Re-Visiting Health Informatics
HINF1100
Fall 2008

What is Health Informatics?

- Health Informatics is a scientific discipline that deals with all aspects of *understanding* and *promoting* the effective *organization*, *analysis*, *management* and *use* of health information to *improve* the *delivery* and *practice* of healthcare

- Health Informatics is the study of applying information and technology to improve health and healthcare

- Health Informatics = Health + Healthcare + People + Information + Technology

Why Health Informatics

- Health Informatics is an exciting new discipline that aims to transform the healthcare system by incorporating information systems to support healthcare processes

- Health Informatics is revolutionizing healthcare by developing technology-based solutions to help both health professionals and patients
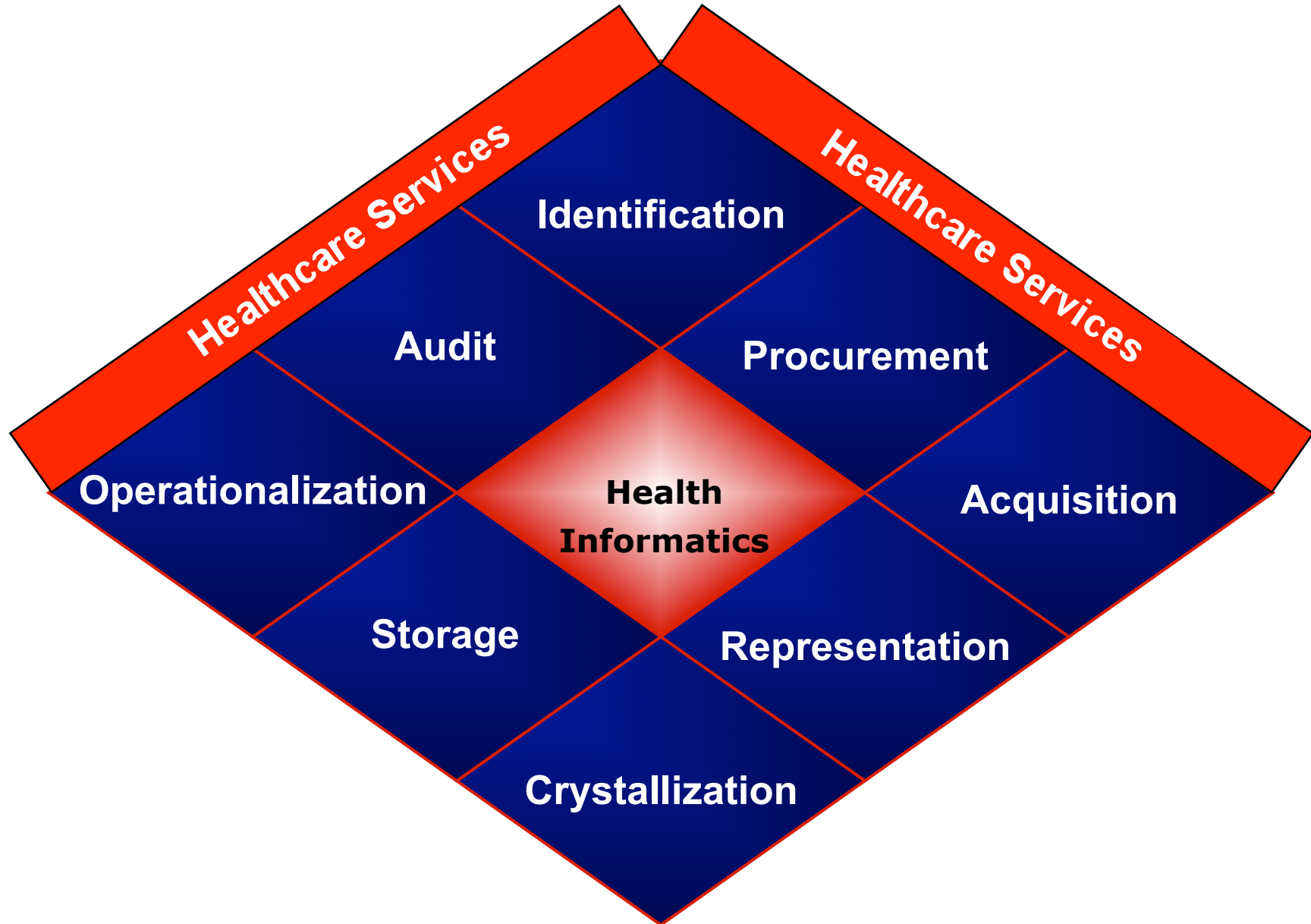
How Does Health Informatics Help?

