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Lapland University of Applied Sciences

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Teemu Niemelä, Senior Lecturer

Lapland - on top of the world

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Lapland UAS in figures (2024)

Students **6000**

Employees **426**

Operating area **98 984** km2

Turnover € **50,1** million

Volume of RDI activities
€ **13,6** million

23 Bachelor degree programmes

13 Master degree programmes

953 Bachelor degree graduates

248 Master degree graduates

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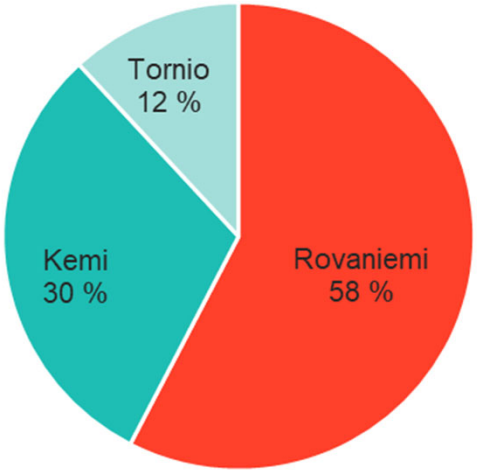
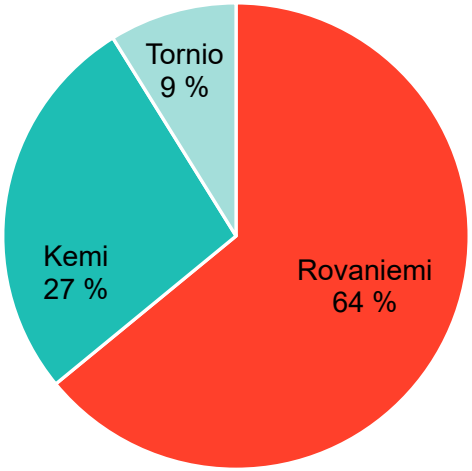
Lapland UAS community

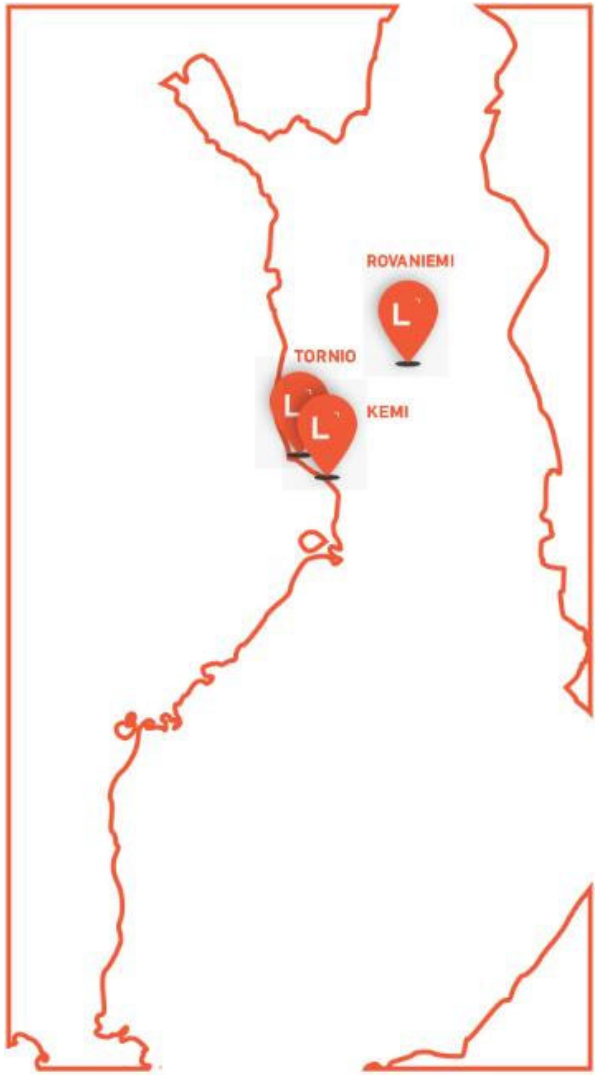
Students*



Employees



** Present in September 2023*



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Fields of education

- Culture (Tornio)
- Natural resources and the environment (Rovaniemi)
- Tourism, catering and domestic services (Rovaniemi)
- Business and administration (Rovaniemi & Tornio)
- Technology and transport (Kemi, Rovaniemi & Tornio)
- Social services, health and sport (Kemi & Rovaniemi)

