



ENSURING IT SUCCESS WITH AUTOMATION AND APPLICATION MANAGEMENT

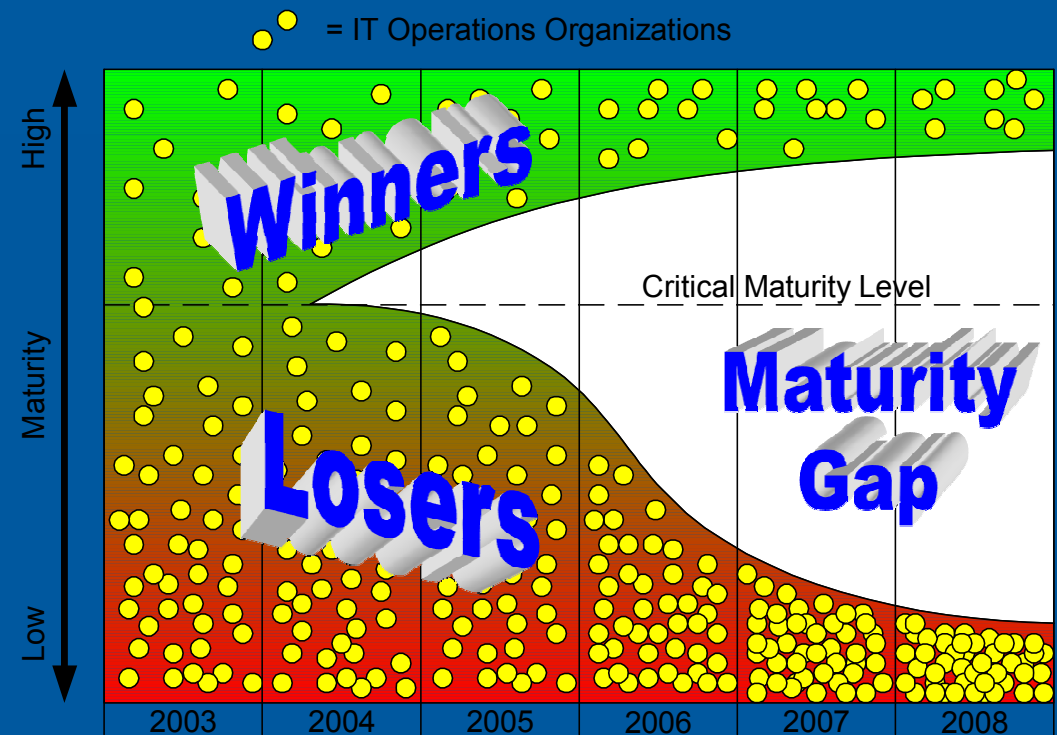
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IT Operations at a Crossroad

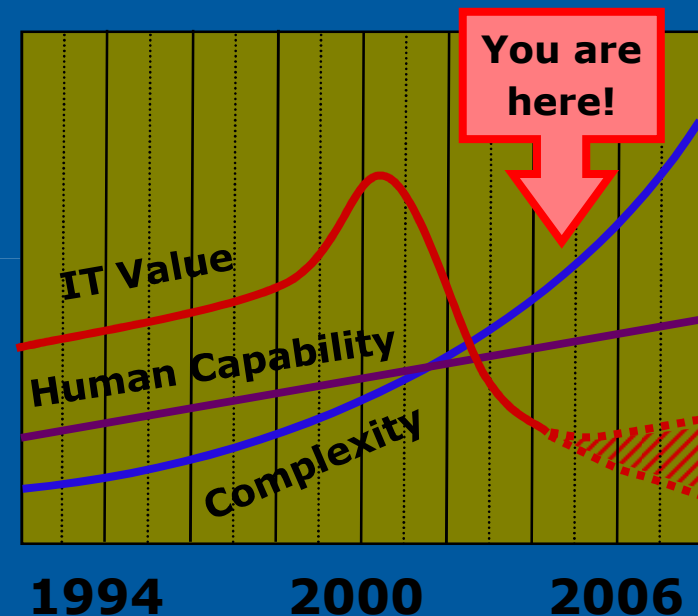
- Infrastructure has been too much of a focus
 - It is time to take the leap to business services
- The application is the new focus for business services
 - Users are more concerned with applications
- Excessive IT costs must be reduced
- IT organizations risk irrelevance unless they act now to change
 - Change practices or face punitive outsourcing
- Success requires:
 - Cultural change
 - Process discipline
 - Effective use of automation technologies



