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HEXpt

hyper execution platform

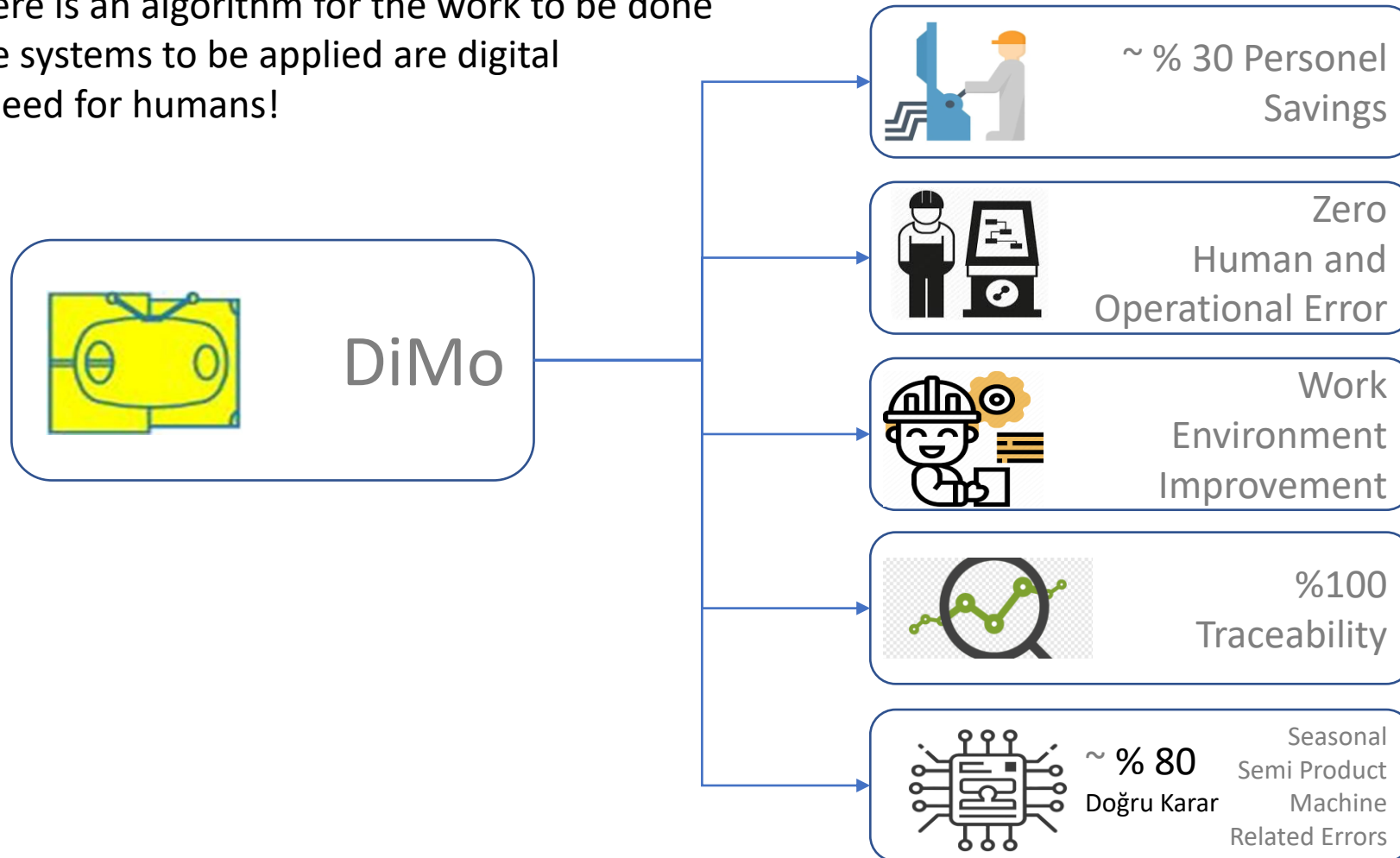
Machines should be managed by machines, not by humans.



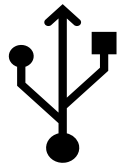
Hasan Ürek

Targets

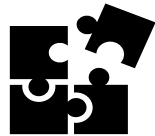
- The intended goals when switching from human machine operator to digital machine operator.
 - If there is an algorithm for the work to be done
 - If the systems to be applied are digital
 - No need for humans!



