

IBM Healthcare & Life Sciences



## IBM Healthcare & Life Sciences

***Innovation that Matters***



***Patient Centric Healthcare***  
***The Transformation to Personalized,  
Predictive, Preventive Medicine***



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**ON DEMAND BUSINESS™**

## **IBM Point of View 2015 .....**

**Healthcare in Crisis: Win-Win or Lose-Lose Transformation?**

**Transforming Value**

**Transforming Patient Responsibility**

**Transforming Care Delivery**

Healthcare in Crisis: Win-Win or Lose-Lose Transformation?

## Systems must adopt an accountability framework, supported by aligned incentives and a unified perspective on value

### Accountability

- Many healthcare systems lack a clear accountability framework
- Accountability must span key stakeholders

### Aligned Incentives

- A sustainable accountability framework is not possible without aligned incentives across the various stakeholders

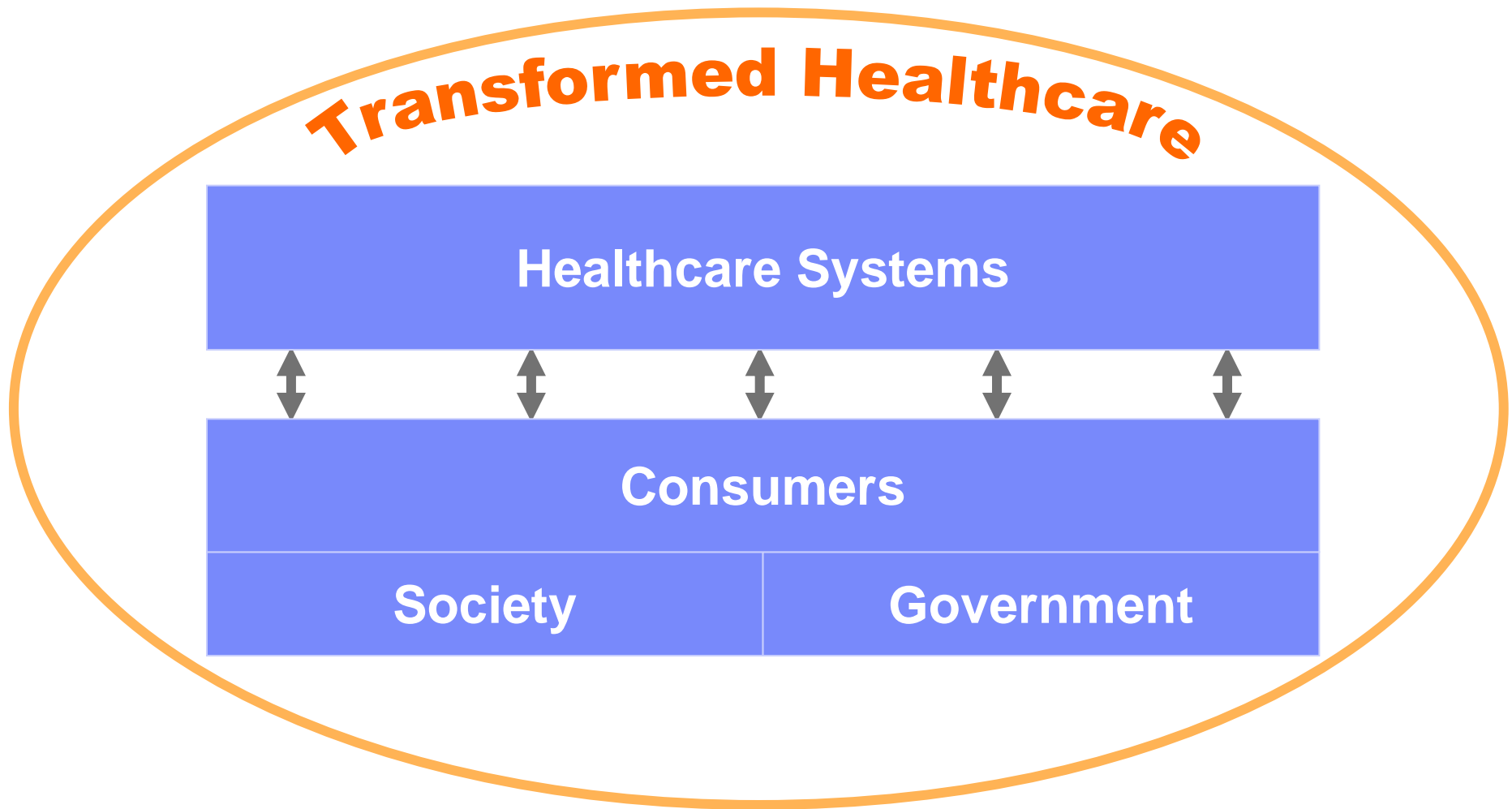
### Perceptions of Value

- Key stakeholders must be willing to reconcile their different perspectives on value in order to align incentives

❖ *An accountability framework, supported by aligned incentives and reconciled perspectives, is needed in an increasingly global environment*

Healthcare in Crisis: Win-Win or Lose-Lose Transformation?

**Four areas of simultaneous, inter-related change are required for healthcare transformation**



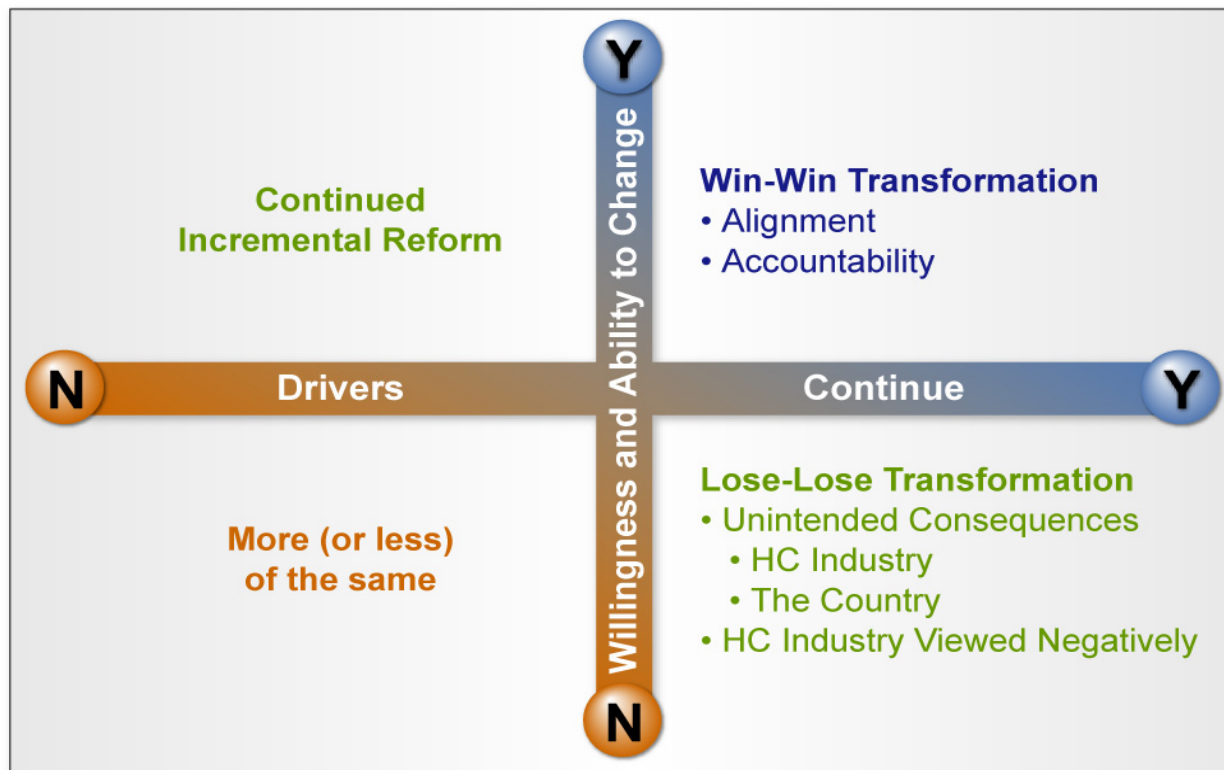
Healthcare in Crisis: Win-Win or Lose-Lose Transformation?

