



International evaluation and accreditation

EVALUATION AND ACCREDITATION DOCUMENTS

University of Danang – Danang University of
Science and Technology

Danang

Vietnam

April 2024

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High Council for evaluation of research and higher education

CONTENTS

Evaluation report	pages 1 to 22
Comments of the institution	page 23-26
Accreditation decision	following pages



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EVALUATION REPORT

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February 2024



Danang University of Science and Technology (DUT) has mandated the Hcéres to perform its external evaluation. The evaluation is based on the “External Evaluation Standards” of foreign Higher Education institutions, adopted by the Hcéres Board on January 31st, 2022. These standards are available on the Hcéres website (hceres.fr).

In the name of the expert committee¹ :

Christophe Haunold, President of the committee

In the name of Hcéres² :

Stéphane Le Bouler, Acting President

The Higher Council for Evaluation of Research and Higher Education (Hcéres) is an independent public authority. It is responsible for evaluating higher education and research institutions, research organizations, research units, and training programmes.

¹⁻² In accordance with articles R. 114-15 and R. 114-10 of the Research Code, evaluation reports are signed by the Chairman of the expert committee and countersigned by the President of Hcéres.

CONTENTS

I. PRESENTATION OF THE INSTITUTION	4
INSTITUTION IDENTITY SHEET	4
RESULTS OF PREVIOUS ACCREDITATION(S)	4
II. INSTITUTION'S SELF-EVALUATION PROCESSES	6
III. COMPOSITION OF THE EXPERTS PANEL	6
IV. VISIT DESCRIPTION.....	6
V. EVALUATION REPORT	8
Field 1: Strategic and operational management	8
Field 2: Policy on research, innovation and the inclusion of science in society	13
Field 3: Education, student and campus life policy	16
VI. CONCLUSION.....	21
Strengths.....	22
Weaknesses	22
Recommendations to the institution.....	22
VII. Comments of the institution	23

I. PRESENTATION OF THE INSTITUTION

INSTITUTION IDENTITY SHEET

- University/institution: University of Danang - University of Science and Technology (DUT)
- Year of creation: 1975
- Legal status: public university of science and technology
- Internal organisational structure: 14 faculties, 10 research centres and institutes, 11 functional units and departments
- Location of the institution
 - Town(s): Danang
 - Campus(es): Lien Chieu
- Number of students: 16 484
- Distribution in 2023: 16,175 students enrolled in Bachelor, 245 in Master, 64 in PhD.

The University of Science and Technology – University of Danang is a public polytechnic university created in 1975, just after the national unification of the country, with four initial faculties. In 2012, it had 14 faculties and became a member of the full-range University of Danang, which clusters six universities, underlining its rapid development. It is one of the three Polytechnic universities (*Bach Khoa*) in Vietnam together with Hanoi and HCMC. It aims to provide the country with well-trained human resources and technological knowledge and solutions to answer the regional developmental issues and, particularly, the needs of the labour market in the Central region of Vietnam. DUT is deeply aware of the fast changes in the structure of industry and occupation, together with the open competition between universities in ASEAN, which constantly requires new skills and adapted qualifications.

Its education offer ranges from numerous Bachelors and Engineering programmes in a large variety of specialities (38), to Masters (17 programmes) and PhD (15 programmes) which are deeply embedded in the region. In 2022, around 16,000 students graduated from DUT, 15,636 of them with a Bachelor's or Engineer's degree. On Fall 2023, 3500 new students got enrolled after a demanding selection.

In 2023, DUT academic staff relies on 357 full-time professors and lecturers, 73% of them with a PhD, and 125 full-time administrative staff. 36% of the staff are women.

Since 2017, DUT scientific production has experienced a notable increase in international publications, with a focus on research projects spanning various domains such as construction material treatment, energy saving, marine economy, and smart cities. The local government of the city of Danang, among others, needs specific expertise on some of these issues and provides funding for applied research projects, while offering good opportunities for field-based training for the students.

DUT's large and green campus extends on more than 23 hectares and is located on the outskirts of the city of Danang. Its gradual renovation is under way.

DUT is headed by a Rector and three vice-Rectors. Governance is organized in a highly structured way around several central bodies, with relays in each faculty:

1. University Council
2. Scientific and Academic Council
3. Party Committee.

RESULTS OF PREVIOUS ACCREDITATION(S)

DUT was accredited for the first time in 2017, at an institutional level, by Hcéres, along with three other Vietnamese universities carrying the "*Programme de formation d'ingénieurs d'excellence au Vietnam*" (PFIEV) set up at France's initiative in 1997.

When its initial five-year accreditation expired in 2022, DUT applied to Hcéres for renewal of its international label, following an external evaluation including an on-site visit. For this purpose, Hcéres itself underwent an accreditation procedure to be allowed to operate in Vietnam by the national Ministry of Education and Training. A visit of two Hcéres members organised in October 2022 in Hanoi gave the opportunity to inform and train the teams of the four applicant universities to the new evaluation framework and relative methodology.

On programmes' level, DUT benefits from 42 international accreditations and assessments, delivered by AUN-QA (21 programmes), ASIIN (11 programs) and CTI (10 programmes).

In 2017, the Hcéres Accreditation Commission drafted the following recommendations:

- The Commission recommends that the institution make progress in linking training and research, and in setting up structured research teams.
- The Commission recommends that real steering indicators be put in place, enabling the faculties to be monitored by the Rector.
- The Commission recommends taking advantage of the potential for economic development, taking into account strong competition.
- The Commission recommends greater integration of students in the institution's various governance structures, and calls for the DUT Board to be opened up to them.
- With regard to the "ethics" criterion, the Commission considers that the institution should set up a process for ethics training and fraud prevention.

II. INSTITUTION'S SELF-EVALUATION PROCESSES

Quality and professionalism are core values of DUT, which is deliberately involved in continuous improvement and quality assurance, at both institutional and programme level. It firmly relies on political support represented by a vice-Rector, cascaded at the level of each faculty, where the vice-Dean is in charge of the implementation of the annual plan. The effective Educational testing and Quality assurance department at central level was mandated to implement the self-evaluation process and the visit of the panel. The preparation was seamless, with the panel being furnished with a comprehensive Self-evaluation file containing a wealth of information and documentation.

III. COMPOSITION OF THE EXPERTS PANEL

The experts' panel was chaired by Christophe Haunold, Partnership, Knowledge & Technology Transfer office Head, University of Luxembourg

The following experts participated in the evaluation:

- Philippe Ackerer, Research Director - National Centre for Scientific Research (CNRS), Strasbourg
- Pierre Haro, Engineer graduated from École nationale supérieure de techniques avancées (ENSTA Paris)
- Odile Jankowiak-Gratton, General Director of services of Université de Toulouse
- Claire Lartigue, Full professor, Paris Saclay University
- Pierre Renaud, Full professor, Institut national des sciences avancées, Strasbourg.

Hcéres was represented by Michelle Houppe, Head of project at the Europe and International Department.

IV. VISIT DESCRIPTION

- Date of the visit: 30th November-1st December 2023
- Summary of the conduct of the visits: see the table below
- Organisation of the visit: seamless and fully satisfactory
- Cooperation of the institution to be evaluated: full cooperation, high goodwill, and very kind attitude
- Any problems: none

November 30th, 2024

Time	Session 1	Session 2
8:15 - 8:30 A	Opening Session	
8:30 – 9:45 B	Board of Rectors and the Chairman of the University Council	
9:45 – 10:00	Coffee break	
10:00 – 11:00 C	Representative panel of members of University Council & Scientific and Educational Council	
11:00 -12:00 D	Panel of Faculty Deans (7 people)	Panel of Faculty Deans (7 people)
12:00 – 13:00	Lunch break	
13:00 – 14:00 E	Managers of departments/centres for academic affairs	Top managers of administrative department for HR
14:00 – 15:00 F	Representative panel of lecturers (various status and disciplines)	Representative panel of researchers (various status and disciplines)

15:00 – 15:30	Coffee break	
15:30 – 17:00 G	Visit of the campus by a panel of student association leaders	Visit to labs by a representative panel of directors of research centres/institutes

December 1st 2024

Time	Session 1	Session 2
8:30 – 9:30 H	Representative panel of Doctoral students	Quality assurance and ethics
9:30 -10:30 I	Managers of research centres (incubator, technical platforms, intellectual property, etc.)	Alumni & employers
10:30 – 10:45	Coffee break	
10:45 – 11:45 J	National academic & research partners	Top managers of Planning and finance affairs + facility management
11:45 – 12:45 K	International affairs Department	Information system and tools for strategic steering at top management level (dashboard, KPIs)
12:45 – 14:00	Lunch break	
14:00 – 15:00 L	International academic partners and students in mobility inbound and outbound	Communication Department (internal & external)
15:00 – 16:00 M	Representative panel of students active in association (different undergraduate and graduate programs)	
16:00 - 16:30 N	Closing session with the Rector and Vice-Rectors	

120 participants were met during the interviews.

V. EVALUATION REPORT

FIELD 1: STRATEGIC AND OPERATIONAL MANAGEMENT

Standard 1: The institution defines its institutional positioning at local, national and international level.

DUT positions itself as a distinctive local actor, a prominent national university and an emerging player on the international stage.

