



Health Informatics and Contemporary Roles for Business Analysts

Professional Development Summit 2013

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Agenda

- ▶ **Health Informatics**
 - ▶ Definition, Qualifications & Competencies
 - ▶ Industry Role Matrix
- ▶ **Industry Analysis**
 - ▶ Needs & Priorities
 - ▶ Key Industry Leaders
- ▶ **Industry Roles & Alignment to IIBA**
- ▶ **Exemplar: HI Opportunities in Canada**

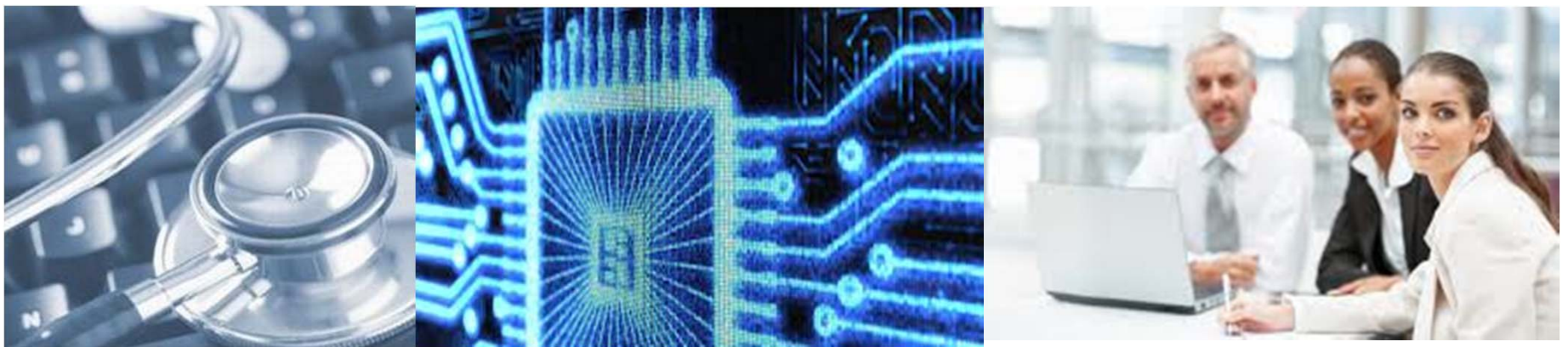
Understanding Health Informatics

Defining Health Informatics



“Health Informatics is the intersection of clinical, IM/IT and management practices to achieve better health”

(COACH, 2012, p. 24)





Health Informatics Scope

- ▶ HI involves the application of information technology to facilitate the creation and use of health-related data, information and knowledge.
 - ▶ HI enables and supports all aspects of safe, efficient and effective health services for Canadians (e.g., planning, research, development, organization, provision, evolution of services, etc.).
- ▶ **Numerous professional sub-specialties**
 - ▶ Medical informatics
 - ▶ Nursing informatics
 - ▶ Consumer Health Informatics
 - ▶ Public Health Informatics

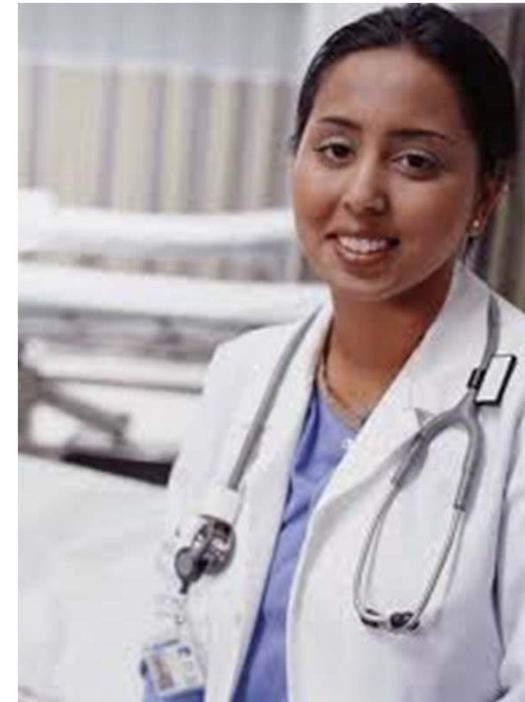
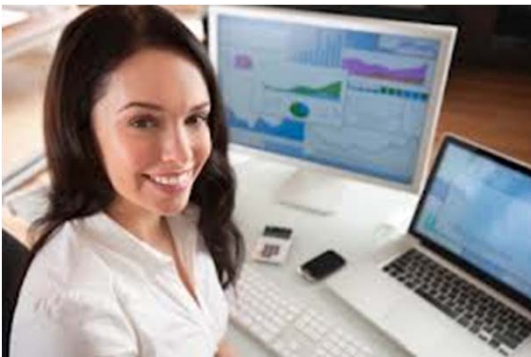
Who are Health Infomaticians?

- ▶ **Clinicians**

- ▶ Medicine, nursing, pharmacists, dentists, allied health care professionals

- ▶ **Non-clinicians**

- ▶ Information Technology/Systems
- ▶ Business programs
- ▶ Health Informatics programs





HI Qualifications

▶ COACH

- ▶ Graduation from recognized program in source discipline and gain other requisite core competencies through work experience/self-study in HI
- ▶ or graduation from HI program and acquire practical experience and knowledge in one or more area of HI practice through work experience

▶ Academic Programs

- ▶ List of Canadian programs on COACH website

▶ Professional Certifications

- ▶ CPHIMS-CA is the pre-eminent certification
- ▶ HL7 certifications, standards, ITIL, etc.



