

# Manufacturing

Standard Business Process Framework

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## A1 Analyze and improve business

### A1.1 Analyze the external environment

- A1.1.1 Analyze external political changes and the legal and regulatory environment
- A1.1.2 Evaluate technological innovations and scientific trends in the external environment
- A1.1.3 Analyze demographic, social and cultural trends in the external environment
- A1.1.4 Analyze economic changes and industry trends in the external environment
- A1.1.5 Analyze potential suppliers as part of shaping development strategy
- A1.1.6 Analyze potential contractors as part of shaping development strategy
- A1.1.7 Analyze competition as part of shaping development strategy

### A1.2 Analyze the internal environment

- A1.2.1 Assess and analyze quality of goods and services on offer
- A1.2.2 Analyze product mix
- A1.2.3 Assess and analyze production costs
- A1.2.4 Assess and analyze efficiency of business processes
- A1.2.5 Assess and analyze labor efficiency

### A1.3 Develop business concept and strategy

- A1.3.1 Identify appropriate market outlets
- A1.3.2 Develop and negotiate marketing strategy
- A1.3.3 Develop business plans for project/investment solutions
- A1.3.4 Develop strategic development plan
- A1.3.5 Prepare and adjust short-term development plans

### A1.4 Develop business management model

- A1.4.1 Set organizational goals and develop management policies
- A1.4.2 Design business processes and management subsystems
- A1.4.3 Generate technical specifications for automating business processes
- A1.4.4 Design organizational structure
- A1.4.5 Design workplace conditions
- A1.4.6 Develop procedures for surveying and analyzing the external and internal business environment
- A1.4.7 Develop staff incentive schemes
- A1.4.8 Develop quality management system

### A1.5 Implement organizational changes

- A1.5.1 Plan organizational changes
- A1.5.2 Take steps to implement organizational changes
- A1.5.3 Monitor implementation of organizational changes

### A1.6 Support and monitor management performance

- A1.6.1 Audit internal regulatory and administrative documentation
- A1.6.2 Monitor compliance with regulatory and procedural requirements

## **A2 Develop new and improve existing products**

### **A2.1 Design a new product's concept**

- A2.1.1 Identify market segments for a new product
- A2.1.2 Translate potential customers' needs and wants into requirements for a new product
- A2.1.3 Envisage and design features of a new product
- A2.1.4 Design a new product's life cycle
- A2.1.5 Design and introduce new technologies in a new product's concept
- A2.1.6 Determine product cost and price as part of designing a new product's concept

### **A2.2 Develop marketing and sales strategies for a new product**

- A2.2.1 Forecast behavior of target market segments
- A2.2.2 Select distribution channels for a new product
- A2.2.3 Develop competitive marketing strategy for a new product
- A2.2.4 Develop pricing strategy for a new product
- A2.2.5 Develop advertising and promotion strategies for a new product
- A2.2.6 Develop sales forecast for a new product

### **A2.3 Design a new product**

- A2.3.1 Develop design specification for a new product
- A2.3.2 Develop design documentation for a new product
- A2.3.3 Build and evaluate prototypes of a new product
- A2.3.4 Develop and test manufacturing process prototype
- A2.3.5 Develop quality procedures and methods for a new product
- A2.3.6 Patent, license and certify a new product and its components

### **A2.4 Develop manufacturing of a new product**

- A2.4.1 Identify types of materials and equipment needed for a new product's manufacturing
- A2.4.2 Select and design tools for a new product's manufacturing
- A2.4.3 Develop manufacturing process for a new product
- A2.4.4 Standardize material and temporal parameters for a new product's manufacturing
- A2.4.5 Identify measuring equipment for a new product's manufacturing
- A2.4.6 Issue process documentation for a new product's manufacturing

### **A2.5 Improve existing products**

- A2.5.1 Analyze customer claims and suggestions for product improvement
- A2.5.2 Develop proposals for product improvement
- A2.5.3 Select economically sound proposals for product improvement
- A2.5.4 Develop proposals for improving manufacturing processes
- A2.5.5 Select economically sound proposals for improving manufacturing processes

## **A3 Manage promotion and sales of products**

### **A3.1 Promote products**

- A3.1.1 Analyze customer database
- A3.1.2 Develop and implement customer retention programs
- A3.1.3 Identify need for attracting new customers
- A3.1.4 Develop and implement programs to promote products to target markets

### **A3.2 Identify a customer's need**

- A3.2.1 Identify a customer's need in products
- A3.2.2 Negotiate terms and conditions for shipping products to a customer
- A3.2.3 Negotiate conditions for warranty service and satisfaction of a customer's claims
- A3.2.4 Identify amounts and methods of payment for products

