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Accenture Mobility Services Mobility for Connected Health

May 2012

 **accenture**

consulting | technology | outsourcing

Contents

- Mobility in Connected Health
- Why Mobility ?
- Mobility in Hospital Environment - Enablers
- Mobility Use cases
- Accenture in Mobile Health

Connected Health

- Connected Health is the use of an integrated communications technology environment to improve the efficiency of all aspects of health care
- The application of Connected Health applies across the full spectrum of healthcare – patients, clinicians, home and hospital

Mobile Unified Communication Use Cases



Healthcare is going mobile (1/2)

Berg Insight: Home Health Monitoring market (wired & wireless) \$11 billion in US and Europe, growing at 10% annually



Healthcare is going mobile (2/2)

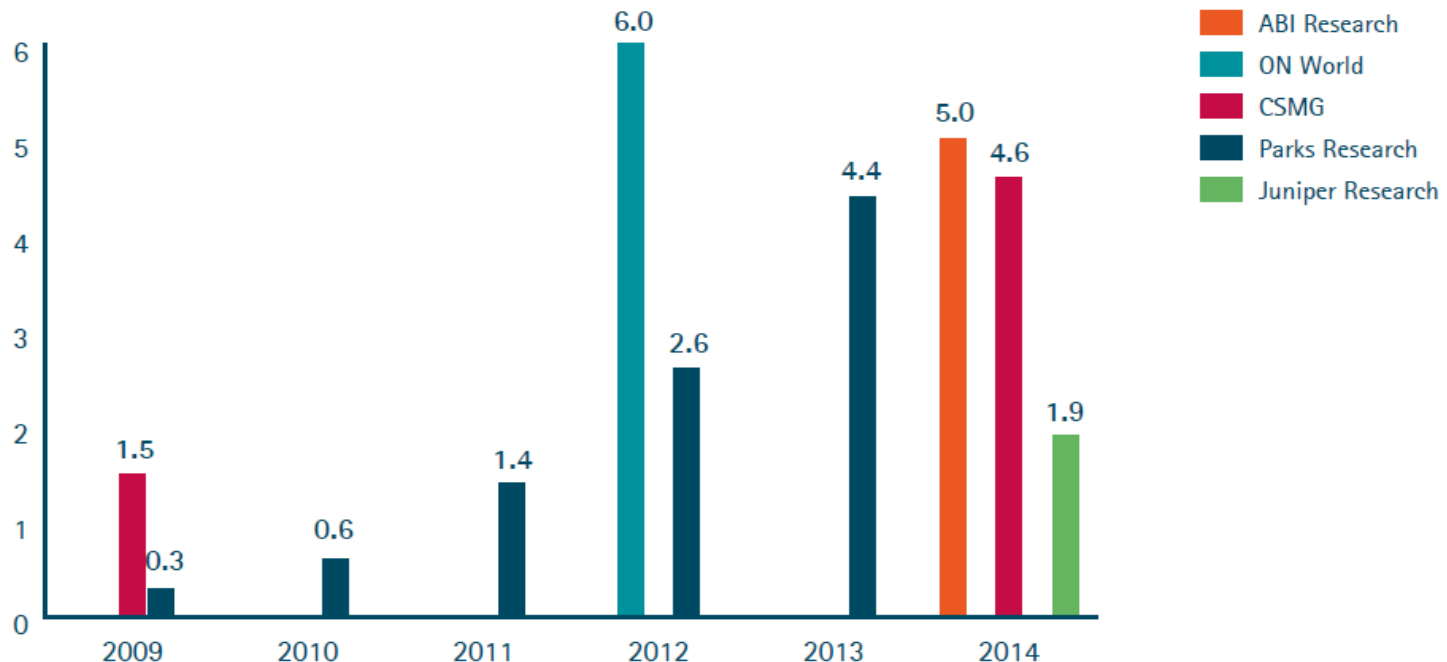
Manhattan Research: 81% of physicians to own smartphones by 2012
and the consumer app market is already crowded with apps



Mobility in Connected Health Overview

- Mobility is a key part of the overall environment, using mobile devices to provide services in a timely and relevant way for users, **doctors, nurses, and other stakeholders in the “health-chain”**
- The challenges of successfully implementing Connected Health solutions **aligns with Accenture’s core expertise** in delivering complex solutions at scale

Market estimates vary, predicting growth between \$2-\$5 billion by 2014.
Mobile health revenue predictions, \$ billions



Sources: ABI Research, ON World, CSMG, Parks Research, Juniper Research

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Why Mobility ?

