

# PETROLEUM UPSTREAM PROCESS CLASSIFICATION FRAMEWORK<sup>SM</sup>

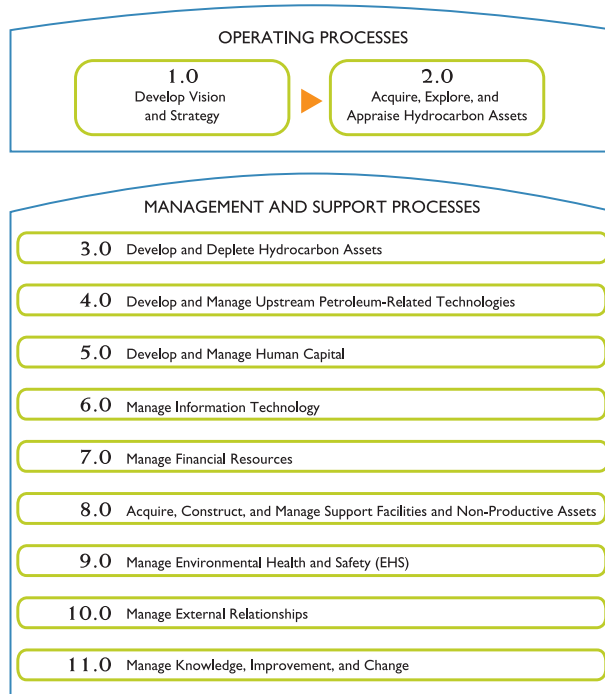
## THE PETROLEUM UPSTREAM PROCESS CLASSIFICATION FRAMEWORK

Based on the renowned Process Classification Framework<sup>SM</sup> (PCF), a taxonomy of cross-functional business processes intended to allow objective comparison of performance within and among organizations, and the support of IBM, this industry PCF enables more industry applicable content by outlining and defining processes and activities specific to the Petroleum Upstream industry. This allows organizations to choose the framework most relevant to the specific process improvement need, whether it be benchmarking within or across industries, business process management/re-engineering, or content management. The cross-industry PCF and industry PCFs are available on the APQC website at no charge. IBM provided the subject matter expertise and intellectual property to create the industry specific business process classification frameworks, as part of the IBM's continuing leadership in the promotion of open standards to help organizations evaluate and measure business processes at an industry level.

## THE FRAMEWORK FOR PROCESS IMPROVEMENT

Experience shows that the potential of benchmarking to drive dramatic improvement lies squarely in making out-of-the-box comparisons and searching for insights not typically found within intra-industry paradigms. To enable this beneficial benchmarking, the APQC Process Classification Framework<sup>SM</sup> (PCF) serves as a high-level, industry-neutral enterprise process model that allows organizations to see their business processes from a cross-industry viewpoint.

The cross-industry framework has experienced more than 15 years of creative use by thousands of organizations worldwide. The PCF provides the foundation for APQC's Open Standards Benchmarking<sup>SM</sup> database of performance metrics, the largest of its kind in the world. The PCF will continue to be enhanced as the database further develops definitions, processes, and measures. The PCF, associated measures, and definitions are available for download at no charge at [www.apqc.org/osb](http://www.apqc.org/osb). An online benchmarking portal for individual assessments is also available.



## HISTORY

The cross-industry Process Classification Framework was originally envisioned as a taxonomy of business processes and a common language through which APQC member organizations could benchmark their processes. The initial design involved APQC and more than 80 organizations with strong interest in advancing the use of benchmarking in the United States and worldwide. Since its inception in 1992, the PCF has seen updates to most of its content. These updates keep the framework current with the ways that organizations do business around the world. In 2008, APQC and IBM worked together to enhance the cross-industry PCF and to develop a number of industry-specific process classification frameworks.



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## LOOKING FORWARD

The cross industry and industry Process Classification Frameworks are evolving models, which APQC will continue to enhance and improve regularly. Thus, APQC encourages comments, suggestions, and more importantly, the sharing of insights from having applied the PCF within your organization. Share your suggestions and experiences with the PCF by e-mailing [pcf\\_feedback@apqc.org](mailto:pcf_feedback@apqc.org).

## ABOUT APQC

An internationally recognized resource for process and performance improvement, APQC helps organizations adapt to rapidly changing environments, build new and better ways to work, and succeed in a competitive marketplace. With a focus on productivity, knowledge management, benchmarking, and quality improvement initiatives, APQC works with its member organizations to identify best practices; discover effective methods of improvement; broadly disseminate findings; and connect individuals with one another and the knowledge, training, and tools they need to succeed. Founded in 1977, APQC is a member-based nonprofit serving organizations around the world in all sectors of business, education, and government. APQC is also a proud winner of the 2003 and 2004 North American Most Admired Knowledge Enterprises (MAKE) awards. This award is based on a study by Teleos, a European based research firm, and the KNOW network.

The PCF is written in United States English language format.

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## ABOUT IBM

IBM works with its clients to develop new business designs and technical architectures that allow their businesses the flexibility required to compete in a global business landscape. The business is also adjusting its footprint toward emerging geographies, tapping into IBM's double-digit growth, providing the technology infrastructure they need, and taking advantage of the talent pools provided to better service IBM's clients. IBM's major operations comprise a Global Technology Services segment; a Global Business Services segment; a Systems and Technology segment; a Software segment; and a Global Financing segment. For more information, visit: [www.ibm.com/soa](http://www.ibm.com/soa)

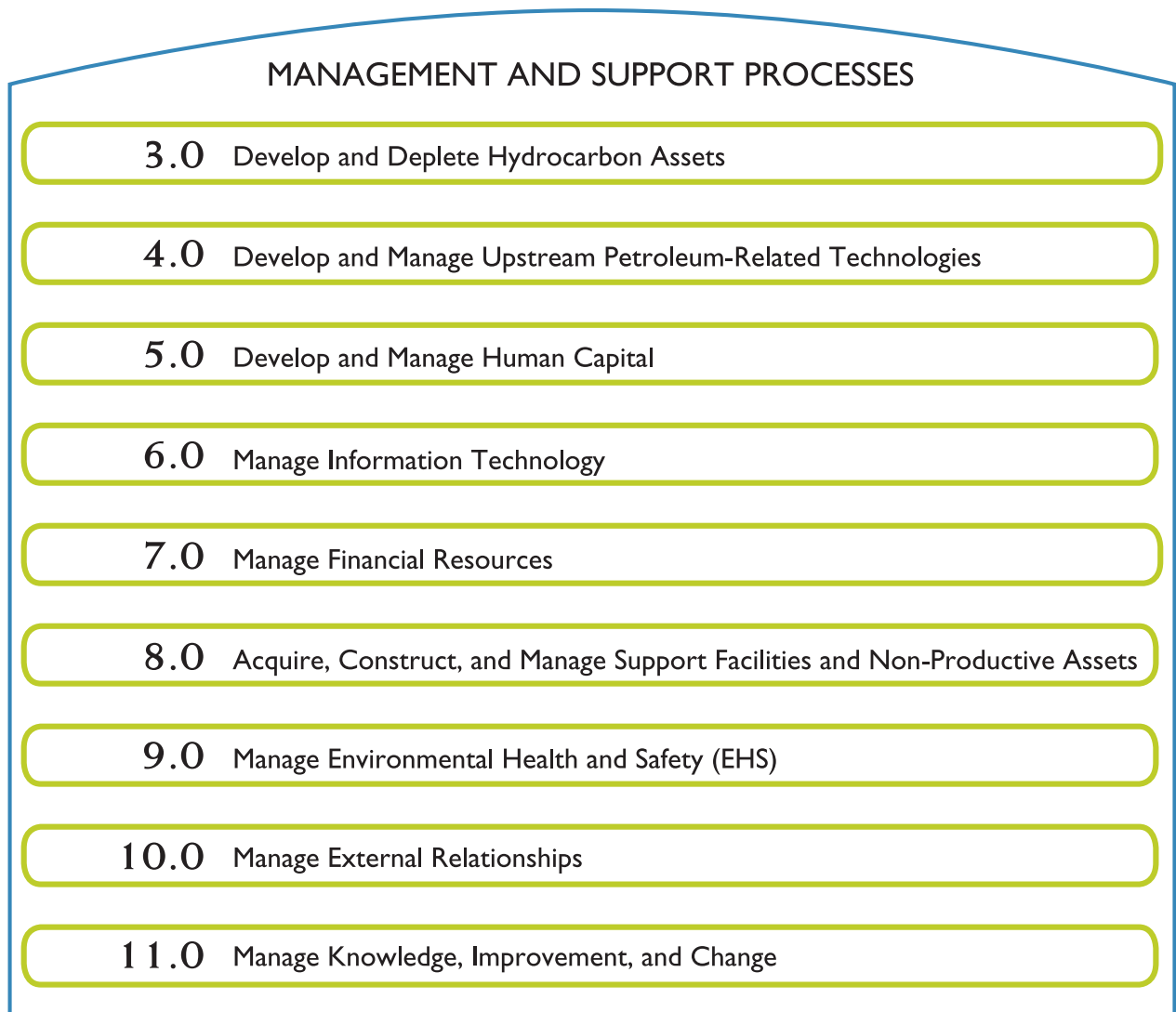
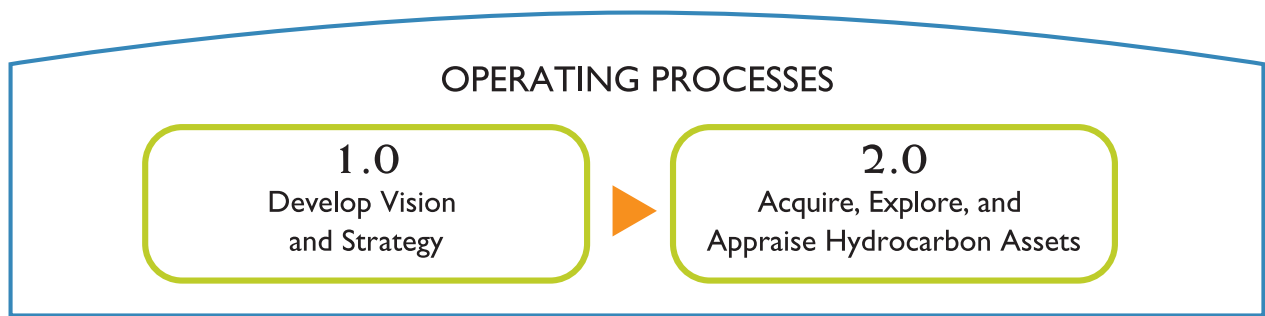
## THE PETROLEUM UPSTREAM PROCESS CLASSIFICATION FRAMEWORK<sup>SM</sup>

