

# Health IT Convergence

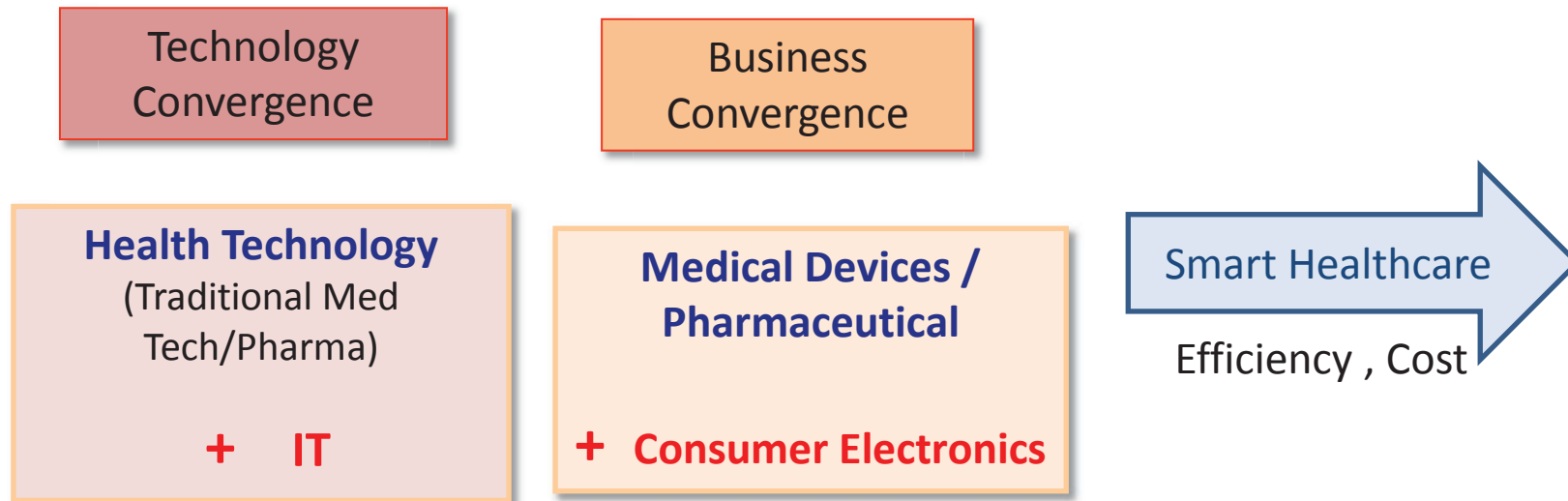
## -Technology to Business

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**Eunsung Park**  
**Samsung Advanced Institute of Technology**  
**Samsung Electronics**

# Convergence for Smart Healthcare

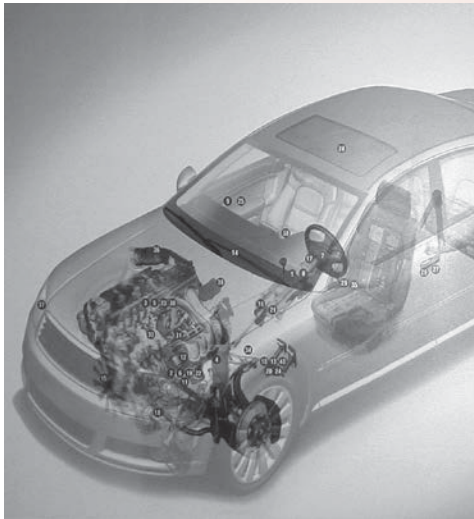


## **GOALS: Convenient, Personalized, Better care with Lower Cost**

- Convenience: Automatic, Continuous, Always but Un-noticed
- Personalized: My Treatment, My Information, Personally Manageable
- Better: Preventive, More coverage, Less expensive, Accurate, Enhanced clinical outputs, My Satisfaction

