Healthcare and Wellness Applications for Smart Systems

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ICT for Health “ABC Ecosystem

- Academic
- Business
- Clinical

Tyndall & Academic partners

Tyndall Healthcare Solutions

Clinicians & Patients

Business
Core Enabling Technologies

Nano Technology

Smart Systems

Photonic Integration

ICT for Health at Tyndall

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Research & Technology platforms

ICT for Health at Tyndall

Core Enabling Technologies

Smart Systems

Photonic Integration

Molecular modelling

Advanced Sensors

Advanced Processing

Micro Power

Photonic systems

Photonic devices

Photonic packages

Wireless inertial sensing

Lab on chip systems

Electronic integration
Case 1: Connected Health
Body Area Networks and Physiological Health Monitoring Platforms

Wireless blood pressure monitoring
Temperature patch for patient skin temperature monitoring
Piezo Respiratory Effort Sensors for breathing analysis

Wireless ECG monitoring
Tyndall Communicator

Smart Wireless Inertial Measurement
Wireless Pulse Oximetry
Smart Glove
Case 2: Therapeutic Systems
Integrated microneedle array theranostic systems
Perinatal Disease Burden

- 500,000 maternal deaths
- For every maternal death 17 cases of significant maternal morbidity
- 3.2 million stillbirths
- 4 million neonatal deaths

INFANT Centre for Perinatal Research
www.infantcentre.ie

- Perinatal complications account for 10% of global disease burden
- R&D investment in perinatal health remains small and non-strategic
- Equitable investment in perinatal healthcare could avert 3% of the global disease burden

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Thank You