

# Madencilik 4.0: Dünyadan Akıllı Madencilik Uygulamaları

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21 Eylül 2022



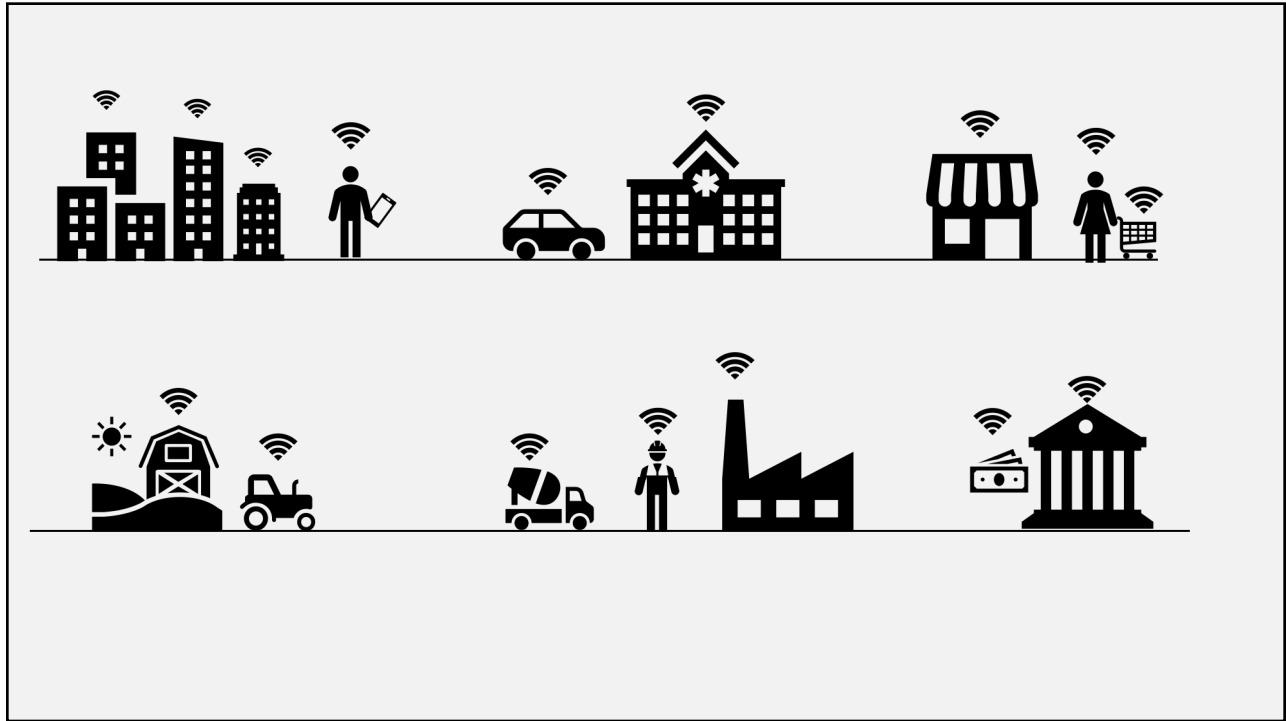
1



2000 Öncesi  
Tüm Veriler

2020 sonrası  
1 Günlük Veri

2



3



4



Chuquicamata 1920

Chuquicamata 1990