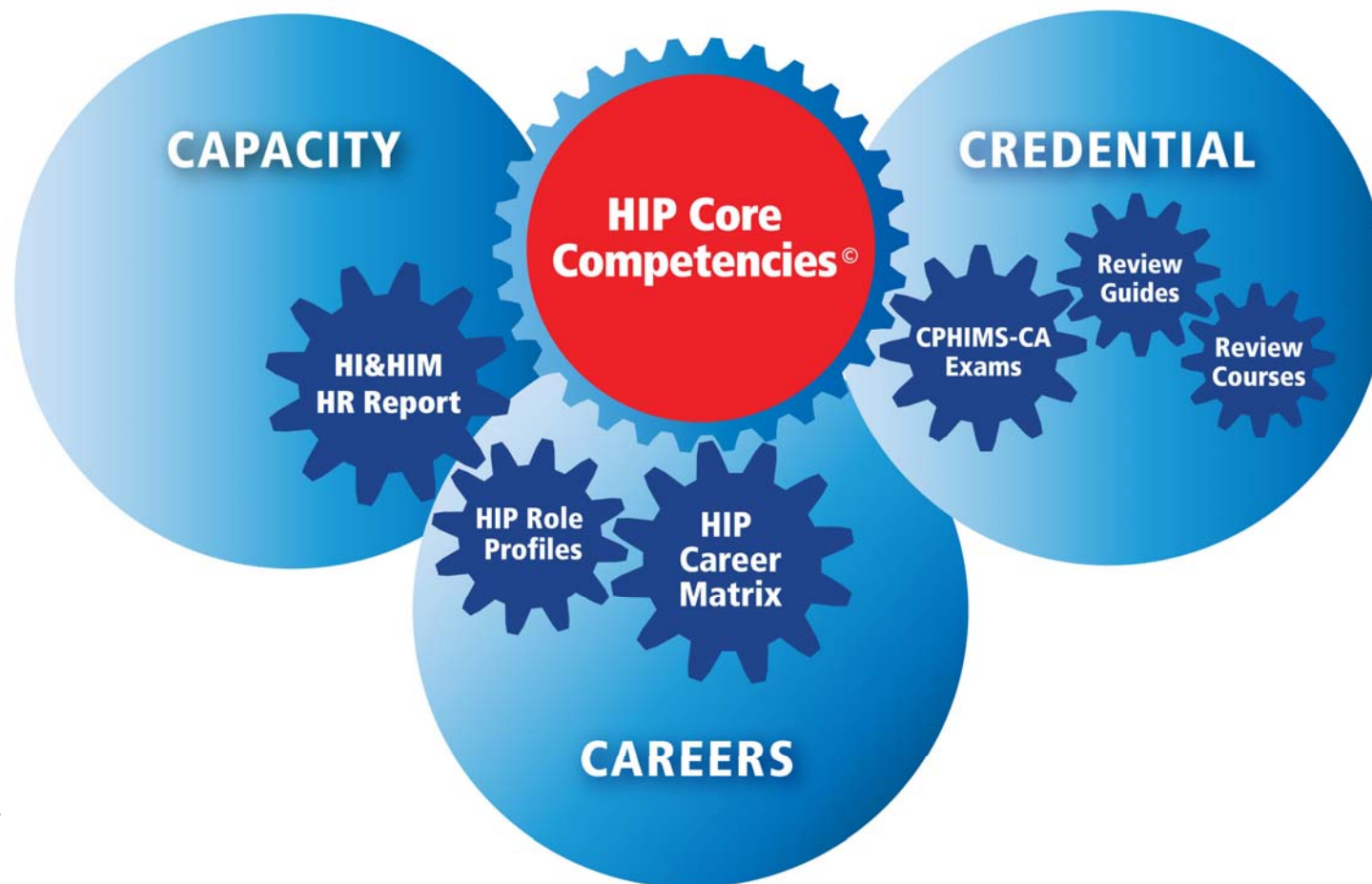
HI Competencies

- ▶ Health Informatics Professional Core Competencies V3.0 (Nov 2012)
- ▶ Interdisciplinary team refresh to competencies & role matrix
 - ▶ competencies increased from 46 to 50
- ▶ Minimum requirements as recommended by COACH
 - ▶ practice safely either solo and/or as a member of a HI team that includes multiple specialties.
 - ▶ develop more advanced or specialized competencies as progress from beginning to expert levels

Where to Start?

