Space Cluster Region Norrbotten

- The impact of aerospace in our region today and tomorrow

RIT2021

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Who we are

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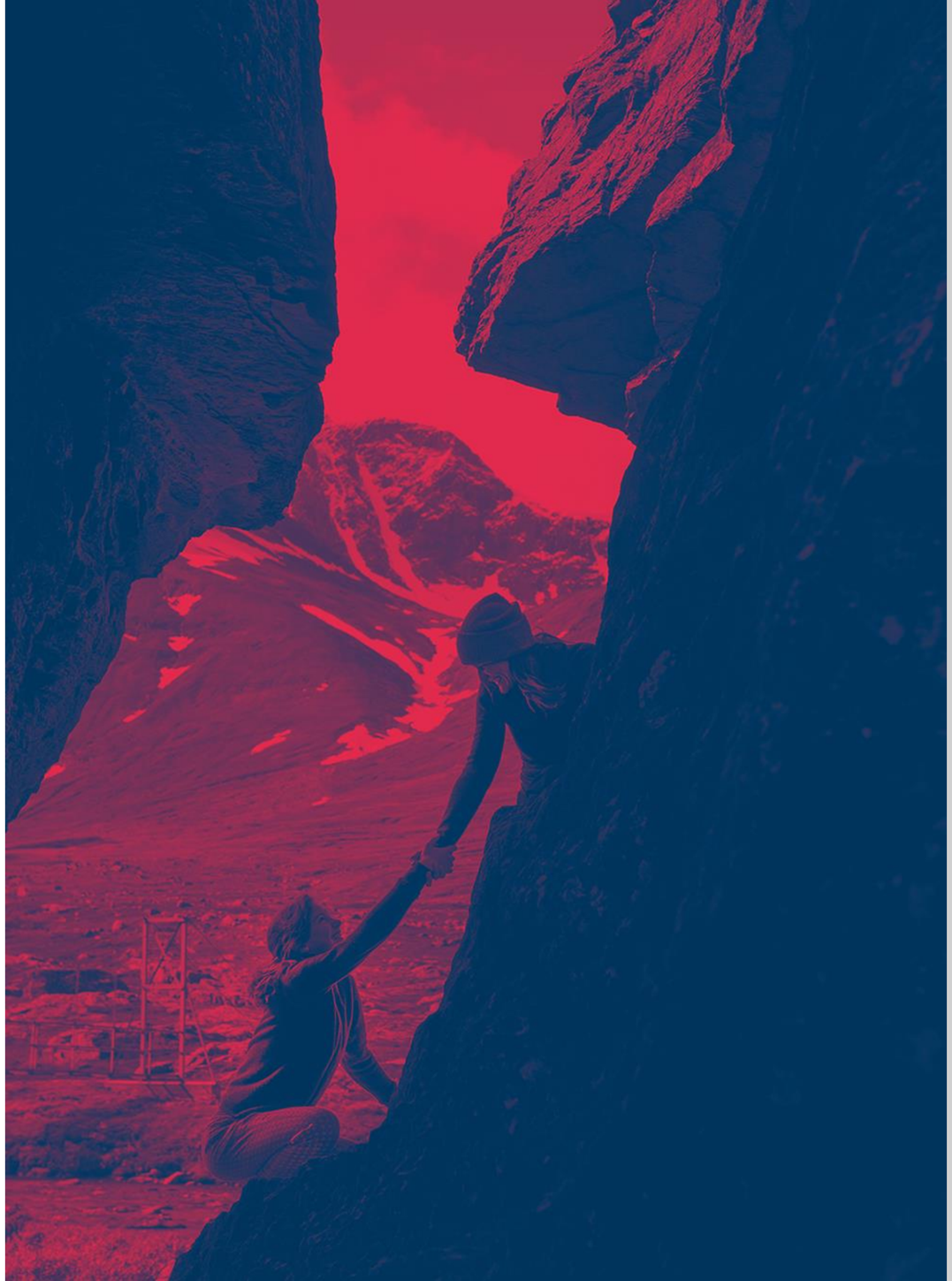

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AGENDA

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REGION NORRBOTTEN´S SPACE CLUSTER

