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An analysis of the year by the Executive of the Faculty in relation to the goals of the FoST Strategic Plan 2016-2020.

**Introduction**

The Faculty moved into its fourth year in July 2017 and completed its program of review and renewal begun in 2015. We also began teaching at our new Berwick campus a task largely undertaken by staff at all levels from the Gippsland campus. Although only three degrees were offered (two science and one IT) the task was significant with a concerted effort necessary to ensure the technical and teaching resources were available. Initial enrolments were very encouraging and suggest that Berwick will exceed our expectations as a major new campus in the Federation constellation.

This year we completed the last of the major discipline, curriculum renewals with our engineering programs revamped and revitalised to reduce the number of courses to 87 while maintaining the full breadth of programs including civil, mechanical, mining and mechatronics. A new common engineering core means a significant reduction in the number of courses while maintaining student choice in graduate outcomes. In addition, the engineering group undertook a 5 yearly accreditation review with Engineering Australia which added a very significant workload. However, despite the demands and program of change our engineering degrees have been re-accredited for the next 5 years and the discipline has been commended for the new degree structure and our links with industry partners. Congratulations to Steve Wilcox and the Engineering staff across our campuses.

We also undertook a University review of the postgraduate program in Maintenance and Reliability Engineering and again the review panel commended the degree and its fully online delivery while making some good suggestions for improvements which will be followed up over the next 12 months. This degree is a premier offering of the University with a long history and an enviable reputation in industry.

The new Information Technology degree which won an Australian Computer Society (ACS) award last year for its innovative design, was introduced to first year students this year. The combination of a more phased and pervasive introduction to programming through problem solving and algorithm analysis has proved popular with students and staff. Programming courses have been an issue with student understanding in all computer science courses but it would appear the new approach eases the introduction to programming logic allowing better student understanding and progression. The new courses will begin with our partners next year and we anticipate similar favourable reactions with our major international cohort.
The ACS also accredited the new IT programs in 2017 and were impressed with the development of the degree, commending the innovative approach of the program and its strong industry linkages. In this context we were also finalists in the 2017 Australian Financial Review Higher Education Awards for our long partnership with IBM and co-development of our very successful Bachelor of Information Technology Professional Practice degree.

The rationalisation of science courses is now all but complete and the development of team teaching in each of our courses is yielding a process of continuous review and change to meet the needs of the curriculum and our students. This is most notable in on-line teaching where the provision of a specific coordinator and rapidly changing teaching support provisions have improved pass rates and retention dramatically.

The annual Executive Dean’s tour of China in September allowed us to welcome large numbers of new students into our partner degrees at HUST, SGU and a first FedUni intake at ZUT. We also visited Shenzhen Polytech and began development of a new joint offering in Nutritional Science. This has meant some rapid work between the Head of the School of Applied and Biomedical Sciences and our Associate Dean, Engagement to put it all together but they have succeeded and we anticipate that we will meet the Chinese deadlines to enrol our first students in September 2019.

It has been an excellent year for promotions with Barbie Panther, Richard Dazeley and Vince Verheyen achieving Associate Professorships while Fiona Hogan and Manoj Khandelwal were elevated to senior lecturers.

Singarayer Florentine has been awarded a Citation for Outstanding Contribution to Student Learning by the Australian Awards for University Teaching. This is National recognition of teaching prowess and we are very proud that Florry has joined our other national awardees Jessica Reeves, Richard Dazeley and Barbie Panther in receiving recognition for their excellent teaching skills and outcomes.

Wendy Wright won the 2017 Award for Excellence in Graduate Research Leadership with her long stewardship of our Higher Degree Research students.

The University’s Alumnus of the Year was one of our 2007 graduates in Information Technology, Leon Newnham for his outstanding professional achievement for both his voluntary work and his international IT career. Distinguished Alumnus of the year was also one of our graduates, Kenneth Ogden who was a member of Ballarat Council and had a long career as a civil engineer in academia, consulting and policy development with a wide range of organisations.
Rae Mackay left us to take up the role of Latrobe Valley Mine Rehabilitation Commissioner with the State Government and was elected Emeritus Professor of the University. This reflects the expertise of the Geotechnical and Hydrogeological Engineering Research Group and their close association with the mines in Gippsland.

