Catania Alerts meeting December 2019

The current H2020 Contract and the next PILOT

OPTICON

EC Optical InfraRed Cordination Network for Astronomy

- **FP5 (2000-2004) Start-up networking**
- **FP6 (2004-2008) 47 partners €19M (5 years)**
- **FP7-1 (2009-2012) 30 partners €10M (4 years)**
- **FP7-2 (2013-2016) 26 partners €8.5M (4 years)**
- **H2020 (2017-2020) 32 partners €10M (4 years)**
- **H2020 (2021-2024) PILOT project with RadioNet (4 years)**
- Partners: funding agencies, hardware R&D groups, observatories, industrial partners
- Activities: observing access, technology R&D, networking / community development

Coordinator:	Prof Gerry Gilmore
Project Manager:	Dr Gudrun Pebody
Project Scientist:	Dr John Davies (ATC Edinburgh)

OPTICON H2020

Adaptive Optics € 500,500	Fast Cameras € 1,000,000	Fast Detectors € 400,000	Freeform Mirrors € 600,000
Additive Manufacturing € 849,957	Astrophotonics € 529,989	Light Sensitive Materials € 500,000	Next Generation Instruments € 550,625
Management € 800,131	Adaptive Optics Network € 499,500	Interferometry Network € 250,000	Training Schools € 429,527
Time Domain Astronomy € 600,000	Technology Foresight € 124,416	Community Sustainability € 100,000	Transnational Access € 2,265,355

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JRAs

[JRA 1]
Calibration and test tools for adaptive-optics E-ELT instruments
Jean-Luc Beuzit
CNRS
€ 500,500

[JRA 2]
(CMOS) Fast Detectors and Cameras for Laser Guide Stars
Philippe Feautrier
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Michiel Rodenhuis
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Next Generation Instrument Concepts for VLT Interferometry
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MaxPlanck
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Networks

[NA 1]
Adaptive Optics Community Network
James Osborn
UDUR
€ 499,500

[NA 3]
Enhancing Community Skills – Integrating Communities
Heidi Korhonen
UCPH
€ 429,527

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Ruben Sanchez-Janssen
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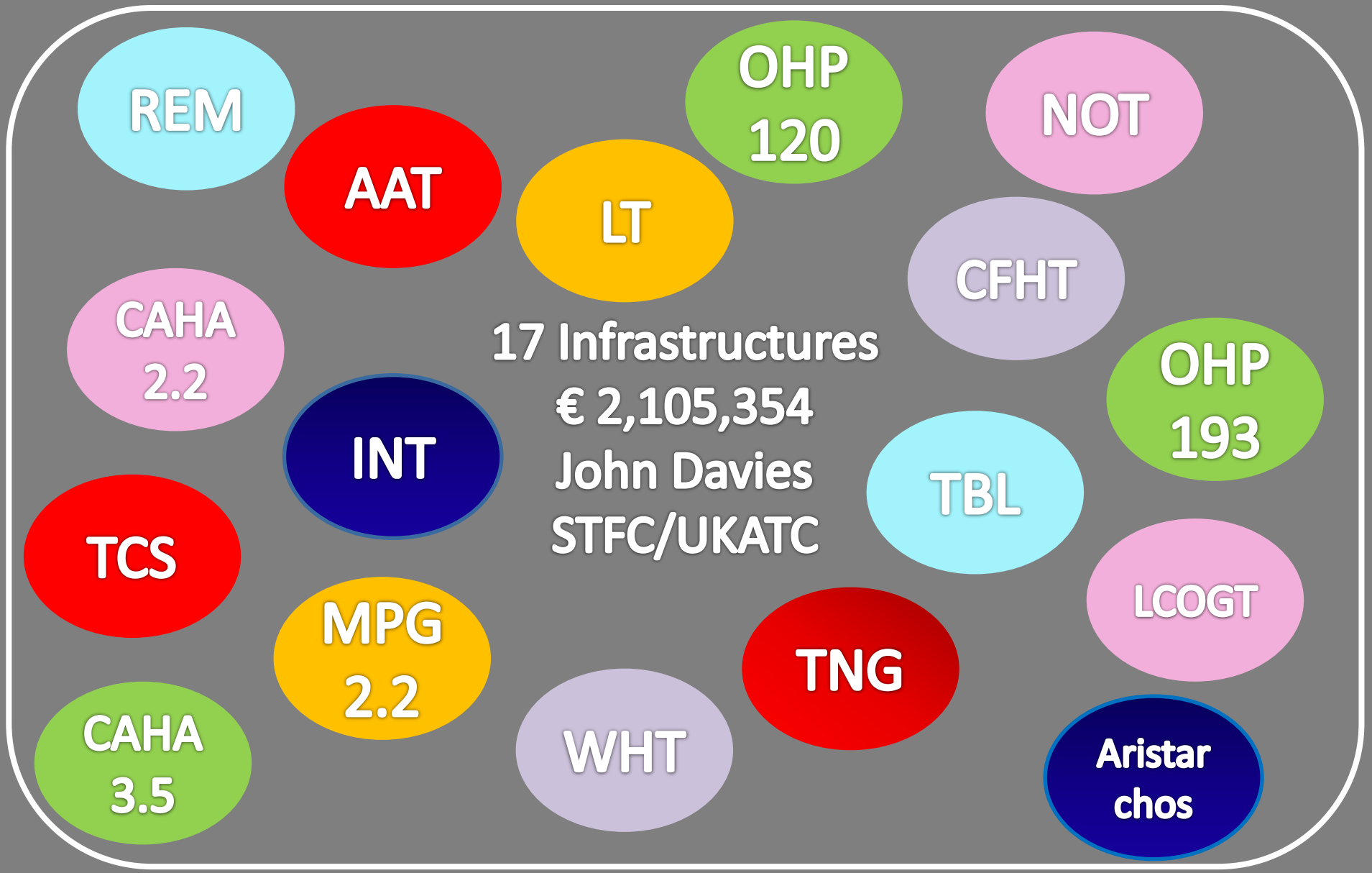
Paulo Garcia
UPORTO
€ 250,000

