Resource Management

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CGEIT Domains

Job Practice Areas by Domain

- 25% IT Gov Frameworks
- 20% Risk Mgmt
- 15% Strategic Alignment
- 15% Value Delivery
- 13% Resource Mgmt
- 12% Performance Msmt

Source: ISACA
IT Resource Management

- **ISACA Thumbnail Description**
  - Optimal investment in, and the proper management of, critical IT resources -- applications, information, infrastructure and people

- **Primary Objective**
  - Ensure that IT has sufficient, competent and capable resources to execute strategic objectives and keep up with business demands by optimizing the investment, use and allocation of IT resources

- **CGEIT Exam Perspective**
  - Demonstrate you understand and can execute appropriate resource management practices

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Definitions of IT Resources

- **ISACA** People, apps, information, & infrastructure
- **ITIL** People, products, processes, & partners
- **BSC** Human, information & organization capital
Benefits of IT Resource Management

• Strengthen IT and business unit working relationships
• Improve accountability for results
• Reduce enterprise risks
• Enhance IT service quality and effectiveness
• Engender more efficient use of IT resources
• Focus IT spending on business drivers, values, needs, and priorities
• Facilitate effective project and contract management
• Reduce IT project complexity
• Facilitate more effective IT planning

CGEIT Domain Task Statements

• Ensure that IT has sufficient, competent, and capable resources to execute strategic objectives
  – Design & establish resource planning programs
  – Train & develop staff
  – Analyze gaps
  – Allocate against requirements
  – Integrate resource management into strategic & tactical planning (identification, classification, allocation, periodic evaluation)
  – Standardize IT infrastructure; focus on economy of scale principles; interoperability
  – Manage & protect IT assets throughout lifecycle

Key Functions
  – Assess baseline
  – Analyze gaps
  – Gap remediation
  – Acquisition
  – Training & Maintenance
  – Support
  – Performance
  – Monitoring

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CGEIT Domain Knowledge Statements

- **Know**
  - Corporate, business & IT resources
  - Resource acquisition processes
  - Required skill and technology mix
  - HR management processes
  - Outsource and offshore processes
  - How to maintain workforce competency
  - Enterprise business strategies
  - Methods for monitoring & reporting resource performance

Resource Management Roles

- **Board**
  - Monitor how management determines what IT resources are needed to achieve strategic objectives
  - Ensure a critical review of resource allocations—proper balance of IT investments between sustaining and growth objectives

- **IT Strategy Committee**
  - High level direction for sourcing & use of IT resources
  - Oversee aggregate IT funding

- **CEO**
  - Capitalize on knowledge & information
  - Establish business priorities & allocate resources for IT performance
  - Organize for & facilitate IT strategic implementations
  - Define the CIO role
Resource Management Roles

- **Business Executives**
  - Allocate business resources for effective IT governance
- **CIO**
  - Provide the IT infrastructure to facilitate knowledge & information creation/sharing
  - Ensure availability of IT resources for strategic objectives
  - Define value creation roles within IT
  - Standardize architecture & technology
- **Management Committees**
  - Balance sustain/growth proposals
  - Advise on infrastructure needs
  - Architectural design
  - Manage complex projects
  - Monitor & report on results

Two Distinct Components

- **Resource Planning**
  - Ensure focused resources are aligned with strategic IT objectives and investments
  - Determine what resources are needed to ensure success to the business strategy
  - What processes are required to support the resources (acquisition, maintenance, automation, training, operations, etc)
  - How to ensure resources are being used efficiently and effectively
  - Covers both IT project and non-project resources (operations and support functions)
- **Project Management**
  - Focus on best utilization of available resources
  - Time, cost, space concerns
ITIL Resource Categories

- **People**
  - Skill sets
  - Certifications
  - Productivity
  - Morale

- **Processes**
  - Costs
  - Productivity
  - Availability (ARMSS)
  - Change & Configuration Mgt

- **Products**
  - Knowledge & information re customers, markets, processes
  - Infrastructure

- **Partners/Suppliers**
  - Relationships
  - Diligence
  - Escrows
  - Second sourcing
  - Equity positions

Kaplan & Norton Resource Categories

- **Human**
  - Ensure right skills are available for the business needs

- **Organization**
  - Build the supporting culture

- **Information**
  - Deliver relevant, high quality, and timely information
Resource Management Starts with Alignment

- **Strategic Objective: Operational Excellence**
  - Minimize problems
  - Provide rapid response

- **Strategic Job Identification**
  - Quality managers
    - Six sigma
    - Problem management
  - Call center agents
    - Customer interaction skills
    - Problem management
    - Team building

Resources Aligned to Strategy

- **Strategic Objective: Innovative Market Leader**
  - Understand customer segments
  - Develop new products

- **Strategic Job Identification**
  - Consumer market managers
    - Market research
    - Advertising
    - Cross business processes
  - Joint venture managers
    - Relationship mgt
    - Negotiation skills
    - E-commerce knowledge
Human Resource Planning

