



EUROPEAN COMMISSION
DIRECTORATE-GENERAL RESEARCH & INNOVATION

Open Innovation and Open Science
Research infrastructure

Brussels,

REVIEW REPORT

Grant Agreement (GA) number:	730890
Project¹ Acronym:	OPTICON
Project title:	Optical Infrared Coordination Network for Astronomy
Type of Action:	RIA
Start date of the project:	01/01/2017
Duration of the project:	48
Name of the primary coordinator contact and organisation:	Gerard GILMORE (UCAM)
Period covered by the report:	from 01/01/2017 to 17/12/2018
Periodic report:	Intermediate assessment not linked to the end of a reporting period
Date of first submission of the periodic report (if applicable):	Not applicable
Date of latest version of Annex 1 to the GA (Description of the Action - DoA) against which the assessment is performed	13/12/2016
Date of meeting with consortium (if applicable):	17/10/2018
Name(s) of monitors assisting in the project assessment (if applicable)	ANDREJA* GOMBOC
Name of Project Officer drafting the report:	Keji Alex ADUNMO

¹ The term ‘project’ used in this template equates to an ‘action’ in certain other Horizon 2020 documentation

1. Overall assessment

Overall assessment
Project has achieved most of its objectives and milestones for the period with relatively minor deviations.
Significant results linked to dissemination, exploitation and impact potential
<p>Project has delivered exceptional results with significant immediate or potential impact (even if not all objectives mentioned in the Annex 1 to the GA were achieved).</p> <p>The most significant results delivered by the project during the period under review:</p> <ol style="list-style-type: none">1. TNA programme - enabling astronomical observations (used by scientists, bringing new research data and scientific findings)2. Schools and Workshops - dissemination and knowledge transfer (participants: students, researchers, engineers, companies)3. Time Domain Astronomy Network - development of small and medium size telescopes network and building a community of their users (scientists, bringing new research data and scientific findings)4. Final design review of the fast low noise CMOS camera and market review (relevant also for SMEs and use outside of astronomy, in e.g. bioimaging, surveillance)5. The study of new functional materials, including VPHGs, and modern production methodologies (e.g. free form optics and additive astronomical integrated-component manufacturing) (relevant for research institutions and companies)6. Summaries of common needs and strategies (e.g. for calibration and test tools for adaptive-optics assisted E-ELT instruments) (relevant for astronomical research community).
General comments
<p>The Opticon project is a highly successful project, bringing important results in several areas:</p> <ul style="list-style-type: none">- on the technology side it is pushing the boundaries in several areas (fast low noise CMOS cameras, VPHGs, free form optics etc.), contributing to the state-of-the-art in astronomical instrumentation.- on the scientific side it is bringing new state-of-the-art astronomical observational data with a range of telescopes (TNA network and Time Domain Astronomy network) and new scientific results.- building communities: TNA and Time Domain Astronomy communities of astronomers, as well as connecting astronomical and engineering communities.- dissemination of the project results in the form of schools, workshops, publications, talks at conferences etc. is helping in the knowledge transfer in the community, in particular to new generations of scientists and engineers. <p>Main activities are progressing according to the DoA, and achieving their objectives in line with the workplan. A few of deliverables were delayed (list given below in "Objectives and Workplan"), however causes of delays were explained and justified in the periodic report, and appropriate actions taken to mitigate them. Use of resources is in line with the DoA, small deviations were satisfactorily justified in the periodic report.</p>
Recommendations concerning the period covered by the report
A minor recommendation regarding the dissemination activities is to collect information about all publications benefiting from the Opticon project and publish the list of them on the project webpage.
Recommendations concerning future work, if applicable
<p>There are no overall modifications needed. I have only a few minor recommendations:</p> <ol style="list-style-type: none">1. To identify project areas with high risk factor due to their reliance on just one key-person and investigate how it would be possible to reduce that risk.2. In the TNA programme the allocation of time is provided based only on scientific merit. This is not entirely in compliance with the DoA, Article 16.1.1. c, which states: "The selection panel must base its selection on scientific merit, taking into account that priority should be given to user groups composed of users who:<ul style="list-style-type: none">- have not previously used the installation and- are working in countries where no equivalent research infrastructure exist."Explore possibilities to include also these two dimensions in the time allocation procedure, in particular the last one. Review whether more could be done in view of supporting researchers working in countries where no equivalent

