DEVELOPMENT OF STRATEGIC INTERNATIONAL INDUSTRY LINKS TO PROMOTE VOCATIONAL TRAINING AND POSTGRADUATE RESEARCH PROGRAMS FOR STUDENTS
IDP-Conference Presentation

Introduction:

Historical perspective

The program was established in 1992 as an International Industry Experience Program for the Students of RMIT Department of Aerospace Engineering.
Initially few companies from Germany, Switzerland and Japan provided industry placements. The demand for Program however grew rapidly, and students from other parts of the faculty of Engineering were demanding to be allowed to participate.

- In 1999 the program was extended to the whole faculty of Engineering. The number of company participants increased to 105.
- The number of countries increased to 11
- 2001 the Program was extended to all disciplines in RMIT and assumed the name RMIT International Industry Experience and Research Program.

- 2002 A Global Industry Advisory Board was founded for the program:
  - This consists of people from the executive level of large international companies in Australia. Board was given the brief to help develop the program in terms industry needs and trends, as well as to increase the number participating companies and diversify the vocational training and research Projects.
The Board helped to expand the number of companies participating in the program to 130.

Currently, the companies involved are based in the following countries:

- Germany, France, Switzerland, Netherlands, Sweden, Denmark, United Kingdom, United States, Liechtenstein, and Canada.

Currently, international companies commit each year about 1.9 million dollars in terms of living allowance to support the vocational training of RMIT Undergraduate students.

Currently, companies provide $612,460 in research grants to RMIT postgraduate Research students.
Rationale

The program was set up based on the understanding that it is practically impossible for any academic institution to provide the infrastructure to meet the vocational training and research programs aspirations of every student.

There exists around the globe state of the art vocational training and research infrastructure, which under the appropriate conditions could be accessed.

The increasingly globalize economy needs a new type of graduate, who apart from being professionally competent must be ware of attitudes in different cultures.

The program was therefore set up to achieve the following defined goals:
RMIT INTERNATIONAL INDUSTRY EXPERIENCE AND RESEARCH PROGRAM

- To facilitate the development of graduates who are worldly in their outlook and hence globally employable.
- To provide students/graduates with the opportunity to carry out their industry experience training projects at international companies, and in the process to get them exposed to work ethic in different cultural environment.
- To provide students/graduates with a wide range of facilities for the development of their vocational and research skills.
- To provide RMIT the means of assessing the quality of its students/graduates from a global perspective.
- To promote RMIT University’s interaction with companies/institutions, which have best practice in the requisite areas of interest.

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Figure 1.1 Structure of the Program

- Stakeholders of the program are the Students, RMIT University and the participating companies

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Vocational industry Experience Program

Under this segment of the program students may spend 3-12 months at the company.

Applicants for this part of the Program are assessed on the basis of:

- Academic Performance (60%)
- Interview (40%)

Successful candidates enroll into Internal Industry experience courses.

They are given pre-departure sessions about the company and the country in which they will undertake the work experience programs.
Benefits for students

The obvious benefits are

- the opportunity of an early exposure to a global work environment in different cultural and ethical settings
- acquisition of the requisite vocational skills necessary for professional development,
- the opportunity to improve students’ employability later as graduates
- generous levels of remuneration by companies during the periods the projects are carried out.
Fig. 1.2  What do you think you gained from the Program?

- (a) improved my vocational skills: 49%
- (b) improved my ability to work in a different cultural environment: 3%
- (c) improved my research skills: 4%
- (d) improved my ability to work in a team: 5%
- (a)-(b) 36%
- (a)-(d) 5%
- (b)-(c) 6%
- (c)-(d) 1%
Fig. 1.3 Do you think your participation in the program has improved your employability (a) within Australia (b) Without Australia?
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How do you rate the program in your profession development?

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Fig. 1.4 Do you think your participation in the Program has affected the course you have chosen in your profession?

