams involve many players and reflect the shared needs of the companies. This is where Peak Innovation's activities and resources can do the most good as we can contribute more muscle,” says Tomas Ekström, head of operations at Peak Innovation.



Photo: Sandra Lisa Pettersson

MID SWEDEN SCIENCE PARK

A science park's task is to transform ideas into commercially viable products or services. Mid Sweden Science Park currently has three initiatives underway: Incubator, SoLab and Peak Innovation. Mid Sweden Science Park's task is to boost business and the labour market by stimulating the growth of new companies, developing companies and organisations that

are already operating and encouraging companies, capital and people to move to Jämtland.

The Incubator offers companies, students or entrepreneurs an office space in an open and creative environment, education and guidance, help with business development, advice and access to important financial networks.

THE MORE THE MERRIER

Cooperation between smaller players is vital to taking a place on the international stage. There are now several business networks in the region of Jämtland to boost the rate of development.



Photo: Stadium

STADIUM SATISFIED AFTER PRODUCT TESTING IN ÖSTERSUND

A team from Stadium was on site in Östersund for three wintery days, working with researchers from the Swedish Winter Sports Research Centre (SWSRC) on testing new products with a focus on temperature regulation.

ADVANCED FIELD MEASUREMENTS were carried out to investigate how different garments and designs affect runners' temperature regulation.

"Running continues to be a strong trend and more people run year-round, so we want to give our customers better chances of dressing properly, even in cold weather," says Catrine Marchall, Head of Product and Process at Stadium.

Initially, the tests were to be carried out in Germany, but Östersund was chosen thanks to an established contact with Professor Billy Sperlich, who is a visiting researcher at Mid Sweden University in 2014. Professor Sperlich is an expert in temperature regulation in textiles and, according to Sture Espwall, Grants Officer at SWSRC, is a strategic recruitment. This collaboration has already proven to be successful and was an excellent solution for Stadium's team.

"Testing in Östersund exceeded our expectations. The facilities are good and we could work efficiently. We managed to do a great deal during the three days we were there," says Catrine Marchall.

She is positive to expanding the collaboration with SWSRC, where there is now a great deal of expertise and good testing environments. In addition, Mid Sweden University's new investments in a wind tunnel and climate chamber provide even better conditions for testing functional clothing.

"Stadium has a large range of its own brands in several product areas, so there is great potential for continuing cooperation," concludes Catrine Marchall.

WORK IN PROGRESS

Qualisys 3-D camera helps skiers find the right technique on the slopes.



Photo: Qualisys

OVER THE YEARS, QUALISYS and the Swedish Winter Sports Research Centre (SWSRC) have had several joint research projects that have used Qualisys' 3-dimensional movement analysis system to help some of the world's best skiers. A forthcoming revolutionary project to be conducted with the Swedish ski cross team will collect 3D data on the slopes, helping create a better understanding of how different techniques influence the skiers' kinetic energy.

"Movements in ski cross happen too fast for the human eye to keep up, but using high tech equipment and cooperation with researchers means it is possible to discover new things to improve," says Patrik Almström from Qualisys.

Cooperating with SWSRC means that Qualisys has the opportunity to develop, test and optimise new areas of use for its product.

All R&D cases are conducted with the support of Peak Innovation, for financing the tests and the test leaders.

DYNAFIT DEVELOPS THE NEXT GENERATION OF ALPINE BINDINGS IN ÅRE

In the summer of 2013, Fredrik Andersson, a product developer who has contracts with Dynafit, moved into premises at the Swedish Winter Sports Research Centre in Åre. This allowed him to access very advanced measuring equipment, high speed cameras and prototyping machines. In 2014, Dynafit will conduct physiological and biomechanical tests with a focus on work economy in alpinism to optimise the next generation of bindings. The tests will be conducted using scientific methodology in the laboratories in Östersund and field testing in Åre.



Photo: Anja Palm

JOHAN REHDE DIRECTOR FOR GROWTH, CITY OF ÖSTERSUND

In 2011–2014, the Östersund Municipality is investing SEK 17 million in the Swedish Winter Sports Research Centre (SWSRC), SportsTech and Etour research environments. Why?

