

REQUEST FOR PROPOSAL

Technical assistance services; Development of business process management system for Turkish Employment Agency

UNDP-TUR-RFP(KFW)-2019/01

SECTION 5. TERMS OF REFERENCE

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Abbreviations

Abbreviation	Definition
AIX	Advanced Interactive Executive
API	Application Programming Interface
BPM	Business Process Management
BPMN	Business Process Model and Notation
CMIS	Corporate Management Information System
JVC	Job and Vocational Consultants
ISO	International Organization for Standardization
ISKUR	Turkish Employment Agency
IT	Information Technology
LDAP	Lightweight Directory Access Protocol
ORM	Object Relational Mapping
SLA	Service Level Agreement
SSO	Single Sign-on
SR	Service Request
SMTP	Simple Mail Transfer Protocol
SQL	Structured Query Language
ToR	Terms of reference
UI	User Interface
UNDP	United Nations Development Programme

Definitions

Abbreviation	Definition
Beneficiary	Turkish Employment Agency, İŞKUR
BPM-Case Management	The proposed BPM solution must have case management capabilities. Case management refers to the complex processes with capabilities of electronic workflows, human interaction, collaborations, document collection (in this sense, image and content storage) capabilities, which are dealt with by the business owner after passing through various stages by being treated as an electronic case folder in a case integrity. In the design and development environment, there must be components that correspond to the case configuration (case stages, steps, file management, etc.) and capabilities for case management.
Level 1 Business Process	High-level processes of strategic importance with direct impact on business results
Level 2 Business Process	Processes that form the main processes and interact with each other, supporting the main process
Level 3 Business Process	Activities that make up processes and concern two or more functions
Level 4 Business Process	Activities performed by one or more people within the same function and forming subprocesses
Level 5 Business Process	Atomic activities performed by several people
Platform	Strategic Planning and Quality Management Platform with Business Processes
Service	All activities of the Contractor within the scope of this terms of reference

1. Background Information, Rationale and Project Description

UNDP supports the Government of Turkey to respond to the Syrian Crisis through its Syria Crisis Response and Resilience Programme in Turkey to strengthen the resilience of refugees, host community members, local municipalities and relevant national institutions to cope with and recover from the impact. UNDP's resilience response strategy is to invest in existing national and local systems to ensure they can adequately serve both host and refugee communities.

UNDP uses a resilience-based development approach which focuses on investing in existing national and local systems to ensure they can adequately serve both host and Syrian communities. As part of UNDP Syria Crisis Response and Resilience Programme in Turkey, Employment and Skills Development Projects supports Syrians and vulnerable host community members to access the local labour market. The project will do so through strengthening the institutional capacity of İŞKUR to expand active labour market services and adjust capacities and services where needed to respond to the demand for services for both Turkish and Syrian job seekers.

Within the scope of the Project, business process management system will be developed considering both immediate and medium-term needs of İŞKUR to strengthen its services targeting Syrians and Turkish citizens.

Background Information

ISKUR was originally founded as the Labour and Employment Agency in 1946 and was subjected to a radical transformation by virtue of the Law numbered 4904 on Employment Agency of Turkey, which was put into effect after its promulgation in the 25159th issue of the Official Gazette on 05.07.2003, in order to respond to globalization that began in the 1980s, technological advances, and new "paradigms" in labour markets resulting from the information society; to assist in actions aimed at preserving, developing, and extending employment and preventing unemployment; and to provide unemployment insurance services.

The new law has extended the ISKUR's area of responsibility so that it acquired a structure enabling it to offer conventional employment and labour supply services while implementing active and passive labour policies. An inclusive organizational model open to social dialogue was adopted and a General Assembly which also included the representatives of public agencies, civil society organizations, and the academia was established in order to assist development of Turkey's employment policy. A Board of Directors composed of the representatives of workers, employers, storekeepers, and tradesmen among others was set up as the ISKUR's organ with management, decision-making, powers, and responsibilities at the highest level. In provinces, Provincial Employment and Occupational Training Committees were founded to promote local initiatives for regional development and to formulate local employment policies.

In 2011 and 2012, 4255 "Job and Vocational Consultants (JVCs)" were employed to provide services to the unemployed and matching them with vacancies and the number of personnel continued to increase in the following years. İŞKUR has implemented several capacity building and service improvement projects for expanding counselling services and organisation of in-service trainings in the last three years.

The administrative structure of İŞKUR consists of the General Directorate in Ankara, Provincial Directorates in 81 provinces, 77 Service Centres and 2720 service points. As of 06.11.2019, İŞKUR has 8,888 employees except for worker status. 8326 of these people work in the Provincial Directorates and 4766 serve as JVC.

İŞKUR's roles and responsibilities are constantly extending and it is becoming more visible in the eyes of the public due to its role. It offers services to a larger group because of its new roles and responsibilities. It is developing customized programs for different groups, including Syrians Under Temporary Protection Status and these services and programs are delivered to a large group through efficient use of social media.

There are high expectations that İŞKUR shall efficiently offer services of high quality demanded and needed by the potential target group which is growing amid a process of diversification on the supply and demand site of the labour market because of the changing structure of the labour market and new emerging needs. Being aware of

this fact, İŞKUR is observed to be making efforts to enhance its institutional capacity to respond to those expectations in a timely manner and meeting high standards in a dynamic process.

From this perspective, it is observed that it is necessary to analyse business processes in detail, to optimize them in line with the best practices, to digitalize processes that are capable of being digitalized, to identify that could be automatic through robotic process automation, and to switch them to automation. The organization structure should be revised according to business processes, the roles and authorization should be clarified and documented, and the task requirements need to be established.

Rationale

For institutional performance and a sustainable business workflow; business processes are expected to be properly defined and run under an appropriate organizational structure. In this context, the findings of the current status of İŞKUR are listed below.

- There is a need for standardization and documentation of business processes and documentation of job descriptions from a similar point of view. Process performance measurement is not currently performed and there may be repeated or unnecessary operations within some process flows; they are time consuming and have no impact on the quality of services offered to the citizen / target audience.
- As a result of the human resources examinations, the needs identified regarding the processes are as follows:
 - Duties, authorities, responsibilities, knowledge, skills and experience of the workforce, education and job descriptions are not sufficiently developed.
 - The measurement and evaluation criteria of business processes are not adequately defined.
 - Policies and rules related to business processes are partially available.
 - Integration of related processes with information technologies is not fully realized.
- Work related to business processes was initiated however, it is unclear to what extent the overall business processes are compatible with the current practice .In addition to the identification of business processes, optimization of workflows in line with the process objectives, determination, monitoring and improvement of situational and logical modelling, strengthening of the strategic approach and creation of workflows in electronic environment, monitoring and finalization of job descriptions, task definitions and risks and control mechanisms should be established.
- There is a need to carry out studies on improvement areas within the İSKUR.
- There is a need for sufficient authority, responsibility and decision-making mechanisms to implement the governance mechanism, new technologies, services and other digital applications, including internal authority and approval mechanisms.
- It is observed that some of the jobs that can be automated within İŞKUR and most of the internal communication are carried out manually rather than digital. It has been assessed that there is a potential to increase individual / team performance through motivated and standardized work and processes, which are improved and improved to improve employee experience.
- It is necessary to monitor and manage the technological infrastructure and information activities of the İSKUR in digital environment (warranty tracking, error segmentation, etc.).
- IT processes need to be defined and implemented in a standard way. Monitoring and control mechanisms are needed. There is a need to define which documents and applications shall be used in IT processes, what powers and responsibilities shall be fulfilled, distribution of tasks, responsibility and authority relationships and mechanisms, and ISO 2000 and similar quality management units and systems in related processes.
- Although İŞKUR projects are carried out within the framework of a structured project management approach, tasks, authorities, responsibilities and processes regarding the management of national and international project activities should be determined and put in a standard framework in order to achieve

maximum benefit.

- Clarification of job descriptions should be well documented. It is necessary to create job descriptions according to the existing business processes and then, the optimized business processes. In this context, workloads, norm staff, organization design should be made. In addition, there is a need to increase the number of personnel in some departments within the General Directorate and Provincial Directorates.
- Developing a digital transformation strategy and envisioning of digitalization to the vision and goals of the corporation and increasing the motivation of employees with such awareness workshops on digital strategy is needed. In this context, process and process-oriented task / ownership definitions should be made.
- There is a need for a Project Management Office that provides the necessary authority to the project managers under the central structure, provides instant monitoring-control-reporting opportunity, makes strategic decisions faster, ensures the successful conclusion of a project starting from the execution decisions and monitors the results.

2. Specific Objectives

The overall objective of the project is to increase the corporate performance of İŞKUR and to provide the infrastructure to increase the service satisfaction of the target audience and the job satisfaction of İŞKUR employees as part of its corporate transformation. The specific objective of the project is to increase the institutional capacity of İŞKUR, to determine the business processes for the execution of institutional services and activities, to create business processes by standardization and optimization of these processes, to define these processes with the help of a system and to establish relations with each other, to actualize the organization design, job descriptions of the personnel and the required norm staff work to carry out these business processes.

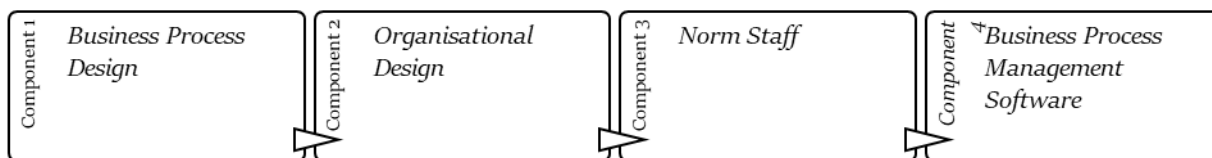
As a result of the project, it is expected that İSKUR would have a more effective organization design, and significantly improved processes (such as services to different target groups including the Syrians Under Temporary Protection), and employees who are empowered and committed to their business.

The project results targeted within the scope of the project are as follows;

1. Analysing business processes and creating process maps to ensure compliance with laws and regulations, thus, increasing efficiency, decreasing bureaucracy and maintaining performance focus.
2. Ensuring the automation of the processes in electronic environment and integrating the processes with the existing operational systems, increasing the traceability of the works and processes.
3. Improving the institutional performance by redesigning the organizational structure in line with the vision and targeted strategies of the İSKUR and defining the required competencies.

3. Scope

In line with the objectives of the project, the Contractor is expected to undertake the activities in four main components;



- Component 1, Business Process Design;

The Contractor shall analyse the existing business processes of İŞKUR and optimize and revise business processes in line with current and future needs, technological developments and strategies.

- Component 2, Organizational Design;

the Contractor shall provide consultancy services to design the organizational structure, to implement the optimized business processes and to prepare the job descriptions of the personnel to carry out the processes

- Component 3, Norm Staff;

The Contractor shall determine the norm staff required by the current processes.

