SAP BASIS services
(Infrastructure and System Management)

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SAP BASIS services

TECHNICAL ARCHITECTURE DESIGN

✓ Product
✓ Platform
✓ Business
   Continuity
✓ Sizing

SECURITY

✓ OS
✓ SAP, Application layer
✓ SAP, Database Layer

PROJECT

✓ New projects
✓ Conversion projects
✓ Value added projects

EDUCATION

✓ In-house training
✓ Practical training

QUALITY

✓ Identifying disciplines
✓ Standardization

MAINTENANCE & SUPPORT

✓ Periodic maintenance
   (planned)
✓ Unplanned maintenance

✓ Technical Quality Management

✓ Outsource

01
02
03
04
05
06

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Services
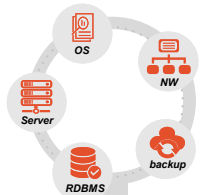
01

TECHNICAL ARCHITECTURE DESIGN
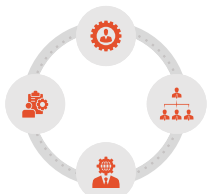
01

PRODUCT

SAP products to be positioned are determined to include SAP licenses

---

02

PLATFORM

Alternatives are determined for the positioning of SAP products;

- OS
- Database
- Backup media
- Network needs
- Server (physical, virtual, certified, TDI…)

OS
NW
Server
backup
RDBMS

03

Business Continuity

Business continuity requirements, in line with organization needs to be determined;

- CLUSTER (online system backup)
- DISASTER (system backup for disaster scenario)

04

SIZING
&
Technical Architecture

Suitable for detection in 3 stages

- "server SIZING" is evaluated together with hosting alternatives (on-premises, cloud…).
- Alternatives are determined according to the BUDGET.
- Technical architecture modeling is created.
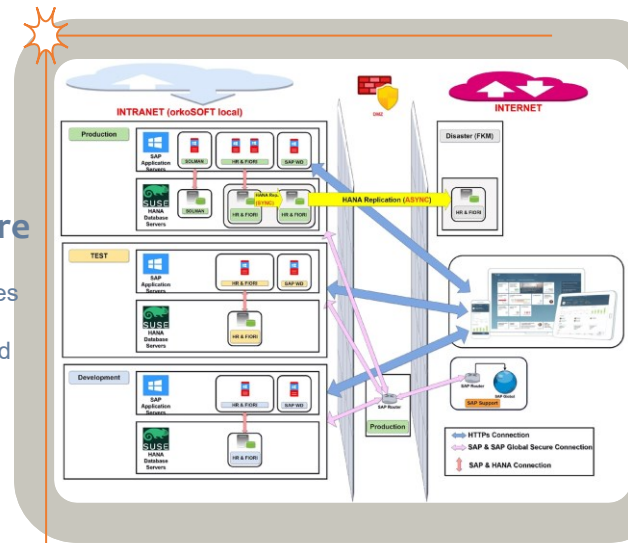
PRO		TOPLAM :	OS adet	CPU (vCPU)	MEMORY (GB)	DISK (GB)	HANA DB (mem.)(GB)
WINDOWS uygulama sunucuları >>>		TOPLAM :	11	80	576	3,410	
SUSE (HANA DB) sunucuları >>>		TOPLAM :	5				1,216
PRO (DR)		TOPLAM :	OS adet	CPU (vCPU)	MEMORY (GB)	DISK (GB)	HANA DB (mem.)(GB)
WINDOWS uygulama sunucuları >>>		TOPLAM :	11	80	576	3,410	
SUSE (HANA DB) sunucuları >>>		TOPLAM :	5				1,216
DEV		TOPLAM :	OS adet	CPU (vCPU)	MEMORY (GB)	DISK (GB)	HANA DB (mem.)(GB)
WINDOWS uygulama sunucuları >>>		TOPLAM :	8	46	192	2,520	
SUSE (HANA DB) sunucuları >>>		TOPLAM :	5				1,216

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02

SECURITY

Services

SAP System Basic Structure

Presentation Layer **1**

- o It is the layer that represents the connection between users or other systems and the SAP system.
- o It serves different access types.

DB Layer **3**

- o It is obligatory to select a database suitable for the SAP system to be positioned.
- o It is the layer where the data of SAP systems are stored.