It is important for the City of Östersund to participate in development and support areas that generate growth. These are research centres that have a high international standard and that are a good match for the municipality's profile areas. Östersund is not just the Winter City, it also has a distinct profile in sports and the outdoors.

The biggest share goes to SWSRC, which is a world-leader in its field; there is a clear link between the research and the athletes' performances. It is great that investments give results in the shape of Swedish medals.

Research is not only part of promoting sporting performance, it also contributes to new knowledge and the opportunity to test new materials and products. Research in materials development helps to strengthen regional companies and stimulate new and innovative products that generate growth and jobs in the region.

Investments are a partnership, in which Mid Sweden University and the City of Östersund jointly put in resources to boost the research environments. In addition, the Swedish Olympic Committee has made further targeted investments in SWSRC.

WORKSHOP WITH IPC

The successful Paralympics in Sochi recently drew to a close. On 4-6 June 2014, representatives from the International Paralympic Committee will arrive to discuss the possibilities for developing the Mid Sweden region for the Winter Paralympic movement with regional representatives.

The two days are planned as a workshop, at which they will talk about establishing a centre for Nordic Skiing, ongoing activities in events and research, as well as product development and future actions and activities for international collaboration. The workshop is a partnership between Mid Sweden University, the City of Östersund, Åre Municipality, J H Disability Sports Association, the Swedish Sports Organisation for the Disabled and Peak Innovation.

INSPIRED BY LIGHT

Storsjögymsnaset and Peak Innovation have launched a multi-year partnership in which the college students' ideas and work will be used to help market Jämtland's opportunities. 'Inspired by light' is the students' initial project where they use light and cameras to highlight Jämtland's attractions. The objective is to give the students an opportunity to work with real cases that prepare them better for a real working day, full of high demands, tight deadlines, and fast tempo.

"Together with the students, we decided to work more towards businesses and organisations. Partly so that students can learn how to work with clients, but also to make them more attractive to the job market after college. Peak Innovation has given the students free rein in marketing Jämtland from a different perspective, which gives them a chance to bring out their creativity," says Alee Farrohi Project Manager at Storsjögymsnaset.

INTERNATIONAL KNOWLEDGE EXCHANGE

On 6-11 April 2014, Jämtland hosted an international exchange trip as part of CEDEFOP, an EU programme for knowledge exchange that focuses on lifelong learning, business, expertise and smart specialisation. On the theme of "Bringing education, enterprises and science together" the 14 delegates, from institutions such as the Chamber of Commerce in Hamburg, University of Sussex in Brighton, Business in the Community, Dublin, and Arteweldehogeschool in Ghent, were informed about Jämtland's work on innovation and expertise, followed by dialogue and learning.

For Jämtland/Härjedalen, the visit was an important part of the strategy of being more active in European cooperation, where Peak Innovation and the organisation of our way of working with smart specialisation have an important role. Peak Innovation is part of supporting the visit's organisation.



Photo: Frida Jansson

CREATIVE SUMMIT ÅRE

On 10-11 April 2014, creativity bubbled even more than usual in Åre. This was the first time that Creative Summit, a conference focusing on creativity, communication and technology, with participants from around the world, was held in Jämtland. There were inspiring speakers such as Niklas Bergh, creative director at Zound Industries, Caitlin Burns from Starlight Runner in New York, Steve Benford, professor at Nottingham University, Johanna Frelin, managing director of Hyper Island and Liz Sivell, creative director at Star JudgeGill in London.

"The tourism, sport and outdoor industries have fantastic potential in the digital economy, and that applies to both products and services. Creating an international meeting place for the digital sector creates the right conditions for interesting cross-pollination," says Magnus Burvall, managing director of Mid Sweden Science Park.

Peak Innovation is a partner of Creative Summit Åre.



PEAK INNOVATION – OUR SERVICES

DISCOVER – information about opportunities in the Jämtland Region and personal visiting programs.

ESTABLISH – advice before and during an establishment. Get assistance with practical work such as setting up the company, soft landing program, finding suitable locations, information on taxes etc.

CAPTURE – transfer ideas and research results from academia, business and sport to the innovation system.

VERIFY – take ideas to proof of concept.

