

# ANNUAL REPORT 2020

IT UNIVERSITY OF COPENHAGEN

### CONTENT

UNIVERSITY DETAILS	
MANAGEMENT STATEMENTS AND INDEPENDENT AUDITORS REPORT	
STATEMENT BY THE BOARD OF DIRECTORS AND THE EXECUTIVE MANAGEMENT	
OPERATING REVIEW	10
PRESENTATION	11
STRATEGY	12
WORK OF THE BOARD OF DIRECTORS	
STRATEGIC FRAMEWORK CONTRACT	
FINANCIAL RESULTS FOR THE YEAR	
ACADEMIC PERFORMANCE FOR THE YEAR	
OUTLOOK FOR THE COMING YEAR	23
FINANCIAL STATEMENTS	
APPLIED ACCOUNTING POLICIES	
INCOME STATEMENT 1 JANUARY – 31 DECEMBER	
BALANCE SHEET AT 31 DECEMBER.	30
CASH FLOW STATEMENT 1 JANUARY TO 31 DECEMBER	
KEY FINANCIAL FIGURES AND RATIOS	
REPORTING	45
THE STRATEGIC FRAMEWORK CONTRACT FOR 2020	46
STRATEGIC TARGET 1	
STRATEGIC TARGET 2	
STRATEGIC TARGET 3	
STRATEGIC TARGET 4	
STRATEGIC TARGET 5	
STRATEGIC TARGET 6	
APPENDIXES	
APPENDIX 1 – MANAGEMENT STRUCTURE OF THE IT UNIVERSITY 31 DECEMBER	
APPENDIX 2 – MEMBERS OF THE EMPLOYERS' PANELS OF THE IT UNIVERSITY	
APPENDIX 3 – THE DATA PROTECTION OFFICER'S STATUS OVER 2020	58



# **UNIVERSITY DETAILS**



### **UNIVERSITY DETAILS**

Organisation	IT University of Copenhagen Rued Langgaards Vej 7 DK-2300 Copenhagen S
Telephone E-mail Website	+45 72 18 50 00 itu@itu.dk www.itu.dk
CVR-no.	29 05 77 53
Registered office	Copenhagen

#### **BOARD OF DIRECTORS**

#### Carsten Krogh Gomard

Chairman of the Board of Directors, Investor and professional board member, born 1966. Netcompany co-founder. *Joined the Board of Directors on 1 November* 2020.

#### Lars Mathiesen

Deputy Chairman of the Board of Directors, Director, Frost Management, born 1956. Associated Director, Deloitte. Member of the Board of Directors of YOUANDX. Member of the IT Project Council of the Municipality of Copenhagen, the IT Council of Danish Regions, the Expert Council of the Capital Region of Denmark, It-tilsynet in Skat, KL/KOMBITs Digitaliseringsråd and the Datafølgegruppe in Minestry of Justice. Expert Judge at the Eastern High Court in Copenhagen.

Kristine Stenhuus Corporate Vice President, NNIT, born 1973.

#### David Basin

Dr., Professor, ETH Zürich, born 1961.

#### Christina Hvid

CEO, Molio, born 1970. Chairman of the Board of Directors of Fonden Hornbæk Kunstmuseum. Member of the Board of Directors of Byg Erfa. 2008: Appointed Young Global Leader of World Economic Forum. Joined the Board of Directors on 1 April 2021.

#### Mircea Lungu

Associate Professor, IT University of Copenhagen, born 1980.

#### Anaya Mourad Jensen Academic Advisor, IT University of Copenhagen, born 1987 Joined the Board of Directors on 1 January 2021.

#### Mikala Sofie Skoglund Thomsen Master of Science Student, IT University of Copenhagen, born 1995 Joined the Board of Directors on 1 January 2021.

Sebastian Mateos Nicolajsen Master of Science Student, IT University of Copenhagen, born 1998.

### **EXECUTIVE MANAGEMENT, AUDITORS, ATTORNEYS AND BANK**



#### EXECUTIVE MANAGEMENT

Martin Tvede Zachariasen Vice Chancellor

Jens Christian Godskesen Pro-rector

Georg Dam Steffensen University Director

#### AUDITOR

Rigsrevisionen (The Danish National Audit Office) Landgreven 4 DK-1301 København K

#### INSTITUTIONAL AUDITOR

EY Godkendt Revisionspartnerselskab Dirch Passers Allé 36 P O Box 250 DK-2000 Frederiksberg

#### ATTORNEYS

Advokatpartnerselskabet Kirk Larsen & Ascanius Esbjerg Brygge 28 6700 Esbjerg

Kammeradvokaten Advokatfirmaet Poul Schmith Vester Farimagsgade 23 1006 København V

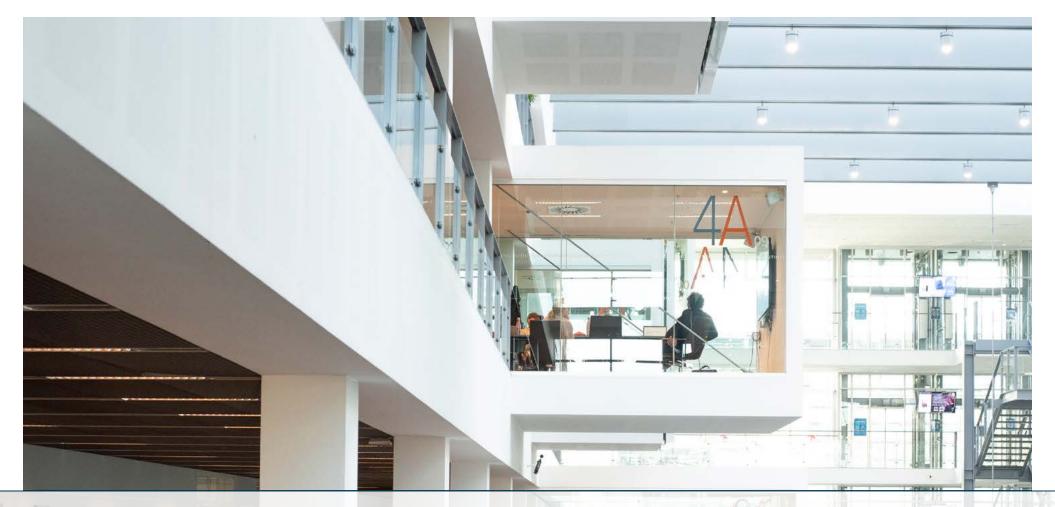
Nørgaard Piening Advokater Strandgade 4 1401 København K

Njord Advokatpartnerselskab Pilestræde 58 1112 København K

Gangsted Advokatfirma Borgergade 24B 1300 København K

#### BANK

Danske Bank A/S Holmens Kanal 2-12 DK-1092 København K



## MANAGEMENT STATEMENTS AND INDEPENDENT AUDITORS REPORT

### STATEMENT BY THE BOARD OF DIRECTORS AND THE EXECUTIVE MANAGEMENT

Today the Board of Directors and the Executive Management have discussed and approved the Annual Report of the IT University of Copenhagen.

The Annual Report has been prepared in accordance with Executive Order no. 1021 of 24 June 2020 on Grants and Auditing etc. of Universities.

#### It is hereby stated that:

- 1. The Annual Report gives a true and fair view, i.e. the Annual Report does not contain any material misstatement or omissions, including adequate presentation and reporting on the Strategic Framework Contract.
- **2.** The transactions comprised by the financial reporting are consistent with appropriations granted legislation and other regulations as well as agreements entered into and general practice.
- **3.** Business procedures have been established that ensure financially appropriate administration of the funds comprised by the Annual Report.

Copenhagen, 15 April 2021

#### THE EXECUTIVE MANAGEMENT OF THE IT UNIVERSITY OF COPENHAGEN

Martin Tvede ZachariasenJens Christian GodskesenVice ChancellorPro-rector

Georg Dam Steffensen University Director

#### THE BOARD OF DIRECTORS OF THE IT UNIVERSITY OF COPENHAGEN

Carsten Krogh Gomard	Lars Mathiesen	Kristine Stenhuus
Chairman, External member	Deputy Chairman, External member	External member
David Basin	Christina Hvid	Mircea Lungu
External member	External member	Staff-elected member
Anaya Mourad Jensen Staff-elected member	Mikala Sofie Skoglund Thomsen Student-elected member	Sebastian Mateos Nicolajsen Student-elected member

### **INDEPENDENT AUDITORS' REPORT**

#### TO THE BOARD OF DIRECTORS OF THE IT UNIVERSITY OF COPENHAGEN

#### Opinion

We have audited the financial statements of the IT University of Copenhagen for the financial year 1 January - 31 December 2020, which comprise accounting policies, income statement, balance sheet, equity statement, cash flow statement and notes, including supplementary information. The financial statements are prepared in accordance with the Danish State's accounting rules and ministerial order no. 1021 of 24 Juni 2020 on funding and auditing, etc., of universities (the Danish State's accounting rules).

In our opinion, the financial statements are, in all material respects, correct, i.e. prepared in accordance with the Danish State's accounting rules.

#### **Basis for opinion**

We conducted our audit in accordance with International Standards on Auditing (ISAs) and additional requirements applicable in Denmark as well as public auditing standards as the audit was performed on the basis of the provisions of the Danish State's accounting rules. Our responsibilities under those standards and requirements are further described in the "Auditor's responsibilities for the audit of the financial statements" section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Independence

We are independent of the University in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and additional requirements applicable in Denmark, and we have fulfilled our other ethical responsibilities in accordance with these rules and requirements.

### Management's responsibilities for the financial statements

Management is responsible for the preparation of financial statements that are, in all material respects, correct, i.e. prepared in accordance with the Danish State's accounting rules. Management is also responsible for such internal control that Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, Management is responsible for assessing the University's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting in preparing the financial statements unless Management either intends to liquidate the University or to cease operations, or has no realistic alternative but to do so.

### Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance as to whether the financial statements as a whole are free from material misstatement, whether due to fraud or error. and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and additional requirements applicable in Denmark as well as public auditing standards, cf. the Danish State's accounting rules, will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if. individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit conducted in accordance with ISAs and additional requirements applicable in Denmark as well as public auditing standards, cf. the Danish State's accounting rules, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

 Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management.
- Conclude on the appropriateness of Management's use of the going concern basis of accounting in preparing the financial statements and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the University's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the University to cease to continue as a going concern.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

#### Statement on the Management's review

Management is responsible for the Management's review (pages 10 - 23), reporting on the Strategic Framework Contract (pages 45 - 52) and financial highlights (pages 41 - 44), in the following referred to as *the other reports*.

Our opinion on the financial statements does not cover the other reports, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other reports and, in doing so, consider whether the other reports are materially inconsistent with the financial statements or our knowledge obtained during the audit, or otherwise appears to be materially misstated.

Moreover, it is our responsibility to consider whether the other reports provide the

information required under the Danish State's accounting rules.

Based on the work we have performed, we conclude that the other reports are in accordance with the financial statements and have been prepared in accordance with the requirements of the Danish State's accounting rules. We did not identify any material misstatement of the Management's review.

### Report on other legal and regulatory requirements

### Statement on compliance audit and performance audit

Management is responsible for ensuring that the transactions included in the financial reporting comply with appropriations granted, legislation and other regulations and with agreements entered into and usual practice and that due financial consideration has been taken of the management of the funds and operations of the activities covered by the financial statements. Consequently, Management is responsible for establishing systems and procedures supporting economy, productivity and efficiency.

#### In performing our audit of the financial statements, it is our responsibility to perform compliance audit and performance audit of selected items in accordance with public auditing standards. When conducting a compliance audit, we test the selected items to obtain reasonable assurance as to whether the transactions covered by the financial reporting comply with the relevant provisions of appropriations, legislation and other regulations as well as agreements entered into and usual practice. When conducting a performance audit, we perform assessments to obtain reasonable assurance as to whether the tested systems, processes or transactions support due financial considerations in

relation to the management of the funds and operations of the entities covered by the financial statements.

We must report on any grounds for significant critical comments, should we find such when performing our work.

