

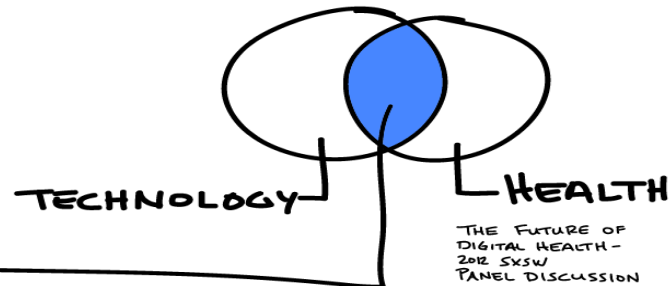
## ***Mobile technologies in healthcare***

JOAN CORNET PRAT  
MOBILE WORLD CAPITAL BARCELONA

INNOVATIVE HEALTHCARE  
CONGRESS. KATOWICE  
4-5 April 2017



# DIGITAL HEALTH



# REVOLUTION

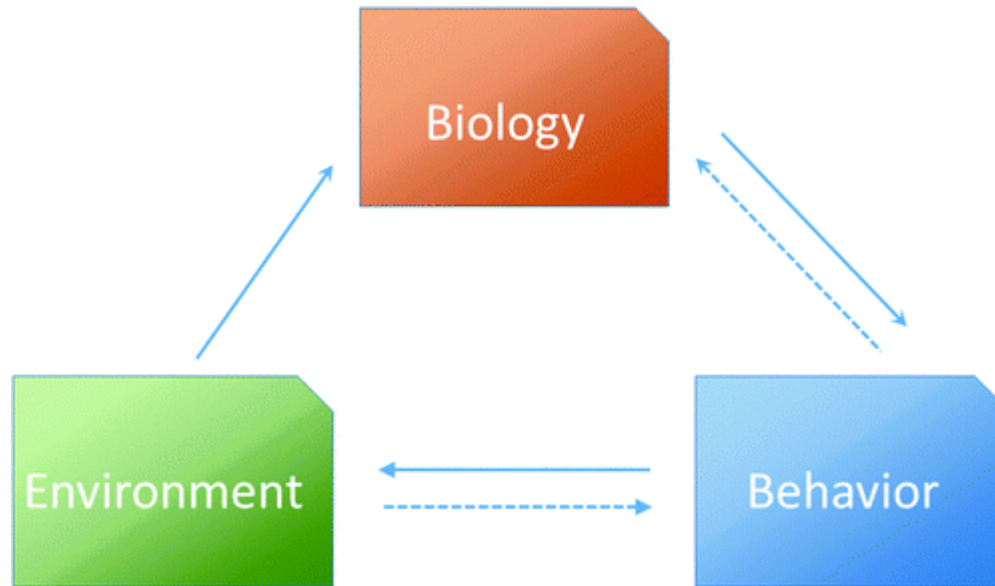
MEDICINE WILL BE REVOLUTIONIZED  
BY THE "INTERNET OF THINGS," A  
WORLD OF INTERCONNECTED SENSOR-  
LADEN DEVICES AND OBJECTS.

THE INTERNET OF  
THINGS: DISRUPTIVE  
TECHNOLOGIES: GLOBAL  
TRENDS 2015, SRI CONSULTING

# INDIVIDUALIZED MEDICINE ENABLED BY DIGITIZING HUMANS

THE CREATIVE DESTRUCTION  
OF MEDICINE - DR. ERIC TOPOI, M.D.

