



SMART METER ROLLOUT

THE DEPLOYMENT TOOL

BASED ON BLÅ COORDINATOR



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ABOUT

ISMOBILE

The first company that has brought together on-demand service chain management, advanced optimisation and mobile technologies into a highly scalable “best of breed” field service management solution. With flexibility built-in.

The world is constantly changing. Regardless of software solution. Affected by the global economy, service providers are regularly forced to reevaluate their competitiveness and how to best position themselves in the business ecosystem. In addition, service industry workers demand a higher level of participation and more dynamic organisational structures. But these ideas are traditionally counterintuitive to cost-efficiency.

That's where isMobile comes in.

We have built a software platform with the top criteria to handle change. Changes in real-time and over time. Having **flexibility built-in** in our software solutions and in our behaviour. Working together between three main roles - back-office, field worker and end-customer - is key to us.

Understand what I need to give in order to get delivery from my co-worker and what I need to deliver. Understand my role in this work order, my role within the team for the success of the project. It's about efficiency by transparency. **It's about people.**

isMobile transforms or optimises service organisations into streamlined information-driven service operations. isMobile delivers best-in-class software solutions to support this transition. We also provide services – delivered by us or in partnership with friends - such as analysis of the operations, mapping processes with functionality, integrations with corporate systems, software development additions and the deployment and training of our software solution. Working in a **partnership** model is in our DNA.

Efficiency starts and ends with serving People.

KEY FACTS ABOUT ISMOBILE

- isMobile is a growing Swedish software product company founded in 2000, active in the mobile field service management solution market.
- Main market segments are Utility, Industrial Maintenance and Customs.
- isMobile delivers two types of solutions; either an enterprise field service management solution with the full-blown Blå Coordinator or specific optimized mobile field service management packages as a cloud service for specific high-volume applications like Smart Meter Rollout.
- Our solutions are today being used in ten countries by world-market clients like Eltel Networks, Naturgy, Vattenfall Service, Maintpartner, Kamstrup, OneNordic, Lassila & Tikanoja and many more.
- The partner network is growing, as the main strategy to help even more customers in Europe and the rest of the world.
- isMobile operates from its head office in Luleå, Sweden, with sales and support personell in Helsingfors, Stockholm och Sevilla.

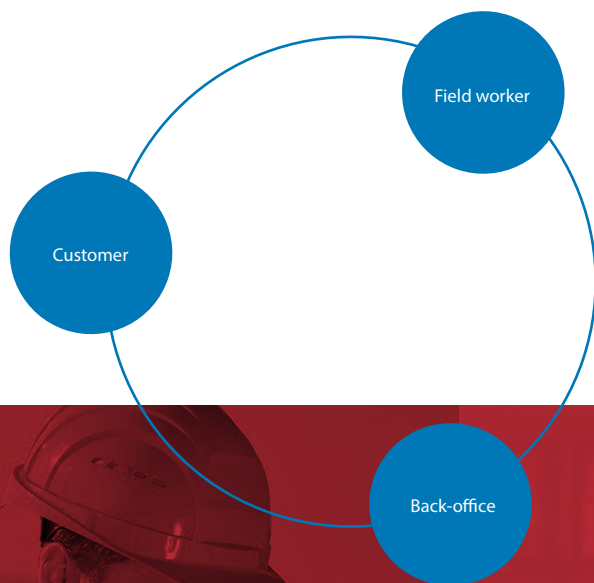
SMART METER ROLLOUT

BASED ON BLÅ COORDINATOR

All our customer experiences are built-in into our full-blown enterprise field service management solution Blå Coordinator. For high-volume applications like Smart Meter Rollout, we have a specific optimized mobile field service management package (using necessary Blå base modules) with a predefined workflow for meter exchange. Offered as a cloud service.

Situation-smart field service management

Blå Coordinator with a human BOTTOM-UP approach made as an agile system to deliver bottom-line efficiency. A system built to react to real-time changes. Always - in every situation - having three categories of participants in mind;
Field service person/team, the Back-office and the Customer.



