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Welcome Message

Professor Maggie Cusack, President of Munster Technological University It is my great honour to present Munster Technological University's first Annual Report. Since MTU's establishment on 1st January 2021, our university has become a leading TU in Ireland and a shining example of the benefits of investment in the higher education sector locally, regionally and nationally.

Our first year as Munster's newest university was marked by unprecedented challenges. Students and staff began university life separated from each other due to a global pandemic. We all had to learn to adapt to new processes and technology to continue learning and teaching in a safe way. My sincere thanks to our entire MTU community for your hard work and commitment to making our new university a success despite all the difficulties of operating in a prolonged emergency.

As MTU's first President, I am extremely grateful for the support I have received across our six campuses in establishing this key pillar in Ireland's third level sector. Our campuses in Cork and Kerry have been working tirelessly on the momentous task of creating a single university that will be globally competitive and attract learners and talent not just in Ireland but from around the world.

Our income from January to August 2021 was €140 million supporting our student body, which has grown to over 18,000, and combined staff of just over 2,000. The majority of our students were studying at levels 7 or 8 on the NFQ and in total we offered 140 courses throughout the year. Research and entrepreneurship are a hallmark of our new university and 2021 saw 19 research projects awarded competitive funding, involving 140 researchers collaborating on projects across our Cork and Kerry campuses. We also continued working with industry to ensure our students will be ready for rewarding careers on graduation and meet the skills needs of the southwest for years to come. Our university's 70 Innovation Voucher agreements accounted for over 17% of total innovation vouchers nationally in 2021 with MTU signing more contracts for the use of facilities

and equipment with companies and state organisations than any other HEI nationally.

While our university is new, 2021 was also a year to acknowledge and celebrate the long history and range of cultures across our six campuses. MTU Cork School of Music and MTU Crawford College of Art and Design continued to excel with live performances restarting and artworks being acquired by the national collection of the Irish Museum of Modern Art (IMMA) and Crawford Art Gallery. Tralee celebrated becoming a university town through our Kerry South campus and Kerry North campus, and our Bishopstown campus began enjoying long overdue improvements to its buildings and facilities. In summer 2021 the National Maritime College of Ireland (NMCI) celebrated the distinction of hosting MTU's first ever graduation ceremony.

As we celebrate these successes, we are mindful of our continued commitment to sustainability and equality, diversity and inclusion. In terms of sustainability, we are striving to embed responsible actions and considerations across our teaching, learning and operations. The recruitment of an EDI Officer in 2021 will help make MTU a university open to all and a safe space for everyone to be the truest version of themselves.

Thanks to the hard work of our governors, executive and staff, and the dedication of our students, despite the challenges, MTU got off to a strong start. Again, I would like to thank everyone for their efforts to make MTU a great place to study and work, and I look forward to a very bright future for our university and the entire southwest region which we serve.

Professor Maggie Cusack, FRSE President

2021 MTU Overview

The formation of Ireland's first regional Technological University, Munster Technological University ("MTU") is an exciting milestone in Irish Higher Education. MTU formed on 1st January 2021 when Cork Institute of Technology and Institute of Technology Tralee merged to form MTU.

MTU is located in the southwest region of Ireland - a region which, in many respects, is a microcosm of modern Ireland. To the east, it is anchored by Cork city (Ireland's secondlargest urban centre), a nexus for foreign direct investment, indigenous business development, and cultural and artistic expression. To the west, it is more rural in character and is anchored by a number of independent urban towns, situated in areas which feature a high concentration of microenterprises, a number of niche and largescale enterprises, low population density and a richness in culture and heritage. Many of these towns, in Cork and Kerry, operate as significant local employment and service centres for a large rural hinterland. The southwest features the largest economy in Ireland outside of the Dublin region, having significant strengths in pharma,

med-tech, engineering, financial services, information and communications technology, agri-tech, tourism, manufacturing, food and life sciences.

The southwest Region offers a counterbalance to the overconcentration of development activity in Dublin and has been targeted in Project Ireland 2040 for significant expansion of its population and enterprise base, as well as for sustainable rural development and renewal. As a consequence, demand for access to higher education will rise significantly over the next 10 years in particular.

MTU consists of six campus locations across Cork and Kerry. Four of these are located in Cork - Bishopstown, Cork School of Music and Crawford College of Art & Design in the city centre and the National Maritime College of Ireland in Ringaskiddy. The two campuses in Kerry are located in Tralee - North campus at Dromtacker and South campus at Clash. *Figure* **1** shows the location of the MTU campuses in County Cork and County Kerry.

Figure 1: MTU Campuses

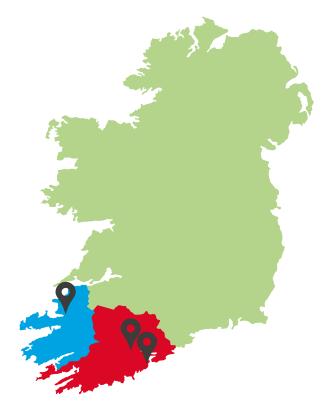
Cork campuses:

Cork City - Bishopstown, Crawford College of Art & Design and Cork School of Music

Ringaskiddy - National Maritime College of Ireland

Kerry campuses:

Tralee Town - North & South campus



MTU Key Details in numbers:

MTU comprises 18,000+ students and 2,000+ staff members. There are 100+ student clubs and societies. Over 140 courses are taught in MTU. *Figure 2* provides a graphic containing these Key Details.



Figure 2: MTU Key Details

Diverse Student Population

In the period January to August 2021, MTU had 18,000+ learners. Our international student population comprised 524 students from 45 countries.

This International student body consisted of 163 postgraduate students (120 taught international students and 43 Research international students), 214 undergraduate students, 121 International Medical Commencement Programme students, 20 Erasmus students and 6 visiting Study Abroad students.

The Top 5 countries where our international students came from were India, Malaysia, Nigeria, USA and Oman.

In January 2021, MTU's Erasmus and Study Abroad in-bound and out-bound student mobility resumed after a postponement of activities in Semester 1 of the 2020/2021 academic year due to the Covid-19 pandemic.

MTU's Income & Expenditure

MTU's Total Income for the 8-month period from 1 January 2021 to 31 August 2021 was €140 million. MTU's Total Expenditure for the period was €134 million. For the 8-month period to 31 August 2021, MTU had a surplus of €3 million after movement to/from the Capital Development Reserve. *Figure 3* provides a graphic containing these numbers.

€140

MTU's Total Income for the 8-month period from 1 January 2021 to 31 August 2021 million was €140 million.

€134 million

MTU's **Total Expenditure** for the period was €134 million.

€3 million

For the 8-month period to 31 August 2021, MTU had a surplus of €3 million after movement to/from the Capital Development Reserve.