- Component 4, Business Process Management Software;

The contractor shall develop an information system that is user-friendly and able to integrate with existing systems to monitor and improve processes

Component 1- Business Processes Design

Activity 1.1- Analysis

The Contractor shall hold meetings with all service units and departments to collect information on existing processes and document process requirements. The Contractor shall also review examples of successful implementations in similar organizations and shall complete the relevant literature review to understand the best practice requirements for process optimization and organizational design. The outcomes shall be presented to İŞKUR and UNDP as a report. The activities listed below shall be carried out to analyse existing business processes and best practices;

Establishing Process Inventory

- Establishing the existing process model (Level 3¹) and development of the process inventory
- Analysis of the process model (Level 1, Level 2, Level 3 and Level 4) of existing business processes

Activity Based Analysis

- Documentation of activity level (Level 4 and Level 5) processes in flow chart drawings
- Identifying the points that can be digitized in documented processes
- Preparation of IT process flows within the framework of existing processes

Determination of Improvement Areas

- Identifying bottlenecks and determining improvement areas according to best practices and pain points
- Comparative analysis of existing processes according to ISO 20000 Information Technology Service Management Standard
- Executing interviews with stakeholders, beneficiary and the employees to gather information on pain points
- Conducting validation meetings with process owners, including pilot provinces as needed

Activity 1.2- Design

During the Design Phase the process models shall be reviewed and mapped according the target operating model and processes. In this context, the activities listed below shall be carried out by the Contractor;

High Level Redesign

- Defining design principles for the target operating model
- Redesigning the process model (Level 1, Level 2 and Level 3) of the target operating model
- Grouping of processes to be studied by parallel teams on process design. (Since this project will be the basis of many other projects, it is crucial to implement it as quickly as possible. To this end, it is expected to work with a reasonable number of parallel teams (3 or 4 at the same time) to shorten the duration of this work.)

¹ Level 1: High-level processes of strategic importance with direct impact on business results

Level 2: Processes that form the main processes and interact with each other, supporting the main process

Level 3: Activities that make up processes and concern two or more functions

Level 4: Activities performed by one or more people in the same function and forming sub-processes

Level 5: Atomic activities performed by several people

- Determining the processes that can be digitized and how to provide the digitization and revealing the technological needs

Process Optimization

- Based on the analysis, optimizing the activity-based processes (Level 4 and Level 5) in line with the improvement areas on legislation, technology, existing needs, target group and employee experiences. Optimized processes shall be depicted in the form of flow chart drawings, clearly indicating the following;
 - whether the activity is automated and/or digitalized or manual
 - which systems, databases, tools etc. are used for executing the task
 - legal reference of the activity (number and name of law or secondary legislation)
 - data and document requirements for the activity
 - outputs of the activity
 - organizational mapping of the activity (as per the revised organized structure, see Component 2 for the related task)
- Determination of performance M&E indicators of Level 3 processes
- Dissemination of all design documents on the portal

Optimization and Documentation of IT Processes

- Modelling of target processes in line with ISO 20000 Information Technology Service Management Standard specific for İŞKUR. The processes to be established are as follows;
 - Planning the new or changing services
 - Service Level Management
 - Capacity Management
 - Information Security Management
 - Service Continuity and Availability Management
 - Service Budgeting and Accounting
 - Configuration Management
 - Change Management
 - Version and Dissemination Management
 - Event and Service Request Management
 - Problem Management
 - Business Relationship Management
 - Supplier Management
- Establishment of performance indicators for each Level 3 process
- Establishment of authorization and approval matrices and procedures
- Defining system requirements
- Establishment of a management model to ensure the up-to-date processes

Activity 1.3- Road Map for Process Implementation

After the analysis, the Contractor shall create a road map / plan for purchasing the system / application / software. The Procurement Plan shall include the following items;

- System Architecture
- System Access
- System Security
- Authorisation
- Integration with External Systems
- Integration with Internal Systems
- Workflow Module
- Form Management

- Identity Management
- New software, package programs, etc.
- Infrastructure requirements
- Risk management

The Contractor shall also identify the organizational changes that may be needed to ensure the execution of the designed operations and identify other institutional capacity building elements (collaborations, new competencies, etc.) necessary to carry out the designed processes and to place them in the implementation plan.

Component 2- Organisational Design

Within the scope of this component, literature studies shall be conducted, and face-to-face meetings shall be executed with different units of İŞKUR (including pilot provinces).

The Contractor shall initiate the organizational design works following the delivery of the target process model and the organizational design shall be completed before the completion of Level 4 and Level 5 process design.

For organizational structure and detailed job descriptions; roles, responsibilities, authorities, relationships, inputs, outputs, job descriptions, competencies-qualifications, units-sub units, and processes for optimized processes shall be submitted.

- Redesigning the organizational structure in line with the newly designed Level 3 business processes including the provincial organizational structure (pursuant to the legislative framework)
 - Defining new units (if needed)
 - Defining merging / dividing units
- Functional identification of job titles (positions) (ex. purchasing chief)
- Detailed job descriptions
- Defining and documenting job descriptions according to the designed processes
- Establishing responsibility, reporting and authorization matrices according to the job descriptions
- Detailed description of the requirements (qualifications required from each position)

Component 3- Norm Staff

Within the scope of this Component, literature studies shall be made, face-to-face interviews and surveys shall be conducted with different teams of İŞKUR (including pilot provinces), and an up-to-date training to calculate and create Norm Staff shall be organized for the relevant project team of İŞKUR. Training participants shall be determined by İŞKUR and it shall be limited to a maximum of 20 people.

Activity 3.1- Determination and Development of the Approach

- Establishment of working teams including İŞKUR representatives
- Providing norm staff training to İŞKUR representatives within the working teams
- Preparation of the analysis infrastructure for performing job analysis and time / effort measurements through the designed processes and the designed organizational chart (including the job titles)
- Developing a model for norm staff analysis
- Defining the areas where activities, responsible person, duration and time deviation analysis can be integrated in the model on the basis of units and teams
- Determining the parameters related to how much work can be done with the staff and including them in the formulation model
- Defining executive positions and building a team structure

Activity 3.2-Measuring and Implementation

- Collecting and entering time and effort information in a format that can be integrated into the model by making interviews with employees across all units, making measurements in possible processes, conducting observations and using expert opinion
- Filling the model with field data and obtaining draft results

Activity 3.3-Reporting

- Matching the optimum number of staffs of each unit with the task requirements, revealing how many people are needed in which department with which competency and preparing the Norm Staff Report
- Contractor will ensure that the team work with the relevant İSKUR personnel to transfer the know how that İSKUR can carry out this work with its own team after the completion of the project.
- Provide necessary information and on the job training for re-running of the models with up-to-date data (methods, approaches, models and tools used)

Component 4- Business Process Management Software

Activity 4.1- Design of Business Process Management Software

The Contractor shall initiate these studies following the analysis of the existing process model (definition of Level 2 and Level 3) for the target process model and shall complete it before the end of the Level 4 and Level 5 process design. In this context, the Contractor shall provide a business process management (BPM) software and adapt it to suit İŞKUR's business processes.

BPM-Case Management: The BPM solution must have case management capabilities. Case management refers to the complex processes with the capabilities of electronic workflows, human interaction, collaborations, document collection (in this sense, image and content storage) capabilities, which are dealt with by the business owner after passing through various stages by being treated as an electronic case folder in a case integrity. In the design and development environment, there must be components that correspond to the case configuration (case stages, steps, file management, etc.) and capabilities for case management.

Within the scope of the pilot implementation, the Contractor shall work on 10 business processes. The 10 business processes which shall be determined with İŞKUR (including up to 3 different Level 1 processes, including the shortest and least complex, the longest and the most complex, and the stakeholder processes) shall be completed by the end of the 8th month.

*** Minimum requirements for the software are given as annex to this terms of reference.**

Activity 4.2- Trainings

The Contractor shall provide all user manuals, other relevant user documentations, and guarantee and quality certificates of the solution. The Contractor shall organize the following user trainings for İŞKUR personnel for the BPM solution.

- The Contractor shall provide BPM, BPMN, BPM Agile Project Management, product trainings, process analysis, process modelling, process improvement and Project Management Certificate program trainings requested by İSKUR for the products and services included in the ToR. (max. 5 personnel)
- The Contractor shall provide trainings and product workshops to the personnel to be determined by İSKUR at the Head Office of the manufacturer of the products to be provided in the ToR. (max. 5 personnel)
- ISO 9001: 2015 Executive Information & Leadership Training (max. 15 personnel)
- ISO 9001: 2015 Project Team Information Training (max. 15 personnel)
- ISO 27001 complementary and awareness raising trainings (max. 15 personnel)
- ISO 20000 complementary and awareness raising trainings (max. 15 personnel)
- Process Management Training (max. 20 personnel)

- The Contractor shall transfer all the software development outputs to the personnel determined by İSKUR through training and transfer of information.

Activity 4.3- Tests

- Following the implementation of each process, the BPM software shall be tested, and the test results shall be documented.
- After the software has been tested, if requested by İŞKUR, revisions shall be made, and the system shall go live for all selected users within the scope of the ToR.

4. Approach and Methodology

The project shall be completed in 3 phases in total and each phase shall be completed with the activities described in the specification.

Inception Phase (1 month)

The Inception Phase of the projects are comprised of the following activities;

- *Kick-off Meeting:* The Project will be started with a kick-off meeting at İŞKUR. The Contractor shall be responsible for the arrangement of the kick-off meeting and will present the project work plan and approach for the delivery of the project activities. The meeting report shall be prepared by the Contractor and shall be shared with UNDP for approval within 10 working days.
- *Interviews with Stakeholders and İŞKUR:* In order to develop a detailed work plan, relevant target groups, stakeholders and İŞKUR authorities shall be consulted. The Contractor shall consult with İŞKUR representatives to determine the list of stakeholders to be visited during the preparation of the work plan and during the implementation phase (Central units of İŞKUR General Directorate and at least 8 stakeholder institutions / units should be visited). The focus of stakeholder visits shall be receiving critical feedback that needs to be taken into account when redesigning business processes. In the interviews to be held within İŞKUR, it is expected that in-house personas (employee profiles / personas) shall be determined and experience maps shall be created for the personas. In the Inception Report, the Contractor shall clearly define the personas (5-7) and the methodology of experience mapping.
- *Formation of Working Groups:* The Contractor shall provide a list of the working areas for the division of labour and task allocation (inclusion of participants from all units in the team is critical). In this context, İŞKUR shall form the Working Group, which will represent the İSKUR in each field of activity and actively coordinate the project with the project team. Process modelling training will be provided to the Working Group and a separate process training will be organized for middle and senior managers to provide management support. When needed, UNDP will take part in the working groups.
- *Preparation of the Work Plan:* The Contractor shall prepare the draft work plan and review the work plan prior to approval in accordance with the feedback from UNDP and İŞKUR.
- *Reporting:* After 4 weeks from the contract signature, the Contractor shall present the draft Inception Report. The report shall include all the meeting notes and any amendments or changes made on the ToR. After the approval of the final Inception Report, the Contractor shall submit the Turkish version of the Inception Report within 2 weeks.

Technical Implementation Phase (10 months)

It is important to note that all the activities in each project component are interrelated with each other and the Contractor shall pursue input-output relationships between activities as required and to maintain the project within the framework of these relations.

