

Executive Summary

Customer Name:

Cranfield University

Industry:

Education

Location:

Bedfordshire and Wiltshire,
England

Number of Students:

3800 from over 100 countries

Challenge:

- 43% of students study part-time thus creating a need to provide a flexible learning environment to help them study more effectively
- Students and industry partners are in disparate locations around the world
- A need for a technology solution which would deepen collaboration to further advance research at the University
- A solution which would reduce the time demands on industry partners through reduced frequency of face to face meetings whilst ensuring the smooth running of supervising students' research

Solution:

- Web conferencing, creating new opportunities and new ways of working whilst providing a helpful alternative to face to face meetings over long distances
- Comprehensive, reliable, secure suite of real-time web collaboration services
- Integrate web conferencing with VoIP, telephony and video and existing IT infrastructure

Benefits:

- Enable students from different campuses and industry partners around the globe to meet online quickly and easily, helping to strengthen relationships between industry partners and Cranfield
- Reduce the University's dependence on travel, minimising its cost base and carbon footprint
- Provide a convenient mechanism for collaboration and encourage innovation and knowledge sharing as lecturers can supervise students' research projects on a weekly basis via WebEx

Web Conferencing Helps Post-Graduate University Collaborate Globally with Students and Industry to Innovate in Research

Background

Cranfield University is one of Western Europe's largest academic centres for strategic and applied research, development and design. It is unique in that it is entirely postgraduate focus and specialises heavily in science, technology, management, aerospace and engineering.

Working with well recognised brands such as Airbus, Boeing, GlaxoSmithKline, Rolls-Royce, Shell and BP, Cranfield is distinctive in undertaking extensive industrial collaboration whilst also being a recognised leader in the field of management executive training.

The University has 3800 students from over 100 countries studying either full or part-time, or in parallel with their career. In addition, the University has 14,500 continuing professional development delegates.

Challenge

As 43 percent of students study part-time and the two main campuses are 67 miles apart with a return journey between these campuses being over three hours by car, there was a need to provide a flexible learning environment for them.

Furthermore, the University's research is underpinned by collaboration with industry. Students, lecturers and industry partners needed a technology solution which would facilitate collaboration in project meetings and supervisions on research projects, especially since these meetings would otherwise involve international travel.

Students studying for a Masters or research degree are required to write a thesis based on solving a real business problem, often based within a company. These students will work closely with technical and/or senior business decision makers at the company, even though the students and business can be in disparate locations.

"Collaboration and idea generation is very important to us at Cranfield, it's the quality of our research which we are known for," said Professor John Fielding, Head of Aerospace Engineering. "However, it's paramount that we're sensitive to the time an industry partner can give to a student project. We wanted a solution which would facilitate and deepen collaboration whilst providing time savings for our students, industry partners and supervisors," said Professor Fielding.

The University spends a large amount of money on travel and subsistence for collaborative research projects and so a web-based technology solution was required to cut down on travel to Europe and long haul destinations. In addition, a solution was called for to reduce costs and create efficiencies whilst ensuring team work could continue smoothly.

Solution

The Integrated Vehicle Health Management (IVHM) Centre of Excellence at Cranfield University, which informs existing maintenance and repair of high-tech, high-value vehicles such as aircraft and ships, was the first department to request a web conferencing solution to assist in their board meetings.

“Following this request, an assessment of web conferencing technologies took place. WebEx scored highly on giving good customer support over its competitors, integrating easily with Microsoft Office applications, having a reliable hosted service and being an enterprise focused solution, rather than an education focused one,” remarked Alan Pibworth, an Information Consultant in the Cranfield IT department at the University.

WebEx is also used by many of the leading institutions and partners of Cranfield University such as Boeing, Rolls-Royce and BAE Systems. “This was a good indicator of the credibility of WebEx’s technology,” said Jim Angus, Commercial Director for IVHM Centre. “Based on this, we knew the benefits that web conferencing could afford us and that WebEx’s technology could fulfil our needs whilst saving time and money for the University.”