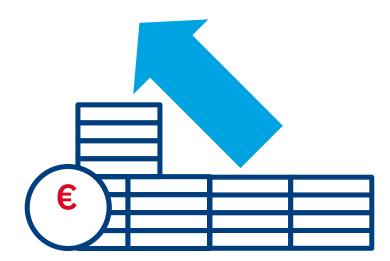


Figure 3: MTU's Income & Expenditure

MTU's Research Centres and Groups

Each of the Research Centres and Groups listed below are specialists in their area of expertise and thrive on solving research problems which make a difference.

Activity in the **BioExplore Research Group** focuses on bio-analysis, diagnostics, antimicrobial screening, molecular epidemiology, bioinformatics, peptide engineering, protein purification and mass spectrometry, medical microbiology, veterinary microbiology, antibiotic resistance, biocontrol, food fermentation, food pathogens, animal production, food production, cell biology, bacterial viruses and animal health.

Activity in the **CAPPA Research Centre** focuses on generating and harnessing light, impacting a wide range of areas such as telecommunications, gas sensing, food and medical imaging.

The Centre for Entrepreneurship and Enterprise Development (CEED) seeks to cultivate the entrepreneurial mind-set through the philosophy of collaboration, inclusion and innovation with the wider business and academic communities.

Research activity in the **Clean Technology Centre (CTC)** is focused on providing innovative and effective resource efficiency solutions.

MTU Cork School of Music research involves investigating technical, creative, historical, and pedagogical aspects of musical practices and musical repertoires.

MTU Crawford College of Art & Design research takes place across the disciplines of Fine Art, Applied Art, Art Education, Art Therapy, Visual Design and Media Communications.

The EdTech and E-learning Research Group focuses on pedagogically-orientated research into the application of new and emerging technologies to facilitate learning at all levels using techniques such as learning analytics, game-based learning, gamification, Open Educational Resources (OERs) and the use of augmented and virtual reality for learning.

The Halpin Research and Innovation Centre undertakes maritime research, with the aim of promoting the development of a vibrant and dynamic maritime sector, capable of realising its full potential in contributing to the sustainable economic, social and environmental development of the island of Ireland and that of our international partners, for the benefit of all.

Research at the Hincks Centre for Entrepreneurship Excellence focuses on entrepreneurship in all its forms, contributing to theory, practice and policy, aiming to understand how entrepreneurship contributes to economic growth, competitiveness, social wellbeing, and underpins entrepreneurship training and education at MTU.

Activity in the MeSSO (Mechanical Energy System Simulation Optimisation) Research Group focuses on optimising the performance and design of mechanical and energy systems.

Activity in the **NIMBUS Research Centre** addresses Cyber-physical Systems, the Internet of Things (IoT) and the digitalisation of industry and society. NIMBUS is MTU's largest research centre and a recognised international centre.

Activity in the **NutRI Research Group** focuses on delivering innovative solutions to global challenges in food, nutrition and health through direct engagement with industry and society through three key areas; Food Innovation, Food Microbiology and Public Health Nutrition.

Research activity in **Process innovation Engineering Research Group (PiERG)** focuses on providing solutions to the Pharma Engineering sector through its combined expertise in the development of predictive models and industrial pharmaceutical processing.

Activity in the **RÍOMH Research Group** focuses on investigation, design & development of secure, scalable communication infrastructures; abstractions; and algorithms that optimise the delivery of services and allocate, secure and provision resources end-to-end.

Enterprise Engagement and Experiential Learning (E3LG) explores engagement interactions between higher education institutions and external organisations, with a particular focus on experiential learning.

The **HEx-Spo Research Group** focuses on inspiring meaningful, impactful research in the areas of Health, Exercise and Sport Science, aimed at tackling societal health problems such as obesity and physical inactivity across the lifespan, and examining sport-related issues in the coach education, performance analysis and skill acquisition domains.

IMaR (Intelligent Mechatronics and RFID) is a commercially focused, state of the art, Research Centre and a Technology Gateway within the Enterprise Ireland Technology Gateway Network. The centre consists of two research strands: Intelligent Mechatronics and Radio Frequency Identification and Internet of Things. Both strands are focused on the delivery of innovative solutions to industry and enterprise, via the development and integration of improved operational efficiencies or new product development.

Shannon ABC is another commercially focused, state of the art, Research Centre and Technology Gateway within the Enterprise Ireland Technology Gateway Network. The centre is a collaboration between Munster Technological University and the Technological University of the Shannon: Midlands Midwest. Shannon ABC responds to the challenges of Biotech, Food and Life Science Industries through the sustainable development of viable and cost-effective processes and products from bio-resources.

Activity in the Space and Astronomy Research and Policy Group (SARP) develops and uses instruments for astronomy and space with both terrestrial and space applications, provides advice to industry on opportunities in the space domain, advocates and supports the development of national space policy.

Activity in the **Sustainable Infrastructure Research & Innovation Group (SIRIG)**promotes sustainability through multidisciplinary infrastructure related research in the context of the environmental, engineering, digitisation (incl. BIM), and built environments.

The V-LINC Research Group is at the cutting edge of economic research, using a specially designed methodology and associated software to map, analyse and evaluate linkages and relationships between different actors within industry clusters and networks to inform policy, develop targeted initiatives, and strengthen regional competitiveness.

Activity in the **SIGMA Research Group** focuses on applying Artificial Intelligence and computational techniques to enable next generation digital engagement, across video, speech, text and immersive technologies, and support inclusion, accountability, and appropriate controls.

UNESCO Chair research leads a global partnership for social change. The full and effective inclusion of persons with disabilities on an equal basis with others and their full enjoyment of physical education, sport, fitness and recreation, without discrimination, underpins MTU's UNESCO Chair research and activities.



Succeeding Together

MTU has a high level of expertise in the following areas:

Science

Business

Humanities

Engineering

- Social Sciences
- Creative and Performing Arts and Media

MTU has succeeded greatly in the areas of research and collaboration and following are details of some highlights in 2021, both nationally and internationally.

→ Launch of CYBER-SKILLS in June 2021

Funded under the Higher Education Authority (HEA) Human Capital Initiative (HCI) Pillar 3 scheme, MTU is leading a new collaborative project to address the critical skills shortage of cybersecurity professionals in Ireland. Cyber-skills is developing an innovative methodology to rapidly develop enterprise-focused education and training to address regional and national skills needs on the specific topic of cyber security in a fast-changing technological environment. The Cyber-skills project is coordinated nationally across four higher education universities: Munster Technological University (MTU), University of Limerick (UL), Technological University Dublin (TU Dublin) and University College Dublin (UCD). The project also benefits from an international dimension with the involvement of Virginia's Commonwealth Cyber Initiative which is based at the US University, Virginia Tech.

