

RIT2021

SPACE

INNOVATION

GROWTH

COOPERATION

1 A P R I L 2 0 1 9

RIT 2021

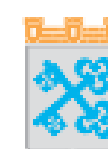
Operated by



Partners



Sponsors





WHY SPACE

THE SPACE ECONOMY IS GROWING FAST

RESEARCH, INFRASTRUCTURE & COMPANIES WITH
HIGH TECH SKILLS DRIVES THE DEVELOPMENT



A REGIONAL SPACE PROGRAMME

WE ARE BUILDING A SUSTAINABLE ECOSYSTEM FOR THE GLOBAL SPACE ARENA
THAT ATTRACTS PEOPLE, NEW ESTABLISHMENTS AND INVESTORS

RIT

2015-2018

RIT strengthened the regional space ecosystem by encouraging collaboration between industry, academia, regional SME's and actors within the innovation support system

RIT2021

2019-2021

RIT2021 will establish a strong innovation system for growth in the space industry based on collaboration, research, test-driven development and clustering

TARGET GROUP

FOR THE RIT 2021 PROJECT

- ✓ The regional business in existing space companies
- ✓ SMEs in other industries that do not deliver to the space industry today but who could and would like to do so
- ✓ Academy in order to build excellence in specific areas that are in demand by the space industry

BACKGROUND

THE GOAL OF **RIT** WAS TO STRENGTHEN REGIONAL COLLABORATION BETWEEN
INDUSTRY, ACADEMIA & ACTORS WITHIN THE INNOVATION SUPPORT SYSTEM

BACKGROUND

FROM INITIATING

- R&D collaboration
- PhDs with the Space Industry
- Centre of Excellence for Space
- Space Innovation Forum
- New Innovation Support System for Space.

TO ESTABLISHING

All our achievements within the RIT project now need to get
established and further developed

