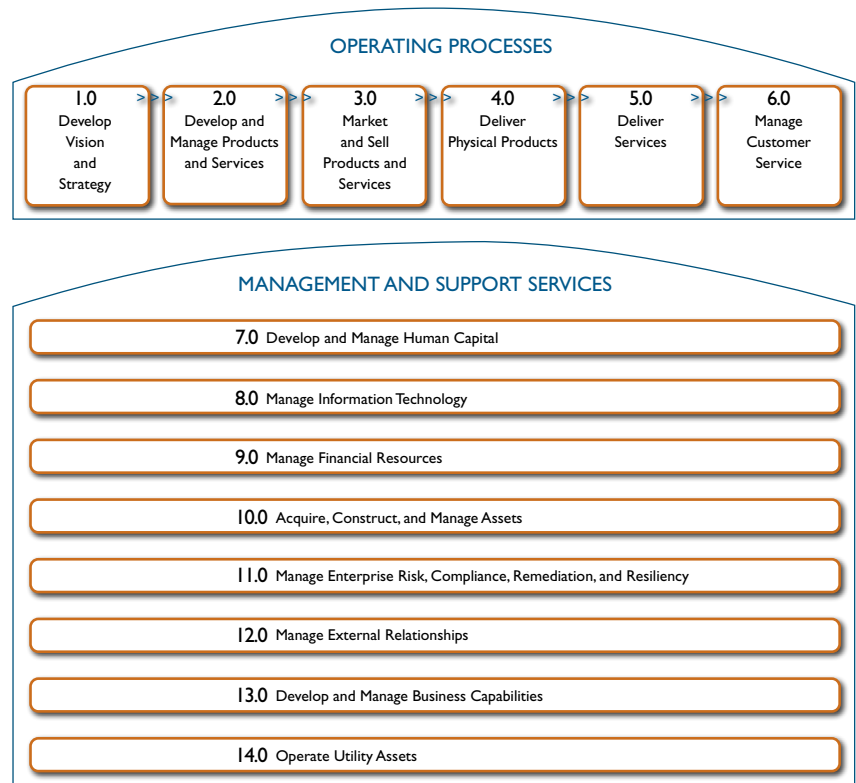


# UTILITIES PROCESS CLASSIFICATION FRAMEWORK®

Version 7.2.2

## OVERVIEW

Cross Industry Process Classification Framework® (PCF) is a taxonomy of cross-functional business processes intended to allow the objective comparison of organizational performance within and among organizations. The PCF was developed by APQC and its member companies as an open standard to facilitate improvement through process management and benchmarking, regardless of industry, size, or location. The PCF organizes operating and management processes into 13 enterprise-level categories, including process groups and more than 1,000 processes and associated activities. The PCF, its associated measures, and definitions are available for download at no charge at [www.apqc.org/pcf](http://www.apqc.org/pcf).



## 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 (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 20 years of creative use by thousands of organizations worldwide. The PCF provides the foundation for APQC's Open Standards Benchmarking® (OSB) database and the work of its advisory council of global industry leaders. Each version of the PCF will continue to be enhanced as the OSB database further develops definitions, processes, and measures. The PCF and associated measures and benchmarking surveys are available for download from the Open Standards Benchmarking web site at [www.apqc.org/osb](http://www.apqc.org/osb).

## 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 a 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 2014, APQC worked to enhance the cross-industry PCF and updated a number of industry-specific process classification frameworks.

*The PCF is written in United States English language format.*



Version 7.2.2-en-XI • March 2025



## 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 non profit serving organizations around the world in all sectors of business, education, and government. APQC is also a proud winner of the 2003, 2004, 2008, 2012, and 2013 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.

## ABOUT IBM

At IBM, we collaborate with our clients, bringing together business insight, advanced research and technology to give them a distinct advantage in today's rapidly changing environment. Through our integrated approach to business design and execution, we help turn strategies into action. And with expertise in 17 industries and global capabilities that span 170 countries, we can help clients anticipate change and profit from new opportunities. For more information, visit [www.ibm.com/services/gbs](http://www.ibm.com/services/gbs).

## PROCESS CLASSIFICATION FRAMEWORK®

## TABLE OF CONTENTS

Content Organization	3
PCF Levels Explained/Number Scheming	3
1.0 Develop Vision and Strategy	4
2.0 Develop and Manage Products and Services	6
3.0 Market and Sell Products and Services	8
4.0 Deliver Physical Products	12
5.0 Deliver Services	14
6.0 Manage Customer Service	15
7.0 Develop and Manage Human Capital	17
8.0 Manage Information Technology (IT)	19
9.0 Manage Financial Resources	24
10.0 Acquire, Construct, and Manage Assets	28
11.0 Manage Enterprise Risk, Compliance, Remediation, and Resiliency	29
12.0 Manage External Relationships	31
13.0 Develop and Manage Business Capabilities	32
14.0 Operate Utility Assets	35

## PCF LEVELS EXPLAINED

<b>Level 1 - Category</b>	<b>10.0 Manage Enterprise Risk, Compliance, Remediation and Resiliency (16437)</b>
Represents the highest level of process in the enterprise, such as Manage customer service, Supply chain, Financial organization, and Human resources.	
<b>Level 2 - Process Group</b>	<b>10.1 Manage enterprise risk (17060)</b>
Indicates the next level of processes and represents a group of processes. Perform after sales repairs, Procurement, Accounts payable, Recruit/source, and Develop sales strategy are examples of process groups.	
<b>Level 3 - Process</b>	<b>10.1.4 Manage business unit and function risk (17061)</b>
A process is the next level of decomposition after a process group. The process may include elements related to variants and rework in addition to the core elements needed to accomplish the process.	
<b>Level 4 - Activity</b>	<b>10.1.4.3 Develop mitigation plans for risks (16458)</b>
Indicates key events performed when executing a process. Examples of activities include Receive customer requests, Resolve customer complaints, and Negotiate purchasing contracts.	
<b>Level 5 - Task</b>	<b>10.1.4.3.1 Assess adequacy of insurance cover (18129)</b>
Tasks represent the next level of hierarchical decomposition after activities. Tasks are generally much more fine grained and may vary widely across industries. Examples include: Create business case and obtain funding and Design recognition and reward approaches.	

## PROCESS ELEMENT NUMBERING SCHEME

The PCF identifies each process element using a unique 5-digit reference number following the name of the process element.[i.e., **(16437)**, **(17060)**, **(17061)** **(16458)**, **(18129)**, shown in the above graphic]. This number will always refer to the conceptual definition of the process element. The actual process elements and actual definition may change, but conceptually the decomposition will remain consistent considering the entire scope of the PCF. A new 5-digit number will be assigned to a process element if its definition substantially changes.

## COPYRIGHT AND ATTRIBUTION

This Industry Process Classification Framework was jointly developed by APQC and IBM to facilitate improvement through process management and benchmarking. ©2025 APQC and IBM reserve all rights in this work except as expressly granted herein. APQC and IBM hereby grant you a perpetual, worldwide, royalty-free license to use, copy, publish, modify, and create derivative works of the PCF, provided that all copies of the PCF include this notice, and any derivative works contain the following attribution:

This work is based in part on an Industry Process Classification Framework (“PCF”), an open standard developed by APQC and IBM to promote benchmarking and best practices worldwide. The PCF is intended to facilitate organizational improvement through process management and benchmarking, regardless of industry, size, or geography. To download the full PCF or other industry-specific versions of the PCF, as well as associated measures and benchmarking, please visit [www.apqc.org/pcf](http://www.apqc.org/pcf).

## I.0 Develop Vision and Strategy (I0002)

### 1.1 Define the business concept and long-term vision (17040)

- 1.1.1 Assess the external environment (10017)
  - 1.1.1.1 Identify competitors (19945)
  - 1.1.1.2 Analyze and evaluate competition (10021)
  - 1.1.1.3 Identify economic trends (10022)
  - 1.1.1.4 Identify political and regulatory issues (10023)
  - 1.1.1.5 Assess new technology innovations (10024)
  - 1.1.1.6 Analyze demographics (10025)
  - 1.1.1.7 Identify social and cultural changes (10026)
  - 1.1.1.8 Identify ecological concerns (10027)
  - 1.1.1.9 Identify intellectual property concerns (16790)
  - 1.1.1.10 Evaluate IP acquisition options (16791)
- 1.1.2 Survey market and determine customer needs and wants (10018)
  - 1.1.2.1 Conduct qualitative/quantitative research and assessments (10028)
  - 1.1.2.2 Capture customer needs and wants (19946)
  - 1.1.2.3 Assess customer needs and wants (19947)
- 1.1.3 Assess the internal environment (10019)
  - 1.1.3.1 Analyze organizational characteristics (10030)
  - 1.1.3.2 Analyze internal operations (19948)
  - 1.1.3.3 Create baselines for current processes (10031)
  - 1.1.3.4 Analyze systems and technology (10032)
  - 1.1.3.5 Analyze financial health (10033)
  - 1.1.3.6 Identify core competencies (10034)
- 1.1.4 Establish strategic vision (10020)
  - 1.1.4.1 Define the strategic vision (19949)
  - 1.1.4.2 Align stakeholders around strategic vision (10035)
  - 1.1.4.3 Communicate strategic vision to stakeholders (10036)
- 1.1.5 Conduct organization restructuring opportunities (16792)
  - 1.1.5.1 Identify restructuring opportunities (16793)
  - 1.1.5.2 Perform due-diligence (16794)
  - 1.1.5.3 Analyze deal options (16795)
    - 1.1.5.3.1 Evaluate acquisition options (16796)
    - 1.1.5.3.2 Evaluate merger options (16797)
    - 1.1.5.3.3 Evaluate de-merger options (16798)
    - 1.1.5.3.4 Evaluate divesture options (16799)

### 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 Define and evaluate strategic options to achieve the objectives (10038)
  - 1.2.2.1 Define strategic options (10047)
    - 1.2.2.1.1 Select partnerships and relationships to support the

- extended enterprise (18083)
- 1.2.2.2 Assess and analyze impact of each option (10048)
  - 1.2.2.2.1 Identify implications for key operating model business elements that require change (13289)
  - 1.2.2.2.2 Identify implications for key technology aspects (13290)
- 1.2.2.3 Develop B2B strategy (16800)
  - 1.2.2.3.1 Develop service as a product strategy (16801)
- 1.2.2.4 Develop B2C strategy (16802)
- 1.2.2.5 Develop partner/alliance strategy (16803)
- 1.2.2.6 Develop merger/demerger/acquisition/exit strategy (16805)
- 1.2.2.7 Develop innovation strategy (16806)
- 1.2.2.8 Develop sustainability strategy (14189)
- 1.2.2.9 Develop global support strategy (19950)
- 1.2.2.10 Develop shared services strategy (19951)
- 1.2.2.11 Develop lean/continuous improvement strategy (14197)
- 1.2.2.12 Develop innovation strategy and framework (19952)
- 1.2.3 Select long-term business strategy (10039)
- 1.2.4 Coordinate and align functional and process strategies (10040)
- 1.2.5 Create organizational design (10041)
  - 1.2.5.1 Evaluate breadth and depth of organizational structure (10049)
  - 1.2.5.2 Perform job-specific roles mapping and value-added analyses (10050)
  - 1.2.5.3 Develop role activity diagrams to assess hand-off activity (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 analysis and activity diagrams 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)
  - 1.2.6.1 Identify organizational goals (19953)
  - 1.2.6.2 Establish baseline metrics (19954)
  - 1.2.6.3 Monitor performance against goals (19955)
- 1.2.7 Formulate business unit strategies (10043)
  - 1.2.7.1 Analyze business unit strategies (19956)
  - 1.2.7.2 Identify core competency for each business unit (19957)
  - 1.2.7.3 Refine business unit strategies in support of

- company strategy (19958)
- 1.2.8 Develop customer experience strategy (19959)
  - 1.2.8.1 Assess customer experience (19960)
    - 1.2.8.1.1 Identify and review customer touchpoints (19961)
    - 1.2.8.1.2 Assess customer experience across touchpoints (19962)
    - 1.2.8.1.3 Perform root cause analysis of problematic customer experiences (19963)
  - 1.2.8.2 Design customer experience (19964)
    - 1.2.8.2.1 Define and manage personas (16612)
    - 1.2.8.2.2 Create customer journey maps (19965)
    - 1.2.8.2.3 Define single view of the customer for the organisation (19966)
    - 1.2.8.2.4 Define a vision for the customer experience (19967)
    - 1.2.8.2.5 Validate with customers (19968)
    - 1.2.8.2.6 Align experience with brand values and business strategies (19969)
    - 1.2.8.2.7 Develop content strategy (19970)
  - 1.2.8.3 Design customer experience support structure (19971)
    - 1.2.8.3.1 Identify required capabilities (19972)
    - 1.2.8.3.2 Identify impact on functional processes (19973)
  - 1.2.8.4 Develop customer experience roadmap to develop and implement defined capabilities (19974)
- 1.2.9 Communicate strategies internally and externally (18916)

### 1.3 Develop regulatory strategys (19110)

- 1.3.1 Confirm business strategy (19111)
  - 1.3.1.1 Gather information about the business strategy (19112)
  - 1.3.1.2 Review business strategy documentation (19113)
- 1.3.2 Perform current state assessment and gap analysis (19114)
  - 1.3.2.1 Formulate regulatory objectives and goals (19115)
  - 1.3.2.2 Review current regulatory strategy(19116)
  - 1.3.2.3 Identify and review gaps in strategic alignment (19117)
- 1.3.3 Identify long term regulatory requirements and options (19118)
  - 1.3.3.1 Monitor regulatory trends (19119)
  - 1.3.3.2 Identify and review gaps in regulatory strategy against trends (19120)
  - 1.3.3.3 Identify strategic regulatory approach alternatives (19121)

- 1.3.4 Formulate regulatory strategy (19122)
- 1.3.5 Develop regulatory submissions and reports (19123)
- 1.3.6 Initiate and monitor regulatory compliance projects (19124)

### 1.4 Execute and measure strategic initiatives (10016)

- 1.4.1 Develop strategic initiatives (10057)
  - 1.4.1.1 Identify strategic priorities (19975)
  - 1.4.1.2 Develop strategic initiatives based on business/customer value (19976)
  - 1.4.1.3 Review with stakeholders (19977)
- 1.4.2 Evaluate strategic initiatives (10058)
  - 1.4.2.1 Determine business value for each strategic priority (19978)
  - 1.4.2.2 Determine the customer value for each strategic priority (19979)
- 1.4.3 Select strategic initiatives (10059)
  - 1.4.3.1 Prioritize strategic initiatives (19980)
  - 1.4.3.2 Communicate strategic initiatives to business units and stakeholders (19981)
- 1.4.4 Network for new business (12749)
- 1.4.5 Obtain new business financing (12750)
- 1.4.6 Structure contracts /milestones /accounting/tax (12751)
- 1.4.7 Develop joint ventures (12743)
- 1.4.8 Execute new business strategies (19125)
- 1.4.9 Establish high-level measures (10060)
  - 1.4.9.1 Identify business value drivers (19982)
  - 1.4.9.2 Establish baselines for business value drivers (19983)
  - 1.4.9.3 Monitor performance against baselines (19984)
- 1.4.10 Execute strategic initiatives (19507)

### 1.5 Develop and maintain business models (20944)

- 1.5.1 Develop business models (20945)
  - 1.5.1.1 Assemble business model information (20946)
  - 1.5.1.2 Secure appropriate approvals (20947)
  - 1.5.1.3 Identify integration points with existing models (20948)
  - 1.5.1.4 Adopt the business model (20949)
- 1.5.2 Maintain business models (20950)
  - 1.5.2.1 Establish business model maintenance parameters (20951)
  - 1.5.2.2 Accept business model feedback parameters (20952)
  - 1.5.2.3 Prioritize and manage incoming feedback (20953)
  - 1.5.2.4 Update existing models (20954)
- 1.5.3 Establish business model governance (20955)



## 2.0 Develop and Manage Products and Services (10003)

### 2.1 Govern and manage product/service development program (19696)

- 2.1.1 Manage product and service portfolio (10061)
  - 2.1.1.1 Evaluate performance of existing products/services against market opportunities (10063)
  - 2.1.1.2 Confirm alignment of product/service concepts with business strategy (10066)
  - 2.1.1.3 Plan and develop cost and quality targets (10073)
  - 2.1.1.4 Prioritize and select new product/service concepts (10074)
  - 2.1.1.5 Specify development timing targets (10075)
  - 2.1.1.6 Plan for product/service offering modifications (10076)
- 2.1.2 Manage product and service life cycle (10067)
  - 2.1.2.1 Develop plan for new product/service development and introduction/launch (16824)
  - 2.1.2.2 Introduce new products/services (10077)
  - 2.1.2.3 Retire outdated products/services (10078)
  - 2.1.2.4 Identify and refine performance indicators (10079)
  - 2.1.2.5 Conduct post launch review (11423)
    - 2.1.2.5.1 Carry out post launch analytics to test the acceptability in the market (19646)
    - 2.1.2.5.2 Review market performance (11424)
    - 2.1.2.5.3 Review effectiveness of supply chain and distribution network (11425)
    - 2.1.2.5.4 Apply data and analytics to review supply chain methodologies (19647)
    - 2.1.2.5.5 Review quality and performance of the product/service (11426)
    - 2.1.2.5.6 Conduct financial review (11427)
    - 2.1.2.5.7 Conduct new product development process assessment (11428)
- 2.1.3 Manage patents, copyrights, and regulatory requirements (19985)
  - 2.1.3.1 Conduct mandatory and elective reviews (19941)
  - 2.1.3.2 Review infringement of patents and copyrights (16826)
  - 2.1.3.3 Determine patent and copyright needs (16827)
  - 2.1.3.4 Define product technical documentation management requirements (19697)
  - 2.1.3.5 Manage regulatory requirements (12771)
    - 2.1.3.5.1 Train employees on appropriate regulatory requirements (12772)
    - 2.1.3.5.2 Maintain records for regulatory agencies (12773)
    - 2.1.3.5.3 Manage regulatory submission life cycle (12776)
- 2.1.4 Manage product and service master data (11740)