JEFF BENNETT  
DIGITAL SPLASH MEDIA.COM



1 Client education & behaviour change communication (BCC)

2 Sensors & point-of-care diagnostics

3 Registries / vital events tracking

4 Data collection and reporting

5 Electronic health records

6 Electronic decision support  
Information, protocols, algorithms, checklists

7 Provider-to-provider communication  
User groups, consultation

8 Provider workplanning & scheduling

9 Provider training & education

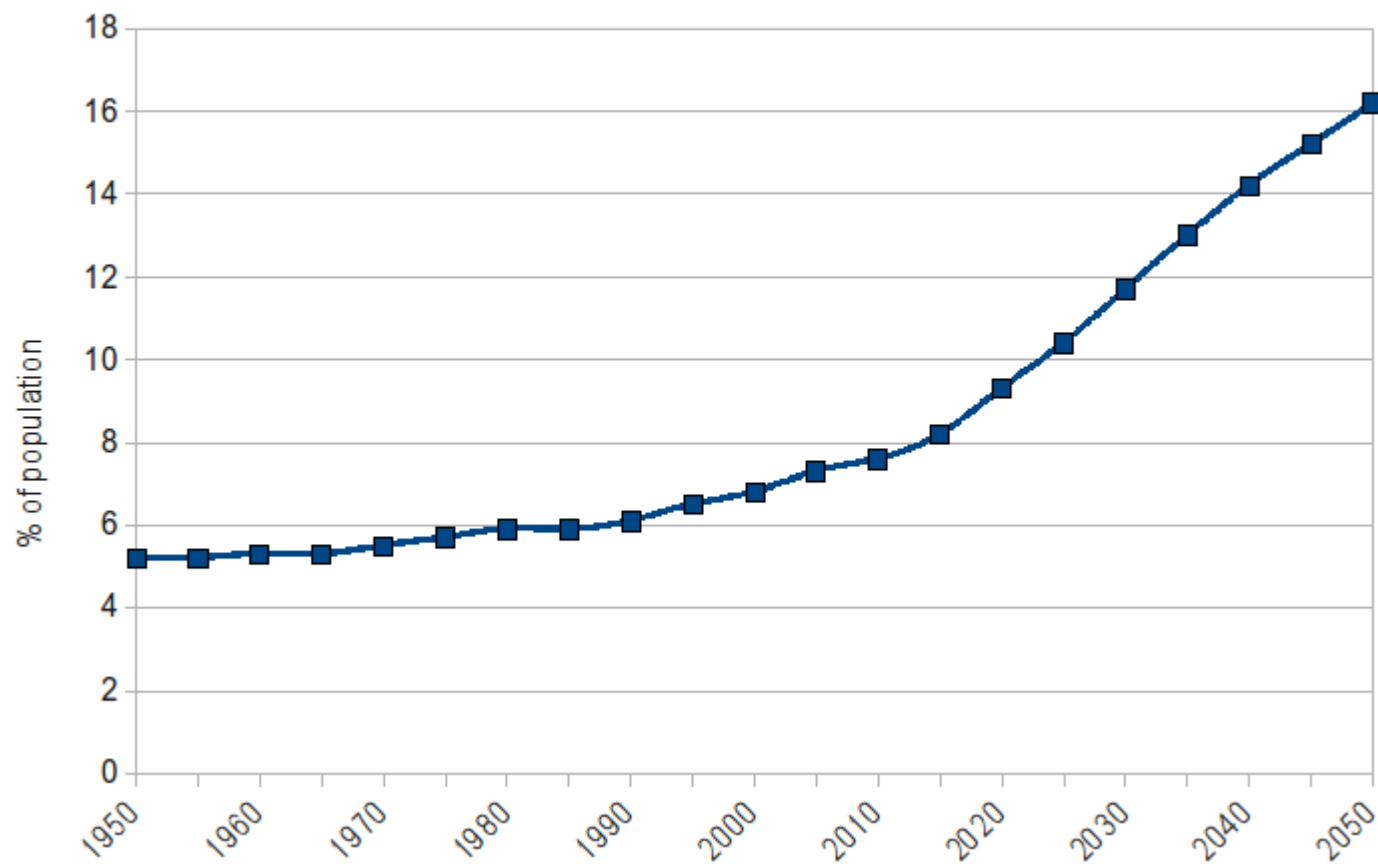
10 Human resource management

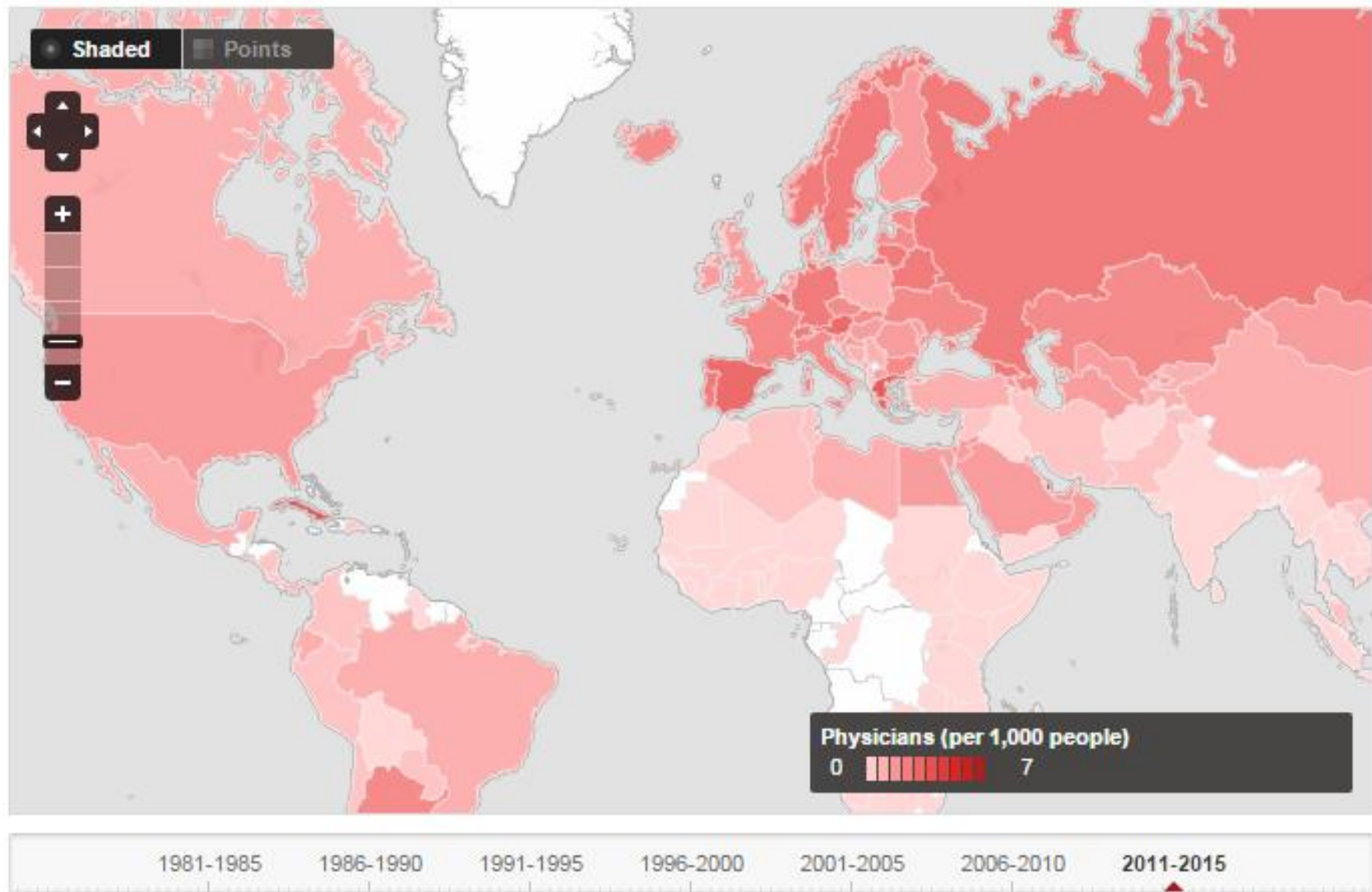
11 Supply chain management

12 Financial transactions & incentives

## Percentage of the World Population Over 65, 1950-2050

Source: UN World Population Prospect, 2008





<http://data.worldbank.org/indicator/SH.MED.PHYS.ZS/countries/B8?display=map>



## ***Potential of mHealth***



### **Can we really prove that mHealth helps sustainability of the healthcare system by ...?**

- Saving time to professionals
- Reducing costs
- Empowering the patient
- Improving efficiency, access to information, ...

### **Good market figures are being foreseen in this segment ...**

- Would these figures incentivate industry?
- Would the public admin be willing to play their role?



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# ***Global Mobile Health Market***

