

Evaluation report

Evaluated point	Grade	Comments
Scientific impact of research	Very good	<p>The Competence Centre of Food and Fermentation Technologies (CFFT) presents itself as a technical platform to provide adequate answers to Estonian enterprises in the first place, and gradually to international companies. Starting from very concrete demands, it has developed a remarkable competence with a research-oriented approach using experimental and theoretical methods. CFFT studies provide for example understanding of growth and nutrition of industrially-relevant microorganisms and the Centre develops software for modelling bioprocesses. The evaluation visit has been the occasion to listen to a rapid but extremely intense presentation of the research carried out in the institute, starting from the growth of bacteria colonies in a gastrointestinal simulator and the theoretical conclusions issued from the experimental results. The quality of research is attested by the number and the quality of publications, especially when compared with the size of the research group. Multiple collaborations, both local and international, should be underlined. The Centre has over 60 staff of which one-third are established researchers with a PhD, and another third PhD students who train at the Centre. The strong contribution to doctoral studies, with completion of over 20 theses over the last 8 years, is particularly impressive. Staff at the CFFT publish widely in the refereed scientific literature in quality journals appropriate to the research topics. Such papers include basic fundamental knowledge on the microbial and fermentation systems as well as research of applied significance. An interactive website for self-analysis of the human gut microbiome provides impact with the public.</p>
Sustainability and potential of research	Very good	<p>The CFFT has a well-established competence, which guarantees sustainability. The only difficulties could be related to the departure of the older generation but this seems to be under control, discussed and prepared in the Centre. There are current projects or platforms to provide further support for R&D. The CFFT has a very healthy split of income generating activities, with foundational research attracting around 45% of its funding with the remaining income through application in R&D contracts with industry, provision of services and technology development. The CFFT has paid great attention to invest in its laboratories and in its people. The research operation is well thought through and vibrant. Development of strong partnerships is vital for longer-term sustainability. The Centre has established such partnerships including</p>

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		internationally. The Centre is ambitious, and in fact impatient, to extend its reach.
Societal importance of research	Very good	The CFFT plays a central role in Estonia, with high societal importance for all that concerns food and fermentation technologies. It is one of only a small number of equivalent structures in the world and has well established contracts with international companies. Societal impact is significant since the food industry is one of the most important and largest manufacturing sectors in Estonia to which the Centre offers a unique service. The CFFT is a real go-to place in its area of specialization and should be considered a great asset to the Estonian R&D environment.
<p>Scientific basis in the field is sufficient to conduct doctoral studies. (This question should be answered only if: a) institution being evaluated is conducting doctoral studies and; b) The field being evaluated is proposed to grant positive evaluation. If these conditions are met then: a) If the level of scientific basis is sufficient for conducting doctoral studies in every structural unit being evaluated, then the answer should be „yes“; b) If the scientific basis is not sufficient in some structural units, then those units should be listed.)</p>		<p>Yes. The Centre does not offer a PhD programme but receives PhD students coming from Tallinn University of Technology. Students have excellent conditions for preparing their thesis. The committee has met the PhD students that were present while they were visiting the Centre. They attested the excellence of research conditions for young researchers.</p>

Summary assessment

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<p>Areas of special note as appropriate (Where necessary indicate sub-fields, assessment criteria, and/or structural units which, in the committee's opinion, were of a notably high level.)</p>		<p>Research activities at the CFFT are favourably enhanced by their location on campus which facilitates interactions and collaborations with other researchers. A new molecular facility for DNA analysis, sequencing and genomic studies will significantly improve the analytical capability of the CFFT. There are clear priorities made in considering equipment purchase based on real research needs. The CFFT is a well-equipped and an ideal scientific environment to support the training of PhD students, who can be supported by permanent contracts.</p>
<p>Areas in need of improvement as appropriate (Where necessary indicate sub-fields of the field being evaluated, assessment criteria, and/or structural units which, in the committee's opinion, revealed significant shortcomings.)</p>		<p>The generation transition will probably take place before the next evaluation. The committee hopes this will be successful. Output and activity would be enhanced by additional highly-trained employees. The requirement for PhD students to publish 3 papers may conflict with IP considerations. In addition, patent applications can sometimes inhibit scientific output and dissemination.</p>
<p>Assessment proposal to the Minister of Education and Research</p>	<p>To grant positive evaluation</p>	<p>The evaluation committee has an extremely positive opinion. An impressive well-run organization carrying out high-level research of fundamental and practical significance.</p>

Feedback

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Feedback for institution (This question should be answered only if the institution asked for feedback from the evaluation committee in the self-report (about up to three specific areas of R&D which it finds to be currently important, e.g., related to its development plan).)	NA
Suggestions for unit, institution, state etc. (As appropriate, committee can give additional feedback for the structural unit, the institution, or the State (please specify whom feedback is directed to) according to the directive assessment criteria for regular evaluation (article 7).	Since the CFFT has been benefited enormously by the great leadership of the current heads, it will be of utmost importance to find equivalently enthusiastic and qualified successors. This transition is expected to take place within the next evaluation period.