

Shiftin' Times

September Newsletter



SHIFT
HYPERLOOP

What is Shift Hyperloop?



S H I F T
H Y P E R L O O P

"Once we accept our limits, we go beyond them."

- Albert Einstein

Imagine a world where you could travel from Trondheim to Oslo in under 30 minutes.

Imagine a world where you won't have to wait countless hours in line at the airport.

The thought behind the hyperloop transportation concept is placing a levitating high-speed train in a depressurised tube. This will make it possible to go faster than any other means of transport currently available to the public.

Each year since 2015 there has been arranged a hyperloop competition sponsored by SpaceX. The competition has one goal: To further develop the hyperloop so that we can revolutionize travelling.

That is exactly what we in Shift Hyperloop are going to do. As a part of this competition we will create a "pod", that we hopefully will get to test at the SpaceX test track.

How Team 2021 is Prepared for the Pandemic



Covid-19 has left no one unaffected. This spring Shift had to shut down due to Covid-19 spreading all over the globe. This has forced everyone, including shift, to take appropriate measures. We had a talk with CEO Martin Røise to hear how Covid-19 has affected our operations and how we have prepared to ensure safety for all our members.

What measures have Shift Hyperloop made to take it's responsibility during the Covid-19 pandemic?

We have made guidelines for the organisation, what measures everyone has to take when working on Shifts clock. We have also made a check-in system at the office so in a scenario where a member has tested positive, we know who was at the office at the same time.

Do you see the pandemic affecting Shift Hyperloops ability to operate?

It is definitely harder to gather all the members and have social events. Social events are important for the cohesion of the organisation, but we are getting there, just in a slower pace than without COVID-19.

Last year Shift hyperloop had to shut down its operation due to the lockdown. What will happen if a similar situation occurs this year? How are we prepared?

Hopefully we can avoid a lockdown, but in that case I hope we can continue to reach our goals within the limits of the lockdown.

The Search for New Members

This year there has been a significant increase in the number of applicants and the organization grew 50% in member size.

At the end of August, Shift Hyperloop Team 2021 saw the light of day.



With 82 highly motivated students working at Shift, we are certain that we can achieve our goals.

Students vary in age, nationality, and line of study, all adding up to a group where everyone is ready to make an impact, compete, and create the greatest Hyperloop Pod of 2021.

Startup Week & Bootcamp

10th of September, Shift Hyperloop team 2021 had its first ever meeting. This was the start of our Bootcamp where we got to know each other a little bit better. Many new nervous members got informed about the upcoming plans for 2020 and 2021. This was followed by several team building activities



In addition to planning out work schedules and workshops, we have arranged several social activities. A few of them being; Quizzes, competitions, bowling at Dora, eating at Lager 11, and board game evenings. All were great activities to create a cohesive and team-oriented group.

MEET OUR

In August of 2020, the board appointed a new CEO to lead Shift Hyperloop Team 2021 for the upcoming 12 months. Get to know Martin Røise and his view on Shift Hyperloop, his previous experiences, and how Team 2021 is prepared for any challenge coming our way.



Full name:
Martin Røise

Age:
27

Line of study:
Master in Management & Technology

Hometown:
Nøtterøy

You're the newly appointed CEO of Shift team 2021. How do you feel?!

-I feel a bit overwhelmed but also eager to get to know the organization and the members.

What previous experiences will you bring into your position, what did you do before you joined Shift Hyperloop?

-My previous experience is mostly from the Norwegian Navy, I worked as a logistics officer in the Norwegian Naval Special Warfare Center before I went to the Naval Academy. At the naval academy I studied military leadership and mechanical engineering. After the academy I served as an officer onboard the norwegian submarines.

What type of leadership can Team 2021 expect from you?

-I want to bring transparency and perspective to the members on how the board is working and set achievable and well stated goals we can reach so everyone knows that we are steering in the right direction.

NEW CEO

Team 2021 is just about to take off. What's our starting point this year?

-Our starting point is better than ever! We are around 80 members, the European Hyperloop Week has just been announced. So not only are we well suited to build a highly competitive POD there will also be arenas where we can put Norway and NTNU on the Hyperloop map.

