SWE 523

PROJECT PROPOSAL FORM

Translated and modified from
TÜBİTAK TEYDEB AGY 101 TEMPLATE FOR EDUCATIONAL PURPOSE ONLY

PROJECT NAME : AIRP: AI-based domain-specific business solutions for SMEs

PROJECT ACRONYM : AIRP

COMPANY NAME: AIERP Custom Solutions

DATE: 01.01.2024

SWE 523 - Project1 Proposal Form (translated & modified from
GRANTING_ORGANIZATION/SWE523 TEYDEB Template)

Initial Technological Readiness Level- (start): 2

Target Technological Readiness Level (end): 8

A. FOUNDATION AND PROJECT INFORMATION

A.0. Comparison with Related Project(*)

(*)If the new project proposal presented is the re-submission of a project that was previously submitted to GRANTING_ORGANIZATION/SWE523 and was rejected / withdrawn or abolished, or if it is the continuation of a project that was previously carried out with the support of GRANTING_ORGANIZATION/SWE523, the information requested in this section must be prepared and submitted.

Description: Your new project proposal presented in this section; Re-submission of a project that was previously submitted to GRANTING_ORGANIZATION/SWE523/SWE523 and was rejected / withdrawn or abolished; By comparing it with the project in question, the differences of the new project compared to the previous one in terms of features of the targeted outputs, innovative aspects, methods to be applied, project plan, budget and collaborations, If it is a continuation of a project previously carried out with the support of GRANTING_ORGANIZATION/SWE523/SWE523; By comparing it with the project in question, the differences and advantages of the new project compared to the previous one in terms of the features of the targeted outputs, innovative aspects and the methods to be applied, Prepare a document containing relevant information and upload it in pdf format (The file size you will add can be maximum 5 MB).
Comparison with Related Project

A.1 - PROJECT PRELIMINARY INFORMATION

A.1.1.

Project number	1		
Project name	AIRP: AI-based domain-specific business solutions for SMEs		
Project Start Date	10.06.2024	Project End Date	10.11.2025
Support Start Date		Support End Date	
Project Duration	18 Weeks	Support Period	
Technology Group			
Legal/special permission:	O Project studies require legal/special permission (Ethics Committee, etc.). O Project studies do not require legal/special permission (Ethics Committee, etc.).		
Project information sharing	I hereby approve the information provided in the Project Name and Project Purpose section to be published in promotional activities, analysis and reporting studies, such as success stories, etc. O After the project support process is completed, I approve the name and purpose of the project to be published on the GRANTING_ORGANIZATION/SWE523/SWE523 website. (Note to PRODİS: If the first option is selected in this section, the second option will be selected		
Sector in which R&D Studies will be carried out	With its domain specific nature, the initial project AIRP will carry out studies in the following sectors: Food Production		
Sector Where Project Outputs Will Be Used	Food Production, Textile Manufacturing, Dairy and Dairy Product Manufacturing, Furniture Manufacturing, Electronics Manufacturing, Construction Materials Manufacturing (Hardware), Footwear Manufacturing, Packaging and Food Processing, Giftware Manufacturing, Automotive Parts Manufacturing, Household Appliances Manufacturing, Optical Product Manufacturing, Sports Equipment Manufacturing, Publishing (Book), Chemical Product Manufacturing, Plastic Product Manufacturing, Metal Processing and Manufacturing, Glass and Ceramic Product Manufacturing, Technological Device Manufacturing		

iii)

Scientific and Technological Fields Included in the Project Proposal	
Economic Activity Class of Project Output (NACE Code)	62.01.01
GTIP Code of Project Output	8523
Project Beginning Technology Readiness Level	2
Technology Readiness Level Targeted to be Reached at the End of the Project	8

A.1.2.

Project manager			
Name and surname	Mehmet Eyupoglu	[redacted]TC	17342183964
Title/Duty	Software Developer		
Correspondence			
Telephone	5531731991	[redacted]Fax	
Email	mehmeteyupoglu2@gmail.com	Secondary Email	

A.2 - ORGANIZATION INFORMATION

A.2.1 – Applicant Organization Information

A.2.1.1.

Establishment Official	
Organization Type/Scale/Balance	
Tax Administration	
Tax Registration Number	
Establishment Registration Date	
trade register number	
Location of the Project: (Technocity/R&D Center/OIZ/Other)	

A.2.1.2. Project Person Information

Establishment Official			
Name and surname		TC Identification number	
Title/Duty			
Telephone		Fax	
Email			

A.2.1.3.

Organization Personnel Distribution						
Unit of	Doctorate	Degree	Licence	Technical/Vocatio	Othe	Total
Production						
R&D						
Other						
					Total	

A.2.1.4.

Financial Information of the Organization for the Previous Year or Last Interim Accounting Period (TL)	Year/Period	
	Annual Number of Employees (YIB)	
	Net Sales Revenue	
	R&D Expenses	
	Total Foreign Sales	
	Paid-in capital	
	Total Financial Balance Sheet (Total of	
	Total Grant Support Amount Provided from the Public in the Last Three Years (TL)	
	Equity	
	Last Three Years Net Sales Average	

Partner Organization Information	
Organization Name:	
Tax Office and Registration Number:	
Address:	
Tel/Fax/E-mail/Web Address:	
Establishment Official:	
TC Identification number: Title/Duty: Tel/Fax/E-mail:	
Organization Type/Scale:	

A.2.1.5 Other R&D Projects of the Company:

Other R&D Projects of the Organization Completed and Ongoing in the Last Five Years (*)					
Project Number and Name	**Institution from which support is received**	**Support Amount**	**Start-End Dates**	**Economic Values**	**Explanation**
				Export Amount: Number of Patents: License Revenues: TEYDEB Support?: Total Sales Amount:	

(*) In PRODİS, the organization's previous GRANTING_ORGANIZATION/SWE523 Project information comes automatically from the database. Editing can be done regarding the project information in question, and project information carried out with the support of different institutions can be added. (It will be listed automatically.)

A.2.1.6. Questions for your company's projects previously supported by GRANTING_ORGANIZATION/SWE523 (if any):

1.What is the market share of the supported project outputs and the turnover achieved? (Indirect income for projects other than product development Detailed explanation of the benefits such as increased productivity, cost reduction, and quality increase that enable it to be achieved.
2.Does your company provide after-sales support for the outputs of supported projects? Is the product being sold continued to be developed?
3.Are the supported project outputs a component of a main exported product? (For example, the rim of an exported car)
4. Have applications been made for international R&D support programs (EU Framework Programs, etc.)? Have you taken part in an international project? If yes, please briefly state what your role is in the project.

A.3. PROJECT DESCRIPTION - BRIEF DESCRIPTION

Explanation: In this section, it is expected to provide information that can be shared with people other than those evaluating the project - without commercial sensitivity. The written and visual material you will prepare in this section will be submitted to the Executive Board where the decision for your project proposal will be made. It will be presented unchanged at the meeting. It is recommended that this section be prepared after all other parts of the project proposal form are filled in. In this section, the focus should be directly on the purpose of the project, concrete goals, R&D content, innovative aspects and technology level. Texts should be written that clearly summarize the project team structure, the project-specific methods to be applied, the unique contributions of your organization, and the technical / economic benefits of the project output to be obtained. Considering that the prepared summary will be presented to people who have expertise in the basic technological fields to which the project is related, general (book) concepts related to the subject should not be repeated,

and the focus should be on the technical details to be worked on. General subject and history narratives that are not specific to the project and its content and will not contribute to the evaluation, and explanations such as general project management methodologies, work package ranking, etc. that may be valid for every project should be avoided.