Hardware Layer **5**

- o It represents the infrastructure created from physical or virtual resources, where SAP systems and their servers are located.
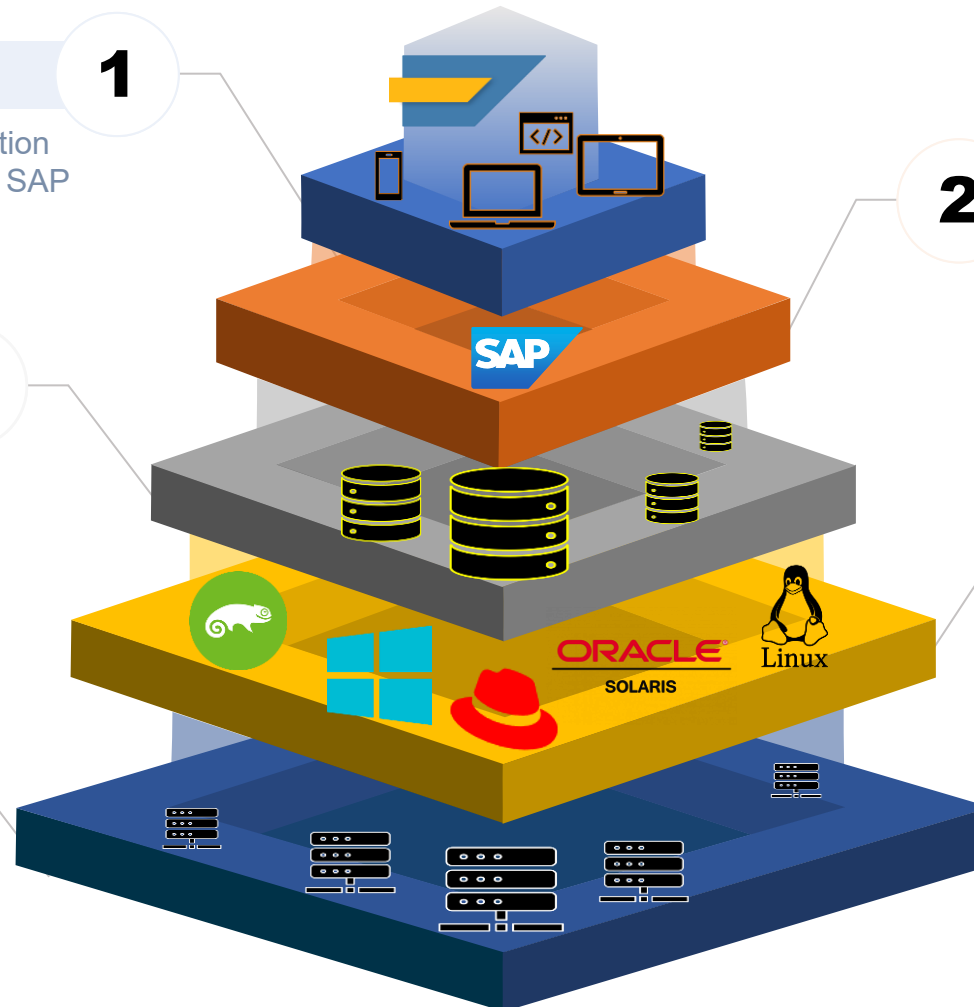
2 **Application Layer**

- o Represents the SAP system.
- o It is the layer that provides secure transfer of users and corporate data.

4 **OS Layer**

- o Represents the operating system on which the SAP system to be located is running.

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02

SECURITY

Services

SAP Security Approach

| Governance | Audit and Compliance | Business Resilience | Cyber Defense | Threat and Risk Assessment | Physical Security | DevSecOps |

