# *Community-Based Models for Health Information Exchange to Support Health and Healthcare*
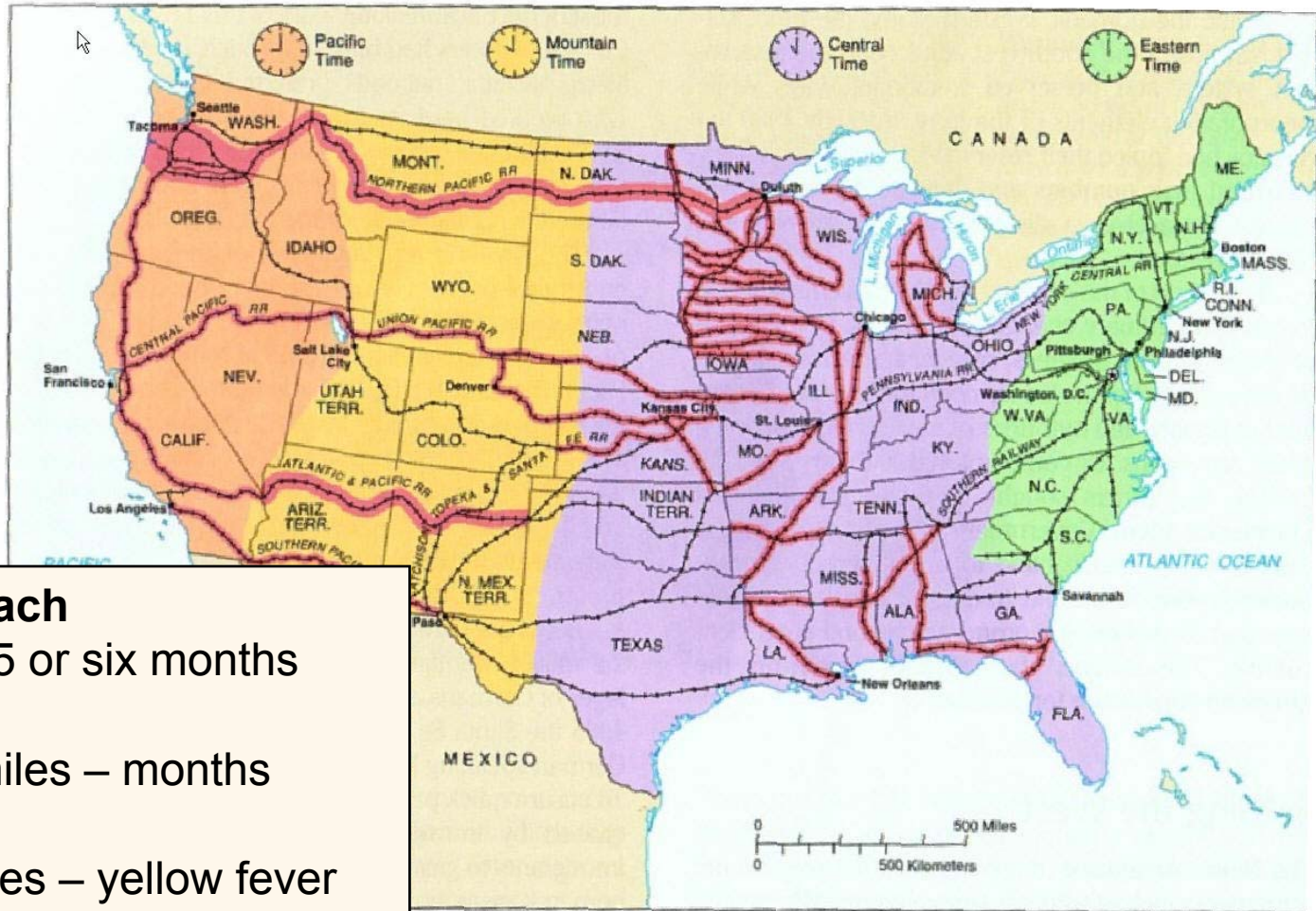
**Mark Frisse, MD**
**Vanderbilt University**
**Volunteer eHealth Initiative**