***How does the future looks like...***



## ***Trends of the mHealth app market***

### **Main highlights**



#### ***mHealth app market is getting crowded***

- 100 K mHealth apps more
- 259 K mHealth apps currently available



#### ***The growth of the demand has slowed down***

- 2015 [+35%] → 2016 [+7%]
- Total 3.2 B in 2016



#### ***mHealth companies are getting smaller***

- Start-ups increased from 8% to 13%
- “We do this to make money”



#### ***Still not a money printing business***

- 60% make less than US\$10,000 per year
- IAP and IAA main income source for 4-10%
- US\$10 is the threshold for mHealth app services



#### ***mHealth app market is a growth market***

- Revenues from mHealth app services (15%)
- US\$31B in 2020 / 551M active users



#### ***Integration of mHealth apps into the system***

- Slowly evolves
- Consumer driven market



#### ***Most important cost levers***

- Reducing hospital readmission rates
- Non-adherence to treatment costs



#### ***HIC are expected to become a key player***

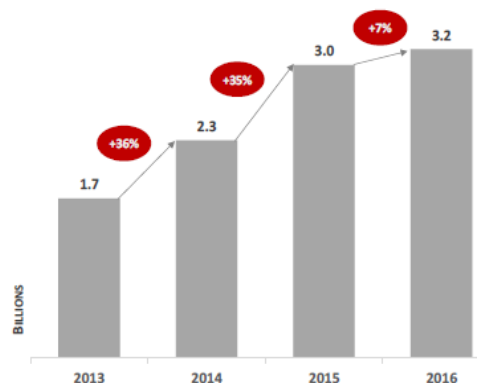
- Cheaper plan
- Share health data

## GLOBAL MOBILE HEALTH MARKET

### Trends of the mHealth app market

#### MHealth APP DOWNLOAD GROWTH IS SLOWING

Estimated total downloads of mHealth apps (billions)