* Within the scope of the Component 2 and Component 3, İŞKUR has started a preliminary work with its own team and the Contractor is expected to work with these teams and get the available information and transfer their own experiences to the İŞKUR teams.

Closure Phase (4 weeks)

This phase shall involve the following main activities:

- Recommendations and actions to ensure sustainability and replication of project results
- Dissemination of project results among the related stakeholders
- Delivering the project archive to the İŞKUR
- Preparation of the Final Report one month prior to the closure and submission of draft report to ensure timely closure of project

Warranty period for the software (1 year)

- The Contractor shall be responsible for maintaining the BPM solution for 1 year. The warranty shall commence upon the acceptance of the system and all software delivered by the Contractor within the warranty period shall have no cost to ISKUR.
- Performance and operational problems resulting from analysis, design and coding errors shall be solved free of charge.
- The Contractor shall provide free software updates of the products offered during the guarantee period.
- The Contractor is responsible for the installation and operation of the updated versions and patch files of the products included in their offer within 15 days of the product update by the manufacturer.
- The Contractor shall make corrective and adaptive changes in the software in order to correct the software errors and performance deficiencies detected during the warranty period.
- Problems determined by users in the software shall be compiled and forwarded to the Contractor by İŞKUR.
- During the warranty period, the Contractor shall provide İŞKUR with a web-based Help Desk application for error reporting and error tracking.
- The Contractor is obliged to fulfil all the maintenance and warranty issues mentioned in the relevant Annex.

5. Deliverables and Schedules/Expected Outputs

<i>Component</i>	<i>Deliverables</i>	<i>Submission Date of draft version (Following the contract signature date)</i>	<i>Expected Date for Review by UNDP and ISKUR (Following the contract signature date)</i>	<i>Expected date for delivery of final version (Following the contract signature date)</i>
<i>Inception Report</i>	Inception Report	<i>4th week</i>	<i>5th week</i>	<i>6th week</i>
<i>Business Processes Design</i>	Process Design Report <ul style="list-style-type: none"> ▪ Project plan ▪ Test plan ▪ Implementation Plan ▪ Business processes existing status model report ▪ Business processes target model report 	<i>27th week</i>	<i>32nd week</i>	<i>35th week</i>

	<ul style="list-style-type: none"> ▪ Gap Analysis for Business process and transition planning report ▪ Business process system requirement report ▪ Process analysis documentation ▪ Analysis report on revised process model ▪ Revised activity-based process drawings (workflows) ▪ Process performance indicators and management 			
<i>Organisational Design</i>	<p>Organizational Design Report</p> <ul style="list-style-type: none"> ▪ Analysis Report for Revised Organizational Chart ▪ Title list ▪ Job descriptions, duties and responsibilities document ▪ Relations between business processes and organizational structure ▪ Task requirements and competencies ▪ Architectural design and implementation documents of architectural designs 	<i>25th week</i>	<i>28th week</i>	<i>33rd week</i>
<i>Norm Staff</i>	<p>Norm Staff Report</p> <ul style="list-style-type: none"> ▪ Norm staff analysis tool according to the working order ▪ Norm Staff Study Report 	<i>27th week</i>	<i>30th week</i>	<i>32nd week</i>
<i>Business Process Software</i>	<ul style="list-style-type: none"> ▪ Processing of the first process (including tests, revisions made) ▪ Processing of the next 4 processes (including revisions, tests made) ▪ Processing of the remaining 5 processes (including tests, revisions made) ▪ 1-year system warranty ▪ Process Management System User Training and Training Materials ▪ Configuration documents including configurations for the installations ▪ Analysis, design, development, test and Implementation 	<i>39th week</i>	<i>43rd week</i>	<i>45th week</i>

	documents of the improvements <ul style="list-style-type: none"> ▪ All codes ▪ Reports of all changes ▪ All status, performance and accessibility reports referred in this Specification ▪ All service level reports referred in this Specification ▪ Monthly progress report ▪ Training materials ▪ Training survey documents and minutes 			
<i>Final Report</i>	Final Report	<i>46th week</i>	<i>48th week</i>	<i>50th week</i>

All versions (i.e. draft, revised) of deliverables of this contract are subject to review of UNDP in consultation with İŞKUR. All comments by UNDP and İSKUR shall be addressed by Contractor. Contractor shall revise the documents in line with the comments of UNDP and İSKUR; and submit revised deliverables with narrative responses identifying revisions made by Contractor.

Final version of all deliverables shall be submitted in 2 hard copies and soft copy. Editable version of soft copy shall also be submitted.

The deliverables shall be prepared in Turkish with an executive summary both in English and Turkish.

6. Key Performance Indicators and Service Level

The Contractor shall continuously monitor the implementation of contract activities according to standard procedures (Inception Phase monitoring, periodic monitoring and final assessment). Project monitoring shall be based on a periodic assessment of progress on delivery of specified project results and towards achievement of the project objectives.

UNDP shall monitor the components of the contract and ensure timely and efficient implementation of the Project, in particular by commenting on the Inception Report and the Final Report and advising on progress towards the delivery of specific project outputs and the achievement of relevant outputs.

General terms are as follows;

- The works to be performed by the Contractor within the scope of this project must comply with applicable Laws and Regulations.
- The software offered by the Contractor shall work together on a single platform, separately proposed software shall not be considered.
- The software shall work on local network and hardware infrastructure of İŞKUR.
- The Contractor shall complete all software procurement and all the conditions stated in the Terms of Reference within the specified time / period and shall deliver the complete system ready for use as a turnkey system.
- The Contractor shall prepare brochures and explanatory documents regarding the software requested by İŞKUR to be included in the business plan file.

The Contractor shall pay the intellectual property rights of all systems (software, etc.) to be provided in accordance with the provisions of the contract and any trademark, patent, industrial design and model rights. In the event of any breach of an intellectual and / or industrial property rights protected by the provisions of the relevant legislation during the fulfilment of its obligations under the Convention, the Contractor shall bear any administrative, legal, criminal and financial responsibility.

- For unlimited users and unlimited processes, licensing is required for 500,000 Process Cases annually, which

shall enable İSKUR internal workflow orchestration and coordination and allow the flow of data required for processing into back office systems.

- Establishment of instant monitoring and control mechanisms along with the flows of the processes to be designed under the Specification and therefore enabling the flow to be made dynamic when necessary.
- Identifying potential bottlenecks in the process by using process simulation techniques in the design phase of the processes to be designed under the Specification.
- Structuring of risk management in the processes to be designed under the Specification, as required by ISO 9001: 2015 version

Output indicators of the project are as follows;

Process Design Report

- During the analysis phase, all departments and units in the General Directorate, Provincial Directorates and Service Centres shall be consulted.
- Process analysis documentation shall be prepared.
- Revised process model shall be prepared.
- Revised activity-based process drawings shall be prepared.
- Process performance indicators shall be determined.
- Process Management Training Documents / Documentation shall be prepared.
- Installation and implementation of the business process management system and application servers to run on shall be completed with the approval of İŞKUR.
- Strategic Planning system shall be established in a way that will be appropriate and that will be integrated to the target Platform solution and İSKUR shall transfer its existing strategic plans to this new infrastructure in the most appropriate way.
- Business process management training and consultancy shall be provided to the project team to be determined by İSKUR.
- Agile BPM project management training and consultancy shall be given to the project team to be determined by İSKUR.
- A BPM software shall be fully installed, shall be tested with at least 10 different business processes and at least 5 business processes shall be revised. (Revised if necessary.)
- The warranty period of the system will be 1 year.

Organizational Design Report

- Revised organization chart shall be prepared.
- Title lists shall be prepared.
- Task and job description documents shall be prepared in accordance with optimized process and organization designs.
- Roles and responsibilities shall be determined.
- Task requirements shall be defined.

Norm Staff Report

- Norm staff analysis tool shall be prepared according to the working order.
- Final Report of norm staff study shall be prepared.

Business Process Software

- Business process software shall be developed in accordance with the minimum requirements as per the Annex to this terms of reference.

7. Governance and Accountability

Project Manager of UNDP Employment and Skills Development Project will directly supervise the Contractor. Contractor will be directly responsible to, reporting to, seeking approval/acceptance of output from Project Manager.

ISKUR is the beneficiary and implementing partner of the project, and the Contractor shall conduct all activities in close cooperation with ISKUR.

A coordination committee composed of UNDP and İŞKUR representatives will monitor and supervise the activities and be responsible for administration of the contract in line with the contract requirements. The committee shall meet in the Inception Phase to obtain information about the approach and about the Contractor, and to provide technical guidance for the results expected from the Contractor. The committee shall meet regularly during the implementation of the contract and shall finally meet upon the submission of the Final Report for review of the outputs.

The contractor shall weekly inform UNDP for the planned activities by e-mail and submit monthly progress reports summarizing the achievements and progress of the activities.

8. Facilities to be Provided by UNDP

UNDP will not provide any physical facility for the services of the Contractor.

The proposer shall ensure that experts are adequately supported and equipped and shall ensure that the service is in accordance with the provisions of the national legislation. In particular it shall ensure that there is sufficient administrative, secretarial and interpreting provision to enable experts to concentrate on their primary responsibilities. Furthermore, the Contractor must also transfer funds as necessary to support its activities under the contract and ensure that its employees are paid regularly and in a timely manner.

When required, the meetings, potential workshops and trainings will be held in İŞKUR or UNDP premises.

All expert expenditure for travel to the pilot provinces shall be covered by the Contractor.

9. Expected Duration of the Contract/Assignment

The expected commencement time of the contract is April 2020.

The total duration of the inception and implementation of the Project is 12 months, and the warranty period of 12 months.

10. Duty Station

The project shall be based in Ankara. All experts shall perform in Ankara and visit the pilot provinces. The experts shall visit Provincial Directorates in Gaziantep, Hatay, İstanbul, Kilis, Şanlıurfa.

11. Professional Qualifications of the Contractor and Key Experts

The Contractor shall have experience on providing technical assistance services on workflow and process analysis, norm staff and organizational restructuring of entities, particularly public entities similar to İŞKUR. The Contractor might have experience in projects aimed at improving the business processes of organizations by using Business Process Management (BPM), having quality standard certificates such as ISO 20000, ISO 27000.

12. Key Experts

The Contractor shall provide adequate staff in terms of expertise and time, in order to complete the tasks required and to achieve the overall and specific objectives of the Contract in terms of time, cost and quality. The Contractor shall mobilize a team of experts comprising following key personnel and short-term experts.

Key Experts have a crucial role in implementing the project. The proposer shall submit the CVs of the key experts with the technical proposal and the CVs shall clearly indicate the related experience as years of experience.