1 - Brief Introduction of the Establishment and Reason for Initiating the Project

Give brief information about your organization's main field of activity, its main products and services, your core competencies that give your organization a competitive advantage (areas you are best at), and your organization's future vision, and explain how the proposed project is related to all of these (the strategic importance of the project for your organization). (Up to 1,500 characters)

The AIRP project addresses inefficiencies in SMEs, aiming to prevent management crises and bankruptcy threats by providing an AI-based assistant. Our core values of innovation, efficiency, and foresight drive this initiative, aligning with our vision of leveraging technology to foster sustainable growth within the SME sector. This strategic endeavor reinforces our commitment to innovation and our position as leaders in AI-driven solutions, while also creating tangible value for businesses navigating an ever-evolving landscape.

2 – Aim of the Project

AIRP aims to offer an affordable ERP solution tailored specifically for SMEs, integrating built-in features that strengthen their operations. Leveraging advanced AI through smart suggestions from Large Language Models (LLMs), it provides intuitive recommendations to enhance decision-making processes. This cloud-based ERP system ensures accessibility on mobile devices, enabling SMEs to manage their operations seamlessly from anywhere. Additionally, our domain-specific setup streamlines processes, making day-to-day tasks easier for SMEs, ultimately empowering them to thrive in competitive markets.

Keywords:	ERP, SME, AI, LLM, Business, B2B, Generative AI, Mobile

3 – Innovative Aspects

This project boasts several innovative aspects that set it apart in the realm of SME-focused ERP solutions. Firstly, our domain-specific setup ensures tailored functionality, addressing the unique requirements of various industries and niches, thereby streamlining operations for SMEs. Secondly, we leverage advanced AI capabilities, such as smart suggestions from Large Language Models (LLMs) trained on company-specific data, enabling personalized and contextually relevant insights to drive decision-making. Lastly, our emphasis on mobile access ensures flexibility and convenience, empowering users to manage their businesses anytime, anywhere, and on any device.

4 –Techniques and Technologies to be Used/Developed and Original Contributions

Prototype level:

- Backend: Express.js, MySQL
- Frontend: React
- Generative AI: Llama 2

Enterprise level:

- Backend: Microservices (e.g., Spring Boot) with containers (Docker, Kubernetes) on cloud platforms (AWS, Azure).
- Database: Distributed SQL (e.g., sharded PostgreSQL) or NoSQL (e.g., MongoDB) based on data needs.
- Frontend: React with server-side rendering (SSR) on a CDN for improved SEO and performance.
- Generative AI: Cloud-based LLM services (e.g., Google AI Platform, Amazon Comprehend).

5 – Economic Benefits & Business Value to the Nation

Considering the large majority of economies in most of the countries rely on SMEs, the immediate effect will be through nationwide sales. Within a few years, AIRP is expected to be used by the 10% of all SMEs in Turkiye, that makes about 320000 SMEs. This is expected to produce around 500M TL (18,5M USD) out of the money wasted due to inefficient resource planning and lack of strong data-driven management.

Project Visual

At least one visual material (photo, technical drawing, layout drawing or draft drawing, table, graph, circuit diagram, system architecture, conceptual model diagram, flow diagram, etc.) that you think will best reflect your project to the evaluators should be uploaded to this section. (You can upload documents in image (JPG, JPEG, GIF, PNG), PDF or Microsoft Word Document format. 1 attachment can be a maximum of 5 MB, and the total size of your attachments can be a maximum of 10 MB.)
Class diagram for the first planned module to be developed

Presentation Material (YOU WILL PRESENT YOUR PROJECTS FOR SWE523 COURSE, 10 slides max.) Project owner companies/project managers who wish can prepare one of the following presentation options and add it to the Project Proposal Form (Do not upload videos only for organization promotion in this section. Your video clip can be a maximum of 10 MB. The videos to be uploaded to the system must be in "flv" format. You can upload your videos in different formats. You can convert it to “flv” format with programs such as Format Factory etc. The presentation file size to be uploaded can be maximum 5 MB):
Project Presentation (must be in MSPowerPoint format, not exceed 10 slide pages) Project Promotion Video (must be in flv format, should not exceed 5 minutes) THIS WILL BE SUBMITTED WITH YOUR PROPOSAL AS PPT FILE Sent via email

B. **INDUSTRIAL R&D CONTENT, TECHNOLOGY LEVEL AND INNOVATIVE ASPECTS OF THE PROJECT**

B.1 -RELATIONSHIP OF THE PROJECT WITH THE CALL TOPIC AND OBJECTIVES

1 -Explain the relationship of the project to the subject of the call.

%100 in aggreement with the call for project.

2 - Explain the general purpose of the project. Identify the problem that is intended to be solved by the project.

SMEs often struggle to manage their data effectively due to resource constraints and limited IT expertise. This is particularly challenging because:

- Lack of control: Disorganized data makes it difficult for SME owners to get a holistic view of their business, hindering their ability to make informed decisions.
- Inefficiency: Manual data entry and isolated processes can waste time and resources, especially for businesses with limited human resources.
- Financial vulnerability: Poor data management can lead to errors in accounting, inventory control, and other critical areas.
- Data entry burden: SMEs with limited staff often find data entry a cumbersome task, leading to delays and potential inaccuracies.

3- Describe the proposed solution to achieve the project objectives.

This project tackles the data management challenges faced by Small and Medium-sized Enterprises (SMEs) by developing a user-centric Enterprise Resource Planning (ERP) system. This system offers several key features designed to empower owners:

- **Centralized Data Hub:**
  - The system acts as a central repository for all business data, accessible through both desktop and mobile devices. This eliminates data silos and ensures all departments and employees have access to the most up-to-date information.
- **Domain-Specific Efficiency:**
  - The system incorporates domain-specific functionalities tailored to the unique needs of different industries within the SME landscape. This streamlines common tasks like inventory management, customer relationship management, or project tracking.
  - Customizable forms further enhance data collection by allowing users to capture industry-specific data points relevant to their operations.
- **Leveraging LLMs:**
  - The project integrates Large Language Models (LLMs) trained on company-specific data. These LLMs can act as intelligent assistants by:
  - Facilitating Data Collection: LLMs can automate data entry tasks by extracting information from documents, emails, or voice commands, reducing manual work and improving accuracy.
  - Supporting Decision-Making: Trained on historical data and industry trends, LLMs can provide insights and generate reports to aid informed decision-making by SME owners.
- **Web Intelligence with LLMs:**
  - The system utilizes LLMs to scrape the web for domain-specific news and industry developments relevant to the company's operations. This allows owners to stay informed about market trends, competitor activity, and potential opportunities.

Overall, this project proposes a comprehensive ERP system that combines centralized data access, domain-specific functionalities, and the power of LLMs. It aims to streamline data management, enhance decision-making capabilities, and provide SME owners with valuable real-time insights to navigate the dynamic business landscape.

4 -Explain the goals planned to be achieved with the proposed solution.