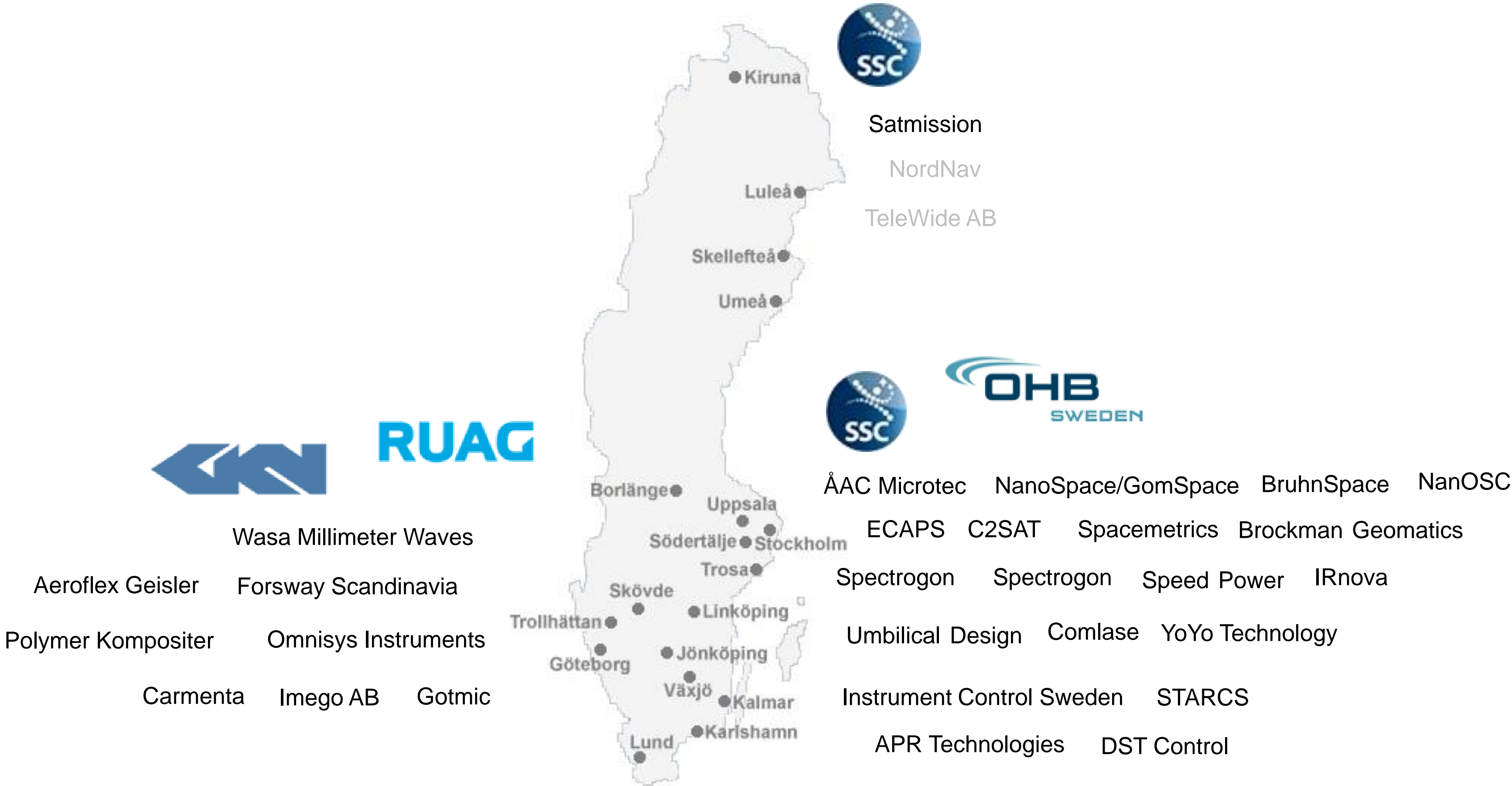
RIT BY NUMBERS

GOALS WE PLANNED FOR AND EXTRA BONUS THAT CAME ALONG.

- ✓ A Centre of Excellence
- ✓ 7 new Master Thesis
- ✓ 7 Innovation PhDs
- ✓ 8 “Space Innovation Forum”
- ✓ 4 initiated collaborations with SMEs
- ✓ Around 15 regional SMEs interested in the space business
- ✓ LTU has become a major player and is invited to important arenas such as Paris Airshow, ESA-PAC, The Space Group of the Government, Space Forum, Almedalen etc.
- ✓ 6+6 research subjects at LTU interested in Space and connected to SSC, Omnisys Instruments, GKN, RUAG, OHB Sweden
- ✓ 3 new cross fertilizations (onboard space systems & Product Innovation, Material Science & Product Innovations, Mashin Elements & Atmospheric Science)
- ✓ 1 new match making event (space students & space Industry)
- ✓ 4 new regional space start-ups
- ✓ 1 new regional start-up within satellite communication
- ✓ 2 new national space start-ups testing in Testbed Kiruna
- ✓ 1 new node for Aerospace Cluster Sweden
- ✓ 1 new node for Big Science Sweden

