

Response to NOVA Evaluation report

The Evaluation Board (EB) has rated NOVA and its four university astronomical institutes together as “exemplary”, meaning that NOVA as a whole is among the top-five leading astronomical institutes worldwide. NOVA is extremely proud of this qualification. This rating is the same as received in a mid-term evaluation in 2014 and the previous full evaluation in 2010 demonstrating that NOVA is consistently operating at the highest international levels.

Below a response is given to the various topics raised by the EB.

The EB recommends that NOVA continues to review its scientific strategy on a regular basis, in order to be able to exploit rapidly emerging scientific opportunities

In response to this recommendation, the NOVA board has appointed the NOVA Research Committee (NRC) consisting of a mix of senior, mid-career and junior astronomers from the four university institutes. The NRC has met several times since February 2017. The overall charge to the NRC is to advise the NOVA Board and Directorate on scientific aspects of the NOVA program, including its science strategy. The specific charge to the NRC for the first half of 2017 is to provide recommendations to the NOVA Board and Directorate on the optimal use of the NOVA Phase 5 research funding. Furthermore, the NRC is asked to provide strategic advice on the arguments and possible routes for obtaining long-term status for NOVA around 2020.

NOVA and its partner universities should continue to exercise tight managerial and financial oversight of the METIS project, with particular attention to management of externally subcontracted work packages, in order to mitigate the considerable risks associated with a project of this scale

NOVA fully appreciates these concerns. In direct response to the EB recommendation, NOVA will set up an independent panel that will assess whether all the internal and external review and control processes are in place and adequate enough to ensure that the project will be a success. Special attention will be paid to organization, management, costs and project risks. The meeting is planned for September-October 2017 and will report to the NOVA Board and the NOVA Supervisory Board (Raad van Toezicht, i.e., the deans of the science faculties involved).

Following normal practices, METIS is subject to regular NOVA monitoring and ESO reviews. The NOVA Instrument Steering Committee (ISC) consisting of (inter)national experts monitors all instrumentation projects twice a year. Each project PI must provide a written progress report in advance and then have a meeting with two members/assessors of the ISC who oversee project progress in comparison with milestones and schedule provided at the previous meeting. Costs and risks are also reviewed. Large projects such as METIS meet with the full ISC for a short presentation followed by an in-depth review of progress, expenditures and results achieved. When unresolved problems arise, the NOVA executive director may call for an additional mini review. Results of the ISC findings and recommendations are reported to the NOVA Board. For METIS the managerial and financial matters are also closely followed by the NOVA executive director who is consulted on decisions on staffing and expenditures over 30 k€. METIS is also monitored by ESO through quarterly progress meetings and through major end of phase milestone reviews, like the Preliminary Design Review (PDR), Final Design Review (FDR) and Preliminary Acceptance Europe (PAE). The first critical milestone is the METIS PDR in mid-2018. Around this time, NOVA is planning an organization, management, costs and risks review for all partners to verify the robustness of the project and the balance in the distribution of work packages.

All partners in METIS work at their own costs and risks. External contracts are usually for the fabrication of hardware or software components only. These products will be procured from industry through standard European procurement roles. NOVA's practice is to involve a professional procurement consultant to execute the procurement process and write the contract with firm fixed prices. Significant experience in this area has been obtained from the series production of the two ALMA receiver projects.

NOVA and its partner universities should continue to take proactive steps to address the pronounced imbalances in the age and gender distributions among its tenured and tenure-track faculty

This topic has the full attention of the NOVA Board and Directorate. Significant improvement of the imbalances takes time because the number of research staff retirements is limited over the next ten years. The NOVA Phase-5 budget will have an overlap component with increased flexibility to finance longer overlap positions to bridge gaps where needed. Also, individual universities will continue to make use of local opportunities to enhance gender balance where possible.

NOVA Board should continue its preparations to identify, recruit, and appoint successors to the current Academic and Executive Directors of NOVA, both of whom will step down in 2-4 years

The NOVA board is fully aware of the importance of appointing excellent successors to the current two directors and has started the process of ensuring a smooth transition.

Elements of NOVA's excellent coordination of supervision and mentoring of PhD students should be extended and adapted to improve the mentoring of its ~90 postdoctoral research associates

NOVA plans to offer to the postdocs an annual career weekend similar to that now in place for the third-year PhD students. The postdocs themselves should plan and organize the content of such a weekend, with advice from NOVA staff members where needed.

NOVA's philosophy is that the initiative and suggestions for enhanced supervision and mentoring should come from the postdocs themselves since they are in that critical stage of their career that they have to prove independence and leadership. NOVA stands ready to help the individual institutes to step up their mentoring of postdocs locally, for example through annual research and development meetings in which goals for the next year are set and opportunities for training courses offered at the universities are discussed. Postdocs are already significantly involved in student supervision at the MSc and PhD level, helping to boost their CVs.

NOVA should produce a comprehensive long-term education and outreach strategy, which would consider the balance between different elements (in the context of existing activities across STEM subjects in the Netherlands), and prioritize future activities accordingly

NOVA will follow this recommendation and produce a comprehensive longer-term education and public engagement strategy expanding on the current efforts and prioritizing where needed. Also, measurements of quality and impact of activities will be included where practical and achievable. Such a strategy will be prepared by the NOVA Information Center (NIC) and presented to the NOVA Board in the fall of 2017.

NOVA and its partner universities should continue to work on and achieve long-term stable funding for its program.

NOVA will closely work together with its Supervisory and University Boards to achieve long-term stable funding in the next 2-3 years. Indeed, some University Boards are already actively engaged in these discussions. The NOVA ranking within the top-five leading astronomical institutes worldwide deserves national recognition and support.