

# Health Information Exchange (HIE) Sustainability: *Lessons Learned by the Indiana Health Information Exchange*

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Indiana Health Information Exchange

# Conflict of Interest Disclosure

## John Kansky, MSE, MBA

Has no real or apparent  
Conflicts of interest to report.

## Session Learning Objectives

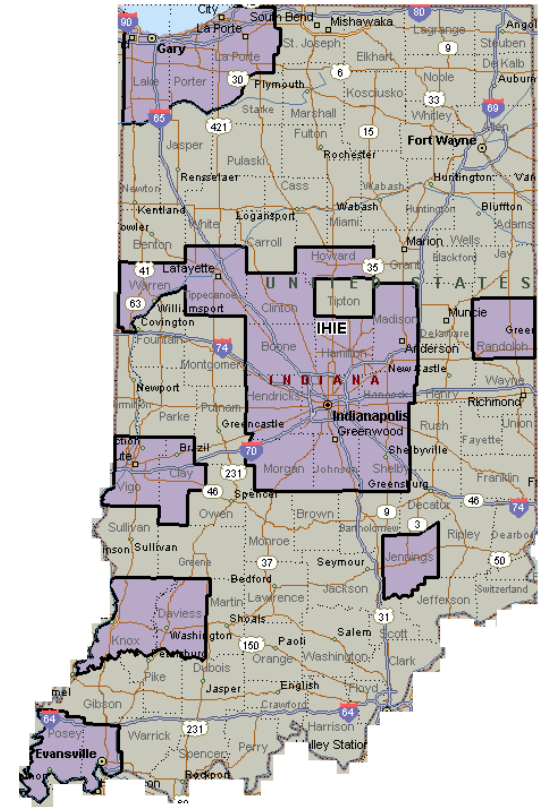
- Attendees will learn how to...
  - Judge and test the sustainability of a given HIE or HIE service concept based on principles of HIE sustainability
  - Apply HIE sustainability principles to the analysis of their (or any) HIE
  - Recognize sustainable HIE service models

## The “Roadmap” of this Session

- Indiana Health Information Exchange background
- The soapbox and the green eyeshade: *An HIE Venn diagram*
- Sustainability Principles: *IHIE’s Lessons Learned*
- The Peanut Butter Principle
- Q&A

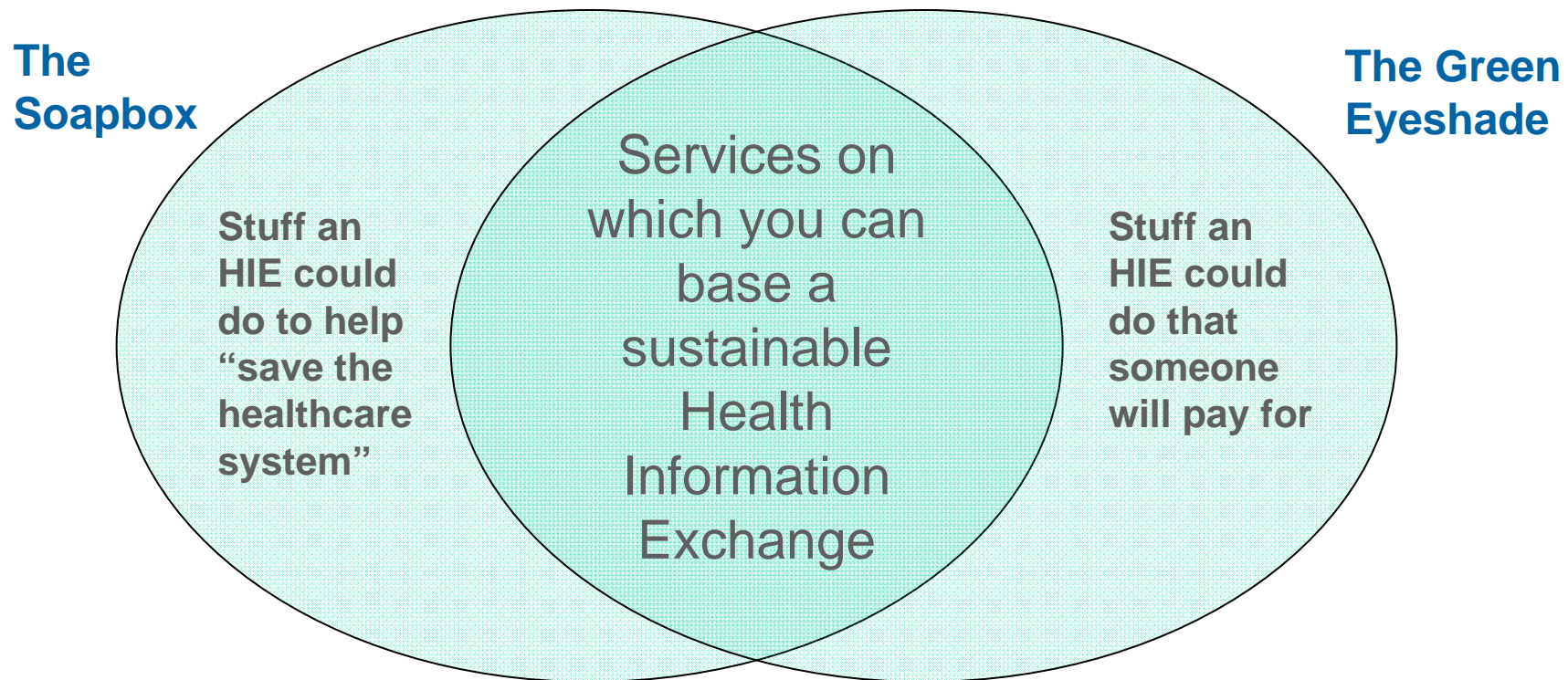
## The Indiana Health Information Exchange