SAP Security Products

Identity and Access Management	Security Configuration and Monitoring	Data Protection and Privacy	Governance, Risk and Compliance	Security Support and Community
SAP Cloud Identity Access Governance	SAP Enterprise Threat Detection	UI data protection	SAP Risk Management	SAP MaxAttention
SAP Cloud Identity Services	SAP Focused Run	SAP Data Custodian	SAP Audit Management	SAP Security Optimization
SAP Single Sign-On	SAP Early Watch Alert	SAP Privacy Governance	SAP Process Control	SAP Security Webcasts
SAP Identity Management	SAP Code Vulnerability Analyzer	SAP Data Privacy Integration	Security Dashboard	Security community for SAP
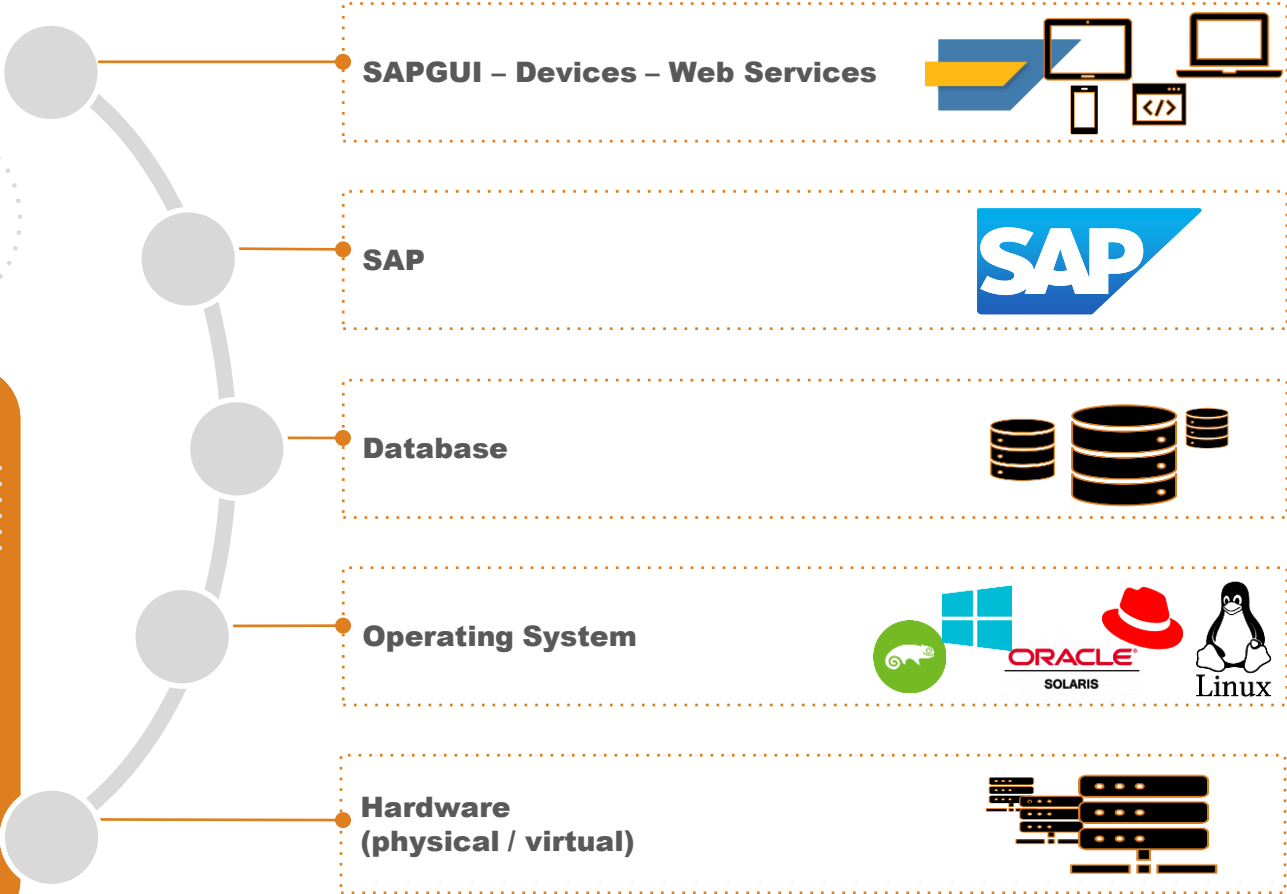
SAPGUI – Devices – Web Services

SAP

Database

Operating System

Hardware (physical / virtual)

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Services

03

EDUCATION

01 SAP

BASIS trainings customized for SAP product

✓ ERP
✓ S/4HANA
✓ Fiori
✓ Portal
✓ Solution Manager
✓ SAP Security
✓ SAP Upgrade
✓ SAP Conversion
✓ …

02 HANA

HANA database management trainings

✓ System management
✓ DB Security
✓ Backup-Restore
✓ Replication
✓ …

03 SAP System Maintenance

Routine maintenance training of SAP systems used

✓ Periodic Checks
  - daily
  - weekly
  - monthly

✓ Update Processes
  - SP update
  - Kernel update
  - …

✓ Troubleshooting
✓ User and authorization
✓ System on-off

04 Database

Database management trainings running on SAP

✓ MSSQL
✓ ORACLE
✓ SYBASE
✓ ASEDB
✓ DB2

✓ Backup & restore

✓ DB update & upgrade

05 Requested Contents

Training in accordance with the content requested by the customer

CERTIFICATE

Participants at the end of the training a certificate of participation is provided.

