



# A Blueprint for Building a Sustainable Health Information Exchange Organization



# eHI Value and Sustainability Model (VSM)

## Hi-Level Summary

Presented by  
Doug Emery

## PURPOSE AND METHOD



**Purpose**

**Answer**

**Method**

- Defines and describes a step-by-step approach as to how to construct a sustainable RHIO
- Leverages the key eHI products and services in eHI's portfolio of tools that can assist leaders in the development of a RHIO
- Based on learning from a collaborative grant with HRSA
- Driven by and interdisciplinary team of thought leaders in HIT
- Vetted with the leading RHIOs in the country

# THE APPROACH AND SUPPORTING TOOLS



	Assess	Define	Evaluate	Plan	Execute
<b>Activities</b>	<ul style="list-style-type: none"> <li>• Asses the market's overall willingness to participate</li> <li>• Understand market structure and balance of power</li> <li>• Identify key priorities</li> <li>• Identify potential ancillary/administrative services</li> </ul>	<ul style="list-style-type: none"> <li>• Define the end state that is desired</li> <li>• Create several options or paths that lead to same end state, including varying functionalities, timing, and ancillary services</li> </ul>	<ul style="list-style-type: none"> <li>• Quantify revenue implications of each option based on pricing strategy</li> <li>• Quantity cost implications of each option based on timing and technology platforms chosen</li> <li>• Quantify risk of each option by assessing operating, market, and execution risk</li> <li>• Choose optimal strategy based on maximum NPV, embedding risk in the RADR</li> </ul>	<ul style="list-style-type: none"> <li>• Create business plan based on optimal strategy</li> <li>• Create financial pro forma projections</li> <li>• Test assumptions in the market</li> <li>• Arrive at required early stage funding and detailed implementation plan</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire required starting capital</li> <li>• Begin execution</li> <li>• Manage business against assumptions in NPV model, pro formas, and business plan</li> </ul>
<b>Tools</b>	<ul style="list-style-type: none"> <li>• Market Readiness Assessment Tool</li> <li>• Priority setting workshops</li> </ul>	<ul style="list-style-type: none"> <li>• Problem solving workshops</li> </ul>	<ul style="list-style-type: none"> <li>• NPV Model</li> <li>• Value Tool</li> <li>• RADR estimator</li> <li>• Analytical support</li> </ul>	<ul style="list-style-type: none"> <li>• Business plan template and support</li> <li>• Pro forma templates</li> </ul>	<ul style="list-style-type: none"> <li>• 10K mile check-ups</li> <li>• Key driver identification and sensitivity analyses</li> </ul>

# WHAT MAKES eHI AND ITS PORTFOLIO OF PRODUCTS AND SERVICES DIFFERENT



## BENEFITS TO HIEs OF USING eHI TOOLS



### Without eHI Tools

- Limited acceptance
- Slow, faltering development and execution
- Long periods of dependence on subsidies
- High risk of ultimate failure

vs.

### With eHI Tools

- Convincing Business Case Development
- Adaptability to Unique Community Demands
- Well-Planned Implementations
- Earned Income Sustainability



# Applying the VSM to the NEO RHIO Project

Presented by  
Claudia Ellison

# Overview



- NEO RHIO and its objectives
- How we applied the VSM
- Lessons Learned



# Most Pressing Challenges



- Securing Upfront Funding
- Developing a Sustainable Business Model
- Addressing Privacy and Security Issues
- Addressing Organization and Governance Issues
- Addressing Technical Aspects

# The VSM Model



- Assess: Market readiness
- Define: Decision framework
- Evaluate: NPV Model
- Plan: Development of Business Plan
- Execute: Acquire required starting capital, begin execution

