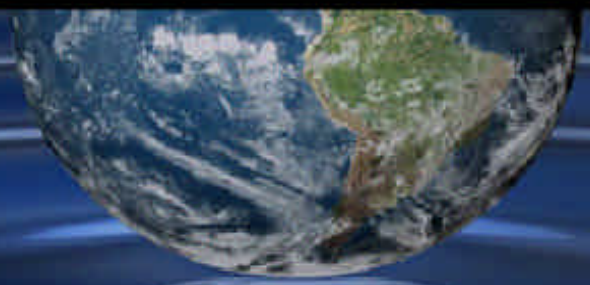
Health Services



Connecting the Health Community
The Next Dimension for Patient Centered Care

Vision

Breakthrough innovations for health providers worldwide.

Jon Zimmerman
Vice President
e.Health
23 May 2003

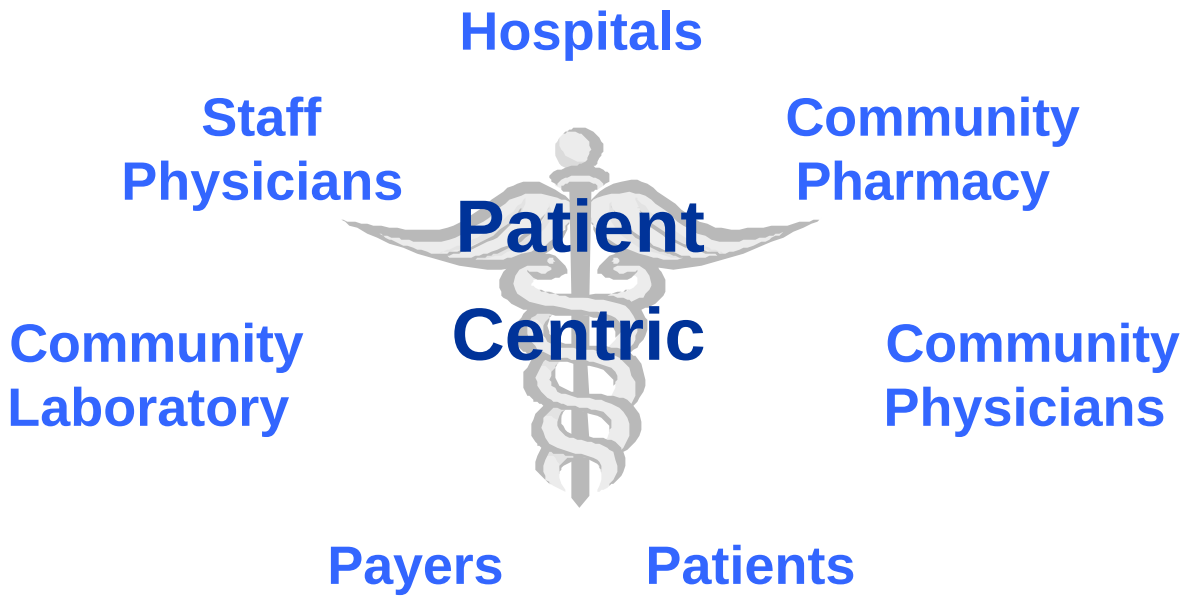
SIEMENS

Objectives

- Develop a Common Understanding of:
  - Problems
  - Opportunities
  - Assets
- Understand How to Align to Address Market Needs
- Build a Plan to Focus Our Efforts in Ways that Matter to:
  - Providers
  - Patients
  - Payers
  - Government
- Achieve

The Mission:

- To deliver proven outcomes by securely transforming, exchanging and integrating information throughout the entire health community.



Topics

- The Connecting for Healthcare Initiative
- Relationship to IHE
- The Industry Challenges
- Actions
- Assets
- Workflow Approach
- How to Start

A Flood of Data

Clinical data for medical practice is undergoing a fundamental change.

The eHealth Initiative is a public-private partnership aiming to improve Healthcare through Applied Information Technology & Standards

Mission

To drive improvement in the quality, safety, and cost-effectiveness of health care through information technology.

Vision

Consumers, providers and those responsible for population health will have ready access to timely, relevant, reliable and secure health care information through an interconnected, electronic health information infrastructure.

… with the broad participation necessary for success

- **Practicing Clinicians**
- **Hospitals, Academic Medical Centers**
- **Payers**
- **Pharmaceutical companies**
- **Quality Improvement Organizations**
- **Government – CDC, CMS, FDA, State Organizations**
- **Researchers**
- **Independent Software Vendors**
- **Application Vendors**

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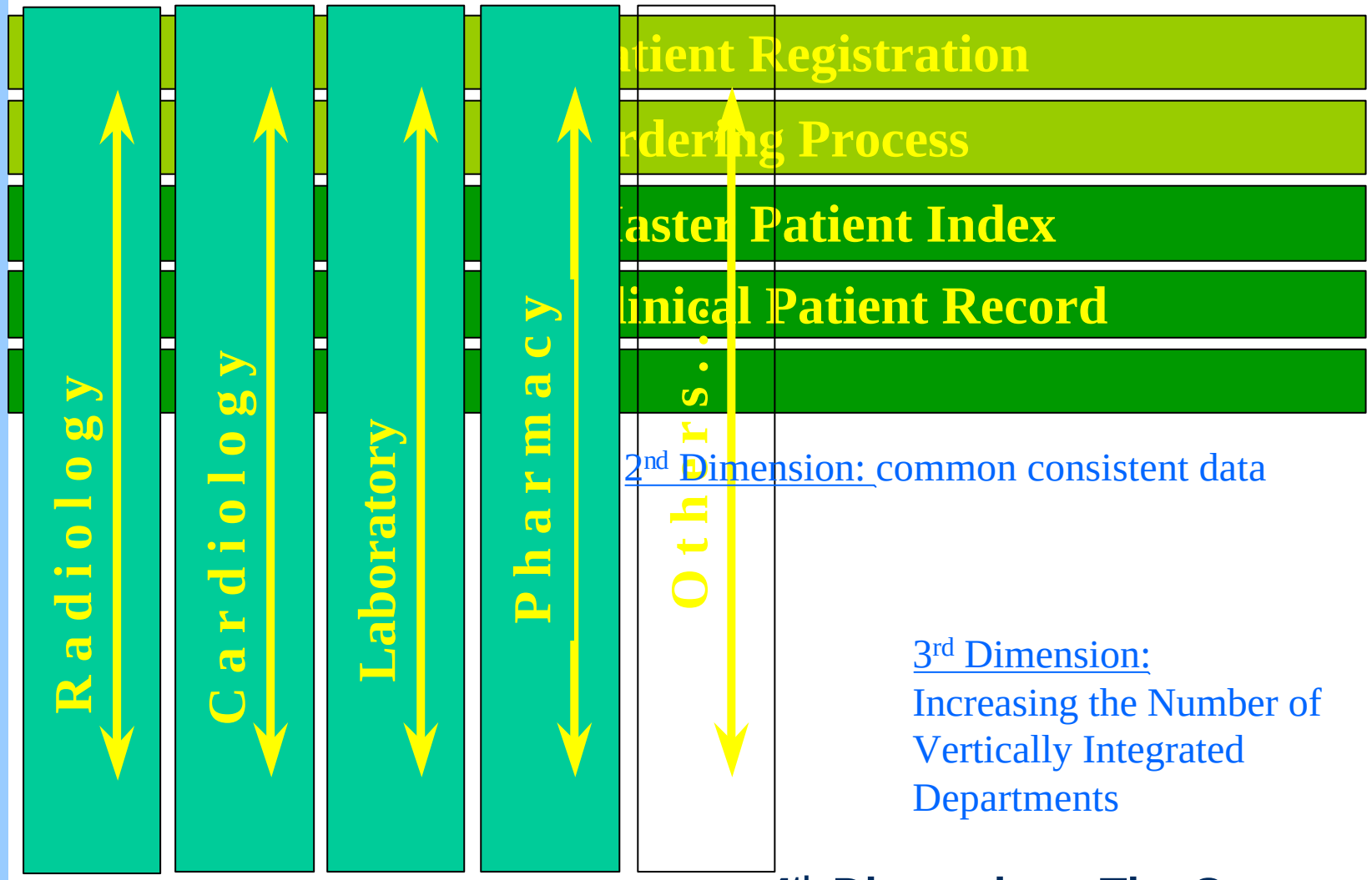
The National Healthcare Collaboration Network is the response to numerous converging environmental pressures in the healthcare industry

