



**@rgemas Automotive Industry Solutions**

**Industry 4.0 applications**

[www.argebilisim.com](http://www.argebilisim.com)



## Lean Transformation Before Digitalization

The production system needs to be made Lean, traceable, and measurable for digital transformation. Lean transformation efforts should be made in production. Arge Bilişim's consultancy team prepares the company for digital transformation by providing training, theoretical consultancy, and practical consultancy services to carry out this transformation.



## OEE Improvement

It's a Key Performance Indicator (KPI) used to measure the effectiveness of production machinery. The OEE of each production machine can be measured and reported in real-time for its performance, quality, uptime, planned and unplanned downtimes, breakdown-maintenance, and on-off statuses. @rgemas MES can measure the OEE of production machines in real-time and can also measure and report the performance of operators who feed or use the machine in real-time.



## Reports that Comply with ISO Standards

The @rgemas ERP material requirement planning software and @rgemas MES production management software offered by Arge Bilişim contain reports required by the ISO16949 standard used in automotive. It offers easily acceptable reports in both the automotive main industry and ISO audits. With these reports, it provides customers with the information needed for continuous improvement. With these reports, companies are successful in audits.





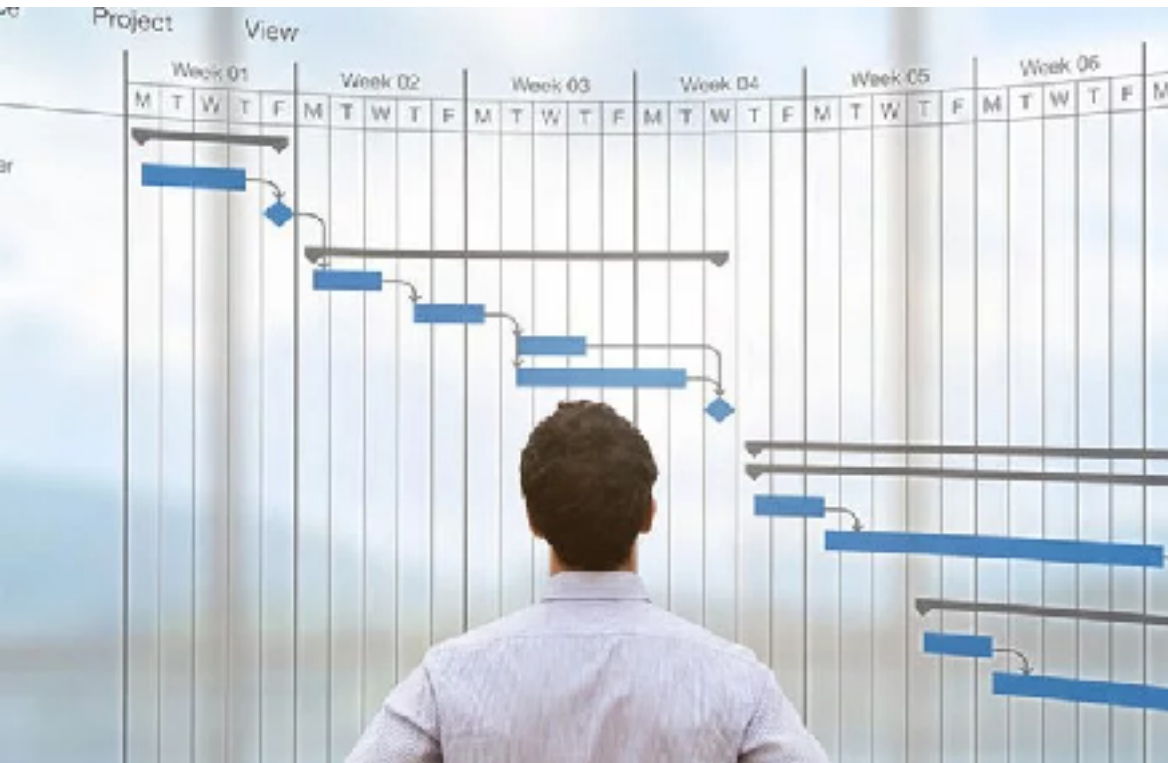
## **Effective Maintenance and Repair System**

The aim is to minimize downtime due to machine stops with the machine failure tracking module. Machine maintenance module consists of modules where machine maintenance is planned and monitored. Arge Bilişim provides consultancy services for the implementation of these modules and offers software and hardware.



# Predictive Maintenance

Predictive maintenance is the automatic notification of maintenance needs to the technical service personnel when maintenance time has not yet arrived but is required. The aim of predictive maintenance is to prevent quality issues and minimize machine downtime, thus preventing a decrease in productivity.