Our research effort is increasing with new grants and contracts in environmental science and conservation, water use and conservation, geotechnics and geohydrology of brown coal, structural engineering, carbon capture, sustainable uses of brown coal, cyber security, biomolecular studies of heart disease, cancer, medical microbiology, optimisation and climate change and cyclones.

Savin Chand was awarded the Vice Chancellor’s Award for Excellence in Research for his work on the effects of Climate Change on Cyclones in the Pacific.

We had another ARC win, three LEIF grants and three NHMRC successes this year. In short, our approach to increase mentoring of our ERA and middle year researchers, build research groupings and developing industry linkages is yielding success even this early in its application. The Faculty’s development of fee-free scholarships for international students has also underpinned our HDR program particularly in Information Technology and Engineering, though Science is also benefitting by attracting good quality international applicants to key programs.

The Faculty’s introduction of a review of individual research into its PRDP assessment process from 2016 and its encouragement of mentoring and collaboration through the thematic groupings has allowed a change in the research culture and rewards those who make their research a productive core of their academic career.
Learning and Teaching

Associate Dean, Learning and Teaching – Barbie Panther

The FoST Strategic Plan was released early in 2017 and lays out the goals and actions for learning and teaching in the Faculty for the next four years. The plan includes seven key strategies:

1. Continuous development of staff capabilities in delivering high-quality offerings and support for staff to move to student-centred teaching activities suitable for on-campus, cross-campus and online environments, with on and off-shore partners.
2. Identify outstanding teaching performance and student support initiatives and encourage/support application for awards and citations.
3. Increase the number of staff undertaking L&T research, applying for, and gaining, L&T grants.
4. Maintain accreditation requirements and manage associated processes in all disciplines subject to external review.
5. Regularly review programs and courses to evaluate learning outcomes, student progression and redevelop curriculum.
6. Obtain and respond to meaningful data on student performance, attrition, L&T quality and student experience.
7. Ensure Faculty processes meet and maintain TEQSA compliance.

2017 was a year in which FoST continued its curriculum renewal process, particularly in IT and engineering. The Faculty offered 26 programs across the disciplines of science, mathematics, engineering and IT at three campuses of FedUni, and through two international partners and seven onshore partner organisations. The majority of the programs in the Faculty are also available for online enrolment.

The Faculty offered programs at the Berwick campus for the first time in 2017, with sixty-eight students undertaking the Bachelor of Environmental and Conservation Science, the Bachelor of Information Technology and the Bachelor of Veterinary and Wildlife Science. FoST also began to deliver the Bachelor of Science (Environmental Science) at the Hebei University of Science and Technology in China with a starting cohort of 84 students.

Student Enrolment

Student numbers were steady across the on-campus enrolments in 2017. Students enrolled in online/flexible courses are now a significant cohort for the Faculty comprising 32% of HE course enrolments for Semester 1, 2017. Enrolment in online courses incorporates both students studying from a distance and local students looking for flexibility in their program.

The Faculty continued to support staff to improve their skills in the development of high-quality online learning materials. One embedded learning designer worked closely with staff teaching online courses to ensure high quality e-learning resources are provided across the Faculty. The number of courses offered online increased from 41 in 2015 to 143 in 2017. We also saw a 230% increase in the number of students taking at least one online course in that time, the majority of these in science and post-graduate engineering courses.
Student Feedback

Student eVALUation was largely positive with 88% of courses rated as excellent or very good by students across the Faculty. Data about teaching and employment outcomes from three surveys of our current and graduating students are combined and published via the government QILT website. The data shows once again, the overall quality of the educational experience, teaching quality and student support for current students in FoST are among the highest in Victoria. We are ranked number 1 in Victoria in overall quality of the educational experience in Engineering and IT and number 2 in Science (5% above the national average). For teaching quality and student support, our current students rank us number 1 in IT and Science and number 2 in Engineering.