5

1990s **Otomasyon Girişimleri** 2010+

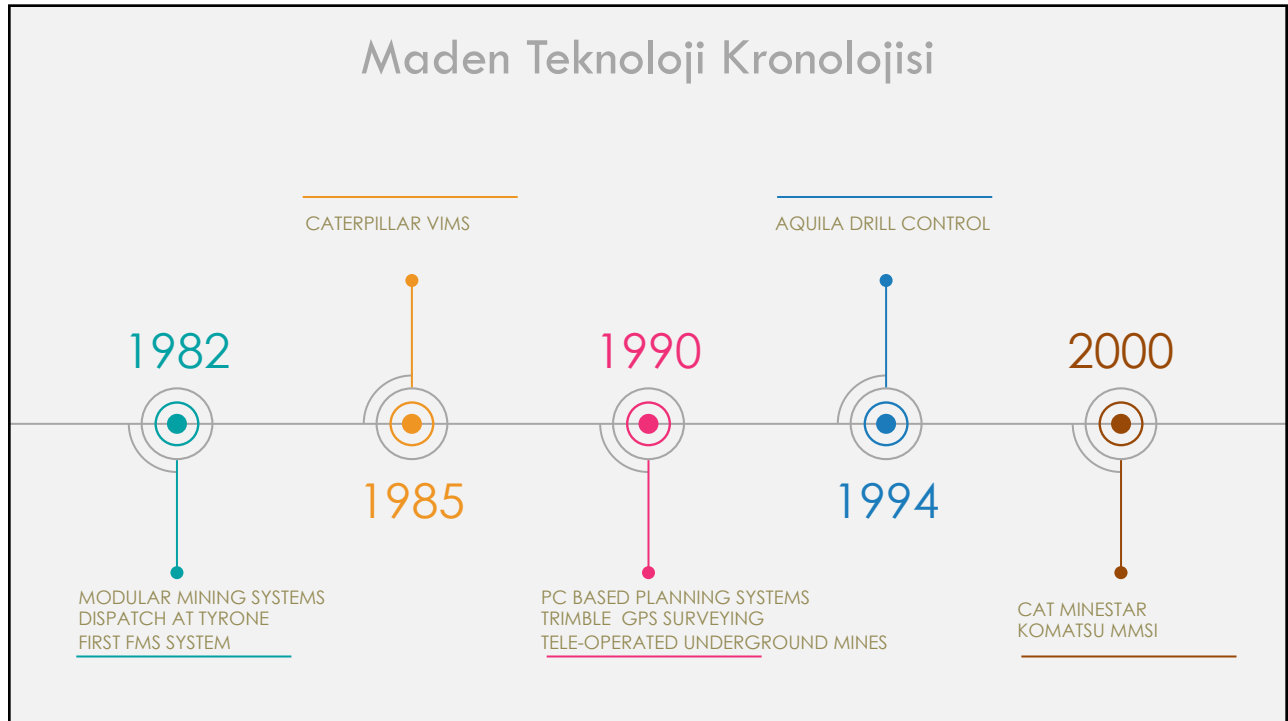
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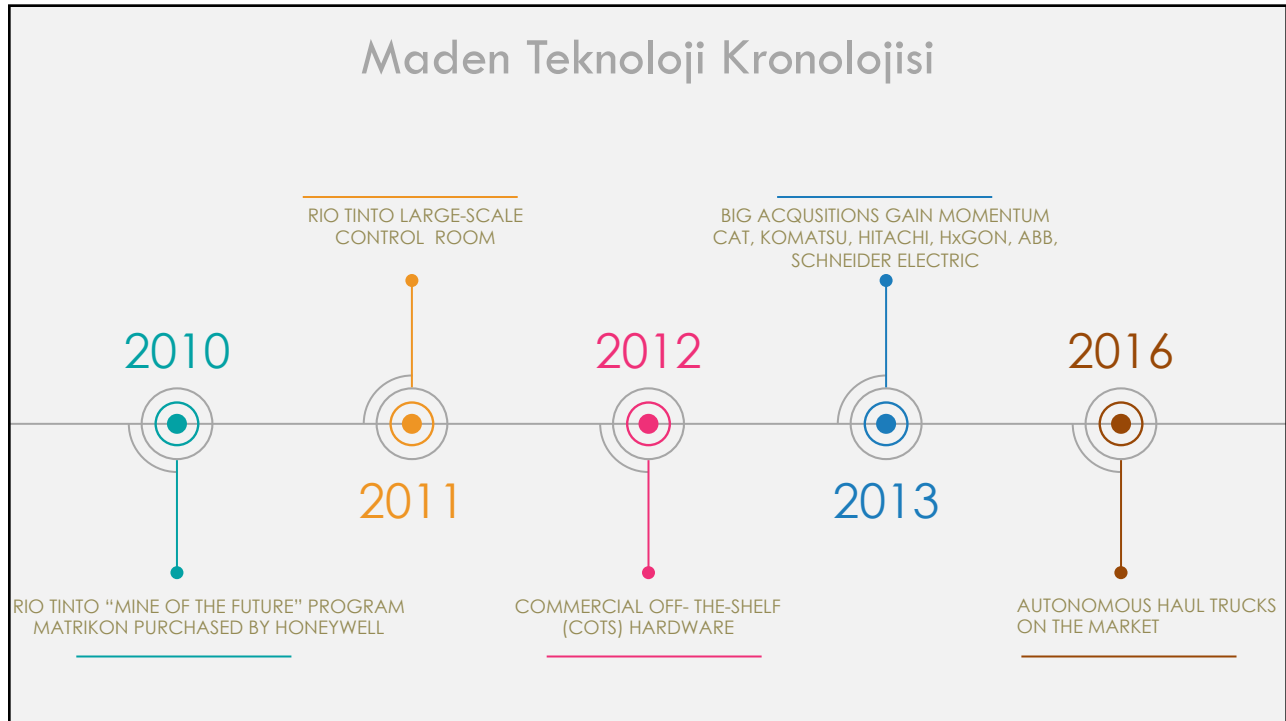
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## Maden Sektöründe Teknoloji Trendleri ve Mevcut Durum

