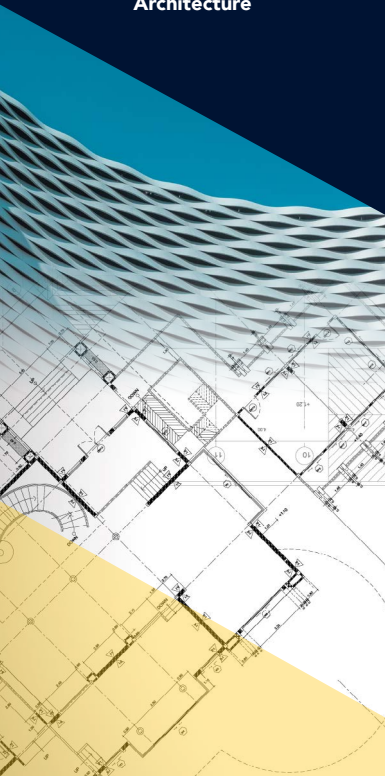


NELSON MANDELA UNIVERSITY

School of
Architecture



School of
the Built Environment and
Civil Engineering



School of
Engineering



School of
Information Technology



VISION 2030 ENGINEERING, THE BUILT ENVIRONMENT AND TECHNOLOGY FACULTY STRATEGY

CONTENTS

CONTENTS	2
EXECUTIVE SUMMARY	3
1. SECTION A: STRATEGIC OVERVIEW	5
a) Vision	6
b) Mission	6
c) Values	7
d) Strategic mandate	8
e) Situational analysis	9
f) Description of the strategic planning process	21
2. SECTION B: STRATEGIC GOALS, OUTPUTS, OUTCOMES, AND INDICATORS	23
Strategic Focus Area 1.	
Liberate human potential through humanising, innovative lifelong learning experiences that prepare graduates to be socially conscious, responsible global citizens who serve the public good.	
Strategic Focus Area 2.	
Pursue impactful, pioneering research, innovation, and internationalisation to address grand societal challenges and promote sustainable futures.	
Strategic Focus Area 3.	
Engage with all publics in equalising partnerships to co-create transformative, contextually responsive solutions in pursuit of social justice and equality.	
Strategic Focus Area 4.	
Catalyse dynamic, student centric approaches and practices that provide life-changing student experiences within and beyond the classroom.	
3. FACULTY STRATEGIC THEMES	29
a) Research and Engagement Themes	
b) Research, Innovation and Engagement Focus areas:	
4. RESOURCE IMPLICATIONS	31
5. FACULTY VISION 2030 PLANNING ARCHITECTURE	33
CONCLUSION	34

LIST OF FIGURES

Figure 1: Faculty organisational structure	31
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LIST OF TABLES

Table 1: Faculty headcount enrolments by qualification type as percentage of undergraduate (UG) and postgraduate (PG), 2018-2022	9
Table 2: Programme qualification mix 2018-2022	11
Table 3: Faculty enrolment numbers 2018-2022	13
Table 4: Faculty success rates 2018-2022	14
Table 5: Faculty graduation numbers and graduation rates (as a percentage of enrolments for the same year) 2018-2022	15
Table 6: Faculty student profile 2018-2022 (a) Numbers and (b) Percentage	16
Table 7: Faculty Research and Engagement entities	18
Table 8: Staff profile (qualification status)	18
Table 9: Faculty NRF Ratings status	19
Table 10: Faculty research output 2018-2021	20
Table 11: Faculty of Engineering, the Built Environment and Technology strategic planning process dates and topics	22

EXECUTIVE SUMMARY

The Faculty of Engineering, the Built Environment and Technology co-created its strategic plan 2023-2025 through engagements and a series of workshops with various faculty and institutional stakeholders. These have included the Faculty management committee; Faculty academic leaders and professors; Faculty student representatives from the different schools; Faculty teaching and learning committee members; Faculty research and engagement entity leaders, and committee members.

This plan should be read in conjunction with the:

- 1 Institution's Vision 2030: the Learning and Teaching Plan
- 2 Research and Innovation Implementation plan
- 3 Institutional Transformation
- 4 Strategy, and the Digitisation Strategy.

STRATEGIC FOCUS AREAS

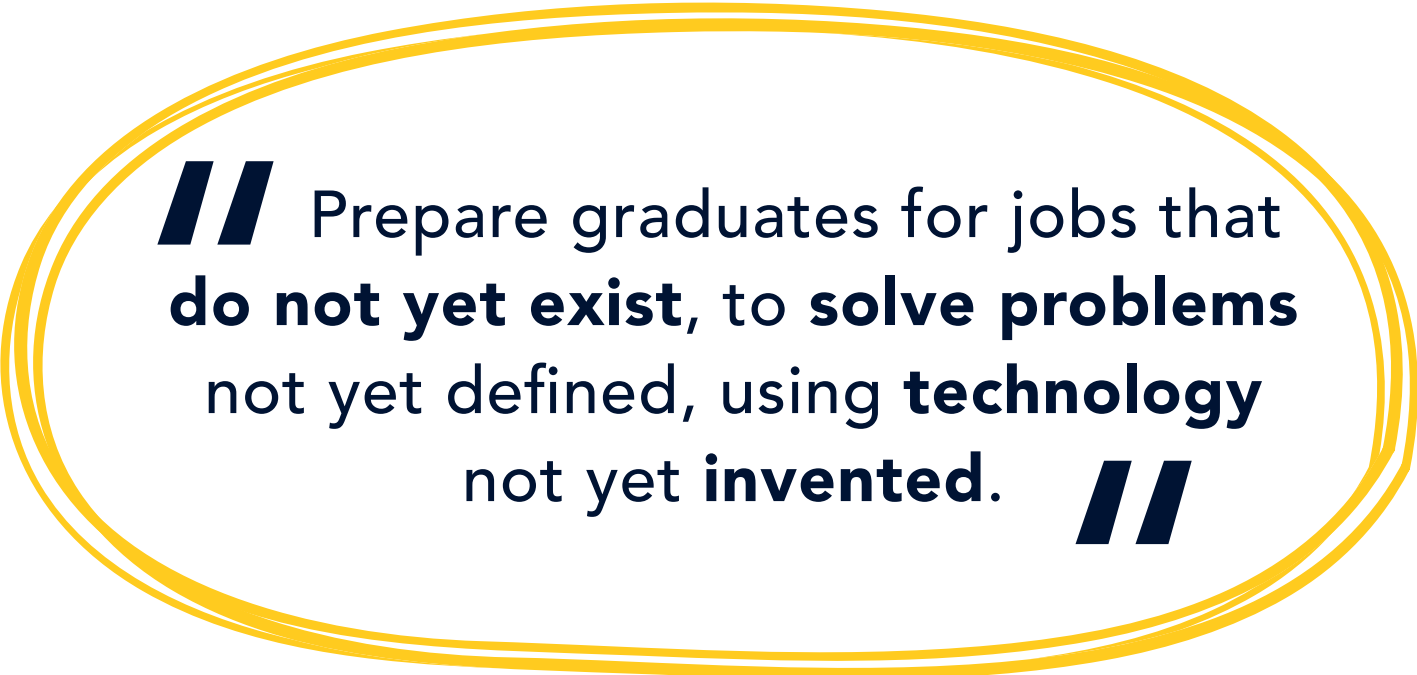
The Faculty's strategy is aligned with the University's Vision 2030 including the four strategic focus areas of:

- SFA1: Humanising, innovative teaching and learning
- SFA2: Impactful research, innovation and internationalisation
- SFA3: Engagement and transformation
- SFA4: Student access for success

The Faculty's research focus areas also align with the 17 Sustainable Development Goals outlined by the United Nations (UN SDGs).

Furthermore, the Faculty strives to adopt and align with the institution's humanising pedagogies and practices that affirm diverse knowledge paradigms and world views. In *Pedagogy of the Oppressed*, Freire (1970) describes humanising pedagogy as a revolutionary approach to instruction that "ceases to be an instrument by which teachers can manipulate students, but rather expresses the consciousness of the students themselves". Fundamentally, it means enabling a way of becoming for work and life for our students and staff, through learning and teaching, as well as through research, innovation and engagement.

The Faculty's strategic plan further endeavours to:



// Prepare graduates for jobs that do not yet exist, to solve problems not yet defined, using technology not yet invented. //

INSTITUTIONAL RESEARCH THEMES

The Faculty's overarching research and engagement themes align with the institution's research themes of:

- Ocean and coastal sciences
- Social justice and democracy
- Environmental stewardship and sustainable livelihoods
- Innovation and the digital economy
- Origins, culture, heritage, and memory
- Humanising pedagogies

1. SECTION A: STRATEGIC OVERVIEW

Several strategic and unforeseen events have unfolded over the past 10 years to significantly shape the content of the institution's Vision 2030 and its decadal strategy. These include but are not limited to: the Fees Must Fall movement (2015/2016), the launch of the new name of Nelson Mandela University (2017), the strategic repositioning of the University with those whom it serves, the Vice-Chancellor's inaugural address and listening campaign (2018), the comprehensive decadal review of Vision 2020 (2020), the organisational redesign process (2018-2021), the advent of the COVID-19 pandemic (2019), and post-pandemic resilience. Combined with extensive stakeholder engagement and strategy development led by Prof Heather Nel, Senior Director: Institutional Strategy, these events culminated in Council approving Vision 2030 on 25 March 2021.