- 2.1.4.1 Manage materials master lists (11741)
- 2.1.4.2 Manage bills of material (11742)
- 2.1.4.3 Manage routings (11743)
- 2.1.4.4 Manage specifications (11744)
- 2.1.4.5 Manage drawings (11745)
- 2.1.4.6 Manage product/material classification (11746)
- 2.1.4.7 Develop and maintain quality/inspection documents (11747)
- 2.1.4.8 Maintain process specification data (11748)
- 2.1.4.9 Manage traceability data (11749)
- 2.1.4.10 Review and approve data access requests (11750)

### 2.2 Generate and define new product/service ideas (19698)

- 2.2.1 Perform discovery research (10065)
  - 2.2.1.1 Identify new technologies (10070)
  - 2.2.1.2 Develop new technologies (10071)
  - 2.2.1.3 Assess feasibility of integrating new leading technologies into product/service concepts (10072)
- 2.2.2 Generate new product/service concepts (19669)
  - 2.2.2.1 Gather new product/service ideas and requirements (19986)
  - 2.2.2.2 Analyze new product/service ideas and requirements (19987)
  - 2.2.2.3 Evaluate new product/service inputs and requirements (19988)
  - 2.2.2.4 Formulate new product/service concepts (19989)
  - 2.2.2.5 Identify potential improvements to existing products and services (10068)
- 2.2.3 Define product/service development requirements (19990)
  - 2.2.3.1 Define product/service requirements (11331)
    - 2.2.3.1.1 Define basic functional requirements (19991)
    - 2.2.3.1.2 Derive interoperability requirements for products and services (16808)
    - 2.2.3.1.3 Derive safety requirements for products and services (16809)
    - 2.2.3.1.4 Derive security requirements for products and services (16810)
    - 2.2.3.1.5 Derive regulatory compliance requirements (16811)
    - 2.2.3.1.6 Derive requirements from industry standards (16812)
    - 2.2.3.1.7 Develop user experience requirements (19992)
    - 2.2.3.1.8 Derive 'services-as-a-product' offering (16814)
  - 2.2.3.2 Define post launch support model (16815)
  - 2.2.3.3 Identify product/service bundling opportunities (17389)

## 2.3 Develop products and services (10062)

- 2.3.1 Design and prototype products and services (19993)
  - 2.3.1.1 Assign resources to product/service project (10083)
    - 2.3.1.1.1 Identify requirements for product/service design/development partners (19994)
  - 2.3.1.2 Prepare high-level business case and technical assessment (10084)
  - 2.3.1.3 Develop product/service design specifications (10085)
  - 2.3.1.4 Develop user experience design specifications (16813)
  - 2.3.1.5 Provide warranty-related recommendations (16817)
  - 2.3.1.6 Document design specifications (10086)
  - 2.3.1.7 Conduct mandatory and elective external reviews (10087)
  - 2.3.1.8 Design products/services (19995)
    - 2.3.1.8.1 Design for manufacturing (16819)
    - 2.3.1.8.2 Design for product servicing (16820)
    - 2.3.1.8.3 Design for re-manufacturing (16821)
    - 2.3.1.8.4 Review product troubleshooting methodology (16822)
    - 2.3.1.8.5 Design and manage product data, design, and bill of materials (16818)
    - 2.3.1.8.6 Design for product upgrades (16823)
  - 2.3.1.9 Build prototypes/proof of concepts (10088)
  - 2.3.1.10 Develop and test prototype production and/or service delivery process (10098)
  - 2.3.1.11 Eliminate quality and reliability problems (10089)
  - 2.3.1.12 Conduct in-house product/service testing and evaluate feasibility (10090)
  - 2.3.1.13 Identify design/development performance indicators (10091)

- 2.3.1.14 Collaborate on design with suppliers and external partners (10092)

- 2.3.2 Test market for new or revised products and services (19996)
  - 2.3.2.1 Prepare detailed market study (10093)
  - 2.3.2.2 Conduct customer tests and interviews (10094)
  - 2.3.2.3 Finalize product/service characteristics and business cases (10095)
  - 2.3.2.4 Finalize technical requirements (10096)
- 2.3.3 Prepare for production/service delivery (19997)
  - 2.3.3.1 Design and obtain necessary capabilities/materials and equipment (10099)
  - 2.3.3.2 Identify requirements for changes to manufacturing/delivery processes (10097)
  - 2.3.3.3 Request engineering/process change (11418)
  - 2.3.3.4 Install and validate production/service delivery process (10100)
    - 2.3.3.4.1 Monitor initial production runs (11417)
  - 2.3.3.5 Validate launch procedures (19998)

## 2.4 Develop tariffs and service charges for regulated products and services (19126)

- 2.4.1 Develop business case for rate change (19127)
- 2.4.2 Determine tariff structure (19128)
  - 2.4.2.1 Determine consumption tariffs (19129)
  - 2.4.2.2 Determine time-of-use tariffs (19130)
  - 2.4.2.3 Determine demand tariffs (19131)
  - 2.4.2.4 Determine use-of-system tariffs (19132)
- 2.4.3 Calculate rates (19133)
- 2.4.4 Complete rate case filing package (19134)
- 2.4.5 File rate case (19135)
- 2.4.6 Negotiate tariff and regulated service cost recoveries (19136)
- 2.4.7 Adjust tariffs, rates and service charges (19137)

## 3.0 Market and Sell Products and Services (10004)

### 3.1 Understand markets, customers, and capabilities (10101)

- 3.1.1 Perform customer and market intelligence analysis (10106)
  - 3.1.1.1 Conduct customer and market research (10108)
    - 3.1.1.1.1 Understand consumer needs and predict customer purchasing behavior (10114)
  - 3.1.1.2 Identify market segments (10109)
    - 3.1.1.2.1 Determine market share gain/loss (10115)
  - 3.1.1.3 Analyze market and industry trends (10110)
  - 3.1.1.4 Analyze competing organizations, competitive/substitute products/services (10111)
  - 3.1.1.5 Evaluate existing products/services (10112)
  - 3.1.1.6 Assess internal and external business environment (10113)
- 3.1.2 Evaluate and prioritize market opportunities (10107)
  - 3.1.2.1 Quantify market opportunities (10116)
  - 3.1.2.2 Determine target segments (10117)
    - 3.1.2.2.1 Identify under-served and saturated market segments (18941)
  - 3.1.2.3 Prioritize opportunities consistent with capabilities and overall business strategy (10118)
  - 3.1.2.4 Validate opportunities (10119)
    - 3.1.2.4.1 Test with customers/consumers (10120)
    - 3.1.2.4.2 Confirm internal capabilities (10121)

### 3.2 Develop marketing strategy (10102)

- 3.2.1 Define offering and customer value proposition (11168)
  - 3.2.1.1 Define offering and positioning (11169)
  - 3.2.1.2 Develop value proposition including brand positioning for target segments (11170)
  - 3.2.1.3 Validate value proposition with target segments (11171)
  - 3.2.1.4 Develop new branding (11172)
- 3.2.2 Define pricing strategy (10123)
  - 3.2.2.1 Conduct pricing analysis (13169)
  - 3.2.2.2 Establish guidelines for applying pricing and discounting of products/services (10124)
  - 3.2.2.3 Establish pricing targets (19999)
  - 3.2.2.4 Approve pricing strategies/policies and targets (10125)
- 3.2.3 Define and manage channel strategy (20000)
  - 3.2.3.1 Determine channels to be supported (20001)
  - 3.2.3.2 Establish channel objectives (20002)
  - 3.2.3.3 Determine channel role and fit with target segments (10127)
  - 3.2.3.4 Select channels for target segments (10128)
  - 3.2.3.5 Identify required channel capabilities (20003)
  - 3.2.3.6 Evaluate channel attributes and potential

- partners (10126)
- 3.2.3.7 Orchestrate seamless customer experience across supported channels (20004)
  - 3.2.3.7.1 Define omni-channel strategy (16590)
  - 3.2.3.7.2 Define omni-channel requirements (16591)
  - 3.2.3.7.3 Develop omni-channel policies and procedures (16592)
- 3.2.3.8 Develop and manage execution roadmap (20005)
- 3.2.4 Analyze and manage channel performance (20006)
  - 3.2.4.1 Establish channel-specific metrics and targets (16573)
  - 3.2.4.2 Monitor and report performance (16574)
  - 3.2.4.3 Monitor and report events influencing factors (16575)
  - 3.2.4.4 Analyze performance (16500)
  - 3.2.4.5 Develop plan for improvements (16501)
- 3.2.5 Develop marketing communication strategy (16848)
  - 3.2.5.1 Develop customer communication calendar (16849)
  - 3.2.5.2 Define public relations (PR) strategy (16850)
  - 3.2.5.3 Define direct marketing strategy (16851)
  - 3.2.5.4 Define internal marketing communication strategy (16852)
  - 3.2.5.5 Identify new media for marketing communication (16853)
  - 3.2.5.6 Define new media communication strategy (16854)
  - 3.2.5.7 Define point of sale (POS) communication strategy (16855)
  - 3.2.5.8 Define communication guidelines and mechanisms (18627)
- 3.2.6 Design and manage customer loyalty program (18924)
  - 3.2.6.1 Define customer loyalty program (20007)
  - 3.2.6.2 Acquire members to customer loyalty program (18925)
  - 3.2.6.3 Build engagement and relationship with members (18926)
  - 3.2.6.4 Monitor customer loyalty program benefits to the enterprise and the customer (16633)
  - 3.2.6.5 Optimize loyalty program value to both the enterprise and the customer (18927)

### 3.3 Develop and manage marketing plans (20008)

- 3.3.1 Establish goals, objectives, and metrics for products/services by channel/segment (10148)
- 3.3.2 Establish marketing budgets (10149)
  - 3.3.2.1 Confirm marketing alignment to business strategy (10155)



- 3.3.2.2 Determine costs of marketing (10156)
  - 3.3.2.3 Create marketing budget (10157)
  - 3.3.2.4 Determine projected ROI for marketing investment (17683)
  - 3.3.3 Develop and manage pricing (20593)
    - 3.3.3.1 Understand resource requirements for each product/service and delivery channel/method (20009)
    - 3.3.3.2 Determine corporate incentives (18948)
    - 3.3.3.3 Determine pricing based on volume/unit forecast (10163)
    - 3.3.3.4 Execute pricing plan (10164)
    - 3.3.3.5 Evaluate pricing performance (10165)
    - 3.3.3.6 Refine pricing as needed (10166)
    - 3.3.3.7 Implement promotional pricing programs (11495)
    - 3.3.3.8 Implement other retail pricing programs (11496)
    - 3.3.3.9 Communicate and implement price changes (11497)
    - 3.3.3.10 Achieve regulatory approval for pricing (17684)
  - 3.3.4 Develop and manage promotional activities (20010)
    - 3.3.4.1 Define promotional concepts and objectives (10167)
    - 3.3.4.2 Develop marketing messages (10159)
    - 3.3.4.3 Define target audience (10160)
    - 3.3.4.4 Plan and test promotional activities (10168)
    - 3.3.4.5 Execute promotional activities (10169)
    - 3.3.4.6 Evaluate promotional performance metrics (10170)
    - 3.3.4.7 Refine promotional performance metrics (10171)
    - 3.3.4.8 Incorporate learning into future/planned consumer promotions (10172)
  - 3.3.5 Track customer management measures (10153)
    - 3.3.5.1 Determine customer lifetime value (10173)
    - 3.3.5.2 Analyze customer revenue trend (10174)
    - 3.3.5.3 Analyze customer attrition and retention rates (10175)
    - 3.3.5.4 Analyze customer metrics (10176)
    - 3.3.5.5 Revise customer strategies, objectives, and plans based on metrics (10177)
  - 3.3.6 Analyze and respond to customer insight (16613)
    - 3.3.6.1 Monitor and respond to social media activity (16627)
    - 3.3.6.2 Analyze customer website activity (16614)
    - 3.3.6.3 Analyze customer purchase patterns (16615)
    - 3.3.6.4 Develop business rules to provide personalized offers (16616)
    - 3.3.6.5 Monitor effectiveness of personalized offers and adjust offers accordingly (16617)
  - 3.3.7 Develop and manage packaging strategy (10154)
    - 3.3.7.1 Plan packaging strategy (10178)
    - 3.3.7.2 Test packaging options (10179)
    - 3.3.7.3 Execute packaging strategy (10180)
    - 3.3.7.4 Refine packaging (10181)
  - 3.3.8 Manage product marketing content (16629)
    - 3.3.8.1 Manage product images (16630)
    - 3.3.8.2 Manage product copy (18130)
- 3.4 Develop sales strategy (10103)**
- 3.4.1 Develop sales forecast (10129)
    - 3.4.1.1 Gather current and historic order information (10134)
    - 3.4.1.2 Analyze sales trends and patterns (10135)
    - 3.4.1.3 Generate sales forecast (10136)
    - 3.4.1.4 Analyze historical and planned promotions and events (10137)
  - 3.4.2 Develop sales partner/alliance relationships (10130)
    - 3.4.2.1 Identify alliance opportunities (10138)
    - 3.4.2.2 Design alliance programs and methods for selecting and managing relationships (10139)
    - 3.4.2.3 Select alliances (10140)
    - 3.4.2.4 Develop trade customer trade strategy and customer objectives/targets (11465)
    - 3.4.2.5 Define trade programs and funding options (11521)
    - 3.4.2.6 Conduct planning activities for major trade customers (11466)
    - 3.4.2.7 Develop partner and alliance management strategies (10141)
    - 3.4.2.8 Establish partner and alliance management goals (10142)
    - 3.4.2.9 Establish partner and alliance agreements (18629)
    - 3.4.2.10 Develop promotional and category management calendars (trade marketing calendars) (11522)
    - 3.4.2.11 Create strategic and tactical sales plans by customer (11523)
    - 3.4.2.12 Communicate planning information to customer teams (11468)
  - 3.4.3 Establish overall sales budgets (10131)
    - 3.4.3.1 Calculate product market share (17682)
    - 3.4.3.2 Calculate product revenue (10143)
    - 3.4.3.3 Determine variable costs (10144)
    - 3.4.3.4 Determine overhead and fixed costs (10145)
    - 3.4.3.5 Calculate net profit (10146)
    - 3.4.3.6 Create budget (10147)
  - 3.4.4 Establish sales goals and measures (10132)
  - 3.4.5 Establish customer management measures (10133)
- 3.5 Develop and manage sales plans (10105)**
- 3.5.1 Manage leads/opportunities (20594)
    - 3.5.1.1 Identify potential customers (10188)
    - 3.5.1.2 Identify/receive leads/opportunities (10189)
    - 3.5.1.3 Validate and qualify leads/opportunities (18115)