## Transformation requires answers to critical questions

Category	Questions	Sample Metrics
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Will enough be available?</li> <li>• Will it be prioritized and spent well?</li> </ul>	<ul style="list-style-type: none"> <li>• % Public/private spending</li> <li>• % of GDP</li> </ul>
<b>Consumers</b>	<ul style="list-style-type: none"> <li>• What is the overall health status?</li> <li>• What are societal expectations and attitudes?</li> <li>• What is the willingness to change behaviors?</li> <li>• How many “literate health activists” are there?</li> </ul>	<ul style="list-style-type: none"> <li>• Healthy life expectancy at birth (HALE)</li> <li>• Disability adjusted life years (DALYs)</li> </ul>
<b>Government</b>	<ul style="list-style-type: none"> <li>• Does the government have the leadership, political will, and stability to drive significant change?</li> <li>• Do government policies and regulations enable transformation?</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to prioritize and follow through</li> <li>• Emphasis on accountability in funding arrangements</li> </ul>
<b>Healthcare Industry</b>	<ul style="list-style-type: none"> <li>• Are key stakeholders willing to change?</li> <li>• Is the healthcare infrastructure (e.g. facilities and IT) appropriately robust?</li> </ul>	<ul style="list-style-type: none"> <li>• Incentives reward a longer term view</li> <li>• Ability to share data</li> </ul>

Healthcare in Crisis: Win-Win or Lose-Lose Transformation?

# In 2015, countries will emerge in one of four scenarios based on how they address the drivers and overcome the inhibitors



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Healthcare in Crisis: Win-Win or Lose-Lose Transformation?

## Countries that successfully transform their healthcare systems (i.e., “win-win” scenario) will witness three changes

### Focus on value

- Consumers, providers, and payers will increasingly direct healthcare purchasing, delivery of healthcare services, and reimbursement monies based on *value*

### Develop better consumers

- Consumers will make better lifestyle choices and become wiser purchasers of healthcare services, frequently with the help of health infomediaries

### Create better options for promoting health and providing care

- Consumers will increasingly seek out more convenient, effective, and efficient means, settings and providers



Transforming Value

## Perspectives on value from the healthcare system differ among stakeholders but must be balanced and reconciled for a win-win

### Value-Based Transformation is Necessary to Align Incentives

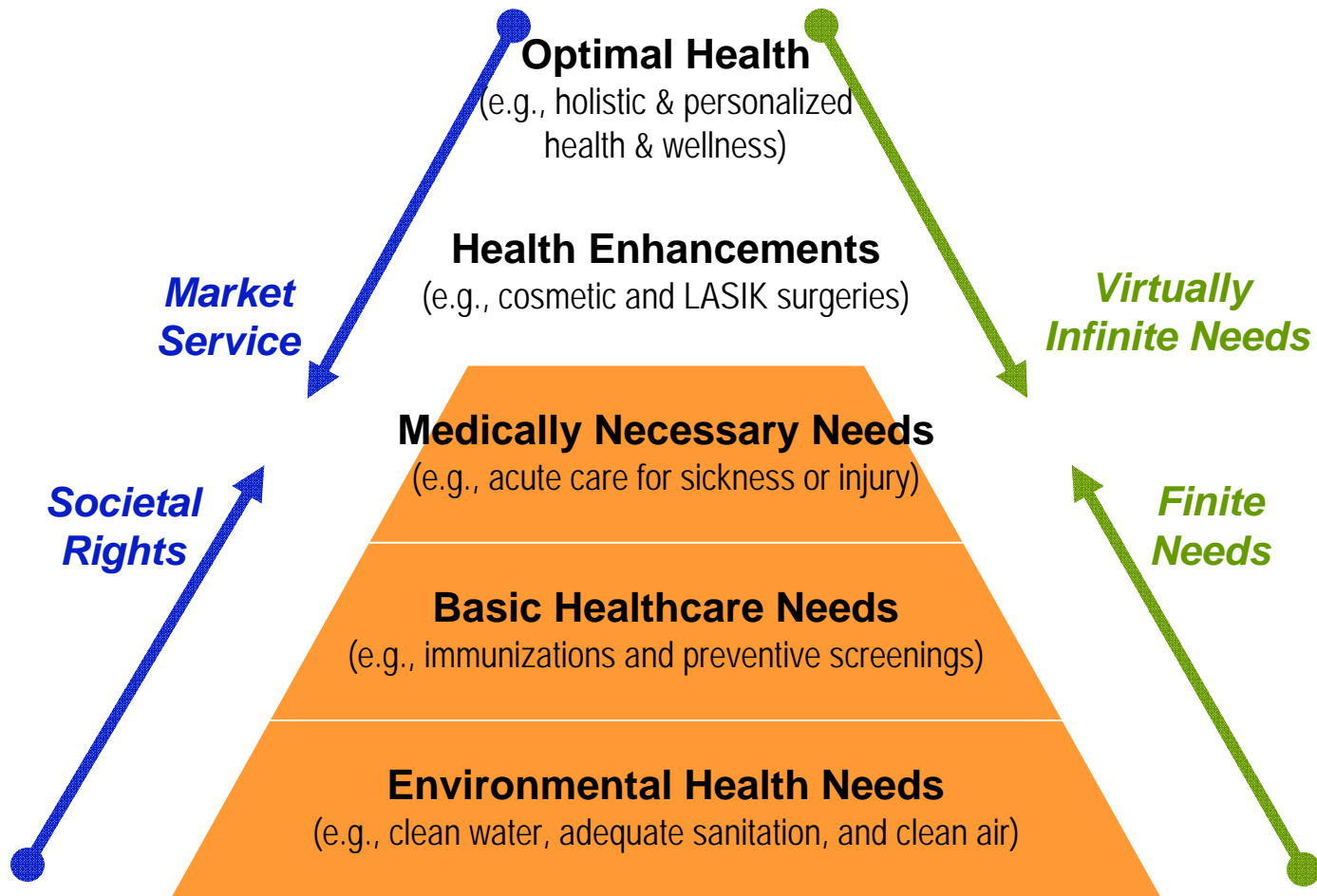
		Stakeholder	Today	Future
Demand	Consumers	<ul style="list-style-type: none"> <li>Fix me regardless of cost or cause</li> </ul>	→	<ul style="list-style-type: none"> <li>Help keep me well</li> <li>Provide appropriate, cost-effective, high quality care when needed</li> </ul>
	Societies	<ul style="list-style-type: none"> <li>Healthcare is a societal right</li> </ul>	→	<ul style="list-style-type: none"> <li>Healthcare is a societal right – but available funds must be well prioritized</li> </ul>
	Payers	<ul style="list-style-type: none"> <li>Minimize unit costs</li> </ul>	→	<ul style="list-style-type: none"> <li>Transparent cost/quality information</li> <li>Able to accept value-based reimbursement</li> </ul>
Supply	Providers	<ul style="list-style-type: none"> <li>Financial incentives to treat and to do more, not to prevent</li> </ul>	→	<ul style="list-style-type: none"> <li>Wellness and prevention</li> <li>High quality, cost-effective acute &amp; chronic care</li> </ul>



