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# 9 STEPS

## to enhance field service capability: From operator to optimiser

Field service mobility solutions have become a staple for many organisations now, particularly across utilities, services, local government and law enforcement. Whether it's improving workforce productivity or meeting increased customer demand, these organisations have addressed an important step towards reaching commercial objectives.

But many mobility programs are now under pressure to undergo enhancements, both from a technology and process perspective. As the tech market reaches new heights, and efficiency becomes ever more scoped as a crucial objective, the challenge is on to take field service management (FSM) capability to the next level.

Ahead of **FSM Australia 2015**, we've put together this eBook to draw out practical insights from several mobility specialists and outline the key steps to successful, end-to-end enhancements. We hope you find the eBook helpful and engaging!

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# 1

## MOBILITY TOOLBOX

Many service delivery organisations can specify and select product and services using a range of requirements and methodologies. Some of these will be based on your current supply and technical standards; others will be new or disruptive to your existing arrangements.

A key success factor for mobility is the way that the various technology elements perform their separate functions as part of an integrated tool (which your people utilise to perform work). The ideal tool is a harmonious melding of field hardware, communications, client functions, security and support services that 'just work'.

But as reality keenly demonstrates, it can take just one clumsy or unreliable technology element across the business process to spoil the entire solution. Similarly, a change of location or working environment can reduce the effectiveness or suitability of individual technology elements, leading to a poor overall outcome.

It is therefore important to view your mobility solution as a modular one, where you have an ability to change the component elements to suit the job at hand, whilst maintaining client functionality and supporting the business process.

Western Australia Police has implemented a State-wide mobility solution to improve forensic investigations, to the point where officers can now go to the scene, collect all of the information in real-time and associate the scientific or forensic investigation with the criminal investigation.

A detective accessing the file for the criminal investigation now has access to the details of the forensic tasks that were attended.

And because fingerprints can be photographed at high resolution, they can now be transmitted to the national fingerprint information system, and have them processed whilst officers are still at the scene. The results are sent back to a pool area where two subject matter experts can review the fingerprints, validate the findings of the system-automated search, and make an identification in real-time to the forensic officer at the scene.

When it comes to both operating and enhancing an existing mobility solution, there are many elements which need to be addressed, including software, hardware, deployment, and integration into the backend systems. Your solution isn't just an app; it's how the program feeds into your existing business systems.

### SOFTWARE

Specification
Tendering of the solution provider
Design, development and testing
Enhancements and licensing costs

### HARDWARE

Procurement process
Configuration requirements
Replacement cycle
Ongoing support for hardware

Properly resourcing your project; understanding the market trends; coming to a decision on whether to outsource or insource all or parts of the solution – it all depends on your business IT architecture and what support contracts and processes need to be in place.

## SOFTWARE CHECKLIST - FUNCTIONALITY & DATA MANAGEMENT

- ▶ Assuming a mobility solution is in place – what information and data services does the field person need to perform their work? (baseline; in isolation)
- ▶ What other information and data services would be required for field people to offer value-add or additional services to the customer?
- ▶ Do you need offline capabilities?
- ▶ Are there opportunities for field people to work more efficiently if you provide them with other data resources? (such as spatial info services, workload/scheduling and resource mapping) Can you find value in supporting field team collaboration?
- ▶ What data needs to flow from/to the field from your business system(s) to support the field transaction(s)?
- ▶ Do you need to track the spatial location of your people?
- ▶ Does this data directly support the process? Can you get the same process outcome without real-time tracking?
- ▶ Is there a safety benefit from real-time tracking?
- ▶ Do your business systems and corporate IT infrastructure have the functionality to support mobile clients? What are your options? (Citrix? RDP? Offline thick client? Back end integration?)
- ▶ **Security!** What are your requirements/policy drivers beyond basic end user authentication? Do you need data encryption/two-factor or biometric authentication?

