Group 1
Stefan Sydberg

Test mural, create a sticky note

What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

Near connections between, university, industri and research
Career paths from studyg to high qualified working posiions
Interaction between different players
Good communications towards the world
Attracting also people - doing it together is important - for all supporting economic sectors

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

Near connections between, university, industri and research
Career paths from studyg to high qualified working posiions
Interaction between different players
Students
companys
Good communications towards the world
The family
Schools in the area - an attractive factor
City environment
Work for partner

What is the dystopia and the utopia of the space sector?

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

260318
5 minutes society, work, school, leisure is
even more improved
A cluster of space industry is established and
gaining benefits from the cooperation with
the mining industry and vice versa.
We have schools targeted towards energy,
digitalization and space in younger classes,
We are coexisting with the sapmi people and
sharing the access to land

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

A continus decrease in population

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

Continued progress of building new Kiruna
Continued progress of building new Kiruna
Key factors for growth enabled (access to land)
Continued progress of building new Kiruna
Attractive community standing firmly on mining, tourism and space industrys
Next step in rocket launching
More housing
English(?) school for younger students
High tech cluster in city center

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

niklas.sirendtvab.kiruna.se
mundialdhyp-open-ok, www.sas.ac, www.aula.ac, we participate in JUICE 2022 share information about Your Space Development within Barentsregion and talk about possible ways of direct cooperation
olle.norberg@ltu.se
marie.korberg@kiruspace.com
International skola i Kiruna maria.johansson@kiruna.se
I like to work with developing some of these ideas. Anna Ohrwall Rönnbäck, Luleå University of Technology (LTU), anna.ohrwall.ronnback@ltu.se
I want to contribute with marketing and cooperation with mining industry Josefin Nilsson Valencia ACTAS Space josefin@actas.se
Josefin Nilsson Valencia ACTAS Space josefin@actas.se

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

Easy with mural to get a full picture
Quite few i real groups perhaps bigger groups
team learning- mentoring - university - research - ecosystem
vision progress

What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

English is a challenge when you also have to write down your opinions
B2B

Group 2
Mate Kerenyi

Test mural, create a sticky note

What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

Nature
Space in all senses to live (relax, accommodation), to work
Synergy between university, institutes and commercial actors
High technology employment
Functioning infrastructure
Access to space
Stable regional and local leadership
Housing
A local environment for academy & research

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

Nature
Space in all senses to live (relax, accommodation), to work
Synergy between university, institutes and commercial actors
High technology employment
A local environment for academy & research
Housing
Functioning infrastructure
Access to space
Stable regional and local leadership
Local population (engineers)
'Spacened'
Academy in general
Inversitors
Commercializing
Students in some fields
Locals
Family members (not science-related jobs)
Several talented scientists leave because there are few opportunities for their families
Customers

What is the dystopia and the utopia of the space sector?

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

It is the ....

Easy to recruit and keep PhD level scientists
Kiruna is a city for the future
IRF SpaceLab is selfsustainning financially
Stable funding for basic research
Critical mass is passed to be competitive for companies and universities (not limited to space)
The new Kiruna center is operational. SMs and functions as a technology demonstrator
Funding for research is continuesly increasing
Sustainability in development - it makes the region more attractive
Green houses heated from the residual heat of the mine
Frequent launches to orbit

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

It is the ....

Filling the near Earth environment with space debris
Creating light pollution that makes it difficult to see the aurora
Difficult to get radio frequencies allocated for space research due to competition from other communications
Competition between actors instead of collaboration
The municipality is one step behind of development
Failed to diversify
Mine caves in - no more commercial flights
Missed out opportunities
Failure to collaborate with tourism and reindeer herding

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

First orbital launch from Esrange
Good relations with reindeer and tourism sectors
Keep interest in space and attract young people to the region. Establish the Kiruna space center
Housing problems solved - Kommun
Double train tracks
New city center (open - hub for innovation)
Lack of cooperation between actors
New research infrastructure - operational. Challenges: keep commercial companies visiting scientists
More accurate aurora and weather predictions - why the tourism
Increased flight frequency
New forum to discuss the development strategy - Municipality
Communicate the results to investors
An attractive multi disciplined, self sustaining ecosystem

