



Position statement Executive Board
Wageningen University & Research

Regarding the PE&RC research themes peer review assessment (2015-2021)

According to the Strategy Evaluation Protocol (SEP 2021-2027) the Graduate School for Production Ecology & Resource Conservation (PE&RC) research themes have been evaluated. An assessment committee of independent experts assessed the performance of PE&RC and its research themes based on a self-evaluation and a site visit.

The Executive Board has received the final report of the assessment committee, and has read it with interest. The Executive Board is very content that the committee concludes that PE&RC has an outstanding and efficient organization where internationally highly appreciated research takes place. The Executive Board would like to thank the peer review committee for carrying out the evaluation.

The response to the main recommendations of the committee has been put together by PE&RC and its research themes and the Executive Board has integrally accepted the response, in which is described how the recommendations will be addressed and how the outcomes of the research evaluation will be used to further strengthen PE&RC's performance. The Executive Board encourages PE&RC (and all its research themes) to reach out to other institutions and coordinate interdisciplinary initiatives.

Also on a general (WGS-wide) level the committee makes very useful recommendations. We are in the middle of a 'Recognition and Rewards' trajectory and agree with the committee that further discussion on a meaningful mix of broad semi-quantitative markers rather than numerical criteria is needed. Moreover, the Executive Board agrees that the duration of the PhD trajectory requires are continuous attention. Therefore additional possibilities in monitoring PhD trajectories to counteract delays will be investigated. We will give special attention towards the dissemination and clarification of the requirements for a PhD thesis trajectory (including work-life balance). Regarding postdocs we will investigate the possibilities to increase the total activity of postdoc mentoring. We use Open Science as a leading principle in our research and will formalise a concrete policy for Open Science milestones for the coming six years. Moreover, we fully embrace diversity as a prerequisite to excel in science. Therefore we will expand our HR policies to increase diversity in a broad sense (international staff, gender, age, social-economic background, culture. Progress on follow-up actions will be monitored in our yearly quality assurance cycle.

The assessment report together with the response to the recommendations will be published on the WUR website, together with summaries of the PE&RC self-evaluation reports and the case studies.

Wageningen
University & Research

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December 19, 2022

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With kind regards,

A handwritten signature in blue ink, consisting of a large, stylized 'A' followed by a horizontal line and a small flourish.

Prof. dr Arthur P.J. Mol
Vice-president of the Executive Board

Response PE&RC Board to recommendations peer review 2021

Please find below the response of the PE&RC Board to the recommendations made by the external evaluation panel and the responses of the four Research Units to the recommendations. These recommendations should be seen in the context of the overall conclusion by the panel: "PE&RC is an outstanding and efficient organization where internationally highly appreciated research takes place and where a top-quality PhD education program is successfully implemented and coordinated by a professional support unit."

Recommendations at PE&RC level and response PE&RC Board in italic:

Mission 1 (4.1.1)

- 1 Consider implementing a yearly assessment questionnaire that explicitly includes questions about the start and progress in writing up manuscripts, so that discussion about structuring this part of the PhD process becomes more explicit and recurrent. To optimize the balance between ambition and workload, one could ask every year whether a student has agreed with her/his supervisors about the level of publication ambition within the general thesis-quality criteria of WU. This questionnaire could also have a supervisor part asking a similar question. Apart from the PE&RC Office, a small committee of supervisors could be involved in evaluating these questionnaires (with due measures to avoid conflicts of interest).
Addition from text: Clarify and disseminate more regularly the requirements for a PhD thesis and revisit them in recurrent internal evaluation.
Use this information to consider whether mid-term milestones might help to make mutual expectations between students and supervisors more transparent.

PE&RC sees the need to set clear objectives for PhD candidates with respect to thesis quality criteria needed to obtain a PhD. These should be well aligned with the personal ambition, ability and career objectives of the PhD candidate. Instruments to visualise progress in writing up manuscripts could support meetings that deal with the general progress of the PhD project (such as the annual performance and progress meetings). PE&RC proposes that the Graduate Schools will explore possibilities to incorporate this aspect as part of questionnaires used in the annual meetings that are part of the PhD registration system Hora Finita. In the annual meetings mutual expectations about the progress needed to fulfil the requirements for obtaining a PhD degree are discussed.