★ **Record** patient's health information in an electronic format

★ **Manage** flow of patient information between health professionals, departments and institutions

★ **Offer** patients easy & timely access to healthcare services

★ **Inform** health professionals about best evidence and practice guidelines

★ **Provide** decision support services to health professionals to reduce medical errors

★ **Optimize** healthcare resources to reduce cost and to improve efficiency

★ **Improve** patient safety and the quality of care

★ **Facilitate** remote healthcare at a patient's home
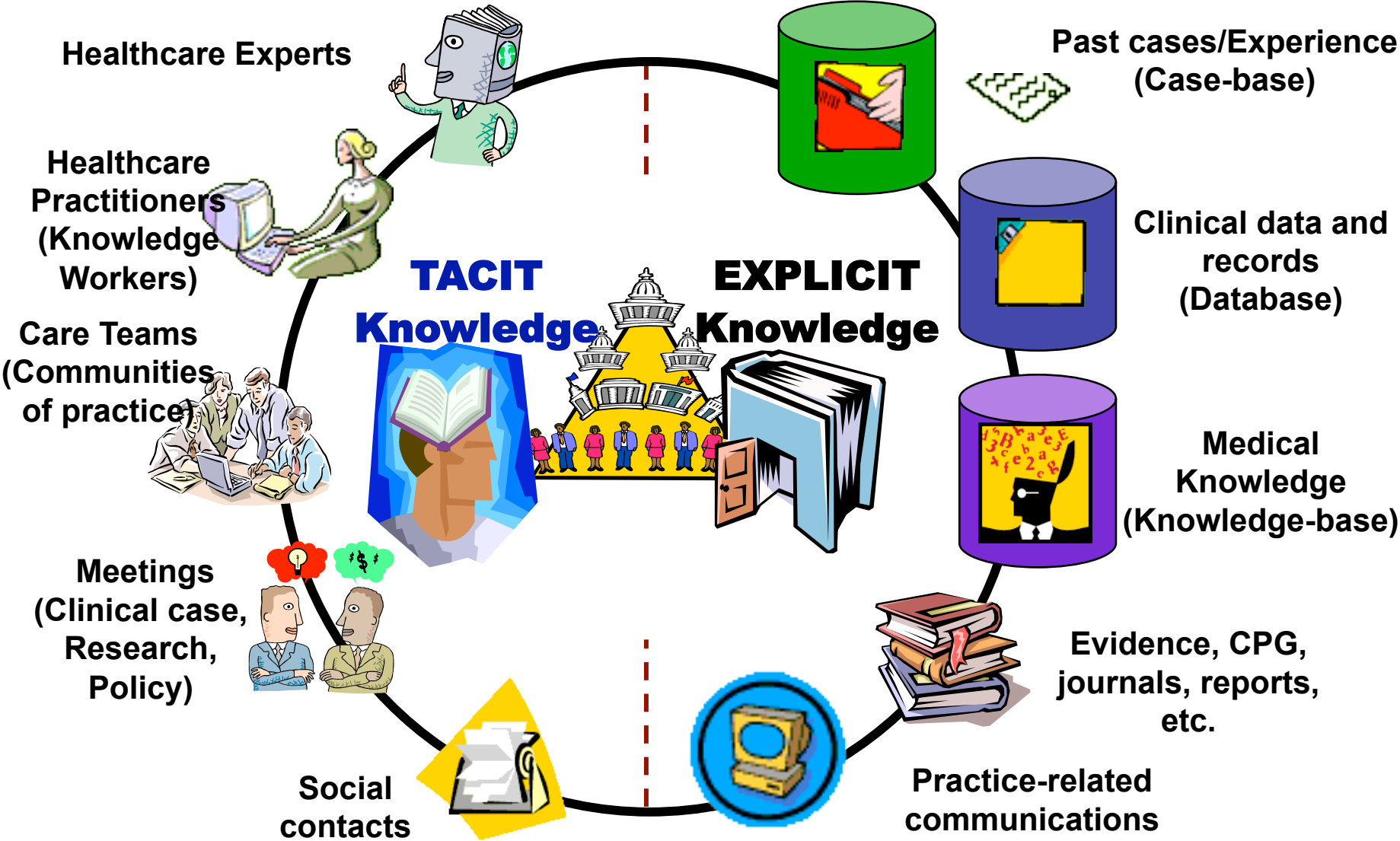
What do Health Informaticians Do?