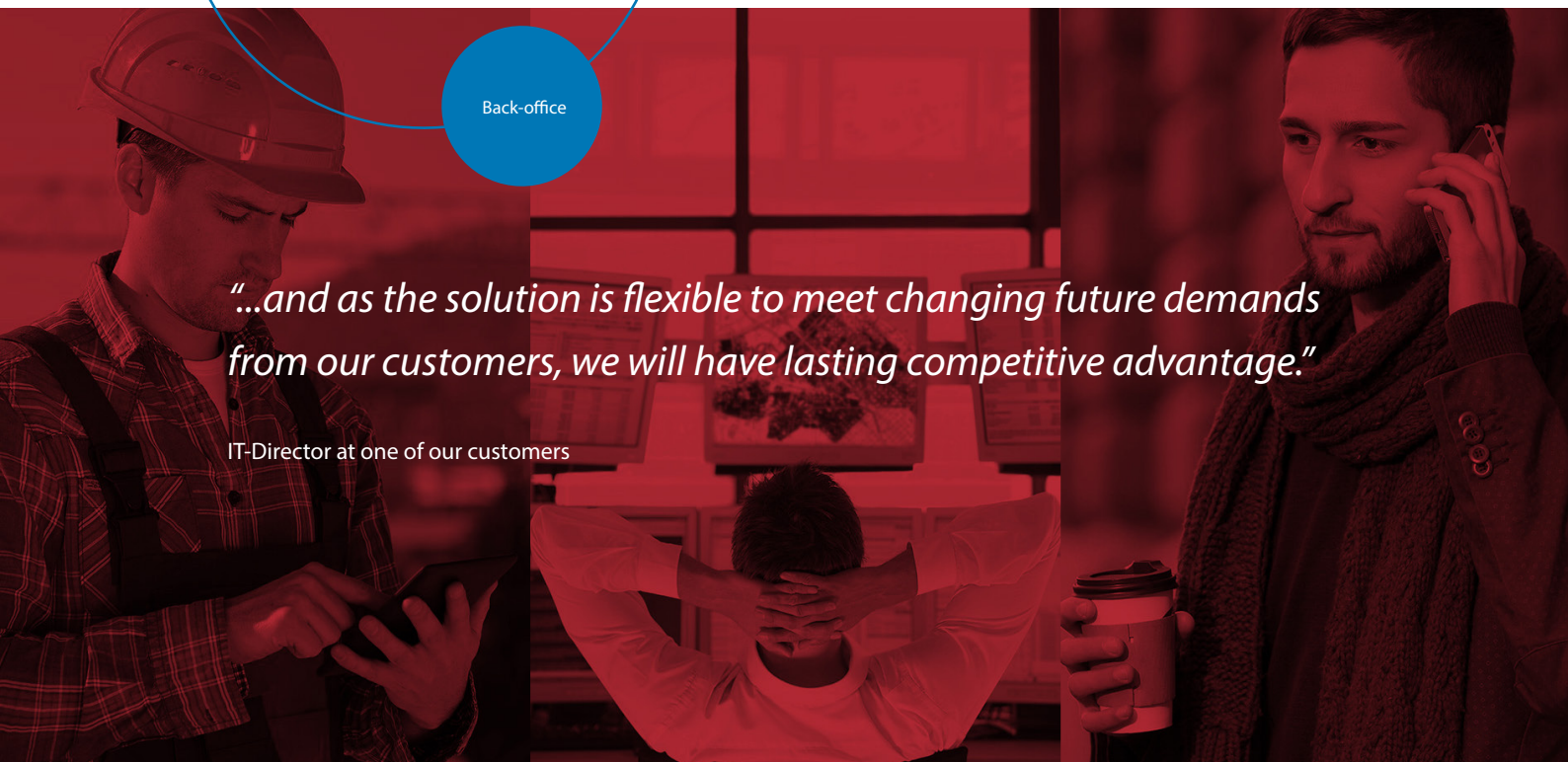
Key values for isMobile Smart Meter Rollout package

In dealing with large-scale projects — such as rolling out smart metering to households nationwide — there are a number of experiences that we see crucial for a winning field service management solution:

- Get in control of massive volume of work - handling real-time changes
- High hit-rate for first appointment - smart planning and customer interaction
- Efficient Meter switch
- Efficient Logistics - plan, monitor and control flow of Customer Smart Meter devices
- Coordination of subcontractors
- Quality Control & inspection
- Cleanup

"...and as the solution is flexible to meet changing future demands from our customers, we will have lasting competitive advantage."