- 2 PhD duration and drop-out rates
Pursue a systematic analysis of early attrition and dropout rates across types of PhD trajectories and PE&RC Themes, to better understand the causes. Such new monitoring routine could produce a structured yet flexible set of rules for organizing a PhD trajectory while differentiating between 'within-payroll/employment contract' and 'outside-payroll/employment contract' reasons for delay in delivering the PhD thesis. The former often work positively (they also include working 4 rather than 5 days a week), while the latter are the real delays on which discussion could then focus. Update analyses could then be considered at, for example, three year intervals.

PE&RC notes that the Committee supports the wish of the PE&RC Graduate School to initiate an in-depth analysis to gain better understanding of the various reasons for delay and drop-out among PhD students. Such an analysis specifies whether specific categories of PhD candidates could be associated with various degrees of 'completion challenges', such as: 1. Type of funding for the project, 2. Directly or indirectly associated teaching duties, 3. Research conditions in Wageningen or elsewhere, 4. Additional (part-time) appointment(s) and leaves of absence due to illness or maternity/paternity leave. With respect to duration, this should focus on 4 years effective PhD time.

PE&RC suggests implementing a WU-wide exit survey as part of the new PhD registration system in which reasons for delay and dropout are explored that can be used as a basis for an in-depth analysis.

- 3 Corona related delays

Continue to discuss whether some compensation for corona-related delays may also be needed in the years to come – early delays may be as serious as later delays and cannot automatically be assumed to resolve themselves without increasing workload and stress levels.

In 2022 there has been a call for compensation of projects ending in 2022/2023 that have been delayed due to Corona. This call aimed at both employed and non-employed PhD candidates. About 60 PhD candidates have sent an application for compensation. Furthermore, groups are stimulated to mitigate the consequences of the Corona restrictions, e.g. by changing and if needed downscaling project objectives. We have also been pressing that in specific cases compensation in the form of e.g. contract extensions from the chair group funds is possible and that this should be supported by the relevant Science Groups management.

- 4 Further increase awareness of how the entire spectrum of possible asymmetries in personal and cultural backgrounds of students relative to their supervisors can be addressed in ways that alleviate stress and optimize work-life balances as much as possible (see also Academic Culture section below).

The Graduate PE&RC explores how to address this issue in several ways:

- *Personal contacts between education coordinators and PhD candidates;*
- *Ensure that there are multiple routes and persons at the PE&RC and WGS level are available to PE&RC members to discuss concerns, problems, or personal issues;*
- *Explore actions at PE&RC level to increase awareness (e.g. this is a discussion topic within the P&RC Board);*
- *Explore changes needed in guidelines (such as the guide for supervisors), monitoring, courses and events at WGS level;*
- *Address the issue at the meetings between confidential advisors and PhD programme coordinators.*

Mission 2 (4.1.2)

- 5 Assessment of staff/groups and DORA principles

Similar to many other academic environments, PE&RC has been confronted with the DORA San Francisco declaration demanding that individual staff and the PE&RC-collective shall be assessed with a meaningful mix of broad semi-quantitative markers rather than the previous routine of using hard numerical criteria. We recommend further discussion on how to make sure that explicit forward-looking strategies can be developed that remain both merit-based and focused on deliverables when less explicit DORA principles are being used.

In line with the national position paper "Room for everyone's talent" WU has installed a committee that designs the outlines for an academic career path at WU. A DORA-proof assessment system is needed that puts less emphasis on quantitative results and more emphasis on quality. A system is foreseen that is partly based on semi-quantitative criteria using rubrics. This is narrative based and will contain a mix of quantitative and qualitative supporting evidence.

- 6 Consider whether developing a clearer alumni strategy could contribute to the international branding of PE&RC as a global magnet for scientists to work with PE&RC's research programs and contribute to or benefit from PE&RC's training of young researchers.

PE&RC has addressed this issue in the future strategy section of its self-evaluation document: "At present PE&RC alumni are invited to subscribe to the PE&RC newsletter in which they are kept informed about ongoing developments and upcoming events. Furthermore, they are actively involved in activities aimed at the future career of PhD-candidates (such as the career-orientation session during the Last-year's weekends).

PE&RC alumni provide a valuable source of expertise for the PE&RC PhD Programme, scientific collaboration and as an entry to potential financial sources. In the forthcoming 6 years this will be further explored."