### RIGHTS AND PERMISSIONS

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### UNDERSTANDING THE NUMBERING SCHEME

Beginning with Version 5.0.0, the PCF uses a numbering scheme that differs from previous versions. The cross-industry framework and the industry-specific frameworks collectively form a library of process



elements used in APOC’s Open Standards Benchmarking database. Each process element is referred to by two numbers: a number used to locate the content within that particular framework (in the format 1.2.3.4) and a serial number used to uniquely identify the process element across all of the various Open Standards Benchmarking frameworks (beginning with 10000).

For example, the process element “1.2 Develop business strategy (10015)” is uniquely identified by the serial number “10015” and the hierarchical reference number “1.2.” In industry-specific PCFs, any process element identified as “10015” will have the same scope and definition as a process element of the same number elsewhere, but may be labeled differently.

### INTERPRETING THE PCF

**Category:** The highest level within the PCF is indicated by whole numbers (e.g., 8.0 and 9.0)

**Process Group:** Items with one decimal numbering (e.g., 8.1 and 9.1) are considered a process group.

**Process:** Items with two decimal numberings (e.g., 8.1.1 and 9.1.2) are considered processes.

**Activity:** Items with three decimal numbering (e.g. 8.3.1.1 and 9.1.1.1) are considered activities within a process.

The Petroleum Upstream PCF is based on the cross-industry PCF Version 5.0.0 released in April 2008.

## I.0 Develop Vision and Strategy (10002)

### 1.1 Define the business concept and long-term vision (10014)

#### 1.1.1 Assess the external environment (10017)

- 1.1.1.1 Analyze and evaluate competition (10021)
- 1.1.1.2 Identify economic trends (10022)
- 1.1.1.3 Identify political and regulatory issues (10023)
- 1.1.1.4 Assess new technology innovations (10024)
- 1.1.1.5 Analyze demographics (10025)
- 1.1.1.6 Identify social and cultural trends (10026)
- 1.1.1.7 Identify ecological concerns (10027)

#### 1.1.2 Survey market and determine customer needs and wants (10018)

- 1.1.2.1 Conduct qualitative/quantitative assessments (10028)
- 1.1.2.2 Assess customer needs (10029)

#### 1.1.3 Perform internal analysis (10019)

- 1.1.3.1 Analyze organizational characteristics (10030)
- 1.1.3.2 Create baselines for current processes (10031)
- 1.1.3.3 Analyze systems and technology (10032)
- 1.1.3.4 Analyze financial positions (10033)
- 1.1.3.5 Identify enterprise core competencies (10034)

#### 1.1.4 Establish strategic vision (10020)

- 1.1.4.1 Align stakeholders around strategic vision (10035)
- 1.1.4.2 Communicate strategic vision to stakeholders (10036)

### 1.2 Develop business strategy (10015)

#### 1.2.1 Develop overall mission statement (10037)

- 1.2.1.1 Define current business (10044)
- 1.2.1.2 Formulate mission (10045)
- 1.2.1.3 Communicate mission (10046)

#### 1.2.2 Evaluate strategic options to achieve the objectives (10038)

- 1.2.2.1 Define strategic options (10047)
- 1.2.2.2 Assess and analyze impact of each option (10048)

#### 1.2.3 Finalize long-term business strategy (10039)

#### 1.2.4 Coordinate and align functional and process strategies (10040)

#### 1.2.5 Create organizational design (structure, governance, reporting, etc.) (10041)

- 1.2.5.1 Evaluate breadth and depth of organizational structure (10049)
- 1.2.5.2 Perform job-specific roles mapping and value-add analyses (10050)
- 1.2.5.3 Clarify role activities and assess hand-offs (10051)
- 1.2.5.4 Perform organization redesign workshops (10052)
- 1.2.5.5 Design the relationships between organizational units (10053)
- 1.2.5.6 Develop role and activity analysis for key processes (10054)
- 1.2.5.7 Assess organizational implication of feasible alternatives (10055)
- 1.2.5.8 Migrate to new organization (10056)

#### 1.2.6 Develop and set organizational goals (10042)

#### 1.2.7 Formulate business unit strategies (10043)

### 1.3 Manage strategic initiatives (10016)

#### 1.3.1 Develop strategic initiatives (10057)

#### 1.3.2 Evaluate strategic initiatives (10058)

#### 1.3.3 Select strategic initiatives (10059)

#### 1.3.4 Establish high-level measures (10060)

## 2.0 Acquire, Explore, and Appraise Hydrocarbon Assets (14200)

### 2.1 Acquire asset (access) (12984)

- 2.1.1 Strategize acquisition (12985)
  - 2.1.1.1 Define key value drivers (12986)
- 2.1.2 Identify opportunities (12987)
  - 2.1.2.1 Gather/create opportunities (12988)
  - 2.1.2.2 Screen and prioritize opportunities (12989)
  - 2.1.2.3 Develop key alignment points (12990)
  - 2.1.2.4 Engage key decision makers (12991)
  - 2.1.2.5 Select opportunities to evaluate (12992)
- 2.1.3 Evaluate opportunities (12993)
  - 2.1.3.1 Form team and dedicate resources (12994)
  - 2.1.3.2 Conduct technical analysis (12995)
  - 2.1.3.3 Identify sources of value and develop business case (12996)
  - 2.1.3.4 Determine value and decide whether to pursue (12997)
- 2.1.4 Pursue opportunities (12998)
  - 2.1.4.1 Confirm potential value of target (12999)
  - 2.1.4.2 Develop transition/ integration plan (13000)
  - 2.1.4.3 Establish price and negotiation strategy (13001)
  - 2.1.4.4 Structure deal, launch offer, close contracts (13002)
  - 2.1.4.5 Finalize agreement and prepare for integration (13003)
- 2.1.5 Handover successful opportunities to exploration, development or production (13004)

### 2.2 Explore asset (13005)

- 2.2.1 Develop exploration strategy (13006)
- 2.2.2 Acquire seismic data (13007)
- 2.2.3 Process seismic data (13008)
- 2.2.4 Develop seismic models (13009)
- 2.2.5 Perform basin analysis (13010)
- 2.2.6 Develop prospect portfolio development (13011)
  - 2.2.6.1 Perform prospect identification (13012)
  - 2.2.6.2 Perform prospect definition (13013)
  - 2.2.6.3 Create ready-to-drill inventory (13014)
- 2.2.7 Drill exploration wells (13015)
- 2.2.8 Evaluate exploration wells (13016)
- 2.2.9 Submit regulatory reports (13017)
- 2.2.10 Handover successful exploration wells for appraisal (13018)