Key Expert 1: Team Leader

The roles and responsibilities of the Team Leader are as follows;

- Ensuring communication and coordination between UNDP, İŞKUR and the project team
- Managing all project activities, following up the project and plans, reflecting the planned, actual and unplanned business items to the plan, ensuring that the project is carried out according to the method.
- Managing project-related risks.
- Planning, conducting and reporting periodic monitoring meetings.
- Ensuring the approval of the phases.
- Following the decision to return or continue in critical situations.
- Coordinating, managing and motivating the project teams.
- Being responsible for the maintenance of project documentation and reporting systems.
- Managing project changes in accordance with the change management procedure.
- Participating in project management meetings and preparing status report on project activities
- Monitoring project activities, as well as guiding and managing the project team's timetable to meet the expectations
- Identifying project requirements
- Ensuring that the project outputs are of the expected quality

Qualifications and Skills

- Bachelor or higher degree in engineering and/or administrative sciences
- Good command of English

General Professional Experience:

- Minimum of 15 years of professional experience

Specific Professional Experience:

- Preferably 8 years, but at least 5 years of experience in administrative position as Project Manager/Project Coordinator/Team Leader
- Demonstrated experience as an expert in organizational restructuring including process management, norm staff and/or organizational design of public entities.

Key Expert 2: Process Management Expert

The roles and responsibilities of the Process Management Expert are as follows;

- Leading the project team to take part in the process activities
- Determining the approach to be followed
- Leading the process analysis and preparation of maps
- Participating in project management meetings related to processes and preparing status report on related project activities
- Monitoring the activities to meet project expectations, as well as guiding and managing the team's timetable
- Identifying project requirements
- Ensuring that the project outputs are of the expected quality

Qualifications and Skills

- Bachelor or higher degree in engineering and/or administrative sciences
- Good command of English

General Professional Experience:

- Minimum of 10 years of professional experience

Specific Professional Experience:

- Preferably 10 years, but at least 8 years of experience in process management projects
- Working experience as an expert in reorganization projects including process management and /or organizational design for public entities.

- Experience related to Business Rule Management Systems will be considered as an asset

Key Expert 3: IT Process Management Expert

The roles and responsibilities of the IT Process Management Expert are as follows;

- Leading the project team to take part in IT Process activities
- Determining the approach to be followed
- Leading the IT process analysis and mapping
- Participating in project management meetings related to processes and preparing status report on related project activities
- Monitoring the activities to meet project expectations, as well as guiding and managing the team's timetable
- Identifying project requirements
- Ensuring that the project outputs are of the expected quality

Qualifications and Skills

- Bachelor or higher degree in computer engineering or a related engineering
- Good command of English

General Professional Experience:

- Minimum of 10 years of professional experience

Specific Professional Experience:

- Preferably 10 years, but at least 8 years of experience in Institutional Information Management and/or Information Technologies Management projects
- Experience in process management and / or organizational design for public entities
- Demonstrated knowledge of ISO 20000 Information Technology Service Management Standard will be considered as an asset
- Demonstrated experience in designing applications that respond to business needs

Key Expert 4: Organizational Design and Development Expert

The roles and responsibilities of the Organizational Design and Development Expert are as follows;

- Leading the project team that shall work within the scope of organizational structure analysis and design
- Determining the approach to be followed
- Participating in project management meetings related to processes and preparing status report on related project activities
- Monitoring the activities to meet project expectations, as well as guiding and managing the team's timetable
- Identifying the project requirements
- Ensuring that the project outputs are of the expected quality

Qualifications and Skills

- Bachelor or higher degree in a related field
- Certification in organization design and development will be considered as an asset
- Good command of English

General Professional Experience:

- Minimum of 10 years of professional experience

Specific Professional Experience:

- Minimum 7 years of professional experience in the field of human resources management
- Working experience as an expert in projects in the field of performance management/human resources management
- Experience in organisational design projects for public entities will be considered as an asset.

Key Expert 5: Testing and Documentation Specialist

The roles and responsibilities of the Test and Documentation Specialist are as follows;

- Preparation of test plan, functional testing and reporting for the BPM software,

- Interpreting workflows and analysis documents and creating test scenarios
- Transmitting the software errors and editing errors encountered in the tests to the related groups and monitoring the solution

Qualifications and Skills

- Bachelor or master’s degree in Engineering or a related field,
- Good command of English

General Professional Experience:

- Minimum of 5 years of professional experience

Specific Professional Experience:

- At least 3-year experience and knowledge in software testing and documentation
- Demonstrated knowledge and experience on test concepts and techniques
- Experience in business processes will be considered as an asset.

Key Expert 6: Business Analyst

The roles and responsibilities of the Business Analyst are as follows;

Uncovering the scope of the project by using or conducting interviews, document analysis, studies on needs, shaped narratives, business process analyses, user processes (use-case) or user stories, scenarios, event lists, task and workflow analyses.

Qualifications and Skills

- Bachelor or master’s degree in Computer Engineering and/or Information and Communication Technology Engineering.
- Good command of English

General Professional Experience:

- Minimum of 10 years of professional experience

Specific Professional Experience:

- Preferably 5 years but at least 3 years of experience in Corporate Information Management and / or Information Technology Management projects
- Experience as a business analyst in projects for public entities.

Non-key Experts:

The Contractor is fully responsible to mobilize non-key experts in addition to key experts listed in this section above, as per the requirements of the various phases of the assignment. CVs of the non-key experts to be recruited during the course of the project must be submitted to UNDP for approval at least two weeks before the start of their assignment. These approval requests shall be accompanied by a proper description of the assignments and outputs/deliverables.

The Contractor shall take the time constraint into consideration and design the expert team accordingly to ensure parallel workstreams. In addition to key personnel, the team shall compose the following non-key experts as minimum;

System Supervisor	Experienced in server and storage, at least 5 years of experience in using and managing Windows and Linux operating systems.
Software Architect	Experienced in software development and architecture in business process management systems, at least 5 years of experience in API integration and management.
Software Engineers (minimum 2 experts)	Knowledge and experience in Java and Microsoft software development with at least 3 years of experience.
Business Process Architect	Knowledge and experience in business process analysis and design, knowledge of BPMN standard, with at least 8 years of experience.

Junior Business Process Analyst (Minimum 2 experts)	Knowledge and experience in business process analysis and design, knowledge of BPMN standard, at least 3 years of experience.
Junior Testing and Documentation Expert (Minimum 2 experts)	Experienced and knowledge in business processes and software testing, experienced in documentation, at least 1 year of experience.

The following non-inclusive list of specific expertise areas shall also be considered to complete the tasks required and to achieve the overall and specific objectives of the Contract in terms of time, cost and quality:

- Organisational Structure Design
- Analysis and management of business processes
- IT Management
- Software Development
- System Management
- Personnel and Human Resources Management
- Performance Measurement and Management
- Management Theories
- Productivity and Total Quality Management
- Change Management

In order to execute the Project properly, the Contractor will be expected to employ the necessary support staff in order to carry out the responsibilities assigned under this contract.

13. Pricing and Schedule of Payments

This is a fixed price service where there is no provision of extension on the budget.

UNDP shall affect payments to the Contractor in the amounts and pursuant to the schedule of payments as follow;

- **10%** following the approval of “Inception Report”
- **20%** following the approval of “Process Design Report” and “Organizational Design Report”
- **20%** following the approval of “Norm Staff Report”
- **30%** following the completion of work on 10 processes implemented in business process software
- **20%** following the approval of “Final Report”

The financial offer of the proposer shall include;

- The remuneration actually paid to the experts concerned per working day,
- Administrative costs of employing the relevant experts, such as relocation and repatriation expenses, accommodation, leave, insurances and security arrangements and other employment benefits accorded to the experts by Contractor.
- The margin, covering the Contractor’s overheads, profit and backstopping facilities,
- Any other expenditure which is needed to implement the contract (e.g., travel, living allowances, taxes,)
- All the costs related to the scope of the works in this Terms of Reference. These costs are in general, relevant administrative, hardware and software, transportation, logistics and repatriation expenses, communication, accommodation and subsistence expenses as well as the office equipment and office consumable materials required for the performance of the contract.
- Costs for supplies and equipment including vehicles and other means of transport, computer hardware and software, fax and internet connection, photocopy machines, office supplies and reference materials, measurement and inspection equipment, etc.

- Costs for proper communication (English/Turkish) with interlocutors.
- Backstopping and support staff costs
- Costs for BPM software
- Costs for the maintenance and support services during the 1 year warranty period

ANNEX- Minimum Requirements for BPM Software

1. GENERAL FEATURES OF THE SOFTWARE

SYSTEM ARCHITECTURE

- The planned structure shall allow for vertical and horizontal expansion.
- The planned structure shall contain metadata in the relational database.
- Planned structure shall run smoothly in Oracle 11g and higher databases. However, MS SQL Server and DB2 databases shall be supported in case they are required.
- The recommended platform shall include DevOps support without requiring external software.

SYSTEM ACCESS

- The planned structure shall be web-based and shall be used on the users' computers via internet browser without any installation process. If required, the software shall be accessible from outside the ISKUR. Operations such as starting a workflow and confirming a document shall be made from the web interface.
- Program modules or parts shall not be downloaded to the user's computers like Active X via the web.
- In-house usage shall be realized through Intranet and system access shall be provided without going to the Internet.
- External access shall be restricted on the basis of user and IP within the planned structure without requiring any external hardware or software. Allowing a specific user to access only from a specified IP or range of IPs shall be possible within the planned structure, again using ISKUR's network protocols and limitations.
- The planned structure shall not only work on a specific Internet browser, but on the latest versions of all modern Internet browsers (IE Explorer, Mozilla Firefox, Safari, Opera, Chrome, etc.).
- The planned structure shall be able to be accessed via mobile devices, the interfaces of the applications shall be responsive and shall be displayed on all kinds of computers, smartphones and tablets. It shall support native client structure on iOS and Android mobile devices. It shall allow the use of e-signatures through the Native Application developed for Android.
- Access to the database of ISKUR shall be open and data import / export operations shall be performed by accessing the database from different applications of İŞKUR.

SYSTEM FLEXIBILITY

- The system shall have an easy and convenient interface that can be learned and used effectively and easily by all users. The screens shall have a standard appearance.
- The system shall be delivered to İŞKUR with Turkish interfaces ready. There shall be Turkish support for the user interface.
- The planned structure shall allow the user to edit the menu view on a per-user basis.
- The proposed solution shall be holistic and provide all the tools necessary for the development of the intended applications on the same platform. In other words, there shall not be a solution consisting of modules that require external integration with each other or require the outputs to be moved from one to the other and shall not require separate installations.
- The application development environment shall be fully integrated. All functions / definitions such as face-up, rule definition, process definition, integration, case management, version control, real-time decision support system shall be provided on a single platform. This platform shall not be developed as a combination of many different software under the name of "suite" but shall be developed as a single platform.
- The application development environment shall allow model-based development with no code. Analysis, modelling and development of the needs of applications and processes should be done on the same

environment. In the development environment, technical development should continue through models created with the definitions of business owners. Modelling and technical development environments shall not be separate, there shall be no transfer between them. Starting from the business objectives and job description, the technical development in detail shall be continued without interruption.