- **Core activities**
  - Start with strategic objectives
  - Identify strategic job families
  - Define competency profile 
    (skills, experience, values, knowledge)
  - Assess status
  - Report gaps
  - Plan for Gap remediation
  - Execute Gap Plan

Values, Skills, Knowledge, Experience

<table>
<thead>
<tr>
<th>Strategic Objective</th>
<th>Achieve a high performance service culture</th>
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<tbody>
<tr>
<td>Values</td>
<td>Anticipate customer needs</td>
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<tr>
<td></td>
<td>Services easy to use</td>
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<td></td>
<td>Create effective solutions</td>
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<tr>
<td></td>
<td>Expertise inspires customer confidence</td>
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<td></td>
<td>Assure quality first time, every time</td>
</tr>
<tr>
<td>Profile</td>
<td>Follow through on commitments</td>
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<td>Concentrate on working problems, not fault finding</td>
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<td></td>
<td>Ensure highest quality</td>
</tr>
</tbody>
</table>
Human Resource Planning

• HR often has its own governance program
  — Cascading Balanced Score Card opportunities
  — Also needs alignment with business strategies

• IT human resources shared responsibility
  — HR takes on the internal process aspects
  — IT takes on the IT skill sets, experience, certification, location, motivation, career development

IT Human Resource Planning

• Interrelated to other IT decisions

• Example – Move to Cloud Computing
  — Personnel requirements may change
  — Less need for internal operations
  — More need for system services management
  — More focus on understanding business value chain
  — Less focus on designing and administering system infrastructures
## IT Human Resource Planning

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### Skills

| • Architecting distributed computing networks | • Managing diverse remote access methods |
| • Configuring large-scale virtual storage    | • Building and reinforcing vendor relationships |
| • Forecasting capacity                       |

### Knowledge

| • Service oriented architecture | • Cisco product lines |
| • Kerberos and PKI              | • .Net Programming |
Information Resource Categories

- **Transaction Processing**
  - Systems that automate basic repetitive enterprise transactions

- **Analytic**
  - Systems and networks that promote analysis, interpretation, and share of information or knowledge

- **Transformational**
  - Systems and networks that change the prevailing business model

- **Technology Infrastructure**
  - Shared technology and administration expertise for effective use and delivery of the Information resources

Information Resource Planning

<table>
<thead>
<tr>
<th>Strategic Theme</th>
<th>Operational Excellence</th>
<th>Innovation</th>
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<tbody>
<tr>
<td>Strategic processes</td>
<td>Min Problems</td>
<td>Understand customer</td>
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<td>Strategic job families</td>
<td>Quality mgr</td>
<td>Call center agent</td>
</tr>
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<td>Analytical</td>
<td>Service QA</td>
<td>Best practice benchmarking</td>
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<tr>
<td>Transaction</td>
<td>Incident tracking</td>
<td>Workforce scheduling</td>
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<tr>
<td>Transformational</td>
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<td>Customer self-help</td>
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<tr>
<td>Infrastructure</td>
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<td>IVR, CTI, CRM stnds, web apps</td>
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Information Resources

- **Information portfolio**
  - Systems, apps, infrastructure for each strategic job family; sorted by category
  - Level of investment in new information projects
  - Mix of investments to align and meet business requirements
  - Industry benchmarks for competitive spending comparisons
  - Input into IT portfolio management (value delivery)
  - Strategy should impact decisions

Sourcing

- Along with the globalization of business, the sourcing of strategic resources on a global basis has proven to be a source of competitive advantage both in terms of innovation and in cost effectiveness.
- It is not sufficient to manage internal resources; managing external relationships with outsourcing service providers is equally important.
- Specialist jobs are likely to continue to migrate from current employers toward companies that provide outsourcing services
  - Outsourcing is not just a cost reduction strategy; but also drives speed, flexibility and level of innovation
- Multi-sourcing risks arise when the best-of-breed benefits do not materialize or become overshadowed by negatives, issues and overheads
- These negative synergies have three root causes:
  - Poorly shaped clusters of IT services
  - Misaligned technology and provider strategies
  - Broken end-to-end processes
ITIL Resource Management

- Focus on resource availability and utilization
- Three ITIL processes
  - Demand management
  - Capacity management
  - Availability management
- Capacity and availability management also featured in the ISO 20000 standard for service management, under the service delivery processes group
Demand Management

• **Purpose**
  – is to understand and influence customer demand for services and capacity provisioning to meet customer demand

• **Strategically**
  – At a strategic level, focus on analysis of patterns of business activity and user profiles

• **Tactically**
  – At a tactical level, focus on use of differential charging to encourage customers to use IT services at less busy times.