Complexity Threatens IT Viability

- New technologies and business demands exacerbate complexity
 - Web services, utility computing, mobile workforce, compliance
 - Today's complexity WILL worsen so we MUST develop new approaches to manage this complexity
- Even the best experts cannot understand everything
 - We must abandon the status quo
- Rigorous process structure and automation help manage complexity
 - Instill discipline in the organization
 - Gain insight into complex systems
 - Focus operations more on business services than myopic silo domains

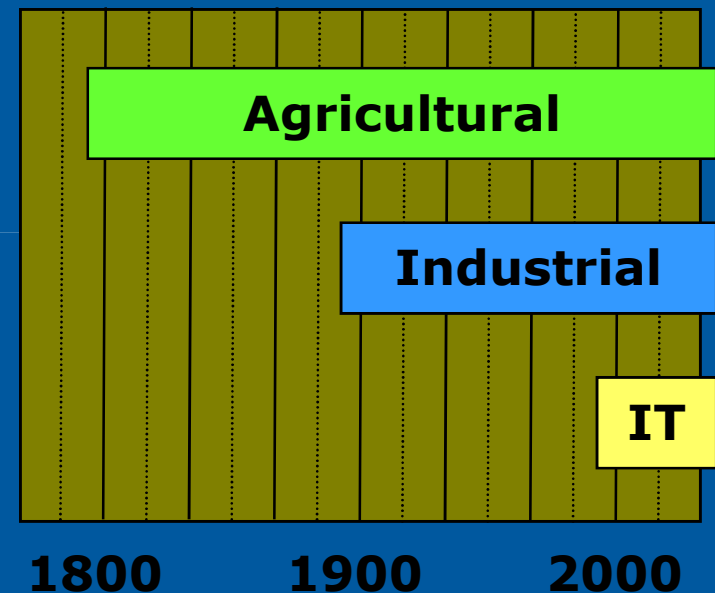
Complexity Explosion Threatens IT Relevance



