



Wireless LAN Event, 6-7th April 2004

Case study: Using wireless for airport safety management

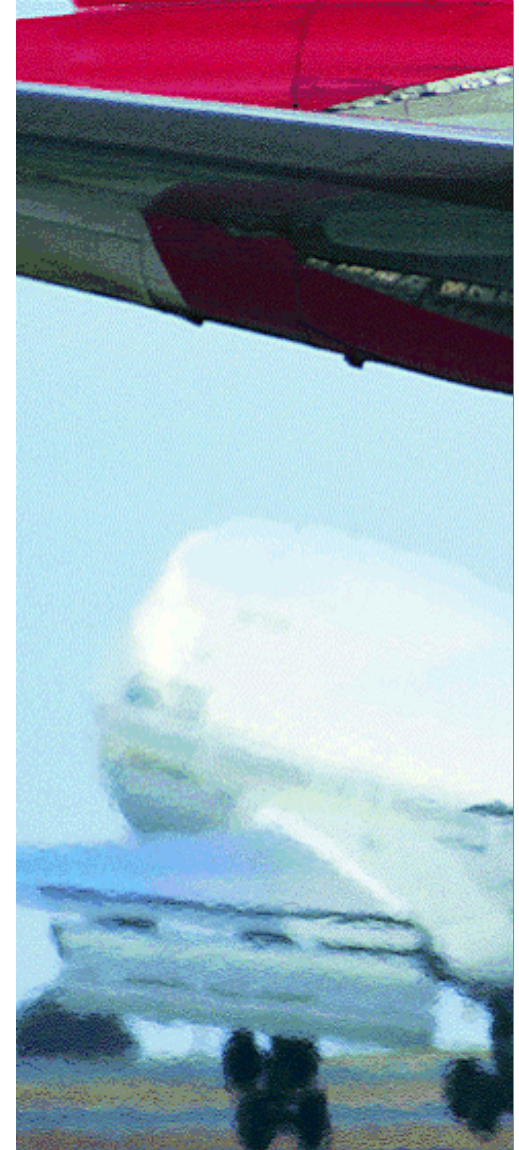
Richard Moore, IT Manager, Bristol International Airport

Richard Atkinson, Managing Director, Clickairport

Bristol International Airport

One of the UK's fastest growing airports

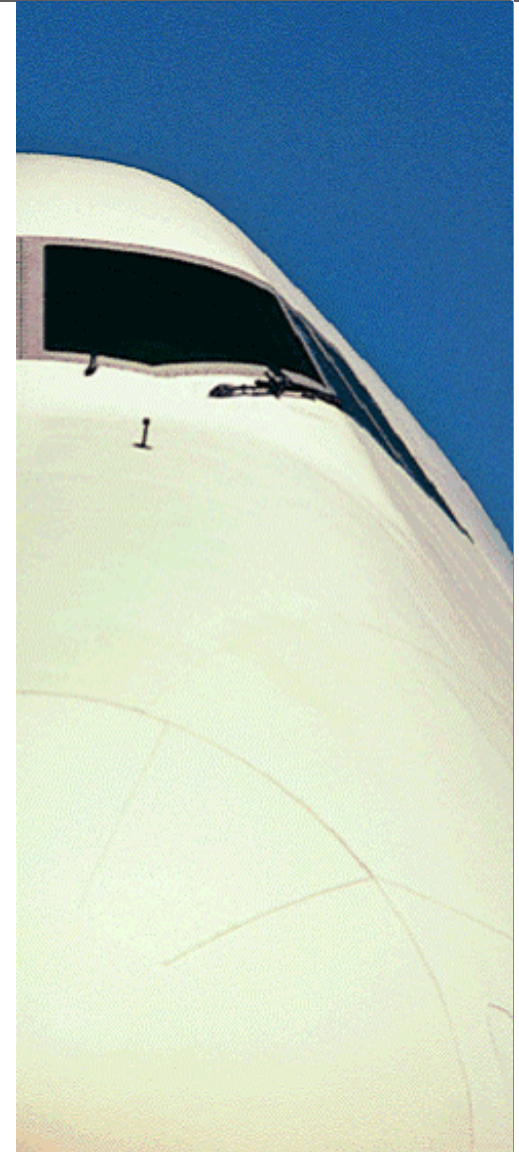
- CLICK AIR** In 2003/04 Bristol International will have handled 4 million passengers.
- CLICK AIR** Over the past 3 years the airport has spent over £47m improving facilities, including a state of the art new passenger terminal.
- CLICK AIR** 19 International Destinations and 12 in the UK.
- CLICK AIR** Using service innovation to differentiate from other airports and to challenge the “west country” stereotypes.
- CLICK AIR** Challenge to maintain team effectiveness as the passenger numbers grow.