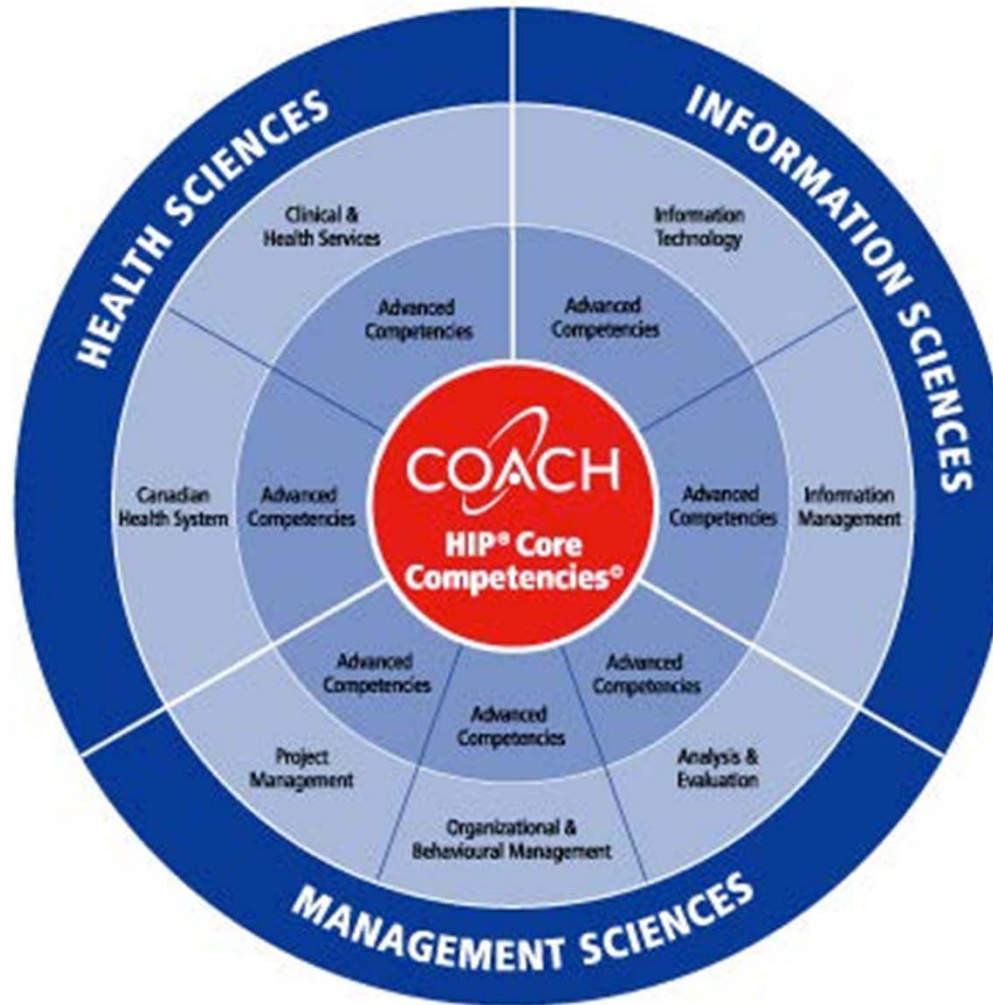


Health Informatics Professionalism (HIP™)