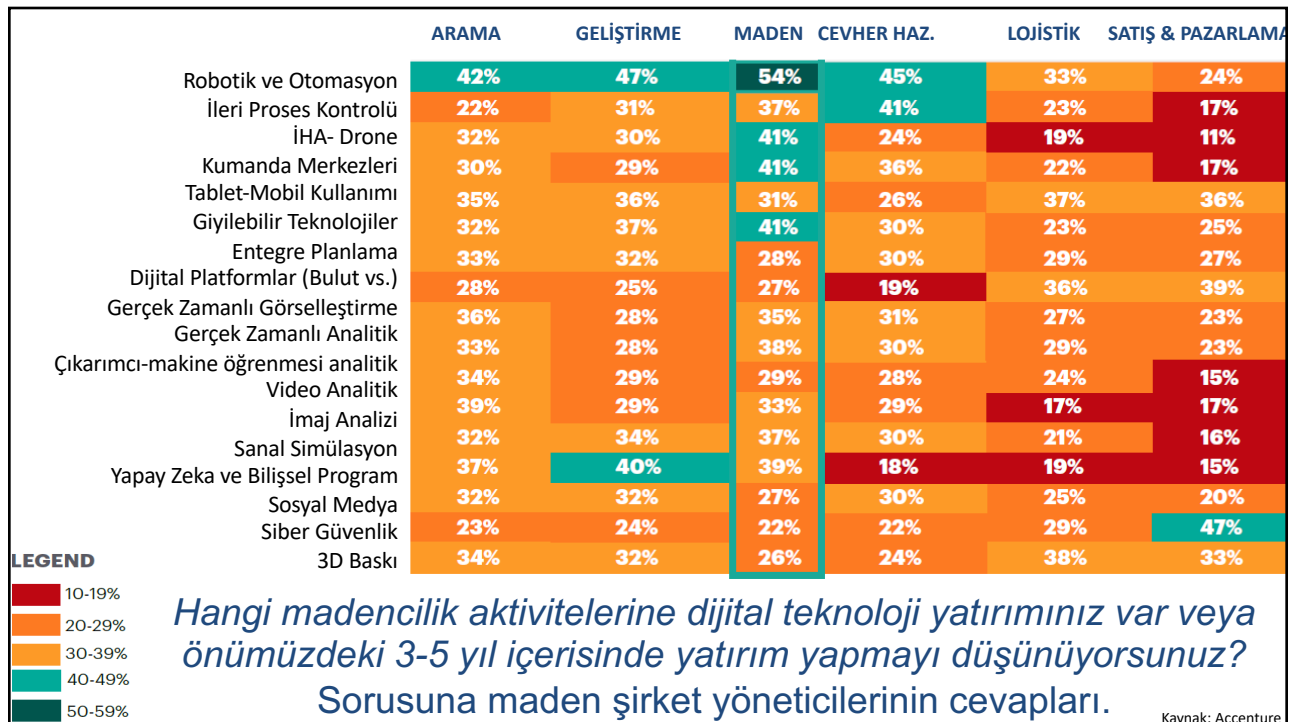
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## Trend Teknolojiler