Shift grew 50% in size this year, why do you believe that is?

-Shift Hyperloop has a very strong message. The hyperloop, a futuristic but achievable, eco friendly, low energy, fast way to travel. I think this is compelling. And the fact that Shift Hyperloop is in the front of this technology race in Norway.

Hyperloop as a concept is growing quickly and attracting more attention around the globe, what does this mean for Shift Hyperloop Team 2021?

-Hopefully this means that we, as the only student Hyperloop team in Norway, are going to get a lot of attention. Both from media but also from companies that are interested in either the technology or the how hyperloop would impact the society.

Is there a clearly stated goal for team 2021? Where are we, and what is our main objective?

-First and foremost our goal is to build a POD that can compete at the highest level and of course compete in both SpaceX and EHW competition. And if we have the energy and resources to start working with politicians and companies to broadcast the hyperloop vision throughout Norway.

Going forward, what are you most excited about?

-I am excited about the POD and the competition of course, but I am also excited about the opportunity we have to broadcast the importance of hyperloop technology to society, put hyperloop on the map in regards to public transportation and politics.

Do you have anything you wish to say to our current and new sponsors?

I would like to start by thanking them with their contribution! We are 100% dependent on our sponsors and could not hope to build a POD without them. And I promise that Shift will hold up

Team of

Electronics

Members:
13

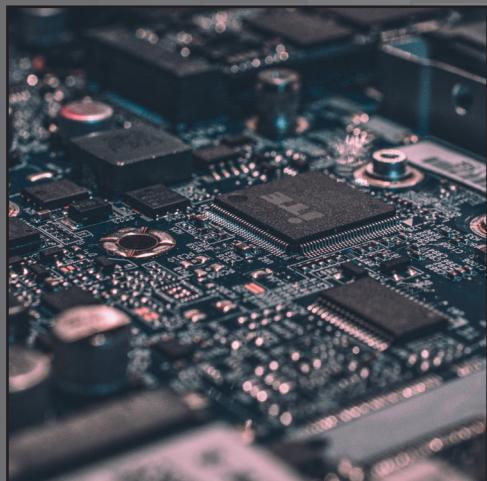
Main Objective:
Responsible for the overview
of all the electrical systems
in the pod.

Group Leader:
Tage Grønli

The main objective of
electronics is to control
the pod, primarily
doing troubleshooting
and collecting data.

The main system is
called VCU, which has
the task of passing on
intelligence between
electrical systems
within the pod.

It consists of a
hierarchy of circuit
cards capable of
collecting data and
forward it to other
systems within the
hierarchy.



Team electronics
is at the top of this
pyramid, overseeing
the entire process and
making sure the right
information is ending
up in the right place,
and that the correct
actions are taking
place.

the Month

This year, the electronics team will use the last year's system as a template to make an even better and more improved version. There are some hardware that can be used, however a lot of the software needs to be tested. Team Leader

Tage has a good overview of what needs to be done this year, and so far there are no dark clouds on the horizon.



Tage Grønli
Group Leader
Electronics

I have a good understanding of what type of challenges we are going to face this year. I have yet to see a problem that we haven't got a solution for. I don't necessarily know the exact solution to every problem at hand, but I do know how we can go about solving them with the help of our team members.

Team of the Month

The main challenge this year is that a lot of the new members are first year students. Katla and Oskar are both first year students, and while they agree that there's quite a learning curve in front of them, they are both convinced that the goals the team have set are definitely achievable. For the first year students, there are a lot of things to look forward to.



Katla Maria
Gudmundsdottir
Electronics



Oskar Helgerud
Electronics

One of the privileges of working at Shift Hyperloop is that you get practical use of all the things you learn in school, and also theoretical use in school of all the practical things you do at Shift. It's a two way street, and both Oskar and Katla have already learned the benefits of working with something that tightly correlates with their line of study, and the social aspect of it is not to neglect either.

Meet some of our newest Members



Alexandra Sheppard
Sydney, Australia
Sustainable Energy, 5th year

Group: Powertrain

I joined Shift to obtain relevant experience while working on a project that potentially could contribute to shape future transport.

Building a pod is complex work. I look forward to see how small changes can effect the performance of the pod.

