META Group

The Technology of Operations

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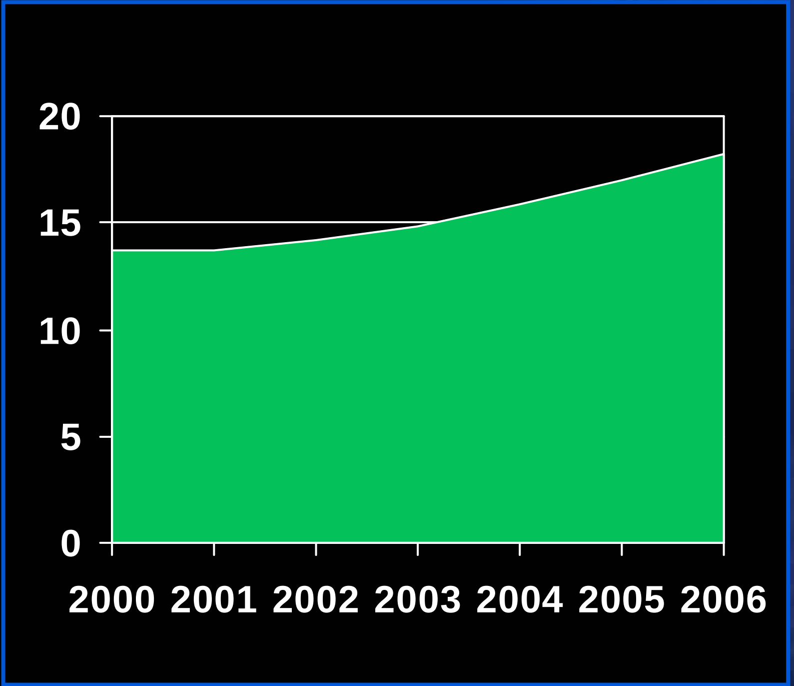
Infrastructure and Application Management Scenario

- 58% of market owned by 4 vendors (CA, IBM/Tivoli, BMC, and HP OpenView)
- Market growth flat ($14 billion in 2001)
- Purchasing increasingly fragmented
  - Organizationally and technologically
- Integration moving to data level — beyond events