DUT is positioned around the following axes:

- Quality training and attentive support for students, especially those from central Vietnam,
- Strong support for Vietnamese companies,
- Strong interaction with the local and regional community,
- International ambitions in training and research.

DUT has reaffirmed its mission to train high-quality human resources and conduct research in the service of the country's economic and social development, yielding tangible outcomes. However, reaching the highest international standards in the research sector will necessitate even more significant investment. International mobility is still hampered by regulatory and financial obstacles, and limited by a somehow unattractive geographical location despite the existence of formalised partnerships with foreign partners (e.g. in France).

The vision and ambition are clearly articulated and shared throughout the institution as part of a participatory approach. The steadfast consistency and persistence in maintaining this positioning have been key contributors to the DUT's positive trajectory in recent years.

The committee acknowledges the quality of the positioning and the results already achieved by DUT. However, the international dimension remains to be built and consolidated. To this end, it is recommended that the range of programmes be strengthened, and that English language skills be increased to facilitate mobility. The regulatory constraints encountered should be discussed with the authorities to mitigate an additional obstacle exacerbating the financial difficulties already faced by outgoing students.

Standard 2: Based on its positioning, the institution defines a strategy at local, national and international level, which it translates into operational objectives and which it monitors.

The Institution offers a well built strategy aiming at the three levels, with a set of operational objectives.

The strategy at local level is clearly defined first and foremost in terms of student support, which involves helping students with financial, educational and psychological difficulties identified through surveys, assisting them in finding employment, and taking into account their quality of life on campus. Interaction with the City of Danang is also a key strategic element for DUT, with a view to developing its local eco-system. Students are considered also on a national level, through the strategy of attracting top-level candidates recruited beyond the regional range. This issue is part of a wider battle to promote scientific and technological studies, which have fallen into relative disfavor according to a nationwide observation.

On the other hand, Vietnamese companies recognise the quality of the support provided by DUT in terms of service contracts, research and technology transfer, thus validating DUT's strategy of commitment to supporting Vietnamese industry and economy.

Finally, the Institution has defined an international strategy aimed at increasing its scientific visibility and attracting foreign staff or nationals who have completed their academic education and broadened their professional experience outside Vietnam.

DUT's strategy is reflected in clear objectives for each of the levels considered, such as increasing (1) the number of publications, (2) the number of qualified staff with PhDs or post-docs trained abroad and who return to take up a position at DUT, or (3) the number of industrial collaborations.

DUT should improve its follow-up and monitoring system.

Operational objectives have been defined and their achievement assessed. Yet the monitoring tools currently employed are limited to a dashboard approach, which appears inadequate for achieving fully controlled management. The lack of data sharing with faculties restricts the institution's ability to strengthen its 360° vision through the construction and consolidation of global indicators. There is likely to be a need for a centralised information system that brings together the existing dashboards and adds new dynamic functionalities.

The committee urges DUT to develop a more integrated information system, one that will furnish the institution's governance and management with enhanced guidance, resources for analysing the impact of implemented policies, and the capacity to conduct any necessary strategic reorientation or refocusing.

Standard 3: The institution is involved in its environment and develops a partnership policy as part of its strategy.

Local partners provide a very strong commitment.

DUT's study programmes are deliberately anchored in the local area, responding to the challenges of regional development involving strong links with the socio-economic world. This has led to an excellent integration of graduates into local companies and responds to the country's development needs. In parallel, research activities carried out in response to the needs of the region's industrial and business fabric provide an attractive offering, which can also be of interest to international companies. The latter are customers of DUT's services and occasionally engage in equipment partnerships, likely aiming to cultivate a pool of skilled workforce that can be hired at reasonable costs.

On the local academic ground, DUT considers its relationship with the University of Danang to be very positive, sometimes leading to simplified relations with the authorities, a degree of administrative flexibility, and even a potential source of additional or complementary funding.

International academic partnerships have also been established through MoU agreements, with sometimes uncertain results, which need to be evaluated in order to rationalise this partnership landscape.

The committee recommends that DUT assess all its inter-university partnerships, measure the actual output achieved against commitments formalised in MoUs in particular, and streamline this portfolio of agreements to focus its efforts and optimize the use of resources.

In conclusion:

DUT positions itself as a major local player, a leading Vietnamese university and a partner with a clear international development agenda in terms of education and research. Its strategy is divided into clear objectives relating to students and their support, partnerships, particularly with local communities and businesses, and international cooperation. This last point, however, requires the development of a wider range of training opportunities, the improvement of students' language skills in particular, and the financial and regulatory facilitation of incoming and outgoing mobility.

The operation of the institution in silos limits its development in multiple areas, and the management would benefit from more transversal management tools, such as an information and decision support system. An analysis of partnerships, especially inter-academic ones, is necessary to rationalise actions and optimise the use of resources.

Standard 4: The governance of the institution is based on an organization, communication and information system adapted to its strategy.

The strategy is driven by the organisation, and supported by proactive communication, but need tools to be strengthened

The University's governance system is based, in compliance with the national regulation, on a three-party coordination: the Party Committee, the University Council and the Board of Rector. Some of the members are common to both councils, which does not seem to pose any problems, but on the contrary reinforces the coherence of governance. In addition, the Scientific and Educational Council advises the Rector on all matters relating to academic, scientific and technological activities, while the Educational Quality Assurance Council ensures that the strategic plan is properly implemented and that the numerous evaluations carried out on training courses are properly exploited. In this way, governance covers all activities and clearly supports the strategy.

Currently, the University has 9 functional units, 14 faculties, 10 Centres, 2 Institutes. Under the direction of the Rector, the heads of the functional departments are professors. There is no hierarchy between faculties and departments. The organisation is pragmatic, more or less centralised depending on the subject. The administrative function is centralised; faculties have very small teams around the dean (one secretary and one academic secretary responsible for academic affairs). Research is less clearly organised.

Vision and strategy are widely shared, both in their development and deployment. A collaboration with the University of Arizona was set up to rework the vision and KPIs. This work was monitored by a steering committee made up of heads of department linked with deans. The management team is involved and trained so as to embody the strategy and implement it according to strong participative principles. The aim is to ensure that everyone understands his or her environment and his or her role.

DUT's vision has not changed much in recent years, and the institution is now looking for greater proactivity. This is the context in which the communications plan fits. The communication plan is structured, with an approach by target audience. Internal communication is very active, in line with the participative dimension of the strategy put forward by the Rector and the Chairman of the Board. It relies on a varied range of media: messages, surveys, meetings, etc. Specific tools are designed to reach out to future students and companies. They enable students and staff to play an active ambassadorial role. The image is well publicised in the media, at trade fairs, in high schools and with local authorities. Particular attention could be paid to inbound and outbound students and lecturers, to reinforce their role as ambassadors. The alumni network could also be strengthened by a more cross-functional organisation at the highest DUT level, beyond the faculties.

The information system team comprises six individuals along with representatives from departments and faculties. Most processes have been digitised; for instance, student registration is entirely paperless. A great attention is paid to data coming from education activities, but there are no databases shared with the faculties. This data is analysed at weekly meetings. A profile system defines access to data, but DUT does not seem to have a data system organised and shared with faculties, nor dashboards that would enable steering indicators to be constructed based on several data sources. This is undoubtedly an avenue worth exploring to strengthen DUT's overall vision and management.

Standard 5: The institution has a comprehensive quality policy.

The institution develops a comprehensive quality policy at strategic level, but lacks tools.

The quality policy of DUT represents a significant lever in the management of the establishment. It encompasses all activities of the Institute and is based on a set of rules from the Higher Educational Law, the strategic plan of the University of Danang, and the priorities of the strategic plan of DUT.

Its organisational structure was reviewed in early 2020, drawing upon a national benchmark, analysis of strategy implementation, and identification of key performance indicators (KPIs). This reviewed structure was subsequently validated by the University of Danang.

This policy pursues several objectives:

- Fulfilling Vietnamese regulatory requirements specific to autonomous institutions.
- Providing visibility to the institution through international accreditations (*Commission des Titres d'Ingénieur*, ASEAN University Network - QA, Hcéres, among others).
- Continuously monitoring the institution's functioning for ongoing improvement.
- Tracking the deployment of the strategic plan.

The position of the Quality assurance structure in the organisational chart illustrates its importance in the institution's strategy. It is directly linked to the Board of Rectors, which relies on an Educational Quality Assurance Council, and is implemented by a team of seven individuals within the Educational Testing and Quality Assurance Department. It is deeply integrated into the organisation and relies on a network of correspondents in faculties, laboratories, and services. Each faculty has an Educational Quality Assurance Council linked to the Faculty's Leadership Board.

Continuous attention is given to evaluating programs based on annual surveys conducted both internally (involving students and teachers, in particular) and externally (involving employers and graduates after one year of professional activity). All surveys are centralised, analysed, and then communicated to the program managers of the faculties to adjust the contents of the courses.

The quality policy is well-known among the staff who are regularly informed and involved during dedicated meetings planned by the organisational units.

Dashboards have recently been created but do not seem to be automatically updated yet. They consist of a summary of unique forms and common evidence annually provided by all organisational units. Automation would serve as a structured tool, facilitating monitoring, communication, and sharing. It would allow for less time spent on processing and more time on analysis and reflection, which is a challenge given the amount of data to be processed.