Our science graduates rank our program number 1 in Victoria in teaching scale (20% above the national average). Our students have close to the highest employment rates in the state with Engineering and IT ranking number 2 and Science number 1. Our graduates also have the highest starting salary for science in Victoria.

Curriculum Development

2017 continued to be a year of curriculum development and review in FoST, particularly in the School of Engineering and IT. The quality of our IT programs has been recognised externally with Assoc Prof Richard Dazeley being named the ICT Educator of the Year in the Australian Computer Society national awards. This award recognised his work in redeveloping the Bachelor of IT. The renewed program was delivered for the first time in 2016 and incorporates seven streams, which have been developed to ensure graduate employability in emerging areas of IT. Students can choose from Big Data and Analytics, Business Information Systems, Cloud and Enterprise Computing, Games Development, Mobile App Development, Networking and Security and Software Development.

The BIT (Professional Practice) program was recognised externally: shortlisted in the Australian Financial Review Higher Education Awards in 2017 in recognition of the high level of engagement with industry in this program. Students in the Professional Practice program undertake work placement with our industry partner, IBM, throughout their studies.
In the postgraduate IT programs, a new stream in software engineering was introduced into the Graduate Diploma and Masters of Technology. The enterprise systems stream was renewed and renamed as Enterprise Systems and Business Analytics to reflect the needs of graduates.

All IT programs were successfully re-accredited by the ACS during 2017. The Bachelor of Engineering (Honours) and Masters of Engineering programs were renewed with the objective of increasing common courses across campuses and disciplines, improving the student experience through enhanced curriculum design and increasing flexibility by allowing for mid-year intake into engineering. As part of this renewal, the common first year was redesigned to provide a stronger underpinning of engineering, mathematics and physics and a core set of courses in design, business and research methodology were introduced to enable students to work in multidisciplinary teams, develop core-engineering competencies and broader employability skills. The new programs, incorporating 73 new courses in civil, mechanical, mechatronics and mining engineering were successfully accredited by Engineers Australia in 2017 and are offered from 2018.

Program Reviews

Four major program reviews were completed in the Faculty in 2017. The Bachelor of Geoscience review panel acknowledged the long and rich history of the geosciences at FedUni and its predecessors and affirmed the program as being the only 3-year pathway program offered in Victoria. The Faculty was commended on the clear sense of identity and community developed for students of the program and the strong reputation of graduates from the program in the geosciences industry. As a result of this review, the geoscience group will undertake a review of curriculum with the purpose of improving efficiency, creating flexibility for students and increasing the use of technology across the program.

Review of the Bachelor of Environmental and Conservation Science found it to be a program delivered effectively across a number of modes of delivery, with significant opportunities for students to undertake practical and applied experience. The curriculum will continue to be monitored to ensure high quality outcomes for students and the Faculty will continue to work with industry partners to ensure relevance of the program for our graduates.

The review panel affirmed Faculty postgraduate Brewing programs as a flagship for the University with an excellent reputation and a high level of industry endorsement. The program was commended for the rich, flexible online learning environment provided for students in the program and for maintaining one of the highest retention and progression rates in the university. The brewing programs will continue to work closely with industry to ensure outcomes are relevant for our graduates.
Learning and Teaching Case Studies

Statistical methods: Providing a sound grounding in essential statistical skills for a diverse student cohort

Statistical Methods is a core subject in a broad range of programs across Federation University, from Psychology across all the Sciences to Education and IT. It is taught across many modes, on-campus, online and in a compressed two week block mode in China. Careful design of the course to meet the needs of all these students has resulted in a course which students praise for its structure and effectiveness. The interactive lectures are a combination of theory and practical with lots of discussion, short videos and explanations of real-world problems. The course allows for diverse learning styles and provides authentic examples inspired by students’ future careers, including: how to test the effectiveness of a new teaching method; comparing post-traumatic stress disorder levels of veterans; assessing the success of drug trials and assessing whether children wearing particular types of superhero costumes are more likely to get injured.