3.5.1.4	Match opportunities to business strategy (11773)	details (10203)
3.5.1.5	Develop opportunity win plans (18116)	3.5.4.2.4 Record address details (10204)
3.5.1.6	Manage opportunity pipeline (20011)	3.5.4.2.5 Record contact details (10205)
3.5.1.7	Determine sales resource allocation (10209)	3.5.4.2.6 Record key customer communication profile details (10206)
3.5.1.8	Manage customer sales calls (10184)	3.5.4.2.7 Review involved party information (10207)
3.5.1.8.1	Perform sales calls (10190)	3.5.4.2.8 Terminate involved party information (10208)
3.5.1.8.2	Perform pre-sales activities (10191)	
3.5.1.8.3	Manage customer meetings/workshops (20012)	3.5.4.3 Determine availability (10196)
3.5.1.8.4	Close the sale (10192)	3.5.4.4 Determine fulfillment process (10197)
3.5.1.8.5	Record outcome of sales process (10193)	3.5.4.5 Enter orders into system (10198)
3.5.2	Manage customers and accounts (10183)	3.5.4.6 Identify/perform cross-sell/up-sell activity (17404)
3.5.2.1	Select key customers/accounts (20013)	3.5.4.7 Process back orders and updates (10199)
3.5.2.2	Develop sales/key account plan (11173)	3.5.4.8 Handle sales order inquiries including post-order fulfillment transactions (10200)
3.5.2.3	Manage sales/key account plan (20014)	3.5.5 Manage sales partners and alliances (10187)
3.5.2.4	Manage customer relationships (11174)	3.5.5.1 Provide sales and product/service training to sales partners/alliances (10211)
3.5.2.5	Manage customer master data (14208)	3.5.5.1.1 Provide certification enablement training (20019)
3.5.2.5.1	Collect and merge internal and third-party customer information (16598)	3.5.5.1.2 Manage certifications and skills (20020)
3.5.2.5.2	De-duplicate customer data (16599)	3.5.5.1.3 Provide support to partners/alliances (20021)
3.5.3	Develop and manage sales proposals, bids, and quotes (11779)	3.5.5.2 Provide marketing materials to sales partners/alliances (18641)
3.5.3.1	Receive Request For Proposal (RFP)/Request For Quote (RFQ) (11781)	3.5.5.3 Evaluate partner/alliance results (10214)
3.5.3.2	Refine customer requirements (11780)	3.5.5.4 Manage sales partner/alliance master data (14209)
3.5.3.3	Review RFP/RFQ request (11782)	
3.5.3.4	Perform competitive analysis (11783)	<b>3.6 Trade Energy Commodities (12908)</b>
3.5.3.5	Validate with strategy/business plans (11784)	3.6.1 Develop overall trading strategy and measurement approach (12909)
3.5.3.6	Understand customer business and requirements (11785)	3.6.1.1 Define objectives (19138)
3.5.3.7	Develop solution and delivery approach (20015)	3.6.1.2 Define evaluation criteria (19139)
3.5.3.8	Identify staffing requirements (11787)	3.6.1.3 Assess and analyze long term market dynamics (19140)
3.5.3.9	Develop pricing and scheduling estimates (11788)	3.6.1.4 Develop possible strategies (19141)
3.5.3.10	Conduct profitability analysis (11789)	3.6.1.5 Test strategies under various scenarios and environmental conditions (19142)
3.5.3.11	Manage internal reviews (20016)	3.6.1.6 Evaluate trade-offs, refine and select strategy (19143)
3.5.3.12	Manage internal approvals (20017)	3.6.2 Evaluate trading opportunities (19144)
3.5.3.13	Submit/present bid/proposal/quote to customer (11790)	3.6.2.1 Gather and analyze market data (supply, demand, inventory, pricing) for relevant products in relevant markets (19145)
3.5.3.14	Revise bid/proposal/quote (20018)	3.6.2.2 Discover potential value in opportunities consistent with trading strategy and objectives and within established capital allocation and risk limits (19146)
3.5.3.15	Manage notification outcome (11793)	3.6.2.3 Monitor environment for trading opportunities (12911)
3.5.4	Manage sales orders (10185)	
3.5.4.1	Accept and validate sales orders (10194)	
3.5.4.2	Collect and maintain account information (10195)	
3.5.4.2.1	Administer key account details (10201)	
3.5.4.2.2	Retrieve full customer details (10202)	
3.5.4.2.3	Modify involved party	

- 3.6.3 Execute physical energy pool and spot trading (19147)
    - 3.6.3.1 Determine medium term plant availability and demand forecasts (19148)
    - 3.6.3.2 Analyze bid/offer tactics (19149)
    - 3.6.3.3 Prepare and submit basic weekly dispatch offers (19150)
    - 3.6.3.4 Determine short term plant availability and demand forecasts (19151)
    - 3.6.3.5 Analyze rebid tactics (19152)
    - 3.6.3.6 Prepare and submit short term market rebids (19153)
    - 3.6.3.7 Report on pool trading activities (19154)
    - 3.6.3.8 Manage physical dispatch (19155)
    - 3.6.3.9 Communicate with market and system operators (19156)
    - 3.6.3.10 Communicate with generation and demand management operators (19157)
    - 3.6.3.11 Conduct pool/exchange balancing (19158)
    - 3.6.3.12 Perform settlement and reconciliation (19159)
  - 3.6.4 Execute bi-lateral and over-the-counter trades (19160)
    - 3.6.4.1 Select and contact counterparties (19161)
    - 3.6.4.2 Establish hedges based on the appropriate derivative instrument and terms (19162)
    - 3.6.4.3 Establish terms and conditions of transaction (19163)
    - 3.6.4.4 Obtain credit clearance or collateralization (19164)
    - 3.6.4.5 Finalize terms and confirm (19165)
    - 3.6.4.6 Communicate deal terms to operations for deal execution and fulfillment (19166)
    - 3.6.4.7 Unwind hedges when the physical position is eliminated (19167)
    - 3.6.4.8 Measure hedge effectiveness (19168)
- 3.7 Manage energy trading positions (12953)**
- 3.7.1 Manage volumetric position (12954)
    - 3.7.1.1 Monitor current and forward physical positions (12955)
    - 3.7.1.2 Determine value at risk (19169)
    - 3.7.1.3 Compare position with risk limits/trading book parameters (19170)
    - 3.7.1.4 Apply trading limits and rules (19171)
    - 3.7.1.5 Monitor strategic supply agreements (12956)
    - 3.7.1.6 Manage exchange reconciliations (12957)
  - 3.7.2 Monitor against trading and physical energy supply / purchase plans (12958)
    - 3.7.2.1 Manage strategy and trader performance (12959)
    - 3.7.2.2 Revise supply/purchase plans (12960)
  - 3.7.3 Calculate Daily (Trading) Profit & Loss (Mark-to-Market) (19172)
    - 3.7.3.1 Obtain market and internal pricing data (19173)
    - 3.7.3.2 Calculate change in market value of positions (19174)
    - 3.7.3.3 Determine other margins and costs (19175)
    - 3.7.3.4 Calculate daily trading profit and loss (19176)
    - 3.7.3.5 Create and communicate pricing exposure report (19177)
  - 3.7.4 Manage Carbon (Certificate) Position and P&L (19178)
    - 3.7.4.1 Calculate from all emissions control on units and monitoring of carbon emissions (19179)
    - 3.7.4.2 Determine current carbon certificate position/ obligations by vintage (19180)
    - 3.7.4.3 Determine carbon trading marker (19181)
    - 3.7.4.4 Obtain carbon market and internal pricing data (19182)
    - 3.7.4.5 Determine cost and value of certificate creation (19183)
    - 3.7.4.6 Determine recovery from customers (19184)
    - 3.7.4.7 Calculate change in market value of positions for carbon (19185)
    - 3.7.4.8 Determine other margins and costs for carbon (19186)
    - 3.7.4.9 Calculate P&L on certificate trading (19187)

## 4.0 Deliver Physical Products (20022)

### 4.1 Plan for and align supply chain resources (10215)

- 4.1.1 Develop production and materials strategies (10221)
  - 4.1.1.1 Define manufacturing goals (10229)
  - 4.1.1.2 Define labor and materials policies (10230)
  - 4.1.1.3 Define outsourcing policies (10231)
  - 4.1.1.4 Define capital expense policies (10232)
  - 4.1.1.5 Define capacities (10233)
  - 4.1.1.6 Define production network and supply constraints (10234)
  - 4.1.1.7 Define production process (14193)
  - 4.1.1.8 Define standard operating procedures (19551)
  - 4.1.1.9 Define production workplace layout and infrastructure (14194)
- 4.1.2 Manage demand for products (10222)
  - 4.1.2.1 Develop baseline demand forecasts (10235)
  - 4.1.2.2 Collaborate demand with customers (10236)
  - 4.1.2.3 Develop demand consensus forecast (10237)
  - 4.1.2.4 Determine available to promise (10238)
  - 4.1.2.5 Monitor activity against demand forecast and revise forecast (10239)
  - 4.1.2.6 Evaluate and revise demand forecasting approach (10240)
  - 4.1.2.7 Measure demand forecast accuracy (10241)
- 4.1.3 Create materials plan (10223)
  - 4.1.3.1 Create unconstrained plan (10242)
  - 4.1.3.2 Collaborate with supplier and contract manufacturers (10243)
  - 4.1.3.3 Identify critical materials and supplier capacity (10244)
  - 4.1.3.4 Monitor material specifications (10245)
  - 4.1.3.5 Generate constrained plan (10246)
  - 4.1.3.6 Define production balance and control (14196)
- 4.1.4 Create and manage master production schedule (10224)
  - 4.1.4.1 Model production network to enable simulation and optimization (20023)
  - 4.1.4.2 Create master production schedule (20024)
  - 4.1.4.3 Maintain master production schedule (17041)
- 4.1.5 Plan distribution requirements (17042)
  - 4.1.5.1 Maintain master data (10252)
  - 4.1.5.2 Determine finished goods inventory requirements at destination (10253)
  - 4.1.5.3 Determine product storage facility requirements (19555)
  - 4.1.5.4 Calculate requirements at destination (10254)
  - 4.1.5.5 Calculate consolidation at source (10255)
  - 4.1.5.6 Manage collaborative replenishment planning (10256)
  - 4.1.5.7 Calculate and optimize destination dispatch plan (10258)

- 4.1.5.8 Manage dispatch plan attainment (10259)
- 4.1.5.9 Calculate and optimize destination load plans (10260)
- 4.1.5.10 Manage partner load plan (10261)
- 4.1.5.11 Manage cost of supply (10262)
- 4.1.5.12 Manage capacity utilization (10263)
- 4.1.6 Establish distribution planning constraints (10226)
  - 4.1.6.1 Establish distribution center layout constraints (10267)
  - 4.1.6.2 Establish inventory management constraints (10268)
  - 4.1.6.3 Establish transportation management constraints (10269)
  - 4.1.6.4 Establish storage management constraints (19558)
- 4.1.7 Review distribution planning policies (10227)
  - 4.1.7.1 Review distribution network (10264)
  - 4.1.7.2 Establish sourcing relationships (10265)
  - 4.1.7.3 Establish dynamic deployment policies (10266)
- 4.1.8 Develop quality standards and procedures (10368)
  - 4.1.8.1 Establish quality targets (10371)
  - 4.1.8.2 Develop standard testing procedures (10372)
  - 4.1.8.3 Communicate quality specifications (10373)

### 4.2 Procure materials and services (10216)

- 4.2.1 Provide sourcing governance and perform category management (10277)
  - 4.2.1.1 Develop procurement plan (10281)
  - 4.2.1.2 Clarify purchasing requirements (10282)
  - 4.2.1.3 Establish materials management contingency plans (10283)
  - 4.2.1.4 Match needs to supply capabilities (10284)
  - 4.2.1.5 Analyze organization's spend profile (10285)
  - 4.2.1.6 Seek opportunities to improve efficiency and value (10286)
  - 4.2.1.7 Collaborate with suppliers to identify sourcing opportunities (10287)
- 4.2.2 Develop sourcing and category management strategies (20973)
- 4.2.3 Select suppliers and develop/maintain contracts (10278)
  - 4.2.3.1 Select suppliers (10288)
  - 4.2.3.2 Certify and validate suppliers (10289)
  - 4.2.3.3 Negotiate and establish contracts (10290)
  - 4.2.3.4 Manage contracts (10291)
- 4.2.4 Order materials and services (10279)
  - 4.2.4.1 Process/Review requisitions (10292)
  - 4.2.4.2 Approve requisitions (10293)
  - 4.2.4.3 Solicit/Track vendor quotes (10294)
  - 4.2.4.4 Create/Distribute purchase orders (10295)
  - 4.2.4.5 Expedite orders and satisfy inquiries (10296)

- 4.2.4.6 Reconcile purchase orders (10297)
- 4.2.4.7 Research/Resolve order exceptions (10298)
- 4.2.5 Manage suppliers (10280)
  - 4.2.5.1 Monitor/Manage supplier information (10299)
  - 4.2.5.2 Prepare/Analyze procurement and vendor performance (10300)
  - 4.2.5.3 Support inventory and production processes (10301)
  - 4.2.5.4 Monitor quality of product delivered (10302)

#### 4.3 Produce/Assemble/Test product (10217)

- 4.3.1 Schedule production (10303)
  - 4.3.1.1 Model and simulate plant (19563)
  - 4.3.1.2 Generate line level plan (10306)
  - 4.3.1.3 Generate detailed schedule (10307)
  - 4.3.1.4 Schedule production orders and create lots (10308)
  - 4.3.1.5 Schedule preventive (planned) maintenance (preventive maintenance orders) (10315)
  - 4.3.1.6 Schedule requested (unplanned) maintenance (work order cycle) (10316)
  - 4.3.1.7 Release production orders and create lots (10309)
- 4.3.2 Produce/Assemble product (10304)
  - 4.3.2.1 Manage raw material inventory (10310)
  - 4.3.2.2 Execute detailed line schedule (10311)
  - 4.3.2.3 Report maintenance issues (10319)
  - 4.3.2.4 Rerun defective items (10313)
  - 4.3.2.5 Monitor and optimize production process (19566)
    - 4.3.2.5.1 Automate and control plant (19567)
    - 4.3.2.5.2 Perform advanced process control (19568)
    - 4.3.2.5.3 Perform real-time optimization (19569)
    - 4.3.2.5.4 Manage plant alarms and alerts (19570)
  - 4.3.2.6 Assess production performance (10314)
- 4.3.3 Perform quality testing (10369)
  - 4.3.3.1 Calibrate test equipment (10318)
  - 4.3.3.2 Perform testing using the standard testing procedure (10374)
  - 4.3.3.3 Manage quality samples (20956)
  - 4.3.3.4 Record test results (10375)
  - 4.3.3.5 Track and analyze non-conformance trends (12045)
  - 4.3.3.6 Perform root cause analysis (12046)
- 4.3.4 Maintain production records and manage lot traceability (10370)

- 4.3.4.1 Determine lot numbering system (10376)
- 4.3.4.2 Determine lot use (10377)

#### 4.4 Manage logistics and warehousing (10219)

- 4.4.1 Provide logistics governance (10338)
  - 4.4.1.1 Translate customer service requirements into logistics requirements (10343)
  - 4.4.1.2 Design logistics network (10344)
  - 4.4.1.3 Communicate outsourcing needs (10345)
  - 4.4.1.4 Develop and maintain delivery service policy (10346)
  - 4.4.1.5 Optimize transportation schedules and costs (10347)
  - 4.4.1.6 Define key performance measures (10348)
  - 4.4.1.7 Define reverse logistics strategy (16905)
- 4.4.2 Plan and manage inbound material flow (20936)
  - 4.4.2.1 Plan inbound material receipts (10349)
  - 4.4.2.2 Manage inbound material flow (10350)
  - 4.4.2.3 Monitor inbound delivery performance (10351)
  - 4.4.2.4 Manage flow of returned products (10352)
  - 4.4.2.5 Control quality of returned parts (12708)
  - 4.4.2.6 Salvage or repair returned products (20109)
    - 4.4.2.6.1 Perform salvage activities (10366)
    - 4.4.2.6.2 Manage repair/refurbishment and return to customer/stock (14195)
- 4.4.3 Operate warehousing (10340)
  - 4.4.3.1 Track inventory deployment (10353)
  - 4.4.3.2 Receive, inspect, and store inbound deliveries (10354)
  - 4.4.3.3 Track product availability (10355)
  - 4.4.3.4 Pick, pack, and ship product for delivery (10356)
  - 4.4.3.5 Track inventory accuracy (10357)
  - 4.4.3.6 Track third-party logistics storage and shipping performance (10358)
  - 4.4.3.7 Manage physical finished goods inventory (10359)
  - 4.4.3.8 Manage warehouse transfers (20957)
- 4.4.4 Operate outbound transportation (10341)
  - 4.4.4.1 Plan, transport, and deliver outbound product (10360)
  - 4.4.4.2 Track carrier delivery performance (10361)
  - 4.4.4.3 Manage transportation fleet (10362)
  - 4.4.4.4 Process and audit carrier invoices and documents (10363)



## 5.0 Deliver Service (20025)

### 5.1 Establish service delivery governance and strategies (20026)

- 5.1.1 Establish service delivery governance (20027)
  - 5.1.1.1 Set up and maintain service delivery governance and management system (20028)
  - 5.1.1.2 Manage service delivery performance (20029)
  - 5.1.1.3 Manage service delivery development and direction (20030)
  - 5.1.1.4 Solicit feedback from customer on service delivery satisfaction (20031)
- 5.1.2 Develop service delivery strategies (20032)
  - 5.1.2.1 Define service delivery goals (20033)
  - 5.1.2.2 Define labor policies (20034)
  - 5.1.2.3 Evaluate resource availability (20035)
  - 5.1.2.4 Define service delivery network and supply constraints (20036)
  - 5.1.2.5 Define service delivery process (20037)
  - 5.1.2.6 Review and validate service delivery procedures (20038)
  - 5.1.2.7 Define service delivery workplace layout and infrastructure (20039)

### 5.2 Manage service delivery resources (20040)

- 5.2.1 Manage service delivery resource demand (20041)
  - 5.2.1.1 Monitor pipeline (20042)
  - 5.2.1.2 Develop baseline forecasts (20043)
  - 5.2.1.3 Collaborate with customers (20044)
  - 5.2.1.4 Develop consensus forecast (20045)
  - 5.2.1.5 Determine availability of skills to deliver on current and forecast customer orders (20046)
  - 5.2.1.6 Monitor activity against forecast and revise forecast (20047)
  - 5.2.1.7 Evaluate and revise forecasting approach (20048)
  - 5.2.1.8 Measure forecast accuracy (20049)
- 5.2.2 Create and manage resource plan (20050)
  - 5.2.2.1 Define and manage skills taxonomy (20051)
  - 5.2.2.2 Create resource plan (20052)
  - 5.2.2.3 Match resource demand with capacity, skills, and capabilities (20053)
  - 5.2.2.4 Collaborate with suppliers and partners to supplement skills and capabilities (20054)
  - 5.2.2.5 Identify critical resources and supplier capacity (20055)

- 5.2.2.6 Monitor and manage resource capacity and availability (20056)

