



Information Technology Infrastructure Library



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Service Management the ITIL Way
Hewlett-Packard

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What is ITIL?

- Information Technology Infrastructure Library (series of reference books)
- Process-oriented, quality system for IT services
- Central Computer & Telecommunications Agency (CCTA)

Why Choose ITIL?



- Formal industry standard
 - Published reference model
 - Accepted & established world-wide (i.e., real world validation)
- Consistent language
 - common terms & meanings
 - common objectives & methods
- Supported by enterprise-class tools



HP & ITIL



- Foundation for HP's ITSM Reference Model
- OpenView Products
 - Synergy with OV Operations modules & ITSM framework
 - ITServiceDesk product “ITILized”

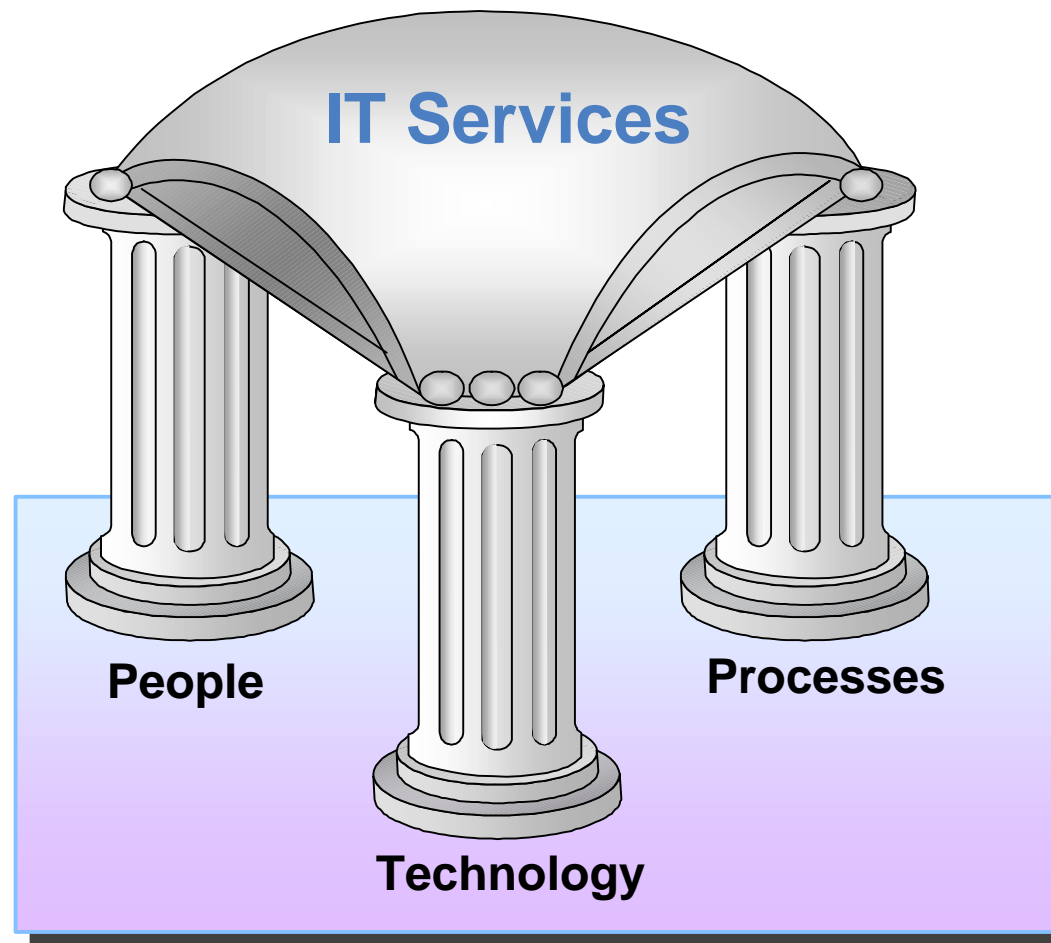


Benefits of ITIL

- Ensure stable, flexible, quality IT services
- Promote optimal IT service at justifiable costs
- Align IT services with business objectives
- Use resources more strategically & effectively
- Define and agree to service levels and customer satisfaction
- Reduce audit compliance efforts



IT Service Components



Putting Availability Numbers in Perspective



<u># of Nines</u>	<u>Uptime %</u>	<u>Down/ Year</u>	<u>Compare To</u>
1.7	97%	11 days	Vacation
2	99%	3 days 16 hours	Long Weekend
2.5	99.5%	1 day 20 hours	Weekend
3	99.9%	9 hours	Full Workday
3.5	99.95%	4 hours 23 minutes	Dinner and a movie
3.75	99.975%	2 hours 11 minutes	Dinner or a movie
4	99.99%	53 minutes	Lunch
5	99.999%	5 minutes	Coffee break
6	99.9999%	32 seconds	Television commercial

Source: Illuminata Research Note, June 1999



Aligning Objectives - Business & IT



- Business Objectives
- IT Service Objectives



Business & IT Alignment



A man is flying in a hot air balloon & realizes he is lost. He reduces height & spots a man down below. He lowers the balloon further & shouts: "Excuse me, can you tell me where I am?"

The man below says: "Yes you're in a hot air balloon, hovering 30 feet above this field."

"You must work in Information Technology" says the balloonist.

"I do" replies the man. "How did you know."

"Well" says the balloonist, "everything you have told me is technically correct, but it's no use to anyone."



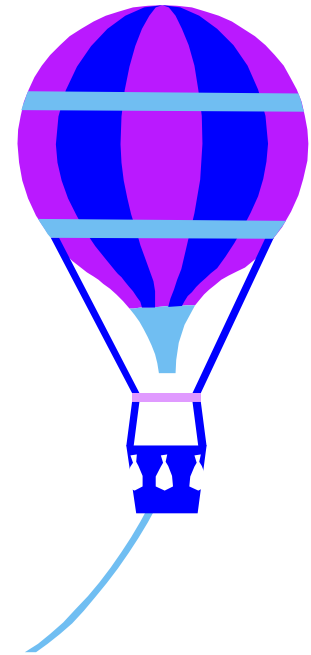
Business & IT Alignment



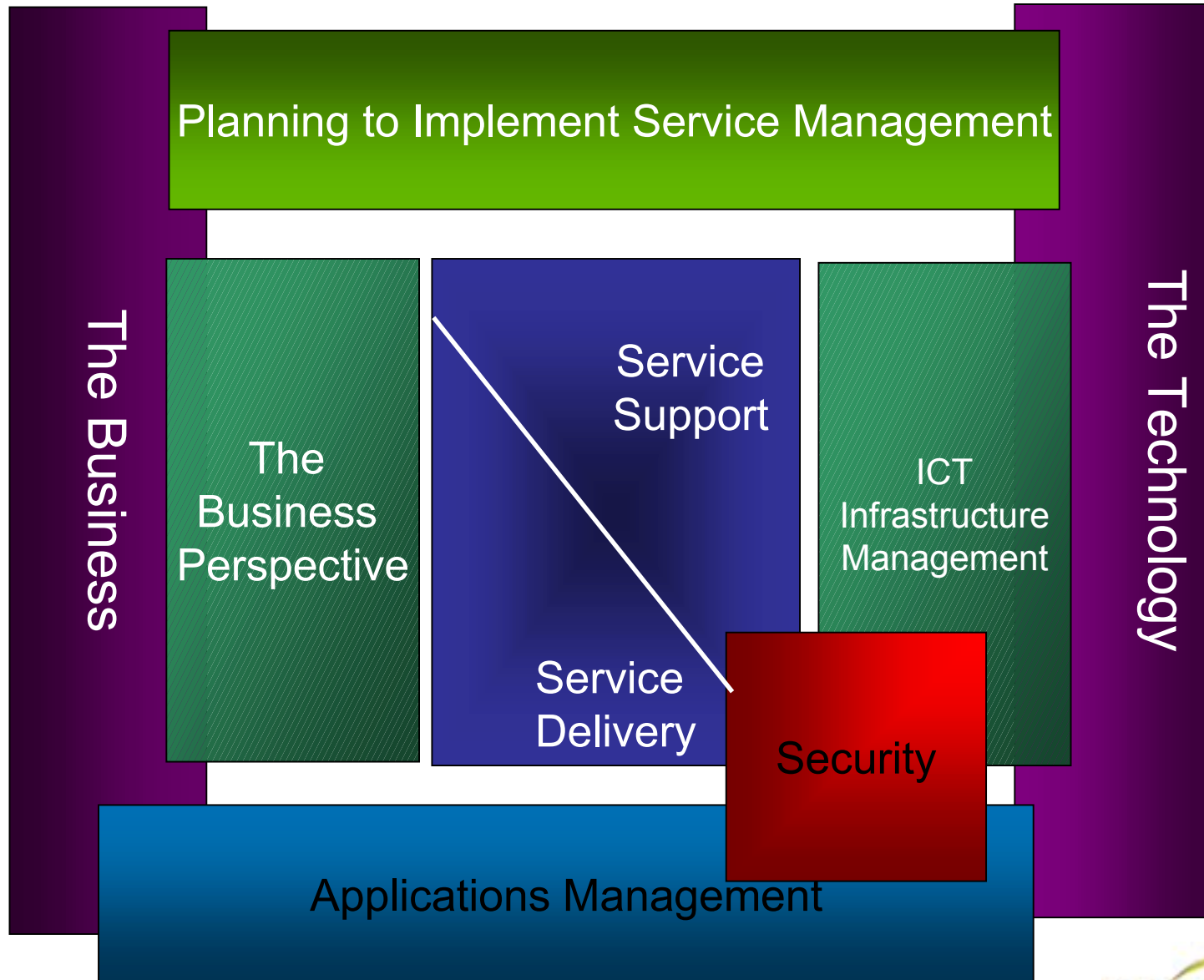
The man below says, "You must work in business."

"I do" replies the balloonist, "but how did you know?"