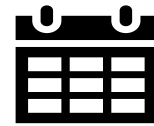
Skills



Plug & Run



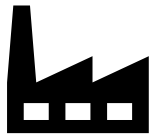
ERP
Entegration



Machine
Queue



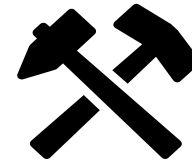
Sustainable



Digital Twin



Energy
Efficiency



Predictive
Maintenance



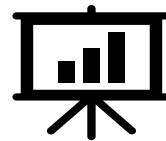
Document
Management



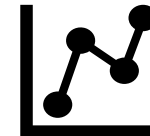
Actual
Cost



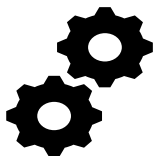
Rf/Barcode
Tracking



Scada
Management



Big Data
Analysis



Process
Management



Recipe
Management



Alarm
Management



Python
Script



Traceability



Autonomous
Process



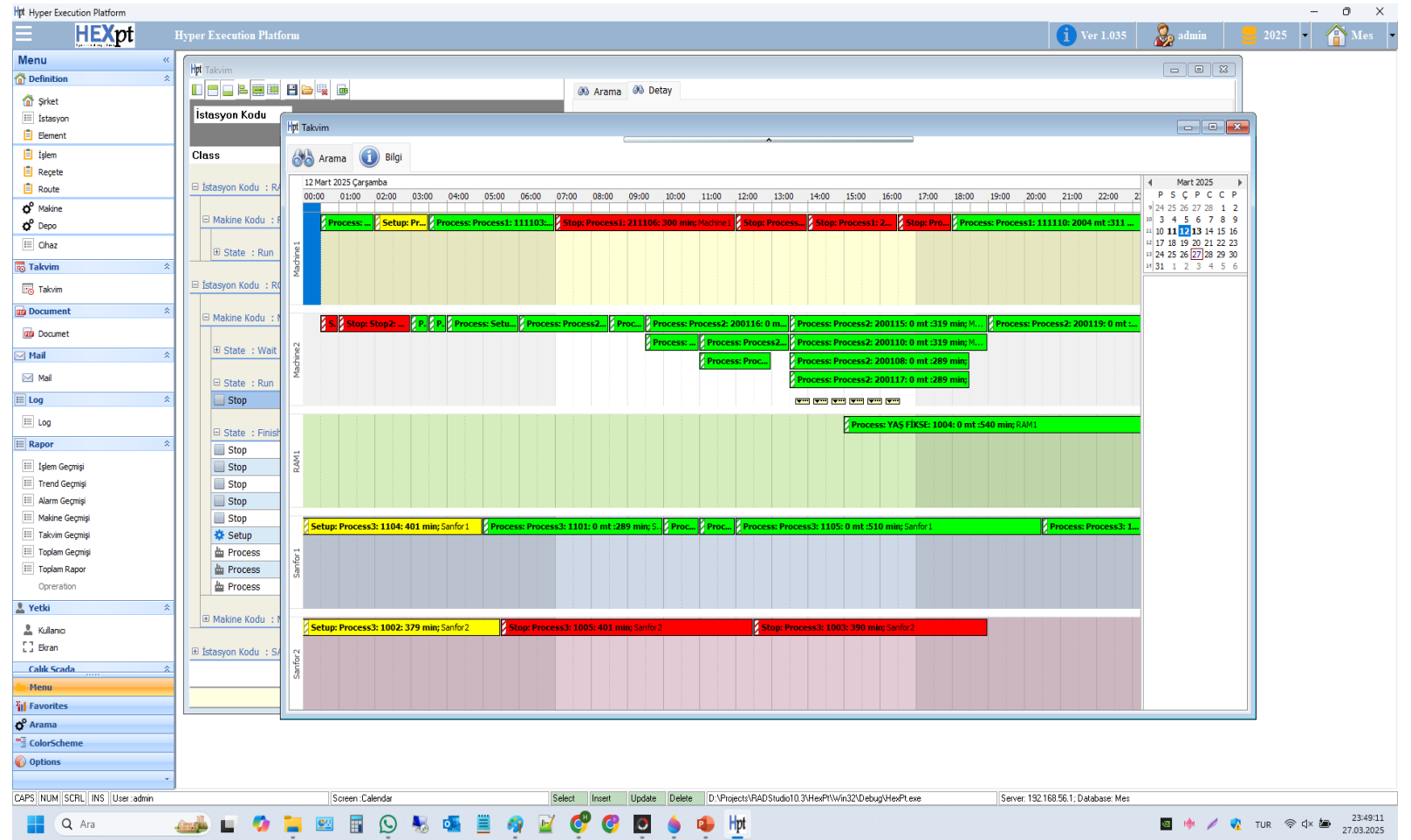
Vertical
Expansion



Strong
Authentication

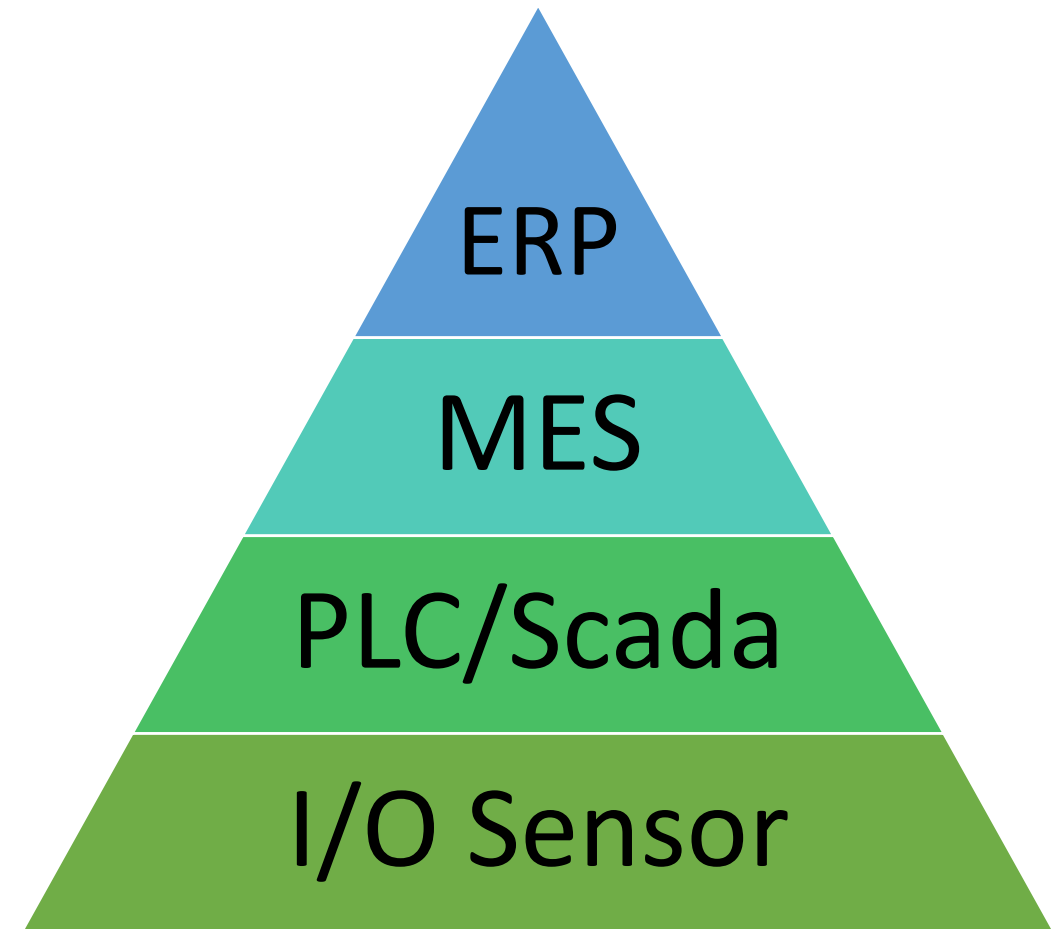
Cross Platform

- Mobile phone or computers. Cross platform indepentend. Native, fastly ve safety.



Modules

- | | |
|---------|-------------------------------------|
| 1. IoT | :Distributed data collection system |
| 2. ALU | :Arithmetic lojic unit |
| 3. ACU | :Virtual counter |
| 4. MBS | :Mobus server |
| 5. PMS | :Process management |
| 6. RMS | :Recipe management |
| 7. TMS | :Trend management system |
| 8. SMS | :Scada management system |
| 9. AMS | :Alam management system |
| 10. MQM | :Machine queue management |
| 11. DMS | :Document management system |
| 12. AMS | :Autonomous management system |
| 13. UMS | :User Management System |