This project aims to develop an ERP system that empowers SMEs by achieving the following goals:

- **Enhanced Operational Efficiency:**
  - By streamlining data collection through built-in functionalities, customizable forms, and LLM automation, the system aims to reduce manual data entry tasks. This translates to a measurable increase in employee productivity, allowing them to focus on higher-value activities.
- **Reduced Resource Redundancy:**
  - The centralized data platform and domain-specific functionalities will eliminate the need for siloed data and redundant processes across departments. This will be measured by tracking the number of processes streamlined and the reduction in duplicate data entry instances.
- **Improved Data Quality and Availability:**
  - By automating data entry and offering user-friendly data capture methods, the system aims to achieve a measurable increase in data accuracy. Additionally, the centralized platform ensures data availability for all authorized users, fostering better decision-making.
- **Data-Driven Decision Making:**
  - The project leverages LLMs trained on company data and industry trends to generate reports and insights. The goal is to increase the utilization of these AI-powered insights by SME owners within a defined timeframe.
- **Strengthened SME Competitiveness:**
  - By achieving the aforementioned goals, the system aims to contribute to a measurable improvement in key performance indicators (KPIs) relevant to SMEs, such as increased sales, improved customer satisfaction, and reduced operational costs. Tracking these KPIs will demonstrate the overall impact of the ERP system on strengthening SME competitiveness

5 -Identify the ultimate beneficiaries of the proposed project and justify the reasons for selecting this target group.

This project prioritizes SMEs due to:

Resource Constraints: Limited financial resources often hinder investment in complex ERP systems or data management expertise. This project offers a user-centric, cost-effective solution.

Data Management Challenges: Inefficient data collection and silos impede control and informed decision-making. The proposed ERP system tackles these challenges through a centralized repository, streamlined collection tools, and functionalities tailored to SME needs.

Enhancing Efficiency: Automation features and data-driven insights aim to bolster overall business efficiency for SMEs.

While broadly applicable, manufacturers may see specific benefits due to their data-intensive operations. The system can be tailored to their industry-specific needs.

6 -Explain in detail the methods to be applied and the reasons for choosing these methods.

This project proposes a flexible approach to empower SMEs with data management capabilities:

- **Ubiquitous Data Collection (Mobile & Desktop):**
  - Rationale: SMEs require flexible data entry options. Mobile access caters to field workers and remote operations, ensuring real-time data capture (e.g., field sales recording). Desktop access facilitates data entry for administrative staff and decision-makers.

- **Domain-Specific Data Organization and Functionalities:**
  - Rationale: One-size-fits-all solutions often fail to capture the unique needs of different industries. The system will offer pre-built functionalities and industry-specific forms that cater to data points relevant to each SME's operations (e.g., inventory management tools for manufacturers, customer relationship management features for service providers). This streamlines data collection and organization according to industry best practices.

- **Leveraging Open-Source LLMs for Company-Specific Insights:**
  - Rationale: State-of-the-art AI technologies offer significant potential for SMEs. By utilizing open-source LLMs trained on a company's specific data sets, the system can generate more relevant and actionable insights. This empowers decision-makers to make informed choices based on tailored data analysis and avoid generic recommendations that may not apply to their specific industry or business context.

7 –Examine the priority areas link in the call text and indicate whether your project has been developed for the "Priority R&D and Innovation Topics" in these areas. (It is recommended to take into account the explanations under the Priority Products and Technologies headings and the Technology Readiness Level (THS).)

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B.2 TECHNOLOGY LEVEL OF THE PROJECT

Current State of the Technology ("State-of-the-Art")
Explain the current national/international level regarding the project subject. (Up to 3,000 characters)

ERP for SMEs: Enterprise Resource Planning (ERP) systems are well-established solutions for larger companies, but catering to SMEs is an evolving area. Existing SME-focused ERPs often lack:

- **Domain Specificity:** Many ERP solutions are generic, neglecting the unique data management needs of different industries within the SME landscape.
- **Built-in Functionalities:** Current offerings may require extensive customization for industry-specific workflows and tasks, adding complexity for SMEs with limited IT resources.

Mobile Access: Mobile access for data entry, monitoring, and basic functionalities is becoming increasingly common in ERP systems, but full feature parity with desktop versions might not always be available.

AI Integration: While AI is making inroads into enterprise software, integrating Large Language Models (LLMs) for data automation, analysis, and insights generation is still a nascent area, particularly for SME-focused solutions.

Market Gap and Innovation: My project proposes a unique combination of features that address the current limitations:

- **Domain-Specific Approach:** Tailoring functionalities and forms to specific industries streamlines data management for SMEs.
- **LLM Integration:** Utilizing LLMs for automation, data analysis, and generating industry-specific insights empowers data-driven decision making for SMEs.
- **Mobile Access with Full Features:** Providing a comprehensive user experience across mobile and desktop platforms caters to the evolving work styles within SMEs.

Techniques and Technologies Covered by Project Activities and Original Contributions
List the techniques and technologies that will be developed or used in the project, especially during the design/development processes, in the table below. Please also indicate your organization's unique contributions to the technical/technological content of the project and the areas of expertise that will receive support from outside your organization:

Name/description of technique/technology	To Be Used / To Be Developed	Why is it needed in the project?	Which phase of the project does it concern (work package)	Project personnel who will carry out the work	Persons or organizations to receive consultancy/service from outside the organization
LLM fine-tuning	To be used	Data needs to be the driving factor for AI	0003 - Large Language Model (LLM) Integration and Training	Sena Cetin, Efe Yaman	None
AI-based form control	To be developed	Data entry facilitation	0004 - Web Intelligence and System Development	Sena Cetin, Efe Yaman	None

Technical/Technological Uncertainty and Challenges
Taking into account your organization's current knowledge and capabilities gained from past projects, describe the technical/technological uncertainties and difficulties you will encounter for the first time and that you will have to overcome during the development of the proposed project, with which you have no experience. (Up to 3000 characters)

Leveraging our expertise in building enterprise applications, we anticipate some technical challenges for this project that fall outside our current experience:

1. LLM Integration and Security: While familiar with APIs, integrating a cloud-based LLM and ensuring secure data anonymization for LLM training is a new area for us. Mastering secure data handling protocols and API interactions with chosen LLM services will be crucial.

2. Domain-Specific Customization: Tailoring functionalities for specific industries requires in-depth understanding of their data management workflows. Collaborating with industry experts and conducting thorough needs analysis will be vital to overcome this challenge.

3. Large-Scale Data Management: While we have experience with databases, managing potentially high-volume data from SMEs across various industries might necessitate exploring distributed database solutions (e.g., sharding) – a new territory for our team.

4. Mobile Application Optimization: Optimizing a complex React application with LLM functionalities for seamless mobile performance requires expertise beyond our current focus on web development. Upskilling team members or collaborating with mobile development specialists will be essential.

B.3 PROMOTION OF THE PROJECT WITH CONCRETE / MEASURABLE OBJECTIVES AND SOLUTION APPROACHES (R&D SYSTEMATICS)

Project Goals

Please indicate in the table below the most important (maximum 5) concrete and measurable success criteria (capacity, physical size, working conditions, speed, various performance values, etc.) that define the targeted outputs of the project.

measure of success	target value
Speed (customer forms processed/filled by every hour)	*100 forms per hour*
Capacity	*20% of productivity in manufacturing*
Working conditions	*20% less work load on management*
Percentage of retrieved news articles relevant to the specific update	*90%*
Scalability of the customer operations	*50%*

Project Preparation Studies

Please indicate in the tables and fields below the information obtained before the project application regarding the literature and patent research on the project subject, technical feasibility studies and the standards / specifications to be followed.

Literature research results, if any, that will contribute to the project:

Publication name	Date	Writers)	Summary information that will form input to the project:

Patent / utility model research results, if any, related to the project subject:

patent number	Patent office where it is registered (TPE, EPO, USPTO, JPO...etc)	Year (application year if at the application stage)	Patent/applicants	Summary information that will form input to the project

Summary findings of technical pre-feasibility studies - if conducted: (Maximum 1500 characters)

1.
2.
3.

Standards / specifications to be followed regarding the project output: (Maximum 1500 characters)

1.
2.
3.