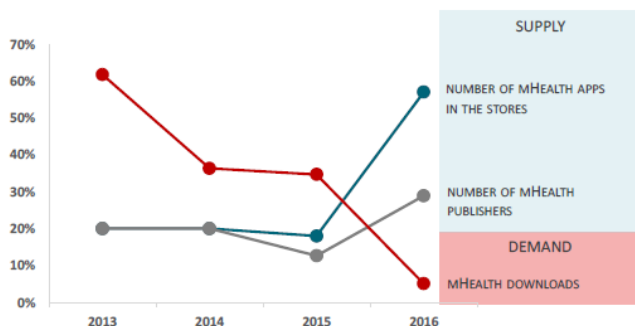


Copyright research2guidance 2016

Source: research2guidance - mHealth App Developer Economics study 2016, n=2600

#### THE GROWTH OF THE SUPPLY SIDE EXCEEDS DEMAND SIDE

mHealth supply and demand growth rates 2013-2016



#### Growth in the total number of mHealth apps

- More mHealth app publishers (58,000)
- Multi-platform app publishing
- Expansion of mHealth portfolios

#### Estimated revenue generated by mHealth companies

**US\$23B** (2017)

**US\$31B** (2020) [\$59.15B ResearchNow]

1. Service revenue
2. Device revenue
3. Transaction revenue
4. Paid download revenue
5. Advertising revenue



## ***Future trends in 5 years***

***mHealth apps will become an integrated part of the healthcare system***

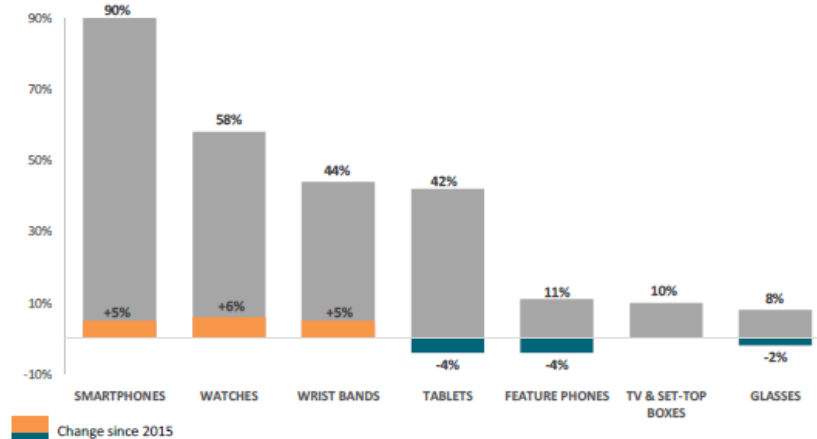
***Total market value will increase significantly***

- Increasing number of users
- Improve Service offerings
- Strengthening of Business models
- Increase in reimbursements for app services

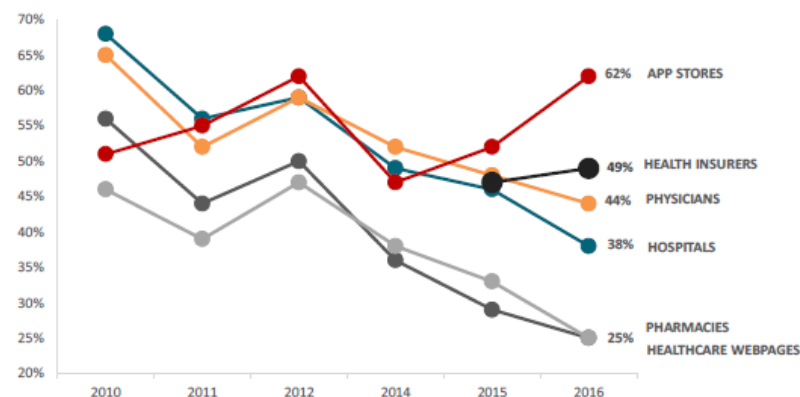
**2.6B app users will have downloaded an mHealth app at least once (551M will be active users)**