- 5.2.3 Enable service delivery resources (12127)
  - 5.2.3.1 Develop service delivery training plan (12128)
  - 5.2.3.2 Develop training materials (12129)
  - 5.2.3.3 Manage training schedule (12131)
  - 5.2.3.4 Deliver operations training (12132)
  - 5.2.3.5 Deliver technical training (12133)
  - 5.2.3.6 Perform skill and capability testing (20057)
  - 5.2.3.7 Evaluate training effectiveness (12135)

### 5.3 Deliver service to customer (20058)

- 5.3.1 Initiate service delivery (20059)
  - 5.3.1.1 Review contract and agreed terms (20060)
  - 5.3.1.2 Understand customer requirements and define refine approach (20061)
  - 5.3.1.3 Modify/revise and approve project plan (20062)
  - 5.3.1.4 Review customer business objectives (20063)
  - 5.3.1.5 Confirm environmental readiness (20064)
  - 5.3.1.6 Identify, select, and assign resources (20065)
    - 5.3.1.6.1 Establish people objectives (20066)
    - 5.3.1.6.2 Establish engagement rules (20067)
  - 5.3.1.7 Plan for service delivery (20068)
- 5.3.2 Execute service delivery (20069)
  - 5.3.2.1 Analyze environment and customer needs (20070)
  - 5.3.2.2 Define solution (20071)
  - 5.3.2.3 Validate solution (20072)
  - 5.3.2.4 Identify changes (20073)
  - 5.3.2.5 Obtain approval to proceed (20074)
  - 5.3.2.6 Make build/buy solution (20075)
  - 5.3.2.7 Deploy solution (20076)
- 5.3.3 Complete service delivery (20077)
  - 5.3.3.1 Conduct service delivery/project review and evaluate success (20078)
  - 5.3.3.2 Complete/finalize financial management activities (20079)
  - 5.3.3.3 Confirm delivery according to contract terms (20080)
  - 5.3.3.4 Release resources (20081)
  - 5.3.3.5 Manage service delivery completion (20082)
  - 5.3.3.6 Harvest knowledge (20083)
  - 5.3.3.7 Archive records and update systems (20084)

## 6.0 Manage Customer Service (20085)

### 6.1 Develop customer care/customer service strategy (10378)

- 6.1.1 Define customer service requirements across the enterprise (20086)
- 6.1.2 Define customer service experience (20087)
- 6.1.3 Define and manage customer service channel strategy (20088)
- 6.1.4 Define customer service policies and procedures (10382)
- 6.1.5 Establish target service level for each customer segment (10383)
- 6.1.6 Define warranty offering (20089)
  - 6.1.6.1 Determine and document warranty policies (16893)
  - 6.1.6.2 Create and manage warranty rules/claim codes for products (16890)
  - 6.1.6.3 Agree warranty responsibilities with suppliers (20090)
  - 6.1.6.4 Define warranty related offerings for customers (20091)
  - 6.1.6.5 Communicate warranty policies and offerings (12673)
- 6.1.7 Develop recall strategy (20092)

### 6.2 Plan and manage customer service contacts (10379)

- 6.2.1 Plan and manage customer service work force (10387)
  - 6.2.1.1 Forecast volume of customer service contacts (10390)
  - 6.2.1.2 Schedule customer service work force (10391)
  - 6.2.1.3 Track work force utilization (10392)
  - 6.2.1.4 Monitor and evaluate quality of customer interactions with customer service representatives (10393)
- 6.2.2 Manage customer service problems, requests, and inquiries (10388)
  - 6.2.2.1 Receive customer problems, requests, and inquiries (10394)
  - 6.2.2.2 Analyze problems, requests, and inquiries (13482)
  - 6.2.2.3 Resolve customer problems, requests, and inquiries (10395)
  - 6.2.2.4 Respond to customer problems, requests, and inquiries (10396)
  - 6.2.2.5 Identify and capture upsell/cross-sell opportunities (16928)
  - 6.2.2.6 Deliver opportunity to sales team (16937)
- 6.2.3 Manage customer complaints (10389)
  - 6.2.3.1 Receive customer complaints (10397)
  - 6.2.3.2 Route customer customer complaints (10398)
  - 6.2.3.3 Resolve customer complaints (10399)
  - 6.2.3.4 Respond to customer customer complaints (10400)
  - 6.2.3.5 Analyze customer complaints and response/

redressal (19072)

- 6.2.4 Process returns (20094)
  - 6.2.4.1 Authorize return (10364)
  - 6.2.4.2 Process return and record reason (20095)
- 6.2.5 Report incidents and risks to regulatory bodies (12840)

### 6.3 Service products after sales (12658)

- 6.3.1 Register products (20605)
- 6.3.2 Process warranty claims (12669)
  - 6.3.2.1 Receive warranty claim (20096)
  - 6.3.2.2 Validate warranty claim (12671)
  - 6.3.2.3 Investigate warranty issues (20097)
    - 6.3.2.3.1 Define issue (20098)
    - 6.3.2.3.2 Schedule field service (12677)
    - 6.3.2.3.3 Request and receive defective part (12678)
    - 6.3.2.3.4 Investigate issue/perform root cause analysis (20099)
    - 6.3.2.3.5 Receive investigation result/recommendation for corrective action (20100)
  - 6.3.2.4 Determine responsible party (20101)
  - 6.3.2.5 Manage pre-authorizations (20102)
  - 6.3.2.6 Approve or reject warranty claim (12668)
  - 6.3.2.7 Notify originator of approve/reject decision (20103)
  - 6.3.2.8 Authorize payment (20104)
  - 6.3.2.9 Close claim (20105)
  - 6.3.2.10 Reconcile warranty transaction disposition (12667)
- 6.3.3 Manage supplier recovery (20106)
  - 6.3.3.1 Create supplier recovery claims (20107)
  - 6.3.3.2 Negotiate recoveries with suppliers (20108)
- 6.3.4 Service products (10218)
  - 6.3.4.1 Confirm specific service requirements for individual customer (10320)
    - 6.3.4.1.1 Process customer request (10324)
    - 6.3.4.1.2 Create customer profile (10325)
    - 6.3.4.1.3 Generate service order (10326)
  - 6.3.4.2 Identify and schedule resources to meet service requirements (10321)
    - 6.3.4.2.1 Create resourcing plan and schedule (10327)
    - 6.3.4.2.2 Create service order fulfillment schedule (10328)
  - 6.3.4.3 Provide service to specific customers (10322)
    - 6.3.4.3.1 Organize daily service order fulfillment schedule (10330)
    - 6.3.4.3.2 Execute product repair (10331)
    - 6.3.4.3.3 Manage service order fulfillment (10332)

- 6.3.4.4 Ensure quality of service (10323)
  - 6.3.4.4.1 Identify completed service orders for feedback (10334)
  - 6.3.4.4.2 Identify incomplete service orders and service failures (10335)
  - 6.3.4.4.3 Solicit customer feedback on services delivered (10336)
  - 6.3.4.4.4 Process customer feedback on services delivered (10337)

#### **6.4 Manage product recalls and regulatory audits (20110)**

- 6.4.1 Initiate recall (20111)
- 6.4.2 Assess the likelihood and consequences of occurrence of any hazards (20112)
- 6.4.3 Manage recall related communications (20113)
- 6.4.4 Submit regulatory reports (20114)
- 6.4.5 Monitor and audit recall effectiveness (20115)
- 6.4.6 Manage recall termination (20116)

#### **6.5 Evaluate customer service operations and customer satisfaction (20595)**

- 6.5.1 Measure customer satisfaction with customer problems, requests, and inquiries handling (10401)
  - 6.5.1.1 Solicit customer feedback on customer service experience (11687)
  - 6.5.1.2 Analyze customer service data and identify improvement opportunities (11688)
  - 6.5.1.3 Provide customer feedback to product management on customer service experience (18126)
- 6.5.2 Measure customer satisfaction with customer- complaint handling and resolution (10402)

- 6.5.2.1 Solicit customer feedback on complaint handling and resolution (11236)
- 6.5.2.2 Analyze customer complaint data and identify improvement opportunities (11237)
- 6.5.2.3 Identify common customer complaints (11689)
- 6.5.3 Measure customer satisfaction with products and services (10403)
  - 6.5.3.1 Gather and solicit post-sale customer feedback on products and services (11238)
  - 6.5.3.2 Solicit post-sale customer feedback on ad effectiveness (11239)
  - 6.5.3.3 Solicit customer feedback on cross-channel experience (20117)
  - 6.5.3.4 Analyze product and service satisfaction data and identify improvement opportunities (11240)
  - 6.5.3.5 Provide feedback and insights to appropriate teams (product design/development, marketing, manufacturing) (11241)
- 6.5.4 Evaluate and manage warranty performance (12672)
  - 6.5.4.1 Measure customer satisfaction with warranty handling and resolution (20118)
  - 6.5.4.2 Monitor and report on warranty management metrics (12676)
  - 6.5.4.3 Identify improvement opportunities (20119)
  - 6.5.4.4 Identify opportunities to eliminate warranty waste (12674)
  - 6.5.4.5 Investigate fraudulent claims (20120)
- 6.5.5 Evaluate recall performance (20121)

## 7.0 Develop and Manage Human Capital (10007)

### 7.1 Develop and manage human resources planning, policies, and strategies (17043)

- 7.1.1 Develop human resources strategy (20958)
  - 7.1.1.1 Identify strategic HR needs (10418)
  - 7.1.1.2 Define HR and business function roles and accountability (10419)
  - 7.1.1.3 Determine HR costs (10420)
  - 7.1.1.4 Establish HR measures (10421)
  - 7.1.1.5 Communicate HR strategies (10422)
  - 7.1.1.6 Develop strategy for HR systems/technologies/tools (10432)
  - 7.1.1.7 Manage employer branding (20606)
- 7.1.2 Develop and implement workforce strategy and policies (17045)
  - 7.1.2.1 Gather skill requirements according to corporate strategy and market environment (10423)
  - 7.1.2.2 Plan employee resourcing requirements per business unit/organization (10424)
  - 7.1.2.3 Develop compensation plan (10425)
    - 7.1.2.3.1 Establish incentive plan (10210)
  - 7.1.2.4 Develop succession plan (10426)
  - 7.1.2.5 Develop high performers/leadership programs (16938)
  - 7.1.2.6 Develop employee diversity plan (10427)
  - 7.1.2.7 Develop training program (11622)
  - 7.1.2.8 Develop recruitment program (11623)
  - 7.1.2.9 Develop other HR programs (10428)
  - 7.1.2.10 Develop HR policies (10429)
  - 7.1.2.11 Administer HR policies (10430)
  - 7.1.2.12 Plan employee benefits (10431)
  - 7.1.2.13 Develop workforce strategy models (10433)
  - 7.1.2.14 Implement workforce strategy models (20122)
- 7.1.3 Monitor and update strategy, plans, and policies (10417)
  - 7.1.3.1 Measure realization of objectives (10434)
  - 7.1.3.2 Measure contribution to business strategy (10435)
  - 7.1.3.3 Communicate plans and provide updates to stakeholders (10436)
  - 7.1.3.4 Review and revise HR plans (10438)
- 7.1.4 Develop competency management models (17046)

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

- 7.2.1 Manage employee requisitions (10439)
  - 7.2.1.1 Align staffing plan to work force plan and business unit strategies/resource needs (10445)
  - 7.2.1.2 Develop and maintain job descriptions (10447)
  - 7.2.1.3 Open job requisitions (10446)
  - 7.2.1.4 Post job requisitions (10448)
  - 7.2.1.5 Modify job requisitions (10450)
  - 7.2.1.6 Notify hiring manager (10451)

- 7.2.1.7 Manage requisition dates (10452)
- 7.2.2 Recruit/Source candidates (10440)
  - 7.2.2.1 Determine recruitment methods and channels (10453)
  - 7.2.2.2 Perform recruiting activities/events (10454)
  - 7.2.2.3 Manage recruitment vendors (10455)
  - 7.2.2.4 Manage employee referral programs (17047)
  - 7.2.2.5 Manage recruitment channels (17048)
- 7.2.3 Screen and select candidates (20123)
  - 7.2.3.1 Identify and deploy candidate selection tools (10456)
  - 7.2.3.2 Interview candidates (10457)
  - 7.2.3.3 Test candidates (10458)
  - 7.2.3.4 Select and reject candidates (10459)
- 7.2.4 Manage new hire/re-hire (10443)
  - 7.2.4.1 Draw up and make offer (10463)
  - 7.2.4.2 Negotiate offer (10464)
  - 7.2.4.3 Hire candidate (10465)
- 7.2.5 Manage applicant information (10444)
  - 7.2.5.1 Obtain candidate background information (10460)
  - 7.2.5.2 Create applicant record (10466)
  - 7.2.5.3 Manage/track applicant data (10467)
    - 7.2.5.3.1 Complete position classification and level of experience (20124)
  - 7.2.5.4 Archive and retain records of non-hires (10468)

### 7.3 Manage employee on boarding, development, and training (20599)

- 7.3.1 Manage employee orientation and deployment (10469)
  - 7.3.1.1 Create/maintain employee on-boarding program (10474)
    - 7.3.1.1.1 Develop employee induction program (10477)
    - 7.3.1.1.2 Maintain/Update employee induction program (10478)
  - 7.3.1.2 Evaluate the effectiveness of the employee on-boarding program (11243)
  - 7.3.1.3 Execute on-boarding program (17050)
- 7.3.2 Manage employee performance (10470)
  - 7.3.2.1 Define employee performance objectives (10479)
  - 7.3.2.2 Review, appraise, and manage employee performance (10480)
  - 7.3.2.3 Evaluate and review performance program (10481)
- 7.3.3 Manage employee development (10472)
  - 7.3.3.1 Define employee development guidelines (10487)
  - 7.3.3.2 Develop employee career plans and career paths (10488)
  - 7.3.3.3 Manage employee skill and competency development (17051)

- 7.3.4 Develop and train employees (10473)
  - 7.3.4.1 Align employee with organization development needs (10490)
  - 7.3.4.2 Define employee competencies (16940)
  - 7.3.4.3 Align learning programs with competencies (10491)
  - 7.3.4.4 Establish training needs by analysis of required and available skills (10492)
  - 7.3.4.5 Develop, conduct, and manage employee and/or management training programs (10493)
  - 7.3.4.6 Manage examinations and certifications (20125)
    - 7.3.4.6.1 Liaise with external certification authorities (20126)
    - 7.3.4.6.2 Administer certification tests (20127)
    - 7.3.4.6.3 Appraise experience qualifications (20128)
    - 7.3.4.6.4 Administer certificate issue and maintenance (20129)

#### **7.4 Manage employee relations (17052)**

- 7.4.1 Manage labor relations (10483)
- 7.4.2 Manage collective bargaining process (10484)
- 7.4.3 Manage labor management partnerships (10485)
- 7.4.4 Manage employee grievances (10531)

#### **7.5 Reward and retain employees (10412)**

- 7.5.1 Develop and manage reward, recognition, and motivation programs (10494)
  - 7.5.1.1 Develop salary/compensation structure and plan (10498)
  - 7.5.1.2 Develop benefits and reward plan (10499)
  - 7.5.1.3 Perform competitive analysis of benefit and rewards (10500)
  - 7.5.1.4 Identify compensation requirements based on financial, benefits, and HR policies (10501)
  - 7.5.1.5 Administer compensation and rewards to employees (10502)
  - 7.5.1.6 Reward and motivate employees (10503)
- 7.5.2 Manage and administer benefits (10495)
  - 7.5.2.1 Deliver employee benefits program (10504)

- 7.5.2.2 Administer benefit enrollment (10505)
- 7.5.2.3 Process claims (10506)
- 7.5.2.4 Perform benefit reconciliation (10507)
- 7.5.3 Manage employee assistance and retention (10496)
  - 7.5.3.1 Deliver programs to support work/life balance for employees (10508)
  - 7.5.3.2 Develop family support systems (10509)
  - 7.5.3.3 Review retention and motivation indicators (10510)
  - 7.5.3.4 Review compensation plan (10511)
- 7.5.4 Administer payroll (10497)

#### **7.6 Redeploy and retire employees (10413)**

- 7.6.1 Manage promotion and demotion process (10512)
- 7.6.2 Manage separation (10513)
- 7.6.3 Manage retirement (10514)
- 7.6.4 Manage leave of absence (10515)
- 7.6.5 Develop and implement employee outplacement (10516)
- 7.6.6 Manage workforce scheduling (20132)
  - 7.6.6.1 Receive required resources/skills and capabilities (20133)
  - 7.6.6.2 Manage resource deployment (10517)
- 7.6.7 Relocate employees and manage assignments (17055)
  - 7.6.7.1 Manage expatriates (10520)

#### **7.7 Manage employee information and analytics (17056)**

- 7.7.1 Manage reporting processes (10522)
- 7.7.2 Manage employee inquiry process (10523)
- 7.7.3 Manage and maintain employee data (10524)
- 7.7.4 Manage human resource information systems HRIS (10525)
- 7.7.5 Develop and manage employee metrics (10526)
- 7.7.6 Develop and manage time and attendance systems (10527)
- 7.7.7 Manage/Collect employee suggestions and perform employee research (10530)

#### **7.8 Manage employee communication (17057)**

- 7.8.1 Develop employee communication plan (10529)
- 7.8.2 Conduct employee engagement surveys (16944)

