Our 2019 engagement numbers have exceeded every other year of the program. Below is a snapshot of the year:

Our 2019 data shows:

- 52 WE events, averaging one event per week
- 31 school visits
- 10 career and expo booths featuring WE
- 15 UQ events involving WE
- 623 students participated in our Renewable Energy workshop
- 1,900 kilometres driven by the WE team to high schools and events
- 3,818 students engaged with WE
- 1st time running a teacher focused workshop by our program
- 148 students engaged with at our Rural Roadshow
- 75% of female enrolments in engineering at UQ were OP1-4 students
2019 Engagement
Prospective Students

In 2019 WE have engaged with:

3827 Students
2597 Female students
167 Teachers and guidance officers
169 Schools across QLD

Engagement list for 2019:

All Hallows’ School
AYAF Careers Fair
Brigidine College
Brisbane Girls Grammar School
Brisbane State High School
Cannon Hill Anglican College
Cleveland District State High School
Darling Downs Rural Roadtrip
EmpowHer Conference
Girls in Computer Science
Good News Lutheran School
Indooroopilly State High School
Indooroopilly State High School
InspireU
Ipswich State High School
Islamic College of Brisbane
It Takes A Spark Conference
Kedron State High School
Kenmore State High School
Lourdes Hill College
Mary Mackillop College
Moreton Bay College
Mount Alvernia College
Open Day - We Morning Team
San Sisto College
Science and Engineering Challenge
Somerville House
St Aidan’s Anglican Girls School
St Margaret’s Anglican Girls School
St Rita’s College
STEM Girl Power Camp
Stuartholme School
TSXPO
UQ Careers that Shape the World
UQ STEAM Hackathon
WE Explore Day
WE Explore Industry Day
Yeronga State High School
Young Scholars Program

Annual comparision of student engagement numbers
We surveyed our current female engineering students to hear their stories.
Who inspired our current cohort

Over 90 female engineering students at The University of Queensland (UQ) answered our 4 part survey on what inspired them to consider engineering.

Who inspired them to study engineering:

- Friends, 3%
- **Family**, 28%
- **Self/No Other Influence**, 14%
- **Teacher/Guidance Officer**, 25%
- **High School Outreach**, 24%
- **Other**, 1%

The main themes on their inspiration to studying engineering were summarised into the below categories:

- Health and humanitarian engineering
- STEM strengths and passion
- High school outreach/WE
- Education on what engineering is
- Career and Job Security/Income

Our highest representation of females in UQ’s engineering community across all years is Chemical Engineering, with a gender split of 41% females.

The above graph broken down:

- **Family**
  - > Parents, 73%
  - > Siblings, 14%
  - > Extended, 13%
- **High School outreach**
  - > Career talks by industry, 37%
  - > Campus tour/workshop, 32%
  - > School visit from uni, 32%

42 respondents said yes to family member being an engineer, and of those:

- 31% said family was their main influence to study engineering
- 21% said teacher/guidance officer was their main influence to study engineering
- 17% said high school outreach event was their main influence to study engineering.

We asked current female engineering students at UQ, what age they decide they wanted to study

- Year 7 and 8 > 2 students
- Year 9 and 10 > 9 students
- Year 11 and 12 > 60 students
- Older > 7 students

We asked, do they have any family members that are/was an engineer?

- **Dad**, 25%
- **Mum**, 4%
- **Brother**, 4%
- **Sister**, 2%
- **Grandad**, 6%
- **Uncle**, 7%
- **Other**, 2%
- **Unde**, 7%

No, 50%

“I went to UQ open day when I was in Year 12 and considering engineering as a possibility. Everything they said at the Open Day and on the tour of the engineering faculty really resonated with me so I decided to finalise my choice to do engineering”

“My engineering light bulb came from my physics teacher (an ex-electrical engineer, my favourite teacher... of my favourite subject) and having experienced science but really wanting a faster turn around for what I can create (7yrs vs 20yrs for a biomedical product vs a scientific breakthrough)”
WE believe the key touch points for our program with our current resources are:

### Additional Explore Days

After our survey conducted to current female engineering students and further analysis into past Explore Day conversion data, WE propose running an additional separate Explore Day event aimed at Year 11 students, and cater the current event to Year 9 and 10 students.

The results of the survey showed the average age of when the females spoken to decided to study engineering was 16 and 17, Year 11. Also past event data highlights that the highest conversion of students attending WE Explore Day and enrolling in engineering programs at UQ in subsequent years was in 2014 when the event targeted at Year 11 and 12 students only, almost a quarter of attendees are current engineering students at UQ.