Methods to be Used in the R&D Process

Specify the analytical / experimental solution methods that will be applied to achieve the project objectives defined above. (NOTE: In this section, it should be explained which technical / scientific approaches and their stages will be followed specifically for the project presented, and the names of work packages or standard / routine working methods that may be in every project should not be repeated.) (Maximum 3000 characters)

B.4. INNOVATIVE ASPECTS OF THE PROJECT

Innovations
After briefly summarizing the innovative aspects of the output targeted in the project, its anticipated differences, advantages and superiorities compared to its counterparts in the market and sector (within the company, at home or abroad), please state it by comparing it with concrete/numerical and measurable values as much as possible in the two tables below.

- State of the art LLM Technologies will be exploited
- Mobile Access
- Industry specific solutions that are peculiar to certain companies which makes the data collection easier
- Solutions for SMEs that need better organization

a) Comparison of the proposed project output with your organization's existing products/processes and the outputs of previously completed R&D projects (Table Y.1):

- There is no similar product/process in our organization that can be compared with the proposed project output.
- Comparison of our organization with similar products/processes is made in the table below.

Technicial Specifications	**Project Output**	**Other Product/Process Available in the Organization (1)**	**(If any) Other Product/Process Available in the Organization (2)**	**.....**
Industry Specific Solutions	*Industry-specific forms & workflows, pre-built tools for common tasks.*	N/A	N/A	
AI trained on company specific data	*Automate data entry, generate reports & insights based on company & industry data.*	N/A	N/A	
Industry Specific News	*LLM gathers & analyzes industry-specific news for users to explore.*	N/A	N/A	
SMEs as target group	*Targets small & medium businesses for efficient data management.*	N/A	N/A	
Cloud solution	*Web app hosted in the cloud for easy access & scalability.*	N/A	N/A	

b) Comparison of the proposed project output with existing or potential similar ones in the domestic/foreign market (Table Y.2):

- In the project, a new product/process that has no comparable counterpart in the market will be developed.
- Comparison of the project output with its current or potential counterparts in the domestic/international market is made in the table below.

Technicial Specifications	Project Output	SAP	Logo Starter	DIA	Monday .com	LIOX	Mikro	Puma
Industry Specific Solutions	*Industry-specific forms & workflows, pre-built tools for common tasks.*	No	No	Partly	No	Yes	Yes	Yes
AI trained on company specific data	*Automate data entry, generate reports & insights based on company & industry data.*	No	No	No	No	No	No	No
Industry Specific News	*LLM gathers & analyzes industry-specific news for users to explore.*	No	No	No	No	No	No	No
SMEs as target group	*Targets small & medium businesses for efficient data management.*	No	Yes	Yes	Yes	No	Yes	Yes
Cloud solution	*Web app hosted in the cloud for easy access & scalability.*	Yes	Yes	Yes	Yes	Yes	Yes	Partly

INFORMATION RELATED TO THE PARTNER PROJECT (*)
(*)(This section will be activated for applications within the scope of projects carried out with national partnerships.)

Explain the division of labor between the partners in the project. State your duties and responsibilities in the project by associating them with the work packages. Provide information about the complementarity of the project partners' skills to be used in the project.

If technology transfer is planned from the partners of the project, please provide information about the efforts to ensure the permanence of technology transfer in the project.

Explain how the intellectual and industrial property rights that will arise as a result of the project will be shared among the partners.

C. PROJECT PLAN AND ESTABLISHMENT INFRASTRUCTURE

C.1. BUSINESS PLAN

Detailed Work-Time Bar Chart
Detailed Job Time Bar Chart

List of Work Packages

Sequence No.	Code	Work Package Name	Start-End Dates
1	0001	Requirements Analysis and Feasibility Study	01-06-2024 - 01-10-2024
2	0002	Domain-Specific Functionalities Development	01-10-2024 - 01-02-2025
3	0003	Large Language Model (LLM) Integration and Training	01-11-2024 - 01-02-2025
4	0004	Web Intelligence and System Development	01-12-2024 - 01-06-2025
5	0005	User Acceptance Testing (UAT) and Deployment	01-04-2025 - 01-09-2025
6	0006	Dissemination and Sustainability (Month 12-18):	01-06-2025 - 01-12-2025

Work Package Identification Form(A separate form will be prepared for each work package)	
Work Package Number:	**0001**
Work Package Name:	Requirements Analysis and Feasibility Study
Starting date:	01-06-2024
End Date:	01-10-2024
Related Organizations(In joint projects, please tick the ones included in this work package from the project partners)	

List work package activities (Maximum 3,000 characters):

1. Stakeholder & Requirements:
   - Identify key users, developers, decision-makers.
   - Gather needs & expectations through interviews/workshops.
   - Document requirements (use cases, user stories).
2. Feasibility Analysis:
   - Assess technical suitability for meeting requirements.
   - Estimate development & deployment costs.
   - Evaluate operational impact & user adoption.
3. Scope Definition & Recommendations:
   - Prioritize functionalities & define project scope.
   - Develop high-level system architecture.
   - Identify & mitigate potential risks.
   - Prepare final feasibility study report.

Describe the methods to be used in the work package and your unique contributions to them, and list the parameters to be examined (Maximum 3,000 characters):

Methods:

- Stakeholder Interviews & Workshops
- Document Analysis (if available)
- Technology Research & Cost Estimation
- User Story & Use Case Development
- High-Level System Architecture Design
- Risk Assessment

My Contributions:

- Leading stakeholder engagement activities
- Analyzing requirements and translating them into technical specifications

- Evaluating technical feasibility of proposed solutions
- Contributing to system architecture design
- Identifying and mitigating potential project risks

Parameters:

- Functional Requirements (what the system should do)
- Non-Functional Requirements (performance, security, usability)
- Technical Suitability (existing technologies to meet needs)
- Development & Deployment Costs
- Operational Impact & User Adoption
- Project Risks (technical, budgetary, schedule)

List the experiments, tests and analyzes in the work package with their reasons in the table below (specify where the experiments and tests will be carried out, give detailed justification for the ones to be carried out abroad. If no experiments / tests / analyzes will be performed in this work package, specify):

Experiment / Test / Analysis Name	Reason for Making	Where it will be carried out (in the company, domestic or international organizations)	(If it will be held abroad) Materials
N/A	N/A	N/A	N/A

Specify the measurable/concrete technical intermediate outputs (milestones) that enable the monitoring of this work package activities and indicate their completion:

Definition of Intermediate Output	Expected Realization Date:	Work Package for Which Output Will Be Used
Search output-1	N/A	N/A

Work Package Identification Form(A separate form will be prepared for each work package)	
Work Package Number:	**0002**
Work Package Name:	Domain-Specific Functionalities Development
Starting date:	01-10-2024
End Date:	01-02-2025
Related Organizations(In joint projects, please tick the ones included in this work package from the project partners)	

List work package activities (Maximum 3,000 characters):

Activities:

- Industry Research & Needs Analysis (Specific to chosen domain. Bakery selected as a start)
- Domain-Specific Form & Workflow Design
- Integration of Pre-built Functionalities
- Development of Custom Functionalities (if required)
- Unit Testing of Developed Functionalities

Describe the methods to be used in the work package and your unique contributions to them, and list the parameters to be examined (Maximum 3,000 characters):

Methods:

- Industry Benchmarking & Best Practices Research
- User Interface Prototyping & User Feedback Sessions
- API Integration & Data Mapping for Pre-built Functions
- Agile Development Methodology (if applicable)
- Unit Testing Frameworks & Code Reviews

My Contributions:

- Analyzing industry data and user needs to define functionalities
- Designing user interfaces and workflows for domain-specific tasks
- Integrating pre-built functionalities with the core system
- Developing custom functionalities to address unique domain requirements
- Ensuring code quality through unit testing and code reviews

Parameters:

- Industry Alignment (functionalities address chosen domain needs)
- User Interface Usability & Efficiency
- Functionality Completeness (covers essential domain tasks)
- Integration Success (seamless interaction with pre-built functions)
- Code Quality & Maintainability (unit test coverage, code clarity)

List the experiments, tests and analyzes in the work package with their reasons in the table below (specify where the experiments and tests will be carried out, give detailed justification for the ones to be carried out abroad. If no experiments / tests / analyzes will be performed in this work package, specify):

Experiment / Test / Analysis Name	Reason for Making	Where it will be carried out (in the company, domestic or international organizations)	(If it will be held abroad) Materials	
UAT TEST	Test for production environment	In the company		

Specify the measurable/concrete technical intermediate outputs (milestones) that enable the monitoring of this work package activities and indicate their completion:

Definition of Intermediate Output	Expected Realization Date:	Work Package for Which Output Will Be Used
UAT TEST OUTPUT	01/10/2024	0002, 0003

Work Package Identification Form(A separate form will be prepared for each work package)	
Work Package Number:	**0003**
Work Package Name:	Large Language Model (LLM) Integration and Training
Starting date:	01-11-2024
End Date:	01-02-2025
Related Organizations(In joint projects, please tick the ones included in this work package from the project partners)	

List work package activities (Maximum 3,000 characters):

Activities:

- LLM Selection & Integration Framework Development
- Data Anonymization & LLM Training Data Preparation
- LLM-powered Automation Functionalities Development
- LLM-based Data Insights & Reporting Design
- Integration Testing of LLM Modules

Describe the methods to be used in the work package and your unique contributions to them, and list the parameters to be examined (Maximum 3,000 characters):

Methods:

- Open-Source LLM Framework Evaluation & Selection
- Data Security & Privacy Protocols Implementation
- Machine Learning Techniques for Data Cleaning & Preprocessing
- Natural Language Processing (NLP) Techniques for LLM Tasks
- System Integration Testing with LLM Functionality Focus

My Contributions:

- Selecting and integrating an appropriate open-source LLM framework
- Developing secure processes for data anonymization and training data preparation
- Designing LLM functionalities for data entry automation and information extraction
- Creating LLM-based features for data analysis, generating reports, and providing insights
- Ensuring seamless integration of LLM modules with the overall system

Parameters:

- LLM Suitability (capability to handle project-specific tasks)
- Data Security & Privacy Compliance
- Effectiveness of LLM Automation (accuracy, efficiency)
- Quality & Relevance of LLM-generated Insights & Reports

- Successful Integration of LLM Modules (no functionality conflicts)

List the experiments, tests and analyzes in the work package with their reasons in the table below (specify where the experiments and tests will be carried out, give detailed justification for the ones to be carried out abroad. If no experiments / tests / analyzes will be performed in this work package, specify):

Experiment / Test / Analysis Name	Reason for Making	Where it will be carried out (in the company, domestic or international organizations)	(If it will be held abroad) Materials	
UAT TEST FOR LLM	Getting ready for production			

Specify the measurable/concrete technical intermediate outputs (milestones) that enable the monitoring of this work package activities and indicate their completion:

Definition of Intermediate Output	Expected Realization Date:	Work Package for Which Output Will Be Used
UAT TEST FOR LLM	12/12/2024	0004, (output might be sold separately)

Work Package Identification Form(A separate form will be prepared for each work package)	
Work Package Number:	**0004**
Work Package Name:	Web Intelligence and System Development
Starting date:	01-12-2024
End Date:	01-06-2025
Related Organizations(In joint projects, please tick the ones included in this work package from the project partners)	

List work package activities (Maximum 3,000 characters):

Activities:

- Web Scraping & Information Extraction (if applicable)
- Data Filtering & Analysis Techniques Development
- System Development & Integration (all core functionalities)
- Comprehensive System Testing (functional & non-functional)

Describe the methods to be used in the work package and your unique contributions to them, and list the parameters to be examined (Maximum 3,000 characters):

Methods:

- Web Scraping Framework Selection & Ethical Data Collection Practices (if applicable)
- Machine Learning Techniques for Data Filtering & Feature Engineering
- Agile Development Methodology (or similar iterative approach)
- System Integration Testing Tools & Techniques
- Functional & Non-Functional Testing Strategies (performance, usability)

My Contributions:

- Designing and implementing web scraping functionalities (if aligned with project goals and data privacy regulations)
- Developing algorithms for filtering and analyzing data extracted from web sources
- Participating in the overall system development process, focusing on LLM integration and data functionalities
- Conducting comprehensive testing of the system, ensuring all features work as intended and meet user needs
- Identifying and resolving any bugs or integration issues during testing

Parameters:

- Web Scraping Compliance (if applicable, adheres to ethical data collection practices)
- Accuracy & Relevance of Extracted Information
- Functionality Completeness (all core features developed and integrated)
- System Performance & Scalability (meeting user demands and future growth)
- Usability & User Experience (system is easy to learn and use)

List the experiments, tests and analyzes in the work package with their reasons in the table below (specify where the experiments and tests will be carried out, give detailed justification for the ones to be carried out abroad. If no experiments / tests / analyzes will be performed in this work package, specify):

Experiment / Test / Analysis Name	Reason for Making	Where it will be carried out (in the company, domestic or international organizations)	(If it will be held abroad) Materials
N/A	N/A	N/A	N/A

Specify the measurable/concrete technical intermediate outputs (milestones) that enable the monitoring of this work package activities and indicate their completion:

Definition of Intermediate Output	Expected Realization Date:	Work Package for Which Output Will Be Used
N/A	N/A	N/A

Work Package Identification Form(A separate form will be prepared for each work package)	
Work Package Number:	**0005**
Work Package Name:	User Acceptance Testing (UAT) and Deployment
Starting date:	01-04-2025
End Date:	01-09-2025
Related Organizations(In joint projects, please tick the ones included in this work package from the project partners)	

List work package activities (Maximum 3,000 characters):

Activities:

- UAT Test Case Development & User Recruitment
- UAT Sessions with SME Representatives
- System Refinement Based on User Feedback
- System Deployment Strategy & Security Configuration
- User Training Material Development & Delivery

Describe the methods to be used in the work package and your unique contributions to them, and list the parameters to be examined (Maximum 3,000 characters):

Methods:

- User Story-based Test Case Creation & Usability Testing Techniques
- Recruitment of SMEs from the Chosen Industry for UAT
- Agile Development Principles for Iterative Refinement Based on Feedback
- Cloud Deployment Strategy or On-premise Server Configuration (depending on needs)
- User Manual & Training Materials Creation tailored for SME audience

My Contributions:

- Collaborating on developing UAT test cases based on functionalities and user stories
- Facilitating UAT sessions with SME representatives, observing user interactions
- Analyzing user feedback and translating it into actionable improvements for the system
- Participating in deployment strategy discussions and ensuring secure system setup
- Developing user training materials (manuals, tutorials) to empower SME users

List the experiments, tests and analyzes in the work package with their reasons in the table below (specify where the experiments and tests will be carried out, give detailed justification for the ones to be carried out abroad. If no experiments / tests / analyzes will be performed in this work package, specify):

Experiment / Test / Analysis Name	Reason for Making	Where it will be carried out (in the company, domestic or international organizations)	(If it will be held abroad) Materials
N/A	N/A	N/A	N/A

