



Single Source of Truth Industrial Data Governance Platform

# About Us



**Founded** on **25.01.2023** with the vision

**Minimize time to value** for manufacturers with real-time insights from industrial data



**Investment** on **28.04.2023**

MaestroHub has been developed for 2 years and is already in production by leading manufacturers from several verticals



**Member** of various ecosystems

Communities and acceleration programs like GAIA-X, EIT Manufacturing, 4.0 Solutions



**30 + years of experience** refined from

Digital transformation consulting, IIoT, software development, and manufacturing project delivery



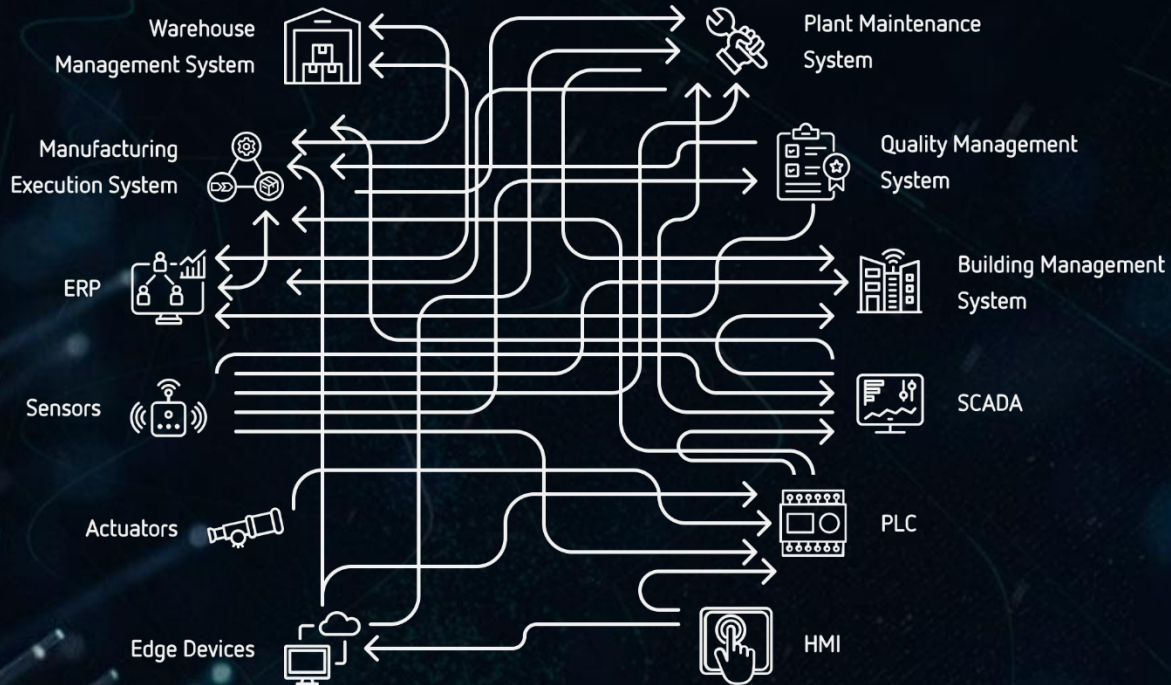
**Partnerships** across MENA, EU, and the US

Integrators, strategic partners, and technology providers. Backed by Microsoft Founders' Hub program.

***"Organize the industrial data, make it accessible and usable!"***

# 5X Projects 3X ROI

## Before MaestroHub



**Exponential integration effort scalability problems**  
**Data cleaning & preparation hinder productivity**  
**Limited talent to conduct data analysis**

## After MaestroHub



**80% Reduction in integration effort**  
**Automatic contextualization saves 50% of time**  
**Drag & Drop empowers domain experts**