SPACE SPIN-OFFs IN THE NORTH

AROUND 2015 BEFORE THE RIT PROJECT



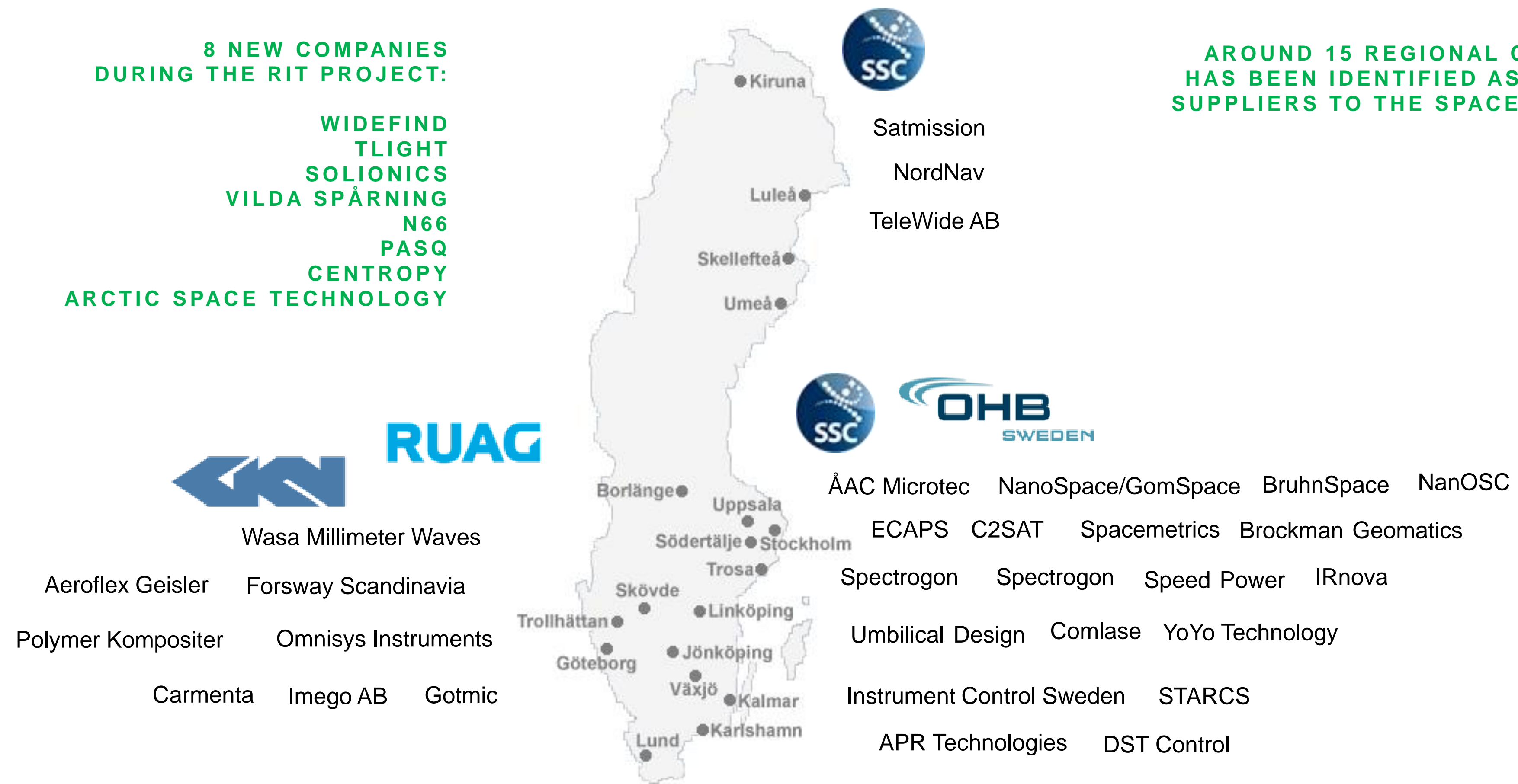
SPACE SPIN-OFFs IN THE NORTH

2018 AFTRE THE RIT PROJECT

