Internet of Things

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Google Cloud IoT
IoT will disappear
Imagine a city with no congestion
Imagine airports with no delays
Imagine perfect energy consumption everyday, everywhere
Imagine medicine tailored for you
IoT is about three expectations

**Reduce risk**
Better understanding of what is happening to get more visibility

**Optimize costs**
More output for lower cost through understanding of the value chain, and waste drivers

**Grow**
Better user or customer experience to increase usage and adoption of a product
IoT should not be focused on things

Connected things
Big data
Machine learning
Industries impacted and volume of data

- **Mfg. / industrial**: 0.5-4Tb/machine annually
- **Healthcare**: ~1Tb/mth
- **Transportation / insurance**: 2-25Gb/hr
- **Consumer products**: ~4Gb/day/product line
What happens when you collect petabytes and exabytes of data?
Mastering big data
seven products with 1B users
Supercharge innovation by leveraging machine learning on IoT data
Connected satellites

Is it cloudy?
Connected data centers

Are they energy efficient enough?
Three key challenges with connected things

1. Securely connecting things
2. Scaling big-data
3. Actionable insights machine learning
Google Cloud IoT
A new service in Google Cloud IoT to bring intelligence in the moment
Planet Scale deployments: single end-point globally
IoT Conscious Security

Smallest footprint for highest security and independence

Google root.pem
Private Key
Basic TLS stack
JWT helper Libs

Partnered with Microchip for Security for secure element
Smart cities

Smart Parking Technology

Direct Benefit: 50% reduction time to market

https://www.smartparking.com/
Manufacturing

Oden Technologies

Operation optimization for plastic moulding factories

Customer benefits: 3500 more hours of production, reduce changeover time 33%, $1M/year
Thank you!

Get started by visiting

https://cloud.google.com/iot