We have no significant critical comments to report in this connection.

Copenhagen, 15 April 2021 EY Godkendt Revisionspartnerselskab CVR no. 30 70 02 28

Peter Gath State Authorised Public Accountant mne19718 Morten Weinreich Larsen State Authorised Public Accountant mne42791



### PRESENTATION

The IT University of Copenhagen (hereafter called IT University) is an independent university under the Ministry of Higher Education and Science.

### MISSION

The mission of the IT University is to provide internationally leading teaching and research, which enable Denmark to become exceptionally good at creating value with IT.

The IT University will create this value mainly via IT research and IT education.

### VISION

We create and share knowledge that is profound and leads to ground-breaking information technology and services for the benefit of humanity.

### **STRATEGY**

The main focus of the strategy for 2017-2021 is to increase, as much as possible, the number of people in Denmark creating value with IT in ways that meet the standards of leadingedge IT research.

### In concrete terms the IT University works with the following areas of action:

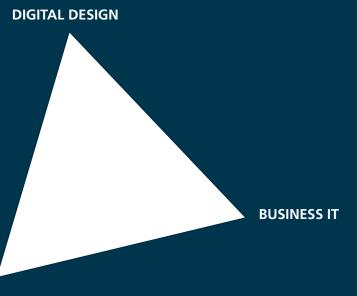
- 1. Increasing the number of highly educated IT professionals
- 2. Increasing the number of female IT professionals
- 3. Increasing quality and relevance of all study programmes
- **4.** Increasing IT research within areas of major societal importance, specifically:
  - a. Digitalisation
  - b. Information security
  - c. Data science
- 5. Strengthening the IT subjects in primary and secondary education.

#### **Profile of the IT University**

The essence of information technology is the creation, sharing and handling of mental concepts by means of digital technology.

Thus, it is the mental concepts of humans, or the intellect, which constitute the core of information technology. Some of these concepts are based in natural sciences and technology, some in the arts and some in the use of IT by the business community. This diversity of specialisation is expressed in the triangle of the IT University:





This view is decisive for the ability of the IT University to attract a large number of researchers and students to this area. As a university dedicated to IT, the IT University has the special advantage of being able to gather these very different approaches to IT in one organisation with common targets and strategy. The vision adds that the three different perspectives all must contribute to create and share knowledge that is profound and leads to ground-breaking information technology and services for the benefit of humanity.

The IT University has three departments corresponding to the three corners of the triangle: The Business IT Department, The Computer Science Department and the Digital Design Department.

### Work on the quality and relevance of the study programmes

In 2016, the IT University achieved a positive institutional accreditation. The positive institutional accreditation is valid until 2022.

With the institutional accreditation, the IT University has systematised its quality assurance work considerably. The IT University's Quality Policy sets quality standards and describes processes to discover and handle any breach of these quality standards.

Plans for the use of the quality grant of the government grants in 2020 had to be adjusted early in the year due to the lockdown due to COVID-19. The focus in 2020 has therefore primarily been on maintaining the quality level of teaching despite the abrupt transition to full online teaching in the spring and partly online teaching in the autumn.

In 2020, the quality grant has contributed to the IT University developing guidelines for teachers and holding workshops and webinars for teachers and teaching assistants on online teaching and online exams. The IT University's Learning Support Unit has also carried out a qualitative analysis of online teaching and on this basis disseminated several advices and recommendations to teachers for the benefit of the continued online teaching in the spring of 2021. The results of the analysis will also be used to further develop blended learning when, after COVID-19, it again becomes possible to focus on how in-person and online teaching best complement each other and contribute to increased quality in the study programmes.

The work on relevance is carried out in cooperation with the university's five Programme-Specific Employers' Panels and the overlying Executive-Level Employers' Panel. All Employers' Panels have met at least twice in 2020 and have submitted reports to the university offering assessments and recommendations. In October 2020, Tine Thorn, IT Development Manager at AP Pension, became the new chairman of the Executive-Level Employers' Panel.

### WORK OF THE BOARD OF DIRECTORS

The composition of the Board of Directors until the end of October was as follows: Maria Rorbye Ronn (Chairman), Lars Mathiesen (Deputy Chairman), Kristine Stenhuus, Lars Frelle-Petersen, David Basin, Karina Garnier Christensen, Mircea Lungu, Sebastian Mateos Nicolajsen and Sophia Aumüller-Wagner.

At the end of October, Maria Rørbye Rønn resigned as chairman of the board after being a member of the board for a maximum of eight years, and on 1 November, Carsten Krogh Gomard took over as the new Chairman of the Board of Directors. Lars Frelle-Petersen resigned from the Board of Directors at the end of 2020, and is per 1 April 2021 replaced by Christina Hvid. Karina Garnier Christensen and Sophia Aumüller-Wagner resigned from the Board of Directors at the end of 2020 and are per 1 January 2021 replaced by Anaya Mourad Jensen and Mikala Sofie Skoglund Thomsen. In 2020, based on the IT University's overall strategy for 2017-2021, the Board of Directors has had a special focus on the role of the IT University to meet the demand for highly skilled IT specialists in Denmark, as well as building research capacity within digitalisation, information security and data science. The Board of Directors and the management have had the ambition to increase the number of admitted applicants on the university's study programmes and have worked purposefully to create the necessary framework for this.

At the Board of Directors' seminar in September 2020, the board had a first discussion of points of reference in the IT University's forthcoming strategy for 2022-2025. At the meeting in November 2020, a first draft of overall strategic objectives was approved and sent for consultation among staff and students. This consultation will end in February 2021. The Board of Directors of the IT University continues to focus on the gender balance among students, and in 2020, just like in 2019, targets have been set for the number of female students on the BSc study programmes in Software Development and Data Science.

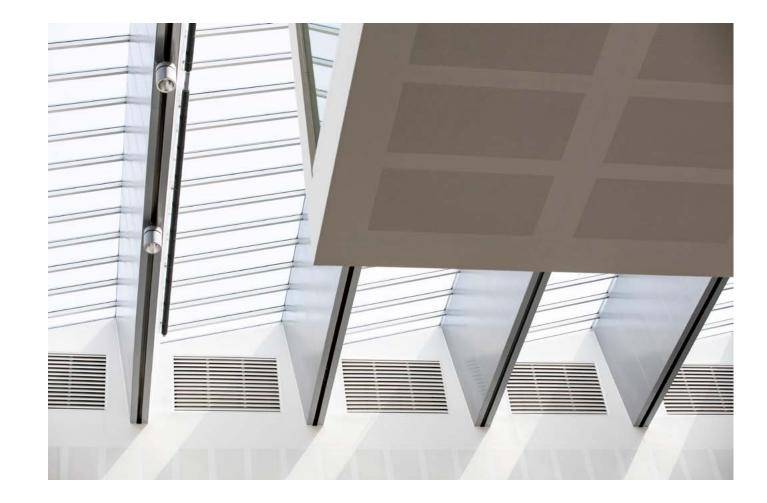
Finally, the Board of Directors has regularly discussed the IT University's work with information security, including the general threat level for the sector – not least considering the COVID-19 lockdown and increased amount of online teaching and working at home.

### STRATEGIC FRAMEWORK CONTRACT

2020 was the third year in the period of the Strategic Framework Contract for 2018-2021. In the contract period, the strategic targets for the IT University are:

- **1.** Increasing the capacity of research-based education of technical IT professionals
- **2.** Increasing the number of female technical IT professionals
- **3.** Achieving a high learning outcome for all students
- **4.** All graduates should achieve good career opportunities
- **5.** Strengthening IT research within areas that reflects societal needs
- **6.** Strengthening the IT subjects in primary schools and high schools by co-operation and exchange of knowledge.

Based on an assessment of the progress made in realising each of the six strategic targets of the Strategic Framework Contract, the IT University has prepared a statement for 2020. The conclusions of the statement are presented in the chapter <u>Reporting of the</u> Strategic Framework Contract for 2020.



### FINANCIAL RESULTS FOR THE YEAR

The IT University's total realised income has increased by DKK 2.2 million from 2019 to 2020. However, the real income increase has been DKK 18.5 million. The difference is due to a technical change in the government rental scheme, where the annual rent expenses have been reduced by DKK 16.3 million and a corresponding amount has been set off against the government grants.

The result before financial income and expenses is DKK -5.4 million, which is DKK 16.1 million higher than the budget of DKK -21.5 million. In addition to the technical rent reduction of DKK 16.3 million, the total expenses are particularly affected of the campus lockdown and the general travel restrictions during COVID-19.

#### Government grants and tuition fees

Government grants and tuition fees are DKK 4.9 million less than budgeted. The decrease is primarily due to the change in the government rental scheme in the university sector, where the rental payment has been reduced to market level, and the IT University's fixed government grants have been reduced correspondingly by DKK 16.3 million.

The reduction in the Government base grants is counteracted by a major increase in the activityspecific grants of DKK 11.0 million in 2020. The increase is partly due to increased study activity during COVID-19 and partly to an increase in admission of students, which is financed by temporary grants from the ministry's central STEM Pool and Government COVID-19 grants. TABEL 1: Financial result of the year (DKK M)

	Realised 2018	Realised 2019	Realised 2020	Budget 2020	Budget 2021
Income	298.9	340.5	342.7	343.8	355.6
Government grants and tuition fees	259.0	294.4	295.6	300.5	301.3
External research funding	29.9	36.1	38.4	33.4	40.3
Other income	9.9	10.1	8.6	9.9	14.0
Expenses	299.5	334.1	348.0	365.4	364.0
Personnel expenses	191.9	210.4	236.6	222.9	240.6
Ordinary operating costs	107.6	123.7	111.4	142.5	123.4
Profit before finansials	-0.5	6.5	-5.4	-21.5	-8.4
Finansials	-1.4	2.8	2.1	0.9	0.9
Profit/loss for the year	-2.0	9.3	-3.3	-20.6	-7.5
Equity at 31 December	74.2	83.5	80.2	62.9	72.7

\* Equity at 31 December for budget 2020 and 2021 are adjusted based on the realised results in 2019 and 2020.

#### **External research funding**

Income from externally funded research of DKK 38.4 million exceeded the budget of DKK 33.4 million by DKK 5.0 million.

The total project costs are composed of 73 per cent personnel expenses, 5 per cent operating costs and 22 per cent overhead costs for buildings, IT and administration etc.

#### Other income

Rental income and other income of DKK 8.6 million is DKK 1.3 million less than budgeted. This is primarily due to COVID-19 restrictions, which since March have meant very limited access to the university, which has particularly affected activities such as rental of meeting rooms, ITU Professional Courses and business collaboration between the Student Affairs and Programmes Department and companies.

#### Personnel expenses

Personnel expenses of DKK 236.6 million exceed the budget of DKK 222.9 million by DKK 13.7 million, of which DKK 6.1 million alone for employments on externally funded research projects.

Personnel expenses for academic staff exceed the budget by DKK 3.0 million, including increased costs for teaching assistants and others who have supported the transition from in-person to online teaching (DKK 1.2 million) as well as focus on recruitment for staffing of courses (DKK 1.8 million).

Personnel expenses for technical and administrative staff exceed the budget by DKK 2.4 million. This is primarily a matter of recruitment for building operations associated with the expanded campus and upgrading of support for researchers and Heads of Departments.

Other personnel expenses are DKK 3.0 million higher than budgeted. This is due to both an increase in the number of employees and the holding of fewer vacation days than usual in 2020.

### Ordinary operating costs and depreciations

Ordinary operating costs of DKK 111.4 million are DKK 31.1 million lesser than the budget of DKK 142.5 million.

The significant deviation is primarily due to the change in the government rental scheme for universities where the annual rent payment has been reduced by DKK 16.3 million and fixed government grants reduced accordingly.

In accordance with government accounting policies, the provision for the re-establishment of Ruud Langgaards Vej of DKK 2.9 million

has lapsed and been recognized as income in connection with the change.