- Private industry demanding reform in Healthcare to slow inflation
- Success of technology to transform other industries; the maturation of collaborative technologies and analytical tools
- Public health surveillance being thrust to the forefront of national agenda
- Federal agency focus on informatics as tool for governmental reform
- Leadership from key national stakeholders coming together to promote change

IHE Vision for Growth

A Multidimensional Expansion of Integration



1st Dimension: Workflow inside department

2nd Dimension: common consistent data

3rd Dimension:
Increasing the Number of
Vertically Integrated
Departments

4th Dimension: The Community

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Industry Challenges

- Rising Costs & Premiums – Plans & Employers
- Shrinking Reimbursements – Practices & Health Systems
- Malpractice Costs – Practices and Health Systems
- Growing Regulation – Plans, Health Systems & Practices
  - HIPAA, Patient Safety, etc
- Staffing Shortage – Health Systems and Practices
  - Physicians, Nurses, Techs, Admin.
- Health & Drug Spend Rising – Plans & Employers
- **Must Have:** Innovation Integrated With Operations
  - Pure Innovation is Just a Dream
  - Plain Operations is the Path to Obsolescence

Imperative Actions

- Improve accuracy without adding complexity
  - Let the systems communicate to get the right data
- Improve efficiency – Reduce Manual Tasks
  - Eliminate unnecessary phone calls and paper
  - Connect intra and inter-entity workflows
  - Reduce **shared operational** costs
- Improve convenience for all stakeholders
  - Patients/members drive revenue
  - Superior patient/member access drives convenience
  - Convenience helps drive market share
  - Market share is a measure of competitive success

Imperative Actions

- Standards and reliable technology are vital
  - Rollout and implementation make or break the value proposition
- Adoption will be the **key** determining factor
  - Proven, incremental workflow improvements are the best adoption accelerant

Objective:

Value via Integrated Business Processes
Delivered via **Networks** of Interconnected **Business Systems** to Serve the Health **Community**

Goal:

Replace $Billions of Inefficiency With Systems for Affordable & Effective Care

Question:

How Do Industry Assets and Competencies Complement and Add Enough Value to Our Customers and Their Communities to be Economically Viable?

The Government: NHII

NHII – National Health Information Infrastructure

- Communication Connections Among:
  - Hospitals
  - Clinics
  - Practices
  - Emergency Response Ceners
  - Government Health Agencies
  - Health Plans
  - Community Clinical Providers
- Used for Commercial and Public Health Purposes Today
- Immediately Expandable to Respond to Emergency Situations

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Eight Areas of Focus

1. privacy & confidentiality
2. architecture
3. standards & vocabulary
4. safety & quality
5. financial incentives
6. consumer health
7. homeland security
8. research & population health

Back to the Business…….

Current and Intended Uses

- Current Commercial
  - Clinical Data Access & Transaction Processing
  - Standard Vocabulary & Translation Engine
  - Administrative Simplification

  HL7 & XML
  SNOMED
  X12
- Current Public Health
  - Disease Reporting & Adverse Events
  - Disease Surveillance (Limited)

  LOINC, HL7 & XML
- Future Commercial
  - Expanded Clinical Data Access
    - Using Standards to Drive More Information to More Authorized Points of Presence
  - Better Integrated, More Simplified Administrative Uses
  - Automated, Standard Quality Performance Reports

  HL7 & XML for Denial Avoidance & Care Management
- Future Public Health
  - Expanded Disease Surveillance & Emergency Response

