



Improving Health through Information:

The Future of e-Business in Hospitals

Jeffrey D. Miller
Vice President
WW Public Sector, Health, and Education
Hewlett-Packard Company

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“High information costs are characteristic of many health care markets; frequently the only way a person can know whether he needs to see a physician is to see a physician.”

Professor Victor R. Fuchs

“Who Shall Live?”



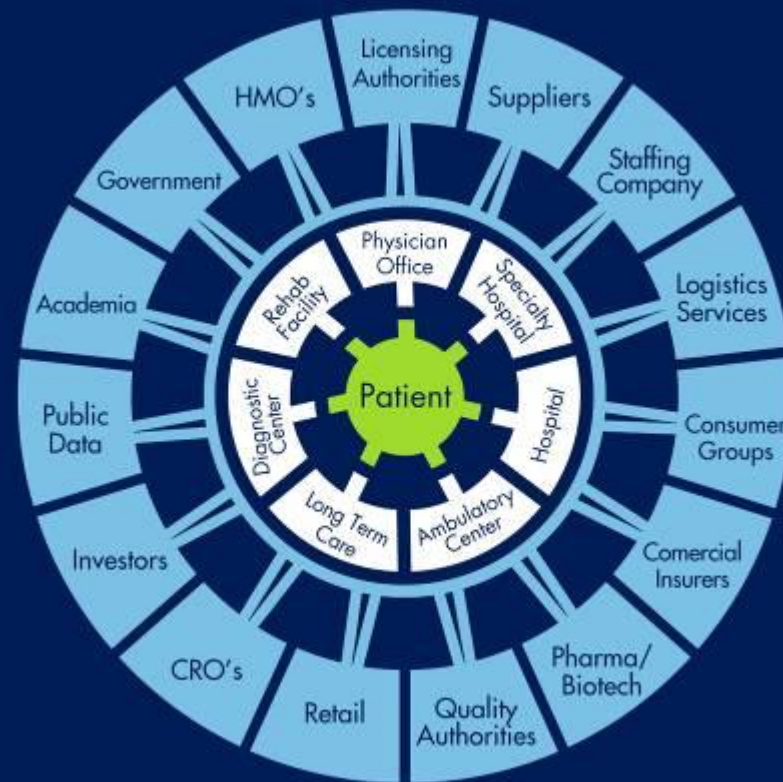
Providers operate in a complex, fragmented business ecosystem

Typical healthcare provider ecosystem



Top healthcare provider priorities

- Improve patient safety
- Increase level of care
- Improve physician productivity
- Comply with privacy regulations
- Efficiently share patient records
- Control spiraling costs



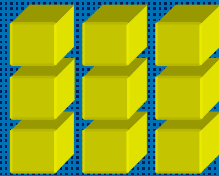
To optimize interactions within their ecosystems, healthcare provider companies must be **agile**: able quickly to respond to and capitalize on change

Key Trends in Health ICT

1

Physical Consolidation

Technology
Centric



Strategy: Consolidate and Integrate Technology

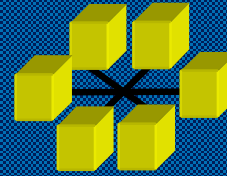
Key Principles: Connect and Consolidate

- Data centers
- Devices
- Facilities
- Networks
- Stacking, Virtualization
- Servers
- Storage

2

Logical Consolidation

People &
Process
Centric



Strategy: Integrate and Simplify the Process

Key Principles: Integrate and Modularize

- Application Rationalization
- Intra-Enterprise Process Improvement
- Architecture & Governance
- Information Policies
- Shared Services

3

Ecosystem Consolidation

Value Chain
Centric



Strategy: Extend Information-enabled Processes

Key Principles: Innovate and Collaborate

- Service based offerings
- Inter-Enterprise Process Improvement
- Standards and Architectures
- Information Mobility