8 NEW COMPANIES
DURING THE RIT PROJECT:

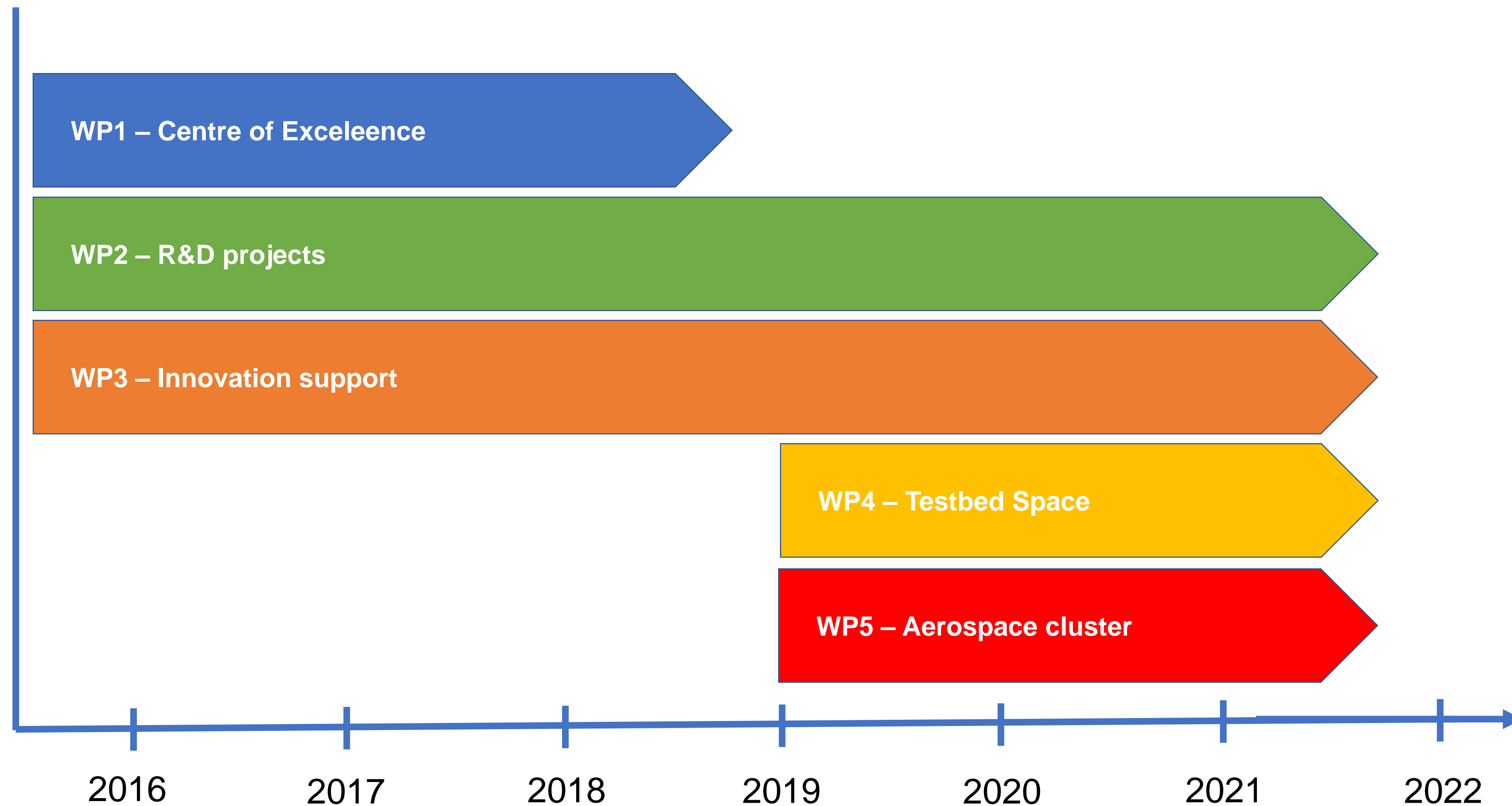
WIDEFIND
TLIGHT
SOLIONICS
VILDA SPÅRNING
N66
PASQ
CENTROPY
ARCTIC SPACE TECHNOLOGY