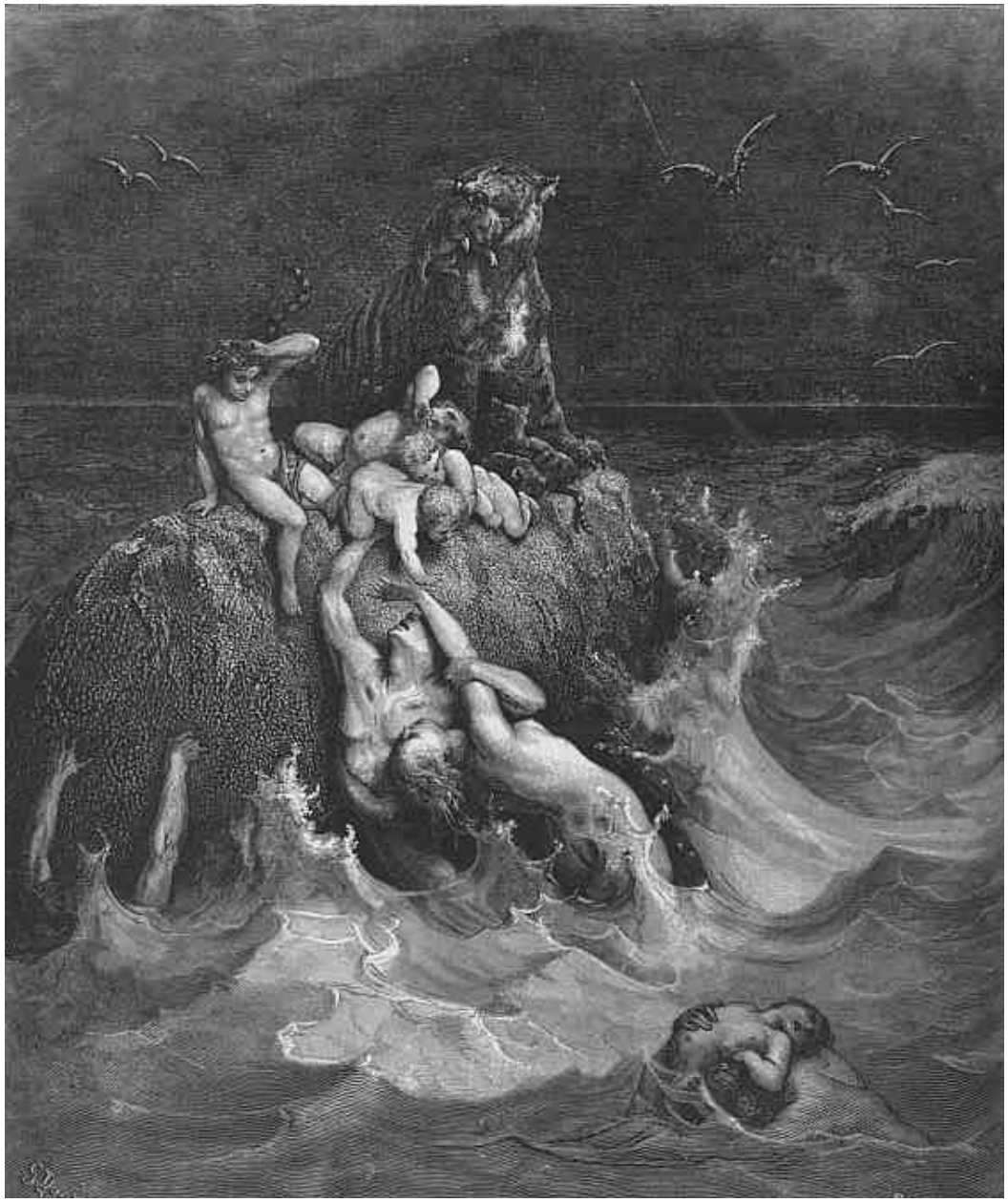
Drivers & Levers

Drivers

- Economics
- HIPAA
- Medical Specialty Societies

Levers

- Standards
- Technology
- Health and Human Service

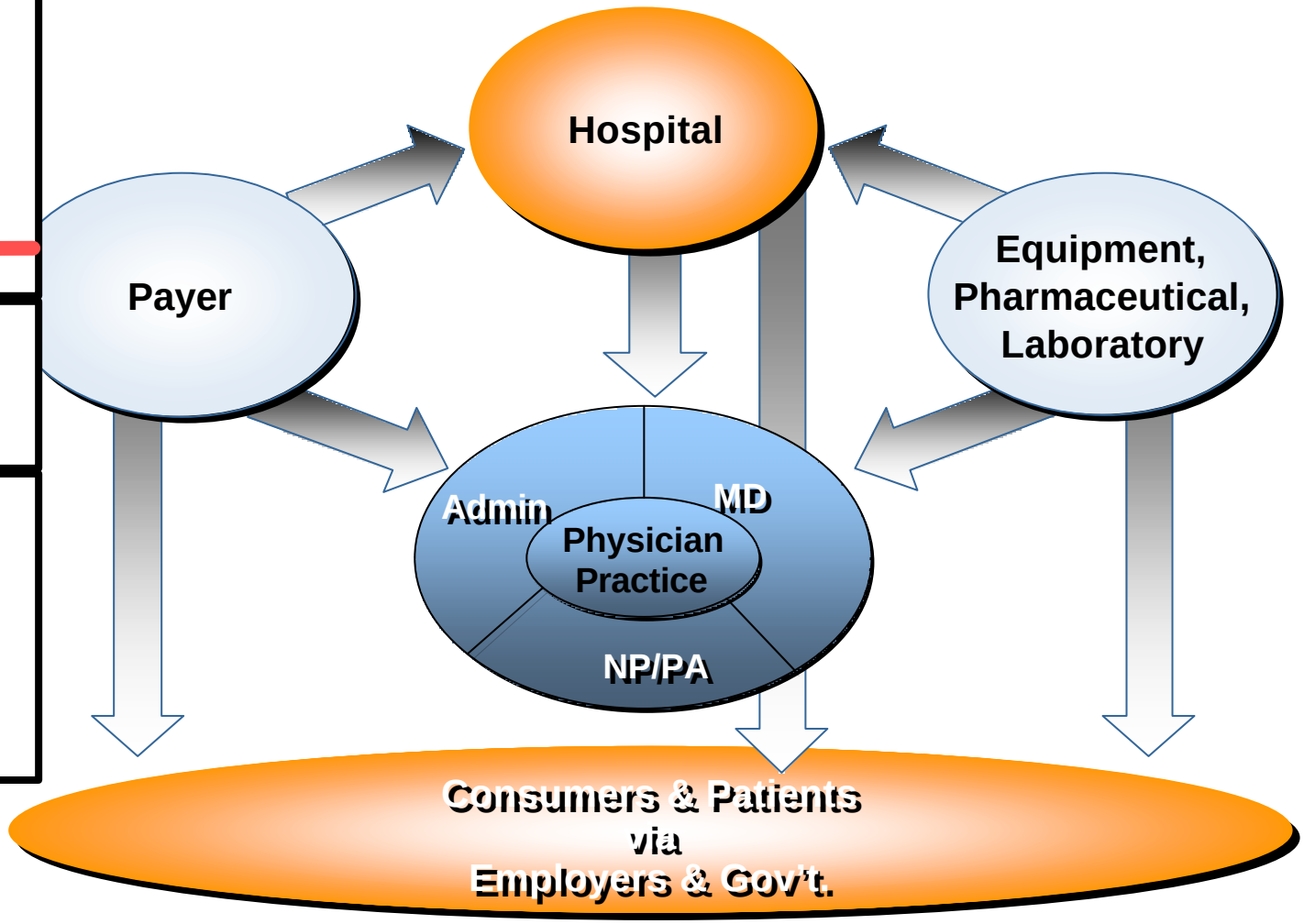


Follow the Flow

Transactions
Documents
Portals
~~**Phones/Faxes**~~

30 Billion / Year

Revenue
Cost
Quality
Compliance



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Rational Business Framework

HEALTH SYSTEM AUDIENCES

OBJECTIVES

	Practices	Patients	Plans
Top Line Growth			
Profitability			
Quality User Experience Business Efficiency			
Compliance			

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Rational Business Framework

HEALTH SYSTEM AUDIENCES

OBJECTIVES

	Practices	Patients	Plans
Top Line Growth	**Transactions** **Electronic Documents** **Clinical and Administrative Portals** **Secure Messages & Infrastructure** **Screening / Monitoring System**		
Profitability			
Quality User Experience Business Efficiency			
Compliance			

Business Process Driven Integration:

Revenue Cycle
Health Information Management
Practice Affinity
Patient Affinity

ELIMINATE PAPER AND PHONE CALLS!