In summary, Vision 2030 has led to the core academic missions of the University being supported and enabled through a values-driven, inclusive institutional culture that aims to liberate the full potential of students, staff and communities as the University seeks to embody the legacy and ethos of its iconic namesake, Nelson Mandela.

Through Vision 2030, Nelson Mandela University reaffirms its commitment to change the world through humanising, life-changing, student-centric educational opportunities; pioneering and impactful research, innovation and internationalisation, and transformative engagement that contribute to a better world. This commitment propels the University towards realising its envisioned graduate attributes of Foundational Knowledge and Literacies, Learning and Innovation Competencies and Life and Career Skills. These core deliverables are, and will be, supported and enabled through a values-driven, inclusive culture that unleashes the full potential of students, employees, and communities.

Additional critical enablers that will support our strategies include ethical governance and leadership, empowered employees, innovation, digitalisation and modernised infrastructure. Responsible resource stewardship with sustainability as a key line of strategic sight is a golden thread running through all the strategic focus areas.

The above deliverables will find the necessary behavioural and experiential expressions through the lived values of the University, represented below.

The Faculty has intentionally aligned with Vision 2030 including the Vision, Mission, Strategic Focus areas and enablers of the institution. This includes aligning with the institutional strategic plans of the following portfolios:

- Learning and Teaching
- Research, Innovation, and Internationalisation
- Engagement and Transformation
- People and Operations.



While crafting this strategic plan, the institution also re-imagined the Virtual Academy, in which the Faculty participated. The Faculty will align with this once it has been approved by the relevant structures.



VISION

To be a faculty that advances knowledge and technology, whilst inspiring and empowering creative minds to develop innovative and sustainable solutions.



MISSION

Fostering excellence and innovation through human-centred, life-changing educational experiences that add value in society.



VALUES

The Faculty agreed to adopt and align with the values of the institution in its Vision 2030 to ensure that we all embody the enduring legacy and ethos of our iconic namesake, Nelson Mandela.

VALUES

UBUNTU

- We are a people-centred, values-driven university that seeks to foster a compassionate and caring institutional culture.
- We respect the dignity of others and strive to be human-centred and relational.
- We recognise our mutual interdependence.
- We promote socially conscious and responsible citizenship.

SOCIAL JUSTICE AND EQUALITY

- We are dedicated to the realisation of a socially just, democratic society that promotes equality for all irrespective of race, gender, sex, pregnancy, marital status, ethnic or social origin, sexual orientation, age, physical and learning abilities, national origins, religion, conscience, belief, culture and language.
- We encourage mutually beneficial, equalising partnerships and engagement with our core publics to co-create sustainable, innovative solutions to persistent societal and planetary challenges.
- We cultivate living, learning and work environments that enable students and employees to realise their full potential, without fear of discrimination, harassment or violence.
- We develop our graduates as global citizens capable of developing and applying knowledge across multiple contexts to make meaningful contributions to advancing a socially just, equal society.

RESPECT FOR DIVERSITY

- We reflect and serve diverse regional, national and global communities.
- We promote an open society where critical scholarship and the expression of a multiplicity of opinions and ideas are actively encouraged.
- We foster an environment in which diversity is appreciated, respected and celebrated.
- We foster a culture that welcomes and respects diverse identities, heritages and life experiences.

SUSTAINABLE STEWARDSHIP

- We are committed to environmental sustainability and recognise our responsibility to conserve, protect and sustainably manage natural resources for current and future generations.
- We promote the integration of sustainability into our governance, leadership, academic core missions, operations, as well as the design and maintenance of physical and digital infrastructure.
- We inspire students and employees to embrace responsible stewardship of all financial, human, infrastructural and environmental resources entrusted to them.

INTEGRITY

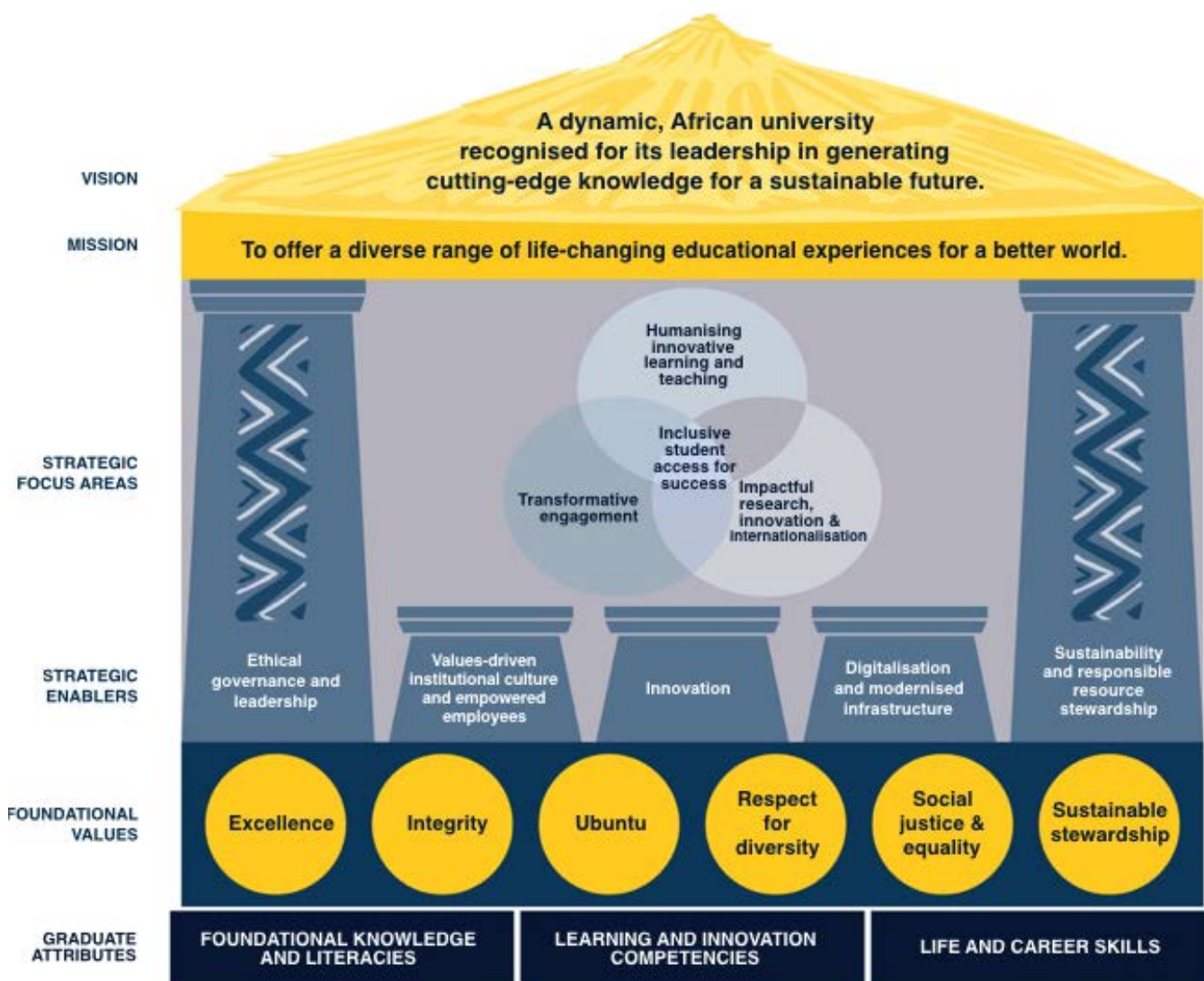
- We commit ourselves to the highest standards of personal honesty and exemplary moral character.
- We are dedicated to cultivating an atmosphere of trust.
- We take responsibility for our decisions, behaviours, actions and the consequences thereof.
- We ensure the integrity of our policies, information, systems and processes.

EXCELLENCE

- We encourage the pursuit of the highest levels of academic, civic and personal achievement.
- We provide a supportive and affirming environment that enables our students, employees and publics to reach their full potential.
- We pursue inclusive excellence by embedding equality of access and opportunity in our policies, processes, systems and practices.
- We seek to foster a culture of intellectual and personal growth and lifelong learning.
- We promote, recognise and reward excellence in our teaching, learning, research, innovation, creative outputs, engagement and service delivery.

STRATEGIC MANDATE

The Faculty draws inspiration from, and is guided by, the Vision, Mission and Values as articulated in Nelson Mandela University's Vision 2030, the framework of which is depicted below. The elements of Vision 2030, coupled with the integrated nature of their eco-systemic workings, need to operate seamlessly and with a sound understanding of the intent and praxes of interdependencies, across all faculties and administrative portfolios, to achieve the University's Vision 2030 aspirations.