AROUND 15 REGIONAL COMPANIES
HAS BEEN IDENTIFIED AS POSSIBLE
SUPPLIERS TO THE SPACE BUSINESS



5 ARBETSPAKET

RIT (2015-2018) OCH RIT2021(2019-2022)1



COLLABORATION IN INNOVATION

AROUND 2015 BEFORE THE RIT PROJECT



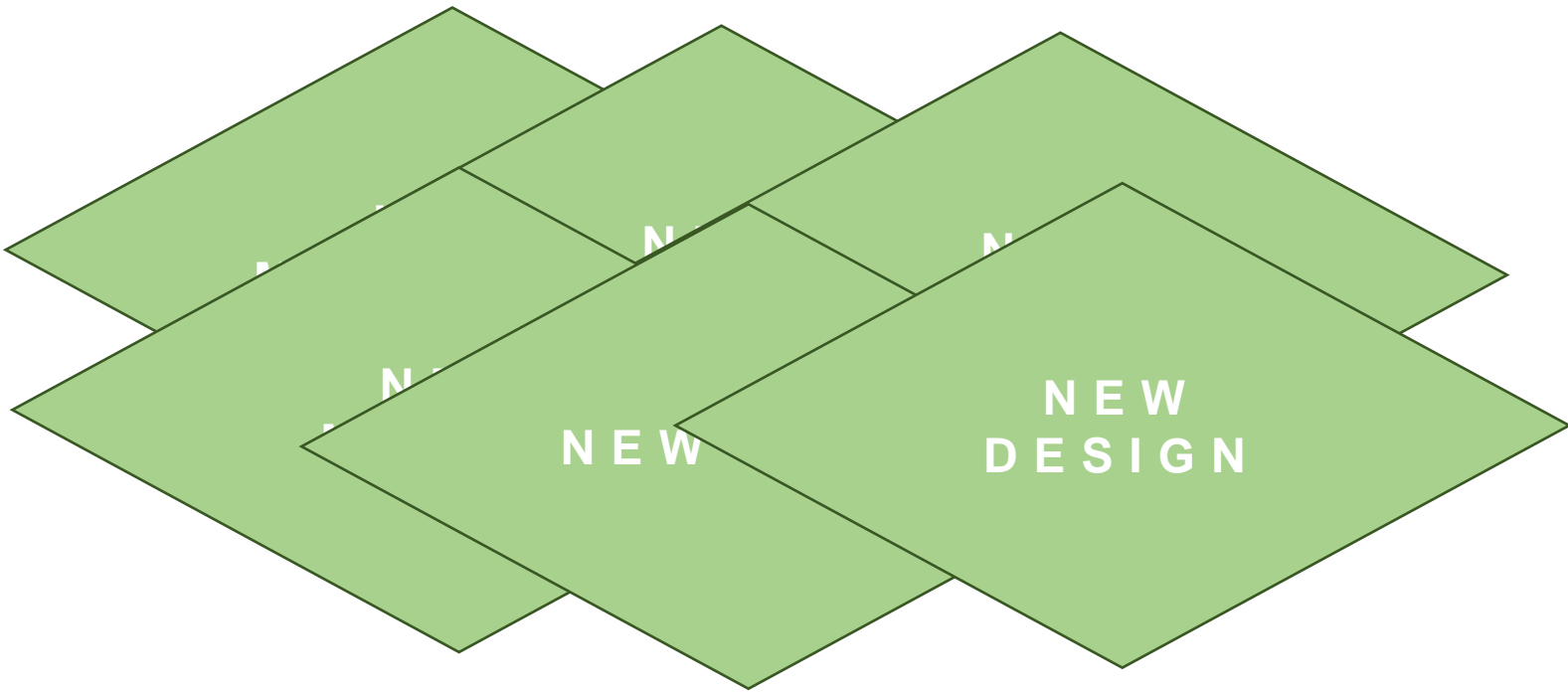
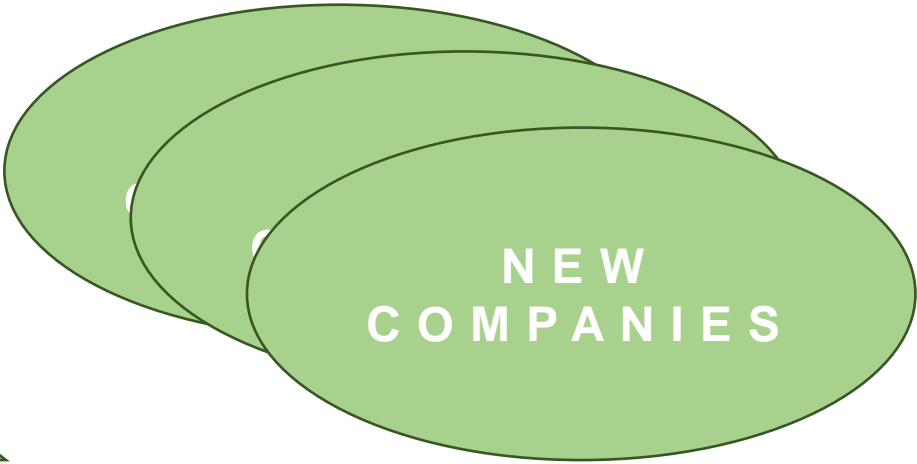
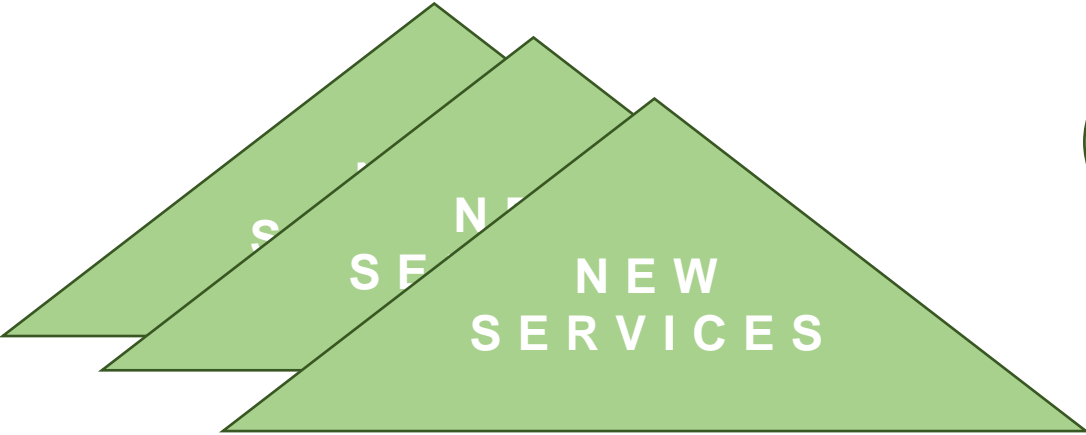
COLLABORATION IN INNOVATION