Specify the measurable/concrete technical intermediate outputs (milestones) that enable the monitoring of this work package activities and indicate their completion:

Definition of Intermediate Output	Expected Realization Date:	Work Package for Which Output Will Be Used
N/A	N/A	N/A

Work Package Identification Form(A separate form will be prepared for each work package)	
Work Package Number:	**0006**
Work Package Name:	Dissemination and Sustainability
Starting date:	01-06-2025
End Date:	01-12-2025
Related Organizations(In joint projects, please tick the ones included in this work package from the project partners)	

List work package activities (Maximum 3,000 characters):

Activities:

- Project Results Dissemination Strategy Development
- Conference Presentations & Publications (considering TEYDEB requirements)
- Pilot Programs with SMEs from the Chosen Industry (optional)
- Business Model Development for Ongoing System Support

Describe the methods to be used in the work package and your unique contributions to them, and list the parameters to be examined (Maximum 3,000 characters):

Methods:

- Identifying relevant conferences, workshops, and publications aligned with EUROSTARS goals
- Preparing presentations and publications showcasing project outcomes and impact
- Partnering with SMEs for potential pilot programs to demonstrate system value (if feasible)
- Exploring revenue models (subscriptions, service fees) or grant opportunities for ongoing maintenance and updates

My Contributions:

- Contributing to the development of a dissemination strategy for project results
- Preparing materials for presentations or publications, highlighting the project's achievements
- Facilitating communication with potential pilot program partners (if applicable)
- Analyzing different business models to ensure the system's long-term sustainability
- Identifying potential funding opportunities for ongoing system support

List the experiments, tests and analyzes in the work package with their reasons in the table below (specify where the experiments and tests will be carried out, give detailed justification for the ones to be carried out abroad. If no experiments / tests / analyzes will be performed in this work package, specify):

Experiment / Test / Analysis Name	**Reason for Making**	**Where it will be carried out (in the company, domestic or international organizations)**	**(If it will be held abroad) Materials**
N/A	N/A	N/A	N/A

Specify the measurable/concrete technical intermediate outputs (milestones) that enable the monitoring of this work package activities and indicate their completion:

Definition of Intermediate Output	**Expected Realization Date:**	**Work Package for Which Output Will Be Used**
N/A	N/A	N/A

C.2. PROJECT MANAGEMENT AND ORGANIZATION

Explanations About Project Management

Agile Methodology with Incremental Delivery: The project will utilize an Agile project management methodology to ensure flexibility and continuous improvement. Work packages will be broken down into smaller user stories or deliverables, allowing for iterative development and feedback loops. This iterative approach facilitates early detection and resolution of issues.

Business Analyst and Project Management Integration: A dedicated business analyst will collaborate with the project manager. The business analyst will contribute to defining user stories and acceptance criteria, ensuring the project aligns with business needs. The project manager will track progress against these criteria and manage overall project scope, timeline, and resources.

Version Control with GitHub: Version control software (VCS) hosted on GitHub will be used for code management. This enables efficient collaboration, tracking changes, and reverting to previous versions if necessary. A private GitHub repository will ensure code security and intellectual property protection.

Project Personnel List

In this form, information about the personnel working on the project will be added. For each project personnel, Fill out the Personnel Resume Form, convert it to PDF format from the "Add Personnel" screen and attach it.

Personne Name	Title	TR ID/Passport Number	Educationa l Status	Undergradu ate Graduation Date	Date of start	Opinionator	Resume
Mehmet Eyüpoğlu	Project Lead	14578699042	B.A.\ MBA	01.05.2014	01.01.2024		
Sena Cetin	Senior Full Stack Software Developer	57895689250	B.S.\ Ms.Sc.	01.06.2006	01.01.2024		
Efe Yaman	Full Stack Software Developer	43258896028	B.S.\ Ms.Sc.	01.06.2012	01.01.2024		
Selin Demir	Business Analyst	45328894043	B.S	01.06.2018	01.01.2024		

C.3. ORGANIZATION INFRASTRUCTURE (*)

(*)This section will be filled out separately for each organization in collaborative projects offered by more than one organization.)

R&D Opportunities of the Organization Describe your organization's R&D opportunities and experience under the following headings: a) Your organization's current R&D structure (R&D unit, laboratory and test environments, tools-equipment and software tools, library facilities, dedicated platform for R&D purposes, etc.), b) Consultancy services received from outside your organization and joint work with other organizations. c) Explain the measures you have taken to make the knowledge that will emerge as a result of the project permanent in your organization. d) Provide information about your new product development and design ability.
The organization does not exist prior to the project.

D. CONVERTERABILITY OF THE PROJECT INTO ECONOMIC BENEFIT AND NATIONAL GAIN

D.1 ECONOMIC FORECASTS

Potential for Commercial Success

By evaluating the potential of the project output to be commercialized / transformed into economic benefit;

a) Provide information about the targeted areas of use, the size of the domestic and international markets, the strategy to access these markets, potential customers and the current market shares of competitors. (Up to 3,000 characters)

Industry Applicability: The AI-powered Resource Platform (AIRP) targets diverse industries beyond an initial focus on baking.

Market Penetration: Distribution partnerships with established vendors holding existing SME client bases will be leveraged for market penetration.

Market Share Estimation: While precise market share data is unavailable, projections suggest Logo (40%), Mikro (25%), and other competitors (35%) hold the current market share.

Initial Market Focus: The baking industry, with approximately 55,000 bakery and pastry businesses in Turkey, will be the initial target market. A 10% penetration rate is targeted within the first year.
This approach ensures a focused launch, leverages existing distribution channels, and offers potential for expansion into other industries.

b) If there is a need for additional investment to commercialize the output / make it economically profitable, explain the significant cost items and how these costs will be covered / financed. Summarize who and how will manage the commercialization process and their experiences on the subject. (Up to 3,000 characters)

In order for the project output to become commercialized / provide economic returns;

■ There is NO Need for Additional Investment.

THERE IS A NEED FOR THAT ADDITIONAL INVESTMENT.

Economic Return Estimate

(NOTE: If the project output is a "product" that will be marketed by targeting a specific sector or customer base, then part (a) is included. If it is a product or process that will be developed in line with a single customer demand (customer specific), part (b) is part (b) only. If it is a new or improved process or product to be used by your organization, please complete part (c).)

O a) It will be offered to the market.

O b) To be developed for a single customer.

O b-1) Customer demand is NOT expected to be repeated.

O b-2) Continuity of customer demand is expected.

O c) To be used within the organization.

a) Please indicate your numerical predictions regarding the economic return that the project output will provide to your organization in the table below. Please explain below your calculations/approaches that form the basis of your predictions. (Up to 3,000 characters)

O i) The project output will be offered to the domestic market only.

O ii) It is aimed to present the project output to foreign markets. (both)

Time to enter the domestic market from the beginning of the project (Months): 12

Time to enter the foreign market from the beginning of the project 36 (Months)(*):

After the project is completed, your organization;	end of 1st year	end of year 3	Year 5 and beyond
Expected total domestic sales revenue (TL)	4,000,000	50,000,000	70,000,000
Expected total foreign sales (export) revenue (TL) (*)	-	30,000,000	+100,000,000
Expected increase in domestic sales revenue (%)	-	1250	40
Expected increase in foreign sales revenue (%)(*)	-	-	333
Expected increase in domestic market share (%)	-	20	15
Expected increase in foreign market share (%)(*)	-	20	40

(*)It will be filled in if the project output is intended to be presented to foreign markets.

b) Provide information about the customer of the project output (domestic, foreign), the sector in which it will be used, the potential to provide import substitution to our country, the expected profit from the sale of the project output, and the potential to receive new orders on subjects similar/related to the project output after the project. (Up to 3,000 characters)

b-1) Total sales revenue expected to be obtained with the project output (TL):

b-2)

O i) The project output will be offered to the domestic market only.
O ii) It is aimed to present the project output to foreign markets.