IT-Director at one of our customers





OPTIMIZED FOR METER EXCHANGE

UNDERSTANDING THE

WORKFLOW

A predefined workflow for meter exchange.

Step-by-step

The Smart Meter Rollout package (based on Blå Coordinator) has a predefined meter roll-out workflow. The first step in that process is to import information needed for roll-out from the customers information system. The import can be done by either using non real-time transfer of information (one example is csv. files) or by using real-time transfer of information (one example is web service based integration).



CREATE WORKORDER

Create workorders by real-time transfer of data such as integrated web services, batch oriented integration of data (e.g. csv files) or by a designated user interface for single workorder creation.



PLAN/PREBOOK

Organize the work into Metropolitan Statistical Areas (MSA) and available resources in teams to create optimized pre-planned time slots reservations by automation or manually.



NOTIFY CUSTOMER

Letters, sms or email are automatically created, notifying the time slot for the work to be done. The notification also contains a reference on how to confirm or rebook the work order if needed.



REBOOK/CONFIRMATION

Confirm or rebook received time slot in the Booking portal. Notifications and SMS reminders provide efficiency regarding communications between end-customer and the call center.



DISPATCH FIELDWORK

Execute plan by dispatching the work to be done to the field worker and re-optimize if needed due to real-time changes. Visualisation and monitoring of real-time progress and statistics with KPI.



EXCHANGE

Receive and execute work with real-time access to workorder information. A mobile device provides a digital guidance with check-list, advanced validation and flexible mobile field reporting.



OPERATIONAL REPORTING

Input from real-time field reporting for reports with KPI on performed work, quality inspections and cleanup actions to correct and predict for right support and conditions of coming exchanges.



CLEANUP

Resolves exchanges not performed based on detailed field reports on cause, corrective maintenance actions needed and information about workorder and inspection history.

SUPPORTIVE PROCESSES



CORRECTION/INSPECTION

Actions of emergency and preventive correction in field. Inspection is planned and performed according to defined business rules to ensure quality of the exchange and continues improvement.



LOGISTICS

Track the Meters and components, from the delivery site to the field and final installation site, both as singular articles and on boxes or pallets. Includes the dismantling and processing of old exchanged meters. Fully integrated with the exchange process.

CREATING

THE WORKORDERS

Smart Meter Rollout makes it possible for the customer to select how work orders should be created.

The alternatives

Smart Meter Rollout (based on Blå Coordinator) includes an interface for the user to create work orders, batch oriented integration using files or using real-time integration.

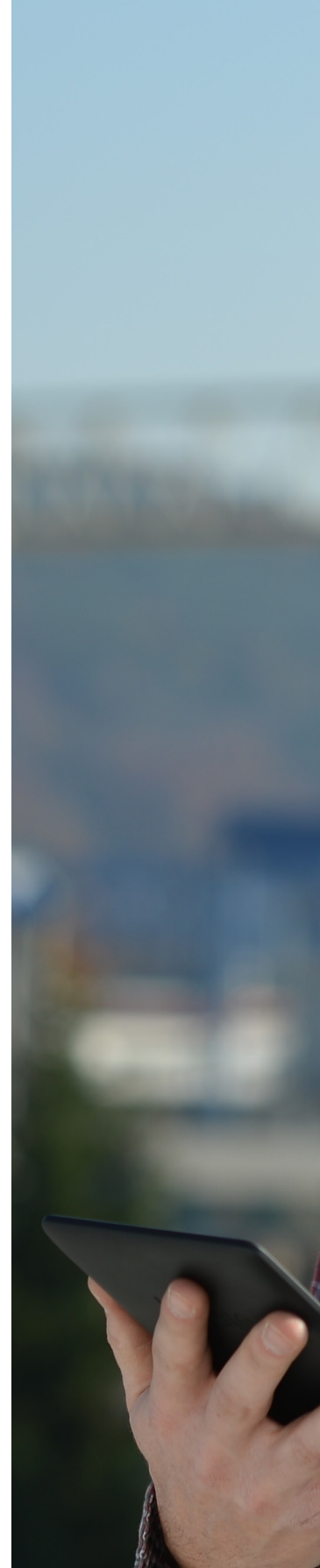
The user interface to create work orders is configurable making it possible to add customer specific fields that can use any information stored in Blå Coordinator or information from other data sources like external interfaces and databases.