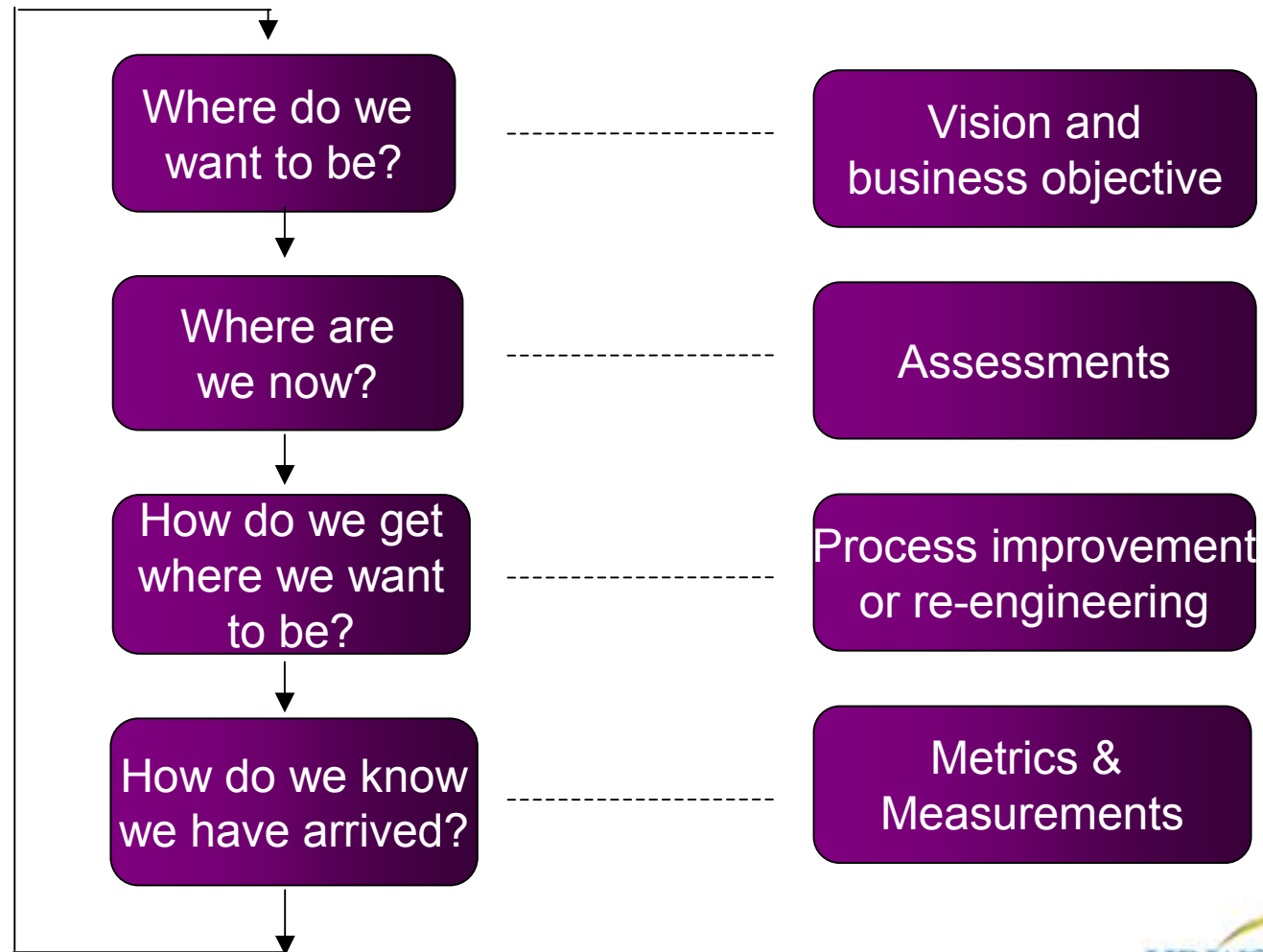
"Well", says the man, "you don't know where you are, or where you're going, but you expect me to be able to help. You're in the same position you were before we met, but now it's my fault."

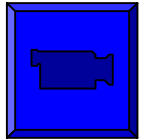


ITIL Publication Framework

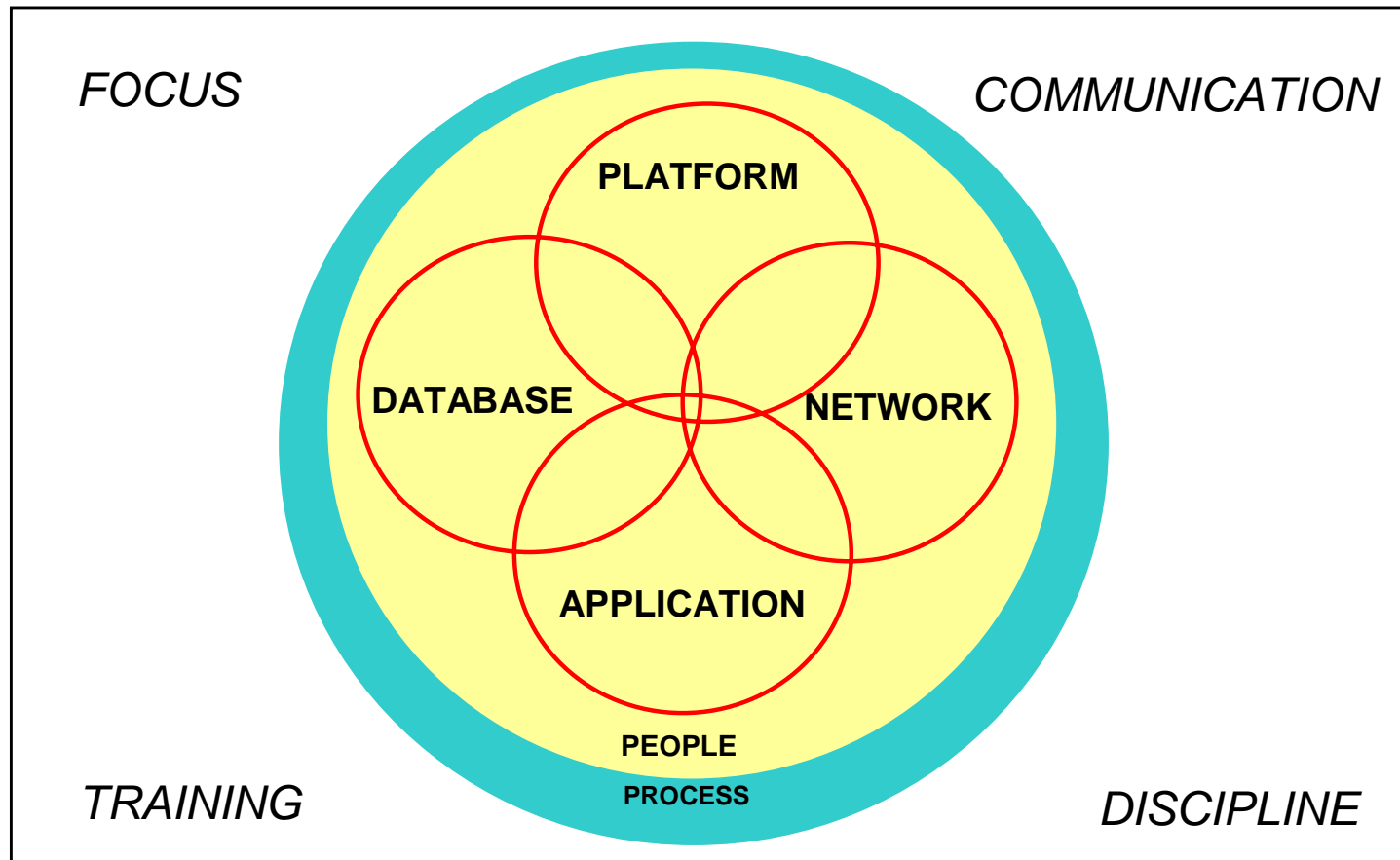


Process Improvement Model

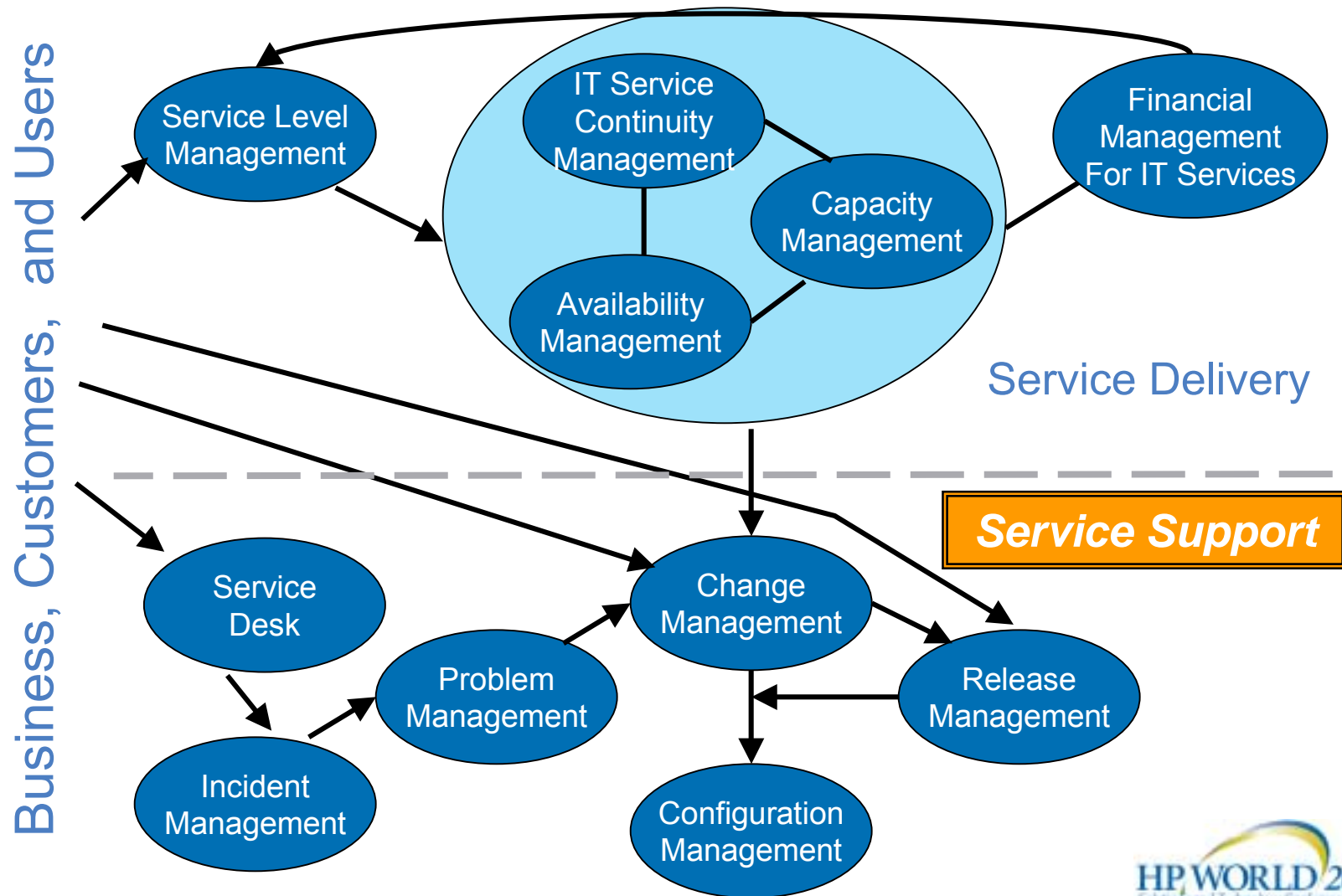




Managing a Mission Critical Environment



ITIL Process Interrelationships

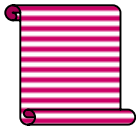


Service Desk



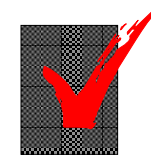
Activities:

- Receive and record all calls from Users
- Initial assessment of incidents
- Monitor and escalate incidents
- Communicate status and progress of incidents



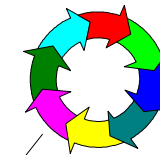
Reporting:

- Service levels: responsiveness, customer satisfaction
- Incidents: impact, categories, duration, distributions
- Time/cost to fix



Benefits:

- Improved user service
- Increased user accessibility
- Improved quality and response to user requests



Terminology:

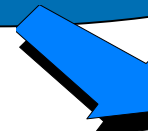
- Incident
 - * Impact code
 - * control
 - * Categorization
 - * Classification

Central point of contact between User and IT Service Management



Possible Problems:

- User service not considered a priority
- Lack management commitment
- Over reliance on technology
- Resistance to changed work practices

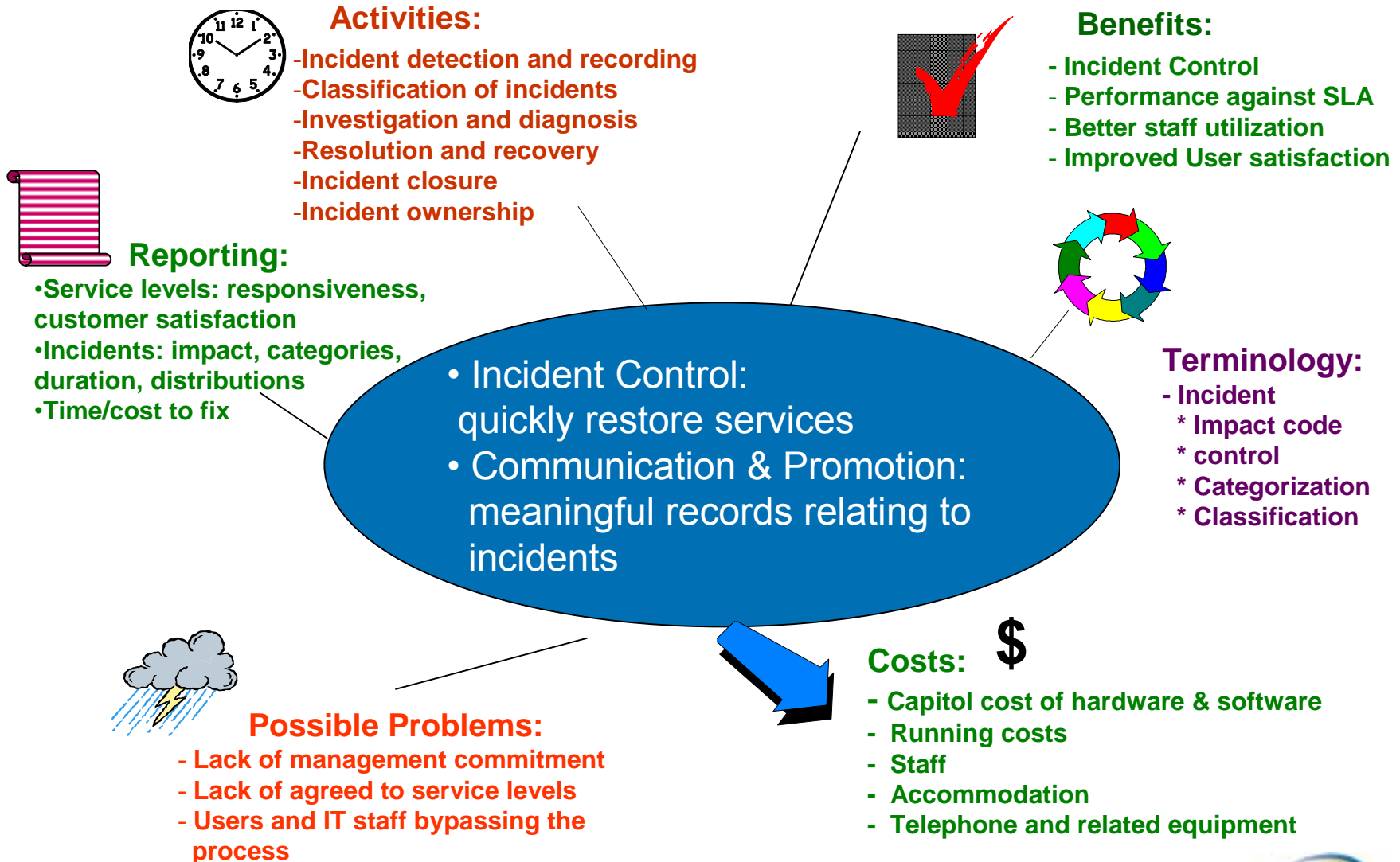


Costs: \$

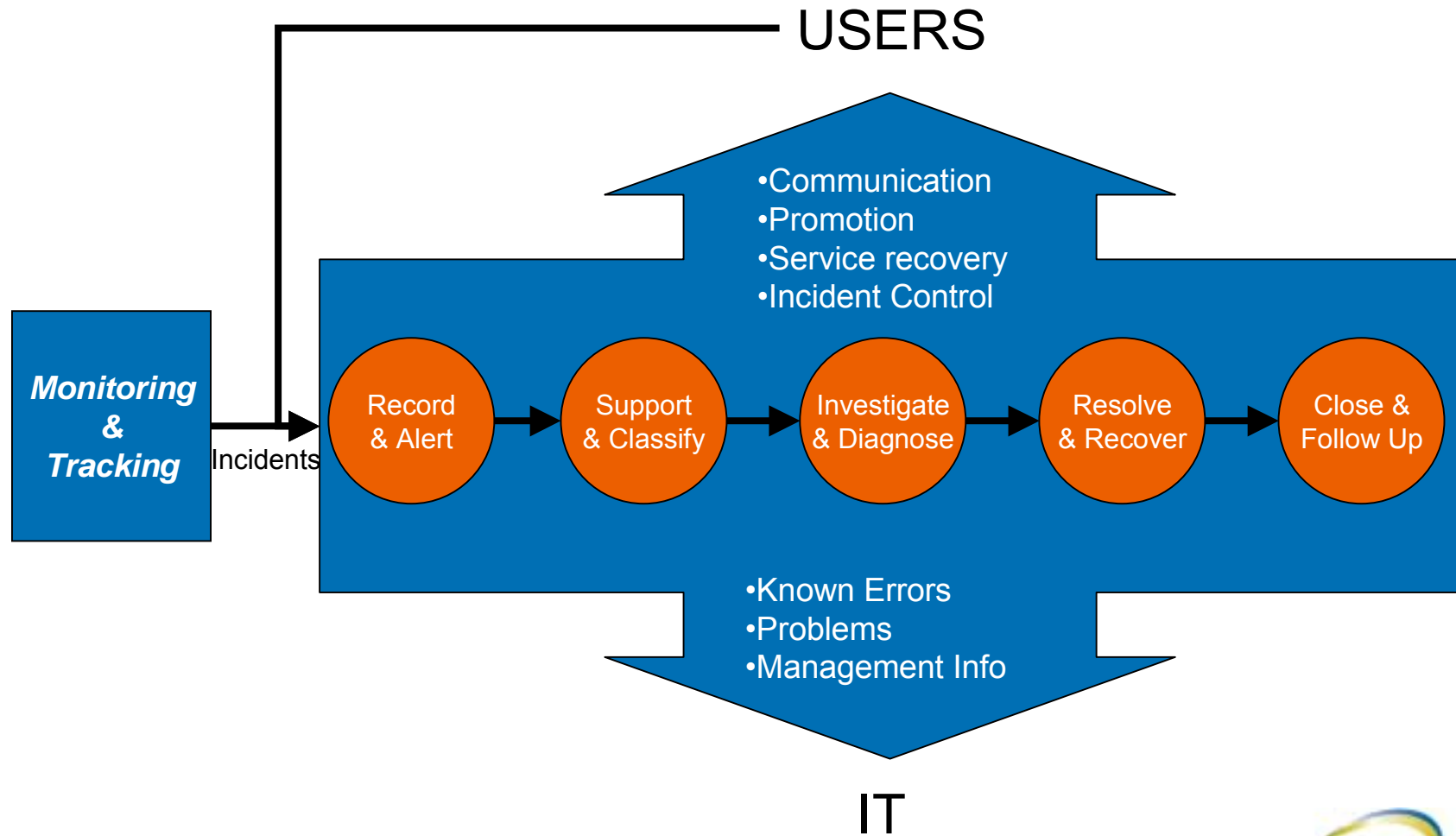
- Capital cost of hardware & software
- Running costs
- Staff
- Accommodation
- Telephone and related equipment



Incident Management



Incident Life-cycle

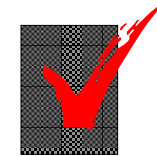


Problem Management



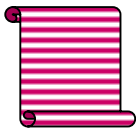
Activities:

- Problem control
- Error control
- Proactive problem management



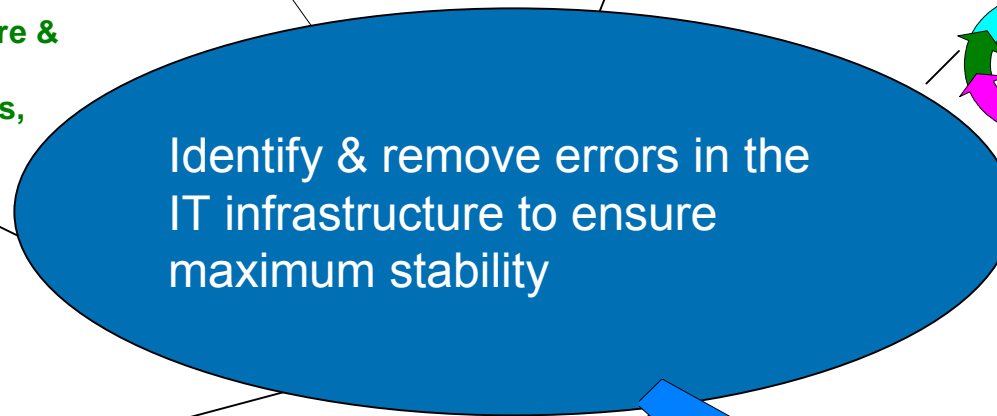
Benefits:

- Increased user productivity
- Better management of IT service
- Improved reputation of IT
- Learning from past experience
- Increased productivity of support staff

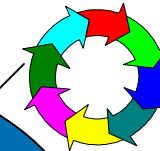


Reporting:

- Impact on Infrastructure & service levels
- Problem classifications, diagnosis, & resolution
- Time/cost to fix



Identify & remove errors in the IT infrastructure to ensure maximum stability



Terminology:

- Problem
- Known Error
- Request for Change



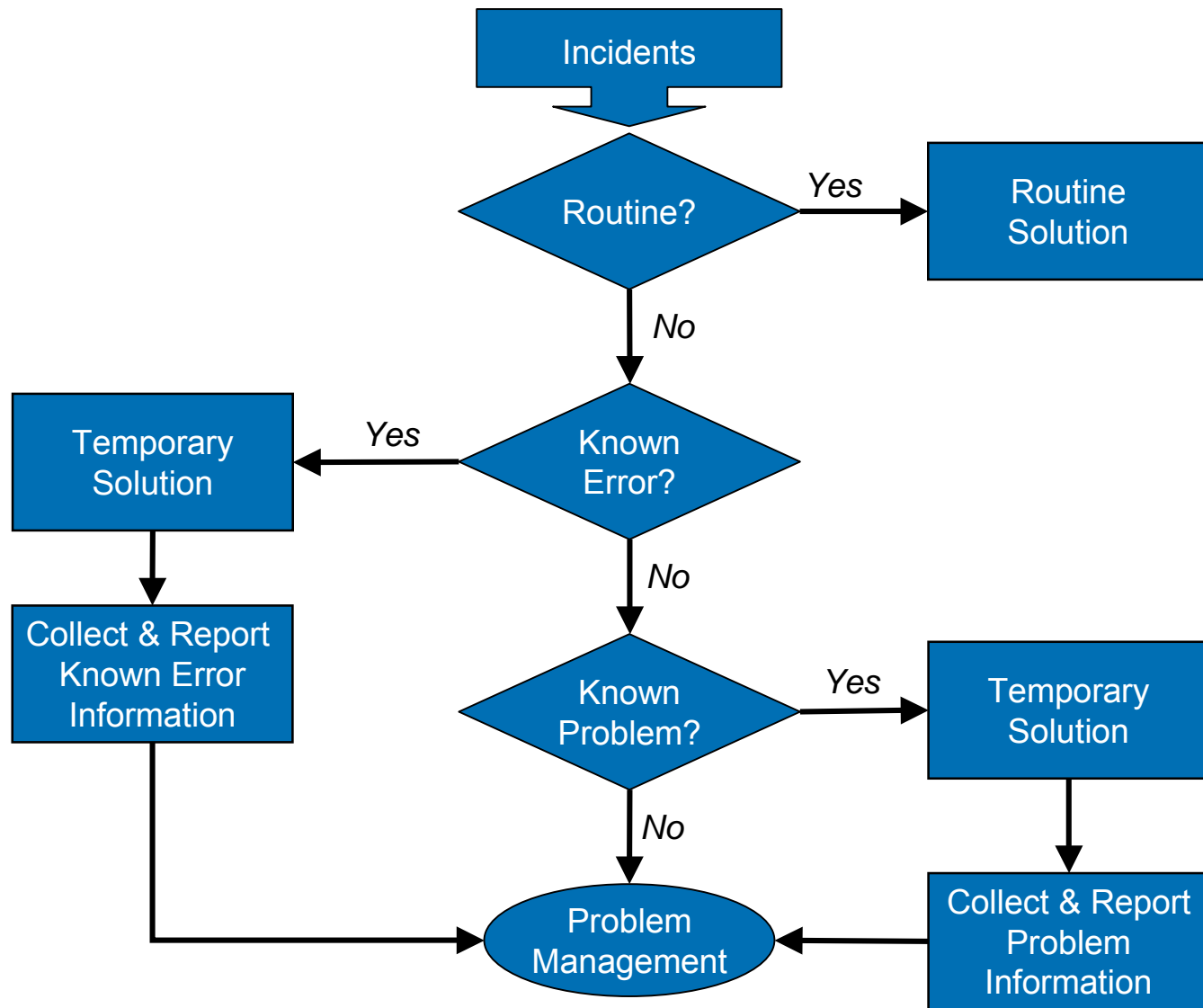
Possible Problems:

- Users contact problem management
- Link between Incident, Problem, & Known Error
- Insufficient time and resources
- Lack of business impact assessment

- Costs:** \$
- Running costs
 - Staff
 - Accommodation



Incidents, Problems, & Known Errors

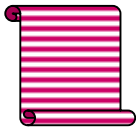


Configuration Management



Activities:

- Planning
- Identification
- Control
- Status accounting
- Verification



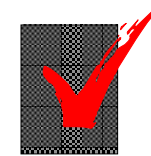
Reporting:

- State of Infrastructure
- Growth of Infrastructure
- Change effects
- Infrastructure Variations
- Infrastructure Trends



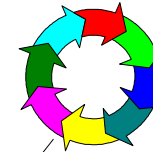
Possible Problems:

- Wrong Configuration Item level
- Manual systems
- Urgent changes
- Over-ambitious planning
- Acceptance by Management



Benefits:

- Management of IT resources
- High quality IT services
- Deal quickly with changes
- Efficient/effective problem solving
- Better software management



Terminology

- Configuration Item (CI)
- Configuration Mgt DB (CMDB)
- Scope
- CI Level
- Attributes
- Relationships

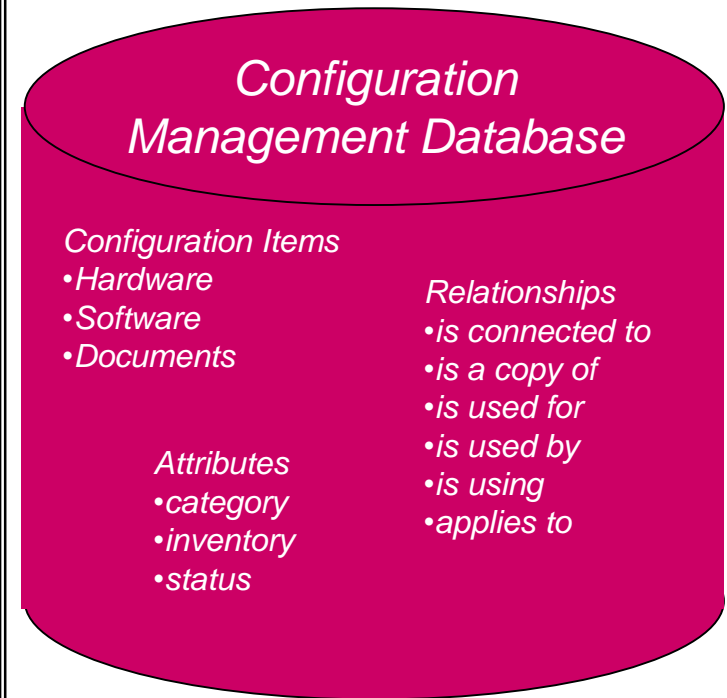
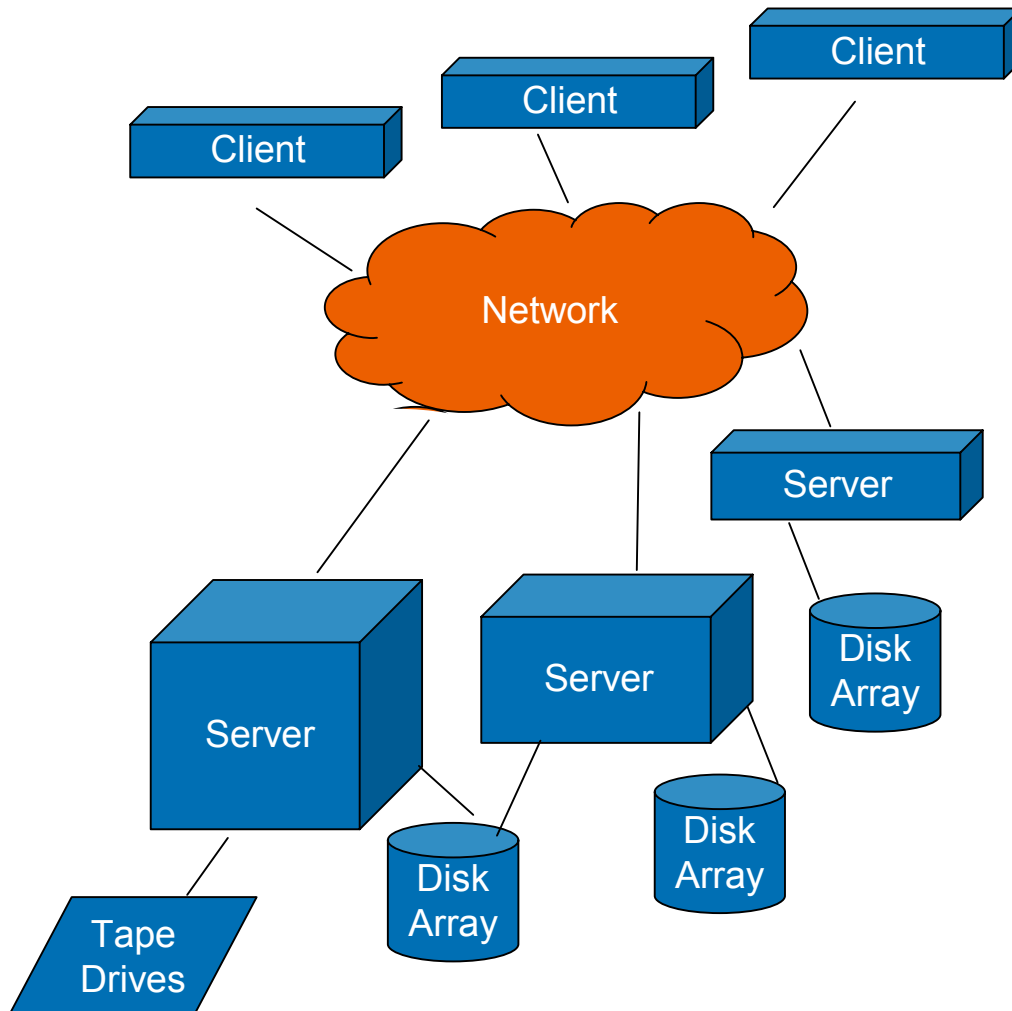
Costs: \$

- Hardware (if necessary)
- Software product
- Customization costs for software
- Additional staff cost should be offset by increased efficiency in Change Mgt

Configuration Management



Example Configuration Items *Appropriate Scope is Essential*

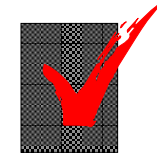


Change Management



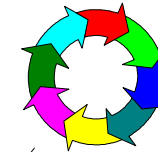
Activities:

- Acceptance
- Classification
- Assessment and planning
- Coordination
- Evaluation



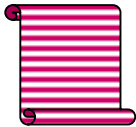
Benefits:

- Fewer change-related problems
- Better understanding of costs
- Improved ability to back-out
- Ability to absorb high levels of change



Reporting:

- Changes by category and status
- Problems resulting from change
- Time/cost to implement



Ensure standard methods are used for efficient & immediate handling of changes to prevent change-related problems

Terminology:

- Change
- Request for Change
- Priority
- Category
- Change Advisory Board
- Change Manager



Possible Problems:

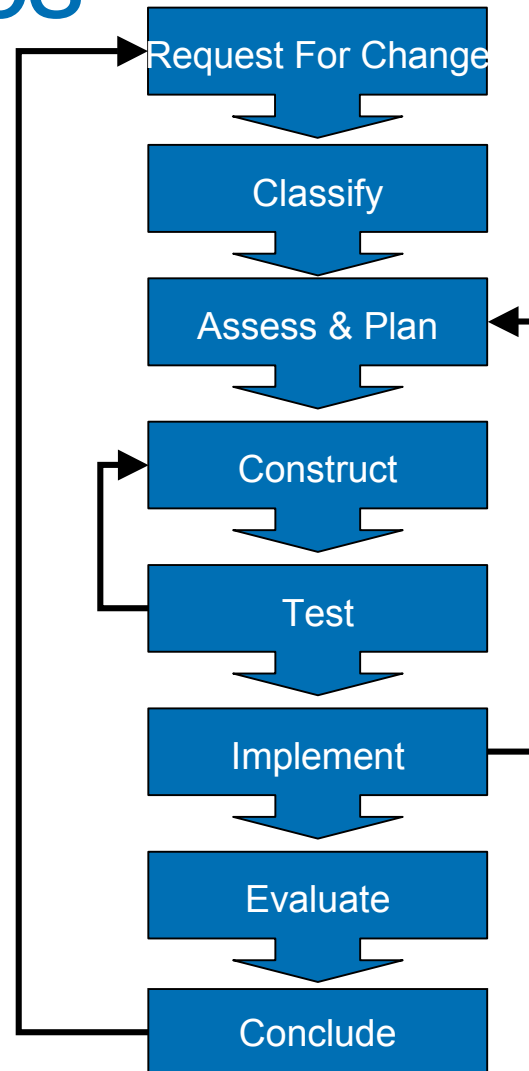
- Tools
- Culture
- Discipline
- Suppliers
- By passing
- Delegation without commitment
- When is it really a change?