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

niklas.sirendtvab.kiruna.se
Mate Kerenyi IRF mate@irf.se 0725813323
Carl-Fredrik Enell, carl-fredrik.enell@viscat.se My contributions include: teaching at LTU Visits etc
I like to work with developing some of these ideas. E.g. good relationships. Anna Ohrwall Rönnbäck, Luleå University of Technology (LTU), anna.ohrwall.ronnback@ltu.se
Johanna.b.nood@ltubusiness.se
Undersöka vad som krävs för en attraktiv stad där mainstream stanner maria.johansson@kiruna.se
Bertrand Bocquet IRF SpaceLab bertrand@irf.se
Josefin Nilsson Valencia ACTAS Space josefin@actas.se
I want to contribute with marketing and cooperation with mining industry Josefin Nilsson Valencia ACTAS Space josefin@actas.se

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

I like the energy during the forum
I like the participants - the more participants the more diversity. IRF should also include the region!
I liked the presentations yesterday

What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

I wish the outcome would be more concrete - concrete items or deliverables
I wish the results were published to a broader audience

Group 3
René Laufer

Test mural, create a sticky note

This is the suggested sticky note to test Mural by René Laufer

This is the suggested sticky note to test Mural by René Laufer

What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

Universities of technologies, academic institutions
Fullfilling basic society needs (accommodation, schools, shops, healthcare, infrastructure, etc.)
Close distance between nature, work, fun and space partners - maybe more than just winter sports
Network to allow research and development

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

Close distance between nature, work, fun and space partners - maybe more than just winter sports
Universities of technologies, academic institutions
Fullfilling basic society needs (accommodation, schools, shops, healthcare, infrastructure, etc.)
Space professionals - but not just the newly graduated university student (we still love them, too!)
It's about diversity - personal backgrounds, and diverse sectors the people come from
Attracting companies: local and regional but also national and global - the latter maybe just collaborating and not always relocating (not always necessary to bring everyone here)

What is the dystopia and the utopia of the space sector?

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

It is the 18th of March 2026:
- space sector has more funding available from government as well as investment sector
- half of the students stay in Kiruna, work here, start families, create start-ups
- large mega constellations for communication, navigation and Earth observation will be a big success and bring upstream and downstream business to Kiruna in development, launch, and operations
- significant spin-offs and spin-outs from the space sector will benefit the new sustainable energy and production sector linked to established business like mining and manufacturing
- successful collaborations in technology development between aviation and the space sector

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

It is the 18th of March 2026:
- the SPAC-driven new space bubble bursted completely, so, investors rerouted their funding away from the space sector and governmental funding decreased to a minimum to sustain ongoing but not new activities
- people leaving Kiruna massively and even existing infrastructure will not be sustained anymore
- large mega constellations turn out to be not economic feasible and - even worse - create an unsustainable Earth orbit environment leading to LEO and other orbits being unusable - many of the newly created space ports and ecosystems crash

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

+3 years Esrange becomes a successful space port with several companies using the facility. Kiruna offer phoenix cases and infrastructure for rent
In 8 years: hydrogen-based and electric aviation is a mature industry in the space and mining sector collaborate widely in the field of technology development and applications
improved health care
cooperation with mining industry
researchers relocating - I want a high-speed train connection to Stockholm
spin-offs from space sector benefit green steel production and vice versa
activities in city not just nature
students stay starts families
Housing
+5 years: 80 space rocket launches per year, 3 new national space protocols (other are located in Kiruna and Esrange), classification-related digital infrastructure for the aviation industry and start-ups - leading to new jobs and security in Kiruna
100 years hence, global societal benefit from New Space investments help with global sustainability issues
Utopia

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

I really lik ethe 100 years perspective! René Laufer, Luleå University of Technology (LTU), rene.laufer@ltu.se
Kendall Rutledge Univ of Vasa / Novia UAS, Vasa Finland krutledg@uwasa.fi
Josefin Nilsson Valencia ACTAS Space josefin@actas.se
I want to contribute with marketing and cooperation with mining industry Josefin Nilsson Valencia ACTAS Space josefin@actas.se
Bertrand Bocquet IRF SpaceLab bertrand@irf.se
Göran Berterns, Aerospace Cluster Sweden Goran.Berterns@aerospacekluster@outlook.com
Se grupp 1-2 maria.johansson@kiruna.se
I like to work with developing some of these ideas. See connections to the LTU initiatives Createnity and SLIN (for example) on the sustainability/energy side. Anna Ohrwall Rönnbäck, Luleå University of Technology (LTU), anna.ohrwall.ronnback@ltu.se