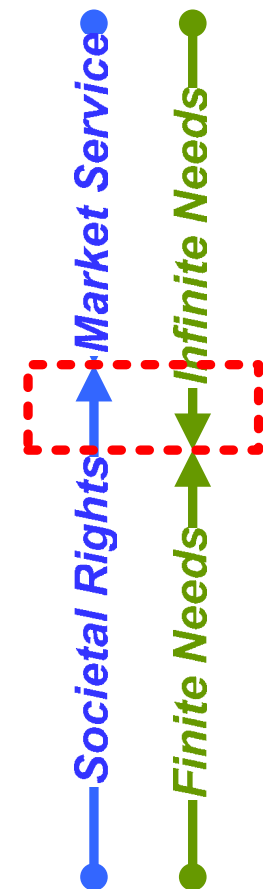
Transforming Value

Healthcare systems must balance and resolve these differences by establishing and addressing the needs of stakeholders

### Hierarchy of Healthcare Needs Model



### Funding Gap



Transforming Patient Responsibility

**In assuming more responsibility for their healthcare, consumers will make wiser health and wellness decisions as patients and purchasers**

**In developed/developing countries, citizens are increasingly assuming greater responsibility for managing and paying for their healthcare services and for their personal health management**

- Keys to this enhanced responsibility include –
  - ▶ **Comparison shopping for healthcare** based on readily available, reliable cost and quality information
  - ▶ **Information access** will be achieved in an IT-enabled, connected healthcare market where providers have adopted electronic health records (EHR)
  - ▶ **Rise of the “health infomediary”** for both the well and the chronically ill and for a much broader socioeconomic segment of the population
  - ▶ **Better health through better choices** will become a reality through the proliferation of healthy living education and social responsibility programs

Transforming Care Delivery

**By 2015, individualized care will increasingly be delivered at more convenient locations, by more affordable and effective healthcare teams**

**In developed and developing countries, *healthcare consumers will seek out more convenient, effective, and efficient healthcare means, settings, and providers***

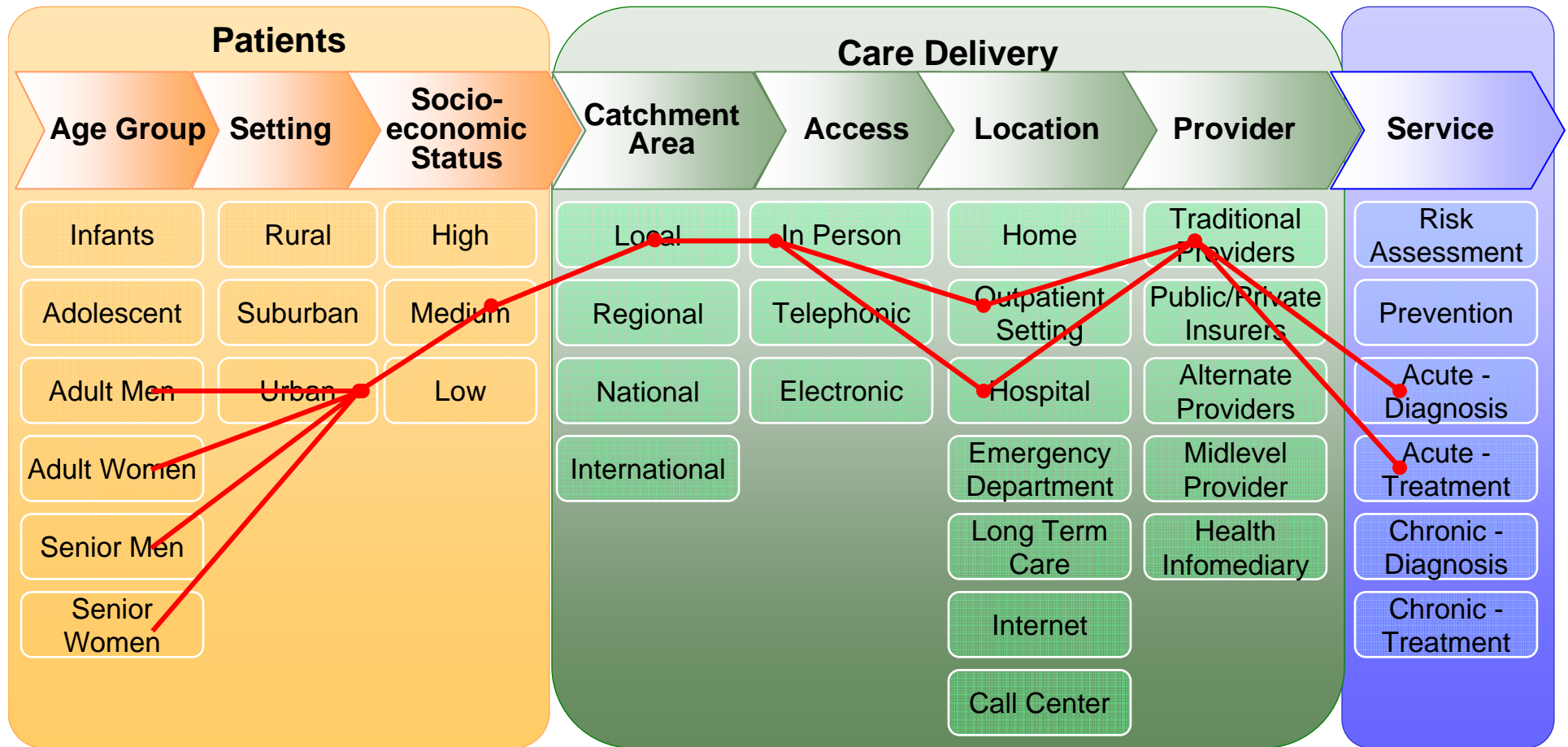
- Payers – governments, third-party health insurers, etc. – will direct its citizens and customers, respectively, to these alternative options
- Current examples include medical tourism, integrative medicine, and retail healthcare