- Development based on a zero coded model should be prepared for future technologies. Model-based applications developed in the current version shall not require changes and adjustments to deploy new technologies that will come with new versions, and the developed model shall be able to operate in accordance with the new technology.
- The most detailed, up-to-date and real-time documentation of the developed application shall be readily available automatically.
- The system shall have an easy and convenient interface that can be learned and used effectively and easily by all users. The screens shall have a standard appearance.
- The same screens shall be designed to adapt automatically to mobile screen sizes and provide more convenient use for phone and tablet sizes.
- The proposed BPM solution shall have case management capabilities. Case management refers to complex processes with electronic workflows, human interaction, collaborations, document collecting capabilities (image and content storage), which are dealt with by the business owner after passing through various stages by being treated as an electronic case folder in a case integrity. In the design and development environment, there must be components that correspond to the case configuration (case stages, steps, file management, etc.) and capabilities for case management.
- The proposed solution shall include a business rules management tool running on the same platform and edited in the same development environment.
- The development environment provided by the proposed solution shall have the infrastructure that can be used not only for workflow development but also as a rapid application development environment. In the projects to be developed, forms shall be created independent of workflows, and transitions, flows, buttons in the form should be visually modelled.
- Changes in the process model during development shall be reflected directly into the model in the development platform, and there shall not be two separate representations for the business model and the technical model. Therefore, there should be no round trip problem between the business model and the technical model.
- In the application development environment, the lifecycle management of the application shall be possible without using a separate tool, including requirements and specification management.
- Version management shall be possible in application development environment. Check-in / check-out and versioning shall be supported without using a separate tool.
- Copies shall be made from an already defined process on the Business Process Software.
- Comprehensive documentation shall be produced automatically at different levels of detail, from the model created to specifications and technical level. Depending on the level of detail and options, documentation content shall include details such as business objectives, business models, specifications, screenshots other than top-level content, business rules, process flow diagrams, E / R diagrams, data model, and integration rules.
- The developed application shall easily be retrieved automatically, including detailed, up-to-date and real-time documentation.
- A calendar management interface shall be provided to define the working days and hours that the process model can use.
- Web Mashup capability shall be available for easy and fast integration with external web-based applications and portals. Workflow application screens shall be built into external web applications and automatically generated web code to enable integration and these screens shall be able to work as part of

external web application.

- The application runtime shall be a single platform; all the components required for the solution (all components of process-based applications; systems in ISKUR and the systems that need to be connected) shall be operated in a single integrated environment so that problems such as integration, synchronization, incompatibility, version upgrade restrictions shall not be encountered.
- Quick editing and flexibility shall be aimed in rapid development and improved process-based applications and SCRUM methodology shall be used for this purpose. The development environment of the proposed solution shall comply with this and shall support artifacts.
- The solution shall not depend on a particular application server, but shall support common application servers (Weblogic, Websphere, Jboss, and Tomcat if preferred in the development environment). There shall be no need for editing or configuration depending on the application server.
- The database management system which the solution will work on, shall not be dependent on a specific manufacturer, but shall be supported on commonly used databases (Oracle, DB2, MS SQL Server and PostgreSQL if preferred). There shall be no need for editing or configuration depending on the database management system on the developed application.
- The solution shall be supported on commonly used server operating systems. (Windows, Linux - including Redhat and SUSE, AIX, Solaris)
- The solution shall have a cache management system with an easy-to-use management screen.
- The recommended solution shall have mobile device support. Applications to be developed shall be available to mobile device users.
- Mobile custom enhancements and management of applications shall be on the same platform. A separate development or management tool shall not be required.
- Mobile support for the proposed solution shall be able to use the capabilities (push notifications, geo-fencing, passbook / wallet) of IOS and Android-based mobile devices.
- The proposed solution shall work entirely on the web. The interface offered to end users, and the development, management, and monitoring environments of the solution shall be web-based. There shall be no browser dependency on the client side and the application shall be designed to include “responsive UI”.
- The user interface design to be created in the development environment of the proposed solution shall create a web-based interface, and the designed application shall work in IOS and Android environments without the need for additional development or configurations. End-user interfaces on mobile devices shall comply with the specifications of the device concerned and shall be compatible with the physical dimensions of the device. (Providing web interfaces suitable for browsers on large desktop requester will not be sufficient to be presented from the mobile browser.)
- The proposed solution shall ensure that processes, business rules and dynamic pages shall be prepared in accordance with their requirements without the need for any programming or script language, modelling notation, technologies such as HTML, JSP or Javascript in the development of application-based applications and it shall be flexible enough to allow the pages, business rules and processes that they prepare to be changed in accordance with the requirements of the application while observing the effects of the process.
- The platform on which the solution works, shall be integrated with all the back-end systems and shall make it appear as if the end user is working with a single system.
- The process modelling tool should allow a visual modelling of the operations by presenting a model in which the screen transitions behind the user form design are planned, not just the workflow steps. In this environment, various decision steps, account transactions, data exchange shall be possible.
- The development tool shall ensure the development of reusable items.
- Modelling-based development shall allow for a layered structure that supports “inheritance” reuse in the

- object-oriented programming approach.
- All the rules, processes, and frontend objects developed in the BPM Platform shall be kept in a single repository and there shall not be any need for integration in different products.
 - The proposed solution shall provide operational monitoring functions and warning mechanisms without any additional license costs. A central management page with operational warnings shall be submitted; the operational warnings to be determined within the definitions to be made shall be sent to the persons to be identified.
 - Only production shall be licensed, other environments (development, test, staging, disaster recovery) shall not be licensed separately. Any number of installations should be possible without the need for a license except production.
 - The proposed solution shall provide a web interface where detailed and summary reports on processes can be designed without additional costs. Reports shall be designed with ease of use for business users from a browser-accessible interface.
 - It shall provide object based visual design in drag and drop technology.
 - User interfaces shall be visually modelled, and the application shall have a form design tool.
 - The BPM product shall provide "wizard" type interfaces for creating and using data tables on the database.
 - The organizational structure shall be modelled within the solution.
 - The solution shall work with known SSO / Enterprise Identity Management System products, the existing LDAP or Active Directory systems, and with different identity provider protocols such as SAML 2.0, Form Based Authentication, Container Managed Authentication, and JAAS for authorization management and authentication and shall be able to provide integration without coding.
 - Role-based authorization shall be supported for end-users, process-based authorization shall be provided, and different types of application shall be limited to the authorization they receive based on their role.
 - The system shall have a structure to define its employees, roles and supervisor relations.
 - Sub-processes shall be defined in the process model. Other process models shall be called from within the process model, information exchange between two process models and waiting conditions for each other shall be defined.
 - The process model shall support time-based conditions, define timeout rules and trigger different business activities in this direction.
 - A calendar management interface shall be provided to define the working days and hours that the process model can use.
 - In the process model, it shall be possible to design optional process steps separate from the normal flow of the process, and these steps shall be called from any point in the process by the end users.
 - The process model shall be able to define an escalation procedure that can be reused in all business processes.
 - Parallel flows shall be based on a certain time function. For example, if one of the parallel branches cannot be completed within a certain time, the flow must be able to continue or terminate without waiting for input from that branch.
 - Processes shall be triggered by ready-made components such as e-mail or receiving a file. Emails shall be able to provide rich HTML content without the need for additional software.
 - For the stages of a case, the SLA (Service Level Agreement) shall be identified on the same platform without the need for a different product during the development phase.
 - For process activities of a workflow, the SLA (Service Level Agreement) shall be defined on the same platform without the need for a different product during the development phase.
 - The data, warnings and errors provided on the platform shall be used to provide decision support in line with changes in general and process conditions, performance indicators and regulations, and no other product shall be needed for this support.

- When the distribution of tasks in the process infrastructure is done on the basis of the pool, the people in the pool shall be assigned jobs according to the workload or in order or wait for a person to take over from the work pool.
- The application shall be able to direct work to a dynamically identifiable role, group or person while the process is running.
- In the approval step, it shall be possible to obtain a separate rule engine with complex rule definitions to whom the process is assigned. This rule flow must be defined by rule sentences or rule tables.
- Every component (process step, interface, integration, etc.) developed on the process development tool shall be immediately testable and shall not need to be transferred to another server to be tested.
- The process model shall support the mechanism of return between steps so as not to form a vicious circle. The number of returns shall be defined as parametric.
- It shall be possible to check the fields and create alerts at the time of data entry.
- The requirements for data entry objects shall be defined. In addition, the requirements shall be mandatory depending on the status of filling of another object.
- The form development environment CSS shall support all automatically generated “Smart Frames features such as client-side validation, and support shall be prepared in a manner that it does not require code writing in BPM.
- The platform shall be able to provide “intellisense” features such as “auto complete”, “query hints”, “intelligent code completion” without requiring code writing.
- Date data types shall be able to be selected from the calendar. Today’s date shall be able to come up automatically.
- The platform shall have the ability to read and write data through queries which was made by using databases and shall be able to visually define the data exchanges in the flow.
- Fields in the form development medium shall be easily fillable from a table in database or from any service.
- Customized database queries and filtering shall be allowed on forms.
- The fields of when and by whom on the form shall appear without code development, they shall be dynamically programmed based on the fields or data objects on the form.
- An object shall be able to attach files to the form.
- Added documents shall be opened with a single click on the document.
- Documents on the created forms shall be archived in an external system.
- Images shall be added on the form and displayed on the user screens if necessary.
- Form flows shall be logged, and visual maps and geographic location information shall be included in the logs.
- Tabs shall be defined on forms, form flows shall be defined during transitions between tabs in the same job step and decision making, service call, control, database connection, mathematical operations etc. shall be done in these steps. Authorizations shall be made for the fields within each tab and form.
- The authorizations such as read-only, hidden, changeable, etc. shall be applied dynamically on form fields.
- Multiple visual variations of the form shall be able to be created: the visuality of the forms shall be designed specifically for paper output for signature purposes. It shall be possible to improve the transfer of these forms to PDF or spreadsheet by developing additional components or using ready-made components.

- The platform shall keep business rules and processes in different versions; if desired, the changes shall be able to be carried out on the same version without affecting the existing functionality of ongoing cases running in the same version.
- The process development platform shall be able to support all channels and shall work as multi-channel such as Internet, IVR, desktop computer, mobile devices, call centre etc.
- Social channels (Facebook, Twitter, etc.) shall be supported.
- The system shall be able to operate as uninterrupted for 24 hours, and even during planning and maintenance work, the user operations shall be able to continue without the system being shut down and without performance loss.
- The system shall be able to operate uninterrupted for 24 hours and the backup process shall be possible without system shutdown and performance loss.
- The system shall not allow any loss of operation due to the failure of the user's Internet browser; when the user re-opens the browser, the process shall continue.
- The system shall be scalable horizontally and vertically.
- Software code in the background using drag-and-drop functionality shall be created by using the best security practices and it shall be protected against the key security vulnerabilities such as “injection”, “broken authentication”, “session management” and “cross site scripting” etc.
- The system shall enable help screens with basic information and directions that users need. Moreover, the number of screens to be released and the flow shall vary according to users' experience, fewer screens for experienced users, more explanation to the inexperienced users' and more detailed and explanatory screens for the inexperienced users.
- Access to the system shall be possible through a portal, users shall personalize screens, and all subsystems within the scope of the platform shall be consolidated and integrated structure, and it shall also make users to have a sense that they look and feel the same system.
- The system shall enable employees in the İŞKUR with instant messaging so that they can communicate easily, it shall include infrastructure that provides sharing and the infrastructure shall be able to work from desktop and mobile devices. Shares shall be monitored in the user's personalized portal interface.
- System shall provide data archiving and liquidation tools, and “wizards”. Archiving/liquidation routines shall be able to run manually or automatically at a desired time or on a scheduled time to be determined.
- System shall support the CMIS standard and it shall be able to integrate with enterprise content management systems. Content should be easily accessible through this integration in business processes and case management.
- The system shall be able to integrate with the REST API provided with institutional content management systems. In business processes and case management, content shall be easily accessible through this integration.
- Additional fields shall be defined in the system according to the requests of the user and/or administrator. There shall be no limit to the number of custom fields defined. It shall also be possible to deactivate these special areas at a later date or to define new special areas. It shall be possible for custom fields to have different content such as date, character, numeric. Parameters such as length, default value, required field shall be given without any coding in the system.
- The system shall have a development interface required for interface identification and editing. This development interface shall only be operated by authorized users, and it shall not be possible for an external user to intervene in this part. The interface shall have an open architecture, which can be easily

changed by the system administrator if required. Changes to the interface shall automatically be updated on the web client.