SITUATIONAL ANALYSIS

Refer to the attached Appendix A for the detail of the situational analysis done as part of the strategic planning process. The high-level Faculty statistics that depict the current key performance indicators are shown in the tables below.

Table 1: Faculty headcount enrolments by qualification type as percentage of undergraduate (UG) and postgraduate (PG), 2018-2022

QUALIFICATION TYPE	2018	2019	2020	2021	2022
Higher Certificates	331	365	284	316	496
UG Diplomas	2 575	2 417	2 203	2 103	2 144
UG degrees	1 251	1 573	1 799	1 960	2 108
BTech Degrees	800	843	508	207	135
Advanced Diplomas		25	184	333	406
UG Total	4 957	5 223	4 978	4 919	5 289
Honours	55	75	75	95	129
Masters	386	406	353	301	294
PhD	91	91	72	82	80
PG Total	532	572	500	478	503
Occasional	13	16	14	12	24
Grand Total	5 502	5 811	5 492	5 409	5 816

QUALIFICATION TYPE	2018	2019	2020	2021	2022
Higher Certificates	7%	7%	6%	6%	9%
UG Diplomas	52%	46%	44%	43%	41%
UG degrees	25%	30%	36%	40%	40%
BTech Degrees	16%	16%	10%	4%	3%
Advanced Diplomas	0%	0%	4%	7%	8%
UG Total	100%	100%	100%	100%	100%
Honours	10%	13%	15%	20%	26%
Masters	73%	71%	71%	63%	58%
PhD	17%	16%	14%	17%	16%
PG Total	100%	100%	100%	100%	100%

QUALIFICATION TYPE	2018	2019	2020	2021	2022
Higher Certificates	6%	6.3%	5.2%	5.8%	8.5%
UG Diplomas	46.8%	41.6%	40.1%	38.9%	36.9%
UG degrees	22.7%	27.1%	32.8%	36.2%	36.2%
BTech Degrees	14.5%	14.5%	9.2%	3.8%	2.3%
Advanced Diplomas	0.0%	0.4%	3.4%	6.2%	7%
UG Total	90.1%	89.9%	90.6%	90.9%	90.9%
Honours	1%	1.3%	1.4%	1.8%	2.2%
Masters	7%	7%	6.4%	5.6%	5.1%
PhD	1.7%	1.6%	1.3%	1.5%	1.4%
PG Total	9.7%	9.8%	9.1%	8.8%	8.6%
Occasional	0.2%	0.3%	0.3%	0.2%	0.4%
Grand total	100%	100%	100%	100%	100%



Table 2: Programme qualification mix 2018–2022

HIGHER CERTIFICATE	3	(i) Higher Certificate in Information Technology in Support Services (ii) Higher Certificate in Renewable Energy (iii) Higher Certificate in Mechatronic Engineering
DIPLOMA	7	(i) Diploma in Architectural Technology (ii) Diploma in Building (iii) Diploma in Interior Design Diploma (iv) Operations Management (v) Diploma in Information Technology (Software Development) (vi) Diploma in Information Technology (Communication Networks) (vii) Diploma in Information Technology (Support Services)
ADVANCED DIPLOMA	8	(i) Advanced Diploma in Architectural Design (ii) Advanced Diploma in Architectural Technology (iii) Advanced Diploma in Information Technology (iv) Advanced Diploma in Interior Design (v) Advanced Diploma in Operations Management (vi) Advanced Diploma in Quality (vii) Advanced Diploma in Quantity Surveying (viii) Advanced Diploma in Construction Management
BACHELOR	11	(i) Bachelor of Engineering in Electrical Engineering (ii) Bachelor of Engineering Technology in Industrial Engineering (iii) Bachelor of Engineering Technology in Mechanical Engineering (iv) Bachelor of Engineering Technology in Marine Engineering (v) Bachelor of Engineering Technology in Civil Engineering (vi) Bachelor of Science Construction Studies (vii) Bachelor of Science in Construction Economics (Quantity Surveying with Financial and Business Management) (viii) Bachelor of Architectural Studies (ix) Bachelor of Information Technology (x) Bachelor of Engineering in Mechatronics (xi) Bachelor of Human Settlement Development
POSTGRADUATE DIPLOMA	1	(i) Postgraduate Diploma in Cyber Security

HONOURS	8	<ul style="list-style-type: none"> (i) Bachelor of Engineering (Hon) in Electrical Engineering (ii) Bachelor of Engineering Technology (Hon) in Industrial Engineering (iii) Bachelor of Engineering Technology (Hon) in Mechanical Engineering (iv) Bachelor of Engineering Technology (Hon) in Civil Engineering (v) Bachelor of Science (Hon) in Construction Management (vi) Bachelor of Science (Hon) in Construction Health and Safety Management (vii) Bachelor of Science (Hon) in Quantity Surveying (viii) Bachelor of Architectural Studies (Hon)
MASTER'S	16	<ul style="list-style-type: none"> (i) Master of Engineering in Electrical Engineering (ii) Master of Operations Management (iii) Master of Engineering in Industrial Engineering (iv) Master of Engineering in Mechanical Engineering (v) Master of Engineering in Mechatronics (vi) Masters of Human Settlement Development (vii) Master of Engineering in Civil Engineering (viii) Master of Science Construction Management (ix) Master of Science in the Built Environment (Construction Health and Safety Management) (x) Master of Science in the Built Environment (Construction Management) (xi) Master of Science in the Built Environment (Project Management) (xii) Master of Science in Construction Economics (xiii) Master of Architecture Professional (xiv) Master of Architecture (xv) Master of Philosophy in Information Technology Governance (xvi) Master of Information Technology
DOCTORATE	9	<ul style="list-style-type: none"> (i) Doctor of Engineering (Civil Engineering) (ii) Doctor of Engineering (Electrical Engineering) (iii) Doctor of Engineering (Mechatronic Engineering) (iv) Doctor of Philosophy (Operations Management) (v) Doctor of Philosophy (Mechanical Engineering) (vi) Doctor of Philosophy in Construction Management (vii) Doctor of Philosophy in Construction Economics (viii) Doctor of Philosophy in Architecture (ix) Doctor of Philosophy in Information Technology

Table 3: Faculty enrolment numbers 2018–2022

SCHOOL	DEPARTMENT	2018	2019	2020	2021	2022
Engineering Inter Dept	Engineering Inter Department	13	16	14	12	24
Built Environment and Civil Engineering	Building and Human Settlement Development	445	444	488	538	603
	Civil Engineering	382	434	415	317	338
	Construction Management	410	449	348	298	262
	Quantity Surveying	332	329	260	231	218
Sub-total		1 569	1 656	1 511	1 384	1 421
Information Technology	Applied Technologies	300	299	214	221	368
	IT Management and Governance	116	136	123	118	113
	Network Engineering	628	685	664	707	724
	Software Engineering	617	713	799	889	1045
Sub-total		1 661	1 833	1 800	1 935	2 250
Architecture	Architectural Tech and Interior Design	223	220	214	221	222
	Architecture	219	227	208	213	200
Sub-total		442	447	422	434	422
Engineering	Electrical Engineering	489	493	452	405	411
	Industrial Engineering	505	461	366	329	319
	Mechanical Engineering	423	458	447	421	457
	Mechatronics	380	403	418	408	411
	Marine Engineering	20	44	62	81	101
Sub-total		1 817	1 859	1 745	1 644	1 699
Faculty total		5 502	5 811	5 492	5 409	5 816

Despite a significant decline in enrolments in 2020 and 2021 compared to 2019, enrolments for 2022 increased by 7.5% over the prior year.

Table 4: Faculty success rates 2018–2022

SCHOOL	ORGANISATIONAL REDESIGN	2018	2019	2020	2021	2022
Architecture	Architecture	88.6%	91.5%	91.8%	84.1%	86.3%
	Architectural Technology and Interior Design	85.9%	83%	85.7%	83.2%	84.5%
Engineering	Electrical Engineering	72%	68.5%	73.2%	75.4%	64.2%
	Industrial Engineering	84.6%	84.4%	86.9%	81.7%	78.5%
	Mechanical Engineering	61.8%	68.5%	85.8%	79.1%	74.9%
	Mechatronics	72.5%	78.5%	84.1%	61.2%	62.7%
	Marine Engineering			69.7%	56.6%	66.8
Built Environment and Civil Engineering	Construction Management	87.8%	86.9%	82.3%	81.1%	70%
	Quantity Surveying	73.6%	76.6%	79.3%	60.2%	64%
	Building & Human Settlement Development	80.3%	79%	91.1%	91%	63%
	Civil Engineering	77.3%	86.1%	75.1%	80.5%	75.3%
Information Technology	Applied Technologies	77.2%	80.6%	81.8%	74.5%	66.5%
	Network Engineering	71.8%	71.2%	89.1%	86.4%	72.3%
	Software Engineering			89.6%	87.5%	83.6%
	IT Management & Governance			90.9%	88.5%	79.6%
Faculty total		76.9%	78.4%	85.2%	81%	74%

Definition of success rate: FTE passed divided by FTE's enrolled for a specific academic year

The Faculty's success rate in 2022 is the lowest it has been in five years and intentional measures will have to be explored to engage and train staff and support students to increase this going forward.

