QUT-Griffith Mobile Staff Productivity Project

Developing Mobile Technology Packages to Achieve Gains in Productivity

An initiative under the QUT-Griffith University Collaboration Program

In 2006, QUT and Griffith University received federal government funding (1.36M, DEEWR – Workplace Productivity Program) to explore the benefits of increasing the use of mobile practices and technologies that enable staff to work anywhere, anytime.

Objectives:

- Improved productivity through the use of technologies that enable anytime, anywhere connection
- Increasing employee capabilities for productive use of mobile devices in the workplace
- Implementing mobile technology platforms with high levels of reliability and availability to support ubiquitous use
- Developing viable support models
- Developing innovative models of equipment ownership

The Mobile Staff Productivity (MSP) project is an initiative under the QUT-Griffith University collaboration program.

Heath Marks – MSP Project Manager
Michael Flynn – Green IT Project Manager
Three Integrated Streams of Activity

QUT-Griffith Mobile Staff Productivity Project

Mobility Framework

Productivity Research

Mobility Trials / Mainstreaming

MSP Project Approach

Stage 1: Initiation and investigation

- Initial analysis of workplace mobility at QUT and Griffith University
- The implementation of a series of mobile technology trials to test the impact of specific mobile practices on productivity
- The development of Mobility Values for QUT and Griffith University
- The development of a multidimensional model of measuring productivity

Stage 2: Mainstreaming (service build and deployment)

- A) The application of the multidimensional model of measuring productivity to stage 2 activities.
- B) The implementation of mobile work practices in a cross-faculty Research Institute and other units in order to embed mobility within university elements, establish best practice in mobile work and further refine methods for measuring staff productivity
- C) The development and release of an integrated package of mobility offerings, training, support and planning via a staff Mobile Technologies and Practices website
The Research Institute Mobile Technology Packages Mainstreaming Model is based on the Gartner Enterprise Mobility Matrix research. The model encompasses six layers of activity.

Layer 1 – The project profiled each Research Institute’s business requirements, location and usage patterns for mobility.
Focused Model for Developing Mobile Technology Packages for a Research Institute

Layer 2 – The project then identified common themes of mobility issues for each

Layer 3 – The output of this was then analysed and the project identified trusted mobile technologies and standards to meet the work place productivity needs of the researchers
Focused Model for Developing Mobile Technology Packages for a Research Institute

Layer 4 – Existing services, technologies and capabilities of each university were evaluated and if a solution was not found the project evaluated solutions in the market.

Layer 5 – Based on the evaluations, a portfolio of mobile technologies and solutions was defined. The technologies were then packaged with training support and marketing and communication strategy was developed for each.
Focused Model for Developing Mobile Technology Packages for a Research Institute

Layer 6 – Productivity research surveys were released before and after the mobile technology package to evaluate the impact of mobile technologies on workplace productivity.

Developing the Researcher on the Move Mobile Technology Package

Case Study
Developing the Researcher on the Move Mobile Technology Package

Background

In June 2008 the MSP project engaged with QUT’s leading research institute, the Institute of Health and Biomedical Innovation (IHBI) to identify a research group who would benefit from the development of bespoke package of mobile technologies.

The highly mobile Medical Device Domain was chosen.

What is the Medical Device Domain?

- One of six interdisciplinary research domains at IHBI
- Draws together biomedical engineers, practising surgeons, chemists, medical physicists and cell biologists
- Performs innovative research into musculoskeletal and spinal conditions, trauma injuries and artificial limbs and organs
- Domain staff are based across several locations and are frequently travelling interstate and overseas. Staff face significant challenges dealing with the mobile nature of their work and rely heavily on mobile technologies.
Consultation

In August 2008 the MSP project began meeting with IHBI and Domain staff to identify the key mobile work challenges. The project engaged with:

- The IHBI IT team to discuss known mobile work issues, possible solutions and technical constraints
- The IHBI Information and Communication Managers to gain insight into IHBI's information management framework and marketing and communication environment
- Key Domain staff to begin identifying and analysing the mobile work challenges impacting the domain

Key Mobile Work Challenges

After analysing the numerous mobile work issues within the Domain, the project identified the following four key mobile work challenges:

- **Challenge 1** - Staying in touch with email and calendar while on the move
- **Challenge 2** - Constant travel to attend meetings at other locations
- **Challenge 3** - Accessing and sharing QUT data from other locations
- **Challenge 4** - Backing up locally stored data to QUT servers
Challenge 1

Staying in touch with email and calendar while on the move:

- Domain staff were finding it difficult to keep up to date with their email and calendar while they were away from the office.
- Email is the main channel of communication within the Domain and most staff were struggling to keep up with the large volume of email communications.
- Staff also struggled to manage their busy calendar, which often involved back to back meetings at different locations.

Challenge 2

Constant travel to attend meetings at other locations:

- Domain staff were constantly travelling between campus locations and various hospitals on a daily basis.
- This was particularly difficult for staff based at facilities outside of the Brisbane CBD, such as research facilities and hospitals.
- Staff would often be absent from meetings at IHBI due to transportation logistics and were feeling increasingly disconnected from their colleagues in the Domain.
- Staff also expressed concerns for the amount of unproductive time spent in transit as well as the environmental impact of their travel.
Challenge 3

Accessing and sharing QUT data from other locations:

- Domain staff spent a significant proportion of their time working at hospitals and other organisations both in Australia and overseas.
- While working off campus, many staff had encountered issues accessing data stored on QUT servers.
- This resulted in an increased use of email to share documents as well as data being stored on laptops, USB thumb drives and other devices that were not regularly backed up.
- Having multiple copies of documents on many devices also made document naming and version control more difficult and time consuming.

