Position of the Executive Board of Eindhoven University of Technology regarding the assessment of the department IE&IS

In May 2017 an international review committee assessed the quality and relevance of research conducted in the period 2010-2016, the viability of the department Industrial Engineering & Innovation Sciences, its research strategy and the quality of the research training, research integrity and diversity. The assessment was carried out using the Standard Evaluation Protocol 2015-2021 for the research assessment of public organizations in the Netherlands.

The assessment committee consisted of:
• Prof. L.G. Soete, Maastricht University, the Netherlands;
• Prof. G. Grote, ETH Zürich, Switzerland;
• Prof. T.A. Runkler, Siemens & Technical University, Munich, Germany;
• Prof. S. Salomo, Technical University of Denmark, Denmark;
• Prof. C.Y. Lee, Hong Kong University of Science & Technology, Hong Kong;
• Prof. T. Hartig, Uppsala University, Sweden;
• Prof. S.O. Hansson, Royal Institute of Technology, Sweden;
• Prof. D. Foray, EPFL, Switzerland.

The committee was supported by Dr. Erwin van Rijswoud, who acted as secretary on behalf of QANU.

The committee concludes:

Overall the committee was particularly impressed with the quality, relevance and viability of the research at both Schools, which was graded as “very good”. At the more detailed research level, the committee has also identified a number of excellent, world-class research fields within both Schools.

It also made specific positive remarks regarding specific research fields, such as:

In some selected research fields such as computational intelligence, fuzzy systems, and decision-making, the IS [Information Systems] group is internationally recognized as one of the world leaders with respect to publications, visibility in the academic community, and real-world applications.

Overall, the committee is impressed by the ITEM [Innovation, Technology, Entrepreneurship and Marketing] research group’s excellent research performance, both with respect to disciplinary research and impact on industry. The group is well equipped to continue its very positive development and is already now among the top research groups within their focused domain.
Regarding the HPM (Human Performance Management) group, the committee finds:

**Overall, the research productivity and quality are excellent, and the HPM group can clearly be considered as one of the most influential groups in the international job stress research community.**

Regarding the OPAC (Operations, Planning, accounting and Control) group, the committee writes:

*The committee acknowledges that this research group has made significant contributions to the field of logistics, both from a methodological and an applied perspective. The research quality of this group is excellent.*

The committee is also very positive about the Philosophy and Ethics (P&E) group:

*The committee concluded that, despite its moderate size, the group has not only established a remarkable track record of influential contributions to the philosophy of technology, but also fulfilled a leading role in the transformation of research in this field. (...) In its view, the P&E group performs research of excellent quality and is a world leader in its field, the philosophy of technology.*

For the Technology, Innovation and Society (TIS) research group, the committee finds:

*The committee applauds the challenging and stimulating research agenda created in this group, in which rigour and relevance are mutually reinforcing, and expects the group to flourish as the newly appointed professors build up their research programmes.*

Regarding the Human Technology Interaction (HTI) group, the committee writes:

*The committee observed that the group members are clearly producing research of excellent quality, as exemplified by the publications submitted with the self-assessment report, which have been published in leading journals in their respective fields.*

The committee also made the following remarks and recommendations:

**1. Strategy and viability**

There are a number of recommendations that follow from the committee’s conclusions and observations. First of all, the six research targets could be formulated with a higher level of specificity and ambition, to match TU/e’s ambition to be among Europe’s top five engineering universities. The committee recommends developing the content of each research theme further – potentially through putting more emphasis on developing joint applications across research groups. The committee also suggests to broaden the scope of the “Logistics and its interfaces” theme by explicitly including more research groups into this theme. The committee raised the issue of increasing organisational complexity through establishing research themes across the formally established research groups. However, the committee is confident that
the Department’s initiatives to develop the research themes and resulting positive effects for research quality and viability merits the extra organisational and management effort. A second recommendation, which is partly addressed to the leadership of the Department and partly to the Executive Board of the University, is to secure a sufficient level of direct funding by keeping the efforts in education and the revenues from the Strategic Allocation Model in balance. Furthermore, they should ensure that the staffing of all research groups is sufficient, especially in the area of Philosophy and Ethics.

2. Research quality and relevance to society
The committee would like to make the following recommendations:

1. The Schools should formulate the research targets in such a way that it becomes clear what is to be attained, when and why. Expressing more ambition regarding the themes would also make them more targeted;
2. Continue with the planned implementation of the research themes. The committee believes that this strategy is a very good way to raise the research quality and societal relevance to an even higher level of accomplishment;
3. Exert more efforts to secure European grant schemes for individual researchers, such as ERC grants;
4. Specify better what disciplinary excellence entails, also in relation to interdisciplinary research. The latter now seems more or less contingent (based on the funding opportunities); both disciplinary and interdisciplinary research could benefit from a more explicit philosophy. The research theme policy can help with that;
5. With regard to the tenure-track policy, reconsider the criteria for tenure (such as the successful completion of two PhD trajectories) since the success of a PhD doesn’t solely depend on the qualities of the tenure-track candidate. Furthermore, an overreliance of the tenure-track candidate on the success of the PhD candidate may result in undue support of the latter by the former;
6. Continue with safeguarding the balance between teaching, the increased revenues this has (and will) yielded, the effects on research quality. Preserve a close connection between research and teaching.

3. PhD Programmes, Integrity and Diversity
The committee would like to make the following recommendations:

1. The Department should make sustained efforts to build a stronger PhD community. In social and intellectual terms, the PhD candidates from the Schools and research groups appear to be working in a fashion that is too isolated. The PhD candidates can be a source of support and inspiration to each other, and given the long PhD completion times and focus on shared research themes, this is something the Department and graduate programmes should encourage.
2. The Department should make more effort to set up an alumni network. The committee thinks this can have many benefits for current PhD candidates, students and the research portfolio of the Department.
3. The Department has set ambitious targets for the number of female staff members. Although in some areas these numbers are being met, in others they are not. The committee recommends the Department continue working on this.

4. In view of the past staff mobility, ensure that the number of senior staff members is up to standard. The Schools’ focus on hiring junior staff members as tenure-track candidates is appreciated, but the necessity of having sufficient senior staff members should not be underestimated.

The Executive Board highly appreciates the work of the committee and the recognition of the quality of the research of TU/e’s department IE&IS. It is equally appreciative of the many concrete recommendations of the committee. The Executive Board will discuss these with the Department Board. The recommendations will help the department to not only maintain its quality, but also improve in the future.

The Executive Board of TU/e has accepted the report and its recommendations and wishes to thank the assessment committee for the considerable time and effort it has spent on this assessment.

On behalf of the Executive Board,

Prof.dr.ir F.P.T. Baaijens
Rector Magnificus Eindhoven University of Technology