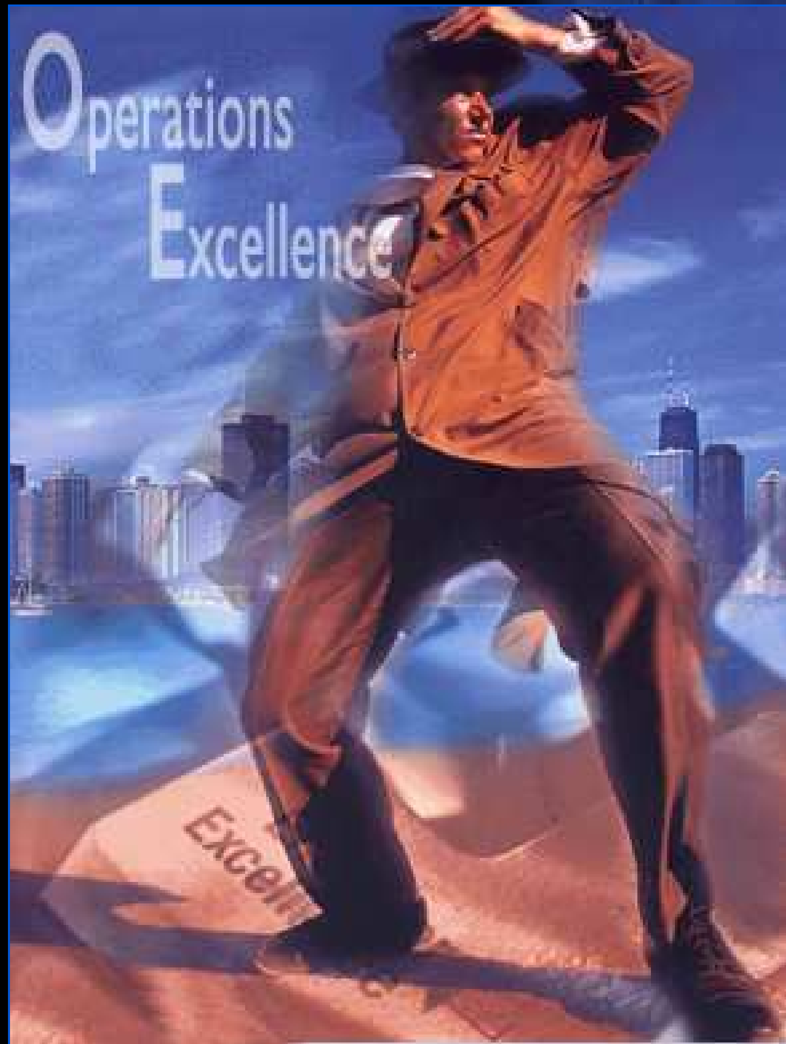
Market Growth



Flat market and more point-tool options lead to more power to buyer — search out deals

Critical Issues

- Understanding the IAM automation market, vendors, and technologies
- Making the right technology buying decisions
- Identifying trends in infrastructure, applications, and service management



Vendor Landscape

- Large vendors retrenching
- Deal sizes shrinking and more focused
- Merger and acquisition activity down
- Smaller vendors thriving
- New focus on storage, security, and Web management
- Commoditization of functionality

Vendors

1 Billion +

Computer Associates
HP OpenView
IBM/Tivoli
BMC Software

$100 Million +

Micromuse
Quest Software
Veritas
Net IQ
Peregrine

Other Public

Visual Networks
Keynote
Concord
Resonate
InfoVista
Novadigm
NetScout
Marimba
Riversoft
Precise
SWAN

