InTechProject

Corporate information system

Operational Concept

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| APPROVED BY | AGREED WITH |
| CEO  InTechProject | Project Manager from organization side  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date |
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APPROVAL SHEET

AGREED WITH:

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REPRESENTATIVES OF INFORMATION SYSTEM DEVELOPER:

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| Title |  | Signature |  | Name |  | Date |

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Terms and Definitions

|  |  |  |
| --- | --- | --- |
| *{Border}* | – | External producer or receiver of an arrow. Name is not specified in case of unambiguous understanding by diagram readers or in case of ambiguity. |
| *{Tunnel}* | – | Producer or receiver of an arrow. Name is not specified in case of unambiguous understanding by diagram readers. |
| *Function Controls* | – | Conditions regulating correct function performance. |
| *Function Mechanisms* | – | Resources (technological, work) used to perform a process. These are not fully consumed when performing one iteration of process. |
| *Organizational Management Structure* | – | Set of specialized functional units interconnected in the process of substantiation, development, adoption and implementation of managerial decisions (hereinafter referred to as the Organizational Structure). |
| *Process (Business Process)* | – | A series of tasks with a clearly defined start and end time, aimed at achieving a particular outcome valuable for an organization. |
| *Process Actors* | – | Resources (technological, work) used for performing a process. |
| *Process Inputs* | – | Resources (material, information) needed to perform a process and transformed by a process into outcomes. |
| *Process Outputs* | – | Resources (technological, work) produced by a process. These are used to perform other processes or consumed by external customers. |
| *Process Owner* | – | A person who is accountable for the process result and has the authority to add or remove resources that affect the process performance. |
| *Sub-Process* | – | A process that is a part of the upper process. |
| IS | – | Information System |

# Introduction

## Software Name

Full name of the Software is Corporate information system.

## Brief Description of Scope

<Describe here application of Information System. Insert in the report template.>

# Development Basis

## Basis for Project Development

<This section should contain information on the basis for project development, for example, information about a contract. Insert in the report template.>

## Project Name and Designation

<This section should contain information relating to the name and designation of the project or implementation of the software. Insert in the report template.>

# Purpose of the Project

## Functional Purpose

<This section should indicate the functional purpose of the project. For example:>

The functional purpose of the Information System is to automate core business processes of InTechProject.

## Operational Purpose

<This section should indicate the operational purpose of the project. For example:>

The Information System is to be operated by employees of the structural divisions of the company whose processes are to be automated.

# Requirements to Information System

## Processes to be Automated

### A3 Manage human resourses

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Head of HR Department | HR Department |  |

#### End Boundary

Capable personnel with necessary qualifications in a sufficient quantity for the organization's activity.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A3.3 Organize personnel training | HR Department | Application for staff training |  |  | 03. Personnel records and payroll system |  |
| Plan of staffing requirements |
| 2. | A3.4 Integrate new employees into the working environment | HR Department | Plan of staffing requirements |  |  | 03. Personnel records and payroll system |  |
| 3. | A3.6 Manage employee rotation and dismissal | HR Department |  |  |  | 03. Personnel records and payroll system |  |

### A4.1 Plan projects

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Director of Operations | InTechProject |  |

#### End Boundary

Project plan, project requirements specification, and project tasks.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A4.1.6 Draw up and issue project tasks | Project Manager | Project plan | Project tasks |  | 010101. Form project tasks |  |
| Project requirements specification |

### A4.2.1 Perform pre-project survey

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Project Manager | InTechProject |  |

#### End Boundary

Pre-project survey documentation drawn up and approved.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A4.2.1.2 Draw up pre-project survey report | Leading Engineer |  | Pre-project survey report | Within one working day after a pre-project survey is over. | 010103. Form pre-project survey report | On the basis of information established during a pre-project survey, process actor draws up a report and submits it for approval. |
| 2. | A4.2.1.4 Draw up certificate of completion | Accountant | Pre-project survey report | Certificate of completion | Within one working day. | 02. Accounting system | Process actor draws up a certificate of completion in two copies. |

### A4.2.2 Draw up and analyze Technical Design

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Director of Operations | InTechProject |  |

#### Start Boundary

Starting boundary is defined by the following events:

| No. | Event | Function Performed |
| --- | --- | --- |
| 1. | Pre-project survey documentation is drawn up and approved | A4.2.2.1 Analyze pre-project survey documentation |

#### End Boundary

Technical Design drawn up and approved.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A4.2.2.2 Draw up and analyze Technical Design | Leading Engineer | Preliminary design | Technical Design | Within five working days. | 010104. Form Technical Design |  |
| Pre-project survey report |
| Project tasks |
| Technical Design |

### A4.2.3.3 Perform construction and installation operations

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Project Manager | InTechProject |  |

#### Start Boundary

Receipt of approved Technical Design, specification, and necessary materials and instruments; subcontract is signed.