The batch-oriented import function makes it possible to import work orders based on content in files. In Blå Coordinator there are tools to help the user to handle different import format.

Real-time integration is supported by the Blå Coordinator integration adaptor (CIA). This includes work order creation, modification, assignment of resources to execute a work order, receive notifications of work orders or assignment status changes etc.

The wide range of messages required by these interactions must be efficiently and timely dispatched between Coordinator server and its cooperating external systems. It is also important that the communication is simple to adapt as the external systems come in many flavours, usually with their own data formats and content. A number of different transportation protocols, i.e. XML/JMS, XML/SOAP/JMS and XML/SOAP/HTTP

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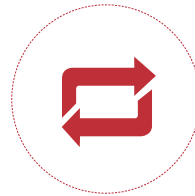


urs, usually with their



IMPORTING FROM SPREED-SHEETS

The batch-oriented import function makes it possible to import work orders based on content in files.



INTEGRATION

Real-time integration is supported by the Blå Coordinator integration adaptor (CIA).



USER CREATION

Front-end utility for single workorder creation.

PRE-PLANNING USING AUTOMATIC TOOLS

PRE-PLANNING

YOUR PROJECTS

Working with large workorder sets

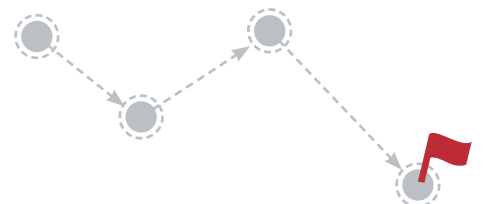
For big meter roll-out projects there are a large number of meters that should be exchanged. Blå Coordinator includes pre-planning automatiion tools to achive project efficiency.

To divide the meter exchange point into suitable blocks GIS information can be used for geographical awareness. Creating blocks that does not require technicians to cross large roads/railways/lakes etc. can be taken into consideration.

Route optimization

The blocks are automatically splitted or merged to create equally sized chunks to fit the roll-out plan.

Based on this an optimized route is created based on "greedy" algorithms and heuristics. The result is a pre-plan. One view of the pre-plan is shown above.



WORKORDER PLANNING

BEHIND THE SCENES



SET OF WORKORDERS

Start with a set of points where each point represents an assignment



BLOCK GRID BASED ON STREET MAP DATA

Divide the point set into suitable blocks – use GIS tools for geographical awareness. If workers are walking, create blocks which does not require them to cross large roads/railways/lakes etc.



BLOCK MERGE

Split/merge blocks to create equally sized chunks where possible. Merge target 100 tasks/block.



OPTIMIZED ROUTE

Create optimized route based on "greedy" algorithms and heuristics. Each task has a position and tentative start/stop time and may be imported into Blå Coordinator.





BOOKING PORTAL, LETTER & SMS
REMINDER.



COMMUNICATING WITH

END CUSTOMERS

Blå Coordinator™ Booking Portal with SMS reminder is an efficient way to communicate with end customers.

The automatic letter generation, rebooking portal and sms reminder is an efficient way to communicate with the customer that complements the call center.

Notification letter

Based on the data from the customer information system and the pre-planning a letter is automatically created stating the contact to the call center, the time slot in which the work order is planned, a reference on how to rebook the work order using the booking portal and information about sms notification.

Appointment booking

In the Booking Portal the end customer can select a new appointment time based on the actual booking situation in that area. The possibility for re-book is closed two days prior to the planned booking.

SMS reminder

At the online re-booking site the end customer can register his/her mobile phone number in order to receive reminder of the booking.

The notification letter, the business rules for the end customer portal and the sms notification can be customized for different customers.

THE PROCESS BEHIND

WORK SCHEDULING

For the meter roll-out different type of job scheduling can be used. It is possible to begin with manual scheduling and successively upgrade to more advance scheduling support.

Manual scheduling

The manual scheduling/dispatching is supported with a graphical UI where drag-n-drop can be used.

The meter exchange orders can be assigned to a specific resource or automatically assigned to a pool where the resource can pick the order.

The strategy for dispatching can be configured in the system, i.e., whether it should immediately be dispatched when assigned or not.