We are happy that the peer review committee supports our wish for a greater alumnus involvement and will explore how to connect alumni to theme activities such as theme days and explore possibilities for PhD internships in the work environment our alumni are active in."

- 7 Although PE&RC groups are generally well funded, a more explicit strategy could be developed to try maximizing interest in, and success of, pursuits towards personal excellence grants from NWO and the ERC.

The evaluation panel has advised PE&RC to specify ambitions (per Theme) to improve pursuit and likelihood of success in personal excellence grants from NWO and ERC, and develop human resource policies to sustain them.

WU-wide there are mechanisms in place to support development of ERC and NWO proposals. For writing an NWO Veni proposal two specific WGS courses are available. Although themes can stimulate the submission of proposals for personal excellence grants, the initiative is primarily with individuals embedded in chair groups. Furthermore, the Wageningen Graduate Schools facilitate a postdoc call aimed at attracting talented postdocs suitable for submitting these type of funding proposals.

It should be noted that in the 2022 Vidi round two subsidies have been granted to staff in PE&RC; one in the One Health theme and one in the Re-design of agro-ecological ecosystems theme. In 2022 a Vici subsidy has been awarded to a staff member in the Ecology, biodiversity & conservation theme. We agree with the committee that personal grants offer great opportunities for the personal ambition of researchers, also in the context of the more overarching PE&RC themes. Nevertheless, these ambitions can also be fulfilled via other projects and grants that might suit the researcher and the topic better. It is key that weighing these two ends of the spectrum and incorporate this in the "explicit strategy" suggested by the peer review panel.

Mission 3 (4.1.3)

- 8 In the self-evaluation report and during discussions on site, it was repeatedly emphasized that PE&RC in its WU embedding has a unique position relative to other Dutch and international Universities. The Committee fully agrees with this assessment, but would also like to stress that 'uniqueness' always obliges to reach out from privileged positions to coordinate interdisciplinary initiatives with other, complementary unique institutions – for example those with large public health schools. The Committee was pleased to see that such broad European and global initiatives are indeed being taken, but also felt that some Themes could do more in this direction, as will be specified in the Theme-specific evaluations.

PE&RC will challenge the themes to respond to this recommendation.

- 9 Continue to further enhance collaborations between the four Themes via joint grants for PhD positions, while keeping in mind to only integrate when synergy potential is obvious.

PE&RC aims at a light coordination structure within the themes that brings groups and staff together where synergy can be obtained.

Future calls for positions will be partly aligned to themes. In 2022 PE&RC has made strategic funding (approx. 30 K€ per theme plus overhead) available to stimulate activities in themes via PhD/postdoc funding.

The self-evaluation document shows that the PE&RC themes can be recognized as collaborative entities, but collaboration of groups and staff often exceeds the level of the themes and extends to other themes and groups and staff within other Graduate Schools. Themes show sufficient overlap that facilitates synergy between themes and Graduate Schools and that can be exploited in various funding opportunities.

Specific aspects (4.1.4)

Open Science

- 10 Consider whether it would be beneficial to formulate a concrete policy for open science milestones that can be achieved in six years' time without increasing the workload or financial burdens of PE&RC staff and students.

WU is preparing a vision on Open Science within the context of sound science and more specifically transparency within the research cycle. Besides this Open Science will be integrated

in the Recognition and Rewards policy and as such be part of an academic career path. Expected focus here is on how an individual staff member deals with open science practices. The number of peer reviewed publications that are published Open Access are visualized and datasets that fulfil conditions with respect to Findability and Accessibility will be seen as specific research products. Finally societal engagement will be considered as part of societal impact.

Academic culture

- 11 To continue improving the gender balance among all, but particularly senior staff, from the perspective that higher diversity of staff is likely to have a positive overall effect on research performance. This would need to go beyond the recruitment phase and would, for example, require specific policies on retention of talent after recruitment.
Addition from text: Specify ambitions and targets related to personal and nationality diversity issues while maintaining a broad set of transparent criteria for academic excellence.

PE&RC supports this recommendation. It should be part of the general HR policy of the university. However as mentioned by the evaluation panel this should come together with maintaining a broad set of transparent criteria for academic excellence.

- 12 This recommendation extends into broader issues of diversity, primarily the objective to move towards a more international permanent staff, and to think about ways to facilitate the employment of spouses and opportunities for international school facilities for the children of newly appointed staff arriving from far away.