[NA 4]
Time-Domain Astronomy
Lukasz Wyrzykowski
UNIWARSAW
€ 600,000

[NA 6]
Long-term Strategic Planning
Gerry Gilmore
UCAM
€ 100,000

TNA


REM
AAT
OHP 120
NOT
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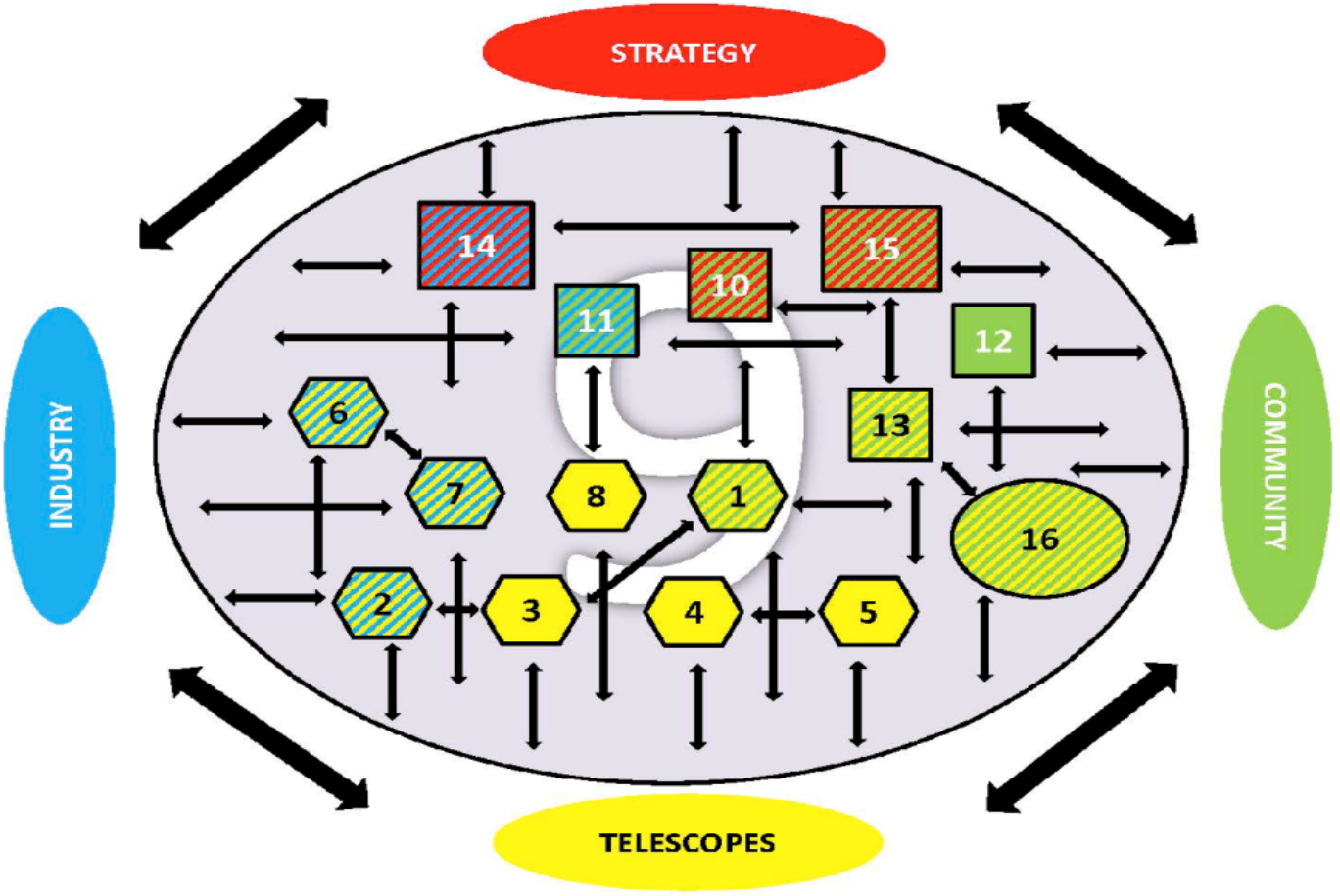
CFHT
CAHA 2.2
17 Infrastructures
€ 2,105,354
John Davies
STFC/UKATC
OHP 193
INT
TBL
TCS
LCOGT
MPG 2.2
TNG
CAHA 3.5
WHT
Aristar chos