#### End Boundary

System installed.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A4.2.3.3.7 Draw up report on construction and installation works | Project Manager | Certificate of completion | Report on construction and installation works | Within three working days. | 010105. Form report on construction and installation works |  |
| Report on construction and installation works |

### A4.2.5 Perform start-up works

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Project Manager | InTechProject |  |

#### Start Boundary

End of construction and installation works, receipt of documentation.

#### End Boundary

System that is up and running in an operational condition.

#### Duration Requirements

Timeframes are determined in accordance with model standards.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A4.2.5.2 Create report on start-up works | Technician | Executive documentation | Report on start-up works | Within one working day. | 010106. Form report on start-up works | On the basis of information concerning the course of start-up works, Technician draws up a report on completed start-up works specifying time periods and conditions when and under which these works were carried out. |

### A4.3.1 Put system into operation

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Project Manager | InTechProject |  |

#### Start Boundary

End of start-up works.

#### End Boundary

Effective system, put into operation.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A4.3.1.4 Add delivery documentation to project folder | Project Manager | Delivery documentation | Delivery documentation | Within one working day. | 010107. Accounting for putting system into operation |  |
| Statement on entry into service | Statement on entry into service |

### A5 Manage instrument

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Head of Engineering Department | Engineering Department |  |

#### End Boundary

Instrument workable.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A5.4 Store and issue instrument | Engineering Department |  |  |  | 01020102. Accounting for the transfer of materials and instruments to production |  |

### A6 Manage procurement

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Head of Procurement Department | Procurement Department |  |

#### End Boundary

Suitable materials and instruments.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A6.1 Develop procurement plan | Head of Procurement Department | Application for materials | Procurement plan |  | 010102. Form purchasing plan |  |
| Instrument purchase request |
| Payment budget |
| 2. | A6.5 Store and distribute material assets | Warehouseman |  |  |  | 01020102. Accounting for the transfer of materials and instruments to production |  |

### A6.2 Find and select suppliers

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Head of Procurement Department | Procurement Department |  |

#### Start Boundary

Starting boundary is defined by the following events:

| No. | Event | Function Performed |
| --- | --- | --- |
| 1. | Project task received | A6.2.1 Search information about suppliers |

#### End Boundary

Supplier selected.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A6.2.7 Enter information about selected supplier into database | Procurement Manager |  |  | Within one working day after a tender is over and a supplier is selected. | 0103. Maintain common directories | After informing a supplier of tender results, responsible employee enters information about the selected supplier into the organization's database of trustworthy suppliers. |

### A6.4 Purchase materials and instruments

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Head of Procurement Department | Procurement Department |  |

#### Start Boundary

Supply contract is drawn up legally.

#### End Boundary

Materials and instruments of proper quality reaching the warehouse in the necessary quantities within the set timeframe.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A6.4.9 Log materials and instruments | Warehouseman | Accompanying documentation for materials and instruments | Accompanying documentation for materials and instruments | Within 24 hours after receiving instruments or materials. | 01020101. Register supplier invoice |  |
| Receipt order |
| Supplier invoice |

### A7 Finance activity and settle accounts

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
| 1. | Chief Accountant | Budget and Finance Department |  |