Standard 6: The institution steers the implementation of its strategy by relying on forecasting tools, budget programming and a structured internal management dialogue.

DUT's business model is still fragile and only partially reflects its strategy

A multi-year budget is drawn up for a five-year period, then updated every year on the basis of previous years' expenditure and payroll forecasts. A dialogue is organized with each faculty to prioritise spending on their majors in alignment with developments in academic curriculum in response to business demands. It does not appear to be based on indicators. The payroll budget is assessed in consultation with the Human Resources department and includes new planned recruitments, promotions and bonuses. The annual budget prepared by the Board is subsequently presented to both the governing bodies and the staff.

The expenditure budget only partly reflects the strategy. The priority given to human resources is clearly reflected in the increase in the payroll, whereas staffing levels have remained stable over the period. On the other hand, there are no research-related operating expenses and no real estate investments.

	2017		2018		2019		2020		2021		2022	
Staff	82 510	46%	92 478	60%	99 343	61%	102 394	58%	170 700	62%	154 000	57%
Prof teaching	28 690	16%	34 972	23%	35 890	22%	46 908	27%	47 000	17%	48 000	18%
supplies/minor repairs	6 224	3%	6 682	4%	6 791	4%	7 217	4%	10 000	4%	11 000	4%
others	2 406	1%	4 586	3%	4 060	3%	4 392	3%	35 000	13%	45 000	17%
U Danang	60 770	34%	16 064	10%	16 300	10%	14 588	8%	13 818	5%	11 000	4%

As for the origin of revenues, this illustrates an economic model based mainly on tuition fees, which have risen from 79% of revenues to almost 100% today. This model can hinder the development of research, which seems to depend on tuition fees (whereas recruiting top-level students is a challenge) or external contributions.

	2017		2018		2019		2020		2021		2022	
State	33 988	18%	34 430	17%	35 172	16%	28 462	12%	26 700	10%	0	
U. revenue	146 601	79%	162 438	82%	190 509	84%	212 108	88%	247 000	90%	269 000	100%
Tuition full time students	139 572		156 396		185 821		206 335		212 000		224 000	
Tuition in service students	694		482									
dormitory	1 046		1 239		1 108		633		700		800	
others	5 289	3%	1 239	1%	1 108	0%	633	0%	700	0%	800	0%

From Self evaluation report pages 82-83

DUT has an accounting software (according to the law). Information on budget execution is presented at regular meetings. But the faculties or the Board do not have access to dashboards. Work has been undertaken to identify the costs of training courses, but this is not yet a management tool.

The budget only partially reflects the strategy; attention should be paid to highlighting research expenditure. A revenue diversification strategy and plan should be drawn up to reduce dependence on tuition fees and find new resources for research and real estate (see below).

Standard 7: The human resources policy and the development of social dialogue reflect the institution's strategy and contribute to the quality of life at work of its staff.

DUT has implemented a well-thought-out human resources policy whose effects are observed and could further evolve

The human resources policy aims to ensure a consistent alignment with the development strategy's needs and those related to the units' activity evolution, through a two-year projection of recruitments across all academic and administrative functions, updated annually.

The quality of recruitment and up-skilling is ensured through an almost continuous evaluation system. Newly recruited individuals undergo a one-year internship followed by an evaluation by the Scientific Council assessing their professional and pedagogical knowledge. A capacity evaluation is conducted annually to better support and advise personnel in their careers.

To compensate for what is considered an obstacle, DUT has established a comprehensive system, in addition to the government-regulated remuneration system: offering bonuses, benefits, and a highly dynamic training policy. As such, lecturers can benefit from free accommodation during their first year of employment, and receive assistance for their research projects, including support from companies that may cover their training costs. A supplementary salary scheme is available in the event of successful research: technological transfer or

publication in an international journal. The least trained personnel, particularly newly recruited individuals, are encouraged to undergo training or pursue education abroad to prepare for a master's or a PhD. Priorities are determined based on individual criteria and the graduation rate in the faculties.

The academic staff's time is divided into three types of tasks: education, research, and administration. For lecturers, who are aware of the challenges that DUT must face, the major challenge lies in their successful integration into the industry to develop their knowledge and contribute to technological transfer. Simultaneously, they must cope with increasing administrative responsibilities, which hinder their research activities.

A few data points extracted from the annexes provided to the committee indicate that DUT managed to maintain its academic staff numbers over the period despite disinterest in the profession and the unfavourable salary level. However, the numbers remain constant. Conversely, the increase in the number of doctoral degree holders demonstrates the positive results of the recruitment methods and the very proactive training policy.

	2018	2019	2020	2021	2022
Academic staff	371	370	352	352	372
Support staff	216	210	202	203	173
Total	587	580	554	555	545

C3.1 Statistics on teaching and non teaching staff

Academic staff	2018	2019	2020	2021	2022
Professor	3	3	3	3	4
Associate professor	42	41	43	44	45
Doctor	141	169	178	189	204
Master	171	148	123	112	119

C3.1 Statistics on teaching staff

All regulations concerning recruitment, promotion, bonuses, and other benefits are formalised in a document updated annually and published on the website: "Regulations on recruitment, employment and management of public employees of the University of Danang". All recruitments undergo a publication process.

Employee feedback is regularly sought through online questionnaires or during the annual staff conference. This feedback covers working conditions (equipment, bonus policies, interest in research activities, etc.). Mechanisms for feedback from the labour union complement these questionnaires, the results of which are integrated into the quality policy.

35.9% of the staff is female: 60% in administration and 14% among the professors. A Committee for Women's Progress ensures their successful professional integration. Several initiatives, such as prioritising research projects involving women, demonstrate attention to gender equality which could be developed more.

Standard 8: The institution integrates a real estate policy that supports its development into its strategy.

Resources dedicated to real estate are still inadequate and likely to hamper development

DUT has a total land area of 236,650 m² of which the construction area is 92,683 m² and has a complete student life campus.

Multi-purpose house	925 m ²
Administrative working areas	18,098 m ²
Laboratory	12,917 m ²
Workshop/garden station	4,108 m ²
Lecture halls	21,414 m ²
Student Dormitory buildings	14,636 m ²
Centre for Learning Resource and Communication	5,040 m ²

From A.7.1

The management of facilities is carried out using a management software common to all members of the University of Danang. Fixed assets are also tracked and updated annually. DUT therefore has a perfect knowledge of its assets.

The medium- and long-term investment and development plan incorporates the University's development strategy up to 2035. Each year, the University reviews and updates its investment plans based on the needs of its entities and the resources available. There are various sources of funding: own resources, the State, local authorities, economic partners and alumni. The University of Danang assists with financing and fundraising. A fixed portion of the budget is devoted to building maintenance, financing both preventive and curative maintenance.

The campus is spacious and pleasant, but resources remain inadequate in view of the state of certain facilities or delays in construction or demolition, which can be a brake on development and attractiveness.

To conclude, vision and strategy are clear and widely shared, both in their development and deployment. DUT's vision has not changed much in the last few years, and the institution is now looking for greater proactivity. The organisation and communication are adapted to this strategy, although the research organisation could be clearer.

The information system should offer more dashboards to construct steering indicators based on multiple data sources. This enhancement would bolster DUT's overall vision and management.

The institution has a comprehensive quality policy directly linked to the Board of Rectors which illustrates its importance in the strategy. Increased automation of the data it deals with (KPIs, surveys...) will reinforce its role in institutional management.

The human resources policy is clearly aligned with the overall strategy, and the initial observed effects indicate its potential to significantly drive DUT development.

The new business model, without state funding, which marks the transition to autonomy, remains fragile and only partially reflects the strategy. It is based mainly on tuition fees, which have risen from 79% of revenues to almost 100% today. This could pose a significant challenge in the development of research and attractiveness of DUT programmes to students. The campus is spacious and pleasant, but resources remain inadequate in view of the state of certain facilities or delays in construction or demolition.

FIELD 2: POLICY ON RESEARCH, INNOVATION AND THE INCLUSION OF SCIENCE IN SOCIETY

Standard 9: The institution's research policy defines structural guidelines.

DUT clearly displays an academic (basic) research activity and an applied research activity, both of good quality and providing a response to numerous requests from companies and local authorities.

Its objectives are to improve the quality of its research and to increase its regional and national impact in applied research. Academic research is carried out in the 14 faculties, while applied research is carried out in the centres (10). Lecturers and scientists (named lecturers in the following) can carry out their research in both structures (faculty or centre). The quality of the research is mainly analysed through the number of publications in referenced international journals (PRIJ) listed in Web of Knowledge and/or Scopus. Lecturers receive a significant premium per PRIJ in order to increase the number of PRIJ. The number of PRIJs rose from 105 in 2017 to 213 in 2022, i.e. from 0.7/EFTR to 1.5/EFTR (EFTR : equivalent full-time research), considering that lecturers devote 40% of their working time to research. This incentive focuses only on a select group of people. The increase in PRIJs should now lead to an improvement in the level of publication by encouraging publication in highly impact-sensitive journals. Reversely, this increase resulted in a sharp decline in publications in national journals, from 208 in 2017 to 145 in 2022.

