

MobiMed ePCR: Service Definition

Introduction

Company Overview

For 30 years, Ortivus has combined expert know-how in wireless, IT and medical technology with clinical expertise to build up confidence among a wide circle of international customers as a leading supplier of mobile solutions for modern emergency medical care.

We offer our customers reliable, patient-friendly and cost-effective decision support systems that save lives and reduce suffering.



Implementation of the right decision support saves lives and provides significant benefits for the entire continuum of care, from the ambulance to the hospital. It allows for the patient to receive the right care at the right time, which is important both for the individual patient but also to ensure that the entire chain of care resources are utilized in the most efficient manner – something that all patients benefit from. Ortivus solutions can, based on different healthcare units' needs, be customized, integrated and made to interact with other systems and applications to enable a well-documented record of care and a support for analysis and further business development.

For healthcare providers, it is increasingly important to have access to safe, patient-friendly and cost-effective systems with good support and Ortivus have experience and knowledge in managing different business models based on customer requirements and demands, from licensing agreements to Managed Service where solutions are supplied as a complete service offering.

Our Experience

Since our first deployments in 1997, MobiMed has been deployed internationally and is active in Sweden, UK, Italy and Norway where we have twenty customers who have implemented the solution as part of the patient care system:

- On over **1,700 ambulances**
- Used by more than **7,000 clinicians**
- Serving a population in excess of **19 Million citizens**
- In-excess of **4 million patient cases** captured and counting...



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Confidentiality

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Information Assurance

Ortivus quality system ensures that our processes and solutions are continuously improved. The company is proactively working to meet future changes in regulations and directives. Improvement work is always carried out with a focus on customer expectations in regards to healthcare outcome and efficiency.

Certifications

Our certifications prove to Ortivus customers, partners and suppliers that the organisation prioritizes continuous improvement in order to deliver the services at the right quality.

Ortivus currently has the following certifications:

- **ISO 13485: Quality Management System for the Design and Manufacture of Medical Devices**
- **ISO 27001: Information Security Management Systems**
- **ISO 20000: IT Service Management**



Ortivus MobiMed is CE marked according to MDD (Directive 93/42/EEC Medical Devices Directive, Annex II) because Mobimed offers a unique solution of vital signs monitoring and documentation when joined with Ortivus integrated vital signs monitor. This sets us apart from all other vendors on the market.

Environment

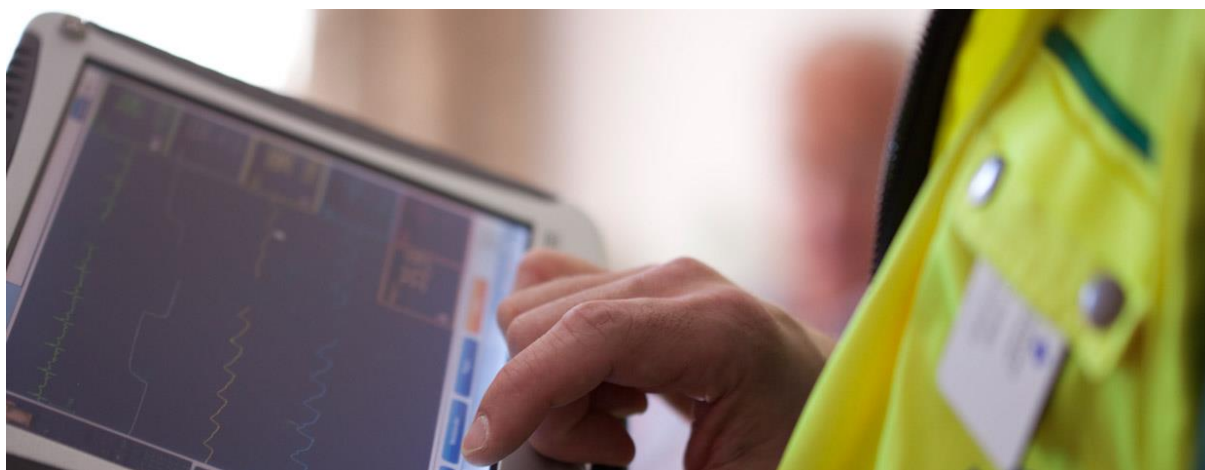
Ortivirus has an active environmental policy. Ortivirus do not use any possibly hazardous substances in the manufacture of our products or during shipment to the customers. We continuously monitor the material and processes used for the packaging and shipment of our goods to make the environmental impact as low as reasonably possible. During the design of our products considerations are made to make the subcomponents of the product easy to re-use or recycle. Ortivirus seek to work throughout the product life cycle with partners and sub-contractors that are active in reducing emissions and environmental footprint.

Ortivirus complies with the RoHS Directive on the restriction of use of hazardous substances in electrical and electronic products.