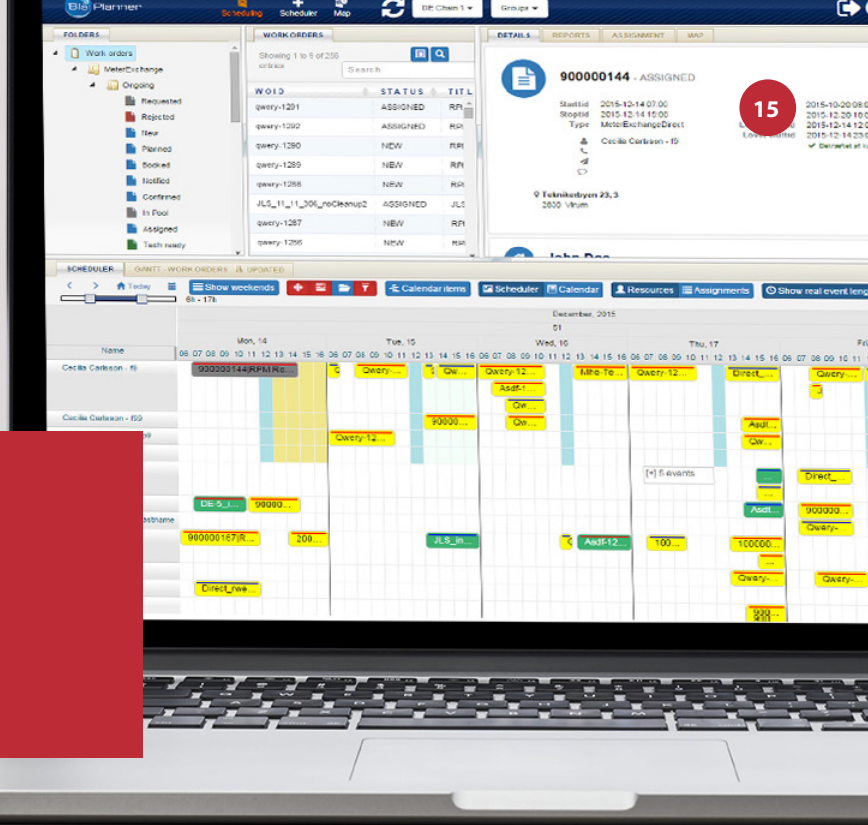
Automatic work scheme optimization

In order to support more efficient scheduling isMobile has developed Blå Optimizer that solves the general optimization case for field service scheduling. The optimization engine has been designed to be fast enough for interactive use and still be able to produce optimal or as near optimal solutions as possible.

Since the actual optimization support is dependent on specific parameters for each service company, the optimization support is developed as a plug-in that can be adapted and developed in a separate project.

Technicians within a resource group or a cleanup group can pick jobs from the meter exchange order pool, listed in the mobile client.

POWERFUL PLANNING AND SCHEDULING TOOLS



Blå Coordinator

Blå Coordinator supports on-line collaboration between back-office personnel, customers and mobile staff. Direct information of work orders and details in each work order makes it easy to co-operate and share actual information.

Blå Cockpit is a base-component in Blå Coordinator providing a graphical interface for planning & dispatch of work orders for mobile staff.

The Blå Cockpit provides managers and work schedulers with continuous information of everything happening in the field important for decision making.

It provides work order calendars, assignment calendars, resource calendars and combines this with real-time work order/assignment/resource information.

Major Functions

- Graphical work schedules for all employees
- Create appointments
- Easy manual scheduling
- Call Status Indication
- Create external request
- Decision support for scheduling
- Real-time optimized scheduling
- Auto pilot
- Actual availability
- Intelligent message handling
- Map-based information
- GIS information related to service objects
- Route-calculation
- Handling of multimedia documents

WORKING IN

THE FIELD

Advanced Mobile Clients with Off-line support.

Mobile clients

An important part of the meter roll-out process is to support the technician exchanging meters efficiently. The solution is based on standardized Smartphones or Laptops, using GSM, 3G, GPRS, WLAN, LAN network technology. The mobile clients can be supported by different clients, as a installed client on **Android** (Blå Android), **PocketPC** (Blå Pocket), **Windows Phone 8** or as an installed client on a **Laptop** (Blå Dashboard).

The installed clients support a combined real time **online and offline working** situation where assignments can be automatically downloaded to a local storage making it possible to work if network coverage would be lost.