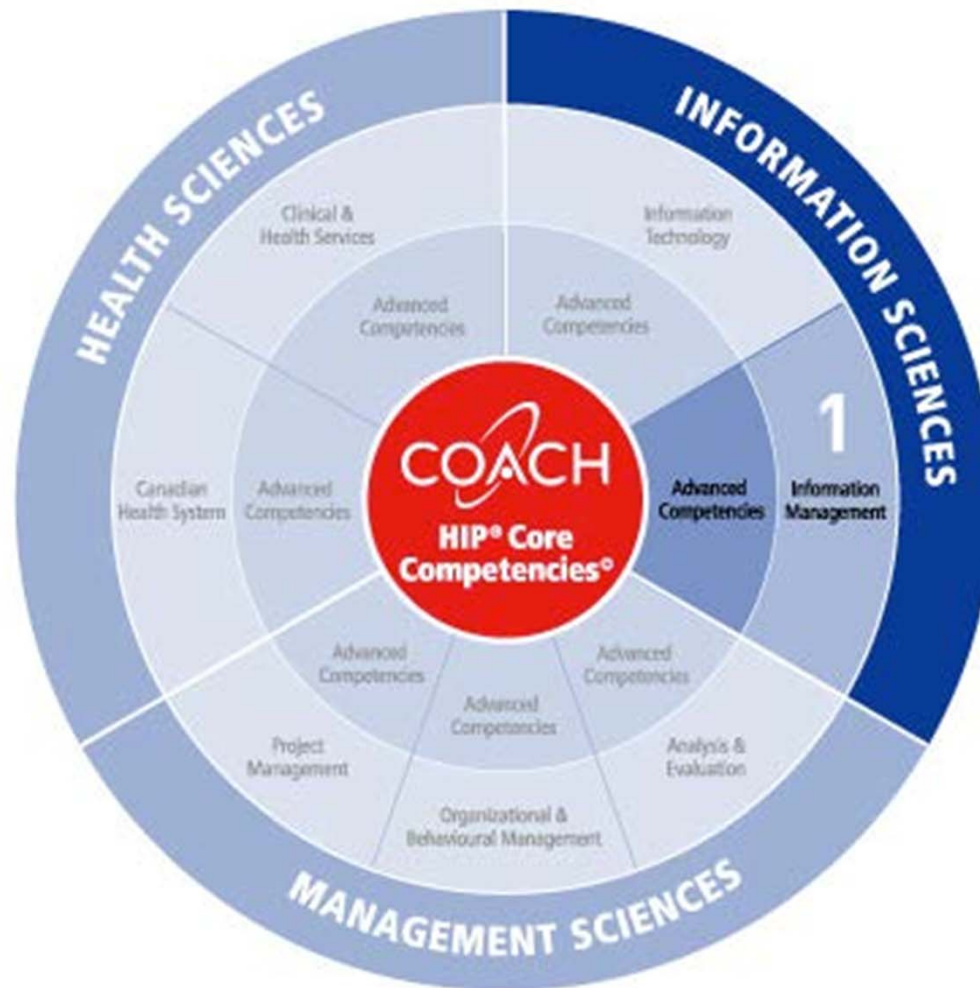


HIP[®] Competency Framework

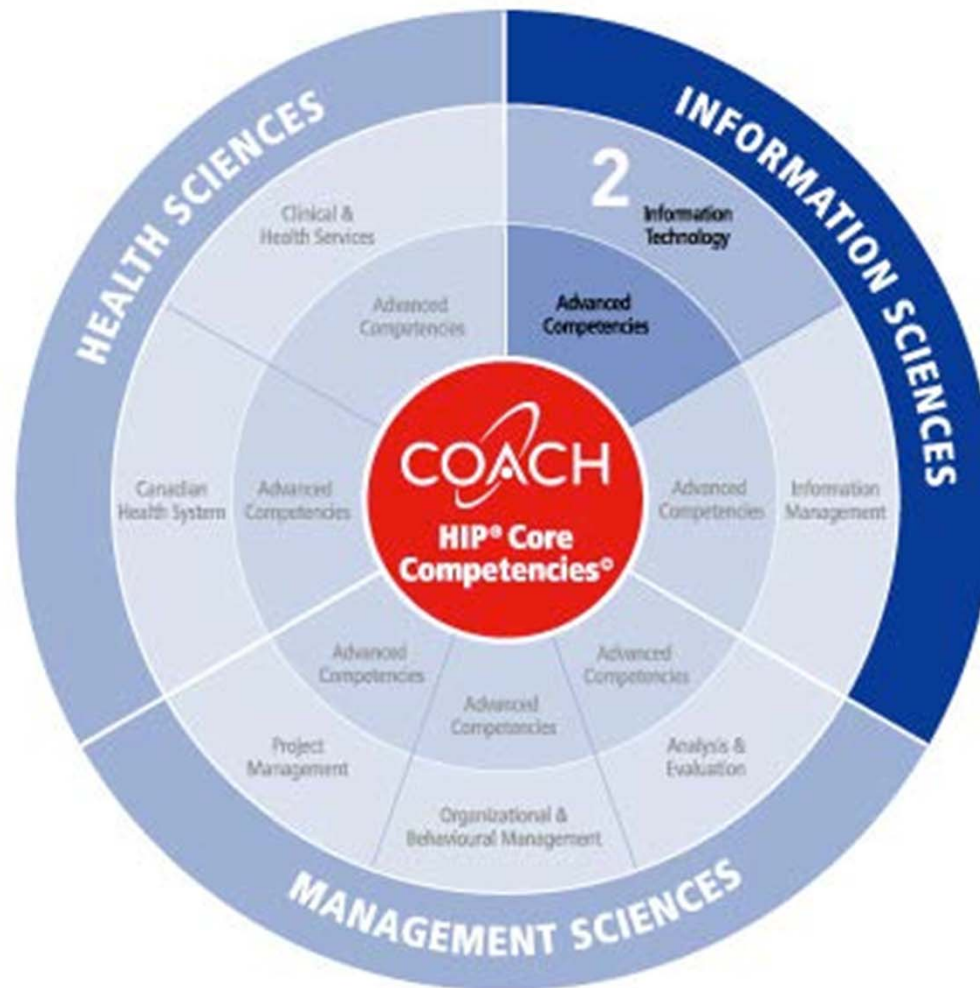
COACH 2012



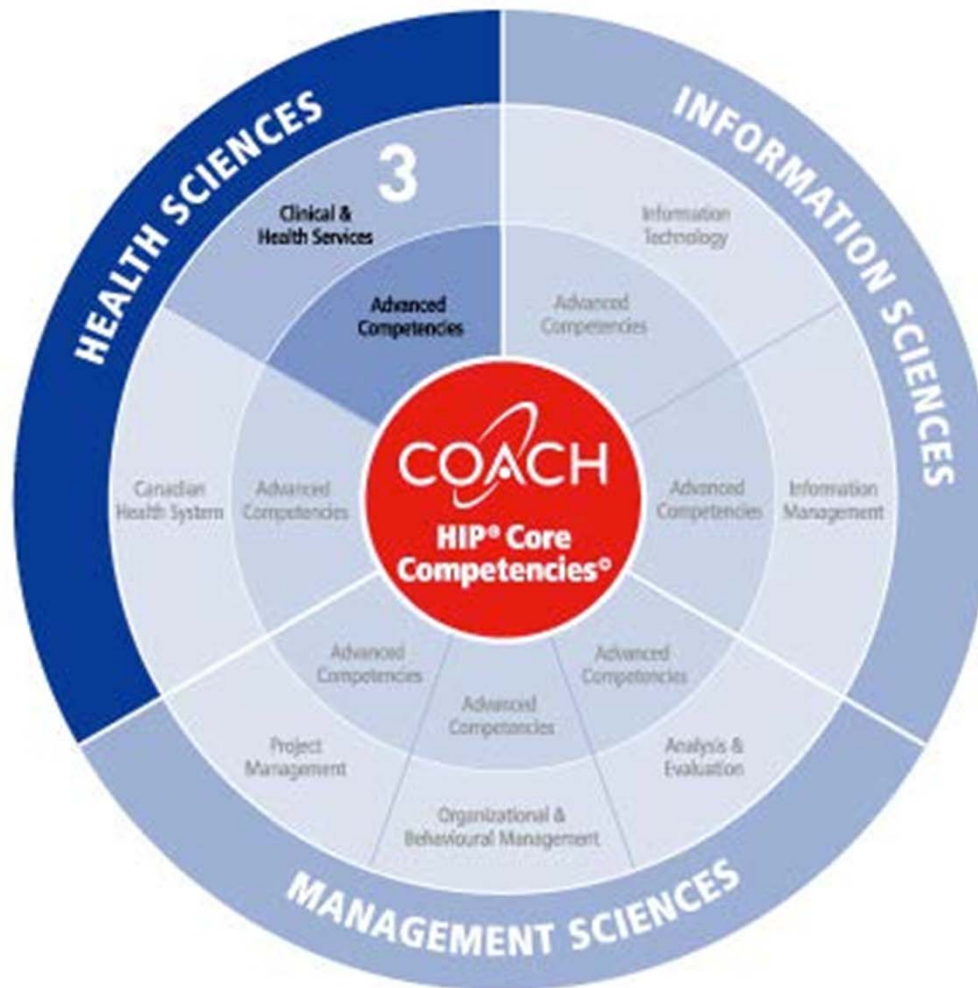