# Lessons Learned



- Discussion

# Regional Efforts to Sustainability



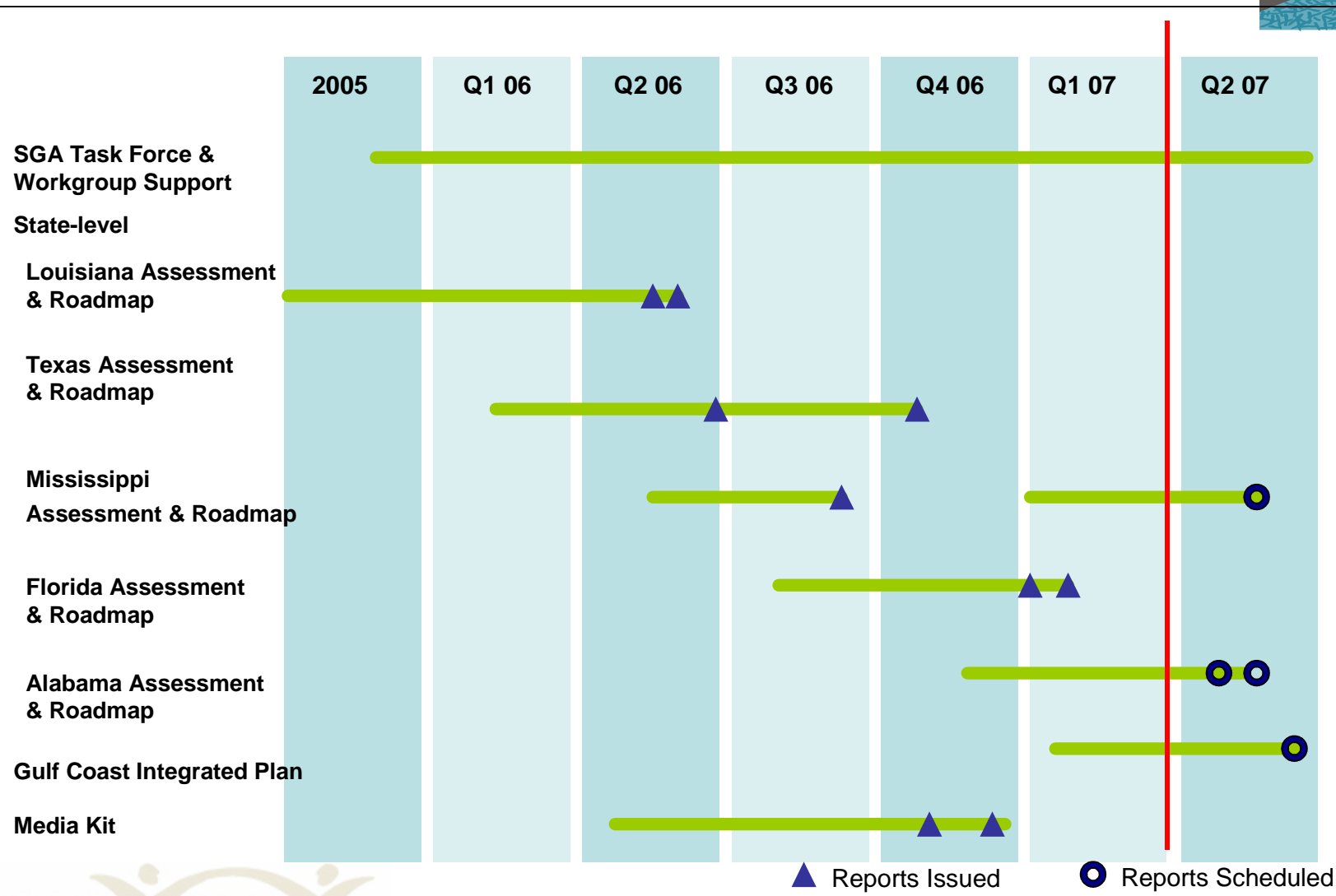
Presented by  
Andrew Weniger

# Regional Efforts to Sustainability











- Completed assessment process for five Gulf Coast states (AL, LA, MS, TX, and FL)
- Expanded upon existing state surveys
- Increase awareness within the state of other state and national initiatives
- Identify the readiness of communities to increase their use of health information technology and health information exchange
- This information is used as a basis for a state specific Roadmap