2

HOW GLOBAL TRENDS AFFECT OUR CLUSTER

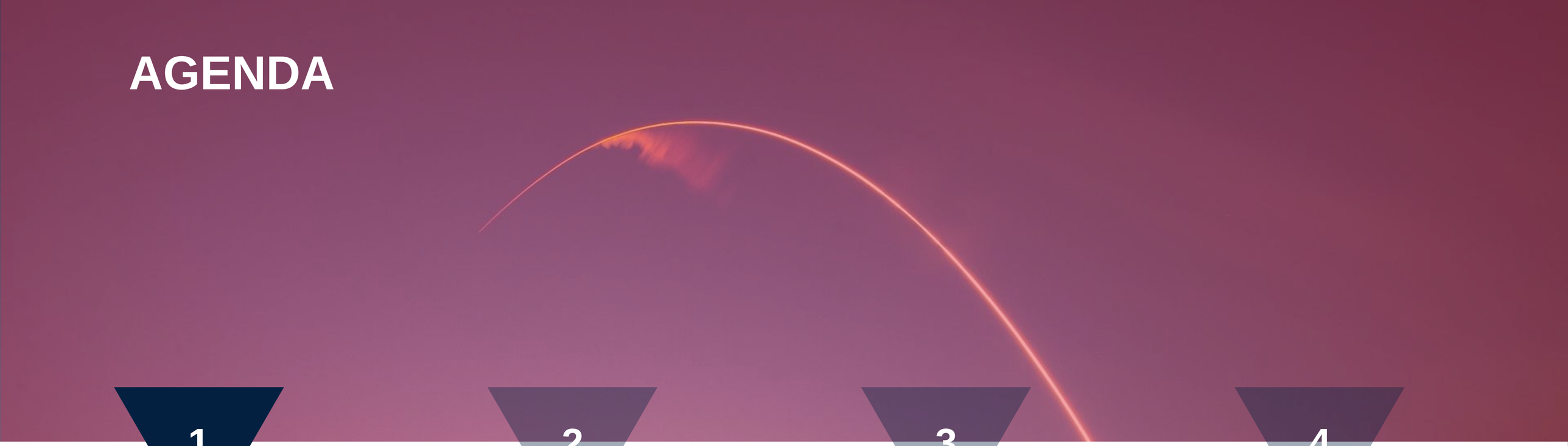
3

COMPARING OUR CLUSTER TO OTHERS

4

A GLANCE INTO THE FUTURE - AN EDUCATED GUESS

AGENDA



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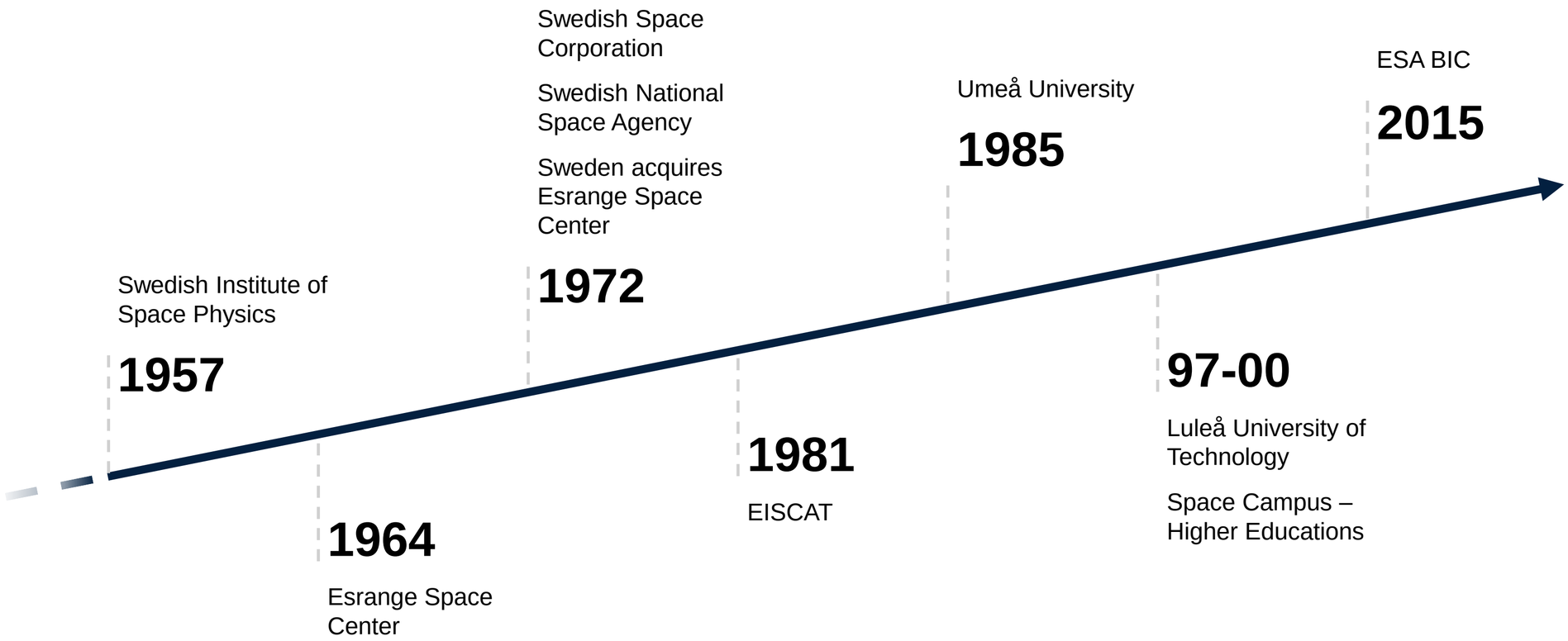
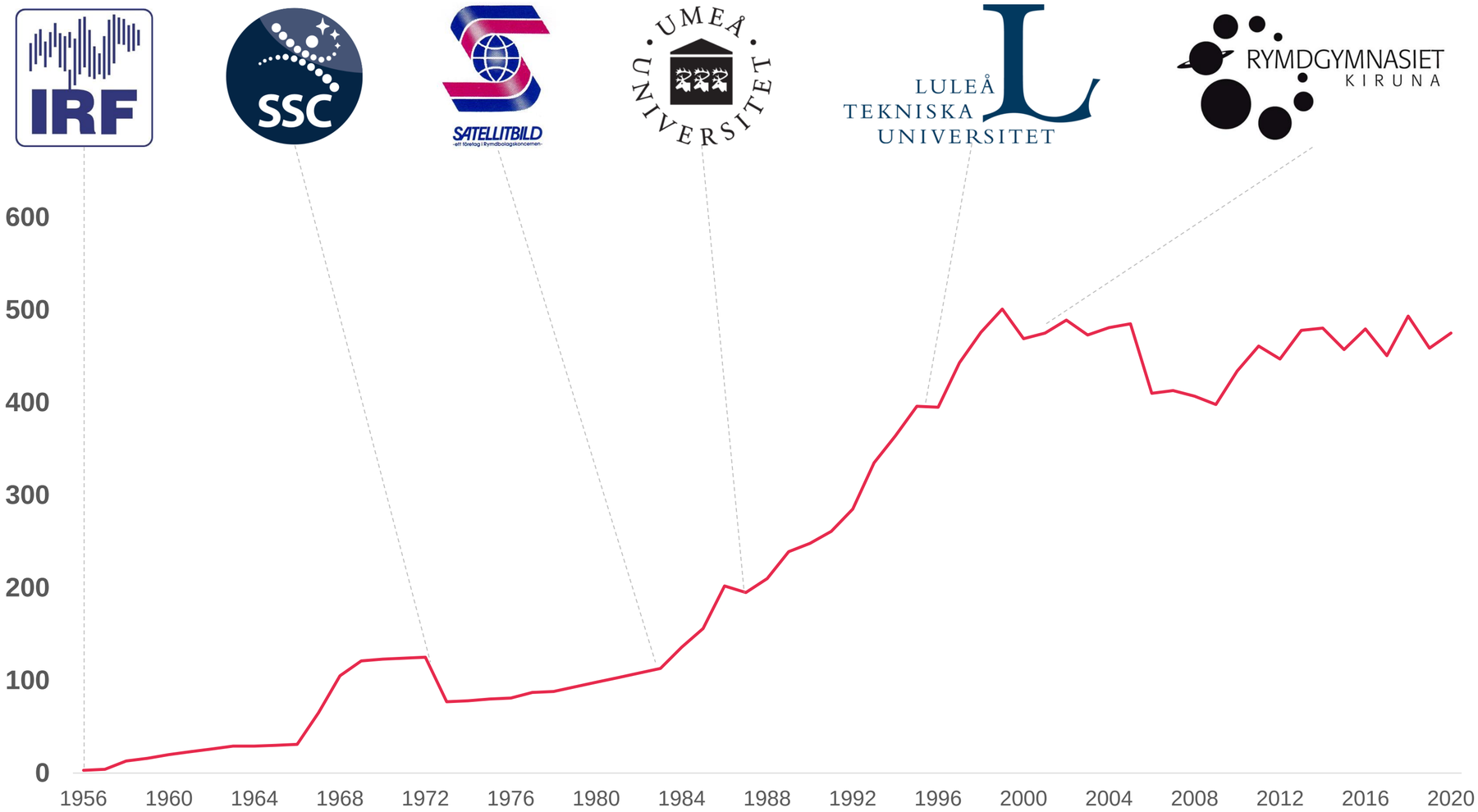
A brief history of Region Norrbotten's space cluster



Organizations are displayed with their current name

New initiatives drives employment growth



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Region Norrbotten has established and maintained key capabilities as a space cluster

Geographical location

- Communication with polar satellites
- The northern lights
- Impact area
- Low air traffic

Infrastructure

- Communications
- Potential to expand
- Test and research infrastructure
- Launch infrastructure

Ecosystem

- International collaborations
- Strong academic foothold
- A number of active space actors
- Business development and incubation