Costs: \$

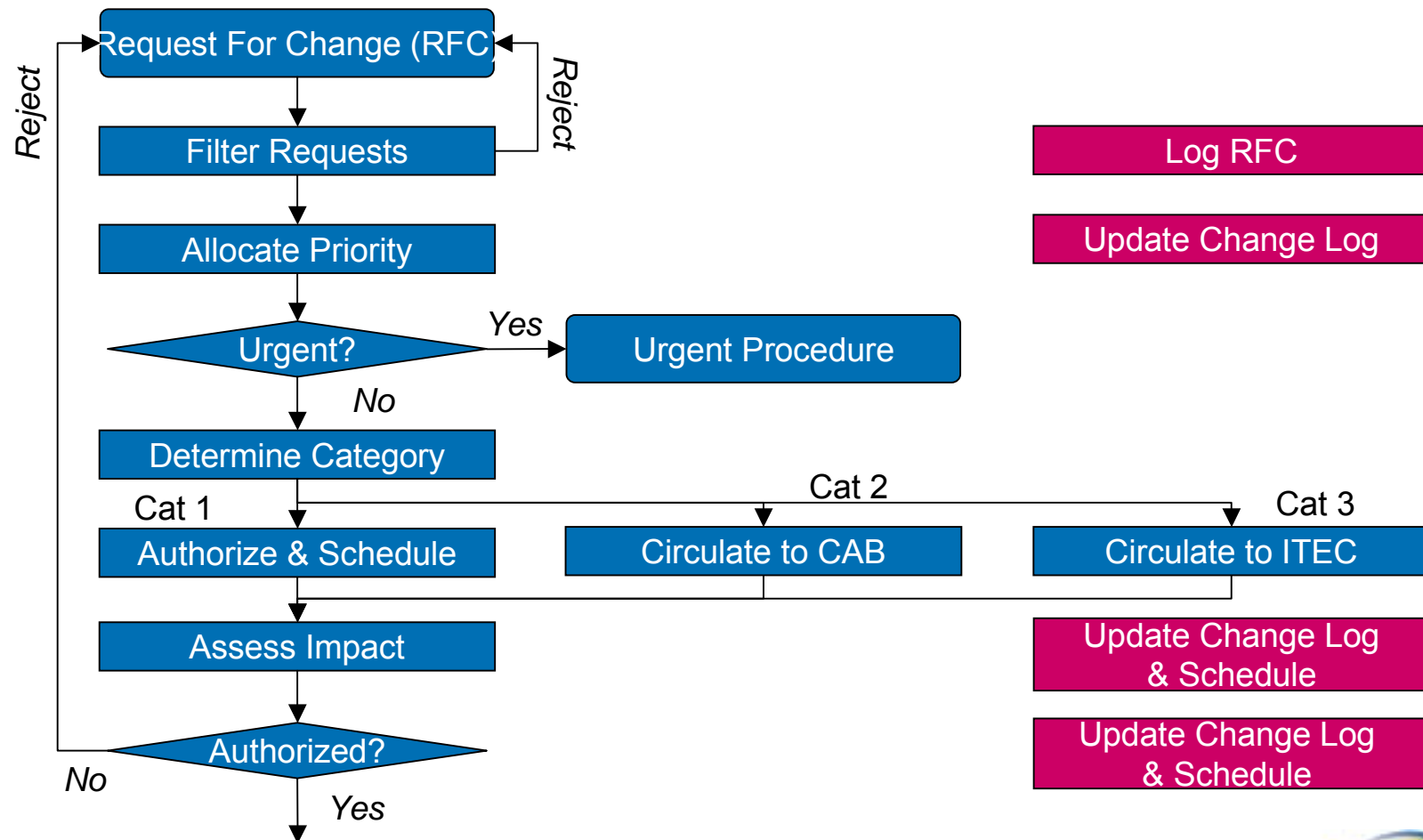
- Hardware and software
- staff
- accommodation
- telephones



Change Management - The Basics

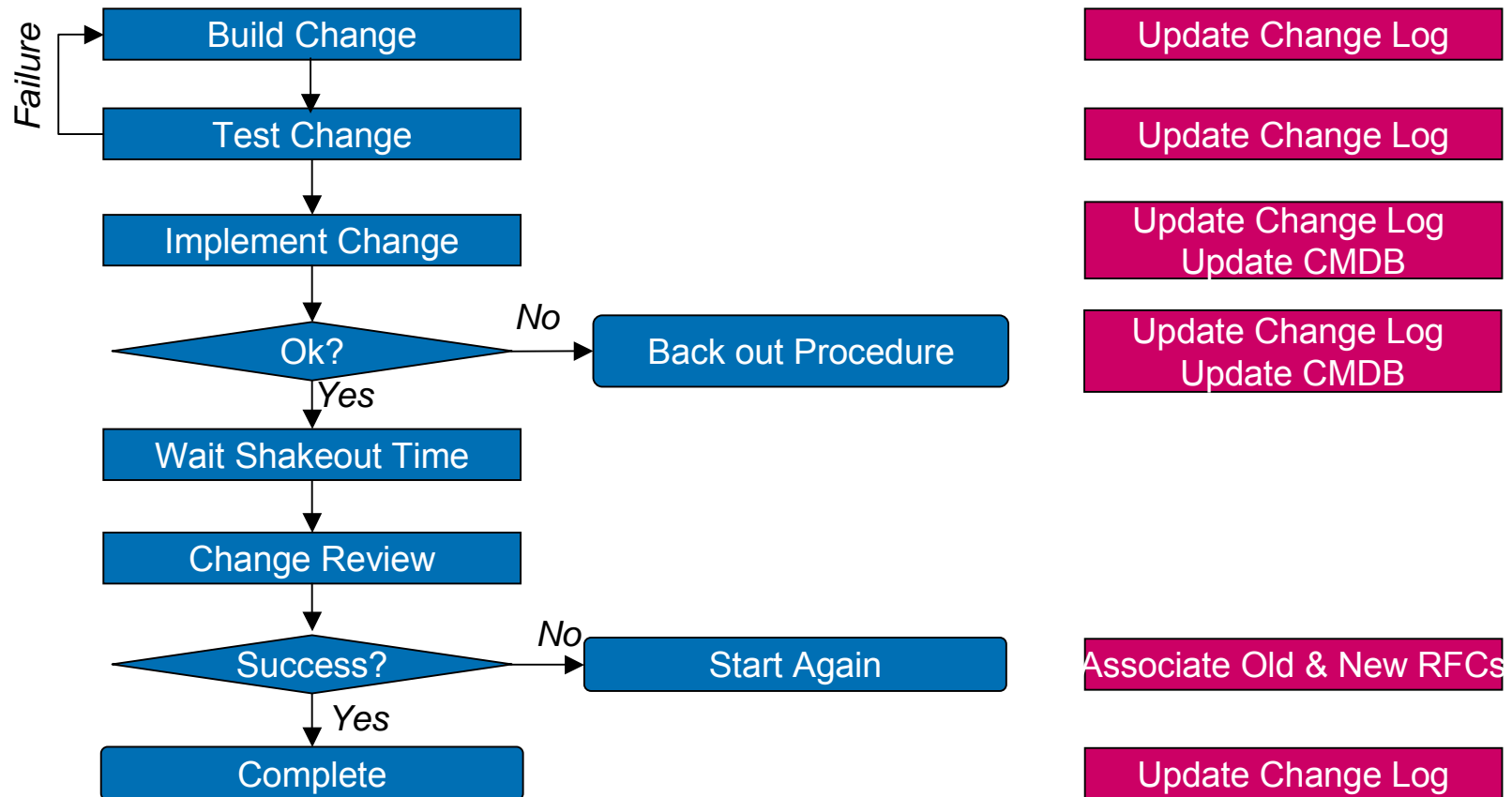


Example Non-Urgent Change Procedure (p1 of 2)



Key: Change Mgmt Config Mgmt

Example Non-Urgent Change Procedure (p2 of 2)

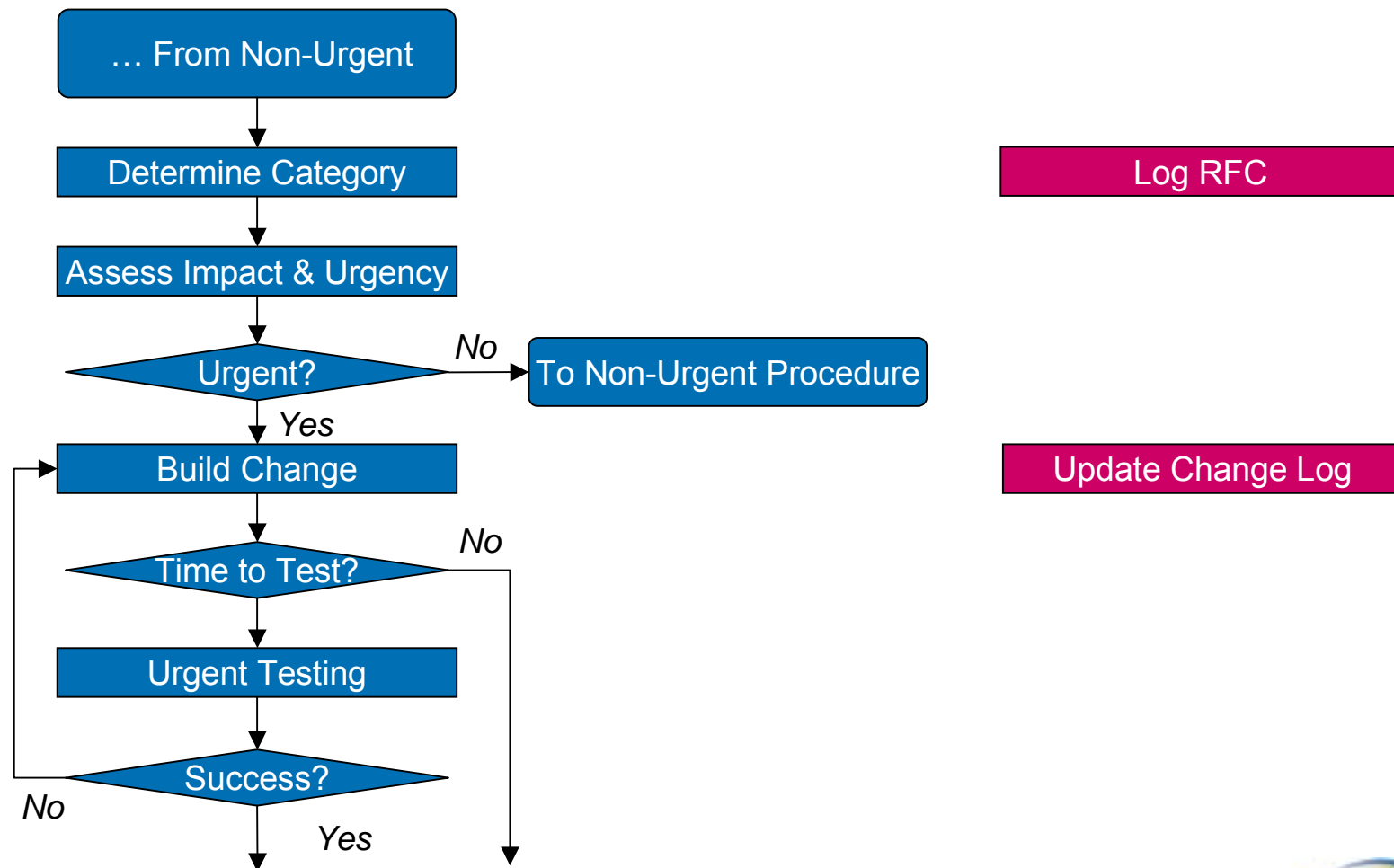


Key: Change Mgmt

Config Mgmt



Example Urgent Change Procedure (p1 of 2)