- Blok Zincir
- Gerçek Zamanlı Analitik
- Makine öğrenmesi
- Video Analitik
- İmaj Analizi
- VR-AR
- Yapay Zeka ve Bilişsel Program
- Sosyal Medya
- Siber Güvenlik
- 3D Baskı
- Robotik ve Otomasyon
- İleri Proses Kontrolü
- İHA- Drone
- Kumanda Merkezleri
- Nesnelerin interneti
- Giyilebilir Teknolojiler
- Entegre Planlama
- Dijital Platformlar (Bulut vs.)
- Gerçek Zamanlı Görselleştirme
- Büyük Veri

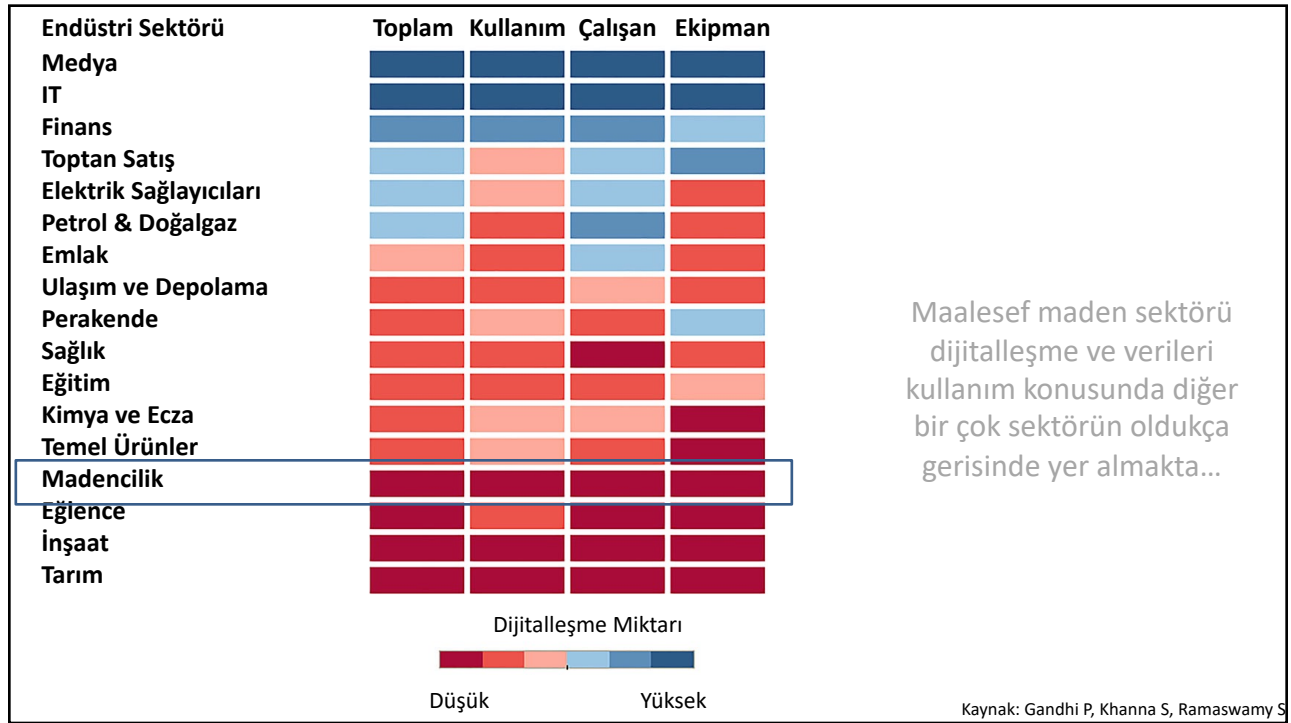
21



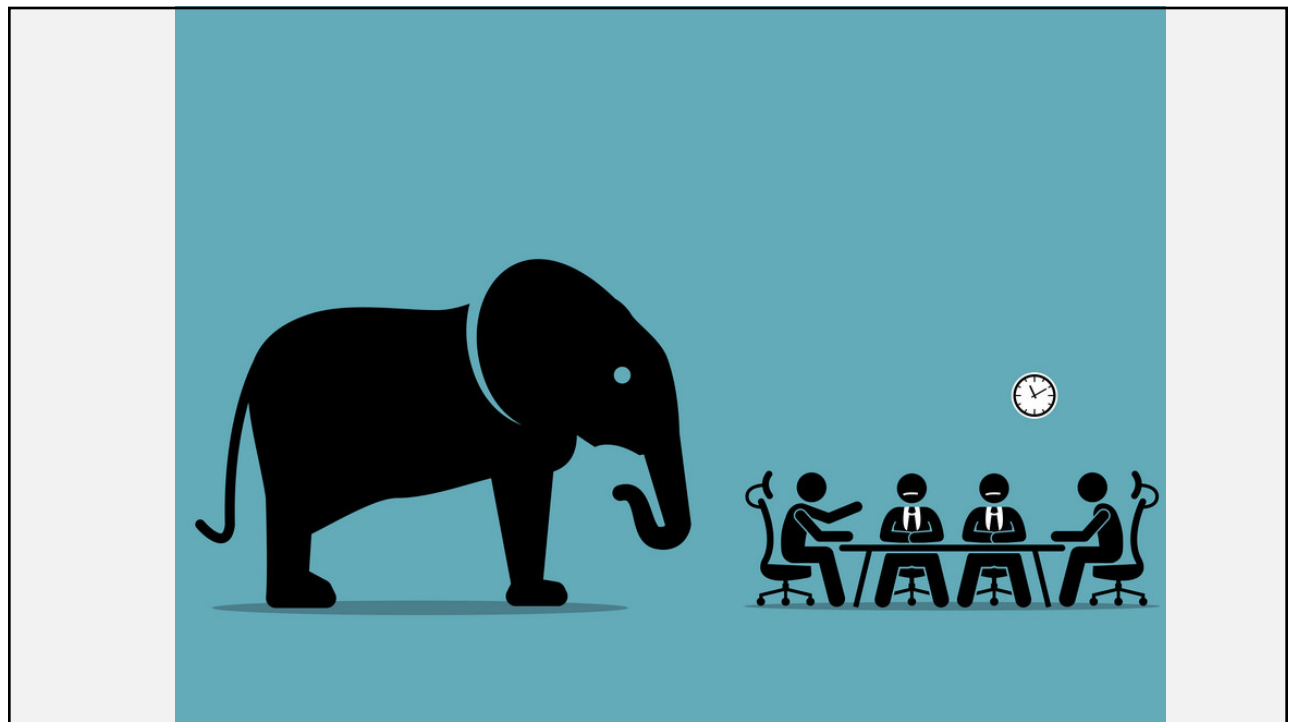
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Veriler, neredeyse her şeyi yapma şeklimizi değiştirdi.

Rekabetçi kalabilmek için her işletme verilerden yararlanmalıdır.

Veri odaklı işletmeler her yıl ortalama %30'dan fazla büyüyor ve 2023 yılına kadar yıllık 1,8 trilyon dolar kazanacakları tahmin ediliyor.

~ Forrester Research, 2018


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The Economist Topics Current edition More

Regulating the internet giants

## The world's most valuable resource is no longer oil, but data

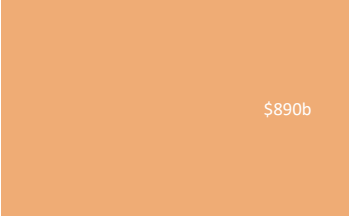
The data economy demands a new approach to antitrust rules