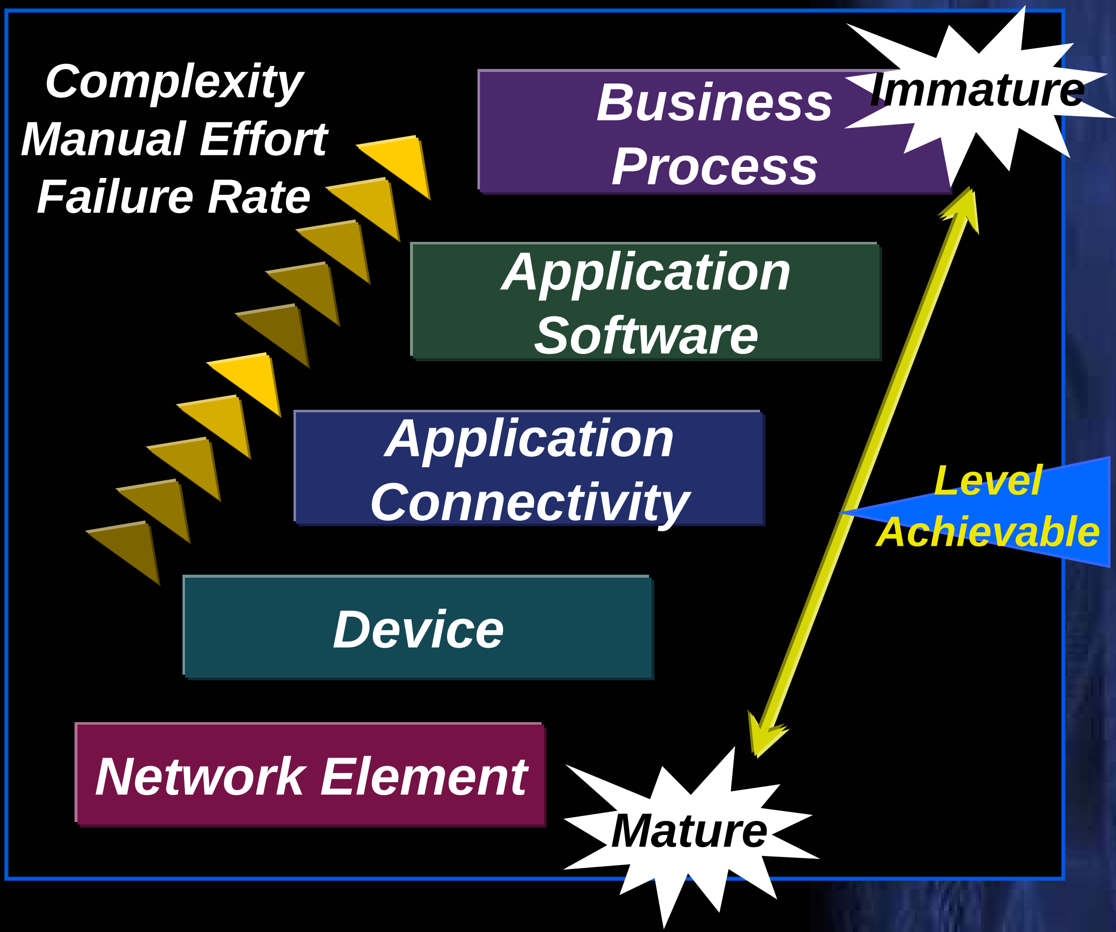
Significant Presence

Mercury Interactive
Microsoft
EMC
Compuware
Cisco
Candle

Negotiation is more important than ever

Root Cause/Discovery

- Without strong discovery, root cause overly manual
- Considerations
  - Accuracy of discovery
  - Ease of rules creation
  - Scope of root-cause analysis

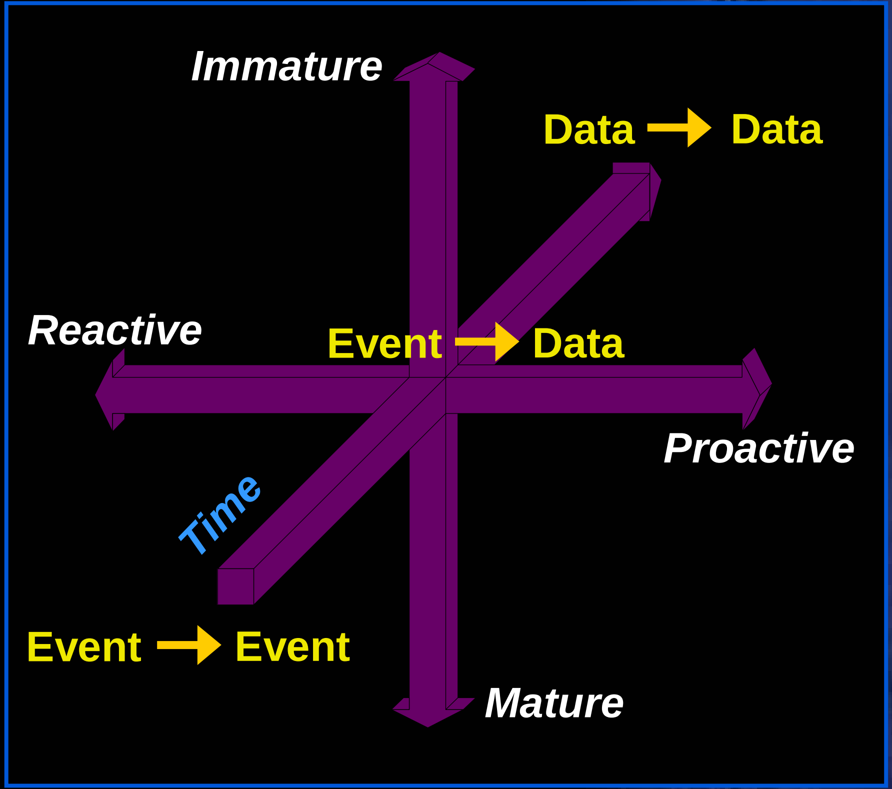


Without sophisticated correlation, root-cause analysis is not a reality

Correlation

- Real time and historical
- Remains complex & tradeoffs necessary
  - e.g., single vendor, complex integration
- Minimize "spots" of correlation
- Seek to use correlation; however, plan full-time attention
  - e.g., rules creation and maintenance

Real Time: Maturing and Progressing



Correlation products are numerous, powerful, and useful, but temper overall expectations

What's Really Used?

Hot Demand Areas

- Storage management
- Web application management
  - Web application server & response time
- Service-level management
- Desktop migration
- Aggregated view
- Root-cause analysis

Most Mature in Use

- Network health/fault, Layer 3 discovery
- Layer 2 discovery will commoditize by YE03
- Element monitors
  - Servers & databases
- Backup/recovery
- Help desks

Hype

- End to end
- Service-level management
- The business view
- Business integration

Technologies that use data, not just generate it, are the most immature (e.g., automated action, analyzing data, real-time correlation)