# The (Not Yet) Digitized Body

Car



400+ on-board sensors  
750MB/s data processed  
in Google self-driving car

Galaxy S5



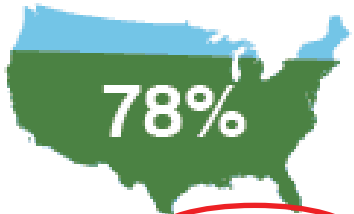
10+ on-board sensors  
4 radios

Human



0 on-board sensors  
Annual checkup  
(maybe)

# Current Shift



of U.S. consumers are interested in m-health solutions



of doctors would like their patients to monitor their health at home, particularly their weight, blood sugar, and vital signs

## THE ECONOMICS



25%

costs in elderly care can be reduced by mhealth solutions



Maternal and pre-natal mortality can be reduced by

30%



2x

rural patients can be reached per doctor



Costs related to data collection can be reduced by

24%

### Consumers want to use mHealth because . . .



Convenient access to their doctor or healthcare provider



To reduce out-of-pocket healthcare costs



To take greater control over their health

# Issues of Convergence: Lack of Understanding

Full of ideas

- but no successful business models yet
- ? lack of understanding the new industry

- Re-Defining Customers
  - Consumers
  - Patients
  - Doctors
  - Payors...
- Understanding Customers
  - How end user react to solutions
  - How doctors react to solutions
  - How healthcare systems react to solutions

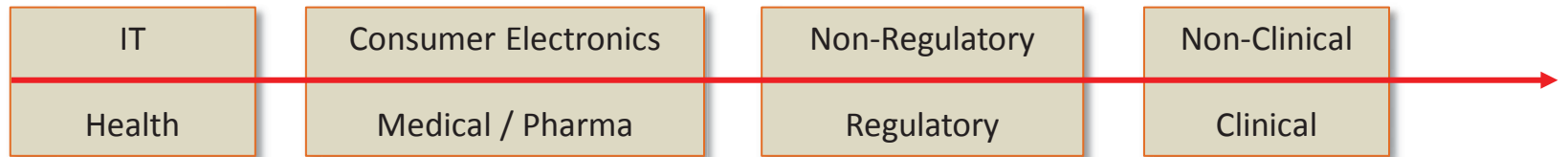
**Medical Devices /  
Pharmaceutical**

**+**

**Consumer Electronics**

# Expectation Mismatches

Mismatches between 2 fields: Health vs. IT



Medical devices?  
Consumer electronics?

# How: Systematic Integration

Digital Health Solutions Must Integrate Devices/Data, Analytics/Insights, and Services

“Sense it”



## **SENSORS/DEVICES**

- Biometric sensors
- Location awareness
- Privacy layer  
 (“with your permission”)

“Interpret it”