KNOWLEDGE TRANSFER

ADVISORY & CONSULTING SERVICES

RESEARCH

METHODS & TOOLS

ACCELERATING CHANGE

Vanderbilt Center for Better Health

# Transformational Change is our Heritage

- **Stagecoach**
  $1000 – 5 or six months
- **Sea**
  18,000 miles – months
- **Panama**
  6,000 miles – yellow fever
- **Train** (**1870**)
  $150 – 5 days – First Class!!

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# The Ideal

# The Reality

# All of This Simply to Build a Track

## One Track: Tennessee Volunteer eHealth Initiative

Overall goal is to create a system of care that is:



- Patient-family focused
- Clinical, not financial at present
- Longitudinal, not episodic
- Regional, not institutional
- Private, secure, and trusted
- Measurable impact on all stakeholders and on the population health
- Complementary to current efforts
- Do no harm – including minimizing the number of parallel initiatives and meetings
- May extend reach to broader range of practitioners
- Will evolve over time
  - Clinical and financial
  - Self-sustaining, non-for-profit "Regional Health Authority"
  - Setting realistic standards – both in technology and in best medical practices
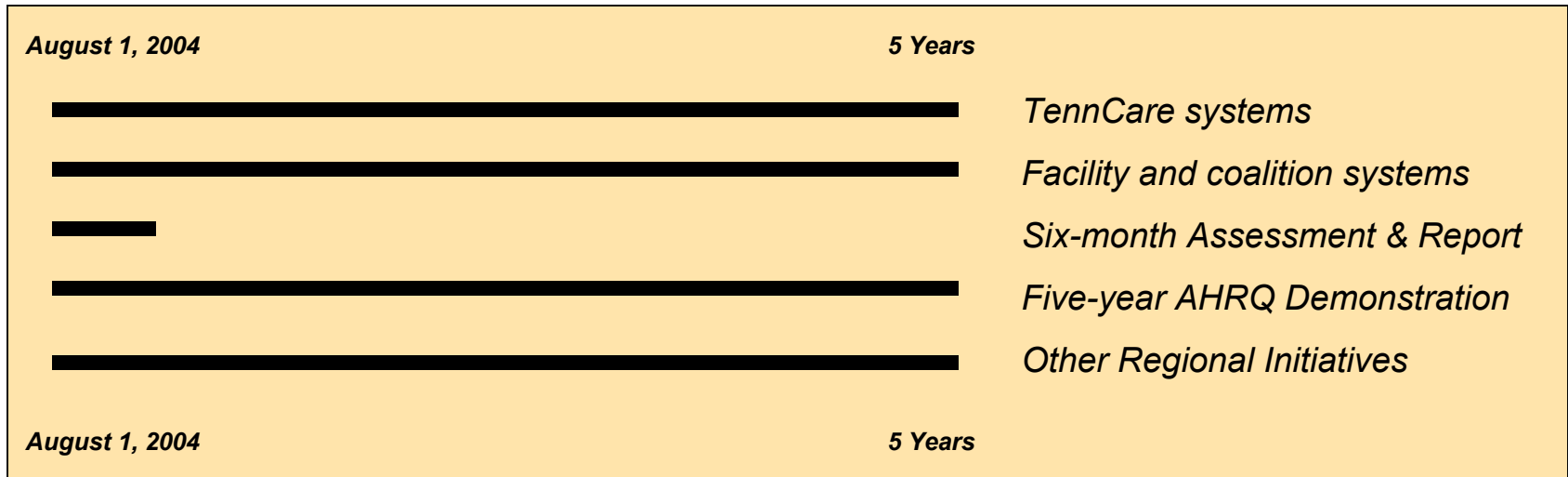
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# The regional focus will be on the following three counties: Shelby, Fayette and Tipton.
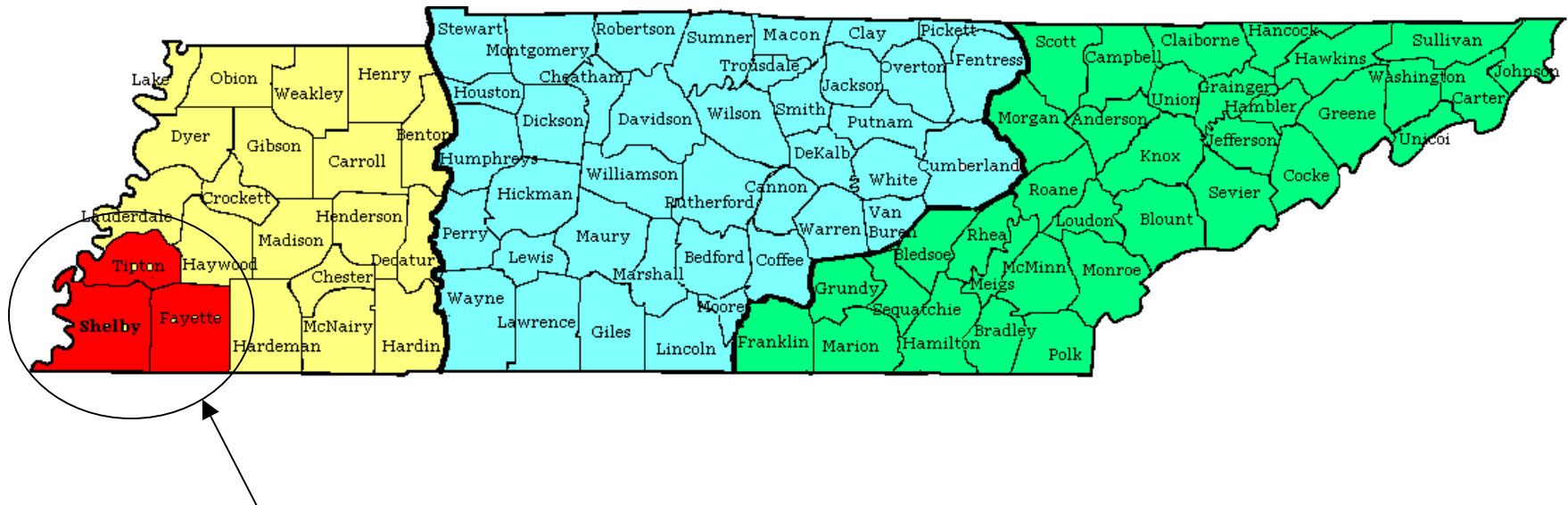