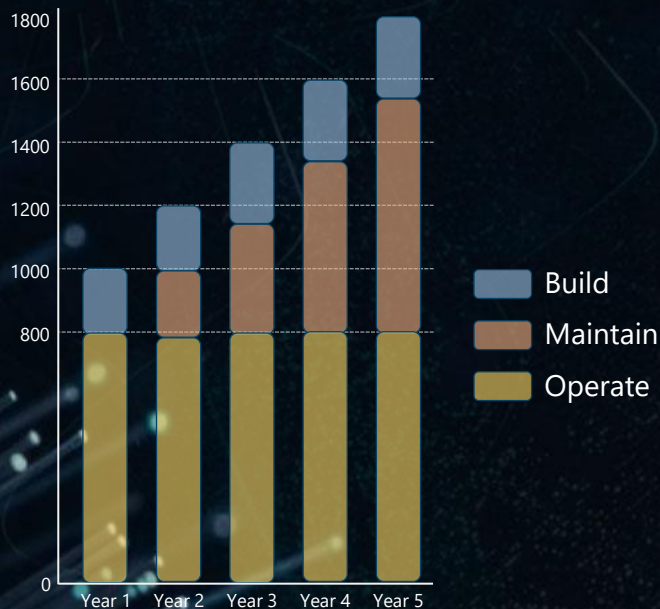
Multiply the talent pool, remove non-value-added activities on skilled workforce

# Traditional IIoT Approach

Exponential  
Integration Effort



Each application is **isolated**,  
integration costs **1-2 M\$/year**

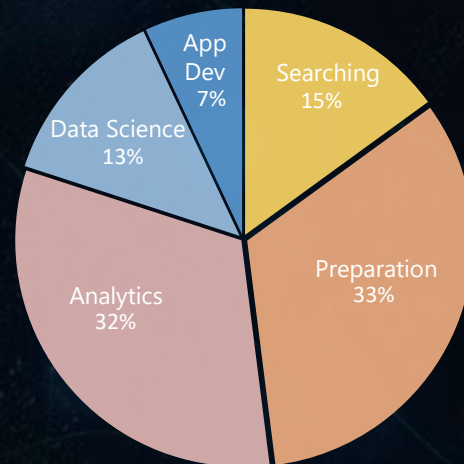


<https://www.cruxddata.com/blog/external-data-roi-cost>

Time Consuming  
Data Preparation



**48%** of data workers' time is wasted  
on searching, preparation, etc.



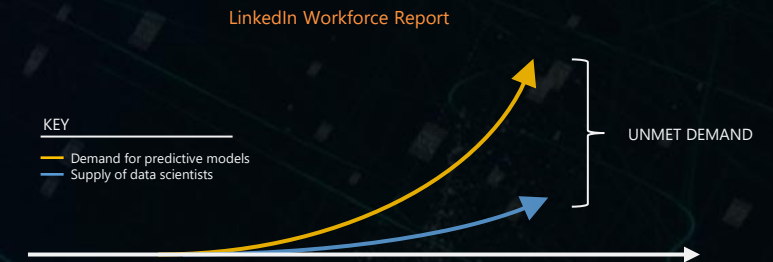
Weekly Time By Activity

\* Source IDC, State of Data Science and Analytics

Highly Skilled  
Workforce Dependency



**Dedicated data analysts** prepare  
analyses based on individual requests



## Gartner

Survey Reveals Talent Shortages as Biggest  
Barrier to Emerging Technologies Adoption

<https://www.gartner.com/en/newsroom/press-releases/2021-09-13-gartner-survey-reveals-talent-shortages-as-biggest-barrier-to-emerging-technologies-adoption>

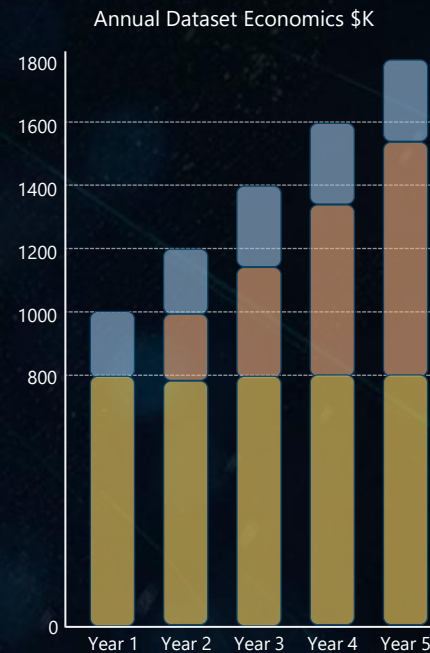
# Reduce Integration Effort 80%

The digital infrastructure for anyone, any system to access the real-time information