Information Management Competencies



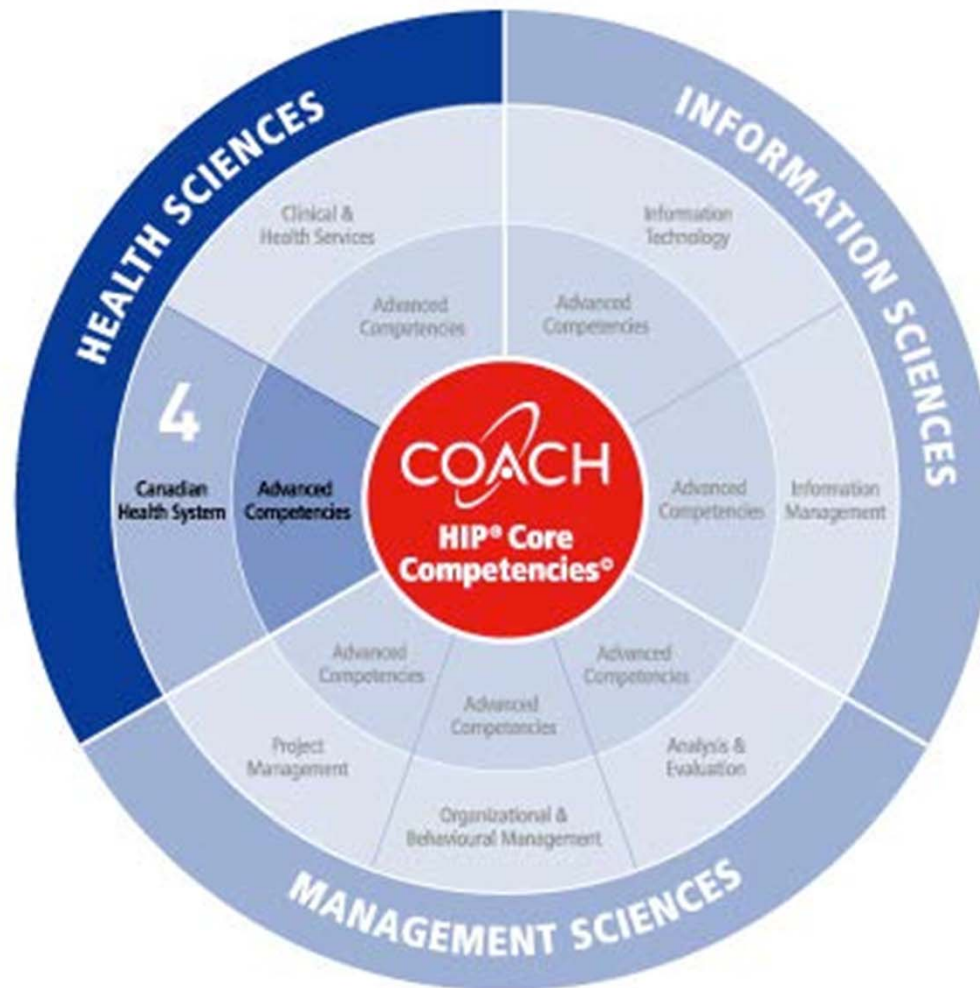
Information Technology Competencies



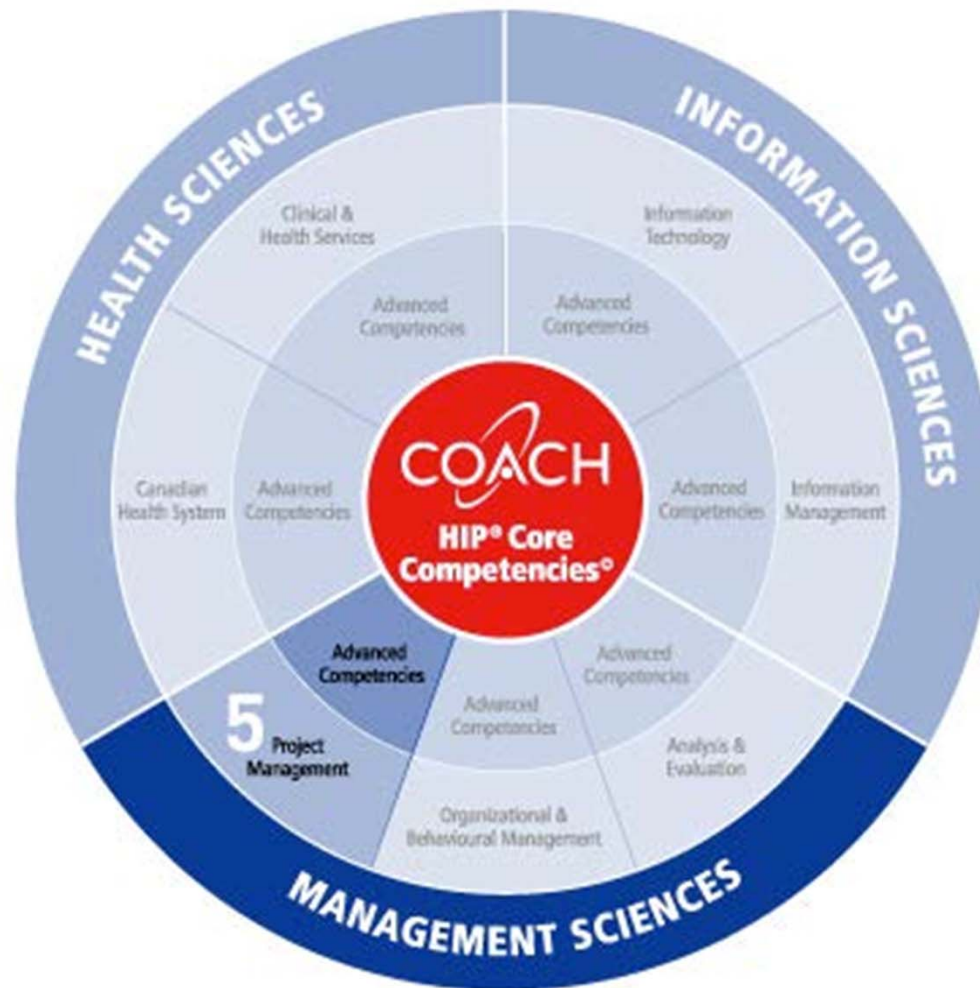
Clinical & Health Services Competencies