### **A3.3 Contract with a customer**

- A3.3.1 Assess a customer's credibility to identify possibilities for further cooperation
- A3.3.2 Draft a contract with a customer
- A3.3.3 Carry out legal assessment of a contract with a customer
- A3.3.4 Sign a contract with a customer

### **A3.4 Receive a customer's orders**

- A3.4.1 Register an order received from a customer
- A3.4.2 Issue an invoice to a customer
- A3.4.3 Process a customer's enquiries as to the status of his/her order

### **A3.5 Store and inventory finished products**

- A3.5.1 Receive finished products for storage and inventory
- A3.5.2 Store and release finished products to a customer

### **A3.6 Manage a customer's order**

- A3.6.1 Issue documentation for finished products and organize shipment of products to a customer
- A3.6.2 Ship and deliver products to a customer (installing products at a customer's sites, if necessary)
- A3.6.3 Provide warranty service and resolve complaints of a customer

### **A3.7 Analyze customer satisfaction**

- A3.7.1 Survey customers to assess their degree of satisfaction
- A3.7.2 Assess customer satisfaction in quantitative terms
- A3.7.3 Classify and group customer claims and suggestions

### **A3.8 Schedule customer order processing**

- A3.8.1 Prepare production plan
- A3.8.2 Schedule (plan) shipments of finished products to customers
- A3.8.3 Forecast customer payments

## **A4 Manage procurement**

### **A4.1 Plan material purchases**

- A4.1.1 Forecast material prices
- A4.1.2 Develop master procurement plan for a period
- A4.1.3 Schedule obligation payments to material suppliers for a period

### **A4.2 Select material suppliers**

- A4.2.1 Analyze potential material suppliers
- A4.2.2 Identify possible conditions for cooperation with material suppliers
- A4.2.3 Evaluate credibility of material suppliers
- A4.2.4 Conduct tenders among material suppliers

### **A4.3 Contract with a material supplier**

- A4.3.1 Draft a contract with a material supplier
- A4.3.2 Carry out legal assessment of a contract with a material supplier

A4.3.3 Sign a contract with a material supplier

#### **A4.4 Monitor and manage material deliveries**

A4.4.1 Schedule material deliveries for a period

A4.4.2 Organize delivery of materials from suppliers

A4.4.3 Settle disputes with material suppliers

#### **A4.5 Receive and store materials and distribute materials from the supply warehouse among departments**

A4.5.1 Accept materials from suppliers

A4.5.2 Place and store materials in the supply warehouse

A4.5.3 Distribute materials from the supply warehouse to departments

#### **A4.6 Evaluate material suppliers**

A4.6.1 Analyze regularity of deliveries from a material supplier

A4.6.2 Analyze material quality as part of a supplier's evaluation

A4.6.3 Define material supplier selection criteria

### **A5 Manufacture products**

#### **A5.1 Plan production operations**

A5.1.1 Schedule production

A5.1.2 Forecast tooling and equipment requirements

A5.1.3 Forecast material requirements

A5.1.4 Forecast workforce requirements

A5.1.5 Analyze availability of raw materials and half-finished products and develop shift manufacturing targets

A5.1.6 Manage and supervise product manufacturing

#### **A5.2 Store material stock in production warehouses**

A5.2.1 Inspect quality of materials sent to production from the supply warehouse

A5.2.2 Inventory material stock in production warehouses

A5.2.3 Store and release materials from production warehouses to manufacturing

#### **A5.3 Manage tooling and equipment**

A5.3.1 Design tooling and equipment

A5.3.2 Produce or repair tooling and equipment

A5.3.3 Test tooling and equipment

A5.3.4 Adjust tooling and equipment

A5.3.5 Verify and calibrate measuring equipment

#### **A5.4 Manage product manufacturing**

A5.4.1 Run manufacturing processes

A5.4.2 Pack and label finished products

A5.4.3 Provide for temporary storage of finished products in the production warehouse and move these to the finished products warehouse

#### **A5.5 Supervise production and check product quality**

A5.5.1 Monitor compliance with requirements for product manufacturing processes

A5.5.2 Monitor and measure various aspects of the manufacturing environment

A5.5.3 Monitor and evaluate environmental performance of production facilities

A5.5.4 Check product quality at all production stages

## **A6 Manage production equipment**

### **A6.1 Select configuration of production equipment and schedule supplies thereof**

- A6.1.1 Analyze technical requirements for production equipment
- A6.1.2 Analyze production equipment failures
- A6.1.3 Analyze noncompliances of products to identify requirements for production equipment
- A6.1.4 Determine whether new production equipment needs to be purchased (produced) or existing equipment upgraded
- A6.1.5 Schedule purchase (production) of new or upgrade of existing production equipment