Time to enter the domestic market from the beginning of the project (Months):

Time to enter the foreign market from the beginning of the project (Months)(*):

After the project is completed, your organization;	end of 1st year	end of year 3	Year 5 and beyond
Expected total domestic sales revenue (TL)			
Expected total foreign sales (export) revenue (TL) (*)			
Expected increase in domestic sales revenue (%)			
Expected increase in foreign sales revenue (%)(*)			
Expected increase in domestic market share (%)			
Expected increase in foreign market share (%)(*)			

(*)It will be filled in if the project output is intended to be presented to foreign markets.

c) State the expected contributions of the project output to organizational efficiency, cost reduction, quality increase and competitiveness, using numerical data. (Up to 3,000 characters)

Transition Point to Profit

Explain how and how long it will take to recover the resources spent on the project. Specify the time to profit from the beginning of the project - together with your calculations. (Up to 3,000 characters)

The project is intended to be developed under this call. However, an additional %10 per cent of the original cost could be needed to main the software, only after the first sales have been made. Due to low operational costs, the product will start making money right after the sales operations start making success.

As to the how long it will take the application start exceeding the amount spent on the project, it is expected that 12-18 months needed to cover the money spent on the project.

D.2 NATIONAL ACHIEVEMENTS

Please indicate the national gains that the project can provide, taking into account the following headings that you deem relevant:

a) Contribution to national knowledge and technological development,
b) The potential to initiate new applications or R&D projects in the same or different technology areas, within or outside the organization,
c) Anticipation of obtaining patents and licensing/know-how sales (outputs of the project that may be subject to patent, utility model and industrial design registration),
d) Creating new business areas and employment impact,
e) Sectoral contribution (contribution of the project to the creation and development of sub-industry, the relevant sector and other sectors),
f) The impact of the project and its outputs on socio-cultural life, the potential to provide improvements in issues such as education, health, and reducing the development gap between regions,
g) Positive effects of project activities and output on the environment and living things
h) Outputs of project studies that can be subject to scientific publication.

(Up to 5,000 characters)

New Applications & R&D:

The LLM technology developed could spark new applications and R&D projects within the organization or inspire similar efforts in other sectors.

Job Creation & Business Growth:

The successful implementation of the project could lead to new business areas, requiring additional employees like developers, customer support, and financial analysts, boosting employment.

Sectoral Contribution:

This project can contribute to the development of the national technology sector, potentially creating a sub-industry focused on LLM applications.

Environmental Impact:

By potentially enabling more efficient resource utilization, the project could lead to reductions in air pollution (estimated 20%-40% decrease).

Additionally:

As SMEs are the backbone of the national economy, empowering them with this technology could have a significant positive impact.
The LLM technology itself, if designed for separate sale, could generate additional revenue streams.

By focusing on these potential national gains, the project can contribute significantly to Turkey's technological and economic development.

E. RISK AND FINANCIAL STRUCTURE

Risks That May Encounter and Precautions to be Taken During the Execution of the Project

Indicate the technical, financial, administrative and legal risks that may be encountered during the execution of the project and what kind of measures you plan to take to minimize them ("your Plan B(s)").

Risk	Precautions Taken to Prevent the Risk from Realizing	What is the probability of the risk occurring despite the measures taken, and what is the impact it might have if it occurs?		What to do if a risk occurs despite the precautions taken ("Plan B")
		Possibility (High / Medium / Low)	Effect (High / Medium / Low)	
High energy consumption by LLMs makes costs higher than expected	Use of high-powered systems on AWS	High	High	Use lower parameter LLMs considering the low accuracy, use of-the-shelf web scrapers in some places
Personell turnover	Software consulting firms have been contacted just in case	Low	High	Minimize the feature requirements, keeping the core requirements, assign development tasks to Mehmet Eyüpoğlu, who is the Project leader.

Risks that may be encountered and precautions to be taken during the commercialization phase of the project output

State the possible obstacles your organization may encounter during the commercialization phase (technical, financial, legal, intellectual property rights, etc.) and your plans to overcome these obstacles. In addition, if the project activities and project output have negative effects on the environment and living things, indicate the precautions you plan to take against them.

Risk	Precautions Taken to Prevent the Risk from Realizing	What is the probability of the risk occurring despite the measures taken, and what is the impact it might have if it occurs?		What to do if a risk occurs despite the precautions taken ("Plan B")
		Possibility (High / Medium / Low)	Effect (High / Medium / Low)	
Rejection by distributors for sales activities	Hire a sales manager early in the Project	Medium	High	Assign sales activities to Mehmet Eyupoglu and Sena Cetin, who have sales experience

Financial Management

In the projects supported by the support program you are applying for, the project expenses are submitted to TUBITAK/SWE523 after they are made by the organization, and at the end of the evaluation, a certain percentage of the expenses related to the project is paid to the organization by TUBITAK/SWE523. Provide information about the adequacy of your equity and other financial resources and the measures you plan to take to carry out the project. (Up to 3,000 characters)

Breakdown of Resources:

Project/Development Costs: ₺2,532,750.00
Travel Expenses: ₺132,500.00
Tools/Equipment/Software/Publishing: ₺397,520.00
Estimated Total Cost: ₺3,062,770.00

Financial Management Plan:

We will utilize existing internal funds to cover initial project costs.
A detailed budget will be established to track expenditure against project milestones.

Invoices and receipts will be meticulously maintained for reimbursement purposes.
We will submit financial reports to TUBITAK/SWE523 as per their guidelines.

Project Management:

A dedicated project manager will oversee financial activities and ensure efficient resource allocation.
We will implement cost-saving measures whenever possible.
Regular progress reports will be generated to monitor project execution and budget adherence.

F. PROJECT BUDGET

F.1 - PERSONNEL EXPENSES ESTIMATED COST FORM (M011)

Project name	**AIRP**
Work Package Number/Name	**0001 / Requirements Analysis and Feasibility Study**

Name and surname	**Role in the Work Package**	**Title in the Company**	**Man/Month Ratio**	**Month**	**Total Man-Month**	**Monthly Cost**	**Total**
Mehmet Eyüpoğlu	Software Design, analysis	Project Lead	1/1	4	4	70000	280000
Selin Demir	Analysis, requirements elicitation	Business Analyst	1/1	4	4	40000	160000
WORK PACKAGE MAN-MONTH TOTAL =					8	**TOTAL**	**440000 TL**

Project name	**AIRP**
Work Package Number/Name	**0002 / Domain-Specific Functionalities Development**

Name and surname	**Role in the Work Package**	**Title in the Company**	**Man/Month Ratio**	**Month**	**Total Man-Month**	**Monthly Cost**	**Total**
Mehmet Eyüpoğlu	Project management	Project Lead	½	4	2	70000	140000
Selin Demir	Analysis, Project management	Business Analyst	½	4	2	40000	80000

Sena Cetin	Software Development	Senior Full Stack Software Developer	1/2	4	2	70000	140000
Efe Yaman	Software Development	Full Stack Software Developer	1/2	4	2	55000	110000
				WORK PACKAGE MAN-MONTH TOTAL =	8	**TOTAL**	**470000TL**