### 2.3 Appraise asset (13019)

- 2.3.1 Gather data (13020)
  - 2.3.1.1 Organize asset data (13021)
  - 2.3.1.2 Acquire/process seismic data (13022)
  - 2.3.1.3 Acquire/process well log data (13023)
  - 2.3.1.4 Gather reservoir data (13024)
  - 2.3.1.5 Gather geochemical data (13025)
  - 2.3.1.6 Estimate data uncertainty (13026)
- 2.3.2 Develop asset model (13027)
  - 2.3.2.1 Build surface geological model (13028)
  - 2.3.2.2 Build seismic model (13029)
  - 2.3.2.3 Correlate well data (13030)
  - 2.3.2.4 Integrate seismic and well model (13031)
  - 2.3.2.5 Build reservoir model (13032)
  - 2.3.2.6 Characterize reservoir (13033)
  - 2.3.2.7 Estimate hydrocarbon potential (13034)
- 2.3.3 Develop scenarios (13035)
  - 2.3.3.1 Build sub-surface scenarios (13036)
  - 2.3.3.2 Build facility scenarios (13037)
  - 2.3.3.3 Build operating scenarios (13038)
  - 2.3.3.4 Develop EHS (Environmental Health & Safety) definitions (13039)
- 2.3.4 Evaluate economic viability (13040)
  - 2.3.4.1 Evaluate well costs (13041)
  - 2.3.4.2 Evaluate facility and pipeline costs (13042)
  - 2.3.4.3 Perform economic analysis (13043)
  - 2.3.4.4 Perform uncertainty analysis (13044)
- 2.3.5 Propose development plan (13045)
  - 2.3.5.1 Develop proposal (13046)
  - 2.3.5.2 Compile plan (13047)
  - 2.3.5.3 Submit regulatory report (13048)
- 2.3.6 Handover appraisal results to development (13049)

## 3.0 Develop and Deplete Hydrocarbon Assets (14201)

### 3.1 Develop asset (13050)

- 3.1.1 Develop facility (13051)
  - 3.1.1.1 Prepare conceptual design (13052)
  - 3.1.1.2 Prepare front-end engineering design (13060)
  - 3.1.1.3 Prepare detailed design (13068)
  - 3.1.1.4 Construct and precommission (13075)
  - 3.1.1.5 Commission and prepare handover (13079)
- 3.1.2 Develop subsurface (13083)
  - 3.1.2.1 Develop preliminary well design (13084)
  - 3.1.2.2 Develop detailed well design (13085)
  - 3.1.2.3 Develop well program (13086)
  - 3.1.2.4 Construct well (13087)
  - 3.1.2.5 Modify well (13093)
- 3.1.3 Submit regulatory reports (13095)
- 3.1.4 Handover to Production (13096)

### 3.2 Produce asset (13097)

- 3.2.1 Establish asset depletion strategy (13098)
  - 3.2.1.1 Define long-term "life of field" strategy (13099)
  - 3.2.1.2 Define term "operational" plan (13103)

### 3.2.2 Operate asset (13107)

- 3.2.2.1 Define operation architecture (13108)
- 3.2.2.2 Define production planning (13109)
- 3.2.2.3 Execute production (13110)
- 3.2.2.4 Conduct surveillance (13111)
- 3.2.2.5 Optimize production (13112)
- 3.2.2.6 Perform maintenance (13113)
- 3.2.2.7 Manage activities (13121)

### 3.2.3 Submit regulatory reports (13126)

### 3.3 Exit opportunity (13127)

- 3.3.1 Develop exit strategy (13128)
- 3.3.2 Perform sale or trade (13129)
- 3.3.3 Perform abandonment (13130)
  - 3.3.3.1 Demolish and secure (13131)
  - 3.3.3.2 Restore site (13132)
  - 3.3.3.3 Prepare handover (13133)
- 3.3.4 Submit regulatory reports (14202)

## 4.0 Develop and Manage Upstream Petroleum-Related Technologies (10003)

### 4.1 Manage upstream petroleum-related technology portfolio (10061)

- 4.1.1 Evaluate performance of existing upstream petroleum-related technologies against market opportunities (10063)
- 4.1.2 Define upstream petroleum-related technology development requirements (10064)
  - 4.1.2.1 Identify potential improvements to existing upstream petroleum-related technologies (10068)
  - 4.1.2.2 Identify potential new upstream petroleum-related technologies (10069)
- 4.1.3 Perform discovery research (10065)
  - 4.1.3.1 Identify new upstream petroleum-related technologies (10070)
  - 4.1.3.2 Develop new upstream petroleum-related technologies (10071)
  - 4.1.3.3 Assess feasibility of integrating new leading upstream petroleum-related technologies into upstream petroleum-related technology concepts (10072)
- 4.1.4 Confirm alignment of upstream petroleum-related technology concepts with business strategy (10066)
  - 4.1.4.1 Plan and develop cost and quality targets (10073)
  - 4.1.4.2 Prioritize and select new upstream petroleum-related technology concepts (10074)
  - 4.1.4.3 Specify development timing targets (10075)
  - 4.1.4.4 Plan for upstream petroleum-related technology offering modifications (10076)

### 4.1.5 Manage upstream petroleum-related technology life cycle (10067)

- 4.1.5.1 Introduce new upstream petroleum-related technologies (10077)
- 4.1.5.2 Retire outdated upstream petroleum-related technologies (10078)
- 4.1.5.3 Identify and refine performance indicators (10079)

### 4.2 Develop new upstream petroleum-related technologies (10062)

- 4.2.1 Design, build, and evaluate upstream petroleum-related technologies (10080)
  - 4.2.1.1 Assign resources to upstream petroleum-related technology project (10083)
  - 4.2.1.2 Prepare high-level business case and technical assessment (10084)
  - 4.2.1.3 Develop upstream petroleum-related technology design specifications (10085)
  - 4.2.1.4 Document design specifications (10086)
  - 4.2.1.5 Conduct mandatory and elective external reviews (10087)
  - 4.2.1.6 Build prototypes (10088)
  - 4.2.1.7 Eliminate quality and reliability problems (10089)
  - 4.2.1.8 Conduct in-house product/service testing and evaluate feasibility (10090)
  - 4.2.1.9 Identify design/development performance indicators (10091)
  - 4.2.1.10 Collaborate on design with suppliers and contract manufacturers (10092)

- 4.2.2 Test market for new or revised upstream petroleum-related technologies (10081)
  - 4.2.2.1 Prepare detailed market study (10093)
  - 4.2.2.2 Conduct customer tests and interviews (10094)
  - 4.2.2.3 Finalize product/service characteristics and business cases (10095)
  - 4.2.2.4 Finalize technical requirements (10096)
  - 4.2.2.5 Identify requirements for changes to manufacturing/delivery processes (10097)

- 4.2.3 Prepare for production (10082)
  - 4.2.3.1 Develop and test prototype production and/or service delivery process (10098)
  - 4.2.3.2 Design and obtain necessary materials and equipment (10099)
  - 4.2.3.3 Install and validate production process or methodology (10100)

## 5.0 Develop and Manage Human Capital (10007)

### 5.1 Develop and manage human resources (HR) planning, policies, and strategies (10409)

- 5.1.1 Develop human resources strategy (10415)
  - 5.1.1.1 Identify strategic HR needs (10418)
  - 5.1.1.2 Define HR and business function roles and accountability (10419)
  - 5.1.1.3 Determine HR costs (10420)
  - 5.1.1.4 Establish HR measures (10421)
  - 5.1.1.5 Communicate HR strategies (10422)
- 5.1.2 Develop and implement human resources plans (10416)
  - 5.1.2.1 Gather skill requirements according to corporate strategy and market environment (10423)
  - 5.1.2.2 Plan employee resourcing requirements per unit/organization (10424)
  - 5.1.2.3 Develop compensation plan (10425)
  - 5.1.2.4 Develop succession plan (10426)
  - 5.1.2.5 Develop employee diversity plan (10427)
  - 5.1.2.6 Develop other HR programs (10428)
  - 5.1.2.7 Develop HR policies (10429)
  - 5.1.2.8 Administer HR policies (10430)
  - 5.1.2.9 Plan employee benefits (10431)
  - 5.1.2.10 Develop strategy for HR systems/technologies/tools (10432)
  - 5.1.2.11 Develop work-force strategy models (10433)
- 5.1.3 Monitor and update plans (10417)
  - 5.1.3.1 Measure realization of objectives (10434)
  - 5.1.3.2 Measure contribution to business strategy (10435)
  - 5.1.3.3 Communicate plans and provide updates to stakeholders (10436)
  - 5.1.3.4 Determine value added from HR function (10437)
  - 5.1.3.5 Review and revise HR plans (10438)

### 5.2 Recruit, source, and select employees (10410)

- 5.2.1 Create and develop employee requisitions (10439)
  - 5.2.1.1 Align staffing plan to work-force plan and business unit strategies/resource needs (10445)
  - 5.2.1.2 Develop and open job requisition (10446)
  - 5.2.1.3 Develop job description (10447)