**Smartphones are the number one device for app development**

*Which devices offer the best market potential for mHealth in the next 5 years?*

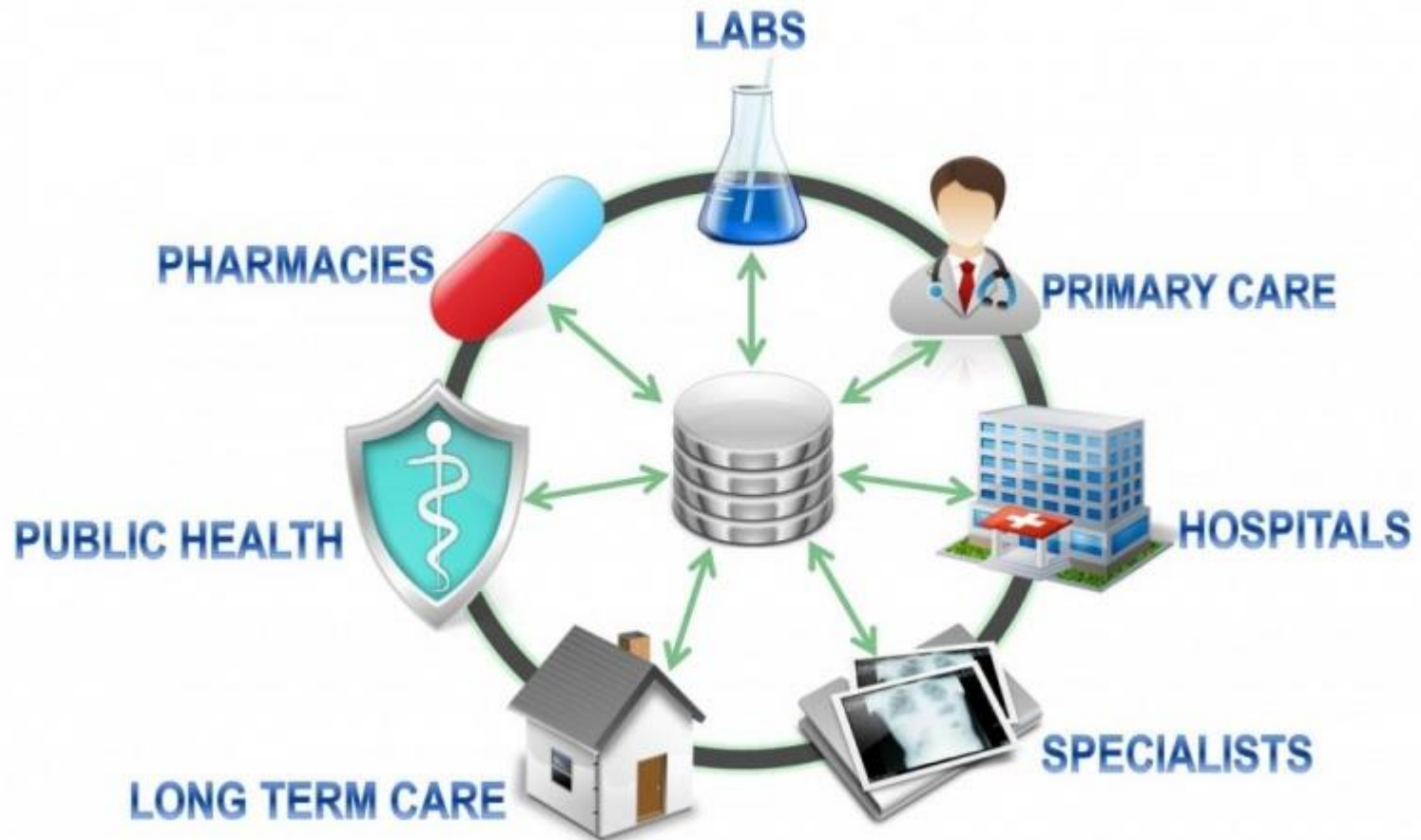


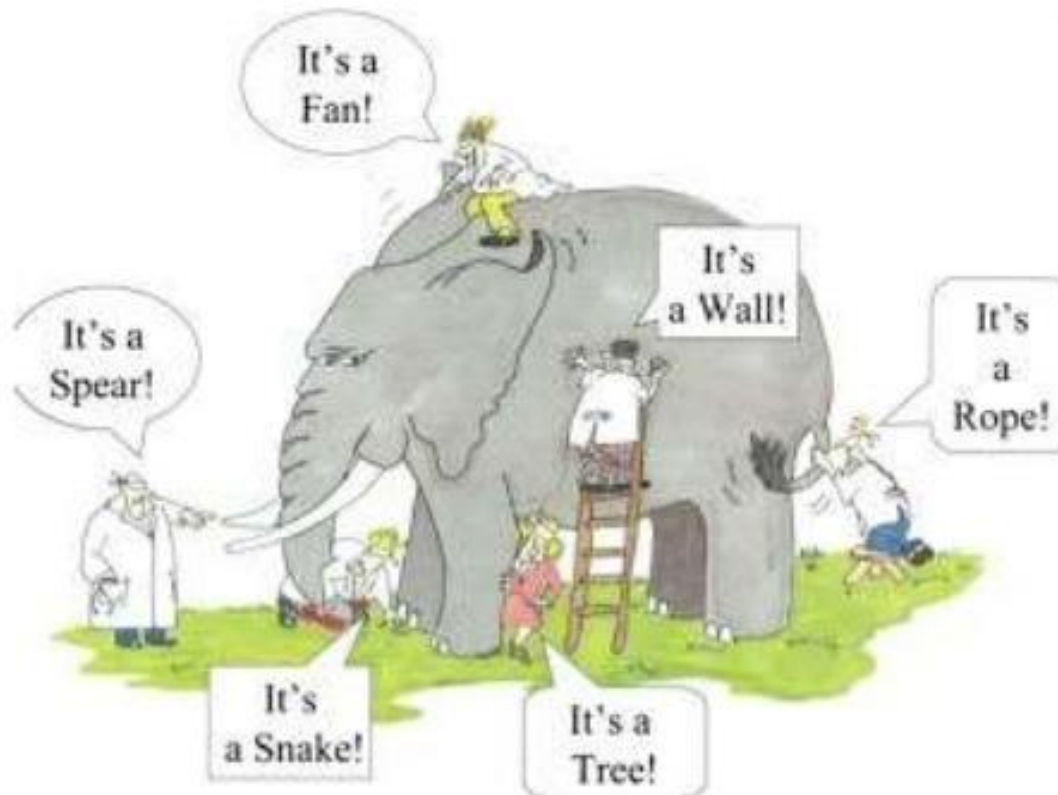
*Which distribution channels offer the best market potential in the next 5 years?*