Print edition | Leaders >  
May 6th 2017

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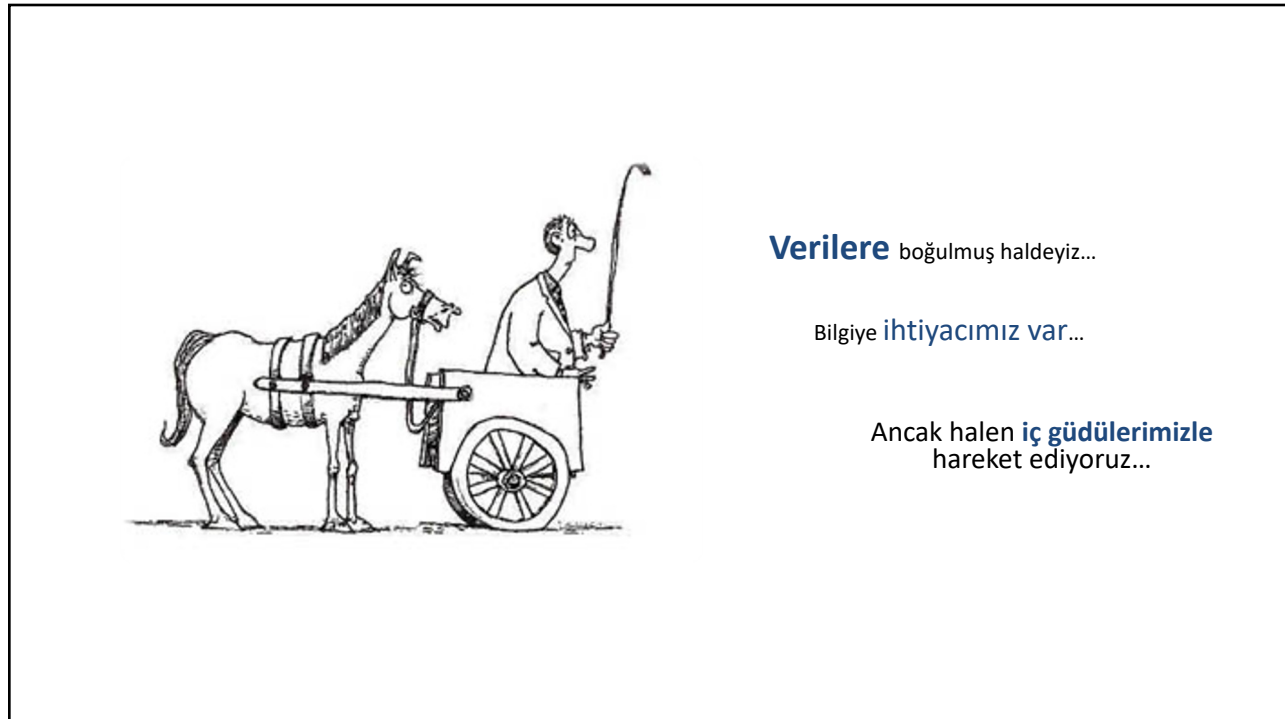
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\$890b

COMPANY	2006	2016	2019	2020
sears	\$28B	\$1.1B	\$0.08B	\$0.B
JCPenney	\$18B	\$3B	\$0.5B	\$0.1B
NORDSTROM	\$12B	\$8B	\$7B	\$2B
KOHL'S	\$24B	\$9B	\$11B	\$3B
*macy's	\$24B	\$11B	\$8B	\$2B
BEV	\$28B	\$13B	\$20B	\$22B
TARGET	\$51B	\$41B	\$64B	\$59B
Walmart	\$214B	\$212B	\$339B	\$370B
amazon	\$17B	\$355B	\$890B	\$1600B