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Services

MAINTENANCE & SUPPORT
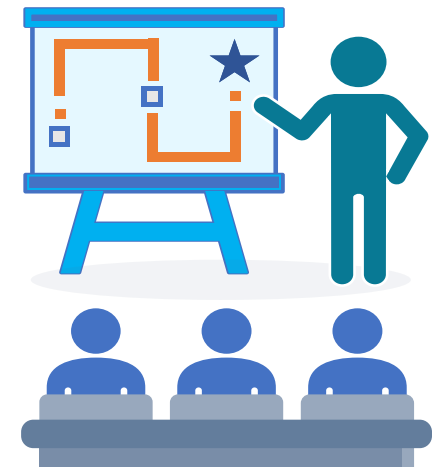
	SLA 1		SLA 2		SLA 3		SLA 4	
öncelik	acil		yüksek		orta		düşük	
süreler	müdahale süresi	çözüm süresi	müdahale süresi	çözüm süresi	müdahale süresi	çözüm süresi	müdahale süresi	çözüm süresi
CANLI sistemler	30 dakika	4 saat	2 saat	4 saat	4 saat	48 saat	2 gün	5 gün
Geliştirme & TEST sistemleri	2 saat	4 saat	4 saat	8 saat	24 saat	48 saat	4 gün	8 gün

7/24

Uninterrupted Support

1. level employee training

In case of requested; By giving 1. level training to the determined responsible person, the TOTAL service quality is increased, and it is aimed to gain customer independence.

client

1. level support

1. Incoming requests are met by 1. level consultants.
2. The problem is analyzed, and root cause of the problem is determined.
   a) Problems originated from application – infrastructure…are escalated to expert determined by customer and customer is informed.
   b) BASIS-related problems are resolved, and the customer is informed.
3. Problems originating from BASIS that **cannot be solved** at **1. level** are forwarded to the 2. level BASIS team.

2. level support

1. The problem is analyzed, and the root cause of the problem is determined.
   a) Problems originated from application – infrastructure…are escalated to expert determined by customer and customer is informed.
   b) BASIS- related problems are resolved, and the customer is informed.
2. Problems originating from BASIS that **cannot be solved** at **2. level** are forwarded to the 3. level BASIS team.

3. level support

1. The problem is analyzed, and the root cause of the problem is determined.
   a) Problems originated from application – infrastructure…are escalated to expert determined by customer and customer is informed.
   b) BASIS-related problems are resolved, and the customer is informed.
2. Problems originating from BASIS that **cannot be solved at the 3. level** are raised to SAP via support.sap.com with a ticket and the problem is resolved by SAP.
1. The customer is informed.

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	Consultant experience
1. level	**1-3 year**
2. level	**4-6 year**
3. level	**7+ year**

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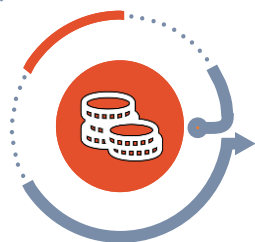
04 MAINTENANCE & SUPPORT

Services

"Outsourcing" service

Productivity
- Focusing on core competency and increasing efficiency
- More efficient use of internal resources

Speed
- Acceleration of products and services in time to market
- Use of additional resources to shorten the duration of the work done

Cost
- Reducing operating costs
- Reduction of investment costs/ (conversion of fixed cost to the variable)
- Knowing the costs in advance

Continuity
- Use of additional resources in case of a shortage of internal resources

Flexibility
- Quick access to variable job capacities
- More flexibility to meet changing business and commercial conditions

Risk
- Quick access to expert resources
- Reducing cost and technology risks

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05 **QUALITY**

Services

**It is aimed to provide value-added services for SAP systems in use.
With 2 different studies, budget advantage and system performance improvements are realized.**
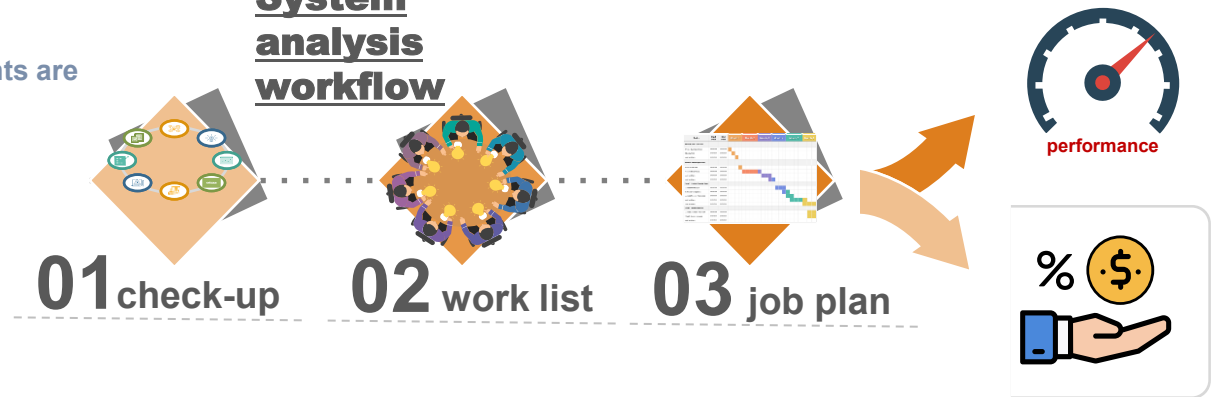
1. **System overview analysis**

❏ Check-UP is done for currently used SAP products.