Understand Market, Vendors, and Technology

Bottom Line

- **Negotiate with vendors offering ever more creative options, and plan to spend time in that process**
  - **Expect significant change in vendor landscape during next 2-3 years**
- **Observe emerging root-cause technology, but engage cautiously and plan to allocate resources**
- **Determine where logical correlation should occur and plan to implement, but allow resources for maintenance**

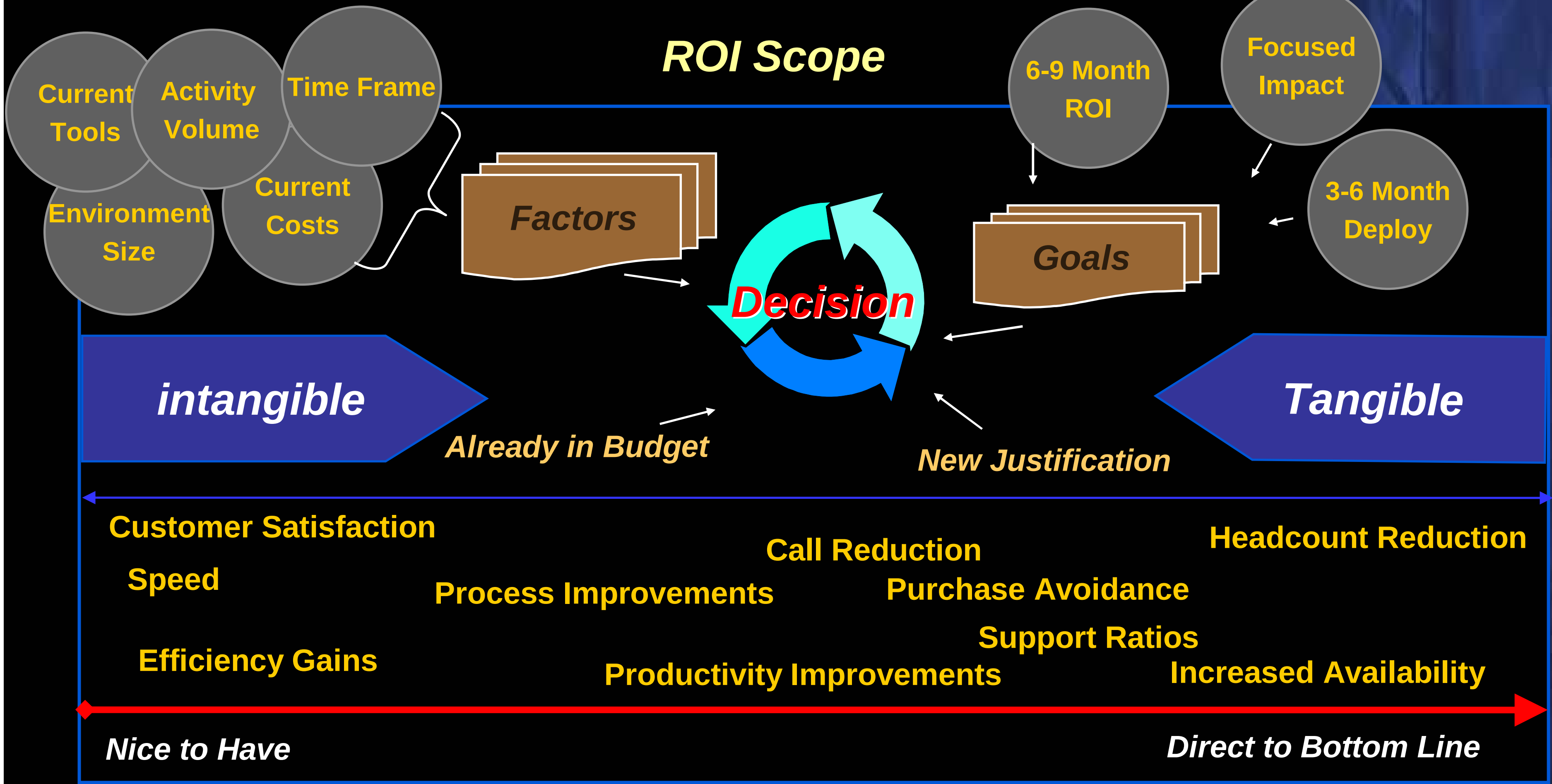
Business Impact: Effective vendor engagement strategies can lead to substantial cost savings