Several other operating costs are affected by COVID-19 restrictions. A few notable examples are:

- Marketing costs have been reduced by DKK 1.1 million compared to 2019, as many outreach activities were canceled or converted to online events.
- Travel expenses have been reduced by DKK 4.1 million compared to 2019 due to COVID-19 travel restrictions.
- Expenses for rent and building operations, including the establishment of an expanded campus were DKK 6.2 million less than expected. This is primarily due to delayed takeover of new leases as well as lower costs for maintenance, cleaning and energy due to the lockdown for much of 2020.

In addition, the establishment of a new server room with a budget of DKK 3.5 million has been delayed. The project will be completed in 2021.

Finally, in accordance with the Danish State's accounting rules, the IT University has made several major acquisitions for DKK 1.4 million

associated with the expanded campus, i.e. the acquisitions will be depreciated and expensed over a number of years.

#### Financials

The financials exceed the budget of DKK 0.9 million by DKK 1.2 million.

#### Liquidity

The IT University's cash and cash equivalents have increased from DKK 46.1 million to DKK 88.0 million, which is primarily due to an increase in prepaid restricted grants for externally funded research.

### **ACADEMIC PERFORMANCE FOR THE YEAR**

#### RESEARCH

Research at the IT University has had a great impact in 2020. This has been achieved, among others, through visibility in the media, participation in debates and by establishing a new research center, Center for Computing Education Research. It is also extremely positive that the researchers at the IT University have attracted external research funding of a magnitude as never seen before. In addition, all of the IT University's research publications are once again registered as Open Access publications.

Below is a short status on research at the IT University in 2020.

#### Strengthening the reputation

Several researchers have received awards and acknowledgements for their research in 2020. Bent Flyvbjerg became the first Honorary Doctor of the IT University. Bent Flyvbjerg is Professor and Academic Lead of Oxford University's research and education programmes in Major Programme Management, and he is known for his groundbreaking research in the management of large-scale projects, including in the field of IT. Bent Flyvbjerg is the most quoted researcher in the world when it comes to the management of large-scale projects. He has authored or edited ten books and written more than 200 articles in professional journals.

Professor Philippe Bonnet was awarded the prestigious SIGMOD Contributions Award for his database research. The SIGMOD Contributions Award is one of the world's most prestigious prizes in the field of database systems and is awarded by the ACM Special Interest Group on Management of Data. Philippe Bonnet receives the award for his innovative contribution to research in scientific reproducibility in publications on database systems.

Professor Roman Beck is among the most significant academics in his field according to an international ranking list. The German business magazine WirtschaftsWoche had Roman on a list of the 100 best German, Austrian and Swiss researchers in business administration.

The IT University's researchers Morten Hjelholt and Jannick Schou have been awarded the international "Herbert Gottweis" Prize for a critical analysis of Danish digitalisation strategies. The political influence of digitalisation on how we as citizens act in relation to the state and vice versa has been ignored – or at least greatly underestimated, they argue in the research article "Digitalizing the welfare state: citizenship discourses in Danish digitalization strategies from 2002 to 2015". The international "Herbert Gottweis" Prize is an honor for the best critical, political research article, and it is awarded by the international academic publisher Taylor & Francis.

Associate Professor Roberta Sinatra received the Complex Systems Society's Junior Scientific Award for her pioneering contribution to research on science and success. Roberta's research on science and success has had a major impact in several areas of research from "network science" to "computational social science". Professor Thore Husfeldt represents the IT University's contribution to the new largescale online encyclopedia, lex.dk. "Den store Danske", "Trap Danmark" and several other encyclopedias have been relaunched on the online platform lex.dk. This gives everyone in Denmark free digital access to more than 200,000 advertising-free articles, which are updated by the leading researchers of the country. This is done by agreement with the Minister for Culture and the Minister of Children and Education.

In 2020, Steffen Dalsgaard, Helena Karasti and Dag Svanæs were appointed professors at the IT University. Steffen Dalsgaard is researching in how digital technologies affect social and cultural life. Helena Karastis' research domain includes participatory design and computer supported collaborative work. Dag Svanæs is researching in humancomputer interaction.

The IT University's researchers have often contributed to the media in 2020 on, for example, blockchain technology, computer games, artificial intelligence and data and IT security. The documentary "Kill Chain: The Cyber War on America's Elections", which premiered on HBO Nordic in 2020, blurs the IT security of the American electoral system. The IT University's professor Carsten Schürmann was to be found in one of the scenes of the movie, where he without much difficulty is hacking an American voting machine. Carsten already beforehand knew the weaknesses of the voting machine, so in a few minutes he had gained full control of it. The research project "Data as Relation" launched a podcast series, exploring the public sector's use of big data. During five episodes the researchers are going into depth with topics such as surveillance, GDPR, big data in the media world and the tech world's notions of the future. The research project explores how big data is generated, negotiated and used in connection with the digitalisation of the public sector, and works with a hypothesis that digitalisation means that the state is reinvented and not just upgrading an earlier version of itself. In each episode, Assistant Professor James Maguire invites a researcher into the studio to talk about the research that inspires the project and the perspectives that the research provides.

Cyber attacks are among the most pronounced threats against Denmark, according to the annual Intelligence Risk Assessment from the Danish Defense Intelligence Service. The threat from cyber crime and cyber espionage is aimed at both Danish companies and public authorities. Professor of cyber security Carsten Schümann was on TV2 with the message that not enough has been done in the last 20 years to secure critical infrastructure against hacker attacks.

During 2020, a new PlayStation and Xbox have hit stores. The new large consoles will have an impact on the entire gaming industry because they set the bar for how the biggest computer games will look and work. The games will be more realistic in the future, the associate professors Martin Pichlmair and Pawel Grabarczyk told DR.

Denmark has an indicator for Open Access publication of research results. When releasing the indicators in 2020, the IT University was again a clear number one among all Danish universities. For the second year in a row, all publications of the IT University were registered as Open Access publications, while the second best Danish university had registered 73 per cent of its publications as Open Access publications and the national average was 52 per cent.

#### External research funding

In 2020, the IT University received external research funding for a total of DKK 88.8 million, which surpasses the largest annual received amount to date in the university's history from 2019 by more than DKK 25 million. Listed below are some of the externally funded projects that were realised in 2020 or will be realised in 2021, as well as the allocated grants for the IT University for each of them.

Professor Andrzej Wasowski received DKK 6.6 million of a total grant of DKK 30 million from the EU Framework Programme H2020 (Marie Skłodowska-Curie Actions ITN) for the project entitled REMARO, where the IT University is the coordinator. The aim of the project is to develop a joint European education of 15 PhDs who will develop underwater robots that can, for example, be used for fighting pollution. Associate Professor Bernardo Machado David received DKK 6.2 million from the Independent Research Fund Denmark's Sapere Aude programme for the project "Foundations of Privacy Preserving and Accountable Decentralized Protocols". The purpose of the project is to focus on the problem of processing sensitive data, which must remain private, while at the same time making it possible to check that the data is not misused.

Associate Professor Pinar Tözün received DKK 6.2 million and DKK 3.3 million from the Independent Research Fund Denmark's Sapere Aude programme and Inge Lehmann programme for the project "RAD: Resource-Aware Data Science". The purpose of the project is to develop new techniques to significantly reduce hardware needs of data science researchers so that they can use and share their hardware resources more efficiently, and thereby reducing CO2 footprints.

Associate Professor Roberta Sinatra received DKK 5.9 million from the VILLUM FONDEN's prestigious VILLUM Young Investigator programme for the project "Bias Explained: Pushing Algorithmic Fairness with Models and Experiments". The purpose of the project is to uncover the relationship between researchers' results and success in selected sciences.

Professor Philippe Bonnet and Associate Professor Pinar Tözün received DKK 3.8 million from the EU Framework Programme H2020 for the Daphne project, of which the IT University is a partner. The purpose of the project is to build a decision analytical network for participatory and integrated planning.

Professor Yvonne Dittrich received DKK 3.6 million from the Innovation Fund Denmark (a bilateral cooperation outside Europe) for the interdisciplinary project "SustAinable Irrigation Advisories for Mid-Himalayan Farmers using Smart Satellite Image Analytics". The project aims at developing advice on sustainable irrigation for mid-Himalayan farmers by developing functionality based on analysis of satellite images.

Associate Professor Jichen Zhu received DKK 3.2 million from the Novo Nordisk Foundation's Start Package grant programme for the project "AI to design novel intelligent user experience (IUX) for wellbeing". The purpose of the project is to establish an interdisciplinary research group at the IT University's Department of Digital Design.

Associate Professor Zsolt István received DKK 3.2 million from the Novo Nordisk Foundation's Start Package grant programme for the project "Privacy through Co-Design for Real-World Data Analytics in the Cloud". The project aims to reduce the cost of data monitoring and tracking in various applications used to enforce privacy and data protection.

Professor Kasper Støy received DKK 3.0 million from the EU Framework Programme H2020 for the project "BIG-MAP: Battery Interface Genome - Materials Acceleration Platform", of which the IT University is a partner. The project promises a result where the pace of development of a safer, longer-lasting and sustainable ultra-high-performance batteries will increase very much.

Associate Professor Søren Debois has received DKK 2.9 million from the Independent Research Fund Denmark for the project "Distrust: Distributed business process execution under partial trust". The overall target of the project is to find methods to have efficient IT systems that work with many participants and many transactions, even if not all participants fully trust each other.

Assistant Professor Christoph Seidl has received DKK 2.9 million from the Independent Research Fund Denmark for the project "Immersive Software Archeology (ISA) - Guided Exploitation of Legacy Systems in 3D Virtual Reality". The project will create a virtual reality representation of a software system that can be explored interactively, e.g. a city with buildings and streets that represent modules, functions and dependencies.

Associate Professor Rachel Douglas-Jones has received DKK 2.8 million from the Independent Research Fund Denmark for the project "Moving Data-Moving People: Reorganizing Trust through China's Social Credit System". The project will, among others contribute with new knowledge about culturally rooted understanding of the interplay between technology and trust in China, as well as a new interpretation of the conditions for China's mobile population, as they achieve a lifestyle reminiscent of the middle class.

#### New research centers

In 2020, the IT University has established a new internal research center, Center for Computing Education Research. In addition, the IT University is part of the new national center for research in digital technologies, DIREC, and of the newly established European network for AI, ELLIS.

Center for Computing Education Research Many people get nervous even about the thought of learning about computing, e.g. a programming language. But that does not have to be that way. The Center for Computing Education Research (CCER) aims to promote technology understanding and increase the desire to learn about IT at a time where there is a shortage of digital competences. The center is based at the IT University, where an interdisciplinary research group will create the necessary knowledge to ensure that young people in education become familiar with IT concepts such as programming, IT security and artificial intelligence, as well as how these concepts affect our everyday lives and the society, we live in.

#### DIREC

The IT University is part of the national research center for digital technologies, Digital Research Center Denmark (DIREC), which is completely unique in several ways. In part, this is the first time that almost all computer science research environments at Danish universities have joined forces to establish a research center. Furthermore, the grant of Innovation Fund Denmark of DKK 100 million to the center is the largest in the history of the fund. The center will contribute to solve Denmark's major capacity challenge in the digital field by attracting foreign talented researchers and by educating more graduates and researchers. In addition, DIREC will collaborate with Danish private and public companies and bring new knowledge and the latest digital technologies into action with them.

#### ELLIS

Professor Sebastian Risi is part of a new European network in artificial intelligence and machine learning, the European Laboratory for Learning and Intelligent Systems (ELLIS). The ELLIS network gathers the research areas most talented European researchers, who together will ensure the European foothold within artificial intelligence. A total of 10 European countries are represented in terms of 17 different units. The new unit in Copenhagen consists of researchers from the IT University, the Technical University of Denmark and the University of Copenhagen. ELLIS has the ambition to take advantage of the research and investment opportunities that exist in Europe, rather than in the USA and China.

#### **Contributing valuable research**

A comprehensive study of the careers of 1.5 million researchers shows that women and men on average produce the same number of scientific articles annually, but that women leave their research careers earlier. Associate Professor Roberta Sinatra, who is co-author of the study, believes that decision-makers should take a closer look at the reasons why women leave academia.