→ First EU Project Launched at MTU

Over the last 5 years, the Centre for Advanced Photonics & Process Analysis (CAPPA) secured over €11 million in funding. One of MTU's successes was the launch in January 2021 of the first EU funded research project at MTU - the PASSEPARTOUT project. This project, worth over €7 million, aims to develop low cost optical sensors and apply them to air quality monitoring, creating a 3-level optical gas analyser network to operate in urban areas. Exploiting photoacoustic and photo-thermal based spectroscopy, the project will create compact photonic sensors mounted on buildings, vehicles and drones, for real-time outdoor air pollution monitoring. The project is co-ordinated by an MTU researcher and Senior Lecturer.

Arts at MTU - Activities

From January 2021 to August 2021 the MTU Arts Office programme of supported activities included exhibitions, podcasts, lectures, music and theatre. Themes such as climate change and sustainability, equality and diversity featured strongly during this time.

The **CONNECT Le Chéile** Arts Project Fund supported 19 cross disciplinary creative projects across MTU that were ambitious, research-based collaborations connected with arts organisations, arts practitioners, and festivals throughout the South West region. This project was developed and produced in the context of the Covid-19 pandemic and lockdown. *Figure 4* below details some of the many creative projects which were undertaken in 2021.

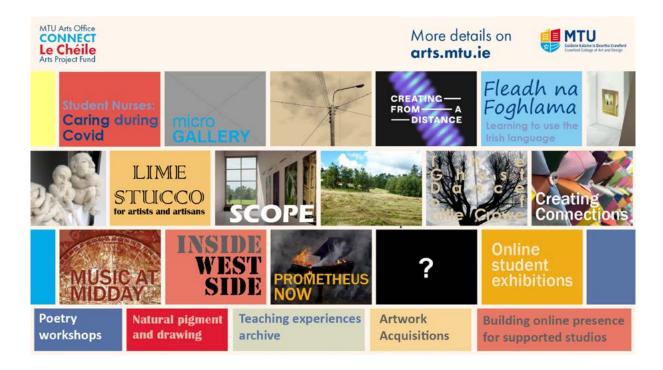


Figure 4: Connect Le Chéile project

The MTU Arts Office launched the **Creative Breaks Series in 2021.** This series was developed by the Arts Office as an online creative class for staff across MTU and gave staff an opportunity to pursue personal interests and passions. It also connected colleagues through shared interests across our 6 campuses which promoted positive relationship-building opportunities. As *Figure 5* outlines, 80 staff participated in 45 individual classes over 5 weeks.

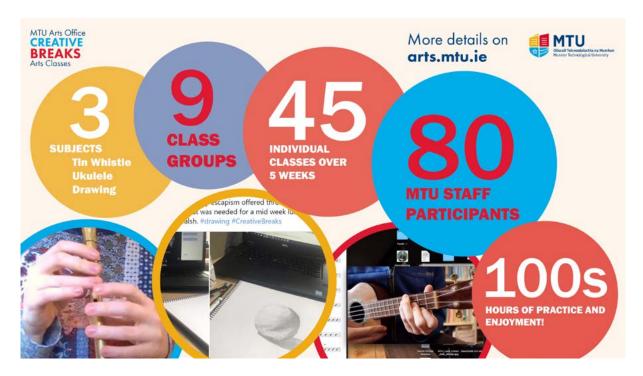


Figure 5: Creative Breaks Series 2021

Student Awards

MTU's students excelled in 2021 winning numerous awards and creating some great collaborations across all our campuses

The **James Dyson Design Award Ireland** went to the Eleskate IPD Multidisciplinary Team. The multidisciplinary team comprised third year Biomedical and Mechanical Engineering students and Accounting students with primary supervision and mentorship by lecturer, Dr. Hugh O'Donnell. The team members included Shannon O'Shea, Rebecca O'Neill, Bronagh McCarthy, Aaron Ahern, Mark Cummins, Ellen Keating, William Kingston, Jamie O'Leary, Krzysztof Przestrzelski and Bartlomiej Rys.

Eleskate went forward to represent Ireland at the international stage of the James Dyson Awards.

'Best New Society' in Ireland Small Colleges Category Award at the BICS Awards 2021 (Board of Irish College Societies National Society), went to the MTU Women in STEM Society. The Committee included Orlaith McGowan, Mechanical Engineering Year 4, Alison Adriaansen, Software Development Year 2, Aoife Kelliher, MTU Societies Officer, Aoife Carberry, Biomedical Engineering Year 3, Ciara Sheehan, Mechanical Engineering Year 4, Jillian O'Donoghue, Biomedical Engineering Year 4, Lauryn Murray, Pharmaceutical Biotechnology Year 2.

First Place - Vicon Prize for Best Undergraduate Medical Engineering Project 2021 at the Healthcare Technologies Student and Early Career Awards London 2021 went to Patricia O'Sullivan, Bachelor of Engineering in Biomedical Engineering Level 8.

At the MTU Prize for Innovation Awards 2021, the following awards were presented:

- MTU Entrepreneur of the Year went to the Eleskate IPD Multidisciplinary Team
- Best Business Opportunity went to the RetainerAid IPD Multidisciplinary Team
- Best Promotion of Business Idea went to the DisinfectTech IPD Multidisciplinary Team
- Best Prototype Award went to the Strum IPD Multidisciplinary Team

The 2021 Enterprise Ireland Award for Graduate of Outstanding Innovation Achievement Award went to Alumnus Mr. Jim Barrett.

The Award-winning **Artists Profile Series** was recognised as a national exemplar of a dynamic, high quality educational arts project. The judges' citation stated that the MTU Arts Office and AnSEO Student Engagement Office project "showed clear evidence of high student engagement and satisfaction in the various incentives it launched. Many of the activities really broadened the student experience and their understanding and appreciation of the arts."

In April 2021 artists represented in the MTU Art Collection had works acquired by the National Collection. These included Nuala O'Donovan, Leanne McDonagh, Alice Maher, Rosaleen Moore, Fiona Kelly and Stephen Doyle. *Figure 6* which shows some photographs of the works produced by some of these artists.

Figure 6: Works produced by MTU Alumni Artists



Fractal by Nuala O'Donovan



Teatime by Leanne McDonagh

Governing Body & MTU Developments

Establishment of MTU

On 01 January 2021 ('Establishment Day'), Munster Technological University ('MTU') was established under the Technological Universities Act 2018 ('the TU Act') through the merger of two former institutes of technology, Cork Institute of Technology and Institute of Technology Tralee. With establishment of the new technological university, CIT and IT Tralee both stood dissolved.

