eHealth and Information Management

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Objectives

- How will the interface between new technologies and information systems change the nature and processes of nursing care
- What will the impact be across the continuum of care
- What are some of the challenges for nurse leaders
- What are the opportunities for nurse leaders

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The Context – what is eHealth

- Healthcare practice supported by electronic processes and communications technologies
- The provision of healthcare supported by electronic processes and communication. eHealth is an overarching term that could include real-time video conferencing, electronic health records, remote disease monitoring
- Involves simplifying and handling processes relating to information, communication and transactions within and between health care organizations

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Leading Change Through Information Management

St. Michael's Hospital – Local perspective

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The experts say

- You should really shape the focus of the digital hospital to focus on process change. There is no inherent value in a paperless or digital system
  - (John Glaser, CIO, Partners Health)

- A fully digital hospital would not produce or use paper records. IT would have digital imaging, order transmission, clinical notes and other aspects of the electronic health record. It would have integrated supply chain and integrated revenue cycle management
  - (David Brailer, National Health Information Coordinator, USA)

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Information Management Vision

- Recognizing:
  - Health care is knowledge based
  - Extends beyond the boundaries of the hospital
  - Technology is a key enabler

- Information Systems:
  - Patient-focused
  - Fully integrated and secure
  - Support business processes and flow of information to users
  - Support accurate measurement of products and services

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The Core Themes – 2007 IM Plan Update

1. Enable/innovate clinical care
2. Enable/innovate accountability and effectiveness
3. Enable/innovate partnerships
4. Enable/innovate the patient experience
5. Enable/innovate knowledge management

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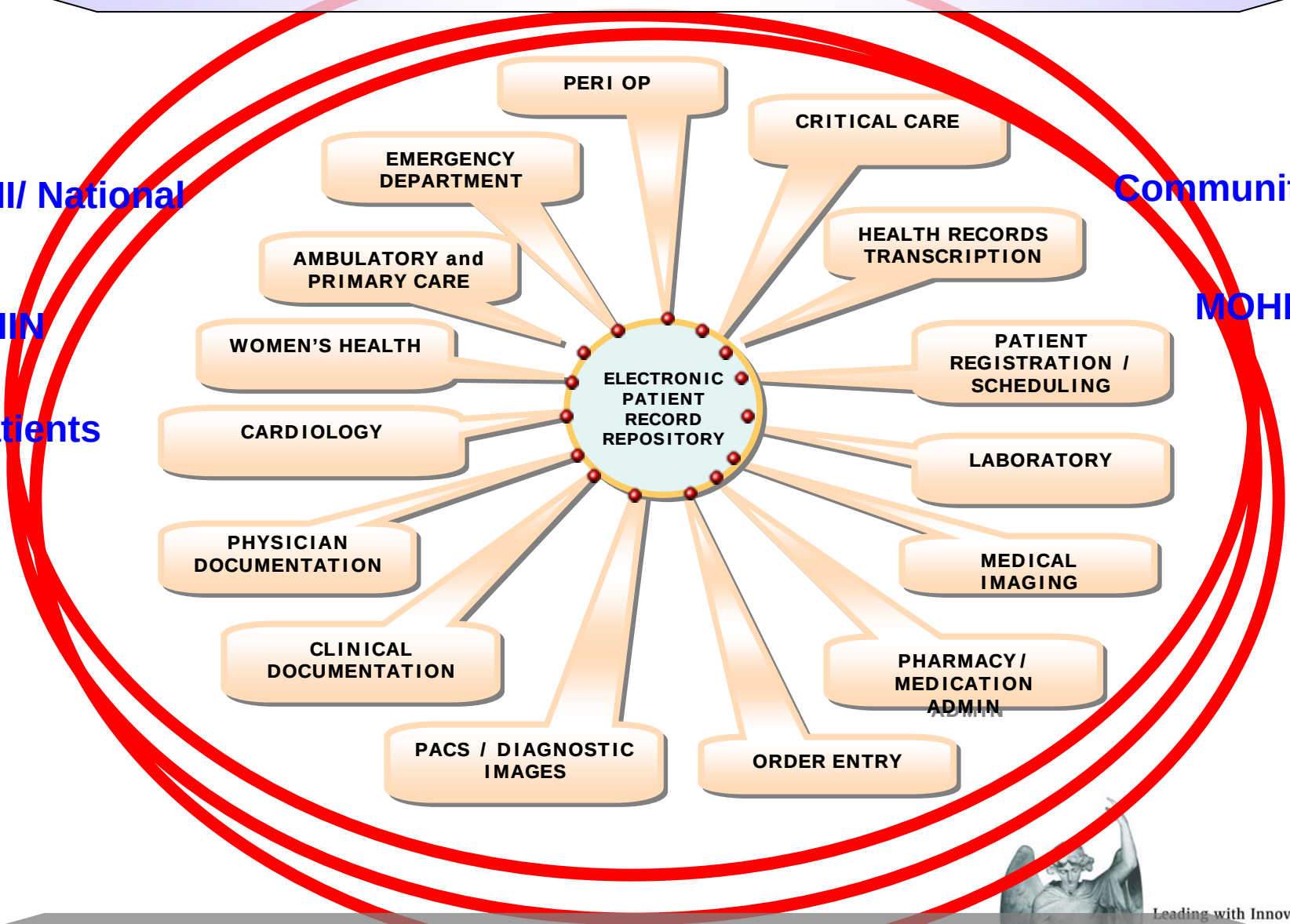
ENABLING TECHNOLOGIES PRIVACY
INFORMATION MANAGEMENT PROCESSES