1. IoT: Distrubuted Data Collection System

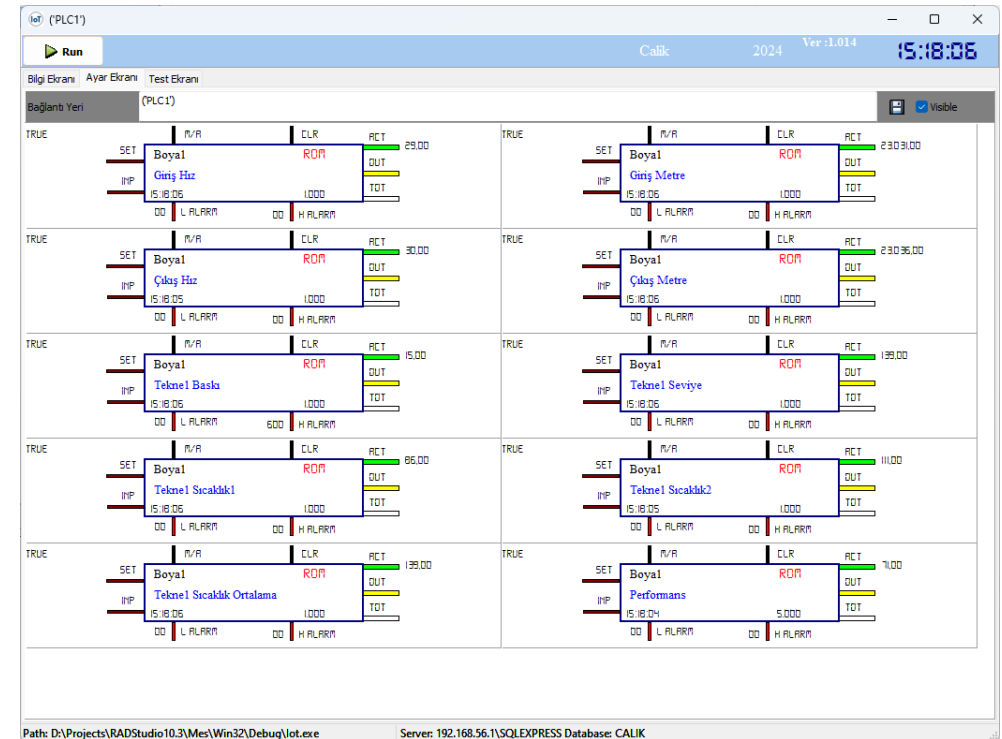
- Provides read and write data exchange from industrial systems with different protocols in different locations to the desired period.

OT katman

- Mqtt
- Opc Da
- Opc Ua
- Modbus Rtu
- Modbus Tcp
- Dde
- Tcp Socket
- Rs 232 /485
- TwinCAT 2

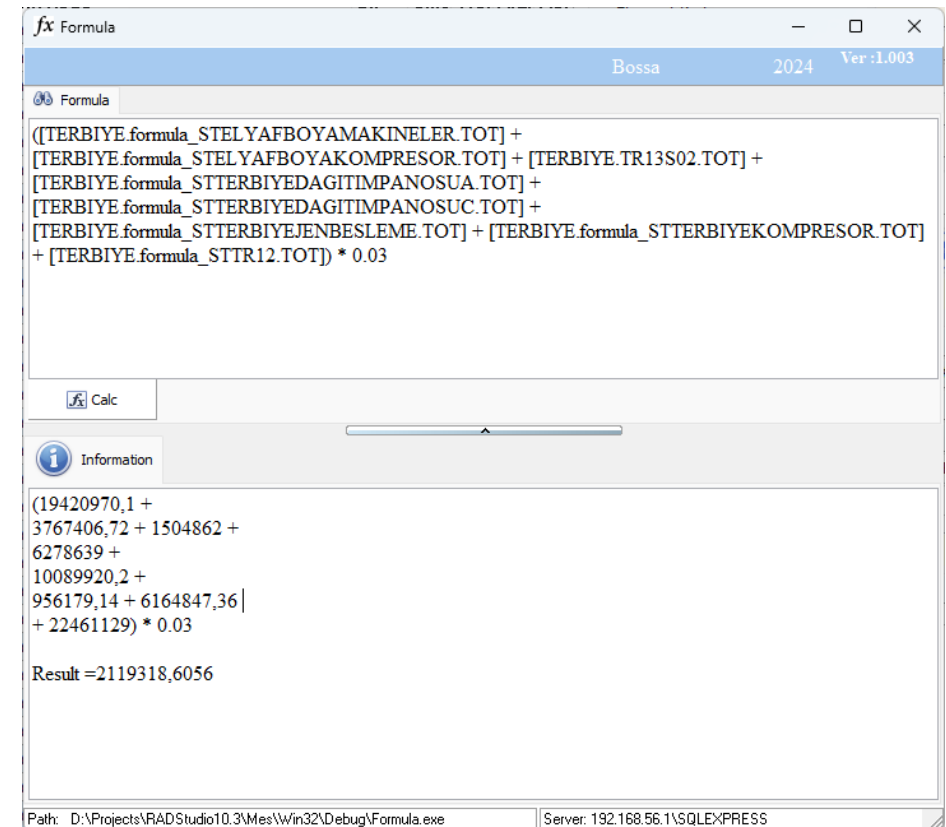
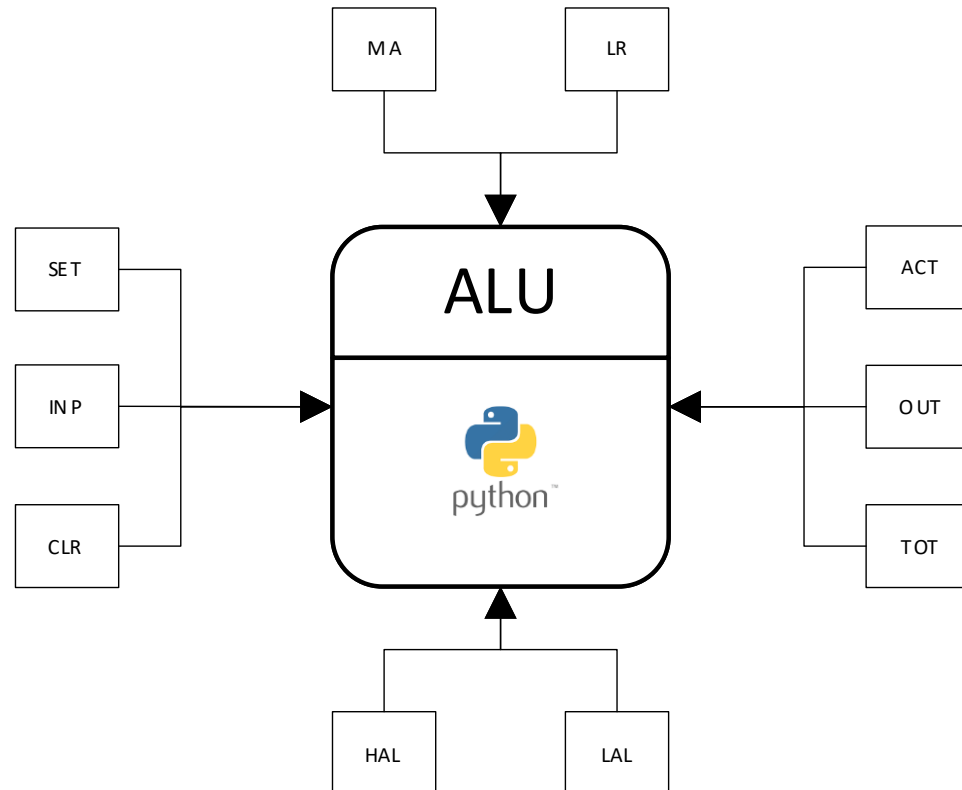
IT katman

