Queensland University of Technology

Health Informatics Domain Knowledge Analysis: An Information Technology Perspective

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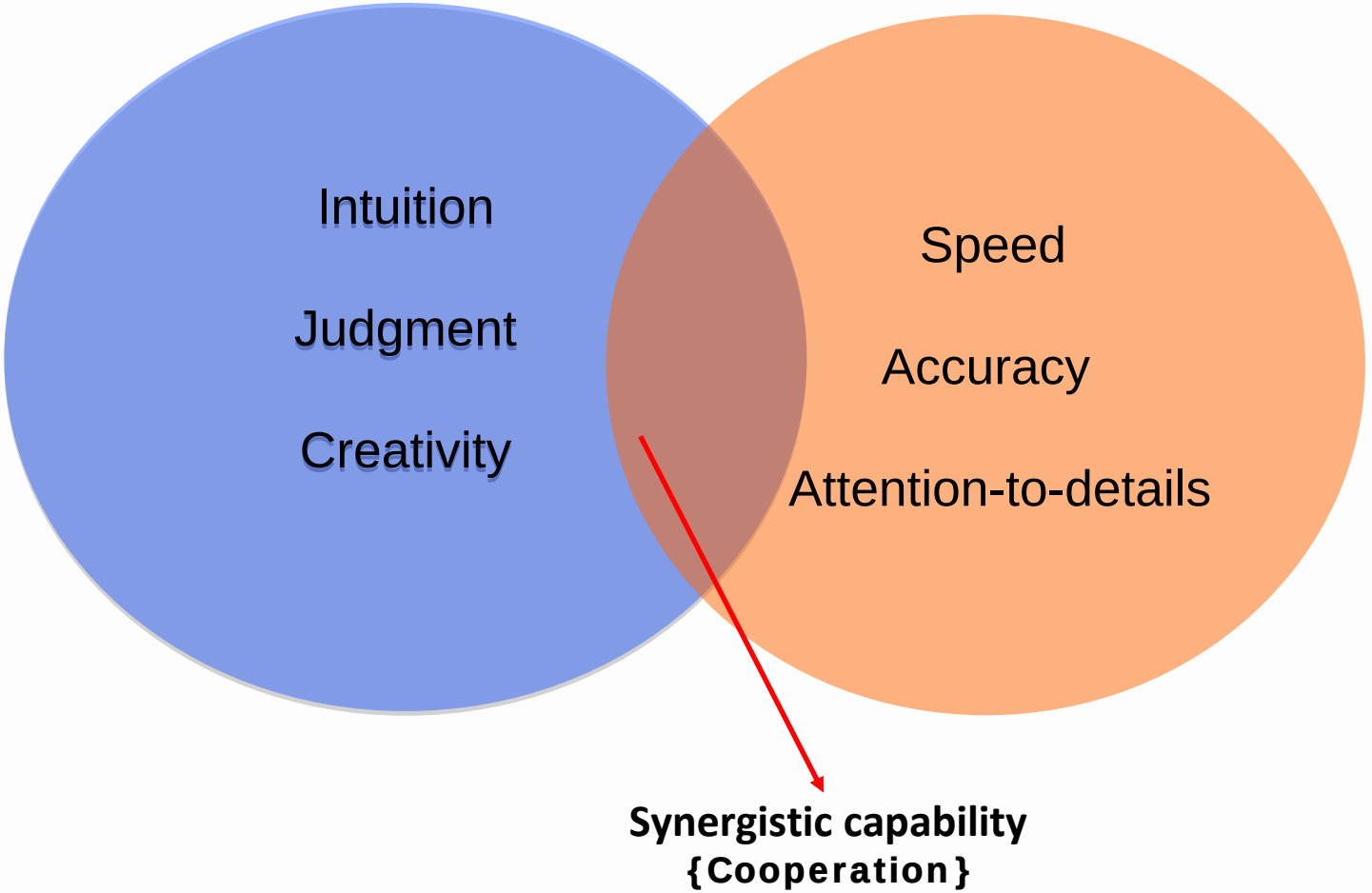
Human vs Computer
(*the interaction that was forgotten*!)



The “iterative” intersections

Information Technology

Health Informatics

Health Care

Medical Informatics

Biomedical Engineering

Medical Science

Informatics

Science (x, y, z)

People; Processes, Procedures and Systems!