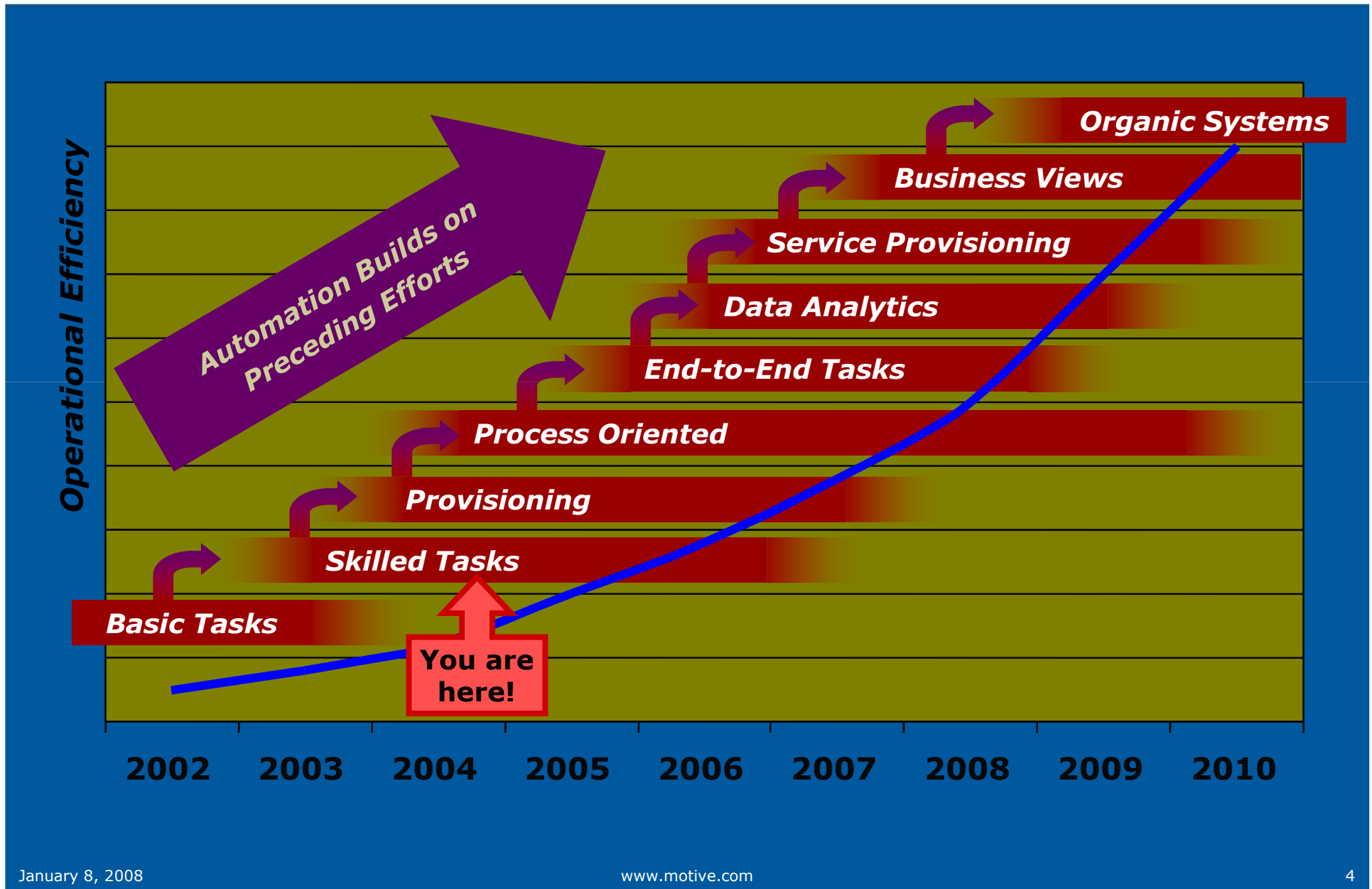
The Benefits of Automation

- Automation is inevitable for any endeavor seeking to optimize efficiency
 - The most powerful force in the human race drives this trend ... economics!
- Faster execution improves efficiency
 - Needed for the adaptive organization
- Lower skills needed to perform tasks
 - Delegate to command center operators
 - Ultimately, NO person will be needed
- Some will fight automation because it threatens their self-perceived value
 - Those who resist WILL lose!
- Error-resistant (error-proof?) execution
 - Repeatable actions can be performed with consistent results
 - Technology can consider possible implications better than humans

Automation Timeline (history repeats)