OPTICON

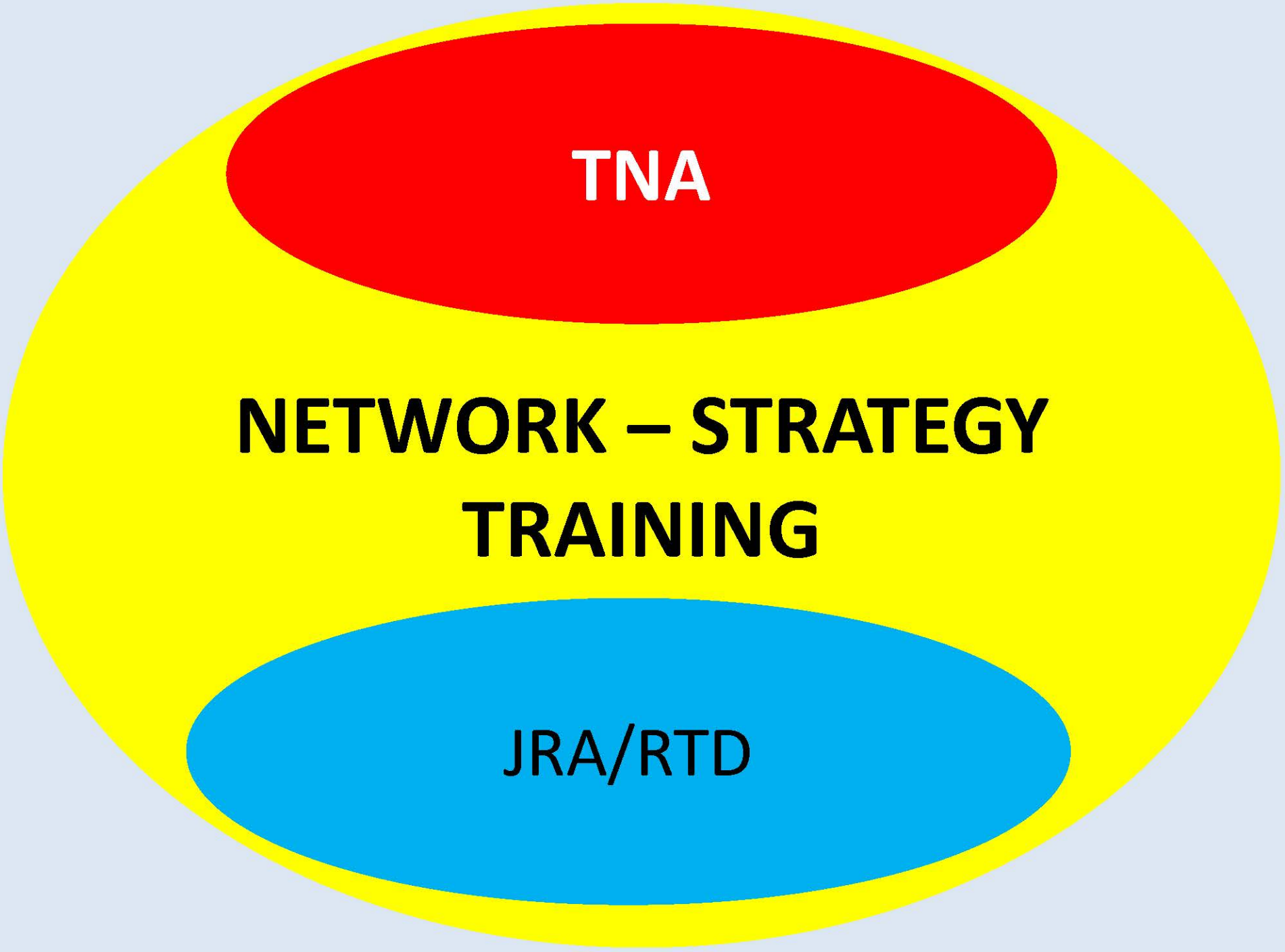
Trans-national Access Programme

www.astro-opticon.org

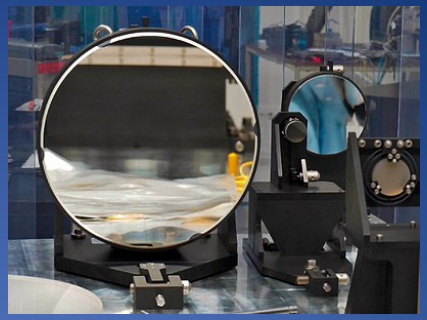
Our ambition: a culture of co-operation and synergy – discovering, delivering and disseminating new ideas, ambitions and projects for the future of the optical infrared community

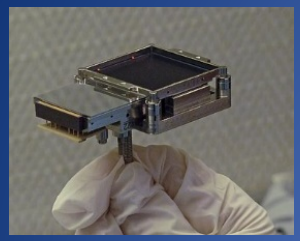


WP1 Adaptive Optics
WP2 Fast Cameras
WP3 Fast Detectors
WP4 Freeform Mirrors
WP5 Additive Manufacturing
WP6 Astrophotonics
WP7 Light sensitive Materials
WP8 Next generation instruments
WP9 Management
WP10 Adaptive Optics Network
WP11 Interferometry Network
WP12 Training Schools
WP13 Time-Domain Astronomy
WP14 Technology Foresight
WP15 Community sustainability
WP16 TNA access