research infrastructure exists (i.e. in what way "priority should be given" to them) than just enabling them to compete for observing time with the top groups from the most developed countries (i.e. UK, France, Germany...), in particular given the high over-subscription rate. Check for possible unconscious bias (against researchers from new EU countries) in the selection procedure for time allocation under the TNA programme.

3. In the TNA programme and time allocations it would be useful to gather data on research topics of proposals, success rate by country/institution/gender/facility/research topic etc.

4. Regarding the dissemination activities it would be very useful (also to demonstrate the impact of the project to various communities) to collect in one place the information about all publications, presentations, outreach and press releases benefiting from/based on data obtained under the Opticon project and to publish the lists of all dissemination activities on the project webpage.

2. Objectives and Workplan

Is the progress reported in line with objectives and work plan as specified in the DoA? If there are significant deviations, please comment.	Yes
<p>The overall progress is in line with the planned schedule. There were some delays, which were satisfactorily explained in the Periodic Report.</p> <p>There are a few reports which were not yet delivered and are re-scheduled:</p> <p>WP3: D3.2: The report was delayed and rescheduled (to 30th June 2019) due to staff relocation and new staff recruitment issues. D3.4: The report was delayed and rescheduled (to 31st Dec 2018) due to staff relocation and new staff recruitment issues.</p> <p>WP4: D4.1: Based on the updated insight on the different competences and resource availability, a redistribution of work was made. New planned date for this report is Dec 2019.</p> <p>WP5: D5.1: Due to re-planning during the kick-off meeting, this report has been delayed and is now planned for Dec 2018.</p> <p>WP11: D11.1: The VLTI school, which was initially planned for 2017, has been rescheduled to July 2018, due to another school with overlapping theme taking place in 2017. Detailed description of the school will take place in the next reporting period.</p> <p>WP14: D14.1: The activities were delayed due to staff illness. The report is expected in Dec 2018.</p>	
Are the objectives of the project still scientifically and /or technologically relevant?	Yes
<p>The project was prepared by a very experienced group of researchers and well planned. Therefore, the objectives of the project continue to be scientifically and technologically relevant as well as achievable with the time and resources available in the project.</p>	
Are the critical implementation risks and mitigation actions described in the DoA still relevant?	Yes
<p>Most of the foreseen risks are still relevant. During the reporting period the project ran into three foreseen risks (2,3,9): one was already successfully mitigated, in the remaining two cases the situation is currently being resolved. No new risks were identified during the reporting period.</p>	
Have the pilots/case studies started to showcase innovative results as described in the DoA?	Not applicable
Have the ethics related deliverables and/or requirements due for the current period been adequately addressed and approved?	Not applicable
Have the comments and recommendations from previous assessments been taken into account?	Not applicable