## HARDWARE CHECKLIST – DEVICES

- ▶ What is the usual working environment for your field people? Do they need specialised ruggedised/intrinsically safe/IP 54/65 rated gear?
- ▶ What service life do you expect from the devices? (three, maybe four years?)
- ▶ What sort of physical working practices are undertaken in the field? Do your people need a hand-held device to use as they work or would a clamshell style device suit?
- ▶ Is work being done outside? Do you require daylight visible screens?
- ▶ Pen based? Touch enabled? Neither? Or both?
- ▶ Screen size? Weight? Performance? Battery life?
- ▶ ***There's no such thing as a free lunch – each factor affects the other!***
- ▶ Do you expect your people to carry the device all day? Are there any ergonomic or safety issues to be dealt with?
- ▶ Will there be a facility to charge their devices during the day?
- ▶ Will your devices be 'docked' whilst in vehicles? What legal requirements apply in your state?
- ▶ Data communications services – what options are available to your field people? Next G/WiFi, Packet data services?
- ▶ What are the computing environment requirements for your field people? Do they need a full corporate suite of applications? Or does a mobile client with a specific subset of functions meet the business need?
- ▶ Is there a benefit in providing corporate services such as email/intranet/collaboration services to your field people?
- ▶ iOS vs x86/Windows vs ARM/Windows vs Android. Where do you strike the balance between functionality, cost and security?

If you implement new hardware and software simultaneously, however, you'll more likely find it challenging to differentiate between hardware issues, software issues and user errors. It is harder for the field team to transition, and training requirements and support will be high.

Staging hardware and software implementation separately significantly increases the likelihood of a successful outcome.



# 3

## INTELLIGENT SCHEDULING & DISPATCH

Intelligent scheduling and dispatch tools are critical to the efficient delivery of field services. Field service staff work autonomously – they are the ‘last mile’ and point of direct contact with your customers. By very definition, a field service person is not directly engaged in your process back at the depot or office.

Field service people depend upon smooth running of the scheduling and dispatch process during their day, so the tools need to be flexible and adaptable in order to manage workload evenly across your service team.

The system should be able to support a steady stream of work to the field teams. Ideally, field people would be made aware of their next job whilst completing currently assigned work. It doesn't help to dump a day's worth of work on the shoulders of a field service person and have them stress out for most of the day!

Variability in service person availability (due to illness, leave, being occupied by complex work) is a factor which needs constant attention from dispatch staff as they manage workload across the team.

Scheduling and dispatch tools become truly ‘Intelligent’ when the system is able to identify the closest, most cost-effective and appropriately skilled person for any particular job. Such dispatch decisions are made on the basis of a balance between:

- ▶ Priority/customer SLA
- ▶ Existing workload (team/Individual)
- ▶ Service person's skill set
- ▶ Distance to client

You also need to consider:

- ▶ How is work currently scheduled – planned or reactive?
- ▶ How is priority set, managed and measured?
- ▶ How do your businesses manage workload across geography?
- ▶ What are your customers' expectations around priority?
- ▶ How do your field people manage conflicting priorities in their workload?
- ▶ Who is best positioned to manage this? Field people or dispatchers?

# 4

## CONNECTIVITY

Connectivity is a front-of-mind issue related to capability. Whilst many people talk about, for example, a web-based solution, some of the newer web solutions with HTML5 are better suited to deal with disconnected environments – but they only go so far.

It's important to address where your devices are going to be deployed and what environments they're going to be deployed in; it's not feasible to store endless amounts of information on the devices.

If you do need to store a reasonable amount of information on the device to deal with the disconnected solution, you then have to ensure that you're picking devices which have appropriate memory.

Field people work autonomously but need to be kept connected and transacting. Telco services improve over time, but remote locations will always have issues. Mobility platforms need to be flexible and support multiple communication methods, as well as manage disconnected states so that field work can continue without disruption.



# 5

## GPS & REAL-TIME POSITIONING

The ubiquity of technology such as smartphones, tablets, apps, 3G data connectivity, GPS and messaging services raise real opportunities for service managers to better connect field service delivery with corporate business processes.

Real time GPS location services are a powerful tool for service organisations, as spatial awareness of available skills and resources support the efficient deployment of people to works.

Spatial awareness is used to drive workforce efficiency through the reduction of unproductive travel time, better customer communication, and improved field force co-ordination. There are several questions which should be addressed when considering GPS applications:

1. Where does real-time positioning fit within the business process? What issues are you trying to address?
2. Is it possible to get the same process outcome using other locational data? (such as location of the last/next service call, home address, depot/office location)
3. Are there safety benefits which can be realised? (man down/SOS alerting)
4. Can GPS/GIS enabled services such as navigation, customer/asset location and mapping add value to field working practice?
5. What specific efficiency savings are you looking to find through the use of spatial location services:
  - ▶ Minimising travel through the day?
  - ▶ Best route to next client?
  - ▶ Avoiding traffic issues?
  - ▶ Analysis of travel patterns to fine-tune territory boundaries?
6. What is the IR situation with your field people? Are you ready/prepared to have the conversation about GPS location tracking?
7. Where are the win-win scenarios?