The Solution: MobiMed

MobiMed provides paramedics with an electronic Patient Record, ePR, using a structured workflow and support that enhances the clinical decision making process. The ePR in combination with vital signs monitoring and the ability to consult with hospital teams prior to arrival, ensures that the patient gets the right care, at the right time, in the right place.

MobiMed has full NHS Spine connectivity and includes the Summary Care Record (SCR) and the Personal Demographics Service (PDS) supporting the needs of a modern 21st century ambulance service.



Features

- ISB1516 Ambulance Electronic Patient Report compliant ePR
- Monitoring with clinical background from cardiac critical care
- Easy to configure and adapt to any clinical standard, including JRCALC and Snomed
- Integrated NHS Smart-card login
- NHS Spine Integration, including
 - Personal Demographics Service (PDS)
 - Summary Care Record (SCR)
- Internal and External Systems Integration
 - Computer Aided Dispatch (CAD)
 - Hospital Information Systems
- Easy to integrate with medical devices including
 - Zoll X-Series
 - Stryker LifePak 15
 - Corpuls 3
 - Other Defibrillators

Capabilities

MobiMed is a highly configurable and future-proof platform that is easy to integrate with existing systems and to adapt to organisational needs.

Right care at the right time

The implementation of MobiMed helps saving lives and provides significant benefits for the entire continuum of care, from the ambulance to the hospital. It allows for the patient to receive the right

care at the right time, which is important both for the individual patient but also to ensure that the entire chain of care resources are utilized in the most efficient manner – something that all patients benefit from. It documents clinical and quality indicators, and helps securing better medical outcomes as well as in improved efficiency throughout the prehospital healthcare system.

Accurate, real-time view of patients at hospitals

MobiMed includes real-time alertable Clinical Workstations at the hospitals, where hospital clinicians gets an accurate, real-time view of the patients' status. It also incorporates an instant messaging functionality to allow for rapid review of ECG and to support communication between hospital and pre-hospital clinicians.

Bespoke solution

MobiMed is modular, highly configurable and flexible in terms of scope of installation, orientation and interaction with other systems and applications depending on the needs of the organisation. The organisation can choose which parts of MobiMed they will use in its operations, build it as large or little as they want it, adjust the documentation to their needs, and implement their own pre-hospital pathways & Fast-tracks, checklists, guidelines and more.

Audits & Performance Indicators

All ambulance organisations are subject to independent audit. The audits of the Ambulance Services and the scope of its work cover not only the audit of financial statements but also value for money and conduct of public business.

In MobiMed all data is stored in a Data Warehouse, accessible for statistical follow-up and to monitor performance against Key Performance Indicators, helping ambulance organisations making sure that patient care is delivered to the highest standard.

Easy to integrate

Integration with and communication between different systems is one of the largest challenges for today's healthcare organisations. MobiMed can be integrated with most systems, from mobile data terminals and monitors/defibrillators in the ambulance, to electronic whiteboards, electronic Patient Records and information systems at hospitals. This enables a cohesive flow of information from the ambulance and into the hospital, resulting in greater efficiency and patient safety.

Secure and robust communication

MobiMed supports all IP-based communication, such as 4G, 3G, GPRS, TETRA (Rakel) and Satellite. It is optimized for poor coverage and low bandwidths and all data is saved locally on the computer if communication is interrupted and sent as soon as connection is re-established with no need for user intervention:

- Encrypted transmission of patient data preventing unauthorized access and preventing data from being corrupted
- Adherent to Information Governance (IG) requirements, ensuring appropriate use of patient data and personal information.
- Full traceability of patient data and events
- Secure login
- Compliant with ISO 27000 Information Security

Future-proof platform

MobiMed uses the latest programming languages and tools (C#/.Net, WPF, WCF, XAML, SQL, etc.) in combination with standard components. This provides a very efficient and secure development both today and for tomorrow.



Our Processes

On-boarding / Off-boarding

The MobiMed project deployment is a Gateway-based approach derived from the the best practice put forwards by the Prince2 and the Project Management Institute (PMI) to ensure clear alignment on deliverables and ensure buy-in with all key stakeholder groups.

The project lifecycle is managed using the following Gateways (GW):

- **GW0 – Startup**
- **GW1 – Initiation**
- **GW2 – Release Readiness**
- **GW3 – Go-Live**
- **GW4 – Maintenance Online**

Our delivery team will support the customisation of our deployment to meet the needs of your organisation to ensure successful solution implementation and benefits realisation.

The off-boarding process follows a similar approach and ensures that all data is appropriately transferred and deleted as required.