**The shift in consumer attitudes toward venues of healthcare delivery will be accompanied by a *corresponding shift* in how, where, and who provides preventive, acute, and chronic care services**

- In general, there will be a **shift from episodic and acute care to more patient-centered, value-based, longitudinal care by healthcare teams**
- There will be better management of chronic conditions, especially as more acute diseases evolve into chronic diseases through advancements in detection and treatment

Healthcare 2015 > Transforming Care Delivery

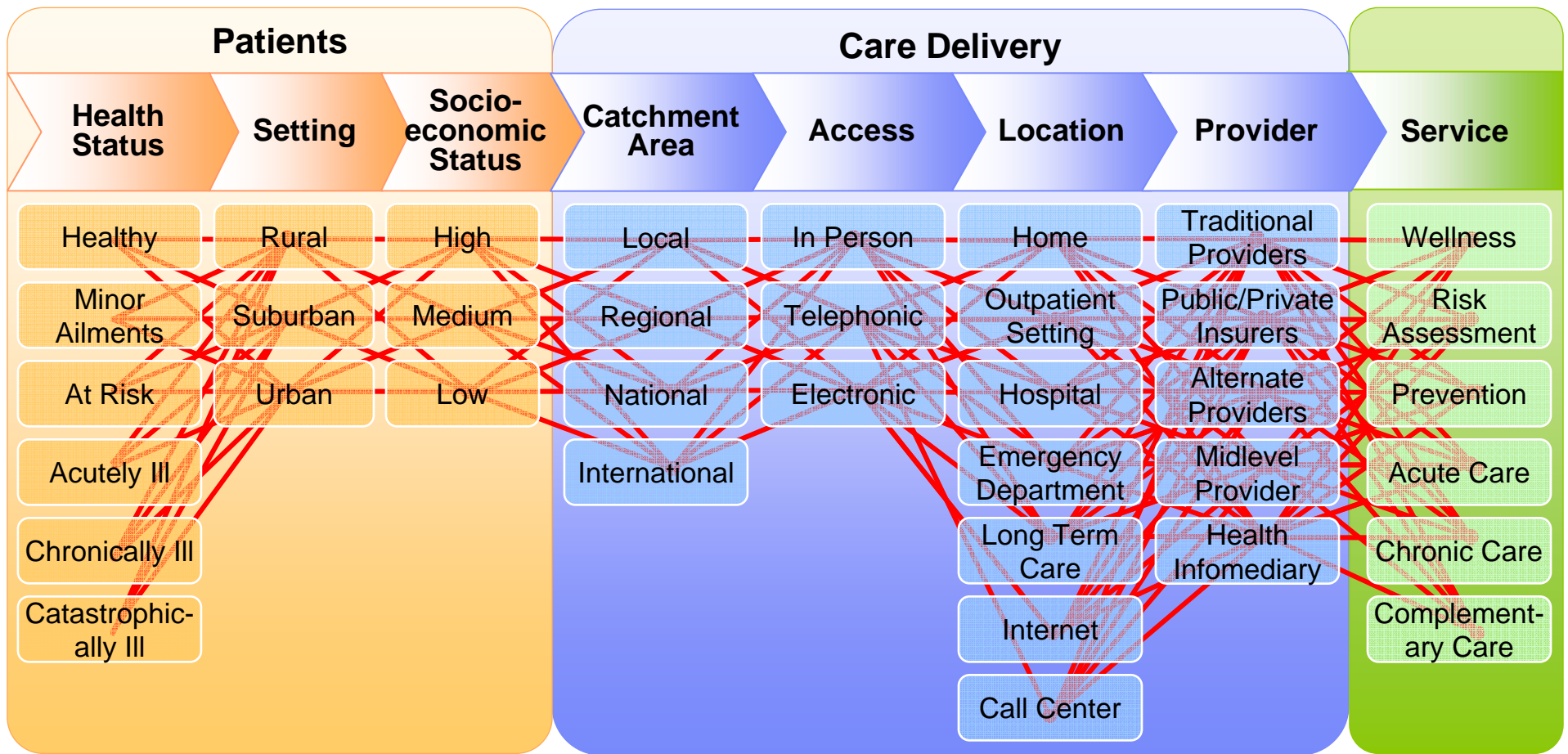
**In 2006 in the developed world, healthcare services are typically acute and provided locally by physicians in outpatient and hospital settings**