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# ***Barriers for adoption and deployment***





**Context and Perspective.**





## Changes & Barriers

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*“Regulation is lagging behind adoption.”*

Adesina Illuyemi,  
University of Portsmouth

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*“Lack of payment mechanisms is a major limitation. Technologies paid for are adopted quickly.”*

Dr. Annette Kroettinger, German  
Foundation for the Chronically ill

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*“Governance of mobile health is one area where government needs to work and invest.”*

Prof Devaka Fernando, Diabetes expert  
Sheffield Hallam University

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*“mHealth will generate data but no common framework to host that data currently exists. A common framework is needed within the EU region to ensure that mHealth can provide real benefits.”*

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## Changes & Barriers

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Regulation

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Reimbursement models

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Governments

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Evidences

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Collaboration

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Big Data

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Policy makers

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Transformation

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Standards

## ***Changes & Barriers***

### **1. Apps should be seen as components of a digital health ecosystem**

Lack of integration into workflow systems  
Interoperability

### **2. Demonstration of reliability and efficacy is key**

Lack of scientific evidence  
Regulatory, confidentiality, security and privacy

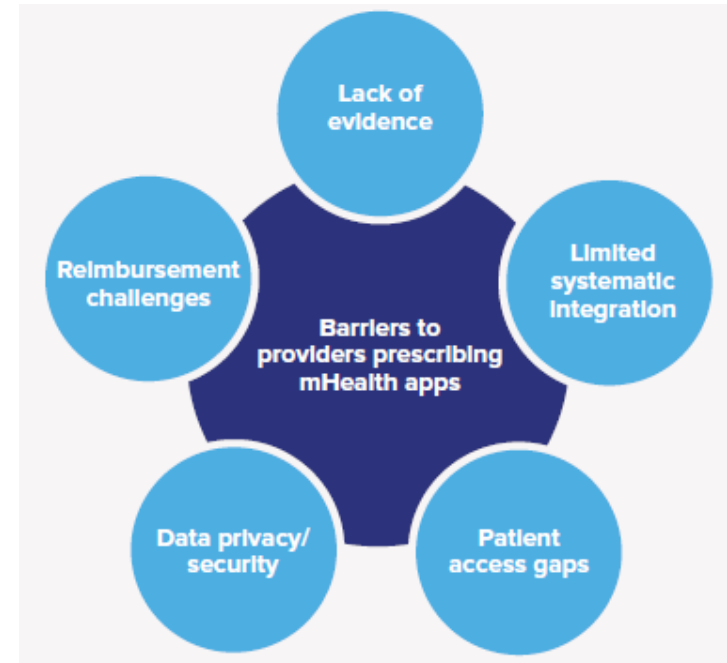
### **3. Sustainable Business models**

Shift in reimbursement processes

### **4. Behaviour change must be a goal**

### **5. Maximizing the power of app-generated data is critical**

Conectivity

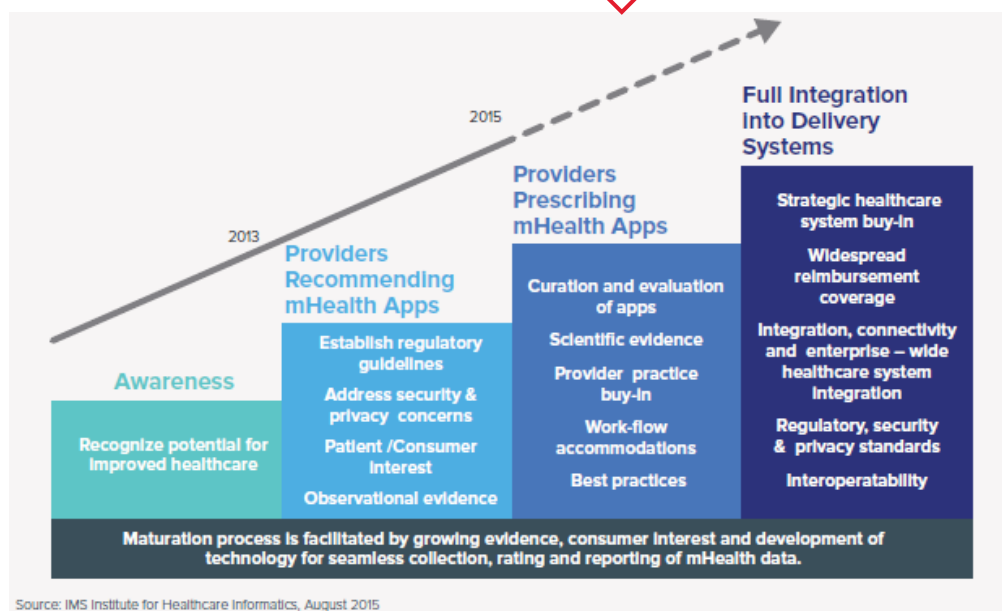


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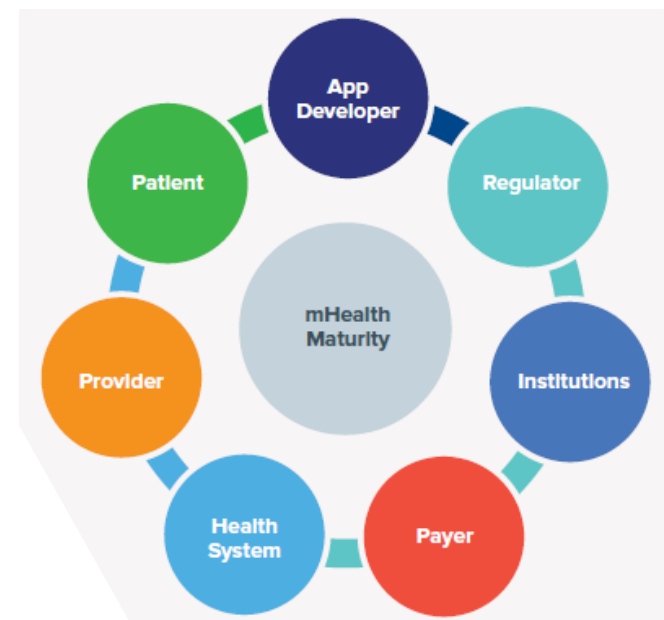
# *Conclusions*

