TÜBİTAK BİLGEM
Software Technologies Research Institute

In 2005, the G222 Project Unit, which started to work under the affiliation of TÜBİTAK Department of National Research Institute of Electronics and Cryptology Design and Development Engineering (UEKAE), has been structured as Software and Data Engineering Department in 2010. In 2012, it has been transformed into an institute under the name of Software Technologies Research Institute (YTE) affiliated with Informatics and Information Security Research Center (TÜBİTAK-BİLGEM).

TÜBİTAK-BİLGEM-YTE develops R&D-focused software solutions that take into account new technologies and innovative approaches to meet the digital transformation needs that provide digital policies of public institutions and organizations.

It is the one and only government institution owning CMMI Level 5 accreditation located in Turkey.

Member of the consortium of the Open Group.
VISION AND GOALS

To become the pioneer research institute that makes Turkey as a reference point by contributing to the development of informatics ecosystem in order to implement effective digital transformation policies. It is aimed:

- Define national, institutional and plan solutions with innovative approaches thematic digital transformation needs with an enterprise architecture perspective and innovative guidelines,
- Conduct strategic, critical and R&D software development projects in digital government policies,
- Develop guideline and reference models with the purpose of building capacities required in informatics ecosystem and to provide guidance,
- Build capacity in new technology areas by following international digital trends and developments,
- Conduct policy researchers to improve the performance and quality of informatics ecosystem.

DIGITAL POLICY DEVELOPMENT
- National and Thematic Strategy Planning and Policy Development
- Policy and Strategy Governance
- Policy Studies and Measures
- Trend and Problem Analysis

DIGITAL TRANSFORMATION PLANNING
- Enterprise Digital Transformation Planning
- Software Development Feasibility
- Technical Provision Preparation
- Spatial Based Decision Support System Development

SOFTWARE DEVELOPMENT
- Software Development
- Open Source Coded Database
- Project and Program Management

CAPACITY BUILDING
- Project Management
- Enterprise Architecture
- Software Life Cycle
- IT Investment Planning and Evaluation
- Digital Maturity and Competence Evaluation
- Digital Capability Guidance
- Usability and Accessibility
- IT Infrastructure Capacity Analysis
As a part of information society National and Thematic Strategy Planning and Policy Development activities are conducted in order to determine the comprehensive medium and long term goals of digital transformation, basic principles and policies, objectives and priorities and the ways and methods to be followed to achieve them, in line with opportunities enabled by developing rapidly information and communication technologies and changing social needs.

Monitoring, evaluating and changing the development, performance, success and quality of the identified strategies and policies are provided by activities of Policy and Strategy Governance. In the digital state ecosystem, international and national Policy Studies, Measures & Trends and Problem Analysis are carried out as an integrative.

- National and Thematic Strategy Planning and Policy Development
- Policy and Strategy Governance
- Policy Studies and Measures
- Trend and Problem Analysis

The listed services that mentioned above are in the field of Digital Policy Development.
Under the policy ownership of Ministry of Environment and Urbanisation, Turkey’s first national Smart City Strategy and Action Plan covering the years 2019-2022 is being prepared with the common wisdom of ecosystem stakeholder, taking into account national needs and priorities as a whole based on the Turkey-specific Smart City Maturity Model.

**Focus Group Meeting:**
- 15

**Stakeholder Meeting:**
- 75

**Capacity Building Workshop:**
- 3

**National Strategy Document were examined:**
- 65

**International Strategy Document were examined:**
- 6

**Local Government participated the survey:**
- 327

**Maturity Valuation Model were reviewed:**
- 5

**Findings:**
- 5573


Monitoring and Evaluation Model and System

Maturity Assessment Model

National Smart City Portal (www.akillikent.gov.tr)

**“It is the 4th strategy and 3rd action plan prepared at the national level in the world in the smart city transformation.”**
Within the frame of Turkey’s 2023 vision, 10th Development Plan and 2015-2018 Information Society Strategy and Action Plan, Turkey’s first comprehensive and holistic national e-Government strategy and action plan and monitoring and evaluation model were developed for direct Turkey’s e-government operations between the years of 2016-2019 with national competence via the common mind and scientific perspective take from the involvement of central government units, local government units, citizens, private sector, professional organizations, non-governmental organizations.