While MTU is a new legal entity with a separate statutory role and a different governance and management structure, the TU Act contains a number of transitional and consequential provisions which addressed, inter alia, transfer of functions, property, contracts, programmes of education and training, quality assurance and access, transfer and progression procedures, and work in progress, from the dissolved institutes to the new technological university on Establishment Day.

Governing Body

The first meeting of the Governing Body of MTU took place on 01 January 2021, chaired by Mr Bob Savage. At that inaugural meeting, Professor Maggie Cusack was appointed as President. Other items addressed at the inaugural Governing Body meeting included: the approval of the Governing Body Standing Orders, the approval of MTU Code of Governance; the establishment of the MTU Audit and Risk Committee to independently ensure proper corporate governance of the university and the management of a Risk Register for the university; and the approval of the MTU Dignity and Respect Policy and Procedure that applies to all staff and students at the university.

MTU Governing Body ratified the continued application of the regulations, policies and procedures of the former Institutes to which they applied immediately before establishment of MTU as theretofore meaning the respective sets of regulations and policies remained in place until altered by MTU by way of amendment or replacement.

In addition, MTU Governing Body ratified the establishment of a small Academic Council, in order to meet the legislative requirements to have an Academic Council in place from Establishment Day. The membership and responsibilities of this small Academic Council were legislated for under the TU Act.

The Governing Body later agreed during this reporting period to the establishment of a larger, 'transitional', MTU Academic Council in May 2021.

MTU Governing Body on Establishment Day comprised of an external Chair and four further members, three of which were external (with the fourth being the MTU President). Soon after designation, MTU Governing Body commenced the process of expanding its membership within the legislated six-month timeframe to 30 June 2021, in accordance with the TU Act. Between Establishment Day (01 January 2021) and the first meeting of the expanded Governing Body (30th June 2021), there was an extended consultation phase in relation to the process for appointment of staff members, student members, and further external members of Governing Body.

The consultation on the process for the appointment of staff members included communications and updates to staff,

requests for feedback, and formal engagement and consultation with staff and student unions.

In terms of regulating its membership, Governing Body recognised that MTU is a multi-campus university and acknowledged the need to develop a balanced approach so as to ensure that broad representation was achieved from as many campuses as possible.

Staff elections were conducted online using the single transferable vote system, the counting of votes based on the Seanad approach. Given the geographical scope of the university and the public health restrictions, online 'Hustings' events were held. This afforded candidates the opportunity to introduce themselves to staff across all campuses and to explain their motivation for seeking Governing Body membership, and to participate in a Q&A.

Three student members were appointed to the expanded MTU Governing Body. During the reporting period, the pre-existing students' unions continued to exist but progressed with work towards a single students' union for MTU. An MOU with the two students' unions was approved by Governing Body; this MOU set out a clear path forward in relation to establishing a single students' union.

As part of this, an interim overarching structure (Student Union Joint Executive Committee) was established and this facilitated recognition for the purposes of the TU Act and student membership of Governing Body.

A Nominations Committee of Governing Body was formed soon after designation for the purpose of expanding external membership of Governing Body. During the reporting period, the Nominations Committee and ultimately Governing Body progressed the appointment of a further 8 external members. This was done through a publicly advertised expressions of interest process. A candidate brief was developed, and public awareness of the expressions of interest process was increased through an advertising and social media campaign.

A new Chairperson, Jimmy Deenihan, was also appointed on 30 June 2021, on foot of a process led by the Department of Further and Higher Education, Research, Innovation and Science.

By the end of the reporting period, Governing Body comprised of 21 members, 12 female and 9 male, with a final Ministerial appointment to Governing Body pending.



MTU Governing Body Membership - Terms of Office during reporting period and as of 31 August 2021

Name	Internal/External Member	Term of Office		
President, Prof Maggie Cusack	Internal	Ex officio		
Chairperson, Mr Bob Savage	External	01 January 2021 - June 2021		
Chairperson, Mr Jimmy Deenihan	External	30 June 2021 - December 2022		
Prof. Sigbritt Karlsson	External - Ministerial nominee	01 January 2021 - 31 December 2022		
Mr Jerry Moloney	External - Ministerial nominee	01 January 2021 - 31 December 2022		
Mr Denis Leamy	External - ETB nominee	01 January 2021 - 31 December 2022		
Ms Paula Cogan	External - MTU appointment	30 June 2021 - 29 June 2023		
Mr Martin Dineen	External - MTU appointment	30 June 2021 - 29 June 2023		
Mr Jim Finucane	External - MTU appointment	30 June 2021 - 29 June 2023		
Ms Mary Hegarty	External - MTU appointment	30 June 2021 - 29 June 2023		
Ms Christina Mandrusiak	External - MTU appointment	30 June 2021 - 29 June 2023		
Ms Aoife O'Brien	External - MTU appointment	30 June 2021 - 29 June 2023		
Mr Colman O'Flynn	External - MTU appointment	30 June 2021 - 29 June 2023		
Ms Ingrid O'Riordan	External - MTU appointment	30 June 2021 - 29 June 2023		
Ms Ursula Barrett	Internal - Staff Member	30 June 2021 - 29 June 2023		
Dr Joan Cleary	Internal - Staff Member	30 June 2021 - 29 June 2023		
Ms Mary Cooney	Internal - Staff Member	30 June 2021 - 29 June 2023		
Mr Tom Doyle	Internal - Staff Member	30 June 2021 - 29 June 2023		
Mr Peter Somers	Internal - Staff Member	30 June 2021 - 29 June 2023		
Ms Petrina Comerford	Internal - Student Member	30 June 2021 - 30 June 2021		
Mr Chris Clifford	Internal - Student Member	01 July 2021 - 29 June 2022		
Ms Aisling O'Mahony	Internal - Student Member	30 June 2021 - 29 June 2022		
Mr Alan Murphy	Internal - Student Member	30 June 2021 - 29 June 2022		

Governing Body Committees

The reporting period saw the establishment of a number of committees of Governing Body.

The Audit & Risk Committee was established on 01 January 2021. Pending the establishment of a Finance Committee, the Audit & Risk Committee had responsibility for finance. At the time of writing, the Finance Committee is in place.

The Nominations Committee was established early during the foundation phase and had an intensive programme of work in relation to the expansion of Governing Body in line with the TU Act. This committee was wound up once this programme of work was completed.

The Governing Body discussed proposals for other committees and established the following during the reporting period:

- Audit & Risk Committee
- · Nominations Committee

Due to Covid-19 restrictions, Governing Body meetings over the reporting period took place via video conference. However, Governing Body, did agree that when restrictions allowed, meetings would revert to in person, rotating between the Cork and Kerry campuses, with options on blended meetings being made available to facilitate Governors' personal circumstances.