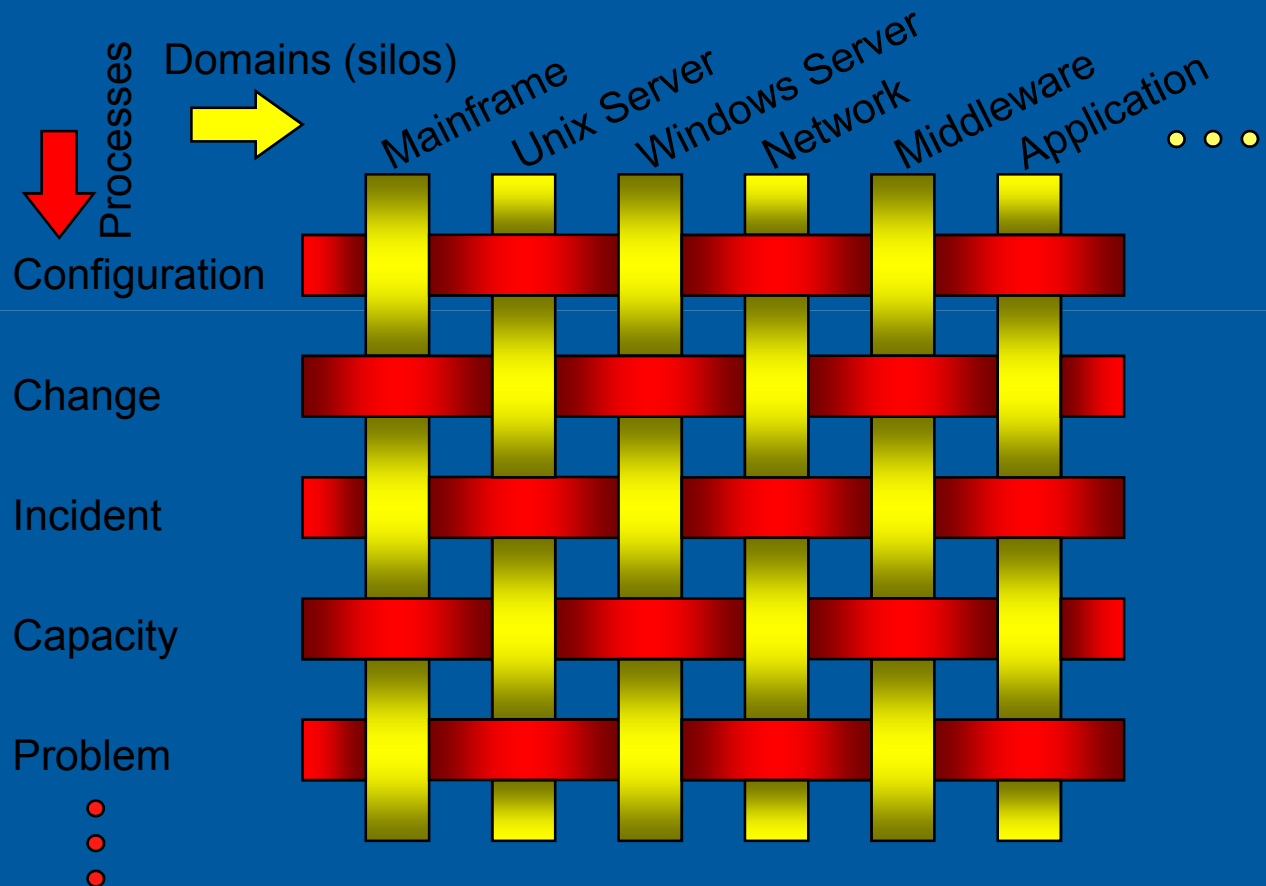


The Automation Continuum



Process Best Practices Foster Discipline

- The processes define the methods of the IT operation
- All processes span silos to be effective
- ITIL is gaining prominence but use ITIL as a foundation, not as a final blueprint
 - Build upon ITIL to suit your specific needs
- Execution requires silo-specific and centralized tools
- Process definition must precede tools development