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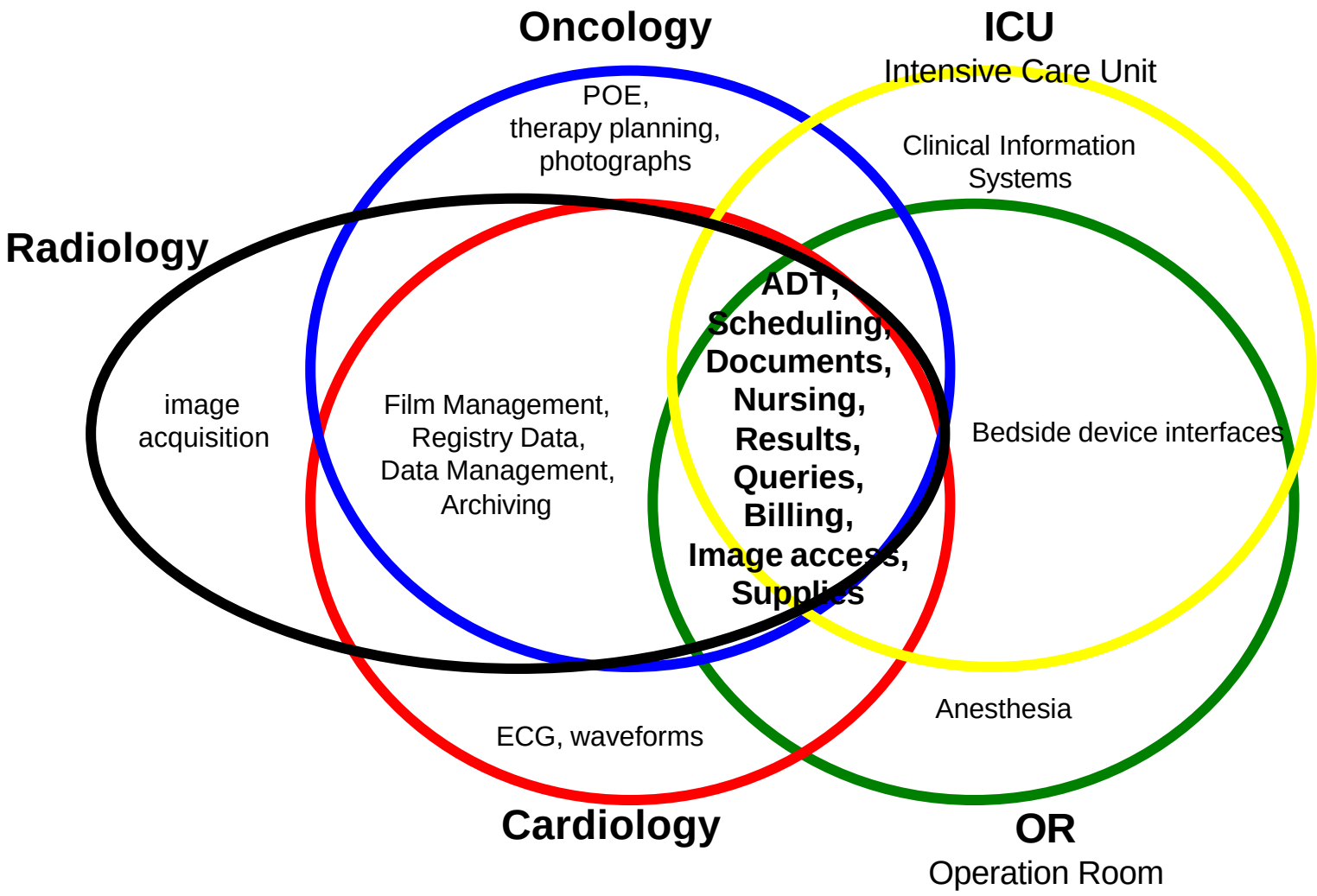
IT-Functionalities of departments overlap