3. Impact

Does the work carried out contribute to the expected impacts detailed in the DoA?	Yes
The work carried out during the reporting period is in line with the DoA and contributes to the expected impacts of the project, which are still highly relevant.	
Does the work carried out follow the plan detailed in the DoA to enhance innovation capacity, create new markets opportunities, strengthen competitiveness and growth of companies, address issues related to climate change or the environment, address industrial and/or societal needs at regional level or bring other important benefits for society? Give information on the relevant innovation activities carried out (prototypes, testing activities, standards, clinical trials) and/or new product, service, reference materials, process or method (to be) launched to the market, if any.	Yes
The project is enhancing innovation capacity through development of new technologies necessary for cutting edge research in astronomy. One of the deliverables in the WP2 is a market study report for the sCMOS commercial camera.	
Does the work carried out contribute towards European policy objectives and strategies and have an impact on policy making?	Not applicable
Does (or will) the work carried out have an impact on SMEs?	Yes
The work carried out in the WP2 includes an SME (First Light Imaging), which has completed a market study for wider commercial applications of the sCMOS cameras (deliverable D2.5).	
Have the beneficiaries aimed at a gender balance at all levels of personnel assigned to the action? If beneficiaries could not achieve the balanced participation of women and men in their teams despite active recruitment efforts, have the reasons been explained in the periodic report?	Partially
Most of the researchers and engineers in the field of astronomy research and technology are men, therefore it can not be expected that gender balance will be achieved at about 50-50 level. Many of the staff in the project were already employed at beneficiaries before the start of the project. It is not entirely clear from the report, that specific attention was given to the gender issue in hiring new staff (PhD students for example) under this project, but it can be expected to be in agreement with the rules of each beneficiary. The gender issue is not addressed in detail in the report, except in the WP12 where they aimed at (and achieved) a gender balance in organisation of the Opticon schools.	

4. Implementation

Has the project been efficiently and effectively managed?	Yes
Building on the previous successful running the OPTICON network has significant experience in effective management of such a large project. There were no problematic issues regarding management of the project identified.	
Is the management of the project in line with the obligations of beneficiaries (including ethics and security requirements, risk and innovation management if applicable)?	Yes
The project runs smoothly in line with the planned obligations of beneficiaries. There was one change of a beneficiary due to re-location of a key staff member.	
Is the contribution of each beneficiary in line with the work committed in the DoA? (applicable only to multibeneficiary projects)	Yes
Obligations of the project's beneficiaries are clearly and well defined. Contribution of each beneficiary is in line with the work committed in the DoA.	
Have the beneficiaries disseminated project results (foreground) in scientific publications as planned in the DoA, including the deposition of publications in open access repositories? Has the dissemination plan been updated? Do they include a reference to EU funding?	Yes
The project results were disseminated in a number of scientific publications, as planned in the DoA. Most of the publications were made available also in the open access repository, i.e. arXiv (https://arxiv.org/). Dissemination of the project's results was carried out also during several workshops and schools, organised as part of this project. The dissemination plan remains in force. There were only some minor changes due to rescheduling of some activities. Publications include reference to EU funding.	
Have the beneficiaries disseminated and communicated project activities and results by other means than scientific publications (social media, press-release, the project web site, video/film...) as planned in the DoA? Do they include a reference to EU funding?	Yes
Project activities and results were disseminated and communicated among the astronomy community (i.e. schools, workshops, e-mails etc.) and also to the general public through media appearances (interviews, articles in magazines).	
Has the plan for exploitation of results, in particular as regards intellectual property rights, been appropriately planned and executed, as described in the DoA?	Not applicable
Has the dissemination and exploitation plan been appropriately executed and updated? Give details if an update of the D&E plan is needed.	Yes
The dissemination and exploitation plan was appropriately executed. It remains in force. There were only some minor changes due to rescheduling of some activities. No major update is needed.	
Has the Data Management Plan (DMP) been appropriately drafted and, if applicable, executed? Give details if an update of the DMP is needed.	Yes
The Data Management Plan is appropriately applied. No update is foreseen.	
Have the proposed institutional changes been appropriately promoted?	Not applicable



5. Resources

Were the resources used as described in the DoA and were they necessary to achieve its objectives? If there are deviations from planned budget, have they been satisfactorily explained? Have they been used in a manner consistent with the principle of sound financial management, in particular regarding economy, efficiency and effectiveness?	Yes
According to the report and presentations the resources have been used as planned, with the aim to achieve the project's objectives, and in a manner consistent with the principle of sound financial management. Minor deviations were satisfactorily explained.	