2018 AFTRE THE RIT PROJECT



ACADEMIA-INDUSTRY-INNOVATION SUPPORT

INDUSTRY-INNOVATION SUPPORT



BETTER OPORTUNITIES TODAY

THE RIT PROJECT HAS PAVED THE WAY FOR REGIONAL DEVELOPMENT

- ✓ Space is a strategic area for the whole region (not only Kiruna)
- ✓ LTU is expanding within the space area: new professors, PhDs, Postdocs, and lectors
- ✓ LTU has a vice rector with a focus on space
- ✓ LTUs space role in the region has strengthen ed
- ✓ An Innovations support system for space is identified
- ✓ A Swedish Space Incubator is in place
- ✓ “Space Innovation Forum” is initiated
- ✓ We have built up a natural technical/knowledge transfer between academia and industry
- ✓ We have a better understanding of various driving forces in industry and academia
- ✓ SMEs have identified Space as a potential market
- ✓ SMEs are more prepared to step into the space industry (and flights, large research facilities)
- ✓ We have several startups in the ESA-BIC

 We have a stronger appeal and external actors want to collaborate with us!

BETTER OPORTUNITIES TODAY

NEW SPACE IS A GAME CHANGER FOR THE BUISINESS

- ✓ We have a modern space race with a growing crowd of private investor
- ✓ Space is an important future industry for the goals of Agenda 2030
- ✓ The demand of small satellites has multiplied
- ✓ The Swedish government has launched a national space strategy
- ✓ The Swedish national Space Agency has launched a new space strategy
- ✓ Esrange is pointed out as a future launch site for satellites
- ✓ Several new regional projects have started: EISCAT 3D, SmallSat Express and Global Watch
- ✓ ESA are launching ESA Ambassadors to stimulate business in space downstream

4 WORK PACKAGES

R&D PROJECTS

Current PhD:s

New PhD:s

Postdocs

TESTBED SPACE

SpaceLab

New Business Models

Commercialization

INNOVATION SUPPORT

New Methods

New Processes

New Business Cases

CLUSTER BUILDING

Aerospace Business

Collaboration

Certification

SYNERGIER

MELLAN DE OLIKA ARBETSPAKETEN INOM RIT2021

R&D PROJECTS

- New PhD:s
- New PostDocs
- New Master Theses
- Project courses

TESTBED SPACE

INNOVATION SUPPORT

- Program for PhD:s
- Program for Postdocs
- Identify new business ideas
- Cases for students

CLUSTER BUILDING

- Collaboration Industry academia
- Master Theses
- Project courses
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TESTBED SPACE

CLUSTER BUILDING

EXPECTED RESULTS

FOR THE RIT 2021 PROJECT

- ✓ The region's position as Sweden's space region has been strengthened
- ✓ The space industry in the region has gone from an initiated to a well-established and sustainable ecosystem that creates growth
- ✓ 7 PhDs have delivered innovative solutions to the space industry
- ✓ 7 PhDs has graduated and highly sought after by the space community
- ✓ 4 cases from the RIT project have been refined and are mature to be included in the space incubator
- ✓ 7 new R&D projects that meet the needs of the space industry have begun
- ✓ Space Innovation Forum is an established and well-attended meeting place
- ✓ New partners, suppliers and customers have found each other
- ✓ Knowledge and technology transfer leads to new business ideas and social benefits
- ✓ Twenty regional SMEs have taken the step into the space business
- ✓ Commitment, time and money are available for the continued operation of both northern nodes for Aerospace Cluster Sweden and Big Science Sweden

EXPECTED RESULTS IN THE LONG RUN

LONG AFTER THE RIT 2021 PROJECT

- ✓ The space industry is a strong regional industry
- ✓ We have a regional development strategy for Space
- ✓ Esrange Space Centre is Europe's launch site on European ground for polar satellites
- ✓ SpaceLab is offering attractive state-of-the art testing facilities on the global space arena
- ✓ EISCAT 3D is contributing to world leading science and space applications for commercialization
- ✓ LTU is a world leading space university with a well respected Centre of Excellence for Space
- ✓ IRF has further consolidated its role as world leading in space physics
- ✓ Aerospace Cluster Sweden is well established and connected to the global space business

IN ADDITION

- ✓ We have a strong space eco system which contributes to regional growth
 - A strong ability in R&D collaboration creates good effects for the space community/society
 - More students are competing to study at Space Campus
 - Space students are considered to be one of the most important target groups for recruitment
 - SMEs are well integrated as suppliers to the space business
 - Etc.....

SOME FROM THE TEAM





THANK YOU

SPACE

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