Applied research is a research activity that is very present within the institution and takes the form of research grants and funding. It also allows lecturers to receive additional remuneration. However, its international scientific audience remains limited.

International research activity is mainly concerned with the organisation of international congresses. There is a significant effort to be made to increase the visibility and attractiveness of the institution at the international level by increasing mobility for lecturers and PhD students. The Institution should also benefit from the network built by lecturers that have been promoted outside Vietnam.

Standard 10: The institution has a policy resource and support for research.

Support for research is effectively organised through the departments, which provide administrative and financial assistance for the development of scientific projects.

The research budget from government funding is stable from 2017 to 2023 (11 billion VND or EUR 420,000/year), except for the years impacted by the pandemic. This is still a modest budget for this university but the

contribution from applied research activities is not included. Reliable information of academic research funding through applied research could not be found in the provided documents.

Financial support is also given to interdisciplinary projects aimed at strengthening academic research within the framework of the Teaching Research Teams (TRTs). Three TRTs were established from 2015 to 2020, bringing the total number of TRTs to 14. These teams are valuable tools to promote research.

The institution is very attractive in terms of doctoral students (on average, 65 new doctoral students per year from 2018 to 2022), and a good part of the recruited students have graduated from another university. The institution has also put in place a whole series of procedures for the follow-up of doctoral students, especially those in difficulty. The research budget dedicated to doctoral students has changed little from 2017 to 2022 and funding for valorisation activities (participation in congresses, publication fees) is not always guaranteed, which limits the participation of doctoral students with the most modest incomes.

The "Science, Technology and International Cooperation" department is an essential department in helping lecturers and scientists for mobility. Its activity dedicated to research deserves to be strengthened given its strategic importance.

In conclusion, the institution clearly supports research. To date, the effects of this support have mainly been achieved through a significant increase of publications in referenced international journals and through Teaching Research Teams.

The institution has to find balance between academic and applied research, which is difficult to achieve. In terms of publications, the PRIJ policy has led to a decline in national publications, which, on the long term, could lead to a decline in the visibility of applied research. This balance seems only achievable by increasing the time dedicated to research.

DUT needs to reflect on its research strengths in order to raise its profile in certain areas that it considers to be priorities, taking into account strategic partnerships for the institution. The Science, Technology and International Cooperation Department also needs to be strengthened for providing guidance, carrying out awareness-raising and prevention initiatives on ethics and integrity, and generally assisting researchers in contracting with socio-economic partners.

The link between academic research and applied research remains to be built by promoting high-level applied research activities. Improving the quality of the applied research will increase publications and nurture academic research with novel questions and topics, which will attract new funding.

In terms of companies and number of Bachelor's degree holders, the environment is not as favourable to DUT compared to universities located in metropolises such as Ho Chi Min City or Hanoi. It is therefore important to give this institution a strong visibility either by identifying niches for research (and education), or by increasing its attractiveness through high-level international research.

Standard 11: In its policy of innovation and inclusion of science in society, the institution defines structuring guidelines.

DUT has a strategy and assets to be a major player in innovation and transfer. It has a strong network of partners, and research centres built to meet industrial expectations.

DUT has a clear strategy regarding innovation as a lever for the institutional development. The institution's focus in terms of research is applied research, involving technology transfer, services and expertise, which is one of DUT's strengths. The institution is well aware of this, and is recognized by companies and local authorities for its activities and skills. Its 2025-2035 plan includes two related directions: increasing transfer and improving service to the community, innovation and entrepreneurship. These directions form part of the roadmap of the Department of Science, Technology and International Cooperation, which then draws up an annual action plan. KPIs have been put in place, including a target for university funding from S&T, innovation, transfer and consulting revenues (15% of total revenues), as well as an increase in the number of Intellectual Property (IP) filings. Lecturers' activities are assessed annually against these criteria, creating an incentive to maintain momentum.

The institution also benefits from connections with a very large number of socio-economic partners and organisations (over 30 internationally, 60 nationally) on which it can rely to develop its strategy. These include local, as well as national and international companies, particularly those with local operations (Fujikin, UACV, for example). Links with local authorities are also well-established, with the City of Danang (for example, developing a LoRa network) and the Ministry of the Economy and Finance providing incentives. It is worth noting that international relations and science & technology are part of the same department, which is conducive to accelerating the international development of applied research activities.

The institution possesses effective tools for conducting transfer and expertise work. On the one hand, there are a dozen research centres, which are structures endowed with a degree of budgetary autonomy and staff dedicated to these endeavours. They carry out R&D activities, as well as sharing expertise, providing services and consulting for private and public partners in fields such as IoT (Internet of Things), automation and civil engineering. These centres can be tailored to the industrial needs of partners. They enable contractual activity with partners from the socio-economic world, and have a good reputation with companies, as demonstrated by the on-site meetings with the panel of experts. DUT implements a specific approach to communication with and from socio-economic partners, as this activity is a major aspect of the research implemented today. Specific communication actions are meant to gather and relay the needs of public and private institutions and pass them on to lecturers, and in the other direction, to showcase the know-how of the researchers, at individual level. The research centres or laboratories could be more collectively involved in these actions.

However, efforts are disparate, with no thematic strategy to make the institution's strengths visible, and no consolidated follow-up at institutional level. Dedications on IP and entrepreneurship need to be pursued. The activities carried out have a clear impact on various fields. Projects can last from a few months to 1 or 2 years and can also be significant in financial terms. Examples include civil engineering and infrastructure construction. However, these initiatives are disparate, relying more on individual researchers than on a centralised structure steered by the institution. Therefore, they are not consolidated in terms of institution-wide indicators, which represents a weakness in the monitoring and steering of activity.

Ultimately, the partnership policy is based on opportunities, with no cross-functional vision of the DUT's strengths. This penalizes visibility with external partners, particularly international ones, in contradiction with the institution's strategy. Furthermore, while the organization between research centres and intra-faculty groups seems well articulated and understood by researchers, it makes it more complex for these external partners and is detrimental to global visibility.

IP and entrepreneurship are key levers for developing partnership activity. In this area, the results are still very modest, even though a number of awareness-raising initiatives have been launched. For example, Tech Show-type initiatives are included as part of training, and a makerspace project is under way. The IP strategy is still in its infancy, a point made all the more complex by the cumbersome regulations the establishment has to deal with.

The development of research partnerships must also be accompanied by awareness-raising and training initiatives on issues of ethics and integrity. The regulatory aspects of these issues are in place, but specific actions are also needed to support and raise awareness among researchers.

Standard 12: The institution pursues a policy of resources and support that benefits its activities in terms of innovation and the inclusion of science in society.

The incentive policy for staff is a strength. DUT has a clear incentive policy for partnerships, and this is well understood by staff: teaching staff has three missions, which are teaching, research and community service. Each year, they sign up for each of the three components, which are duly measured by associated KPIs. The relationship with companies is an integral part of the responsibilities, as is quality management, for example. The annual assessment of their activity is part of the promotion process. The innovation and transfer development strategy is thus effectively managed and perceived as a positive element by the lecturers.

However, progress needs to be made in structuring the monitoring of partnerships, and providing the support staff needed to set them up. The partnership policy relies on staff rather than the institution. Admittedly, DUT has been able to respond to a number of calls for proposals, including international ones, to support its development of research partnerships, as in the case of the Higher Engineering Education Alliance Program (HEEAP). However, partnerships are forged on an ad hoc basis, with no organized interaction or follow-up between faculties and companies. This could help to underpin exchanges and move them towards collaborative R&D rather than simple services or expertise. Lecturers are heavily involved in contractualisation, and the absence of a transfer structure with dedicated staff skilled in business development and contractualisation limits the development of this activity. Efforts are being made in this direction but need to be finalised.

IP management has been the subject of regulatory implementation work. Support is also available from the Science, Technology and International Cooperation Department. DUT has published policies to support registration activities associated with scientific research subjects. Incentive policy is also present in this area: DUT has established standards for rewarding and supporting recognized intellectual property. However, the IP component remains weak, still suffering from national complexity, and furthermore lacking internal human support to manage it. The committee believes that the significant contractual activity with DUT creates valuable opportunities to be seized and commends the institution for its willingness to grow on basic research.

To conclude, DUT has a strategy and assets in the field of research valorisation and technology transfer. Its network of partners is notably a strong asset, with research centres that have the capacity to meet industrial and local authorities' expectations. DUT can also rely on an incentive policy for its researchers that is well understood and effective. Moving forward, in its policy of innovation and fostering science engagement with society, the institution must capitalize on the extensive collaboration it has with its partners. This entails further enhancing the value of collaborative activities and ensuring the continuous advancement of the research dimension within these partnerships. While this approach has been initiated with certain partners, it is recommended to intensify and expand these efforts. The institution must also pursue its efforts in IP and entrepreneurship to increase the volume of activity and its associated metrics. In this respect, it is recommended that consolidated indicators be set up for the entire institution, and that a more structured approach be adopted to monitoring relations with companies.

FIELD 3: EDUCATION, STUDENT AND CAMPUS LIFE POLICY

Standard 13: The institution has a quality teaching policy and teaching offer, consistent with its positioning and strategy.

DUT fulfils its ambition to train a skilled workforce for the development of the country, with a focus on central Vietnam.