~4000
Participants were asked their opinions on e-Government through surveys

~270
Legislation were reviewed

850
Singular participants were involved in face-to-face interviews and workshops

20
Countries’ practices were analysed

21
Upper level policy documents were examined

27
Focus group meetings were held

AS-IS Analysis Report
Monitoring and Evaluation Model
Monitoring and Evaluation System (SEPSİS)
E-Government Portal (www.edevlet.gov.tr)

2016-2019 NATIONAL E-GOVERNMENT STRATEGY AND ACTION PLAN

ENSURING EFFICIENCY AND SUSTAINABILITY OF THE e-GOVERNMENT ECOSYSTEM

ENHANCING USAGE, PARTICIPATION AND TRANSPARENCY

REALIZING e-TRANSFORMATION IN PUBLIC SERVICES

USAGE e-GOVERNMENT SERVICES (Integrated) will ensure the ability to work together with an integrated perspective and cooperation

TECHNOLOGICAL (Technological) will dynamically adapt to and use technology according to the needs

PARTICIPATORY (Participatory) will be shaped with its focus on people with a participatory, transparent and accountable approach

INNOVATIVE (Innovative) will bring forth innovative and environment-friendly approaches and turn them into opportunities

POSITION OF TURKEY IN INTERNATIONAL e-GOVERNMENT INDEXES

PUBLIC VALUE PROVIDED BY e-GOVERNMENT

USER SATISFACTION WITH e-GOVERNMENT SERVICES

EFFECTIVENESS OF e-GOVERNMENT SERVICE DELIVERY

IMPLEMENTING COMMON SYSTEMS FOR INFRASTRUCTURE AND ADMINISTRATIVE SERVICES

2.1 Shared IT Infrastructures
2.2 Shared Solutions
2.3 Administrative Service Infrastructures

PUBLIC VALUE PROVIDED BY e-GOVERNMENT

PERLPECTIVE OF PUBLIC VALUE PROVIDED BY e-GOVERNMENT

AS-IS Analysis Report
Monitoring and Evaluation Model
Monitoring and Evaluation System (SEPSİS)
E-Government Portal (www.edevlet.gov.tr)
Monitoring and Evaluation Model developed in an attempt to the achievement of the vision set forth by National, Thematic and Institutional strategy and action plans, to tracking of progress of actions, and to evaluate the performance and achievements on the basis of objectives and targets, and also Change Management Model has been developed in order to manage the needs of change that occur during the implementation of the action plan and to update the plan. Strategy and Action Plan Monitoring and Evaluation System developed with Open-Source Software Technologies that provide required data entry that necessary for the implementation of models, calculations, and management of reports.
The components of Integrated Financial Management Information System enable knowledge-based decision-making were determined and the roadmap providing a holistic and integrated infrastructure was developed within the body of Minister of Treasury and Finance by analysing the existing processes and systems with the stakeholders of Public Financial Management in Turkey.

**THE PRELIMINARY ANALYSIS OF INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM**

**ACCOUNTING MANAGEMENT**

**BUDGET MANAGEMENT**

**PROGRAM MANAGEMENT**

**WEALTH MANAGEMENT**

**COMMITMENT AND CONTRACT MANAGEMENT**

**REVENUE MANAGEMENT**

**SUPPLY MANAGEMENT**

**PAYMENT MANAGEMENT**

**STATISTICS AND DECISION SUPPORT MANAGEMENT**

**STRATEGIC MANAGEMENT**

**CASH MANAGEMENT**

**DEBT MANAGEMENT**

**HUMAN RESOURCE MANAGEMENT**

**BUDGET AND ACCOUNTING MANAGEMENT**

**EXPENSE AND SUPPLY MANAGEMENT**

**STRATEGY PROJECT AND OPERATION MANAGEMENT**

**ASSET MANAGEMENT**

**EXTERNAL AUDIT**

**HUMAN RESOURCE MANAGEMENT**

**CITIZEN PRIVATE SECTOR ECOSYSTEM ADMINISTRATION**

**BKMYS**

**NON-GOVERNMENTAL ORGANIZATIONS**

**MACROECONOMIC PLANNING**

**INTEGRATED PUBLIC FINANCIAL MANAGEMENT INFORMATION SYSTEM POLICY DEVELOPMENT AND GOVERNANCE**

Functional business processes, AS-IS determinations, capabilities in the target view, and policies for system components that meet these capabilities have been identified within the scope of the Integrated Public Financial Management Information System (BKMYBS) with the cooperation of public financial management ecosystem stakeholders, and for this purpose, the consultancy of method and governance mechanism have been being carried out.