# 6

## COMMUNICATION BETWEEN SOFTWARE, HARDWARE & CORPORATE SYSTEMS

Whilst your business processes define and inform the tools and systems you use, the underlying information flow (to and from the field) is the lubricant which keeps the wheels of your delivery process turning smoothly.

Information stores, service databases, field clients, reporting systems and their associated business rules are all key aspects of efficient delivery systems. However, they deliver no benefit in isolation. Service managers need information systems and tools which complement each other, work seamlessly and are flexible enough to adapt to business change.

Field working practices will never be efficient if the underlying information services supporting them are not optimised and ready.

New tools need to be adaptable in order to integrate with existing systems and expand your organisation's delivery capability. The choice to build, buy, modify or replace system components over their respective life cycles is an ongoing

exercise – identifying new opportunities to streamline and centralise data and workflow management.

Implementing change in key service delivery systems is a challenge. There is little scope for protracted downtime or long delivery cycles. Capital investment is high, and fast returns are essential.

Centralised systems, single sources of 'truth', common data interchange frameworks and transport mechanisms which enable efficient technology interoperability are the goals. To reach them, consider:

- ▶ Standards and enterprise architecture – how do these apply to an effective implementation?
- ▶ How you measure the effectiveness of systems and mobility in supporting field working practice. Should you apply the 80/20 rule?
- ▶ What is a realistic functionality you can create or deploy now, and what you can do over the longer term (such as five years).
- ▶ If the required data already exists in your systems.

Coca Cola Amatil has empowered its field technicians to manage their inventory more accurately through flexibility in communication. Now 12 months into this program, results are the best they've been in five years. Full visibility has also been enabled to monitor the status of the different teams and see in each individual warehouse how many widgets are available. For field service managers, an OSP application has been deployed to allow them to be on-site yet still have access to:

- ▶ What order are allocated for shifts
- ▶ If a technician is listed on shift and completing orders
- ▶ If the technician falls more than a specified time behind their schedule the team leader is notified
- ▶ View current schedules by State and by Team Leader,
- ▶ Active notifications of planning violations, and
- ▶ Sick leave management functionality



# 7

## ADD-ONS & ADVANCED SYSTEMS

When it comes to installing add-ons or advanced systems to your existing mobility system, these solutions have to support your processes with an intuitive and logical flow. Field staff should transact with the process quickly and with a minimal level of distraction, and technology elements must support working practice and not take focus from the job at hand.



Solid requirements to cover the **entire business process** and your non-functional technology needs (integration and security)

The life cycle of synchronisation needs to be accounted for too. Certain products or technical functions within the existing system might not be capable of interoperability. One of the biggest challenges is to enable new capability whilst ensuring every aspect of the system is interoperable, which is why cross-vendor support is vital to achieving this.

Hardware, software, services and functionality need to be considered in real-world usage scenarios. Each scenario and business is unique, and requirements are driven from these outcomes.

Melbourne Water does not operate or manage assets at the retail level, but is focused on the large distribution mains, pumping stations and dams. These are assets with very long (100+ years) service lives. The key to this is ongoing inspection and remediation – any issue in its early phase needs to be identified immediately.

The organisation is working with a UAV contractor to not only perform flights and capture visual data, but more importantly, analyse it post-flight to compile and provide a detailed report with the relevant information for asset management.

There is a grading and classification system for anomalies such as cracking in concrete or surface degradation. A categorisation matrix is used for these types of anomalies. Part of the work carried out with UAVs has focused on training the contractor in the use of this matrix. Technicians can inspect hazardous areas without being exposed to onsite risks and in far shorter timeframes.

# 8

## TRIALS AND PILOTS

The use of technology and process trials is a vital aspect of a well-planned mobility implementation. Trials can unearth anomalies in process or reveal inaccuracies in assumptions made earlier in the planning stage.

A small-scale pilot of technology elements provides a real-world and scenario based indication of a product or service's utility and applicability for your business. Prototyping and proof-of-concept trials with your field people reveal the degree of alignment with vision, as well as utility of your technology platform to its application in working practice.

There is much to be learned and lessons to be taken back into the design and configuration of solutions as they develop. Trial and pilot stages are ideal for evaluation of a range of technology options at the early stages of your mobility projects.

They are also excellent mechanisms for establishing a collaborative environment and relationships between your field workforce and corporate teams (IT, Management, Process teams).