Fredrik Daving
Ski, Norway
Master in Energy and the Environment, 1st year

Group: Mechanical



Thorvald Kiersch
Bærum, Norway
Mechanical Engineering, 1st year

Group: Levitation

I find the Hyperloop concept really intriguing. I hope we will achieve good results, so that we can participate in competitions, and who knows maybe we'll win?!

I really look forward to be working on such a big project like this. I expect I will learn alot, and get to know new exciting people!

Oskar Matre
Stavanger, Norway
Bachelor in Informatics, 1st year

Group: Software



THE TEAM

The Board



Martin
Røise
CEO



Olav
J. Sjøvold
CFO



Viktoria
Shulga
CMO



Eivind
Njaastad
CTO



Ludvik
Rønning
CTO

Electronics



Tage
Grønli
Group Leader



Katla M.
Guðmundsdóttir
State Indication



Markus
Kvælo
State Indication



Maren
Fossum
Telemetry



Viktor
Ellevseth
Telemetry



Bjørn
Eid
Sensors



Stine
Olsen
Sensors



Thomas
Overen
Sensors



Yamen
Zaza
VCU



Oskar
Helgerud
Embedded



Lars
Wium
Embedded



Endre
Hagestuen
VCU



Wilhelm
Karlsen
Master LIB

Battery



Bendik
Nyhavn
Group Leader



Torgeir
Sandvik
ESS



Steffen
Moe
ESS



Knut
Hegreberg
ESS



Magnus
Oddstøl
BMS



Aleksander
Waage
BMS



Eirik
Runshaug
BMS



Håkon
Guddingsmo
LV



Sigve
Gundersen
Casing



Eivind
Due-Tønnesen
LV



Jonas
Korkosh
Charger

Powertrain



Magnus
Johannesen
Group Leader



Tyler
Harrison
Inverter



Alexandra
Sheppard
Inverter



Ruben
Iden
Inverter



Jon
Fagertun
Inverter



Erik
Kleppan
Inverter



Fridtjof
Eikanger
MSc (inverter)



Vemund
Dybvik
MSc



Sageeban
Krishnasothy
Motor



Samson
Bergesen
Motor



Oscar
Jacobsen
Motor



Ole
Herrmann
Mechanical



Lars
Haugan
Casing



Albert
Johannesen
Active Levitation



Fartein
Sveindal
Active Levitation

Relations



Ådne
Børresen
Marketing Coordinator



Ilona
Podliashanyk
Web-Developer



André
Henriksen
PR-Coordinator



Konrad
Sandtrø
Marketing Coordinator



Sturla
Storemyr
Newsletter Editor
Marketing Coordinator



Axel
Wikner
Newsletter Editor
Marketing Coordinator



Henrik
Skjolden
Marketing Coordinator



Kasper
Beddari
Photo & Video

Software



Mathias
Rønning
Group Leader



Hanne
Kyllo



Håkon
Waage



Oskar
Matre



Saim
Iqbal



Simon
Vetter



Mathias
Pettersen

Concept



Anna
Estefors
Group Leader



Brage
Minge



Hannah
Isaksen



Lars
Vatten



Olav
Dimmen



Hedda
Oeyan



Vebjørn
Borgnes

Mechanical



Eivind
Njaastad
Temporary
Group Leader



Mads
Nilsen
Brakes



Sara
Amidi
Brakes



Fredrik
Daving
Aeroshell



Johannes
Gjerdåker
Aeroshell



Simen
Tufte
Aeroshell



Alexander
Meløysund
Chassis



Krisitan
Moe
Chassis

Elyas
Larkermani
Mentor-Fluid

Levitation



Emilie
Bjønnes
Group Leader



Baltasar
Hemmerle
Skis



Thorvald
Kiersch
Wheels



Henrik
Stabell
Suspension



Jakob
Pollestad
Suspension



Kevin
Elshaug
Suspension

Mentors



Daniel
Mohaghegh



Carl Christian
Modum



Hans Theodor
Johnsen



Jonathan
Bognæs



Ulrik
Digerud



Ragnar
Wien



RAMBOLL

Bright ideas. Sustainable change.



We are aluminium