### **A6.2 Design and produce production equipment and its components**

- A6.2.1 Develop design documentation for production equipment and its components
- A6.2.2 Produce production equipment and its components

### **A6.3 Schedule production equipment maintenance and repairs**

- A6.3.1 Schedule major repairs of production equipment
- A6.3.2 Plan scheduled and preventive repairs of production equipment
- A6.3.3 Schedule production equipment maintenance and routine servicing
- A6.3.4 Identify requirements for spare parts and materials needed to repair production equipment
- A6.3.5 Identify need for outside services to maintain production equipment
- A6.3.6 Schedule production equipment repairs for a period

### **A6.4 Ensure ongoing and routine maintenance of production equipment**

- A6.4.1 Monitor and evaluate state of production equipment as part of its ongoing maintenance
- A6.4.2 Carry out routine maintenance of production equipment
- A6.4.3 Carry out ongoing maintenance of production equipment

### **A6.5 Repair, restore and upgrade production equipment**

- A6.5.1 Remove production equipment for repairs, restoration or upgrading
- A6.5.2 Remove units, components and parts from production equipment for repairs or upgrading
- A6.5.3 Inspect components, spare parts and materials removed from production equipment for repairs or upgrading
- A6.5.4 Store and issue components, spare parts and materials for repairs and upgrades of production equipment from warehouses of maintenance departments
- A6.5.5 Organize repairs and restoration of parts and assemblies of production equipment
- A6.5.6 Install operational units, components and parts as part of production equipment repairs or upgrade

### **A6.6 Purchase production equipment**

- A6.6.1 Select suppliers of production equipment
- A6.6.2 Contract with a supplier of production equipment
- A6.6.3 Monitor and manage supplies of production equipment
- A6.6.4 Receive and store production equipment
- A6.6.5 Settle disputes with suppliers of production equipment
- A6.6.6 Evaluate suppliers of production equipment

### **A6.7 Put production equipment into operation**

- A6.7.1 Install production equipment
- A6.7.2 Set up production equipment
- A6.7.3 Determine operational availability of production equipment
- A6.7.4 Put production equipment into operation

## **A7 Manage facilities of engineering and technical infrastructure**

### **A7.1 Select configuration of engineering and technical infrastructure facilities and plan provision thereof**

- A7.1.1 Analyze production requirements for facilities of engineering and technical infrastructure
- A7.1.2 Analyze failures of engineering and technical infrastructure facilities
- A7.1.3 Analyze requirements of supervising authorities to facilities of engineering and technical infrastructure
- A7.1.4 Forecast emergencies and disasters for facilities of engineering and technical infrastructure
- A7.1.5 Determine need for reconstructing of existing or creating of new engineering and technical infrastructure facilities
- A7.1.6 Develop programs for reconstructing of existing or creating of new engineering and technical infrastructure facilities

### **A7.2 Schedule maintenance and repairs of engineering and technical infrastructure facilities**

- A7.2.1 Schedule major repairs of engineering and technical infrastructure facilities
- A7.2.2 Plan scheduled and preventive repairs of engineering and technical infrastructure facilities
- A7.2.3 Schedule maintenance and routine servicing of engineering and technical infrastructure facilities
- A7.2.4 Determine need for outside services to maintain facilities of engineering and technical infrastructure
- A7.2.5 Schedule repairs of engineering and technical infrastructure facilities for a period

### **A7.3 Build facilities of engineering and technical infrastructure**

- A7.3.1 Select contractors for building a facility of engineering and technical infrastructure
- A7.3.2 Contract with a contractor to build a facility of engineering and technical infrastructure
- A7.3.3 Design a new facility of engineering and technical infrastructure
- A7.3.4 Organize and carry out work to build a facility of engineering and technical infrastructure

### **A7.4 Purchase equipment for facilities of engineering and technical infrastructure**

- A7.4.1 Select suppliers of equipment for facilities of engineering and technical infrastructure
- A7.4.2 Contract with a supplier of equipment for facilities of engineering and technical infrastructure
- A7.4.3 Manage and monitor deliveries of equipment for facilities of engineering and technical infrastructure
- A7.4.4 Receive and store equipment for facilities of engineering and technical infrastructure
- A7.4.5 Settle disputes with suppliers of equipment for engineering and technical infrastructure facilities
- A7.4.6 Evaluate suppliers of equipment for engineering and technical infrastructure facilities