The Buying Decision: Set the Context

- Step 1 — Establish a process foundation (e.g., ITIL)
- Step 2 — Accept technology elements and organizational silos will use own tools
  - Establish minimum guidelines
- Step 3 — Understand your existing IAM portfolio
  - Look for bundled technology
- Step 4 — Define technology integration layers
  - e.g., help desk, incident management
- Step 5 — Select vendors
  - Vendors for integration points critical
- Step 6 — Continuous management

Vendor selection in a vacuum results in failed implementations 50%+ of the time

ROI of IAM



Companies wishing to demonstrate an ROI MUST capture complete internal costs

IAM Portfolio Management

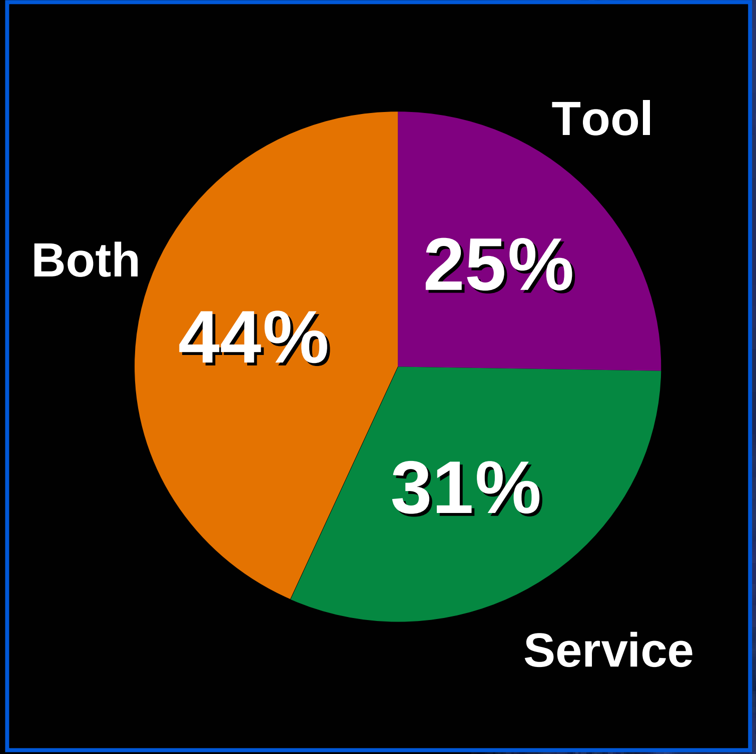
- Taking inventory of what tools are used & owned
  - ID opportunities for additional use — reduce shelfware
  - Tie technology to the processes they support
  - Look for overlapping tools and opportunities for consolidation
- Every new purchase must be compared to portfolio and differentiate its capability or benefit to the organization
- Cost/value comparison of new purchases
  - e.g., Is an extra 0.01% availability worth the cost?
- Evaluate business-derived benefits from purchases
  - Including way to measure

Return on investment (ROI) must be understood for all technology in the portfolio

To Service or Not to Service?

- Management services maturing (e.g., MSP)
- Larger vendors in game
  - e.g., Perot, Compaq, IBM
- Can deliver faster ROI, reduce shelfware, and increase flexibility over doing job internally
- Management services are viable options — and should be investigated for new projects

What Type of Choice Is IAM?