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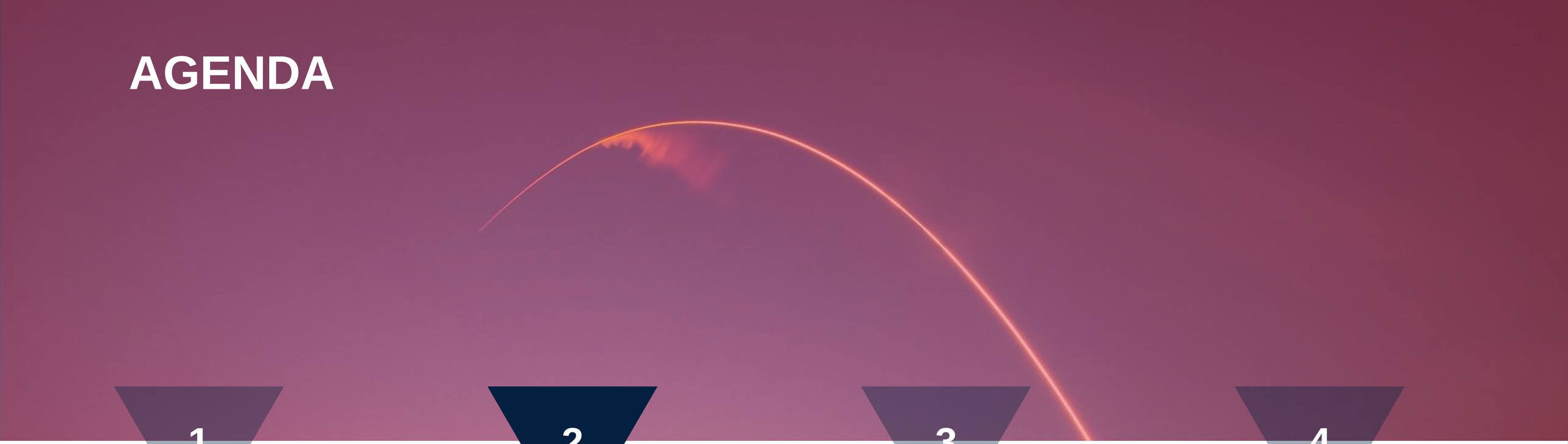

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Global trends in space

Technology development

Enabling easier and cheaper access to space

Enabling more value-creating downstream applications

Enabling more space exploration and planetary missions

Trends provide our region with opportunities

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Capitalizing on opportunities

INDUSTRY	ACADEMIA
SSC builds launch site and will become a launch service provider	IRF – planning phase for New Spacelab
Establishment of 2 new rocket manufacturers	LTU - *Selected European university in space*
Business support - *ESA BIC and SME network*	Developing EISCAT_3D
More investments in global situational awareness – *Global watch center*	Plans to establish more research groups at LTU

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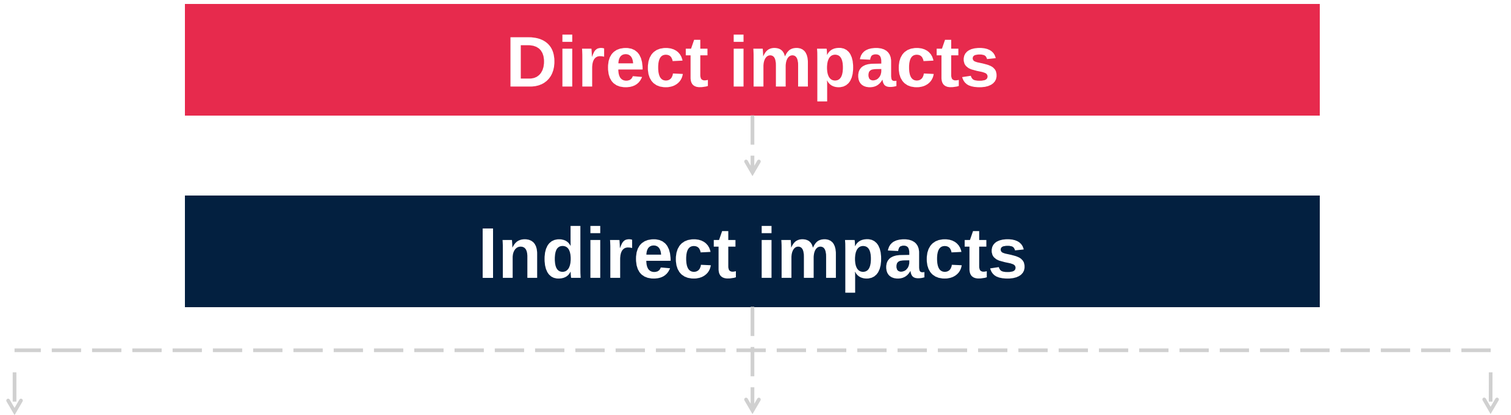
Spillover effects on society



Creating higher sense of pride

Strengthening the space brand

Placing Norrbotten on the map

The space cluster can become a future “light house”