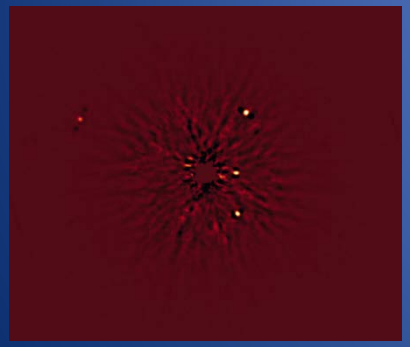

TNA
NETWORK – STRATEGY TRAINING
JRA/RTD

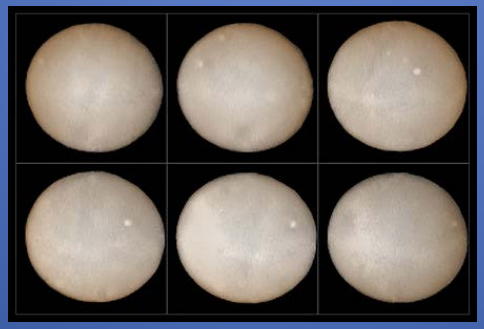
SPHERE

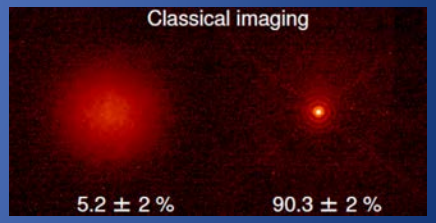


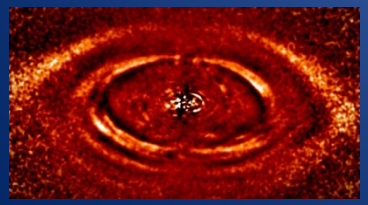


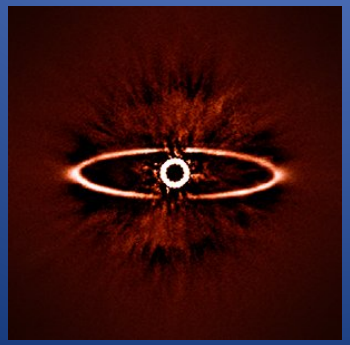
SPHERE @ VLT: OPTICON RTD provided ~30% of the AO technology