Clickairport Background

Leaders in next generation systems for mobile airport workers

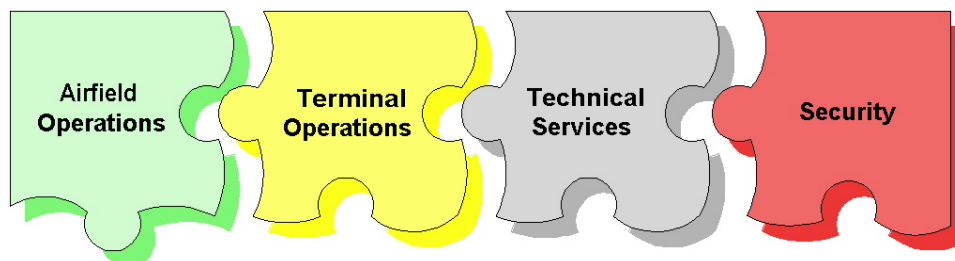
- CLICK AIR** Opportunity created by the maturing of mobile computing technology to the stage where mission critical operational requirements can be fulfilled.
- CLICK AIR** The systems and services help to monitor compliance, improve safety and security, prove due diligence, enable management of risk and an increase in productivity.
- CLICK AIR** After alpha trials at Edinburgh Airport in 2001, the systems are now used by the leading UK civilian airports and the busiest RAF Airbases.
- CLICK AIR** Member of Wireless Airports Association (affiliated to the American Association of Airport Executives)