❏ After the Check-UP control, the needs and deficiencies, if any, are determined.

❏ A project plan is created to implement the findings on SAP products.

2. Data Volume Management:

❏ SAP system database analysis is done.
❏ After analysis;
  ❏ can be deleted,
  ❏ can be migrated to the document management system,
  ❏ can be archived
  data is determined.

❏ A possible acquisition approach is presented, and the data simplification project plan is created.

System analysis workflow

01 check-up   **02** work list   **03** job plan

performance

%

Data volume management

deletion   transport   archiving

DB size

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QUALITY

Services

"Technical Quality Management" service

Budget

Hardware and system maintenance expenditure optimization

Performance

Measurable improvement in system performance

Planning and Business continuity

Planning and realization of projects and deliveries in accordance with business continuity

Accordance

Compatibility between expectations and positioned products

Technical coordination and reporting

Managing technical teams and preparing comprehensive-understandable management reports for the work done.

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06

PROJECT

Services

New projects

❑ Project requirements are determined for the project according to SAP modules and products
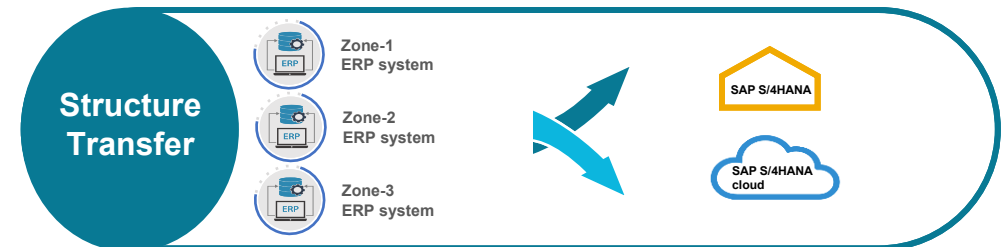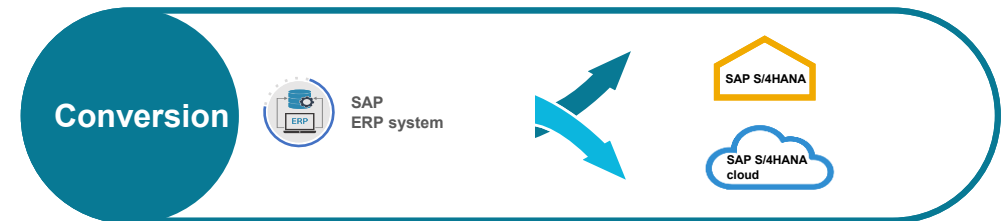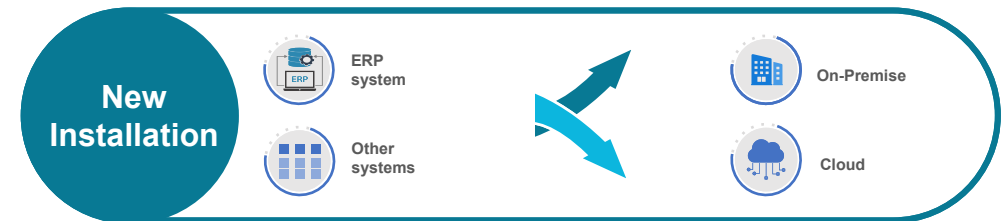❑ and in accordance with the prepared project plan to go-live.

Projects to be carried out for existing systems

❑ Occurring after SAP products GO-LIVE, "update, upgrade, Unicode conversion…." project requirements are determined for their needs

❑ and implemented in accordance with the prepared project plan.
❑ project samples;
  ❑ minor version update
  ❑ major version upgrade
  ❑ OS & DB migration
  ❑ HANA migration
  ❑ S/4HANA conversion
  ❑ Unicode conversion
  ❑ OpenText <> SAP Content Server content transfers
  ❑ …

New Installation

ERP system

Other systems

On-Premise

Cloud

Conversion

SAP ERP system

SAP S/4HANA

SAP S/4HANA cloud

Structure Transfer

Zone-1 ERP system

Zone-2 ERP system

Zone-3 ERP system

SAP S/4HANA

SAP S/4HANA cloud

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tarafından
geliştirilmiştir.