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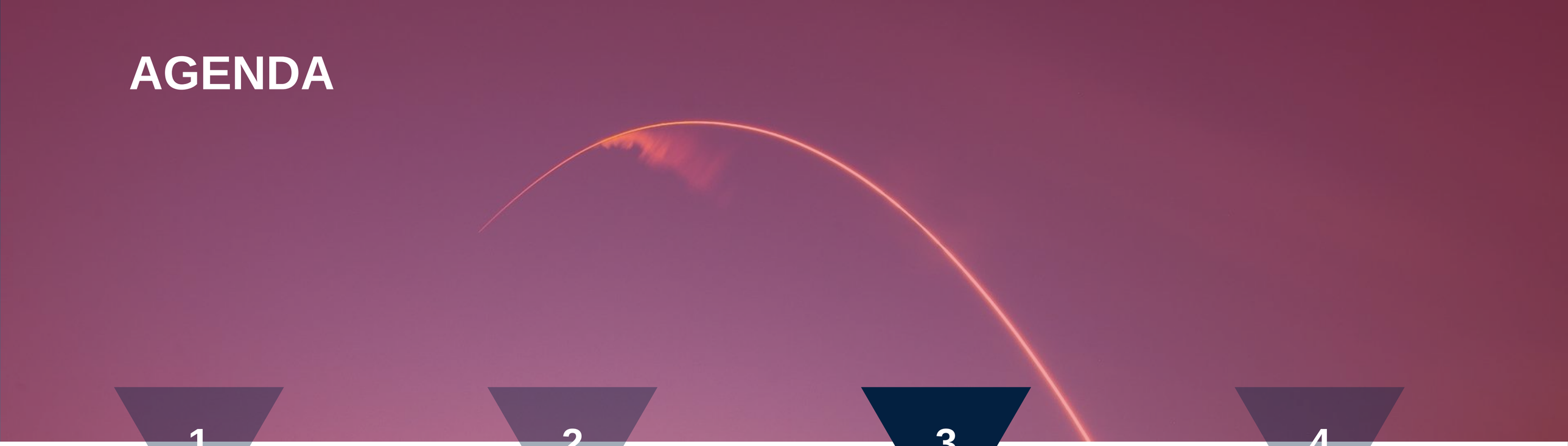

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A comparison of our cluster on a national and cluster level

*What can we learn from other **countries**?*

- United Kingdom
- Luxemburg

*What can we learn from other **clusters**?*

- Harwell, UK
- HEGAN, Spain

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Key initiatives for growth – National level

Ambitious targets

- Highly ambitious and specified governmental space plans and growth strategies

UK: 10% of the global space market by 2030

Financial support and incentives

- Various tax breaks
- Funding and financial grants

Luxembourg: Various tax credits and financial support for R&D, new investments, IP etc.

Cluster formation and infrastructure

- Creation of space clusters through dedicated resources
- Investments in spaceports and other infrastructure

UK: Development of new space clusters (catapults) across England, Scotland, Wales and Northern Ireland

Laws, regulations and declarations

- Guiding and supporting legislation
- Quick regulatory responses to market demand

Luxembourg: Legal framework for the authorization and supervision of space activities

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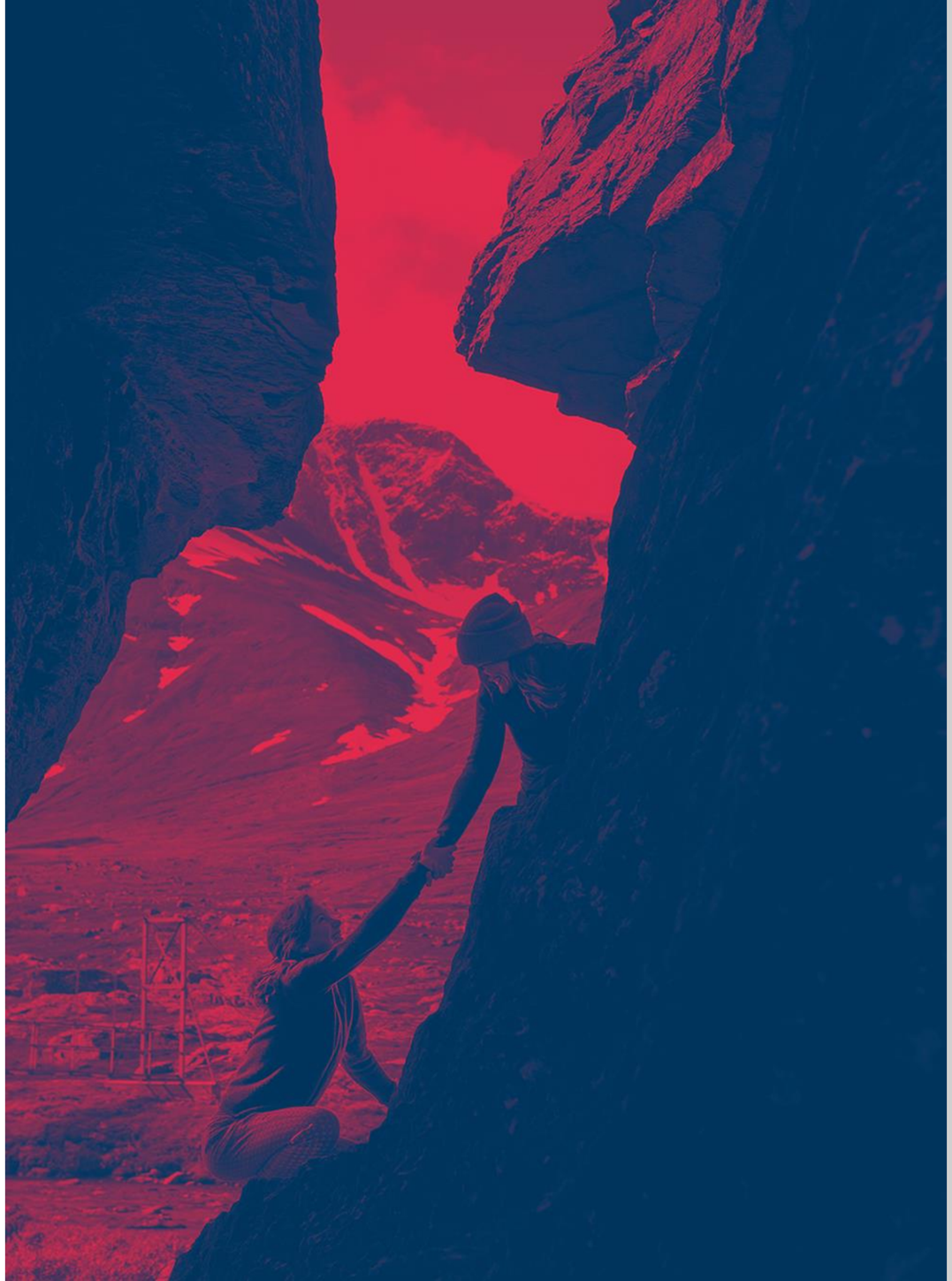
Key initiatives for growth – Cluster level