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

I like the openess of our group discussions, the Mural process and its ingent by the facilitators, combined these worked well in this workshop environment
One positive energy of the many creative visions for the utopian outlook
I like to discuss together, nice atmosphere
Future visions

What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

I disliked... blank
I wish for live meetings...)
More national collaboration

Group 5
Johanna Bergström

Test mural, create a sticky note

test
Testing testing 123

What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

Ta fava good care of the infrastructure and access to local partners.
competence
a launch site for rockets and balloons
space education
a nice city where my family can live a good life
Kompetens
Leisure activities
People
Communications, infrastructure.
Good placesto live in
Futuristic domain
Infrastruktur

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

senior experts
Young talents
families
Marketing people
Building infrastructure
students
Experienced people
diversity
What is missin in the Kiruna Kluster?
Supporting staff for new establishments
start-ups
entrepreneurs
teachers
researchers
Housing is a challenge
investors
Robots
technicians, engineers
Experts
Mission
branding

What is the dystopia and the utopia of the space sector?

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

It is the 18 March 2026 and Anna who lives in Kiruna just turned 10 years old. Her dream is not yet set up but as the space city is working hard on attracting yound talents from the town to focus on space she has join a group of you space scientists. This group group is led by the space students at LTU and other young members of the space community - they are acting as super creative role models who inspires and help connecting to international relationships. This is a natural networking that includes anyone and diversity is important. The group is focusing on exploration of space, especially returning to the Moon. Out at Esrange there is a test site that looks exactly as the Moon where test of robotics and othe cool technologies are performed during sommer schools etc.
A natural path for Anna is to enter either the Space Hight School or the SSC Space Collage (in competition with many others from all over) and then continue with highe educations - go abroad with scholarship and then come back and help us build our space region/cluster.

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

It is the 18 March 2026 and the space industry is lacking support from the Swedish gouvernment. Due to a big accident during testing of new rocket systems in combination with conflicts of how we can use our impact area (air and ground) the activities at Esrange are really suffering. There are no activities to stimulate the interest of STEM in school for the youb'ng peolpe in the region.

We are lacking funds and we have not reach our goal to launch satellites from Esrange. The new rocket manufacturers are gone and international students are no longer interested to come here.

The global situation is really stressed at space has become a weapon and a threat instead of solving global challanges.

Due to political international confics we are not able to launch from Sweden.

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

Gather all space actors and the school administration in the region and great a common roadmap
Build a society that is attractive for young people to stay or to come back to
Livskvalitet i centrum - både för sport, natur och kultur
SSC Space Highschool in parallel with the existing Space High School
Competence, municipality and business
Work together with LKAB - as we both are in the "rocket science business"
PR arbete
Externt Rekrytera tillsammans - visa upp oss tillsammans
Övevett vilken bransch du jobbar i så är det high tech
Bryta stereotier i Kiruna där cyniskt inte är bara för entusiaste
Build a local pride of being the space and mining high-tech city of Sweden
Nätverk av förebilder från akademi och företag
Skapa en bild av attjdet är här det händer!
We are the world champions in creating space experts of the children born in our region and the whole country
Sustainable values
A "formal" creation of the cluster
Both physical and (on-line) infrastructure to meet and share ideas, talent, investors, problems.

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

Bertrand Bocquet IRF SpaceLab bertrand@irf.se
Lennart Poromaa lennart.poromaa@sscspace.com
I want to contribute to make the Space Cluster sustainable and active. / olle.norberg@ltu.se
I want to contribute with marketing and cooperation with mining industry Josefin Nilsson Valencia ACTAS Space josefin@actas.se
Bertrand Bocquet IRF SpaceLab bertrand@irf.se
René Laufer, Luleå University of Technology (LTU), rene.laufer@ltu.se
Johanna.b.nood@ltubusiness.se
Alexander.bergström@ltubusiness.se Focus on Industry/ Academia collaboration/ formation of the space cluster (organisation, roles, setting up KPI's)
Jari Rattanen VAMK, Vaasa UAS Design Centre MUOVA West Coast Startup jari.rattanen@muova.fi
Jari Rattanen VAMK, Vaasa UAS Design Centre MUOVA jari.rattanen@muova.fi
I would like to work with the sustainability aspects Lisa Larsson, LTU lisa.larsson@ltu.se
I like to work with developing some of these ideas. See connections to the LTU initiatives Createnity and SLIN (for example) on the sustainability/energy side. Anna Ohrwall Rönnbäck, Luleå University of Technology (LTU), anna.ohrwall.ronnback@ltu.se