- Reduced costs due to paper usage and paper-based processes as a result of increased use of electronic documents.
- Processes completion times are reduced in consequence of the process of transferring to electronic media and as a result, increasing the required satisfaction from public service.
- To acquisition and use of public resources more effectively, economically and efficiently.
- To increased use of electronic documents
- Improvement of financial reporting capability in the public sector
- More widespread use of statistical analysis methods in decision making processes
- Establishment infrastructure for a holistic and integrated public financial management
- Faster fulfilment of the financial transactions
Policy researches, trends and problem analyses are carried out in order to facilitate access by national and international authorities to the accurate, actual and comparable information on digital transformation activities in Turkey.

The prepared reports that are available on the Internet and in print form have been submitted to the relevant national and international stakeholders in the digital state ecosystem.

Policy and Legislation
Institutionalization and Management
Performance and Quality
Domestic Content
Shared Infrastructures
Standards and Guides
Service Providing Models
Online Services
e-Participation

2017 E-GOVERNMENT IN TURKEY: AN OUTLOOK

As a result of the necessity of adaptation to new conditions and expectations and of agility in digital transformation, even the most successful organizations have difficulty in completing transformation. Digital transformation process is not an easy task that;
Digital Transformation Planning in which digital transformation needs are defined by a multidisciplinary corporate architectural perspective and solutions that take into account new technologies and innovative approaches are planned in order to utilize at the highest level of information technology of public institutions and organizations, and to operate with a high quality, efficient, effective and transparent structure.

In the presentation of these services:

- The vision of achievable and sustainable digital transformation and its harmonized objectives are determined in accordance with the needs of institutions and organizations. AS-IS Analysis is carried out with a multidisciplinary systematic approach in the axis of strategy and policy, legislation, service, process, data, software, IT infrastructure analysis.
- With Needs Analysis, the determinations obtained by AS-IS analysis are justified as digital transformation needs in consideration of new technologies, innovative approaches and good practice examples. Digital transformation strategies and objectives are determined in the phase of the Target View Determination to meet the justification.
- A Roadmap is developed in which short, medium and long term solutions providing the specified target view are planned and programmed as projects and activities. If necessary, it is converted into Technical Specification.

The listed services that offered in the field of Digital Transformation Planning.
AS-IS has been analysed within the scope of digital transformation studies so that the support programs which managed by the Small and Medium Business Development and Support Administration (KOSGEB) can be carried out more efficiently, target view determined, and the KOSGEB e-Transformation Plan was developed to provide access to the target view from the AS-IS.

Land registry and cadastral works and transactions conducted by the General Directorate of Land Registry and Cadastre have been developed on the basis of business, data, application and axes in technology layers together with considering determination of current situations which is taking into account innovative approaches and new technologies, in order to analyse knowledge management system capabilities determined in the target viewpoint with the perspective of enterprise architecture and projected an implementation of comprehensive feasibility study and determined a digital transformation roadmap.

Turkish Electricity Transmission Company (TEİAŞ) plans to build an enterprise spatial data infrastructure in order to manage the high voltage substations and transmission lines. The infrastructure shall be utilized as the main tool for all the processes from planning to operations including transmission lines’ and substations’ construction, environmental impact assessment and expropriation. The IT infrastructure shall be compliant with international and national standards and be integrated into Turkish National Spatial Data Infrastructure (TUCBS) and shall serve to both central and regional organizations of TEİAŞ.