Table 5: Faculty graduation numbers and graduation rates (as a percentage of enrolments for the same year) 2018–2022

SCHOOL	DEPARTMENT	2018		2019		2020		2021		2022	
Architecture	Architectural Technology and Interior Design	50	22.4%	47	21.4%	34	15.9%	43	19.5%	41	18.6%
	Architecture	59	26.9%	67	29.5%	89	42.8%	96	45.1%	83	40.3%
Sub-total		109	24.7%	114	25.5%	123	29.1%	139	32.0%	124	29.1%
Built Environment and Civil Engineering	Building and Human Settlement Development	91	20.4%	64	14.4%	104	21.3%	126	23.4%	139	23.5%
	Civil Engineering	74	19.4%	76	17.5%	41	9.9%	58	18.3%	115	34.8%
	Construction Management	87	21.2%	134	29.8%	56	16.1%	43	14.4%	49	19.8%
	Quantity Surveying	119	35.8%	126	38.3%	60	23.1%	53	22.9%	64	30%
Sub-total		371	23.6%	400	24.2%	261	17.3%	280	20.2%	367	26.6%
Engineering	Electrical Engineering	87	17.8%	86	17.4%	85	18.8%	74	18.3%	82	20.2%
	Industrial Engineering	176	34.9%	174	37.7%	135	36.9%	65	19.8%	85	27%
	Mechanical Engineering	70	16.5%	99	21.6%	119	26.6%	86	20.4%	134	30.2%
	Mechatronics	37	9.7%	46	11.4%	34	8.1%	24	5.9%	36	9%
	Marine Engineering	0	0%	0	0%	2	3.2%	2	2.5%	11	10.9%
Sub-total		370	20.4%	405	21.8%	375	21.5%	251	15.3%	348	20.9%
Information Technology	Applied Technologies	180	60%	181	60.5%	141	65.9%	103	46.6%	123	34.2%
	IT Management and Governance	12	10.3%	17	12.5%	18	14.6%	8	6.8%	13	11.5%
	Network Engineering	95	15.1%	127	18.5%	150	22.6%	121	17.1%	121	17%
	Software Engineering	169	27.4%	220	30.9%	220	27.5%	331	37.2%	304	29.3%
Sub-total		456	27.5%	545	29.7%	529	29.4%	563	29.1%	561	25.3%
Faculty total		1 306	23.7%	1 464	25.2%	1 288	23.5%	1 233	22.8%	1 400	24.5%

Definition of graduate rate: the ratio of graduates over headcount enrolments for a specific academic year.

There has been an increase in the graduation throughput rate compared to the prior year driven by performance in the schools of Engineering, and the Built Environment and Civil Engineering.

Table 6: Faculty student profile 2018–2022 (a) Numbers and (b) Percentage

a) Numbers

QUALIFICATION TYPE	ORIGIN	2018	2019	2020	2021	2022
Occasional	Other African	1				
	SADC excluding SA			1		
	South African	12	16	13	12	24
Occasional Total		13	16	14	12	24
UG	Other African	37	35	30	21	21
	Other foreign	8	11	8	5	4
	SADC excluding SA	127	120	111	108	106
	South African	4 785	5 057	4 829	4 785	5 158
UG Total		4 957	5 223	4 978	4 919	5 289
PG	Other African	27	28	17	14	7
	Other Foreign	3	4	4	4	5
	SADC excluding SA	28	37	24	27	36
	South African	474	503	455	433	455
PG Total		532	572	500	478	503
Total	Other African	65	63	47	35	28
	Other Foreign	11	15	12	9	9
	SADC excluding SA	155	157	136	135	142
	South African	5 271	5 576	5 297	5 230	5 637
Grand Total		5 502	5 811	5 492	5 409	5 816

Occasional students, undergraduate and postgraduate student numbers have all increased over previous years.

b) Percentage

QUALIFICATION TYPE	ORIGIN	2018	2019	2020	2021	2022
Occasional	Other African	7.7%				
	SADC excluding SA			7.1%		
	South African	92.3%	100%	92.9%	100%	100%
Occasional Total		100%	100%	100%	100%	100%
UG	Other African	0.7%	0.7%	0.6%	0.4%	0.4%
	Other Foreign	0.2%	0.2%	0.2%	0.1%	0.1%
	SADC excluding SA	2.6%	2.3%	2.2%	2.2%	2%
	South African	96.5%	96.8%	97.0%	97.3%	97.5%
UG Total		100%	100%	100%	100%	100%
PG	Other African	5.1%	4.9%	3.4%	2.9%	1.4%
	Other Foreign	0.6%	0.7%	0.8%	0.8%	1%
	SADC excluding SA	5.3%	6.5%	4.8%	5.6%	7.2%
	South African	89.1%	87.9%	91.0%	90.6%	90.5%
PG Total		100%	100%	100%	100%	100%
Total	Other African	1.2%	1.1%	0.9%	0.6%	0.5%
	Other Foreign	0.2%	0.3%	0.2%	0.2%	0.2%
	SADC excluding SA	2.8%	2.7%	2.5%	2.5%	2.4%
	South African	95.8%	96.0%	96.4%	96.7%	96.9%
Grand Total		100%	100%	100%	100%	100%

Table 7: Faculty Research and Engagement entities

TYPE	NAME	LEADER
Institute	eNtsa	Prof Danie Hattingh
Centres	Advanced Mechatronic Technology Centre (AMTC)	Mr Karl Du Preez
	Built Environment Research Centre (BERC)	Mr Chris Allen
	Centre for Community Technologies (CCT)	Prof Darelle van Greunen
	Centre for Research in Information and Cyber Security (CRICS)	Prof Kerry-Lynn Thomson
	Southern Africa Cisco Academy Support Centre (SACASC)	Mr Gratitude Kudyachete
Units	Marine Robotics Unit (MRU)	Mr Andrew Young
	Cross Laminate Timber Engagement Unit (CLTEU)	Ms Emma Ayesu-Koranteng
	Infrastructure Development and Engagement Unit (ID&EU)	Ms Emma Ayesu-Koranteng
Groups	Advanced Engineering Design Group	Mr Clive Hands
	Mandela Uni Autonomous Operations (MAO)	Prof Russel Phillips
	Renewable Energy (RE)	Prof Russel Phillips
	Stem In Action (SiA)	Ms Isabel Van Gend

Table 8: Staff profile (qualification status)

ACADEMIC STAFF QUALIFICATION		
Doctorate	35	32%
Master's	46	42%
Less than Master's	28	26%
Total	109	100%



Table 9: Faculty NRF Ratings status

NAME, TITLE	RATING CATEGORY	RATING PERIOD	GENDER	RACE
Abou-El-Hossein, K, Dr	C2	2022-2027	M	B
Botha, RA, Prof	C2	2015-2020	H	W
Emuze, FA, Prof	C3	2019-2024	M	B
Futcher, L, Prof	C1	2023-2028	F	W
Hattingh, DG, Prof	B3	2018-2023	M	W
Haupt, T, Prof	C1	2023-2028	M	C
Pottas, D, Prof	C3	2014-2019	F	W
Shakantu, W, Prof	C2	2023-2028	M	B
Sheldon, M, Prof	C2	2022-2027	F	C
Smallwood, JJ, Prof	C2	2020-2025	M	W
Thomson, K-L, Prof	C2	2022-2027	F	W
Van Greunen, D, Prof	C2	2018-2023	F	W
Van Wyk, BJ, Prof	C3	2017-2022	M	W
Von Solms, R, Prof	B2	2021 - 2026	M	W

The Faculty has one institute, five centres, three units and four groups. Going forward, these entities will be reviewed for alignment with the strategic areas. Most staff hold master's degrees and staff NRF Ratings are mostly C2.

Table 10: Faculty research output 2018-2021

DEPARTMENTS	BOOK CHAPTER				BOOK CHAPTER TOTAL	CONFERENCE PROCEEDINGS				CONFERENCE PROCEEDINGS TOTAL	JOURNAL ARTICLE				JOURNAL ARTICLE TOTAL	BOOK		BOOK TOTAL	GRAND TOTAL
	2018	2019	2020	2021		2018	2019	2020	2021		2018	2019	2020	2021		2020	2021		
Building and Human Settlement Development			1	2	3	4	9		6	19			4	5	9				31
Centre for Community Technologies	1	1			2							1			1				3
Department of Architecture						2			1	3				1	1	1	1		5
Department of Construction Management	1		7	4	12	46	56	20	27	149	12	4	23	23	62	2		2	225
Department of Electrical Engineering							14	10	2	26									26
Department of Engineering Management											4	8	5		17				17
Department of Industrial Engineering						1	7		1	9	2	3		1	6				15
Department of Information Technology		2			2	1	24	16	7	48	12	19	10	11	52				102
Department of Logistics							1			1									1
Department of Mechanical Engineering						3	2	6		11	3	6	7		16				27
Department of Mechatronics Engineering							2	11	1	14	27	49	52	27	155				169
Department of Quantity Surveying						18	15		10	43	3	6		2	11				54
EBET						5				5									5
Engineering Management									2	2			6		6				8
Entsa							1			1	3	4	2		9				10
IT Management & Governance									2	2			3	5	8				10
Marine Engineering													1		1				1
Network Engineering													1	2	3				3
School Of Engineering														3	3				3
School of Information and Communication Technology	2				2	16	4		2	22	20	1		1	22				46
Software Engineering								2	4	6									6
Grand Total	4	3	8	6	21	96	135	65	65	361	83	100	110	89	382	2		3	767

Research outputs in the form of book chapters, books and journal articles has declined versus over the period measured, whereas the number of conference proceedings have been maintained.