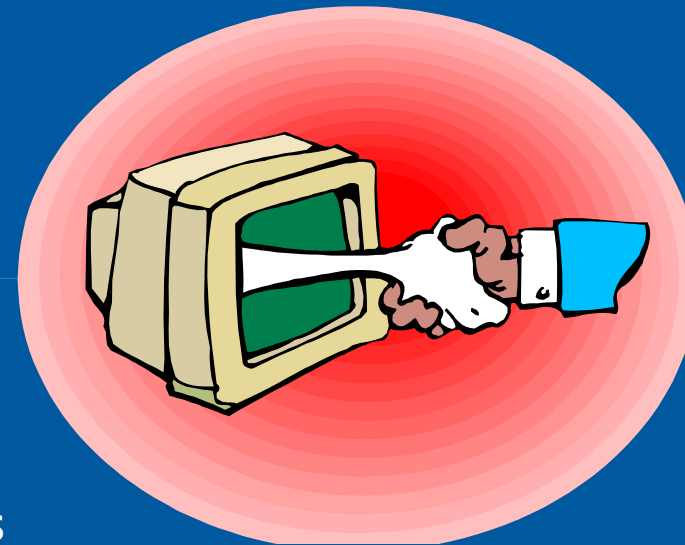
The Infrastructure Focus is Waning

- Infrastructure remains critical, but its management is commoditizing
 - Network and server monitoring is pervasive, understood, easy, and less of a cost issue
- Fault tolerance minimizes attention on component availability
 - A single device failure has less impact and devices are more reliable
 - This is a reason to celebrate, but the focus must now turn to actual end user services, of which applications are an important perspective
- Emerging automation may execute upon infrastructure, but it is driven by application requirements and application-centric policies
 - e.g., adapt infrastructure only if it improves application performance
- Continue to develop infrastructure management in close cooperation with application management
 - Autonomous infrastructure management has limited value
 - Autonomous (traditional) application management has limited value
 - The whole will be greater than the sum of its parts

The Application is the New Focus

- Business processes are increasingly embodied in applications
 - (e.g., SAP, PSFT, web apps, middleware, portals)
- Application management is evolving to include more sophisticated discovery of application details and supporting infrastructure
 - ... and more importantly, the exploitation of this information for service optimization
- Performance monitoring is getting very sophisticated to adapt to expanded needs and growing application and service complexity
 - Simple response-time monitoring is no longer sufficient
 - Application insight leverages internal components and relationships
- Manage applications in concert with infrastructure for more effective management of business services

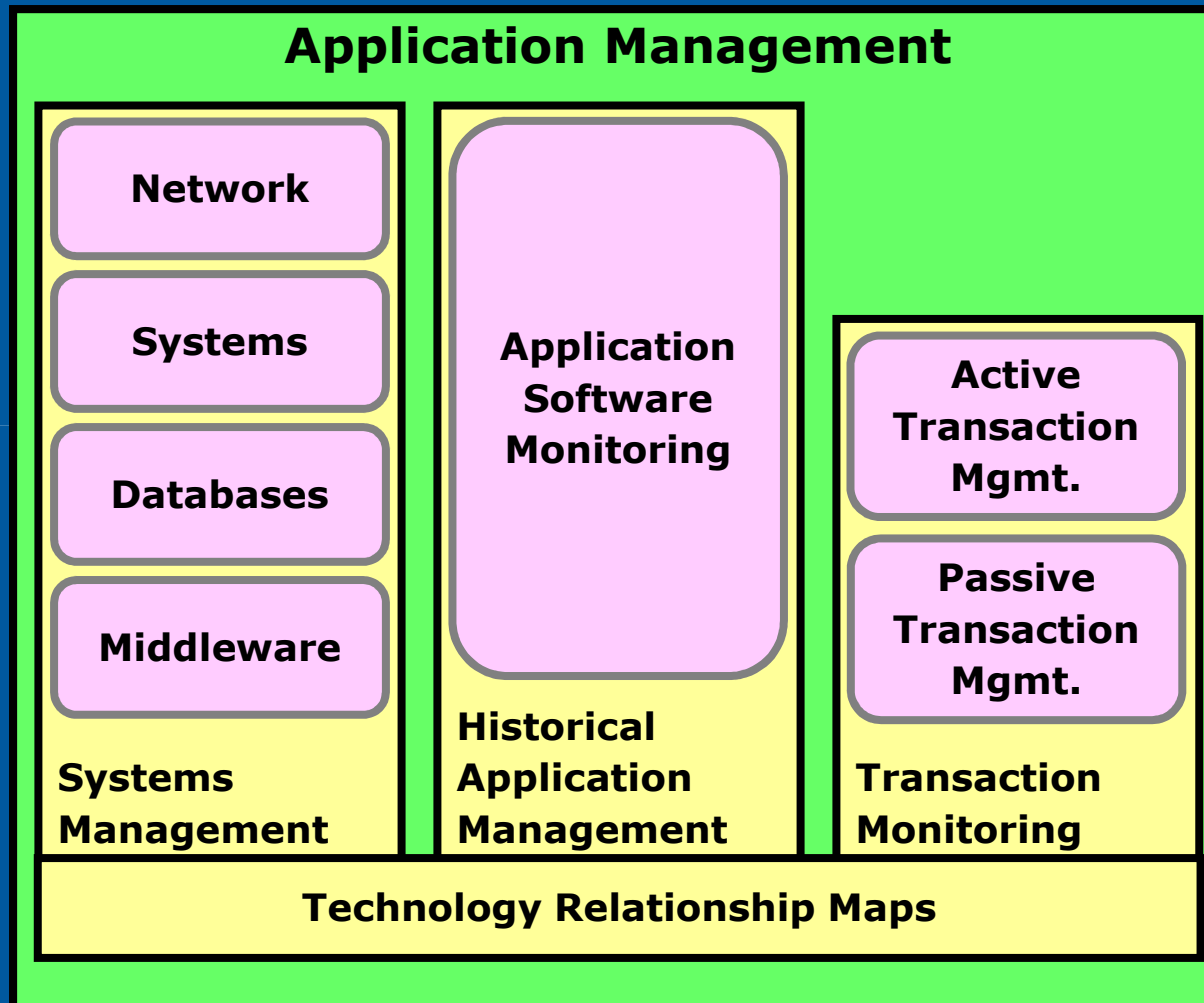
Applications present the tangible service to users