The needs of Information Technologies and Communication Agency (BTK) Information Management System were identified and the road map was developed so that the organization and audit process of the electronic communication sector can be conducted more efficiently.
According to the 12th session of Conferences of Parties under the UN Convention to Combat Desertification and with the cooperation of General Directorate of Combating Desertification and Erosion under Ministry of Agriculture and Forestry, Soil Organic Carbon (SOC) has been determined as one of the three global indicators besides Land Cover and Land Productivity in order to monitor Land Degradation Neutrality (LDN). For this purpose, prediction of the existing SOC stock of Turkey, monitoring SOC changes, developing strategies and putting actions to increase SOC stock through a sustainable SOC monitoring system have been aimed.

DETERMINATION OF BIOGEOGRAPHIC AREAS BASED ON SOIL ORGANIC CARBON

“The first National Soil Organic Carbon Map of Turkey is created by using artificial intelligence.”
Under the body of Minister of Agriculture and Forestry, Geographical Based Basin Monitoring and Evaluation System providing infrastructure for integrated policy development via evaluation of the themes such as Desertification, Erosion, Flood, and Torrent was developed and Desertification Model and Risk Map of Turkey was created.

Having finished 5 field surveys, it was determined that the Model Results and Observed Risk Values resulted in 84% consistency at 90% confidence level for micro-basins.

According to Desertification Risk Map of Turkey, 12.7% of Turkey’s land is in Weak Risk group, 53.2% is at Moderate Risk group and 25.5% is at Severe Risk group.

The TUCBS Project is a participatory project aiming at the establishment of the Geographical Information System infrastructure in accordance with the technological developments at the national level and in cooperation with INSPIRE Directive. The idea is to set standards and general rules together with the public institutions and organizations, which are responsible for spatial data production for all data consumers - public or private.

Presenting Desertification Risk in Turkey
Combating with Vulnerable Areas to Desertifications
Periodical Update of Desertification Risk Map
Monitoring the Change of Desertification Risk in Turkey
Determination of Desertification Risk Trends

Increasing Spatial Data Supply
Increasing Service Satisfaction
Building new channels among Stakeholders
Transparency
Increasing Interoperability
Spatial Data Standardization
Overcoming of Repeating Investments
Awareness
Coordination at varying levels among public and private sector

Generating Data Specification Template Document and Responsibility Matrix for Public Institutions in terms of Spatial Data Production
Defining List of National Spatial Data Themes
Defining Components of General Conceptual Model
Defining Interoperability Guidelines for Public Institutions in terms of Spatial Data and Network Services
Generating Spatial Data Specification Documents

According to Desertification Risk Map of Turkey, 12.7% of Turkey’s land is in Weak Risk group, 53.2% is at Moderate Risk group and 25.5% is at Severe Risk group.

Having finished 5 field surveys, it was determined that the Model Results and Observed Risk Values resulted in 84% consistency at 90% confidence level for micro-basins.
SOFTWARE DEVELOPMENT

Software Development services are dedicated in accordance with High Maturity Level (CMMI Level 5) and Open Source Coded Technology Usage policy. In order to develop strategic, critical and R&D solutions that enable the actualization of key actions in the national agenda and strategy and policy documents that guide the digital state ecosystem.

- Software requirements are created based on the definition of the targeted solution and prioritized work packages.
- Architectural design, coding, code review and testing activities are carried out.
- The user interface of the developed software is designed considering human-computer interaction and the user’s comfort is provided.
- Training materials are prepared in accordance with the needs and expectations of the target group, user training is given practically and necessary user support is provided.

The quality assurance activities that defined in the transition points of the solution phases are carried out through Project and Program Management perspective and within the scope of actualisation of the proposed projects and activities on the road map.

- Software Development
- Open Source Coded Database
- Project and Program Management

The listed services that offered in the field of Software Development.
An electronic document-based information system which enables centralized management of the accounting transactions of all public institutes and agencies is being developed in cooperation with Minister of Treasury and Finance through significantly simplified and speed up processes.