#### End Boundary

Payables within the range of plan values, no claims from tax authorities.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | A7.1 Draw up income and expenditure budget | Budget and Finance Department | Project plan | Consolidated income and expenditure budget |  | 02. Accounting system |  |
| 2. | A7.2 Monitor income | Budget and Finance Department | Contract | Breakdown of receivables |  | 02. Accounting system |  |
| Statement on entry into service |
| 3. | A7.3 Calculate payment amounts | Budget and Finance Department | Supplier invoice | Breakdown of payables |  | 02. Accounting system |  |
| 4. | A7.4 Draw up payment budget | Budget and Finance Department | Consolidated income and expenditure budget | Payment budget |  | 02. Accounting system |  |
| Contract |
| Development strategy |
| Payment order |
| 5. | A7.5 Make payments | Budget and Finance Department | Breakdown of payables | Debt repayment schedule |  | 02. Accounting system |  |
| Contract | Payment order |
| Payment budget |
| 6. | A7.6 Prepare reporting | Budget and Finance Department | Accompanying documentation for materials and instruments |  |  | 02. Accounting system |  |
| Certificate of completion |
| Debt repayment schedule |
| Delivery documentation |
| Executive documentation |
| Pre-project survey report |
| Receipt order |
| Report on construction and installation works |
| Report on start-up works |
| Site acceptance statement |
| Site delivery statement |
| Statement of start-up works |
| Statement on entry into service |
| Technical Design |

### RP1 Register and sign contract

#### Process Owner

| No. | Position | Department | Activity Object |
| --- | --- | --- | --- |
|  |  |  |  |

#### Start Boundary

Starting boundary is defined by the following events:

| No. | Event | Function Performed |
| --- | --- | --- |
| 1. | Contract agreed | RP1.1 Register contract |

#### End Boundary

Contract concluded.

#### Process Diagram

|  |
| --- |
| title |

#### Process Steps to Be Automated

| No. | Process Step | Actors | Documents Used | | Duration Requirements | IS Function | Instructions |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs | Outputs |
| 1. | RP1.1 Register contract | Lawyer |  | Contract | Within one working day. | 0103. Maintain common directories |  |
| 2. | RP1.2 Allocate contract a registration number |  | Contract | Contract | Within one working day. | 0103. Maintain common directories |  |

## Information System Structure

#### Modules and Functions of Information System

| No. | Module | Function |
| --- | --- | --- |
| 1. | 01. Project Management System |  |
| 2. | 0101. Manage project | 010101. Form project tasks |
| 010102. Form purchasing plan |
| 010103. Form pre-project survey report |
| 010104. Form Technical Design |
| 010105. Form report on construction and installation works |
| 010106. Form report on start-up works |
| 010107. Accounting for putting system into operation |
| 3. | 0102. Manage warehouse |  |
| 4. | 010201. Manage purchasing | 01020101. Register supplier invoice |
| 01020102. Accounting for the transfer of materials and instruments to production |
| 5. | 010202. Manage sales |  |
| 6. | 0103. Maintain common directories |  |
| 7. | 02. Accounting system |  |
| 8. | 03. Personnel records and payroll system |  |

## Modules and Functions of Information System to Be Developed

### Modules of Information System to Be Developed

| № | Module |
| --- | --- |
|  | 010202. Manage sales |

### Functions of Information System to Be Developed

| № | Module | Function |
| --- | --- | --- |
| 1. | 0101. Manage project | 010104. Form Technical Design |
| 010105. Form report on construction and installation works |
| 010106. Form report on start-up works |
| 010107. Accounting for putting system into operation |
| 2. | 010201. Manage purchasing | 01020102. Accounting for the transfer of materials and instruments to production |

## Workstations to Be Automated

### InTechProject

### **InTechProject**

| No. | Position | IS Functions Used | | |
| --- | --- | --- | --- | --- |
| Process | Sub-process | IS Function |
| 1. | Lawyer | RP1 Register and sign contract | RP1.1 Register contract | 0103. Maintain common directories |
| 2. | Leading Engineer | A4.2.1 Perform pre-project survey | A4.2.1.2 Draw up pre-project survey report | 010103. Form pre-project survey report |
| A4.2.2 Draw up and analyze Technical Design | A4.2.2.2 Draw up and analyze Technical Design | 010104. Form Technical Design |
| 3. | Project Manager | A4.1 Plan projects | A4.1.6 Draw up and issue project tasks | 010101. Form project tasks |
| A4.2.3.3 Perform construction and installation operations | A4.2.3.3.7 Draw up report on construction and installation works | 010105. Form report on construction and installation works |
| A4.3.1 Put system into operation | A4.3.1.4 Add delivery documentation to project folder | 010107. Accounting for putting system into operation |
| 4. | Technician | A4.2.5 Perform start-up works | A4.2.5.2 Create report on start-up works | 010106. Form report on start-up works |