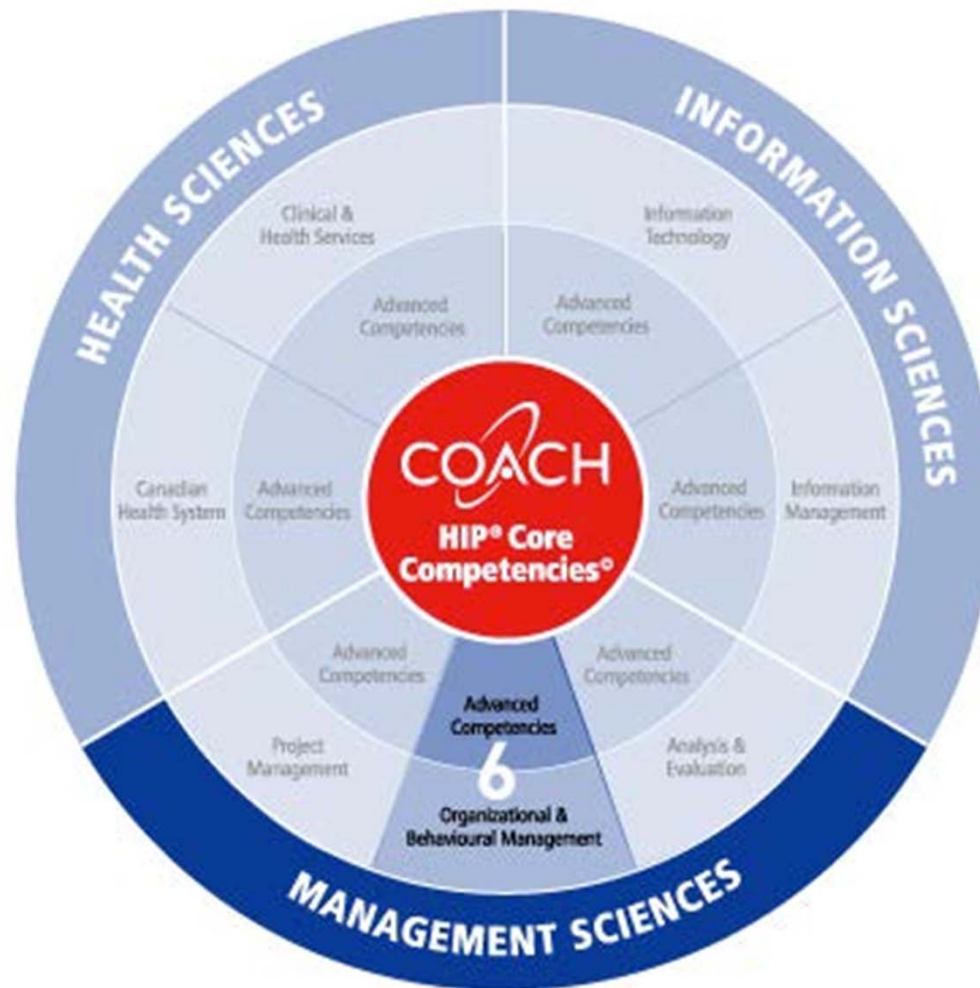
Canadian Health System Competencies



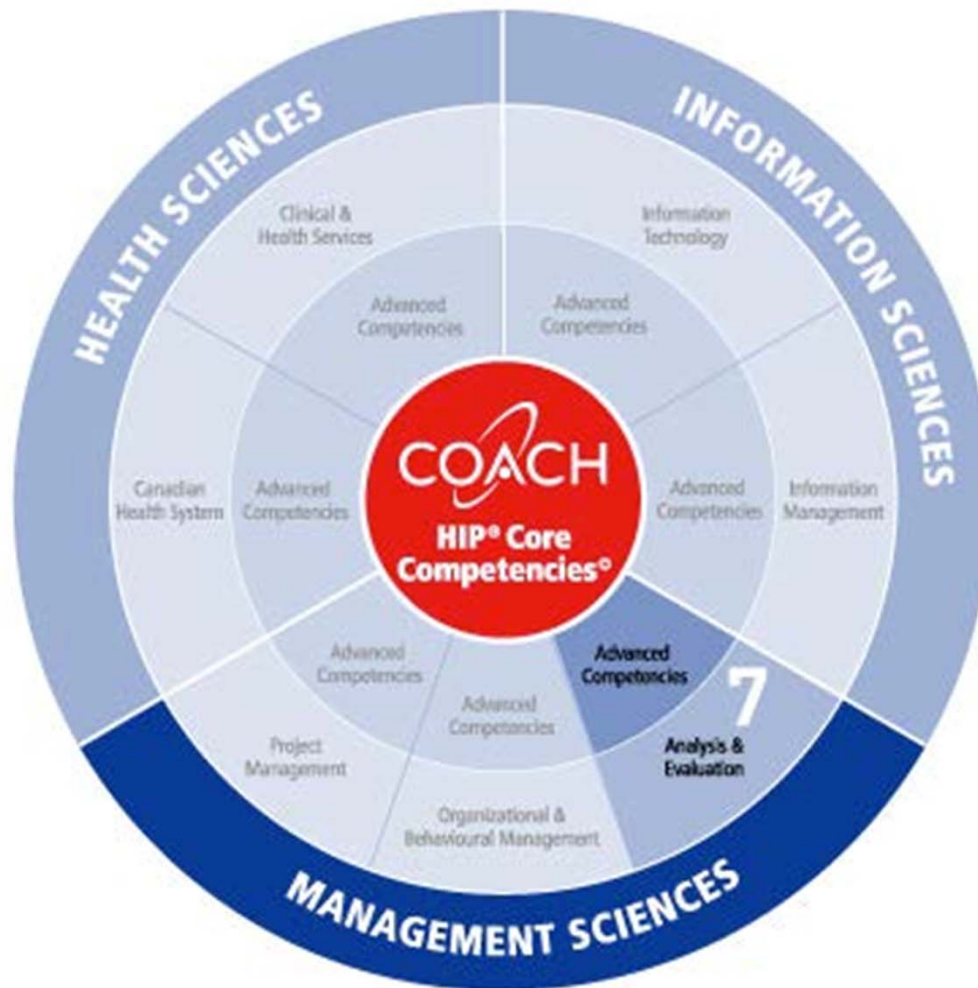
Organizational & Behavior Management Competencies