- T Sql, Pl SQL
- Rest, Soap server
- Html,
- Xml, Json
- OCX
- Smtip, Ftp
- Text file
- Excel, Access
- Speech
- Image process



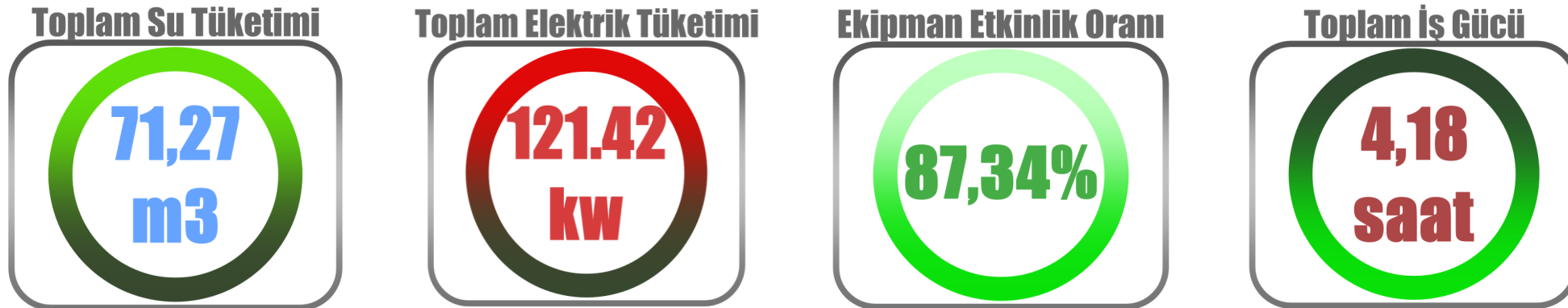
2. ALU: Arithmetic Logic Unit

- Module that performs mathematical and logic operations on data.



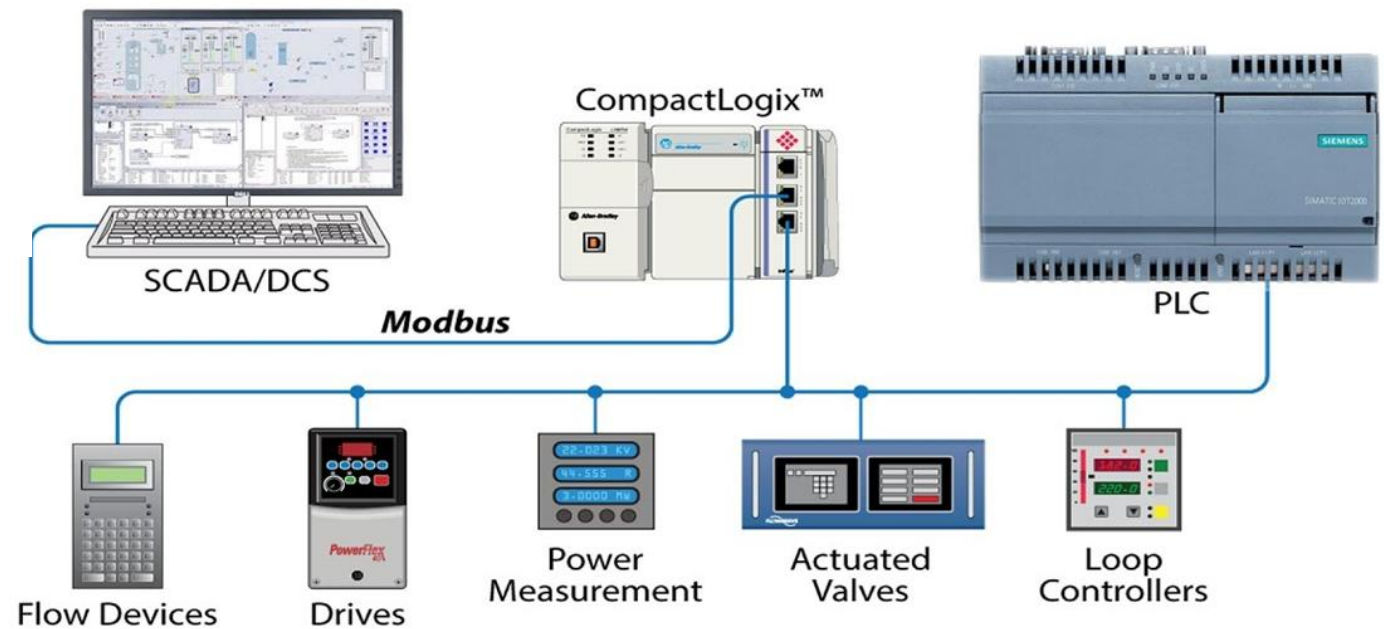
3. ACU: Accumulator Unit

- Module that can create aggregator counters with data.