A widespread technology developed to create content for video games can be used to teach robots to solve new tasks, writes professor at the IT University Sebastian Risi in an article published in the renowned scientific journal "Nature Machine Intelligence". Risi has written the article in collaboration with the former researcher at the IT University, Julian Togelius, who is currently Associate Professor at New York University. According to the authors, "Procedural Content Generation" can make it easier to train the abilities of robots to solve a given task in a computer simulation.

Tech companies need to learn to talk about the ethical aspects of their product. This is the opinion of Associate Professor Irina Shklovski, who has headed a recently completed research project to equip developers to make ethical decisions. For three years, researchers at the IT University and partners from four institutions have developed specific tools for companies that make products connected to the Internet of Things (IoT). The tools make it easier for designers to address ethical issues and societal challenges right from the start of the design phase. Associate Professor at the IT University Leon Derczynski, together with an English research group, has shown that on days with many tweets about depression and schizophrenia, there are more inquiries at two psychiatric crisis centers in London. The researchers' study has been published in one of the world's most recognized scientific journals, "Nature's Scientific Reports". The study was carried out in collaboration with several English research groups and led by Dr. Anna Kolliakou from King's College London.

There has been a decrease in the number of bibliometric points, BFI, which are calculated by the Danish Agency for Research and Education with a delay of almost one year. For 2019, a total of 194 points were calculated versus 255 the year before, cf. table 2. There has been a small increase in terms of the number of peer-reviewed publications, as in 2020 254 peer-reviewed publications were registered versus 234 in 2019.

There has been an increase in the number of externally funded research projects from 93 in 2019 to 100 in 2020. At the same time, there has been a slight decrease in the number of cooperation projects with the business sector from 37 in 2019 to 33 in 2020 while financial cooperation with the business sector has increased from DKK 15.1 million in 2019 to DKK 15.7 million in 2020.

One invention was registered in 2020 just like in 2019. No patent application was submitted in 2020, where in 2019 one patent application was submitted. As in 2019, the IT University had no patents issued in 2020, cf. the table with key financial figures and ratios.

#### Entrepreneurship

The IT University is one of several Danish universities participating in the project "Open Entrepreneurship", which is meant to increase innovation in Danish compagnies by means of research-based knowledge. The initiative is supported by the Danish Industry Foundation, and contributes to the IT University's establishment of an innovation unit. In 2020, the innovation unit received a grant for the development of an entrepreneurship strategy from The Danish Foundation for Entrepreneurship. This work will be carried out in 2021. In addition, a model has been established for compagnies memberships of the IT University's research centers.

#### The PhD School

In 2020, the IT University admitted 22 new PhD students and 12 PhD students graduated. Several of the PhD students received attention in 2020. PhD student Sunniva Sandbukt received an EliteForsk travel grant of DKK 200,000, which is used for a stay abroad at the University of California, Irvine. Sunniva is researching in the social infrastructure of digital payment service platforms as well as the cultural significance such platforms are given in an urban context, here with emphasis on Indonesia.

The year 2020 was marked by COVID-19. With this imprint, the PhD School has focused on meeting the PhD students' many and diverse challenges by, among others, developing and reorganising certain elements of the PhD programme into an exceptionally, digital format. This includes new guidelines for digital/hybrid PhD defenses. The PhD School also increased its efforts as a social unifying force by holding online coffee and lunch meetings with topics that in various ways address the IT University's PhD students.

#### TABLE 2: Research full-time equivalents, PhD theses and publications

	2016	2017	2018	2019	2020
Number of admitted PhD students	18	15	13	20	22
Approved PhD theses	15	11	13	10	12
PhD students (full-time equivalents)	32	39	33	40	41
VIP: Assistant professors, associate professors and professors (full-time equivalents)	76	77	86	94	107
Number of publications (peer-reviewed)	231	230	256	234	254
Publication points	236	248	255	194	*

\* Unfortunately, the figures from the Danish Agency for Science and Higher Education were not available at the completion of the Annual Report.

#### **EDUCATION**

The IT University has experienced a very good interest from applicants in relation to the total number of students that the university's financial framework enables. In 2020, the IT University received 1,807 applications for the BSc study programmes – the highest number ever – as well as 1,195 applications for the university's MSc study programmes.

As a consequence of the introduction of the international dimensioning, the admission requirement in relation to Danish language proficiency at the BSc study programmes in Data Science and Global Business Informatics was tightened in 2019. I 2020 the admission requirement for the BSc study programme in Data Science was changed back, so that English-speaking applicants could apply again. This has resulted in the total number of applicants for the BSc study programme in Data Science in 2020 again being at the same level as the number of applicants in 2018.

Political agreements on one-time financial grants in relation to STEM study programmes and COVID-19 have made it possible to admit about 70 additional BSc students in 2020 compared to 2019.

The total number of enrolled BSc and MSc students is increasing, and the number of BSc and MSc graduates has also increased significantly from 2019 to 2020, cf. table 3. This has happened despite the spring's COVID-19 lockdown, which meant that all teaching and exams in the spring semester from March 2020 were transferred to online implementation.

The number of applications for the part-time study at the IT University, the Master's study programme in IT Management, remains satisfactory. A revision of the study programme was started in 2019 and a revised version will be offered in 2021. The total number of enrolled master's and diploma students as well as the number of full-time students equivalents obtained by part-time students has been declining over several years as the IT University has stopped the admission of students on the diploma study program and two master's study programmes.

In September 2020, the Board of Directors decided to open for admission to a new MSc study programme in Data Science in 2021.

#### TABLE 3: Enrolled students, full-time student equivalents, graduates and completion times

	2016	2017	2018	2019	2020
Applicants for the MSc study programmes	1,881	1,707	1,217	1,130	1,195
Admitted MSc students	479	498	517	507	536
Enrolled MSc students	1,106	1,049	1,088	1,123	1,164
Graduated MSc students	414	470	380	391	454
Completion time. MSc students (years)	2.3	2.0	1.8	1.8	1.8
Applicants for the bachelor study programmes	1,165	1,715	1,787	1,577	1,807
Admitted bachelor students	273	333	341	364	433
Enrolled bachelor students	682	762	861	963	1.099
Graduated bachelor students	169	169	156	169	228
Completion time. bachelor students (years)	2.8	2.8	2.8	2.8	2.8
Number of full-time student equivalents	1,361	1,357	1,445	1,582	1,702
Admitted master's/diploma students	69	52	40	42	41
Enrolled master's/diploma students	567	493	431	243	200
Number of full-time student equivalents obtained by part-time students	96	75	94	68	54

Note: Full-time student equivalents are calculated at 31 August. Students and graduates are calculated at 30 September. The completion time, which is 1.8 years for MSc students, is calculated as the median of the number of commenced study months for graduates who complete their MSc degree in the period 1 October to 30 September. The same method is used for bachelor students.

### **OUTLOOK FOR THE COMING YEAR**

The current strategy for the IT University expires in 2021, and work on a new strategy for 2022-2025 has begun. In the spring of 2021, staff and students will be involved in the strategy work, and the strategy is expected to be completed in June 2021. In parallel, negotiations will begin with the Ministry of Higher Education and Science on a new Strategic Framework Contract for 2022-2025.

In December 2019, the IT University signed a rental agreement with DR for renting approximately 9,300 square meters in DR Byen. The rented premises lie in immediate vicinity of the university's current building and are going to house teaching, research and administration. The rental ensures that the IT University can increase the activities in the coming years. The rented premises was taken over on 1 March 2020, and the move-in was completed just after the summer holidays of 2020.

In 2020, the IT University significantly increased the total volume of the externally funded research projects, and in 2021 the university will continue to work on attracting externally funded research projects and ensuring financial sustainability in relation to the repatriation of external research funding.

The budget for 2021 shows a net deficit of DKK 7.5 million with a related equity forecast as at 31 December 2021 of DKK 72.7 million, cf. table 1. The deficit is primarily due to a delay in renting out vacant premises following the expansion of the campus in 2020.





# **FINANCIAL STATEMENTS**

### **APPLIED ACCOUNTING POLICIES**

#### **Basis of accounting**

The annual report for the IT University has been prepared in accordance with Executive Order no. 1021 of 24 June 2020 on Grants and Auditing, etc., of Universities.

The applied accounting policies are consistent with those of previous year.

#### **Recognition and measurement**

Assets are recognised in the balance sheet when it is probable that future economic benefits will flow to the university and the value of the asset can be reliably measured.

Liabilities are recognised in the balance sheet when an outflow of economic benefits is probable and when the liability can be reliably measured.

On initial recognition, assets and liabilities are measured at cost. Subsequently, assets and liabilities are measured as described below for each individual item.

In recognising and measuring assets and liabilities, probable economic benefits and liabilities occurring prior to the presentation of the annual report that evidence conditions existing at the balance sheet date are taken into account.

#### Foreign currency translation

Receivables, payables and other items denominated in foreign currencies that have not been settled at the balance sheet date are translated using the exchange rate at the balance sheet date.

**Corporation tax and deferred tax** The IT University is not liable to pay tax.



#### **INCOME STATEMENT**

#### **ITEMS OF INCOME**

#### **General matters**

The income of the IT University includes government grants for basic research, grants per student and operating income from the ordinary government appropriation. In addition, the university receives donations and grants, income from cooperation agreements, student fees from part-time programmes and income from other commercial activities.

#### **Government grants**

The IT University is entitled to government grants, and the grants to the university are disclosed in the Finance and Appropriation Act. Grants are recognised as income in the period to which they relate.

Grants per student are paid on account on a monthly basis based on the anticipated number of full-time equivalents. Every year in October, the actual production of full-time equivalents is calculated, and the on account payments are adjusted.

#### External grants and donations

Grants and commitments, including income from cooperation agreements subject to conditions of use by the grantor, are recognised as income as the costs are paid.

Grants that are not subject to conditions are recognised as income at the time of receipt.

#### **Financial income**

Financial income comprises return in the form of interest and dividend from investments in shares, bonds and investment fund shares as well as value adjustments of securities recognized at the quoted price of the individual securities at the balance sheet date.

Tuition fees for part-time programmes, other commercial activities and rental income The income is recognised in the period to which it relates.

#### COSTS

Costs include external costs incurred for the activities of the year. Costs comprise staff costs, consumables, services, insurance premiums, maintenance costs and other operating costs of running the university.

#### **BALANCE SHEET**

#### Intangible assets

Software is capitalised when it is vital to the task handling of the university, and when its size and useful life are significant.

Only costs related to the development process and which result in a real increase in value are capitalised. Costs incurred during the initial phase and the phases of operation are recognised as expense.

Software is measured at cost less accumulated amortisation. Amortisation is provided on a straight-line basis over the expected useful lives of the assets from the date when the assets are available for use. The expected useful life is five years.

#### Property, plant and equipment

IT and AV equipment, machinery, tools and equipment as well as leasehold improvements are measured at cost less accumulated depreciation.

Cost comprises the purchase price and any costs directly attributable to the acquisition as well as costs for preparing the assets for use.

Depreciation is provided on a straight-line basis over the expected useful lives of the assets. The expected useful lives are as follows:

IT and AV equipment3 years
Machinery, IT systems, tools
and equipment5 years
Leasehold improvements10 years

Assets with a cost of less than DKK 100,000 per item are expensed in the year of acquisition. For this purpose, the IT University does not aggregate assets.

#### INVESTMENTS

#### Investments in subsidiaries

Entities in which the university holds the majority of the votes or in some other way exercises control are considered subsidiaries. Investments in subsidiaries are recognised at acquisition at cost.

#### Impairment write-downs

The carrying amount of intangible assets, property, plant and equipment and financial assets is subject to an annual test for indications of impairment. Impairment losses are recognised in the income statement.

#### **Securities**

Securities comprise investments in bonds, shares and investment fund shares that are recognized in accordance with the quoted price of the individual securities at the balance sheet date, including accrued interest.

#### Collections and works of art

The IT University has received works of art from various donors. In accordance with the accounting rules of the Government, these works of art are not recognised at a value.