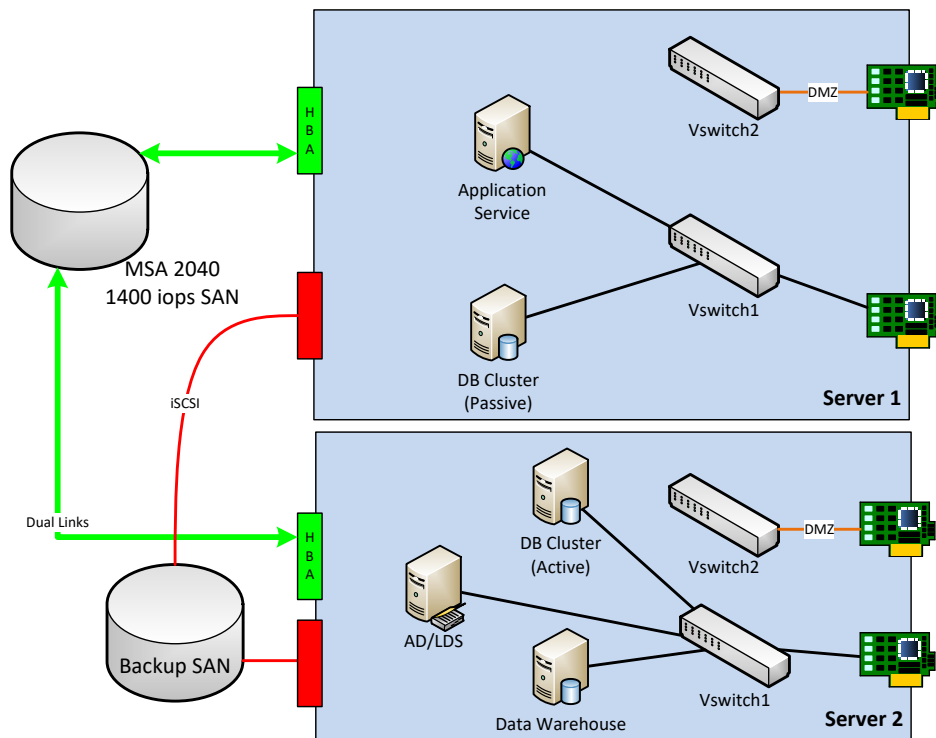
Backup/Restore

Ortivus provide a comprehensive Disaster Recovery / Business Continuity Process (DR/BCP) that is regularly audited and tested in line with our ISO-20000 accreditation.

The MobiMed server side is hosted with our approved Data Centre partners who offer a TIA 942 Tier 3 service with SLAs of 100% on power and 99.999% uptime on networks, providing support from 2 different sites within their UK centres. They hold the following accreditations:

- ISO9001 Quality Management
- ISO 27001:2013 Information Security
- HSCN Aggregator
- BSI Associate Consultant Programme - Platinum Partner
- techUK member
- Microsoft Gold Partner
- Oracle Gold Partner

EAL4 certified firewalls are used to protect the N3 LAN where two different firewalls are used; one which faces the N3 circuit and the other facing the internet and to provide a secured and flexible environment allowing a scalable system, the server solution is based on two physical servers as depicted by the blue boxes in the diagram below.



On the physical servers, several virtual computer instances run with the aid of VMware enabling them to be dynamically configured based on system load and other non-functional requirements such as resilience and availability.

All business critical services are delivered from systems configured in high availability mode (i.e. if one part fails another similar part continues to deliver the service). Should an element failure occur the Network Operations Centre (NOC) will be alerted to this effect and action will be taken to resolve the issue and bring the system concerned back to its original high availability condition. In this situation all relevant parties will be alerted to the component failure and given an estimated time to resolution and kept informed of progress regarding corrective actions.

All central hardware failure scenarios are covered by automatic failover to secondary systems and by work instructions so that the original failed component can be quickly repaired or replaced.

Our Services

Service Desk

Ortivus are ISO 20000 certified, the international best practice standard for IT Service Management , and our support staff has extensive experience from working with complex IT installations and medical devices. All support staff are trained in ITIL, a set of principles for managing IT services.

Implementation of ISO 20000 brings with it many benefits and advantages:

- Reduction in incidents and improved incident management
- Adoption of an integrated process to the delivery of IT services
- Reduction in response times and interruptions to IT service
- A culture of continuous improvement
- Greater understanding of roles and business objectives
- Consistency in the delivery of services and products
- Evidence that ITIL best practices have been implemented

We have experience and knowledge in managing different business models based on customer requirements and demands, from licensing agreements to Managed Service where MobiMed is supplied as a complete service offering.

Our Service Desk is available 24/7 to respond to Severity 1 issues and we offer a dedicated phone line and email system for raising support requests to access our Level 2 and Level 3 support services.

Training

We recognise that the foundation of a successful implementation is to deliver high quality training to the end-users of our solutions.

Ortivus offers a range of training programs, from Clinical User training courses to Technical Super User training courses, always tailored to suit the needs and conditions of the organisation and the implemented solution and will provide the following training as standard:

- Train-the-trainer session for the ePR users
- ePR administrator training
- MobiMed Server training
- Training documentation

Further training is available if required and can be acquired via additional engagement.