Project Management Competencies



Analysis & Evaluation Competencies





Role Matrix

- ▶ Grid stratifying HI roles across Canada in alignment with competencies
- ▶ Developed in conjunction with 500 employers
- ▶ Currently undergoing 2012 refresh
 - ▶ Role profiles
 - ▶ Matrix
 - ▶ Closer alignment to all industry sectors
- ▶ Analyst roles are embedded
 - ▶ Junior – senior
 - ▶ Role specific (policy analyst, risk analyst, etc.)

Health Informatics Professional Career Matrix[®]



Level	Clinical & Health Sciences	Canadian Health System	Project Management	Organizational & Behavioural Management	Analysis & Evaluation	Information Management	Information Technology
5 Master	Chief Medical Information Officer	Chief Information Officer		Practice Director	Research & Analysis Vice President	Chief Privacy Officer	Chief Technology Officer
4 Expert	Clinical Informatics Director	Lead Policy Strategist	Program Management Office Director	Change & Evaluation Services Director	Senior Methodologist	Chief Quality Officer Information Management Director Standards Director	Architecture Director Information Technology Director
3 Proficient	Clinical Informatics Specialist Clinical Informatics Manager	Business Development Analyst Risk Manager Senior Business Analyst	Project Director Program Management Office Manager	Engagement Manager Program Manager Service Manager	Outcomes Specialist Senior Researcher	Privacy Specialist Registry Manager Standards Manager Standards Specialist	Data Architect Security Specialist Solution Architecture Lead
2 Competent	Clinical Analyst	Business Analyst Policy Analyst Risk Analyst	Project Manager	Product Specialist Trainer Transition & Change Management Lead	Benefits & Evaluation Analyst Business Intelligence Analyst Information Analyst	Data Integrity Analyst Privacy & Data Access Lead	Data Modeller Integration Architect Senior Testing Analyst Solutions Architect Technical Lead
1 Emerging Professional	Clinical Coordinator	Junior Business Analyst	Project Coordinator Program Coordinator	Product Support Analyst Training Coordinator	Research Analyst	Operations Coordinator Privacy Analyst Standards Analyst	Service Desk Coordinator Testing Analyst

Industry Analysis



Industry Need & Priorities

- ▶ COACH 2009 HI Resources Report
 - ▶ Available on COACH website
- ▶ Current workforce 32,540 in public & private sectors
- ▶ 6,320 -12,330 additional professionals needed by 2014
 - ▶ Net new 2,480 - 8,490
 - ▶ Retirement ~3,840
- ▶ 10% vacancy & growing
- ▶ In 2009, ~27.3% of HI and HIM professionals either acquired broader skills or need to do so.
- ▶ By 2014, broader skills required by 13,690-32,170 HIMs
 - ▶ Projected that professional development requirements will exceed the resources currently available from professional associations.

Easy algorithm.....



Projected need - available resources = gap

Gap = opportunity





Key Industry Leaders

- ▶ **COACH**
 - ▶ 1500+ members
 - ▶ Chiefs Forum
 - ▶ Canadian Telehealth Forum
 - ▶ Emerging Professionals Forum
- ▶ **Standards Collaborative Forum**
- ▶ **Information Technology Association of Canada (ITAC)**
 - ▶ Members & associate members,
- ▶ **Canadian Health Information Management Association (CHIMA)**
 - ▶ 3700+ HIM
 - ▶ 1300 affiliate members
- ▶ **International Medical Informatics Association (IMIA)**
- ▶ **Canadian Nursing Informatics Association (CNIA)**
 - ▶ 200 members across Canada

Industry Roles & Alignment to IIBA

IIBA BABOK® Tasks & Competencies (Version 3.0)



- ▶ Business Analysis Planning & Monitoring
- ▶ Elicitation
- ▶ Requirements Management & Communication
- ▶ Enterprise Analysis
- ▶ Requirements Analysis
- ▶ Solution Assessment & Validation



IIBA – Projected BA Roles

▶ **Generalist**

- ▶ Competent across all areas of business analysis
- ▶ Uses a variety of techniques in initiatives of varying scope and circumstances
- ▶ Found at various levels in the organization