① Creating the Digital Hospital

Integration across the technology domains

Nurse Call

Medical Equipment

IT Systems/Facility Control

ICT Infrastructure

Communication Equipment

Medical Application Integration

Patient Portal/Terminal

RFID/WiFi

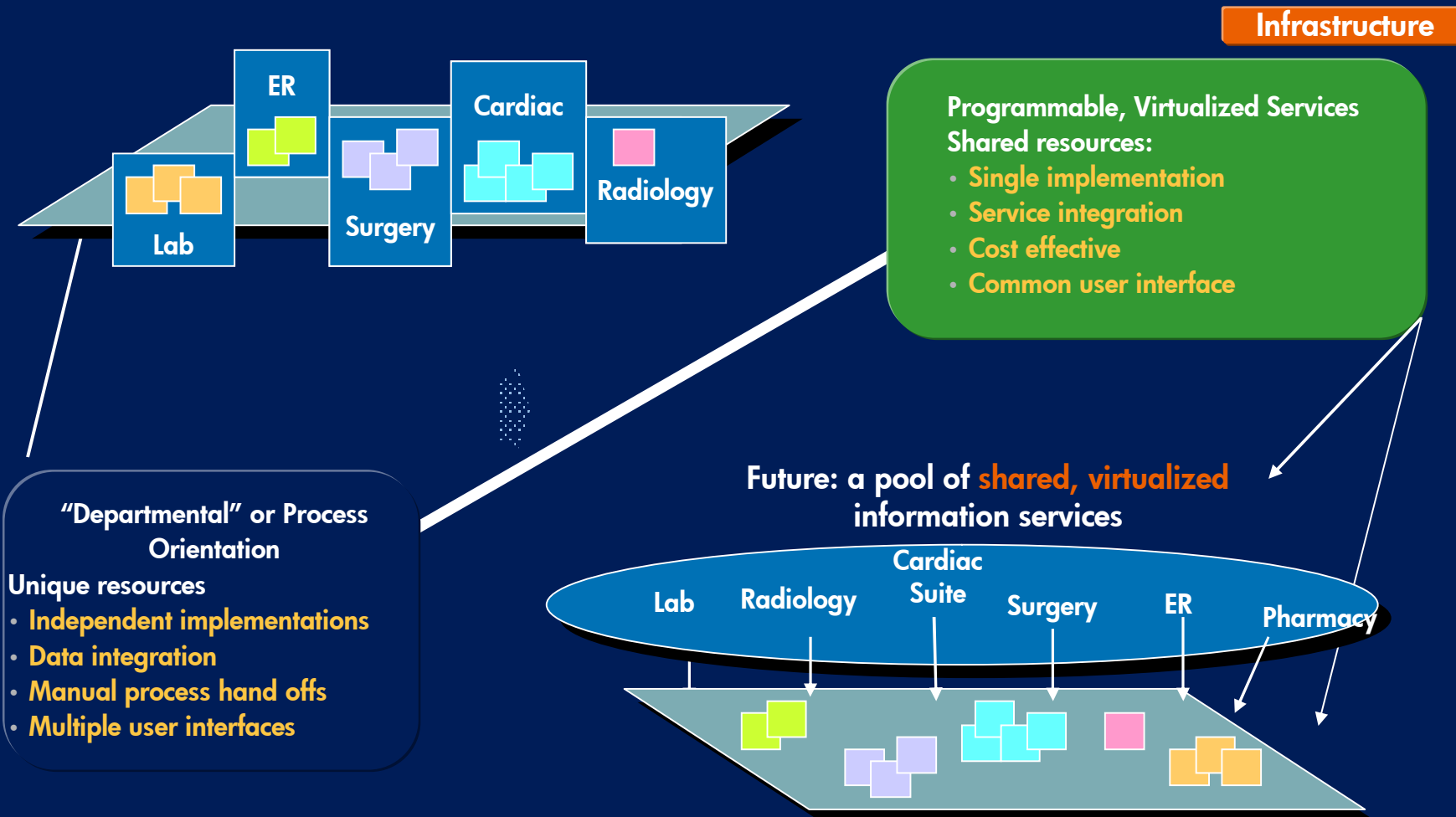
Digital Paper

Integration Operation



2 Integration of hospital applications

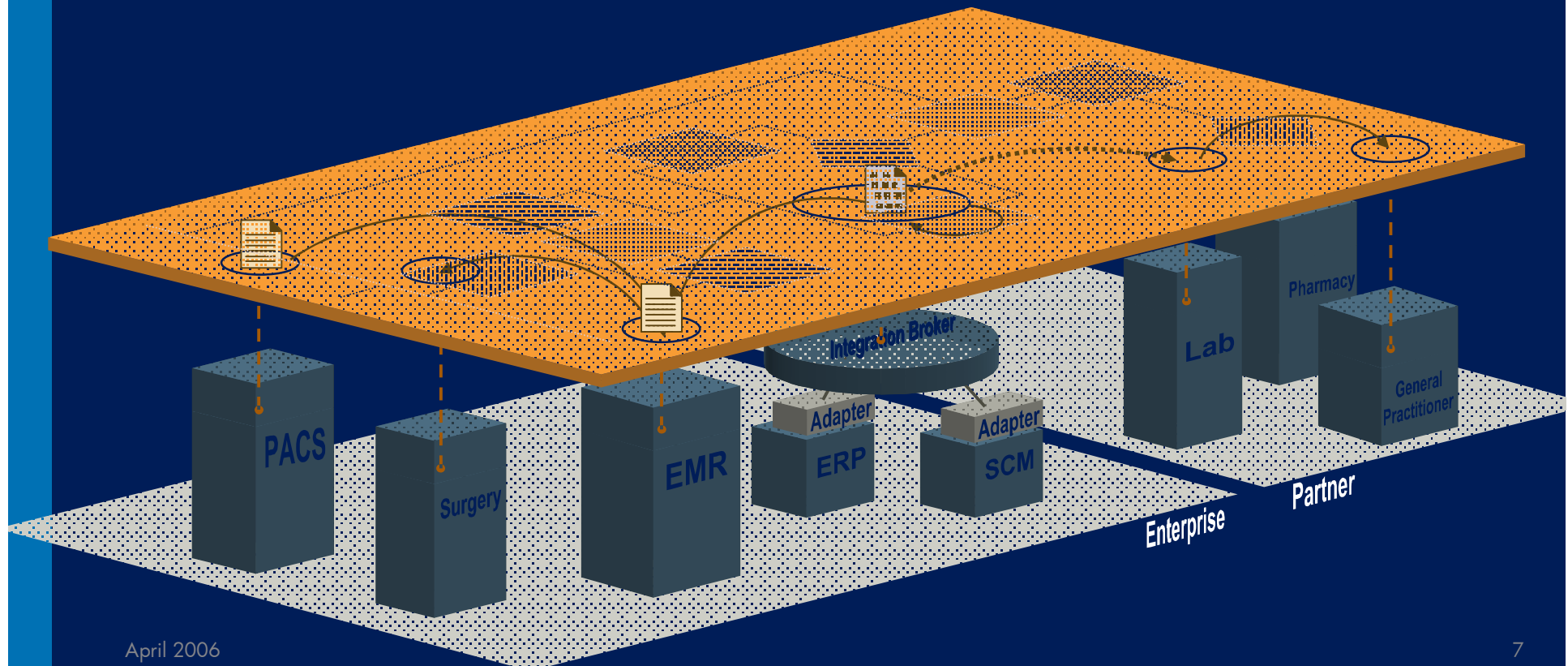
Creating a common platform for process improvement