- 5.2.1.4 Post requisition (10448)
- 5.2.1.5 Manage internal/external job posting Web sites (10449)
- 5.2.1.6 Change/update requisition (10450)
- 5.2.1.7 Notify hiring manager (10451)
- 5.2.1.8 Manage requisition date (10452)
- 5.2.2 Recruit/source candidates (10440)
  - 5.2.2.1 Determine recruitment methods (10453)
  - 5.2.2.2 Perform recruiting activities/events (10454)
  - 5.2.2.3 Manage recruitment vendors (10455)
- 5.2.3 Screen and select candidates (10441)
  - 5.2.3.1 Identify and deploy candidate selection tools (10456)
  - 5.2.3.2 Interview candidates (10457)
  - 5.2.3.3 Test candidates (10458)
  - 5.2.3.4 Select and reject candidates (10459)
- 5.2.4 Manage pre-placement verification (10442)
  - 5.2.4.1 Complete candidate background information (10460)
  - 5.2.4.2 Conduct pre-employment screening (10461)
  - 5.2.4.3 Recommend/not recommend candidate (10462)
- 5.2.5 Manage new hire/re-hire (10443)
  - 5.2.5.1 Draw up and make offer (10463)
  - 5.2.5.2 Negotiate offer (10464)
  - 5.2.5.3 Hire candidate (10465)
- 5.2.6 Track candidates (10444)
  - 5.2.6.1 Create applicant record (10466)
  - 5.2.6.2 Manage/track applicant data (10467)
  - 5.2.6.3 Archive and retain records of non-hires (10468)

### 5.3 Develop and counsel employees (10411)

- 5.3.1 Manage employee orientation and deployment (10469)
  - 5.3.1.1 Create/maintain employee on-boarding program (10474)
  - 5.3.1.2 Introduce new employees to managers (10475)
  - 5.3.1.3 Introduce workplace (10476)
  - 5.3.1.4 Evaluate the effectiveness of the employee on-boarding program (11243)
- 5.3.2 Manage employee performance (10470)
  - 5.3.2.1 Define performance objectives (10479)
  - 5.3.2.2 Review, appraise, and manage employee performance (10480)

5.3.2.3 Evaluate and review performance program (10481)

**5.3.3 Manage employee relations (10471)**

5.3.3.1 Manage health and safety (10482)  
5.3.3.2 Manage labor relations (10483)  
5.3.3.3 Manage collective bargaining process (10484)  
5.3.3.4 Manage labor management partnerships (10485)

**5.3.4 Manage employee development (10472)**

5.3.4.1 Develop competency management plans (10486)  
5.3.4.2 Define employee development guidelines (10487)  
5.3.4.3 Develop employee career plans (10488)  
5.3.4.4 Manage employee skills development (10489)

**5.3.5 Develop and train employees (10473)**

5.3.5.1 Align employee and organization development needs (10490)  
5.3.5.2 Develop competencies (10491)  
5.3.5.3 Establish training needs by analysis of required and available skills (10492)  
5.3.5.4 Develop, conduct, and manage employee and/or management training programs (10493)

**5.4 Reward and retain employees (10412)**

**5.4.1 Develop and manage reward, recognition, and motivation programs (10494)**

5.4.1.1 Develop salary/compensation structure and plan (10498)  
5.4.1.2 Develop benefits and reward plan (10499)  
5.4.1.3 Perform competitive analysis of benefits and rewards (10500)  
5.4.1.4 Identify compensation requirements based on financial, benefits, and HR policies (10501)  
5.4.1.5 Administer compensation and rewards to employees (10502)  
5.4.1.6 Reward and motivate employees (10503)

**5.4.2 Manage and administer benefits (10495)**

5.4.2.1 Deliver employee benefits program (10504)  
5.4.2.2 Administer benefits enrollment (10505)  
5.4.2.3 Process claims (10506)  
5.4.2.4 Perform benefits reconciliation (10507)

**5.4.3 Manage employee assistance and retention (10496)**

5.4.3.1 Deliver programs to support work/life balance for employees (10508)  
5.4.3.2 Develop family support systems (10509)  
5.4.3.3 Review retention and motivation indicators (10510)  
5.4.3.4 Review compensation plan (10511)

**5.4.4 Administer payroll (10497)**

**5.5 Re-deploy and retire employees (10413)**

**5.5.1 Manage promotion and demotion process (10512)**

**5.5.2 Manage separation (10513)**

**5.5.3 Manage retirement (10514)**

**5.5.4 Manage leave of absence (10515)**

**5.5.5 Develop and implement employee outplacement (10516)**

**5.5.6 Manage deployment of personnel (10517)**

**5.5.7 Relocate employees and manage assignments (10518)**

**5.5.8 Manage employment reduction and retirement (10519)**

**5.5.9 Manage expatriates (10520)**

**5.5.10 Manage employee relocation process (10521)**

**5.6 Manage employee information (10414)**

**5.6.1 Manage reporting processes (10522)**

**5.6.2 Manage employee inquiry process (10523)**

**5.6.3 Manage and maintain employee data (10524)**

**5.6.4 Manage human resource information systems (HRIS) (10525)**

**5.6.5 Develop and manage employee metrics (10526)**

**5.6.6 Develop and manage time and attendance (10527)**

**5.6.7 Manage employee communication (10528)**

5.6.7.1 Develop employee communication plan (10529)

5.6.7.2 Manage/collect employee suggestions and perform employee research (10530)

5.6.7.3 Manage employee grievances (10531)

5.6.7.4 Publish employee communications (10532)



## 6.0 Manage Information Technology (10008)

### 6.1 Manage the business of information technology (10563)

#### 6.1.1 Develop the enterprise IT strategy (10570)

- 6.1.1.1 Build strategic intelligence (10603)
- 6.1.1.2 Identify long-term IT needs of the enterprise in collaboration with stakeholders (10604)
- 6.1.1.3 Define strategic standards, guidelines, and principles (10605)
- 6.1.1.4 Define and establish IT architecture and development standards (10606)
- 6.1.1.5 Define strategic vendors for IT components (10607)
- 6.1.1.6 Establish IT governance organization and processes (10608)
- 6.1.1.7 Build strategic plan to support business objectives (10609)

#### 6.1.2 Define the enterprise architecture (10571)

- 6.1.2.1 Establish the enterprise architecture definition (10611)
- 6.1.2.2 Confirm enterprise architecture maintenance approach (10612)
- 6.1.2.3 Maintain the relevance of the enterprise architecture (10613)
- 6.1.2.4 Act as clearinghouse for IT research and innovation (10614)
- 6.1.2.5 Govern the enterprise architecture (10615)

#### 6.1.3 Manage the IT portfolio (10572)

- 6.1.3.1 Establish the IT portfolio (10616)
- 6.1.3.2 Analyze and evaluate the value of the IT portfolio for the enterprise (10617)
- 6.1.3.3 Provision resources in accordance with strategic priorities (10618)

#### 6.1.4 Perform IT research and innovation (10573)

- 6.1.4.1 Research technologies to innovate IT services and solutions (10620)
- 6.1.4.2 Transition viable technologies for IT services and solutions development (10621)

#### 6.1.5 Perform IT financial management (10574)

- 6.1.5.1 Develop and maintain IT services and solutions cost transparency (10622)
- 6.1.5.2 Establish and maintain accounting process (10623)
- 6.1.5.3 Tie project funding to business case decision checkpoints (10624)

#### 6.1.6 Evaluate and communicate IT business value and performance (10575)

- 6.1.6.1 Establish and monitor key performance indicators (10625)
- 6.1.6.2 Evaluate IT plan performance (10626)
- 6.1.6.3 Communicate IT value (10627)

#### 6.1.7 Perform IT staff management (10576)

- 6.1.7.1 Develop IT leadership and staff (10628)
- 6.1.7.2 Manage IT staff performance (10629)

#### 6.1.8 Manage IT suppliers and contracts (10577)

- 6.1.8.1 Develop IT (development and delivery) sourcing strategies (10630)

6.1.8.2 Negotiate with suppliers (10631)

6.1.8.3 Establish and maintain supplier relationships (10632)

6.1.8.4 Evaluate supplier performance (10633)

6.1.8.5 Assess contract performance (10634)

### 6.2 Develop and manage IT customer relationships (10564)

#### 6.2.1 Develop IT services and solutions strategy (10578)

- 6.2.1.1 Research IT services and solutions to address business and user requirements (11244)
- 6.2.1.2 Translate business and user requirements into IT services and solutions requirements (11245)
- 6.2.1.3 Formulate IT services and solutions strategic initiatives (11246)
- 6.2.1.4 Coordinate strategies with internal stakeholders to ensure alignment (11247)
- 6.2.1.5 Evaluate and select IT services and solutions strategic initiatives (11248)