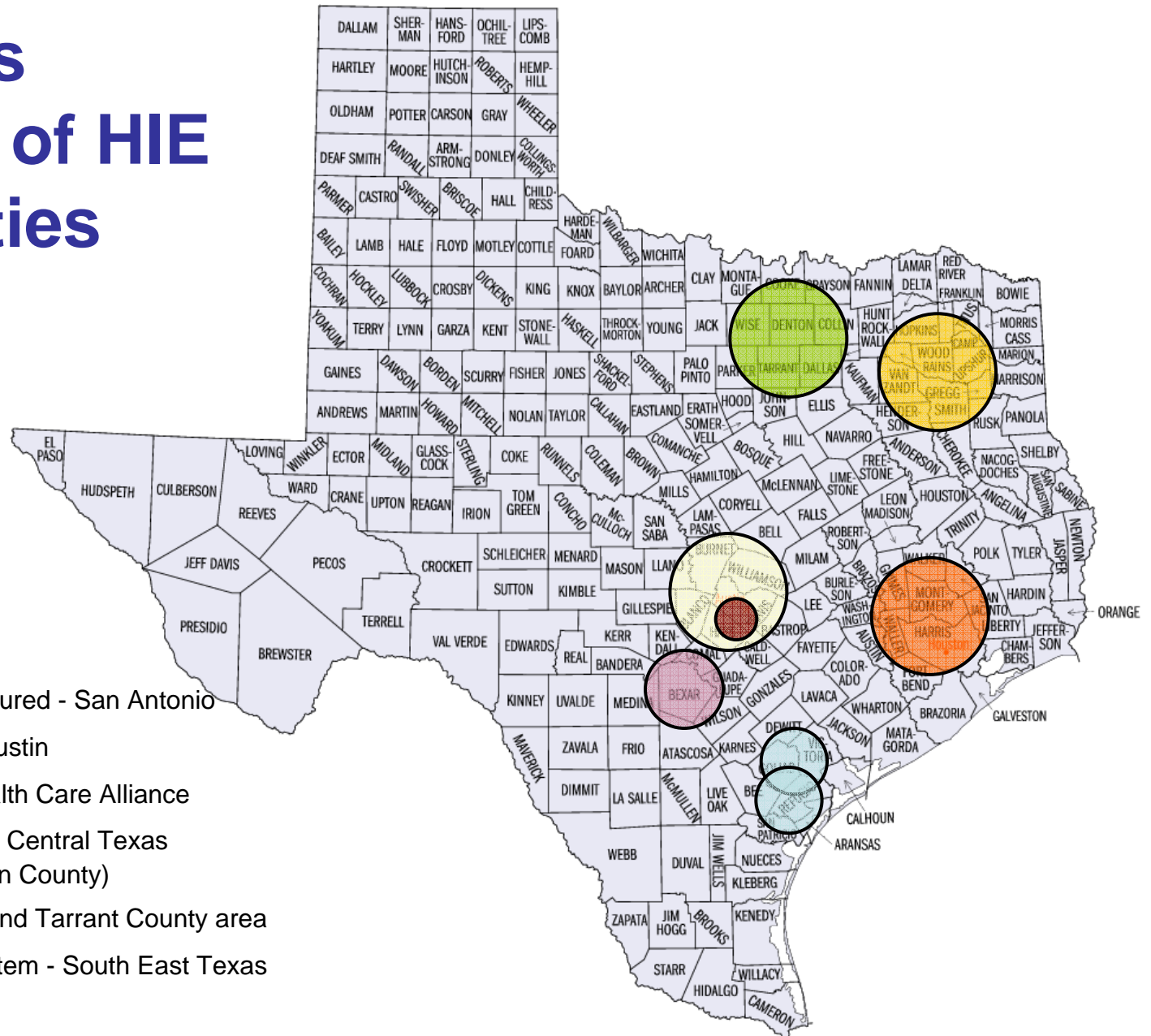
# eHI & Gulf States Status



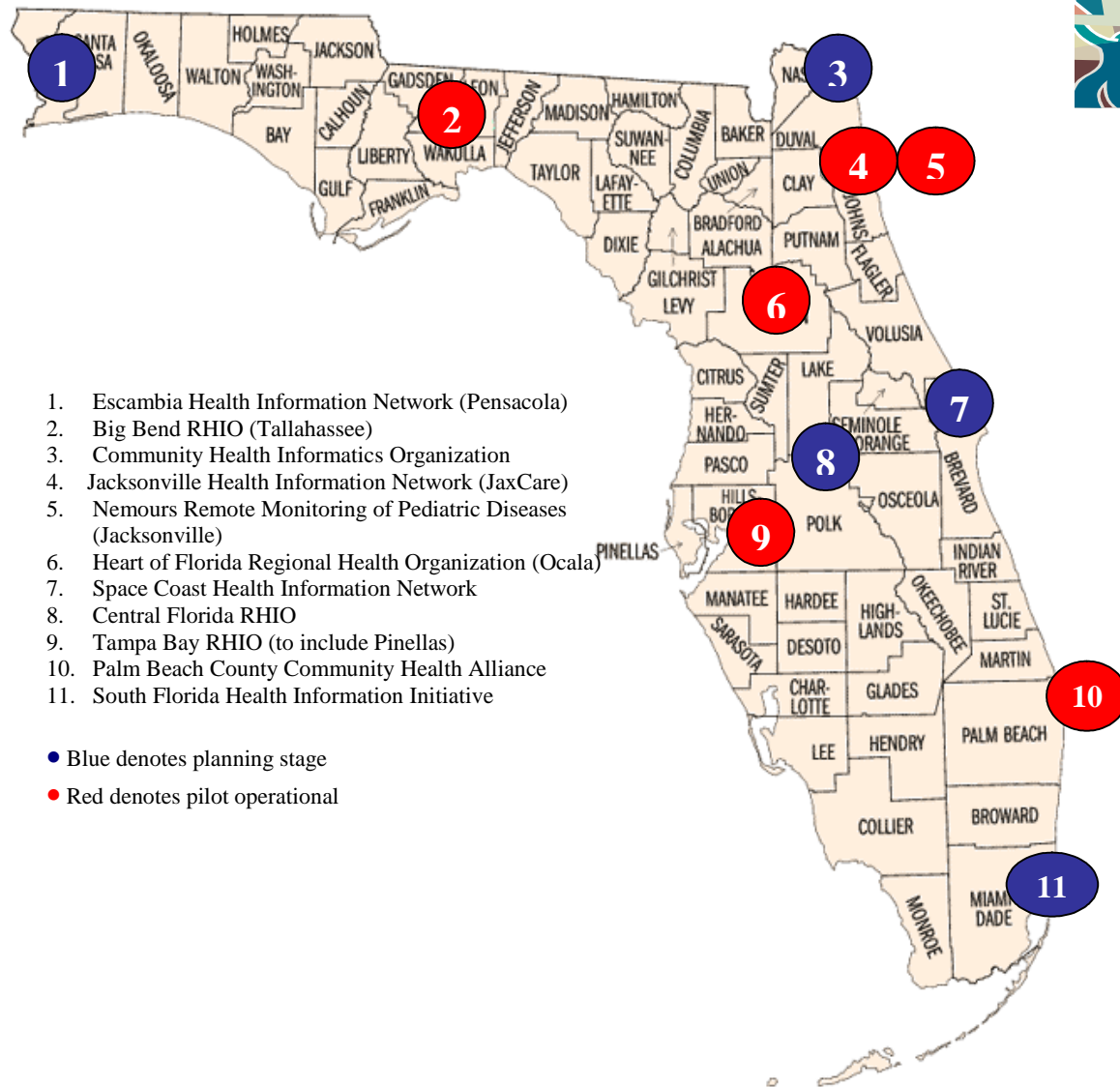
# Texas

## Locations of HIE Activities

-  Access Medica - East Texas
-  Access to Care for the Uninsured - San Antonio
-  CriticalConnection - South Austin
-  Houston - Harris County Health Care Alliance
-  Indigent Care Collaboration - Central Texas
-  (Hays, Travis, and Williamson County)
-  North Texas RHIO - Dallas and Tarrant County area
-  Southeast Texas Health System - South East Texas