② Transformation to an industry Service Oriented Architecture

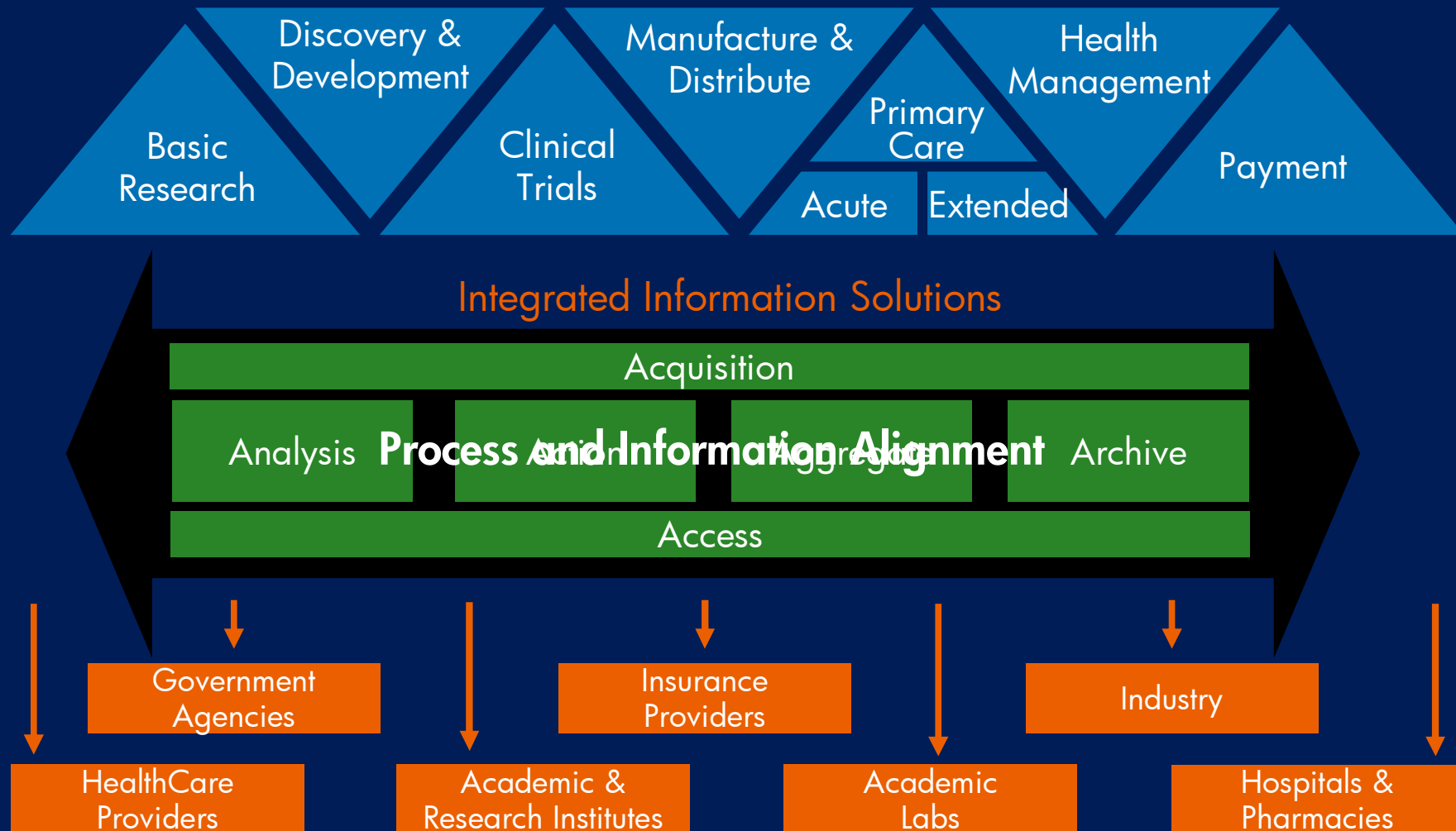


- Promotes agile and flexible business processes
- Increases collaboration and integration of value chain
- Improves ability to introduce new products and services