Bachelor of Sport Studies in Lapland UAS

- 210 ECTS (3,5 years)
  - Language and communication skills 20 ECTS
  - PE pedagogy 25 ECTS
  - Health promotion, wellness coaching, anatomy and exercise physiology 30 ECTS
  - Sport business studies 25 ECTS
  - Internship during studies 45 ECTS
  - Final Thesis 20 ECTS
  - Elective studies 10 ECTS

AND:

- Arctic Green Exercise (adventure pedagogy, winter sports, sustainable hiking) 35 ECTS

OR:

- Sport Coaching of the Future (analysis and enhancement of performance, AI and coaching, dialogue between coach and athlete etc.) 35 ECTS

New Bachelor of Sport Studies, Outdoor Experiences is coming! Studies will start autumn 2027!

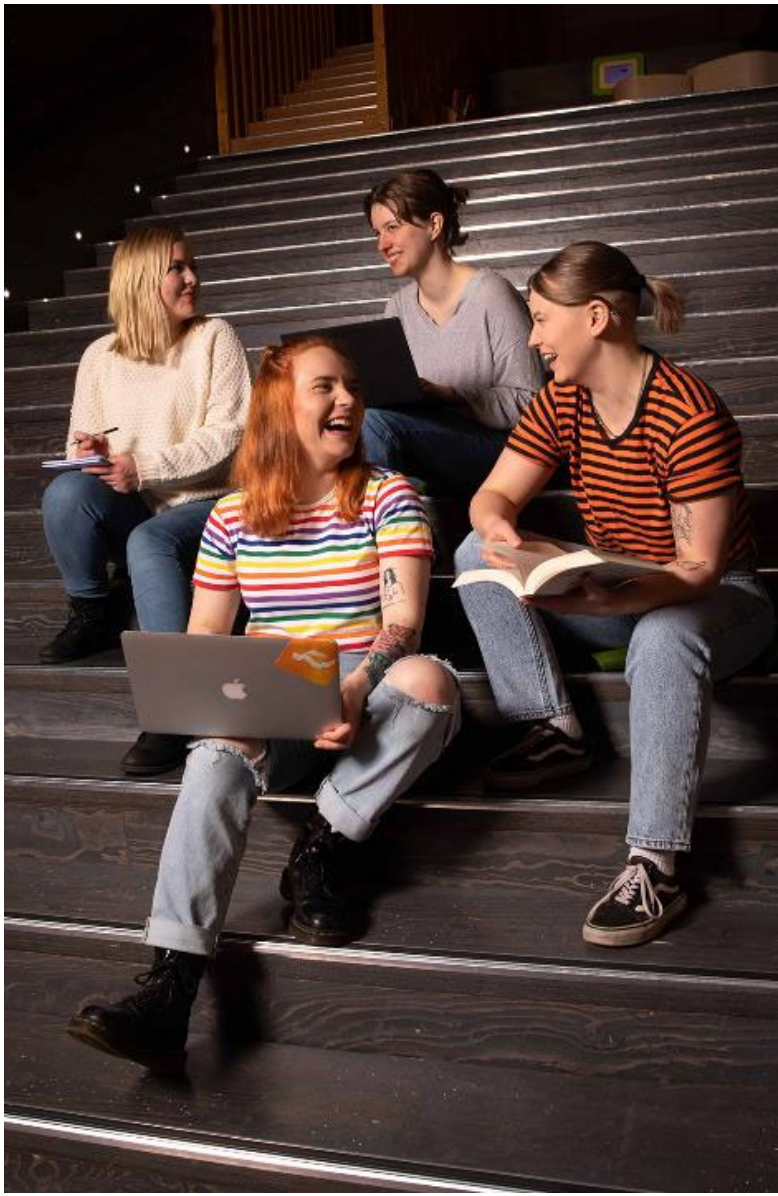
- Step into a degree that takes learning beyond the classroom — into the wild. The Bachelor of Sports Studies, Outdoor Experiences (210 ECTS) prepares you for a global career in outdoor leadership, environmental education, and adventure tourism.