"The State Accounting Information System that developed by Open Source Code Software Technologies, is working on an open source code database”

---

GOVERNMENT ACCOUNTING INFORMATION SYSTEM

173
Public Administration

35 Million
Annual Accounting Process

20
Integrated with System

645 Billion TL
Annual Accounting Transaction Amount

3 Billion TL
Daily Average Payment

1 Billion TL
Daily Average Collection

---

NOVEMBER
2016

Project Started

SEPTEMBER
2017

The transition of Special Budget Institutions started

APRIL
2018

The transition to new accounting system of all institutions is completed

NOVEMBER
2019

Project Completed

---

SIMPLE AND FAST
ACCOUNTING

ONLINE REALIZATION
OF PUBLIC PAYMENTS

ADMINISTRATIVE BASED
ACCOUNTABILITY

E-DOCUMENT
STANDARD IN
FINANCIAL DATA
SHARING

EFFECTIVE PROACTIVE
BUDGET CONTROL

---

“Escrow
Management

Asset
Management

Performance
Management

Debit
Management

Credit
Management

Payment
Management

Accounting
Management"
National Product Tracking and Monitoring Model and compatible information system are being developed in order to provide infrastructures for tracking medical devices and cosmetic products from end-to-end, conducting audit mechanisms and executing clinical engineering processes in a reliable and effective manner.

ÜTS is the information system that has been put into practice for the first time in the world in order to ensure the tracking of all produced or imported medical devices in Turkey.

Registerd Cosmetic Products
~ 135,000

Registered Medical Devices
~ 2.9 Million

Active Medical Devices Companies
~ 35,000

Opticianry Enterprise Product Movements
~ 140 Million

~ 135,000
~ 2.9 Million
~ 35,000
~ 140 Million

Registered Cosmetic Products
Registered Medical Devices
Active Medical Devices Companies
Opticianry Enterprise Product Movements

~ 35.000
~ 140 Million

Registered Cosmetic Products
Registered Medical Devices
Active Medical Devices Companies
Opticianry Enterprise Product Movements

~ 135,000
~ 2.9 Million
~ 35,000
~ 140 Million

Cosmetic product management brought into use
Medical device company, documentation and product registration brought for use
Market Surveillance, Inspection (PGD) and Warming
Tracking started for class III medical devices
Tracking started for 90/385/EEC medical devices

550,000 UNIQUE PRODUCT RECORD
250,000 MOVEMENT NOTIFICATION
8 Million TRANSACTION
15,000 MEDICAL DEVICE RECORD
400 DOCUMENT RECORD
350,000 EXTERNAL SYSTEM QUERY

Monitoring and Tracking
Product Management
User, Institution and Authorization Management
Clinical Engineering
Business Intelligence
Market Surveillance, Inspection (PGD) and Warming
Supporting Functions
Citizen-oriented Services

Project Started
2014
7 JANUARY
12 JUNE

Tracking started for class III medical devices

2016
1 MARCH

Tracking started for 90/385/EEC medical devices

2017
11 SEPTEMBER
11 OCTOBER

Tracking started for Class III medical devices

2018
2 JULY
1 OCTOBER
27 DECEMBER

2018
27 DECEMBER

Project Completed
INTEGRATED SOCIAL ASSISTANCE SERVICE

An information system for centralized management of the social assistance program within the body of Minister of Labour, Social Services and Family provided by the was developed to ensure a more fair allocation of resources, and to activate social assistance decisions through holistic management of social assistance information.

It is recognized by many authorities in the world as a management information system that enables the implementation of stakeholder integration, aid processes and the application of rate-based aid distribution policies at the highest level of maturity.
It is aimed to develop open-source database system, tools and expertise in YTE in order to create a strong alternative for the commercial database management systems which count for the largest item in IT infrastructure budget of government agencies and to be used in strategic and critical application systems.

As part of the development studies of native database R&D project, development of PostgreSQL expertise, enhancement of awareness about open source databases in government agencies and encouraging them to use in application development projects, and development of migration strategy and methods from commercial databases are being performed.