#### Receivables

Receivables are measured in the balance sheet at nominal value less write-down for bad debt losses. Write-down for bad debt losses is based on an individual assessment of receivables.

#### Externally funded activities in progress

On an ongoing basis, the IT University enters into agreements with businesses, public institutions and private organisations on research activities. The activities funded by the grantor are set out in the agreements. To the extent that the IT University incurs costs for activities that are funded under the agreements, but for which the grants have not yet been paid, the grants to which the IT University has obtained a right are recognised as receivables from externally funded activities in progress.

Grants received, covering costs that have not yet been paid, are recognised as prepaid restricted grants.

The IT University charges a fee to cover overhead costs related to grant activities. The fee is recognised as income as the grants are used.

As a project coordinator of grant-financed research projects, the IT University manages the total grants, which are in the balance sheet and passed on to participating parties.

Provision for bad debt losses is made on the basis of an individual assessment of the individual externally funded activities in progress and as a general provision for unforeseen losses. The provision is set off against receivables from externally funded activities.

#### Prepayments and deferred income

Prepayments comprise costs incurred concerning subsequent financial years. Prepaid costs relate to rent, insurance premiums, subscriptions and prepaid wages and salaries, etc. Deferred income comprises payments received concerning income in subsequent years.

#### Liabilities

Liabilities other than provisions are measured at amortised cost, which is in all material respects equivalent to the nominal value.

#### Provisions

Provisions are recognised when, as a result of past events, the university has a legal or a constructive obligation and it is probable that there may be an outflow of resources embodying economic benefits to settle the obligation.

#### **Contingent liabilities**

Contractual obligations and contingent liabilities include liabilities related to leases and pending litigation against the university that the university will most likely not have to settle.

#### **CASH FLOW STATEMENT**

The cash flow statement shows the university's cash flows from operating, investing and financing activities for the year, the year's changes in cash and cash equivalents as well as the university's cash and cash equivalents at the beginning and end of the year. The cash flow statement cannot be derived solely from the published accounting records.

#### Cash flows from operating activities

Cash flows from operating activities are calculated as the surplus for the year adjusted for non-cash items, such as depreciation, amortisation and impairment losses, as well as changes in working capital, interest received and interest paid. Working capital comprises current assets, excl. cash and cash equivalents less current liabilities other than provisions.

#### Cash flows from investing activities

Cash flows from investing activities comprise cash flows from acquisitions and disposals of intangible assets, property, plant and equipment and investments.

#### Cash flow from financing activities

Cash flows from financing activities comprise cashflow from raising and repayment of longterm debt and securities.

#### **STAFF ACCOUNTING**

The IT University recognizes all categories of staff in the staff account in accordance with Universities Denmark's definition manual. Persons paid in the form of fees are not included in the number of employees in the Staff Accounts, ie. external assessors and external examiners as well as guest teachers.

#### **SEGMENT INFORMATION**

Presentation of income, staff costs and operating costs follow the public sector chart of accounts.

#### **FINANCIAL HIGHLIGHTS**

Financial highlights are prepared in accordance with section 23(2) of Executive Order on Grants and Auditing. The IT University uses the definition manual for the statistics of Universities Denmark.

Costs based on purposes follow "Vejledning om hovedområde- og formålsfordeling af universiteternes omkostninger" (Guidelines on classification by main area and purpose of the costs of the universities) issued by the Ministry of Higher Education and Science in December 2012. An effort is made to ensure that as many of the university's costs as possible are attributed directly to professional purposes, i.e. education, research as well as communication and exchange of knowledge. Costs which cannot be attributed to these categories are classified by means of sharing keys.

### **INCOME STATEMENT 1 JANUARY – 31 DECEMBER**

3	Government grants Tuition fee External research funding	289,809 5,780	287,395
3		5,780	
	External research funding		6,963
4		38,449	36,113
	Other income	8,614	10,065
	Total income	342,652	340,535
5	Staff costs	236,623	210,367
	Depreciation, amortisation and impairment losses	1,348	1,421
6	Other ordinary operating costs	110,077	122,265
	Total ordinary operating costs	348,047	334,053
	PROFITT/LOSS FROM ORDINARY ACTIVITIES	-5,395	6,482
7	Financial income	2,389	4,291
8	Financial expenses	325	1,516
	Total financial income and expenses	2,064	2,775
	PROFITT/LOSS FOR THE YEAR	-3,331	9,257

#### **DISTRIBUTION OF PROFIT**

	<b>2020</b> DKK´000	2019 DKK´000
Predisposed to retained earnings	-3,331	9,257
Total distribution of profit	-3,331	9,257

### **BALANCE SHEET AT 31 DECEMBER**

#### **ASSETS AT 31 DECEMBER**

Note		2020 DKK´000	2019 DKK´000
		DKK 000	DRK 000
	Software	520	1,221
9	Total intangible assets	520	1,221
	Leasehold improvements	4,483	3,773
	IT equipment	575	84
	Fixtures and fittings, tools and equipment	1,217	0
9	Total property, plant and equipment	6,275	3,857
	Investments in subsidiary	3,500	3,500
10	Total investments	3,500	3,500
	TOTAL NON-CURRENT ASSETS	10,295	8,578
	Trade receivables	7,816	9,529
	Receivables from externally funded activities	3,974	6,834
11	Other receivables	10,984	3,915
	Prepayment	717	2,163
	Total receivables	23,492	22,441
12	Securities portfolio	116,811	114,825
	Cash and cash equivalents	88,024	46,118
	Total cash	204,835	160,944
	TOTAL CURRENT ASSETS	228,327	183,385
	TOTAL CONNENT ASSETS	220,327	103,505
	TOTAL ASSETS	238,622	191,963
	TOTAL ASSETS	238,622	191

#### **EQUITY AND LIABILITIES AT 31 DECEMBER**

Note		<b>2020</b> DKK′000	<b>2019</b> DKK′000
	Equity at 1 January	83,497	74,240
	Retained surplus	-3,331	9,257
13	Total equity and liabilities	80,166	83,497
	Provision for re-establishment **	0	2,924
	Total Provisions	0	2,924
	Trade payables	20,609	18,598
	Holiday allowance *	33,686	27,964
14	Other payables	11,553	9,639
	Prepaid restricted contributions	63,119	18,156
	Prepaid government grants	29,050	30,290
	Other prepayments	439	895
	Total short-term	158,456	105,542

#### TOTAL EQUITY AND LIABILITIES 238,622 191,963

\* Frozen holiday funds amounts to DKK 18.4 million of the total holiday pay allowance.

\*\* In accordance with government accounting policies, the provision for the re-establishment of Ruud Langgaards Vej of DKK 2.9 million has lapsed and been recognized as income in connection with the change.

- **15** Mortgages and collateral
- **16** Contractual obligations
- **17** Contingent liabilities
- **18** Staff accounts
- **19** Segment information
- 20 Commercial activities
- 21 Management salary Board of Directors
- 22 Student activities
- 23 Related parties
- 24 ITU Business Development
- 25 Additional factors

### **CASH FLOW STATEMENT 1 JANUARY TO 31 DECEMBER**

Note		2020 DKK´000	2019 DKK´000
	Profit/loss for the year	-3,331	9,257
	Depreciation, amortisation and impairment losses	1,348	1,421
	Profit and loss by sale of fixed assets	0	47
	Changes in provisions	-2,924	43
	Reversal of items with no cash flow effect	-1,576	1,511
	Change in receivables	-1,050	-6,956
	Change in current liabilities	52,914	5,182
	Change in working capital	51,864	-1,774
	CASH FLOWS FROM OPERATING ACTIVITIES	46,957	8,994
9	Purchase and sale of intangible assets and property,		
	plant and equipment	-3,065	-4,870
	Value adjustment of financial fixed assets	0	1,500
	Cash flows from investing activities	-3,065	-3,370
	Purchase and sale of securities	-1,986	-4,159
	Cash flow from financing activities	-1,986	-4,159
	CHANGES IN CASH AND CASH EQUIVALENTS	41,905	1,465
	Cash and cash equivalents at 1 January	46,118	44,654
	CASH AND CASH EQUIVALENTS AT 31 DECEMBER	88,024	46,118

### NOTES TO THE FINANCIAL STATEMENTS

#### **1. GOVERNMENT GRANTS**

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Full-time education	154,485	136,555
Part-time education	1,668	2,081
Exchange students	408	480
Free university places and scholarships	1,315	1,824
Excess study time bonus	6,297	5,759
Employment bonus	5,286	5,422
Quality grants	954	931
Research	134,099	132,693
Other purposes	1,599	1,649
SEA reform *	-16,300	0
Total government grants	289,809	287,395

\* The government rental scheme has changed, which means that both the IT University's rent and base government grants have been reduced per 1 January 2020.

#### **2. TUITION FEES**

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Participants in part-time education	5,254	5,788
Other tuition fees	526	1,174
Tuition fees in total	5,780	6,963

#### **3. EXTERNAL RESEARCH FUNDING**

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Danish public research funding	16,142	7,902
Danish private research funds	13,326	12,882
EU research funds	6,156	13,071
Other foreign research funds	2,824	2,258
Total external research funding	38,449	36,113

#### **4. OTHER INCOME**

	2020 DKK′000	<b>2019</b> DKK′000
Rental income	648	602
Other income	7,966	9,463
Other income in total	8,614	10,065

#### **5. STAFF COSTS**

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Wages and salaries	239,638	212,483
Refound of wages and salaries	-5,105	-3,989
Other staff costs	2,089	1,874
Total staff costs	236,623	210,367

#### 6. OTHER ORDINARY OPERATING COSTS

	<b>2020</b> DKK′000	2019 DKK′000
Rent	35,033	39,052
Other ordinary operating costs	75,043	83,213
Total ordinary operating costs	110,077	122,265

#### 7. FINANCIAL INCOME

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Return on securities portfolio, profit	2,388	4,288
Other financial income	1	3
Total financial income	2,389	4,291

#### **8. FINANCIAL EXPENSES**

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Return on securities portfolio, loss	281	4
Write-down of investments	0	1,500
Other financial expences	44	12
Total financial expenses	325	1,516

Financial Statements Applied Accounting Policies Income Statement 1/1 - 31/12 Balance Sheet at 31/12 Cash Flow Statement 1/1 - 31/12 Notes Key Financial Figures and Ratios

#### 9. FIXED ASSET NOTE

	Software	Leasehold improvements	IT equipment	Fixtures and fittings, tools and equipment	Total
	DKK'000	DKK'000	DKK'000	DKK'000	DKK'000
Purchase price at 1 January	8,403	4,167	5,644	613	18,826
Additions during the year	0	1,133	577	1,355	3,065
Disposals during the year	0	0	-1,805	-543	-2,348
Purchase price at 31 December	8,403	5,300	4,416	1,425	19,544
Accumulated depreciations/amortisation and write-down at 1 January	7,182	394	5,560	613	13,749
Depreciation/amortisation and write-downs for the year	701	423	86	138	1,348
Reserved depreciation/amortisation for the year	0	0	-1,805	-543	-2,348
Accumulated depreciations/amortisation and write- down at 31 December	7,883	817	3,841	208	12,748
Purchase price at 31 December	520	4,483	575	1,217	6,795

#### **10. FINANCIAL FIXED ASSETS**

	<b>2020</b> DKK′000	2019 DKK′000
Equity investments in ITU Business Development A/S	3,500	3,500
Total equity investments in subsidiary	3,500	3,500

#### **11. OTHER RECEIVABLES**

	2020 DKK'000	<b>2019</b> DKK′000
Receivables VAT compensation	0	0
Receivables wages and salaries and refound of wages and salaries	1,122	1,340
Receivables deposits	7,740	446
Other receivables	2,122	2,129
Other receivables in total	10,984	3,915

#### **12. SECURITIES AT PORTFOLIO MANAGER**

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Securities	116,383	114,512
Deposited cash and cash equivalents	428	313
Securities portfolio in total	116,811	114,825

#### **13. STATEMENT OF CHANCES IN EQUITY**

	<b>2020</b> DKK'000	<b>2019</b> DKK′000
Accumulated retained earnings at the beginning of the year	83,497	74,240
Retained earnings for the year	-3,331	9,257
Total equity and liabilities	80,166	83,497

#### 14. OTHER PAYABLES

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Performance pay	1,434	1,310
Fixed-term employment	1,338	860
Wages and salaries payable	4,723	4,084
Auditors	0	123
Print payable, students	34	40
VAT payable	351	427
Deposits	987	952
Other payables	2,686	1,842
Total other payables	11,553	9,639

#### **15. MORTGAGES AND COLLATERAL**

The IT University has not provided any mortgages or collateral.