DESCRIPTION OF THE STRATEGIC PLANNING PROCESS

An extensive strategic planning process took place across the Faculty. The collaborative, strategic, visioning and planning process consisted of workshops that included the Faculty Management of the Executive Dean, Assistant Dean, four directors of schools and 15 heads of departments. As shown in Table 11 below, each workshop had a specific theme or topic.

The first workshop focused on an overview of the University's Vision 2030 and a Faculty situational analysis and profile, with invited representatives of the Institutional Strategy unit (Senior Director: Institutional Strategy and the Director: Strategic Intelligence and Data Analytics). This was followed by a session focusing on crafting a collective new vision and mission for the Faculty.

Subsequent workshops with broader Faculty staff and student participation (as shown in Table 6) each focused on a Strategic Focus Area related to the institutional Vision 2030 of:

- Humanising and innovative learning and teaching with additional invited members from the Faculty learning and teaching committee and relevant institutional support units;
- Impactful research, innovation and internationalisation with invited professors, heads of Faculty research entities, and members of relevant institutional support units;
- Engagement and transformation with invited professors and heads of the Faculty engagement entities; and
- Student access for where success, where a specific session was held with student representatives from all the schools and departments.

The location of Nelson Mandela University within the Eastern Cape was an important factor, responding to local needs of industry, government and communities. Similarly, the mandate of being "in service of society" was also equally integral. Being a faculty with a responsive and relevant programme qualification mix was another key factor.

As part of crafting the new vision and mission statements a few interesting and thought-provoking discussions unfolded regarding what "humanising" means in the EBET Faculty context and whether to rather use "humanised" or "human-centred".

When it came to the Faculty's research and engagement themes and focus areas, consideration was given to alignment with institutional research themes as well as local, national, continental and global imperatives (such as the UN SDGs).

The first draft of the Faculty strategy, including the proposed Vision and Missions statements, overarching research and engagement themes, and strategic research and engagement focus areas, was tabled at the Faculty board meeting of 2 June 2023 for input. This then was adopted at the Faculty board meeting on 18 August 2023. The research and engagement themes and focus areas were tabled at the Institutional Senate sub-committee meetings as follows:

- Research and Innovation Committee: 3 October 2022
- Engagement and Transformation Committee : 9 October 2023
- Trans-disciplinarity and Internationalisation Committee: 27 November.

The revised strategy with input from the subsequent workshops, and Faculty staff, was tabled at the Faculty Management committee on 19 September 2023 for recommendation to the Faculty board on 20 October for approval.

Table 11: Faculty of Engineering, the Built Environment and Technology strategic planning process dates and topics

DATE	FOCUS	STAKEHOLDERS INVITED
31 Oct 2022	AY2023 planning	FMC
21 Nov 2022	Institutional Vision 2030	Prof Heather Nel; Dr Charles Sheppard
14 Feb 2023	FA1: Humanising, innovative T&L	FMC; FL&TC
8 Mar 2023	FA2: Impactful research, innovation and internationalisation	FMC; FRITEC; Entity leaders; Prof; Chairs;
23 Mar 2023	FA3: Transformative engagement	FMC; Prof; Chairs;
20 Apr 2023	FA4: Inclusive student access for success	FMC; FL&TC; students
25 May 2023	Draft 1: Faculty goals	FMC agenda
1 Jun 2023	Vision, Mission, R&E themes and focus areas (recommendation to Faculty Board 2 Jun)	FMC
2 Jun 2023	Draft 1: Vision, Mission, R&E themes; R&E focus areas	Faculty Board (Draft1)
23 Aug 2023	Mission statement: Discussion on humanising vs humanised vs human-centred	FMC
30 Aug 2023	Finalisation of strategy: (i) Vision & Mission; (ii) Goals and objectives	FMC
13 Sep 2023	Finalisation of strategy: (i) Vision & Mission; (ii) Goals and objectives	FMC
19 Sep 2023	FMC (recommendation to Faculty Board)	FMC/Schools/Depts
20 Oct 2023	Faculty Board approval	All

As part of strategy development, the Faculty has started a repository to collate all MoUs and agreements per school, department, entity, centre, unit and group. These will be reviewed with relevant stakeholders in the Legal Office and the Internationalisation Office to first ensure that all agreements have been aggregated. The Faculty will then apply its mind to the relevance of each within the spirit and intent of its strategic pillars. After this, it will start to maintain or advance these agreements with the relevant external stakeholders. The volume and complexity of these agreements are generally perceived as insurmountable. However, the Faculty believes that unbundling these will help to accelerate delivery of Strategic Focus Area 3: Engage with all publics in equalising partnerships to co-create transformative, contextually responsive solutions in pursuit of social justice and equality. It will also advance the University's brand and orientation to due diligence.

2.

SECTION B: STRATEGIC GOALS, OUTPUTS, OUTCOMES, AND INDICATORS

The Faculty's strategic goals were discussed and aligned with the institutional strategic goals; Institutional Learning and Teaching Plan; Institutional Research, Innovation, and Internationalisation Plan; Digitisation Plan, and the Institutional Transformation Plan. Strategic objectives were formulated from the previous discussions and engagements on the four strategic focus areas with the different stakeholders.

Refer to Appendix B: Institutional Strategic Planning template for annual priorities of objectives, outputs, outcomes and indicators.

STRATEGIC FOCUS AREA 1

Liberate human potential through humanising, innovative lifelong learning experiences that prepare graduates to be socially conscious, responsible global citizens who serve the public good

INSTITUTIONAL GOALS	FACULTY GOALS	FACULTY OBJECTIVES
1.1. Scale up distinguishing strategic academic directions that differentiate Mandela University within a diverse higher education landscape nationally and globally.	1.1 Scale up (strengthen/advance/expand) distinguishing strategic academic directions that differentiate FEBET within a diverse higher education landscape nationally and globally.	1.1.1 Initiate review of PQM that is strategic, relevant and responsive. 1.1.2 Review the PQM to ensure sustainability and viability.
1.2 Embrace the distinctive features of a comprehensive programme and qualification mix that provide a range of access routes and learning pathways for multi-generational learners from diverse educational backgrounds.	1.2 Embrace the distinctive features of a comprehensive programme and qualification mix that provide a range of access routes and learning pathways for multi-generational learners from diverse educational backgrounds.	1.2.1 Embrace a Faculty PQM that allows for multiple access routes. 1.2.2 Embrace a Faculty PQM that provides multiple articulation pathways for progression
1.3 Design and implement strategies to support the progressive migration towards high-quality, technology-rich hybrid learning within and beyond the classroom.	1.3 Design and implement strategies to support the progressive migration towards quality, technology-rich blended learning within and beyond the classroom.	1.3.1 Prepare for and ensure compliance with professional body accreditation requirements for upcoming visits. 1.3.2 Initiate programme reviews for those with no professional body. 1.3.3 Embed the digitisation strategy into the curricula with the use of technology, and specialised software.

INSTITUTIONAL GOALS	FACULTY GOALS	FACULTY OBJECTIVES
1.4 Design and offer hybrid and fully online short learning programmes and stackable credentials in support of lifelong learning and continuing professional development.	1.4 Design and offer blended or fully online short learning programmes in support of lifelong learning and continuing professional development.	1.4.1 Define what blended-learning means in the context of the Faculty disciplines. 1.4.2 Initiate a review of all current SLPs for mode of delivery, sustainability and viability.
1.5 Advance humanising learning experiences and curriculum transformation interventions that seek to prepare graduates for success at work, entrepreneurship and in life.	1.5 Advance human-centered learning experiences and curriculum transformation interventions that seek to prepare graduates for success at work, entrepreneurship and in life.	1.5 Initiate a review of the curriculum including human-centred pedagogies, entrepreneurship and transformation in the Faculty.
1.6 Promote University-wide internationalisation initiatives aimed at enhancing global pedagogical relevance.	1.6 Promote Faculty-wide internationalisation initiatives aimed at enhancing global pedagogical relevance.	1.6 Review current Faculty internationalisation activities in the curricula.

STRATEGIC FOCUS AREA 2

Pursue impactful, pioneering research, innovation, and internationalisation to address grand societal challenges and promote sustainable futures.