- Founded in February 2004
- Based on the technology, knowledge, and experience of the Regenstrief Institute
- 42 employees
- Annual revenues in excess of \$5 million
- Providing services to 58 hospitals (18 health systems), 13,000 clinicians, and 3 payors
- Serving an area with a population of over 3 million people



# The Soapbox and the Green Eyeshade

There are services that a health information exchange could theoretically provide for which there is no apparent business model. There are also services that have business models that are outside the mission of a typical HIE.



## HIE Sustainability – *Basic Conceptual Principles*

Based on the experience of 6 years of operation and an on-going history of service development, launch, and support, IHIE bases its sustainability plans seven basic principles. We believe these principles are key to health information exchange being a self-sustaining endeavor.

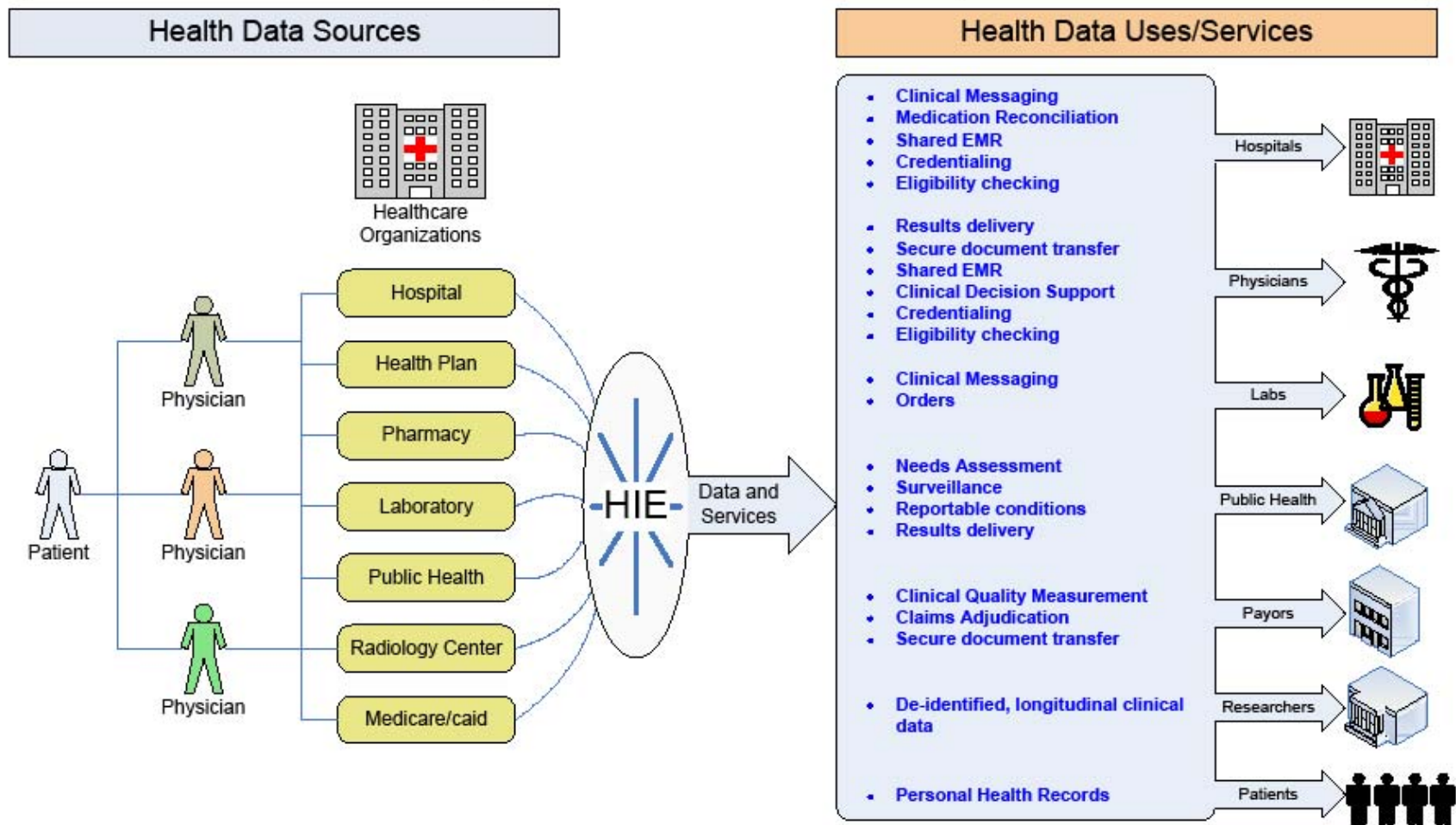
- **Principle 1:** HIE is a Business
- **Principle 2:** The Leveraging of High-cost, High-value Assets
- **Principle 3:** No Loss Leaders
- **Principle 4:** Independent, Local Sustainability
- **Principle 5:** Natural Monopoly
- **Principle 6:** The Need for Scale
- **Principle 7:** Avoidance of Grants for Operational Cost