## **ANALYTICS/INSIGHTS**

- Big data analytics & Aggregation of data streams

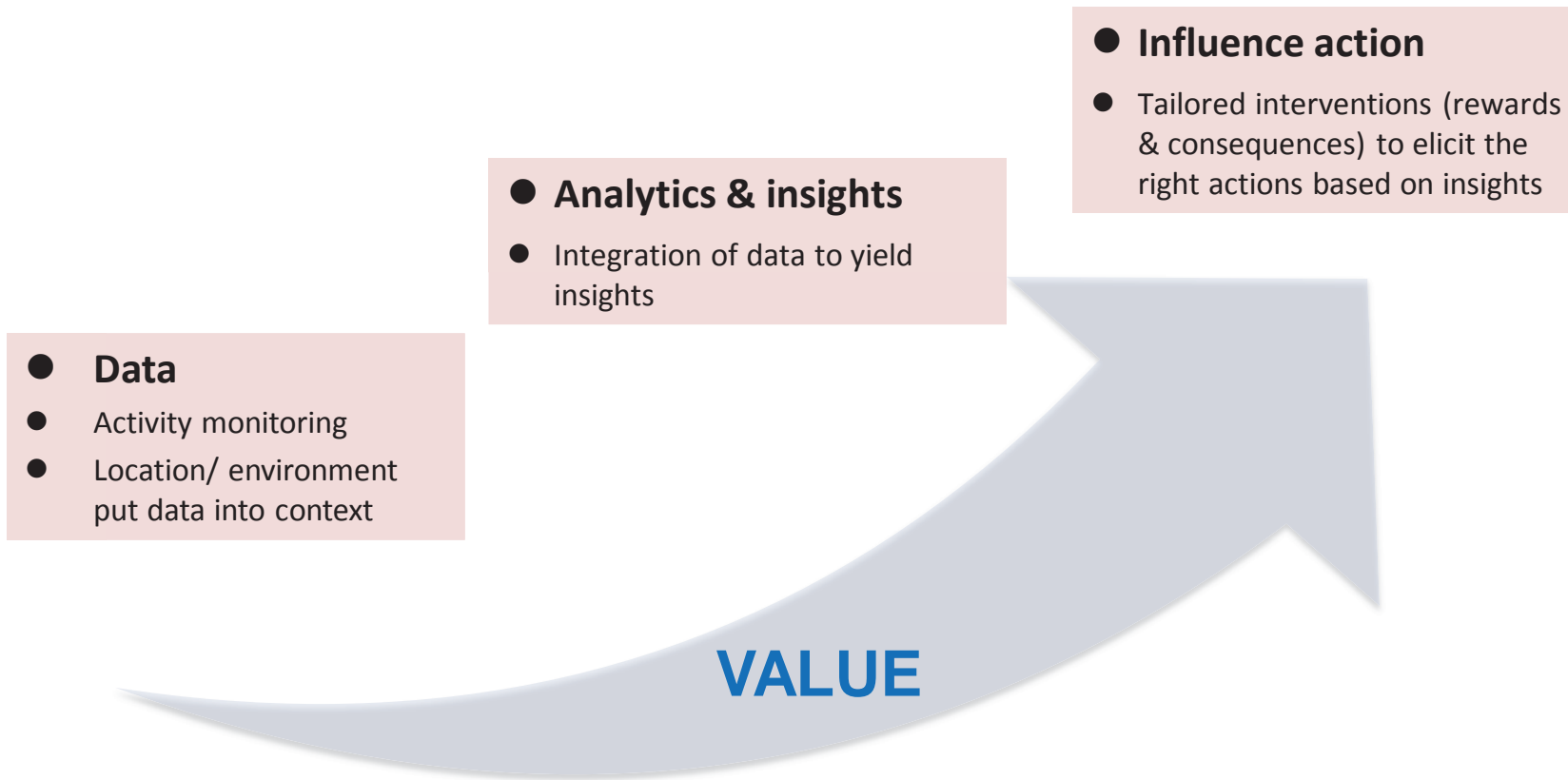
“Show it”



## **SERVICES**

- Behavior change, incentives
- Interactive & adaptive environments

# Value through Systematic Integration





# Digital Future of Health and Wellness

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- Healthcare is the most inefficient industry worldwide (Now)
  - Low levels of competition, limited digital technology use, and virtually no consumerization
- Two disruptive trends can reinvent and transform healthcare
  - Digital & mobile technologies enabling monitoring and data management
  - Consumerization will create new business models based on access to information and transactions
- Digital Health solutions must seamlessly integrate into a rewarding user experience (Influence target customers)

THANK YOU

# Interesting Market Dynamics

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## Drivers



- Strong demand for convenient, personalized healthcare services
- Strong demand for access to personal health information

## Restraints



- Consumers trust in new (health) technologies is unstable
  - Lack of medical evidence even for consumer electronics
- Resistance from medical community in some countries
  - Telemedicine, Wellness Guidance in KR

# Inefficiency of Healthcare