#### **7.9 Deliver employee communications (10532)**



## 8.0 Manage Information Technology (IT) (20607)

### 8.1 Develop and manage IT customer relationships (20608)

- 8.1.1 Understand IT customer needs (20609)
  - 8.1.1.1 Understand IT customer communities (20610)
  - 8.1.1.2 Assess IT customer operational capabilities (20611)
- 8.1.2 Identify IT customer transformation needs (20612)
  - 8.1.2.1 Understand business requirements for IT capabilities (20613)
  - 8.1.2.2 Understand IT landscape (20614)
  - 8.1.2.3 Develop IT visioning (20615)
  - 8.1.2.4 Outline IT service expectations (20616)
- 8.1.3 Plan and communicate IT services (20617)
  - 8.1.3.1 Manage IT customer expectations (20618)
  - 8.1.3.2 Define future IT services (20619)
  - 8.1.3.3 Determine IT performance indicators (20620)
  - 8.1.3.4 Create IT marketing messages (20621)
  - 8.1.3.5 Create IT service marketing plan (20622)
- 8.1.4 Provide IT transformation guidance (20623)
  - 8.1.4.1 Develop IT transformation plans (20624)
  - 8.1.4.2 Collect IT customer requirements (20625)
  - 8.1.4.3 Analyze IT customer requirements (20937)
  - 8.1.4.4 Identify and prioritize IT opportunities (20626)
  - 8.1.4.5 Facilitate solution design activities (20627)
  - 8.1.4.6 Prioritize IT outcomes (20628)
  - 8.1.4.7 Develop business cases (20629)
  - 8.1.4.8 Support business case (20630)
  - 8.1.4.9 Develop transformation roadmap (20631)
- 8.1.5 Develop and manage IT service levels (20632)
  - 8.1.5.1 Understand IT service requirements (20633)
  - 8.1.5.2 Forecast IT service demand (20634)
  - 8.1.5.3 Maintain IT services catalog (20635)
  - 8.1.5.4 Define service level agreement (20636)
  - 8.1.5.5 Maintain IT customer contracts (20637)
  - 8.1.5.6 Negotiate and establish service level agreements (20638)
  - 8.1.5.7 Develop and maintain improvement processes (20640)
- 8.1.6 Manage IT customer relationships (20641)
  - 8.1.6.1 Establish relationship management mechanisms (20642)
  - 8.1.6.2 Understand IT customer strategy (20643)
  - 8.1.6.3 Understand IT customer environment (20644)
  - 8.1.6.4 Communicate IT capabilities (20645)
  - 8.1.6.5 Manage IT requirements (20646)
- 8.1.7 Analyze service performance (20648)
  - 8.1.7.1 Assess SLA compliance (20649)
  - 8.1.7.2 Triage SLA compliance issues (20650)
  - 8.1.7.3 Collect feedback about IT products and

services (20647)

- 8.1.7.4 Synthesize and distribute IT performance information (20938)

### 8.2 Develop and manage IT business strategy (20652)

- 8.2.1 Define business technology and governance strategy (20653)
  - 8.2.1.1 Build and maintain IT strategic intelligence (20654)
  - 8.2.1.2 Monitor and map current and emerging technologies (20655)
  - 8.2.1.3 Define and communicate digital transformation strategy (20656)
  - 8.2.1.4 Develop IT strategic alignment (20657)
  - 8.2.1.5 Articulate IT alignment principles (20658)
  - 8.2.1.6 Maintain IT strategic alignment (20659)
- 8.2.2 Manage IT portfolio strategy (20660)
  - 8.2.2.1 Establish and validate IT value criteria (20661)
  - 8.2.2.2 Determine IT portfolio investment balance (20662)
  - 8.2.2.3 Evaluate proposed IT investment projects (20663)
  - 8.2.2.4 Prioritize IT projects (20664)
  - 8.2.2.5 Align IT resources to strategic priorities (20665)
  - 8.2.2.6 Align IT portfolio to business objectives (20667)
- 8.2.3 Define and maintain enterprise architecture (20668)
  - 8.2.3.1 Create and publish enterprise architecture principles (20670)
  - 8.2.3.2 Establish and operate enterprise architecture governance (20671)
  - 8.2.3.3 Research technologies to innovate IT services and solutions (20672)
  - 8.2.3.4 Provide input to definition and prioritization of IT projects (20673)
- 8.2.4 Define IT service management strategy (20674)
  - 8.2.4.1 Establish IT service management strategy and goals (20675)
  - 8.2.4.2 Identify IT service operating and process requirements (20676)
  - 8.2.4.3 Define IT service catalog (20677)
  - 8.2.4.4 Establish IT service management framework (20678)
  - 8.2.4.5 Define and implement IT service management (20679)
  - 8.2.4.6 Define and deploy support service management process tools and methods (20680)
  - 8.2.4.7 Monitor and report IT performance (20681)
- 8.2.5 Control IT management system (20682)
  - 8.2.5.1 Determine IT performance measures (20683)
  - 8.2.5.2 Define IT control points and assurance procedures governance model (20684)

8.2.5.3	Monitor and analyze overall IT performance (20685)	8.3.2.4	Establish mitigation approaches for IT risks (20720)
8.2.5.4	Monitor and analyze IT financial performance (20686)	8.3.3	Control IT risk, compliance, and security (20721)
8.2.5.5	Monitor and analyze IT value and benefits (20687)	8.3.3.1	Evaluate enterprise regulatory and compliance obligations (20722)
8.2.5.6	Optimize IT resource allocation (20688)	8.3.3.2	Analyze IT security threat impact (20723)
8.2.5.7	Manage IT projects and services interdependencies (20689)	8.3.3.3	Create and maintain IT compliance requirements (20724)
8.2.5.8	Report IT service and project performance (20690)	8.3.3.4	Create and maintain IT security policies, standards, and procedures (20942)
8.2.5.9	Select, deploy, and operate IT performance analytics tools (20692)	8.3.3.5	Develop and deploy risk management training (20725)
8.2.6	Manage IT value portfolio (20693)	8.3.3.6	Establish risk reporting capabilities and responsibilities (20726)
8.2.6.1	Assess performance against IT service and project value criteria (20694)	8.3.3.7	Establish communication standards (20727)
8.2.6.2	Quantify value of IT service and project portfolio investments (20695)	8.3.3.8	Conduct IT risk and threat assessments (20728)
8.2.6.3	Communicate business technology value contribution (20696)	8.3.3.9	Monitor and manage IT activity risk (20729)
8.2.6.4	Determine and implement IT portfolio adjustments (20697)	8.3.3.10	Identify, supervise and monitor IT risk mitigation measures (20730)
8.2.7	Define and manage technology innovation (20699)	8.3.4	Plan and manage IT continuity (20731)
8.2.7.1	Establish selection criteria for research initiatives (20700)	8.3.4.1	Evaluate IT continuity (20732)
8.2.7.2	Analyze emerging technology concepts (20701)	8.3.4.2	Identify IT continuity gaps (20733)
8.2.7.3	Identify technology concepts and capabilities (20702)	8.3.4.3	Manage IT business continuity (20734)
8.2.7.4	Execute IT research projects (20703)	8.3.5	Develop and manage IT security, privacy, and data protection (20735)
8.2.7.5	Evaluate IT research project outcomes (20939)	8.3.5.1	Assess IT regulatory and confidentiality requirements and policies (20736)
8.2.7.6	Identify and promote viable concepts (20704)	8.3.5.2	Create IT security, privacy, and data protection risk governance (20737)
8.2.7.7	Develop and plan IT investment projects (20705)	8.3.5.3	Define IT data security and privacy policies, standards, and procedures (20738)
<b>8.3 Develop and manage IT resilience and risk (20706)</b>		8.3.5.4	Review and monitor physical and logical IT data security measures (20739)
8.3.1	Develop IT compliance, risk, and security strategy (20707)	8.3.5.5	Review and monitor application security controls (20740)
8.3.1.1	Determine and evaluate IT regulatory and audit requirements (20708)	8.3.5.6	Review and monitor IT physical environment security controls (20741)
8.3.1.2	Understand business unit risk tolerance (20940)	8.3.5.7	Monitor/analyze network intrusion detection data and resolve threats (20742)
8.3.1.3	Establish IT risk tolerance (20709)	8.3.6	Conduct and analyze IT compliance assessments (20743)
8.3.1.4	Establish risk ownership (20710)	8.3.6.1	Conduct projects to enhance IT compliance and remediate risk (20744)
8.3.1.5	Establish and maintain risk management roles (20711)	8.3.6.2	Conduct IT compliance control auditing of internal and external services (20745)
8.3.1.6	Establish compliance objectives (20712)	8.3.6.3	Perform IT compliance reporting (20746)
8.3.1.7	Identify systems to support compliance (20941)	8.3.6.4	Identify and escalate IT compliance issues and remediation requirements (20747)
8.3.1.8	Identify and evaluate IT risk (20713)	8.3.6.5	Support external audits and reports (20748)
8.3.1.9	Evaluate IT-related risks resiliency (20714)	8.3.7	Develop and execute IT resilience and continuity operations (20749)
8.3.1.10	Create IT risk mitigation strategies and approaches (20715)	8.3.7.1	Conduct IT resilience improvement projects (20750)
8.3.2	Develop IT resilience strategy (20716)	8.3.7.2	Develop, document, and maintain IT business
8.3.2.1	Determine IT delivery resiliency (20717)		
8.3.2.2	Determine critical IT risks (20718)		
8.3.2.3	Prioritize IT risks (20719)		

- continuity planning (20751)
- 8.3.7.3 Implement and enforce change control procedures (20752)
- 8.3.7.4 Execute recurring IT service provider business continuity (20753)
- 8.3.7.5 Provide IT resilience training (20754)
- 8.3.7.6 Execute recurring IT business operations continuity (20755)
- 8.3.8 Manage IT user identity and authorization (20756)
  - 8.3.8.1 Support integration of identity and authorization policies (20757)
  - 8.3.8.2 Manage IT user directory (20758)
  - 8.3.8.3 Manage IT user authorization (20759)
  - 8.3.8.4 Manage IT user authentication mechanisms (20760)
  - 8.3.8.5 Audit IT user identity and authorization systems (20761)
  - 8.3.8.6 Respond to IT information security and network breaches (20762)
  - 8.3.8.7 Conduct penetration testing (20763)
  - 8.3.8.8 Audit integration of user identity and authorization systems (20764)

#### 8.4 Manage information (20765)

- 8.4.1 Define business information and analytics strategy (20766)
  - 8.4.1.1 Establish data, information, and analytic objectives (20767)
  - 8.4.1.2 Establish data, information, and analytic governance (20768)
  - 8.4.1.3 Access IT data/analytic capabilities (20769)
- 8.4.2 Define and maintain business information architecture (20770)
  - 8.4.2.1 Determine enterprise business information requirements (20771)
  - 8.4.2.2 Define enterprise data models (20772)
  - 8.4.2.3 Identify and understand external data sources (20773)
  - 8.4.2.4 Establish data ownership and stewardship responsibilities (20774)
  - 8.4.2.5 Maintain and evolve enterprise data and information architecture (20775)
- 8.4.3 Define and execute business information lifecycle planning and control (20776)
  - 8.4.3.1 Define and maintain enterprise information policies, standards, and procedures (20777)
  - 8.4.3.2 Implement and execute data administration responsibilities (20778)
- 8.4.4 Manage business information content (20779)
  - 8.4.4.1 Monitor and control business information (20780)
  - 8.4.4.2 Maintain business information feeds and repositories (20781)
  - 8.4.4.3 Perform internal usage audits (20782)

- 8.4.4.4 Implement and administer business information access (20783)

#### 8.5 Develop and manage services/solutions (20784)

- 8.5.1 Develop service/solution and integration strategy (20785)
  - 8.5.1.1 Determine IT service/solution development (20786)
  - 8.5.1.2 Define IT service/solution development processes/standards (20787)
  - 8.5.1.3 Identify, deploy, and support development methodologies and tools (20788)
  - 8.5.1.4 Establish service component criteria (20789)
  - 8.5.1.5 Understand and select reusable service components (20790)
  - 8.5.1.6 Maintain service component portfolio (20791)
  - 8.5.1.7 Establish development standards exception governance (20792)
- 8.5.2 Manage service/solution lifecycle planning (20793)
  - 8.5.2.1 Monitor and track emerging technology capabilities (20794)
  - 8.5.2.2 Identify IT services/solutions (20795)
  - 8.5.2.3 Determine IT service/solution approach (20796)
  - 8.5.2.4 Define IT solution lifecycle (20797)
  - 8.5.2.5 Develop IT service/solution “sunset” plans (20798)
- 8.5.3 Develop and manage service/solution architecture (20799)
  - 8.5.3.1 Assess IT application and infrastructure architecture constraints (20800)
  - 8.5.3.2 Assess business constraints on IT service/solution (20801)
  - 8.5.3.3 Determine IT component integration requirements (20802)
  - 8.5.3.4 Identify opportunities for IT component reuse (20803)
  - 8.5.3.5 Promote adoption of existing service/solution architecture (20804)
  - 8.5.3.6 Develop and maintain service/solution architectures (20805)
  - 8.5.3.7 Assess IT service/solution architecture conformance (20806)
  - 8.5.3.8 Manage architectural exceptions (20807)
- 8.5.4 Execute IT service/solution creation and testing (20808)
  - 8.5.4.1 Execute IT service/solution development lifecycle (20809)
    - 8.5.4.1.1 Assess and validate IT service/solution requirements (20810)
    - 8.5.4.1.2 Create service/solution design (20811)
    - 8.5.4.1.3 Build and test IT service/solution components (20812)
    - 8.5.4.1.4 Integrate IT components and services (20813)
    - 8.5.4.1.5 Execute IT service/solution validation (20814)

- 8.5.4.1.6 Bundle service/solution deployment packaging (20815)
- 8.5.4.1.7 Manage service/solution process exceptions (20816)
- 8.5.5 Perform service/solution maintenance and testing (20817)
  - 8.5.5.1 Execute IT service/solution maintenance lifecycle (20818)
    - 8.5.5.1.1 Assess IT remediation (20819)
    - 8.5.5.1.2 Modify service/solution design (20820)
    - 8.5.5.1.3 Perform IT service/solution remediation (20821)
    - 8.5.5.1.4 Manage service/solution operations (20822)
    - 8.5.5.1.5 Prepare fixed/enhanced service/solution packaging (20823)

## 8.6 Deploy services/solutions (20824)

- 8.6.1 Develop and manage service/solution deployment strategy (20825)
  - 8.6.1.1 Assess IT deployment business impact (20826)
  - 8.6.1.2 Establish IT deployment policies (20827)
  - 8.6.1.3 Define and create deployment procedure workflow (20828)
  - 8.6.1.4 Define IT change/release standards (20829)
  - 8.6.1.5 Assign deployment approval responsibilities (20830)
  - 8.6.1.6 Analyze deployments outcomes (20831)
- 8.6.2 Plan service and solution implementation (20832)
  - 8.6.2.1 Assess IT deployment risk (20833)
  - 8.6.2.2 Define implementation schedule and roll-out sequence (20834)
  - 8.6.2.3 Determine implementation requirements (20835)
  - 8.6.2.4 Plan and align user testing and resources (20836)
  - 8.6.2.5 Develop IT training (20837)
  - 8.6.2.6 Create implementation communications (20838)
  - 8.6.2.7 Manage IT roll-back procedures (20839)
- 8.6.3 Manage change deployment control (20840)
  - 8.6.3.1 Assess IT change/release impact (20841)
  - 8.6.3.2 Confirm change/release compliance (20842)
  - 8.6.3.3 Assess IT change/release risk (20843)
  - 8.6.3.4 Consolidate IT change (20844)
  - 8.6.3.5 Create and communicate deployment schedule (20845)
  - 8.6.3.6 Approve change/release deployment (20846)
  - 8.6.3.7 Document IT change/release outcome (20847)
- 8.6.4 Implement technology solutions (20848)
  - 8.6.4.1 Confirm hardware/software operational status (20849)
  - 8.6.4.2 Confirm operational availability (20850)
  - 8.6.4.3 Execute internal IT implementation plan (20851)

- 8.6.4.4 Confirm implementation completion (20852)
- 8.6.4.5 Implement software change/release (20853)
- 8.6.4.6 Perform post-installation testing (20854)
- 8.6.4.7 Distribute software components network-wide (20855)
- 8.6.4.8 Verify change/release implementation success (20856)
- 8.6.4.9 Execute roll-back plan (20857)
- 8.6.5 Perform service and solution rollout (20858)
  - 8.6.5.1 Conduct IT training (20859)
  - 8.6.5.2 Prepare and distribute service/solution communications (20860)
  - 8.6.5.3 Support organizational changes (20861)
  - 8.6.5.4 Execute rollout plans (20862)
  - 8.6.5.5 Provide rollout support (20863)
  - 8.6.5.6 Manage rollout support capabilities (20864)
  - 8.6.5.7 Monitor and record rollout issues (20865)