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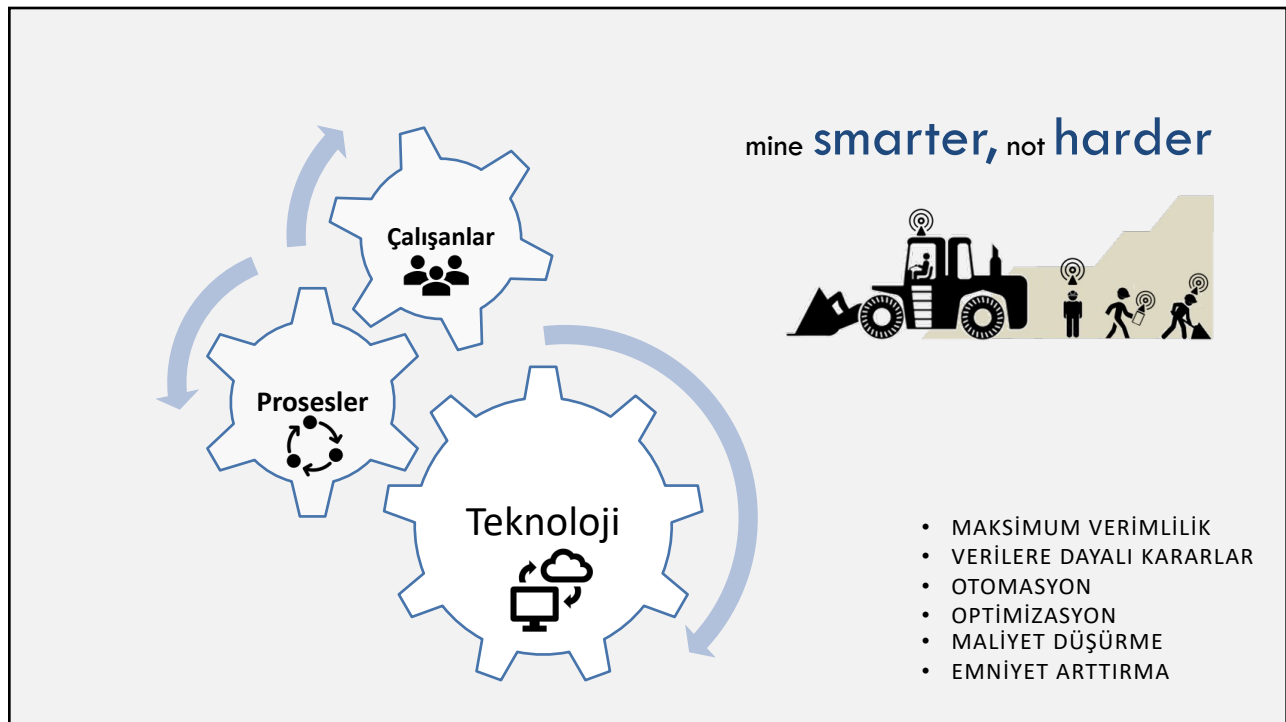


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## Verileri

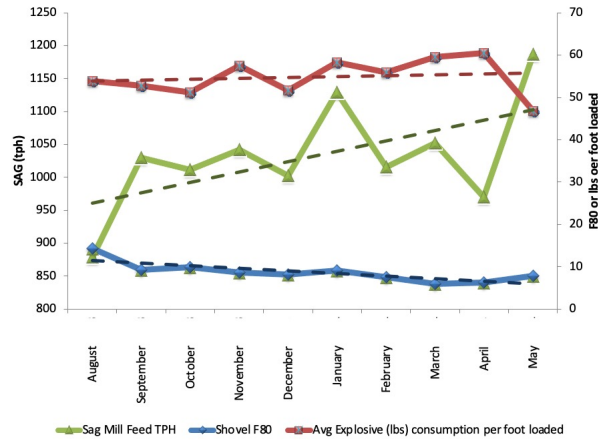
Nasıl daha **etkili ve verimli** kulanabiliriz ?

