

# Engineering Gateways - case study

HEI name: Kingston University
Employer: JNDC Ltd
Student name: DEAN CARRAN
<b>1. Individual work based student</b> Please provide: (maximum 500 words) <ul style="list-style-type: none"><li>• What attracted you to the programme</li><li>• Name of any academic qualification already held</li><li>• Summary of the key benefits in undertaking the programme</li><li>• Explanation of the impact of the programme on your professional aspirations</li></ul>
<p>Finishing university with an Aerospace Engineering Design first class honours bachelors degree initially opened many doors for me in industry; however, the degree was "I Eng" level and to progress my career I decided to explore the possibility of one day becoming a Chartered Engineer.</p> <p>The MSc at Kingston offered exactly what I needed: academic supervision to assist me to meet the requirements of the MSc, as well as an industry supervisor who guided and advised as to how to align the course deliverables with the Institution requirements to demonstrate CEng competencies.</p> <p>The start of the MSc reviewed my existing skills, and compared them against the requirements for chartership providing a form of gap analysis, clearly identifying what areas I needed to focus the modules of my MSc on to ensure that upon completion I fully covered all areas, giving me the best possible preparation for the Institution interview.</p> <p>The MSc gave me the freedom to "design" my own modules around my expertise as well as relevant jobs I had been involved with at work. My academic and industrial supervisors checked the proposed modules met the MSc and Institution requirements.</p> <p>Working on modules that I had developed not only made the work more enjoyable, but also easier as well as beneficial to the company. Some of the modules focused on the internal development of the company such as improving quality and marketing strategy, which has clearly benefited the company, increasing quality as well as drawing in more enquiries.</p> <p>When I complete the MSc in the coming months, I feel that it will have prepared me extremely well for the Institution interview, as well as developed my personal skills that I can take on with me as my career further progresses over time.</p> <p>The MSc has given me the opportunity to reach Chartered status, as well as hold an MSc, both of which have been attained by aligning the modules around my work, keeping the subjects concurrent and interesting, and most of all developing my personal skills and competencies further.</p> <p><i>Dean Carran, JNDC Ltd, Participant in MSc Professional Engineering scheme</i></p> <p>Are you using an electronic recording system provided by your professional engineering institution? No</p> <p>Can the Case Study be published or is it confidential? Can be published</p>
<b>2. Employer</b> Please provide: (maximum 500 words) <ul style="list-style-type: none"><li>• Overview of type and size of company</li><li>• Summary of the work-related activity/projects contributing to the MSc Professional Engineering</li><li>• Statement about how the MSc PE student's work has impacted on the business</li><li>• An indication of when the benefit / impact occurred, including appropriate indicators</li></ul>
<p>JNDC is a Farnborough based engineering consultancy providing a suite of solutions to clients in the private and public sectors. We are proud to have an outstanding record providing a top quality service to clients, while meeting the time constraints demanded by projects today.</p> <p>Our clients vary from major Aircraft Manufacturers, Automotive Companies, Petrochemical Organisations, Universities through to Small Businesses.</p> <p>Our highly skilled engineers and first class facilities allow us to take on challenging and high-tech projects. We apply</p>

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a creative yet methodical approach, which enables us to explore solutions that combine novelty with innovation and have resulted in numerous patents and products.

Dean's MSc has provided valuable impact on the company, from the development of a novel fastener solution where he designed, analysed and managed the project from beginning to end, including the management of staff and resources.

He introduced the company to a new manufacturing method, DMLS (direct metal laser sintering), which allows the company to produce parts that were previously not viable to produce economically. This has had an extremely positive effect on the company, opening new avenues in the aerospace sector.

Through this programme he also introduced a quality management system including a new quality manual with procedures for the company to follow. He also managed the whole process of the company achieving ISO 9001 including two successful audits.

*Jan Niklewicz, CEng Director, JNDC Ltd*

Can the Case Study be published or is it confidential? Yes can be published

### 3. University

Please provide: (maximum 500 words)

- Brief overview of how this case study partnership was initiated
- Summary of the key benefits to the academic and the institution
- Details of any specific outputs a. from this partnership

b. generally of being an Engineering Gateways academic institution

Dean is a past graduate of Kingston University, who received information from us about the Engineering Gateways MSc Professional Engineering scheme through our contacts with our engineering alumni. It has been great to see his development post graduation and to facilitate his further learning and progression towards becoming a Chartered Engineer. He is now progressing well with his MSc. As for many participants/students, he has found that making the time to undertake the MSc assignments alongside full time working and a social life requires effort and commitment, but that it is stimulating - as well as leading to an MSc and CEng.

He is a good role model for existing undergraduates and provides an excellent example to them of how their Kingston engineering degree can lead to good opportunities in engineering practice. We value the links we have with JNDC and other high calibre companies, and find that having a participant on the MSc Prof Eng from such companies enhances the depth and breadth of the relationship we have with them. We are pleased Dean has appreciated the combination of academic and professional input available from Kingston under this scheme, including the advice on professional aspects from an experienced Chartered Engineer in our team who is a Member of his target Professional Institution. We understand this can be particularly helpful for SMEs such as JNDC.

Our supervisors welcome the opportunity to interface both with the participants and with their in-company managers and mentors. This liaison has particular focus and current relevance as it relates to live company projects being used by the participant for their MSc Learning Agreement. These Learning Agreements are individually developed with each participant, and their manager/mentor, as part of our MSc's entry gateway, so that the MSc is directly relevant and beneficial both to the participant and to their company.

Involvement with participants on this work based MSc helps our staff to add to their existing awareness of current engineering practice, in a range of engineering companies. It also provides useful examples, with due respect of confidentiality, when teaching undergraduates or other postgraduates. In addition, our supervisors get much pleasure from assisting practising engineers to achieve their aim of becoming Chartered.

*Mike Hope CEng CEnv, Field Leader Work Based Learning, Kingston University*

Can the Case Study be published or is it confidential? Yes