SYSTEM MONITORING tool (SysRANGER)

Host monitoring

- ❑ CPU
- ❑ Memory (physical, virtual, swap)
- ❑ Disk
- ❑ CPU/Mem usage history
- ❑ OS running jobs
- ❑ OS running services
- ❑ OS Events (Windows)
- ❑ Service connection Check
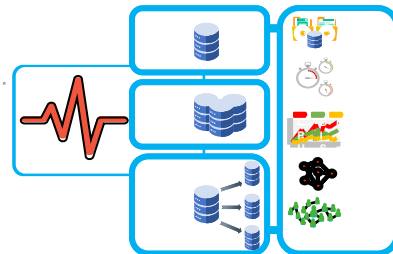- ❑ Ping Check
- ❑ Network graph

Database monitoring

- ❑ Status Check
- ❑ User connection control
- ❑ SAP connection control (R3Trans)
- ❑ Data and log size control
- ❑ License check

Hana monitoring
- ❑ System overview
- ❑ "Service Memory" usage
- ❑ "Backup" listing
- ❑ "Backup" size" prediction
- ❑ Active statements list
- ❑ Connection list
- ❑ Transaction list
- ❑ Task list

SAP monitoring

- ❑ Access point list
- ❑ Alert table
- ❑ Process monitoring
- ❑ Queue statistics
- ❑ Gateway clients
- ❑ Work process table
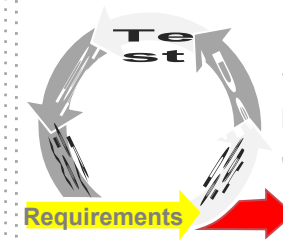- ❑ System logs
- ❑ Developer traces

Instance ICM Monitoring
- ❑ ICM Threads
- ❑ ICM Connections
- ❑ ICM Cache table
- ❑ ICM Proxy connections
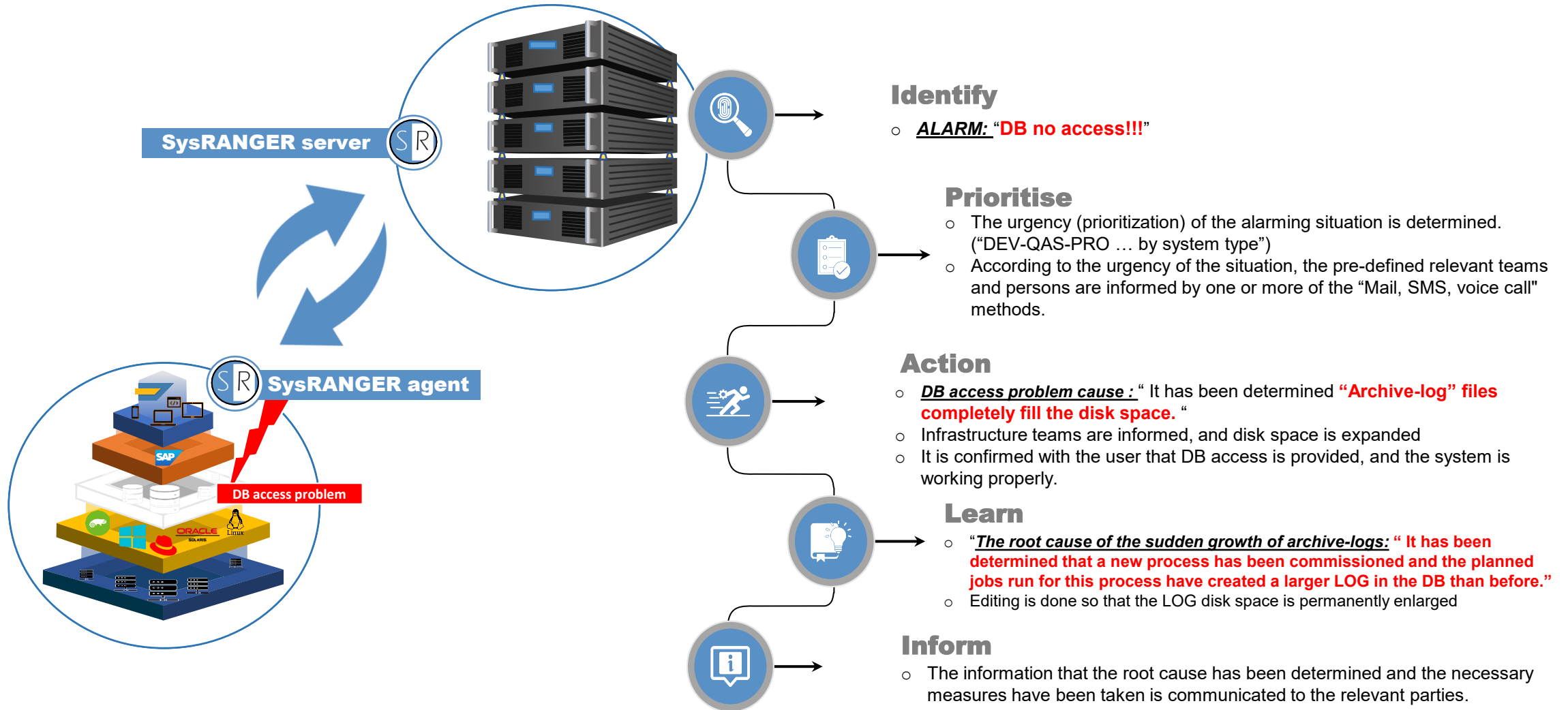
Non-SAP monitoring

SysRANGER tool was developed by orkoSOFT

Test

Requirements

For special requests; Non-SAP applications can also be monitored with "additional enhancements"

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tarafından geliştirilmiştir.