DUT proposes a variety of programmes that cover a wide variety of scientific and technical fields, appropriately sequenced from Bachelor to Master programmes, and up to doctoral programmes. Programmes are deeply embedded in the region. They respond to regional developmental issues, thanks to their strong links with the socio-economic world (in particular local stakeholders). This is reflected in the very good professional integration of students after graduation.

Research-based learning at undergraduate level is organized around projects and/or competitions, some of them run in tight collaboration with industry partners. This could be supplemented by courses dedicated to research methods, which would outline the fundamentals of research, from conducting a literature review to elaborating research questions. Master's students could be allowed to attend the scientific workshops organized by DUT, and would thus gain exposure to research. This could be further extended to undergraduate students. Doctoral candidates mentioned several research opportunities offered at DUT, including participation in workshops and conferences, networking with professors from other countries, or access to small funding. Most PhDs candidates are lecturers at universities in the region.

Only two advanced programmes are taught in English, which is detrimental to both the inbound mobility and the internationalisation of students. There is an interesting programme for Laotian students which fulfils its role of training qualified personnel in South-Asia. However, inbound mobility from other countries is little developed and there is little evidence that the success with the Laotian programme can scale easily due to the language barrier. The internationalisation of study programmes could be further reinforced. It essentially relies on PFIEV programmes, which are excellence programmes. However, it should be noted that outbound mobility opportunities are virtually non-existent for students, except for internships. Also, the internationalisation policy should be further reinforced by more financial supports for outbound student mobility. The lack of English proficiency still remains an issue, although support is offered in the form of additional courses offered at DUT. The involvement and participation of foreign teachers in study programmes should be strengthened for instance via on-line courses. DUT has a great number of international MoUs, most of them for outbound mobility programs dedicated to internships, organized in close partnership with companies and businesses. These MoUs are managed at the faculty level. Even so, international attractiveness is quite low.

The development of professional and soft skills should be reinforced within the study programmes and clearly planned in the curricula. All the students should benefit from courses or activities related to communication and soft skills, not only those who are involved in extra-curricular activities. Furthermore, although opportunities to gain work experience or develop professional practice are mentioned in the curriculum, their implementation is uneven across fields and across years in the same subject area. This point has been emphasised by both students and business partners, who would like students to develop practice and work experience in each year of the programme, in a consistent way across faculties.

It can be noted that particular attention is paid to students' civic engagement and social responsibility. Professional ethics is also one of the four mandatory courses for doctoral students.

Standard 14: The institution develops a set of institutional mechanisms to ensure the pedagogical quality of its teaching offer.

Study programmes benefit from a high-quality and experienced staff to deliver its range of courses. However, pedagogical innovation remains limited.

Study programmes are defined by national rules, with local application when necessary. A wide range of study regulations governs the curriculum offering, from undergraduate to doctoral programmes, within a very clear framework.

A competency-based approach is not yet totally demonstrated. It is clearly indicated that programmes share core scientific courses, but transverse and multidisciplinary skills could be further emphasized.

The programmes benefit from the highly experienced academic staff, as most of the classes are given by lecturers who conduct a research activity for a third of their working time. Yet, little is done in the area of pedagogical innovation. In particular, the use of digital means is limited to the basic features of Moodle, which is mainly used as a synchronous teaching method. This system could be used more efficiently to give access to shared documents, videos, registered classes, MOOCs, and so on. Expanding the approach that has already been initiated through Problem-Based Learning (PBL) would also be a progress.

Teachers' continuous training remains limited, which may be due to partial funding, in particular for international conferences, as some of the remaining costs must be covered by the lecturers themselves. Thus, academic mobility is low. Nevertheless, DUT implements a proactive policy of international collaborations at faculty level, to enhance the quality of its staff and as a result of the training programs. They actively support connections with other universities, giving priority to science and technology universities in order to receive visiting scholars and to set up MoUs.

Careful attention is given to English language training. DUT has issued policies to promote student's English proficiency. However, a large number of students do not meet the required level. DUT could reinforce collaboration with US or British cultural institutions, following the example of the *Institut Français* located in Danang, which provides support for students to enhance their French language proficiency.

DUT has a large number of laboratories for practical training, most of which are shared between faculties. Equipment is generally good, and also takes advantage of industrial connections, in particular with regional stakeholders.

PhD candidates are appointed one or two supervisors. Doctoral programmes are run by lecturers recruited according to specific regulations. Classes are mainly taught during the first year of the doctorate. One recommendation put forward here would be to set up a doctoral students' association, which would be beneficial for PhD candidates to exchange ideas, share resources or help each other, as well as to discuss the issues they may face.

Standard 15: The institution analyses the attractiveness, performance and relevance of its educational offer and promotes student success from orientation to professional integration.

The institution develops mechanisms to control its attractiveness. Aware of student's low success rates, it has set up measures to help students succeed.

Attractiveness has been declining at the Master's level for the past four years, and more sharply since the Covid-19 pandemic. In the meantime, at the undergraduate level, the number of students is rising steadily for most of the faculties. As a result, undergraduate students rose from 14,088 in 2019 to 16,175 in 2023. DUT is rather efficient in its promotion of undergraduate student's attractiveness. The institution organizes various events to entice young people to pursue training in science, technology, engineering, and mathematics (STEM). In particular, DUT directly conducts actions aimed at high-school students in the local area, either in the secondary schools or at DUT premises, mainly through challenges or competitions. Specific attention is paid to female students.

For each programme, the rules for admission and validation requirements are clearly specified. In particular, although it may seem surprising, students who do not hold a Master's degree can enter a doctoral programme if they have at least one publication. Both the student selection process and the number of enrolled students are regulated at the undergraduate level. There are six different ways to recruit students, the main one being based on the cut-off score of the applicant. This cut-off score has been increased by DUT to reach a higher selection level. If this criterion is objective, the others are more vague. DUT must clarify selection processes to obtain a better overview of the origins of recruitment and monitor the performance of the various student recruitment sources. The different available selection processes can encourage diversity, which is good for

development, but may also lead to greater heterogeneity in academic levels. Another fact to be noted is the decrease in the number of scholarships awarded to students. This could have a negative impact on attractiveness, especially in the context of increasing tuition fees.

The number of Master's degree students fell by 60% since 2018, and by 30% over the last two years. The students enrolled in Master's programmes are currently 245. The number of study programmes (17 at this level) is probably too high, and a study could be conducted at university level to cluster programmes in close fields by defining more common core courses, and only a few elective courses for specialization.

The institution is aware of the low rate of graduation on time (around 41%); this is mainly due to language proficiency imposed to reach international standards, but not only. Students also fail to succeed due to the high level of the programmes. But DUT prefers to have a low success rate in four years than to lower the academic excellence of the programmes. Nevertheless, different solutions can be set up to help students succeed: intensive English courses, reorientation, and the possibility of acquiring credit from another university of the G7 network. These opportunities should be enhanced and strengthened.

Programmes are established taking into account the stakeholders' needs. Relationships with companies and business partners are strong, including internships, recruitment of graduate students, but also foreign language training for students. These relationships strengthen the preparation for professional integration of students, and offer a guarantee for future and continued improvement of the programmes. Companies foster innovation, offer access to their open laboratories to lecturers, and support evolution of the curriculum in relation to promising new fields (AI for instance). Moreover, companies' feedback as regards to study programmes is rapidly taken into account in the improvement of such programmes.

An academic advisor is assigned to each class to support students. Students are surveyed every semester about their opinion or difficulties. The surveys include questions about working conditions, learning environment and course content. Student difficulties are classified into three categories: academic, financial or psychological. Each one leads to a series of actions. Financial difficulties are managed by looking for support from industry; local support would be appreciated. Special classes (during the summer or in the evenings) are proposed to help students with academic difficulties. Students can also give their opinion on the lecturers, which can lead to recommendations for the lecturers.

Student feedback is also collected once they graduate, in particular to assess the quality of the programme as regards to their employability. By the way, the employment rate within one year after graduation is quite high, rising at 85.1% in 2021. Companies that hire students have close links with the student's home faculty. Key alumni graduated from DUT foster relations between companies and DUT. Companies expressed their satisfaction with the students they recruit: they share the same values, come from the local area and show excellent academic performances.

Standard 16: The institution monitors the development of its program offering and ensures that it is sustainable, by relying on a human resources policy consistent with its teaching policy and by implementing a continuous improvement approach.

The academic offer is monitored through various surveys and takes into account feedback from both students and the socio-economic world, the latter playing an important role.

Study programmes are revised every two years with minor revisions. Although programmes are subject to national regulations, adjustments of elective modules are still possible. Programmes are modified every five years based on student surveys, but also based on continuous improvement policies (for new teaching methods and new knowledge) relying on three main points:

1. benchmarking international programs;
2. sharing the results of pedagogical methods experimented by lecturers who graduated from foreign universities;
3. obtaining help from US universities to promote new pedagogical methods and knowledge.

This is a good strategy based on international experience, which could be further improved by highlighting a few examples, and by pooling the results of the different experiments among faculties.