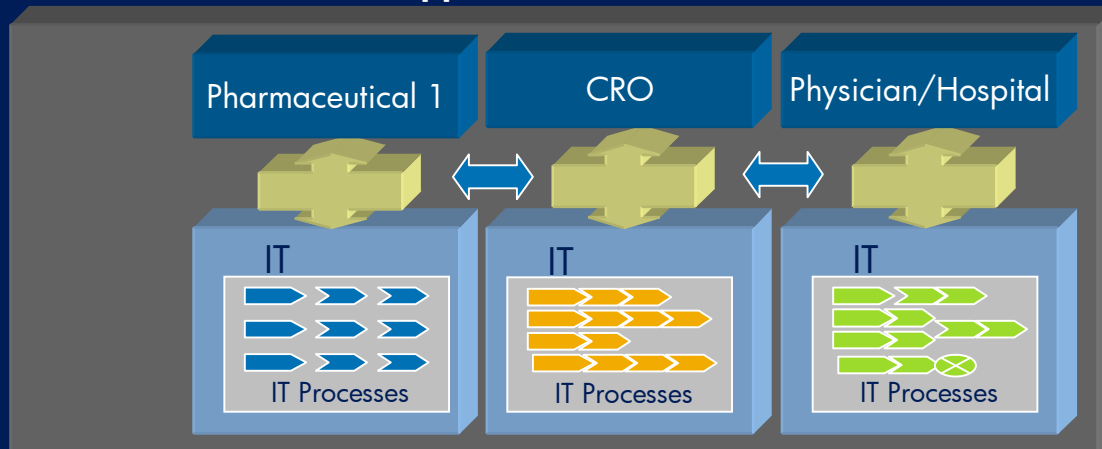
③ Transformation through alignment

Integrated information across the value

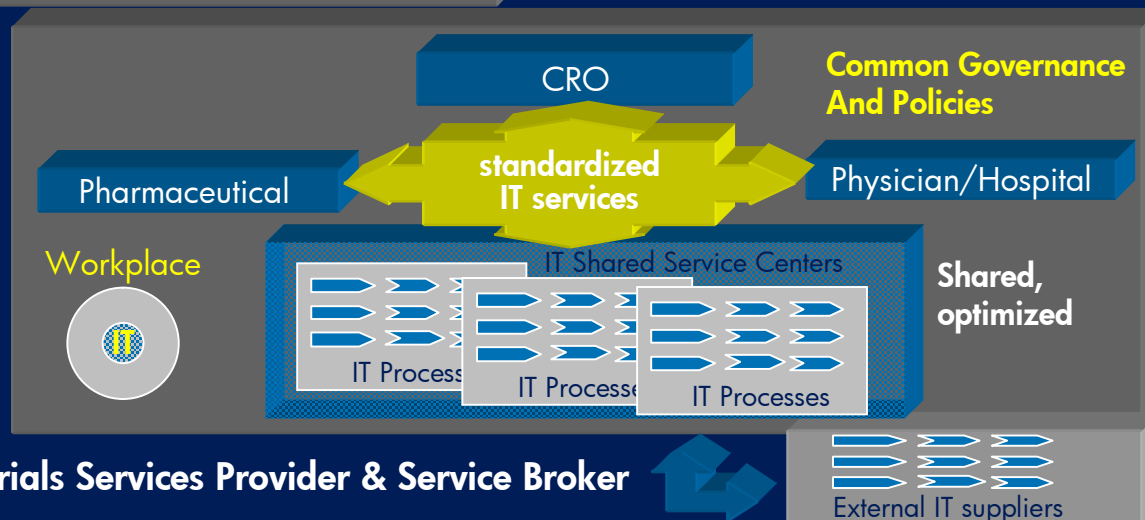


3 Emergence of Health Information Services Clinical Trials Applications

Traditional Approach



Each organization:
Unshared,
Unsynchronized
underutilized



Clinical Trials Services Provider & Service Broker

Keys to the Future – Six A's

- Building Action-oriented, patient-centric applications
- Improving data Acquisition by connecting medical devices
- Aggregation of phenotypic, proteomic, and genomic data
- Better decision support by improving the Analytical foundation
- Management and Archival of data based on information lifecycle
- Ability to Access information from multiple locations via multiple methods



Value Formation

Accelerating medicine through integration, insight, and agility

- **Integration**—Integrating resources across the value chain while automating and managing transactions for greater efficiency and speed
- **Insight**—Turning information into insights that enable rapid advancements and better decisions
- **Agility**—Streamlining operations, accelerating the pace of innovation and ensuring compliance



“A rational man acting in the real world may be defined as one who decides where he will strike a balance between what he desires and what can be done. It is only in imaginary worlds that we can do whatever we wish.”