## Principle 1: HIE is a Business

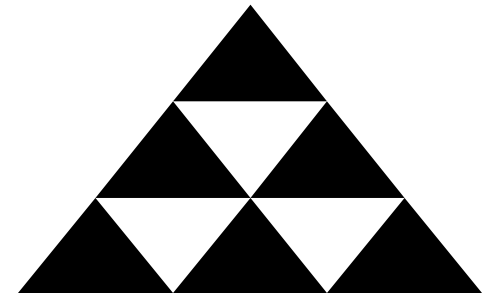
- HIE is a business and as with all businesses, creating a sustainable HIE requires:
  - offering services that the market wants...
  - at a price the market will bear...
  - doing so in such a way that revenue exceeds expenses.
  - services delivered by the HIE must be at a level that healthcare organizations have come to expect from their suppliers.



## Health Information Exchange – Service Concept



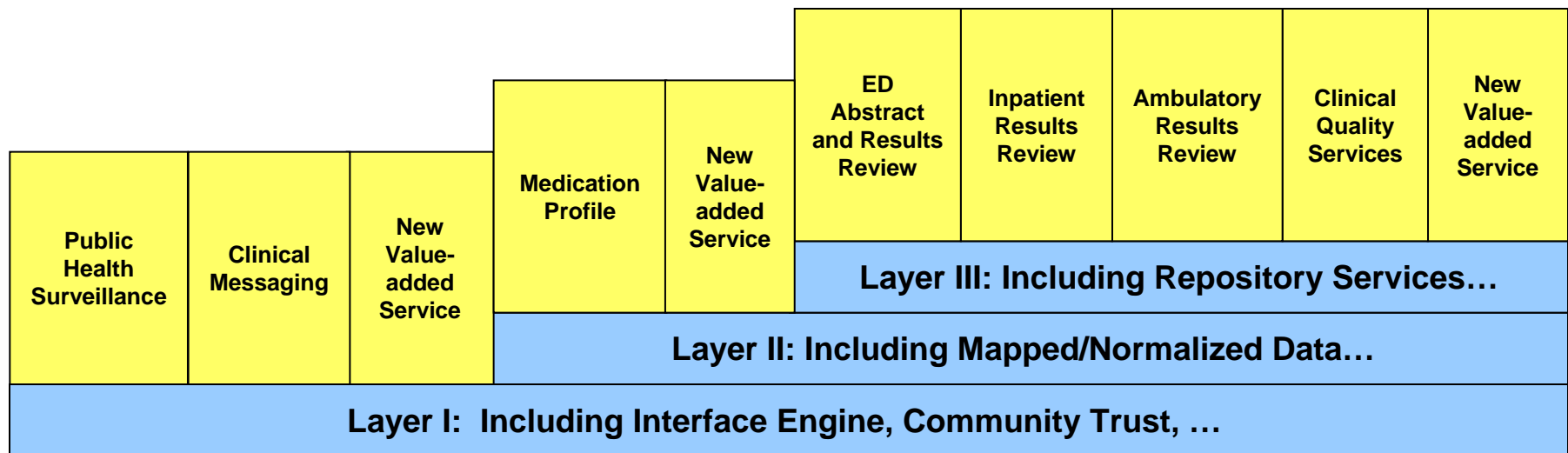
## Principle 2: The Leveraging of High-cost, High-value Assets



- Once dollars have been invested in the creation of HIE infrastructure, it is essential to leverage and re-use those assets to deliver as much and as many services as is necessary to achieve sustainability.
  - the services an HIE is able to provide to the market must be capable of producing sufficient revenue to cover expenses
  - due to the cost of the infrastructure that is required, offering multiple services to various market stakeholders is conducive to sustainability.