The Need

Improve Safety, Performance and Quality of Service

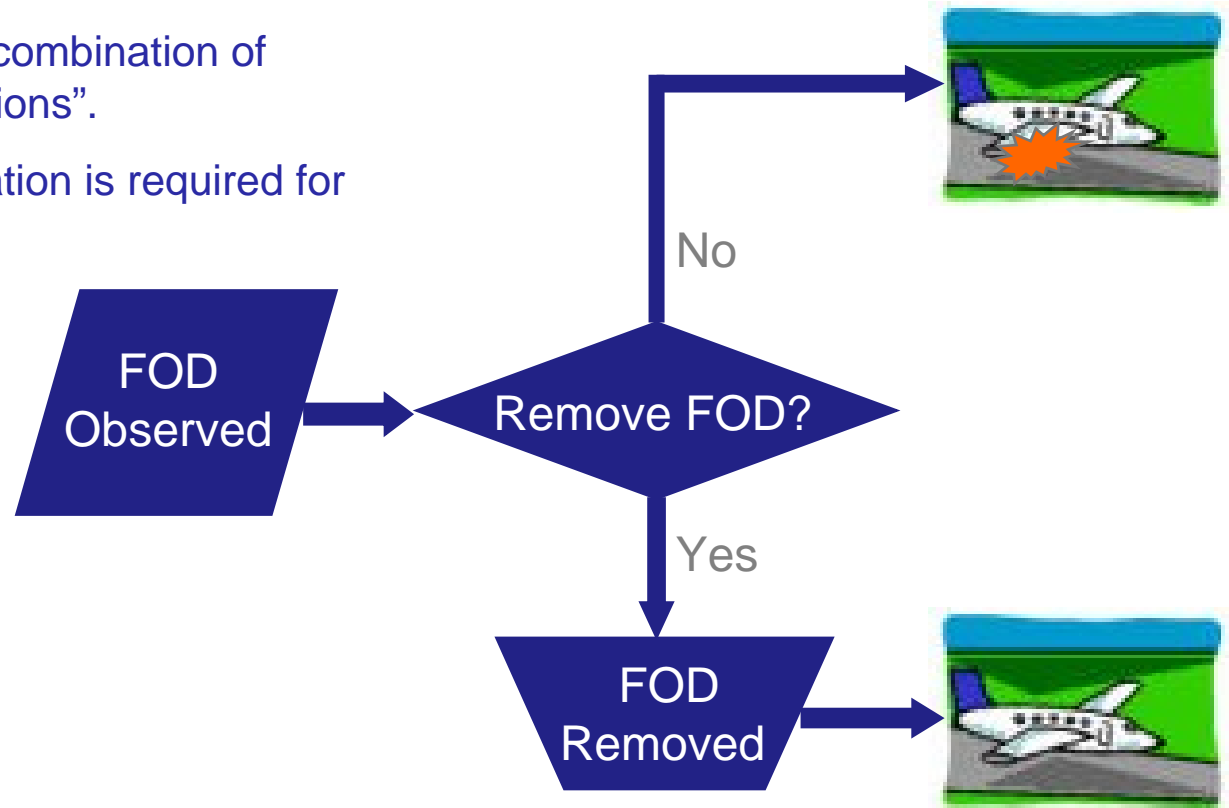
- CLICK AIR** Airports have a very high ratio of mobile workers to desk based workers.
- CLICK AIR** Airports are very large sites, with a high proportion of staff time spent moving around.
- CLICK AIR** Revenue generating opportunity for airports to provide WiFi access to passengers and tenants.
- CLICK AIR** Also a role for 802.11 based systems to improve staff productivity and process performance on a common infrastructure.
- CLICK AIR** Whilst traditional IT software tools are quite mature, mobile applications need to provide flexibility and ease of deployment for front line staff.



The Need

Manage Risk

- CLICK AIR** Risk is not a game of chance.
- CLICK AIR** The difference is in the combination of “information” and “decisions”.
- CLICK AIR** Accurate, timely information is required for quality decisions.



The Need

Manage Risk



~800 data points



~3200 data points



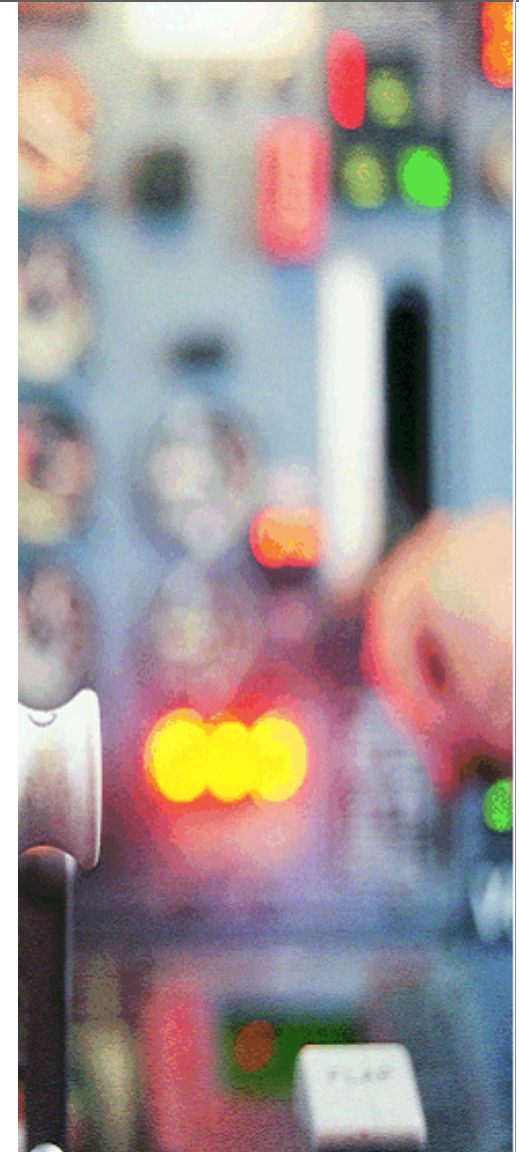
Large quantities of data are required for an accurate picture.