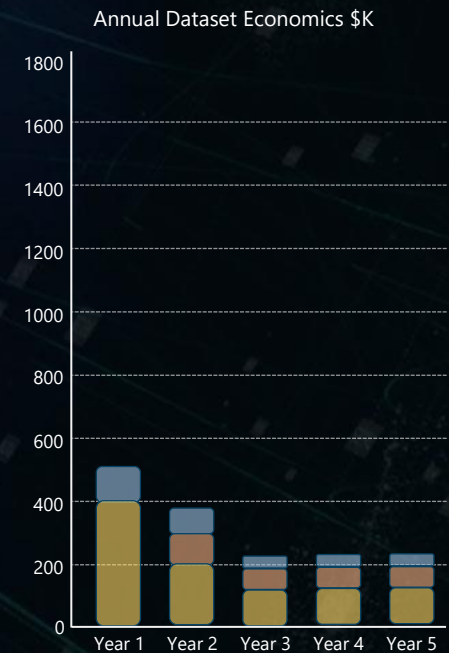
Hub for all data flows, connect with a few clicks

**Integration effort** decreases from weeks to minutes with **smart data layer**

## Point to Point Integration



## MaestroHub, UNS



Build Maintain Operate

\* Source <https://www.cruxdata.com/blog/external-data-roi-cost>

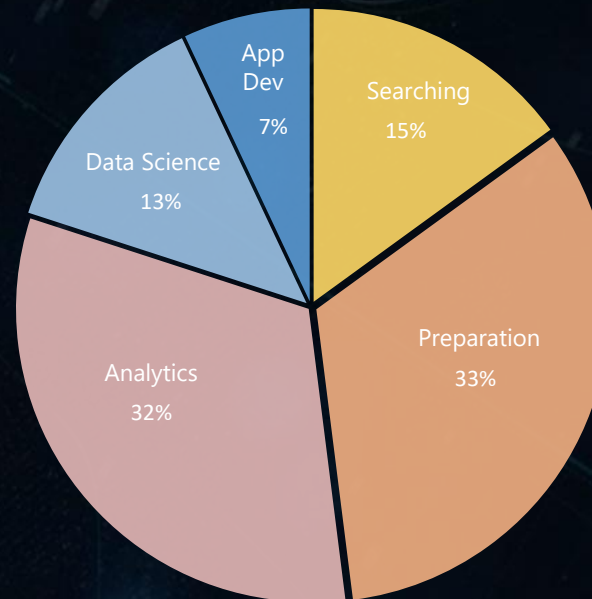
# Context First to Double Productivity

Organize your industrial data, make it accessible, clean and contextualized

Context from everywhere  
Clean & Rich information packages  
with one timestamp

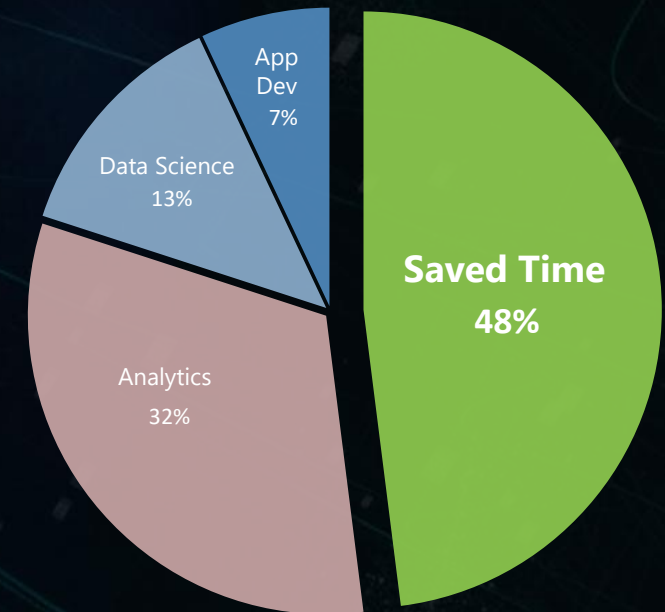
Data searching and preparation  
vanishes with **real-time automated  
contextualization**