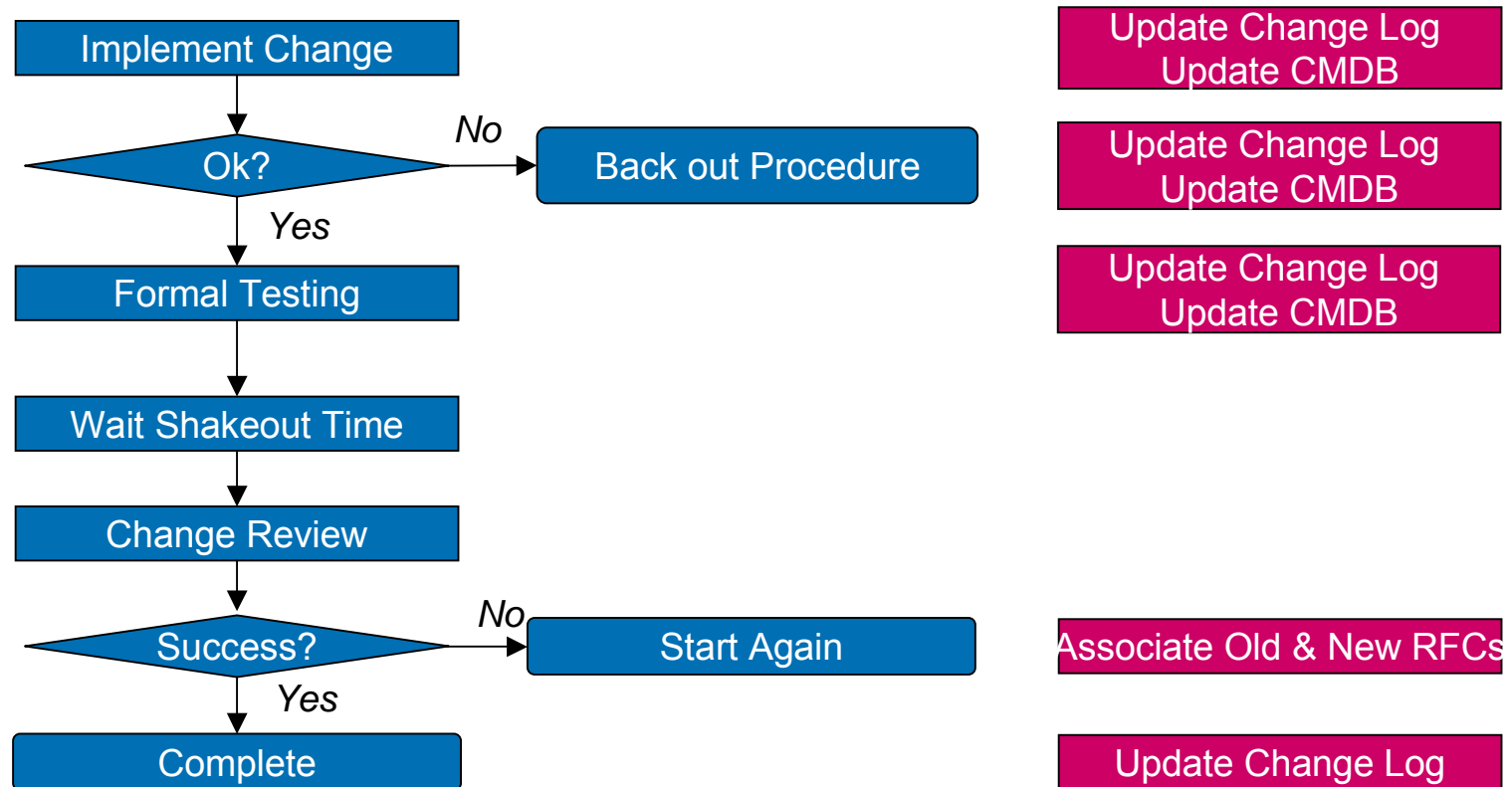


Key: Change Mgmt

Config Mgmt



Example Urgent Change Procedure (p2 of 2)



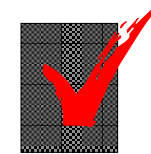
Key: Change Mgmt Config Mgmt

Release Management



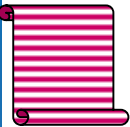
Activities:

- Planning and overseeing roll-out
- Liaison with Change Management
- Ensure CMDB is up to date
- Manage customer & user expectations



Benefits:

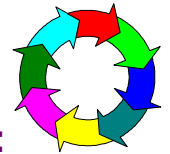
- Good quality software
- Less chance of incorrect versions
- Secure software items
- Process large numbers of changes
- Environment-wide versions



Reporting:

- CIs accepted, rejected, LTUs
- Development expectations
- Documentation
- Time/cost to build/use

Holistic view of a change to an IT service, ensuring all aspects of a Release are considered together



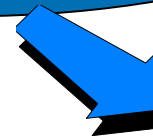
Terminology:

- Definitive Software Library
- Software Configuration Item
- Release
 - * Delta
 - * Full
 - * Package
 - * Emergency



Possible Problems:

- Resistance to change
- By-passing Release Policy
- Urgent changes
- Unclear ownership & role acceptance
- Inadequate building and testing

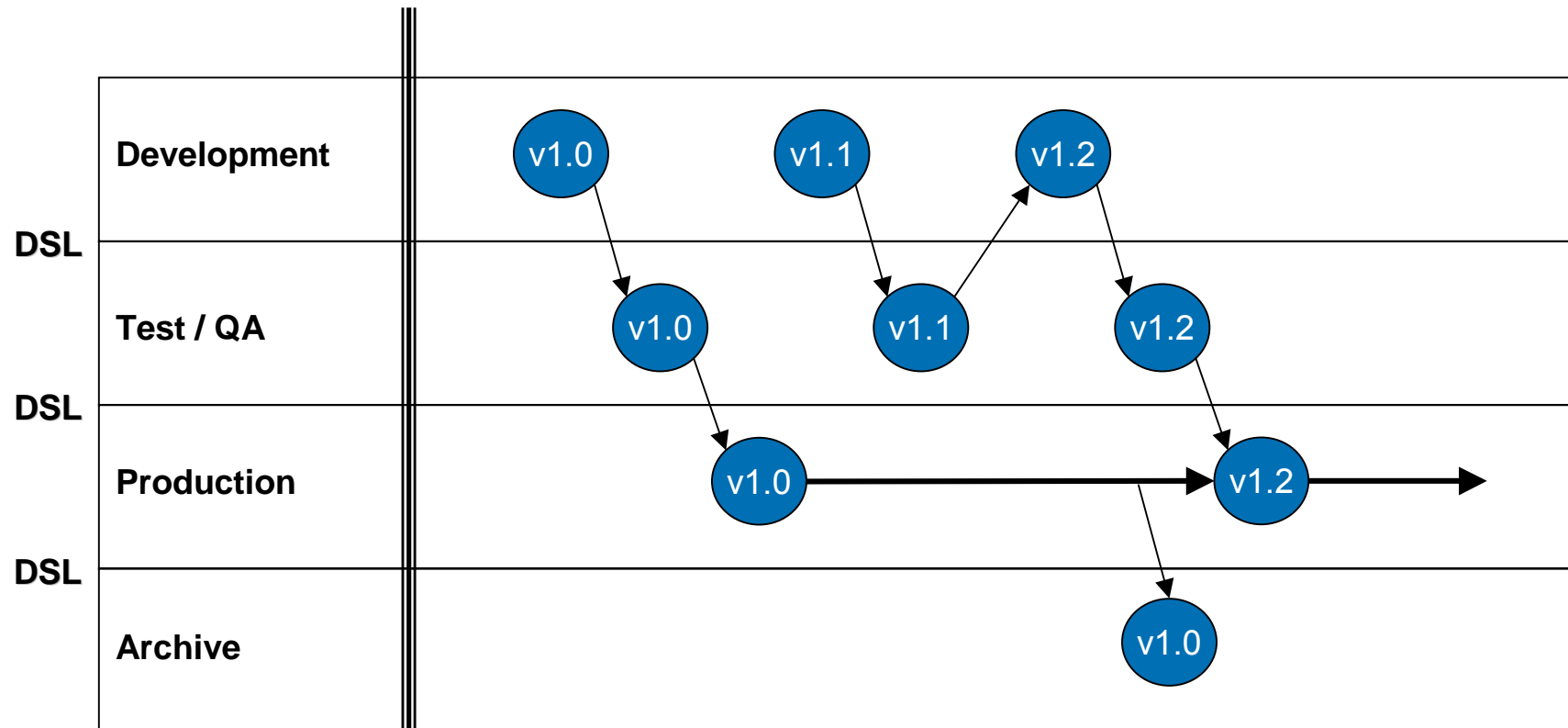


Costs: \$

- Staff
- File storage
- Computer and network resources
- Software support tools
- Training of staff