# The Leveraging of High-cost, High-value Assets

HIE assets are interdependent and, once created, can be leveraged to deliver additional services.



A layer of necessary investment

Value-added services that can be built upon the HIE investment

## Principle 3: No Loss Leaders

- Loss leaders are goods or services “sold at a loss” to create profit through other, related goods or services
- In the business of HIE, avoid loss leader services that promise to amass data or infrastructure to support a future sustainable service.
  - The HIE policy and business model landscape is evolving too rapidly
  - The risk that the future services might never be possible is too great and should not be factored into sustainability plans
- Examples include many “secondary use” concepts (e.g. information for pharma research)



## Principle 4: Independent, Local Sustainability

- When the country is connected via the national health information network (NHIN), many HIEs will be giving or receiving more value than a given partner.
- Therefore, in the future “NHIN economy,” dollars will need to change hands between HIE partners.
- However, until the business rules are defined, sustainability plans of individual HIEs, based in a specific market or region, should not be dependent on HIE-to-HIE exchange.
  - National niche data sources may be exceptions



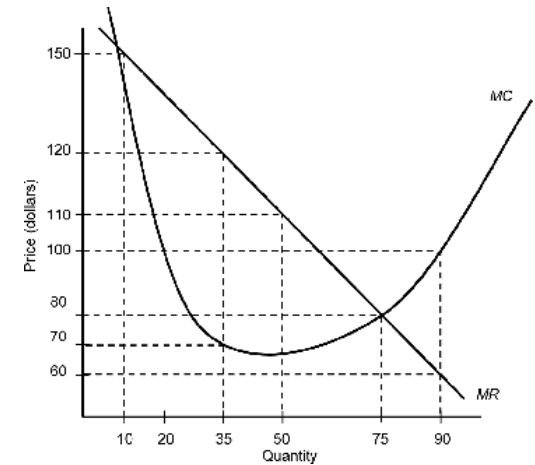
## Principle 5: Natural Monopoly

- HIEs are natural monopolies.
  - the total cost of producing HIE services for a given market is lower if there is just a single producer than if there are several competing producers.
  - There is a large cost for the necessary infrastructure (which is a fixed cost), making the creation of a redundant infrastructure wasteful and detrimental to the economy as a whole.



## Principle 6: The Need for Scale

- Micro-economics tells us that there is an optimal size for businesses of any given type; therefore, there is an optimal size for an HIE.
  - There is a scale (e.g. in terms of population of the market served) at which a given HIE service model is optimal and below which a given service model is not economically sustainable.
  - Based on the experience of the largest HIEs, the upper bound of the optimal size of a health information exchange business has not yet been reached.



## Principle 7: Avoidance of Grants for Operational Costs

- Grants are indispensable sources of start-up funds for HIEs or individual services, but should not be counted on to cover operational costs beyond a ramp up stage.
- Once fully operational, HIE services must be able to generate revenue equal to or in excess of expenses such that grants (or other non-operating revenue sources) are not necessary to cover operational costs.



# The Peanut Butter Principle

|  | Problem to Solve   | Solution  | Byproduct Issue   | Secondary Solution  | Outcome   |
|--|--|---|---|---|---|
| George Washington Carver<br>(early 1900's) | Soil depleted by Cotton  | Plant Peanuts to replenish lost nutrients in the soil         | What to do with all the peanuts?  | Make and sell products that use peanuts, e.g.: <ul style="list-style-type: none"> <li>• Peanut butter</li> <li>• Peanut oil</li> </ul>  | Sustain the southern economy<br>(Keep growing cotton) |
| Health Information Exchange<br>(2010)      | <ul style="list-style-type: none"> <li>• Rising cost of healthcare</li> <li>• Need to improve healthcare quality and safety</li> </ul> | Build HIE infrastructure (and use it to address the problems) | How does society (or a given community) pay for HIE?<br>i.e. financially sustain it | Offer/sell services that use (and reuse) the HIE infrastructure, e.g.: <ul style="list-style-type: none"> <li>• Electronic Results delivery</li> <li>• Clinical Quality Services</li> <li>• Medication profile</li> </ul> | Make positive contributions to health and healthcare  |

## Questions?

For Further Information, Please Contact:

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