## 8.7 Create and manage support services/solutions (20866)

- 8.7.1 Define and establish service delivery strategy (20867)
  - 8.7.1.1 Assess business objectives and IT service delivery (20868)
  - 8.7.1.2 Define IT service delivery portfolio (20869)
  - 8.7.1.3 Create and maintain IT service delivery model (20870)
  - 8.7.1.4 Determine IT service delivery locations and activities (20871)
  - 8.7.1.5 Define IT service delivery sourcing strategy (20872)
- 8.7.2 Define and develop service support strategy (20873)
  - 8.7.2.1 Assess business objectives and IT service support delivery (20874)
  - 8.7.2.2 Define IT service support portfolio (20875)
  - 8.7.2.3 Create and maintain IT support model (20876)
  - 8.7.2.4 Develop IT support service sourcing strategy (20877)
  - 8.7.2.5 Establish support service framework (20878)
  - 8.7.2.6 Provide service support tools and technology (20879)
- 8.7.3 Plan and manage service delivery control (20880)
  - 8.7.3.1 Plan operational activities for IT service delivery (20881)
    - 8.7.3.1.1 Schedule service delivery resources (20882)
    - 8.7.3.1.2 Maintain/optimize batch job schedule (20883)
    - 8.7.3.1.3 Schedule change/release windows (20884)
    - 8.7.3.1.4 Schedule/optimize backup and archive activities (20885)
    - 8.7.3.1.5 Balance operational workloads across available infrastructure components (20886)

	8.7.3.1.6 Determine specific problem support procedures (20887)	8.7.6.2 Run and monitor batch job schedule (20907)
8.7.4	Develop and manage infrastructure resource planning (20888)	8.7.6.3 Manage service delivery workloads (20908)
8.7.4.1	Develop IT service delivery strategy (20889)	8.7.6.4 Manage infrastructure performance and capacity (20909)
8.7.4.2	Assess IT infrastructure business objectives (20890)	8.7.6.5 Respond to unplanned operational issues (20910)
8.7.4.3	Determine ongoing IT infrastructure capabilities (20891)	8.7.6.6 Produce and distribute output media (20911)
8.7.4.4	Plan IT infrastructure change (20892)	8.7.6.7 Monitor IT infrastructure security (20912)
8.7.4.5	Plan and budget IT license usage volumes (20893)	8.7.6.8 Manage IT infrastructure/data recovery (20913)
8.7.5	Define service support planning (20895)	8.7.7 Manage infrastructure resource administration (20914)
8.7.5.1	Understand IT support demand patterns (20896)	8.7.7.1 Manage infrastructure configuration (20915)
8.7.5.2	Determine required support resource levels, responsibilities, and capabilities (20897)	8.7.7.2 Perform infrastructure component maintenance (20916)
8.7.5.3	Maintain service support knowledge repository (20898)	8.7.7.3 Install/configure/upgrade infrastructure components (20917)
8.7.5.4	Maintain service support learning (20943)	8.7.7.4 Maintain IT asset records (20918)
8.7.5.5	Communicate service support needs (20899)	8.7.7.5 Administer IT licenses/user agreements (20919)
8.7.5.6	Define IT escalation mechanisms (20900)	8.7.7.6 Provide IT infrastructure service and capabilities (20920)
8.7.5.7	Manage IT service support resources (20901)	8.7.8 Operate IT user support (20921)
8.7.5.8	Coordinate with external support providers (20902)	8.7.8.1 Triage IT issues/requests (20922)
8.7.5.9	Triage IT service delivery incidents (20903)	8.7.8.2 Provide IT resolution capabilities (20923)
8.7.5.10	Monitor IT service support performance (20904)	8.7.8.3 Manage IT user requests (20925)
8.7.6	Develop and manage service delivery operations (20905)	8.7.8.4 Escalate IT requests (20926)
8.7.6.1	Operate and monitor online systems (20906)	8.7.8.5 Resolve IT issues/requests (20927)
		8.7.8.6 Execute IT continuity and recovery action (20928)



## 9.0 Manage Financial Resources (17058)

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

- 9.1.1 Perform planning/budgeting/forecasting (10738)
  - 9.1.1.1 Develop and maintain budget policies and procedures (10771)
  - 9.1.1.2 Prepare periodic budgets and plans (10772)
  - 9.1.1.3 Operationalize and implement plans to achieve budget (20135)
  - 9.1.1.4 Prepare periodic financial forecasts (10773)
  - 9.1.1.5 Perform variance analysis against forecasts and budgets (20136)
- 9.1.2 Perform cost accounting and control (10739)
  - 9.1.2.1 Perform inventory accounting (10774)
  - 9.1.2.2 Perform profit center accounting (14057)
  - 9.1.2.3 Perform cost of sales analysis (10775)
  - 9.1.2.4 Perform product costing (10776)
  - 9.1.2.5 Perform variance analysis (10777)
  - 9.1.2.6 Report on profitability (11175)
- 9.1.3 Perform cost management (10740)
  - 9.1.3.1 Determine key cost drivers (10778)
  - 9.1.3.2 Measure cost drivers (10779)
  - 9.1.3.3 Determine critical activities (10780)
  - 9.1.3.4 Manage asset resource deployment and utilization (10781)
- 9.1.4 Evaluate and manage financial performance (10741)
  - 9.1.4.1 Assess customer and product profitability (10782)
  - 9.1.4.2 Evaluate new products (10783)
  - 9.1.4.3 Perform life cycle costing (10784)
  - 9.1.4.4 Optimize customer and product mix (10785)
  - 9.1.4.5 Track performance of new-customer and product strategies (10786)
  - 9.1.4.6 Prepare activity-based performance measures (10787)
  - 9.1.4.7 Manage continuous cost improvement (10788)

### 9.2 Perform revenue accounting (10729)

- 9.2.1 Process customer credit (10742)
  - 9.2.1.1 Establish credit policies (10789)
  - 9.2.1.2 Analyze/Approve new account applications (10790)
  - 9.2.1.3 Analyze credit scoring history (14187)
  - 9.2.1.4 Forecast credit scoring requirement (14188)
  - 9.2.1.5 Review existing accounts (10791)
  - 9.2.1.6 Produce credit/collection reports (10792)
  - 9.2.1.7 Reinstate or suspend accounts based on credit policies (10793)
- 9.2.2 Invoice customer (10743)
  - 9.2.2.1 Maintain customer/product master files (10794)
  - 9.2.2.2 Generate customer billing data (10795)
  - 9.2.2.3 Transmit billing data to customers (10796)

- 9.2.2.4 Post receivable entries (10797)
- 9.2.2.5 Resolve customer billing inquiries (10798)
- 9.2.3 Process accounts receivable (AR) (10744)
  - 9.2.3.1 Establish AR policies (10799)
  - 9.2.3.2 Receive/Deposit customer payments (10800)
  - 9.2.3.3 Apply cash remittances (10801)
  - 9.2.3.4 Prepare AR reports (10802)
  - 9.2.3.5 Post AR activity to the general ledger (10803)
- 9.2.4 Manage and process collections (10745)
  - 9.2.4.1 Establish policies for delinquent accounts (10804)
  - 9.2.4.2 Analyze delinquent account balances (10805)
  - 9.2.4.3 Correspond/Negotiate with delinquent accounts (10806)
  - 9.2.4.4 Discuss account resolution with internal parties (10807)
  - 9.2.4.5 Process adjustments/write off balances (10808)
  - 9.2.4.6 Perform recovery workout (14007)
  - 9.2.4.7 Manage default accounts (14008)
- 9.2.5 Manage and process adjustments/deductions (10746)
  - 9.2.5.1 Establish policies/procedures for adjustments (10809)
  - 9.2.5.2 Analyze adjustments (10810)
  - 9.2.5.3 Correspond/Negotiate with customer (10811)
  - 9.2.5.4 Discuss resolution with internal parties (10812)
  - 9.2.5.5 Prepare chargeback invoices (10813)
  - 9.2.5.6 Process related entries (10814)
  - 9.2.5.7 Perform market settlement, data exchange, reconciliation, and validation (11275)

### 9.3 Perform general accounting and reporting (10730)

- 9.3.1 Manage policies and procedures (10747)
  - 9.3.1.1 Negotiate service-level agreements (10815)
  - 9.3.1.2 Establish accounting policies (10816)
  - 9.3.1.3 Publish accounting policies (20604)
  - 9.3.1.4 Establish common financial systems (10818)
  - 9.3.1.5 Establish common financial systems (10818)
- 9.3.2 Perform general accounting (10748)
  - 9.3.2.1 Maintain chart of accounts (10819)
  - 9.3.2.2 Process journal entries (10820)
  - 9.3.2.3 Process allocations (10821)
  - 9.3.2.4 Process period end adjustments (10822)
  - 9.3.2.5 Post and reconcile intercompany transactions (10823)
  - 9.3.2.6 Reconcile general ledger accounts (10824)
  - 9.3.2.7 Perform consolidations and process eliminations (10825)
  - 9.3.2.8 Prepare trial balance (10826)
  - 9.3.2.9 Prepare and post management adjustments (10827)

- 9.3.3 Perform fixed-asset accounting (10749)
  - 9.3.3.1 Establish fixed-asset policies and procedures (10828)
  - 9.3.3.2 Maintain fixed-asset master data files (10829)
  - 9.3.3.3 Process and record fixed-asset additions and retires (10830)
  - 9.3.3.4 Process and record fixed-asset adjustments, enhancements, revaluations, and transfers (10831)
  - 9.3.3.5 Process and record fixed-asset maintenance and repair expenses (10832)
  - 9.3.3.6 Calculate and record depreciation expense (10833)
  - 9.3.3.7 Reconcile fixed-asset ledger (10834)
  - 9.3.3.8 Track fixed-assets including physical inventory (10835)
  - 9.3.3.9 Provide fixed-asset data to support tax, statutory, and regulatory reporting (10836)
- 9.3.4 Perform financial reporting (10750)
  - 9.3.4.1 Prepare business unit financial statements (10837)
  - 9.3.4.2 Prepare consolidated financial statements (10838)
  - 9.3.4.3 Perform business unit reporting/review management reports (10839)
  - 9.3.4.4 Perform consolidated reporting/review of cost management reports (10840)
  - 9.3.4.5 Prepare statements for board review (10841)
  - 9.3.4.6 Produce quarterly/annual filings and shareholder reports (10842)
  - 9.3.4.7 Produce regulatory reports (10843)
  - 9.3.4.8 Perform legal and management consolidation (14074)

## 9.4 Manage fixed-asset project accounting (10731)

- 9.4.1 Perform capital planning and project approval (10751)
  - 9.4.1.1 Develop capital investment policies and procedures (10844)
  - 9.4.1.2 Develop and approve capital expenditure plans and budgets (10845)
  - 9.4.1.3 Review and approve capital projects and fixed-asset acquisitions (10846)
  - 9.4.1.4 Conduct financial justification for project approval (10847)
- 9.4.2 Perform capital project accounting (10752)
  - 9.4.2.1 Create project account codes (10848)
  - 9.4.2.2 Record project-related transactions (10849)
  - 9.4.2.3 Monitor and track capital projects and budget spending (10850)
  - 9.4.2.4 Close/capitalize projects (10851)
  - 9.4.2.5 Measure financial returns on completed capital projects (10852)

## 9.5 Process payroll (10732)

- 9.5.1 Report time (10753)

- 9.5.1.1 Establish policies and procedures (10853)
- 9.5.1.2 Collect and record employee time worked (10854)
- 9.5.1.3 Analyze and report paid and unpaid leave (10855)
- 9.5.1.4 Monitor regular, overtime, and other hours (10856)
- 9.5.1.5 Analyze and report employee utilization (10857)
- 9.5.2 Manage pay (10754)
  - 9.5.2.1 Enter employee time worked into payroll system (10858)
  - 9.5.2.2 Maintain and administer employee earnings information (10859)
  - 9.5.2.3 Maintain and administer applicable deductions (10860)
  - 9.5.2.4 Monitor changes in tax status of employees (10861)
  - 9.5.2.5 Process and distribute payments (10862)
  - 9.5.2.6 Process and distribute manual checks (10863)
  - 9.5.2.7 Process period-end adjustments (10864)
  - 9.5.2.8 Respond to employee payroll inquiries (10865)
- 9.5.3 Manage and process payroll taxes (10755)
  - 9.5.3.1 Develop tax plan (14075)
  - 9.5.3.2 Manage tax plan (14076)
  - 9.5.3.3 Calculate and pay applicable payroll taxes (10866)
  - 9.5.3.4 Produce and distribute employee annual tax statements (10867)
  - 9.5.3.5 File regulatory payroll tax forms (10868)

## 9.6 Process accounts payable and expense reimbursements (10733)

- 9.6.1 Process accounts payable (AP) (10756)
  - 9.6.1.1 Verify AP pay file with purchase order vendor master file (10869)
  - 9.6.1.2 Maintain/Manage electronic commerce (10870)
  - 9.6.1.3 Audit invoices and key data in AP system (10871)
  - 9.6.1.4 Approve payments (10872)
  - 9.6.1.5 Process financial accruals and reversals (10873)
  - 9.6.1.6 Process payables taxes (10874)
  - 9.6.1.7 Research/Resolve payable exceptions (10875)
  - 9.6.1.8 Process payments (10876)
  - 9.6.1.9 Respond to AP inquiries (10877)
  - 9.6.1.10 Retain records (10878)
  - 9.6.1.11 Adjust accounting records (10879)
- 9.6.2 Process expense reimbursements (10757)
  - 9.6.2.1 Establish and communicate expense reimbursement policies and approval limits (10880)
  - 9.6.2.2 Capture and report relevant tax data (10881)
  - 9.6.2.3 Approve reimbursements and advances (10882)
  - 9.6.2.4 Process reimbursements and advances (10883)

9.6.2.5	Manage personal accounts (10884)	9.7.4.2	Manage financial intermediary relationships (10908)
9.6.3	Manage corporate credit cards (20929)	9.7.4.3	Manage liquidity (10909)
9.6.3.1	Establish corporate credit card policies and approval limits (20930)	9.7.4.4	Manage issuer exposure (10910)
9.6.3.2	Establish corporate credit card policies and (20931)	9.7.4.5	Process and oversee debt and investment transactions (10911)
9.6.3.3	Order corporate credit cards (20932)	9.7.4.6	Process and oversee foreign currency transactions (10912)
9.6.3.4	Manage corporate credit card accounts (20933)	9.7.4.7	Produce debt and investment accounting transaction reports (10913)
9.6.3.5	Approve/Change credit limits (20934)	9.7.4.8	Process and oversee interest rate transactions (14210)
9.6.3.6	Cancel/Deactivate credit card (20935)		
<b>9.7 Manage treasury operations (10734)</b>			
9.7.1	Manage treasury policies and procedures (10758)	9.7.5	Monitor and execute risk and hedging transactions (11208)
9.7.1.1	Establish scope and governance of treasury operations (10885)	9.7.5.1	Develop risk management/hedging strategy (12974)
9.7.1.2	Establish and publish treasury policies (10886)	9.7.5.2	Manage interest rate risk (11209)
9.7.1.3	Develop treasury procedures (10887)	9.7.5.2.1	Manage interest rate market data (19575)
9.7.1.4	Monitor treasury procedures (10888)	9.7.5.2.2	Determine interest rate exposure for all markets (19576)
9.7.1.5	Audit treasury procedures (10889)	9.7.5.2.3	Determine interest rate hedge requirements in accordance with risk policy (19577)
9.7.1.6	Revise treasury procedures (10890)		
9.7.1.7	Develop and confirm internal controls for treasury (10891)	9.7.5.2.4	Execute interest rate trades (19578)
9.7.1.8	Define system security requirements (10892)	9.7.5.3	Manage foreign exchange risk (11210)
9.7.2	Manage cash (10759)	9.7.5.3.1	Manage foreign exchange market data (19579)
9.7.2.1	Manage and reconcile cash positions (10893)	9.7.5.3.2	Determine foreign exchange exposure for all currencies (19580)
9.7.2.2	Manage cash equivalents (10894)	9.7.5.3.3	Determine foreign exchange hedge requirements in accordance with risk policy (19581)
9.7.2.3	Process and oversee electronic fund transfers (EFTs) (10895)	9.7.5.3.4	Execute foreign exchange trades (19582)
9.7.2.4	Develop cash flow forecasts (10896)	9.7.5.3.5	Manage foreign exchange balance sheet risk (19583)
9.7.2.5	Manage cash flows (10897)	9.7.5.4	Manage exposure risk (11211)
9.7.2.6	Produce cash management accounting transactions and reports (10898)	9.7.5.4.1	Determine current customer exposures and limit exceptions (19584)
9.7.2.7	Manage and oversee banking relationships (10899)	9.7.5.4.2	Resolve customer exposure limit violations (19585)
9.7.2.8	Analyze, negotiate, resolve, and confirm bank fees (10900)	9.7.5.4.3	Manage customer collateral (19586)
9.7.3	Manage in-house bank accounts (10760)	9.7.5.4.4	Perform annual customer credit reviews (19587)
9.7.3.1	Manage in-house bank accounts for subsidiaries (10901)	9.7.5.5	Execute hedging transactions (20137)
9.7.3.2	Manage and facilitate inter-company borrowing transactions (10902)	9.7.5.5.1	Measure physical positions (19588)
9.7.3.3	Manage centralized outgoing payments on behalf of subsidiaries (10903)	9.7.5.5.2	Establish hedges (19589)
9.7.3.4	Manage central incoming payments on behalf of subsidiaries (10904)	9.7.5.5.3	Unwind hedges (19590)
9.7.3.5	Manage internal payments and netting transactions (10905)	9.7.5.5.4	Evaluate and refine hedging positions (11213)
9.7.3.6	Calculate interest and fees for in-house bank accounts (10906)	9.7.5.5.5	Monitor credit (11215)
9.7.3.7	Provide account statements for in-house bank accounts (10907)	9.7.5.6	Produce hedge accounting transactions and
9.7.4	Manage debt and investment (10761)		
9.7.4.1	Establish investment policy (14079)		