### Data Thread



Weekly Time By Activity

### MaestroHub, UNS



Weekly Time By Activity

\* Source IDC, State of Data Science and Analytics

# Minimize Upskilling Costs

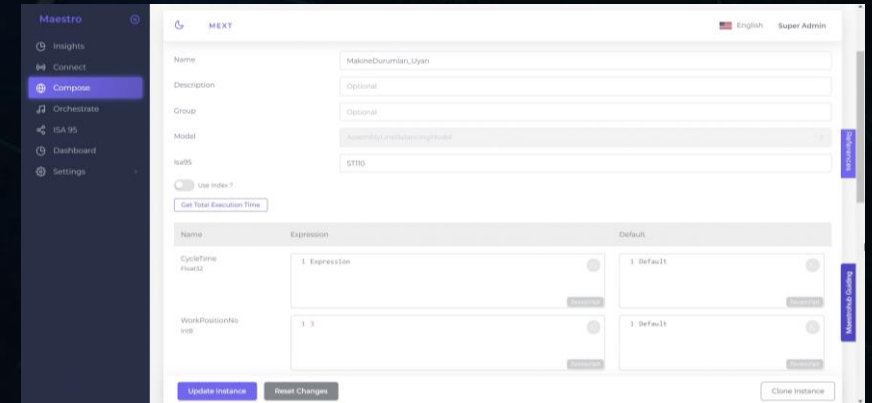
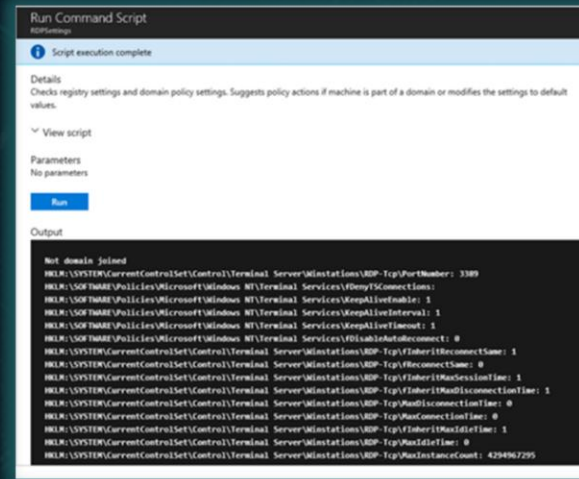
Empower domain experts to conduct data analysis with interactive onboarding

## Software Skills

## MaestroHub, UNS

Drag & Drop, No-Code technology

**Lack of talent** is eliminated by turning every employee into **citizen analysts**



# How it Works?

Deploy **in 1-hour** Connect **in minutes** Scale **without any limitation**

## Workflow of MaestroHub



**Bidirectional** communication for 30+ industrial protocols

**Contextualize first** then transfer for storage

Manage your data flows

Aware **all** your data sources and flows

**Smart Data Layer:**  
Single application by **securely** standardizing data

**Modelling:**  
Real-time data preparation **before sharing** with any application

**Ease of Use:**  
Great UX / UI with **drag & drop** and no code functions



# Have a Clear Picture?



Not Digitally Transformed



Digitally Transformed

Our architecture **Unified Namespace** is acknowledged as the reference IIoT architecture

\* Source <https://www.gartner.com/en/documents/4586599>

# Implemented Use Cases

## Process Cost, Energy & Sustainability

- Energy Monitoring
- Energy Cost Mapping
- Energy Anomaly Notification
- Production Carbon Footprint Per Product
- Process Cost Mapping

## Joint Studies

### Partnership

- Remote Task Validation Using Smart Wearables
- HSE Anomaly Notification
- Digital SoP
- Total Productive Maintenance

### AI & Cloud

- Real time quality prediction by AI/ML application
- Production stoppage prediction with AI/ML application

## Process and Product Quality

- Automated Quality & Maintenance Work Order Creation
- Process Anomaly Notification
- Condition Based Monitoring
- Production Quality

## Production Monitoring & Tracking

- Machine Remote Monitoring
- Machine Recipe Control
- CNC Tool Life Monitoring and Anomaly
- Smart Bin, Automatic Purchase Order Creation
- Digital Performance Management
- Line Balancing
- Production Scheduling Compliance
- Real time Operator Performance
- Real Time Value Stream Mapping
- Product Passport