PE&RC supports this recommendation. It should be part of the general HR policy of the university.

Human Resources

- 13 The Committee sensed that there is general concern about steadily increasing workload from the PhD student level upwards. This is generally an increasing and very hard to solve problem, driven by what seems to be endless opportunities in a globalized academic world. We nonetheless recommend to start actively considering these challenges and to instill a greater awareness of the need for personal time management based on more explicit evaluation of opportunity costs.

PE&RC supports this recommendation. Workload is an important concern in academic career paths and is often mentioned in relation to staff in tenure track. Therefore, it is part of the recognition and rewards process at WU that aims at a re-design of the academic career paths. As mentioned by the panel opportunities for activities in a globalized academic world are endless and clear choices have to be made by individual staff about their focus. Furthermore, PE&RC supports a development of an up-when-ready tenure track system rather than one with fixed 3 or 4 year time steps thus allowing more flexibility in time and ambitions for individual staff. Finally, PE&RC suggests that a buddy system for younger staff is introduced.

- 14 Although very good starts have been made, more work is needed to make sure that the organization is aware, at all levels, that diversity is obviously more than gender (age, colour, culture, social-economic background etc.) and that diversity issues extend beyond who is on the PE&RC payroll and also include higher-level structures of power asymmetry that need to be considered.

This recommendation closely links to recommendations 11 and 12. It should be part of the general HR policy of the university but should also be considered as part of PhD policy and more specific activities such as the lecturers in a postgraduate course. The latter is the responsibility of a Graduate School, PhD policy is to be considered at the level of Wageningen Graduate Schools. It also relates to the functioning of teams in which function profiles and personalities should complement each other in order to address the specific tasks of a group in its research and education domain. Finally, several groups within PERC have started interactive sessions on cultural awareness, which PERC strongly recommends.

- 15 Consider to formalize PE&RC's total activity in postdoc mentoring to an extent that would make it suitable for more structured evaluation in the next 2027 peer review round.

PE&RC has played a leading role in developing the Wageningen postdoc policy, which aims at improving the position of postdocs in the organisation, increasing awareness among postdocs, and facilitating postdoc career development. However, the tasks of the Graduate Schools with respect to postdocs are not fully formalized and postdocs as a specific category are not part of the SEP protocol. PE&RC will explore ways to make the postdoc policy part of the six-year evaluation cycle and also address this issue in a WGS context.

Responses Research Units

Theme Re-design of Agro-ecosystems

1. Given the already high workload of staff and students and the limited financial support (in contrast to the funding of the Chair Groups), keeping Theme-governance minimal without impeding collaboration seems a viable strategy for the coming years.

One concrete action that is embedded in the strategy to strengthen the research theme, while keeping governance of the theme to a minimum, is the establishment of a core group. Therefore, young staff (mid-career) of each participating chair were selected to represent their chair in the core group based on their willingness to engage in the theme. They lead the scientific agenda within the theme, as well as ensure that the relevant activities of the research agenda are integrated within their respective chair group. Besides the chair representatives, a coordinator is facilitating communication, lead and activities, contributing to an integrated and updated governance of the theme.

2. Theme members might consider looking particularly at the interfaces between their different competences and research specializations, because these may well inspire new research that does not require large new investments while easily securing synergy benefits.

Chair groups within the research theme already collaborate with each other in different constellations on a wide range of topics. Our aim is to create an atmosphere and opportunity to promote further collaboration and find synergies among individuals, the different chair groups and other partners. We will organise our collaboration by focusing on four key scientific challenges that are recognised as central for all (or many) chair groups. These cross-cutting challenges, that apply and link the research lines of the theme, are resource use efficiency, scaling across hierarchical levels, emergent properties, and resilience. This is not an exclusive list but provides a focus for the coming years. To move forward together on these challenges, the following actions have been agreed upon:

- Create a PhD discussion group on Re-design of Agroecosystems to enable knowledge exchange and interactions, with support of staff members.
- Organize a series of symposia covering the mentioned scientific challenges. The first symposium has already taken place in May (2022). Preparations for the next series are underway through the core group.
- Organise a PhD level PE&RC course. Each group will contribute, and the course will both bring researchers together to collaborate and explore synergies among the chair groups, while training PhD students and involving them in strategic planning.
- Collective research proposals. Joint proposals on diverse re-design options for achieving global sustainability are a useful strategy to increase funding opportunities due to the relevance of the topic as well as strengthening the work developed within the research theme.