There will be very few standalone MSP vendors of significant size

Make the Right Buying Decision

Bottom Line

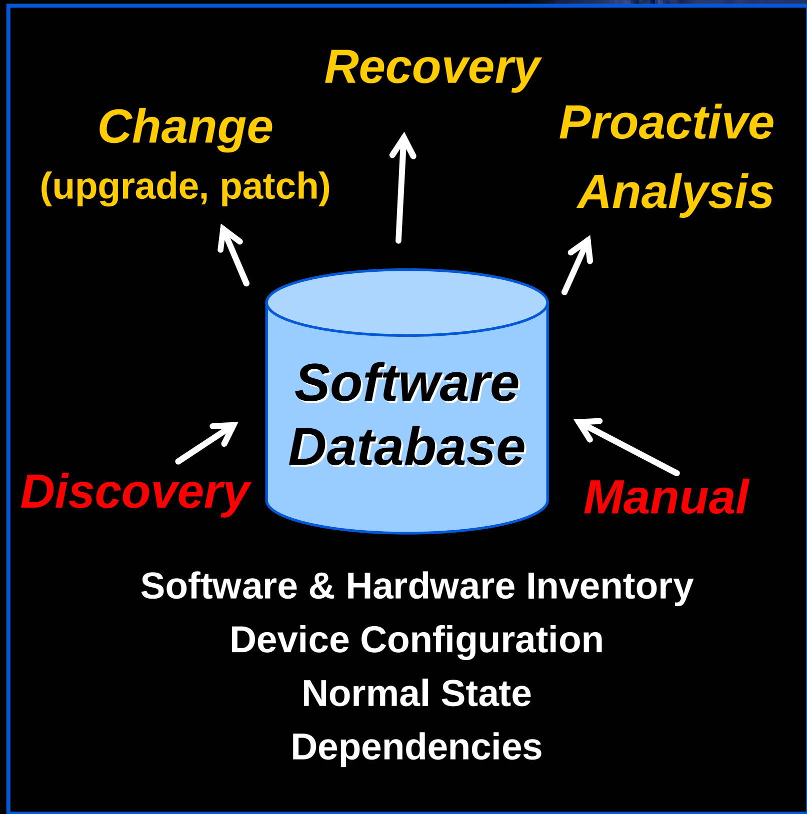
- No buying decision will succeed unless the organization is prepared to accept the new tool
  - Processes are more important than technology
- Expect ROI in 6-9 months, with deployments in 3-6 months
- Evaluate the existing IAM technology portfolio
- Evaluate management services as viable alternatives to buying tools and doing it internally

Business Impact: New management purchases should deliver return in 6-9 months — anything longer will fail

Emerging Trends

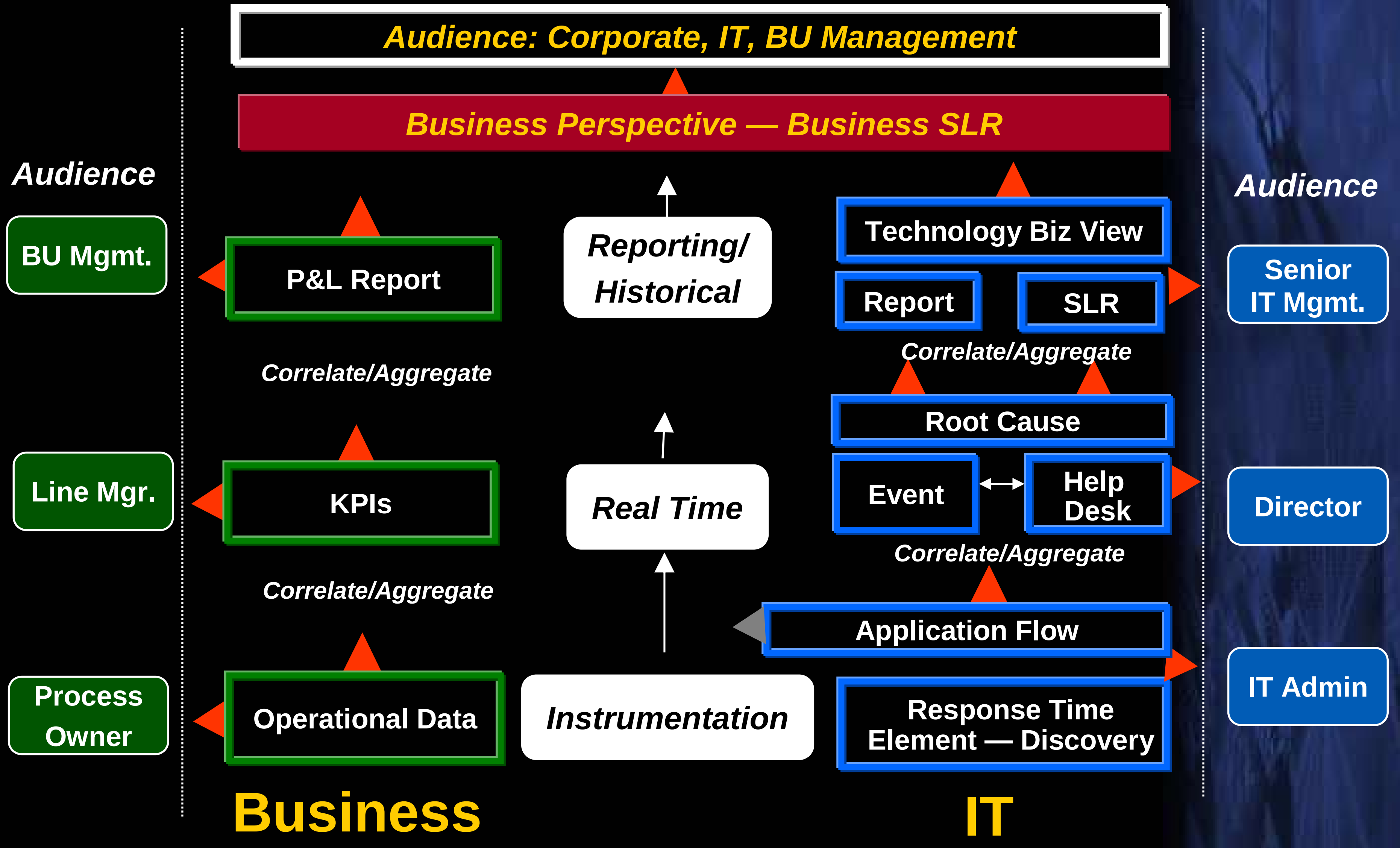
- IT and business alignment
- Continued proliferation of new devices to manage
  - Server farms, blade servers, VoIP, Web services, utility computing environments, Web infrastructure
- Wireless management should focus on infrastructure and not devices (through 2004)