However, the recruitment procedures for lecturers and their connection to study programmes lack clarity. Establishing a clear link between human resources policies and teaching policies is essential for coherence. Lecturers are assigned to three core tasks: teaching, research, and collective responsibilities. The latter, at times, proves time-consuming and falls on a limited number of individuals. Strengthening support staff could alleviate lecturers' collective responsibilities, allowing them more time for research and teaching.

Particular attention should be given to the calculation of academic costs and programme sustainability. Exploring the development of specific programmes, such as short training programmes tailored for companies, is under consideration to bolster resources. This is an opportunity that needs to be exploited.

To conclude, DUT offers a variety of programmes covering a wide range of scientific and technical fields, well articulated from Bachelor's to Master's and even doctoral programmes. The study programmes are closely linked to the region's needs for qualified human resources and may change according to the development needs of the industry in a proactive manner. The study offer is well monitored thanks to various surveys taking into account feedback from students and the socio-economic world, the latter playing an important role. This positions DUT as the leading technical university in the central region of Vietnam.

The policy on teacher recruitment needs clarification, specifically regarding study programmes. However, there is a strong focus on training newly recruited teachers, which benefits from international connections. DUT should consider hiring additional support staff for collective tasks to alleviate the burden on teachers.

It is important to prioritize the sustainability of study programs. For example, the number of students is shrinking at Masters' level. In order to reverse the trend, DUT should propose some actions, for example with the contribution of its alumni to increase attractiveness. Although many initiatives are in place to help students, few graduate on time. Efforts to support students have to be expanded.

International attractiveness is rather low, as is the internationalisation of study programs. A transversal vision at university level would certainly benefit the internationalisation of the academic offer. DUT must also maintain its efforts to promote student's English proficiency.

Standard 17: The institution supports the development of student and campus life, student engagement in governance, and promotes student well-being.

The institution has the potential to benefit from increased student engagement while prioritizing the improvement of campus life quality to align with its international ambitions.

DUT has a well-structured network of student associations, strongly supported by the institution's staff. Student life is fully funded by the institution, and lecturers hold the positions of both the Student Union and the Student Association presidency. This network provides students with the opportunity to develop their soft skills and assume various responsibilities. These include organizing cultural activities, engaging in community services such as an annual blood donation event, welcoming new students and offering peer-to-peer support for students facing academic difficulties. However, considering the increasing demand for soft skills in the corporate world, it is important to prioritize the development of soft skills in the study programmes. This can be achieved by expanding the approach that has already been initiated through Problem-Based Learning (PBL).

Currently, only one student is participating in governance, specifically through the president of the Student Union, who is designated through student elections. Given the plan for DUT to strengthen postgraduate enrollments, it is suggested that student engagement in governance be expanded to include postgraduate students (both masters and doctoral students) in the University Council. While regular surveys on class quality help compensate for the lack of student participation in the Academic & Research Council, the institution would still benefit from increasing the number of students involved in governance and expanding the number of councils that are open to students. Additionally, apart from the allocation of scholarships, there is no specific process to reward student engagement in the institution.

The welcome policy for international students is in line with the current level of inbound and outbound mobility of the institution. When students visit DUT, they receive assistance from a dedicated unit to complete the necessary administrative formalities for studying in Vietnam. It is important to note the dedicated support provided to Laotian students with paperwork during the pandemic.

In terms of student services, DUT provides dedicated units with their own facilities to support students with administrative or health needs. However, while annual health checks are organized for students at the Healthcare Centre of DUT, the university does not take direct actions regarding prevention of alcohol, drug, or sexually transmitted diseases (STDs). Additionally, there is still a need for improvement in the development of affordable housing opportunities, for both national and international students.

The institution manages a large information centre, spanning over 5000 m², which is well-equipped with computers and internet connections to meet the needs of the students. The opening hours are flexible, to accommodate students' schedules. In fact, the centre even opens on Sundays and extends its hours during exam periods. However, there are significant disparities in the infrastructure dedicated to students, which greatly limits their well-being. While buildings such as the resource centre and the PBL classrooms are of high quality,

there are other buildings in need of major repairs. For example, the outdoor sport facilities and the dormitory are in need of attention and the latter is inadequate for accommodating students. In addition, having a more reliable internet connection throughout the campus would greatly improve study conditions and enhance social interactions and campus life.

It is important to acknowledge that securing funding for these necessary investments is challenging. However, the current state of the buildings is a potential barrier to attracting students and could damage the university's reputation in the short term.

To conclude, the participation of students in governance is limited to only one undergraduate, which limits the representation of postgraduate students. The international mobility of students is still low, and the lack of international exposure is a hindrance to the development of students, particularly in terms of their English proficiency. The campus life is fuelled by a vibrant and active student association community, strongly supported by DUT, that help students to develop their soft skills and better prepare them for professional integration. However, it lacks the necessary physical and numerical infrastructure to fully achieve its ambitions in terms of regional, national and international attractiveness.

VI. CONCLUSION

DUT is a university that claims a regional and national role in supporting the development of Vietnam, while aiming for international development in terms of training and research. The quality of its actions is evidenced by the good job placement results of its graduates and by the numerous partnerships with the local community and the business sector. However, the ambition for international development is hampered by a relative lack of clarity about what is on offer, and by financial, linguistic, and administrative barriers that limit inward and outward mobility. Given the number of MoUs in place, an analysis of the outcomes of these collaborations should help to prioritise and streamline the portfolio to optimise the use of resources.

The institution's strategy is clear and well-supported internally. Its management and communication procedures are adequate, despite the complexity of the research organisation. The objectives set are monitored and evaluated, but DUT does not have all the tools it needs to manage its activities. In particular, the fact that it operates in silos means that data is processed vertically. A more cross-functional approach to operations and information management and a more integrated decision support system are necessary for the institution's development, in line with its well-designed quality policy.

In terms of managing resources, DUT's human resources policy is in line with its strategy, with an incentive-based approach that is already helping to stabilise academic staff and increase the overall level of skills. The business model, on the other hand, remains fragile. Dependent almost exclusively on tuition fees since the withdrawal of state financial support following the transition to autonomy, the institution needs to find new sources of income. The ability to increase research activities, as well as the means to maintain and develop the campus infrastructure, also depends on this effort.

In terms of programmes offering, DUT offers a comprehensive range of courses in the technology sector, which are diversified and adapted to the country's needs. DUT pays great attention to student support, for example in terms of professional integration. However, despite identifying the problems encountered, the support policy has not yet borne fruit at undergraduate level. Furthermore, the decrease in the number of Master's students is a cause for concern. Finally, mobility opportunities are limited due to a variety of obstacles.

In the field of research, the policy of encouraging high-level scientific publications has borne fruit by generating an increase in this indicator. However, the committee draws DUT's attention to the importance of maintaining its efforts in terms of providing technical publications for the Vietnamese industrial sector, which helps to support local economic and industrial development. Basic research and applied research are conducted at a high level and attract a large number of doctoral candidates.

The research partnerships are encouraged by a policy of incentives for certain researchers. The support functions provided, in particular, by the Science, Technology and International Cooperation department are essential and should be strengthened. The activity benefits from a large network of industrial partners and the research centres are aligned with the needs of the sector, particularly the local companies. Collaborations with foreign companies tend to include training aspects, for instance via equipment agreements. All partnership activities suffer from a lack of overall visibility at the institutional level, whose communication would benefit from being consolidated to better promote its research strengths.

The creation and management of an intellectual property portfolio remains limited, mainly due to regulatory complexities, and the creation of incubated companies could be further developed through increased support for entrepreneurship.

In conclusion, the institution faces a number of risks in terms of its organization, its international positioning, the clarity of its research offering and its business model. However, it does have a clear vision and a shared strategy that can enable it to build a sustainable development path. To this end, it can rely on its network of economic partners, the involvement of its alumni and the commitment of its staff. The committee has identified numerous successes in the implementation of various incentive policies and hopes that its recommendations will inspire DUT to continue its efforts.

STRENGTHS

- A strong political will and a positive trajectory towards development
- A good recognition by the local industrial base and community of the quality of support provided by DUT
- A good recognition of the education quality as evidenced by the very good employment rate
- Clear care for students, which in turn generates a strong sense of belonging to the institution
- Clear and efficient incentives for lecturers which increased the number of scientific publications
- A human resources policy that is bearing fruit: raising skills levels and stabilising academic staff numbers.
- A good adaptation to past main challenges such as COVID crisis, access to autonomy, articulation with the University of Danang
- A positive commitment of staff in all missions

WEAKNESSES

- A vertical approach (silo) in several domains: teaching, communication, research, interactions with the alumni
- A lack of cross-functionality, which is exacerbated by the absence of an integrated information system to support the management and decision-making process
- A lack of prioritisation in the definition of an international research strategy, including with industry
- A decreasing number of Master students, and a low rate of timely graduations
- A business model still to consolidate and lacking a fine understanding of the costs structure and the potential new revenues
- International mobility both ways still under-developed (low attractiveness for external students and staff, financial issues for outbound local students, language skills issues)
- A lack of resources to ensure good quality infrastructure

RECOMMENDATIONS TO THE INSTITUTION

- **Equip DUT with a management system** that supports decision-making, going beyond the use of simple dashboards and introducing a dynamic and integrated approach to data. This objective must be considered with the help of DUT's natural partners, in particular the University of Danang.
- **Continue international publication efforts**, without neglecting more technical national publications that are useful for raising the profile of DUT with companies.
- **Improve the attractiveness of Masters courses** by providing financial support; provide better support for undergraduate students in order to limit the number of drop-outs; improve professional integration at Masters level through the use of the alumni network; provide all students with communication and soft skills trainings.
- Consider all the factors that hinder **incoming and outgoing mobility** (financial, administrative and regulatory) in order to alleviate them, if necessary by advocating greater flexibility with government authorities; provide the means to improve students' English language skills
- Assess DUT's inter-academic partnerships, measure the outputs actually produced against commitments formalised in MoUs in particular, and **streamline this portfolio of agreements**
- Design and **launch a revenue diversification strategy** to reduce dependence on tuition fees and find new resources;
- Increase the level of collaborations with industry and design consolidated indicators for the entire institution, to better monitor relations with companies
- **Develop infrastructure to fully achieve DUT's ambitions** in terms of regional, national and international attractiveness.