Health Informaticians *support*, *design*, *lead* and *manage* a variety of key healthcare components

Lead	Hospital Information Systems Management	Health Technology Innovations & Research		Manage
Lead	Health Technology Deployment Teams	Health Policy Teams	Health Standards	Manage
Design	Hospital Information Systems	Patient Support Services	E-Health Systems	Manage
Design	Electronic Health Records	Decision Support Systems	Research Tools	Manage
Support	Knowledge Management	Knowledge Access	Knowledge Translation	Manage
Support	Information Flow	Information Standards		Manage
Support	Data Collection	Data Storage / Data Sharing	Data Analysis	Manage

Health Informatics Activities

Health Informatics Knowledge

Healthcare Experts

Healthcare Practitioners (Knowledge Workers)

Care Teams (Communities of practice)

Meetings (Clinical case, Research, Policy)

Social contacts

TACIT Knowledge

EXPLICIT Knowledge

Past cases/Experience (Case-base)

Clinical data and records (Database)

Medical Knowledge (Knowledge-base)

Evidence, CPG, journals, reports, etc.

Practice-related communications

Health Informatics Environment

People

Cultures and organizational structures that facilitate the adoption of HI technology

Healthcare Enterprise

Processes

An operational environment that incorporates HI solutions within the workflow

Technologies

IT technologies and techniques
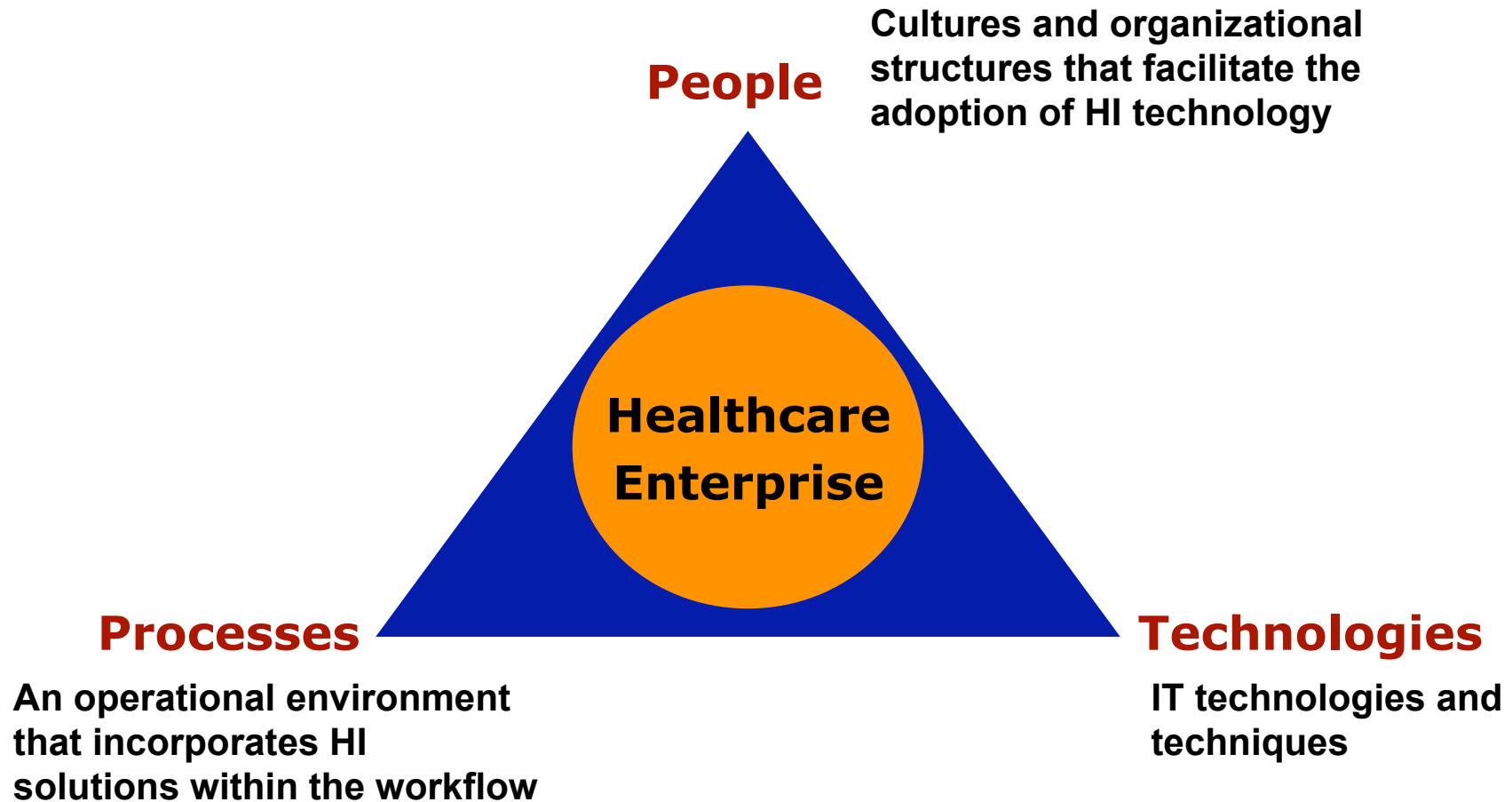
Health Informatics Solutions