- Awareness, Trust and Ecosystem Creation
- Expertise, Competence and Service Development
- New Feature of R & D, National PostgreSQL Version Development

DECLINE IN LICENSE AND MAINTENANCE COSTS

NEW EMPLOYMENT AREA

ALTERNATIVE COMMERCIAL PRODUCTS

AWARENESS RAISING ON OPEN SOURCE

CMMI Level 5
MARCH 2017

CMMI Level 4
JANUARY 2014

CMMI Level 3
JULY 2008
An integrated information system on financial management of the Development Agencies within the body of Minister of Industry and Technology was developed to ensure the transparency, accountability, coherence, and coordination that will increase the efficiency and effectiveness of the main business processes.

**DEVELOPMENT AGENCIES INVESTMENT PROJECTS**

- ~15 Billion TL Total budget of projects
- >10,500 People Number of active independent assessors registered
- ~9 Billion TL Requested support of all Project applications
- >26,000 People Applicants who submitted Project application
- ~3 Billion TL Total amount of funds allocated for support
- ~10,000 Project Total number of projects with signed and monitored

**ENERGY MARKET REGULATORY MANAGEMENT SYSTEM**

A system, ensuring centralized management of the energy market (electricity, natural gas, oil and LPG) data considering the security requirements and management of the notifications from all actors in the market obliged to and the applications made to operate in the marketplace through electronic form was developed, in order to provide input to decision support mechanisms through statistical analysis and reports, and to accelerate business processes with e-government applications.

- 2.7 Billion TL Total Budget for Support
- ~35,000 Total Number of Licences Given by the System
The reference methods and models are developed, guidelines are prepared, guidance is presented taking into consideration the best practices in the framework, models and standards in order to share the knowledge and experiences possessed in the digital state ecosystem and to develop the required capability.

Planning of assets, processes and services, implementation and planning of governance mechanisms are provided to assess the digital maturity and competencies of public institutions and to ensure that they achieve the targeted maturity and capability levels.

- Project Management
- Enterprise Architecture
- Software Life Cycle
- IT Investment Planning and Evaluation
- Digital Maturity and Competence Evaluation
- Digital Capability Guidance
- Usability and Accessibility
- IT Infrastructure Capacity Analysis

The listed services that offered in the field of Capacity Building.
Digital Maturity Model that specified to evaluate the digital maturity of public institutions and their services has been developed in public institutions and short, medium and long-term solution proposals have been presented to improve the maturity of the institutions. Guidelines have been prepared for use as guidance in areas of competence compatible with the maturity model.

Service Provided Institutions

Digital Competence Model has been aimed to define the strengths and weaknesses of IT experts who are working in public institutions by evaluating the competency and to identify open areas for improvement in terms of training and career development. 28 IT professional role and 5 levels are defined for the targeted 41 competence areas that employees in these roles have to be possessed and competence areas, the relationships determined between roles, areas of competence, and competence levels.

Service Provided Institutions
Digital Capability Guidelines has been developed with relevant information and routing alternatives on the basis of the competency areas that included in the Digital Maturity Model are considered to be taken into account when managing information projects and activities which contained suggested elements and alternatives, in order to increase digital maturity and employee competence of public institutions and to ensure efficient usage of public resources. Training and guidance are provided by using guides in line with the needs for transformation into public.

Digital Capability Guidelines are shared with all ecosystem stakeholders at www.digitaldonumus.gov.tr

ETUDE PROJECT GUIDES
- Software Development Feasibility Guideline
- Software Modernization Feasibility Guideline
- Disposal Feasibility Guideline
- Data Center / Data Center Development / Improvement Feasibility Guideline
- Disaster Recovery Center Development / Improvement Feasibility Guideline
- Guideline to Preparing Top Policy Papers
- Institutional Digital Transaction Planning Guideline

SYSTEM DEVELOPMENT / IMPROVEMENT / PROCUREMENT GUIDES
- Software Development Guideline
- Software Modernization Guideline
- System Software Procurement Guideline
- Application Software Procurement Guideline
- Security Software Procurement Guideline
- Software Engineering Consultancy Guideline
- Server Infrastructure Procurement Guideline
- Data Center / Data Center Development / Improvement Procurement Guideline
- Guideline to Preparing Top Policy Papers
- Institutional Digital Transaction Planning Guideline

DATA PRODUCTION / UPDATE GUIDELINES
- Archive Digitization Guideline
- Geographic Data Digitization Guideline
- System Data Digitization Guideline
- Digitization Consultancy Guidelines