*Health care is regional and a significant number of individuals seeking care in Tennessee are residents of one of 8 bordering states*

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## The Context – Five Types of Effort

**August 1, 2004**                                                    **5 Years**

*TennCare systems*

*Facility and coalition systems*

*Six-month Assessment & Report*

*Five-year AHRQ Demonstration*

*Other Regional Initiatives*

**August 1, 2004**                                                    **5 Years**

- Administrative and clinical systems required for addressing TennCare operational issues
- Enhancing the information infrastructure at facilities and coalitions within the State
- Six-month assessment and creation of models for evolving a regional health information infrastructure (through Vanderbilt, in collaboration with Accenture)
- Five-year demonstration pilot in the Three-County Region
- Other regional initiatives

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# A Three-Phased Approach to Planning

**- Proposed Approach –
(Regional Planning Effort)**

## Assess

**Where are we now?**

*Mgt Checkpt*

## Plan

**Where do we need to be?**

*Mgt Checkpt*

## Recommend

**How do we get there?**

*Mgt Checkpt*

Project Management
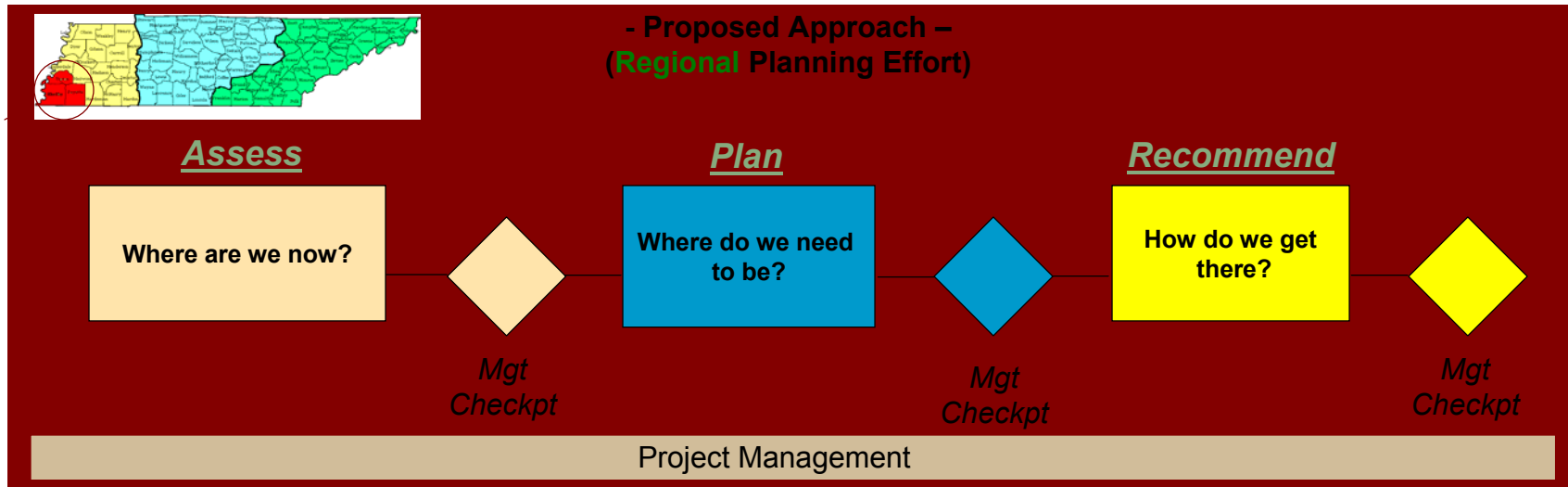
### Assessment Deliverables

- Facility Summaries
- Survey Results
- National Best Practices
- Standards
- Assessment Framework
- Regional Breakouts for the State
- List of Potential Obstacles/Barriers
- Project Management toolset
- Governance Model
  - Diagrams
  - Charters
  - Roles and Responsibilities
  - Decision-making flow

### Planning Deliverables

- Prioritized set of outcomes
- Future State Model
  - Technology Architecture
  - Impact to processes
  - Impact to organization structure
- Gap analysis (state of readiness)
- Benefit Realization Model
- Identification of programmatic linkages
- Proposed list of core entities and data elements

### Recommendation Deliverables

- Workplan for implementation of Volunteer eHealth in SW Tennessee
- Identification of funding alternatives
- Preliminary assessment of other regions
- Key issues / risks related to the implementation of the Volunteer eHealth Initiative

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*Vanderbilt University, in collaboration with Accenture*

# Initial Assessment Categories

| Assessment Category | Definition |
|---|---|
| **Sponsorship** | Assess the organization's ability to participate in the Volunteer eHealth Initiative pilot in the Memphis region |
| **Priority & Resources** | Identification of key projects and priorities for the organization in the near-term and long-term |
| **Experience** | Understanding the organization's experience with large scale and collaborative projects |
| **Technical Infrastructure** | Assess the organization's technology systems and architecture in place today and planned for the future (e.g. clinical systems, security, communications) |
| **Affiliations and Networks** | Understand the organization's current involvement in any collaborative projects, physician affiliation with the organization, and relationships with area providers (e.g. nursing homes, labs, imaging centers). |
| **Environmental Influences** | Understand the Internal and external influences motivating the organization to partake in patient centric projects. |