Decisions based on it directly affect safety, performance and quality of service.

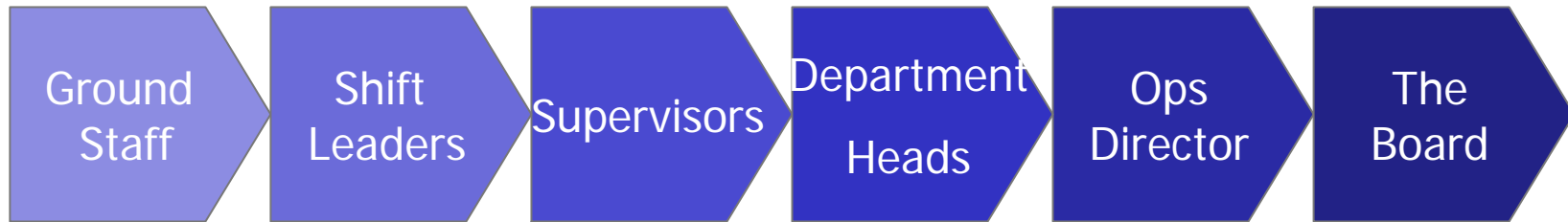


Mobile computing technologies available can provide at least this four times increase in data throughput.



The Platform Solution

Handheld devices and an Intranet



Mobile Devices

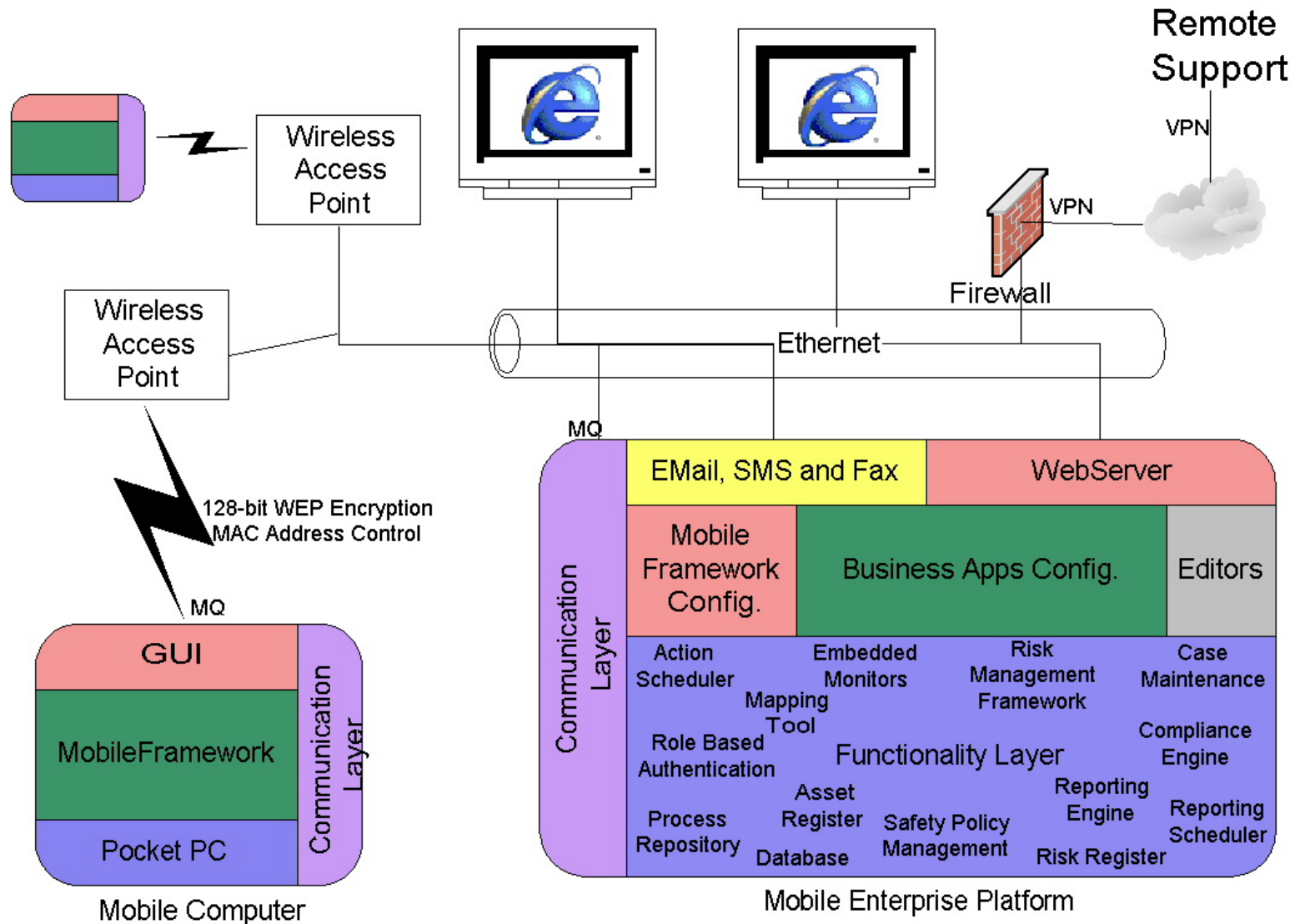


Intranet : **Reporting**, Document Logs, Database Maintenance

email : Automatic document & report delivery

The Platform Solution

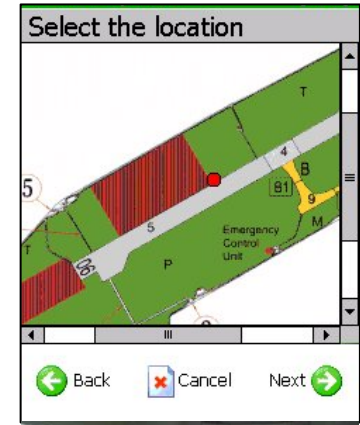
Technical Overview



The Platform Solution

Capture data at source, access information remotely and manage mobile resources

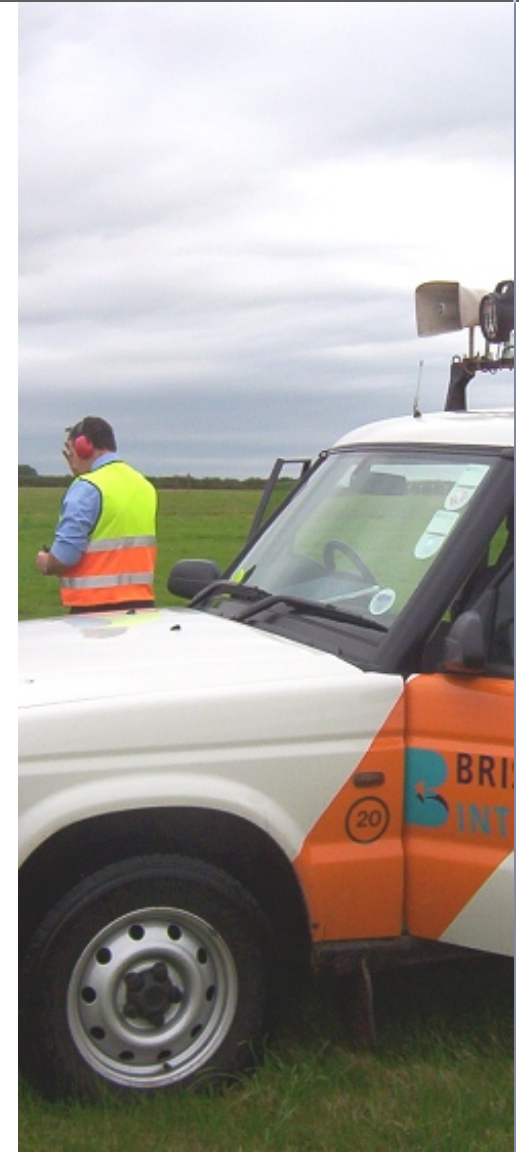
- CLICK AIR** Simply, mobile devices replace pen and paper and even memory:
 - CLICK AIR** Productivity Tools