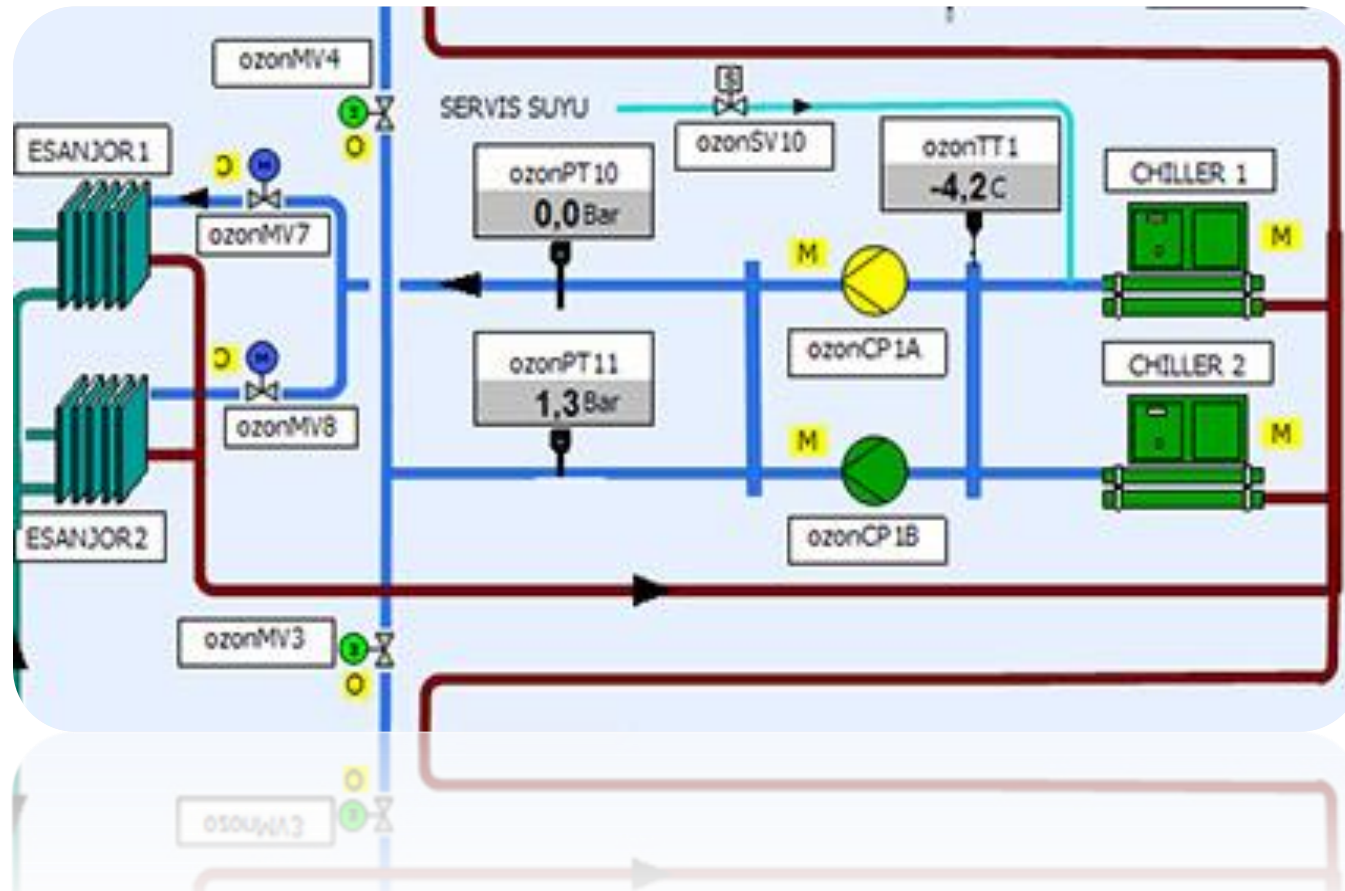
4. MBS :Modbus Server

- Module that shares with other automation systems created on HexPt via Modbus TCP protocol.



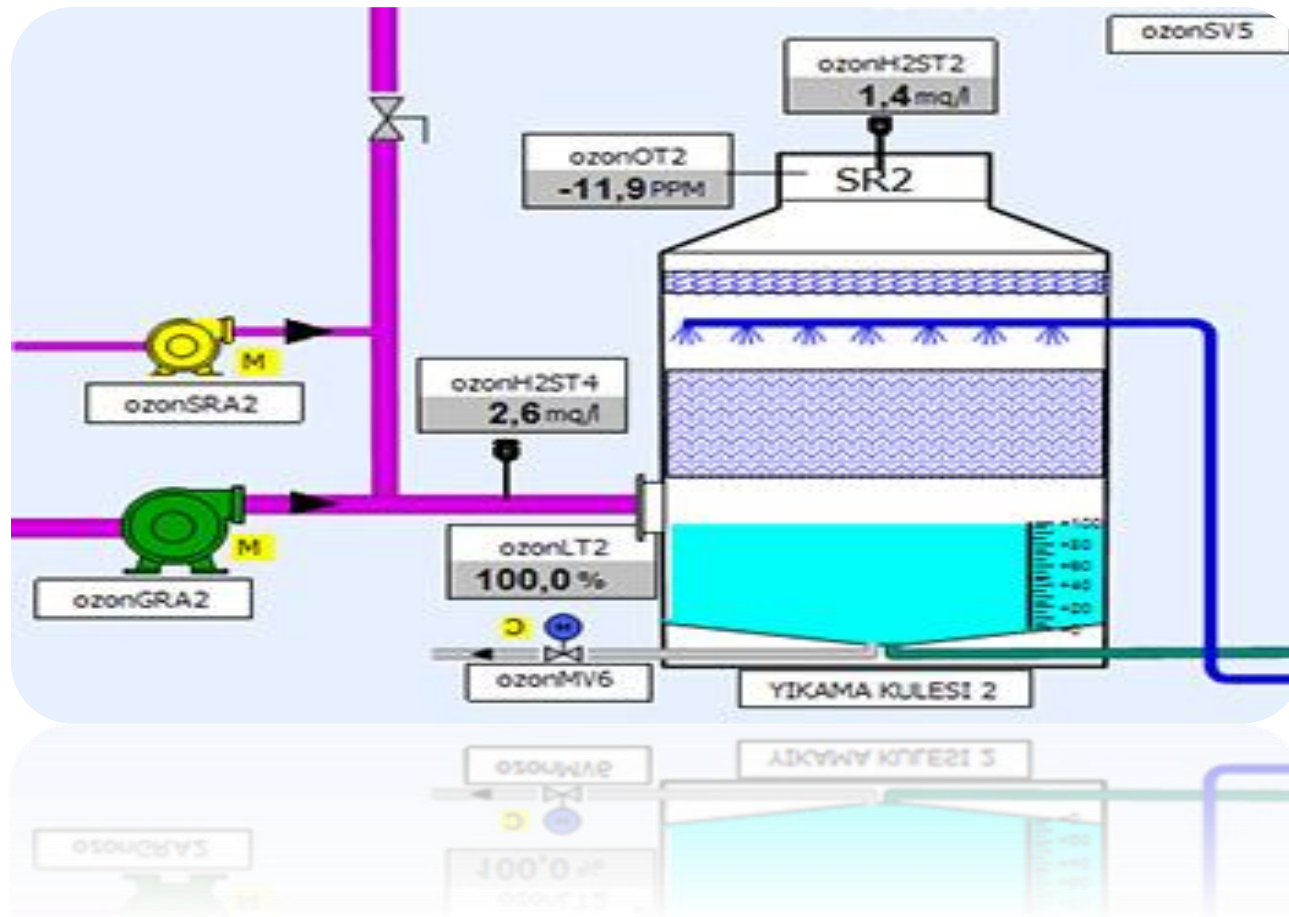
5. PMS: Process Management System

- This module process is automatically worked in the machine.