Benefits to patients (1/2)

Mobility technologies bring advantages to all actors in the “health-chain” but most important are benefits to patients

What	Where	Mobility health solution	Outcome
Diabetes	USA	Post discharge remote monitoring	42% drop in overall cost per patient
Doctor visits	USA	Cell phone size wireless transmitter transferring vital signs to electronic health record	71% increase in number of days between office visits
Congestive heart failure	Trans-European Network	Remote monitoring of patients who received implantable cardiac defibrillators	35% drop in inpatient length of stay; 10% reduction in office visits; 65% drop in home health visits
Chronic obstructive pulmonary disease	Canada	Remote monitoring of patients with severe respiratory illness	Reduced hospital admissions by 50%; acute home exacerbations by 55%; hospital costs by 17%.

Why mobility ?

Benefits to patients (2/2)

What	Where	Mobility health solution	Outcome
Appointment Reminders	UK	Appointment reminders by SMS	Reduce non-attendance rates between 6%-38%. Cost-effectiveness demonstrated. (22 million missed appointments p.a. Missed appointments cost the NHS £790 million p.a)
Smoking cessation	New Zealand	Range of SMS services. Various other approaches trialled.	170%-240% higher likelihood of giving up smoking.
Epidemic	Brazil		93% reduction in number of cases
Medication Adherence	South Africa	Reminders via SMS to take daily medication	90% of patients complied, compared to the typical 22 to 60% compliance rate without the system

It was proven that Mobility technologies are beneficial to patients in five healthcare areas:

Chronic disease management

Medication adherence

Safety monitoring

Easy and timely access to health info

Wellness

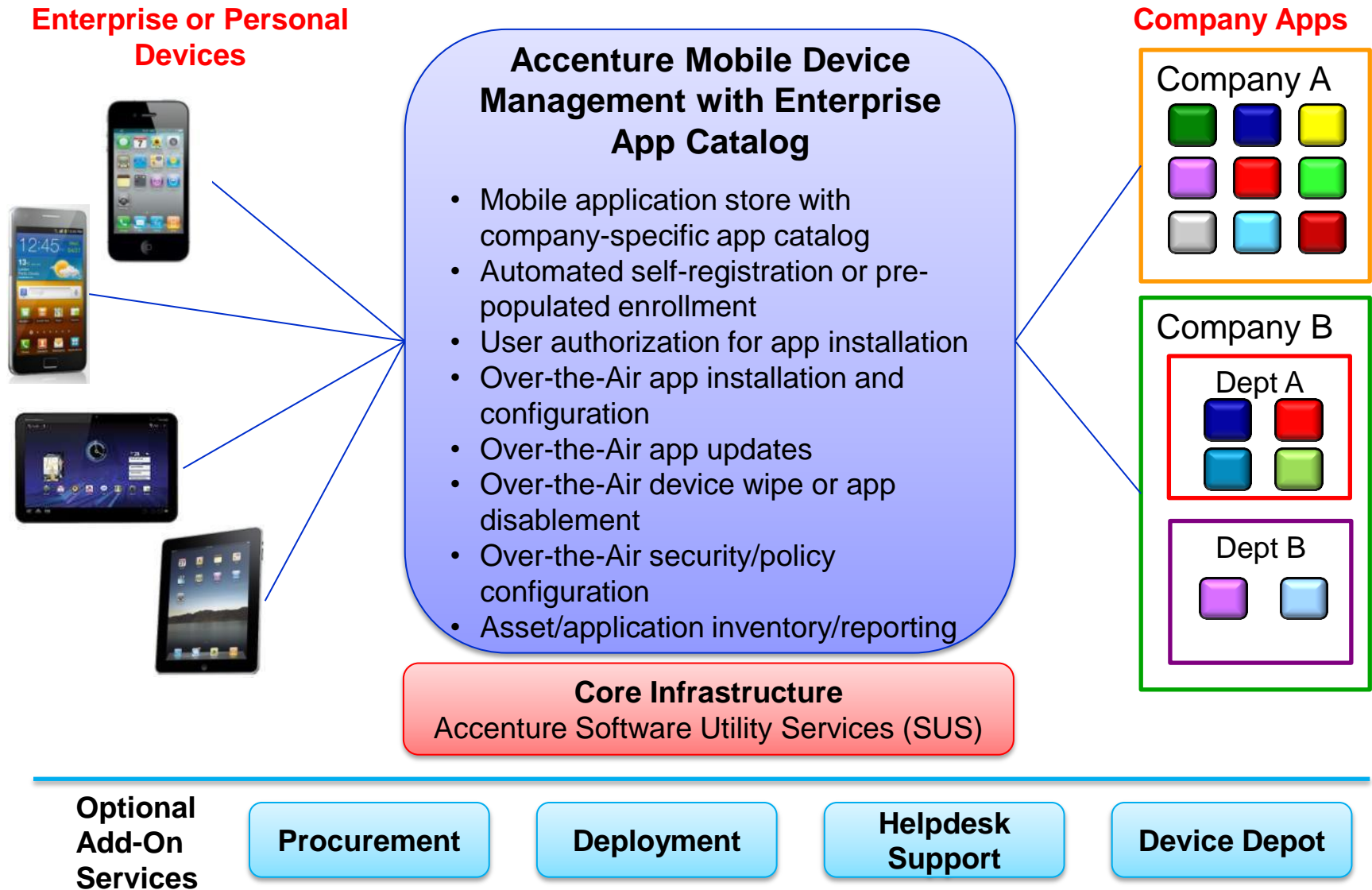
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Mobility Foundation