Service Oriented Building Blocks

Patient centric

Processes driven

Procedural centric

Application Development

Service deliveries

Decision making

Databases

Data (e.g., HER, MR)

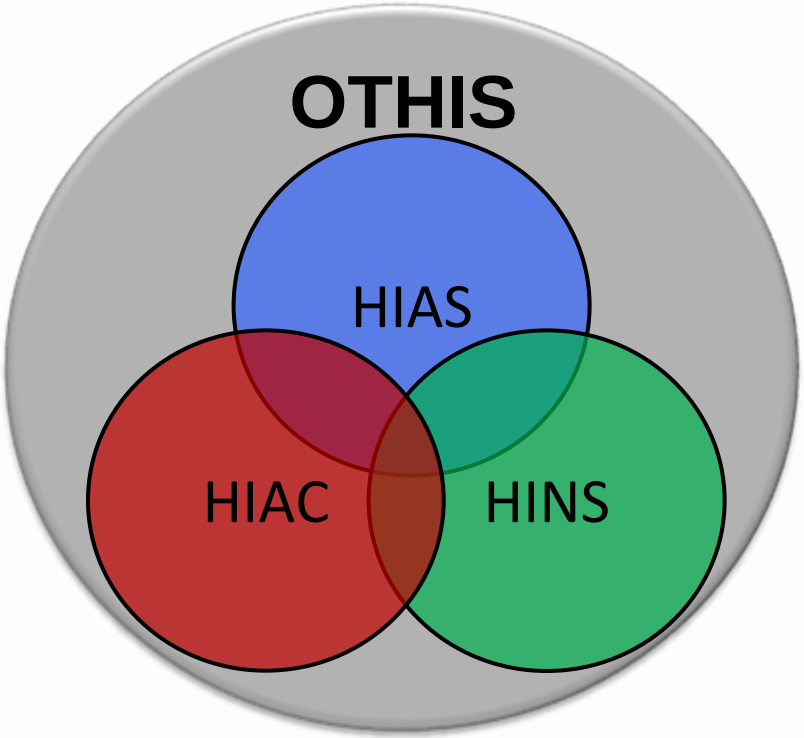
Advance Networking

Security & Privacy

Devices (Mobile, Ubiquitous)

OS, **OTHIS**, HIS

Open and Trusted Health Information Systems (OTHIS)



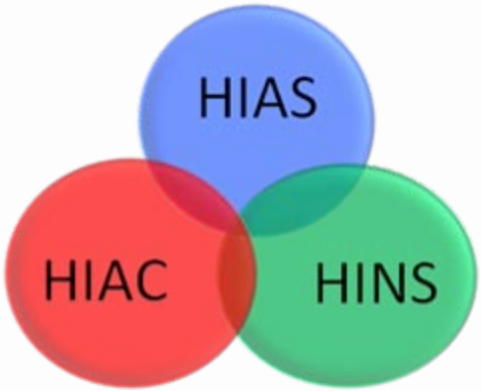
isi Information Security Institute
Faculty of Science and Technology
Queensland University of technology

OTHIS Architecture Modules

Health Informatics Access Control (HIAC)
Health Informatics Application Security (HIAS)
Health Informatics Network Security (HINS)

Process centric
Information under processing

Data centric
Information at rest



Transfer centric
Information under transfer

Frontier of Health Informatics

- EHR Management
- Advance networking capabilities
- Clinical decision support (+ Management Support)
- DSS vs DW (and DBs)
- QoS and the Service Quality
- Point-of-Care Information Technology (POC-IT)
- Health care Information Technology (HCIT)
- OS vs OTHIS
- Ubiquitous Access and Devices
- Information Accountability –

  the use of information should be transparent so it is possible to determine whether a particular use is appropriate under a given set of rules and that the system enables individuals and institutions to be held accountable for misuse

  (Weitzner, et al., 2008).

Intellectual contributions

- ✓ Perception and understanding of the requirements
- ✓ Discipline boundaries (e.g., *Health Care without boundaries*)
- ✓ Education and Training
- ✓ Research and Development
- ✓ Investment on Knowledge
- ✓ Reward on Experiences and performances
- ✓ Incorrect tools (e.g., KPI, ROI, Business Models)
- ✓ Learning from the mistake (e.g., no repeat)
- ✓ Professional Practice (e.g., CPD, Job Training etc)
- ✓ ……..,
- ✓ ,…….

The trend on HIS domain knowledge

- Efficient Decision Support Systems
- Research and Development in data and information accessibility
- Efficient Information Retrieval
- Policy development (e.g., health care solution)
- Synergies between key personals

Databases	Networks	Policies
HER applications	Advance networking	Security
Information Retrieval	Mobile Devices	Protocols
Database designs	Medical Devices	Forensics analysis
HER management	Ubiquitous Devices	Privacy policies
DSS and applications	OS	Health care solutions
Data Integration	OTHIS	Quality assurances

Moving Forward

- Must
  - ✓ prepare for the change
  - ✓ see the changes
  - ✓ accept the changes
  - ✓ understand the culture of change!
- Share
  - ✓ ideas
  - ✓ experiences
  - ✓ innovations
  - ✓ no boundaries
- Take
  - ✓ responsibilities
  - ✓ precautions
  - ✓ no risk

“Perpetuating what we have is not going to get us where we want to go”

Discussions