  This international program blends outdoor education, technical outdoor skills, and experiential learning to prepare you for a career in wilderness leadership or sustainable outdoor entrepreneurship.

  Key features:
- Hands-on outdoor training across all seasons
- Focus on sustainability, leadership, and human factors
- International internships and project-based learning
- Pathway to global guiding and adventure tourism careers

International student community

- Bachelor degree programmes
  - Nursing
  - Business and Talent Development
  - Sport Business Management
  - Tourism
  - Machine Learning and Data Engineering
- Master degree programme
  - Digital Business Management
- 233 international degree students representing 64 nationalities
- 188 exchange students



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Experienced partner in RDI

- Lapland UAS RDI-activities are in scope among the top of the Finnish universities of applied sciences.
- Over 20 years of experience in the coordination of international EU projects.
- Involved in many international

funding programmes

- Horizon Europe
- Joint Undertaking (KDT)
- Interreg Aurora
- Interreg B (Northern Periphery and Arctic; Baltic Sea Region)
- Interreg C (Europe and previous)
- Erasmus+
- ENI/ENPI programmes
- Eureka Clusters (ITEA, XECS)

and networks

- uArctic
- Smart Specialsation thematic platforms
  - Digitalisation and safety for tourism
  - Clusport
  - Social economy
- InShape
- EPSI
- ENOS
- Robocoast EDIH
- S3 Bioenergy
- European University Foundation (EUF)
- EARMA
- Vision 2020 (Crowdhelix)

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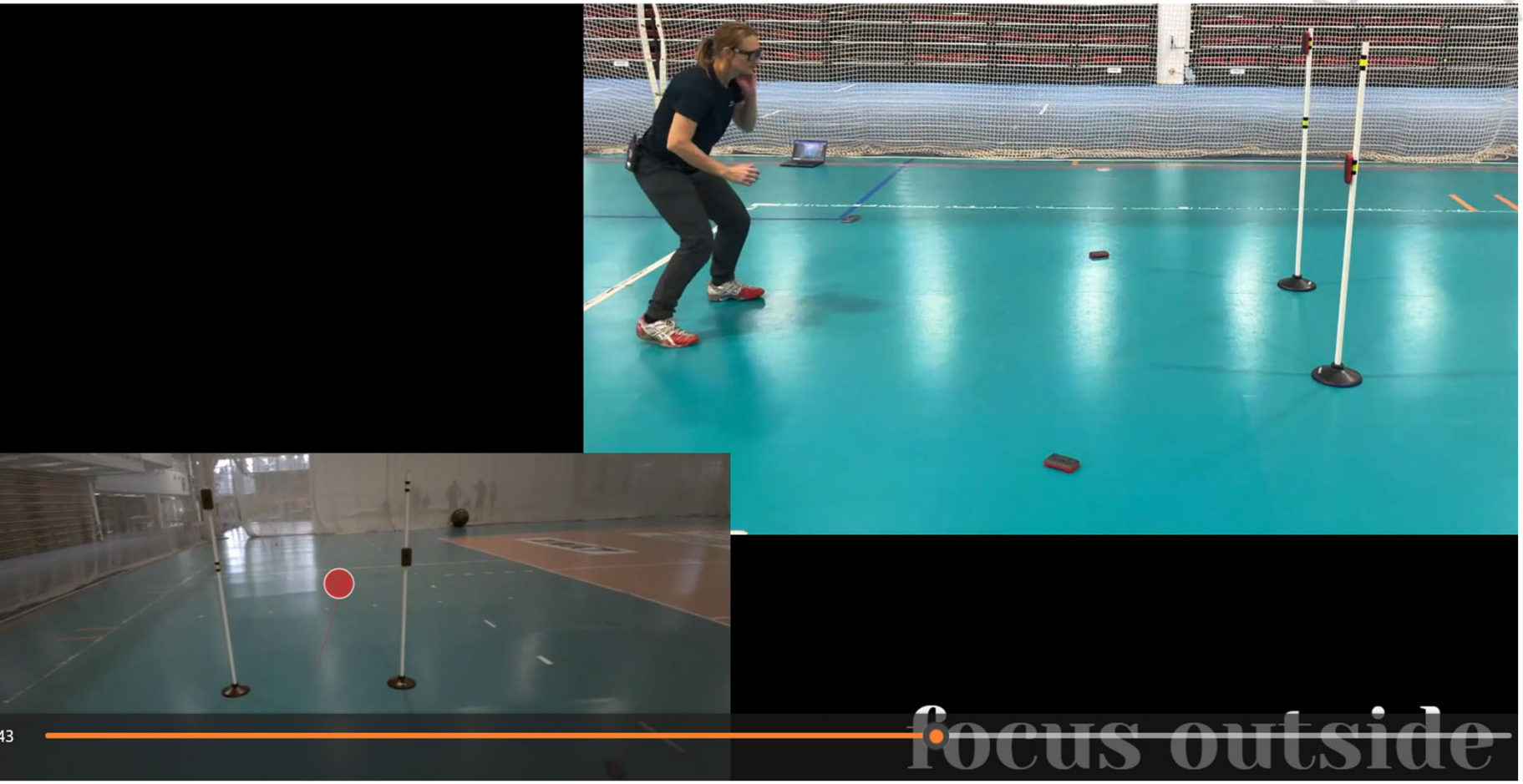
Examples of ongoing and upcoming sport projects:

- **SmartMotion** – Innovations at the intersection of perceptual-motor skills and AI technology
  - Silmäasema, Toyota racing, Nro.One, Terveystalo
  - Lapland UAS, Santasport, Kihu
- **InShape** - The European Network of Innovation Hubs for sports & vitality
  - 7 regions in Europe /
  - 13 Flagship companies + more than 20 co-developer companies
  - ComeBack Center

And many others: 1) Sharing European Sport Excellence (Erasmus +), 2) Digital Sport and Healthy Active Lifestyle Ecosystem (EAKR), 3) Depart (Interreg Europe), 4) LiFt (EAKR) etc.

Example of InShape (ACL recovery protocol with dual tasking):



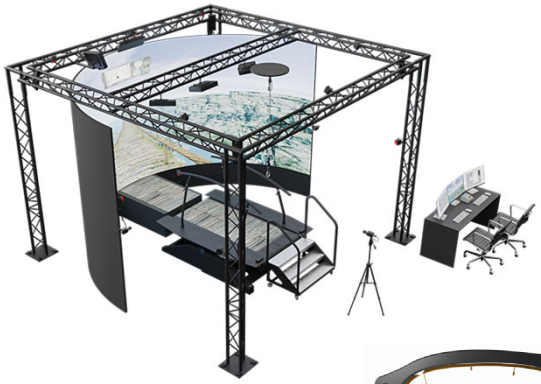
Example of upcoming SmartMotion:

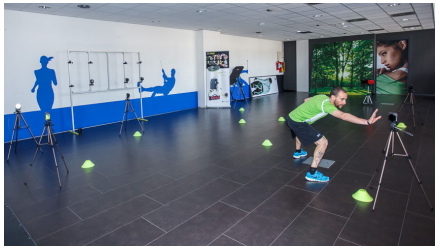
Example of upcoming SmartMotion:

Lapland UAS Sports Lab (Rovaniemi)

Lapland UAS Sports Lab (Rovaniemi)