EDUCATION CLINICAL CARE RESEARCH

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Tactical and Practical: St. Michael's Projects

- Hospital based EPR projects
  - Clinical results viewing
  - Electronic documentation
  - Document management
  - Computerized practitioner order entry
  - Medication administration
- Integrated communications- voice, data, images
  - New ways of collaborating, communicating
- Integrated clinical viewing
  - Information exchange. Enable care planning across sectors
- Clinical Decision Support
  - Cues, alerts, workflows, guidelines
  - Foundation for advancing patient safety, quality and accountability

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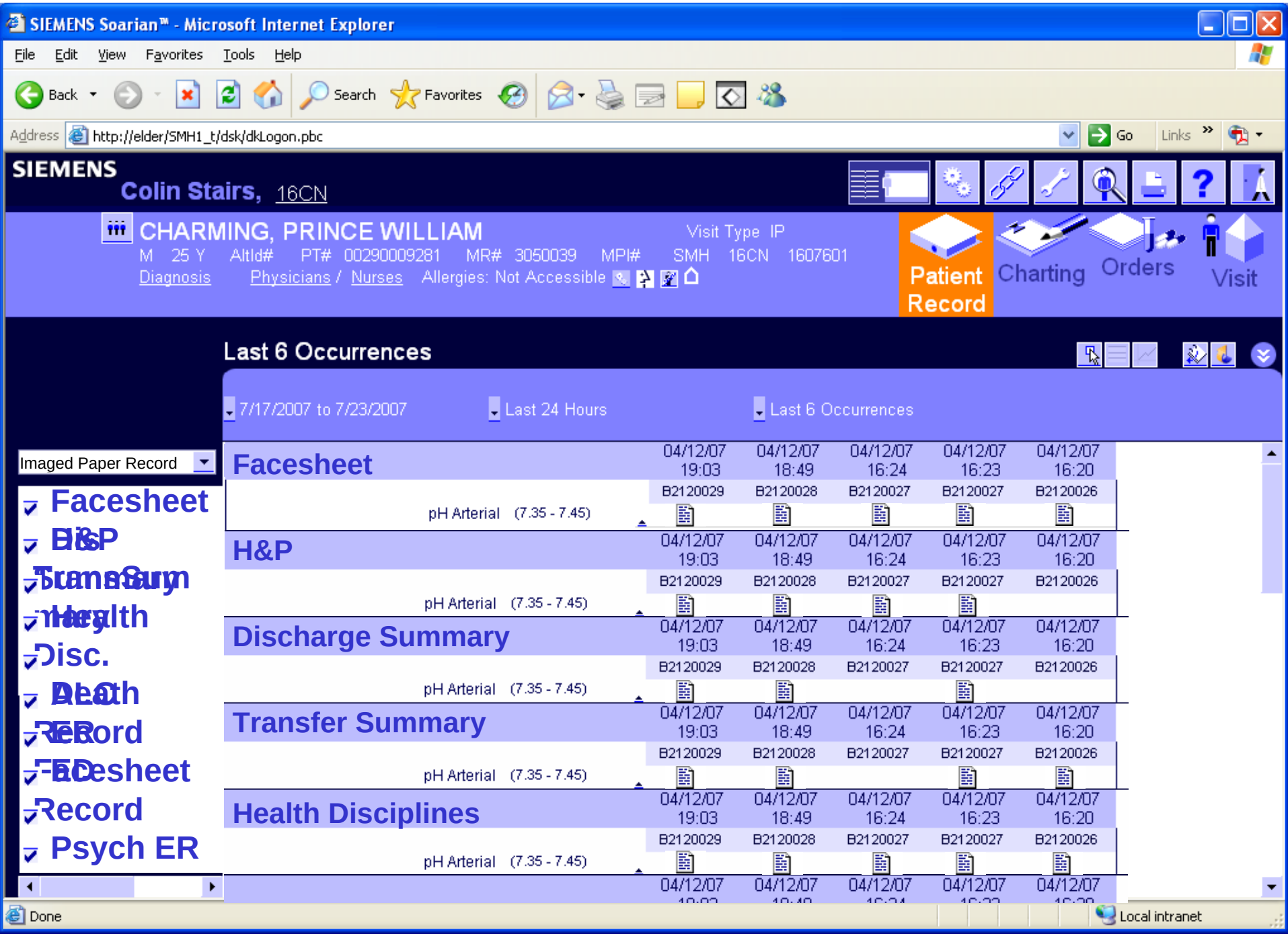
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Diagnosis Physicians / Nurses Allergies: Not Accessible
Patient Record
Charting
Orders
Visit
Last 6 Occurrences
7/17/2007 to 7/23/2007
Last 24 Hours
Last 6 Occurrences
Imaged Paper Record
Facesheet
H&P
Discharge Summary
Transfer Summary
Health Disciplines
Psych ER
Facesheet
04/12/07 19:03
04/12/07 18:49
04/12/07 16:24
04/12/07 16:23
04/12/07 16:20
pH Arterial (7.35 - 7.45)
B2120029
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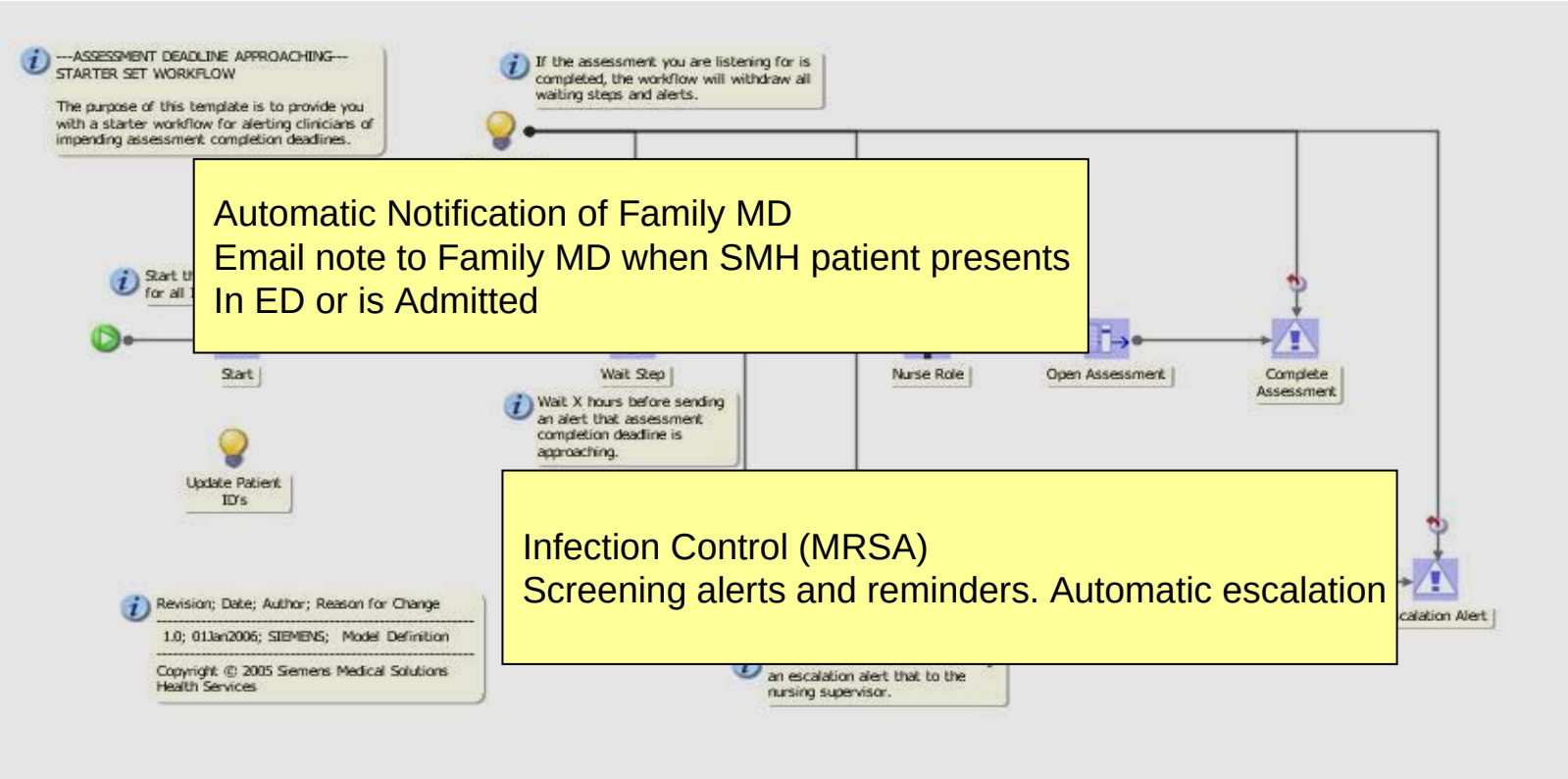
H&P
Discharge Summary
Transfer Summary
Health Disciplines
Done
Local intranet