# Success Story - Energy Cost Mapping

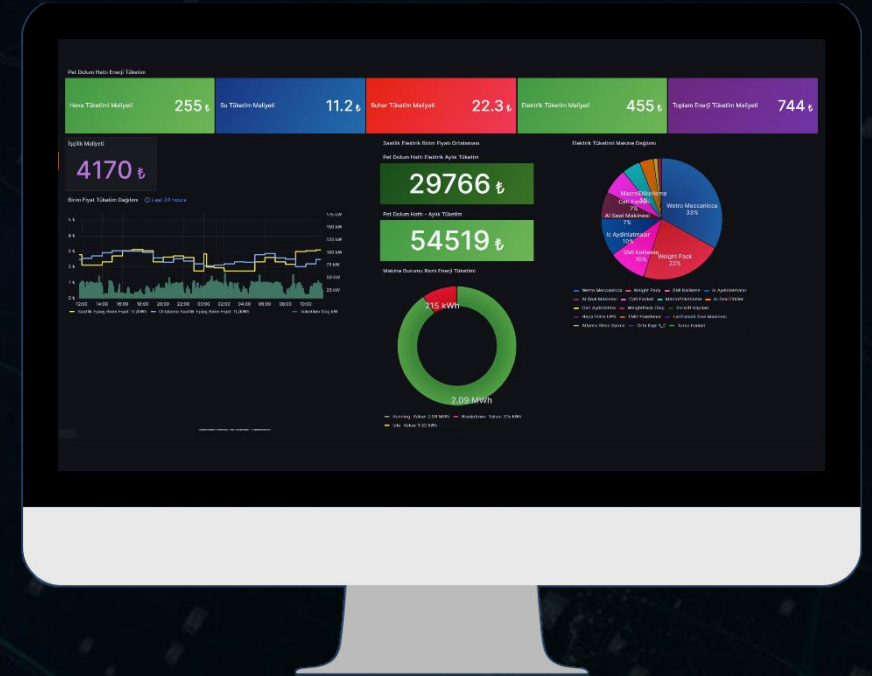
Chemical Manufacturer saves 8 tonnes of steam per day within 1 week

## Problem

- Alcohol distillation is not integrated with production systems
- Business logic → Minimum capacity if the customer orders are low
- The optimization cannot be concluded on the same day

**45K \$/year within 1 week**

- Step 1:** Connect alcohol distillation SCADA and ERP to MaestroHub
- Step 2:** Model utility cost per production quantity
- Step 3:** Visualize breakeven point details in real-time
- Step 4:** Make informed decisions and save **8 tonnes of steam per day**



8 Tonnes  
steam/day



Saved **45K/year**



1 week

# Success Story - Digital Performance Management

SME Yarn Manufacturer digitally transforms in 1 year

## Problem

- Scalable IIoT platform to support their digital transformation
- Connect to 200+ machinery, ERP, MES, and 10 more other system
- Struggling to attract and retain skilled workforce for the initiatives

## 5-year plan realized in 1-year

**Step 1:** Connect all the data sources to MaestroHub

**Step 2:** Implement semantic hierarchy to organize data

**Step 3:** Calculate and visualize critical KPIs like OEE, MTTR, breakdowns

**Step 4:** Real-time visibility on operations with **100+ dashboards**

**Step 5:** Executives analyzed the data and improved capacity, quality



**%50+** Quality improvement



**%20+** Capacity Increase



1 year

# Success Story - Anomaly Detection

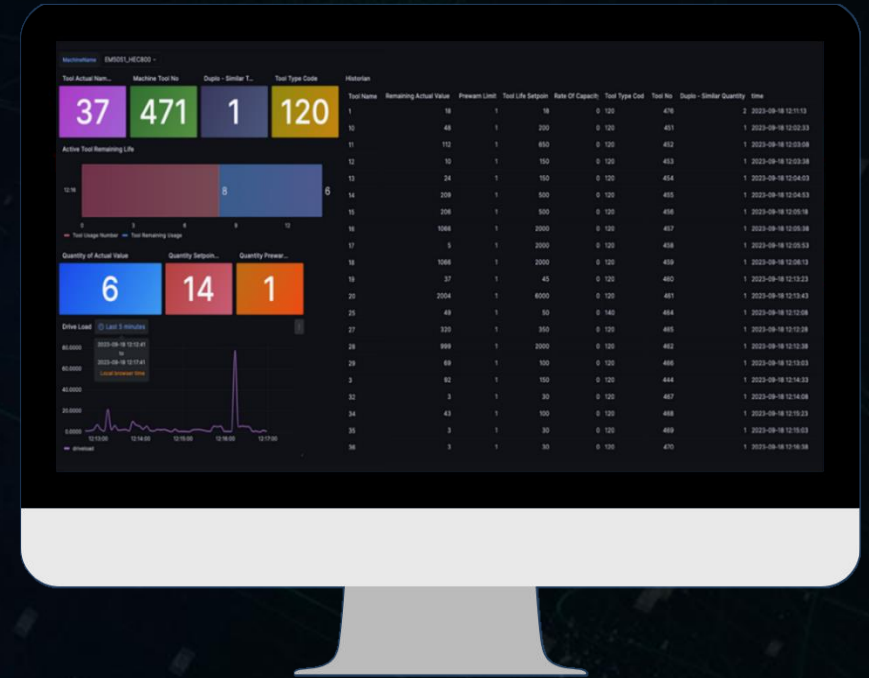
Automotive OEM saves 22K\$/year for each CNC on cutting tools