# Florida Locations of HIE Activities



1. Escambia Health Information Network (Pensacola)
2. Big Bend RHIO (Tallahassee)
3. Community Health Informatics Organization
4. Jacksonville Health Information Network (JaxCare)
5. Nemours Remote Monitoring of Pediatric Diseases (Jacksonville)
6. Heart of Florida Regional Health Organization (Ocala)
7. Space Coast Health Information Network
8. Central Florida RHIO
9. Tampa Bay RHIO (to include Pinellas)
10. Palm Beach County Community Health Alliance
11. South Florida Health Information Initiative

- Blue denotes planning stage
- Red denotes pilot operational



# Path to Sustainability



- Regional efforts – clear geographic centers but unclear borders/transitions
- Prioritization frequently guided by conflict avoidance and disproportional influence
- Subsidies may create momentum in the wrong direction/wrong functionalities



# Making the Business Case

Presented by  
Edric Engert

## VALUATION DISCUSSION OVERVIEW

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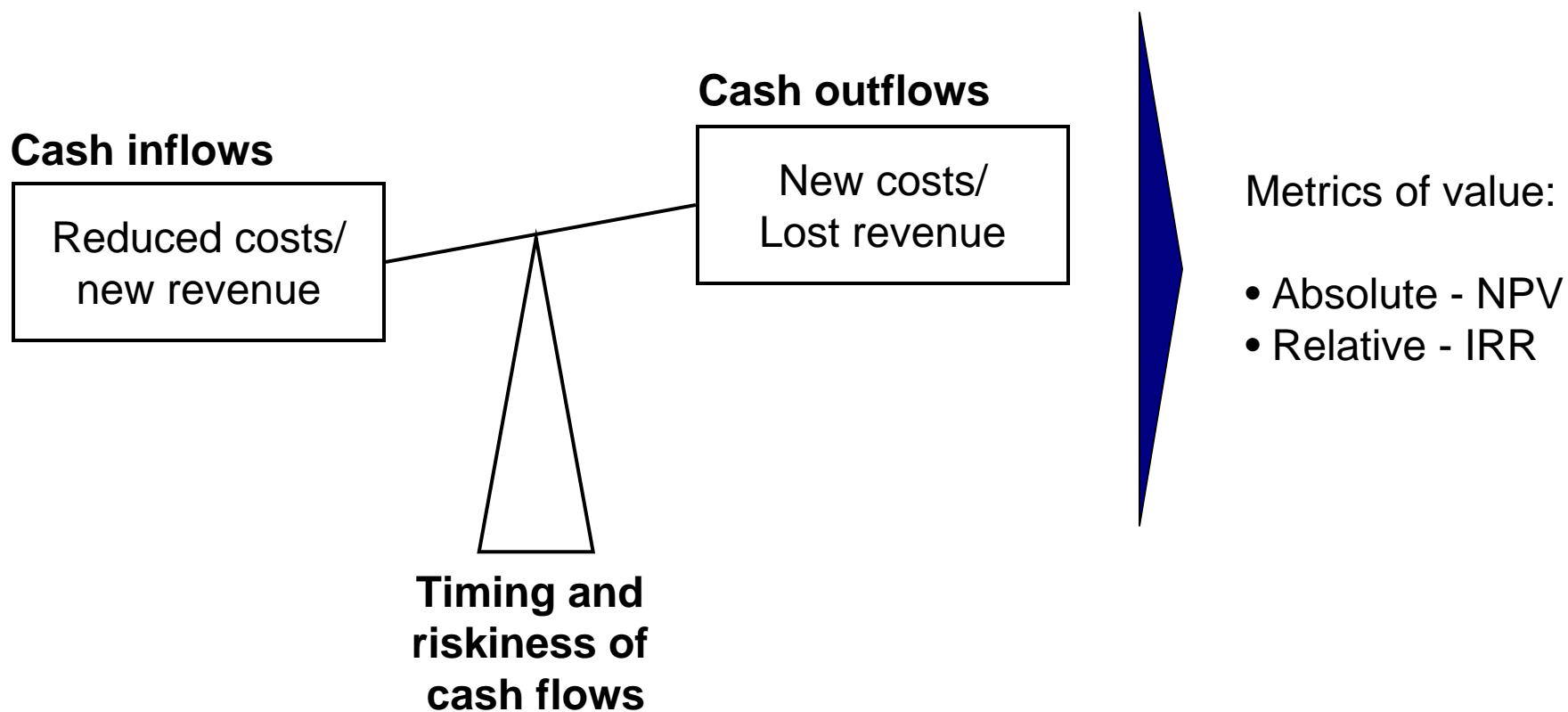
- **Why value is important**
- **What value and its components are**
- **The taxonomy of value**
- **How value is measured**
- **Implications for the tool**