Configuration Management



The trend is toward tools that automate complex tasks and analyze management data

Building to the Business View & Service Levels



Server & Storage Management

- Automation of server administrative tasks
- Management of physical devices and data

Server/Data Center Management

Initial Deploy	Provision
Operate	Maintenance Administration Audit
Replace	Imaging

Storage Management Taxonomy

Solutions More Immature

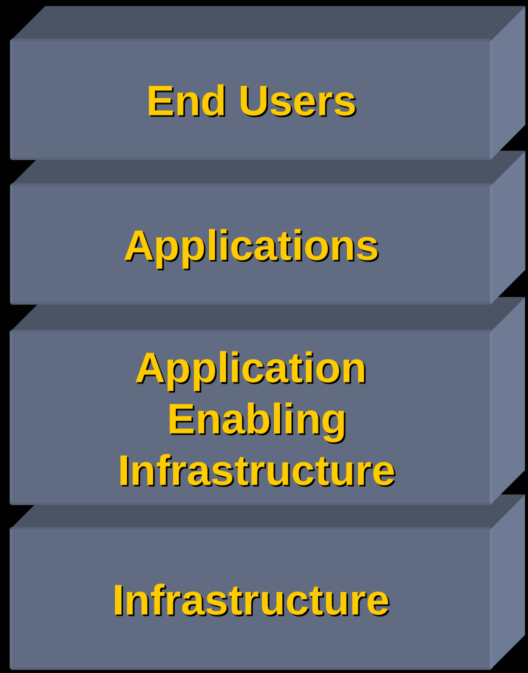
- Infrastructure Level
- Data Level
- Application Level

Despite commodity pressure, markets for low-level and application-level management remain dynamic

Web Application Management

- Still requiring 5-10 tools to manage Web environment (through 2003)
  - Number of vendors has reduced (4-5)
  - Response time tools will be among first to consolidate
- Most issues currently in application enabling infrastructure (e.g., Web application server)

Tiers of Management



Full application management needs broad underlying infrastructure visibility and relationship maps

Emerging Trends

Bottom Line

- Identify new technology that is entering the environment
- Explore new trends in automating complex tasks, seeking reduction of workload on current staff
- View purchases for managing new technologies as tactical, since the landscape most drastically changes in the first 2 years of existence
- Seek to cluster tiers of like technology for management consolidation opportunities
- Emerging infrastructure technologies (e.g., blade servers, wireless) require simple extensions of existing management, not a whole new approach

The Technology of Operations

Transformation Steps

- Understanding market, vendors, and technology
  - Determine where logical correlation should occur and plan to implement, but allow resources for maintenance
- Making the right buying decision
  - No buying decision will succeed unless the organization is prepared to accept the new tool
  - Expect 6-9 month ROI and 3-6 month deployment
  - Evaluate the existing IAM technology portfolio
- Emerging trends
  - Explore new trends in automating complex tasks, seeking reduction of workload on current staff