#### **16. CONTRACTUAL OBLIGATIONS**

In May 2015, the IT University concluded a rent agreement with the Danish Building and Property Agency. Section 60(1) of the Danish Business Lease Act applies to the lessee's conditions. As a main rule, the lease can only be terminated in its entirety. The period of notice is six months for removal on the first day of a month.

In December 2019, the IT University signed a rental agreement with DR Byen. The period of notice is six months for removal on the first day of a month. The lease can be terminated at the earliest April 2022 for removal October 2022.

#### **17. CONTINGENT LIABILITIES**

For 39 co-funded PhD students of a total of 61 PhD students ultimo 2020, the IT University guarantees payment of the students' salaries for the 3-year or 4-year period in which their employment contracts are non-terminable by the university. The liability may become relevant if the payroll costs are not covered by companies or institutions with which education agreements have been concluded.

The IT University is comprised by the government self-insurance principle and has taken out liability insurance for members of the Board of Directors.

#### **18. STAFF ACCOUNTS**

Full-time equivalents	2020	2019	2018	2017
Academic staff	192	171	160	150
Part-time academic staff	51	44	40	43
Other full-time equivalents	174	162	151	140
Full-time equivalens (FTEs) in total	417	376	351	333

Number of employees	2020	2019	2018	2017
Number of employees 1 January	713	628	612	602
Accessions	439	411	374	475
Resignations	376	326	358	465
Number of employees 31 December	776	713	628	612

Note: In 2020, the IT University has specified the calculation method of the staff accounts concerning remunerated persons. Comparative figures for 2017-2019 have been adjusted accordingly.

### **19. SEGMENT INFORMATION**

	2020 DKK'000	2019 DKK′000	2018 DKK′000	<b>2017</b> DKK'000
Inventory of the ordinary activities				
Income	299,749	298,937	263,278	245,655
Payroll costs *	-208,677	-186,632	-169,445	-160,883
Other direct costs *	-106,694	-116,548	-102,406	-97,561
Other indirect costs	8,804	7,477	5,892	5,507
Profit/loss	-6,818	3,234	-2,681	-7,282
Inventory of the commercial activities				
Income	6,681	7,690	8,372	6,311
Payroll costs *	-2,601	-1,709	-3,386	-1,255
Other direct costs *	- 633	-1,024	-1,437	-2,238
Other indirect costs	-2,024	-1,709	-1,419	-887
Profit/loss	1,422	3,248	2,131	1,930
Accumulated profit/loss	20,811	19,389	16,141	14,009
Inventory of the externally funded research activities				
Income	35,628	33,908	27,252	24,063
Payroll costs	-24,761	-22,026	-19,062	-15,323
Other direct costs	-4,087	-6,114	-3,717	-4,120
Other indirect costs	-6,780	-5,768	-4,473	-4,620
Profit/loss	0	0	0	0
Inventory of the externally funded activities				
Income	593	0	0	0
Payroll costs	-583	0	0	0
Other direct costs	-10	0	0	0
Other indirect costs	0	0	0	0
Profit/loss	0	0	0	0
Profit/loss for the year before financial income and expenses	-5,395	6,482	-549	-5,352

\* The IT University has changed the registration of project costs, which entails a correction to the distribution of Payroll costs and Other direct costs from 2019 onwards.

## **20. COMMERCIAL ACTIVITIES**

The IT University's commercial activities comprise letting of premises, events, parking etc. The table shows the profit/loss for the year and the accumulated profit/loss for a 4-year period where the accumulated profit/loss must not be negative under the rules of the Ministry of Finance for commercial activities.

	2020 DKK′000	2019 DKK'000	2018 DKK'000	2017 DKK'000
Income	6,681	7,690	8,372	6,311
Direct and indirect costs	5,259	4,442	6,241	4,380
Profit/loss for the year	1,422	3,248	2,131	1,930
Accumulated retained earnings at 31 December	20,811	19,389	16,141	14,009

In accounting for the accumulated profit/loss on commercial activities, the institution must build on 2007 as the first earning year, so that there in recent years accumulated result is summed over four years of results. The accumulated result for 2017 must correspondingly include the accumulated result for the period 2007-2017.

## 21. EXECUTIVE PAY – BOARD OF DIRECTORS

	2020	2019
Number of external board members	5	5
Paid chairman's remuneration (DKK'000)	130	129
Total remuneration paid to other external members (DKK'000)	260	258

## **22. STUDENT ACTIVITIES**

	<b>2020</b> DKK′000	<b>2019</b> DKK′000
Student political activities	664	627
Other student activities	0	0
Student activities in total	664	627

## **23. RELATED PARTIES**

Related parties	Transactions
Ministry of Higher Education and Science (UFM)	Government grants from UFM amounts to DKK 289,809 thousand in 2020 and DKK 287,395 thousand in 2019.
Executive Management	Renumeration to the Executive Management amounts to DKK 3,874 thousand in 2020 and DKK 4,066 thousand in 2019.
ITU Business Development A/S (ITU BD)	<ul> <li>The IT University has contributed capital of DKK 5,000 thousand to ITU BD in 2014. In 2019, the value of the IT University's investment is written down to DKK 3,500 thousand. The IT University owns 100 per cent of the company.</li> <li>Profit for the year in ITU BD is DKK -813 thousand and equity at 31 December 2020 amounts to DKK 2,018 thousand.</li> <li>ITU BD has provided services for the IT University of Copenhagen and taken over obligations regarding patents of DKK 1,359 thousand in 2020 and DKK 2,112 thousand in 2019.</li> <li>ITU BD has from 2015 rented office space at the IT University of DKK 256 thousand in 2020 and DKK 287 thousand in 2019.</li> </ul>
Folketingets Finansudvalg (FFU, Danish Parliament´s Finance Committee)	The IT University does not have any contruction projects, which require approval from the FFU.

## 24. ITU BUSINESS DEVELOPMENT

	Contributed capital in the financial year	Accumulated contributed capital	Recorded value of the ownership share	Ownership share
	DKK'000	DKK'000	DKK'000	Per cent
ITU Business Development	0	5,000	3,500	100

	Income in the financial year (Net turnover)	Costs in the financial year	Profit in the financial year
	DKK'000	DKK'000	DKK'000
ITU Business Development	2,482	3,295	-813

Financial Statements Applied Accounting Policies Income Statement 1/1 - 31/12 Balance Sheet at 31/12 Cash Flow Statement 1/1 - 31/12 Notes Key Financial Figures and Ratios

## **25. ADDITIONAL FACTORS**

Other matters which the IT University must disclose in accordance with:

- Executive Order No. 1021 of 24 June 2020 on Grants and Auditing etc. of Universities.
- Letter from Danish Agency for Institutions and Educational Grants of 18 December 2020 on the annual report for 2020.

The IT University is not responsible for carrying out the secretariat function for scholarships and the like.

The IT University has established and owns a company, ITU Business Development A/S, to promote the flow of knowledge and technology between research institutions and the business community in accordance with section 4 (1) of the Danish Act No. 580 of 1 June 2014 on the Commercial Activities and Co-operation with Foundations of Public Research Institutions (law of technology transfer).

The IT University has not contributed funds to foundations whose main purpose is to establish dwellings close to universities in accordance with section 10(2) of the Danish Act on the Commercial Activities and Co-operation with Foundations of Public Research Institutions (law of technology transfer).

The IT University has no costs for administration of foundations and associations, including commercial foundations and associations.

The IT University does not offer study programmes abroad.

The IT University does not participate in Erasmus Mundus programmes.

The IT University complies with the EU rules on government grants for research infrastructure.

## **KEY FINANCIAL FIGURES AND RATIOS**

Income (DKK´000)	2020	2019	2018	2017	2016
Education	176,192	160,015	159,528	153,106	146,210
Research	134,099	132,693	101,650	93,470	89,924
External funds *	46,414	45,575	39,110	31,027	26,165
Research-based government consultancy	0	0	0	0	0
Other grants **	-14,701	1,649	-2,146	-3,003	-1,773
Other income	2,712	3,378	-672	4,715	5,531
Total	344,716	343,311	297,470	279,314	266,058

\* External funds relate to subsidy-funded research activities, other subsidy-funded activities and commercial income covered activities.

\*\* The IT University's reduction in rent and in base government grants through the SEA reform is included in other grants.

Costs (DKK´000)	2020	2019	2018	2017	2016
Education	174,878	163,428	148,445	141,141	120,529
Research	137,875	133,478	113,631	107,285	97,118
Dissemination and knowledge sharing	19,001	19,619	17,125	13,560	7,233
Government consultancy services	0	0	0	0	0
General management, administration and service	13,947	14,464	14,078	13,260	26,852
Total	345,701	330,989	293,279	275,246	251,732

Staff (full-time equivalents)	2020	2019	2018	2017	2016
Academic staff	191.7	171.1	159.7	150.0	135.2
Part-time academic staff	51.3	43.5	39.9	43.0	42.6
Other full-time equivalents	173.6	161.8	151.5	140.3	136.6
Total	416.6	376.5	351.0	333.3	314.4

Balance sheet (DKK´000)	2020	2019	2018	2017	2016
Equity	80,166	83,497	74,240	76,221	78,287
Balance sheet total	238,622	191,963	177,481	172,713	187,371

Economic key figures (per cent)	2020	2019	2018	2017	2016
Profit margin	-1.0%	2.7%	-0.7%	-0.7%	3.5%
Liquidity ratio	183.0%	236.4%	228.5%	233.5%	205.7%
Robustness ratio	33.6%	43.5%	41.8%	44.1%	41.8%
Finance degree *	0.0%	0.0%	0.0%	0.0%	0.0%
Debt factor *	0.0%	0.0%	0.0%	0.0%	0.0%

\* The IT University has no long term debt.

Building (m2)	2020	2019
Building, total	32,618	23,352

Bachelor and MSc students for the period 1 October - 30 September	2020	2019
Number of admitted bachelor students	433	364
Number of admitted MSc students	535	507
Number of students enrolled at 30 September	2,263	2,086
Number of full-time equivalents (including guest students)	1,702	1,582

Graduated bachelor and MSc students for the period 1 October - 30 September	2020	2019
Number of graduated bachelor students	228	169
Number of graduated MSc students	454	391

Free university places and scholarship	2020	2019	2018	2017
Number of students enrolled in free university places at 30 September	5	9	11	12
Number of full-time equivalents in free university places	6	9	12	11
Number of students who have received scholarships	10	14	19	17
Total amount paid as free university places, rate 3 (DKK'000)	593	909	1,110	1,040
Total amount paid as scholarships (DKK'000)	722	915	1,030	1,355
Government grants on free university places and scholarship (DKK'000)	1,445	1,475	1,523	1,544
Profit for the year (DKK'000)	130	-350	-617	-851
Account balance at 31 December (DKK'000)	1,949	1,818	2,168	2,784

Part time students in the period 1 October - 30 September	2020	2019
Number of admitted master's students	41	42
Number of fee-paying part-time students	225	306
Number of full-time students equivalents obtained by part-time students	54	68
Number of graduated diploma and master's students	30	54

Internationalisation for the period 1 September - 31 August	2020	2019
Number of exchange students outbound (including exchange grants)	41	75
Number of exchange students, in bound	39	35
Number of foreign students at 30 September	302	296

Research education	2020	2019
Number of PhD students enrolled at 31 December	61	54
Number of PhD students admitted during the year	22	20
Number of approved PhD theses for the year	12	10

Results for research and communication	2020	2019
Number of research publications	254	234
Number of patent applications	0	1
Number of patents issued	0	0
Number of inventions for which application for registration has been filed	1	1
Number of projects with enterprises	33	37
Number of external projects	100	95
Economic co-operation with business community (DKK'000)	15,668	15,094



# THE STRATEGIC FRAMEWORK CONTRACT FOR 2020

The Strategic Framework Contract is valid for 2018-2021 and includes six strategic targets:

- 1. Increasing the capacity of research-based education of technical IT professionals
- 2. Increasing the number of female technical IT professionals
- 3. Achieving a high learning outcome for all students
- 4. All graduates should achieve good career opportunities
- 5. Strengthening IT research within areas that reflects societal needs
- **6.** Strengthening the IT subjects in primary schools and high schools by co-operation and exchange of knowledge.

