



Emerging Technology & Innovation

Briefing Pack 2014

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Mission

To generate ideas, stimulate open innovation and facilitate pioneering solutions to products, processes or services in order to meet Heathrow's business challenges.

Goals

- To support business case development through evidence by generating ideas, trialing products and testing options.
- To de-risk large IT spend through understanding gained by prototypes & trials
- To engage with both colleagues and partners
- To bring “lean” & “art of the possible” thinking
- To enable Heathrow's promise to provide excellence for both passengers and airlines
- To be able to adapt to changes in the outside world
- To follow a ‘fail fast’ principle, through Build-Measure-Adapt

Mobile Display Units



Business Goal:

To have a Display screen that could be deployed in a terminal without the need to plug-in power or data cables.

Solution: To develop a First of Type (FOT) display that is “fit for purpose” for a Heathrow environment. The display can be deployed in normal operations or during crises to provide information for passengers. The display can rise to a height of 2.3 meters, last for 18 hours and be charged in 6 hours.



Points of interest

- Leveraged established best practice for battery powered mobile units (Hospitals) to reduce development time, increase likelihood of success whilst also reducing costs.
- Initial discussions indicate multiple use cases, both operational and commercial
- Reduces the need for expensive construction work to lay cables or re-site power
- Programme delivery engaged to develop operational deployment plan.
- Further Product Development opportunities – to become a mobile power and data source itself.

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Mobile Display Units – Content Management



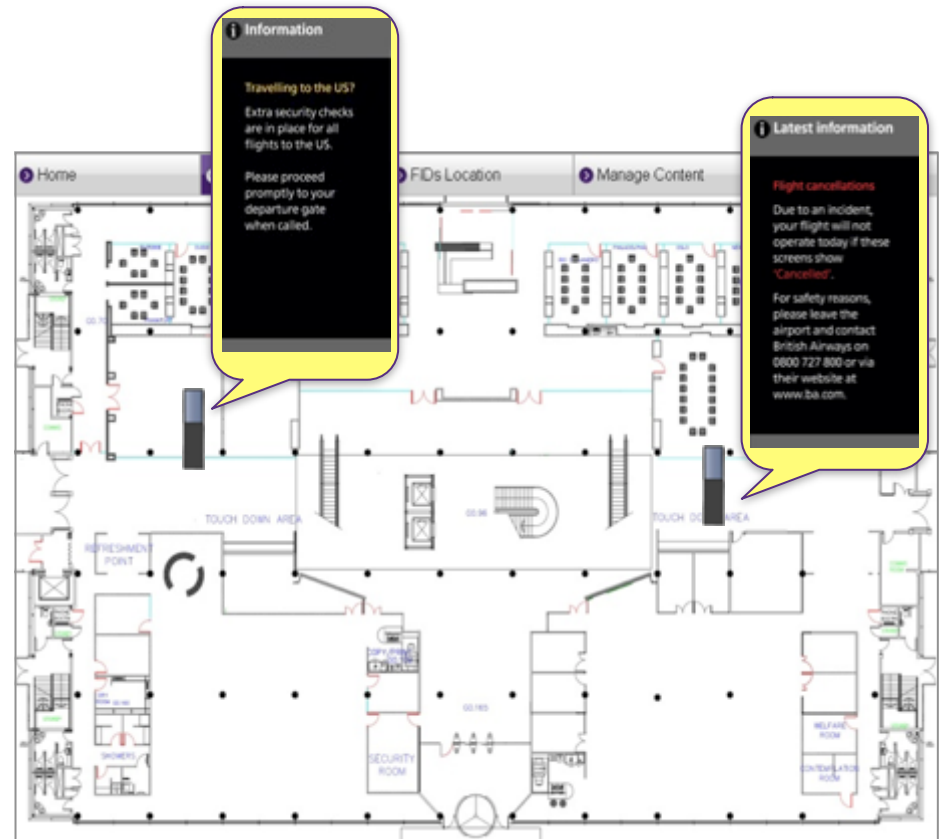
Business Goal:

To be able to control approved content delivered to mobile display units from a central location

Solution: Developed a Proof of Concept Web App that shows how a Mobile display could be selected from a map, then a screen chosen from a pack of pre-approved content, then be pushed to the device.

Points of interest:

- Showing the art of the possible by building business understanding around content management requirements.
- POC Utilised existing ET&I hardware and tools to deliver at no additional cost.



Security Compliance – Engagement through 3D



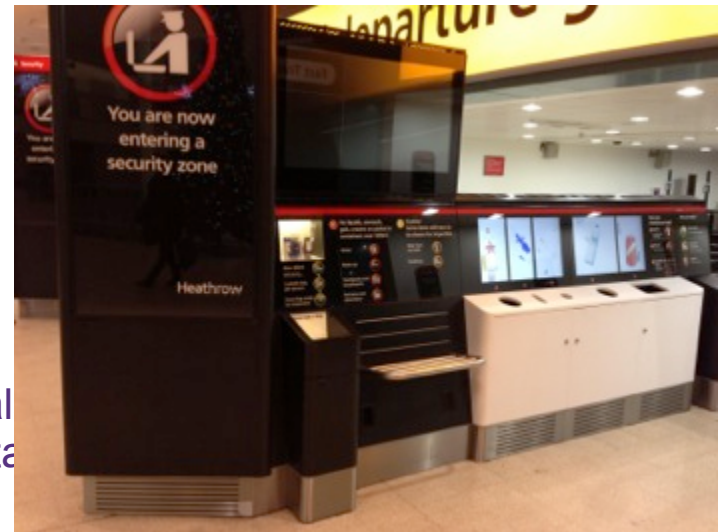
Business Goal: To reduce the number of passengers failing security compliance checks.