Cranfield now has a branded WebEx presence to support the University’s research and knowledge sharing.

The Benefits

Integrated Vehicle Health Management (IVHM) Centre of Excellence

Partners at the IVHM Centre of Excellence include Boeing, BAE Systems, Rolls Royce, Thales and Meggitt each contributing £1 million of funding over a five year period to research in this area. They have been recently joined by the MOD and Alstom who have signed up as tier two members.

These are heavily involved in the management of the research centre and whilst senior executives at these companies are spread across Europe and the US, they need to be in regular contact. With the help of WebEx, senior level executives and technologists have been able to meet online regularly to closely manage the centre and contribute to the direction of research being undertaken.

One project manager in the National Soil Resources Institute at Cranfield calculated the time, cost and carbon savings from conducting their meetings via WebEx rather than face-to-face in Italy.

FINANCE

Cost: 3 WebEx connections for 2hrs at £0.19 per min per connection. = £70

Savings: Two airfares and associated costs for round trip to Bologna 2 x £300 = £600

Total cost savings: £530

TIME

Cost: 2 Cranfield staff = 2x2hrs = 4hrs

Savings: Travel to Bologna = 2x8hrs round trip = 16 hrs

Total time saving: 12hrs

Carbon emission avoided: 0.8 tonnes (flights only)

School of Engineering, Department of Aerospace Engineering

One course in particular at Cranfield University is using WebEx technology to communicate with students in Nigeria.

In 2008, students on the Aerospace Vehicle Design MSc course at Cranfield University were working on a new design for a tanker aircraft. The research is important for the industry as it could help to advance technologies for reducing the environmental impact of aviation.

The course is a key part of a new collaboration agreement between the School of Engineering at Cranfield and the Nigerian Air Force for the training of engineering officers.

Students from the armed forces around the globe or from the aerospace industry presented their group designs to an aerospace industry audience in May 2008.

Although the presentations were held on campus in Bedfordshire, officers from the Air Force Institute of Technology (AFIT) Kaduna, Nigeria, were able to participate through a WebEx meeting, using Voice over IP, data sharing and video.

In addition, AFIT sends students each year on the Masters course. Before students start the course in October, they are able to see the previous year's student presentation in May before they arrive, via WebEx.

"By using WebEx's technology, the future Nigerian students can get a good insight into the course for the next academic year, enabling them to ask questions and understand what lies ahead for them," said Squadron Leader O C Ubadike, from the Nigerian Air Force Institute of Technology. "It also helped to strengthen the relationship between AFIT and Cranfield."

In 2009, WebEx was also used to allow both Nigerian students and students from Hindustan Aeronautics Ltd, Bangalore, India to participate in the group presentation.

"WebEx has enabled us to broaden our collaboration with industry, allowing students from Nigeria and Bangalore to participate in the presentations and demonstrate to industry the importance of cross-border teamwork," said Phill Stocking, Course Director, MSc in Aerospace Vehicle Design at Cranfield University.

As part of the collaborative agreement with AFIT, officers who participated in the course continue their individual research projects. Through a regular weekly WebEx conference meeting between Cranfield and AFIT, students can share their design models on the screen for lecturers at Cranfield to discuss with them.

"At Cranfield we want to give our students the tools to be successful. Any student can obtain a WebEx account if their supervisor agrees to it," said Pibworth.

The Future

A handful of departments are using WebEx at the University and have seen major teamwork and productivity benefits, including time, cost and carbon savings. Now the University wants to encourage other departments to adopt WebEx where it can add value to their research and industry collaboration.

The Aerospace Engineering department will also be making more extensive use of WebEx:

“Using WebEx as part of the course for students and lecturers has been so successful that in 2010, WebEx will be used for the first time for the final exam board meeting,” said Stocking. “This will allow officers in Nigeria who are supervising the students to participate in the exam board meeting.”



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