Pathophysiology: human and animal perspectives

Offerings of pathophysiology courses in the past have been human-oriented to provide for biomedicine students, but since the introduction of Veterinary and Wildlife Science across all our campuses, the pathophysiology courses have been redesigned to accommodate students in both programs. Students are given the opportunity to pursue animal or human-based examples of disease conditions. As an example, students complete an assignment on the biology and spread of cancer in humans or a vertebrate of their choice. In lectures on organ systems where obvious structural or functional differences exist amongst vertebrates, the comparative anatomy/physiology provides contrast and understanding of underlying similarities despite the presence of overt difference. Students studying pathophysiology are provided with a broad knowledge of disease and its processes applicable amongst vertebrates as a whole.

Games Design and Theory: Gamifying the online environment

As part of the renewal of the Bachelor of IT, an innovative on-line environment has been developed for the introductory games development fundamentals course in the Bachelor of IT. Students progress through the course from “Fresh spawn” through “Rookie” and “Adventurer” to “Master”, advancing each week as they complete the learning tasks. A weekly quest acts as formative assessment and is designed to enable students to share their ideas about game design with each other. For their major assessment task, students are asked to develop a computer game prototype and at the end of the semester, the staff then produce a video show reel showcasing and reviewing the Top 10 games.
Student Retention & Success

Associate Dean, Student Retention & Success – Grant Meredith

The Faculty is proactive in its response to student satisfaction and feedback from all its offerings. All courses are reviewed each year for their curriculum, learning outcomes and student satisfaction, with adjustments made to improve these outcomes as required. The SRS program is an ongoing University initiative with which the Faculty is fully involved and which we review progress through the year.

Student retention figures for 2017 are not yet available and thus we present the 2016 results in this discussion. The figures remained challenging for the Faculty in 2016 with relatively high attrition rates at all delivery locations including partners (Figure 1). However, the figures would appear to have plateaued since 2015 and we are optimistic that this does portend improving figures over the next year as our retention and success program takes hold.

![Attrition rates University and Faculty 2013 – 2016.](image)

When the attrition data for commencing students was broken down into our main domestic delivery locations the Faculty saw a sharp increase in the attrition rates of commencing Mt Helen and Online students in comparison to the other sites (Figure 2). This rise might be explained by the increasing mature age cohort at Mt Helen and online students who are dominated by time-poor students often with variable commitment to their studies. The Faculty has appointed a coordinator for online students at Gippsland and this does seem to have helped with progression and retention.
The retention figures obtained to date for the 2017 year were for the programs Bachelor of Science, with a 3% improvement since 2016 and the Bachelor of Information Technology with a 7% improvement. These programs were both targeted for attention in 2016 and it is gratifying to see these improvements so early in their retention recovery plan.

The Faculty instituted a number of strategies to assist with improving retention. These strategies include ensuring that students who were identified as needing intervention throughout their university lifecycle were directed straight to the services most relevant to their needs. This eliminates the need for a meeting with a Program Coordinator who then directs the student to other support services. Training to increase staff awareness of the available intervention strategies and assistance was provided. Program Coordinators were made more aware of Student Success Plans and as a result the Faculty saw a large increase in their use. In fact the Faculty’s partner sites now lead the way with a high uptake of the Student Success Plans. In 2016 and 17 the focus was on supporting student-lead activities and the formation of student societies. This was evidenced by the Gippsland campus’ IT Society winning the University’s “Best New Society” award for 2017. 2017 also saw the first year of IT and Science at Berwick and a significant focus was placed upon support for these students.
Research

Associate Dean, Research – David Piedrafita

Research Goals 2016 - 2020

1. Retain and improve our ERA ranking in all fields submitted in 2015, but not be bound by the constraints of the ERA in developing research.
2. Develop areas of research with significant growth potential.
3. At least double average annual research income by 2020.
4. Expand our research engagement with industry and government agencies.
5. Encourage all existing and new academic staff to contribute to research through an appropriate organizational structure, time management, planning and mentoring.
6. Increase the visibility of our research through the web, the media and traditional research outputs, as well as by ensuring its relevance and impact.
7. Build a strong and distinctive research culture of high quality and collegiality at all levels of the Faculty.

