

# Project AUTOSTRIP-

«Autonomous Systems in Transport and Industrial Processes»



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USN Partnership  
Rector's staff





**18.230**

STUDENTS



**1.900**

EMPLOYEES



**8**

CAMPUSES



**65**

BACHELOR  
PROGRAMMES



**36**

MASTER  
PROGRAMMES



**8**

PHD  
PROGRAMMES

BØ – DRAMMEN – KONGSBERG  
NOTODDEN – PORSGRUNN  
RAULAND – RINGERIKE – VESTFOLD

# FORREGION Capacity Enhancement projects

- AUTOSTRIP is one of 7 national projects financed by the NRC, the region and USN
- Started 2017 with a total budget of 8 MEUR over 6 years
- It is about:
  - how to develop a research area based on the future competence need, where the institution has an opportunity to take a leading research position relevant to the industry/business
  - mandatory learning outcome through courses, subjects or general education/degrees
  - the institution must taking an agile role and willing to change/adapt
  - preferably multidisciplinary projects
  - an integrated process with the industry/businesses
- So how do you do that in an mostly static, top down organisation with typically low multidisciplinary collaboration with 2 faculties with 5 institutes spread over 4 campuses?

# AUTOSTRIP approach from USN

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- Involved the industry from day one and further on through established cluster
- Established an agile unit with project developers from the industry to develop applications
- Ownership placed outside of line organisation at the rectorate
- Line organisation is stimulated through
  - Expectations and goals
  - Some basic funding to stimulate collaboration
  - Funding based on deliverables
  - Help to develop applications and to coordinate with industry/businesses
  - Gift professorships in cooperation with regional partners
  - Steering committee with all responsible involved committing in front of the partners
- Develop a national collaboration on autonomy research

# AUTOSTRIP by it's core

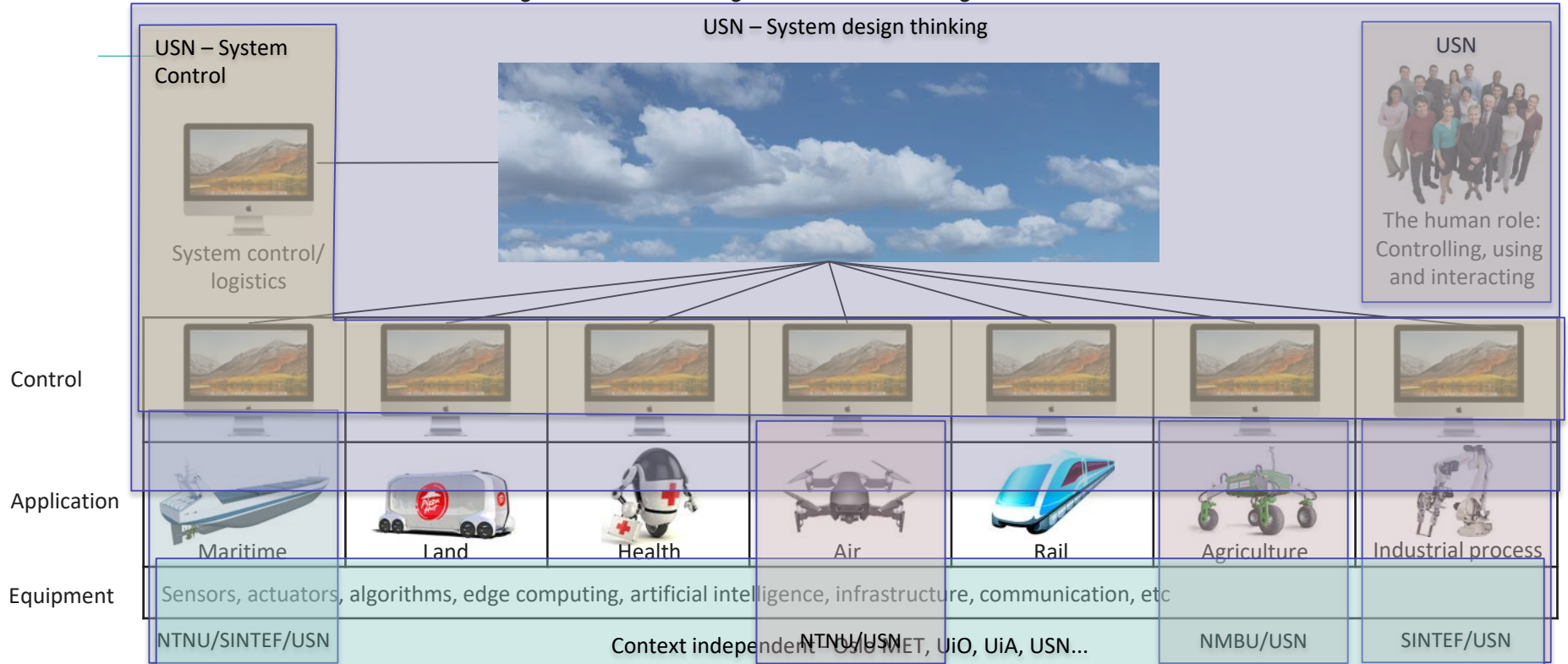
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- For the industry and their future competence need
- Help them to SUCCEED in mastering AUTONOMOUS SYSTEMS








Our solution together with the industry partners:

- Develop competence, build capacity and convey through education and courses
- Develop tools and infrastructure for development, test and verification (test arenas)
- Develop research projects with the best of the industry
- Established SAMS Cluster – Sustainable Autonomous Mobility Systems with the industry
- All-in-all: Develop complete innovation system to help the industry and startups

# The autonomous system – system of systems



# Sub projects and cross competence focus

	 Maritime	 Land	 Health	 Air	 Rail	 Agriculture	 Industrial
<b>Logistics and multi modal operations</b>							
<b>Machine Learning and Smart Sensors</b>							
<b>Systems and Security</b>							
<b>Human Aspects in Autonomous Systems</b>							
<b>Business Development, Entrepreneurship and Innovation</b>							

# Goals of AUTOSTRIP

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- Understand and communicate with the industry
- Become more adaptable to external needs
- Develop the areas where we can play an important role
- Manifest the value of the research and the collaboration with the industry through
  - Relevant research projects with the best in the industry
  - Growth in the resource capacity to meet external demand
  - Portfolio of research projects of 30+ MNOK per year by 2023
- Develop new curriculums based on need
- Anchor USN as central actor in a national



# Curriculum development

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- Changed B.Sc. program Cyber Security (start 2020) – refurbished course according to industrial demands
- Extended M.Sc. Computer Science with specialisation in Cyber Security (start 2020)
- Extended M.Sc. IT Management with specialisation in Entrepreneurship (start 2020)
- New M.Sc. Autonomous Systems, start 2021
- Interesting subjects will be made available to the industry

# Learnings from the process

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- Academic institutions (generalised)
  - are not adapted to quick hiring of resources
  - are very funding and task oriented
  - stimuli through funding and resources is crucial
  - easier to get backing for projects initiated internally than externally
  - has a low willingness to change – change will come – but slowly – be patient
- Top management backing is essential
- Patience and a positive attitude helps
- You can never coordinate and discuss too much...
- It is actually about non profit business development and professionalising of an academic institution



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