- Synergies through collaboration among several disciplines and actors
- Ambitious target and specified goals – *Connected to the national space strategy*
- Detailed and continuous evaluation of clusters
- Strong academic base
- Strong tech and business support



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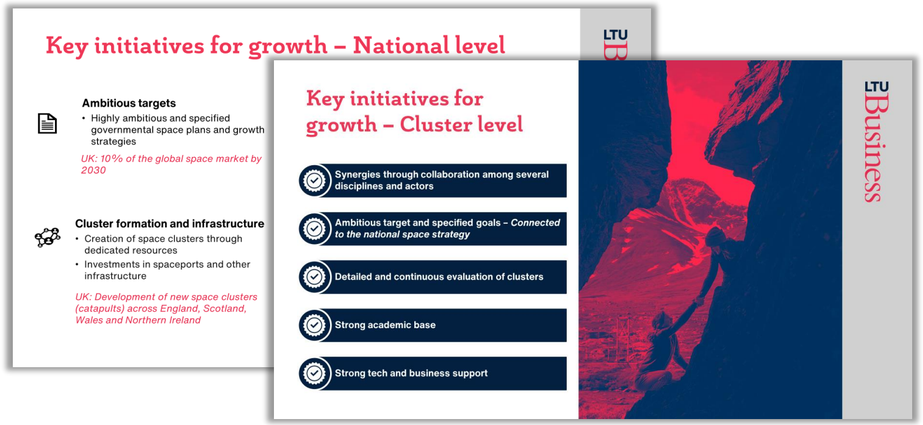
What can we learn from the comparison?



Initiatives at national and cluster level are required for growth

Success factors

- Ambitious targets and continuous evaluation
- Cluster formation and infrastructure
- Synergy utilization
- Tech and business support
- Financial incentives
- Laws, regulations and declarations
- Strong academic base

We are performing relatively well in comparison

	Success factors	How we perform	Most critical to improve
National level	Laws, regulations and declarations		
	Ambitious targets and continuous evaluation		Measurable targets on government level, spread across cluster
	Cluster formation and infrastructure		Create ownership of cluster through resource dedication
	Financial incentives		Implement financial models that incentivizes innovation and new establishments, spinoffs, startups
Cluster level	Strong academic base		
	Ambitious targets and continuous evaluation		Measurable targets on cluster level with clearly divided responsibilities and continuous evaluation
	Tech and business support		Expand tech and business support – Support new players who want to establish
	Synergy utilization		Create a forum where actors can interact, collaborate and find synergies

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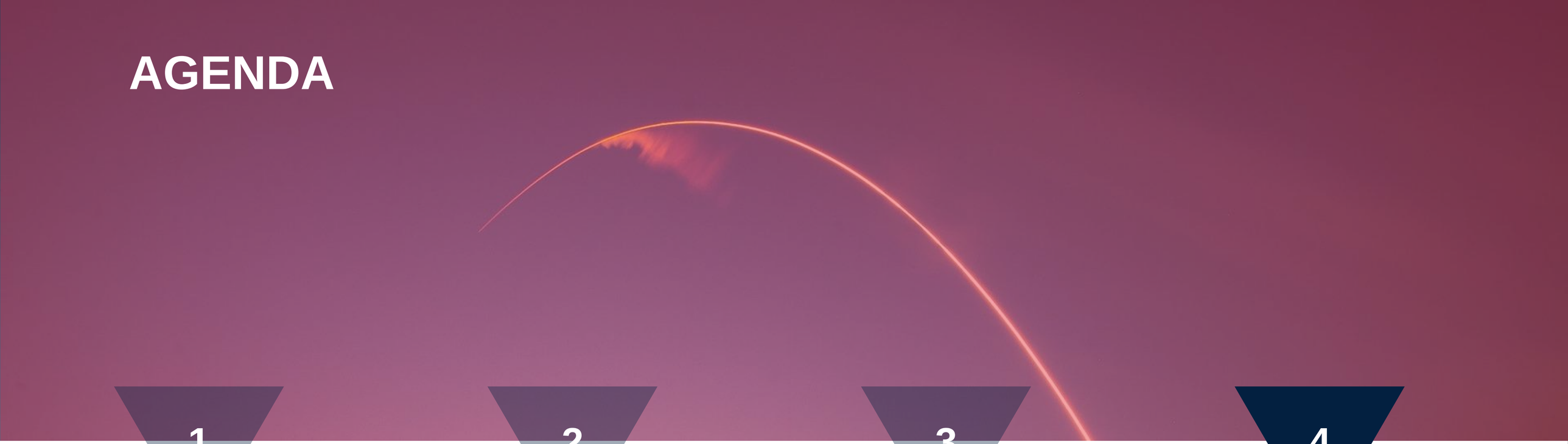