3. Consider developing a more explicit outreach strategy if it can be done without increasing overhead.

The future of the research theme is promising due to the broad scope, high quality and impact of the work currently developed. Since the formation of the theme is recent, the outreach strategy is relevant to promote a scientific and/or social impact while strengthening the group. The following are the actions to promote the theme:

- Website: Deliver information to PE&RC to update their website on the research strategy section (<https://www.pe-rc.nl/about/research-strategy>). This information will describe the identity of the theme, our mission, collaborations, activities, among others.
- Social media: Link the group with the PE&RC advertisements in social media, actively posting news and agenda of the theme.
- Define a logo: The logo will be used in presentations, workshops, social media and any other tool where the theme will be present.
- Workshops/symposia: In future presentations, organized sessions, etc., the theme will try to be more visible by using the logo and pitch, to increase visibility.

- Communication company: In a term of 3 years from now, the theme will consider devising an outreach and communication strategy to a wider audience (national/international) with the support of a communication company.
4. Consider to develop a plan for attracting external ERC grantees and for providing further incentives to ERC and Veni, Vidi, Vici grantees.

The research theme is well positioned to deliver scientific output of high impact and to develop the science/impact interface, which is compatible with the new "DORA" language, suitable for future evaluations. The following action strategies are proposed to attract external funding opportunities:

- Monitor what the individual groups are doing regarding attracting, maintaining ERC grantees, and explore options to harmonize the strategy that some groups are doing to attract ERC grantees across the whole theme.
 - Raise awareness among the groups about the relevance of attracting ERC grantees and share the experiences of successful grantees among the theme.
 - Identify what the training options are and make them visible to potential grantees, and make those options to potential grantees visible on the website
5. Continue initiatives to further diversify staff as planned.

Our research theme strives for social well-being and diversity among staff. Based on the weaknesses and threats pointed out by staff members in the SWOT analysis, we proposed the following actions:

- Encourage staff members to discuss diversity and prevention of racism in our research. For example, four chair groups created a discussion platform entitled: "Recognizing and dismantling racism and white supremacy: in our private lives, in our culture, and in academia." Such initiatives and good practices from certain groups will be shared and replicated in the other groups .
- Encourage gender, age, and ethnic diversity among staff for future recruitment. The university has new proactive procedures for hiring that enable this. Moreover, our theme will keep a periodic record of the changes in the annexes of the SEP, monitoring that the balance of gender, age and ethnic diversity improves among staff.

Theme Ecology, Biodiversity & Conservation

1. Use systems and scenario analyses to help prioritize research.

This is certainly a good idea, but challenging to implement because of several structural and strategies hurdles. First, the structure of the tenure track is focused on individual research lines, complicating any scenario analyses across chair groups. Second, chair groups are still the main organization units within the themes and will follow certain strategies directions. It is uncertain whether these chair group-specific strategies can be aligned within a systems and scenario analyses. Finally, the opportunities and success for funding applications is highly unpredictable and often involves a pragmatic approach. We will nonetheless attempt to incorporate systems and scenario analyses where possible.

2. Develop a funding strategy that is two-pronged: 1) funding for large and long-term grants, and 2) smaller and expensive laboratory projects. Clustering research ideas can facilitate large, long-term funding.

This is certainly a nice and useful idea, but faces similar limitations to the ones described for the first recommendation.

3. Develop a review paper by 2023 on advances in the flattening of the biodiversity loss curve.

A very nice suggestion.

4. Create an ad hoc task team that identifies and produces outlines of possible synthesis papers for the Research Theme so that one synthesis paper is produced each year.

Also a very useful suggestion, but will be hard to implement because chair groups and individual research might have different aims. The exchange of ideas and research plans is needed to facilitate this process.

5. Long-term experiments are both an asset and a weakness and need to be monitored for their added value. The identification of common outcomes across the three focus areas will allow for a more integrated research agenda.

Although we definitely agree with this recommendation, it might be challenging to implement this for ecological systems. Given the slow dynamics of these systems and the shifting climatic/environmental conditions, such long-term experiments can often be more of a burden than a treasure. Moreover, it can be extremely difficult to secure sufficient funding for long-term experiments.