BPA and UP

• **Business processes are the primary source of demand for services. Patterns of business activity (PBAs) influence the demand patterns seen by service providers**
  – Analyzing and tracking the activity patterns of the business process makes it possible to predict demand
  – PBAs are identified, codified and shared across processes for clarity and completeness of detail

• **User profiles (UPs) are based on roles and responsibilities within enterprises for people, and functions and operations for processes and applications**
  – Processes and applications can have UPs
  – Each UP can be associated with one or more PBA
  – UPs are constructed using one or more predefined PBA.

• **Pattern matching using PBAs and UPs ensures a systematic approach to understanding and managing demand from customers.**
Capacity Management

• **Purpose**
  – Provide a point of focus and management for all capacity and performance-related issues, relating to both services and resources, and to match the capacity of IT to the agreed-on business demands

• **Capacity management**
  – Ensures that capacity and performance of the IT services and systems match the evolving agreed-on demands of the business in the most cost-effective and timely manner
  – It includes business, service and component capacity management across the IT service life cycle
  – A key success factor in managing capacity is ensuring that it is considered during the service design stage

• **The IT service life cycle is broadly centered around the business customer and staging through service strategy → service design → service transition → service operation → continual service improvement, and then back to the business customer.**

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Capacity Management

• **Business capacity management**
  – Translates business needs and plans into requirements for service and IT infrastructure

• **Service capacity management**
  – The management, control and prediction of the end-to-end performance and capacity of the live, operational IT services usage and work loads

• **Component capacity management**
  – The management, control and prediction of the performance, utilization and capacity of individual IT technology components
Availability Management

- **Purpose**
  - Provide a point of focus and management for all availability issues
  - Relating to services, components and resources,
  - Ensure availability targets in all areas are measured and achieved, and that they match or exceed the current and future agreed-on needs of the business in a cost effective manner

Availability management

- **There are two key aspects:**
  - *Reactive activities*
    - Monitoring, measuring, analysis and management of events, incidents and problems involving service unavailability
  - *Proactive activities*
    - Proactive planning, design, recommendation and improvement of availability
Resource Management & Metrics

- **Performance measurement questions**
  - How well is the capacity and resource plan working
  - Are milestones met
  - Are utilization models holding
  - What’s trending
  - Are SLA and OLA on target

Resource Management Summary

- **Focus shift**
  - From cost and availability
  - To strategic alignment, with emphasis on the critical differentiating processes

- **IT resources**
  - Managed like other enterprise assets
  - Value measured to indicate contribution to strategy and value delivery

- **Resource Planning**
  - Feeds into IT Portfolio management
  - Business cases
  - Alignment success
Key Resource Management Points

- Part of the IT Governance process
  - Purpose is to optimize the planning and availability of IT resources needed for business strategies
- Frameworks
  - ITIL for service management environments
  - BCS—learning and growth approaches—strategic alignment
  - Availability & Capacity focus areas
- IT Project Management
  - Part of good governance to have a standard PM methodology
  - But not the same as Resource Planning and Strategic Alignment
  - Detailed knowledge of Prince2 and PMBOK not needed for exam

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COBIT Project Management

- **Focus on Project Management**
  - PO10 Manage Projects
  - Prioritization and coordination of IT projects
  - Master plan, resource assignments, deliverables, approvals, phased delivery, QA, testing, post implementation review
  - Reduce the risk of unexpected costs and project cancellation
  - Improve communication between business units and users
  - Ensure value delivery

COBIT PO10 Manage Projects

- **Standardize the PM process**
  - Have a methodology
  - Provide enterprise PM guidelines
  - Require enterprise project planning

- **Critical Factors**
  - Commitment
  - Scoping
  - Integrated planning
  - Resource assignments
  - Risk assessment and management
  - Change control
  - Performance metrics and monitoring
  - Formal project closure
### COBIT PO10 Manage Projects

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs</th>
</tr>
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<tbody>
<tr>
<td>PO1 IT Portfolio</td>
<td>Performance Reports ME1</td>
</tr>
<tr>
<td>PO5 Updated IT Portfolio</td>
<td>Risk Management Plan PO9</td>
</tr>
<tr>
<td>PO7 IT Skills Matrix</td>
<td>PM Guidelines AI 1—7</td>
</tr>
<tr>
<td>PO8 Development Stnds</td>
<td>Detailed Project Plans PO8/AI 1-7</td>
</tr>
<tr>
<td>AI7 Post-implementation Review</td>
<td>Updated IT Portfolio PO1/PO5</td>
</tr>
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### PMBOK and Prince2

- **General project management frameworks (not just for IT)**
  - Both have been mapped to COBIT
  - PO 10 Manage Projects capture most components
- **PMBOK (ANSI/PMI 99-001-2004)**
  - Focus on consistent implementation of a proven framework based on best PM practices
  - Lifecycle approach—initiation, planning, executing, controlling, closing
- **Prince2 (UK Gov’t)**
  - Business case driven
  - Focus on the process of project management
  - Segments projects into manageable stages