The dispatcher is always informed about actual status of meter roll-out performed and the process is time stamped.

The mobile user can browse through detailed meter roll-out information and use Google maps to navigate to site. Work order specific information like old meter number, address, location, customer information, etc. is provided on the mobile client based on the configuration for meter roll-out. It is also possible for the user to print information using mobile printers.

It is easy to add customer specific report forms with checklists, digital signatures, date box, etc. The reporting also includes possibilities for advanced validation of data either locally on the client or towards back-end systems.

"The solution provided by IBM and isMobile has proven to be a powerful tool for us. delivered by the solution is among the best we have seen."

IT-directo



DATA CAPTURE FOR

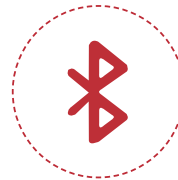
METER EXCHANGE

The meter roll-out temple has predefined report to capture information/photos about the old and new meter



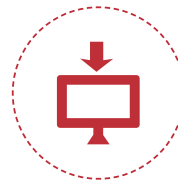
MEDIA DOCUMENTATION

Technician photo and video documentation.



PROBING OF SMART METERS

ANSI C12.18 protocol via optical interface, Barcode scanning, Label printing.



MEASURING INSTRUMENTS

Testo measuring instruments e.g. 340 Flue Gas Analyzer.

The optimization

or at one of our customers

CREATING

CUSTOMER REPORTS

Operational Reporting

Real Time Reporting – In Blå Cockpit it is possible to see the status and progress of orders in real-time as well as summary of the situation in a team regarding number of work orders in different status. For the smart meter roll-out project this gives valuable information about the pre-planning situation, notification situation, status of re-booking, progress by technicians, amount of rework and the

number of completed work orders.

Detailed Information – For all orders it is possible to drill down into the information to see details about progress. It is also possible to export information to Excel or pdf.

Flexibility – By setting up different Blå Cockpit configurations the user can create unique configurations for different scenarios.

Follow-up Reporting

Any data that exist within Blå Coordinator can be stored in the Blå Coordinator KPI database. This information can then be used to create customized reports within the framework of Blå Coordinator or used by third party tools like SAP BO, Excel, Cognos and QlikView.



Operational report



Follow-up report



BENEFITS

No upfront investment
Flexible capacity
Speed & Agility



SUITED FOR

Smart metering roll-out
Outsourcing
Smaller service organisations



CUSTOMER NEEDS

Full suite of softwares components
Combine modules

RUNNING BLÅ COORDINATOR AS A

CLOUD-BASED SERVICE

Blå Cloud is based on isMobile's well proven Blå Technology, made available in a cloud-based model.

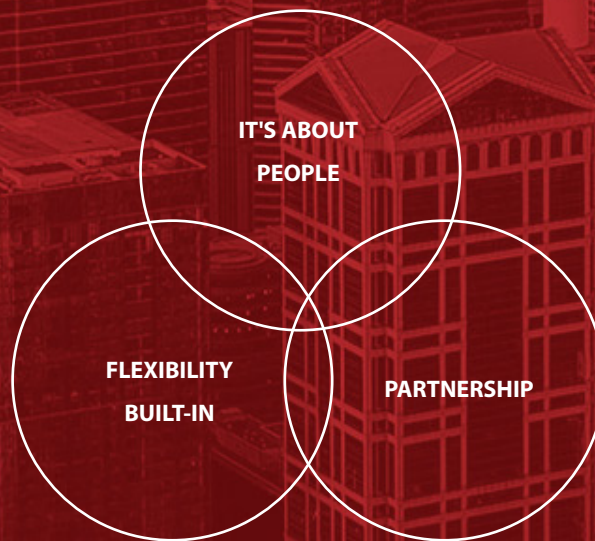


isMobile uses **Amazon Web Services (AWS)** as the platform for cloud services as the primary option.

The great flexibility in capacity, reliability and security in AWS provides an excellent platform for implementing a business critical Mobile Field service management solution.

BUSINESS-ORIENTED FIELD SERVICE MANAGEMENT

IN HARMONY WITH PEOPLE



Flexibility is built-in in our software solutions and in our behaviour. Working together between three main roles - back-office, field worker and end-customer - is key to us. It's about efficiency by transparency. Working in a partnership model is in our DNA.



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