- BlazePod
- Dartfish
- Delsys Trigno
- Desmotec D. Full
- Desmotec E. Board
- Desmotec V. Full
- Desmotec V. Mini
- Ergoline Bicycle Ergometer + Blood Pressure Monitor + Pulse Oximeter
- GoPro kamerat
- Insta360 kamera
- Lactate Plus
- Motek Grail + Vicon motion capture system
- Movesense
- Newtest contact mat
- Oculus Quest2
- PNOE Oxygen and Carbon Dioxide Analyzer
- Polar Heart Rate Monitors
- Polar Team Pro
- Saehan Hand Dynamometer and Skinfold Fat Caliper
- Senaptec Strobe glasses
- Smart Equitest
- Suunto Heart Rate Monitors
- Tobii Pro 3 glasses
- Witty SEM by Microgate
- Xsens DOT





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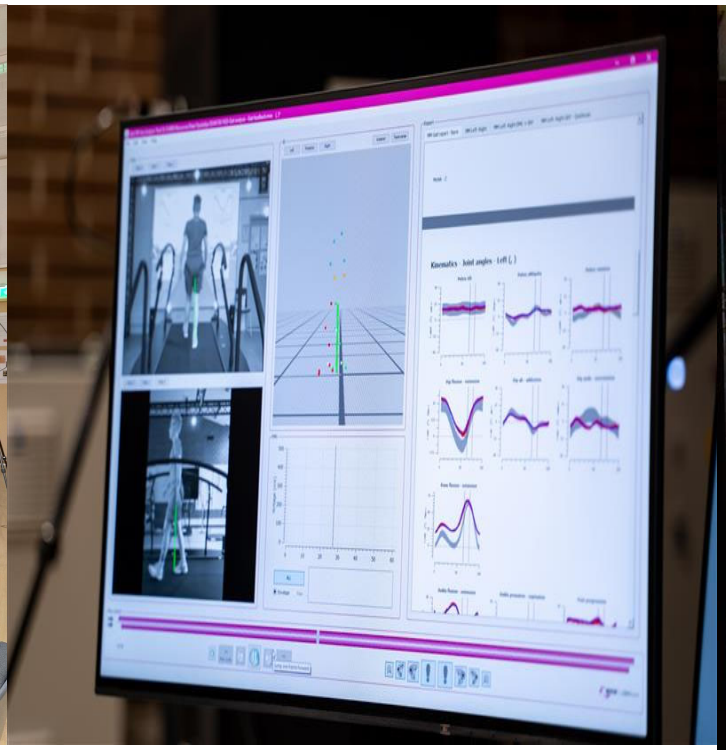
Lapland UAS Sports Lab (Rovaniemi)