#### 6.2.2 Develop and manage IT service levels (10579)

- 6.2.2.1 Create and maintain the IT services and solutions catalog (10640)
- 6.2.2.2 Establish and maintain business and IT service level agreements (10641)
- 6.2.2.3 Evaluate and report service level attainment results (10642)
- 6.2.2.4 Communicate business and IT service level improvement opportunities (10643)

#### 6.2.3 Perform demand-side management (DSM) for IT services (10580)

- 6.2.3.1 Analyze IT services and solutions consumption and usage (10644)
- 6.2.3.2 Develop and implement incentive programs that improve consumption efficiency (10645)
- 6.2.3.3 Develop volume/unit forecast for IT services and solutions (10646)

#### 6.2.4 Manage IT customer satisfaction (10581)

- 6.2.4.1 Capture and analyze customer satisfaction (10647)
- 6.2.4.2 Assess and communicate customer satisfaction patterns (10648)
- 6.2.4.3 Initiate improvements based on customer satisfaction patterns (10649)

#### 6.2.5 Market IT services and solutions (10582)

- 6.2.5.1 Develop IT services and solutions marketing strategy (10650)
- 6.2.5.2 Develop and manage IT customer strategy (10651)
- 6.2.5.3 Manage IT services and solutions advertising and promotional campaigns (10652)
- 6.2.5.4 Process and track IT services and solutions orders (10653)

### 6.3 Manage business resiliency and risk (11216)

#### 6.3.1 Develop and manage business resiliency (11217)

- 6.3.1.1 Develop the business resilience strategy (11221)

- 6.3.1.2 Perform continuous business operations planning (11222)
- 6.3.1.3 Test continuous business operations (11223)
- 6.3.1.4 Maintain continuous business operations (11224)
- 6.3.2 Develop and manage regulatory compliance (11218)**
  - 6.3.2.1 Develop the regulatory compliance strategy (11225)
  - 6.3.2.2 Establish regulatory compliance controls (11226)
  - 6.3.2.3 Manage regulatory compliance remediation (11227)
- 6.3.3 Perform integrated risk management (11219)**
  - 6.3.3.1 Develop an integrated risk strategy and approach (11228)
  - 6.3.3.2 Manage integrated risks (11229)
- 6.3.4 Develop and implement security, privacy, and data protection controls (11220)**
  - 6.3.4.1 Establish information security, privacy, and data protection strategies and levels (11230)
  - 6.3.4.2 Test, evaluate, and implement information security, and privacy and data protection controls (11231)

#### **6.4 Manage enterprise information (10565)**

- 6.4.1 Develop information and content management strategies (10583)**
  - 6.4.1.1 Understand information and content management needs and IT services's role in executing the business strategy (10654)
  - 6.4.1.2 Assess the information and content management implications of new technologies (10655)
  - 6.4.1.3 Identify and prioritize information and content management actions (10656)
- 6.4.2 Define the enterprise information architecture (10584)**
  - 6.4.2.1 Define information elements, composite structure, logical relationships and constraints, taxonomy, and derivation rules (10657)
  - 6.4.2.2 Define information access requirements (10658)
  - 6.4.2.3 Establish data custodianship (10659)
  - 6.4.2.4 Manage changes to content data architecture requirements (10660)
- 6.4.3 Manage information resources (10585)**
  - 6.4.3.1 Define the enterprise information/data policies and standards (10661)
  - 6.4.3.2 Develop and implement data and content administration (10662)
- 6.4.4 Perform enterprise data and content management (10586)**
  - 6.4.4.1 Define sources and destinations of content data (10663)
  - 6.4.4.2 Manage technical interfaces to users of content (10664)
  - 6.4.4.3 Manage retention, revision, and retirement of enterprise information (10665)

#### **6.5 Develop and maintain information technology solutions (10566)**

- 6.5.1 Develop the IT development strategy (10587)**
  - 6.5.1.1 Establish sourcing strategy for IT development (10666)
  - 6.5.1.2 Define development processes, methodologies, and tools standards (10667)
  - 6.5.1.3 Select development methodologies and tools (10668)
- 6.5.2 Perform IT services and solutions life cycle planning (10588)**
  - 6.5.2.1 Plan development of new requirements (10669)
  - 6.5.2.2 Plan development of feature and functionality enhancement (10670)
  - 6.5.2.3 Develop life cycle plan for IT services and solutions (10671)
- 6.5.3 Develop and maintain IT services and solutions architecture (10589)**
  - 6.5.3.1 Create IT services and solutions architecture (10672)
  - 6.5.3.2 Revise IT services and solutions architecture (10673)
  - 6.5.3.3 Retire IT services and solutions architecture (10674)
- 6.5.4 Create IT services and solutions (10590)**
  - 6.5.4.1 Understand confirmed requirements (10675)
  - 6.5.4.2 Design IT services and solutions (10676)
  - 6.5.4.3 Acquire/develop IT service/solution components (10677)
  - 6.5.4.4 Train services and solutions resources (10678)
  - 6.5.4.5 Test IT services/solutions (10679)
  - 6.5.4.6 Confirm customer acceptance (10680)
- 6.5.5 Maintain IT services and solutions (10591)**
  - 6.5.5.1 Understand upkeep/enhance requirements and defect analysis (10681)
  - 6.5.5.2 Design change to existing IT service/solution (10682)
  - 6.5.5.3 Acquire/develop changed IT service/solution component (10683)
  - 6.5.5.4 Test IT service/solution change (10684)
  - 6.5.5.5 Retire solutions and services (10685)

#### **6.6 Deploy information technology solutions (10567)**

- 6.6.1 Develop the IT deployment strategy (10592)**
  - 6.6.1.1 Establish IT services and solutions change policies (10686)
  - 6.6.1.2 Define deployment process, procedures, and tools standards (10687)
  - 6.6.1.3 Select deployment methodologies and tools (10688)
- 6.6.2 Plan and implement changes (10593)**
  - 6.6.2.1 Plan change deployment (10689)
  - 6.6.2.2 Communicate changes to stakeholders (10690)
  - 6.6.2.3 Administer change schedule (10691)
  - 6.6.2.4 Train impacted users (10692)
  - 6.6.2.5 Distribute and install change (10693)
  - 6.6.2.6 Verify change (10694)

- 6.6.3 **Plan and manage releases (10594)**
  - 6.6.3.1 Understand and coordinate release design and acceptance (10695)
  - 6.6.3.2 Plan release rollout (10696)
  - 6.6.3.3 Distribute and install release (10697)
  - 6.6.3.4 Verify release (10698)

## 6.7 Deliver and support information technology services (10568)

- 6.7.1 **Develop IT services and solution delivery strategy (10595)**
  - 6.7.1.1 Establish sourcing strategy for IT delivery (10699)
  - 6.7.1.2 Define delivery processes, procedures, and tools standards (10700)
  - 6.7.1.3 Select delivery methodologies and tools (10701)
- 6.7.2 **Develop IT support strategy (10596)**
  - 6.7.2.1 Establish sourcing strategy for IT support (10702)
  - 6.7.2.2 Define IT support services (10703)
- 6.7.3 **Manage IT infrastructure resources (10597)**
  - 6.7.3.1 Manage IT inventory and assets (10704)
  - 6.7.3.2 Manage IT resource capacity (10705)
- 6.7.4 **Manage IT infrastructure operations (10598)**
  - 6.7.4.1 Deliver IT services and solutions (10706)
  - 6.7.4.2 Perform IT operations support services (10707)
- 6.7.5 **Support IT services and solutions (10599)**
  - 6.7.5.1 Manage availability (10708)
  - 6.7.5.2 Manage facilities (10709)
  - 6.7.5.3 Manage backup/recovery (10710)

- 6.7.5.4 Manage performance and capacity (10711)
- 6.7.5.5 Manage incidents (10712)
- 6.7.5.6 Manage problems (10713)
- 6.7.5.7 Manage inquiries (10714)

## 6.8 Manage IT knowledge (10569)

- 6.8.1 **Develop IT knowledge management strategy (10600)**
  - 6.8.1.1 Understand IT knowledge needs (10715)
  - 6.8.1.2 Understand current IT knowledge flow (10716)
  - 6.8.1.3 Coordinate strategy and roles with the enterprise KM function (10717)
  - 6.8.1.4 Plan IT knowledge management actions and priorities (10718)
- 6.8.2 **Develop and maintain IT knowledge map (10601)**
  - 6.8.2.1 Define knowledge elements, logical relationships and constraints, and currency rules (10719)
  - 6.8.2.2 Identify IT knowledge sources and repositories (10720)
  - 6.8.2.3 Identify IT knowledge-sharing opportunities (10721)
  - 6.8.2.4 Define IT knowledge processes and approaches (10722)
- 6.8.3 **Manage IT knowledge life cycle (10602)**
  - 6.8.3.1 Gather knowledge elements from IT knowledge sources (10723)
  - 6.8.3.2 Evaluate, create, and codify knowledge elements (10724)
  - 6.8.3.3 Deploy codified IT knowledge (10725)
  - 6.8.3.4 Update and retire IT knowledge (10726)
  - 6.8.3.5 Evaluate and improve IT knowledge strategies and processes (10727)