### Budget and Finance Department

### Budget and Finance Department

| No. | Position | IS Functions Used | | |
| --- | --- | --- | --- | --- |
| Process | Sub-process | IS Function |
| 1. | Accountant | A4.2.1 Perform pre-project survey | A4.2.1.4 Draw up certificate of completion | 02. Accounting system |

### Procurement Department

### Procurement Department

| No. | Position | IS Functions Used | | |
| --- | --- | --- | --- | --- |
| Process | Sub-process | IS Function |
| 1. | Head of Procurement Department | A6 Manage procurement | A6.1 Develop procurement plan | 010102. Form purchasing plan |
| 2. | Procurement Manager | A6.2 Find and select suppliers | A6.2.7 Enter information about selected supplier into database | 0103. Maintain common directories |
| 3. | Warehouseman | A6 Manage procurement | A6.5 Store and distribute material assets | 01020102. Accounting for the transfer of materials and instruments to production |
| A6.4 Purchase materials and instruments | A6.4.9 Log materials and instruments | 01020101. Register supplier invoice |

## Performance Requirements

### List of Reports

The following reports should be generated automatically by the System:

| No. | Report |
| --- | --- |
|  | Breakdown of payables |
|  | Breakdown of receivables |
|  | Consolidated income and expenditure budget |
|  | Pre-project survey report |
|  | Procurement plan |
|  | Project tasks |
|  | Receipt order |
|  | Report on construction and installation works |
|  | Report on start-up works |
|  | Technical Design |

<Specific functional requirements for the system should be listed below. For example:>

### Requirements to Production Planning and Control System

The Information System should provide resource planning and order production management.

IS Functionality Requirements:

1. Manage configuration of the finished product (FP):

* Keep normative and reference information on the composition of the FP with the option of indicating the period of relevance of the specifications and manufacturing the FP with a range of different specifications;
* Maintain normative and reference information on the manufacturing technology of all parts of the finished product with the option of indicating the period of relevance of those technologies and manufacturing the FP with a range of different technologies;

1. Manage Sales:

* View the history of client relationships;
* Register/adjust a client application with an indication of the list of FPs, volumes, dates of shipment, pricing, and any other relevant conditions;
* View the current economic indicators (calculations) of the ordered FPs;

1. Plan Production:

* Generate a schedule for the availability of equipment, indicating the number of available standard hours for each day of the planned period;
* Generate a production plan indicating the manufactured product, its quantity, the equipment used and the business units deployed on each day of the planned period;
* Generate a list of production requirements in terms of materials and components;
* Control and manage the machinery workload under the given production plan;
* Adjust the production plan at the time of its execution;
* A plan vs actual analysis of the production plan;

1. Manage Production:

* Generate a list of shift-based working duties (orders) for the product manufacturing;
* Establish/re-establish orders linked to the implementation of work with an indication of the relevant employees, the number of manufactured products, the number of defective products and the causes of any faulty workmanship;
* Manage storage and movement of inventory items (goods and materials) used in the production process;

1. Manage Supply:

* Generate purchase orders for the materials and components, indicating the suppliers, nomenclatures of goods and materials, quantities and delivery times;
* Generate purchase orders for the one-off purchase of goods and materials from company-owned departments;
* Control and track purchase order process;
* Operational control of any leftover stock;
* Plan vs actual analysis of deliveries;

1. Manage Costs:

* Breakdown planned (normative) cost of the FP;
* Determine actual production costs;
* Calculate actual cost of the FP;
* Plan vs actual cost analysis.

### Requirements for Calculating the Standard Order Cost

The standard cost of the product and the entire order shall be calculated using the following method:

1. Direct material component of the standard cost of a product shall be based on the standard composition of the product (specification) and the established prices for the inventory items included in the specification. Multiple material cost entries are permitted in this specification.
2. The total amount of wages paid shall be calculated on the basis of the standard operational composition of the product. The following data must be provided: the standard time of each operation and the profession and category of the worker required to perform the operation. The standard hourly rates payable for the professions and categories of the workers engaged should also be provided.
3. Indirect costs shall be calculated as a percentage of the specified base costs (i.e. the sum of the direct costs for the specified item).