Health Sciences

Cognitive Science

Database Technologies

HI Methods

Psychology and Psycho-Sociology

Decision Support Systems

Management

Internet & Networking Technologies

Information Systems

Human Computer Interactions

Organizational Science

Education
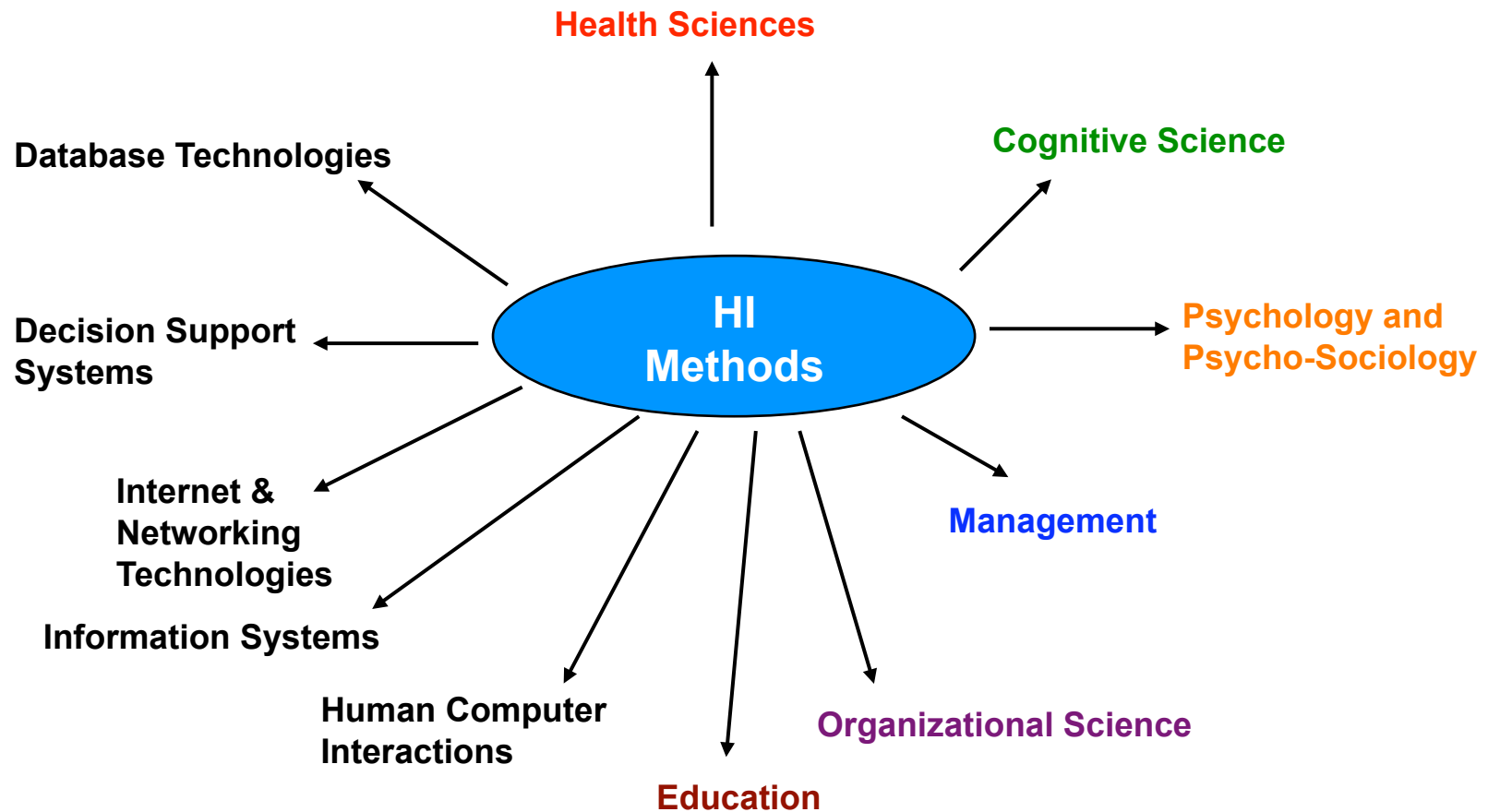
State of Affairs: Possible Barriers to Health Informatics

- – Potential of HI Technology
    - Culture
    - Infrastructure (Techniques and Technology)
    - Incentive

- – Lack of Collaboration
    - Ad hoc means of communication
    - Paucity of resources (time, space, incentives, etc.)
    - Islands of operations

- – Heterogeneity
    - Departments
    - Standards
    - Systems
    - No binding glue…

State of Affairs: Possible Barriers to Health Informatics

– Lack of Value Proposition

  • Upfront cost

  • Piecemeal initiatives

– 'Unawareness' to Health Informatics

  • What can be done?

  • Can it really be done?

  • How will this help healthcare? How will it help me, my department?

Health Informatics Outlook

- Health Informatics is
  - Needed
  - Needed to be done
  - Needed to be done correctly