- The system shall use the Unicode character set. The use of special characters shall also be ensured in this way.
- Prepared business processes shall be able to be moved from one server to another by import and export methods. Thus, business processes and templates prepared on a server used for testing shall be transferred to the server running in real environment.
- When a document is displayed on the web interface, it shall be displayed in the approval history and notes added by people in the process. Information such as person, status, approval request and response date and signature shall be displayed in the approval history.
- Process management applications to be used shall provide necessary tools (suitable interfaces, doing updates and improvements without the need for proper design and software coding) to make business processes manageable and redesignable.
- It shall be possible to send automatic messages via standard mail servers and SMTP protocol.
- Workflows and documents shall be viewable by grouping dynamically.
- Users shall be able to see the documents that wait for their approval in the web interface.
- The system shall be modular and able to improve according to the need.
- The system/application shall be able to work seamlessly with network security applications such as the operating system and/or firewall on which it is running.

SYSTEM SECURITY

- Necessary precautions shall be taken for the security of the information and documents to be included in the planned structure. It shall be possible to protect documents with at least 128-bit encryption algorithm. It shall support SSL communication for the Web interface and all other interfaces. Within the scope of Personal Data Protection Law (KVKK), sensitive information such as information, password etc. shall be encrypted.
- The encryption algorithm on the planned structure shall be able to be changed by the system administrator (the user(s) who have the right to manage the system on the application).
- The planned structure shall record the operations performed by the users and the error reports occurring in the system and these reports shall be followed by authorized users.
- If a user is not working for a certain period of time, the program shall log off automatically for security reasons.
- The planned structure shall allow CAPTCHA (Image Verification) or different verification possibilities if external access is made. Thus, the robot software shall be prevented from attacking the system by trying user name and password. The system administrator shall be able to determine whether CAPTCHA or different authentication possibilities are used for internal access.
- Preferably, WAN and LAN authorizations of users shall be able to be made separately. What a user can do inside and outside ISKUR shall be able to be controlled and restricted separately or together.
- The menus in the planned structure interfaces shall be dynamic according to the user privileges, and the users should be able to see only the options for the transactions with which they have privileges.
- There should be controls in the system to protect the integrity of the database and inconsistent data entry should be prevented.

DELEGATION

- The planned structure shall allow the system administrator to define user roles that identify and restrict menus and operations that users can access.

- The planned structure shall use a role-based mechanism for menu authorizations. A user can have more than one role. The user must have authority in the form of a combination of roles.
- Users and / or groups shall be able to be created easily from the management interface. For each user defined in the system, optional features such as institution, e-mail address, title should be defined, membership groups, administrator and other information should be changed by the administrator during usage.
- In accordance with the institutional authority structure, the authority section shall provide the opportunity to define authority groups and to assign (see, change, delete) authority levels to these groups.
- A user shall be able to belong to more than one authority section / group.
- In the planned structure, the management module shall provide an interface for users and groups of users to specify which operations can be performed and which screens can be accessed, and to modify, delete, display, send by e-mail and fax.
- Groups, categories, folders must be hierarchical and able to work with authorization definitions and inheritance logic.
- Authorization shall have separate and detailed authorization definitions for each module.
- The system shall include a function / screen where the organizational structure can be defined.
- In the organizational structure, units shall be defined, and their managers shall be specified by verifying among the personnel of ISKUR. It shall not allow manual entry.
- The supervisor of each user and unit shall be identified by verifying among the personnel of ISKUR.
- User / title / position relationships shall be defined. The organizational structure shall be able to be entered and managed in detail.
- Users shall be prevented from accessing the storage area where the files are stored and accessing the folder and file contents. Access should only be made within the authorization of the system.
- When editing a document by one user, the same document must not be modified by another user.
- The power of attorney must be given within the application. When assigning a power of attorney, it should be possible to choose which roles can be left by proxy. For example, if the user is both the department manager and the system administrator, only the proxy of the department manager role of that person should be given to another person.
- In practice, one person may delegate power to another person, and the persons themselves may do so. If the person leaving the power of attorney is required to get approval for this work, the power of attorney will be executed after this approval. The attorney shall be able to see the pending duties of the person to whom he or she is acting and may perform transactions instead. The power of attorney will be able to determine the date and time of the power of attorney.
- The software shall allow authorized persons to list the users who have given power of attorney and the reason why they have given power of attorney.
- The user shall be able to see the documents he / she has acted by proxy when the proxy has ended.

INTEGRATION WITH EXTERNAL SYSTEMS

- The planned structure must contain all the web services and APIs to integrate with other systems.
- The user table of a different application (LDAP, Active Directory, and other authentication systems) shall be used for user authentication.
- In order to determine the user authentication method by the system administrator, the relevant screens shall be presented in the system management module.
- There shall be an API support for code written in the workflow. Access to databases, sending e-mails, calling workflow functions from external applications, establishing database connection, calling DLL, etc. should have an API to facilitate the operations of this type and these API functions should be included in the guide documentation with sample uses and detailed explanations.

- In applications written by ISKUR via API, the system shall be able to be used as a workflow engine.
- XML web services shall be available to receive information about workflows from external applications, approvals for any document, and attached files and file information for any document.

LOG RECORDS

- Log information shall be kept in a way that no user can change or delete it from within the application.
- Log information shall be viewable by authorized users.
- Activities performed within the system (adding, changing, deleting, moving records, etc.) and date, time, user and internal and external access IP information shall be kept.
- Logs shall be monitored instantly.
- Logs shall be filtered and reported according to the user, unit, transaction and date range.

2. WORKFLOW MANAGEMENT MODULE

WORKFLOW DESIGN

- The planned structure shall include an integrated workflow design tool and engine in order to define the workflow processes of the organization and to follow the business processes.
- Workflows shall be designed from a visual management tool using drag-and-drop technology in a graphical environment. The parameters of each step and the entire flow shall be intervened.
- Even complex processes with user-friendly interfaces shall be developed without programming.
- All institutional business rules shall be defined and managed for all processes.
- The graphical interface must have components that perform all operations.
- It shall allow other workflows to be used in workflow design.
- It shall allow other workflows to be triggered from within the workflow.
- It shall allow web services to be called within the workflow.
- The planned structure shall be able to establish integration with the web services and the programs and databases that ISKUR uses in its business processes.
- When designing a workflow, the planned structure shall be able to use program snippets developed outside the system as add-ons to meet the future needs of ISKUR and to provide flexibility. These plug-ins can be developed independently by ISKUR and should not require any coding to be used in the system.
- For each activity defined in the workflow, static or dynamic (in the workflow run phase) time shall be defined.
- Static or dynamic user or title shall be defined for each activity defined in the workflow.
- Job descriptions in workflows shall allow the flow to proceed in different ways, depending on the delay / completion / cancellation situations.
- It should be possible to connect defined workflows to a menu and run them directly by users.
- Modelling of any process shall be possible. That is, it should allow the definition of parallel, conditional, sequential processes; processes should be able to call other subprocesses and be able to link different process activities.
- Planned structure, workflow design shall be able to use the processes used to manage the workflow (such as interrupt workflow, combine parallel flow, complete workflow). In the workflow design, operations related to user functions (such as assigning tasks, sending messages) should be possible.
- Document and form operations on the system shall be used in workflow design.
- Dynamic forms defined in the system shall be included in workflow designs. It shall be ensured that institutional form transactions carried out on paper with the planned structure are carried out in digital environment and connected to the workflows and used. On workflows, it must be ensured that workflows conditionally advance in different ways according to the values entered in form fields.
- Access control workflows of authorization departments defined on forms shall be able to be controlled.

- Forms shall be able to be delegated to different users or groups of users in whole or in part.
- The planned structure shall provide the opportunity to update and display workflow designs. Workflow definitions must be stored in the database so that they can be later copied, sent to the printer, or modified.
 - It shall allow real-time monitoring of dynamic performance information related to the processes running on the planned structure.
 - Activities shall be monitored graphically online (processing time, which step of the process is currently being run, etc.) and logged.
 - Workflows that are not fully designed shall be temporarily saved.
 - The planned structure shall provide authorization for the defined workflows. Authorization must be in the form of See, Modify, Delete, Run.
 - In the planned structure, it shall be possible to determine which user group and what kind of access rights the designed workflows have over a graphical interface.
 - The planned structure shall create a new version of the workflow for updated workflow definitions. Workflows in progress on the old workflow shall continue to run on the old version.
 - In the planned structure, all authorized users shall be able to define the workflow.

WORKFLOW OPERATIONS

- The workflow shall be able to be run from the main menu.
- The planned structure shall be able to initiate a workflow automatically.
- For a workflow that will start automatically, matching definitions of the source of the trigger with the parameters in the workflow shall be recorded, and in the case of workflows that will run automatically later, this matching shall be used by the system.
- The status of the currently active workflows shall be monitored both graphically and in list form.
- The planned structure shall allow alerts to be generated for delays (resulting from functions that users do not complete during the given time) when a workflow is running.
- In the planned structure, the document shall be sent to one or more users, user group or title within the workflow, explanations shall be entered in these submissions, duration shall be specified, warnings shall be shown before the time of duty and different functions shall be defined in case of delay.
- It shall be ensured that supervisors are informed about the life cycle and stages of workflows, when the starting and finishing times are exceeded. Supervisors shall be able to control the processes of the personnel connected to them.
- Users shall define the users who will delegate to them in the system between certain dates for use in workflows.
- Tasks assigned to users with active proxy are automatically assigned to proxy users. The task is considered to be completed when the proxy or actual user completes the task.
- In the planned structure, user access updates for the use of workflows shall be created.
- Repetitive workflows shall be defined. Repetition periods (every N day, N. day of each week, N. day of each month, etc.) shall be determined by the system supervisor.
- Repetitive workflows shall be initiated by the system without user intervention.