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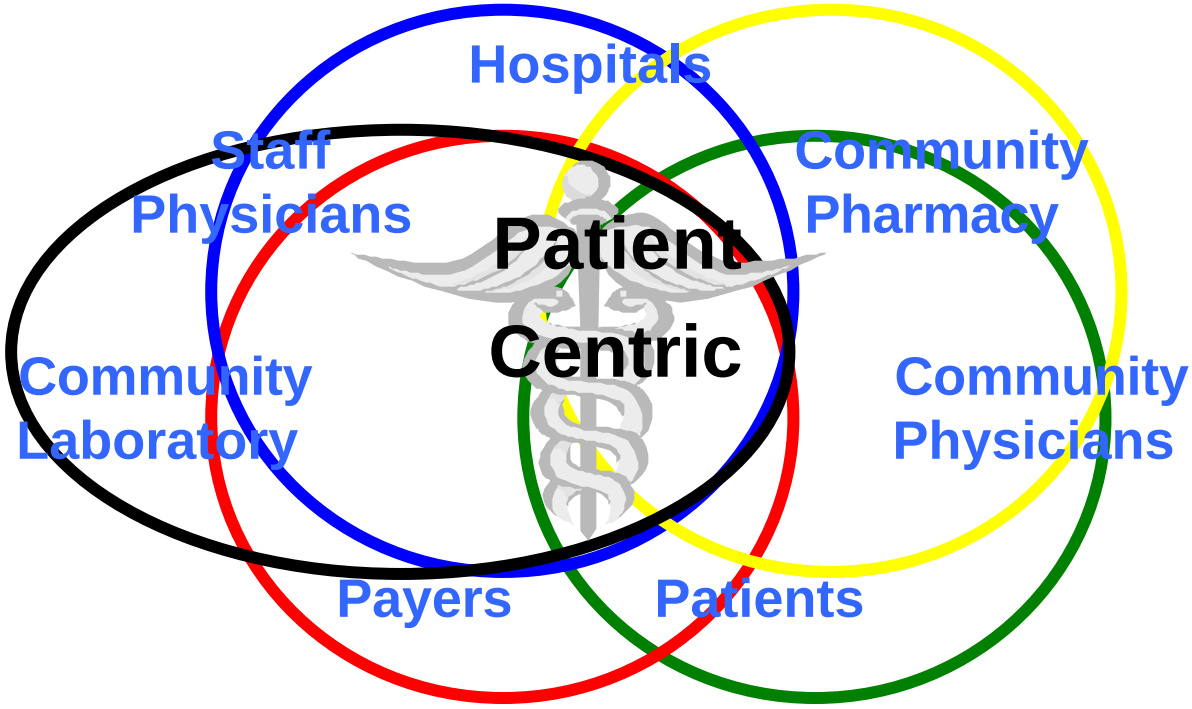
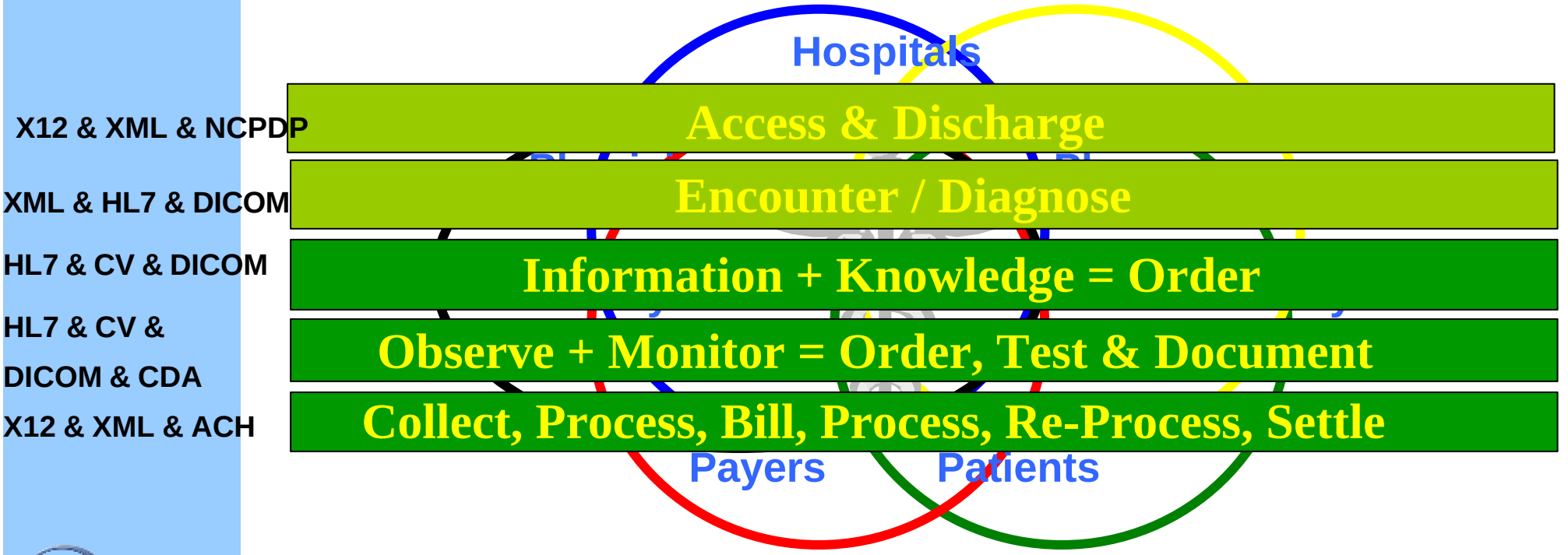
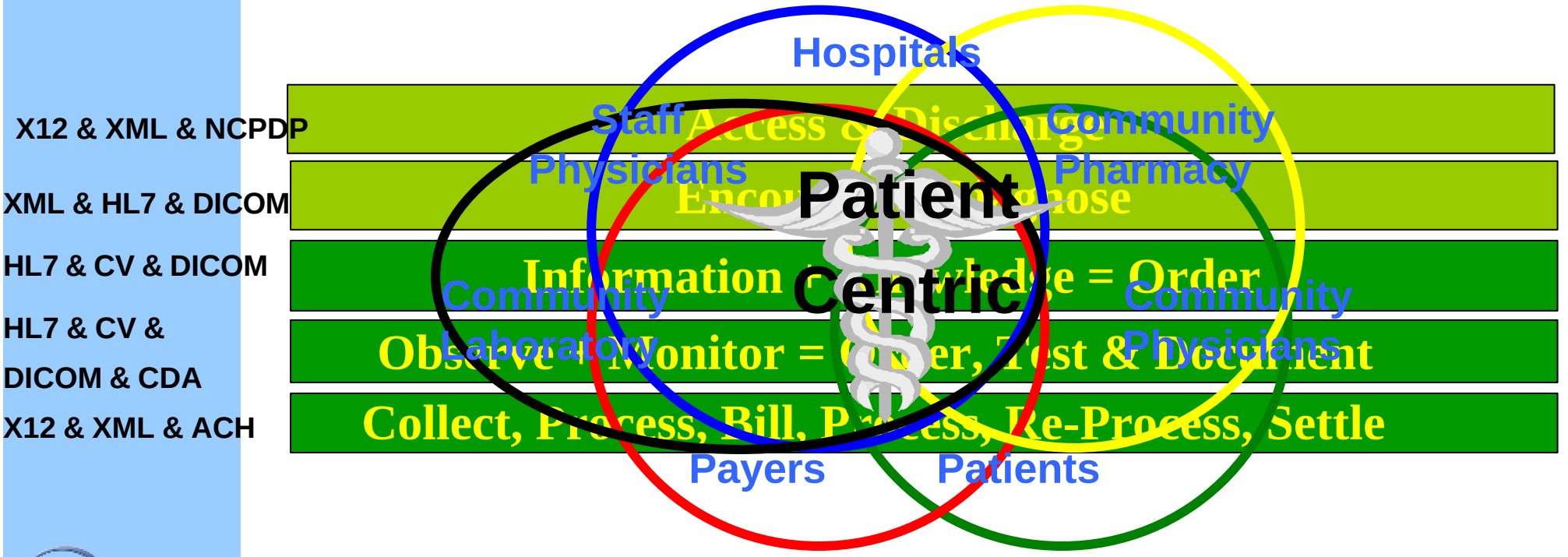
IT Functionalities Meet the Community