- Application management is more than just monitoring
 - Includes configuration discovery, software distribution, performance tuning, etc.
- Must leverage existing & emerging process best practices
 - e.g., ITIL's incident management applies to applications just as it does to infrastructure
- Application monitoring collects data on end-to-end transactions, server-side software components, and relationships
- Most view application management as strictly an operations responsibility, but everyone in IT plays a role
- Effective application management requires coverage of all processes and permeates the entire application life cycle

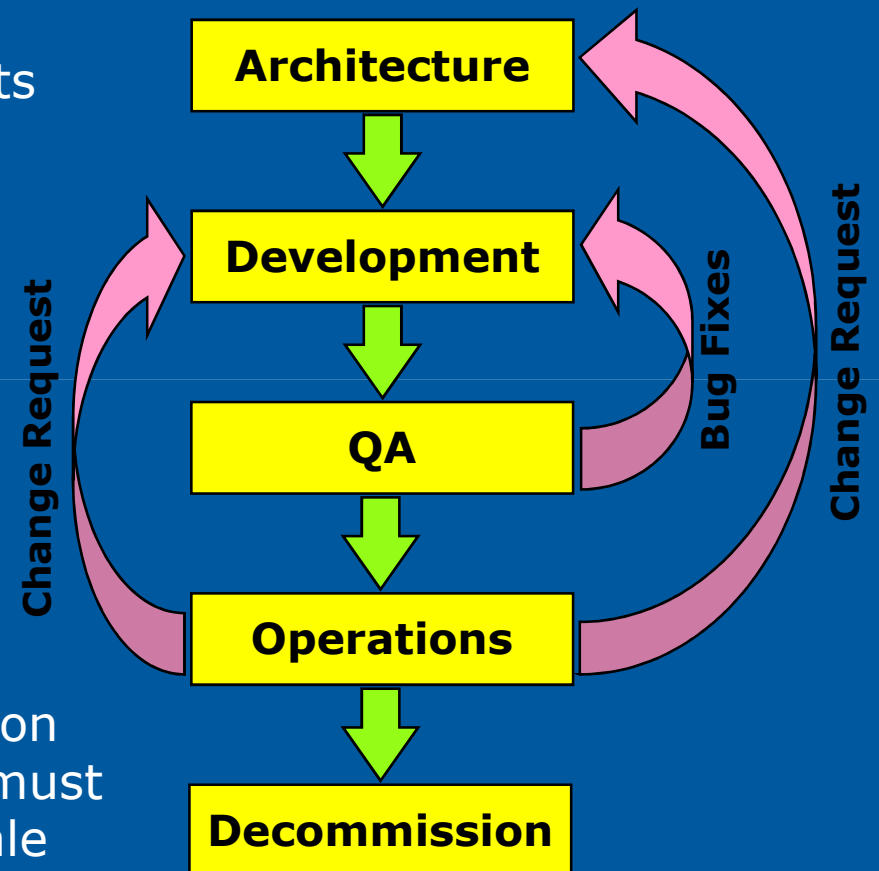


Application Management Employs a Hybrid of Management Technologies



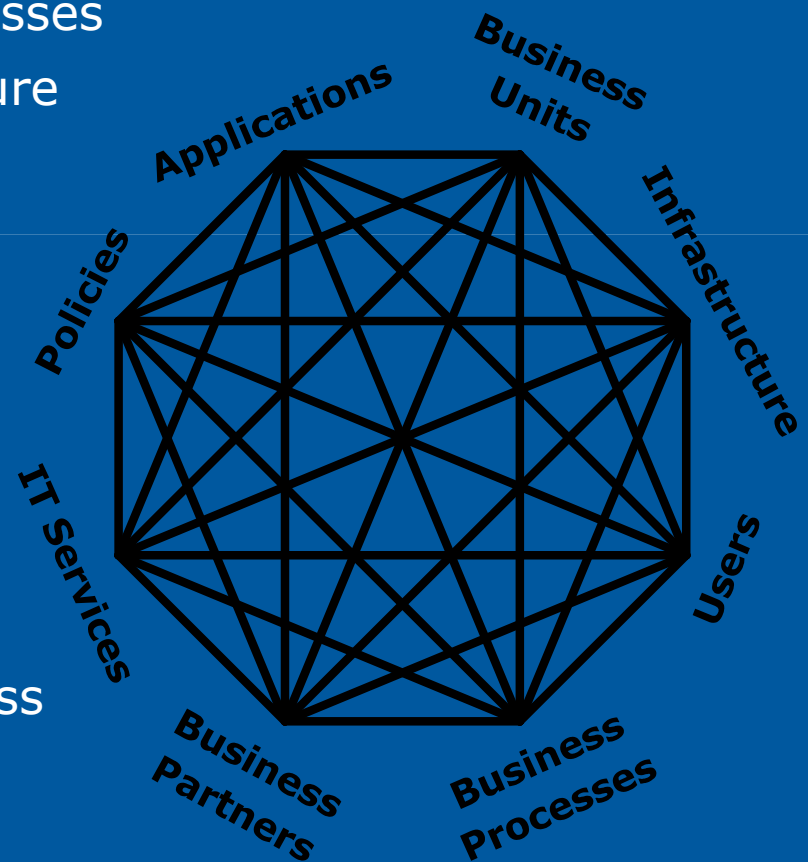
Links to App. & Infrastructure Development, Security, and Operations COEs

- Design applications for management & operations
- Information flow across life cycle stages instills cooperation and results in more robust services
 - Better applications yield better services and less troubleshooting
- Configuration information is developed along with applications
 - Preserve information generated in the very early stages
 - Enhances every subsequent stage in the life cycle
- Embedded application instrumentation is the ultimate best practice, but it must be simple to succeed on a broad scale



Relationships: The Secret to Configuration Bliss

- Configuration items have limited value without relationships
 - The technology relationship map is multidimensional
- Automated relationship discovery is an evolving frontier in management technologies and processes
- Discovery of internal application structure is the next phase in this evolution
 - Still evolving but ready to provide analytical value
 - Discovers an essential “missing link” for automated analysis
- Mapping software and hardware components exposes application behavior for analysis
 - Streamlines root-cause and performance optimization efforts
- Automated discovery of business process relationships remains elusive, however manual mapping systems exist now



- Develop processes around high business-value services
 - This means applications
- Automate core functions
 - Repeatedly and relentlessly seek new automation opportunities
- True service optimization requires automation that is still emerging
 - Focus on the application for best initial results and future prospects
 - Capitalize on the profound value of relationship mapping, but recognize that it is still evolving
- IT is integral to the business, so better IT discipline (maturity) means more success for the business
 - Be flexible and **embrace change!**

"In the struggle for survival, the fittest win out at the expense of their rivals because they succeed in adapting themselves best to their environment."

- Charles Darwin -