SIEMENS
Motion

Automating Workflow



Automatic Notification of Family MD
Email note to Family MD when SMH patient presents
In ED or is Admitted

Infection Control (MRSA)
Screening alerts and reminders. Automatic escalation

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How does it all get pulled together?
The Clinical Vision

- The vision for clinical transformation at SMH is about much more than simply automating our existing paper systems.

- It is about carefully designing a patient centered, best-practice framework for implementation.
  - That is based on a model of interprofessional practice
  - Includes the use of evidence based care processes (ie., CPG's, order sets) and decision-support systems to achieve the best outcomes for our patients.

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How is This Achieved?

- People / Processes
  - Interdisciplinary culture / model
  - Workflow redesign

- Technology
  - Design of technological tools.
  - Hardware – access devices to bring technology to the point of care
  - Software – clinical decision support

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Benefit Realization Methodology

Current State

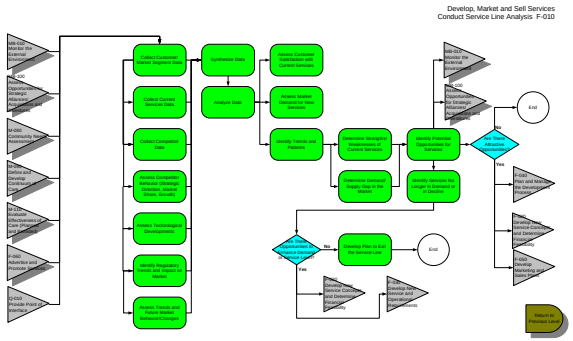
People

Technology

Process

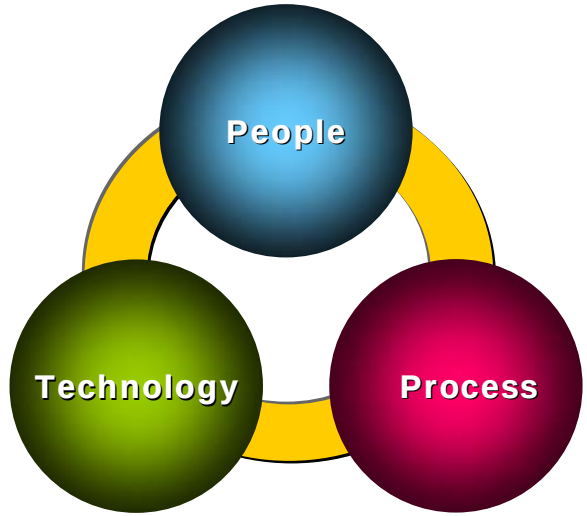
Interviews and **Observations**
- Clinics
- Clinical Units
- Receiving Departments

Transformation Process



Accelerated Design and **Iterative Future State Modeling**
- Workflow Analysis
- Soarian Feature/Functions
- Resource Impact Analysis

Future State



Future State
- Automated Workflow
- Redesign Processes
- Integrated Roles and Responsibilities