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Fig. 1.4 As an employer, you have two new graduates with all other attributes being the same if one of them has undertaken overseas work experience at an international company, during his or her studies; will this fact favour the applicant in your eyes? Yes/No.
Benefits for RMIT University

- Access to infrastructure worldwide for vocational training and research with multicultural underpinnings does give RMIT Graduates advantage in the global job market.
- Raises the profile of University in the eyes of prospective students.
- International Companies provide valuable feedback on student performance which can be used as a measure of the quality of students/graduates from global perspective.
Benefits of Vocational Training Program to Companies

- Opportunity to observe the performance of prospective employees in house for a period of time without commitment of employment.
- Involvement at an early stage in shaping the attitudes and developing the skills of the future labour force.
- Development of the skills of employees constitutes a very important aspect of strategic planning of companies.
- Students fulfill tasks which contribute significantly to companies’ bottomline.
- Companies appreciate the skills students bring to their projects.
Fig. 1.5 How do rate the RMIT Students you have supervised with regards to their ability carry out tasks

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Fig. 1.7 How do rate the RMIT Students with regards to their ability to work in a team.
How did the RMIT students integrate into the social environment of your company?

(a) Easily (90%)  
(b) Quite slowly (10%)  
(c) Did not integrate at all (0%)
Bachelor Degree Theses

- This segment of the Program is aimed at providing students at an early stage access to state of the art Research infrastructure.

Benefits for students

Opportunity to develop applied research skills in a sophisticated industry environment.

- Creating conducive conditions for company/institutional grants for postgraduate research
- Research in multicultural and international environment
Benefits for the University
The ability to ensure that Bachelor Degrees projects are
carried out at the facilities of companies overseas

- has the capacity to relieve pressure on research
  facilities in the University
- engenders the flow of knowledge back to the
  University from the myriad of research projects
  undertaken
- create opportunities for grants from overseas
  companies and institutions for postgraduate
  research
- helps to develop to some extent a virtual
  research infrastructure for the University.
Benefits for Companies

- Within the framework of their thesis students carry out middle level research to aid the R&D efforts of the company with minimum company supervision.

- Enables companies to get involved in developing the researchers of the future.

- Enables companies to evaluate final year students’ potential as future researchers for that company.
Industry Graduate Traineeship

This part of the Program, which is usually for a period of 12 months is designed to smooth the graduates’ entry into the Global job market.

Benefits for students

- Improved vocational skills, which promotes job prospects and engenders self confidence
- Improved professional standing
- Improved global employability
Benefits for the University

- The ability of the University to ensure that its graduates receive extra vocational training does improve its standing with prospective students.
- The University does ensure the flow of skills from overseas companies to the local industry.
- This does foster collaborative relations between the University and the local industry.
Benefits for companies

- Opportunity to monitor, in house, the suitability of highly motivated young graduates for employment, without prior commitment.
- Graduate trainees provide cost effective expert labour.
Postgraduate Research

- All stakeholders see great benefits in this segment of the program.

- Benefits for students

- Access to state of the art research facilities at high technology companies/research institutions

- Ability to pursue in research areas, for which infrastructure is not available in Australia.

- Large grants from international companies.

- Rapid completion rates

- Ability to publish in reputable journals

- Good job opportunity as researchers in industry/academia
# RMIT INTERNATIONAL INDUSTRY EXPERIENCE AND RESEARCH PROGRAM