In 2020, which is the third year of the contract period, the IT University assesses that there is progress for all six strategic targets, cf. the table below:

	Progress	No progress
Strategic target 1	X	
Strategic target 2	X	
Strategic target 3	X	
Strategic target 4	X	
Strategic target 5	X	
Strategic target 6	X	

Conserning the first two strategic targets, there has been a high increase in the technical IT study programmes both in the total number of admitted students and in the number of admitted female students. The current students of the IT University assess that the quality of their education and their learning outcomes are high. In addition, unemployment among the MSc graduates of the IT University has decreased significantly during the contract period.

In the research area, the IT University has more than doubled the number of researchers within the research fields of information security and data science during the contract period. In addition, several research centers have been established within, among others, digitalisation and information security. During the contract period, there has been a strengthening of research-based teaching.

Below, the IT University's progress and work in 2020 with each of the six strategic targets are elaborated.

Strategic target 1. Increasing the capacity of research-based education of technical IT professionals. The IT University will, if the government grants in the future provides the opportunity herefore, increase the capacity of research-based education of technical IT specialists to meet the demand and support Denmark's digital growth.

As there is growth in the number of admitted technical IT students in relation to the period 2017-2019, and since the admission of BSc students is larger than the target for 2020, and while the dropout rate during the first year of the technical BSc study programmes is lower than the dropout rate in the period 2017-2019, it is the assessment of the IT University that again in 2020 clear progress has been achieved within this strategic target.

The foundation for increasing the capacity of research-based education of technical IT specialists was established during 2018 with an increase in base grants. These grants, as well as grants from the national STEM Pool beginning in 2019 and the extra study places created in 2020 as a result of COVID-19 grants, have meant a major increase in the number of admitted technical BSc students. For the technical BSc study programmes, the target of the IT University was to increase the number of admitted students to 240 in 2020. This target was achieved when 283 BSc students were admitted – of which 195 students on the BSc study programme in Software Development and 88 students on the BSc study programme in Data Science. With this, there has been an increase of 80 BSc students, which corresponds to an increase in the number of admitted students of 33 and 57 per cent, respectively, compared to the 2017 indicators, which were 147 and 56 admitted BSc students, respectively.

For the technical MSc study programmes, there has been an increase of 72 students, corresponding to 45 per cent on the number of admitted students in 2020 in relation to the number of admitted in 2017. The increased allocation of base grants, STEM grants and COVID-19 grants have thus in 2020 meant an increased admission of 152 technical IT students at the IT University compared to 2017.

Further, the target for the two technical BSc study programmes was to have a maximum dropout rate of 20 per cent during the first year of study in 2020. This target has been achieved with a dropout rate of only 9 per cent on the BSc study programme in Software Development and a dropout rate of 12 per cent on the BSc study programme in Data Science.

As a supportive activity, a communication effort has also been carried out in 2020 with a focus on the technical IT study programmes.

Strategic target 2. Increasing the number of female technical IT professionals to enhance the quality of society's digitalization. The IT University will increase the proportion of female students and by becoming even better at retaining female students on the study programmes.

In relation to the baseline in 2017, there has been progress for this target, and in relation to 2019, there has been a significant progress, as there has been progress in the indicators both with regard to the admission of female students and in relation to dropout.

In 2020, the IT University has the lowest dropout level so far, of 4 per cent among female students in the BSc study programme in Software Development. The target in 2020, of having a maximum dropout rate among female students of 20 per cent on the study programme was thus clearly reached.

In 2020, the admitted female students accounted for 24 per cent and thus almost a quarter of the admitted students on the BSc study programme in Software Development. This is the highest proportion of admitted female students so far since the start of the study programme in 2007, and the result lives up to the target in 2020 of 20 per cent. Among all admitted BSc students at the IT University in 2020, 33 per cent are females, while there are 46 per cent females admitted on the MSc study programmes. As a supportive activity, an important communication effort targeted at females has also been carried out in 2020. However, the effort has been lesser than planned at the beginning of the year due to cancellations and reorganisations because of COVID-19.

During 2020, the IT University has launched a large-scale three-year dissemination project focusing on increasing interest among young people – not least females – to study the most technical BSc study programmes. The project is supported by a grant of DKK 3.8 million from the Novo Nordisk Foundation. The grant will be used, among others, to develop a YouTube universe with tutorials and video logs that will illustrate what programming is and how the technology can help solve major societal problems. The YouTube channel is complemented by an Instagram profile. Both were launched in December 2020.

Strategic target 3. Achieving a high learning outcome for all students. The IT University will strengthen the research coverage of certain study programmes and maintain a high degree of quality, seen with the students' eyes.

Progress has been made in this strategic target in relation to the baseline. In 2020, each study programme also individually and on average lives up to the VIP/DVIP ratio standards of the IT University. In addition, the quality of the study programmes from the students' point of view and the students' learning output again in 2020 are of the same high quality as before.

The total VIP/DVIP ratio at the IT University in 2020 is 4.8, which is higher than the standard of 3.0 in the Quality Policy of the IT University. On each of the IT University's study programmes, the VIP/DVIP ratio in 2020 is at least 2.9, which is above the minimum target of 2.4 for each of the study programmes. On the BSc study programme in Software Development, where the VIP/DVIP ratio in 2018 was 1.9 and 2.4 in 2019, the target in 2020 has been achieved with a VIP/DVIP ratio of 2.9. The national education evaluation, Education ZOOM, which is carried out every second year, is completed at the end of 2020. The score on the indicator "The quality of my study programme is overall high" was 4.3 in 2020, which is higher than the baseline for the indicator in 2016 and close to the score (4.4) for the same indicator for 2018. The score on the indicator "My learning output is high" is 4.0 in 2020, which is close to the score in previous years. In 2020, both scores thus meet the target of the IT University of being at least 4.0 on a scale from 1-5.

In order to further develop the quality of the study programmes, the development of a model for ongoing pedagogical/ didactic competence development for the academic staff (VIP) has been initiated as a supportive activity in 2020. The model includes, among others, the determination of teaching competencies both for use in the ongoing competence development and in the recruitment of lecturers to the IT University. In addition, in 2020 the IT University established the Center for Computing Education Research to generally strengthen research and development of IT teaching, including at the university level.

Strategic target 4. All graduates should achieve good career opportunities. The IT University will reduce the unemployment among graduates on those MSc study programmes that don't already have low unemployment. This will be done through revision of the study programmes in close dialogue with the employers.

In 2020, the IT University has made progress within this strategic target, as the MSc unemployment rate has decreased significantly in 2020 in relation to the baseline in 2017 and in relation to the unemployment rate for MSc graduates at the national level. In addition, the indicator "My study programme has equipped me for my current or most recent job" has increased compared to the baseline.

The average of the last three years' MSc unemployment rate calculated 4-7 quarters after graduation has decreased from the baseline in 2017 at 11.2 per cent to 8.6 per cent in 2020. The IT University also assesses positively that the university's MSc unemployment rate is below the national MSc average, which was 12.5 per cent and 11.1 per cent, respectively, in 2017 and 2020. The IT University's MSc unemployment rate has each year in the period 2017-2020 been lower than the national average, but where the national average for MSc unemployment has decreased by 11 per cent, the IT University's MSc unemployment has decreased by 23 per cent during the four years.

The national education evaluation, Education ZOOM, which is carried out every second year, is completed at the end of 2020. The graduates' assessment of whether their study programme have equipped them for their jobs was 4.1 on a scale of 1-5. Thus, the score in 2020 is higher than in previous years, just as the IT University's target of 4.0 for this indicator is achieved.

With regards to relevance seen with employers' eyes, the IT University's close dialogue with the employers under the auspices of the employers' panels has continued to be an important supportive activity throughout 2020 as far as reducing the graduates' unemployment is concerned. The employers' panels have thus again in 2020 evaluated and approved the labor market tickets for each of the study programmes at the IT University. The revised annual cycle and reporting scheme for the employers' panels have been in use since the beginning of 2020 and have functioned well.

Strategic target 5. Strengthening IT research within areas that reflects societal needs. The IT University intends to educate and recruit more researchers in the field of digitalisation and, if the prerequisite for strategic target 1 is met also in the field of information security and data science.

The IT University has made significant progress within this target in 2020, as the research environment in the fields of data science and information security has been strengthened during 2020 compared to the baseline in 2017. The progress in 2020 has taken place both through new employments and employments of current assistant professors as associate professors. In addition, in the fields of information security and digitalisation, external grants have been obtained making it possible to employ PhD students and postdocs. Further, initiatives have been taken to increase collaboration within the IT University's Research Center for Government IT.

The IT University's strengthening of the research environment within the field of data science has taken place by employing an

assistant professor in 2020, and three more associate professors are employed in 2020 with job start at the beginning of 2021. Further, four current assistant professors have been employed as associate professors during the year. In addition, very significant external research grants have been obtained, and both in 2020 and in the coming years, PhD students and postdocs will be employed.

In 2020, the IT University has strengthened the research environment within the field of information security, as a current assistant professor has been employed as an associate professor. This means that the IT University's Center for Information Security and Trust now has employed one professor, four associate professors and three assistant professors, and thus still has employed eight researchers at at least assistant professor level. The most significant supportive activity in 2020 has been the staffing of the research environments, including job postings, recruitment activities, assessment, job interviews, negotiations etc. Furthermore, the IT University has supported researchers' applications for external research grants, which has been productive in terms of collaborations and external grants.

As a supportive activity in relation to obtaining increased external research grants, the IT University has in 2020 entered into dialogues with several large private foundations and companies, where research projects and collaborations are being developed.

Strategic target 6. Strengthening the IT subjects in primary schools and high schools by co-operation and exchange of knowledge. During the term of the contract, the IT University will teach high school teachers and provide academic input for strengthening IT subjects in primary schools and in high schools.

In the short run, there has been a decline in the two indicators in relation to the baseline. as the IT University has not taught any high school teachers in 2020. In the long run, there has been progress, as the IT University has entered into a co-operation agreement on the implementation of the Master's study programme in Informatics Teaching, which is aimed at high school teachers. In addition, in 2020 the IT University has established a targeted research center, the Center for Computing Education Research, to support IT education for all education sectors from primary schools to universities. Overall, the IT University therefore assesses that within this target there has been significant improvements in 2020 that provides completely new opportunities in the coming years.

The Master's study programme in Informatics Teaching, which is based at Aarhus University, is specifically aimed at continuing and further education for the purpose of teaching in high schools. The IT University's participation in the collaboration on this study programme replaces the previous years' less comprehensive and organisationally looser anchored activities in this area. The IT University contributes to the new master's study programme and its prerequisite courses starting with an entrance course to be held in the autumn of 2021.

In order to achieve a general strengthening of research and development of IT teaching, the IT University in 2020 established the Center for Computing Education Research. The center has independent management and researchers, and the center was inaugurated in the autumn of 2020. The center will work with teaching in IT and computer science at university, high school and primary school level, and broadly also with teaching in IT and computer science for target groups that should not be IT professionals, software developers, etc.

The IT University is an active partner in the collaboration between university colleges and universities on capacity building in relation to the subject Technology Literacy in the primary school.



# **APPENDIXES**



# **APPENDIX 1**

## MANAGEMENT STRUCTURE OF THE IT UNIVERSITY 31 DECEMBER

The IT University is governed by a Board of Directors and an Executive Management.