Accenture MDM with Enterprise App Catalog

Managed Service

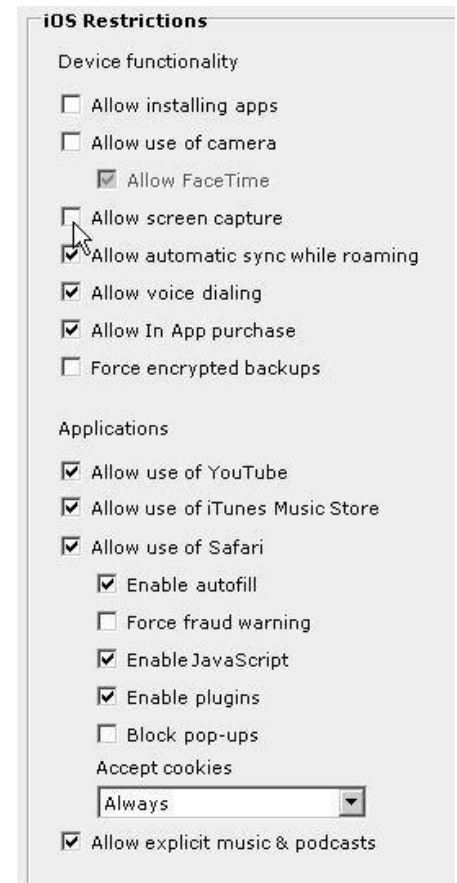


Mobility Foundation

MDM iOS Feature Set

The Accenture Enterprise App Catalog solution provides a set of Application and Device Management capabilities – **remotely, over the air** from a **centralized location**. Customers can select the desired features for implementation to their users.

- Enterprise App Catalog
- OTA App Installs
- OTA App Updates
- Prompted App Installs
- Links to Apple App Store
- Automated self-registration
- Pre-populated user registration
- Remote Device Locking
- **Remote Device Wiping**
- Remote Device Inventory
- Remote Passcode Clearing
- **WiFi settings**
- **Security Certificates**
- VPN Settings
- Email/Exchange Settings
- LDAP Settings
- Web Clips
- Require Passcode
- Require Alphanumeric Value
- Minimum Passcode Length
- Minimum Number of Complex Characters
- Maximum Passcode Age
- Auto-Lock time (1-5 minutes or none)
- Number of Unique Passcodes
- Grace Period for Device Lock
- Maximum Number of Failed Attempts
- Disable Installing Apps
- **Disable Camera**
- Disable Screen Capture
- Disable Automatic Sync When Roaming
- Disable Voice Calling
- Disable YouTube
- Disable iTunes Store (iOS)
- Disable Safari (iOS)
- Disable Movies or TV Shows



The screenshot shows the 'iOS Restrictions' settings window. It is divided into two main sections: 'Device functionality' and 'Applications'. Under 'Device functionality', there are checkboxes for 'Allow installing apps' (unchecked), 'Allow use of camera' (unchecked), 'Allow FaceTime' (checked), 'Allow screen capture' (unchecked), 'Allow automatic sync while roaming' (checked), 'Allow voice dialing' (checked), 'Allow In App purchase' (checked), and 'Force encrypted backups' (unchecked). Under 'Applications', there are checkboxes for 'Allow use of YouTube' (checked), 'Allow use of iTunes Music Store' (checked), and 'Allow use of Safari' (checked). Below these, there are more options: 'Enable autofill' (checked), 'Force fraud warning' (unchecked), 'Enable JavaScript' (checked), 'Enable plugins' (checked), 'Block pop-ups' (unchecked), and 'Accept cookies' (set to 'Always' via a dropdown menu). At the bottom, there is a checkbox for 'Allow explicit music & podcasts' which is checked.

Mobility Foundation Enterprise App Catalog

Now, enterprises can continue to use the consumer App Store for consumer-facing apps, but use their own Enterprise App Catalog for internal, employee-facing apps.



Consumer
Applications



Employee
Applications

Mobility Foundation

Secure identification with Smartphones and Tablets

- Many use cases, where secure identification with smart card needed
- Various mobile smart card readers available
 - Direct mounting to smartphone
 - Bluetooth connection
- Tablets with integrated smart card reader
- Future solution using secure identification from SIM card ?