INSTITUTIONAL GOALS	FACULTY GOALS	FACULTY OBJECTIVES
2.1 Establish nationally and internationally renowned, inter- and transdisciplinary research themes that address key issues facing society and the planet.	2.1 Establish nationally and internationally renowned, inter- and transdisciplinary research themes that address key issues facing society and the planet.	2.1.1 Identify faculty research themes that align with global, national and institutional themes and strategic imperatives. 2.1.2 Identify faculty research focus areas that align with global, national and institutional themes and strategic imperatives. 2.1.3 Review faculty entities for alignment with Faculty themes and focus areas.
2.2 Review recognition, rewards, resourcing and workload models to provide an enabling environment for the generation of impactful research and innovation outputs that are locally relevant and globally significant.	2.2 Review recognition, rewards, resourcing and workload models to provide an enabling environment for the generation of impactful research and innovation outputs that are locally relevant and globally significant.	2.2.1 Revise faculty workload model to have an inclusive model that incorporates all aspects of academic work, including Learning & Teaching; Research & Innovation; Engagement & Service, activities. 2.2.2 Participate in the institutional review of the Ad Personam Policy review. 2.2.3 Communicate calls for Ad Personam promotions aligned with policy and pending availability of funds.

INSTITUTIONAL GOALS	FACULTY GOALS	FACULTY OBJECTIVES
<p>2.3 Invest in the attraction, development and retention of socially diverse, research active postgraduate students, postdoctoral fellows and early career academics to promote talent continuity, research productivity and academic excellence.</p>	<p>2.3 Invest in the attraction, development and retention of socially diverse, research active postgraduate students, postdoctoral fellows and early-career academics to promote talent continuity, research productivity and academic excellence.</p>	<p>2.3.1 Review PG enrolments, supervision capacity, and identify challenges in the faculty.</p> <p>2.3.2 Develop a Faculty PG student orientation and support programme to ensure timeous completion and graduation.</p> <p>2.3.3 Review postdoctoral fellow appointments and links to PG students and supervision capacity challenges.</p> <p>2.3.4 Identify Faculty early-career researchers and engage on support required to increase the proportion of staff with M&D qualifications.</p> <p>2.3.5. Develop a Faculty mentorship programme for early-career researchers.</p>
<p>2.4 Leverage the expertise of the HEAVA appointees and research associates for postgraduate student supervision, co-authoring of publications and joint applications for external grant funding.</p>	<p>2.4 Leverage the expertise of the HEAVA appointees and research associates for postgraduate student supervision, co-authoring of publications and joint applications for external grant funding.</p>	<p>2.4.1 Compile a report of the activities, involvement, and output of all HEAVA appointments in the Faculty to determine the impact and contribution.</p> <p>2.4.2 Identify opportunities to optimise HEAVA contributions.</p>
<p>2.5 Provide sustainable support to research chairs and entities as institutionalised mechanisms to promote synergies, enhance research and innovation productivity, and leverage external funding.</p>	<p>2.5 Provide sustainable support to research chairs and entities as institutionalised mechanisms to promote synergies, enhance research and innovation productivity, and leverage external funding.</p>	<p>2.5.1 Increase the number of externally funded research chairs aligned with the Faculty research and engagement themes and focus areas.</p> <p>2.5.2 Ensure external funding proposals are costed according to the institutional costing model to provide adequate operational, financial and admin support.</p> <p>2.5.3 Promote the commercialisation of research output where applicable.</p>
<p>2.6 Enhance the global reach and visibility of the University through expanded international networks, strategic partnerships and collaborative international research grants, particularly on the African continent and in the global South.</p>	<p>2.6 Enhance the global reach and visibility of the faculty through expanded international networks, strategic partnerships and collaborative international research grants, particularly on the African continent and in the global South.</p>	<p>2.6.1 Establish a Faculty database of all existing research partnerships and agreements.</p> <p>2.6.2 Establish the current Faculty national, African and international footprint with the aim of identifying the strategic research and innovation partners to retain and identify new partnerships to be formed.</p>
<p>2.7 Ensure that the physical and electronic library and information services collections are appropriately resourced to maintain currency with trends in scholarship across all knowledge domains.</p>	<p>2.7 Ensure that physical and electronic library and information services collections are appropriately resourced to maintain currency with trends in scholarship across faculty knowledge domains.</p>	<p>2.7 Arrange annual faculty/discipline book exhibitions to ensure allocated funding is spent to maintain the currency of the different knowledge domains.</p>

STRATEGIC FOCUS AREA 3

Engage with all publics in equalising partnerships to co-create transformative, contextually responsive solutions in pursuit of social justice and equality.

INSTITUTIONAL GOALS	FACULTY GOALS	FACULTY OBJECTIVES
3.1 Conceptually and programmatically anchor the strategic goals of engagement and transformation within and beyond the University.	3.1 Conceptually and programmatically anchor the strategic goals of engagement and transformation within and beyond the Faculty.	3.1.1 Establish and maintain a Faculty database of all existing engagement partnerships and agreements. 3.1.2 Establish and maintain the current the Faculty national, African and international footprint with the aim of identifying the strategic equalising partnerships to retain and new partnerships to be formed.
3.2 Position engagement and transformation as an institutional orientation that supports the aspiration of excellence in learning, teaching and research.	3.2 Position engagement and transformation as a faculty orientation that supports the aspiration of excellence in learning, teaching and research.	
3.3 Lead creative and pioneering engagement and transformation projects that differentiate Mandela University within the national and global higher education sector.	3.3 Lead creative and pioneering engagement and transformation projects that differentiate the faculty within the national and global higher education sector.	3.3 Identify and engage external stakeholders that support and advance the faculty strategic focus areas.
3.4 Cultivate a vibrant intellectual culture that promotes critical consciousness and creates spaces for the open sharing of diverse knowledge paradigms and ideas.	3.4 Cultivate a vibrant intellectual culture that promotes critical consciousness and creates spaces for the open sharing of diverse knowledge paradigms and ideas.	3.4 Identify and transform shared spaces that can be used as inter-/multi-/trans-disciplinary areas of convergence and social integration.
3.5 Develop and implement institutional policies, systems and processes, to promote social inclusion and decisively eliminate all forms of discrimination, micro-aggressions and gender-based violence.	3.5 Contribute to the development and implementation of institutional policies, systems and processes, to promote social inclusion and decisively eliminate all forms of discrimination, micro-aggressions and gender-based violence.	3.5 Provide input into relevant institutional policies, systems and processes and make suggestions/recommendations through the relevant faculty structures.
3.6 Embed engagement and transformation across all University portfolios for broad socio-economic impact and in the interest of the public good.	3.6 Embed engagement and transformation within the faculty for broad socio-economic impact and in the interest of the public good.	3.6.1 Create opportunities for engagement and transformation discussions and activities within the Faculty structures (i.e. relevant Faculty Research and Engagement committee – FRI2T2EC) 3.6.2 Align Faculty engagement and transformation activities to institutional engagement and transformation strategies.

INSTITUTIONAL GOALS	FACULTY GOALS	FACULTY OBJECTIVES
<p>3.7 Cultivate a culture of scholarship as an intellectual resource base that buttresses the engagement and transformation approaches, praxes and programmes of the University.</p>	<p>3.7 Cultivate a culture of scholarship as an intellectual resource base that buttresses the engagement and transformation approaches, praxes and programmes of the University.</p>	
<p>3.8 Develop platforms for co-creating sustainable, innovative solutions to societal challenges through equalising partnerships with diverse publics.</p>	<p>3.8 Develop platforms for co-creating sustainable, innovative solutions to societal challenges through equalising partnerships with diverse publics.</p>	<p>3.8 Strengthen and support the management and governance structures for Faculty entities.</p>



STRATEGIC FOCUS AREA 4

Catalyse dynamic, student-centric approaches and practices that provide life-changing student experiences within and beyond the classroom.