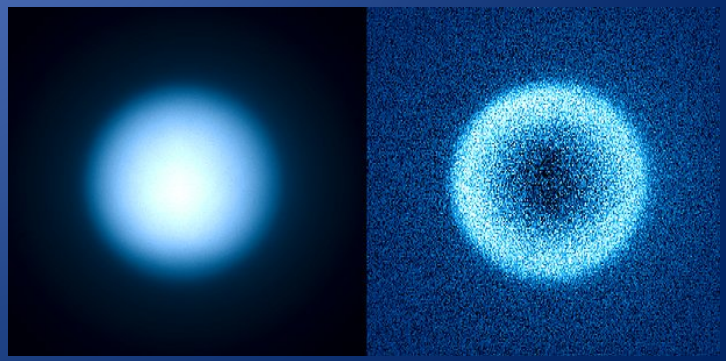






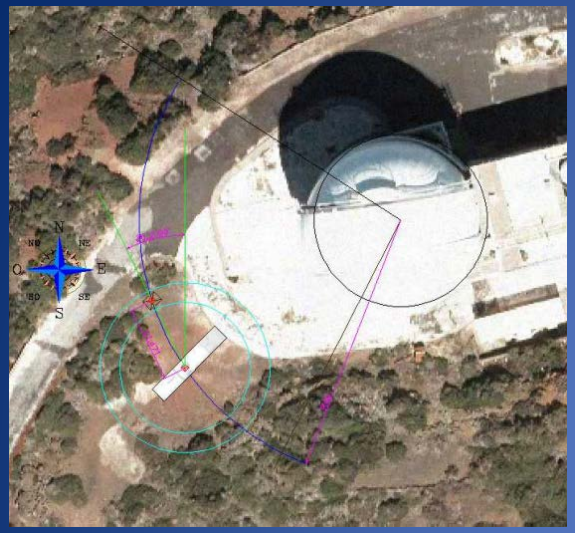


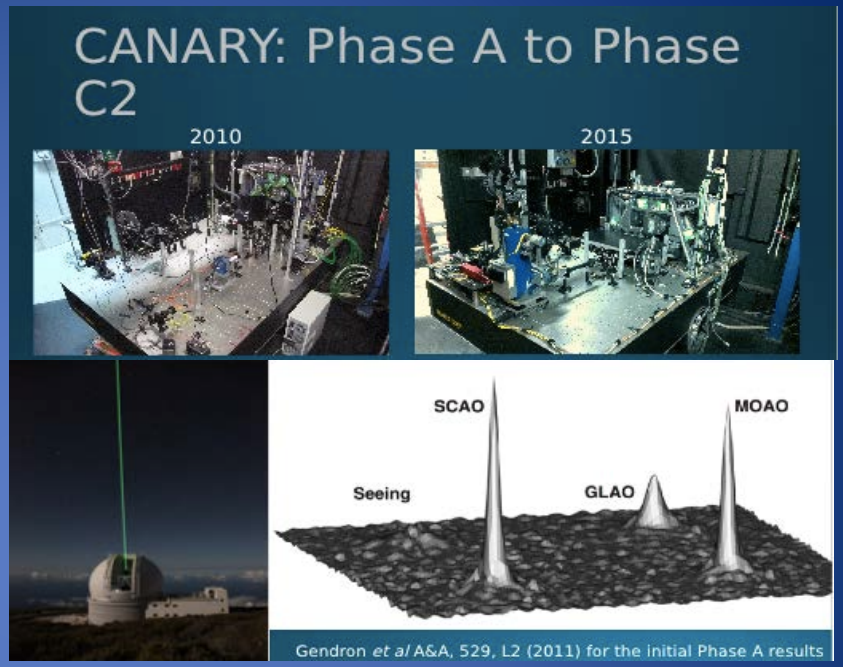




Canary

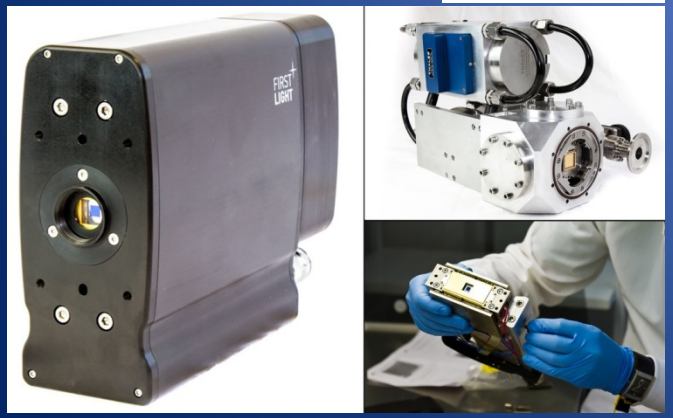
adaptive optics testbed





Ocam

FIRST LIGHT ADVANCED IMAGERY

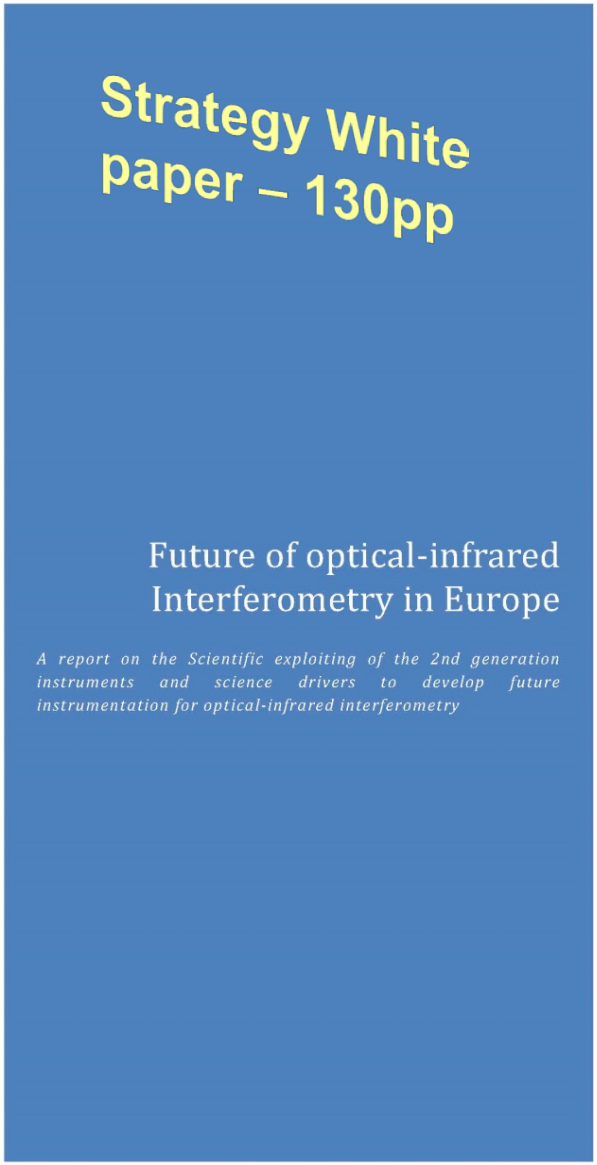


optoscribe

Novel optical manufacturing processes using an ultrafast laser inscription process developed for OPTICON Astrophotonics

Networks FP7 deliverables

Strategy White paper – 130pp



Interferometry data processing cookbook – 80pp

RECONSTRUCTION TEST REPORT AND DATA PROCESSING COOKBOOKS

OPTICON FP7-2 Report (JRA.4 DELIVERABLE)

OPTICON

Authors:

Joel Sanchez-Bermudez (Max-Planck-Institut fuer Astronomie -MPIA-, Heidelberg, Germany)

Eric Thiébaut (Centre de Recherche Astrophysique de Lyon, Lyon, France)

Gilles Duvert (Observatoire de Grenoble and IPAG, Grenoble, France)

Guillaume Mella (Observatoire de Grenoble and IPAG, Grenoble, France)

John Young (Univ. of Cambridge, Cambridge, United Kingdom)

J-Uwe Pott (Max-Planck-Institut fuer Astronomie -MPIA-, Heidelberg, Germany)

Nuno Gomes (Universidade do Porto - Faculdade de Engenharia, Departamento de Engenharia Física -CENTRA-, Porto, Portugal)

Paulo J. V. Garcia (Universidade do Porto - Faculdade de Engenharia, Departamento de Engenharia Física -CENTRA-, Porto, Portugal)

December, 2016
Heidelberg, Germany

Training schools & workshops

- Observing
- Archive data analysis
- Instrumentation
- Photonics
- Interferometry
- Adaptive Optics technology