IT Functionalities Meet the Community



IT Functionalities Meet the Community



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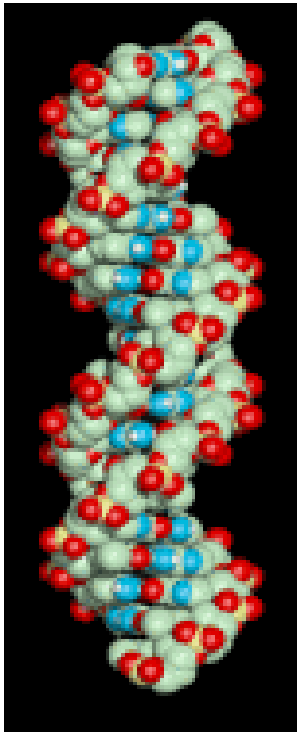
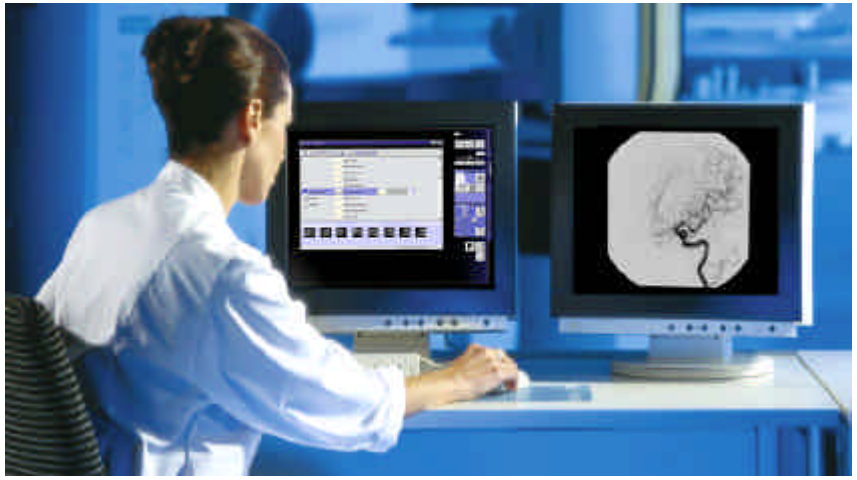
HIPAA

- Changes All Billing Transactions & the Revenue Cycle
- Establishes Standards & Use Cases
- Drives Data & Privacy Protection
  - To Facilitate Confident Use of Networks
- Enables Interchange
  - Business & Research
- Sets the Platform for Clinical Interchange
- We Still Need a “Standardized Use of Standards”



Medical Specialty Societies

- Centers of Physician Trust
- Very Strong Market Power
- Building Systems Momentum
- Assembling for Leadership and Self-Sustaining Systems Solutions



Technology Leaders & The Internet

- Ubiquitous, Distributed Computing
- Used and Developed Open Standards
- Unleashed Physical Connections
- Unleashed Innovations
  - Business Implosions
- Unleashing Integrations
- Workflow Integrations Will Drive Sustainability
- Standards and Use Cases Will Drive Meaningful Integrations

Health and Human Services

- Experienced Action Oriented Executive Leader
- Root Cause Identifier
  - Preventive Care
  - Chronic Disease
  - Standards
- Pay for Proof
  - Differentials on Quality
- NHII
  - Business, Public Safety, Fiscal Responsibility
- Pushing Congress to Act
- The Department's Clear Support of eHI

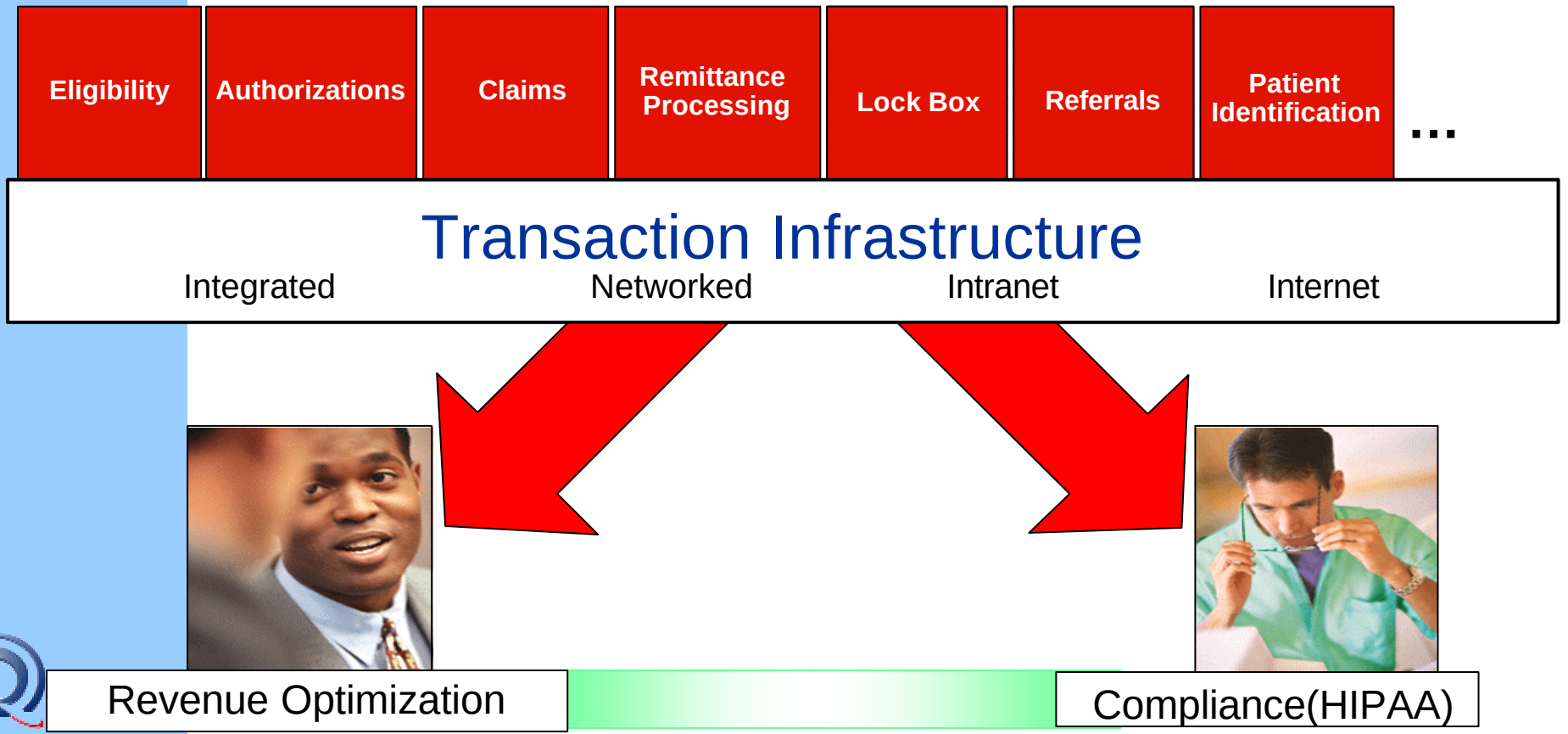
Engineering a Better System

A Flood of Data

Clinical data for medical practice is undergoing a fundamental change.

