

SPACE

INNOVATION GROWTH COOPERATION

JOHANNA BERGSTRÖM ROOS 1 February 2019





WE ARE WORKING TO BECOME

A STRATEGIC ASSET FOR THE GLOBAL SPACE ARENA

BY BUILDNING UP AN OUTSTANDING ECOSYSTEM

THAT ATTRACTS PEOPLE, NEW ESTABLISHEMENTS AND INVESTORS



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



PROJECT BACKGROUND

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

BACKGROUND

TO ESTABLISHING

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

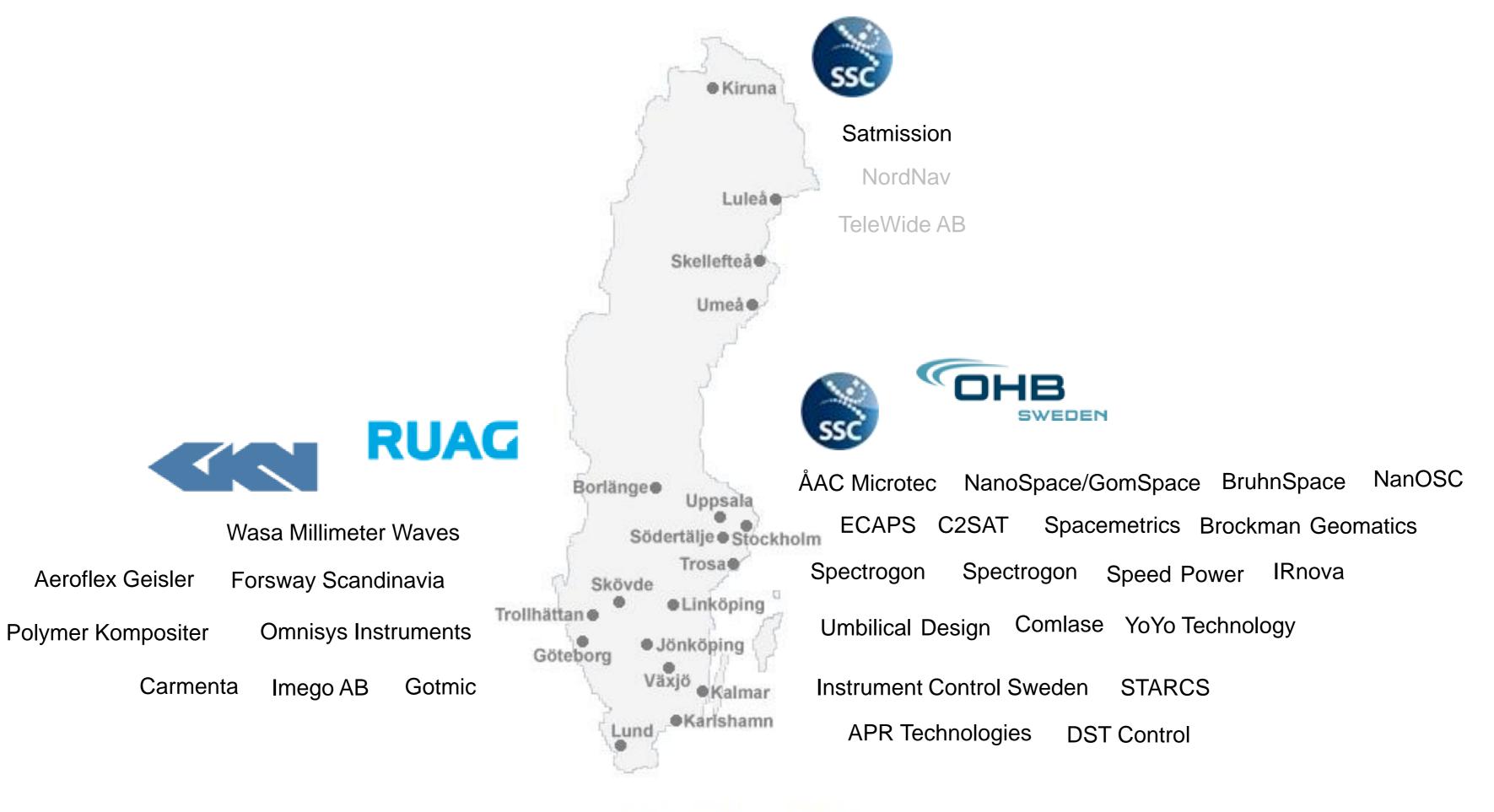
FROM INITIATING

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



SPACE SPIN-OFFS IN THE NORTH

AROUND 2015 BEFORE THE RIT PROJECT





SPACE SPIN-OFFS IN THE NORTH

2018 AFTRE THE RIT PROJECT



WIDEFIND TLIGHT SOLIONICS VILDA SPÅRNING N66 Satmission
NordNav
Lulea
TeleWide AB

Umeå @

AROUND 20 REGIONAL COMPANIES HAS BEEN IDENTIFIED AS POSSIBLE SUPPLIERS TO THE SPACE BUSINESS



Wasa Millimeter Waves

Aeroflex Geisler Forsway Scandinavia

Polymer Kompositer Omnisys Instruments

Carmenta Imego AB Gotmic



ÅAC Microtec NanoSpace/GomSpace BruhnSpace NanOSC

ECAPS C2SAT Spacemetrics Brockman Geomatics

Spectrogon Speed Power IRnova

Umbilical Design Comlase YoYo Technology

Instrument Control Sweden STARCS

SWEDEN

APR Technologies DST Control



COLLABORATION IN INNOVATION

AROUND 2015 BEFORE THE RIT PROJECT



ACADEMIA

INDUSTRY-INNOVATION SUPPORT



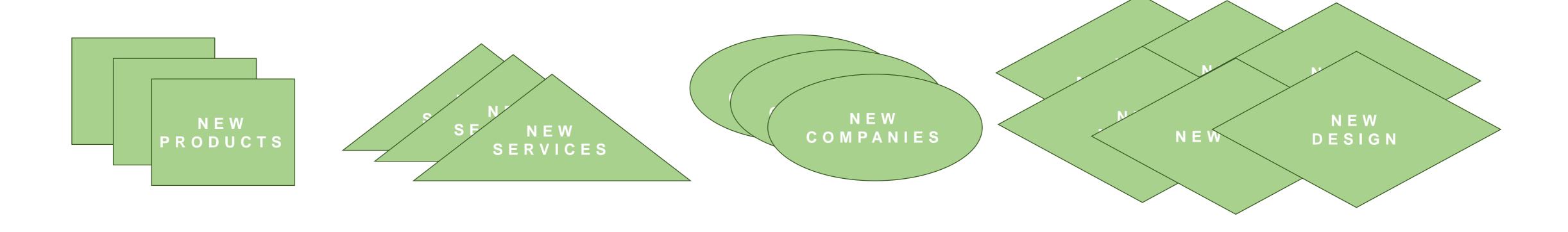
COLLABORATION IN INNOVATION

2018 AFTRE THE RIT PROJECT



ACADEMIA-INDUSTRY-INNOVATION SUPPORT

INDUSTRY-INNOVATION SUPPORT





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 playor and is invited to important arenas such as Paris Airshow, ESA-PAC, The Space Group of the Gouvernment, 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 fertelizations (onboard space systems & Product Innovation, Material Science & Product Innovations, Mashin Elements & Atmisferic 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



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



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.....

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