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

Good collaboration - real and engagement in the teams
I like the move forward rather quick
I like to gather people like this and focus on shapes - this is how we can see opportunities together
Kreativ, bra tempo, tillåtande för nya idéer och frågeställningar
I wish that we were sitting in the same room, physically :-)

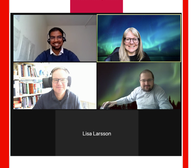
What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

The suggestions and recommendations needs to be stored somewhere for some way
Ta med samtal om relevan av rymdteknik och hur det kan vara relevant för det som vi jobbar med i Kiruna
I wish that we had more time to do the "warming up" activity, like a ice breaker, to get the dialogue going
I wish that we move forward rather quick

Group 6
Anna Öhrwall Rönnbäck

Test mural, create a sticky note

Anna, Anish, Leonard, Mathias, Lisa



What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

collaboration opportunities
To feel welcome!
Collaboration
Competence in Spaceburiness
Infrastructure
Research at top international level
Students
Working environment
Work-life balance
Facilities & Competences
Leisure
Friendly Environment
Work opportunities

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

"kändisar"
Journalists
Influencers
Research groups for specific missions/ campagins
Mission Project leaders
Universities
Leisure
Institutes
Friendly Environment
Researchers and Engineers
Research at top international level
Competence in Spaceburiness
Work opportunities
Infrastructure
Students
Facilities & Competences
Established companies
Space companies
Suppliers
Start-ups from the local university environment
Start-ups from all over the world
Freelancers
To feel welcome!
Families
Work-life balance
Working environment
Collaboration
collaboration opportunities

What is the dystopia and the utopia of the space sector?

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

It is the 18th of March 2030 and Joanna is landing at the airport of Kiruna, feeling far from her safe home in Texas, where she left family (husband and two kids) and friends behind. She is hitching herself to this mission in Kiruna, which will be both lonely and boring.

After the terrible accident in the mines last year, the town is almost empty, only space mission employees have the exceptional right to stay in the properties. Within a year from the accident, the town became a place only for fly-in fly-out workers.

The global warming has worsened the climate in Kiruna. The temperatures are extreme, completely opposite to her homing lesun climate.
Arriving to Esrange, there are several controls to pass, showing all papers necessary to enter the main arrivas to the so called "hotel" which nonetheless is a very lonely place.

Today nobody picked her up, and it is just luck that she has been there before and knows where to find the room, which she locks up with a code, without meeting anyone to talk to.

She makes a cup of tea and start to eat the dry sandwiches she brought, since there is nothing to buy out here, no restaurang.

The internet connection fails also, and she lost communication with the world around .

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

It is the ....

It is the 18th of March 2026, and Joanna is landing at the airport of Kiruna, feeling far from her safe home in Texas, where she left family (husband and two kids) and friends behind. She is hitching herself to this mission in Kiruna, which will be both lonely and boring.

After the terrible accident in the mines last year, the town is almost empty, only space mission employees have the exceptional right to stay in the properties. Within a year from the accident, the town became a place only for fly-in fly-out workers.

The global warming has worsened the climate in Kiruna. The temperatures are extreme, completely opposite to her homing lesun climate.
Arriving to Esrange, there are several controls to pass, showing all papers necessary to enter the main arrivas to the so called "hotel" which nonetheless is a very lonely place.

Today nobody picked her up, and it is just luck that she has been there before and knows where to find the room, which she locks up with a code, without meeting anyone to talk to.

She makes a cup of tea and start to eat the dry sandwiches she brought, since there is nothing to buy out here, no restaurang.

The internet connection fails also, and she lost communication with the world around .