Research Highlights – Thematic groups

The Faculty has a strong commitment to the four thematic research groups (Biological Sciences, Computer Science and Mathematics, Engineering Resources and Technology, and Impact Ecology) and our continued success is in no small part attributed to the workings of these members (Figure 3). The four themes have substantial benefits in the management and administration of research as well as in mentoring early- and mid-career researchers and the expansion of publicity arising from the Faculty’s research programs. Particular recognition and thanks to our thematic leaders (Alexander Kruger, Fadi Charchar, David Piedrafita Jessica Reeves, Manzur Murshed, Singarayer Florentine; Steve Wilcox) who have worked hard to facilitate research opportunities for their members.
Figure 3: Our thematic groups continue to drive excellence in research within the Faculty. The four thematic groups are shown in each circle with their major centres shown in Bold, their research interests and overlapping interests are also named. Acronyms include: GHERG – Geotechnical and Hydrological Engineering Research Group, CIAO – Centre for Informatics and Applied Optimisation, MCCAIR - Centre for Multimedia Computing, Communications, and Artificial Intelligence Research, FECRI – Fiona Else Cancer Research Institute, CCT – Carbon Capture Technology, WSR – Water Systems Research.

Research Engagement funds have enabled thematic groups to fund a number of initiatives including travel grants to build collaborative links (allowing new grant applications e.g. ARC-DP), annual meetings, key workshops and developmental workshops on relevant topics, international visitors and identifying common synergies amongst members within the groups.

The Faculty hopes these thematic groupings will continue to be valued, fostered and supported in the future, as they will benefit the University’s charter of excellence in research. The future success of the University’s research development will depend on the mentoring and development of its staff; a role being well fulfilled by these groupings.
Research Productivity

We continue to perform well with grant income (Figure 4), which for 2017 in total was $2,665,301 with Commonwealth (Cat 1) Research Grants of $644,726 and general Research (Cat 2, 3 and 4) of $1,765,195. The percentage of successful applications decreased this year and reflected the increasing competitive environment for limited funding. As such, our total income was slightly lower than the previous year and this highlights the requirement for support and investment for our continued success. We continue to do well in category 2-4 funding.

![FoST Research Income](image)

*Figure 4: Research income for 2017 divided between Commonwealth grants and other sources.*

Publications

A feature of the Faculty are our high quality publications (Publications: 213 Journal articles, 150 (C1); Conference papers – 37; Other – 20), with staff and students participating in their production (Figures 5 & 6). An excellent result. It is pleasing to see C1 journals dominate our publication outputs and these will continue to build our staff’s academic profiles and are the basis for the development of academic networks and future Cat 1 funding success. Publications are available for viewing on the publications notice boards in our buildings across the campuses.
Figure 5: Total publications and published researchers for 2017.

Figure 6: Publications by Category for 2017.
**HDR Supervision**

Our research active staff continue to do the major share of HDR supervisions in the University (Figure 7). Across the campuses 129 Faculty HDR students have been working hard throughout 2017. The cohort comprises 89 full time students and 39 part time students, essentially evenly split between the two Schools: 61 belong to the School of Applied and Biomedical Science (SABS) and 68 belong to the School of Engineering and Information Technology (SEIT). The cohort of students also included 23 new starters in 2017. 20 full time and 3 part-time. Congratulations to the 10 who completed their research degrees in 2017.

![Figure 7: HDR student numbers by time fraction and school for 2017.](image)

**Industry Forums**

A range of industry forums were held through the year in order to focus staff on the opportunities and introduce industry to the Faculty.