Governing Body Meetings

01 January 2021 to 31 August 2021	Governing Body Meetings 2021		Audit & Risk Committee Meetings 2021		Nominations Committee 2021	
	Attended	Scheduled	Attended	Scheduled	Attended	Scheduled
Jimmy Deenihan (Chair)	2	2				
Bob Savage (Former Chair)	15	15			8	8
Maggie Cusack	18	18				
Ursula Barrett	2	2				
Joan Cleary	2	2				
Chris Clifford	1	1				
Paula Cogan	1	2				
Petrina Comerford	1	1				
Mary Cooney	2	2				
Martin Dineen	2	2				
Thomas Doyle	2	2				
Jim Finucane	1	2				
Mary Hegarty	2	2				
Sigbritt Karlsson	12	18	3	3		
Denis Leamy	18	18	3	3	8	8
Christina Mandrusiak	2	2				
Jerry Moloney	17	18	3	3	8	8
Alan Murphy	2	2				
Aoife O'Brien	2	2				
Colman O'Flynn	1	2				
Aisling O'Mahony	2	2				
Ingrid O'Riordan	2	2				
Peter Somers	2	2				

Members of the Audit & Risk Committee (Met on 3 occasions during the period)

- Jerry Moloney (Chair)
- Sigbritt Karlsson
- · Denis Leamy

Members of the Nominations Committee (Met on 8 occasions during the period)

- Bob Savage (Chair)
- Jerry Moloney
- Denis Leamy

The first MTU Finance Committee meeting took place on 6 December 2021.

Governing Body Expenses

No expenses were paid to GB members during the time period 1st January 2021 to 31 August 2021.

Risk Management

Governing Body oversees risk management within the university and reviews the operation and effectiveness of the risk management process through the Audit & Risk Committee. The University Executive team implement the risk management policy and advocate a risk management culture. The Risk Register is kept up to date by the Executive team which is approved by Governing Body through recommendation from the Audit & Risk Committee. The Risk Register is a risk recording and monitoring tool which acts as a repository for all key risks identified and includes details of the risk rating assigned to the risk as well as details of the mitigating controls and actions which manage risk.

MTU Organisation Structure

During the year 2021, the high-level structure of the organisation saw members of the executives from Cork and Kerry work together as one executive under the leadership of Professor Maggie Cusack. The academic and functional structures remained as they were as the organisation worked through its foundation year.

Internal Controls

A robust system of governance is vital to enable MTU to operate effectively and for the Governing Body to discharge its responsibilities as regards transparency and accountability.

The university has in place the MTU Code of Governance. This is a living document that will evolve over time in line with both best practice and legislative changes. The most recent version is published on the university website.

The following compliance items from the MTU Code of Governance are of particular importance:

 The Chair of Governing Body and President of MTU signed an Oversight Agreement with the HEA setting out the broad governance and accountability framework and key responsibilities which form the basis of the relationship between the HEA and the University;

- The Governing Body approved the annual programmes and budgets of the University including an analysis of performance against budget.
- An internal review of the effectiveness of the Governing Body was not completed in the period under review but it will be completed in the academic year 2021/22. An external evaluation is performed at least once in the term of each Governing body.
- The Governing Body meets sufficiently regularly to discharge its duties effectively and has a schedule of matters specifically reserved for it for decision. Governing Body met on eighteen occasions during the period 1st January to 31st August 2021.
- During the period 1st January to 31st August 2021 the Audit and Risk Committee met three times. This was sufficient to allow the ARC to discharge its role during the period.
- MTU publishes its annual report and financial statements within one month following completion of the audit of the financial statements by the Comptroller and Auditor General.
- MTU continues to adhere to all relevant aspects of the Public Spending Code.

The Governing Body are responsible for preparing the annual report and financial statements and opining on whether they consider the financial statements to be a true and fair view of MTU's financial performance and its financial position at the end of the year. They are responsible for ensuring that timely and accurate disclosure is made to the Minister on all material matters regarding MTU including the business context, financial performance and position and governance of MTU.

We confirm that the system of internal controls has been in place in the University for the period ended 31 August 2021 and up until the date of approval of the financial statements. A review of the internal controls was carried out during the period.

Financial Statements

The University prepared its first set of Audited Financial Statements for the 8 months to 31 August 2021. These Financial Statements reflected a Net Assets position for the University of €177m and a surplus for the period of €3m on total income of €140m.

The full Financial Statements are available on the MTU website.

Academic Council

On Establishment Day, Governing Body decided to establish a small, time-limited, Academic Council. Thus, an Academic Council was put in place for MTU with immediate effect in accordance with the TU Act.

The Establishment Day Academic Council, supported by the two Registrars' Offices, progressed the expansion of the Academic Council. This drew on work and consultation carried out prior to designation.

Regulations for the current 'transitional' Academic Council membership model were approved by Governing Body on 12 February 2021. This transitional body, which commenced on 7th May 2021, was formed in accordance with the TU Act but with time-limited arrangements for the matters set out in the TU Act.

The President chairs the Academic Council, and its membership comprises 89 members as follows:

- President (1);
- Ex officio members, including Registrars (17);
- Elected academic staff (non-management grade) (42);
- Research staff members (4);
- Members elected from academic management grades (20); and
- Student Members (5).

As per the Academic Council Regulations approved by Governing Body, the membership of the current Academic Council drew from the Academic Councils of CIT and IT Tralee (as on 31 December 2020) in the first instance, with the exception of certain ex officio positions. In accordance with those Regulations, Academic Council subsequently determined that the filling of any vacancies still existing after the first instance would be opened up to all eligible MTU

staff and students. A number of seats of the Academic Council were filled in this manner both before and since the current Academic Council commenced on 7th May 2021.

The two Academic Legacy Committees of CIT and IT Tralee continued to be in place during the reporting period, dealing only with legacy and operational issues, and with significant delegated authority to manage quality assurance according to the existing QA frameworks. A significant portion of their business during the reporting period was the development of principles and guidelines for Semester 2 Teaching, Learning & Assessment, in the context of the ongoing and dynamic Covid-19 situation.

The first business of the 'transitional' Academic Council included arrangements for the establishment of six new 'Integration and Development' committees, aligned with the functions of the Academic Council under the TU Act, which focus on the development of a unified academic quality framework for the university and planning for the 'steady state' Academic Council. These committees are as follows:

- Academic Planning & Review Integration & Development Committee;
- 2. Admissions & Student Affairs Integration & Development Committee;
- 3. Learning Resources/Infrastructure & Student Supports Integration & Development Committee;
- 4. Regulations & Quality Assurance Enhancement Integration & Development Committee;
- 5. Research Council Integration & Development Committee; and
- 6. Standing Orders Integration & Development Committee.