## Problem

- Optimize the remaining useful life of CNC cutting tools
- Tool breakdowns in the early hours of the shifts
- No significant factor is identified in the model

## Notifications saved 22K\$/year for each CNC

- Step 1:** Additional process data collected with edge devices
- Step 2:** Adjustments made by the operator were included in models
- Step 3:** Prediction accuracy improved with additional data sources
- Step 4:** Notifications are generated for line supervisors for anomalies



%95+ Quality improvement



Saved 22K/year



1 month

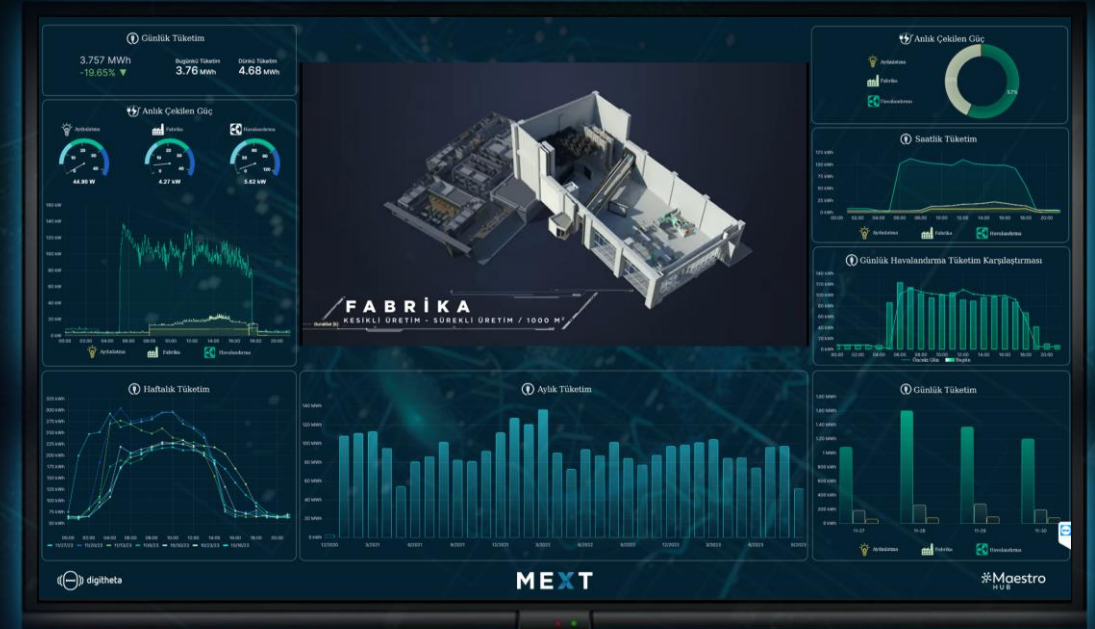
# Energy Monitoring

## Problem

- Energy consumption trend is not monitored
- Area/system energy consumption proportion is not visible

## Full visibility within 1 month

- Step 1:** Connect all energy analyzers
- Step 2:** Model energy metrics and utility costs
- Step 3:** Visualize consumption of each process/system in real-time
- Step 4:** Optimize machine/system start times and idle operations
- Step 5:** Increase automation accordingly



Reduce Carbon  
Footprint



Cost Reduction



1 month

# Some of Our References

**FORD OTOSAN B/S/H/ MEXT**  Eczacıbaşı



# Turn data into actionable information



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 **Maestro**  
HUB