**Current Postgraduate Awarded to RMIT students by Overseas Companies**

<table>
<thead>
<tr>
<th>Nr</th>
<th>Company</th>
<th>Country</th>
<th>Program</th>
<th>Grant/year</th>
<th>Total Grant over the life of the Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Trane Company</td>
<td>USA</td>
<td>PhD</td>
<td>$72,000</td>
<td>$216,000</td>
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<tr>
<td>2</td>
<td>Robert Bosch</td>
<td>Germany</td>
<td>PhD</td>
<td>$55,000</td>
<td>$165,000</td>
</tr>
<tr>
<td>3</td>
<td>Volkswagen</td>
<td>Germany</td>
<td>PhD</td>
<td>$45,000</td>
<td>$135,000</td>
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<tr>
<td>4</td>
<td>German Aerospace Research Centre-Stuttgart</td>
<td>Germany</td>
<td>PhD</td>
<td>$36,000</td>
<td>$108,000</td>
</tr>
<tr>
<td>5</td>
<td>German Aerospace Research Centre-Oberpfaffen hofen</td>
<td>Germany</td>
<td>PhD</td>
<td>$36,000</td>
<td>$108,000</td>
</tr>
<tr>
<td>6</td>
<td>Sauer &amp; Danfoss</td>
<td>Germany</td>
<td>PhD</td>
<td>$56,000</td>
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</tr>
<tr>
<td>7</td>
<td>Robert Bosch</td>
<td>Germany</td>
<td>PhD</td>
<td>$55,000</td>
<td>$165,000</td>
</tr>
<tr>
<td>8</td>
<td>Robert Bosch</td>
<td>Germany</td>
<td>PhD</td>
<td>$55,000</td>
<td>$165,000</td>
</tr>
<tr>
<td>9</td>
<td>BASF</td>
<td>Germany</td>
<td>PhD</td>
<td>$52,000</td>
<td>$156,000</td>
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<tr>
<td>10</td>
<td>Siemens</td>
<td>Germany</td>
<td>PhD</td>
<td>$54,000</td>
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<tr>
<td>11</td>
<td>AUDI</td>
<td>Germany</td>
<td>M.Eng.</td>
<td>$18,000</td>
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<tr>
<td>12</td>
<td>DaimlerChrysler</td>
<td>Germany</td>
<td>M.Eng.</td>
<td>$16,000</td>
<td>$16,000</td>
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<tr>
<td>13</td>
<td>ABB</td>
<td>Switzerland</td>
<td>M.Eng.</td>
<td>$26,460</td>
<td>$26,460</td>
</tr>
<tr>
<td>14</td>
<td>BMW</td>
<td>Germany</td>
<td>M.Eng.</td>
<td>$36,000</td>
<td>$36,000</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$612,460</strong></td>
<td><strong>$1,634,460</strong></td>
</tr>
</tbody>
</table>

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Benefits for the University

- Access to state of the art research facilities confers upon the University a virtual research infrastructure capability.
- Grants received from overseas companies enables the University to increase the number of postgraduate scholarships.
- The size of the grants allow University to attract high quality graduates.
- Fast completion rates of postgraduates.
- Publication in reputable journals.
- Flow back of knowledge and expertise to the University.
Benefits for Participating companies

- Access to highly motivated young researchers at low cost (grants)
- Ability to attract very good researchers to their R&D programs
- Flow of knowledge/expertise from University to companies
- Collaborative research programs with the University
Postdoctoral Research Program

Benefits for the University

- Access to state of the Art Research facilities and participation in top level research at the international level
- University will establish itself as a dynamic renown international research institution
- Flow of knowledge in virgin areas of research to the University
- Establishing high level links in the international research community.
Benefits for the Postdoctoral Researchers

- Individual Researchers will build reputation as researchers of international repute.
- Researchers will establish their research credentials by publishing in reputable journals.
- Researchers of this calibre have better chances of winning Australian Research Council Grants.
Benefits for Companies

- Unfettered access to highly motivated and capable researchers (at low cost)
- Companies have also access to expertise at the University through the postdoctoral fellows.
- Mutually beneficial research collaboration.
The Global Industry Advisory Board, which has the following brief, plays a very important role in the operation of the program:

- The main task of the board will be to explore ways of helping RIIERP to achieve its strategic goals stipulated in the policy document entitled International Industry Experience and Research Program: Benefits for the Stakeholders.
- The director of RIIERP will rely on the expert advice of the board in matters pertaining to the local and global industry needs, as well as issues related to the further development of the program.
It is hoped that the members of the Advisory Boards, who occupy substantive positions in their own companies and have enormous industry expertise will help to expand the program significantly in terms of increasing industry placements and further diversification of the program.

The board will play an active role in defining and advising on policies, which will lead to the achievement of the program goals, as well as proposing new avenues for the program development.
### Members of the Global Industry Advisory Board