VII. COMMENTS OF THE INSTITUTION



TRƯỜNG ĐẠI HỌC BÁCH KHOA - ĐẠI HỌC ĐÀ NẴNG
UNIVERSITY OF SCIENCE AND TECHNOLOGY - THE UNIVERSITY OF DANANG



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Danang, 11th March 2024

Subject: Observations on Evaluation Report by HCERES

Dear Prof. Stéphane Le Boulter,

The University of Danang – University of Science and Technology has received the HCERES evaluation report for the institutional accreditation carried out at DUT from 30 November to 1 December 2023. The entire HCERES Self-Assessment Council at DUT would like to warmly thank the HCERES experts panel for their remarkable work of analysis and recommendations. We find all the comments and suggestions very thoughtful, judicious and relevant. We firmly believe that the implementations of all the experts' recommendations will definitely contribute to the comprehensive development of our university in all aspects.

As far as the information system is concerned, we totally agree that DUT needs to build a more integrated, centralised information system which brings all its activities and functionalities together. Currently, DUT has adequate tools and information systems for its operational management and the data is available to be shared with staff and departments/ faculties. However, these systems are somewhat discrete. In fact, DUT has a plan to build an information management system (IMS) under the support of the PHER project from Indiana University (USA) starting from June 2024.

In terms of managing resources, you may be aware that DUT is a public university where its revenue origins and expenditures have to comply with the government regulations. The source of revenue is mainly from the tuition fees while investing in real estate to seek more revenues is not allowed by Law. This is commonly applied to all Vietnamese public universities. Therefore, DUT has a strategy to increase revenues by some solutions, including diversifying the revenue sources, seeking more revenue from industry cooperation activities to carry out research projects and investment in facilities, and enhancing science and technology transfers. Looking for significant investment opportunities from big projects funded by the government is also a good way to consider. Regarding budgets for all operations, DUT has updated its Internal Expenditure Regulation



(waiting for the approval from the Director of The University of Danang), in which the budgets for research and facilities are increased from 2024.

DUT has a clear and transparent policy and procedure for staff recruitment, especially for lecturers, which is specifically specified in the institutional regulations. The working hours of academic staff are distributed to three core tasks, including teaching, research, and community service, which are regulated in the government legal documents. Each lecturer has to balance these 3 tasks, i.e if they do more in teaching or research, they can do less in community services and vice versa. The duty of community services are mandatory and specifically specified in the regulations of the government and in the university regulation on the working regime of lecturers. To reduce the workload on community service tasks, DUT allows transferring teaching and scientific research hours to community service hours. To save time for this task, DUT has set a plan to create an online system for lecturers to easily report their work. Furthermore, DUT considers recruiting more support staff to assist with these activities. Currently, DUT has a policy to encourage lecturers to participate in scientific research projects with industries to get more involvement in technology transfer. Through this type of activity, lecturers have more opportunities to update practical knowledge in order to improve the quality of their teachings.

According to concerns related to international mobility for lectures and students, DUT totally supports all the related activities. Nevertheless, these activities are still in a very difficult situation when dealing with limited funds from the university because DUT is a public university where its revenue sources and expenditures have to comply with the government regulations. For the past five years, DUT has had a number of international cooperation programs and projects with Asian countries such as Japan, Korea, Taiwan, etc. However, there have not been many corporations and exchanges with European countries (such as France, UK), America, etc. due to geographical and financial limitations. So far, most of the international mobility events at DUT have been based on fundings from partners. In the last 3 years, due to Covid pandemic, student mobility decreased. However, starting from 2023 these activities have been on the increase. For example, students were sponsored to participate in the Muratã and Sakura programs in Japan and 17 students from the program of Mechanical Engineering-Aerospace mechanics will be funded by KP Aero Industries (Korea) to take part in a long-term internship program in Korea (2024). Recently, in Feb 2024, BOEING sponsored five DUT students for an internship program in the United States.

Benefits and support from alumni should be taken into account. All the faculties at DUT have their own alumni networks, of which some groups have had considerable contributions to the development of the faculties as well as university. Nevertheless, DUT hasn't got an alumni network at university level. Based on HCERES' recommendation, we will conduct a study within the university and propose to establish a DUT alumni association with branch associations at the faculties.

In terms of research, the budget for scientific research is rather limited, taking about 5% of the total revenue which is regulated in the government regulation. For the past several



years, in addition to the institution's budgets for science and technology, there have been fundings from industries to carry out science and technology tasks and projects at the university. To promote the financial investment for research, especially for lab facilities, DUT plans to seek more special co-operations with more industries and partners to get further funds.

Applied research activities in the last five years have developed quite well through sponsorships from industries for scientific research projects as well as technology transfers, such as Murata and Fujikin funds. Moreover, several projects from local government and industries have contributed to the increase in the applied projects at DUT as well. However, it can be seen that there is an unbalance between academic and applied research at DUT; this is due to many factors including policy mechanisms as well as high-level requirements from applied research along with inadequate facilities. To promote applied research to meet the university development strategy, DUT has set targets to increase the annual budget for applied research.

As well as publications are concerned, we agree that there is a decline in national publications. In fact, many national publications are not in world-prestigious journals. DUT strategy is to increase the quality of publications instead of their quantity (especially published in bad journals) and the current policy aims to increase prestigious publication. This will no doubt contribute to high evaluations on the quality of the university's research level. We believe that in the following years, the number of publications will increase gradually, hopefully by 5% to 10% each year. Regarding ethics and integrity, DUT has regulations on academic integrity in general. A new regulation on academic integrity in research is expected to be issued within 2024.

Finally, in terms of education, student and campus life policy, to improve student English skills in order to meet the requirements international integration as well as graduations, from the 2nd semester of cohort 2023-2024, DUT, in cooperation with UD - University of Foreign Language, has opened enhanced English classes at level 3/6 and 4/6 (in the 6-level foreign language competency framework prescribed by the Ministry of Education and Training). In addition, apart from the two advanced programs which are 100% taught in English, DUT has requested a number of study programs to implement some courses taught in English. Also, students are encouraged to take part in Capstone projects (supervised by both DUT lecturers and industries) and have viva defense in English.

We agree that development of professional and soft skills should be reinforced within the study programmes and clearly planned in the curricula. All the study programs at DUT are designed according to Project-Based Learning (PBL). Each study program has 4-6 PBLs allocated each year, from the first or second year to the final year. For all students from the admission year 2020, they have to participate in internship programs at industries as well as Capstone projects.

Master and PhD students enrolments should follow the criteria and regulations regulated in legal documents. Currently, DUT has developed a policy to support PhD students



through scientific research policies such as priority in project proposal approval and support for publishing and attending conferences and seminars..

Regarding the facilities, DUT has a plan to repair and upgrade facilities for training and scientific research in the period 2025-2030. Construction works, facilities and equipment in buildings C, H and S will be repaired and invested in order to attract students to enroll in the next academic year's admission. In addition, DUT has written project proposals to request fundings from the Ministry of Education and Training to invest in key laboratories. Also, DUT wrote some project proposals to build new lecture halls, practical laboratories, and invest in purchasing new machines and equipment for training and scientific research within the next 5 years. In terms of reliable internet connection, DUT has wireless internet network coverage of nearly 100% of the campus. However, access speed needs to be improved in the future. In 2024, the university has a project to re-plan the network system for the whole university. Through this project, the network system will be reconfigured to be more reasonable and reliable, increasing access speed and ensuring information security.

Those mentioned above are our observations on the HCERES evaluation report. One more time, we sincerely appreciate all the comments and recommendations from the HCERES experts. They help us thoroughly understand our current situations and will no doubt be our precious guidance for further improvement and developments.

While waiting for a response from you, please accept our warmest regards.

Your truly,



Assoc.Prof. Nguyen Hong Hai

Vice-Rector

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are available online: www.hceres.com

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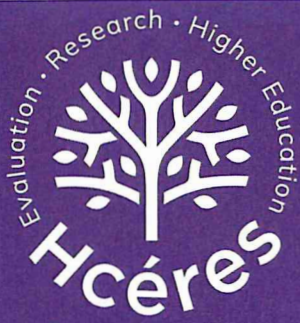


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International evaluation and accreditation

ACCREDITATION DECISION

University of Danang - Danang University of
Science and Technology

Danang

Vietnam

April 2024

SCOPE OF THE ACCREDITATION GRANTED BY HCERES

HCÉRES has based its evaluation process on a set of objectives that higher education institutions must pursue to ensure recognised quality within France and Europe. These objectives are divided up into three fields among which are the accreditation criteria.

