Development dialogue NVAO accreditation visit Master Geographical Information Sciences

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Following a full day of sessions directed by the review panel with students, lecturers, programme management, examination board, alumni and faculty board, the final meeting of the day was hosted by the programme management and focused on potential future developments.

Development observed by the programme

The recent rise of data science is promoting awareness of the commonalities across data and information science domains. In practice, geospatial data is increasingly combined with non-geospatial data to analyse government, business or civic processes. This is also reflected in the increase in students who enrol in our Master’s programme because they have encountered GIS as part of core processes, besides other data types and analysis methods. These trends are a major opportunity for our programme. More and more people encounter geospatial data in their professional lives. Because much data has a geospatial component, location is a strong ordering principle and geovisualisation is a powerful communication format GIS has become a prominent feature of data science applications. A good example is the game Geocraft to get youth involved in developing a sustainable environment. Programme management asked the panel how to incorporate these innovative developments into the UNIGIS programme. The programme already has taken some steps: the programme organised a GIS event on data and ethics as an extracurricular activity, reflects on the latest innovations during webinars in the courses, and investigates possibilities to develop new courses.

Input from the visitation panel

The panel shares their experiences and ideas how to incorporate the outlined developments:

- The UNIGIS programme posed the question: How to bring innovation in the study programme? A counter question that was posed by the panel: How much innovation does education need?
- Although current professional practice does not yet use the new programming techniques much in combination with GIS, it is important for students to learn about innovative techniques – R, Python, Javascript – that will soon become standard tools in the work environment. Which of these techniques are best combined with what GIS approach for specific tasks? Guest lectures in existing courses or indeed new electives can help to introduce such new perspectives.
- The University of Salzburg has developed a broad bachelor’s programme as a foundation for many different masters. The idea is to start with a project based approach. In this programme, students are confronted with a problem they have to solve. In solving the problem, students can follow their interests in for example coding or design. Alongside they get introduced to a broad range of basic theories.
- At TU Delft, explorations are made into how to fruitfully connect and perhaps integrate BIM and GIS. BIM is building oriented, while GIS is environment oriented. This raises questions about the scalability of data and automation. TU Delft has a pilot in the third bachelor year where students first have to design a project. They use augmented reality to project models on the table. Next, the students do
several analyses, but they need a new model for each analysis. Students want to design, make changes, but models are not easily changed. There is a need for more pragmatic models. The current models are lacking design possibilities. Experimenting and collaboration are important to improve the models.

- The chair of the panel (Utrecht University) emphasizes the role of people. People work, live and move in buildings and landscapes. It is important to consider how well a building or landscape serves society. In addition, people make changes to their environment. It is important to see people as context and users. Therefore, it is important to involve stakeholders for awareness and engagement. Awareness is necessary to let people see how they can contribute to a sustainable environment. Awareness has to evolve along with the tools. Otherwise the tools become obsolete. The UNIGIS programme – due to its expertise in Geodesign – is indeed well placed to train its students in applying geospatial technologies for effectively involving stakeholders in the planning process.

The feedback is received with great enthusiasm and will be taken into account in programme development.