# Production Scheduling

@rgeschedule is developed to easily plan even the most complex production processes. With this module of @rgemas, multiple scheduling scenarios can be created and turned into real schedules. It is the module where scheduling is carried out. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware.



# Real-Time Production Tracking

Each order is tracked in real-time based on its specifications, monitoring input and output quantities on the production line. Additionally, external production data regarding quantity and quality from manufacturers is collected and reported online through this module. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware.



# Traceable Product & Measurable Production System

Traceability is a crucial requirement for customer satisfaction and planned production. Moreover, the traceability of materials during production is fundamental to measurability. Arge Bilişim with its industrial engineering team, establishes bundle, kanban, supermarket, and Lean Walk systems for a traceable production system. By establishing a traceable information system on this walk system, traceable production is designed. Traceability (traceability) is provided for each product in terms of materials, labor, quality, and energy, resulting from traceable production.





# Quality Improvement

Arge Bilişim provides consultancy services in the installation of quality systems in factories, training in various quality control methods, and quality improvement with its industrial engineering team. Arge Bilişim engineers establish real-time measured, evaluated, and actionable quality control systems using @rgemas MES software, which includes quality control modules such as in-line (statistical process control), end-of-line (end-of-line quality control), final quality control, internal nonconformity, and inspection.



## **Work Plan (Routing)**

The planning module including pricing, planning, OEE measurement, productivity measurement, and performance measurement required for operational bank, work plan (route), and target calculations. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware solutions.



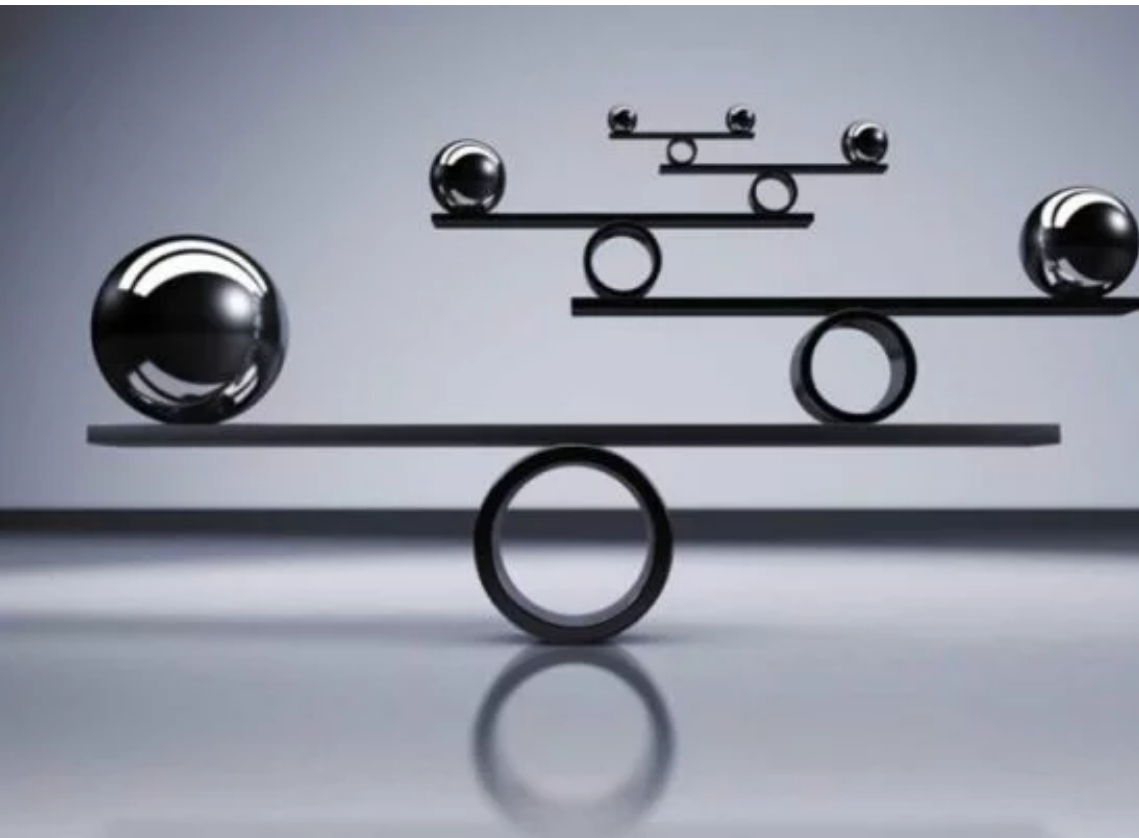
# Standard Time Measurement (Stopwatch & MTM)

Standard time measurement using the stopwatch method is a module used for accurate measurement of standard operating times. MTM is a module used for measurement, optimization and standardization of standard operation times with universal accuracy. Arge Bilişim provides consultancy services for the implementation of these modules, offers software and hardware.