3. INTEGRATION WITH OTHER SYSTEMS

WEB SERVICE INTEGRATION

- The planned structure shall be able to use web services in workflow design and execution.
- When the address of the web service to be used is entered into the system via the workflow design tool, the function list provided by the web service shall be presented to the user.
- The user (the user (s) who can make this definition) shall be able to define which parameters to call the web service in a dynamic and static manner.

- The workflow shall be able to follow different paths depending on the result returned from the web service.
- The workflow shall be able to call both synchronous and asynchronous web services.

SMS INTEGRATION

- It shall be possible to send SMS in workflows through the application.
- To send SMS, the application shall be able to install plugins to call Web Services offered by SMS providers. There shall be no need to code or stop the system to install a new plugin.
- The system to be delivered shall be delivered integrated with at least 3 different service providers.

4. FORM MANAGEMENT MODULE

FORM DESIGN MODULE

- The planned structure should have a web-based form design module that allows institutional forms to be defined on the system. The form design module shall have the ability to design and use electronic forms easily.
- The form design module shall be an integral part of the system.
- The form design module of the proposed system should be able to initiate and advance defined processes in an integrated manner through client-side web browser scripts without server-side code or scripts over existing web forms in the existing automation of the organization.
- The form design module shall be completely web-based, fully HTML-based, and there shall be no need to install on user machines such as ActiveX.
- Any authorized user shall be able to design the form.
- There shall be various objects for text input, list type data input, and optional data input. For dynamic form design, rich GUI components such as table, arithmetic operations on the table, selection boxes, selective box, single select list, tree structures, user information shall be provided.
- The form design screen shall allow automatic calculations with formulas that can be defined, and the result of the calculation shall be automatically displayed in the relevant field upon entering the information in the relevant field during the data entry of the user filling the form.
- Within the dynamic form design, the users defined in the system and the controls to add the existing documents in my site as a list shall be provided.
- During the form design, authorization shall be partitioned, and different sections shall be given the opportunity to allow different users to see / change authorization.
- Authorization partitioning on dynamic form designs shall be possible in order to determine the different users' viewing / updating privileges on certain parts of a form on the planned structure. Access control of authority departments should be able to be controlled on workflows.
- Multiple tabs shall be defined on forms and objects can be grouped into tabs. The tabs shall be visually identifiable and authorize for each tab.
- Requirements for data entry objects shall be defined. In addition, the requirements shall be mandatory depending on the state of filling of another object.
- The data types shall be defined, and the user shall be warned when entering data in the wrong format.
- In form designs, parametric fields such as date and user name shall be defined, and the form filling / date information should be automatically brought to the form during form usage.
- It shall allow the validation criteria of form fields to be defined.
- For the controls on the form, validation code shall be written on the design screen with special .net, or similar scripting languages. It should not require an external code-writing program. Access to objects on the form must be possible within the code. It should also be possible to connect to the database or to access previously written DLLs.

- Forms shall be able to be exported to Microsoft Word, Writer and PDF formats at any stage of the workflow. This transfer shall be on a template basis. Optionally, templates can be created in a different view from the form. It should be updated later and transferred over these templates.
- Events such as changes for controls on the form shall be able to be identified and the actions to be taken when these events occur.
- The data of the forms shall be stored in the database. There shall be no data on documents on the form or on the file system.
- It shall be possible to connect the defined forms to a menu and run them directly.
- There shall be an object that allows attachment of files to forms.
- These files shall be opened with a single click on the form.
- The controls placed on the form shall have visual characteristics such as colours, fonts, frames, background colours and should be able to be determined by the user performing the form design.
- During the form design, the designing user shall be provided with functions such as alignment, averaging, distribution, grouping, and drag-and-drop as single or multiple controls.
- During the form design, the designing user shall be able to perform single or multiple transport operations by using the keyboard arrow keys.
- Form design shall include controls such as panels and tabs for grouping controls.
- The help file shall be added for form designs and the person filling out the form shall be able to see the help file prepared for the relevant form design when necessary.
- It shall allow customized database queries and filtering.
- The filled (used) forms shall be able to be queried and listed on the values entered in the form fields.
- Filled (used) shall should be able to be displayed in authorization.
- The filled (used) forms shall be able to be updated or deleted within the authorization.
- User access updates for the use of forms shall be created in the planned structure.
- In the planned structure, an interface that displays the user access data created for the forms shall be presented.
- Access to other related forms via forms shall be easy.
- Version control change tracking and access authorization management of forms and templates shall be possible.
- Multiple templates shall be linked to forms. Different representations of the same data shall be provided by templates. Templates shall be designed with Microsoft Office tools.
- The planned structure shall create a new version of the form for updated form designs. Processes on the old form shall continue on the old version.
- The planned structure shall provide the possibility of listing / viewing / modifying existing form designs within the authorization.
- The forms designed on the application shall be published on the website of İŞKUR if required and user authentication shall not be required in accessing these forms. For example, a Complaint Form defined on the application should be able to be automatically published on İŞKUR's web pages and the relevant flow should be automatically run.
- Approved forms shall be forwarded by e-mail and approval, rejection and revision operations should be made via e-mail without logging into the system.

INTEGRATION WITH EXTERNAL SYSTEMS

- The values of the controls placed on the form and containing data (list, selective box, etc.) shall be available from Web Services.
- In order to import / export data, different databases (Oracle, MySQL, PostgreSQL, DB2, SQL Server) shall be accessible via native, ODBC and JDBC connection types.

- The values of the controls placed on the form and containing data (list, selective box, etc.) shall be available from other application databases used by ISKUR.
- There shall be no need to modify or recompile the program in order to connect to and withdraw data from other databases.
- In order to connect to other databases and withdraw data, the connection information shall be obtained and the data from which tables should be drawn should be made through the screens on the system.
- It shall allow the use of external program snippets for complex data acquisition from other databases.
- The form data shall be able to be written to the other databases used by ISKUR over the system.
- In order to connect to other databases and write data, connection information shall be obtained, and which data to be written to which table shall be made through the screens on the system.

5. **HELP MODULE**

- The application shall have an online help system.
- Help pages shall be completely in Turkish.
- When the user presses the help button on the screen, the help page for that screen shall be opened.
- The help system shall be web based (html) and maintained on the server. It shall not be installed on client computers.
- As application updates are performed on the server, the help pages on the server shall also be updated.
- Help pages shall be supported with illustrations and should be descriptive.
- The help module shall be able to access different pages and support the user's use of the training document.

6. **USER MANAGEMENT MODULE**

- There shall be user identification screens where users can be defined, and passwords and privileges can be set through the application through the system. The system supervisor shall be able to set which information will be available on the user identification screen, which information is mandatory, which information can be viewed and changed by normal users from a management screen. Users can have more than one ID, and users with more than one ID will be shown all of the identities they have at the time of login to the system and access will be provided according to the selected ID.
- System supervisors shall be assigned on a unit basis, unit system administrators will be able to manage the accounts of users working in their unit and will not interfere with users of other units.
- The proposed solution shall be capable of being integrated into identity management systems.
- User authentication shall be done separately for WAN and LAN. The roles and user groups that the user has can be separate for WAN and LAN.
- Users shall assign their own Proxy for a certain period of time within their authorization. The user assigned as proxy shall be able to see the tasks assigned to the user who assigns as proxy.
- At least the following methods for user authentication will be supported;
 - Application Authentication: The user name and password are verified by the application.
 - Windows Authentication: Automatic verification is performed by using the user name and password entered into Windows without entering the user name and password.
 - LDAP / Active Directory: User authentication is done through LDAP or Active Directory servers owned by the organization.
 - External Application Authentication: The User Name and Password are verified through the database used by another program.
 - Web Service Verification: User Name and Password are provided through a web service provided.

The screens where the Authentication Method can be selected so that the system administrator can select which authentication method to use and enter the relevant parameters will be on the Application.

7. ACCESS RIGHTS MANAGEMENT

- Access rights shall be granted by group and role authorization.
- Users shall be in one or more groups or roles.
- The system shall be open for inter-personnel guidance depending on the intensity of the work.
- The rights of listing, seeing, changing, adding, deleting rights to groups on the documents in the system shall be defined in 3 steps (Allow, Deny, Deny Rights from Other Groups).
- When the rights of more than one group owned by the user intersect, they shall be granted by combining their rights.
- User shall have Roles for the access to application menus. A user can have one or more Roles.
- The menus to be shown to the user shall be restricted to the Roles it has.
- The user shall have passive status. Access to the application shall be prevented when it is passive.
- The proposed solution shall be capable of being integrated into identity management and access systems.
- An unlimited number of Roles shall be defined on the application.
- The actions that can be assigned to the Roles shall be shown in the tree structure and the selected actions or menus shall be shown to the relevant user.
- There shall be automatic log off. At the end of the defined period, the user who is not active should be logged off by the application.

8. SYSTEM PERFORMANCE MANAGEMENT

- There shall be performance monitoring reports or screens available to the system administrator over the application.
- With this infrastructure, the following parameters shall be monitored:
 - List of users who connect instantly (in tree structure by units)
 - The amount of instant memory the system consumes on a process basis
 - Total amount of memory consumed by the system
 - Total number of searches
 - Average search time
 - Number of searches in the last month
 - Call duration in the last month
 - Number of calls in the last week
 - Call duration in the last week
 - Number of instant open workflows
 - Number of instant open tasks
 - Total number of workflows run
 - Total number of finished workflows
 - Number of workflows run in the last month
 - Number of workflows finished in the last month
 - Number of workflows run in the last week
 - Number of workflows finished in the last week
 - Total number of documents
 - Number of documents added in the last month

- Number of documents added in the last week
- Number of instant users
- Number of users logged in in the last month
- Number of users logged in in the last week
- Number of users with no login

9. SYSTEM SETTING MANAGEMENT

- There shall be areas where the parameters of the whole system can be managed.
- As a minimum, the following information should be managed.
 - Characteristics of the barcode label to be printed for incoming documents
 - E-mail account information to be used when sending e-mails via the system
 - SMTP address for sending e-mail
 - Whether to use image validation on the local network
 - Whether to use image verification if available via Internet
 - There shall be interfaces where Fax Integration settings can be made. By means of these interfaces, the information about how the documents to be sent as fax will be transmitted to the fax server can be managed, and the information on which streams of incoming faxes will be sent and from which document type will be saved to the system will be managed.
 - There shall be interfaces where SMS Integration settings can be made. Thanks to this interface, information can be managed by which service provider which SMSs will be sent over the system, which plugins can be installed while sending.
 - There shall be interfaces for e-mail integration settings. With this interface, information such as from which account e-mails will be sent over the system can be managed.

10. IP SECURITY MANAGEMENT

- The proposed system shall be able to take all measures against both internal and external attacks. In this context, incorrect IP addresses should be logged.
- The following functions shall preferably be performed.
 - Temporary Blocking: The number of incorrect entries to be determined by the System Supervisor should be able to be temporarily blocked. Parameters such as blocking time and error number should be changed by the system administrator through this screen.
 - Permanent Blocking: The number of incorrect entries to be determined by the System Supervisor should be able to be permanently blocked. The number of errors should be changed by the system administrator through this screen.
 - The list of blocked IPs should be presented to the System Supervisor through this screen. The System Supervisor should be able to add the desired IP to the block list manually if necessary.
 - The Trusted IP List should be presented to the System Supervisor through this screen. The System Supervisor should be able to manually add any IP to this list.
 - Access Allowed WAN IP Management, this screen should only allow access to the system from WAN IPs added by the system administrator. Masking features such as * must be available when adding WAN IPs.