# THE IMPORTANCE OF VALUE

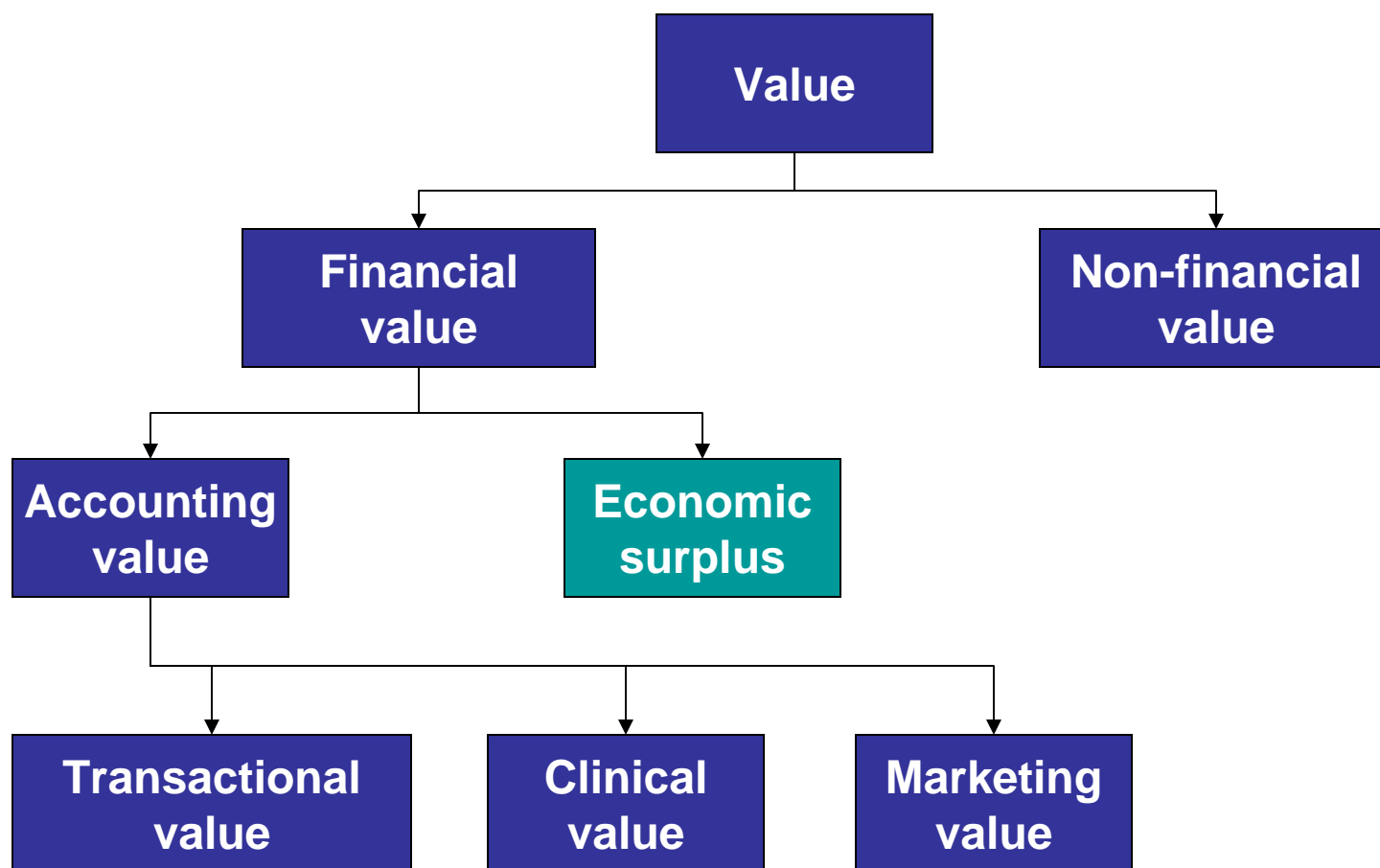
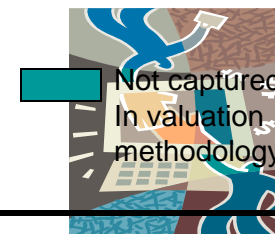