	reports (11214)	9.9.1.1	Develop foreign, national, state, and local tax strategy (10927)
9.7.6	Manage financial fraud/dispute cases (16958)	9.9.1.2	Consolidate and optimize total tax plan (10928)
<b>9.8</b>	<b>Manage internal controls (10735)</b>	9.9.1.3	Maintain tax master data (10929)
9.8.1	Establish internal controls, policies, and procedures (10762)	9.9.2	Process taxes (10766)
9.8.1.1	Establish board of directors and audit committee (10914)	9.9.2.1	Perform tax planning/strategy (10930)
9.8.1.2	Define and communicate code of ethics (10915)	9.9.2.2	Prepare tax returns (10931)
9.8.1.3	Assign roles and responsibility for internal controls (10916)	9.9.2.3	Prepare foreign taxes (10932)
9.8.1.4	Define business process objectives and risks (11250)	9.9.2.4	Calculate deferred taxes (10933)
9.8.1.5	Define entity/unit risk tolerances (11251)	9.9.2.5	Account for taxes (10934)
9.8.2	Operate controls and monitor compliance with internal controls policies and procedures (10763)	9.9.2.6	Monitor tax compliance (10935)
9.8.2.1	Design and implement control activities (10917)	9.9.2.7	Address tax inquiries (10936)
9.8.2.2	Monitor control effectiveness (10918)	<b>9.10</b>	<b>Manage international funds/consolidation (10737)</b>
9.8.2.3	Remediate control deficiencies (10919)	9.10.1	Monitor international rates (10767)
9.8.2.4	Create compliance function (10920)	9.10.2	Manage transactions (10768)
9.8.2.5	Operate compliance function (10921)	9.10.3	Monitor currency exposure/hedge currency (10769)
9.8.2.6	Implement and maintain controls-related enabling technologies and tools (10922)	9.10.4	Report results (10770)
9.8.3	Report on internal controls compliance (10764)	<b>9.11</b>	<b>Perform global trade services (17059)</b>
9.8.3.1	Report to external auditors (10923)	9.11.1	Screen sanctioned party list (14090)
9.8.3.2	Report to regulators, share-/debt-holders, securities exchanges, etc. (10924)	9.11.2	Control exports and imports (14091)
9.8.3.3	Report to third parties (10925)	9.11.3	Classify products (14092)
9.8.3.4	Report to internal management (10926)	9.11.4	Perform currency conversion (19593)
<b>9.9</b>	<b>Manage taxes (10736)</b>	9.11.5	Calculate duty (14093)
9.9.1	Develop tax strategy and plan (10765)	9.11.6	Communicate with customs (14094)
		9.11.7	Document trade (14095)
		9.11.8	Process trade preferences (14096)
		9.11.9	Handle restitution (14097)
		9.11.10	Prepare letter of credit (14098)

## 10.0 Acquire, Construct, and Manage Assets (19207)

### 10.1 Plan and acquire assets (10937)

- 10.1.1 Develop property strategy and long term vision (10941)
  - 10.1.1.1 Confirm alignment of property requirements with business strategy (10955)
  - 10.1.1.2 Appraise the external environment (10956)
  - 10.1.1.3 Determine build or buy decision (10957)
- 10.1.2 Develop, construct, and modify sites (10942)
  - 10.1.2.1 Obtain construction permissions (11277)
  - 10.1.2.2 Perform construction design and planning (11278)
  - 10.1.2.3 Perform construction (11279)
- 10.1.3 Plan facility (10943)
  - 10.1.3.1 Design facility (10958)
  - 10.1.3.2 Analyze budget (10959)
  - 10.1.3.3 Select property (10960)
  - 10.1.3.4 Negotiate terms for facility (10961)
  - 10.1.3.5 Manage construction or modification to building (10962)
- 10.1.4 Provide workspace and facilities (10944)
  - 10.1.4.1 Acquire workspace and facilities (10963)
  - 10.1.4.2 Change fit/form/function of workspace and facilities (10964)
- 10.1.5 Manage facilities operations (10949)
  - 10.1.5.1 Relocate people (10965)
  - 10.1.5.2 Relocate material and tools (10966)

### 10.2 Design and Construct productive assets (19208)

- 10.2.1 Manage capital program for productive assets (19209)
  - 10.2.1.1 Define capital investment plan (19210)
  - 10.2.1.2 Monitor capital program (19211)
  - 10.2.1.3 Secure construction financing (19212)
- 10.2.2 Perform utility network planning (19213)
  - 10.2.2.1 Perform demand forecasting (19214)
  - 10.2.2.2 Assess performance and capacity of current assets (19215)
  - 10.2.2.3 Perform network modeling (19216)
  - 10.2.2.4 Perform protection design (19217)
  - 10.2.2.5 Perform secondary systems design (19218)
- 10.2.3 Design and plan asset construction (20139)
  - 10.2.3.1 Develop construction strategy (19220)
  - 10.2.3.2 Perform construction performance management (11276)
  - 10.2.3.3 Obtain asset construction permissions (19221)
  - 10.2.3.4 Design assets (19222)
  - 10.2.3.5 Plan construction resources (19223)
- 10.2.4 Schedule and perform construction work (19229)
  - 10.2.4.1 Schedule construction work (19230)
  - 10.2.4.2 Obtain resources (19231)
  - 10.2.4.3 Construct new assets (19232)
  - 10.2.4.4 Augment existing assets (19233)

- 10.2.4.5 Renew/Replace assets (19234)

- 10.2.5 Manage asset construction (19224)
  - 10.2.5.1 Monitor work performance (19225)
  - 10.2.5.2 Undertake construction quality control (19226)
  - 10.2.5.3 Create work and asset records (19227)
  - 10.2.5.4 Manage safety, security, and access to sites (19228)
- 10.2.6 Commission new assets (11280)
  - 10.2.6.1 Schedule commissioning (19235)
  - 10.2.6.2 Co-ordinate energization with network operations (19236)
  - 10.2.6.3 Capture commissioning records (19237)

### 10.3 Maintain productive assets (19238)

- 10.3.1 Plan asset maintenance (19239)
  - 10.3.1.1 Develop maintenance strategies (19240)
  - 10.3.1.2 Analyze assets and predict maintenance requirements (10967)
  - 10.3.1.3 Specify maintenance policies (19241)
  - 10.3.1.4 Integrate preventive maintenance into operations schedule (10968)
  - 10.3.1.5 Identify work management tasks & priorities (19242)
  - 10.3.1.6 Conduct resource planning (19243)
  - 10.3.1.7 Create work plans (19244)
- 10.3.2 Manage asset maintenance (19245)
  - 10.3.2.1 Schedule maintenance work (19246)
  - 10.3.2.2 Obtain required resources (19247)
  - 10.3.2.3 Undertake quality control (19248)
  - 10.3.2.4 Update work and asset records (19249)
  - 10.3.2.5 Manage maintenance work safety (19250)
  - 10.3.2.6 Define maintenance performance targets (19251)
  - 10.3.2.7 Monitor maintenance performance against targets/contracts (19252)
- 10.3.3 Perform asset maintenance (19253)
  - 10.3.3.1 Perform preventative asset maintenance (10947)
  - 10.3.3.2 Perform routine asset maintenance (19254)
  - 10.3.3.3 Perform corrective asset maintenance and repairs (19255)
  - 10.3.3.4 Identify unplanned maintenance requirements (19256)
  - 10.3.3.5 Perform unplanned maintenance and repairs (19257)

### 10.4 Maintain productive assets (19238)

- 10.4.1 Develop exit strategy (10952)
- 10.4.2 Decommission productive assets (19258)
- 10.4.3 Perform sale or trade (10953)
- 10.4.4 Perform abandonment (10954)
- 10.4.5 Perform waste and hazardous goods management (16970)



## 11.0 Manage Enterprise Risk, Compliance, Remediation, and Resiliency (16437)

### 11.1 Manage enterprise risk (17060)

- 11.1.1 Establish the enterprise risk framework and policies (16439)
  - 11.1.1.1 Determine risk tolerance for organization (16440)
  - 11.1.1.2 Develop and maintain enterprise risk policies and procedures (16441)
  - 11.1.1.3 Identify and implement enterprise risk management tools (16442)
  - 11.1.1.4 Coordinate the sharing of risk knowledge across the organization (16443)
  - 11.1.1.5 Prepare and report enterprise risk to executive management and board (16444)
- 11.1.2 Oversee and coordinate enterprise risk management activities (16445)
  - 11.1.2.1 Identify enterprise level risks (16446)
  - 11.1.2.2 Assess risks to determine which to mitigate (16447)
  - 11.1.2.3 Develop risk mitigation and management strategy and integrate with existing performance management processes (16448)
  - 11.1.2.4 Verify business unit and functional risk mitigation plans are implemented (16449)
  - 11.1.2.5 Ensure risks and risk mitigation actions are monitored (16450)
  - 11.1.2.6 Report on enterprise risk activities (16451)
- 11.1.3 Coordinate business unit and functional risk management activities (16452)
  - 11.1.3.1 Ensure that each business unit/function follows the enterprise risk management process (16453)
  - 11.1.3.2 Ensure that each business unit/function follows the enterprise risk reporting process (16454)
- 11.1.4 Manage business unit and function risk (17462)
  - 11.1.4.1 Identify risks (16456)
  - 11.1.4.2 Assess risks using enterprise risk framework policies and procedures (16457)
  - 11.1.4.3 Develop mitigation plans for risks (16458)
    - 11.1.4.3.1 Assess adequacy of insurance coverage (18129)
  - 11.1.4.4 Implement mitigation plans for risks (16459)
  - 11.1.4.5 Monitor risks (16460)
  - 11.1.4.6 Analyze risk activities and update plans (16461)
  - 11.1.4.7 Report on risk activities (16462)

### 11.2 Manage compliance (17467)

- 11.2.1 Establish compliance framework and policies (17468)
  - 11.2.1.1 Develop enterprise compliance policies and procedures (17469)
  - 11.2.1.2 Implement enterprise compliance activities (17470)
  - 11.2.1.3 Manage internal audits (14133)

- 11.2.1.4 Maintain controls-related technologies and tools (14137)

### 11.2 Manage regulatory compliance (16463)

- 11.2.2.1 Develop regulatory compliance procedures (16464)
- 11.2.2.2 Identify applicable regulatory requirements (16465)
- 11.2.2.3 Monitor the regulatory environment for changing or emerging regulations (16466)
- 11.2.2.4 Assess current compliance position and identify weaknesses or shortfalls therein (16467)
- 11.2.2.5 Implement missing or stronger regulatory compliance controls and policies (16468)
- 11.2.2.6 Monitor and test regulatory compliance position and existing controls (16469)
- 11.2.2.7 Compile and communicate compliance scorecard(s) (19595)
- 11.2.2.8 Compile and communicate internal and regulatory compliance reports (19596)
- 11.2.2.9 Maintain relationships with regulators as appropriate (16470)

### 11.3 Manage remediation efforts (11185)

- 11.3.1 Create remediation plans (11201)
- 11.3.2 Contact and confer with experts (11202)
- 11.3.3 Identify/dedicate resources (11203)
- 11.3.4 Investigate legal aspects (11204)
- 11.3.5 Investigate damage cause (11205)
- 11.3.6 Amend or create policy (11206)

### 11.4 Manage business resiliency (11216)

- 11.4.1 Develop the business resilience strategy (11221)
- 11.4.2 Perform continuous business operations planning (11222)
- 11.4.3 Test continuous business operations (11223)
- 11.4.4 Maintain continuous business operations (11224)
- 11.4.5 Share knowledge of specific risks across other parts of the organization (16471)

### 11.5 Develop security strategy (11281)

- 11.5.1 Perform security needs assessment (11282)
  - 11.5.1.1 Determine security needs for distribution assets (11283)
  - 11.5.1.2 Determine security needs for transmission assets (11284)
  - 11.5.1.3 Determine security needs for fossil generation assets (11285)
  - 11.5.1.4 Determine security needs for nuclear assets (11286)
  - 11.5.1.5 Determine security needs for water utility assets (19262)
  - 11.5.1.6 Determine security needs for gas pipeline assets (19263)

- 11.5.2 Determine security and risk tolerance levels (11287)
  - 11.5.2.1 Perform security and risk threat assessment (11288)
  - 11.5.2.2 Develop risk tolerance levels (11289)
- 11.5.3 Develop security program (11290)

#### **11.6 Develop threat response strategy (11291)**

- 11.6.1 Perform threat assessment (11292)
- 11.6.2 Develop threat response program (11293)

#### **11.7 Manage security programs (11294)**

- 11.7.1 Manage and support security program (11295)
- 11.7.2 Manage and support threat response program (11296)

## 12.0 Manage External Relationships (10012)

### 12.1 Build investor relationships (11010)

- 12.1.1 Plan, build, and manage lender relations (11035)
- 12.1.2 Plan, build, and manage analyst relations (11036)
- 12.1.3 Communicate with shareholders (11037)

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

- 12.2.1 Manage government relations (11038)
  - 12.2.1.1 Assess relationships (12869)
  - 12.2.1.2 Appoint responsible executives (12870)
  - 12.2.1.3 Monitor relationships (12871)
  - 12.2.1.4 Receive input from internal advisors (12872)
  - 12.2.1.5 Receive input from external advisors (12873)
  - 12.2.1.6 Liaise with authorities (12874)
- 12.2.2 Manage relations with quasi-government bodies (11039)
  - 12.2.2.1 Manage and support power pool coordinator or grid operator activities (11297)
  - 12.2.2.2 Manage and support power market activities (11298)
  - 12.2.2.3 Establish relationships with agencies (12875)
  - 12.2.2.4 Respond to audit inquiries (12876)
  - 12.2.2.5 Maintain documentation of contacts (12877)
  - 12.2.2.6 Plan and manage meetings (12878)
- 12.2.3 Manage relations with trade or industry groups (11040)
  - 12.2.3.1 Manage and support state and local lobbying activities (11299)
  - 12.2.3.2 Manage and support interstate and federal lobbying activities (11300)
  - 12.2.3.3 Evaluate the requirements for strategic relationships (12879)
  - 12.2.3.4 Monitor the success of the partnerships (12880)
  - 12.2.3.5 Extend or change the relationships (12881)
- 12.2.4 Manage lobby activities (11041)

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

- 12.3.1 Report financial results (11042)

- 12.3.2 Report audit findings (11043)

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

- 12.4.1 Create ethics policies (11044)
- 12.4.2 Manage corporate governance policies (11045)
- 12.4.3 Develop and perform preventive law programs (11046)
- 12.4.4 Ensure compliance (11047)
  - 12.4.4.1 Plan and initiate compliance program (11053)
  - 12.4.4.2 Execute compliance program (11054)
- 12.4.5 Manage outside counsel (11048)
  - 12.4.5.1 Assess problem and determine work requirements (11056)
  - 12.4.5.2 Engage/Retain outside counsel if necessary (11057)
  - 12.4.5.3 Receive strategy/budget (11058)
  - 12.4.5.4 Receive work product and manage/monitor case and work performed (11059)
  - 12.4.5.5 Process payment for legal services (11060)
  - 12.4.5.6 Track legal activity/performance (11061)
- 12.4.6 Protect intellectual property (11049)
  - 12.4.6.1 Manage copyrights, patents, and trademarks (11062)
  - 12.4.6.2 Maintain intellectual property rights and restrictions (11063)
  - 12.4.6.3 Administer licensing terms (11064)
  - 12.4.6.4 Administer options (11065)
- 12.4.7 Resolve disputes and litigations (11050)
- 12.4.8 Provide legal advice/counseling (11051)
- 12.4.9 Negotiate and document agreements/contracts (11052)

### 12.5 Manage public relations program (11014)

- 12.5.1 Manage community relations (11066)
- 12.5.2 Manage media relations (11067)
- 12.5.3 Promote political stability (11068)
- 12.5.4 Create press releases (11069)
- 12.5.5 Issue press releases (11070)