  - Needed to be done correctly in stages
  - Needed to be done correctly in stages whilst involving all healthcare stakeholders

HI Internships

- **NS Dept of Health**
- **IWK**
- **Ministry of Health Ontario**
- **QEII Renal Clinic/Medical Informatics**
- **NS Rehabilitation Centre**
- **Poison Control, IWK**
- **Cancer Care Nova Scotia**
- **Cancer Care NS Surveillance & Epidemiology**
- **Population Health Research Unit**
- **Eye Care Centre, VG**
- **Centre for Research in Family Health, IWK**

- **CIHI, Standards Department**
- **CIHI, Clinical Administrative Databases, Toronto**
- **CDHA**
- **Canada Health Infoway**
- **South West District Health Authority**
- **Federal Healthcare Partnership**
- **Sunnybrook Hospital (Aging & Veterans Care Directorate)**

- **College of Pharmacy, Dal**
- **Dept. of Radiology, Dal**
- **DME, Dalhousie University**
- **Urology, Dalhousie University**

- **AGFA (University of Waterloo)**
- **HeadQuarters Hair Solutions Clinic**
- **Medusa Medical**
- **Neusoft Co., LTD**
- **Barrington Consulting Group**
- **Nuvus Consulting Group**
- **SLIC Hair Removal Clinic**
- **Dr. Lief Surgurdson Inc.**

The End