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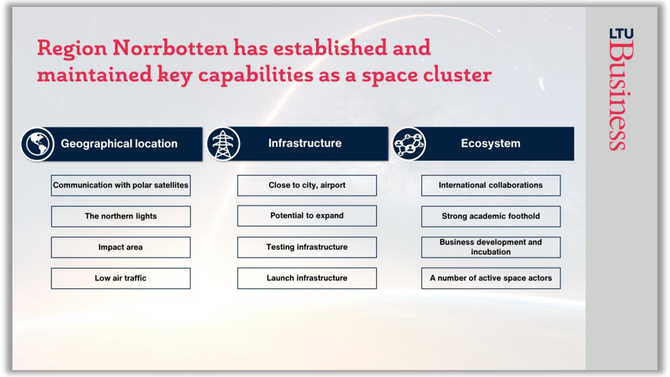
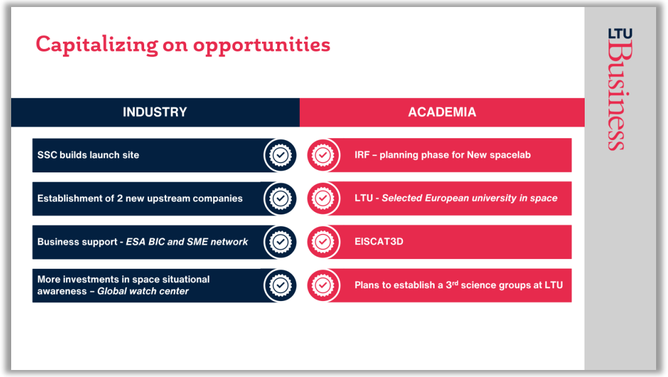
What we know

We have great prerequisites…



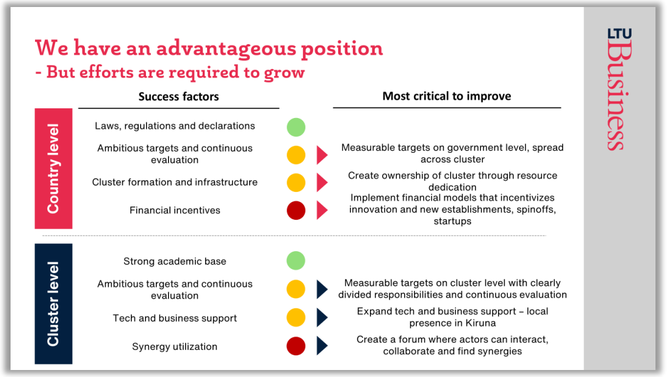
“It used to be a question of “if” and “when”. Now it is clear that our industry will grow.

There are many ongoing initiatives…



“From our perspective, more is happening now than ever before.

If we play our cards right…



“From a Norrbotten perspective, space could be a much larger field. With the right plan, it could be 10 times as big in 15 years.