▶ **Specialist**

- ▶ Possesses solid or advanced subject matter expertise in specific areas
- ▶ Applies a more focused set of techniques with greater levels of expertise to potentially resolve extremely complex business problems
- ▶ May be at any level of experience

▶ **Hybrid**

- ▶ Demonstrates some degree of competency across a more limited set of knowledge areas or tasks
- ▶ Requires some degree of competency in business analysis and some other discipline
- ▶ Performs multiple roles: a “jack of all trades”

Convergence of BA Skills & Opportunities



- ▶ **Example**
 - ▶ Conduct Stakeholder Analysis
 - ▶ Identify all stakeholders
 - ▶ Determine stakeholder influence and relationship needs
 - ▶ Create documentation (inventory, network diagrams, etc.)
 - ▶ Build and manage stakeholder relationships (internal & external)
 - ▶ **Alignment across 100% BA competencies**





Examples of HI work

Design, development, implementation, maintenance and evaluation of:

- ▶ electronic patient record systems (regionally, provincially, territorially or nationally)
- ▶ evidence-based clinical decision support systems
- ▶ internet and mobile technology and applications for engaging patients in their own care
- ▶ public health surveillance and protection systems
- ▶ clinical information data warehouses and reporting systems



Contemporary BA Roles in HI

- ▶ Requirements gathering and analysis
- ▶ Current and future state analysis
- ▶ Work flow process, mapping, & analysis
- ▶ Business process redesign
- ▶ Technical analysis
- ▶ Risk analysis
- ▶ Options analysis
- ▶ Change management
- ▶ Training
- ▶ Standards Development
- ▶ Terminology

*Exemplar: HI Roles in Canada
Global Village Consulting Inc.*



Corporate Overview

- ▶ Preeminent HI company in Canada
- ▶ Branches across Canada
 - ▶ British Columbia and Alberta Branch
 - ▶ Development Branch
 - ▶ Saskatchewan and Manitoba Branch
 - ▶ Ontario Branch
 - ▶ Federal, NGO & Atlantic Region Branch
- ▶ Global Village Asia Pacific - Cebu, Philippines
- ▶ Global Village Middle East - Dubai UAE, Riyadh KSA



Global Village Evolution

- ▶ 1995 - founded as development company
- ▶ 2004 - expanded with expertise in health informatics
- ▶ 2011 – merged with Amaranth Consulting Group
- ▶ Established range of Canadian Offices
 - ▶ Vancouver, Victoria, Regina, Toronto, Ottawa
- ▶ 2012 – continue to expand domestically & internationally
 - ▶ Atlantic Branch
 - ▶ Asia Pacific Branch – Cebu City, Philippines
 - ▶ Middle East Branch – Dubai, UAE
 - ▶ Developing Branches – Europe, USA, and South America



Professional Services

- ▶ Project Management
- ▶ Business Analysis
- ▶ System specification
- ▶ System development
- ▶ Design and Implementation Enterprise Applications
- ▶ System and Application Architecture
- ▶ Implementation strategies
- ▶ Software development methodologies
- ▶ eHealth Architecture Review
- ▶ Health Messaging Standards Development
- ▶ Health Information Content Standards
- ▶ Health Information Governance and Process Management
- ▶ Business Process Improvement
- ▶ Health System Management
- ▶ Public Health Policy Development
- ▶ Policy and program reviews



Expertise

- ▶ Informatics consulting and software development
- ▶ Recognized experts in
 - ▶ Health, eHealth and mHealth
 - ▶ Public Health
 - ▶ Information Management, and
 - ▶ Enterprise Application Development
- ▶ Specialized expertise in public sector and health care clients
 - ▶ policy, strategy, pan-Canadian consensus and collaboration, and standards
- ▶ Focus is to ensure that the best practices of both Public Health and Health Informatics are incorporated into all projects

Global Village Opportunities



BA Activities at Global Village

- ▶ Gather business requirements
- ▶ Critically evaluate
 - ▶ information gathered,
 - ▶ reconcile conflicts,
 - ▶ decompose high-level information into details,
 - ▶ abstract up from low-level information to a general understanding, and
 - ▶ distinguish user requests from the underlying business needs.
- ▶ Interpret business needs,
- ▶ Translate them into application and operational requirements;
- ▶ collaborate with developers and subject matter experts to establish the vision and analyze tradeoffs between usability and performance needs.
- ▶ Liaison between the business community and technical solution providers.

BA Requirements at Global Village



- ▶ Post-secondary education in Health Informatics, Information Management or Information Technology (or equivalent)
 - ▶ Collection, documentation and analysis of the current and future state
 - ▶ Analysis of process gaps, information flow obstacles, & potential efficiencies
 - ▶ Document requirements in use case format and create process models using UML modeling
 - ▶ Experience in software development lifecycle activities in an integrated technical environment
 - ▶ Interpersonal & communication skills
-

BA Opportunities: The Fun, the Exciting, and the Downright Rockin'



- ▶ Directly engage with health care needs in Canada
 - ▶ Information architecture
 - ▶ Solution design & deployment
 - ▶ Change management
 - ▶ Domain specific – public health
- ▶ Transform how Canadian systems access, use, or exchange health information
 - ▶ National projects
 - ▶ Provincial projects
 - ▶ First Nations
 - ▶ pan-Canadian collaboration and consensus methodologies
- ▶ Innovation
 - ▶ iPad apps
 - ▶ Mobile apps
- ▶ International opportunities
 - ▶ *Yes, you can change the world!*

Power of HI



Who are you?

I'm just a Health Infomatician!





Contacts

- ▶ HI professional
 - ▶ COACH
 - ▶ <http://www.coachorg.com/en/>
 - ▶ CNIA
 - ▶ www.cnia.ca

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Questions & Discussion