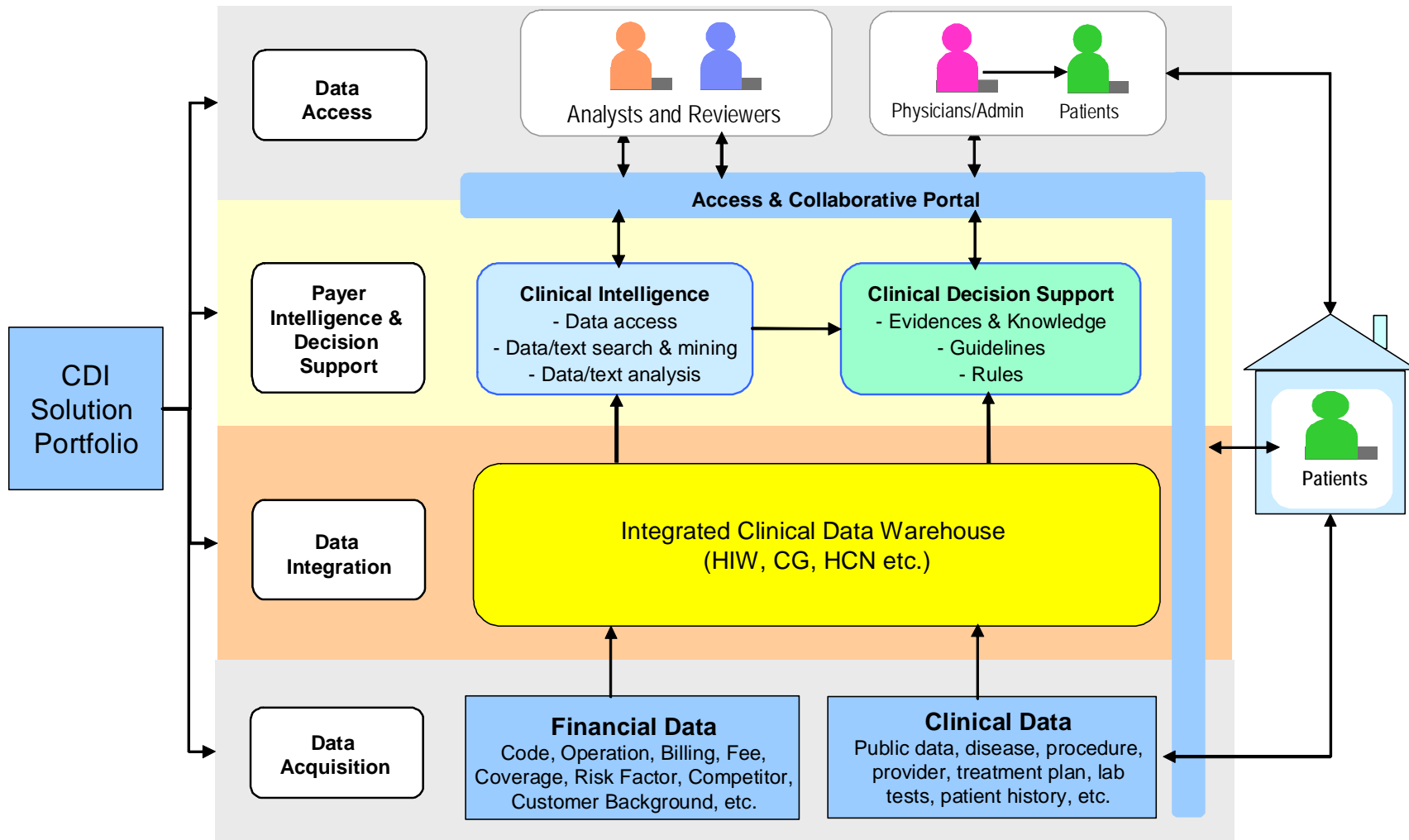
Transforming Care Delivery

# By 2015, payers, providers, and suppliers will focus more on market segmentation and channel management

## Consumers Will Seek Out More Healthcare Delivery Channels



# The Future - Fully Integrated Clinical Decision Intelligence



## IBM's Role to Lead the Patient Centric Healthcare Era

### Deliver Innovative Solutions to our clients based upon IBM's deep domain and technological expertise

- Healthlink's clinical and business process assets which optimize workflows
- IBM Software application integration and information access capabilities
- Systems leadership in data analytics and storage solutions that provide critical patient insights



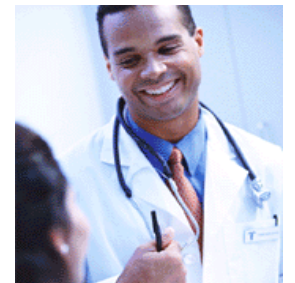
### Connect key stakeholders and cultivate the global ecosystem

- Relationships with a critical mass of collaborators
- Ability to develop value nets and new business models
- Leadership in motivating the use of EHR and PHR



### Lead and Drive Patient Empowerment

- Demonstrative examples as a best practice employer and corporate innovator
- Valuable Health System advisor
- Experience in working with connected community collaboration and Intelligent Health Access





# IBM Healthcare and Life Sciences

## *Our Solutions Portfolio Addresses These Challenges*

### **Strive for Operational and Clinical Excellence**

- Comprehensive clinical and business strategy to support your transformation
- Drive quality through the transformation of clinical and business processes, supported by enterprise clinical systems

### **Drive Innovation**

- Leverage your organizations information assets to drive operational efficiencies and clinical quality
- Shift towards quality transparency and evidence based practices care

### **Achieve Flexibility and Efficiency in Operations**

- Achieve cost efficiencies and unprecedented up time of mission critical systems through an optimized, open information infrastructure
- Leverage legacy systems while preparing for tomorrow's challenges

### **Enhance Collaboration and Revenue Opportunities**

- Ensure your information infrastructure is open, flexible and interoperable to prepare for tomorrow's patient centric era

**Clinical & Business  
Process Optimization**  
*Strategy Advisory Services  
Supply Chain & Human Capital  
Clinical Portal and Single Sign On*

**Healthcare Analytics**  
*Clinical, Administrative  
and Research Informatics  
Clinical Genomics*

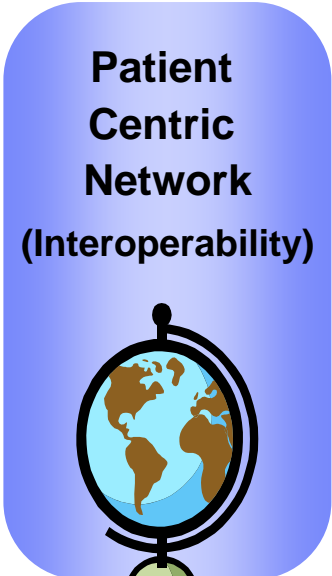
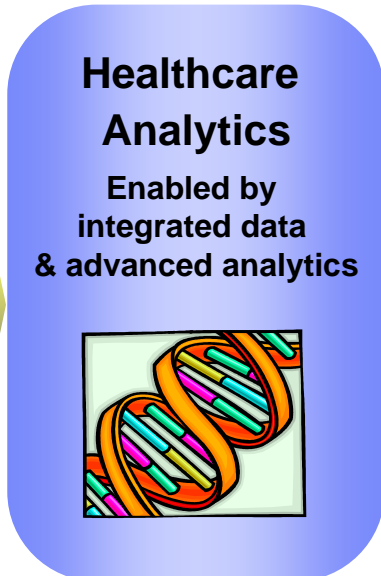
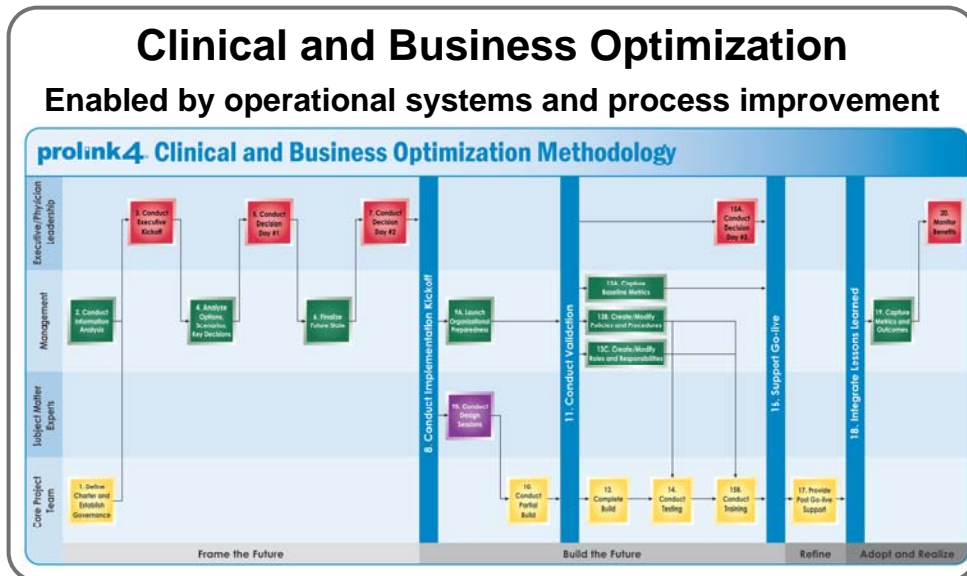
**Healthcare Technology Services**  
*Wireless Technologies  
On Demand Infrastructure  
IT Resource Optimization*