Membership of these committees was opened up to all staff of the university through an online nomination and election process which was completed in June 2021. The nomination and election process for academic staff ensured inclusion of both management and non-management academic grades on each committee. Each committee also has 'Heads of Function' members, PMS staff members, and student members, with Cork and Kerry campuses represented for each category.

When Governing Body approved the Regulations of the current Academic Council in March 2021, it noted that it was proposed to establish an Executive Committee of Academic Council to order and manage the agenda for each meeting of Academic Council and to carry out certain delegated functions at times when a meeting of the full council is not feasible. For Summer 2021, as the Executive Committee of Academic Council had not yet been constituted, the Academic Council agreed to delegate, for Summer 2021 only, 'summer powers' to a group based on the composition of the original small 'Establishment Day' Academic Council.

Over the reporting period, work was also done on enhancing communications within Academic Council and its effectiveness going forward. An Academic Council dashboard was developed; this is essentially a single repository of information and documentation which can be accessed by the whole university community.

Academic Council met on 8 occasions during the reporting period:

Academic Quality Assurance Policy and Procedures

MTU Governing Body, in one of its first acts, ratified, on the recommendation of the MTU Academic Council, the continued application of the regulations, policies and procedures already in place by the former institutes to those modules and programmes to which they

applied immediately before establishment of the MTU, until such a time as they are altered by MTU by way of amendment or replacement. This was given effect by the approval of two policy documents which set out the status and interpretation of academic affairs quality assurance (QA) procedures at CIT / MTU (Cork), IT Tralee /MTU (Kerry) respectively, that predated the establishment of MTU.

These documents were published on the university's website, and a 'must read' statement was published on all relevant university webpages.

The approach to QA and enhancement in MTU aligns with the principles set out in the TU Act, the Qualifications and Quality Assurance (QQI) Act 2012, as amended and extended by Qualifications and Quality Assurance (Education and Training) (Amendment) Act 2019,the 2015 European Standards and Guidelines for Quality Assurance (ESG), and QQI published guidelines.

Over the period January to March 2021, the 'Establishment Day' Academic Council approved the adoption of the MTU Cork campus Postgraduate Regulations for MTU as a whole, and approved the adoption of the QQI Award Standards for the university, as an interim measure pending the development and approval of a bespoke set of award standards for MTU.





The current policies and publications in relation to the MTU governance, including MTU Academic Council Policies and Procedures, can be found at MTU Policies and Publications. The MTU Code of Governance provides the framework for the application of best practice in corporate governance by MTU.

Prior to Establishment Day, CIT and IT Tralee contacted QQI in relation to the timelines for the submission of the final Annual Quality Reports (AQR) for the two institutes. Cognisant of the designation date being 01 January 2021, QQI agreed to the proposal of CIT and IT Tralee that the reporting period for the final reports be extended to cover the 16-month period 1 September 2019 to 31st December 2020 inclusive. Both AQRs were submitted during the reporting period.

It was subsequently agreed with QQI that the first AQR for MTU - to cover the 8-month period 1 January 2021 to 31 August inclusive - would be the formal mechanism for approval by QQI of the QA Procedures for the new university, those QA procedures to be subsequently proposed for approval to QQI's Programme and Awards Executive Committee (PAEC). At the time of writing, work on the first Institutional Review of MTU - to take place under the CINNTE Cycle - is getting underway, and the outline schedule has been discussed with QQI.

Library Developments

Work towards fully identical digital infrastructure, systems, supports with aligned business processes across all campus sites, continued to progress. Projects include a single shared library management system, the advancement of a common, seamless web-based discovery platform and a new A

to Z e-Journals search feature to enhance the online user experience via the library webpage. Database re-negotiations, including consortium subscriptions upgrades, enabled the roll-out of twenty-three shared e-resources common to all campuses in March 2021. High demand for digital content saw new material and new forms of delivery added across disciplines with multi-user perpetual licenses secured to counter the logistical challenges of providing equitable remote access to a dispersed population. E-book usage more than doubled during the period.

A series of 360-degree bespoke virtual tours were developed in-house and launched online in early 2021 to further promote library facilities and spaces. Significant enhancements to Bishopstown campus Library facilities were delivered during Summer 2021 with a major capital works ICT infrastructure upgrade resulting in a high density WiFi solution and the installation of a new electrical system to support personal devices at all study desks. In addition to discipline specific database workshops, library training and support covered information literacy, research search strategies referencing, critical thinking skills, misinformation, Open Science and Research Data Management.

A number of library staff were certified as Virt2ue Trainers during the period and went on to develop and deliver a structed module for postgraduate students - Current Issues in Research Integrity; a 10 ECTS module focused on improving student understanding and practice of Research Integrity. The Institutional Repository (SWORD) facilitated the establishment of the university's first undergraduate journal, the International Undergraduate Journal of Health Sciences which was created in partnership with the Dept. of Biological Sciences and was launched by the MTU President in June 2021.



Sustainability at MTU

MTU aspires to be recognised as a leading university for sustainability in line with the UN Sustainable Development Goals (SDGs)

As a leader in our community, as educators of students for tomorrow's world and to represent our Social Responsibility in the best possible way, we are developing a new focus.

Ensuring that sustainability is our primary focus of the operations, across all six campuses, it will be integrated into our academic offerings and will actively engage with students and staff alike.

MTU, as a Higher Educational Sector Public Organisation has several EU & Governmental Legal Targets to achieve. The Irish Government Climate Action Bill Amendment 2021, outlining a transition to a climate-resilient, biodiversity-rich and climate-neutral economy by no later than the end of 2050 calls on all public bodies to respond and support this governmental strategy. MTU is responding to this National, European, and Global call to action, by dedicating resources to this hugely important aspect of our future. In alignment with our Strategy on the climate crisis, MTU will support this call by addressing and achieving; -

- Our legal targets set for 2030
- Address the Irish Governments Climate Action Bill and Low Carbon Development (Amendment) Act 2021 and develop KPIs
- Work towards a Carbon Neutral status by 2050 or sooner
- Our Social Responsibility, in support of the 17 UN SDGs, will ensure our Sustainability Program Plan is rolled out in a timely and professional manner

Currently MTU is transitioning from its planned program of environmental work, underway for more than 15 years, on Energy, Water, Waste and Biodiversity to a new 10-year Sustainability Strategy. To date MTU has achieved major results:

- Energy 2020 target of 33% was surpassed by achieving 56%
- Old equipment overhauled
- Systematic, out of term periods shutdown program of all non-essential electrical equipment rolled out
- Water conservation measures taken have resulted in a stabilisation of use, despite a doubling of our Student and Staff population in recent years.
- Waste recycling from 2008 has resulted in zero waste going to landfill
- Biodiversity restoration's focus is based on our Student campus Research and a commissioned landscape survey. MTU has, over the past 3 years planted over 500 trees on campuses

MTU aims to become a societal pillar of sustainability and we are now embarking on our next phase beginning with the development of a specific sustainability strategy for all 6 MTU campuses. This will be a tendered service and will have a coordinated and inclusive approach. This Sustainability strategy approach will engender a strong sense of Responsibility, Ownership & Teamwork.