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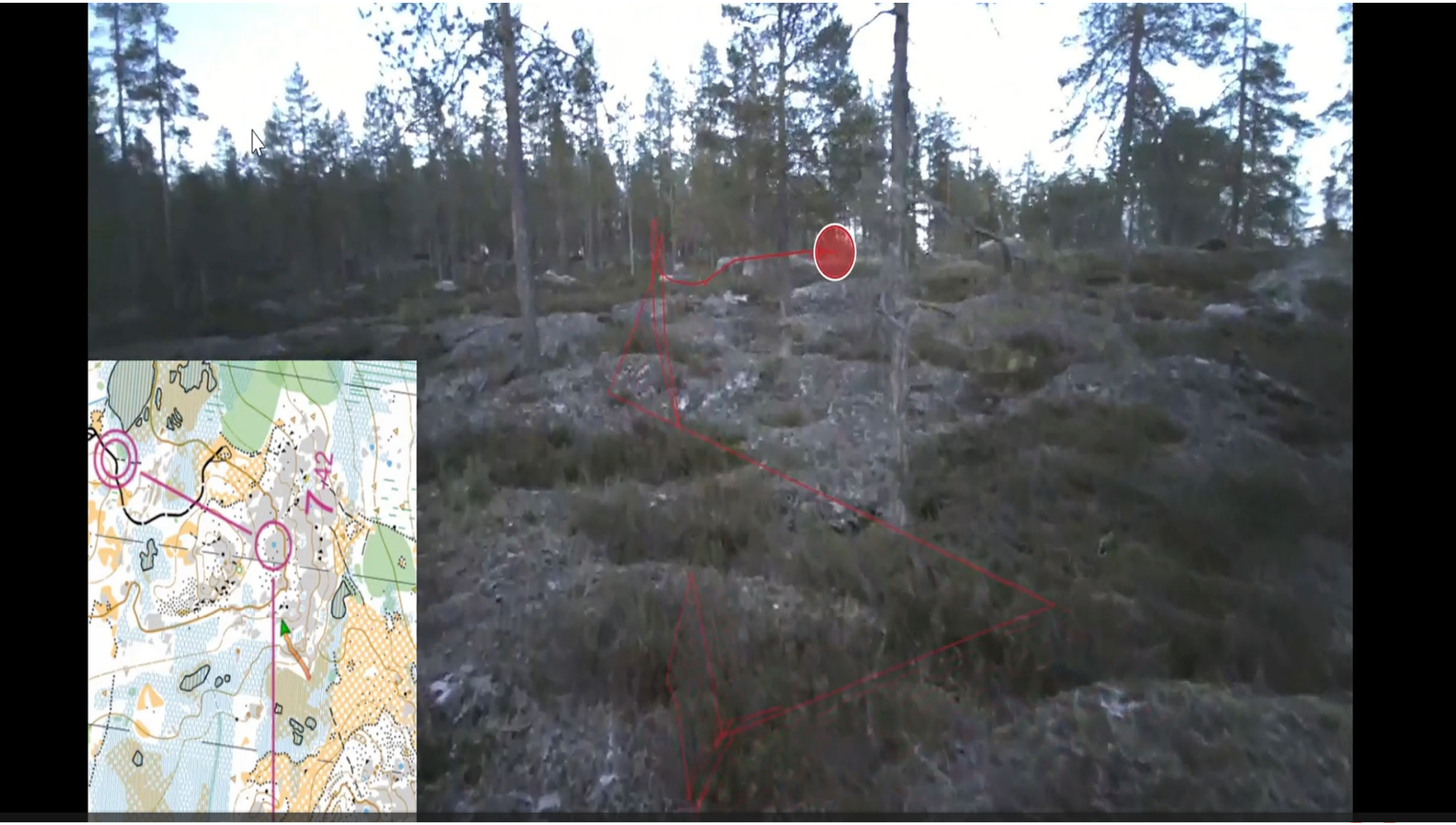
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Lapland UAS Environmental Testing Lab (Rovaniemi)

Specialized in testing and research under extreme conditions.
The environmental laboratory provides a controlled setting where technologies, products, and solutions can be tested and developed under regulated conditions.

Location: Lapland UAS Jokiväylä, Rovaniemi
Facility size: 70 m²
Temperature range: -40 °C to +30 °C
Humidity range: 5–95 %

Examples of testing and analysis possibilities:
- Usability of technology in extreme conditions
- Battery life measurement in cold and hot environments
- Effects of ice formation on devices
- Testing drones and wearable technology
- Functionality of sensors and IoT devices

Utilization of collected data:
- Product development and innovation testing
- Modeling the impact of extreme conditions
- Improving usability and durability