**Patient Centric Networks**  
*Strategy and Advisory Services  
Implementation and Hosting Services  
Health Information Exchange  
Clinical Research Networks*

**Flexible Delivery & Financial Models**



# The Methodology

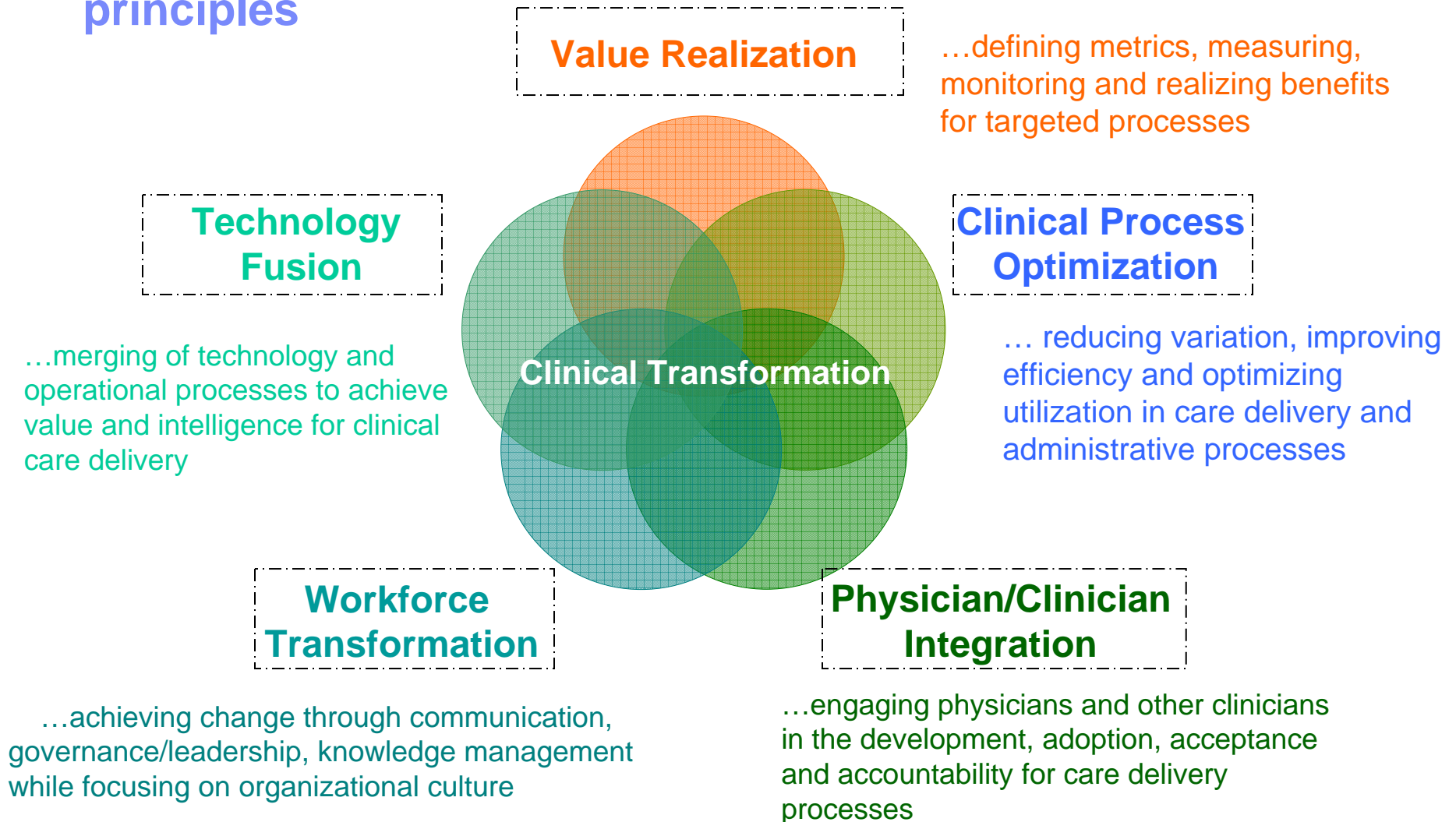


**Clinical Research, Quality, and Operational Improvement**

**Provider Connectivity to the Healthcare Ecosystem**

**Optimized Infrastructure**

# Clinical Transformation components and underlying principles



*We envision a “layered” methodology with linkages between layers to enable an integrated approach to Clinical Transformation.*

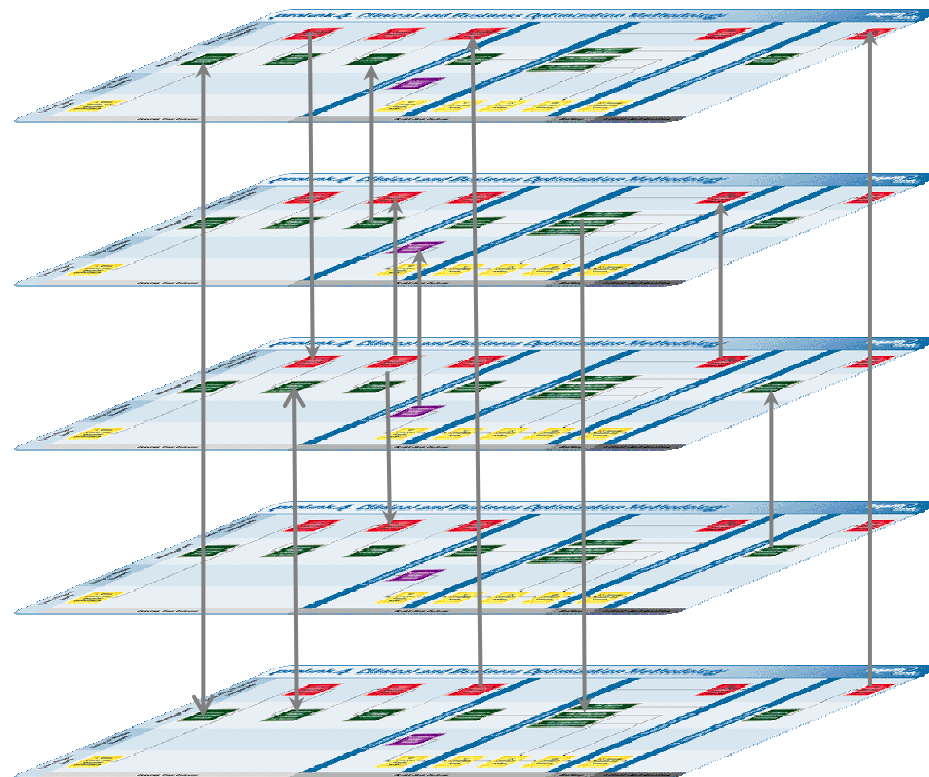
**Program Management** – Creates overall program goals and manages priorities and resources