Exec comp	Capital	Stakeholders	Pricing	Focus
<ul style="list-style-type: none"><li>• Value provides founders and management with incentive to begin and maintain operation</li><li>• Is a critical component of total comp package</li></ul>	<ul style="list-style-type: none"><li>• Rigorous determination of value required for access to capital markets</li></ul>	<ul style="list-style-type: none"><li>• All players need to understand value as it accrues to them in order for network to thrive</li></ul>	<ul style="list-style-type: none"><li>• Pricing's upper bound determined by value to users</li><li>• Helps determine fee structure and stakeholder subsidies</li></ul>	<ul style="list-style-type: none"><li>• Management needs to focus their priorities on key drivers of value</li></ul>

# THE COMPONENTS OF VALUE



# THE TAXONOMY OF VALUE



# TRANSACTIONAL VALUE EXAMPLE



POTENTIAL COST SAVINGS					
Percent data availability	30%				
Percent physician will act on available data	15%				
Percent applicability	5%				
Hrly rate 2006	15.89				
Growth rate	3%				
Hrly rate by year	15.89				
Activity min. per visit	24				
Wait min. per visit	10				
Labor costs per visit	9.01				
Paper costs 2006	0.2				
Growth rate	3%				
Paper costs by year	0.20				
Fax costs 2006	0.1				
Growth rate	3%				
Fax costs by year	0.10				