Global Impact

Through partnerships ranging from local to international scales, the impact from MTU's research and innovation ecosystem is positioning our region as a globally connected exemplar of healthy, sustainable and responsible living. The university's research expenditure was circa €18m over the reporting period (€26m annualised) by successfully attracting funding from a diverse range of funders including Enterprise Ireland, Science Foundation Ireland, Horizon 2020, Dept. of Agriculture, Food and Marine, Environmental Protection Agency, HEA, Teagasc, Irish Research Council and Sustainable Energy Authority of Ireland. Industry collaborative research accounted for the vast majority of MTU's research activities. These mutually beneficial research partnerships were funded directly by industry as well as EU and nationally funded mechanisms. Our researchers supported industry leaders in their drive for disruptive innovations across a diversity of areas such as climate, environment and sustainability, digital transformations, manufacturing competitiveness and new product development. Our industry partners invested over €3m into MTU research, representing the largest industry cash investment into a TU last year in the sector.

The **Global Impact** of MTU research was emphasised by the circa **€15m** won from **Horizon 2020** since it began, almost three times the value won in the predecessor FP7 programme.

The university delivered its largest-ever internally funded R&I programme which was cofunded by the DFHERIS (Department of Further, Higher Education, Research, Innovation and Science) under the Technological Universities Transformation Fund (TUTF). €2.3m from TUTF was internally allocated by MTU to "build additional sustainable R&I capacity across the multi-campus University". A total of 19 research projects were competitively awarded funding, involving 140 researchers collaborating on projects across the multi-campus University (with 99 researchers sited on campuses in Cork and 41 in Kerry).

MTU retained the "Excellence in Human Resources for Researchers - HRS4R" badge from the EU Commission, and a Bronze Award from the Athena Swan gender equality initiative reinforcing the University's long-term commitment to both the career development of its researchers and to equality, diversity and inclusion.

The University's diverse research community comprises of **20+ nationalities** each of whom bring their culture and varying educations into our work including 253 research postgraduates of which 62% are Irish, 18% are from the EU and 20% are non-EU. External examiners of research degree programmes included those with an Irish nationality and also international examiners across a broad range of American, UK, European (French, German, Spanish, Danish), Asian (China and Vietnam) and Australian affiliations.

Scholarly outputs continued to be of a very high quality. Over 200 publications were recorded in the scopus database and the overall field-weighted citation index was 1.53. More than 100 countries were involved as co-authors in these publications, with the most significant contributors being UK, France, Germany, United States and United Arab Emirates. Co-authoring institutions included all Irish HEIs and highly ranked international universities including Harvard, Berkeley, CNRS (French National Centre for Scientific Research), Oxford and Adelaide.

Almost 20% of publications acknowledge SFI as the funding source for the research, with the European Regional Development Fund (ERDF) and Horizon 2020 being the next two most significant.

Some key highlights of global impact during the reporting period included: Dr. Mubashi Rehmani being appointed as Editor for Nature Scientific Reports; Professor Roy Sleator being listed in Research.com's top Biology and Biochemistry Scientists globally, Dr. Paul Reynold's key role in the international VERITAS collaboration involving 108 scientists; MTU researchers and Health Innovation Hub Ireland's launch of an **AI "chatbot**" to improve mental health across Finland, Ireland, Northern Ireland, Scotland and Sweden; the pilot site demonstrator of the Horizon 2020 "DENIM" project with 18 partners from 8 European countries; and the appointment of **Dr. Niall Smith** as Expert Committee member for the Government's 'Creating Our Future' campaign.



Equality, Diversity and Inclusion at MTU

MTU is very committed to EDI and has demonstrated this by recruiting an EDI Officer in March 2021 and an EDI Manager in May 2021 to develop and support the work being carried out by departments and working groups across campuses, to include the Athena Swan Self-Assessment Team, among others. Some of the many initiatives progressed between January to August 2021 include the following:

- » EDI Awareness Events a series of online events were held throughout April 2021 to raise awareness of the different protected categories under the Equal Status Acts.
- » EDI Staff / Student Consultation held in May 2021, following the series of Awareness Events, input was invited from key staff and students to highlight particular areas of focus for tackling issues relating to EDI at MTU.
- » Age Friendly University status achieved in May 2021, this accreditation indicates the commitment to provide a welcoming environment to staff and students of all ages.
- » Code Red Period Dignity Project funding approved in May 2021, this initiative aims to tackle period poverty and ensure that no one loses out on their work or education due to lack of access to basic sanitary products.
- » White Ribbon in July 2021, the Men's Development Network provided the accreditation proposal for MTU to become Ireland's first White Ribbon University, committing to tackling gender-based violence in all its forms.

Athena Swan

MTU made a submission in June 2021 to secure a Legacy Bronze Award as a new institution. A revised cross-campus Self-Assessment Team has since been formed, working on a new application under the revised 2021 Charter. In addition to amending the name from SWAN to Swan, the new Charter further extends the original focus from female academics in STEMM to be more inclusive and intersectional in nature.

The principles of the new Charter include tackling behaviours that detract from creating a safe and respectful campus culture, such as sexual violence and harassment, in addition to bullying and discrimination. This aligns with the new Speak Out anonymous reporting tool that will allow data on these issues to be captured and actioned accordingly.

The existing Gender Equality Action Plan is being developed to form one new integrated approach across all campuses.

MTU works to ensure equality, including gender equality, through its Dignity and Respect Policy and Equality Diversity and Inclusion Policy. The Dignity and Respect Policy can be accessed here:

MTU's Equality Statement can be accessed here:

International MTU

In January 2021, the establishment of Munster Technological University unified the international functions of the two preceding institutes presenting the new university with a greater international student body and broader global footprint. In addition, MTU established new partners in Turkey, Malaysia, and South Africa during this period.

MTU was awarded its new University Erasmus code and Erasmus charter, the first regional Erasmus code in Ireland.

MTU secured official recognition for MTU from the Government of China.

In February 2021, the International Office launched a new International Student Module on canvas. The module has information specific to current international student requirements including practical information for living in Ireland (PPS Numbers, Bank Accounts, Immigration).

The module is also used to communicate information to international students and is used as an online space specific to international learners to improve the reach of communication and information outside of emails.

In March 2021, the International Office was awarded Strategic Alignment of Teaching and Learning Enhancement (SATLE) Funding from the National Forum for a project to promote COIL/Virtual Exchange as part of the internationalisation agenda for the University.