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# Governance



Governor's Health Information Committee

National Technical Advisory Panel

Project Management Office (PMO)

Regional Information Infrastructure Demonstration

(PMO)

CEO Oversight Group

Technology Governance Panel

Clinical Governance Panel

Security & Privacy Governance Panel

Financial Governance Panel

Proposed Initial Advisory Groups
- Outcomes and Effectiveness
- Communications
- Education
- Site Champions
- Patient-focused Alliances
- Others

Governor's Six Month Accelerated Health Information Management Planning Initiative
- Identify intervention candidates
- Quantify additional opportunities afforded through a State-wide information infrastructure
- Integrate early AHRQ demonstration project considerations with findings to develop a long-term, state-wide plan

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# Advanced Regional Databank



**Healthcare Entity Internal Systems** → **Regional Databank**

Vaults:
- Hospital A → Entity Patient ID Info | Structured Documents
- Hospital B
- Group Practice
- Clinic
- Nursing Home
- Retail Pharmacy
- Payer

Regional Index:
- Person 1 Composite ID Info | Link 1 | Link 2 | ...
- Person 2

Integrated Patient Database:
- Person 1 — Problems, Lab Data, Med Data, ...
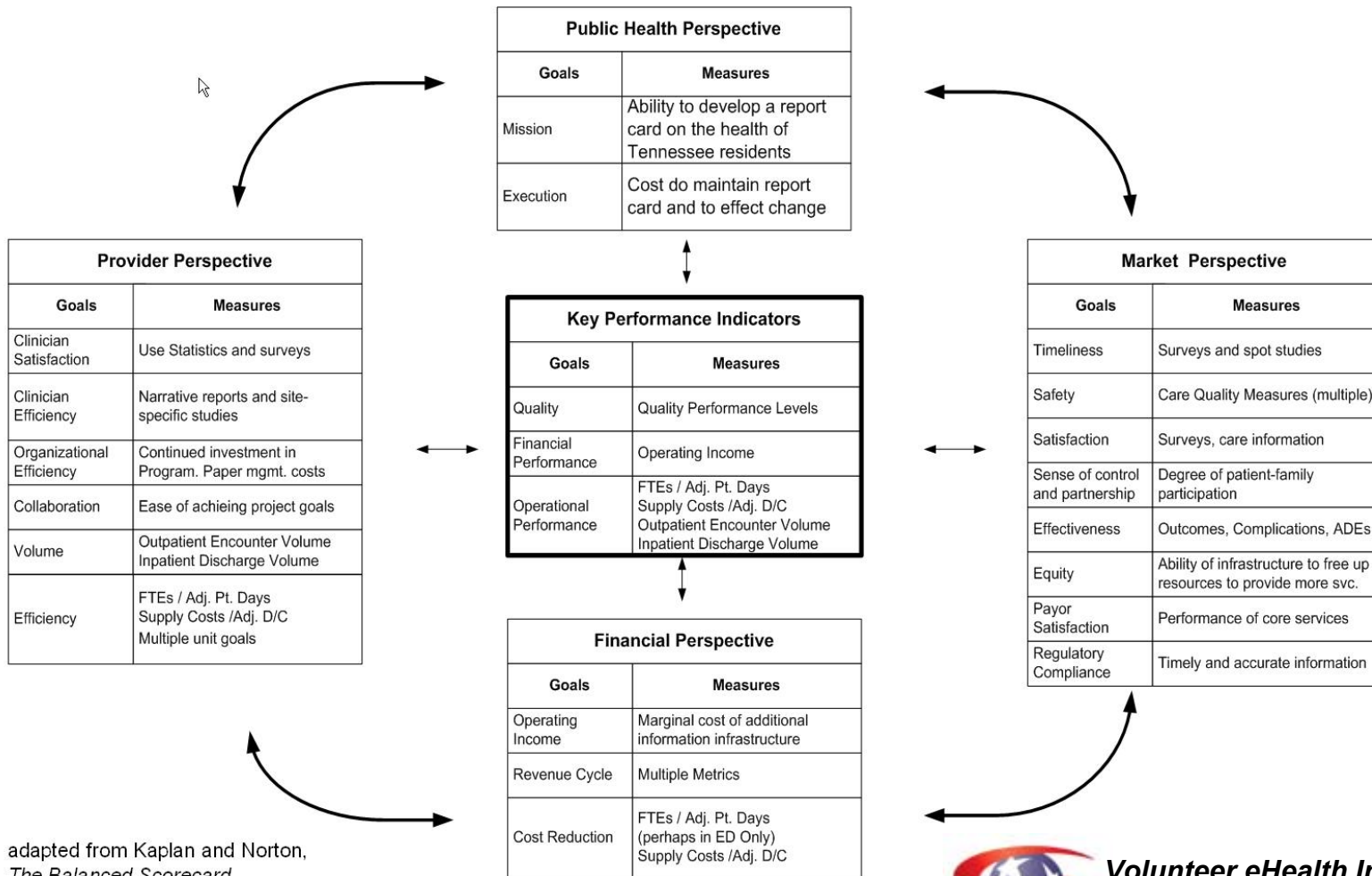- Person 2
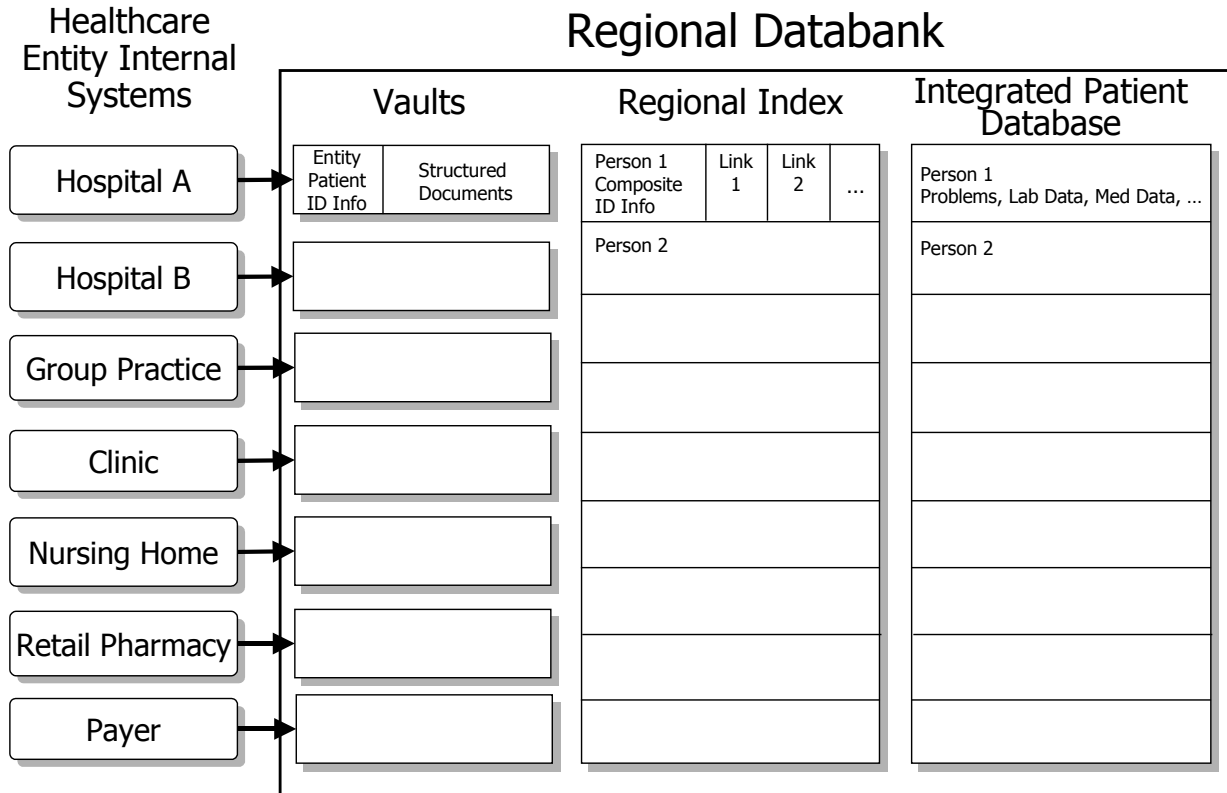
*Regional Databank Model.* Standards have been incorporated into the internal systems of the Healthcare Entities for certain data types. An integrated patient database now sits beside the vaults to merge the data into a patient record supporting full two-way interoperability for those data