### **A7.5 Install equipment of engineering and technical infrastructure facilities**

- A7.5.1 Install equipment of an engineering and technical infrastructure facility
- A7.5.2 Set up and put into operation equipment of an engineering and technical infrastructure facility

### **A7.6 Put engineering and technical infrastructure facilities into operation**

- A7.6.1 Carry out internal acceptance of an engineering and technical infrastructure facility
- A7.6.2 Arrange for official acceptance of an engineering and technical infrastructure facility
- A7.6.3 Register a facility of engineering and technical infrastructure with the official registration chamber
- A7.6.4 Commission an engineering and technical infrastructure facility

### **A7.7 Monitor state of engineering and technical infrastructure facilities and ensure ongoing maintenance of facilities**

- A7.7.1 Monitor and evaluate state of engineering and technical infrastructure facilities
- A7.7.2 Carry out routine maintenance of engineering and technical infrastructure facilities
- A7.7.3 Manage ongoing maintenance of engineering and technical infrastructure facilities

### **A7.8 Repair, restore and reconstruct engineering and technical infrastructure facilities**

- A7.8.1 Remove a facility of engineering and technical infrastructure for repairs and restoration or reconstruction

A7.8.2 Remove units, components, parts and equipment from a facility of engineering and technical infrastructure for repairs or reconstruction

A7.8.3 Carry out incoming inspection of components, spare parts and materials removed from a facility of engineering and technical infrastructure for repairs or reconstruction

A7.8.4 Store units and parts for repairs and reconstruction of engineering and technical infrastructure facilities and issue them from warehouses of maintenance departments

A7.8.5 Organize and carry out work to repair or reconstruct a facility of engineering and technical infrastructure

A7.8.6 Install operational units, components and parts of an engineering and technical infrastructure facility as part of its repair or reconstruction

#### **A7.9 Manage water, discharge and waste treatment**

A7.9.1 Operate water, discharge and waste treatment systems

### **A8 Manage information systems and IT infrastructure equipment**

#### **A8.1 Determine configuration of information systems and IT infrastructure equipment of our company and develop plans for supplying such systems and equipment**

A8.1.1 Analyze requirements for information systems and IT infrastructure equipment of our company

A8.1.2 Analyze failures of information systems and IT infrastructure equipment of our company

A8.1.3 Forecast failures of information systems and IT infrastructure equipment of our company

A8.1.4 Determine need for purchasing, developing or upgrading of information systems and IT infrastructure equipment of our company

A8.1.5 Schedule purchase or production of new or upgrade of existing information systems and IT infrastructure equipment of our company

#### **A8.2 Schedule maintenance and repairs of information systems and IT infrastructure equipment of our company**

A8.2.1 Schedule routine maintenance of information systems and IT infrastructure equipment of our company

A8.2.2 Schedule repairs of IT infrastructure equipment of our company

A8.2.3 Identify need for spare parts and materials to maintain and repair IT infrastructure equipment of our company

A8.2.4 Identify need for outside services to maintain information systems and IT infrastructure equipment of our company

#### **A8.3 Carry out ongoing maintenance of information systems and IT infrastructure equipment of our company**

A8.3.1 Monitor state of information systems and IT infrastructure equipment of our company

A8.3.2 Carry out routine maintenance of information systems and IT infrastructure equipment of our company

A8.3.3 Carry out primary failure diagnosis of information systems and IT infrastructure equipment of our company

#### **A8.4 Purchase information systems and equipment for IT infrastructure of our company**

A8.4.1 Select suppliers of information systems and equipment for IT infrastructure of our company

A8.4.2 Contract with a supplier of information systems and equipment for IT infrastructure of our company

A8.4.3 Manage ongoing supplies of information systems and equipment for IT infrastructure of our company

A8.4.4 Receive and store equipment for IT infrastructure of our company

A8.4.5 Settle disputes with suppliers of information systems and equipment for IT infrastructure of our company

A8.4.6 Evaluate suppliers of information systems and equipment for IT infrastructure of our company

#### **A8.5 Repair (restore) or upgrade information systems or IT infrastructure equipment of our company**

A8.5.1 Prepare repairs to or upgrade of an information system or IT infrastructure equipment of our company

A8.5.2 Decommission an information system or IT infrastructure equipment of our company

A8.5.3 Repair (restore) or upgrade an information system or IT infrastructure equipment of our company

## **A8.6 Design or improve information systems of our company**

A8.6.1 Develop design documentation to build or improve information systems of our company