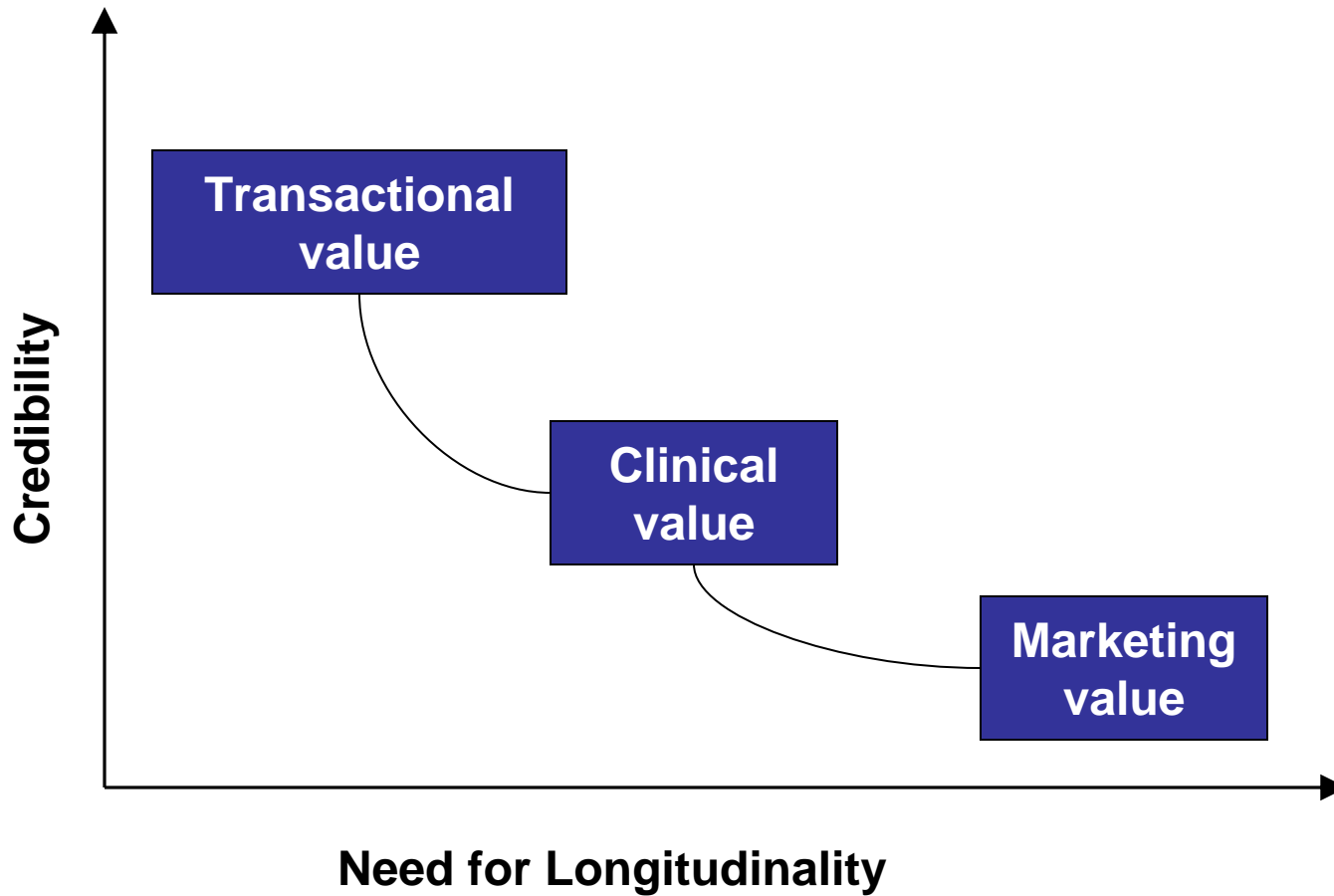
# CLINICAL VALUE EXAMPLE



		2006			
<b>Case 1: reduction of redundant tests</b>					
Number of redundant tests per visit		2			
Cost of tests		18			
Price of tests		36			
Revenue of tests weighted for payor mix		\$16			
Cost trend		3%			
Price trend		3%			
Cash inflow per transaction:		\$3			
<b>Case 2: reduction of adverse drug events</b>					
Number of adverse drug events per visit		0.02			
Cost of adverse drug event		500			
Price of adverse drug event		800			
Revenue of adverse drug event weighted for payor mix		\$366			
Cost trend		3%			
Price trend		3%			
Cash inflow per transaction:		\$3			



# ASSUMPTIONS AND CREDIBILITY



## DISCOUNT RATE – OVERALL PURPOSE



### Timing

- How does the timing of cash inflows and outflows relative to the valuation date affect the valuation results

### Risk

- How does the riskiness of the cash flows compare to other potential investments

# DISCOUNT RATE – RISK COMPONENTS



- Traditional risk as embodied in Risk Adjusted Discount Rate

- Can be driven by WACC or CAPM method

- Three key drivers:
  - Operating risk
  - Market risk
  - Execution risk

- Must be included in valuation to fully capture riskiness of cashflows

# BUSINESS RISK DEFINITIONS



## Operating Risk

- How the company is structured, and the details of its basic logistics in order for it to carry out its plan successfully

## Market Risk

- To what extent the market for the HIEs services is ready for its adoption, what barriers or obstacles if any exist, and how well the marketing plan meets market needs and obstacles

## Execution Risk

- Ability of the HIEs team to actually execute, given the complexity of the endeavor and their track record at rolling out such products and services

## IMPLICATIONS FOR THE TOOL

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- **Not just transactional, need more data and assumptions**
- **Sensitivity analyses and “zero solver” needed to deal with uncertainties**
- **Longitudinality required to capture data over time in order to refine forward looking assumptions**
- **Calculations must include risk of venture and market of entry**