 - CLICK AIR** Information Access
 - CLICK AIR** Work Routing
 - CLICK AIR** Data Capture
- CLICK AIR** GUI suited to users not historically supported by technology
- CLICK AIR** A Mobile Framework on the device interprets XML instructions from the platform to construct local objects into applications.
 - CLICK AIR** 'Always on' network connection not necessary for access to services.
 - CLICK AIR** Back to base installation not necessary.



The Handheld Framework

Data Capture Example: Bird Dispersal

- CLICK AIR** Bird Strikes pose a serious hazard to aircraft and cost the civilian aviation industry over a billion USD per annum.
- CLICK AIR** Although serious incidents are rare, consequences could be huge.
- CLICK AIR** Bristol International use technology solutions where they:
 - CLICK AIR** Improve safety.
 - CLICK AIR** Monitor compliance.
 - CLICK AIR** Prove due diligence.
 - CLICK AIR** Reduce risk.



The Handheld Framework

Data Capture Example: Bird Dispersal 1 of 7

Select the Bird Type.

Bird Dispersal (1/7)	
Bird sighted	
Black headed gull	↑
Buzzard	
Common gull	↕
Crow	
Curlew	
Feral pigeon	
Goose	
Herring Gull	↓
◀ ▶	
← Back	✖ Cancel
Next →	

The Handheld Framework

Data Capture Example: Bird Dispersal 2 of 7

Select the Quantity.

Bird Dispersal (2/7)

Number of birds dispersed

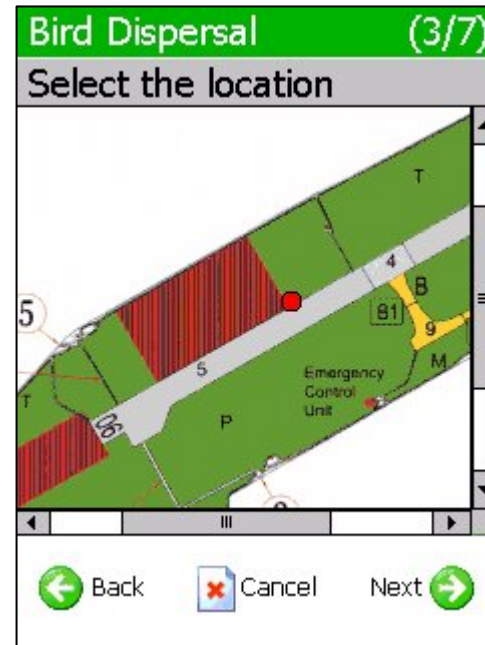
- 1
- 100+
- 11-100
- 2-10

← Back ✖ Cancel Next →

The Handheld Framework

Data Capture Example: Bird Dispersal 3 of 7

Define the Location.



The Handheld Framework

Data Capture Example: Bird Dispersal 4 of 7

Select the Dispersal Method.