Project name	**AIRP**
Work Package Number/Name	**0003 / Large Language Model (LLM) Integration and Training**

Name and surname	**Role in the Work Package**	**Title in the Company**	**Man/Month Ratio**	**Month**	**Total Man-Month**	**Monthly Cost**	**Total**
Mehmet Eyüpoğlu	Project management	Project Lead	¼	3	¾	70000	52500
Selin Demir	Analysis, Project management	Business Analyst	¼	3	¾	40000	30000
Sena Cetin	Software Development	Senior Full Stack Software Developer	1/3	3	1	70000	70000
Efe Yaman	Software Development	Full Stack Software Developer	1/3	3	1	55000	55000
				WORK PACKAGE MAN-MONTH TOTAL =	**3,5**	**TOTAL**	**207500 TL**

Project name	**AIRP**
Work Package Number/Name	**0004 / Web Intelligence and System Development**

Name and surname	Role in the Work Package	Title in the Company	Man/Month Ratio	Month	Total Man-Month	Monthly Cost	Total
Mehmet Eyüpoğlu	Project management	Project Lead	¼	6	3/2	70000	105000
Selin Demir	Analysis, Project management	Business Analyst	¼	6	3/2	40000	60000
Sena Cetin	Software Development	Senior Full Stack Software Developer	3/4	6	9/2	70000	245000
Efe Yaman	Software Development	Full Stack Software Developer	3/4	6	9/2	55000	202500
				WORK PACKAGE MAN-MONTH TOTAL =	**12**	**TOTAL**	**612500 TL**

Project name	**AIRP**
Work Package Number/Name	**0005 / User Acceptance Testing (UAT) and Deployment**

Name and surname	Role in the Work Package	Title in the Company	Man/Month Ratio	Month	Total Man-Month	Monthly Cost	Total
Mehmet Eyüpoğlu	Project management	Project Lead	¼	5	5/4	70000	87500
Selin Demir	Analysis, Project management	Business Analyst	1/2	5	5/2	40000	100000
Sena Cetin	Software Development	Senior Full Stack Software Developer	1/2	5	5/2	70000	175000
Efe Yaman	Software Development	Full Stack Software Developer	3/4	5	15/4	55000	206250
				WORK PACKAGE MAN-MONTH TOTAL =	**10**	**TOTAL**	**568750 TL**

Project name	**AIRP**						
Work Package Number/Name	**0006 / Dissemination and Sustainability (Month 12-18)**						
Name and surname	**Role in the Work Package**	**Title in the Company**	**Man/Month Ratio**	**Month**	**Total Man-Month**	**Monthly Cost**	**Total**
Mehmet Eyüpoğlu	Project management	Project Lead	1/6	6	1	70000	70000
Selin Demir	Analysis, Project management	Business Analyst	1/6	6	1	40000	4000
Sena Cetin	Software Development	Senior Full Stack Software Developer	1/4	6	3/2	70000	105000
Efe Yaman	Software Development	Full Stack Software Developer	1/6	6	1	55000	55000
WORK PACKAGE MAN-MONTH TOTAL =					**4,5**	**TOTAL**	**234000 TL**

F.2 - TRAVEL EXPENSES ESTIMATED COST FORM (M012)

Project name	**AIRP**				
Name and Surname of the Person Who Will Make the Travel	**Title in the Company**	**Travel Description**	**Relationship of Travel to Project Activities**	**City Country**	**Amount (TL)**
Mehmet Eyüpoğlu	**Project Lead**	**Sales Meetings (20day-trip)**	**Sales Activities Through Distributors**	**Ankara, Konya, Kayseri, Adana, Mersin, Antalya**	**40000**
Mehmet Eyüpoğlu	**Project Lead**	**Sales Meetings (10day-trip)**	**Sales Activities Through Distributors**	**Gaziantep, Sanliurfa, Diyarbakir, Kahraman Maras, Malatya**	**17500**
Mehmet Eyüpoğlu	**Project Lead**	**Sales Meetings (10day-trip)**	**Sales Activities Through Distributors**	**Samsun, Ordu, Trabzon, Rize**	**15000**
Mehmet Eyüpoğlu	**Project Lead**	**Sales Meetings (10day-trip)**	**Sales Activities Through Distributors**	**Bursa, Balikesir, Canakkale, Tekirdag, Edirne**	**20000**
Mehmet Eyüpoğlu	**Project Lead**	**Sales Meetings (10day-trip)**	**Sales Activities Through Distributors**	**Afyon, Manisa, Izmir, Aydin**	**20000**
Mehmet Eyüpoğlu	**Project Lead**	**Sales Meetings (10day-trip)**	**Sales Activities Through Distributors**	**Eskisehir, Duzce, Sakarya, Kocaeli**	**20000**
				TOTAL	**132500TL**

F.3 - ESTIMATED COST FORM FOR TOOLS/EQUIPMENT/SOFTWARE/PUBLISHING PURCHASES (M013)

Project name	**AIRP**									
sequence number	**Tool/Equipment/ Software/Publication Name**	**Piece**	**Capacity**	**Technical specification**	**Purpose of Use in Project Activities**	**Place/Purpose of Use After the Project**		**Unit Price (USD)**	**Unit price (TL)**	**Total Amount (TL)**
						R&D	**Production**			
1	Dell Vostro 3400 Computer	4	16GB RAM 512GB SSD	Intel Core i5 1135G7 Windows 10 Pro 14"	Development	-	Maintenance	620	20000	80000
2	Github Copilot (18 month subscription)	2	-	-	Development	-	Maintenance	10	320	11520
3	AWS EC2 Instance (24 month subscription)	4	2vCPU, 4gb memory	Ubuntu Server Pro, 24.04 LTS	Deployment/Delivery	-	CI/CD	100	3200	307000
									TOTAL	**397520TL**

F.4 - ESTIMATED COST FORM FOR WORKS PERFORMED BY R&D AND TESTING ORGANIZATIONS (M014)

Project name	

Organization from which R&D is carried out	**Description of the Work Done**	**Relationship with Project Activities**	**Reason for Outsourcing**	**Amount (TL)**
			TOTAL	**TL**

F.5 - SERVICE PROCUREMENT ESTIMATED COST FORM (M015)

Project name	

Organization from which the service is received	**Description of the Service**	**The Relationship between Service Procurement and Project Activities**	**Justification for Service Procurement**	**Amount (TL)**
			TOTAL	**TL**

F.6 - MATERIAL PURCHASES ESTIMATED COST FORM (M016)

Project name							
Sequence No.	**Product name**	**Purpose of Use in Project Activities**	**Quantity and Unit**	**Justification of Amount**	**Unit Price (USD)**	**Unit Price (TL)**	**Total Amount (TL)**
						TOTAL	**TL**

F.7 - PERIODICAL AND TOTAL ESTIMATED COST FORM (TL) (M030)

Project Name : AIRP								
Cost Item	**2024**		**2025**		**2026**		**TOTAL (TL)**	**RATIO IN TOTAL COST (%)**
	I	**II**	**I**	**II**	**I**	**II**		
Employee	910000	820000	802750				2532750	83
Trip			132500				132500	4
Tool/Equipment/Software/Publication	137680	100000	159840				397520	13
Works Outsourced to Domestic R&D and Testing Organizations								
Works Outsourced to Foreign R&D and Testing Organizations								
Domestic Service Procurement								
Foreign Service Procurement								
Material								
TOTAL COST	1047680	920000	1095090				3062770	one hundred
CUMULATIVE COST	1047680	1967680	3062770				3062770	one hundred
TOTAL MAN-MONTH IN THE PROJECT							**46**	

G.ANNEXES