<table>
<thead>
<tr>
<th>No.</th>
<th>Company</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ABB Australia Pty Ltd</td>
<td>Senior Vice President-Head of Process Industries</td>
</tr>
<tr>
<td>2</td>
<td>Siemens Ltd</td>
<td>General Manager (Human Resources) Chair of the Board</td>
</tr>
<tr>
<td>3</td>
<td>GKN Engage</td>
<td>Manager (Technical Support Division)</td>
</tr>
<tr>
<td>4</td>
<td>Accenture</td>
<td>Recruiting Director (Australia &amp; New Zealand)</td>
</tr>
<tr>
<td>5</td>
<td>Goethe Institut Inter Nationes</td>
<td>Director</td>
</tr>
<tr>
<td>6</td>
<td>Colesmyer</td>
<td>General Manager, Recruitment</td>
</tr>
<tr>
<td>7</td>
<td>Boeing</td>
<td>Business Manager</td>
</tr>
<tr>
<td>8</td>
<td>Battenfeld</td>
<td>Managing Director</td>
</tr>
<tr>
<td>9</td>
<td>BASF</td>
<td>Human Resources Manager</td>
</tr>
<tr>
<td>10</td>
<td>GM Holden</td>
<td>Human Resources Director</td>
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<tr>
<td>11</td>
<td>Arup Australasia</td>
<td>National Manager-Human Resources</td>
</tr>
<tr>
<td>12</td>
<td>Robert Bosch Australia</td>
<td>General Manager</td>
</tr>
<tr>
<td>13</td>
<td>ABB Australia, Pty Ltd</td>
<td>Manager</td>
</tr>
</tbody>
</table>

### RMIT University Members

1. Chancellery                                   | Pro Vice-Chancellor          |
2. Chancellery                                   | Pro Vice-Chancellor          |
3. Engineering                                  | Dean                         |
4. Business                                     | Dean                         |
5. School of Aerospace, Mechanical and Manufacture Engineering | Head of School |
6. RMIT International                           | Manager                      |
7. Teaching & Learning                           | VET Manager                  |
8. Corporate Affairs                             | Manager                      |
9. Engineering                                   | Director-RIIERP              |

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Activities of the Board

The board has since its foundation worked assiduously to promote and help develop and diversify the operations of the program.

- Promoting the program among Australian Industry
- Working to increase the number of overseas participating companies
- Providing departure sessions for students departing for overseas.
- Liaising with branches overseas to ensure the smooth running of the program
- Strategies to employ graduates of the program worldwide.
- Meeting every three months to draw up strategies to manage the program.
Benefits of RIIERP to Australian industry

Australian industry is a passive stakeholder in the Program:

- Graduates return with unique skills that benefit Australian industry
- A survey of Australian Industry shows that it will preferably employ graduates who have had international Industry experience.
- Australian Industry treasures the goals of the program
Benefits of the Program to Australian industry

Australian industry is a passive stakeholder in the Program:

- Graduates return with unique skills that benefit Australian industry
- A survey of Australian Industry shows that it will preferably employ graduates who have had international Industry experience.
- Australian Industry treasure the goals of the program
- The local industry prefers graduates who apart from their professional skills are also capable of working effectively in different cultural environment.
International Industry Experience Courses

To emphasize the educational value of the program, international Industry experience courses have been introduced. All participants of the program must enroll into these courses.

**Courses**

- **International Industry Experience**: 12 credit points for 3 months sojourn at a company.
- **International Industry Experience 2**: 24 credit points for 6 months sojourn at the overseas company.
- **International Industry experience 3**: 36 credit points for 12 months sojourn at the overseas company.
- These courses have detailed course guides which outline the academic requirements of the program.
Assessment of the International Industry Experience Courses

Performance assessment given by company supervisor: 30%

Assessment of discipline based report by RMIT: 20%

Oral presentation of discipline based report at RMIT: 10%

Assessment of cultural report by RMIT: 20%

Oral presentation of cultural report at RMIT: 10%

Journal: 10%
SUMMARY AND CONCLUSION

- The RMIT International Industry Experience and Research program has demonstrated that by building links to international companies, it is possible for an academic institution to provide comprehensive vocational training and research program for its students.

- The program has shown that such a relationship can be mutually beneficial to the three main stakeholders and the local industry.
Summary and Conclusions

It has demonstrated that if clear goals are set both the local and international industry will be prepared to commit resources for building the skill base of the future labour force.

- Today many international companies see themselves as international corporate citizens, hence apart from the benefits which accrue to them, from this RIIEP, the efforts they make to develop the professional skills of the students can be seen in the context of rendering service to the community at large.
Nowadays most companies strive to be good corporate citizens. They do this by adhering to the principles of sustainable development and rendering service to the community. Helping RIIERP to promote the skills development of RMIT students, who come from many countries, is one sure way of rendering service to the international community.