## 7.0 Manage Financial Resources (10009)

### 7.1 Perform planning and management accounting (10728)

- 7.1.1 **Perform planning/budgeting/forecasting (10738)**
  - 7.1.1.1 Develop and maintain budget policies and procedures (10771)
  - 7.1.1.2 Prepare periodic budgets and plans (10772)
  - 7.1.1.3 Prepare periodic financial forecasts (10773)
- 7.1.2 **Perform cost accounting and control (10739)**
  - 7.1.2.1 Perform inventory accounting (10774)
  - 7.1.2.2 Perform cost of sales analysis (10775)
  - 7.1.2.3 Perform product costing (10776)
  - 7.1.2.4 Perform variance analysis (10777)
  - 7.1.2.5 Report on profitability (11175)
- 7.1.3 **Perform cost management (10740)**
  - 7.1.3.1 Determine key cost drivers (10778)
  - 7.1.3.2 Measure cost drivers (10779)
  - 7.1.3.3 Determine critical activities (10780)
  - 7.1.3.4 Manage asset resource deployment and utilization (10781)
- 7.1.4 **Evaluate and manage financial performance (10741)**
  - 7.1.4.1 Assess customer and product profitability (10782)

- 7.1.4.2 Evaluate new products (10783)
- 7.1.4.3 Perform life cycle costing (10784)
- 7.1.4.4 Optimize customer and product mix (10785)
- 7.1.4.5 Track performance of new-customer and new-product strategies (10786)
- 7.1.4.6 Prepare activity-based performance measures (10787)
- 7.1.4.7 Manage continuous cost improvement (10788)

### 7.2 Perform revenue accounting (10729)

- 7.2.1 **Process customer credit (10742)**
  - 7.2.1.1 Establish credit policies (10789)
  - 7.2.1.2 Analyze/approve new account applications (10790)
  - 7.2.1.3 Review existing accounts (10791)
  - 7.2.1.4 Produce credit/collection reports (10792)
  - 7.2.1.5 Reinstate or suspend accounts based on credit policies (10793)
- 7.2.2 **Invoice customer (10743)**
  - 7.2.2.1 Maintain customer/product master files (10794)
  - 7.2.2.2 Generate customer billing data (10795)

- 7.2.2.3 Transmit billing data to customers (10796)
- 7.2.2.4 Post receivable entries (10797)
- 7.2.2.5 Resolve customer billing inquiries (10798)
- 7.2.3 Process accounts receivable (AR) (10744)**
  - 7.2.3.1 Establish AR policies (10799)
  - 7.2.3.2 Receive/deposit customer payments (10800)
  - 7.2.3.3 Apply cash remittances (10801)
  - 7.2.3.4 Prepare AR reports (10802)
  - 7.2.3.5 Post AR activity to the general ledger (10803)
- 7.2.4 Manage and process collections (10745)**
  - 7.2.4.1 Establish policies for delinquent accounts (10804)
  - 7.2.4.2 Analyze delinquent account balances (10805)
  - 7.2.4.3 Correspond/negotiate with delinquent accounts (10806)
  - 7.2.4.4 Discuss account resolution with internal parties (10807)
  - 7.2.4.5 Process adjustments/write-off balances (10808)
- 7.2.5 Manage and process adjustments/deductions (10746)**
  - 7.2.5.1 Establish policies/procedures for adjustments (10809)
  - 7.2.5.2 Analyze adjustments (10810)
  - 7.2.5.3 Correspond/negotiate with customer (10811)
  - 7.2.5.4 Discuss resolution with internal parties (10812)
  - 7.2.5.5 Prepare chargeback invoices (10813)
  - 7.2.5.6 Process related entries (10814)
- 7.3 Perform general accounting and reporting (10730)**
  - 7.3.1 Manage policies and procedures (10747)**
    - 7.3.1.1 Negotiate service level agreements (10815)
    - 7.3.1.2 Establish accounting policies (10816)
    - 7.3.1.3 Set and enforce approval limits (10817)
    - 7.3.1.4 Establish common financial systems (10818)
  - 7.3.2 Perform general accounting (10748)**
    - 7.3.2.1 Maintain chart of accounts (10819)
    - 7.3.2.2 Process journal entries (10820)
    - 7.3.2.3 Process allocations (10821)
    - 7.3.2.4 Process period-end adjustments (e.g., accruals, currency conversions) (10822)
    - 7.3.2.5 Post and reconcile intercompany transactions (10823)
    - 7.3.2.6 Reconcile general ledger accounts (10824)
    - 7.3.2.7 Perform consolidations and process eliminations (10825)
    - 7.3.2.8 Prepare trial balance (10826)
    - 7.3.2.9 Prepare and post management adjustments (10827)
  - 7.3.3 Perform fixed-asset accounting (10749)**
    - 7.3.3.1 Establish fixed-asset policies and procedures (10828)
    - 7.3.3.2 Maintain fixed-asset master data files (10829)
    - 7.3.3.3 Process and record fixed-asset additions and retires (10830)
    - 7.3.3.4 Process and record fixed-asset adjustments, enhancements, revaluations, and transfers (10831)
  - 7.3.3.5 Calculate and record depreciation expense (10833)
  - 7.3.3.6 Process and record fixed-asset maintenance and repair expenses (10832)
  - 7.3.3.7 Reconcile fixed-asset ledger (10834)
  - 7.3.3.8 Track fixed-assets including physical inventory (10835)
  - 7.3.3.9 Provide fixed-asset data to support tax, statutory, and regulatory reporting (10836)
- 7.3.4 Perform financial reporting (10750)**
  - 7.3.4.1 Prepare business unit financial statements (10837)
  - 7.3.4.2 Prepare consolidated financial statements (10838)
  - 7.3.4.3 Perform business unit reporting/review management reports (10839)
  - 7.3.4.4 Perform consolidated reporting/review of cost management reports (10840)
  - 7.3.4.5 Prepare statements for board review (10841)
  - 7.3.4.6 Produce quarterly/annual filings and shareholder reports (10842)
  - 7.3.4.7 Produce regulatory reports (10843)
- 7.4 Manage fixed-asset project accounting (10731)**
  - 7.4.1 Perform capital planning and project approval (10751)**
    - 7.4.1.1 Develop capital investment policies and procedures (10844)
    - 7.4.1.2 Develop and approve capital expenditure plans and budgets (10845)
    - 7.4.1.3 Review and approve capital projects and fixed-asset acquisitions (10846)
    - 7.4.1.4 Conduct financial justification for project approval (10847)
  - 7.4.2 Perform capital project accounting (10752)**
    - 7.4.2.1 Create project account codes (10848)
    - 7.4.2.2 Record project-related transactions (10849)
    - 7.4.2.3 Monitor and track capital projects and budget spending (10850)
    - 7.4.2.4 Close/capitalize projects (10851)
    - 7.4.2.5 Measure financial returns on completed capital projects (10852)
- 7.5 Process payroll (10732)**
  - 7.5.1 Report time (10753)**
    - 7.5.1.1 Establish policies and procedures (10853)
    - 7.5.1.2 Collect and record employee time worked (10854)
    - 7.5.1.3 Analyze and report paid and unpaid leave (10855)
    - 7.5.1.4 Monitor regular, overtime, and other hours (10856)
    - 7.5.1.5 Analyze and report employee utilization (10857)
  - 7.5.2 Manage pay (10754)**
    - 7.5.2.1 Enter employee time worked into payroll system (10858)