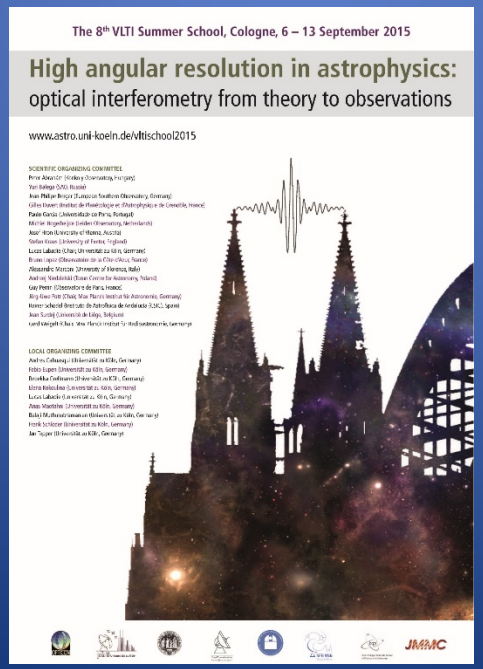
TRAINING SCHOOLS FP7-2

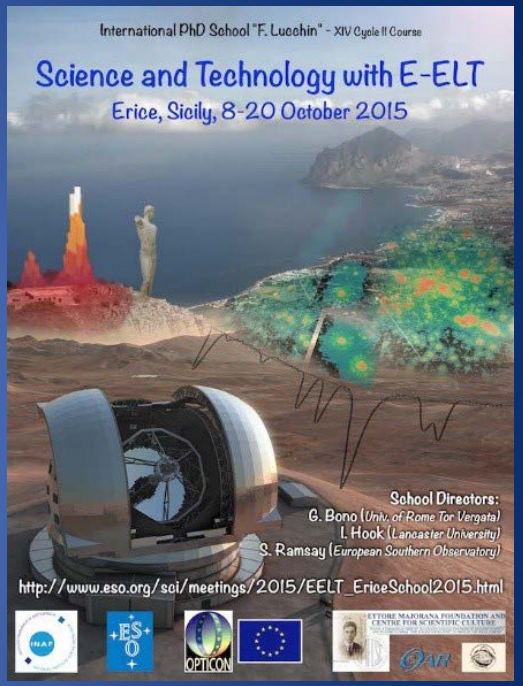
Astrophotonics

- Durham (UK) 21-25 September 2015

Interferometry

- Barcelonnette (FR) 9-21 September 2013
- Cologne (DE) 6-13 September 2015





E-ELT science

- Erice (IT) 8-20 October 2015

Adaptive Optics

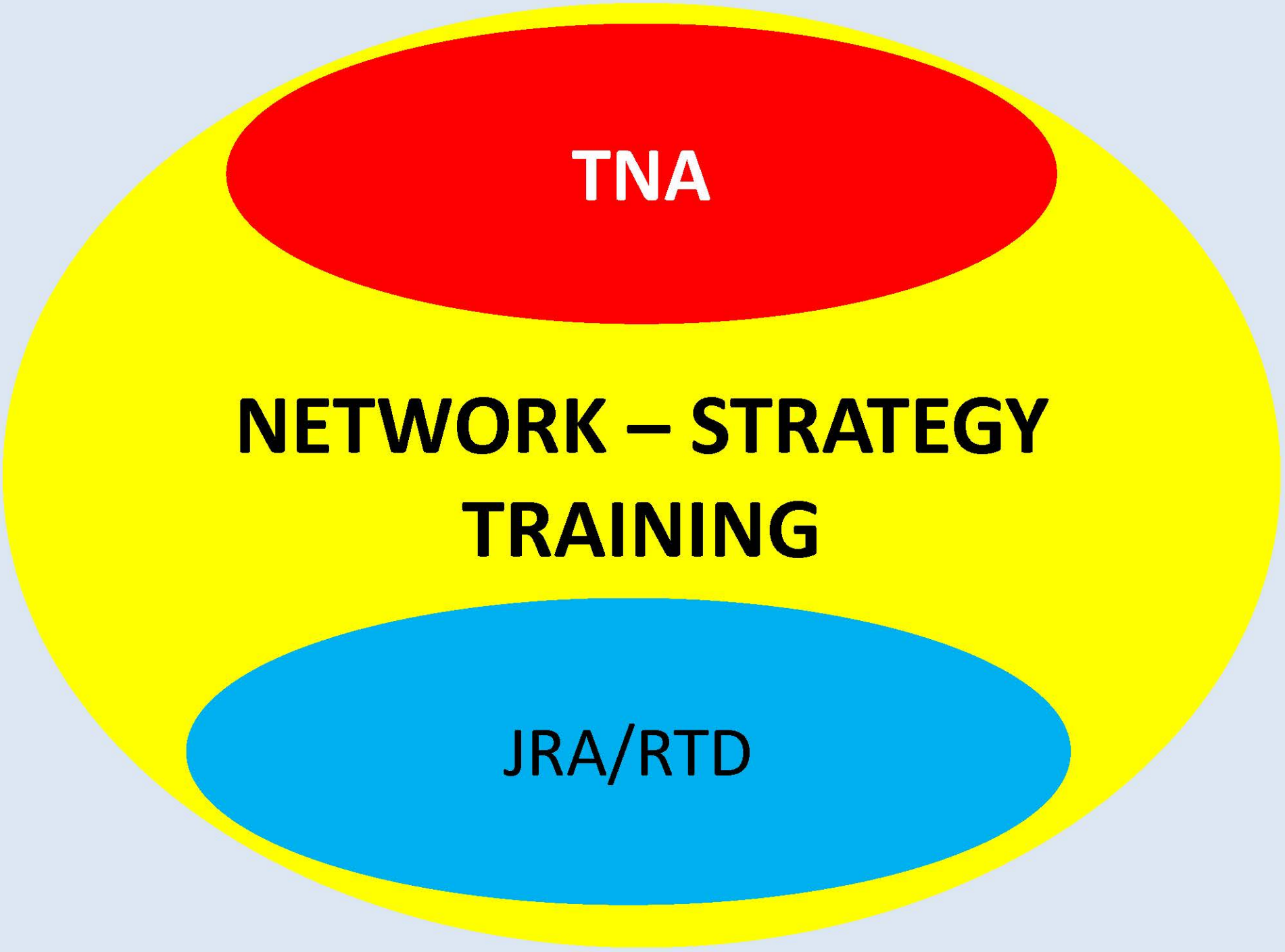
TRAINING SCHOOLS H2020
WP 12

NEON (Observation)

- 2017 ● 3-17 September ● La Palma
- 2018 ● 9-22 September ● Asiago
- 2019 ● 15-29 September ● Rozen & Sofia
- 2020 ● TBD

Instrumentation / Proposal writing

- 2017 ● 3-12 July ● Copenhagen
- 2018 ● 18 February – 2 March ● La Silla & Santiage [ESO co-funded]
- 2019 ● 17-27 June ● Stará Lesná
- 2020 ● TBD?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JRA/RTD

STRATEGY

OPTICON

TNA

RadioNet

TRAINING

JA

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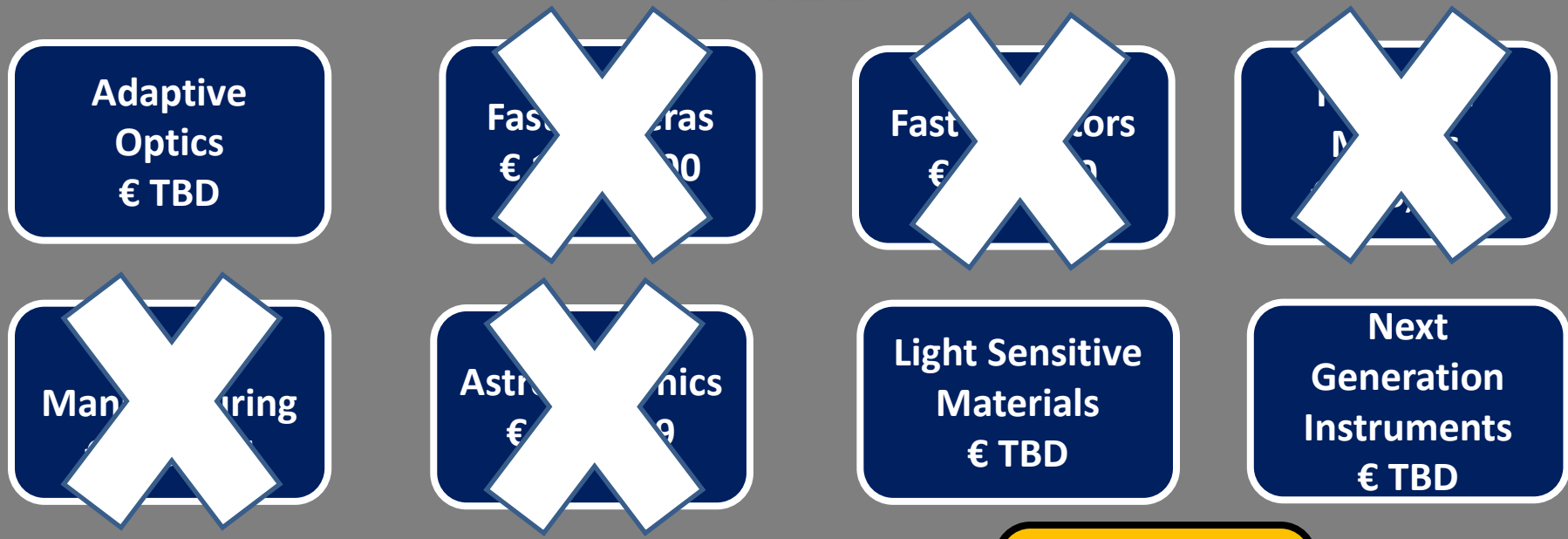
PILOT


Adaptive Optics € TBD
Light Sensitive Materials € TBD
Next Generation Instruments € TBD
Management € 500,000
Adaptive Optics Network € TBD
Interferometry Network € TBD
Training Schools € TBD
Time Domain Astronomy € TBD
Technology Foresight € TBD
Community Sustainability € TBD
Transnational Access € 4,500,000

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[JRA 8]
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Jörg-Uwe Pott
MaxPlanck
€ 550,625

PILOT

[JA / TA]
Calibration and test tools for adaptive-optics instruments
Canary collaboration

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[JA 3.1]
Innovative Photosensitive Materials for Diffractive and Reflective Optical Elements
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INAF
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[JA/TA]
Instruments for VLT Interferometry
Sebastian Hoenig
EII Collaboration