## GLOBAL MOBILE HEALTH MARKET

### Conclusions



Maturity model for adoption



Stakeholders



## **Conclusions**

### **1. It's not about apps, it's about systems**

Linking the digital – physical World

Addressing multiple problems simultaneously

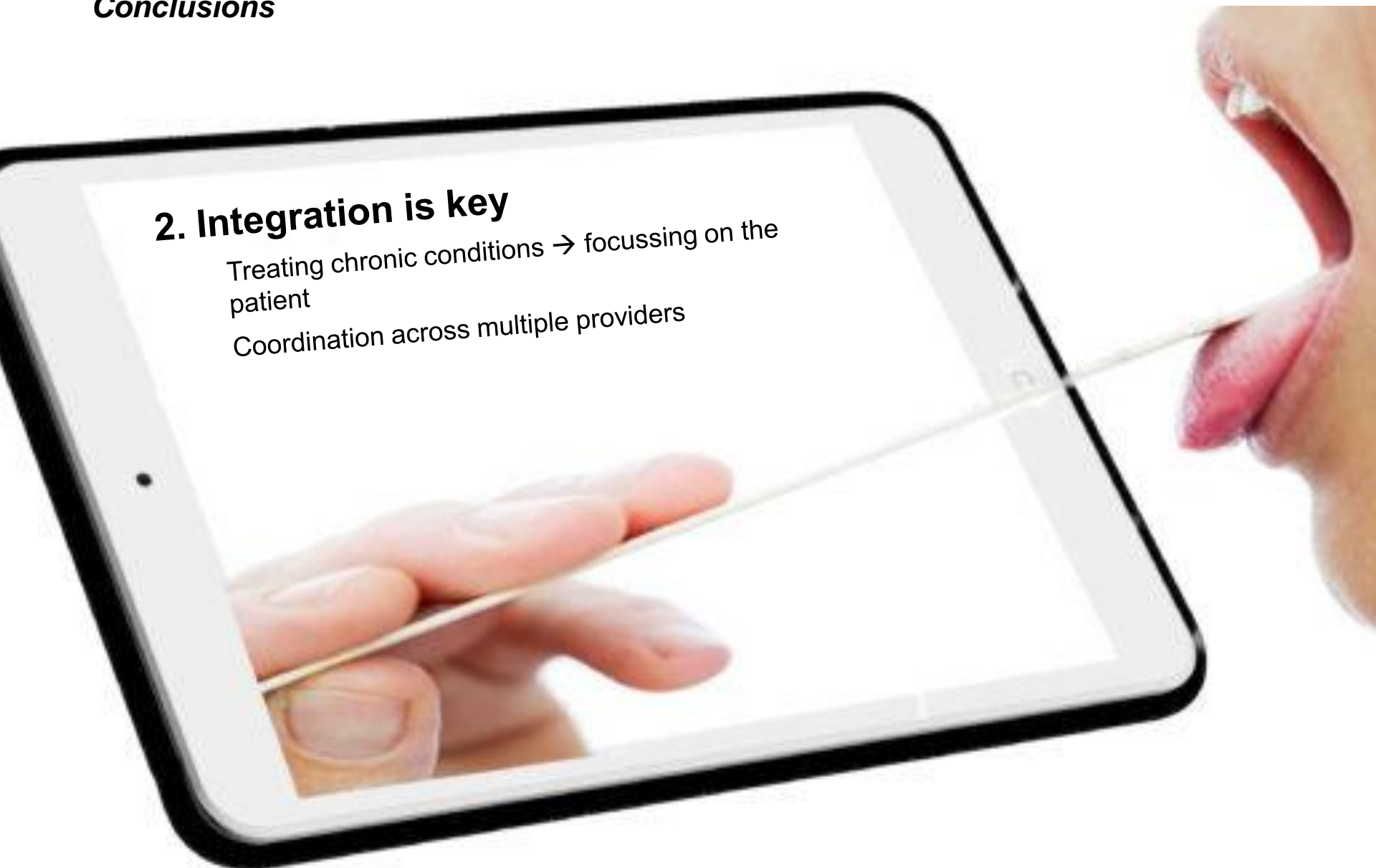


## **Conclusions**

### **2. Integration is key**

Treating chronic conditions → focussing on the patient

Coordination across multiple providers



## **Conclusions**

### **3. Like everything, it's ultimately about people**

Technology won't replace health Workers  
Apps need to pay attention to the system and the people