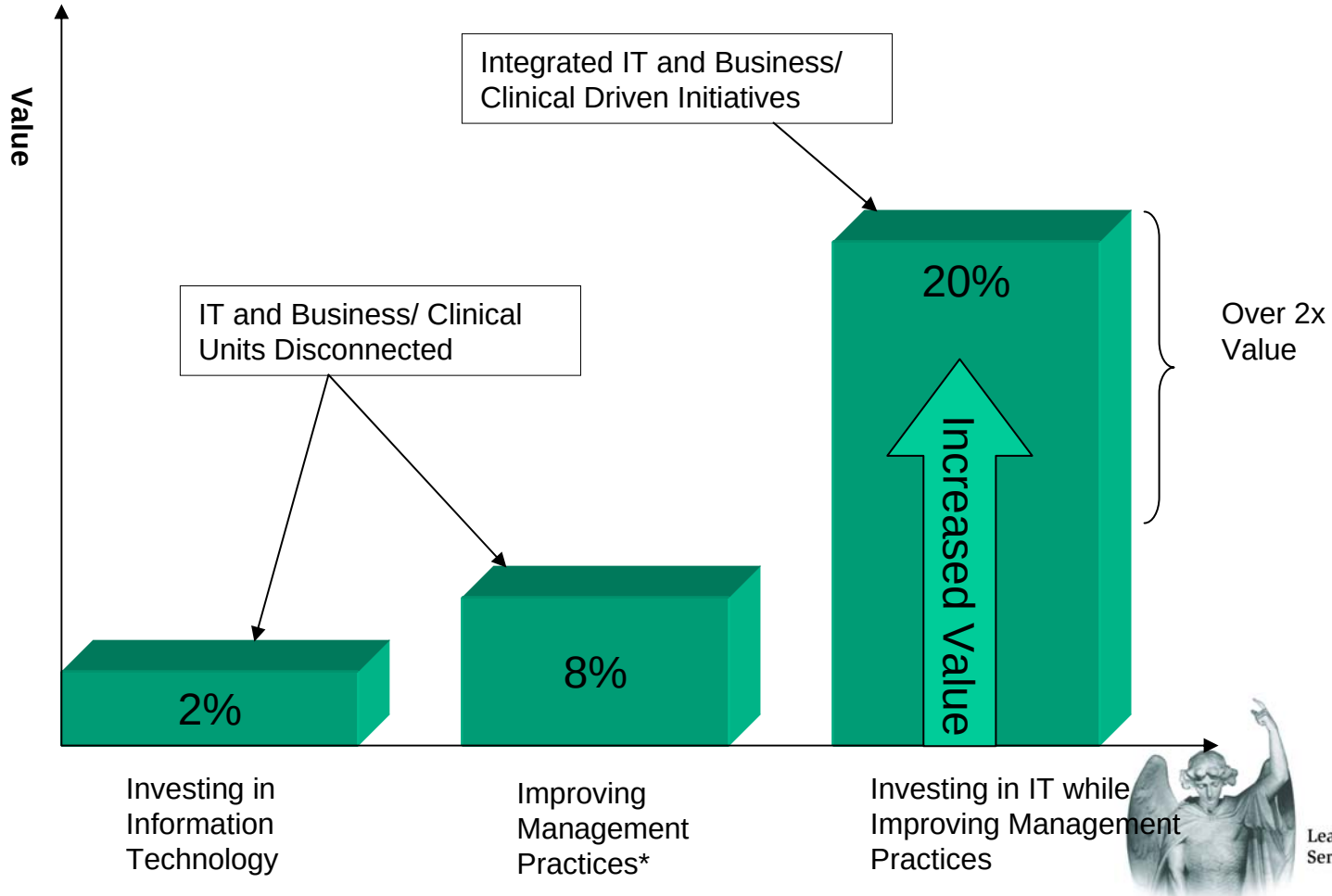
Benefits

Current State Metrics

Clinical Transformation
- Maximizing Benefits

Building on the IBM Framework and Gemini Goals, a St. Michael's **Logic Model Framework** was created.

ICT Value Proposition



* Process Redesign, Clinical Transformation, Six Sigma, Evidence-based Medicine, etc.

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Implications for Nursing

- Caring for an informed “e-consumer”
- Care is an information intense process
- Using technologies to enable care – elimination of old redundant practices and thinking
- Breaking down of traditional discipline silos- achieve interprofessional care delivery models

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Challenges

- Change. Change. Change. Change
- Understanding
- Advocating
- Modeling – use of information in our decision making, planning
- Adopting standards
- Aligning the internal strategies to the local, LHIN, provincial, national and global communities
- Understanding the potential

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Nurse Leaders Call to Action

- eHealth is not an IT/IM initiative
- Technologies are the enablers – the vision and process changes need to come from clinician leaders

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