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Medical Apps – Continua compliant app for streamlined data reading (Medigate)

Reduced cost

- More efficient workflow for entering medical data to the hospital system
- In outpatient care, reduced number of hospital visits

Improved patient safety

- No transcription / typing mistakes

Various Continua certified devices made by various manufacturers.



Medigate Mobile Apps



Electronic Medical Records

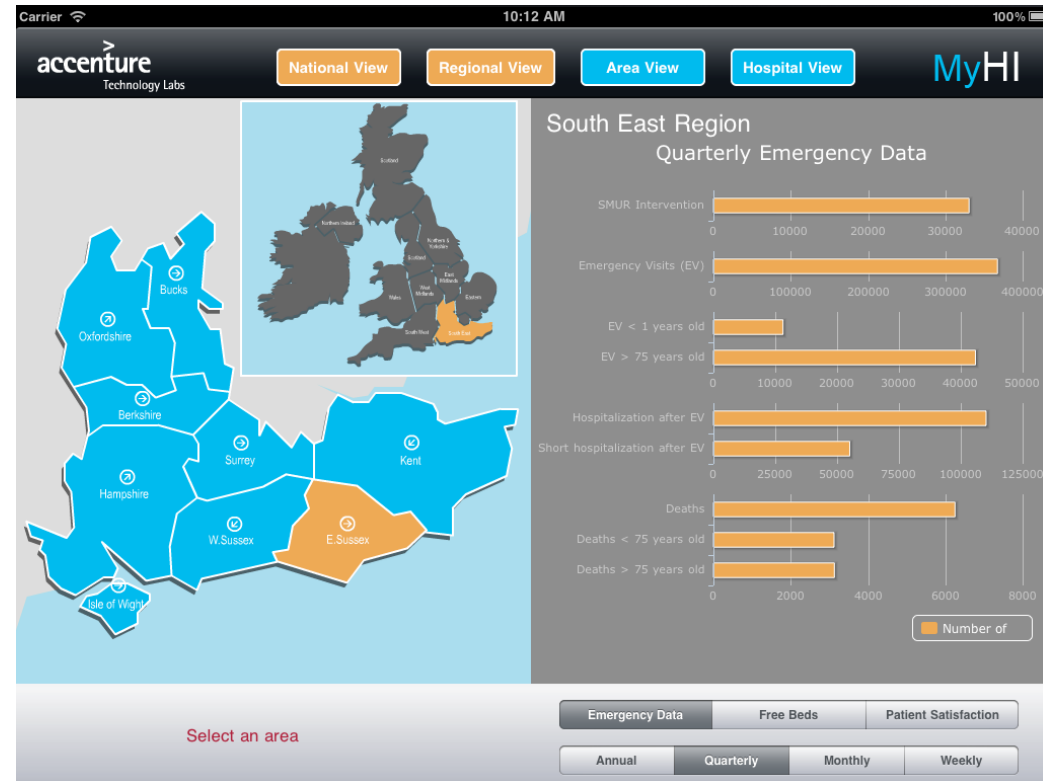


Medigate Mobile App for Doctors, Data retrieval and review



Information at Your Fingertips

- Dashboard application for hospital managers
- Quick and informative access to real-time operational management information and statistics
- From Hospital to nation wide level



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Mobility Connected Health in Accenture Mobility ...

Applications - native applications for health and life sciences clients on all mobile platforms and cross platform hosted applications on mobile devices

Managed Services - cloud / infrastructure based services and interfacing to them from mobility solutions – such as Mobility in Connected Health data collection / electronic Medical Records systems / near real time aggregated health data

Device & Platforms - platform modifications, embedded device engineering for medical devices; end-to-end solutions for key technologies such as security, device management etc

Business Integration Services - system integration services from devices , applications , tablet, PC applications

... builds on the offers with Connected Health focused products and services

Managed Services

Deployment of mobile assets in the health environment as managed services. Assets include the mHealth product on the AMS managed service platform, providing industrial scale collecting, hosting, managing and reporting of data, and Medicomm, a workflow management tool promoting task-based mobile collaboration.



Medical Applications

Building on existing AMS services (Application Factory, Enterprise Application Catalogue and Mobile Device Management) to deliver, support and provision mobile applications tailored to the specific requirements of the Life Sciences and H&PS industries, such as security & data handling requirements, regulatory compliance and hospital customisation.



Medical Device & Platforms

With increased connectivity and mobility in medical equipment, leverage existing D&P skills to provide software engineering support to manufacturers of medical technical equipment. Focus areas include monitoring and diagnostic, home care, infusion systems and telemedicine, with mapping to D&P skills of base, multimedia, middleware and platform delivery and validation.



Summary

- Mobile health can bring significant benefits and efficiency to healthcare
- Technical building blocks are there to bring mobile health to home and hospitals
- Accenture is working on wide scale globally on mobile health solutions – unique capabilities in Finland with world class mobility and health care expertise

QUESTIONS ?

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