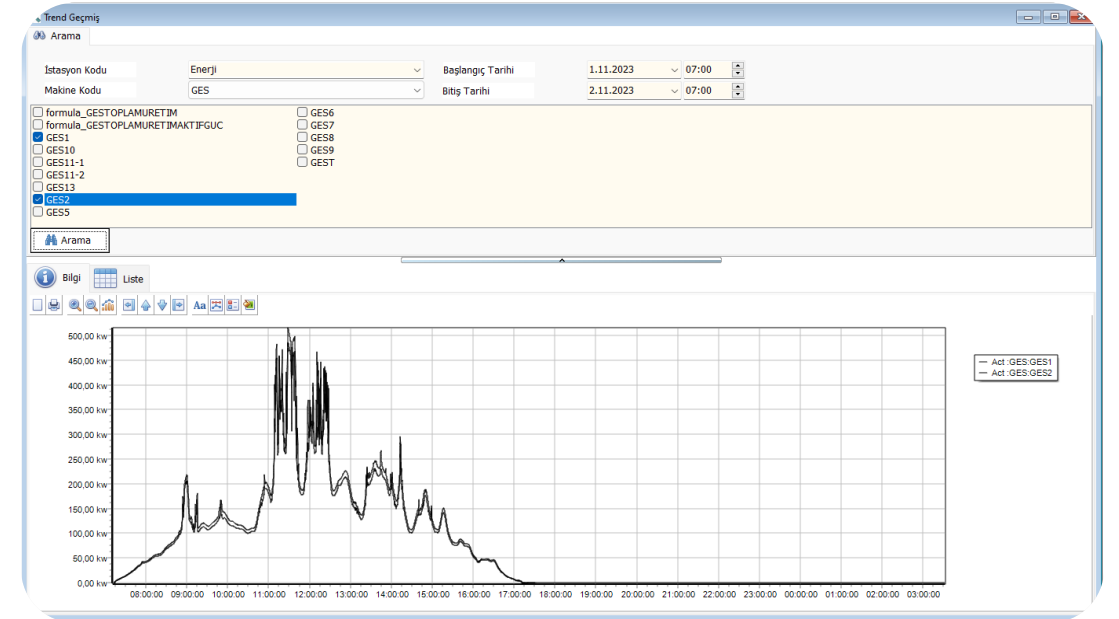
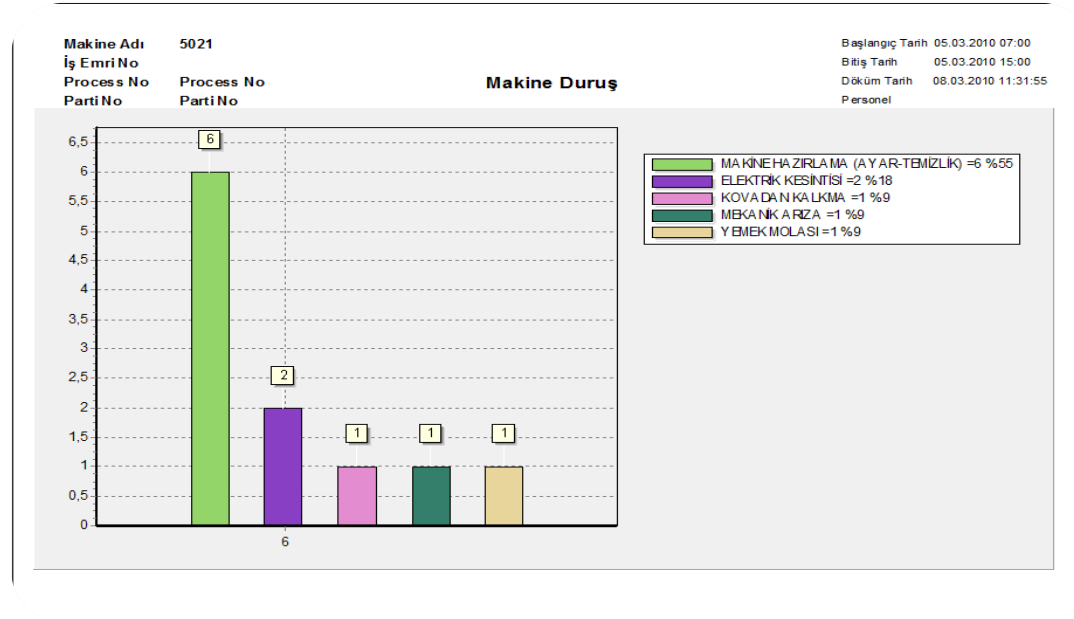
6. RMS: Recipe Management System

- This module recipe is automatically prepared in the kitchen.



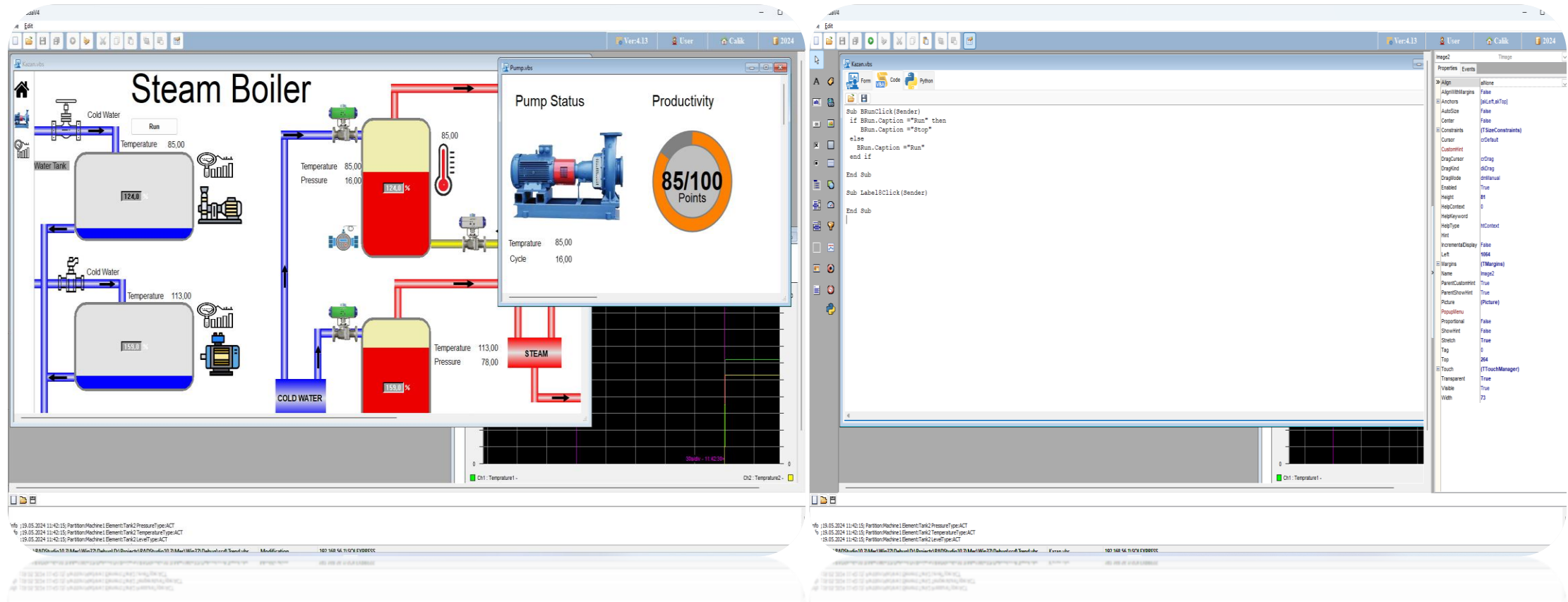
7. TMS: Trend Management Sytem

- This module is all machines are monitored and reported 7/24.