Bird Dispersal (4/7)

Dispersal Method

- Air Rifle
- BSC
- Distress call**
- Manual
- Shot Gun
- Vehicle

← Back ✖ Cancel Next →

The Handheld Framework

Data Capture Example: Bird Dispersal 5 of 7

Did the birds Disperse OK.

Bird Dispersal (5/7)
Did birds disperse?

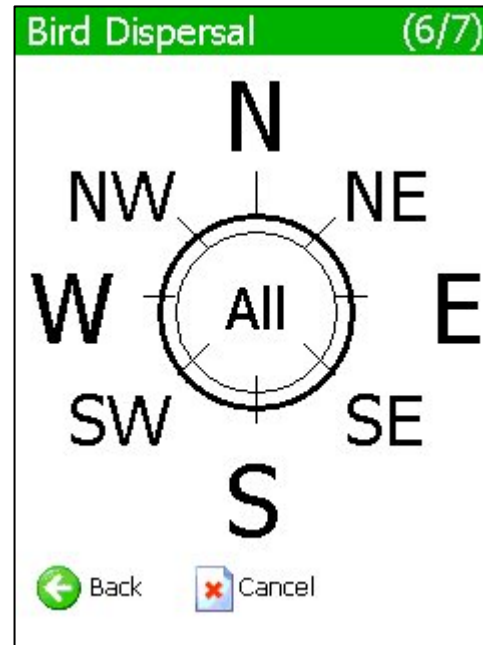
YES NO

← Back Cancel Next →

The Handheld Framework

Data Capture Example: Bird Dispersal 6 of 7

Which direction did they disperse ?



The Handheld Framework

Data Capture Example: Bird Dispersal 7 of 7

Confirm the date & time.

Bird Dispersal (7/7)
Confirm date and time

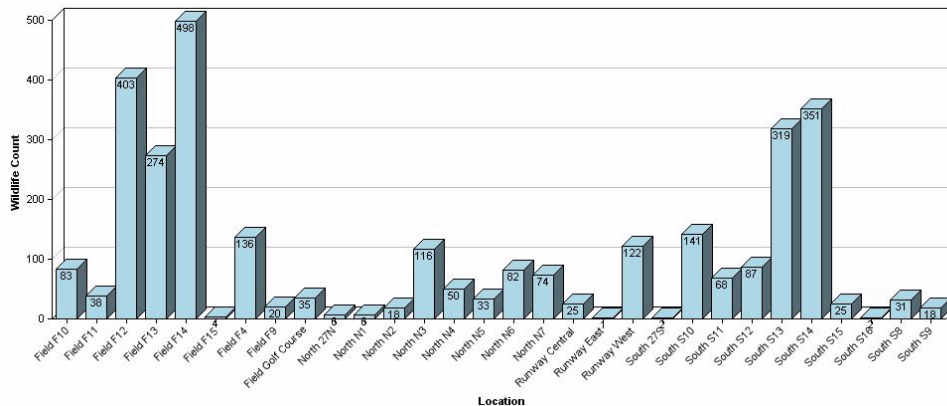
Date: 18 Jun 2002

Time: 18 31

Back Cancel Save

- CLICK AIR** Reports are compiled in real time using the reporting tools.
- CLICK AIR** Management are not slaves to compilation into the same old template reports
- CLICK AIR** Management can focus on analysis and actively hunting out risks, process bottlenecks, causal factors and ineffectiveness.