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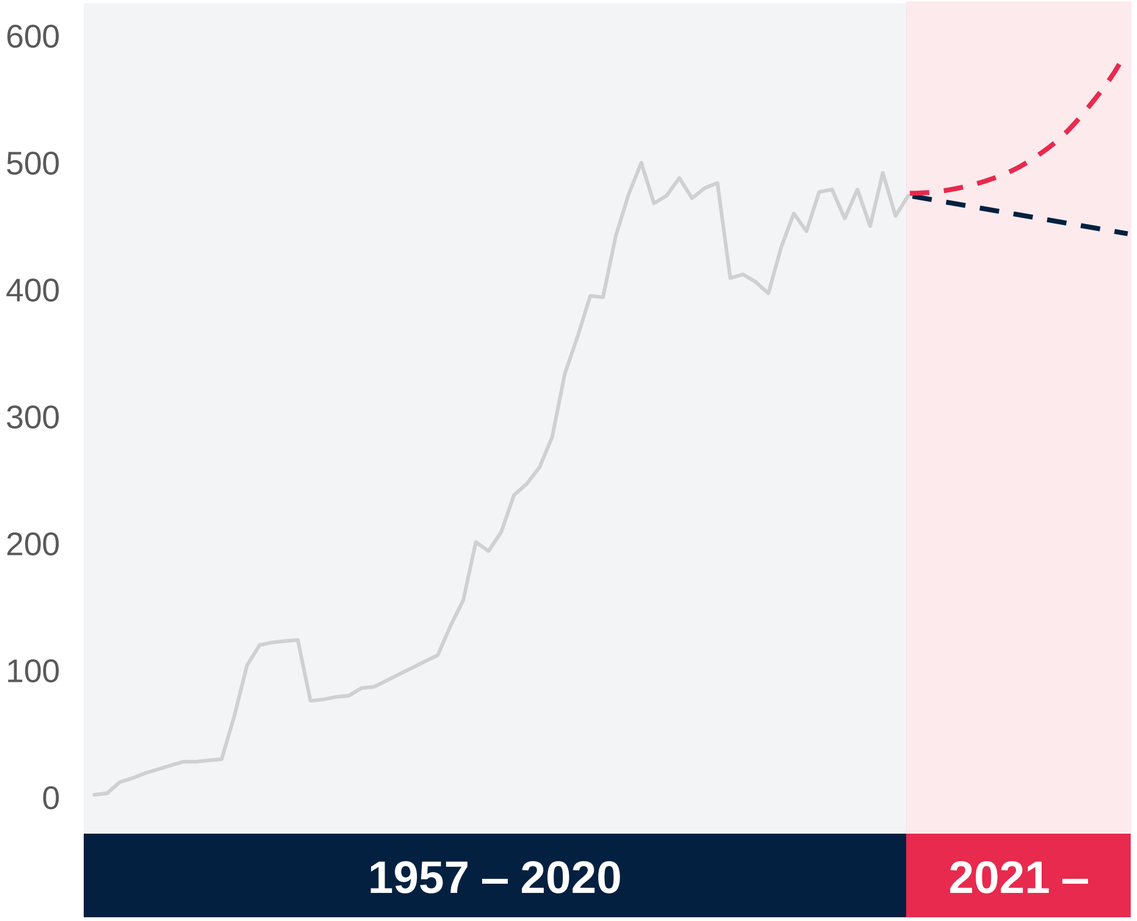
Future growth is dependent on actions

Full Time Employees



13 NEW STARTUPS

N66 ACTAS Space Sky Alert

REMOS Widefind Arctic Space Technologies

HIPOR Fieldrobotics Porkchop

Centropy PASQ SOL-IONICS

Gemometrics AB

2 NEW MIDCAP

isar aerospace technologies

RFA Rocket Factory

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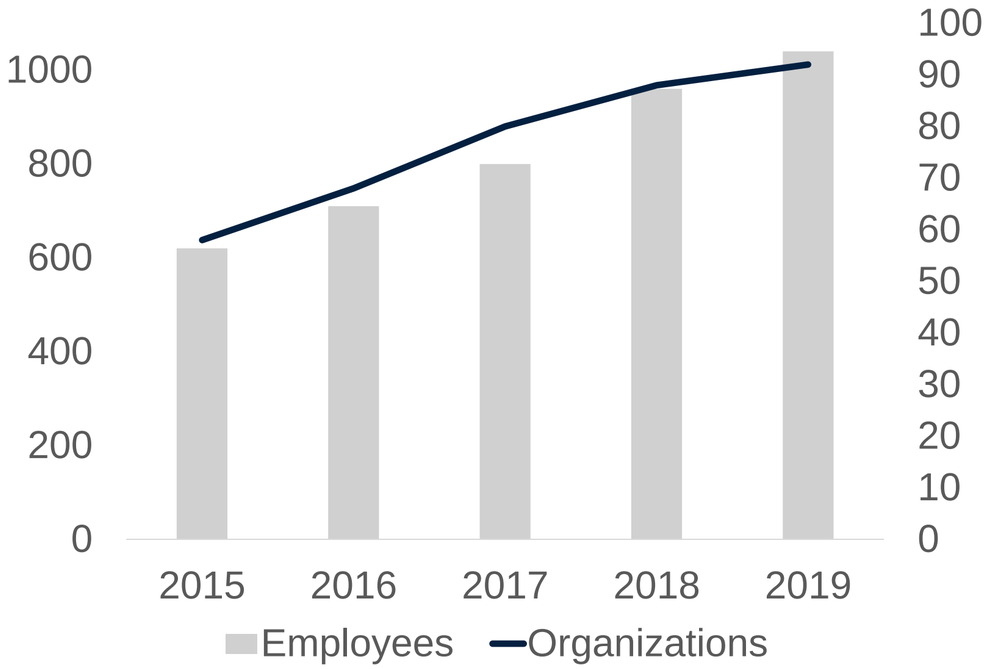
Growth in other clusters - Indicates possibilities



Harwell

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Expecting a strong growth in the coming 10-15 years

50-70 actors
Mainly startups, some midcaps and possibly tier 1 players

800-1000 employees
Mainly gained through in-organic growth

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Thank you

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