#### The Board of Directors

The Board of Directors of the IT University includes a chairman, a deputy chairman and seven members. The chairman, deputy chairman and three members are external members, one member is elected by and among the academic staff at the IT University, one member is elected by and among the technical/administrative staff at the IT University, and two members are elected by and among the students at the IT University.

The Board of Directors is the highest authority of the IT University. The Board of Directors protects the interests of the IT University in its role as an educational and research institution and establishes guidelines of its organisation, long-term activities and development.

Board meetings are public. However, cases which fall within the statutory provisions on secrecy in public administration, all cases related to persons and cases which include information on contract negotiations with private parties or similar negotiations with public partners are handled in confidence.

#### Vice Chancellor

The Vice Chancellor answers to the Board of Directors on all matters and is responsible for the day-to-day management of the IT University within the framework stipulated by the Board of Directors. This right of management includes all staff employed by the IT University.

The Vice Chancellor must ensure that the IT University acts in accordance with the legislation and regulations in force from time to time and is obliged to carry out all other actions, which are required in order to ensure that the IT University is managed in a good and proper manner.

#### **Pro-rector**

The Pro-rector supplements the Vice Chancellor in all types of tasks carried out by the Vice Chancellor.

#### University Director

The University Director is responsible for ensuring that the entire administration supports research and education to the widest possible extent. The University Director is accountable to the Vice Chancellor for the observance of the legislation in force in the administrative area and for ensuring cohesion between the administrative processes across the administrative departments.

The University Director is in charge of all large inter-disciplinary projects of the administrative departments and represents the administration in relation to the external world.

#### **Executive Management**

The Executive Management includes the Vice Chancellor, the Prorector and the University Director. The Executive Management is responsible for the preparation of the strategies of the IT University and the preparation and negotiation of the Development Contract with Ministry of Higher Education and Science.

The Executive Management is responsible for ensuring that the development of the IT University is supported optimally within the financial framework provided by the Board of Directors. The work of the Executive Management results in cohesion between research, education and administration.

In its day-to-day work, the Executive Management works on the promotion of the three core values of the IT University: Trend setting, responsibility and openness, throughout the organisation.

#### Academic Council

The Vice Chancellor appoints an Academic Council. The Academic Council includes a chairman and four members and chooses its own chairman among the members of the council. Two members are elected by and among the academic staff at the IT University, and two members are elected by and among the students at the IT University.

The Academic Council answers to the Vice Chancellor in the areas of central strategic research and education and plans the exchange of know-how, awards the degrees PhD and doctorate and may issue statements on all academic matters of material importance to the activities, etc., of the IT University.

#### **Study Committee**

The Vice Chancellor appoints one or more study committees, including members in identical numbers of academic staff (VIP) and students. Each study committee appoints a chairman among its VIP members and a deputy chairman among its student members. The chairman and the deputy chairman are approved by the Vice Chancellor.

The study committee carries out planning, implementation and development of courses and tuition, including quality assurance and quality development of courses and tuition, preparation of draft curricula and amendments to these and approval of plans for preparation of courses and tests, etc.

#### **PhD Council**

The Vice Chancellor appoints a PhD Council, including members in identical numbers of science staff (VIP) and students. The chairman and the deputy chairman are appointed by the Vice Chancellor on recommendation of the PhD Committee.

The PhD Council approves PhD courses, issues statements on the evaluation of the PhD programme, and provides guidelines to the Head of the PhD Programme and approves applications for merit and exemption, etc.

#### **Heads of Department**

The Heads of Department are appointed and dismissed by the Vice Chancellor. The Head of each Department is responsible for the day-to-day management of the department, including the planning and allocation of tasks. The Head of Department may request staff to carry out specific tasks. When academic staff is not occupied with such tasks, they carry out independent research within the strategic framework of the IT University.

A Head of Department ensures quality and cohesion in research and education and must include the Study Committee and the Head of studies in its evaluation of education and tuition.

#### Dean of Education

The Dean of Education is employed by the Vice Chancellor. The Dean of Education has the overall responsibility for all the IT University's educational activities, their organisation, implementation, quality assurance and development. In addition, the Dean of Education is responsible for leading the renewal of teaching and educational activities, including the development of new study programmes, and the management of the organisational changes that are needed to achieve targets and meet quality standards.

#### **Cooperation and Safety Committees**

The safety and cooperation organisation of the IT University consists of a Main Co-operation and Safety Board (H-SiSu) and two subcommittees: the Administrative Co-operation and Safety Board (A-SiSu), which covers the administrative section, and the Research Cooperation and Safety Board (F-SiSu), which covers the department, plus two safety groups in each sub-committee.

In general, subjects related to members of staff are handled by H-SiSu, including policies, strategies, workplace assessments (APV), staff satisfaction evaluations (MTU) and drafts for staff development meetings (MUS). Subjects relevant to administration or research only are handled by A-SiSu and F-SiSu, respectively. As a rule, subjects relating to health and safety at work are handled by A-SiSu and F-SiSu.

Close cooperation between the "SiSu"s are presupposed. Discussion of topics may be delegated by H-SiSu to A-SiSu or F-SiSu, respectively, and topics which have been discussed in A-SiSu and F-SiSu may be handled by H-SiSu if this is considered necessary.

## **APPENDIX 2**

## MEMBERS OF THE EMPLOYERS' PANELS OF THE IT UNIVERSITY

#### EXECUTIVE-LEVEL EMPLOYERS' PANEL:

**Tine Thorn (chairman)** Head of Department, IT Digital Development, AP Pension

Mette Fjord Sørensen Head of Research, Higher Education and Diversity, Confederation of Danish Industry.

Marianne Sørensen Director, Employment and Integration Administration, Municipality of Copenhagen

**Brit Kannegaard Johannessen** Senior Vice President, NNIT Michael Aagaard Biermann CIO, Ørsted

Marc Schröter Senior Vice President, Product Management, SimCorp

Rikke Hvilshøj CEO, Danish IT Society

Anders Peter Kierbye Johansen Global R&D HR Director, Unity BACHELOR IN SOFTWARE DEVELOPMENT (SWU)/ BACHELOR IN DATA SCIENCE (DS)/ CAND.IT., SOFTWARE DESIGN (SD) AND CAND.SCIENT. COMPUTER SCIENCE (CS):

**Christian Bjerre Nielsen (chairman)** Chief Product Officer, uQualio ApS

**Casper Hovard** Senior Engagement Manager, KSP Nordic

Jesper Hollitsch Poulsen Assoc. Development Director, Rational Tools & Engineering Processes, Danske Bank

**Niels Hallenberg** Director, Architect Manager, SimCorp

Morten Zohnesen Managing Architect, Netcompany

**Bodil Biering** Independent Consultant

Kaare Brandt Petersen Director of Learning Analytics, Laerdal Copenhagen Søren Ilsøe Director, Insight Strategy, Analytics & Information Management, Deloitte

**Mikkel Muhldorff Sigurd** Optimization Manager, Maersk Line

Mille Østerlund Head of Civil Advice, CFCS – Center for Cyber Security

**Galina lanchina** Deputy director of RUC Digital, Roskilde University

Jane Eriksson Dahl Head of IT-development, Domstolsstyrelsen

Maiken Lykke Country Manager, Sopra Steria

#### Appendixes

Appendix 1 - Management Structure Appendix 2 - Members of the Employers' Panels Appendix 3 - The Data Protection Officer's Status Over 2020

BACHELOR IN DIGITAL DESIGN AND INTERACTIVE TECHNOLOGIES (DDIT)/ CAND.IT., DIGITAL DESIGN AND INTERACTIVE TECHNOLOGIES (DDIT):

**Rie Scheuermann Christensen (chairman)** Head of UX, Leo Innovation Lab

Nanna Engberg Partner and User Experience Director, Manyone

**Louise Wiktoria Klinker** Strategy & UX Director, 1508

Britt Rifbjerg Hertsdahl Head of Large Corporates Digital, Nordea

Michael Harboe Strategic Advisor and CEO, Virsabi

Jens Christiansen Lead UX Designer, Designit

Sarah Kirkeby Head of Division, Agency for Digitisation

**Brian Ravn** People Manager – UX & Product Solutions, R&D Software, FOSS CAND.IT., GAMES:

Astrid Refstrup (chairman) CEO, Tripple Topping

Adam Mechtley Lead Software Developer, Unity Technologies

Simon Jon Andreasen Head, DADIU

Jonathan Bonillas Lead User Researcher, Nordisk Film

Na'Tosha Bard Vice President, Research & Development, KMD

Marina Surdu Talent Acquisition Specialist, IO Interactive

Hannah Nicklin CEO, Die Gute Fabrik

**Rob Pierce** Producer, Framebunker

**Christos Iosifidis** VP of Product Management, Vivino

Kelly Griffin HR, Tactile BACHELOR IN GLOBAL BUSINESS INFORMATIC (GBI)/ CAND.IT., DIGITAL INNOVATION AND MANAGEMENT (DIM):

Kirsten Nielsen (chairman) Talent Pipeline Management-Programme Manager, Nordea Markets, Nordea

Jari Friis Jørgensen Owner, Symmetric

Tanja Danner Digital Advisor, Self employed

Simon Kiilerich Vedel Director, Zero North

Nicolai Meelby SVP, eBusiness, Topdanmark

Jan Struwe Poulsen Dep. Head of Office, KL

**Joacim Jeppesen** Chief Growth Officer, Valtech

Janus Sandsgaard Head of Digital Policy, IT and Digitalisation, The Danish Chamber of Commerce

**Nina Husfeldt Clasen** Head of Division, Agency for Digitisation

#### **MASTER IN IT MANAGEMENT (ILM)**

**Ghita Thiesen (chairman)** Head of Division, Local Government Denmark

Martin Jensen Buch Senior Consultant, The Danish ICT Industry Association

**Erik Møberg** Director, Rambøll Management Consulting

**Stig Lundbech** CIO, IT Department, Municipality of Copenhagen

Lars Hagerup CIO, Odense University Hospital (OUH)

Philip Heller-Christensen Head of Development, Dansk IT

Lars R. Andersen Vice President, NNIT

**Pernille Juel Sefort** Human Resource Manager, Naviair

**Lisbeth Nielsen** Director General, The Danish Health Data Authority

# **APPENDIX 3**

## THE DATA PROTECTION OFFICER'S STATUS OVER 2020

In 2020, targeted work has continued ensuring compliance with the General Data Protection Regulation (GDPR) at the IT University. An example is, among others, that the GDPR e-learning course now also includes the academic staff (VIP), meaning that all employees at the IT University must complete the course and finish with a test. There has also been a strong focus on maintaining documentation for processing activities, which include personal data, and associated risk assessments, as well as answering GDPR inquiries.

Furthermore, due to the Schrems II ruling from summer 2020, there has been a work of reviewing all concluded data processor agreements and noting whether a transfer is made to countries outside the EU/EEA as well as contacting those who use the Privacy-Shield scheme as a transfer basis. The aftermath of the ruling means that the work of ensuring legal transfers of personal data to countries outside the EU/EEA will continue into 2021.

At the end of the spring, the IT University was contacted by the Danish Data Protection Agency regarding monitoring of the students in connection with conducting digital exams. The IT University managed to answer all the Agency's questions satisfactorily but is awaiting a conclusion on the case from the Danish Data Protection Agency. During the summer, the IT University, together with a number of other organisations, was selected by the Danish Data Protection Agency for a written maturity survey. In December, the IT University received from the Danish Data Protection Agency a notification considering the case as completed and that no criticism is expressed. The Danish Data Protection Agency's statement is published on their website.

Seven security incidents have been registered during 2020. Two of these were about non-compliance with the personal data security and were reported to the Danish Data Protection Agency. The affected persons were informed. One of the incidents was reported by the IT University on the website. Both incidents have been completed without criticism from the Danish Data Protection Agency.

2020 has been a year of major upheavals in the field of data protection, and the IT University has also had to change how things were done, but there is no doubt that the changes have improved the handling and security of personal data.