At Wel Networks in New Zealand, a dedicated Business Improvement team worked with IT through system and user testing to enable integration of data analytics, specifically across preventative maintenance and inspection times.

End users are also able to submit data in real-time direct from the field, eliminating the need for 3rd party facilitators. Information accuracy has been improved as a result, and administration staff at head office can determine if jobs are billable, and what materials are required.

Further development is underway to enable automated timesheet reporting. Technicians will be able to receive a call and accept it whilst on-site, and subsequently record and upload information straight into the main ERP system.



# 9

## IMPLEMENTATION & SUSTAINABILITY

The best mobility solution in the world can be rendered useless through poor implementation. The goal is not just to deploy a technology – but to introduce it within the existing way work is done so that the end result is an overall improvement to the process.

This requires an engaged and collaborative approach with your field workforce, many of which might not be comfortable in using the new tools or equipment. The scale of change needs to be sensitively managed.

Your people will adapt to change over time if you avoid burdening them with too much at once. Introducing new tools and capability over part of a frequent process gives your people time to adapt to change and gain confidence with the new tools. Once adapted, new functionality and processes are easily implemented.

Work on the premise that something better will be around the corner. Two or three years are the ideal timeframes for changeover.

Also think beyond the users and have everyone involved who will play a role in the successful implementation and use. Continue to take small steps and get the team understanding that change is the constant.

Field service mobility is rapidly becoming far more than a strategy or program for companies; it's transforming into a key business enabler. The amount of new technology accessible is an exciting prospect; but that's only half the story. Business processes and organisational agility have equally important roles to play. Together, these elements can pave the way for companies to move from operators to optimisers.



# Join us at Field Service Management 2015!

18 - 20 March, 2015, Australian Technology Park, Sydney

## Our expert speaker panel includes:

### **Michael Olsen**

Chief Executive Officer,  
**Infraworks Rail**

### **John Avgenicos**

IS Relationship Manager,  
Information Services,  
**Spotless Group Limited**

### **Sandra Roggeveen**

CEO, **dZON**

### **Michael Davey**

National Field Service Manager,  
**Coca-Cola Amatil**

### **Lance Martin**

Superintendent, State Intelligence  
and Communications Portfolio,  
**WA Police**

### **Gavin Hudson**

National Operations Manager,  
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### **Mary Brittan-White**

Managing Director,  
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### **Dr. Michael Phelan**

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Manager Plant & Equipment,  
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### **Bart Dilissen**

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Manager Information Technology,  
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Director Information and  
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### **Colin Wilson**

Workforce Automation  
Stream Lead, **SPARQ Solutions**

### **Steffi Harbert**

Field Force Automation Quality  
Manager, **Ergon Energy**

### **Craig Taylor**

General Manager, **City Care**

### **Chris Puddle**

SAP Systems Specialist,  
**WEL Networks**

### **Dr. Catherine Ball**

Senior Project Manager,  
**URS Corporation**

### **Kathryn Turner**

Manager Customer Service  
Delivery, **Queensland Urban  
Utilities**

### **Wendy Sparkes**

Business Performance Manager,  
**WEL Networks**

### **Clr Mathew Dickerson**

Mayor of the City of Dubbo,  
**Dubbo City Council**

### **Stephen Jewell**

Manager Network Operations,  
Infrastructure Services Division  
**Unitywater**

## Make the most of your attendance and networking opportunities and attend the interactive workshop sessions:

### Workshop A:

**Building Effective Field Service  
Mobility Strategies with the  
Latest Technology and Devices**

*Facilitator:*

**Lance Martin**

Superintendent, State Intelligence  
and Communications Portfolio,  
**WESTERN AUSTRALIA POLICE**

### Workshop B:

**Strategies for Successful  
Implementation of Field  
Services**

*Facilitator:*

**John Avgenicos**

IS Relationship Manager,  
Information Services,  
Spotless Services  
**Australia Ltd**

### Workshop C:

**Achieving Higher Productivity,  
Cost Effectiveness and  
Customer Satisfaction with  
Workforce Automation**

*Facilitator:*

**Chris Puddle**

Business Systems Analyst  
**WEL Networks Ltd**

**Steffi Harbert**

Improvement Initiatives  
Business Lead  
**Ergon Energy Corporation Ltd**

### Workshop D:

**Improving Field Service  
Mobility Strategies with  
Effective Utilisations of GIS**

*Event Partner*