Challenge 4

Locally stored data wasn’t being backed up to QUT storage:

- Many off campus Domain staff were putting their data at risk by storing it on devices that were not regularly backed up.
- Other staff worked with large medical imaging files also stored data on their laptops as it was too slow to access this data through a network; should the laptop or USB thumb drive be stolen, lost in transit or become corrupted, the data is unrecoverable.
- The current backup strategy for Medical Device laptops was only effective for staff who were regularly accessing the QUT network on campus and because of this, many Domain staff were not able to regularly back up their data.
- Putting important research and grant application documents at risk was of great concern to Domain staff.
Developing the Researcher on the Move Mobile Technology Package

Investigating Mobile Technologies

- After analysing the four key mobile work challenges affecting the Domain, the project began investigating mobile technologies that would address these needs.
- The project worked closely with technical teams to select and package the mobile technologies that would provide the greatest benefit to Domain staff.
- The following mobile technologies were developed and packaged via the Researcher on the Move Mobile Technology Package intranet website:
  - IHBI Web Storage
  - Davenport WebDAV implementation
  - Allows staff to access their data on IHBI servers from anywhere, via a web based interface
  - Provides staff with access to their data from within restricted hospital networks, from home or from overseas institutions.
Remote Backup

- Remote Backup allows staff to choose when to backup their data to IHBI storage.
- Uses a custom package of the Super Flexible File Synchroniser software
- Sends compressed file deltas during backup
- Daily backups are scheduled or staff can initiate backup manually

Wireless Broadband

- Wireless Broadband allows staff to stay connected while they are on the move using a small high-speed 3G USB modem.
- Used in conjunction with IHBI Web Storage and Remote Backup to provide a powerful mobile data management solution.
- Can be used in areas covered by the Optus Mobile network within Australia.
Video Conferencing

- A High-Definition Mobile Video Conferencing Unit has been installed at IHBI's leading Hospital Research Facility.
- Hospital based Domain staff can now meet with their colleagues at IHBI and other locations without the need to travel.
- The mobile unit can be moved between rooms to accommodate both small and large groups.
- The unit has recently been integrated into two AV equipped operating theatres to allow innovative new surgery techniques to be broadcast in real time across the world.

QUT Smart Phones

- A QUT Smartphone can access email, calendar, contacts and more.
- Staff can compare and choose from several fully tested and supported devices.
- QUT uses Microsoft Exchange which is compatible with all offered devices.
Developing the Researcher on the Move Mobile Technology Package

Addressing the Challenges

<table>
<thead>
<tr>
<th>Mobile Technology</th>
<th>Challenges Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIWebSphere</td>
<td>Challenge 3</td>
</tr>
<tr>
<td>Remote Backup</td>
<td>Challenge 4</td>
</tr>
<tr>
<td>Wireless Broadband</td>
<td>Challenge 1, 3 and 4</td>
</tr>
<tr>
<td>QUT Smartphone</td>
<td>Challenge 1</td>
</tr>
<tr>
<td>Mobile Video Conferencing</td>
<td>Challenge 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenge 1</td>
<td>Staying in touch with email and calendar while on the move</td>
</tr>
<tr>
<td>Challenge 2</td>
<td>Constant travel, attend meetings at other locations</td>
</tr>
<tr>
<td>Challenge 3</td>
<td>Accessing and sharing QUT data from other locations</td>
</tr>
<tr>
<td>Challenge 4</td>
<td>Backing up locally stored data to QUT servers</td>
</tr>
</tbody>
</table>

Package Website

In February 2009, the package was officially released to Domain staff via an intranet website containing information, training and support for each of the mobile technologies – www.ihbi.qut.edu.au/go/mobileresearcher
IHBI Focused Research (Feb – June 09)

- Contributed to their own productivity
- Decreased their level of stress
- Contributed to their job satisfaction
- Contributed to their lifestyle satisfaction
- Made them more efficient
- Improved their access to the resources they need to do their job
- Helped them be more creative

- Positive scores for improved confidence, productivity, satisfaction and reduced stress with an average degree of increase (2.3 on a 10 point scale)

QUT-Griffith University All Staff Productivity Research

All Staff Productivity Research (Nov 08 – May 09)

<table>
<thead>
<tr>
<th>Time</th>
<th>University</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>QUT</td>
<td>16%</td>
</tr>
<tr>
<td>1</td>
<td>Griffith</td>
<td>17%</td>
</tr>
<tr>
<td>2</td>
<td>QUT</td>
<td>14%</td>
</tr>
<tr>
<td>2</td>
<td>Griffith</td>
<td>18%</td>
</tr>
</tbody>
</table>
Staff Perceptions of Mobile Technologies’ contribution to overall productivity

All Staff Productivity Research (Nov 08 – May 09)

Positive Change in Staff Perceptions of Mobile Technologies’ Contribution to Overall Productivity (Time 2 - Time 1)

Staff perceptions of usefulness of mobile technologies for work

All Staff Productivity Research (Nov 08 – May 09)

Positive Change in Staff Perceptions about the Usefulness of Mobile Technologies for Work (Time 2 - Time 1)
Mobile Work Symposium

Increase your awareness of the many dimensions of mobile productivity

Attend a one day Symposium hosted by Griffith University & Queensland University of Technology in Brisbane Tuesday 29 September 2009

For more information visit www.conferenceit.com.au/mobilework

Questions?

- More information:
  - Intrnet.griffith.edu.au/gomobile
  - www.gomobile.qut.edu.au