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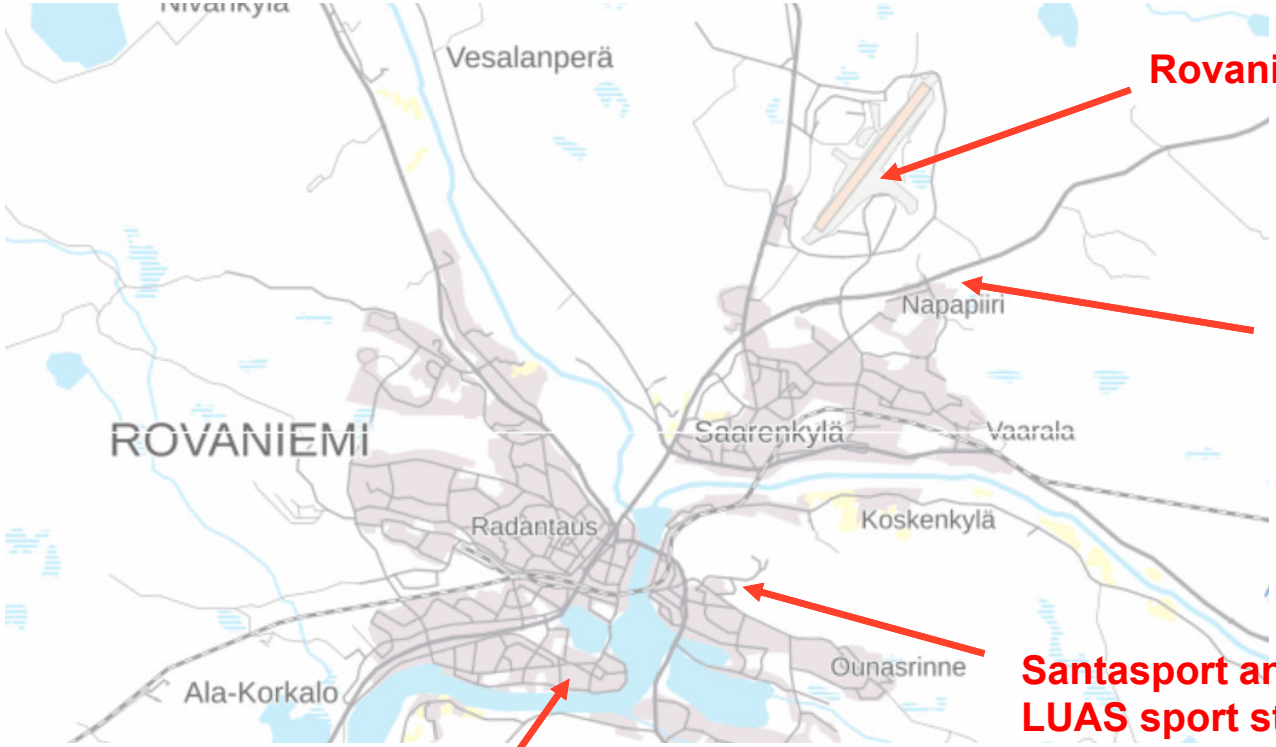
Co-funded by the European Union

Rovaniemi



Rovaniemi airport

Santa Claus village

Santasport and LUAS sport studies

LUAS main campus

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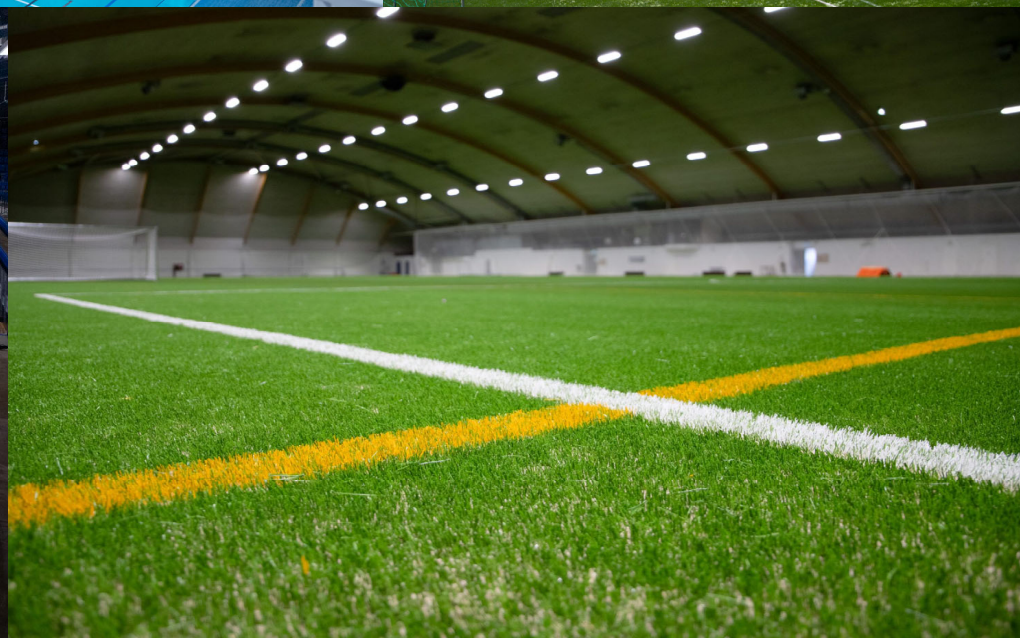
Co-operation with Santasport Olympic Training Center