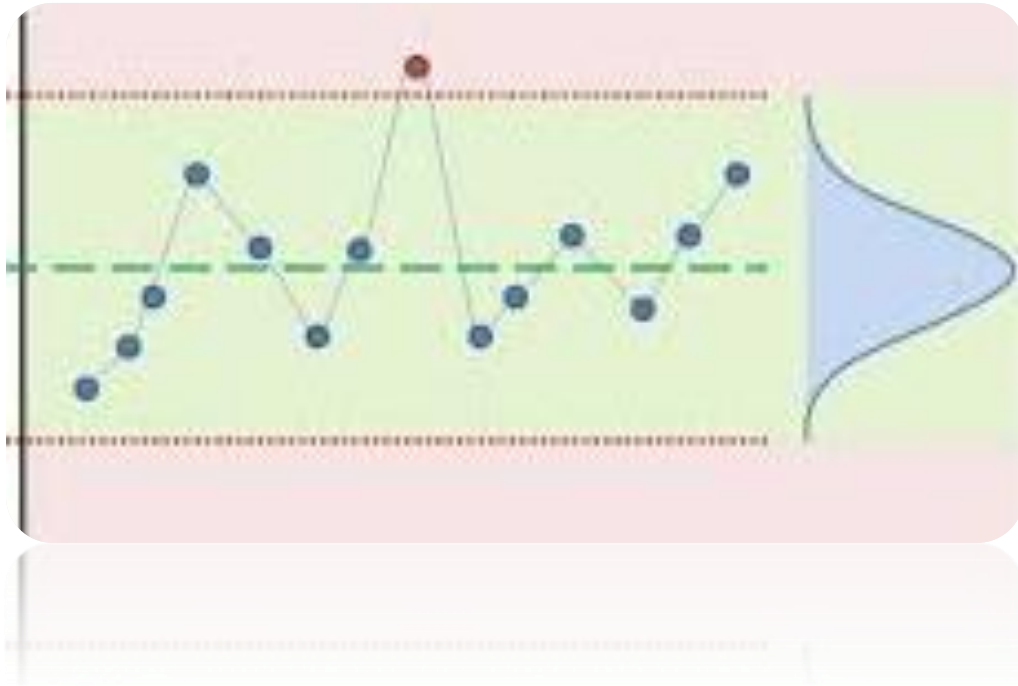
8. SMS: Scada Management System

- Python script supported scada management system with drag and drop live screens.



9. AMS: Alarm Management System

- Module that warns the relevant people about undesirable situations visually, audibly and via e-mail.

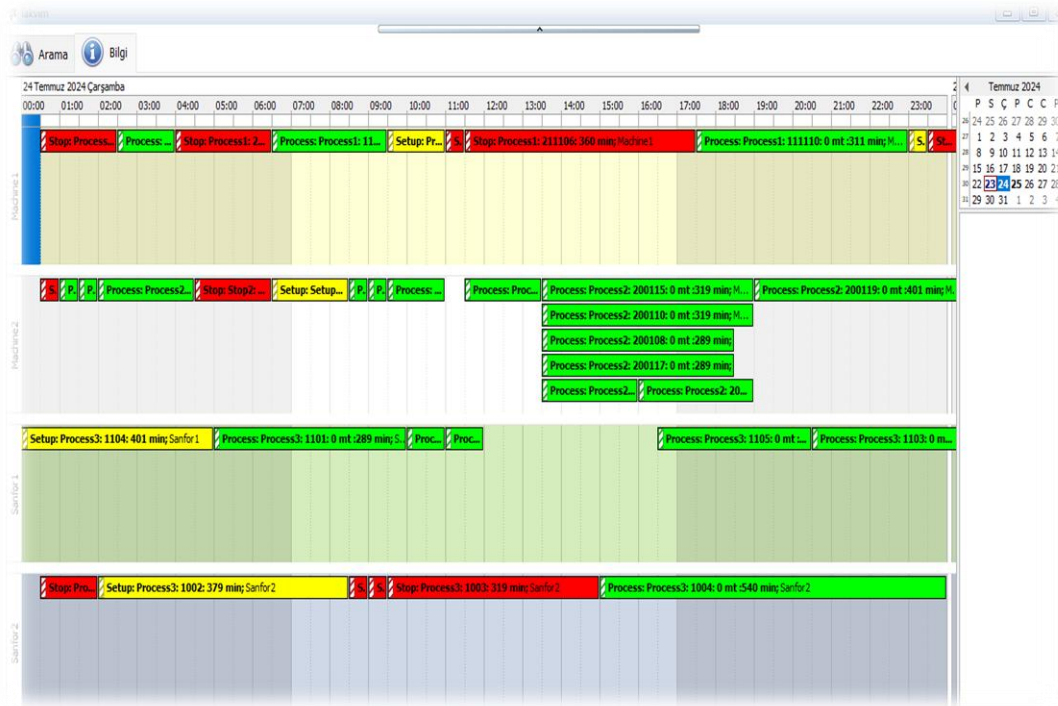


Alarm Types:

- SET :The process set is compared with the device value.
- ACT :The process set is compared with the actual value.
- CHZ :The process set is compares with the device value.
- AVG :The process set is compared avarage value.
- HST :The process set is compared history value.
- NAL :When data cannot be read
- CAL :When data cannot be connection
- AND :The alarm type is anomaly dedection.

9. MQM: Machine Queue Management

- Plan your stops, malfunctions, maintenance, preparations and work orders with drag and drop. Reflect online the machine operator screen.



10. DMS: Document Management System

- Module that delivers your documents, instructions, procedures to the machine operator.

The screenshot shows a web application window titled 'Document'. It features a sidebar with a tree view containing 'Istasyon Kodu', 'Boya', and 'Boya'. The main content area is divided into two tabs: 'Arama' (Search) and 'Document'. The 'Document' tab is active, displaying a form with the following fields:

- Key:** {61797142-42BF-467E-B598-2D303E14C2EF}
- Istasyon Kodu:** Boya
- DocumentCode:** Elektrik-isleri
- DocumentName:** Elektrik-islerinde-calisma-talimati.pdf
- Revision:** 12
- Group:** Boyama.Elektrik
- UpdateUser:** (empty)
- Güncelleme Tarihi:** 12.02.2024 20:56
- CreateUser:** (empty)
- Oluşturma Tarihi:** 12.02.2024 18:14

At the bottom of the form, there are buttons for 'Ekle', 'Sil', 'Düzenle', 'Kaydet', 'İptal', and 'Güncelle'.