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

Municipality and companies
Good collaboration between different players e.g. end users, suppliers, manufacturers (OEMs)
Joint projects with NASA, ESA
IRF, LTU
Functional launch site for small satellites
Esrange
Work opportunities for all the family
Esrange
Municipality, entrepreneurs
Housing / Making Kiruna more livable
Make Kiruna's role in space visible to the world
"Hall of Fame"
Influencers
Talking about how life is in Kiruna for the family, friends, for family
Making space activities more visible (via apps, geo-apps, Kiruna Museum etc) for tourist families living in Kiruna
A "Hall of Fame" where celebrities brag about having been to Kiruna and taking part of movies or space activities, e.g. "I pushed the button" (this Hall of Fame attracts then fans, journalists, etc) - a collaboration between Space and Filmpool Nord
Project manager from "Vad Lapland/Kiruna? Ser inte nätverk alls Tver hela"
"Self managed" by enthusiasts in the long run
Utopia
Kiruna - you have to live here to see it, and you have to go home from work
Commuting is not an issue
Back based work life balance for the empoyee (than singles to the whole family) - in Kiruna
Aurora from your bedroom window - the sun is your face at midnight

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

I would like to work with LTU and Esrange for new space projects. Anish Niranjan Kulkarni, Student, AMASE-Master, LTU Sweden & LstB-Germany, Email - ankul-9@student.ltu.se
I like to work with developing some of these ideas. Anna Ohrwall Rönnbäck, Luleå University of Technology (LTU), anna.ohrwall.ronnback@ltu.se
Josefin Nilsson Valencia ACTAS Space josefin@actas.se
I want to contribute with marketing and cooperation with mining industry Josefin Nilsson Valencia ACTAS Space josefin@actas.se
I like the Hall of Fame & Press the Button ideas :) René Laufer, Luleå University of Technology (LTU), rene.laufer@ltu.se
Agree that we need to be much more visible! I can commit to this goal. olle.norberg@ltu.se
Johanna.b.nood@ltubusiness.se
I would like to work with the PR related activities. Lisa Larsson, LTU lisa.larsson@ltu.se
Bertrand Bocquet IRF SpaceLab bertrand@irf.se

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

I liked the forward thinking theme!
Though Kiruna is at an extreme location, due to the mining and space, it feels like us, we can build it - the Europe's future launch site
I like the structure and mix of "exercises"
Inspirational that we produced so much ideas in a short time and with people who usually had meet.
I liked the whole vibe of developing Kiruna - it is big enough that it is a leading global force in the Space Industry
I liked the discussions about a future of the space region and how to create it.

What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

I would like to participate in a workshop where we actually do something together in the physical space :)
I wish spot activities like this, where people with different backgrounds meet and understand each other

Group 7
Olle Norberg

Test mural, create a sticky note

What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

Geographic location
Test resources
Ecosystem already in place
Growth
Availability of local venture capital
Academia
Communications (easy to travel)
Critical mass of capital, people, knowledge, institutions
Part of a global network
Openness (availability)
RDI activities
Venture Capital
Schools that can support non-native language speakers
Mission
Competence
brand
access to talent
Easy to establish both people and companies
Challange
get a feeling of what is happening right now
Somewhere to live
education/ opportunities for learning

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

Startups (students, researches)
Other startups
Infrastructure developers
VC or private equity
Interested individuals
Medium and large companies looking for a growth location
Talent brokers
Organisations within R&D that want to be present
education/ opportunities for learning
Test resources
Somewhere to live
Ecosystem already in place
Openness (availability)
RDI activities
Challange
Academia
Communications (easy to travel)
Venture Capital
education/ opportunities for learning
Availability of local venture capital
employment opportunities
get a feeling of what is happening right now
access to talent
Geographic location
Growth
Schools that can support non-native language speakers
Critical mass of capital, people, knowledge, institutions
Easy to establish both people and companies
Part of a global network
Mission
branding
Technology companies / innovation companies
Competence

What is the dystopia and the utopia of the space sector?

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

It is 2026 and we love it!

New technology and bigger players in the global arena.
Space Based data is used extensively to help solve our biggest challenges on earth
exceeded terrestrial capabilities (better instrumentation, easier access to space, more simulations for new situations)
We will use space infrastructure for sustainable farming, forestry, fishing
100% of the world population and have access to broadband internet, thus improving democracy
Space exploration is a space endeavoury, with a national base (in the sense that it is a national mission in Nato
[illegible]
New regulation/ Legislation passed to accommodate all stakeholders in the Commercial space industry (companies and activities)
We have a new international regulatory framework for space, governing commercial space teams. Global cooperation is the shared and treated
space sector creates jobs, business opportunities, increased collaboration,

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

It is 2026 and we are not happy...