International Office representatives continued to engage in all international activities in a digital manner to ensure continued engagement with all students, partners and stakeholders for continuity, strengthening and finalising new partnerships.

The International Office's Virtual Office, which was launched in August 2020, continued throughout this period due to national Covid-19 restrictions. Students and staff could drop in to the virtual international office to speak with one of the international team for any queries or advice.

International Office representatives along with academic staff collaborated to participate in virtual student recruitment fairs and events in India, ASEAN, East Africa, West Africa, South Africa, Latin America, USA and Canada.

The Covid-19 pandemic brought with it many challenges for international education activities due to global travel restrictions. The International Office successfully managed the safe arrival of students to their respective campus locations following government protocols and ensured international students were compliant with national pandemic regulations in place at the time.



Enterprise at MTU

MTU had an impressive start in 2021 in which research expenditure derived from industry increased by 39% over the 2020 figure. MTU had the highest research expenditure (€3.2m) derived directly from industry amongst the Technological Universities (TUs) and Institutes of Technologies (IOTs). MTU's research expenditure funded by industry represented 45% of the total for all of the TUs and IOTs. MTU had the second highest number of Innovation voucher agreements nationally, 70 agreements, 17.6% of total innovation vouchers in Ireland in 2021. In 2021 MTU signed more contracts for the use of facilities and equipment than any other HEI with companies and state organisations.

The Tom Crean and Rubicon on-campus business incubation centres are key catalysts for enterprise development and innovation in the region, and they maintained strong occupancy over this period. The incubation centres were successful in securing over €200,000 in funding from Enterprise Ireland and the Department of Rural & Community Development through the Connected Hubs scheme. This funding was used to upgrade ICT and meeting facilities, and for other Covid-19 measures. State-of-theart telecoms infrastructure in both incubation centres allows the centres to provide support and training to enterprises and entrepreneurs across the region. The client companies located in the centres avail of this infrastructure to engage with their customers and funders nationally and internationally. The centres are drivers of the Network of Incubation and Co-Working Hubs across the South West region, and facilitate regular meetings of Hub managers to share information and good practice.

In 2021, 22 companies were supported on New Frontiers Phase 2 as part of the €3.5 million New Frontiers Programme funded for five years. In addition, a further 80 entrepreneurs were supported and mentored as part of Phase 1.

On-campus entrepreneurship is vibrant and a key feature of the student experience with several initiatives run for students in partnership with enterprise and other stakeholders. These initiatives include Business Model Canvas training for first years, the Innovation Challenge, Goalmine Summer Camp and Transition Year programmes, and the MTU Prize for Innovation in which approximately 1,500 students participate annually. Student Inc., Ireland's longest-running student accelerator programme is led by MTU and open to students from five other universities. Annually, Student Inc. provides approximately 30 students with the opportunity to start their own business during the summer months in the on-campus incubation centres as well as helping them to develop an entrepreneurial mindset.

March 2021 marked MTU Innovation and Enterprise Month and Kerry Month of Enterprise during which MTU led 70 events and seminars internally and across the region, with almost 5,000 participants from the MTU community and externally.

MTU spends approximately €1,000,000 annually on enterprise support activity. Most of this funding is externally sponsored through our excellent partnerships with HEA, Enterprise Ireland, Local Enterprise Offices, Cork and Kerry Local Authorities, EU and ERDF funding.

MTU provides dedicated industry and community engagement which is delivered through MTU Extended campus on the MTU Cork Campus and the External Engagement function on the MTU Kerry Campus. These teams collate and guide external relationships beyond the singletransaction experience, map key relationships and identify opportunities for strategic alliances, and celebrate engagement successes. The MTU Extended Campus and External Engagement functions maintain an engagement network across 1,300 organisations and play a key role in ensuring that MTU's involvement in initiatives such as Springboard+ provide the mix and volume of talent and skills needed in the South West Region and across Ireland.

Our Shared Future

The establishment of MTU on 1st January 2021 was the culmination of many years of sustained effort by the students, staff and all stakeholders of both Cork Institute of Technology (CIT) and the Institute of Technology Tralee (ITT). The Governing Body of MTU met on that day and its first act was the ratification of the appointment of Professor Maggie Cusack as its inaugural President. The Governing Body also established the interim Academic Council and its various sub-committees.

The initial period of transition from CIT and ITT focussed on alignment of business systems including finance, payroll, IT systems and those for our students: namely student records and marks and standards.

During the first few months of our journey as MTU, we took the opportunity to look back and acknowledge our founding institutes and all their achievements, not wishing to lose all that made them successful. We recognise the importance

of the significant period of change within which we were operating. A significant change management programme was initiated. During this period we undertook a cultural assessment of our six campuses ensuring that we would build upon all the positives of the founding Institutes.

The theme of the change management programme was "Our Shared Future". Dedicated communication sessions were independently facilitated to enable staff and students identify and discuss items/issues which they felt required consideration. Linking these sessions with the vision and mission of MTU helped develop key messages, topics and feedback that we have collated from students and staff. These inputs led to the development of the below infographic, *Figure 7: 'Our Shared Future'*, which mapped the journey of the MTU staff and students toward a truly great, globally competitive university.

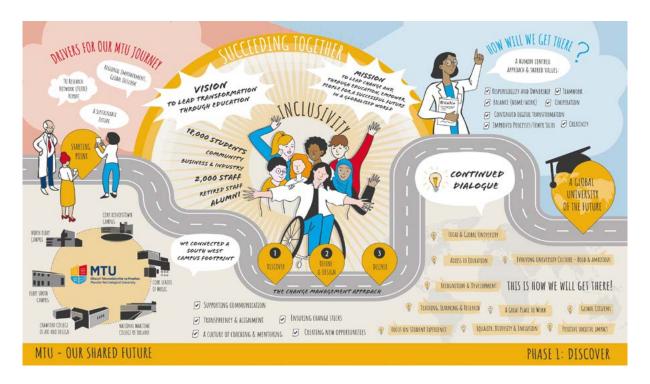


Figure 7: 'Our Shared Future' Infographic

Periods of change require consistent and clear communication. In the early days of MTU, we found ourselves working remotely, this heightened the importance of a greater than ever need for effective university-wide communication. MTU recognises that our students and staff are our greatest asset and we developed an Internal Communications Plan to ensure that everyone was kept fully up to date on all and any activities along our transformation journey.

An internal communications working group was established comprising a cross university representation of staff and students. Based upon the work and expertise of this group, this provided valuable outputs which contributed to regular updates from the President to all staff and students. Feedback from the internal communications working group continues to provide valuable guidance to help ensure that that staff and students are informed during the various stages of our journey.