INSTITUTIONAL GOALS	FACULTY GOALS	FACULTY OBJECTIVES
4.1 Conceptualise, develop and co-create an African-purposed, integrated suite of thriving student life and support services that deliver evidence-based interventions to support student success.	4.1 Conceptualise, develop and co-create an African-purposed, integrated learning environment that delivers evidence-based interventions to support student success.	4.1.1 Embed activities and assessments into the curricula that develop and assess the Nelson Mandela University and other professional body graduate attributes. 4.1.2 Raise student awareness of and integration with academic and non-academic student support services and interventions to ensure student success.
4.2 Stimulate vibrant, inclusive living and learning student communities on- and off-campus through diverse intellectual, cultural, sport and recreational activities and programmes.	4.2 Stimulate vibrant and inclusive learning environments within the faculty and programmes.	4.2.1 Identify and transform indoor and outdoor learning spaces that can be used as inter-/multi-/trans-disciplinary areas of convergence and social integration. 4.2.2 Work with university support units to ensure venues are equipped and up to standard for conducive learning and teaching environments.
4.3 Provide curricular and co-curricular experiential learning opportunities that cultivate innovative, entrepreneurial mindsets and enhance the readiness of graduates for life and work.	4.3 Provide curricular and co-curricular work-integrated learning opportunities that cultivate innovative, entrepreneurial mindsets and enhance the readiness of graduates for life and work.	4.3.1 Scaffold the different work-integrated-learning modalities into the curricula: (i) Work-directed theoretical learning; (ii) Problem-based learning; (iii) Project-based learning; (iv) Workplace-based learning as applicable. 4.3.2 Embed opportunities and activities related to entrepreneurship into the curricula. 4.3.3 Form partnerships and create opportunities for final year students to engage with external stakeholders such as industry for employment and other opportunities.
4.4 Enact institutional communities of practice, collaborative programmes and campaigns to promote holistic student well-being, health and safety.	4.4 Enact faculty communities of practice, collaborative programmes and campaigns to promote holistic student well-being, health and safety.	4.4 Create space and optimise the timetable for students to participate in non-academic activities and interventions that support their wellbeing, health and success.
4.5 Transform the culture of dialogue and student engagement to nurture the leadership capabilities of young African leaders and intellectuals who contribute meaningfully to society.	4.5 Create a culture of dialogue and student engagement to nurture the leadership capabilities of young African leaders and intellectuals who contribute meaningfully to society.	4.5 Create opportunities and activities in curricula for dialogue, engagements that harness and develop leadership capabilities and prepare graduates to contribute to society.
4.6 Facilitate the continued involvement of alumni in the activities and initiatives of the University to enhance global visibility and reach through value-adding collaborative networks.	4.6 Facilitate involvement of alumni in the activities and initiatives within the faculty to enhance global visibility and reach through value-adding collaborative networks.	4.6.1 Create and maintain alumni database for a national, African, and international footprint. 4.6.2 Initiate opportunities and involve Faculty alumni to enhance our global visibility and reach.

3. FACULTY STRATEGIC THEMES

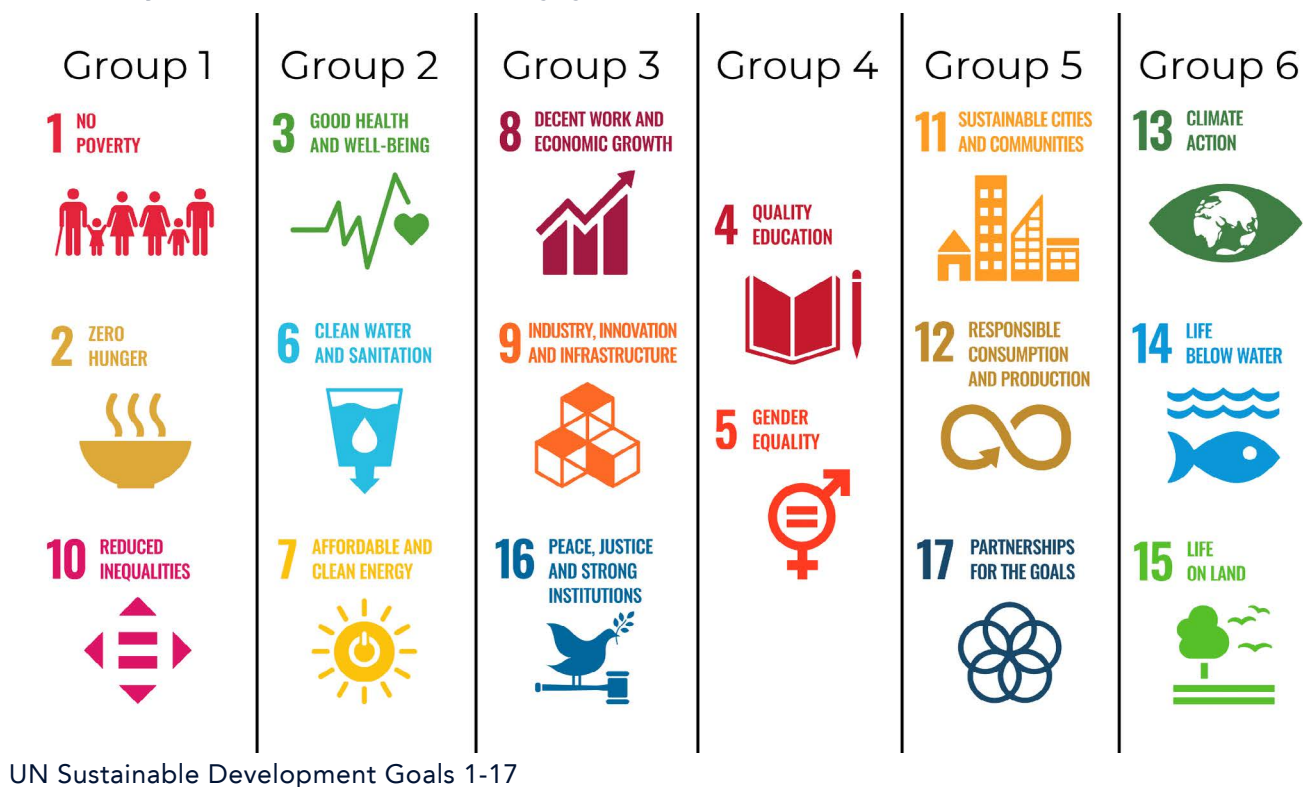
The following faculty strategic themes are aligned with the University's institutional themes. These themes were identified with input from the Faculty Research and Engagement committee; entity leaders; professors and associate professors, and research chairs.

a) Faculty Research and Engagement Themes

1. Marine and Maritime Engineering, Technology and Sciences
2. Sustainable Environments and Infrastructure
3. Innovation and the Digital Economy
4. Cyber Security and Privacy
5. Advanced Manufacturing
6. Indigenous Knowledge Systems and Sustainable Development
7. STEAM Education and Pedagogies for the Digital Economy



b) Faculty Research, Innovation and Engagement Focus areas:



The following are the faculty focus areas, aligned with the sustainable development goals

1. Autonomous Systems and Technologies (SDG 9)
2. Cyber Security and Privacy (SDG 3; 4; 9)
3. Data Science and Artificial Intelligence (SDG 9)
4. Digital Health and Wellness (SDG 1; 3; 10)
5. Digital enhancement of policy implementation and governance (SDG 4; 9; 16)
6. 4IR and Internet of Things (SDG 9)
7. Robotics and Automation (SDG 9)
8. Sustainable energy technologies and solutions (SDG 1; 6; 7; 13)
9. Sustainable water technologies and solutions (SDG 1; 6; 14)
10. Sustainable, Smart Cities and Urban Infrastructures (SDG 1; 3; 8; 9; 11; 12)
11. Sustainable Materials and Processes (SDG 9)
12. Closing the gender gap (SDG 5)
13. STEAM Education and Pedagogies (SDG 4; 5)

NOTES:

Human-centred approach will be adopted throughout all themes.

STEAM: Science, Technology, Engineering, Architecture, Mathematics.

4. RESOURCE IMPLICATIONS

In addition to the above, it is important to outline the resource implications in relation to each of the strategic priorities and goals.

The Faculty Structure as approved by Manco in 2019 is presented in Figure 1.