11. WARRANTY, MAINTENANCE AND SUPPORT

The Contractor shall provide 1 year of warranty, maintenance and support services from the acceptance date of

the final report. The Contractor shall continuously inform ISKUR during the improvement and maintenance services and shall prepare and submit the necessary documentation to ISKUR.

Version management shall be meticulously implemented within the framework of change management processes to be implemented after the implementation of developed report applications, and the following procedure shall be followed for this purpose:

- For the new version, acceptance tests shall be carried out by the Contractor together with the test expert of ISKUR and the end users of the ISKUR in the test environment and the test report shall be submitted to İŞKUR.
- If ISKUR evaluates and approves the test report, the implementation process shall be initiated according to the implementation which will be planned with the Contractor.
- The Contractor shall, together with the approval, prepare a text explaining the changes and improvements made in the version in detail and shall ensure that these are shared to the relevant authority.
- If ISKUR approves, the new version will be published on the approved date in the production environment with all relevant documentation.

The debugging operation shall be planned with the highest priority over insignificant jobs, mandatory jobs and performance improvement operations, and the solution shall be provided within the time period determined by the parties.

The Contractor shall plan and submit to ISKUR the necessary resources for troubleshooting, request development service, compulsory request development service, performance improvement and consultancy service during the maintenance process after the implementation of the application to be developed.

The Contractor shall notify ISKUR in written form about the technical and administrative works and any solution proposals that ISKUR expects the Contractor to carry out in order to fulfil its responsibility.

If the solution notified to ISKUR is accepted or a solution is requested by ISKUR, the solution deemed appropriate by the parties shall be implemented by the Contractor and technical obstacles in the progress of the project shall be overcome.

The Contractor shall plan and submit to ISKUR the necessary resources for the system support service of the systems specified in this ToR.

In order to prevent any service interruptions arising from all the equipment within the scope of this ToR; the Contractor shall carry out the necessary coordination and maintenance in accordance with the knowledge and approval of ISKUR within the scope of the contracts signed with the third parties in the context of the hardware warranty of ISKUR.

All components of the systems specified within the scope of this ToR shall be undertaken by the Contractor within the scope of 24/7 monitoring, reporting, evaluation and resolution of the performance.

MAINTENANCE

Products

Application Server

- The Contractor shall carry out the maintenance activities of the application servers within the scope of this ToR and shall report to ISKUR.
- Contractor shall open service requests (SR) and critical service requests (Critical SR) for errors, improvements and needs detected on application servers, shall monitor the open SRs and check progress for solution and management of SRs periodically during the project period.
- The Contractor shall determine the improvements it deems necessary according to the status, performance and accessibility monitoring reports and shall submit them to ISKUR for approval. If the

improvements are approved by ISKUR, the Contractor shall implement them.

- The Contractor shall ensure that the backup operations are carried out in accordance with the specified backup strategy and shall report them to ISKUR.
- The Contractor shall make the necessary arrangements according to the configuration, patch levels and update controls of the application servers in coordination with ISKUR and shall manage the application servers in an optimized working state.
- The Contractor shall make the necessary arrangements according to the configuration, patch levels and update controls of the operating systems installed on the application servers in coordination with the Agency and shall manage the operating systems in an optimized working state.
- The Contractor shall carry out the maintenance activities of all applications running on the application servers and shall report them to ISKUR.
- Installation, configuration, implementation and maintenance of application servers shall be carried out by the Contractor for the requirements of the new application servers within the scope of the project to be determined jointly by the Contractor and ISKUR.

Business Process Management System

- The Contractor shall carry out the maintenance activities of the Business Process Management System within the scope of this ToR and shall report to ISKUR.
- The Contractor shall initiate the opening of service requests (SR) and critical service requests (Critical SR) for errors, improvements and needs identified in the Business Process Management System, shall monitor the progress of open SRs and check progress for solution and managing SRs periodically during the project period.
- The Contractor shall determine the improvements it deems necessary according to the status, performance and accessibility monitoring reports and shall submit them to ISKUR for approval. If the improvements are approved by ISKUR, the Contractor shall implement them.
- The Contractor shall ensure that backup operations are carried out in accordance with the specified backup strategy and shall report them to ISKUR.
- The Contractor shall make the necessary arrangements according to the configuration, patch levels and update controls of the Business Process Management System and servers in coordination with ISKUR and shall manage the application servers in an optimized working state.
- The Contractor shall manage the operating systems in an optimized manner by coordinating with ISKUR in accordance with the configuration, patch levels and update controls of the operating systems installed on the Business Process Management System application servers.
- The Contractor shall carry out the maintenance activities of all business process projects in the Business Process Management System and shall report them to ISKUR.
- Business process projects will be developed and implemented by the Contractor for the new business process requirements to be determined jointly by the Contractor and ISKUR.

Business Processes

- The Contractor shall carry out the updating and revision activities of all business processes and shall report to ISKUR.
- The Contractor shall develop and implement new business processes to be designed and developed jointly by the Contractor and the Administration for new business process requirements.

SUPPORT

Products

Application Server

- Support activities that may be requested by ISKUR for the application servers shall be carried out 24/7 with the service registration to be opened on the manufacturer portal. In the cases with priority and

escalation, support shall be got from the Turkey office of the manufacturer of the product.

Business Process Management System

- Support activities that may be requested by ISKUR for the Business Process Management System shall be carried out 24/7 with the service registration to be opened on the manufacturer portal. In the cases with priority and escalation, support shall be got from the Turkey office of the manufacturer of the product.

Business Processes

- Errors reported by ISKUR shall be remedied by the Contractor and the fixations and revisions shall be published.
- The Contractor shall plan and implement the performance improvement demands requested by ISKUR by prioritizing within the scope of man day quotas.
- The Contractor shall plan and implement the new demands requested by ISKUR by prioritizing within the scope of man day quotas.

TRANSFER

- The Contractor shall prepare the transfer documentation including the implementation services provided for the target Platform systems within the scope of this ToR and shall submit it to ISKUR for approval.
- After the approval of the transfer documentation by ISKUR, the Contractor shall transfer the information and documents to the personnel determined by ISKUR.

SUPPORT

- Incident management, case management and problem management processes shall be conducted through the online support system.
- First, event and case types shall be determined specifically for the project and categories shall be formed.
- The urgency and impact matrix specific to the project shall be prepared on the low-medium-high triple scale and the matrix that determines the priorities of the cases shall be prepared and uploaded to the online support system with categories and subcategories.
- Intervention and resolution times for the service levels specified in this ToR shall also be matched with the priorities of the cases.
- The solution codes to be created for the project shall also be uploaded to the online support system after the approval of ISKUR.
- Problem management and change management processes shall be triggered under the control of the project manager by event and case types and shall be reported to ISKUR and corrective and preventive actions shall be determined.
- Help desk escalation by the Contractor shall be carried out as follows; the call shall be recorded first, and the database shall be searched. In case of no solution found within the knowledge base, the analyst and software expert in charge at the first level shall analyse the problem and detect the solution. If the solution will not work, the system architect and software architect team shall escalate and follow the solution implementation of this architectural team. If the architectural team also fails to find a solution, the problem shall be transferred to the Turkey office and global office of the manufacturer and the solution shall be monitored.

12. SERVICE LEVEL

STATUS, PERFORMANCE AND ACCESIBILITY CRITERIA

- The Contractor shall be able to provide remote access services. Remote access can only be opened with the approval of ISKUR.
- Planned outages shall be made with the approval of ISKUR. Planned outages shall not be considered as service level outages.

- The Service Level Monitoring Report shall be submitted to the Agency on a monthly basis by the Contractor in order to audit the services provided. Furthermore, Service Level Monitoring Report shall be provided to İŞKUR upon request
- It is the Contractor's responsibility to arrange all systems and components within the scope of the project to serve on a 24/7 basis.
- The CPU utilization rate for the target Platform solution servers covered by this ToR shall not exceed 85% on average at all times over a period of 15 (fifteen) minutes.
- RAM memory usage rate for target Platform solution servers within the scope of this ToR shall not exceed 85% on average in 15 (fifteen) minutes at all times.
- The accessibility of software and applications to be developed and implemented within the scope of this ToR shall not decrease below 95% on average in 15 (fifteen) minutes at all times.
- The time required to respond to user requests for software and applications to be developed and implemented within the scope of this ToR shall not exceed an average period of 30 seconds at a time of 15 (fifteen) minutes at all times.
- The time required to respond to user requests for reports at basic and intermediate level to be developed and implemented within the scope of this ToR shall not exceed an average of 3 minutes in 15 (fifteen) minutes at all times.
- The time required to respond to user requests for reports at a complex level to be developed and implemented within the scope of this ToR shall not exceed an average period of 15 minutes at a time of 15 (fifteen) minutes at all times.

SERVICE LEVEL

- The Contractor shall not be liable for any problems and interruptions covered by other hardware and software maintenance support agreements.
- The Contractor shall not be liable for any problems and interruptions in the hardware and software which do not fall within the scope of this ToR and which may affect the products and services covered by this ToR.
- The Contractor shall provide solutions according to the following service levels for failure, maintenance, configuration and repair of the system components covered by this ToR.
 - Level 1: If the problem occurring in all system components under the responsibility of the Contractor makes the general systems inoperable, the intervention shall be provided within 2 (two) hours and the solution shall be provided in the following 4 (four) hours.
 - Level 2: If the problem occurring in all system components under the responsibility of the Contractor makes some of the systems inoperable, intervention shall be provided in 4 (four) hours and solutions shall be provided in 8 (eight) hours.
 - Level 3: If the problem occurring in all system components under the responsibility of the Contractor does not affect the general operation of the system but prevents it from performing some of its functions, intervention shall be provided within 12 (twelve) hours and solutions shall be provided in the following 24 hours.

13. DOCUMENTATION

- The Contractor shall prepare the project plans of test, implementation and warranty, maintenance and support processes in detail and they shall be kept up-to-date in an online medium approved by İSKUR.
- Architectural design, developed software components and application development life cycle outputs shall be documented in detail during the project.
- The maintenance works deemed necessary by the Contractor and İSKUR shall be recorded and documented. These records shall be reported as often as determined by İSKUR.

- All requests for changes shall be recorded and documented. These records shall be reported as often as determined by ISKUR.
- The configurations deemed necessary by the Contractor shall be recorded and documented. These records shall be reported as often as determined by ISKUR.

14. CODE AND APPLICATION SECURITY

- During the software development process, automatic vulnerability scanning shall be performed continuously, and findings of higher and superior importance shall be corrected.
- The application shall serve as the HTTPS Extended Validation Certificate with the most current TLS version and the application shall not run as http.
- Penetration tests shall be performed before the application goes live.