In order to make this calculation, the following data must be available in the Information System:

1. The manufacturing specification for the product (as well as the manufacturing specifications for all semi-finished products manufactured in-house and included in the finished product);
2. The manufacturing technology used for the product and any semi-finished products included in it: operations to be performed and the time taken. In addition, the profession and category of the employee required for its implementation (for the production of this particular product) shall be specified for each operation;
3. A list of the prices of all goods and materials used;
4. The standard hourly rates of all professions and categories involved.

### Requirements for Calculating the Actual Cost of an Order

The actual cost of the product and the entire order shall be calculated using the following method:

1. Direct material costs for the manufacture of a product shall be calculated based on the data recorded by the workshop for the consumption of material in the given production process. The cost of all semi-finished products included in the product must be calculated first. An estimate of cost is to be carried out in accordance with the methodology adopted in the accounting policy of the company.
2. The wages of employees directly involved in the production process shall be calculated based on workshop order completion data. Where orders are not recorded in the IS, wage payments shall be based on direct costs subject to distribution, i.e. distribution among the manufactured products on an agreed basis.
3. Depreciation of production equipment shall be included as a direct cost where the given equipment (machine tool) is used at each stage of the process.
4. Direct costs subject to distribution are also allocated for:

* basic materials consumed less frequently than in the production process (for example, chemicals, where the usage per unit of production is so small that it makes no sense to apportion cost in accordance with the rates of consumption);
* wage payments to workers, where there is no information on distribution in proportion to turnover;
* depreciation of equipment, where only monthly totals are available and where there is no cost breakdown in respect of production process.

Such costs shall be allocated to the manufactured products in accordance with the distribution method selected (for example, as a proportion of direct material costs).

1. General production costs: are distributed to manufactured items proportionally in accordance with the method selected. Such expenses may or may not remain work-in-progress, depending upon the accounting policy adopted by the company.
2. General operating and sales expenses shall be recognized as expenses incurred in the current accounting period and related to sales. The manner in which such costs contribute to the final cost price of the finished product can be viewed in a special report.

### Requirements for Information System Performance

<This section should contain requirements relating to the performance of the Information System. Insert in the report template>.

## Reliability Requirements

<This section should contain requirements relating to the reliability of the Information System. For example:>

### Requirements for Ensuring Reliable (Stable) Functioning of the Information System

Reliable (stable) functioning of the Information System must be ensured through the Client’s implementation of organizational and technical measures a list of which is given below:

1. Organization of non-interruptible power supply for technical equipment;
2. Use of licensed software;
3. Compliance with Rules and Regulations;
4. Regular backup of the Information System databases either by means of the Information System itself or by means of a database management system.

### Recovery Time from Failure

Recovery time from failure caused by a power outage affecting the hardware (or by other external factors), where the failure of the operating system is not fatal (i.e. is not a crash), should not exceed the time needed to reboot the affected hardware and software, provided the said rebooting complies with the operating conditions of the given hardware and software.

Recovery time after a failure caused by a hardware malfunction, a fatal failure (crash) of the operating system, should not exceed the time required to troubleshoot the hardware and reinstall the software.

### Failures Due to Incorrect Operator Actions

Failures of the Information System are possible due to the incorrect actions of the operator (user) whilst interacting with the operating system. In order to avoid such program failures, end users should be able to work without any kind of administrative privilege.

## Operating Conditions

<This section should contain requirements relating to the use of the Information System. For example:>

### Climatic Operating Conditions

Climatic conditions of the operation of the Information System must be specified and match the specific operating requirements of the hardware and software.

### Maintenance Requirements

The Information System does not require any kind of maintenance.

### Personnel Requirements and Their Qualifications

Personnel numbers must be sufficient to ensure that all automated processes in the Information System are fully implemented.

Information System operation requires a system administrator and an Information System end user, i.e. the operator.

The system administrator shall be technically educated and hold training certificates issued by the Information System manufacturer. The list of tasks performed by the system administrator shall include:

1. Maintenance of the proper operating performance of the hardware and software;
2. Setting up (installation) and maintenance of the system software;
3. Installation of the Information System;
4. Maintenance and modification of the Information System.

The end user (operator) shall have previous practical experience working with the graphical user interface of the operating system. All personnel must hold electrical safety qualifications.

The required number of users will be determined at the stage of implementation of the Information System.