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UNIWARSAW
€ 600,000

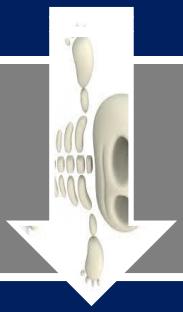
[NA 6]
Long-term Strategic Planning
Gerry Gilmore
UCAM
€ 100,000

Current Networks are basis of PILOT

[TA/JA]
Adaptive Optics experiment Community
James Osborn
UDUR

[JA 4]
Enhancing Community Skills – Integrating Communities
Heidi Korhonen
UCPH

[JA1.4]
Technology and Innovation Network
STFC



[TA/JA]
VLTI Expertise Centres Network
European Interferometry
UPORTO

[TA/VA/JA]
Time-Domain Astronomy
Lukasz Wyrzykowski
UNIWARSAW

[JA 1]
Long-term Strategic Planning
Gerry Gilmore
UCAM

OPTICON-RadioNet PILOT: 2021-2024

Submission deadline: March 17 2020

Budget per community: 7500Keuro

Restriction: 60% (4500K) to be allocated to “access”

New labels: Access TA/VA; training = schools; Joint Actions = everything else

Agreed structure:
Formal coordinator = Anton Zensus MPIfR (limited role)
OPTICON management team will continue to coordinate OPTICON-led activities
Ditto for RadioNet.

Collaboration - not a take-over.

Single Board of all partners, limited role
Executive Board of national agencies and international facilities
Twin management teams

PILOT

TA 1

TA 2

TA 3

TA 4

Total budget
€15M

JA 1

JA 2

JA 3

Training

Management

Management

Trans-National Access TA/VA

TA1:
Primary transnational/virtual access to Europes's leading optical and radio facilities

TA2:
Expanded user support to the complex observing facilities and systems ALMA and VLTI

Total budget 4,500Keuro

This is for this meeting

TA3:
Time-Domain-Multi-wavelength astronomy

TA4:
Instrument and Adaptive Optics test facility access. Some aspects will be classic TNA access, some VA, complemented by a Joint Action under JA2.

Trans-National Access TA/VA

TA1-a **Lead author: RadioNet**

TA1–b **Lead author: OPTICON John Davies**

TA2- a ALMA ARC **Lead author: RadioNet**
TA2-b VLTI-arcs **Lead author: EII team**
OPTICON / RadioNet

Total budget 4,500Keuro

TA3-a PST **Lead author: RN**
TA3-b OPT Timedomain **Lead author: Lukasz W. OPTICON**
TA3-c multi-wave TDA **Lead author: RN**

TA4-a Canary-related **Lead author: James Osborn OPTICON**

TA4-b radio part **Lead author: RadioNet**

Joint Activities

JA1 - Develop and Outline a long-term strategy regarding the viability of relevant Research Infrastructures and activities (mandatory)

JA2 - To coordinate, harmonise, and hence improve the services delivered to the broad research communities across the multiple infrastructures within the PILOT

Total available budget

2,200K

JA4
Training schools related to access training

JA3 - Provide a complementary suite of targeted enhancements to the services and capabilities of the infrastructures within the PILOT.

JA1 – Towards a strategic vision for the long-term

JA1.1 - ***Map and analyse the access modalities across RIs & Countries***

JA1.2 – ***PILOTING the PILOT: The impact of the PILOT combined activities***

JA1.3 – ***Develop possible co-funding models for TA initiatives***

JA1.4 – ***Explore the long-term importance of TA/VA to the community***

Budget: 200Keuro/partner

Chair/lead: Gerry Gilmore

JA2 – Harmonising and Improving services

JA2.1 – *Common-Access to Research Infrastructures*

Includes new NorthStar system: budget 100K??

JA2.2A: Supporting new multi-facility Science opportunities

JA2.2B: Time-Domain-Multi-wavelength Astronomy

JA2.3– *Common frameworks for Data access and processing procedures*

JA2.4 – Synergies between emerging and established interferometric communities

Budget request 100K?

JA3 – Improving and Enhancing Research Infrastructure Capabilities

JA3.1 – ***VPH Grating Developments (200Keuro)***

Continues the opticon Milan WP

JA3.2 – ***Enhancing the capabilities of VLTI***

Continues opticon work: 4 instrument upgrades

Budget request = 900Keuro (some to TA)

JA3.3 – Supporting innovation and guest-instrument access to facilities

AO and related programmes

JA3.4 – mm-wave JRA (RadioNet)

JA3.5 new interferometric algorithms

JA4: Training Schools

Schools must be related to access training, not generic.

Topics include proposal preparation, hands-on infrastructure operation, data processing and analysis, new facility opportunities, including VLTI and adaptive optics, understanding how instrumentation works, how to use VA archive access, and new opportunities in multi-wavelength multi-messenger and time-domain science.

Budget: 300Keuro

Other specific training to be delivered by RadioNet facilities

Management

budget = 500Keuro, including contingency and schools secretarial support

Budget request

Your request

joint actions will improve the performance of the facilities offered during the lifetime of the PILOT.

MOVE AS MUCH AS POSSIBLE TO TA/VA

The point of the PILOT is exploring new forms of TNA

VOCABULARY is the essence… BE CREATIVE

Longer-term activity is not eligible for support in this Call – there will be another in 2021.

Thank you

Innovation – Integration – Infrastructure
Integrated infrastructure initiatives