**People and Workforce** – transforms skills, organizational design, and incentives to achieve program goals

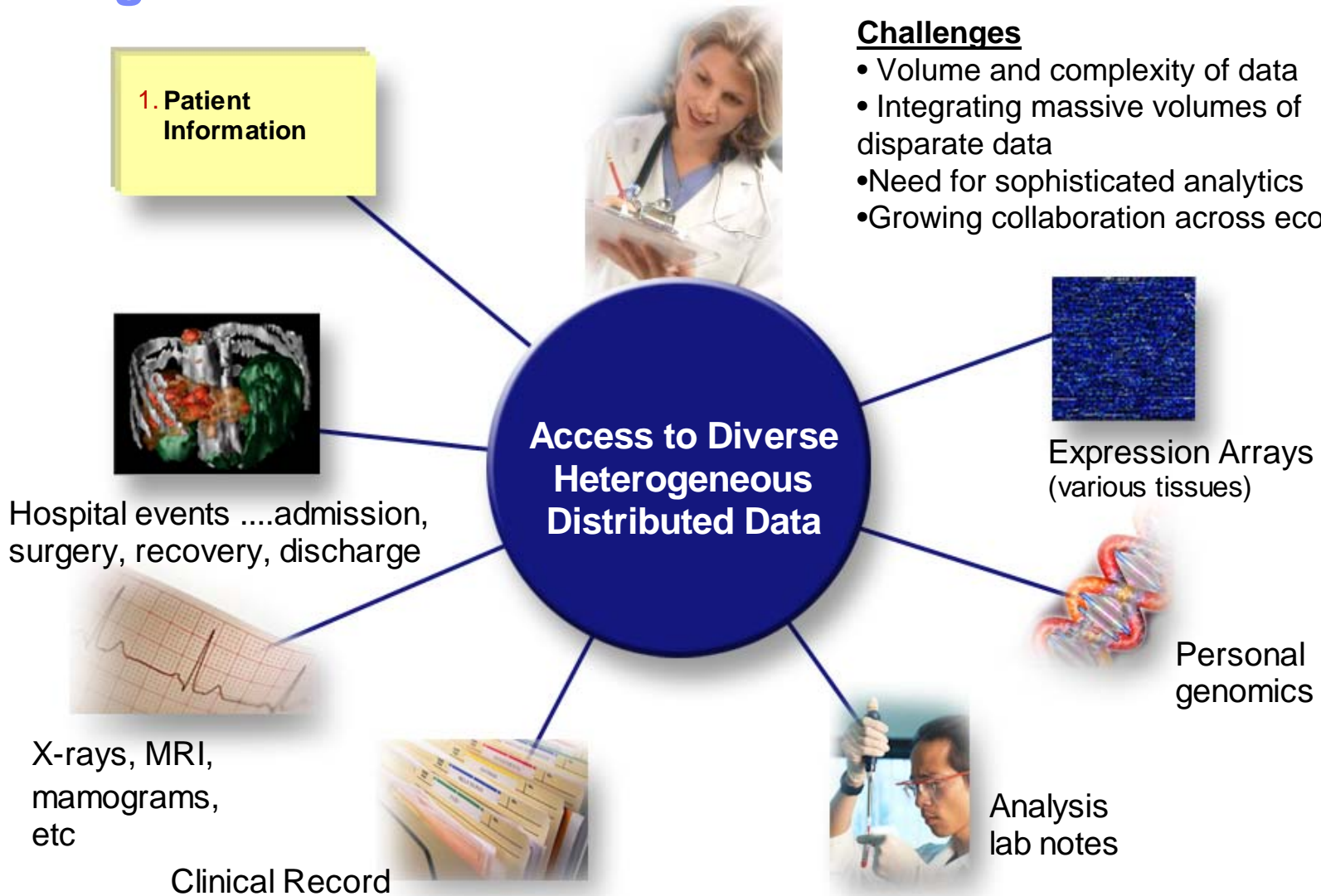
**Process Optimization** – designs and implements new IT-enabled processes

**Technology and Infrastructure** – architects the technology to support new systems and processes

**Value Realization** – ensures that people, processes and technology deliver desired performance improvements



# Health Analytics is about deriving value from disparate, heterogeneous information

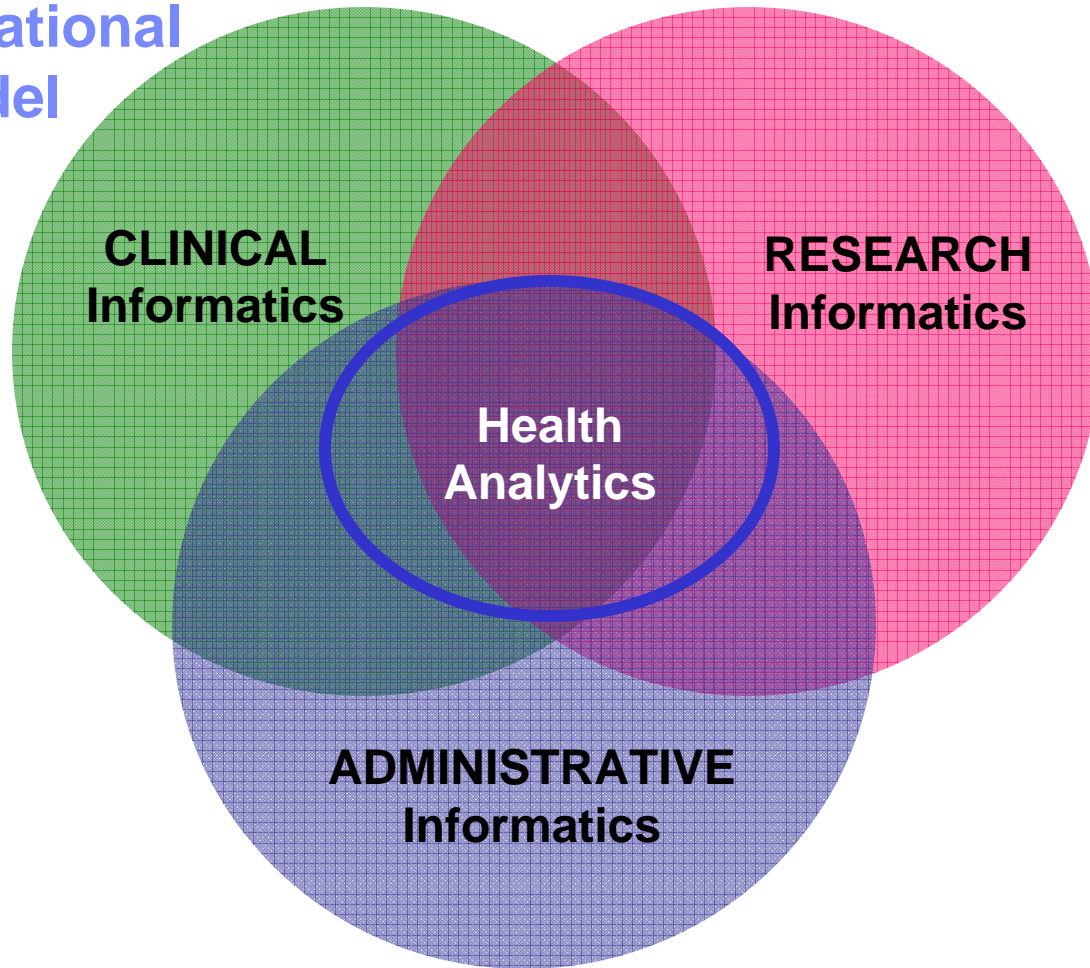


## Challenges

- Volume and complexity of data
- Integrating massive volumes of disparate data
- Need for sophisticated analytics
- Growing collaboration across ecosystem