#CLVolleyW
EuroVolley.TV
POLKKY

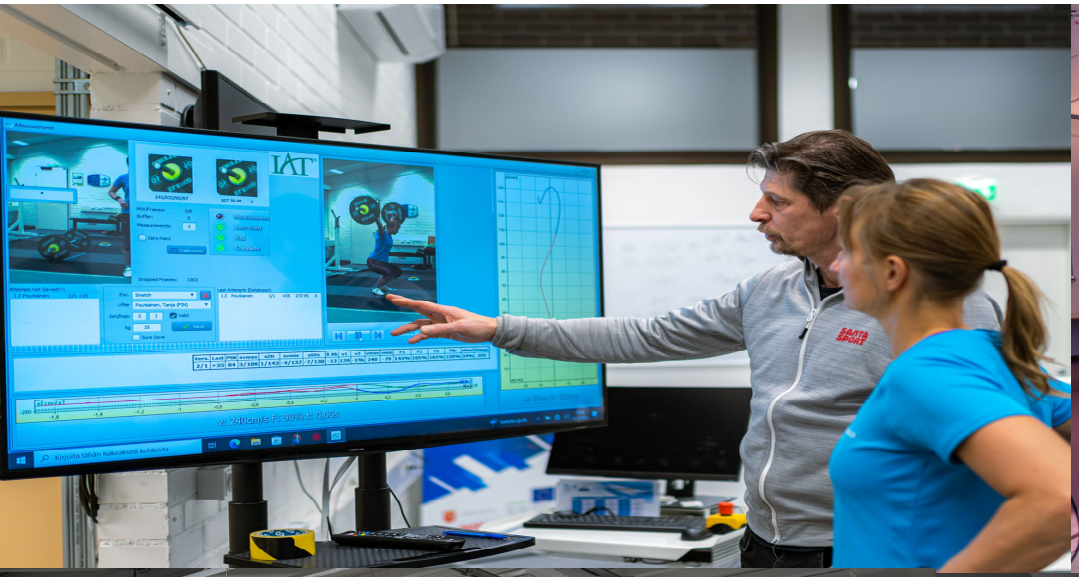

ROVALA
KPMG








RIVI II
Maastoissat
5–8



IAT
SANTA SPORT


RL2700E


SPORTISTI PAREMPI
SANTA SPORT
ELEIKO


SPORTISTI PAREMPI
SANTA SPORT

What do we aim to achieve from the project:

1) Boosting our team's expertise through strong partnerships
2) Creating new, high-quality learning materials for future sports coaching study courses
3) To find international partners to co-create and implement new RDI projects in future
4) To find like-minded researchers to collaborate on studies and publish scientific articles together
5) Enhance exchange opportunities for outgoing and incoming students
6) Increase Erasmus + staff and teacher exchanges in both directions

What might be our contribution to the project:

1) We can offer LUAS Sports Lab to use in project (also when it's used by partners staff or student)
2) We can offer facilities to test protocols on snow, grass, ice, cold, hot, water, wilderness, dark etc.
3) Athletes from various sports in the Lapland Sports Academy enable testing of young athletes across different disciplines
4) Link to many ongoing and upcoming perceptual-motor skills RDI projects
5) Santasport OTC knowledge of testing top-level athletes from various different sports
6) Possibility to recruit numerous participants through the Defence Forces
7) I am personally planning to do research from somatic nervous system supercompensation following different types of training sessions. In addition, we are planning many studies in the area of eye-movement tracking.

THE NORTHERN FACTOR

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