## **Conclusions**

### **4. The role of health professionals is changing**

From information repositories to medical information navigators

Smart decision Support technology

## **Conclusions**

### **5. Priorization and effort across all stakeholders in essential**

Shared responsibility of payers, healthcare systems and consumers is key → delivery, costs and outcomes



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# THANK YOU !

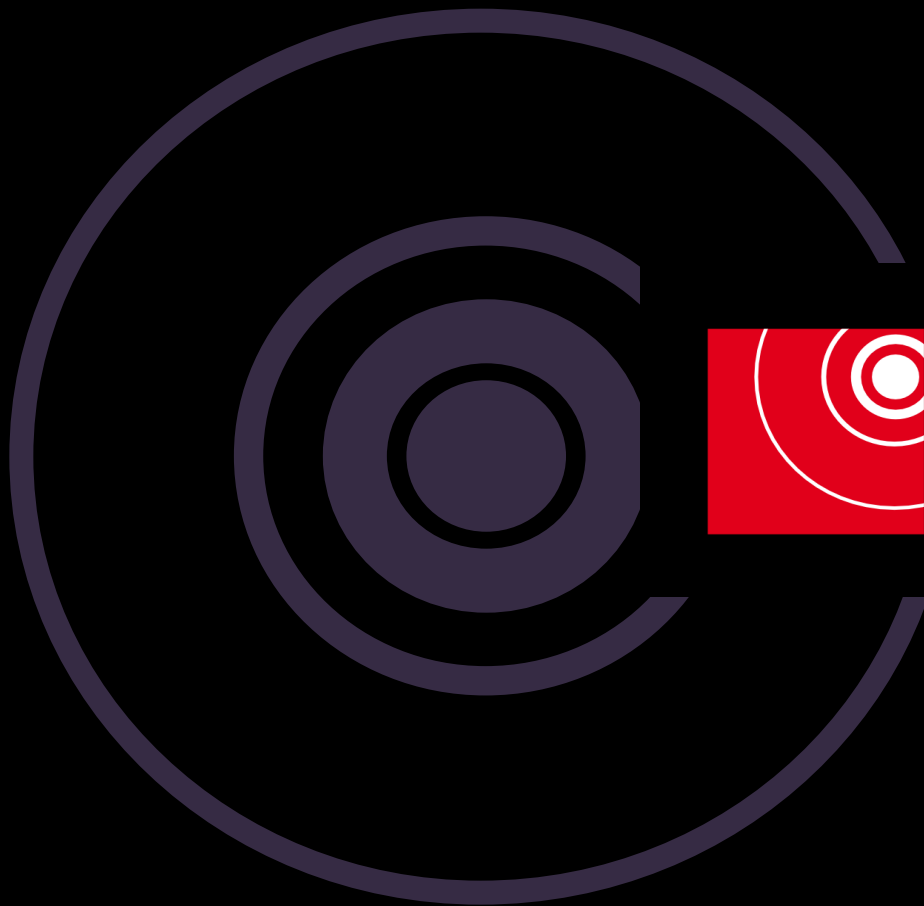
## ***mHealth – MWC***

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**Twitter: jcornetp**



**KEEP  
CALM  
AND  
JUST  
DO IT**



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