## The Translational Health Model

Results, Medications  
VS, Ht/Wt, Allergies  
DC Summaries  
Clinical Doc



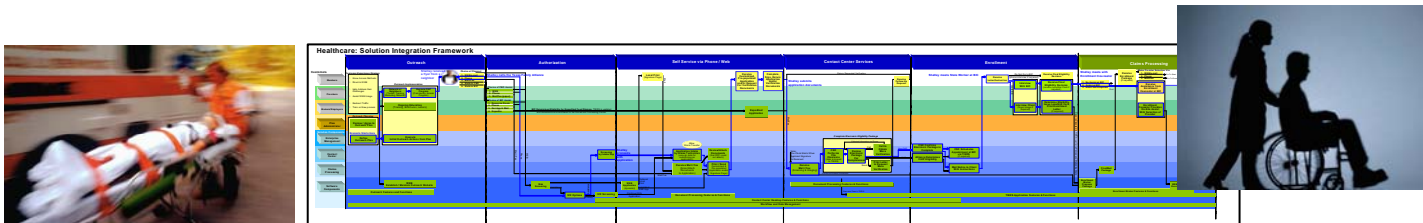
Proteomics, SNPs,  
Publications  
Clinical Trials  
PubMed

ADT, Demographics  
Provider, Scheduling  
Diagnosis, CPT, AR,  
Billing, Claims

## Vision: Patient Centric Revenue Cycle Management

### The Vision

*IBM will deliver solutions and services to enable our clients to achieve market leading efficiency and efficacy in the health care ecosystem by optimizing the revenue cycle among stakeholders. To achieve this we will facilitate cross environment process re-engineering and implementation of Health Information Exchanges for clinical and financial data in a secure and private manner among appropriate participants*



### The Goals

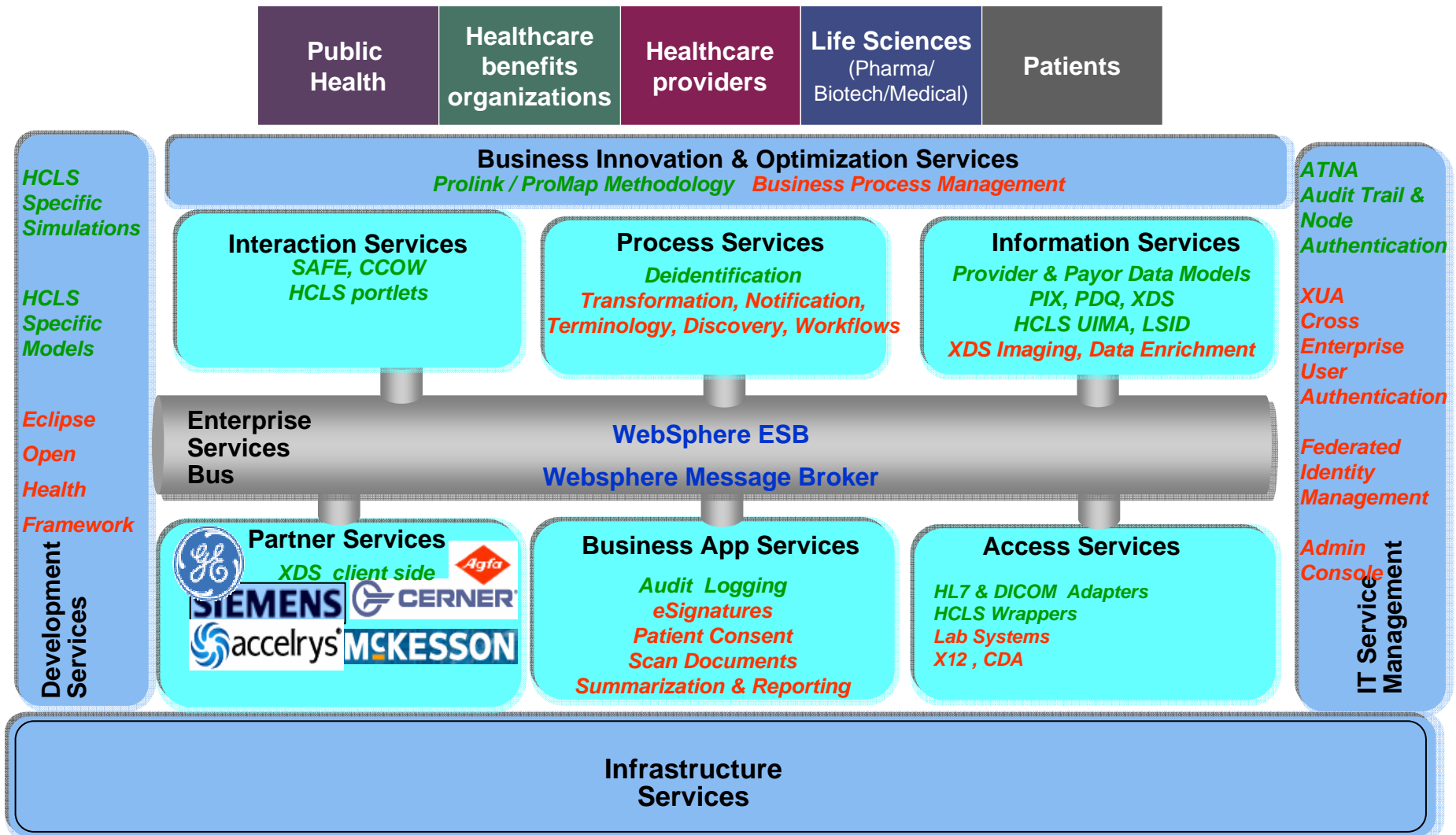
#### Define the Future State

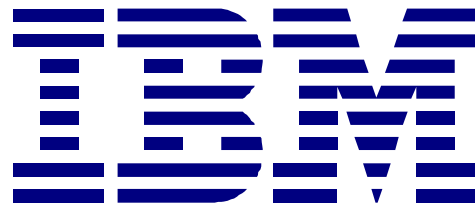
***Define and document future state RCM scenarios which result in innovative ways to improve RCM and costs, through collaboration between patients, payers, hospitals and doctors on the revenue cycle and claims process***

#### Align with Industry Leaders to Deliver Innovation

***Bring these ideas forward to a select set of clients who are interested in collaborating with others in their regional ecosystem to validate the future state and the benefits to all stakeholders***

# Health Information Exchange is a foundation of the strategy





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