Walter Lippmann

Author of “The Public Philosophy”



Back-up slides

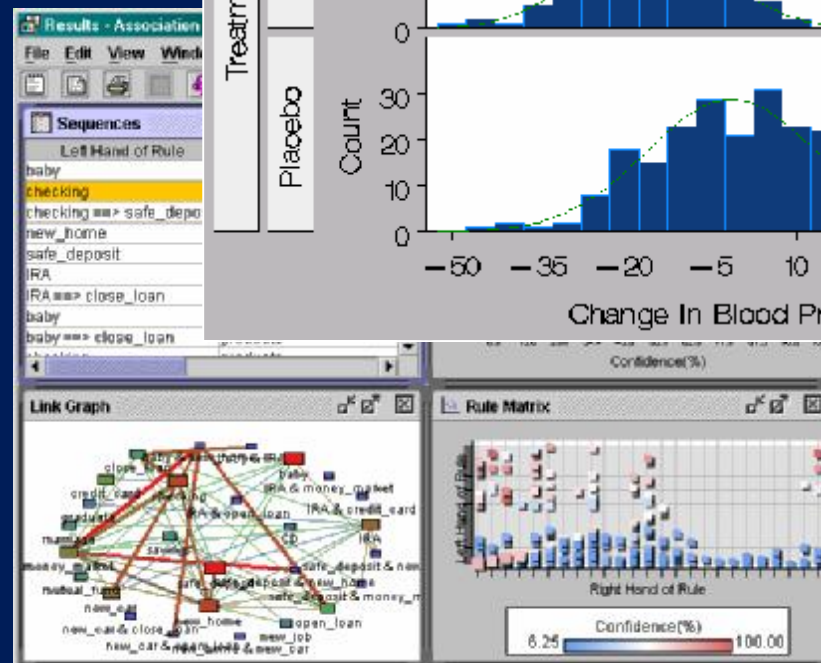
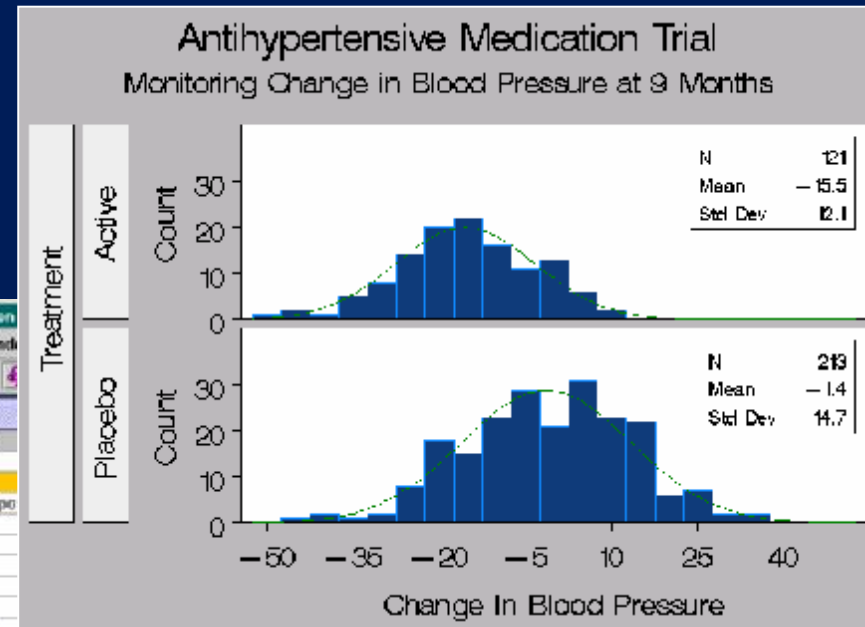
Action