"Incrementalism"

Connections for Payers: Administrative Transaction Services



X12 – XML – HL7 – Web Services – Highly Scalable Infrastructure

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Connections for Medical Records: Document Management Services

Report Distribution	Patient Financial Services	General Financials & Human Resources	Patient Management	Physician Services	Medical Records	Coding Management	Report Archive	Patient Statements

Document Infrastructure

COLD Scanned Multimedia Objects

Revenue Optimization | R.O.I. | Compliance(HIPAA)

Document Formats – Web Services – Highly Scalable Infrastructure

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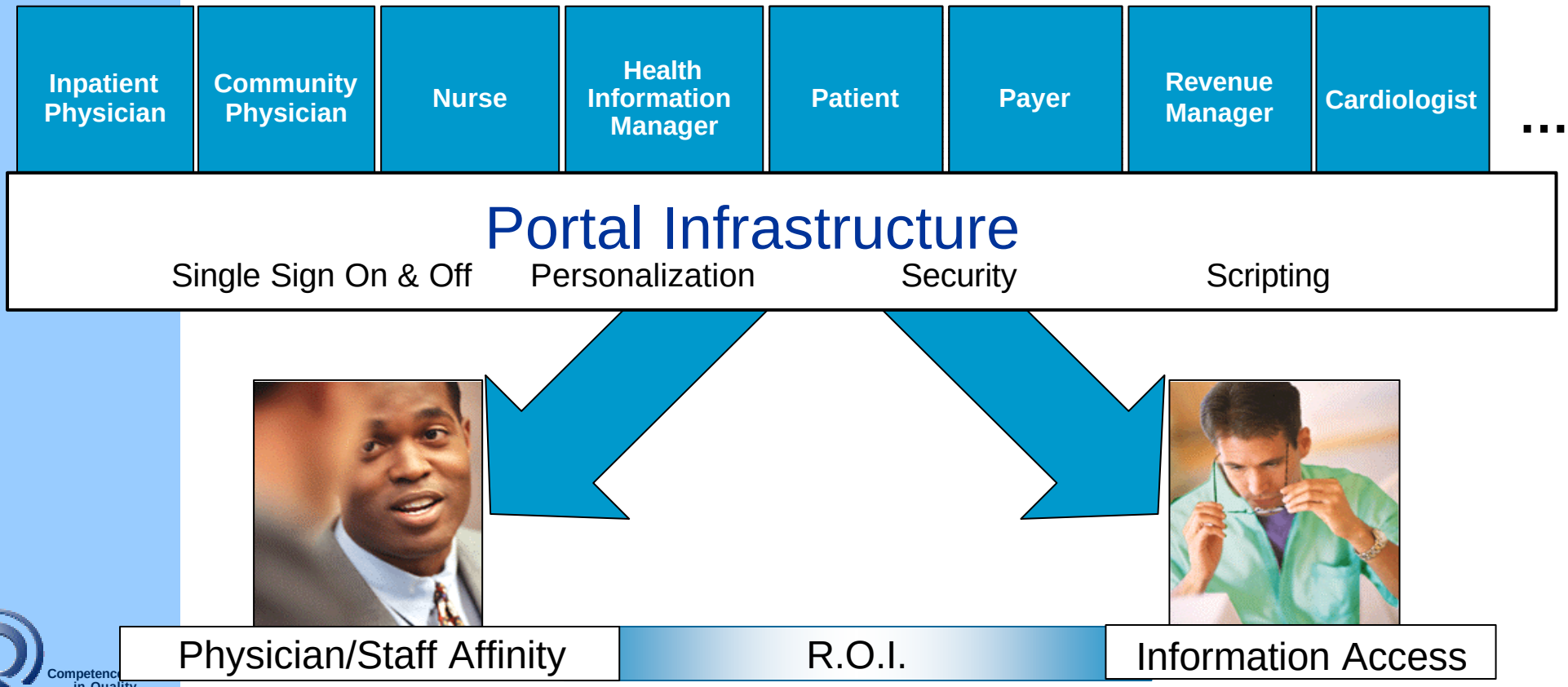
Connections for Doctors, Nurses & Patients: Information Access Portal Services