- 7.5.2.2 Maintain and administer employee earnings information (10859)
- 7.5.2.3 Maintain and administer applicable deductions (10860)
- 7.5.2.4 Monitor changes in tax status of employees (10861)
- 7.5.2.5 Process and distribute payments (10862)
- 7.5.2.6 Process and distribute manual checks (10863)
- 7.5.2.7 Process period end adjustments (10864)
- 7.5.2.8 Respond to employee payroll inquiries (10865)
- 7.5.3 Process payroll taxes (10755)**
  - 7.5.3.1 Calculate and pay applicable payroll taxes (10866)
  - 7.5.3.2 Produce and distribute employee annual tax statements (10867)
  - 7.5.3.3 File regulatory payroll tax forms (10868)
- 7.6 Process accounts payable and expense reimbursements (10733)**
  - 7.6.1 Process accounts payable (10756)**
    - 7.6.1.1 Verify AP pay file with PO vendor master file (10869)
    - 7.6.1.2 Maintain/manage electronic commerce (10870)
    - 7.6.1.3 Audit invoices and key data in AP system (10871)
    - 7.6.1.4 Approve payments (10872)
    - 7.6.1.5 Process financial accruals and reversals (10873)
    - 7.6.1.6 Process taxes (10874)
    - 7.6.1.7 Research/resolve exceptions (10875)
    - 7.6.1.8 Process payments (10876)
    - 7.6.1.9 Respond to AP inquiries (10877)
    - 7.6.1.10 Retain records (10878)
    - 7.6.1.11 Adjust accounting records (10879)
  - 7.6.2 Process expense reimbursements (10757)**
    - 7.6.2.1 Establish and communicate expense reimbursement policies and approval limits (10880)
    - 7.6.2.2 Capture and report relevant tax data (10881)
    - 7.6.2.3 Approve reimbursements and advances (10882)
    - 7.6.2.4 Process reimbursements and advances (10883)
    - 7.6.2.5 Manage personal accounts (10884)
- 7.7 Manage treasury operations (10734)**
  - 7.7.1 Manage treasury policies and procedures (10758)**
    - 7.7.1.1 Establish scope and governance of treasury operations (10885)
    - 7.7.1.2 Establish and publish treasury policies (10886)
    - 7.7.1.3 Develop treasury procedures (10887)
    - 7.7.1.4 Monitor treasury procedures (10888)
    - 7.7.1.5 Audit treasury procedures (10889)
    - 7.7.1.6 Revise treasury procedures (10890)
    - 7.7.1.7 Develop and confirm internal controls for treasury (10891)
    - 7.7.1.8 Define system security requirements (10892)
  - 7.7.2 Manage cash (10759)**
    - 7.7.2.1 Manage and reconcile cash positions (10893)
    - 7.7.2.2 Manage cash equivalents (10894)
  - 7.7.2.3 Process and oversee electronic fund transfers (EFTs) (10895)
  - 7.7.2.4 Develop cash-flow forecasts (10896)
  - 7.7.2.5 Manage cash flows (10897)
  - 7.7.2.6 Produce cash management accounting transactions and reports (10898)
  - 7.7.2.7 Manage and oversee banking relationships (10899)
  - 7.7.2.8 Analyze, negotiate, resolve, and confirm bank fees (10900)
  - 7.7.3 Manage in-house bank accounts (10760)**
    - 7.7.3.1 Manage in-house bank accounts for subsidiaries (10901)
    - 7.7.3.2 Manage and facilitate inter-company borrowing transactions (10902)
    - 7.7.3.3 Manage centralized outgoing payments on behalf of subsidiaries (10903)
    - 7.7.3.4 Manage central incoming payments on behalf of subsidiaries (10904)
    - 7.7.3.5 Manage internal payments and netting transactions (10905)
    - 7.7.3.6 Calculate interest and fees for in-house bank accounts (10906)
    - 7.7.3.7 Provide account statements for in-house bank accounts (10907)
  - 7.7.4 Manage debt and investment (10761)**
    - 7.7.4.1 Manage financial intermediary relationships (10908)
    - 7.7.4.2 Manage liquidity (10909)
    - 7.7.4.3 Manage issuer exposure (10910)
    - 7.7.4.4 Process and oversee debt and investment transactions (10911)
    - 7.7.4.5 Process and oversee foreign currency transactions (10912)
    - 7.7.4.6 Produce debt and investment accounting transaction reports (10913)
  - 7.7.5 Manage financial risks (11208)**
    - 7.7.5.1 Manage interest-rate risk (11209)
    - 7.7.5.2 Manage foreign-exchange risk (11210)
    - 7.7.5.3 Manage exposure risk (11211)
    - 7.7.5.4 Develop and execute hedging transactions (11212)
    - 7.7.5.5 Evaluate and refine hedging positions (11213)
    - 7.7.5.6 Produce hedge accounting transactions and reports (11214)
    - 7.7.5.7 Monitor credit (11215)
- 7.8 Manage internal controls (10735)**
  - 7.8.1 Establish internal controls, policies and procedures (10762)**
    - 7.8.1.1 Establish board of directors and audit committee (10914)
    - 7.8.1.2 Define and communicate code of ethics (10915)
    - 7.8.1.3 Assign roles and responsibility for internal controls (10916)
    - 7.8.1.4 Define business process objectives and risks (11250)
    - 7.8.1.5 Define entity/unit risk tolerances (11251)

## 7.8.2 Operate controls and monitor compliance with internal controls policies and procedures (10763)

- 7.8.2.1 Design and implement control activities (10917)
- 7.8.2.2 Monitor control effectiveness (10918)
- 7.8.2.3 Remediate control deficiencies (10919)
- 7.8.2.4 Create compliance function (10920)
- 7.8.2.5 Operate compliance function (10921)
- 7.8.2.6 Implement and maintain controls-related enabling technologies and tools (10922)

## 7.8.3 Report on internal controls compliance (10764)

- 7.8.3.1 Report to external auditors (10923)
- 7.8.3.2 Report to regulators, share-/debt-holders, securities exchanges, etc. (10924)
- 7.8.3.3 Report to third parties (e.g., business partners) (10925)
- 7.8.3.4 Report to internal management (10926)

## 7.9 Manage taxes (10736)

### 7.9.1 Develop tax strategy and plan (10765)

- 7.9.1.1 Develop foreign, national, state, and local tax strategy (10927)

7.9.1.2 Consolidate and optimize total tax plan (10928)

7.9.1.3 Maintain tax master data (10929)

### 7.9.2 Process taxes (10766)

- 7.9.2.1 Perform tax planning/strategy (10930)
- 7.9.2.2 Prepare returns (10931)
- 7.9.2.3 Prepare foreign taxes (10932)
- 7.9.2.4 Calculate deferred taxes (10933)
- 7.9.2.5 Account for taxes (10934)
- 7.9.2.6 Monitor tax compliance (10935)
- 7.9.2.7 Address tax inquiries (10936)

## 7.10 Manage international funds/consolidation (10737)

7.10.1 Monitor international rates (10767)

7.10.2 Manage transactions (10768)

7.10.3 Monitor currency exposure/hedge currency (10769)

7.10.4 Report results (10770)

## 8.0 Acquire, Construct, and Manage Support Facilities and Non-Productive Assets (14203)

### 8.1 Design and construct/acquire support facilities (10937)

#### 8.1.1 Develop property strategy and long-term vision (10941)

- 8.1.1.1 Confirm alignment of property requirements with business strategy (10955)
- 8.1.1.2 Assess the external environment (10956)
- 8.1.1.3 Make build or buy decision (10957)

#### 8.1.2 Develop, construct, and modify sites (10942)

#### 8.1.3 Plan facility (10943)

- 8.1.3.1 Design facility (10958)
- 8.1.3.2 Analyze budget (10959)
- 8.1.3.3 Select property (10960)
- 8.1.3.4 Negotiate terms for facility (10961)
- 8.1.3.5 Manage construction or modification to building (10962)

#### 8.1.4 Provide workspace and assets (10944)

- 8.1.4.1 Acquire workspace and assets (10963)
- 8.1.4.2 Change fit/form/function of workspace and assets (10964)

### 8.2 Maintain non-productive assets (10938)

#### 8.2.1 Move people and assets (10945)

- 8.2.1.1 Relocate people (10965)
- 8.2.1.2 Relocate material and tools (10966)

#### 8.2.2 Repair workplace and assets (10946)

#### 8.2.3 Provide preventative maintenance for workplace and assets (10947)

#### 8.2.4 Manage security (10948)

#### 8.2.5 Manage facilities operations (10949)

### 8.3 Dispose of non-productive assets (14204)

#### 8.3.1 Develop exit strategy (14205)

#### 8.3.2 Perform sale or trade (14206)

#### 8.3.3 Perform exit activities (14207)

### 8.4 Manage physical risk (11207)

## 9.0 Manage Environmental Health and Safety (EHS) (11179)

### 9.1 Determine health, safety, and environment impacts (11180)

- 9.1.1 Evaluate environmental impact of products, services, and operations (11186)
- 9.1.2 Conduct health and safety and environmental audits (11187)

### 9.2 Develop and execute health, safety, and environmental program (11181)

- 9.2.1 Identify regulatory and stakeholder requirements (11188)
- 9.2.2 Assess future risks and opportunities (11189)
- 9.2.3 Create EHS policy (11190)
- 9.2.4 Record and manage EHS events (11191)

### 9.3 Train and educate employees (11182)

- 9.3.1 Communicate EHS issues to stakeholders and provide support (11192)

### 9.4 Monitor and manage health, safety, and environmental management program (11183)

- 9.4.1 Manage EHS costs and benefits (11193)
- 9.4.2 Measure and report EHS performance (11194)

- 9.4.2.1 Implement emergency response program (11196)

- 9.4.2.2 Implement pollution prevention program (11197)

- 9.4.3 Provide employees with EHS support (11195)

### 9.5 Ensure compliance with regulations (11184)

- 9.5.1 Monitor compliance (11198)