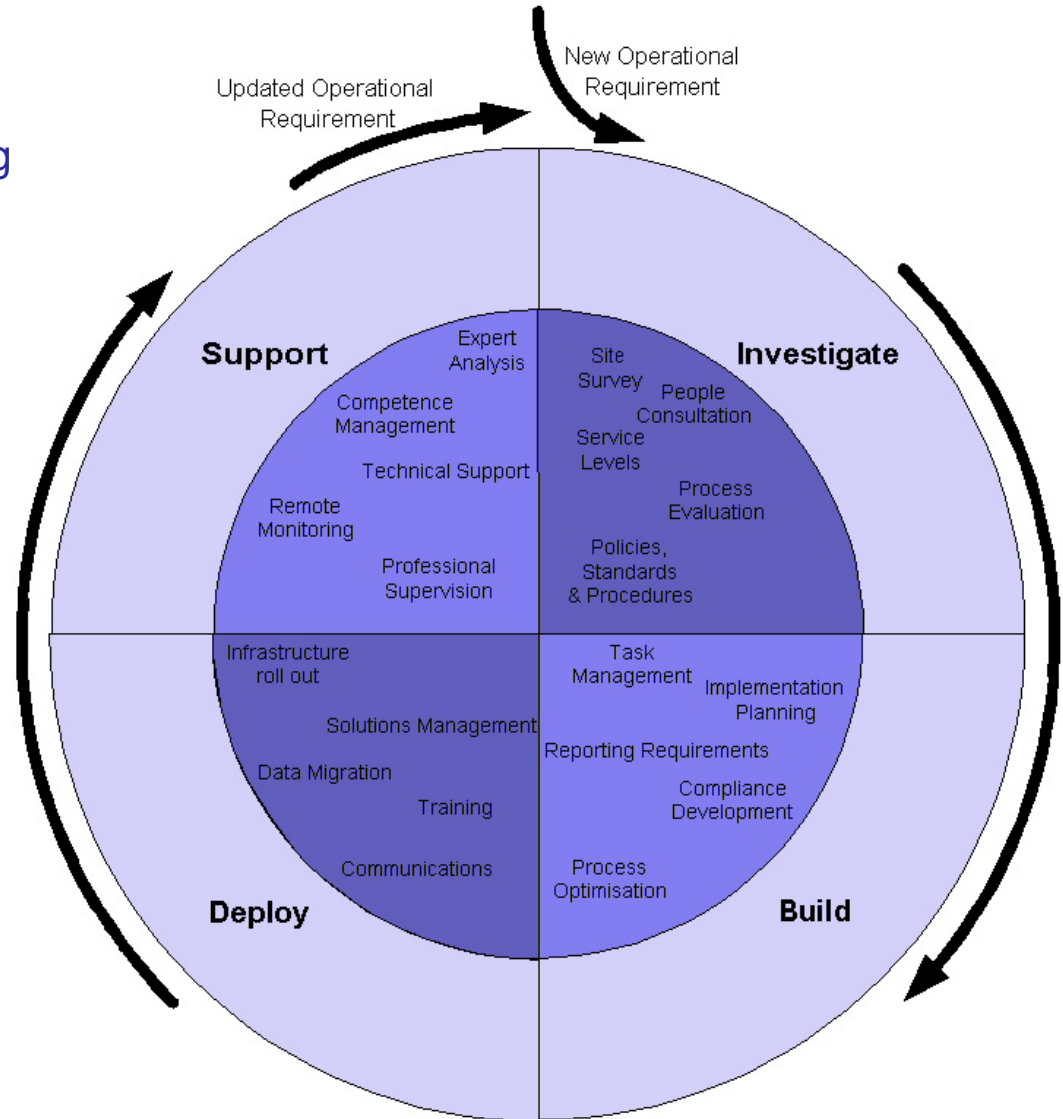
Summary Graphs [Basic] : Location by Wildlife Count



Platform Flexibility and Deployment

Operational requirement led deployment

- CLICK AIR** Front line duties frequently change according to continuously improving processes.
- CLICK AIR** A common platform to manage configurations on remote mobile computers enables ease of deployment of end user applications.



Future Challenges

- CLICK AIR** Improvement in infrastructure reliability
- CLICK AIR** Network coverage
- CLICK AIR** Roll out to support duties in other functional areas



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