## 13.0 Develop and Manage Business Capabilities (10013)

### 13.1 Manage business processes (16378)

- 13.1.1 Establish and maintain process management governance (16379)
  - 13.1.1.1 Define and manage governance approach (16380)
  - 13.1.1.2 Establish and maintain process tools and templates (16381)
  - 13.1.1.3 Assign and support process ownership (16382)
  - 13.1.1.4 Perform process governance activities (16383)
- 13.1.2 Define and manage process frameworks (16384)
  - 13.1.2.1 Establish and maintain process framework (163850)
  - 13.1.2.2 Identify cross-functional processes (16386)
- 13.1.3 Define processes (16387)
  - 13.1.3.1 Scope processes (16388)
  - 13.1.3.2 Analyze processes (16389)
    - 13.1.3.2.1 Identify published best practices (20140)
  - 13.1.3.3 Model and document processes (16390)
  - 13.1.3.4 Publish processes (16391)
- 13.1.4 Manage process performance (16392)
  - 13.1.4.1 Provide process training (16393)
  - 13.1.4.2 Support process execution (16394)
  - 13.1.4.3 Measure and report process performance (16395)
    - 13.1.4.3.1 Identify additional metrics as required (20141)
- 13.1.5 Improve processes (16396)
  - 13.1.5.1 Identify and select improvement opportunities (16397)
  - 13.1.5.2 Manage improvement projects (16398)
  - 13.1.5.3 Perform continuous improvement activities (16399)
- 13.2.3.1.2 Identify project resource requirements (16412)
- 13.2.3.1.3 Assess culture and readiness for project management approach (11118)
- 13.2.3.1.4 Create business case and obtain funding (11120)
- 13.2.3.1.5 Develop project measures and indicators (11121)
- 13.2.3.2 Identify appropriate project management methodologies (11119)
- 13.2.3.3 Develop project plans (16413)
  - 13.2.3.3.1 Define roles and resources (11123)
  - 13.2.3.3.2 Acquire/secure project resources (20142)
  - 13.2.3.3.3 Identify specific IT requirements (11124)
  - 13.2.3.3.4 Create training and communication plans (11125)
  - 13.2.3.3.5 Design recognition and reward approaches (11127)
  - 13.2.3.3.6 Design and plan launch of project (11128)
  - 13.2.3.3.7 Deploy the project (11129)
- 13.2.3.4 Execute projects (16414)
  - 13.2.3.4.1 Evaluate impact of project management (strategy and projects) on measures and outcomes (11131)
  - 13.2.3.4.2 Report the status of project (16415)
  - 13.2.3.4.3 Manage project scope (16416)
  - 13.2.3.4.4 Promote and sustain activity and involvement (11132)
  - 13.2.3.4.5 Realign and refresh project management strategy and approaches (11133)
- 13.2.3.5 Review and report project performance (16417)
- 13.2.3.6 Close projects (16418)

### 13.2 Manage portfolio, program, and project (16400)

- 13.2.1 Manage portfolio (16401)
  - 13.2.1.1 Establish portfolio strategy (16402)
  - 13.2.1.2 Define portfolio governance (16403)
  - 13.2.1.3 Monitor and control portfolio (16404)
- 13.2.2 Manage programs (16405)
  - 13.2.2.1 Establish program structure and approach (16406)
  - 13.2.2.2 Manage program stakeholders and partners (16407)
  - 13.2.2.3 Manage program execution (16408)
  - 13.2.2.4 Review and report program performance (16409)
- 13.2.3 Manage projects (16410)
  - 13.2.3.1 Establish project scope (16411)
    - 13.2.3.1.1 Identify project requirements and

### 13.3 Manage enterprise quality (17471)

- 13.3.1 Establish quality requirements (17472)
  - 13.3.1.1 Define critical-to-quality characteristics (17473)
  - 13.3.1.2 Define preventive quality activities (17474)
  - 13.3.1.3 Develop quality controls (17475)
    - 13.3.1.3.1 Define process steps for controls (or integration points) (17476)
    - 13.3.1.3.2 Define sampling plan (17477)
    - 13.3.1.3.3 Identify measurement methods (17478)
    - 13.3.1.3.4 Define required competencies (17479)

- 13.3.1.4 Prove capability to assess compliance with requirements (17480)
  - 13.3.1.5 Finalize quality plan (17481)
  - 13.3.2 Evaluate performance to requirements (17482)
    - 13.3.2.1 Test against quality plan (17483)
      - 13.3.2.1.1 Conduct test and collect data (17484)
      - 13.3.2.1.2 Record result(s) (17485)
      - 13.3.2.1.3 Determine disposition of result(s) (17486)
    - 13.3.2.2 Assess results of tests (17487)
      - 13.3.2.2.1 Assess sample significance (17488)
      - 13.3.2.2.2 Summarize result(s) (17489)
      - 13.3.2.2.3 Recommend actions (17490)
      - 13.3.2.2.4 Decide next steps (17491)
  - 13.3.3 Manage non-conformance (17492)
    - 13.3.3.1 Assess potential impact (17493)
    - 13.3.3.2 Determine immediate action(s) (17494)
    - 13.3.3.3 Identify root cause(s) (17495)
    - 13.3.3.4 Take corrective or preventative action (17496)
    - 13.3.3.5 Close non-conformance (17497)
  - 13.3.4 Implement and maintain the enterprise quality management system (EQMS) (17498)
    - 13.3.4.1 Define the quality strategy (17499)
    - 13.3.4.2 Plan and deploy the EQMS scope, targets, and goals (17500)
    - 13.3.4.3 Identify core EQMS processes, controls, and metrics (17501)
    - 13.3.4.4 Develop and document EQMS policies, procedures, standards, and measures (17502)
    - 13.3.4.5 Assess the EQMS performance (17503)
    - 13.3.4.6 Create environment and capability for EQMS improvement(s) (17504)
      - 13.3.4.6.1 Reward quality excellence (17505)
      - 13.3.4.6.2 Create and maintain quality partnerships (17506)
      - 13.3.4.6.3 Maintain talent capabilities and competencies (17507)
      - 13.3.4.6.4 Incorporate EQMS messaging into communication channels (17508)
      - 13.3.4.6.5 Assure independent EQMS management access to appropriate authority in the organization (17509)
      - 13.3.4.6.6 Transfer proven EQMS methods (17510)
- 13.4 Manage change (11074)**
- 13.4.1 Plan for change (11134)
    - 13.4.1.1 Select process improvement methodology (11138)
    - 13.4.1.2 Determine stakeholders (11140)
    - 13.4.1.3 Assess readiness for change (11139)
    - 13.4.1.4 Identify change champion(s) (11141)
    - 13.4.1.5 Form design team (11142)
    - 13.4.1.6 Define scope (11143)
    - 13.4.1.7 Understand current state (11144)
    - 13.4.1.8 Define future state (11145)
    - 13.4.1.9 Conduct organizational risk analysis (11146)
    - 13.4.1.10 Assess cultural issues (11147)
    - 13.4.1.11 Identify impacted groups (20143)
    - 13.4.1.12 Determine degree/extent of impact (20144)
    - 13.4.1.13 Establish accountability for change management (11148)
    - 13.4.1.14 Identify barriers to change (11149)
    - 13.4.1.15 Determine change enablers (11150)
    - 13.4.1.16 Identify resources and develop measures (11151)
  - 13.4.2 Design the change (11135)
    - 13.4.2.1 Assess connection to other initiatives (11152)
    - 13.4.2.2 Develop change management plans (11153)
    - 13.4.2.3 Develop training plan (11154)
    - 13.4.2.4 Develop communication plan (11155)
    - 13.4.2.5 Assign change champion(s) (20145)
    - 13.4.2.6 Develop rewards/incentives plan (11156)
    - 13.4.2.7 Establish change adoption metrics (11157)
    - 13.4.2.8 Establish/Clarify new roles (11158)
    - 13.4.2.9 Identify budget/roles (11159)
  - 13.4.3 Implement change (11136)
    - 13.4.3.1 Create commitment for improvement/change (11160)
    - 13.4.3.2 Reengineer business processes and systems (11161)
    - 13.4.3.3 Support transition to new roles or exit strategies for incumbents (11162)
    - 13.4.3.4 Monitor change (11163)
    - 13.4.3.5 Report on change (20146)
  - 13.4.4 Sustain improvement (11137)
    - 13.4.4.1 Monitor improved process performance (11164)
    - 13.4.4.2 Capture and reuse lessons learned from change process (11165)
    - 13.4.4.3 Take corrective action as necessary (11166)
- 13.5 Develop and manage enterprise-wide knowledge management (KM) capability (11073)**
- 13.5.1 Develop KM strategy (11095)
    - 13.5.1.1 Develop governance model with roles and accountability (11100)
    - 13.5.1.2 Define roles and accountability of core group versus operating units (11102)
    - 13.5.1.3 Develop funding models (11103)
    - 13.5.1.4 Identify links to key initiatives (11104)
    - 13.5.1.5 Develop core KM methodologies (11105)
    - 13.5.1.6 Assess IT needs and engage IT



- function (11106)
- 13.5.1.7 Develop training and communication plans (11107)
- 13.5.1.8 Develop change management approaches (11108)
- 13.5.1.9 Develop strategic measures and indicators (11109)
- 13.5.2 Assess KM capabilities (11096)
  - 13.5.2.1 Assess maturity of existing KM initiatives (11110)
  - 13.5.2.2 Evaluate existing KM approaches (11111)
  - 13.5.2.3 Identify gaps and needs (11112)
- 13.5.3 Design and implement KM capabilities (20965)
  - 13.5.3.1 Develop new KM approaches (11114)
  - 13.5.3.2 Design resource model for KM approaches (20966)
  - 13.5.3.3 Implement new KM approaches (11115)
  - 13.5.3.4 Leverage and enhance IT for KM approaches (20967)
  - 13.5.3.5 Develop measures (20968)
- 13.5.4 Evolve and sustain KM capabilities (20969)
  - 13.5.4.1 Enhance/Modify existing KM approaches (11113)
  - 13.5.4.2 Sustain awareness and engagement (20970)
  - 13.5.4.3 Expand KM infrastructure to meet demand (20971)

### 13.6 Measure and benchmark (16436)

- 13.6.1 Create and manage organizational performance strategy (11071)
  - 13.6.1.1 Create enterprise measurement systems model (11075)
  - 13.6.1.2 Measure process efficiency (11076)
  - 13.6.1.3 Measure cost effectiveness (11077)
  - 13.6.1.4 Measure staff productivity (11078)
  - 13.6.1.5 Measure cycle time (11079)
- 13.6.2 Benchmark performance (11072)
  - 13.6.2.1 Conduct performance assessments (11083)
  - 13.6.2.2 Develop benchmarking capabilities (11084)
  - 13.6.2.3 Conduct internal process and external competitive benchmarking (11085)

- 13.6.2.4 Conduct gap analysis (11087)
- 13.6.2.5 Establish need for change (11088)
- 13.6.3 Evaluate process performance (20147)
  - 13.6.3.1 Establish appropriate performance indicators (metrics) (10270)
  - 13.6.3.2 Establish monitoring frequency (10271)
  - 13.6.3.3 Collect data (20148)
  - 13.6.3.4 Calculate performance measures (10272)
  - 13.6.3.5 Identify performance trends (10273)
  - 13.6.3.6 Analyze performance against benchmark data (10274)
  - 13.6.3.7 Prepare reports (10275)
  - 13.6.3.8 Develop performance improvement plan (10276)

### 13.7 Manage environmental health and safety (EHS) (11179)

- 13.7.1 Determine environmental health and safety impacts (11180)
  - 13.7.1.1 Evaluate environmental impact of products, services, and operations (11186)
  - 13.7.1.2 Conduct health and safety and environmental audits (11187)
- 13.7.2 Develop and execute functional EHS program (11181)
  - 13.7.2.1 Identify regulatory and stakeholder requirements (11188)
  - 13.7.2.2 Assess future risks and opportunities (11189)
  - 13.7.2.3 Create EHS policy (11190)
  - 13.7.2.4 Record and manage EHS events (11191)
- 13.7.3 Train and educate functional employees (11182)
  - 13.7.3.1 Communicate EHS issues to stakeholders and provide support (11192)
- 13.7.4 Monitor and manage functional EHS management program (11183)
  - 13.7.4.1 Manage EHS costs and benefits (11193)
  - 13.7.4.2 Measure and report EHS performance (11194)
  - 13.7.4.3 Implement emergency response program (11196)
  - 13.7.4.4 Implement pollution prevention program (11197)
  - 13.7.4.5 Provide employees with EHS support (11195)

### 13.8 Develop, Manage, and Deliver Analytics (20959)

- 13.8.1 Develop and manage hypotheses (20960)
- 13.8.2 Collect data (20961)
- 13.8.3 Analyze data (20962)
- 13.8.4 Report on data (20963)
- 13.8.5 Identify remedial actions (20964)

## 14.0 Operate Utility Assets (19264)

### 14.1 Operate utility network and pipeline assets (11264)

- 14.1.1 Develop operations strategy (11265)
  - 14.1.1.1 Determine network operational goals and targets (19265)
  - 14.1.1.2 Specify and select operational policies (19266)
  - 14.1.1.3 Align with network extension, augmentation and replacement strategy (19267)
- 14.1.2 Develop network operational plans (11266)
  - 14.1.2.1 Specify operation requirements (19268)
  - 14.1.2.2 Perform network demand analysis and forward planning (19269)
  - 14.1.2.3 Create switching/network reconfiguration plans (19270)
  - 14.1.2.4 Simulate/calculate demand and network conditions (electric voltage/water and gas pressures etc.) (19271)
- 14.1.3 Perform operations performance management (11268)
  - 14.1.3.1 Develop and review network operating protocols (19272)
  - 14.1.3.2 Plan and manage control room operations (19273)
  - 14.1.3.3 Collect network usage and availability information and intelligence (19274)
  - 14.1.3.4 Produce network condition reports (19275)
  - 14.1.3.5 Conduct network utilization analysis (19276)
  - 14.1.3.6 Monitor and report overall operational and regulatory performance (19277)
- 14.1.4 Monitor network status (19278)
  - 14.1.4.1 Monitor current network switch/valve state and operational performance data (19279)
  - 14.1.4.2 Maintain historical network state data (19280)
  - 14.1.4.3 Monitor alerts and alarms (19281)
- 14.1.5 Manage network faults and outages (11271)
  - 14.1.5.1 Identify network faults (19282)
  - 14.1.5.2 Execute fault location, isolation, restoration (19283)
  - 14.1.5.3 Coordinate repair and restoration operations (19284)
- 14.1.6 Perform planned network operation (19285)
  - 14.1.6.1 Prepare and submit outage switching and diversion plans (19286)
  - 14.1.6.2 Approve or reject outage plan/submission (19287)
  - 14.1.6.3 Schedule planned network operations (19288)
  - 14.1.6.4 Perform outage notifications (19289)
  - 14.1.6.5 Execute planned switching and diversions (19290)
  - 14.1.6.6 Coordinate with maintenance and construction operations (19291)
  - 14.1.6.7 Return the network to service (19292)

- 14.1.7 Perform utility network performance optimization (19293)
  - 14.1.7.1 Perform demand management planning (19294)
  - 14.1.7.2 Execute demand management operations and controls (19295)
  - 14.1.7.3 Perform stability, voltage, pressure and load optimization controls (19296)
  - 14.1.7.4 Maintain network protection settings and controls (19297)
  - 14.1.7.5 Perform storage operations and controls (11270)
  - 14.1.7.6 Monitor and evaluate network performance (19298)
- 14.1.8 Perform emergency response (network distributor) (11273)
  - 14.1.8.1 Conduct emergency response planning (19299)
  - 14.1.8.2 Identify and manage customer faults (19300)
  - 14.1.8.3 Manage and apply safety regulations (19301)
  - 14.1.8.4 Manage media and public relations (19302)

### 14.2 Operate major utility plant (19303)

- 14.2.1 Operate generating stations (19304)
- 14.2.2 Operate water and wastewater treatment plants (19305)
- 14.2.3 Operate pumping and pressurization plants (19306)

### 14.3 Collect and manage utility metering data (19307)

- 14.3.1 Manage meter information (19308)
  - 14.3.1.1 Identify and process meter information changes (19309)
  - 14.3.1.2 Identify and process customer information changes (19310)
- 14.3.2 Collect meter data (19311)
  - 14.3.2.1 Schedule meter reading work (19312)
  - 14.3.2.2 Process requests for special reads (19313)
  - 14.3.2.3 Read meters (19314)
  - 14.3.2.4 Record and validate readings (19315)
  - 14.3.2.5 Estimate readings (19316)
- 14.3.3 Process meter data (19317)
  - 14.3.3.1 Receive and validate meter readings (19318)
  - 14.3.3.2 Record and utilize meter reading data (19319)
  - 14.3.3.3 Distribute meter reading data (19320)
- 14.3.4 Aggregate and distribute data (19321)
  - 14.3.4.1 Aggregate meter readings (19322)
  - 14.3.4.2 Distribute aggregate meter readings (19323)
  - 14.3.4.3 Pass consumption data to market participants (19324)

### 14.4 Manage and operate utility metering assets (19325)

- 14.4.1 Procure meter components (19326)
  - 14.4.1.1 Receive work request (19327)
  - 14.4.1.2 Procure meter or meter component (19328)
- 14.4.2 Install/remove/energize/re-energize meters (19329)
  - 14.4.2.1 Schedule work (19330)

- 14.4.2.2 Make appointment (19331)
- 14.4.2.3 Complete work (19332)
- 14.4.3 Manage and test meters (19333)
  - 14.4.3.1 Establish test standards and sampling techniques (19334)
  - 14.4.3.2 Test meters (19335)
  - 14.4.3.3 Record results (19336)
- 14.4.4 Operate Advanced Metering Infrastructure (19337)
  - 14.4.4.1 Establish AMI operating center (19338)
  - 14.4.4.2 Monitor AMI network performance (19339)
  - 14.4.4.3 Manage AMI network performance improvements (19340)
  - 14.4.4.4 Manage AMI network faults (19341)



123 North Post Oak Lane, Third Floor

Houston, Texas 77024-7797, USA

800-776-9676 phone • +1-713-681-4020 • +1-713-681-8578 fax

[pcf\\_feedback@apqc.org](mailto:pcf_feedback@apqc.org) • [www.apqc.org](http://www.apqc.org)