IT INFRASTRUCTURE SERVICES GUIDES
- Data Center / Data Center Installation Guideline
- Disaster Recovery Center Setup Guideline
- Cloud Infrastructure Service (IaaS) Guideline
- Data Center Service Guideline
- Disaster Recovery Center Service Guideline
- Data Center / Data Center Maintenance / Modernization Guideline
- Disaster Recovery Center Maintenance / Modernization Guideline

CAPACITY DEVELOPMENT GUIDELINES
- Model Development / Guideline Preparation Guide
- Training Guideline
- Consulting Guideline
- Information Security Consultancy Guideline
- Business Continuity Consultancy Guideline
- Service Management Consulting Guideline
- Project Management Consultancy Guideline
- Software Life Cycle Consulting Guideline

EXAMINATION OF PHYSICAL CONDITIONS OF DATA CENTER
The capacity utilization of physical, system, and network components of data centers which hosts IT services of agencies and institutions are analysed, subsequently improvement suggestions are determined and the future (1-5 years) capacity, hardware needs and business continuity of IT services are planned. In accordance with the findings and improvement suggestions, guidance services such as preparation of technical specifications documents with a competitive perspective, purchase planning, monitoring and evaluation of modernization proposals are provided.

SYSTEM AND NETWORK INFRASTRUCTURE ANALYSIS
- Hardware Inventory Conduct
- Monitoring of Current System Resource Usage
- Determination of Usage Situations and Bottlenecks of Network and Security Devices

REPORTING
- Reporting of the Findings
- Submission of Improvement Proposals
- Future Recommendations for IT Investments

Service Provided Institutions
The KAMIS Guideline has been developed in which provided theoretical and practical implications that are supported by eye-tracking researchers in the User Experience Laboratory in order to comply with the standards of accessibility and usability on corporate websites and e-Services of public enterprises. Training and guidance activities are carried out with the objective of raising awareness and acquire competence in public enterprises.

**GUIDELINES FOR GOVERNMENTAL WEB SITES**

- Usability in Websites
- General Properties
- Visual Design and User Interface Design
- Accessibility
- Legislations of Governmental Websites
- Usability Tests and Applications

www.kamis.gov.tr

Guidelines on preparation and evaluation of project proposals, and monitoring projects in the investment program were developed for predetermined investment types of information and communication technologies (ICT).

| IMPEPROVEMENT OF THE GOVERNMENT INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) PROJECT’S PROPOSAL PREPARATION PROCESS |
| AS-IS Analysis Report |
| Guides Based on Investment Types |
| Public ICT Projects Preparation Guide |
| Public ICT Projects Types |
For organizations developing software solutions, it is aimed to support process improvement activities based on best practices from international models and standards and to craft solutions composed of necessary process implementations, quantified management, monitoring and training, to make it a sustainable and long lasting effort.

AS-IS Analysis Report

Determination of improvement objectives and activity planning

Process dissemination, training and implementation support

Process definition and improvement

Process monitoring

Analysis and Evaluation

HIGH MATURITY IN SOFTWARE DEVELOPMENT PROCESSES AND PRODUCT LINE DEVELOPMENT

Institutional Architecture TOGAF (The Open Group Architecture Framework) methodology provides organizational change and transformation to be designed systematically, plans in an integrated and harmonious manner and carry out predictably.

The Institution’s vision, strategic objectives, business processes, data and software systems, technology infrastructure operational model are associated forming a harmonious architectural view of the institution.

With the institutional architectural methods, a transformation route map is planned through analysing the AS-IS of the institution and designing the target situation.

In the transformation to the digital state implementation of enterprise architecture methods at the national and enterprise level is the key to success.
EVENTS

High Maturity in Software Development
16 May 2017

Digital Maturity Model and Guidance
19 January 2017

Digital Government and Enterprise Architecture
31 May 2016

Usability in Public Institutions Websites
25 December 2014

ACADEMIC PUBLICATIONS

Digital Transformation

Software Engineering

Data Science

Usability and User Experience

Academic Publications

Geographic Information Systems

Software Quality

Project Management

Mathematical Modelling