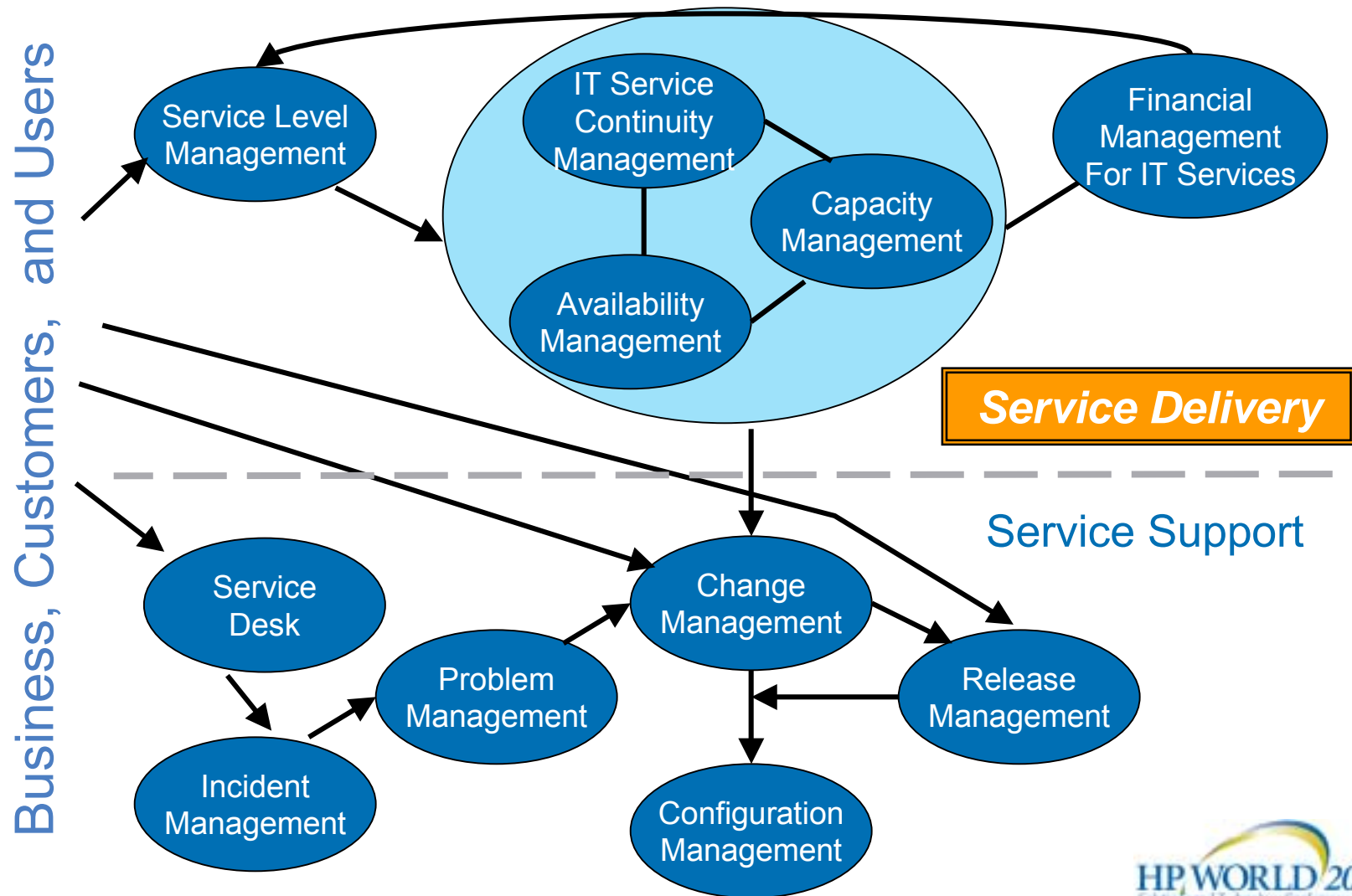


Version Control & Separate Environments



DSL = Definitive Software Library

ITIL Process Interrelationships

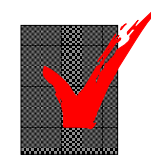


Service Level Management



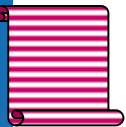
Activities:

- Identify & verify client requirements
- Define, negotiate & establish agreements
- Monitor & review service delivery
- Continuously improving service levels
- Produce & maintain a Service Catalog



Benefits:

- Achieving a specific, consistent measurable level of service
- Balancing required service levels against costs
- Defined relationships with customers
- Less chance of unpredictable demands



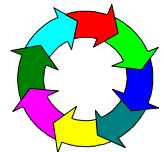
Reporting:

- Services: delivery to agreement
- Operations: delivery to agreement
- Service catalog
- Time/cost to deliver particular service levels

Ensuring agreement to & monitoring of an optimal level of IT Service

Terminology:

- Customer
- Service Level Manager
- Service Catalog
- Service Level Requirement (SLR)
- Operational Level Agreement (OLA)



Possible Problems:

- Establishing Service Level Requirements (SLR)
- Determining cost per SLR
- Recording agreements
- Single Action (customer management)

Costs: \$

- Administration
- Tools
- Ongoing improvement expenditures



Service Level Agreements Include:



- Service Description
- Operating hours
- Availability
- Support Levels
- Performance
- Functionality
- Changes
- Charges
- Contingency
- Growth
- Distribution
- Training
- Evaluations

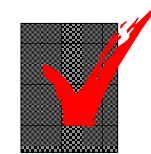


Financial Management



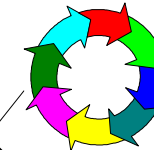
Activities:

- Determine total costs
- Specifying cost per Service
- Monitor costs
- Determine charging policy
- Define chargeable units
- Invoice charges



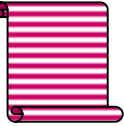
Benefits:

- Management information
- Balance between quality and cost
- Business decisions on IT Services and investments
- Maximizing value for money
- Planning and budgeting



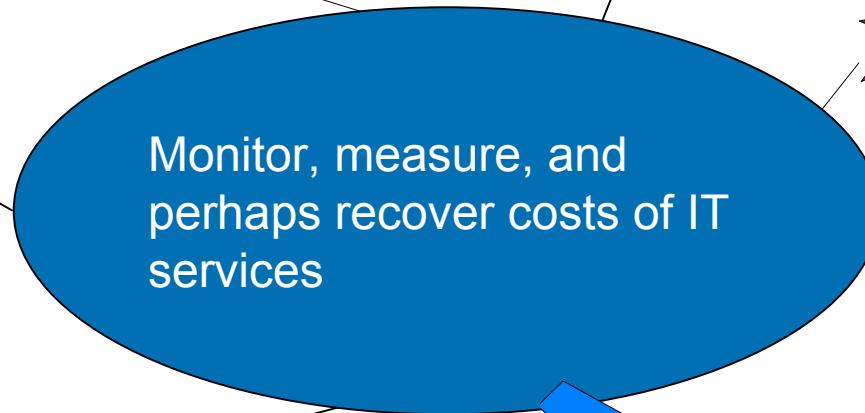
Terminology:

- Cost method
- Pricing
- Charging policy
- Chargeable unit
- Direct costing
- Indirect costing
- Fixed cost



Reporting:

- Costs of each service
- Total IT costs
- Future investments
- Time/cost to deliver particular service levels



Possible Problems:

- Introducing a new discipline
- IT/Accounting knowledge
- Absence of commitment
- Unclear policy or objective
- Cost of the system

Costs: \$

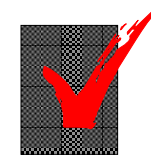
- Hardware (if necessary)
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Capacity Management



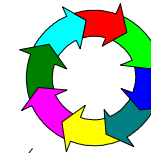
Activities:

- Create capacity management database (CDB)
- Produce Capacity Plans
- Monitor performance and capacity
- Manage resources and demand
- Model business with resource use



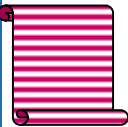
Benefits:

- Maximize existing capacity
- Control over capacity costs
- Reduce risk of capacity related problems
- Better relationship with users
- Improved anticipation of performance and capacity problems



Reporting:

- Resource utilization
- Utilization, workload, & demand Trends
- Capacity predictions versus actual



Ensure optimal & cost-effective use of IT services by matching resources to service commitments

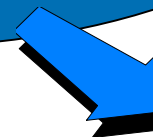
Terminology:

- Performance Management
- Workload Management
- Application Sizing
- Resource Management
- Demand Management
- Modeling
- Capacity Planning



Possible Problems:

- Tuning expectations too high
- User expectations exceed technical realities
- Influence of suppliers
- Unreliable information from users about future workload



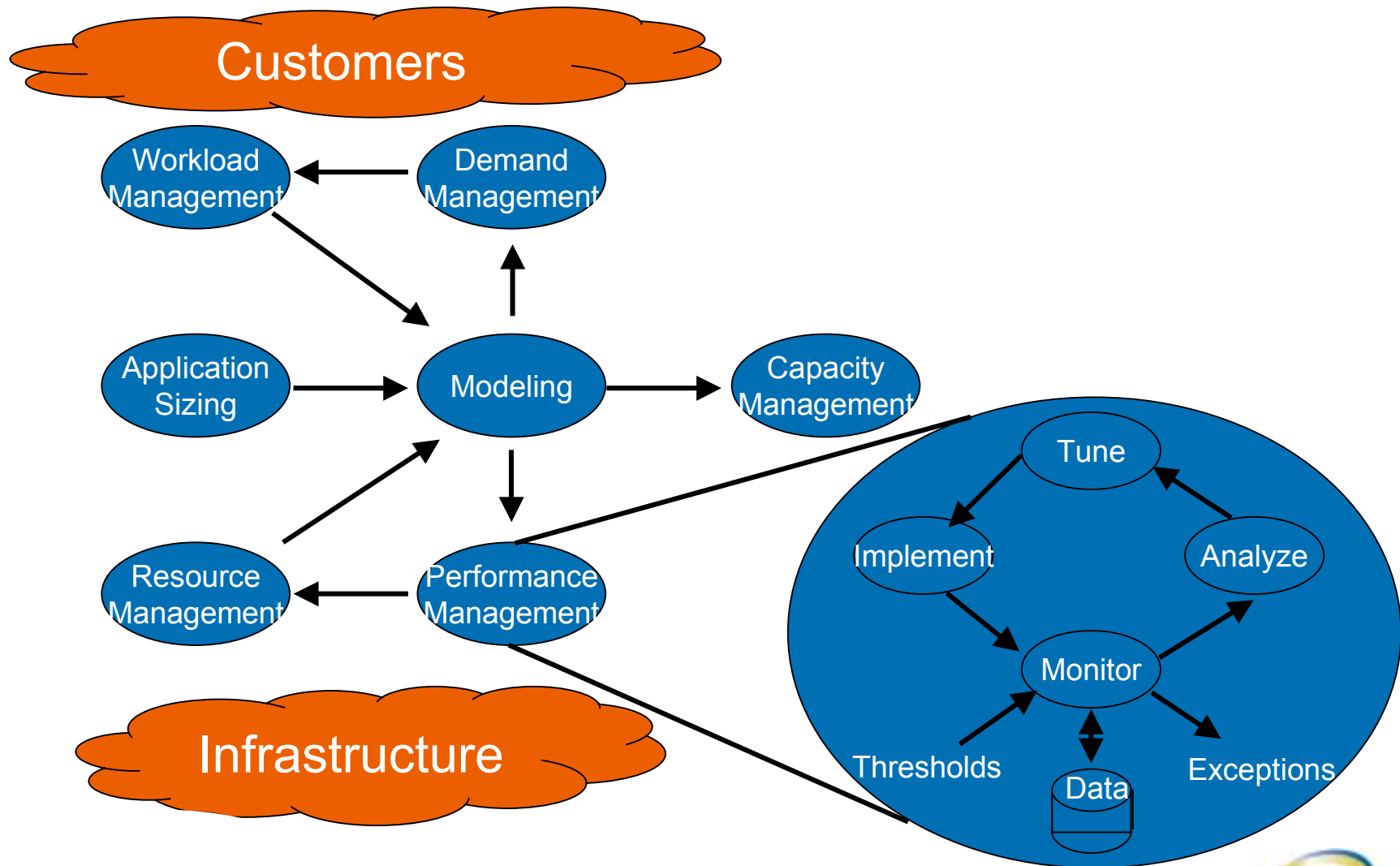
Costs:



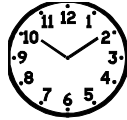
- Staffing
- Training
- Additional software and hardware



Capacity Management

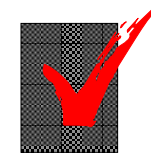


Availability Management



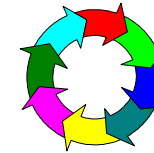
Activities:

- Determine availability requirements
- Creating Availability Plan
- Collecting data
- Maintain the Availability database
- Monitoring
- Management Reporting



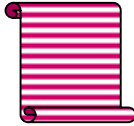
Benefits:

- Quality of service
- Cost effectiveness
- Insight into IT infrastructure
- Systematic instead of ad-hoc
- Security



Reporting:

- Availability - overall
- Deviations from SLAs
- Trends
- Recommendations
- Cost to deliver



Sustain IT service availability
to meet business needs at a
justifiable cost

Terminology:

- Availability
- Reliability
- Maintainability
- Serviceability
- Resilience
- Security



Possible Problems:

- Justification of costs
- Commitment
- Tools
- Dependence of suppliers
- Determination of needs
- Knowledge of IT infrastructure

Costs: \$

- Start-up costs, i.e., staffing, training, and tools
- Hardware and software
- Investment to improve current levels of availability

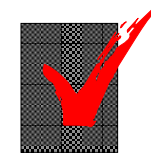


IT Service Continuity



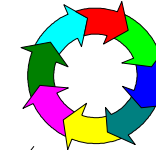
Activities:

- Risk analysis
- Risk control
- Contingency Plan Management
- Testing of Contingency Plan



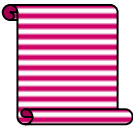
Benefits:

- Reduce number and impact of interruptions
- Quick recovery after crisis
- Greater continuity of IT service
- Minimum interruption of business



Reporting:

- "Disaster" scenarios
- Changes that impact CP
- List of safeguards
- Contracts
- Test results
- Cost of countermeasures



To cope with & recover from an IT crisis that moves work to an alternative system in a non-routine way

Terminology:

- Threat
- Vulnerability
- Risk
- Disaster
- Fall-back



Possible Problems:

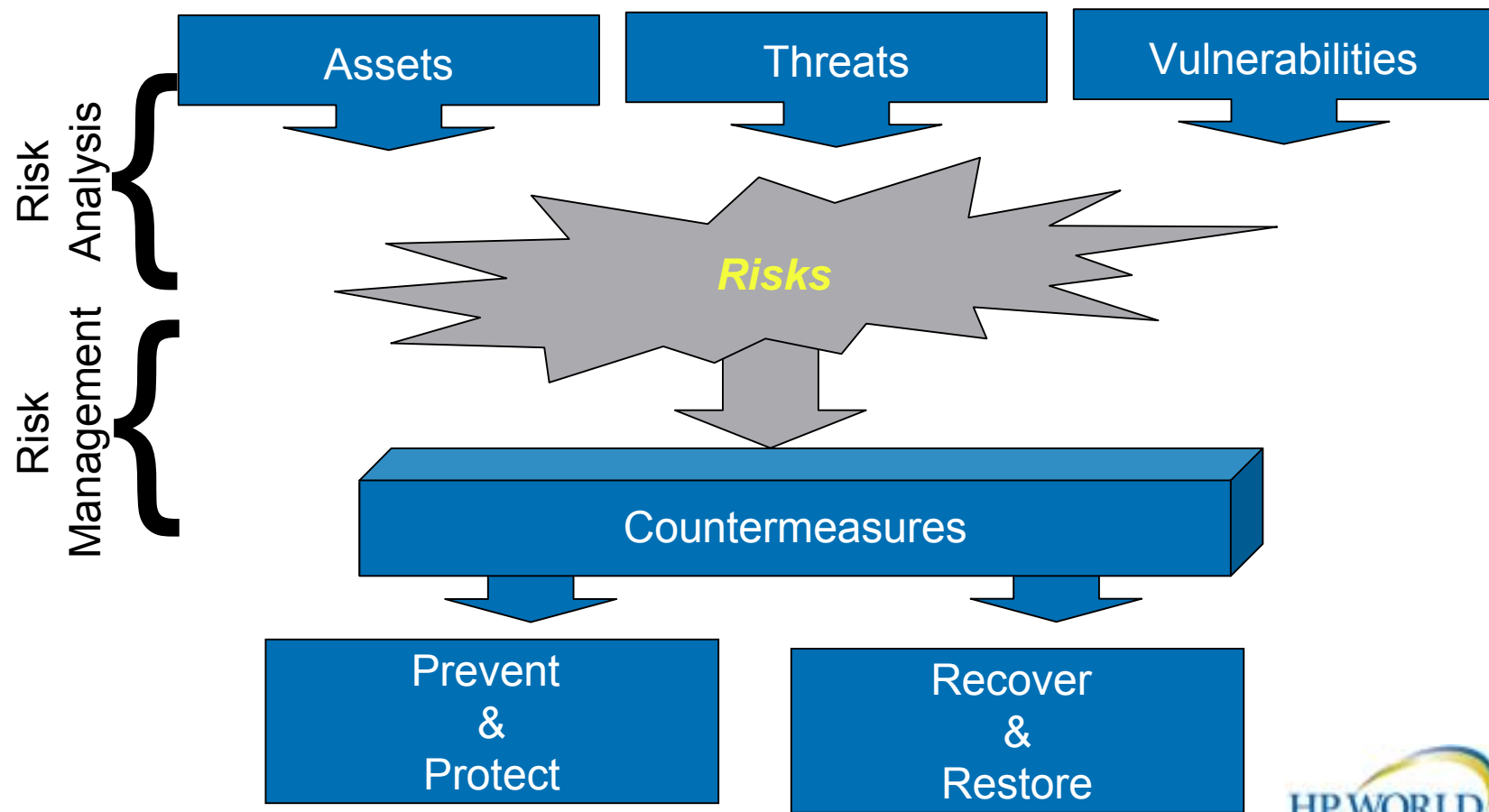
- Gaining management commitment
- Obtaining the required resources
- Testing a plan on live systems

Costs:

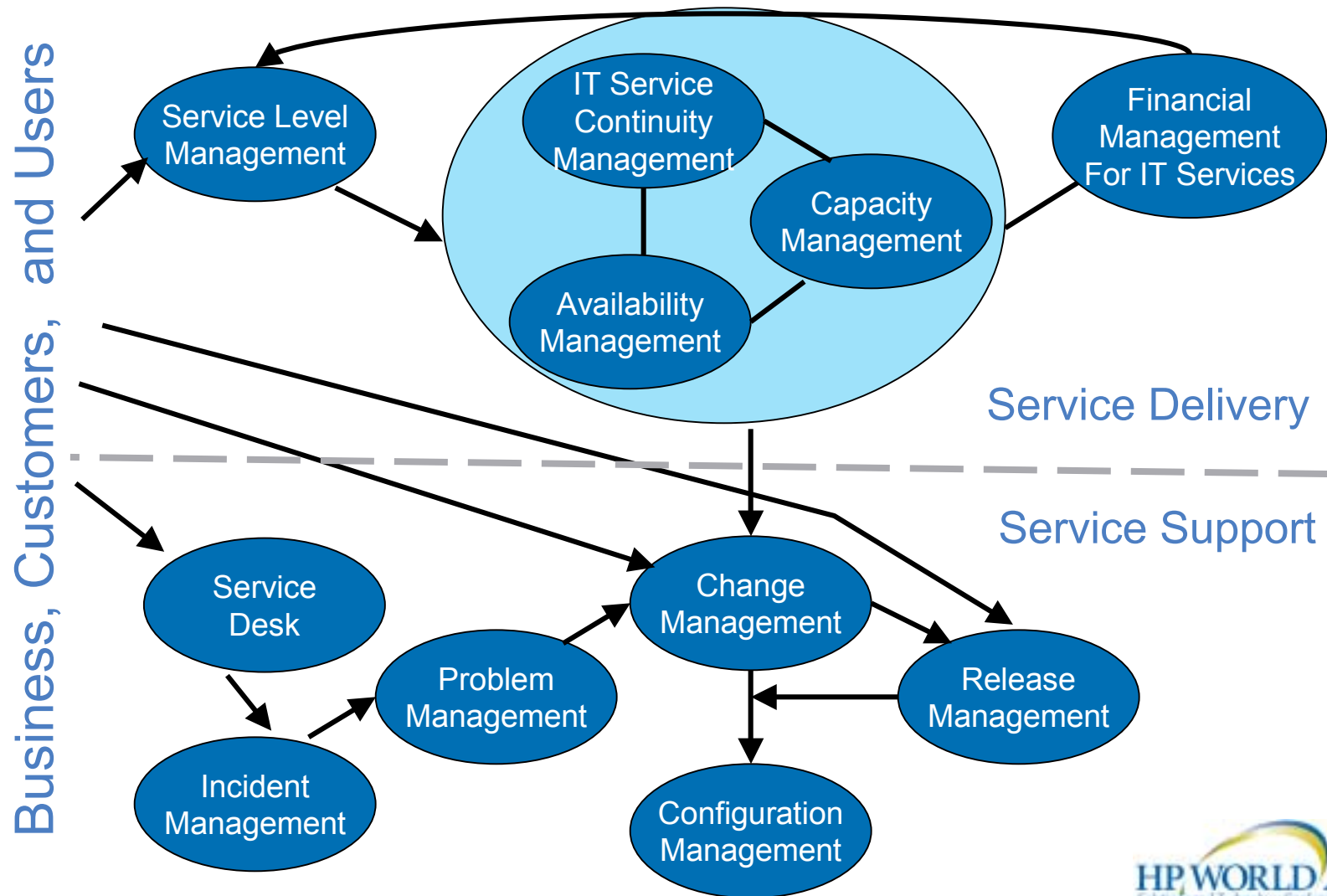


- Resources to produce the plan perform risk analysis, and test
- Hardware or other contingency site costs

Contingency Planning: Risk Analysis & Management



ITIL Process Interrelationships



ITIL Certifications

- **ITIL Essentials**

- 3 day class total
- 1.5 hour multiple choice exam
- covers the 10 processes
- read the pocket guide
- participate, ask questions, stay in the class
- study approximately 1 hour a night
- should be successful

- **IT Service Manager**

- 2 one week courses
 - 1 - Service Support
 - 1 - Service Delivery
- 3 day review/exam
 - using a case study, 2 - 4 hour essay type exams; 5 questions each exam
- 360+ hours of study and class participation

ITIL Certifications (concluded)

- **ITIL Practitioners**

- Service Desk
- Incident Management
- Problem Management
- Configuration Management
- Change Management
- Availability Management
- Capacity Management
- Service Level Management
- Financial Management for IT Services
- IT Service Continuity Management

- **Where?**

- HP Education Center
- Pink Elephant
- IT Service Management Foundation (ITSMF)



ITIL can help you align IT with your business needs and begin the journey from a Technology-driven to a Service-driven *Adaptive Enterprise*.



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HP Certified Professional