A few global companies dominate the internet and has full control of what the internet "internet"
A worsening political climate where there is no international cooperation in space exploration
SpaceX is a de-facto monopoly as a launch service provider
dysfunctional markets (rogue actors, space debris,
Sustainability challenges, Weak collaboration, Lack of investment and private sector
The space cluster in Norrbotten failed since we didn't get Esrange in 2020
[illegible]
Lack of employments opportunities due to lack of sustainable funding from VC etc.

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

Technology solutions
International regulation followed
Sustainable reality
International cooperation is flourishing
Sustainable use of world resources due to space
Space and Nanotechnics hit and become mainstream in high commercial technology
Talent, investors and companies are attracted
Employment opps
Technology protos, showcases
Startups
Technology ideas
Business opportunities
Grass roots level support and understanding
Sustainable values
A "formal" creation of the cluster
Both physical and (on-line) infrastructure to meet and share ideas, talent, investors, problems.

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

I want to contribute to make the Space Cluster sustainable and active. / olle.norberg@ltu.se
Lennart Poromaa lennart.poromaa@sscspace.com
niklas.sirendtvab.kiruna.se
Elizabeth Muntz, International Business Master Student, LTU, elisem@student.ltu.se can be contacted at elizabethmuntz@gmail.com
René Laufer, Luleå University of Technology (LTU), rene.laufer@ltu.se
Johanna.b.nood@ltubusiness.se
I want to contribute with marketing and cooperation with mining industry Josefin Nilsson Valencia ACTAS Space josefin@actas.se
Bertrand Bocquet IRF SpaceLab bertrand@irf.se
Alexander.bergström@ltubusiness.se Focus on Industry/ Academia collaboration/ formation of the space cluster (organisation, roles, setting up KPI's)
Jari Rattanen VAMK, Vaasa UAS Design Centre MUOVA West Coast Startup jari.rattanen@muova.fi
Jari Rattanen VAMK, Vaasa UAS Design Centre MUOVA jari.rattanen@muova.fi
I would like to work with the sustainability aspects Lisa Larsson, LTU lisa.larsson@ltu.se
I like to work with developing some of these ideas. See connections to the LTU initiatives Createnity and SLIN (for example) on the sustainability/energy side. Anna Ohrwall Rönnbäck, Luleå University of Technology (LTU), anna.ohrwall.ronnback@ltu.se

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

Worst is such a great platform - everyone is very interactive.
We have to make sure that good ideas are turned into action
Good call using Mural, really working well in a hybrid concept
Great collaboration

What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

Some energy that is possible to carry versus so wear - maybe a reminder that come out of Course

Group 8
Alexander Bergström

Test mural, create a sticky note

TEST

What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

Interesting job-opportunities
Quality of life outside of work
Collaboration, synergies and a strong community
A feeling of being in a place where the best of the best meets!
Having access to awesome resources and people
Beeing part of something bigger
Flexibility to interact with interesting people, inside and outside of work
A community of innovation
The feeling of beeing in the centre of the universe. Everything revolves around us. Like Shakespeare's at the moment.

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

Engineers in space related areas
Researchers in Space related areas
Student in space related areas
The feeling of beeing in the centre of the universe. Everything revolves around us. Like Shakespeare's at the moment.
A community of innovation
Having access to awesome resources and people
A feeling of being in a place where the best of the best meets!
Collaboration, synergies and a strong community
Flexibility to interact with interesting people, inside and outside of work
interesting job-opportunities
Culture
Sub-contractors Space development companies (compare to mining)
Beeing part of something bigger
Nature
Quality of life outside of work
Companies (startups, spinoffs)
Funding
Families
Private Investo
Public Investors (government, EU)
Innovation network
English speaking schools

What is the dystopia and the utopia of the space sector?

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

It is the ....

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

It is the ....

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

Utopia

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

Group 9
Craig Phillips

Test mural, create a sticky note

What is attractiveness for a space region?

Create one sticky note per statement
Create as many statements as possible

High Technological organisations in collaboration
diversity of space actors, small startups and larger industries
easy access to research and labs at the university
Location for different mission
possibilities for students to do projects with industrial partners
that the population in the region are proud of and interested in being a space region
network with other space actors
Access to the possible work force
Governmental support to companies that want to establish in regon
Variety of specialist small companies

Who are we attracting?