Solution: Security Officer Samit Saini proposed the idea to leverage the engaging nature of 3D Screens in order to advise people of the liquids/sharps security compliance rules. The solution was to design a trial that would provide empirical evidence of any success. The trial is planned for T1 and T4 starting in Q4 and was achieved in close conjunction with the Making Every Journey Better team.



Points of interest

- Winning idea taken from 3D screen emerging technology showcase.
- Evidence shows 3D screens placed in retail environments increase levels of engagement.
- Trial design focused on measurement (enhanced security lanes) and keeping costs down.
- Multiple suppliers, areas of the business and terminal working together to deliver a trial that will provide data for potential future business case



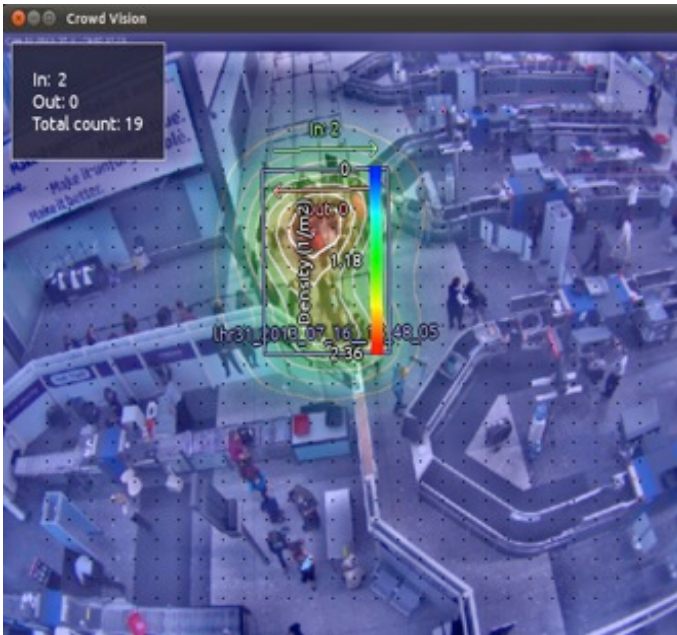
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Crowd Dynamics - Detecting, measuring & alerting through CCTV



Business Goal: To provide counting and identify crowding over defined areas.

Solution: Identified an emerging CCTV technology solution already deployed in a comparable environment. Ran a technology evaluation trial to determine capabilities and identify any constraints. The results from the evaluation demonstrated considerable potential for enabling real-time counting and identifying/measuring crowd density.



Points of interest

- Data showed a ~97% count accuracy.
- The ability to detect crowd density / flow
- Operational Trial being developed for T5.

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Project Updates – Airfield Asset Locator



Business Goal: Enable operational efficiencies for the airfield inspection and airside engineering teams.

Solution: Both airside engineering and airside operations teams wish to reduce the number of revisits required to investigate and resolve faults with airfield lighting. Many revisits caused due to difficulty in positively identifying the exact asset to be repaired. The solution deploys a prototype vehicle mounted touch tablet & high accuracy GPS

This will provide airfield staff with location awareness and asset information via an interactive vehicle mounted map that is always centered on the position of the inspection vehicle. When an inspector touches an asset on the map, key information is displayed ensuring that faults are always reported with the correct identification.

Points of interest

- Trial deployment designed to provide the data to prove if operational efficiency gains are possible.



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Emerging Technology Showcases

Bringing emerging technologies to the Compass Centre and facilitating engagement with areas of the business. These showcases provide valuable feedback and input into potential uses and offer an opportunity to encourage everybody's creative thinking.

3D Screens



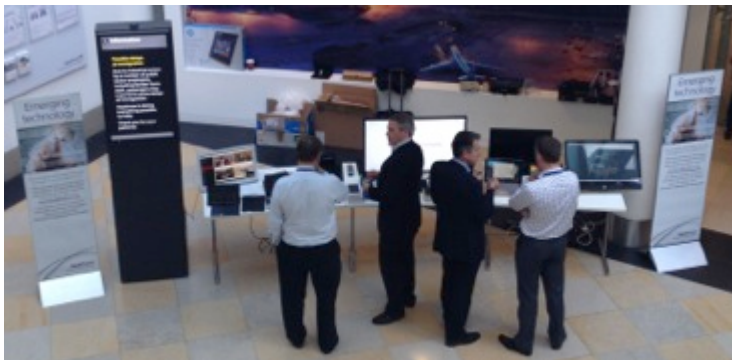
Wayfinding Kiosks



Emerging technology



This emerging technology showcase is brought to you by Heathrow IT. We're always keen to hear about new ideas or concepts that could help benefit our airport. Feel free to share these with us at: innovation@heathrow.com For details of all the current IT innovation activities, or to suggest new ones, please visit: [The Hub->IT Department-Innovation](#)



Devices Showcase



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