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## Uygulama 1: Mine to Mill

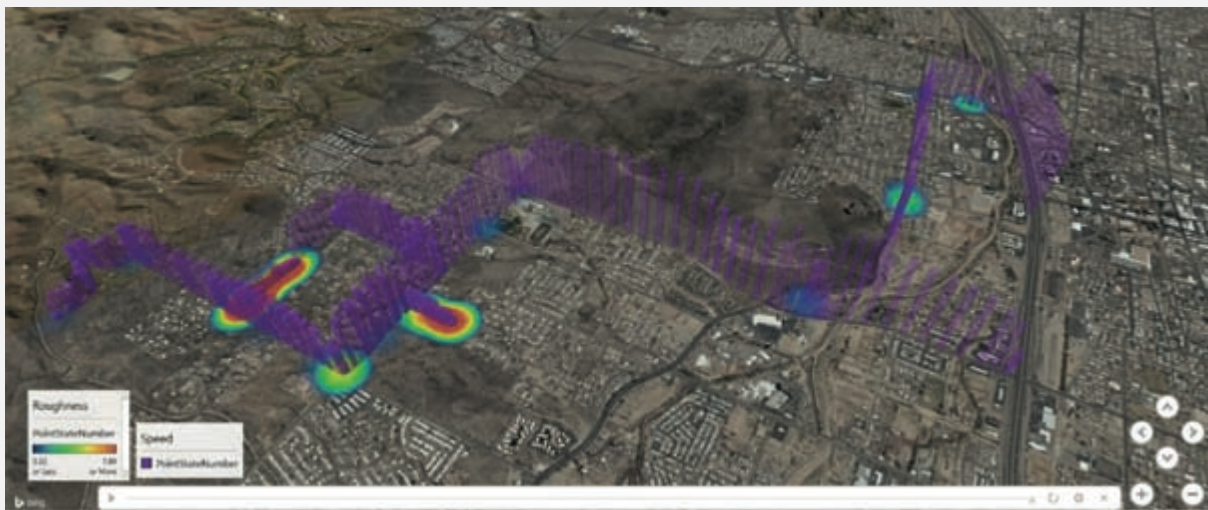


Besleme  
950 TPH → 1100 TPH  
**+16%**

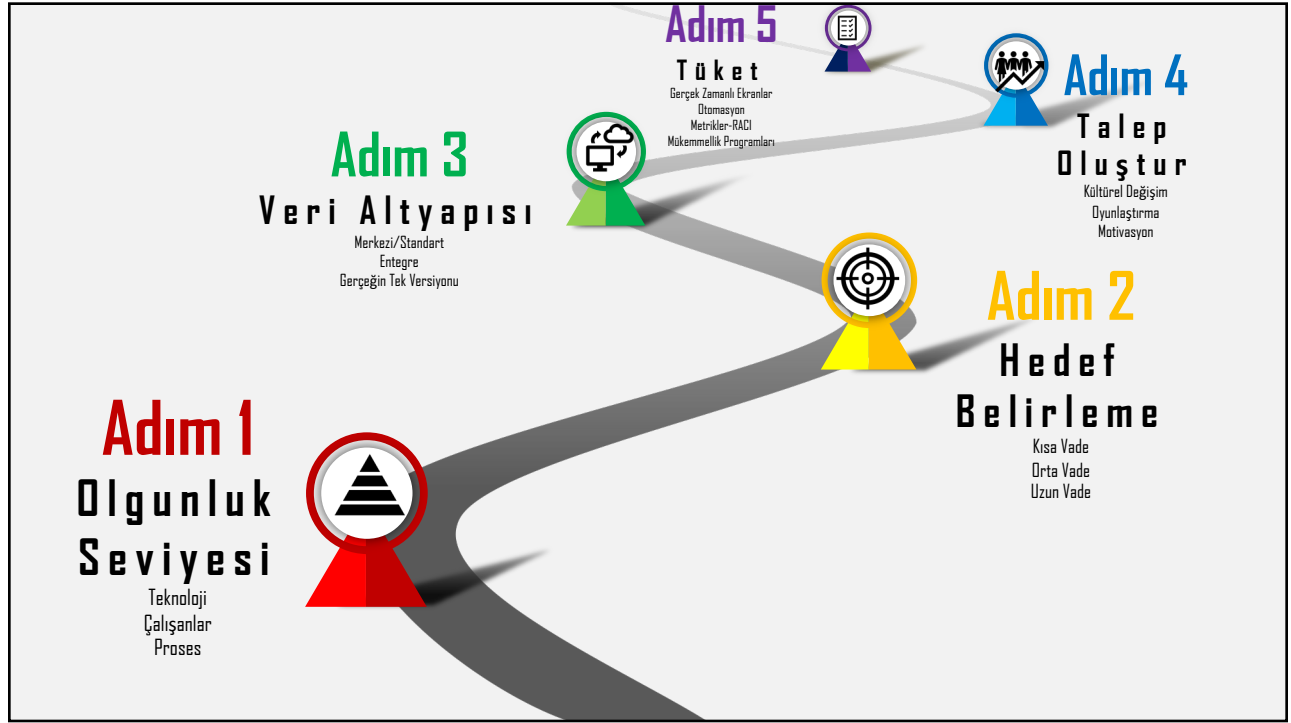
Ort. d<sub>80</sub> Parça Boyutu  
F80: 13" → F80:6"

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## Uygulama 2: Yol Durumu



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**Maden-Tek 2022**  
Maden Endüstriyel Teknoloji Günleri  
MT

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