For whom are we increasing the attractiveness?

Arrange the attractiveness notes under the person that are appealed by the particular attractiveness

existing companies and new companies
must be attractive for everyone around, like the family of new employees
Companies
High Technological organisations in collab
Other industries for
diversity of space actors, small startups and larger industries
easy access to research and labs at the university
Network to allow research and development
Students
Softer values to enable students to start career
possibilities for students to do projects with industrial partners
that the population in the region are proud of and interested in being a space region
network with other space actors
Alumni
Governmental support to companies that want to establish in regon
Consortium of Space Industry who can combine training courses etc.
Variety of specialist small companies
Students who are interested in working in industry
Lifelong Learning
Bridge between the University and Industry
students on both undergraduate and master level
Interaction from University and Companies

What is the dystopia and the utopia of the space sector

Utopia is the best possible scenario
What is the utopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."
Tell us two different stories, one utopianthing and one dystopianthing

Diary March 18 2031
It is the 18th anniversary of my childhood dreams, to move to Kiruna and work as a rocket scientist. I was surprised by the reception in Kiruna, it is really a cozy city, with open and nice people, living with the northern lights from the work window is a luxury when you come from a big city. Now its time to go down to the space forum to compete with the daughter in the kids' rocket challenge, she has optimized the fins for her team's rocket on Kiruna Makerspace so now we just have to print them out before the competition!

more things to do in the free time, like cultural events
A flourishing space base
Recognised Space Hub for Europe where people want to move and visit
Green role model for the world
Expansive immersive town that embraces the space agengy
Inclusive - Leisure activities for everyone
Population increase and multinational environment

Dystopia is when every effort fails and you endup with the most undesirable scenario
What is the dystopia day, month or year from present in the future?
Start with: "It is the 18 of March 2026 and life is..."

It is the ....

The climate change
Negative ambessadors
Decreasing population
Fractus Business with in collabora industri
no interest in higher education
Shrinking sector without support from local authorities
A sense of shringking industry
not using synergies between LKAB and space industry

What is the Change Path to the future?

Put your Utopia as the goal and create the path to that utopia.
It was a time
It was a time of the difficulty of the step
Create sticky notes to create the path.

Difficulty

Create a "Kirunaanda" (positive, innovative)
Improve our "brand"
start a science park in Kiruna, where people live together. Both from mining and space sector
More housing
International school (JK1-9)
Infrastructure improvements
European Space Port Brand
Expand Courses for Students
Collaboration between different industries
Company attracting new workforce
"Discount" for people ir the the municipality

What?
Who?
Time

My next step

Do you want to contribute to this change path?

Where do you want to contribute?
Create a sticky note with your name, organisation and contact information. Copy and stick that to the change paths that you want to drive or simply follow.

Ioana-Simona Rosca Student ioaros-9@ltu.se
Lennart Poromaa lennart.poromaa@sscspace.com
Good ideas, I'm in! olle.norberg@ltu.se
Bertrand Bocquet IRF SpaceLab bertrand@irf.se
Marta-Lena.Antti@ltu.se I want to contribute in working for a closer collaboration between industry and academia regarding education and project courses.
marta-lena.antti@ltu.se I want to work on the network between mining, steel industry and space industry. I think that is a key factor for success.
Johanna.b.nood@ltubusiness.se
I like to work with developing some of these ideas. (PR, communication) Anna Ohrwall Rönnbäck, Luleå University of Technology (LTU), anna.ohrwall.ronnback@ltu.se
Peter Törlind, Coordinator of UNIVERSIX NPS Entrepreneurship & Innovation Focus on Industry/ Academia collaboration/ Activities
I like the brand ideas René Laufer, Luleå University of Technology (LTU), rene.laufer@ltu.se

I Like, I Wish...

What did you like about the workshop today?
Create a sticky note and write what you liked.

Setting Goals for several parties with common objectives
Open dialogue between all the delegates
I liked the friendly atmosphere
I like that you actually can contribute with ideas during a short timeframe!
I like the feeling of us a group working together for a common goal
I like the new generation that can contribute to make Kiruna a leading global force in the Space Industry

What do you wish for if you would participate in a similar workshop sometime in the future?
Create a sticky note and write what you liked.

I wish that we have time to implement this in the future!
More time for storytelling task