Some examples included:
- AusIMM Technical Seminar.
- International Symposium on Control and Optimization for Multidisciplinary Study.
- Biodiversity across the Borders Conference.
- AMSI Optimise.
- Alex Rubinov Memorial Oration.
Corporate Education Workshops and Conferences

These thematic sponsored events brought staff together to discuss research options that might be of interest to industry and for the judgement of the whole thematic group. Prof Paul Wood was also enlisted as a consultant with specific expertise in industry and corporate funding of research. Three thematic workshops were held with a range of projects presented and in each one and then one or two were selected for further development. Other topics addressed included industry liaison, project development and industry priorities.

Some examples included:
- Developing a personal research plan – Strategic planning for individuals in 2018 by Rob Wallis, FedUni.
- Turbocharge your Publications – Hugh Kearns.
- 12 Weeks to Publication – Hugh Kearns.
- Industry Engagement – Prof Paul Wood.
- Leadership and Your Career – Prof Paul Wood.
- Environmental & CO2 Processing Implications of Amine Capture System Degradation Workshop.
- Asset Management Workshop.
- AusIndustry.
- FedUni Open Day Display 27 August 2017
- Workshop on Metric Bounds and Transversality, WoMBat.
- Living with Bushfire Conference 6 – 7 October 2017, Mt Helen Campus (Leader – G Palmer).
Thematic Seminar Series

Each thematic is running a seminar series consisting of HDR, staff and guest speakers addressing research progress through the year. The following table lists some of the seminar titles and speakers for each thematic.

Some examples included:
- Some extended versions of the extremal principle with applications in optimization by Nguyen Duy Cuong (CIAO).
- Decomposition and duality for Stochastic Integer Programs Jeffrey Christiansen (CIAO).
- Detection of outliers among medical by Dr Musa Mammadov (CIAO).
- Spectrum Trading in Cognitive Radio Networks by Assoc Prof Rakib Hassan, Department of Computer Science and Mathematics, Bangladesh Agricultural University, Bangladesh.
- Smoothing techniques in nonsmooth optimisation and applications by Assoc Prof Adil Bagirov (CS&MG).
- Data analytics of Genomics and Transcriptomics across three generations of Protein-DNA interactions by Prof Shandar Ahmad, School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi. (CS&MG).
- Unravelling the dynamics of a major zoonotic disease (Avian Influenza Virus) in Wildlife by Prof Marcel Klaassen. (IERG).
- Why the Antarctic Peninsula is the canary of climate change – or what we can all learn from penguins. By Dr Jess Reeves (IERG).
- What are the main factors influencing the development of lithotypes in brown coal deposits? By Vera Korasidis (IERG).
- Return of the reign – restoring the role of the dingo in Victoria by Dr Ian Mansergh (IERG).
- Mallee Fire – what we do, what we know and what we neither know nor do by Dr David Cheal (IERG).
- Jiuzhaigo National Nature Reserve: China’s “brightly coloured jewel” by Prof Stefano Lugli, University of Modena and Reggio Emilia, Italy and Assoc Prof Wendy Wright, Federation University (IERG).
- Mitigating Ventilation Air Methane Cost Effectively from a Colliery in Australia by Robert Holmes PhD Candidate, SEIT (RE&TG).
- The nonlinear constructive behaviour of Coode Island Silt by Kaveh Ranjbar Pouya PhD Candidate, SEIT (RE&TG).
- Carbon Negative Bio refinery Concept by Adeel Ghayur PhD Candidate, SEIT (RE&TG).
- Mitigating Ventilation Air Methane Cost Effectively from a Colliery in Australia by Robert Holmes PhD Candidate, SEIT (RE&TG).
- Moving Frames and their Applications. Prof Peter Olver, University of Minnesota, USA.
Faculty Research Website

The Faculty redesigned its research website this year to include the thematic groups and link to their major research interests (Figure 8). This plus regularly updated research news in a rolling side bar has clarified our research interests and productivity.

Figure 8: Faculty of Science and Technology Research page.
International Engagement

Associate Dean, Engagement – Guojun Lu

The Faculty’s objectives of International Engagement are to:

- Attract additional revenue,
- Improve viability and sustainability of our programs,
- Enhance student experiences,
- Enhance staff experiences, and
- Advance research collaboration: ideas/projects, funding and HDR student enrolment.