COMMERCIALISE – support for companies in the startup phase.

GROW – support for young and established companies.

ARENAS AND NETWORKS – wide-ranging professional contacts and networks, virtual and real.

DEVELOP/TRAIN – create and execute programs to guarantee the right expertise, both short and long-term.

REACH OUT – marketing of the players in the innovation system – e.g. companies, research environments, destinations – locally, nationally and globally.

CONTACT US

Peak Innovation is a partner for researchers, business developers and companies that wish to conduct development activities in the areas of tourism, sport and the outdoors in the county of Jämtland. www.peakinnovation.se

GET A SOFT LANDING

We challenge you to try out the region with a very generous Soft landing program.

Start a product development project in the region of Jämtland for at least six months (up to two years) and we will put together a Soft landing program for you. Examples on some of the benefits are

- Free office space (including office infrastructure) in a creative environment in the Mid Sweden Science Park
- Time from professors in world leading research environments
- Assistance from research engineers in the prototype lab, textile lab or test environment in the Swedish Winter Sports Research Centre
- Reduced cost for producing prototypes
- Access to lead users/elite athletes/customers on test panels



JIMMY ODÉN
Founder Elevenate

"As newly started clothing company, marketing has an enormous importance. We chose between Verbier and Åre for our localization, as both are well-known, strong brands. There is no doubt that Åre offers the more creative environment and the best conditions for us as entrepreneurs. We want to be part of Åre's success story."

OUTDOOR CLUSTER

These companies together with the Mid Sweden University create an outdoor cluster with valuable networks and many possible partnerships.



THE REGION'S OFFER

Come join us - establish your business in our region. Peak Innovation is a partner for researchers, business developers and companies that wish to conduct development activities in the areas of tourism, sport and the outdoors in the county of Jämtland.

A FLYING START WITH THE SOFT LANDING PROGRAMME

Access to world leading research, assistance from research engineers in testing and prototype laboratories and an office space in the creative environment of Mid Sweden Science Park or in the research centres will give your product development team a flying start. Faster product and service development means faster business growth. As a start - let us put together a personal visit programme!

ACCESS TO WORLD-LEADING EXPERTISE AND LEAD USERS

Mid Sweden University has unique, world-leading research environments for winter sports and product development for the outdoor industry, providing opportunities to access research expertise. Take part in research projects –contribute your own time and in return you'll get time from professors and research engineers. Companies within the region are prioritised when new research projects start. Other forms of expertise are also available, such as the projects in the SportsTech degree programme, and the region is known for its labour supply. We also have access to lead users/elite athletes/customers for test panels.

ACCESS TO HIGH-TECH TESTING LABORATORIES

Make use of the possibilities for prototyping at a reduced cost during product development in the region. The SportsTech lab offers a prototype lab, a textile lab and a wind tunnel in a climate chamber – all open to companies that are established in the region. The Swedish Winter Sports Research Centre in Östersund has a high-tech lab for physiological and biomechanical testing, with a particular focus on cross-country and biathlon. Åre has a test centre for alpine skiing and sports, directly linked to the National Alpine Arena.

BE A PART OF AN OUTDOOR CLUSTER

Many successful brands started in the Peak Region, for example Peak Performance, Hilleberg the Tentmaker, Klättermusen, Lundhags, Trangia and Woolpower. The region attracts researchers, companies and elite athletes due to the good conditions and the support of the local authorities.

STRENGTHEN YOUR BRAND FOR A EUROPEAN MARKET

Åre and Östersund work as brand names and door-openers for businesses that want to build their brand in Europe. Peak Innovation's role includes marketing the players in the innovation system – e.g. companies, research environments and destinations – locally, nationally and globally.

ACCESS TO AN OUTDOOR CLUSTER

Jämtland has a history of many successful outdoor companies. These companies, along with Mid Sweden University and a collaboration with Scandinavian Outdoor Group, create an outdoor cluster with valuable networks and many potential partnerships.

Vision 2020 – the Jämtland region is a leading European environment for research and business development in tourism, sport and the outdoors.



Photo: Anders Robertsson / Jämtland Härjedalen Tourism



Jämtland region's investment in tourism, sports and the outdoors

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