SYSTEM MONITORING tool (SysRANGER)

SAP monitoring – sample scenario

SysRANGER server — S R

SysRANGER agent — S R

DB access problem

Identify
○ *ALARM:* "**DB no access!!!**"

Prioritise
○ The urgency (prioritization) of the alarming situation is determined. ("DEV-QAS-PRO … by system type")
○ According to the urgency of the situation, the pre-defined relevant teams and persons are informed by one or more of the "Mail, SMS, voice call" methods.

Action
○ *DB access problem cause :* " It has been determined **"Archive-log" files completely fill the disk space.** "
○ Infrastructure teams are informed, and disk space is expanded
○ It is confirmed with the user that DB access is provided, and the system is working properly.

Learn
○ "*The root cause of the sudden growth of archive-logs:* **" It has been determined that a new process has been commissioned and the planned jobs run for this process have created a larger LOG in the DB than before."**
○ Editing is done so that the LOG disk space is permanently enlarged

Inform
○ The information that the root cause has been determined and the necessary measures have been taken is communicated to the relevant parties.

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Organization Structure

Sales
Marketing

Finance
Administrative Affairs
Human Resource

Technical
Consultancy

Product
Development

Requirements

TÜRKİYE

Domestic

Abroad

Admin. Affairs

Project

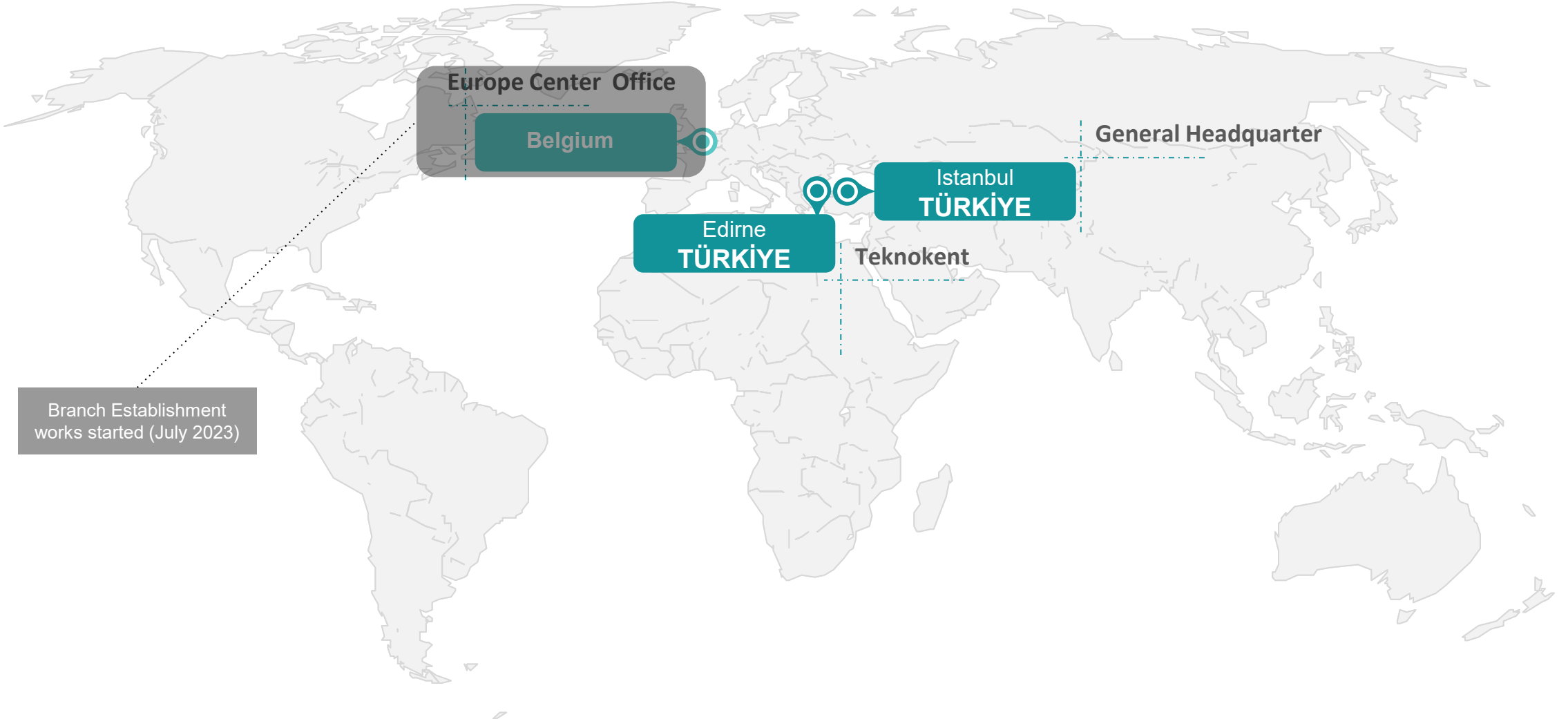Support

Project

Support

HR

Team
Leader

Team
Leader

Software

Team
Leader
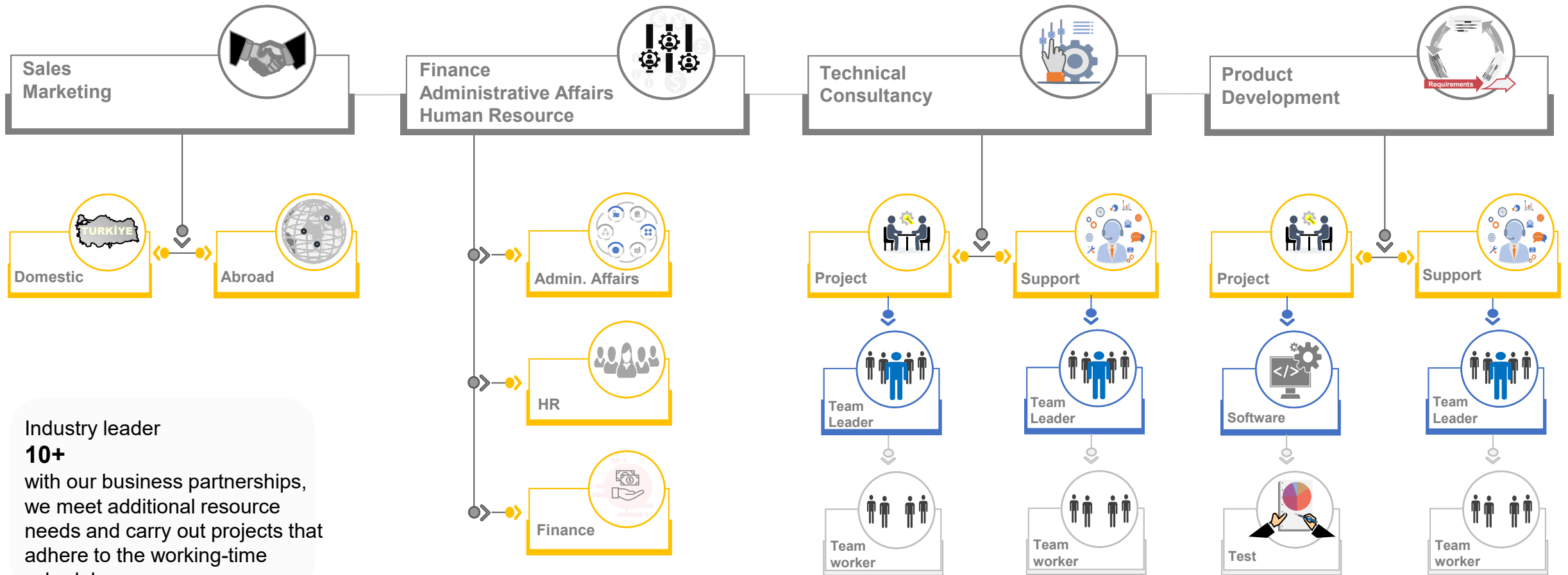
Industry leader
10+
with our business partnerships,
we meet additional resource
needs and carry out projects that
adhere to the working-time
schedule.

Finance

Team
worker

Team
worker

Test

Team
worker

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Current Status

Status: 2023, 1st quarter

20%

80%

50+	20	5	15	%2
Active clients	"Maintenance and Support" service clients	Projects	Team	Abroad income rate
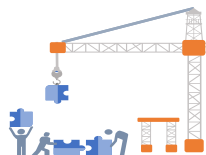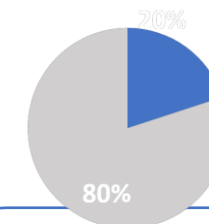
All times

300+	200+	500+
Clients	Maintenance clients	Projects

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REFERENCES