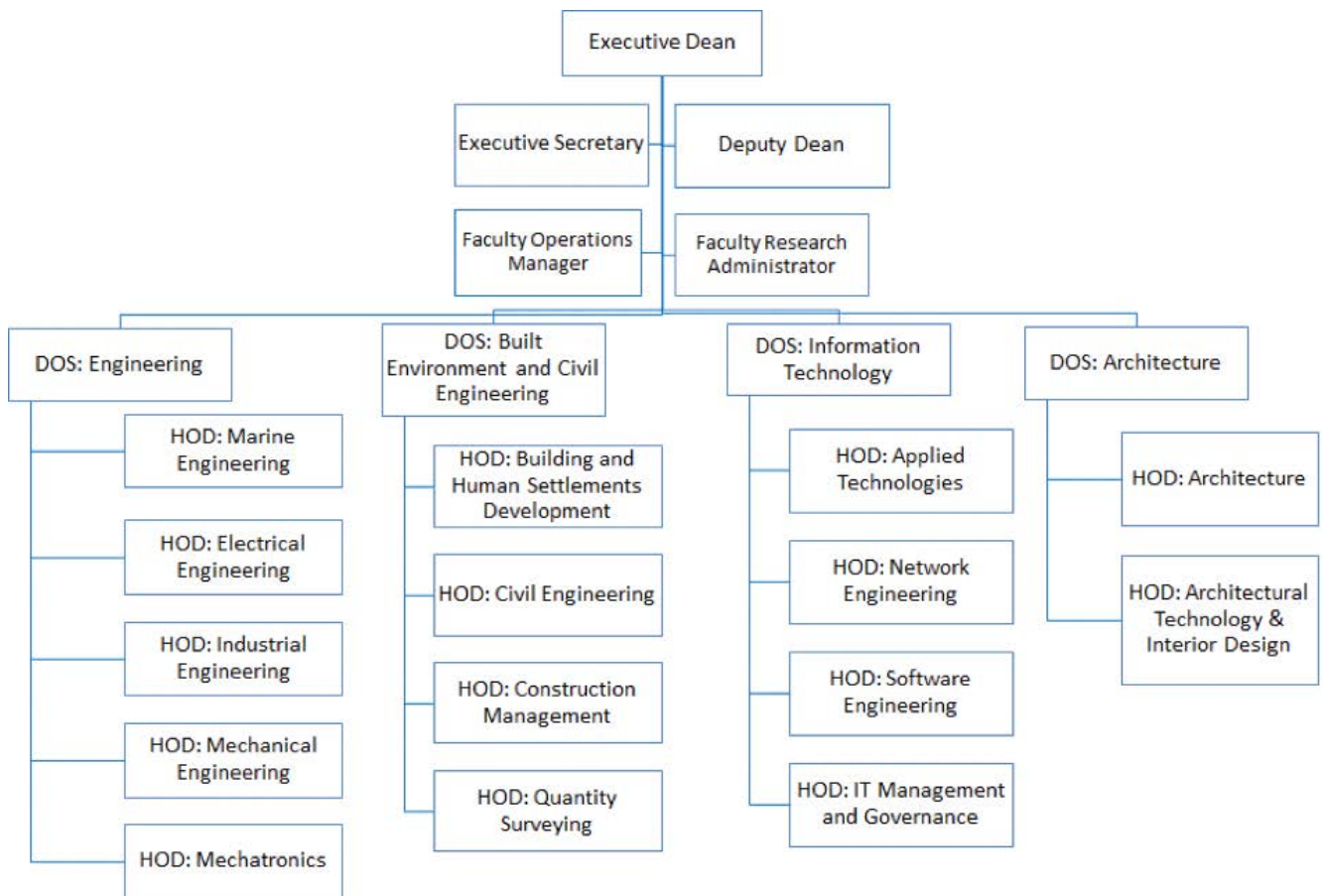


Figure 1: Faculty organisational structure (Manco approved 2019)

The following positions, portfolio coordinators, and/or champions will be required for implementation of the Strategy:

- Operations Manager – coordination and implementation of strategic plan and projects
- Learning and Teaching – PQM and curriculum review champion
- Research and Innovation – Innovation champion
- Internationalisation – Internationalisation champion
- Risk register – Risk champion

The financial implications of these coordinators and champions will need to be discussed by Faculty management, HR, and with the central finance department, considering the Faculty HR resource allocation model (HR RAM); financial viability, and sustainability.

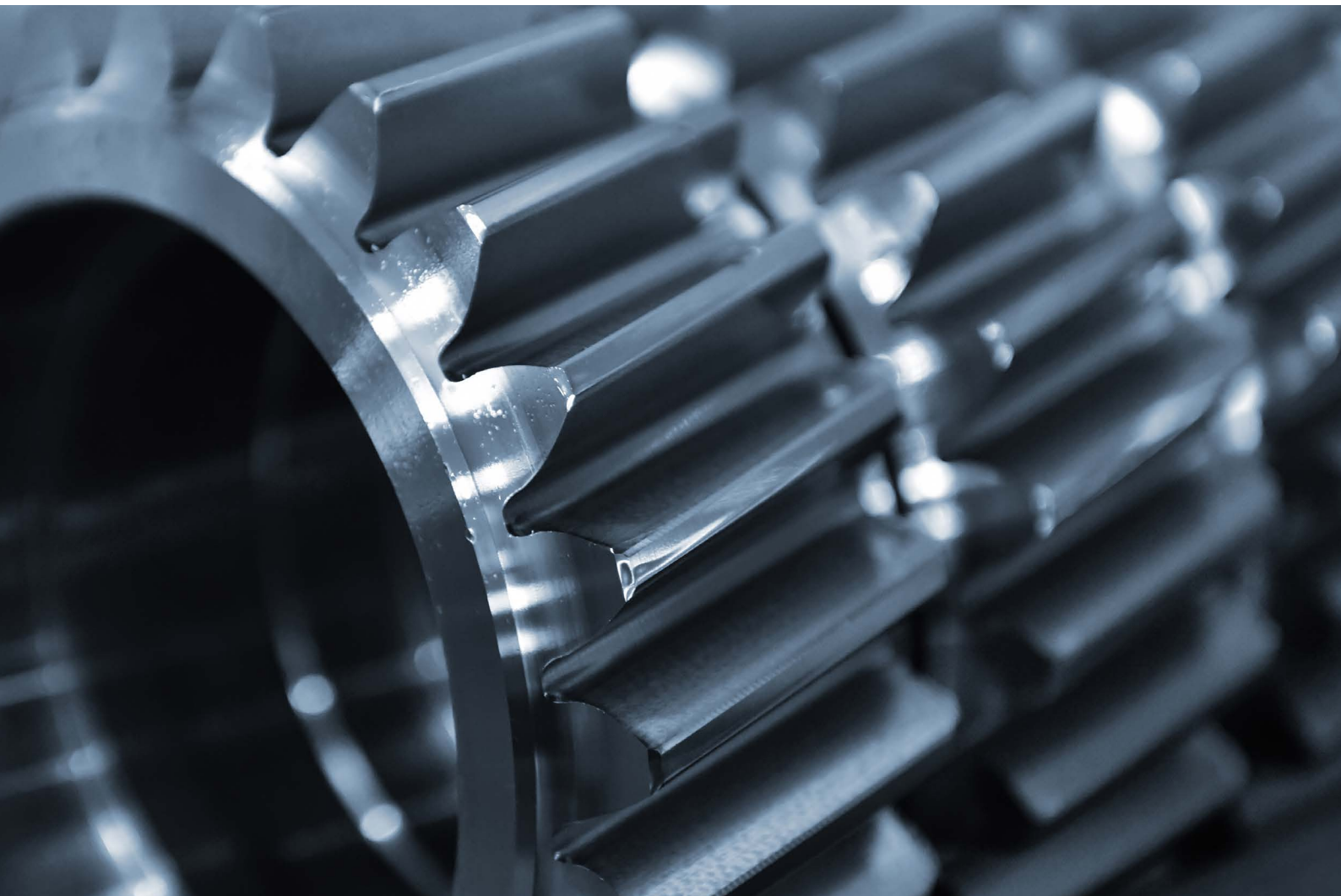
Other staffing, financial, and resource implications (infrastructure, ICT and so on) will be considered when developing the annual performance plans.

Risks and opportunities identification and management

Refer to Appendix C, the Faculty risk register from May 2022.

Update of risk register in 2024

During 2024, the Faculty will list and discuss the key risks and opportunities that may have an impact on the attainment of strategic goals and objectives. The Faculty risk and opportunity registers will be aligned with the three-year strategy and provide an assessment of identified risks and opportunities accompanied by specific action plans to mitigate the risks and optimise the opportunities.



5.

FACULTY VISION 2030 PLANNING ARCHITECTURE

The Faculty's Strategy 2030 is a decadal strategy that will be implemented through two cycles rolling strategic plans from 2023-2025 and 2026-2030. Schools and departments will develop strategic plans aligned with Faculty Strategy to give expression to their contribution to implementing the Faculty's vision, mission, values, strategic goals and objectives.

// Young people must take it upon themselves to ensure that they receive the highest education possible so that they can represent us well in future as future leaders.

//
- NELSON MANDELA

6. CONCLUSION

The trailblazing nature of engineering, the built environment, and technology is reshaping the current and future world of work in unprecedented ways. This requires us as a Faculty to be innovative and continue to push the boundaries of what is possible and create new opportunities. As we look ahead, the trans-disciplinary nature of and between engineering, the built environment, technology and other related disciplines, promises to revolutionise how we live and work, making our world more connected, efficient, and environmentally responsible than ever before.

The rapid advent of technology within engineering, the built environment, and technology sectors is compelling us to prioritise and advance human-centeredness. This strategic plan and its implementation should be anchored by a deeper understanding of human needs, values, and experiences so that we could create solutions that are not only more efficient, but also more inclusive, accessible, and sustainable. Deeper consideration will be given to ethics, integrity, privacy, and our social responsibility. As we navigate the complexities of an increasingly digital and interconnected world, the focus on human-centeredness is instrumental in shaping a future that improves the well-being and the quality of life for all. Even in a rapidly changing technological landscape, it is our shared humanity that should remain at the core of this strategy.

Closing the gender gap in engineering, the built environment, and technology is not just a matter of equality; it is a fundamental necessity for progress. Gender diversity fosters innovation, better problem-solving, and a richer range of ideas. We will through our strategic plan and implementation activity, working to encourage the next generation of young girls to pursue careers in STEAM, and ensuring a more equitable workforce.

In closing, this quote from our institution's namesake encapsulates the heart of the Faculty of EBET's strategy and runs like a golden thread through its spirit and intent:

//

**Everyone can rise above
their circumstances and
achieve success if they are
dedicated to and passionate
about what they do.**

- NELSON MANDELA

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