Theme One Health

1. Develop a statement of uniqueness that specifically identifies unique strengths, in synergy with the reputation of WU for excellence in ecosystem function and eco-agricultural innovation.

During the development of the assessment, we had put much effort into rephrasing our mission statement such that it reflected the unique position of Wageningen in research in "One Health". We take this comment as an encouragement to continue along these lines of defining ourselves, now also connecting to ecosystem function and eco-agricultural innovation.

2. Consider to explore more proactively opportunities to develop research programs that can compete for large-scale program funding, e.g. developing a consortium on tick-borne disease ecology.

This echoes the first comment and our response, indeed, given that we have now more clearly identified and formulated our unique strengths, we are in a better position to apply for such large-scale programs.

3. Aim to strengthen research links across PE&RC Themes to build on the unique range of expertise in WU that could be made relevant for One Health research.

The preparation of the review has shown us that we can benefit from approaches, methods and expertise of others not working on our theme since many of these are shared. So, we fully agree with this suggestion.

4. Plan for, and optimize, anticipated increases in workload over the next six years at the collective Theme level. Is the current research staff-PhD student ratio sustainable? Is there capacity among staff (including senior staff) to design new training courses relevant to the Theme?

5. Progress has been made in increasing diversity among new staff hires. To build on this success, the Committee recommends that staff think strategically on how to provide an inclusive working environment and to ensure staff retention.

Regarding point 4 and 5 we find it difficult to weigh and address these issues. This touches upon the whole TT system that is beyond our immediate control. These are typical recommendations that should be picked up in direct consultation with the staff of the graduate school.

Theme Data and Engineering Science

The Theme has an excellent innovation process, which matches current societal demands to such degree that funding through predominantly contract research is abundantly available. However, this current situation may not last since competition for assignments and staff with industry is increasing. The recommendations from the panel for the Theme are therefore to:

1. Formulate a sound and solid research strategy and action plan to maintain and strengthen the Theme's pivotal position during the coming six years and beyond.

Creating synergies between different chair groups and PI-level units starts with cooperation at personal level on the work floor. This will be strengthened through more collaborations in courses, theses research, cases in education and joint papers, which should lead to the formulation of joint PhD/postdoc projects and cooperation in research programs.

2. Explore thematic synergies between data-driven modelling and process-based biophysical modelling.

In the field of remote sensing this is already happening, but not mentioned in the report because the report aimed to focus on the new(est) collaboration within the theme. In other fields, like simulation modelling, the two are combined with approaches such as data assimilation and meta-modelling / model emulation, ...

3. Further explore synergies between the different Chair Groups and PI-level units, prioritise research rather than application domains, and avoid fragmentation of the Theme's coherence that may result from a too exclusive focus on contract research (and profit making).

Some groups have quite some contract research with industry, but other groups have contract research funded, e.g., by the European Commission or governmental organisations. The latter type of research still can have a strong fundamental focus. The groups participating in the theme prioritize funding PhD and post-doc research projects. The topics may relate to specific applications, but the aim is methodological development, which requires expertise from the different groups.

4. Ensure gender and diversity balance within the different sub-Groups and across the Theme, preferably across the different staff categories.

We are and have been actively working on a better gender balance and a more diverse composition of staff and students. Recognition of the importance of gender balance and diversity has been part of the groups strategic planning process for several years. It is important to stress that we consider these topics ongoing and important to advance in the future and to actively engage in conversations about how to achieve gender balance and how to define, assess, and improve diversity. Our efforts are showing a clear improvement over the last years. Gender balance in the senior leadership is improving, for example, through hiring Kirsten de Beurs as new remote sensing chair (starting in the summer of 2022). Overall the groups are highly internationalized. We acknowledge and would like to stress that improvements cannot be exclusively documented by numbers but that an ongoing reflection is necessary and that changes still need to happen in many ways.

5. Strategically address the challenge of integrating a new cohort of 2-year technically oriented professional doctorate students, taking into account that continuing growth and increasing turnover of staff may leave the Theme with fewer experienced staff in the years to come.

FTE is playing a leading role in a new full-time post master's program leading to a Professional Doctorate in Engineering (PDEng). No further input available at this moment.