The Accreditation Commission issues an opinion about the accreditation of the institution after examining the file. The Hcéres President takes the decision based on the Commission's opinion and the final evaluation report of the institution. This accreditation decision, taken in plenary session, is the result of a collegial and reasoned process.

The decision issued by Hcéres regarding the accreditation of the institution corresponds to the awarding of a label to the evaluated entity.

This decision is independent of the accreditations carried out by the French State and therefore does not entail recognition in France of the institution or the diplomas delivered by it.

Decision n° EI-2024-17 on the accreditation of University of Danang - Danang University of Science and Technology - Vietnam.

The President of the High Council for the Evaluation of Research and Higher Education,

Considering the Research Code, in particular Articles L. 114-3-1 to L. 114-3-6;

Considering the Decree No. 2021-1536 of November 29th 2021 on the organisation and operation of the High Council for the Evaluation of Research and Higher Education;

Considering the Board's deliberation of September 29th 2022 on the accreditation criteria for foreign higher education institutions;

Considering the Decision No. 2023-9 of March 16th 2023 on the international accreditation procedure of the High Council for the Evaluation of Research and Higher Education;

Considering the agreement No. 2023/06/15 - for the evaluation/accreditation of University of Danang - Danang University of Science and Technology

Considering the opinion issued by the Accreditation Commission on March 27th 2024,

Decides:

Article 1

Noting that University of Danang - Danang University of Science and Technology meets the six accreditation criteria, voted by the Board of the High Council on September 29th 2022, as follows:

FIELD 1: STRATEGIC AND OPERATIONAL MANAGEMENT

ACCREDITATION CRITERION 1 - DEFINING THE INSTITUTION'S STRATEGY

DUT positions itself as a distinctive local actor, a prominent national university and a partner with a clear international development agenda in terms of education and research. The vision and strategy are clear and widely shared, both in their development and deployment. DUT's vision has not changed much in the last few years, and the institution is now looking for greater proactivity.

Its strategy is divided into clear objectives relating to students and their support, partnerships, particularly with local communities and businesses, and international cooperation. Priorities include intensifying efforts in internationalization.

ACCREDITATION CRITERION 2 - GOVERNANCE AND ARRANGEMENTS FOR IMPLEMENTING THE STRATEGY

The organisation and communication are adapted to DUT strategy, although the research organisation could be clearer.

The operation of the institution in silos limits its development in several areas and the management would benefit from more transversal management tools, such as an information and decision support system. An analysis of partnerships, especially inter-academic ones, is necessary to rationalise actions and optimise the use of resources.

The information system should offer more dashboards to construct steering indicators based on multiple data sources. This enhancement would bolster DUT's overall vision and management.

DUT has a comprehensive quality policy directly linked to the Board of Rectors, illustrating its importance in the strategy. Greater automation of the data it deals with (KPIs, surveys...) will reinforce its role in institutional management.

The human resources policy is clearly linked to the strategy and its first effects observed so far suggest that it can act as a significant lever in DUT development.

The new business model, without state funding, which marks the transition to autonomy, remains fragile and only partially reflects strategy. It is based mainly on tuition fees, which have risen from 79% of revenues to almost 100% today. This can be a real issue in the development of research and student attractiveness. The campus is spacious and pleasant, but resources remain inadequate in view of the state of certain facilities or delays in construction or demolition.

FIELD 2: POLICY ON RESEARCH, INNOVATION AND THE INCLUSION OF SCIENCE IN SOCIETY

ACCREDITATION CRITERION 3 - RESEARCH POLICY

DUT clearly supports research. To date, the effects of this support have mainly been achieved through a significant increase of publications in referenced international journals (PRIJ) and through Teaching Research Teams.

However, the institution has to find a balance between academic and applied research. In terms of publications, the PRIJ policy has led to a decline in national publications and therefore, in the longer term, a decline in visibility of applied research is to be feared. This balance seems only achievable by increasing the time dedicated to research.

DUT needs to reflect on its research strengths in order to raise its profile in certain areas that it considers to be priorities, taking into account strategic partnerships for the institution. The Science, Technology and International Cooperation Department also needs to be strengthened for providing guidance, carrying out awareness-raising and prevention initiatives on ethics and integrity, and generally assisting researchers in contracting with socio-economic partners.

The link between academic research and applied research remains to be built by promoting high-level applied research activities. Improving the quality of the applied research will enhance publications and will feed academic research with questions and financial resources.

In terms of companies and numbers of Bachelor's degree holders, the environment of DUT is not as favourable as that of metropolitan universities located in Ho Chi Min City or Hanoi. It is therefore important to give this institution a strong visibility either by identifying niches for research (and education), or by increasing its attractiveness through high-level international research.

ACCREDITATION CRITERION 4 - INNOVATION POLICY AND SOCIETAL IMPACT

DUT has a strategy and assets in the field of research valorisation and technology transfer. Its network of partners is notably a strong asset, with research centres that have the capacity to meet industrial and local authorities' expectations. DUT can also rely on an incentive policy for its researchers that is well understood and effective. Moving forward, in its policy of innovation and opening up science to society, the institution must capitalize on the extensive collaboration it has with its partners. This entails further enhancing the value of collaborative activities and ensuring the continuous advancement of the research dimension within these partnerships. While this approach has been initiated with certain partners, it is recommended to intensify and expand these efforts.

DUT needs to pursue its efforts in intellectual property management and entrepreneurship in order to increase the volume of activity and its associated indicators. In this respect, it is recommended that consolidated indicators be set up for the whole institution, and that a more structured approach be adopted to monitoring relations with companies.

FIELD 3: EDUCATION, STUDENT AND CAMPUS LIFE POLICY

ACCREDITATION CRITERION 5 - TEACHING POLICY

DUT offers a variety of programmes covering a wide range of scientific and technical fields, well articulated from Bachelor's to Master's and even Doctoral programmes. The study programmes are closely linked to the region's needs for qualified human resources. This positions DUT as the leading technical university in the central region of Vietnam. The study offer is well monitored thanks to various surveys taking into account feedback from students and the socio-economic world, the latter playing an important role.

The policy on teacher recruitment needs clarification, specifically regarding training programmes. However, there is a strong focus on training newly recruited teachers, which benefits from international connections. DUT should consider hiring additional support staff for collective tasks to alleviate the burden on teachers.

It is important to prioritise the sustainability of education programmes. For example, the number of students is decreasing at Masters' level. In order to reverse this trend, DUT should propose some actions, for example with the contribution of its alumni to increase its attractiveness. Although there are many initiatives to help students, few graduate on time. Efforts to support students need to be expanded.

International attractiveness is rather low, as is the internationalisation of training programmes. A transversal vision at university level would certainly benefit the internationalisation of the academic offer. DUT must also maintain its efforts to promote students' English proficiency.

ACCREDITATION CRITERION 6 - STUDENT AND CAMPUS LIFE

The participation of students in governance is open to only one undergraduate, which limits the representation of postgraduate students. The international mobility of students is still low, and the lack of international exposure is a hindrance to the development of students, particularly in terms of their English proficiency. Campus life is fuelled by a vibrant and active student association community, strongly supported by DUT, which helps students to develop their soft skills and better prepare for their professional integration. However, it lacks the necessary physical and numerical infrastructure to fully achieve its ambitions in terms of regional, national and international attractiveness.

Article 2

University of Danang - Danang University of Science and Technology is fully accredited for a period of five years.

Article 3

The decision is accompanied by the following recommendations and comments:

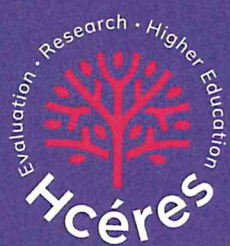
- **Equip DUT with a management system** that supports decision-making, going beyond the use of simple dashboards and introducing a dynamic and integrated approach to data. This objective must be considered with the help of DUT's natural partners, in particular the University of Danang.
- **Continue international publication efforts**, without neglecting more technical national publications that are useful for raising the profile of DUT with companies.
- **Improve the attractiveness of Masters' courses** by providing financial support; provide better support for undergraduate students in order to limit the number of drop-outs; improve professional integration at Masters level through the use of the alumni network; provide all students with communication and soft skills trainings.
- Consider all the factors that hinder **incoming and outgoing mobility** (financial, administrative and regulatory) in order to alleviate them, if necessary by advocating greater flexibility with government authorities; provide the means to improve students' English language skills
- Assess DUT's inter-academic partnerships, measure the outputs actually produced against commitments formalised in MoUs in particular, and **streamline this portfolio of agreements**
- Design and **launch a revenue diversification strategy** to reduce dependence on tuition fees and find new resources;
- Increase the level of collaborations with industry and design consolidated indicators for the entire institution, to better monitor relations with companies
- **Develop infrastructure to fully achieve DUT's ambitions** in terms of regional, national and international attractiveness.

Article 4

This decision will be published on the Hcéres website.

Paris, April 10th 2024

The acting President
signed
Stéphane Le Bauler



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