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# Balanced ScoreCard

### Public Health Perspective

| Goals | Measures |
|---|---|
| Mission | Ability to develop a report card on the health of Tennessee residents |
| Execution | Cost do maintain report card and to effect change |

### Provider Perspective

| Goals | Measures |
|---|---|
| Clinician Satisfaction | Use Statistics and surveys |
| Clinician Efficiency | Narrative reports and site-specific studies |
| Organizational Efficiency | Continued investment in Program. Paper mgmt. costs |
| Collaboration | Ease of achieing project goals |
| Volume | Outpatient Encounter Volume Inpatient Discharge Volume |
| Efficiency | FTEs / Adj. Pt. Days Supply Costs /Adj. D/C Multiple unit goals |

### Key Performance Indicators

| Goals | Measures |
|---|---|
| Quality | Quality Performance Levels |
| Financial Performance | Operating Income |
| Operational Performance | FTEs / Adj. Pt. Days Supply Costs /Adj. D/C Outpatient Encounter Volume Inpatient Discharge Volume |

### Financial Perspective

| Goals | Measures |
|---|---|
| Operating Income | Marginal cost of additional information infrastructure |
| Revenue Cycle | Multiple Metrics |
| Cost Reduction | FTEs / Adj. Pt. Days (perhaps in ED Only) Supply Costs /Adj. D/C |

### Market Perspective

| Goals | Measures |
|---|---|
| Timeliness | Surveys and spot studies |
| Safety | Care Quality Measures (multiple) |
| Satisfaction | Surveys, care information |
| Sense of control and partnership | Degree of patient-family participation |
| Effectiveness | Outcomes, Complications, ADEs |
| Equity | Ability of infrastructure to free up resources to provide more svc. |
| Payor Satisfaction | Performance of core services |
| Regulatory Compliance | Timely and accurate information |

adapted from Kaplan and Norton,
*The Balanced Scorecard*

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# Face Offs



- Competing Proposals
  - Carve outs for quick wins
  - Not invented here syndrome
- Practices – Plans/payers
  - Pay for use -> P4P?
- Hospitals – practices
  - How to establish consistent linkages
- Care delivery systems – patients
  - How to establish a comprehensive system?
- All need a single "track" and coordination
  - Data standards, business protocols, protections

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## Transforming Health Care and Medical Practice

- We are overhauling the engine while speeding down the track
- We have gone from insufficient interest to unconstrained exuberance
- When will this help the medical practice?
- Need <u>more</u> than financial incentives
- Need help in transforming their work flows and lowering their overhead
- Need financing mechanisms to avoid high up-front costs in people and time
- Need "certified" products (and their vendors need a stable environment!)



*Image source: http://www.drtinkertrains.com/train%20repair.jpg*

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