

mHealth : Enabling the Revolution







ARM Overview

ARM is the world's leading semiconductor IP company and The Architecture for the Digital World[®]



• Over 25 billion ARM technology based

chips shipped to date

- Unrivalled Partner ecosystem
 - Over 750 processor licenses sold to more than 250 companies
 - Millions of developers; billions of users
- ARM has the right technology
 - Optimized for a mobilizing world
- We're customer-focused listening

harder and responding faster



Medical Challenge and Opportunity

- Worldwide today:
 - 1 billion adults overweight
 - 860 million chronic disease patients
 - 600 million elders age 60 or older
 - Retiring Baby Boomers





- 75-85% healthcare spent on chronic disease management
- USA, 50% people chronic condition by 2020, consuming 80% of healthcare spending (RAND corporation)
 - 1/3 of children born in US after 2000 will become diabetic

Source: World Health Organization; McKinsey

mHealth for long-term conditions

- Wilson et al. (BMJ, 2005): "The evidence backing the use of diseasespecific self-management programmes like diabetes is strong. The challenge is how to move to a programme that can support the many millions of patients who might benefit."
- Focus on mobile phone:
 - Equality of care 90% of UK population owns a mobile phone
 - Portable device for real-time data entry and review (feedback)
 - Ease of communication with "remote nurse" (telehealth nurse), based on shared data
 - The cost-effectiveness of using the individual's own mobile phone makes the mHealth solution a financially viable proposition (model based on 18% reduction in unplanned hospital admissions)

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Broad Range of Solutions Appearing

"The complexity for minimum component costs has increased at a rate of roughly a factor of two per year" – Gordon E. Moore, *Electronics*, April 19, 1965 Based on empirical observations 40+ years ago





Remote Diagnosis Medical Tablets ECG Blood Diagnosis

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System Requirements

- Common Themes
 - Low power
 - Small form factor
 - Low cost
 - Connectivity

Differences

- Requirement mix of general purpose, graphics, IO and digital signal-processing
- Security









Glucose Meter Block Diagram

ARM



The Architecture for the Digital World®

Functionality for Medical Applications

GPRS 3G LTE WiFi Bluetooth ZigBee HomePlug

Connectivity

Highperformance Interface Graphics ARM®

Image processing Video Codecs Audio Codecs Video Streaming

Performance

Low Power 32-bit CPU OS Support Security



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Connecting the World



Connected Community 850+



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