Analysis

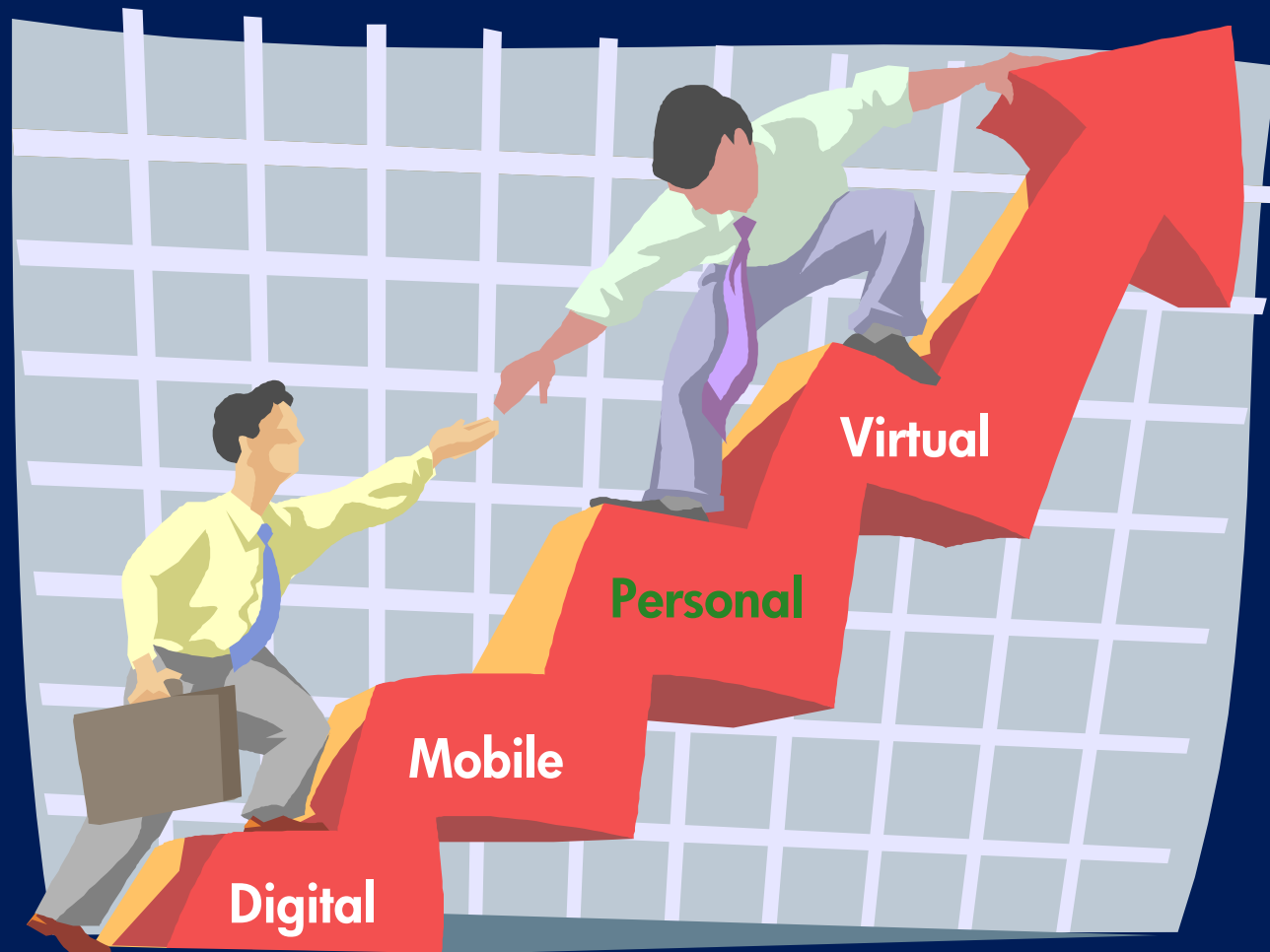
Creating Insight from Information

- Forecasting
- Predictive & descriptive modeling
- Optimization
- Design of experiments
- Text mining



Journey to the promise of personalized medicine

Changing our perspective one step at a time





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