- 9.5.2 Perform compliance audit (11199)

- 9.5.3 Comply with regulatory stakeholders' requirements (11200)

### 9.6 Manage remediation efforts (11185)

- 9.6.1 Create remediation plans (11201)

- 9.6.2 Contact and confer with experts (11202)

- 9.6.3 Identify/dedicate resources (11203)

- 9.6.4 Investigate legal aspects (11204)

- 9.6.5 Investigate damage cause (11205)

- 9.6.6 Amend or create policy (11206)

## 10.0 Manage External Relationships (10012)

### 10.1 Build investor relationships (11010)

- 10.1.1 Plan, build, and manage lender relations (11035)
- 10.1.2 Plan, build, and manage analyst relations (11036)
- 10.1.3 Communicate with shareholders (11037)

### 10.2 Manage government and industry relationships (11011)

- 10.2.1 Manage government relations (11038)
- 10.2.2 Manage relations with quasi-government bodies (11039)
- 10.2.3 Manage relations with trade or industry groups (11040)
- 10.2.4 Manage lobby activities (11041)

### 10.3 Manage relations with board of directors (11012)

- 10.3.1 Report results (11042)
- 10.3.2 Report audit findings (11043)

### 10.4 Manage legal and ethical issues (11013)

- 10.4.1 Create ethics policies (11044)
- 10.4.2 Manage corporate governance policies (11045)
- 10.4.3 Develop and perform preventive law programs (11046)
- 10.4.4 Ensure compliance (11047)
  - 10.4.4.1 Plan and initiate compliance program (11053)
  - 10.4.4.2 Execute compliance program (11054)

### 10.4.5 Manage outside counsel (11048)

- 10.4.5.1 Assess problem and determine work requirements (11056)

- 10.4.5.2 Engage/retain outside counsel if necessary (11057)

- 10.4.5.3 Receive strategy/budget (11058)

- 10.4.5.4 Receive work product and manage/ monitor case and work performed (11059)

- 10.4.5.5 Process payment for legal services (11060)

- 10.4.5.6 Track legal activity/performance (11061)

### 10.4.6 Protect intellectual property (11049)

- 10.4.6.1 Manage copyrights and patents (11062)

- 10.4.6.2 Maintain intellectual property rights and restrictions (11063)

- 10.4.6.3 Administer licensing terms (11064)

- 10.4.6.4 Administer options (11065)

### 10.4.7 Resolve disputes and litigations (11050)

### 10.4.8 Provide legal advice/counseling (11051)

### 10.4.9 Negotiate and document agreements/contracts (11052)

### 10.5 Manage public relations program (11014)

- 10.5.1 Manage community relations (11066)

- 10.5.2 Manage media relations (11067)

- 10.5.3 Promote political stability (11068)

- 10.5.4 Create press releases (11069)

- 10.5.5 Issue press releases (11070)

## 11.0 Manage Knowledge, Improvement, and Change (10013)

### 11.1 Create and manage organizational performance strategy (11071)

- 11.1.1 Create enterprise measurement systems model (11075)
  - 11.1.1.1 Establish performance measures (11080)
  - 11.1.1.2 Establish performance monitoring frequency (11081)
  - 11.1.1.3 Set performance targets (11082)
- 11.1.2 Measure process productivity (11076)
- 11.1.3 Measure cost effectiveness (11077)
- 11.1.4 Measure staff efficiency (11078)
- 11.1.5 Measure cycle time (11079)

### 11.2 Benchmark performance (11072)

- 11.2.1 Conduct performance assessments (11083)
- 11.2.2 Develop benchmarking capabilities (11084)
- 11.2.3 Conduct process benchmarking (11085)
  - 11.2.3.1 Compile and update list of processes and organizations to benchmark (11089)
  - 11.2.3.2 Establish benchmarks (11090)
  - 11.2.3.3 Measure performance against benchmarks (11091)
- 11.2.4 Conduct competitive benchmarking (11086)
  - 11.2.4.1 Compile and update list of processes and organizations to benchmark (11092)
  - 11.2.4.2 Establish benchmarks (11093)
  - 11.2.4.3 Measure performance against benchmarks (11094)
- 11.2.5 Conduct gap analysis to understand need for and degree of change needed (11087)
- 11.2.6 Establish need for change (11088)

### 11.3 Develop enterprise-wide knowledge management (KM) capability (11073)

- 11.3.1 Develop KM strategy (11095)
  - 11.3.1.1 Develop governance model (11100)
  - 11.3.1.2 Establish central KM core group (11101)
  - 11.3.1.3 Define roles and accountability of core group versus operating units (11102)
  - 11.3.1.4 Develop funding models (11103)
  - 11.3.1.5 Identify links to key initiatives (11104)
  - 11.3.1.6 Develop core KM methodologies (11105)
  - 11.3.1.7 Assess IT needs and engage IT function (11106)
  - 11.3.1.8 Develop training and communication plans (11107)
  - 11.3.1.9 Develop change management approaches (11108)
  - 11.3.1.10 Develop strategic measures and indicators (11109)
- 11.3.2 Assess knowledge management capabilities (11096)
  - 11.3.2.1 Assess maturity of existing KM initiatives (11110)

- 11.3.2.2 Evaluate existing knowledge management approaches (11111)
- 11.3.2.3 Identify gaps and needs (11112)
- 11.3.2.4 Enhance/modify existing knowledge management approaches (11113)
- 11.3.2.5 Develop new knowledge management approaches (11114)
- 11.3.2.6 Implement new knowledge management approaches (11115)

### 11.3.3 Identify and plan KM projects (11097)

- 11.3.3.1 Identify strategic opportunities to apply KM approach(es) (11116)
- 11.3.3.2 Identify KM requirements and objectives (11117)
- 11.3.3.3 Assess culture and readiness for KM approach (11118)
- 11.3.3.4 Identify appropriate KM methodologies (e.g., self-service, communities, transfer) (11119)
- 11.3.3.5 Create business case and obtain funding (11120)
- 11.3.3.6 Develop project measures and indicators (11121)

### 11.3.4 Design and launch KM projects (11098)

- 11.3.4.1 Design process for knowledge sharing, capture, and use (11122)
- 11.3.4.2 Define roles and resources (11123)
- 11.3.4.3 Identify specific IT requirements (11124)
- 11.3.4.4 Create training and communication plans (11125)
- 11.3.4.5 Develop change management plans (11126)
- 11.3.4.6 Design recognition and reward approaches (11127)
- 11.3.4.7 Design and plan launch of KM project (11128)
- 11.3.4.8 Deploy the KM project (11129)

### 11.3.5 Manage the KM project life cycle (11099)

- 11.3.5.1 Assess alignment with business goals (11130)
- 11.3.5.2 Evaluate impact of KM (strategy and projects) on measures and outcomes (11131)
- 11.3.5.3 Promote and sustain activity and involvement (11132)
- 11.3.5.4 Realign and refresh KM strategy and approaches (11133)

### 11.4 Manage change (11074)

#### 11.4.1 Plan for change (11134)

- 11.4.1.1 Select process improvement methodology (11138)
- 11.4.1.2 Assess readiness for change (11139)
- 11.4.1.3 Determine stakeholders (11140)
- 11.4.1.4 Engage/identify champion (11141)
- 11.4.1.5 Form design team (11142)
- 11.4.1.6 Define scope (11143)
- 11.4.1.7 Understand current state (11144)
- 11.4.1.8 Define future state (11145)
- 11.4.1.9 Conduct risk analysis (11146)
- 11.4.1.10 Assess cultural issues (11147)



- 11.4.1.11 Establish accountability for change management (11148)
- 11.4.1.12 Identify barriers to change (11149)
- 11.4.1.13 Determine change enablers (11150)
- 11.4.1.14 Identify resources and develop measures (11151)

**11.4.2 Design the change (11135)**

- 11.4.2.1 Assess connection to other initiatives (11152)
- 11.4.2.2 Develop change management plans (11153)
- 11.4.2.3 Develop training plan (11154)
- 11.4.2.4 Develop communication plan (11155)
- 11.4.2.5 Develop rewards/incentives plan (11156)
- 11.4.2.6 Establish metrics (11157)
- 11.4.2.7 Establish/clarify new roles (11158)
- 11.4.2.8 Identify budget/roles (11159)

**11.4.3 Implement change (11136)**

- 11.4.3.1 Create commitment for improvement/change (11160)
- 11.4.3.2 Reengineer business processes and systems (11161)
- 11.4.3.3 Support transition to new roles or exit strategies for incumbents (11162)
- 11.4.3.4 Monitor change (11163)

**11.4.4 Sustain improvement (11137)**

- 11.4.4.1 Monitor improved process performance (11164)
- 11.4.4.2 Capture and reuse lessons learned from change process (11165)
- 11.4.4.3 Take corrective action as necessary (11166)



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