The screenshot shows a web application window titled 'DiMo'. It features a top navigation bar with 'Input', 'Setup', and 'Run' buttons. The main content area is divided into two tabs: 'Process' and 'Document'. The 'Process' tab is active, displaying a form with the following fields:

- ReqQuantity:** 0.000
- InputMeasure:** 30.00
- InputQuantity:** 23.029.00
- OutputMeasure:** 0.000
- OutputQuantity:** 23.034.00

The 'Document' tab is also visible, displaying a document titled 'Denim2 Boyama Normal' with a 'Normal' status. The document content includes a header with 'İTÜ' logo, 'İŞYERİ SAĞLIK VE GÜVENLİK BİRİMİ', and 'İSTANBUL TEKNİK ÜNİVERSİTESİ İŞYERİ SAĞLIK VE GÜVENLİK BİRİMİ ELEKTRİK İŞLERİNDE ÇALIŞMA TALİMATI'. Below the header, there are images of safety equipment: red gloves, a blue jumpsuit, a green bag, and a white hard hat. The document also includes a table with the following information:

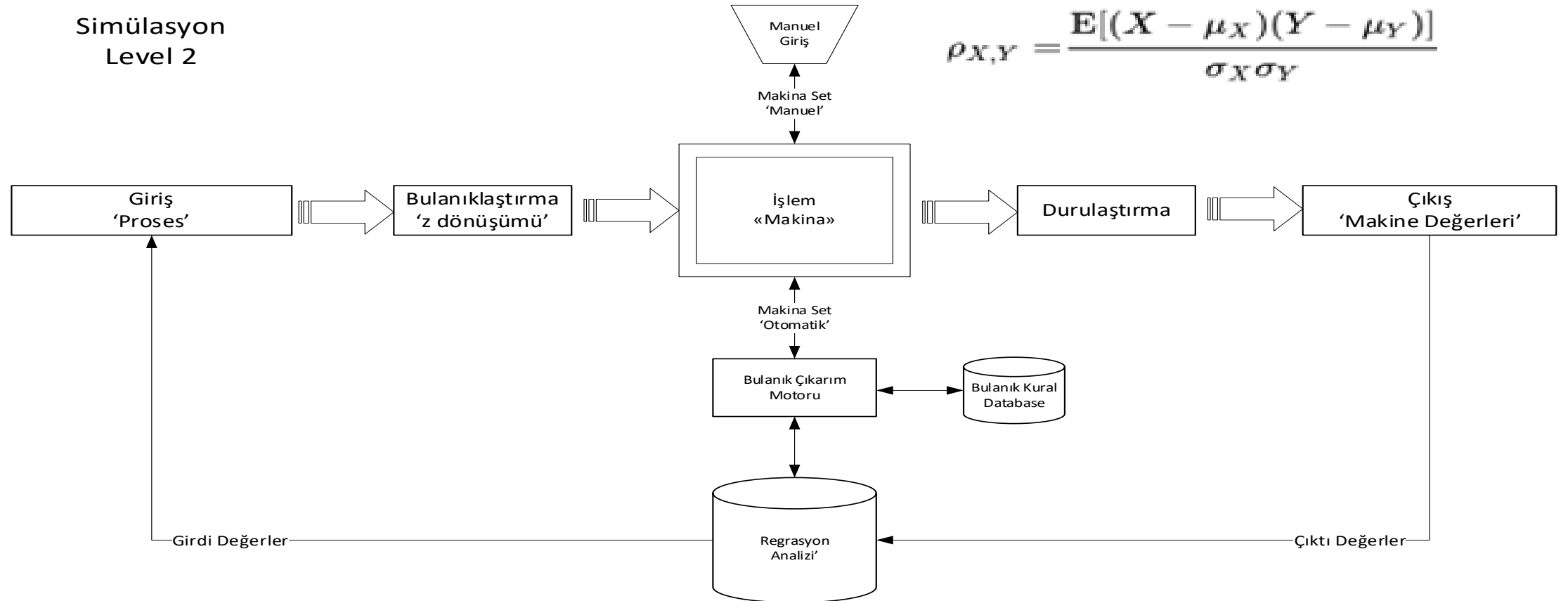
BELGE NO.
Yayın Tarihi:
Revizyon No: 00
Revizyon Tarihi: 22.06.2017

At the bottom of the document, there is a footer with the following information:

Projects\RADStudio10.3\Mes\Win32\Debug\DiMo.exe Server: 192.168.56.1\SQLEXPRESS: Database: CALIK Information : 16.02.2024 13:04:22 : Tekne1 Sıcaklık2 : 100010 : 118

11. AMS: Autonomous Management System

- Module that thinks, decides and implements a problem.



12. UMS: User Management System

- User authorization system
- User log system

The screenshot shows the 'Authorization' window. On the left is a sidebar menu with items: Alarm History, Authorization, Company, Device, Element, Machine, Machine Address, Machine Detail (highlighted), Process, Process Detail, Product, Product Detail, Recipe, Rood, Rood Detail, Schedule, and Screen. The main area has a 'Search' section with an 'Ekran Kodu' input field and a 'Search F3' button. Below this is a 'Bilgi' section with 'StationList' and a 'UserCode' field set to 'admin'. The 'Ekran Kodu' dropdown is set to 'Machine Detail'. There are checkboxes for 'Select', 'Insert', 'Update', and 'Delete'. At the bottom, there is a large text area containing '("Station1", "Station2")' and a toolbar with buttons: Insert, Delete, Edit, Post, Cancel, and Refresh.

The screenshot shows the 'Kullanıcı Geçmiş' (User History) window. The top bar has 'Arama' and 'Detay' tabs. The 'Kullanıcı Kodu' dropdown is set to 'Operation'. The 'Ekran Kodu' dropdown is set to 'Schedule'. Below this is a list of 'Operation : Update' entries, each with a 'Schedule' label. On the right, there is a 'Bilgi' section with fields: 'Kullanıcı Kodu' (admin), 'Ekran Kodu' (Schedule), 'Operation' (Update), 'Tarih ve Saat' (15.02.2024 18:02:16), 'HostName', 'IpAddress', and 'UserName'. At the bottom, there is a 'CreateDate' field showing a range from 4.02.2024 14:03:58 to 15.02.2024 14:03:58. The bottom toolbar includes buttons: Ekle, Sil, Düzenle, Kaydet, İptal, and Güncelle.

References: HexPt



Bossa

References: Textile Package

ISKOTM

ORTA

MATESA
SINCE 1989


KİPAŞ
HOLDİNG


ATLAS DENİM
TEKSTİL SAN. TİC. A.Ş.

Bossa


**GÜNEY
TEKSTİL**

References: Intemas