The additional event targeted at senior students will have more advanced in-depth sessions at The University of Queensland and maximise the use of the innovative Engineering facilities.

### Industry Days

Based on the post event feedback and successes of the first Industry Day in 2019, WE are looking to expand this unique opportunity in 2020. WE endeavor to invite more of our Advisory Board partners on board to showcase their industries to prospective students and allowing them to gain firsthand experience as life as an engineer. Following on from this, work placement opportunities and connecting high schools directly with industry would be encouraged based on the successful outcome of 2 opportunities created in 2019.

### Regional Roadshows

WE are interested in doing more rural roadshows in 2020, based on the success of the event in 2019 to the Darling Downs school region. Geographic mapping of our female enrolments from QLD school regions indicates increasing new trends in which will look to expand and connect with new high schools by increasing awareness of engineering at UQ.

### Mentoring

WE would like to provide more mentorship opportunities for female high school students interested in STEM, and connect them with current engineering students, as the missing link between prospective students and industry role models.

### New Workshops

WE hope to bring a new hands on workshop to our program in 2020 that links to the high school curriculum, providing additional resources and options to the high schools in which we connect with.
2019 region breakdown of female enrolments into UQ engineering

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>South East</td>
<td>9%</td>
</tr>
<tr>
<td>Central Queensland</td>
<td>5%</td>
</tr>
<tr>
<td>Darling Downs</td>
<td>5%</td>
</tr>
<tr>
<td>South West</td>
<td>5%</td>
</tr>
<tr>
<td>Far North Queensland</td>
<td>2%</td>
</tr>
<tr>
<td>North Queensland</td>
<td>2%</td>
</tr>
<tr>
<td>North Coast</td>
<td>15%</td>
</tr>
<tr>
<td>South East</td>
<td>9%</td>
</tr>
<tr>
<td>Central Queensland</td>
<td>5%</td>
</tr>
<tr>
<td>Darling Downs</td>
<td>5%</td>
</tr>
<tr>
<td>South West</td>
<td>5%</td>
</tr>
<tr>
<td>Inner City</td>
<td>62%</td>
</tr>
</tbody>
</table>

UQ female engineering enrolments by Metropolitan Region

<table>
<thead>
<tr>
<th>Metropolitan Region</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brisbane West</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Brisbane North</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Brisbane South</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Brisbane East</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Ipswich</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>63</td>
<td>73</td>
<td>84</td>
</tr>
</tbody>
</table>
WE strategies for our other key stakeholders

Current Students
WE have been in contact with The University of Queensland’s Engineering, Architecture and Information Technology Employability team to work towards creating more industry focused events to help current female engineering students and industry connect. WE would also like to provide more tailored opportunities for our Advisory Board partners to network and connect with all current engineering students.

Mentors are crucial to personal development – through support, networking and encouragement, in 2020 we will implement a mentoring program for our student leaders with Industry. WE would like to refocus efforts with our current students and offer a networking event with a difference, focusing on diversity and inclusion.

High School Teachers/Guidance Officers
WE will expand our teacher focused workshop in 2020 at WE Explore Day and continue to provide the required resources that high school teachers request to inspire the next generation of future engineers. WE recognise that utilizing the knowledge and resources we have in the Faculty and at UQ will be in greater demand to not only engage with prospective students but provide relevant classroom content that aligns with the school curriculum for teacher professional development.

The engagement at Brisbane Girls Grammar School this year included a special presentation and academic representation on the topic of Circular Economies was one such example of this. Our STELR Renewable Energy workshop that aligns with the Year 8 curriculum has also been in high demand for engagement with this year level. Topics of future interest will be in sustainable design, and designing with empathy.

Parents
As we continue to see the importance of parents in female students university choices, WE want to organize a focus group workshop that allows us to empower the parents to influence with this knowledge, educate the parents on our engineering messaging and for parents to reflect on their own careers, what impact they are making, what/ if any biases were imposed on them and their choices after school.

Wider Networks
WE attended the Women in Engineering and IT Symposium hosted by UTS and UNSW in Sydney this year. Our UQ run biennial collaboration workshop event will be held in 2020 at University of Adelaide. WE have also engaged with various other faculties across UQ including Science and Mathematics departments in ways we can collaborate our outreach engagement efforts and allow for a more rounded representation of STEM at UQ for school visits. This was requested by teachers in our collaboration workshop at WE Explore Day in 2019.
Special thanks to our program partners for their continuous support
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