## System Composition and Hardware/Software Parameter Requirements

<This section should contain requirements regarding the system composition and hardware/software parameters. Insert in the report template.>

## Information and Software Compatibility Requirements

### Requirements for Information Structure and Solution Methods

<This section should contain requirements for information structure and solution methods. Insert in the report template.>

### Source Code and Programming Language Requirements

<This section should contain requirements regarding source codes and programming languages. Insert in the report template.>

### Requirements for software used by the Information System

<This section should contain the requirements for software used by the Information System. Insert in the report template.>

### Requirements for the protection of information and the Information System

<This section should contain the requirements for the protection of information and the Information System. Insert in the report template.>

## Labeling and Packaging Requirements

There are no special requirements for labeling and packaging.

## Transportation and storage requirements

There are no special requirements for transportation and storage.

## Special Requirements

<This section should contain special requirements. For example:>

The Information System should provide interaction with the user (operator) by means of a graphical user interface.

# Requirements for the Documentation

## Preliminary Composition of the Documentation

Documentation should include:

1. Operational Concept: the purpose and scope of the Information System, all technical, economic and special requirements relating to the Information System, details of the necessary stages and project deadlines, and the various types of tests;
2. Explanatory notes: an algorithm schematic diagram, a general description of the algorithm and/or the operation of the program, as well as a justification of the technical and economic decisions taken;
3. Operator’s Manual: information to ensure good communication between the operator and the Information System during system operation.

# Economic Indicators

<This section should contain information on the cost effectiveness of system implementation. Insert in the report template.>

# Project Development Stages

<This section should contain special requirements. For example:>

Development of the Information System shall be carried out unit by unit. The content, volume, project deadline and cost are to be determined for each unit and drawn up as separate additions to the contract. Each unit shall be developed in accordance with the development stages listed below.

## Project Stages

The Information System project shall comprise the following stages:

1. Operational Concept;
2. Working Draft;
3. Implementation.

## Development Stages

The following steps shall be implemented to develop Operational Concept:

1. Develop Operational Concept (or revise the existing one);
2. Agree Operational Concept;
3. Approve Operational Concept.

The following tasks shall be implemented at the Design stage:

1. Information System Development;
2. Development of the Documentation;
3. Information System Testing.

The following tasks shall be implemented at the Implementation stage:

1. Operational testing of the Information System;
2. Refinement of the Information System and Documentation;
3. Commercial operation of the Information System.

## Steps Description

The following tasks shall be implemented at the Operational Concept Development stage:

1. Statement (clarification) of the problem;
2. Determination and clarification of hardware/software requirements;
3. Determination of any additional Information System requirements;
4. Determination of the project stages, the deadlines, the Information System and its documentation development stages;
5. Identification of the key client users and assignment of their individual task responsibilities;
6. Determination of the need for external modules and the programming languages linked thereto;
7. Coordination and approval of the Operational Concept.

All programming and debugging activities should be carried out at the Design stage.

At the Documentation Development stage, all program documentation should be drawn up.

At the Testing stage, the Information System shall undergo two types of tests:

1. Internal testing following the delivery of the Information System for trial operation by the developer. Here, the following activities shall be performed:

* development, agreement and approval of the order in which the tests are to be carried out, and their methodology;
* testing;
* registration of test results;
* adjustment of the Information System and Documentation based on the test results.

1. Client-side testing of the Information System during trials and commercial operation. Here, the following activities shall be performed:

* determination and localization of defects in the Information System;
* registration of the defects into a defect register with detailed descriptions of the fault conditions;
* elimination of the defect, re-adjustment of the Information System and the Documentation based on the results of both test and commercial operation.

The following activities shall be performed at the test and commercial operation stage:

1. Allocation of automated workstations to the users of the Information System, assigning functionality and handing over the relevant set of operator manuals;
2. Preparation and transfer of the Information System together with documentation for use in the Client’s business unit subdivisions;
3. User training on Information System operation and registration of their results;
4. Consulting users on any emerging issue linked to the operation of the Information System;
5. Practical help with any accounting issues linked with the Information System.

# Control and Acceptance Procedure

After each unit passes the Information System operational stage, a System Acceptance Certificate shall be drawn up and approved by the representatives of the signatory parties to the Agreement on Information System Development, or by persons authorized by the said representatives.

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