To meet these objectives, the FoST Strategic Plan 2016-2020 sets the following seven International Engagement Goals:

1. Increase on-campus commencing international students.
2. Increase teaching revenue from joint offshore programs through direct teaching and moderation.
3. Develop partnerships to cover all our major disciplines.
4. Develop international research partnerships and collaboration to increase international HDR enrolment and research income.
5. Encourage and provide student mobility opportunities to enhance local student experiences and to support our international partners.
6. Offer relevant programs at Brisbane and Malaysia campuses as required.
7. Work closely and constructively with onshore partners to maintain enrolments and improve student satisfaction.

The Faculty made good progress towards these goals in 2017, as highlighted below.

Goal 1. Increase on-campus commencing international students

We worked closely with joint program partners and international marketing, and China and India offices to attract student transfer to FedUni campuses, and promoted FedUni International Excellence Scholarships. As a result, there were 126 new international students enrolled with the Faculty in 2017, as compared with 103 new international students in 2016 (over 22% increase).

Goal 2. Increase teaching revenue from joint offshore programs through direct teaching and moderation

The Faculty has three joint program partners in China. We offer a Bachelor of Science (Environment Science) with Hebei University of Science and Technology (HUST). We had 98 new students in 2017, as compared with 96 in 2016 and 88 in 2015. Teaching revenue of more than $600K pa is expected from this joint program from 2018.
We offer an Advanced of Diploma of Computing with Shaoguan University. Thirty four new students enrolled in the program in 2017, as compared with 33 in 2016. Teaching revenue of more than $120K pa is expected in 2018.

We also offer a Bachelor of Engineering Technology (Civil) with Zhejiang University of Technology, and had first intake in 2017 with 65 new students. Teaching revenue of more than $500k pa is expected when the pipeline is full.

We are working on 5 additional joint programs with HUST through a Joint Institute and a new top up degree in Food and Nutrition Science with Shenzhen Polytechnic.

**Goal 3. Develop partnerships to cover all our major disciplines**

Currently, we cover the following disciplines in our joint programs or partnership delivery:
- Environmental Science at HUST,
- IT at SGU and onshore partners, and
- Civil Engineering at ZUT.

If our current initiatives are successful, we will also cover the following disciplines:
- Food and Nutritional Science at SZPT, and
- IT at HUST.

Most of Faculty’s major disciplines are included in our joint programs and partnership delivery.

**Goal 4. Develop international research partnerships and collaboration to increase international HDR enrolment and research income**

We signed joint PhD supervision agreements with:
- Xi'an University of Posts and Telecommunication, and
- Zhengzhou University of Light Industry.

In addition, many academic staff have international collaboration activities which continue to be encouraged through staff development activities including conference attendance, visiting fellow positions and OSP.

**Goal 5. Encourage and provide student mobility opportunities to enhance local student experiences and to support our international partners**

Over the past year, the Faculty has won 4 student mobility grants (The New Colombo Plan) and sent (or will send) 44 of our students to the following partners:
- Sichuan University, China (Vet and Animal Science),
- SGU, China (IT),
- ZUT, China (Civil Engineering),
- Nepal (Ecology and Conservation Sciences),
- Chitkara University and Delhi Technological University, India (Civil Engineering), and
- Timor-Leste (Geology).

**Goal 6. Offer programs at Brisbane campuses as required and tailor these to the specific markets involved**

We are working towards offering MTech in February 2018 Brisbane Campus, subject to enrolment numbers.
Goal 7. Work closely and constructively with onshore partners to maintain enrolment and student satisfaction

Significant numbers of international students enrol with programs offered at our onshore partners. Efforts have been made to stabilise partner enrolment including offering fee discount scholarships. There has been some success in this regards. There were 3964 new enrolments (495 EFTSLs) in 2017, as compared with 2393 new enrolments (299 EFTSLs) in 2016.