# Productivity & Performance Improvement

Industrial engineers of Arge Bilişim are experts in productivity and quality oriented factory installation, L-out design and implementation, business and method development (OPEX) department installation, work and time study training, traceable and measurable line installation, productivity measurement, bottleneck management training, fair wage system and bonus system installation, productivity development. He provides consultancy services to factories on these issues. With the efficiency module of @rgemas MES, the measurement of efficiency, lost time and performance in real-time is provided.



## **Balanced Line Setup & Assignment Optimization**

Balanced line installation and continuous flow are one of the conditions for increasing efficiency. Balanced lines should be installed in order to provide sufficient and high-quality materials to each workstation. Arge Bilişim provides theoretical and practical consultancy services on process management, balanced line installation to increase productivity, bottleneck management in factories with its industrial engineering staff. @rgemas is implemented by both line balancing and balanced line installation with real operators with the automatic line establishment module of MES.





# Short and Long Follow-up & Bottleneck Management Module

These are modules used for activities such as reaching the source of inefficiency and/or quality problem, collecting data from the source, conducting analysis and developing for efficiency and quality improvement purposes. Arge Bilişim provides consultancy services for the implementation of these modules, offers software and hardware.



## Fair Wage & Premium System

The wage system is one of the most basic systems of a business. The fairness of the wage system has a direct positive impact on the company both in terms of life and competitiveness. A bonus is an extra fee earned by employees if they generate income above the target profit and is a conditional expense. Salary + bonus is a profitable and fair wage system for both the factory and employees. Arge Bilişim promotes productivity and quality by establishing salary and bonus systems based on objective criteria in factories.



# Demand Management

It is the management of the requests required for the procurement of all the tools and materials necessary for the continuity of production activities, whether internally or externally sourced. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware solutions.



# Purshasing

It is the management of the purchasing process. Needs can be calculated in a lean manner and/or through MRP, can be generated, ordered, and tracked. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware solutions.





# Warehouse & Inventory Management

These are the software modules required for the management of warehouse identification, warehouse management, inventory movements processes. Arge Bilişim provides consultancy services for the implementation of these modules, offers software and hardware.





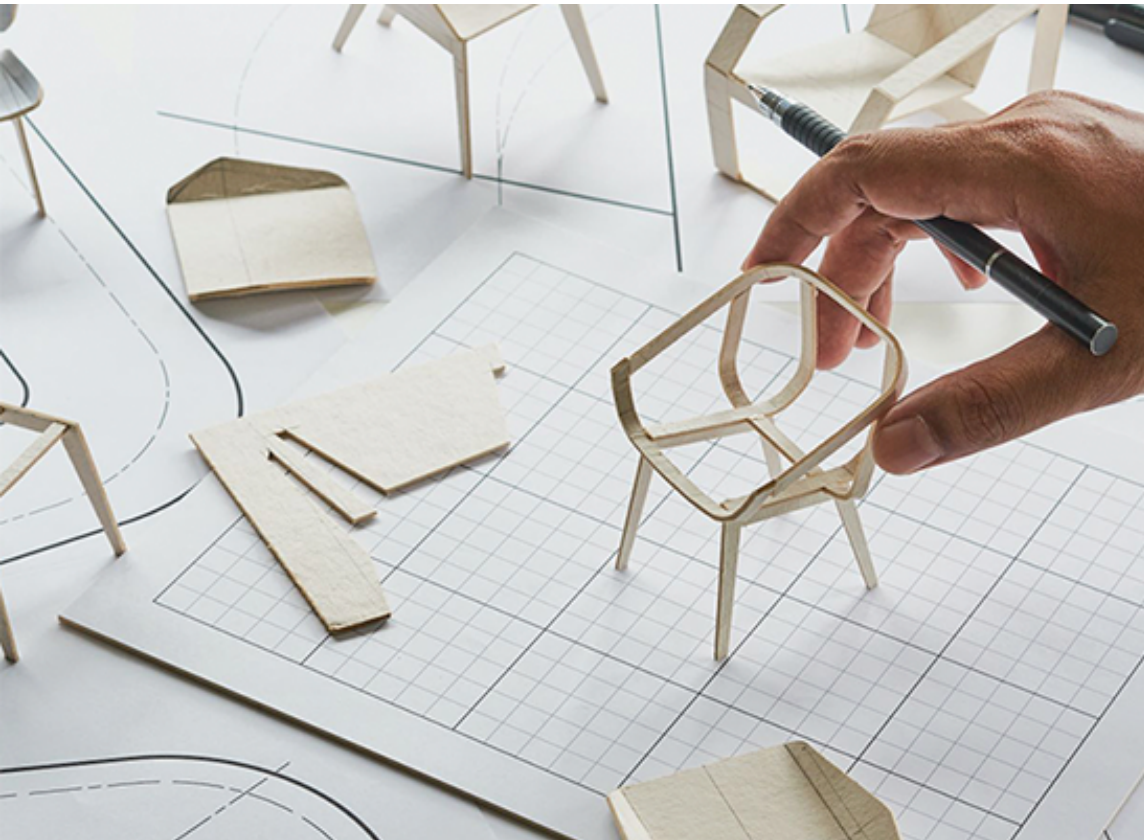
# Order Management

They are software modules in which customer and production orders are entered, converted and managed. Planning related to orders (conversion to production order, cancellation, increase, division, replacement) can be carried out with these modules. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware.