A8.6.2 Design or improve software for information systems of our company

A8.6.3 Prepare supporting documentation for information systems of our company

## **A8.7 Put information systems or IT infrastructure equipment of our company into operation**

A8.7.1 Install an information system or IT infrastructure equipment of our company

A8.7.2 Set up a newly launched information system or IT infrastructure equipment of our company

A8.7.3 Test a newly launched information system or IT infrastructure equipment of our company

A8.7.4 Design documentation and operations manuals for a newly launched information system or IT infrastructure equipment of our company

A8.7.5 Provide orientation courses for users of a new information system or IT infrastructure equipment of our company

A8.7.6 Commission an information system or IT infrastructure equipment of our company

## **A9 Dispose of waste, rejects and unmarketable stock**

### **A9.1 Collect and sort waste and rejects from departments**

A9.1.1 Deliver waste and rejects from departments for processing

A9.1.2 Sort waste and rejects for further processing

### **A9.2 Sell unmarketable stock, waste and fixed assets**

A9.2.1 Price fixed assets, unmarketable stock and waste being sold

A9.2.2 Search for buyers of unmarketable stock, waste and fixed assets

A9.2.3 Contract with buyers of unmarketable stock, waste and fixed assets

A9.2.4 Ship unmarketable stock, waste and fixed assets to buyers

### **A9.3 Process waste and rejects into production resources**

A9.3.1 Determine methods of processing waste and rejects into production resources

A9.3.2 Process waste and rejects into resources required for product manufacturing

## **A10 Manage human capital**

### **A10.1 Plan personnel recruitment**

A10.1.1 Analyze personnel requirements

A10.1.2 Analyze skill pools

A10.1.3 Estimate personnel requirements

A10.1.4 Plan steps to recruit personnel

### **A10.2 Select personnel**

A10.2.1 Implement steps to recruit personnel

A10.2.2 Assess a candidate's competence

A10.2.3 Assess a candidate's dependability

A10.2.4 Negotiate salary and working conditions with a candidate

A10.2.5 Sign an employment contract with a candidate

### **A10.3 Integrate new employees into the working environment**

A10.3.1 Provide health and safety training

A10.3.2 Implement programs for engaging a new employee into his/her job

A10.3.3 Assess suitability of a new employee based on the results of his/her trial period

### **A10.4 Appraise employee performance and manage employee development**

A10.4.1 Appraise employee performance



A10.4.2 Create individual employee development plans

A10.4.3 Organize personnel training

### **A10.5 Ensure employee capability**

A10.5.1 Provide periodic training for personnel

A10.5.2 Ensure that the working environment meets all applicable standards

A10.5.3 Organize corporate events

A10.5.4 Organize internal PR events

### **A10.6 Manage employee rotation and dismissal**

A10.6.1 Manage an employee's promotion and demotion

A10.6.2 Manage an employee's temporary absence (annual leave, sick leave)

A10.6.3 Manage an employee's termination

## **A11 Finance business activity and settle accounts**

### **A11.1 Perform budgeting**

A11.1.1 Manage budgeting at department level

A11.1.2 Prepare consolidated budgets

A11.1.3 Create balance-sheet forecasts

### **A11.2 Forecast incomes for a short-term period and monitor incomes**

A11.2.1 Forecast incomes on core activities for a short-term period

A11.2.2 Forecast incomes on secondary activities for a short-term period

A11.2.3 Forecast incomes on investments for a short-term period

A11.2.4 Monitor incomes

### **A11.3 Estimate expenditure**

A11.3.1 Regulate business units' expenditure in excess of budget

A11.3.2 Assess expenses for accounts payable

A11.3.3 Assess expenses for loan servicing and repayment

A11.3.4 Calculate payroll

A11.3.5 Assess payments to extra-budgetary funds

A11.3.6 Calculate dividend payments

A11.3.7 Calculate tax payments

### **A11.4 Balance a payment schedule and identify need for financial resources**

A11.4.1 Balance a payment schedule

A11.4.2 Assess extent of fundraising needs

A11.4.3 Determine deadlines for and marginal rates of loan raising

### **A11.5 Provide financial resources**

A11.5.1 Manage returns on investment

A11.5.2 Invest free cash flows

A11.5.3 Manage loan raising

### **A11.6 Manage settlements**

A11.6.1 Prepare a daily payment schedule

A11.6.2 Make payments

### **A11.7 Prepare financial statements**

A11.7.1 Collect and process source documents

A11.7.2 Document business operations in accounting records

A11.7.3 Prepare management statements

A11.7.4 Close accounting periods

A11.7.5 Prepare internal accounting reports

A11.7.6 Prepare accounting statements for external reporting purposes