CCOW, HL7, XML – Web Services – Highly Scalable Infrastructure

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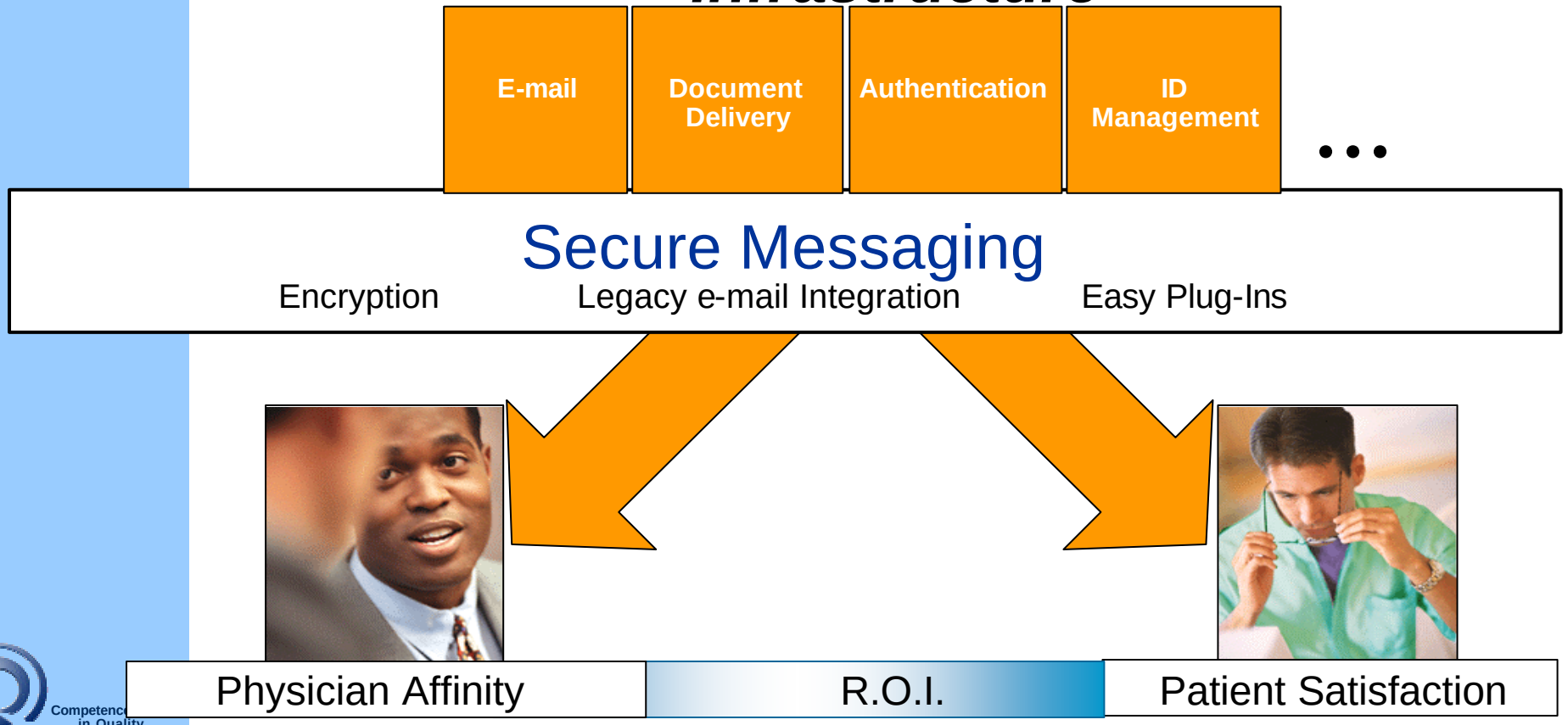
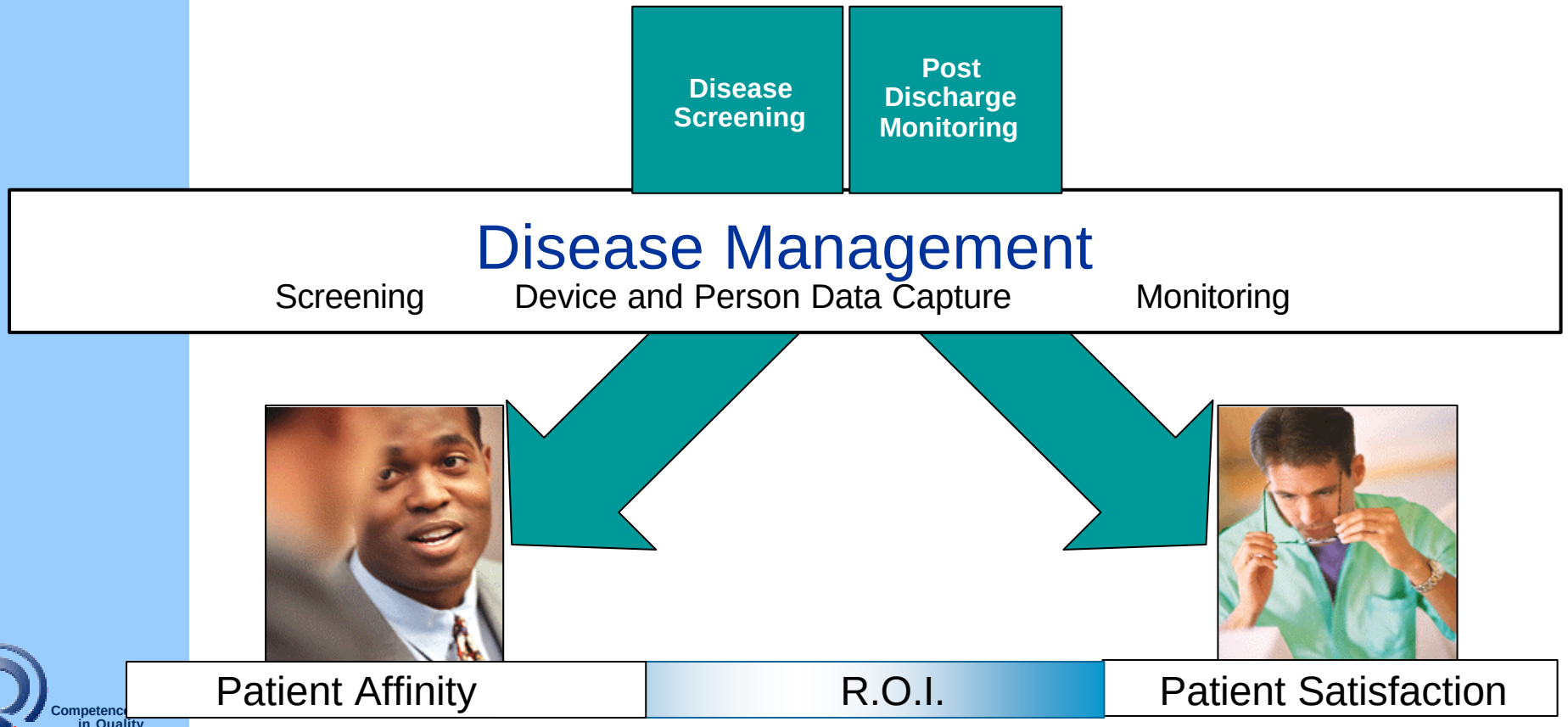
Connections Across the Community: Secure Messaging & Access Infrastructure



XML, SAML – Web Services – Highly Scalable Infrastructure

Connections for Patient Care: Care Management Infrastructure



XML, HL7 – Web Services – Highly Scalable Infrastructure

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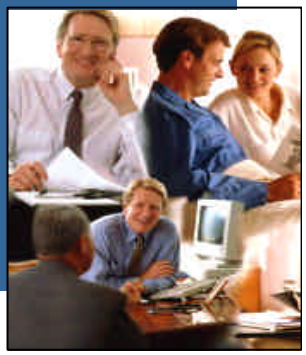
How To Improve Workflow?

Integrate to Eliminate

- Understand healthcare needs.
  - Existing Processes, Inefficiencies and Friction Points
  - Apply to Medical and IT technologies
  - Clearly define patient, physician & payer expectations
- Transform knowledge & assets into unique solutions with measurable results.
  - Set outcome-oriented goals – for key stakeholders
  - Leverage cross-industry best practices
  - Develop tactics and market introduction strategies, based on defined integration and workflow improvements
- Deliver innovative solutions with measurable results.
  - Leverage collective technology, systems, and services
  - Deliver best practice integration as defined by stakeholders
  - Accommodate the individual
  - Deploy for enabled delivery systems and communities



Where Do We Start?

- Select High Impact Workflows to Integrate
  - Access, Admission, Management, Utilization, Adjudication, Payme
  - For each selected, define clear achievable goals
  - For each selected, define:
    - Economic Value Add, Measurable Outcomes, Success Factors
- Define the Assets to Leverage & Standards to Use
- Define the Market Sub-Segments, Drivers & Timing
- Define the Best Market Approach(es)
- Define Relationship Types – Pros and Cons
- Develop & Model Best, Worst and Most Likely Business Cases
- Select Targets
  - Workflow, Assets, Market Segment, Approach & Business Model
- Set a Date and Build the Timeline
- Set the Team and Drive

Objectives

- Develop a Common Understanding of:
  - Problems
  - Opportunities
  - Assets
- Understand How to Align to Address Market Needs
- Build a Plan to Focus Our Efforts in Ways that Matter to:
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