## **Bill of materials & MRP**

It is the module where product design is managed. They are software modules in which all revision, technical drawing and variant documents are archived and managed. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware.



# Product Design & Document Management

It is the module where product design is managed. They are software modules in which all revision technical drawing and variant documents are archived and managed. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware.



# Cost Management

They are software modules in which inventories, products and the cost of each order are calculated, reported and managed as labor and materials. Pricing, inventory costs and realized costs are prepared and calculated with these modules. Arge Bilişim provides consultancy services for the implementation of this module and offers software and hardware.

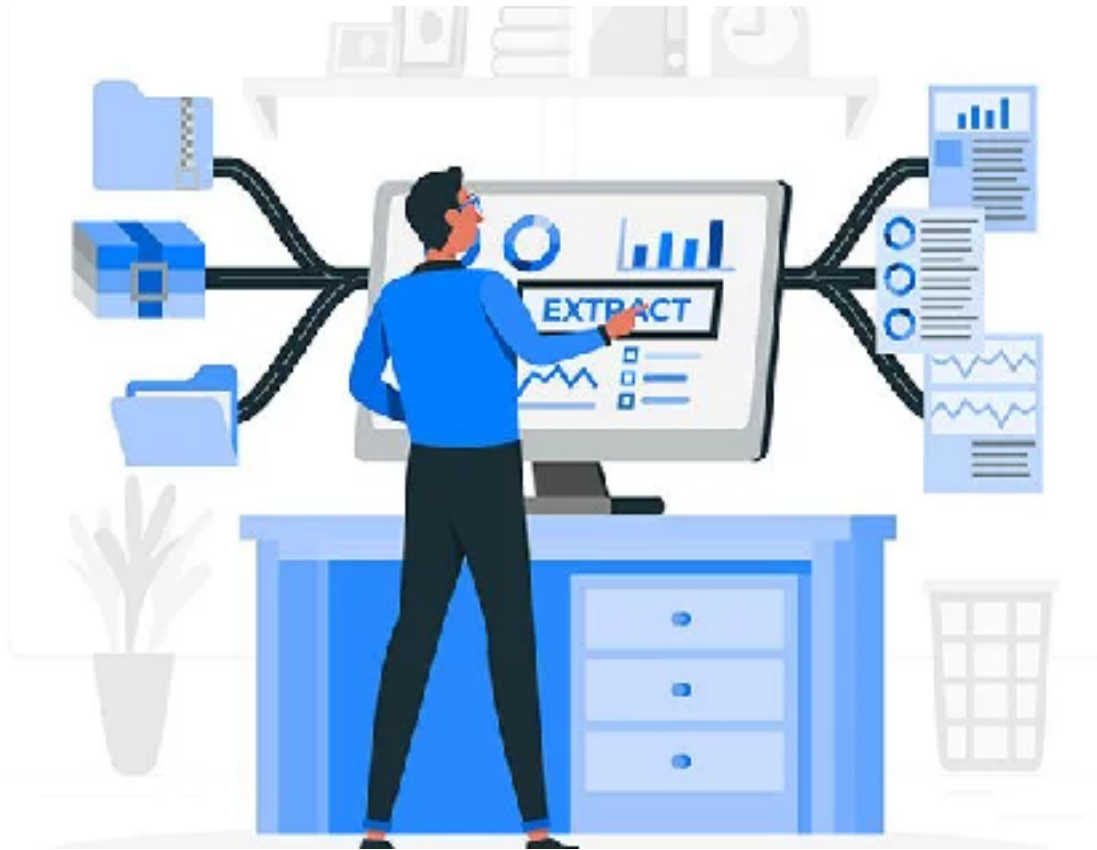


## **Supplier & Customer Evaluation**

For supplier and customer evaluation, they are software modules in which criteria are defined, entries are made, points are given and reported. Arge Bilişim provides consultancy services for the implementation of these modules, offers software and hardware.







# Software Integration

It is a software service performed for the integration of @rgemas and other software used by the company. @rgemas integration has been performed with over 30 other ERP and/or accounting software.