

Changing the way we
live and work

The Next Big Thing

Watson IoT™

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An aerial night view of a city with numerous skyscrapers. The scene is overlaid with a network of glowing yellow arcs that connect various points across the city, suggesting a complex system or data flow. The sky is a deep blue with some light clouds. The text "A critical moment" is centered in the middle of the image in a white, bold, sans-serif font.

A critical moment

Evolving Internet of Things

Internet of Things refers to the growing range of connected devices that send data across the Internet

A “thing” is any object with embedded electronics that can transfer data over a network — without any human interaction.

Forbes

“Telcos are in a position to create powerful platforms that companies could use to manage their devices or improve their data use and analysis”

IoT Business Outcomes

Improve operations & lower cost

Enhance customer experience

Create new revenue streams

IoT Marketspace Projections

- **30B connected “things” by 2020**
- **\$4T to \$11T value of data insights by 2025**
- **75% of world's cars connected by 2020**

For the Telco to play in IoT, they must look to move up the value chain

Hardware

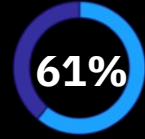
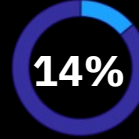
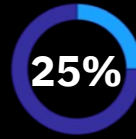
H

Connectivity

C

Applications

A



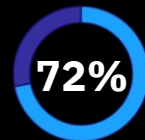
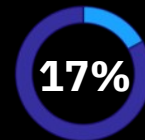
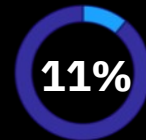
USD 201B in 2025
Source: Analysis Mason

H

C

A

Limited to mobile IoT only



USD 128B in 2025



IBM Watson IoT industry offerings target up-stream value realization

IBM IoT Industry Solutions can be integrated and offered by Telco's to their customers

IoT for Automotive

- Driver Behavior, Map, Weather
- Connected Vehicles Services
- Personalized Customer Engagement
- Enhance MTData

IoT for Manufacturing

- Remote Machine Monitoring
- Machine Performance & Optimization
- Alerts, Thresholds Management

IoT for Worker Safety

- Safety Regulations Monitoring
- Hazard Detection
- Accident Prevention & Mitigation

IoT for Insurance

- Claims Management
- Risk Mitigation
- Personalized Customer Engagement

IoT for Agriculture

- Yield Optimization
- Crop Management
- Livestock Tracking & Monitoring

Watson Personal Assistant

- Voice Activated Assistant
- Engaging with Clients
- Deliver Personalized Experiences

IOT for Building

- Monitor Building Population
- Read Environment
- Control Assets
- Alert on / Resolve Problems

IOT for Store Adviser

- Monitor customer location
- Customer mood / segmentation
- Understand movement profiles
- Optimize store positioning

IoT for Energy & Water Utilities

- Condition based monitoring of grid (meters, distn, quality, consumpt'n)
- Understand damages and asset aging
- Predict / Prevent Outages

Watson IoT Brings Cognitive Analytics to IoT Applications

Natural Language Processing

Enables interaction through natural human language and dialog

Jefferson Hospital,
Local Motors

Machine Learning

Automates data processing and continuously monitors new data to learn and improve results

US Cycling, KONE

Text Analytics

Enables mining of textual sources to find correlations and patterns in these vast amounts of untapped data

Honda

Video / Image Analytics

Enables monitoring of unstructured data from video feeds and image snapshots to identify scenes and patterns


Aerialtronics

IBM's Weather Company enhances end user service offerings


IBM Weather Company's traffic and weather forecast data is being applied to businesses such as retail and ground transportation, consumer applications – over 15 billion forecasts per day, all to gain new insights from real-time data



**Up to
2.2 Billion**
weather forecast
locations



15 Million
pressure readings
from mobile
devices



Atmospheric data
from **50,000**
flights per day



> 200,000 worldwide
weather stations

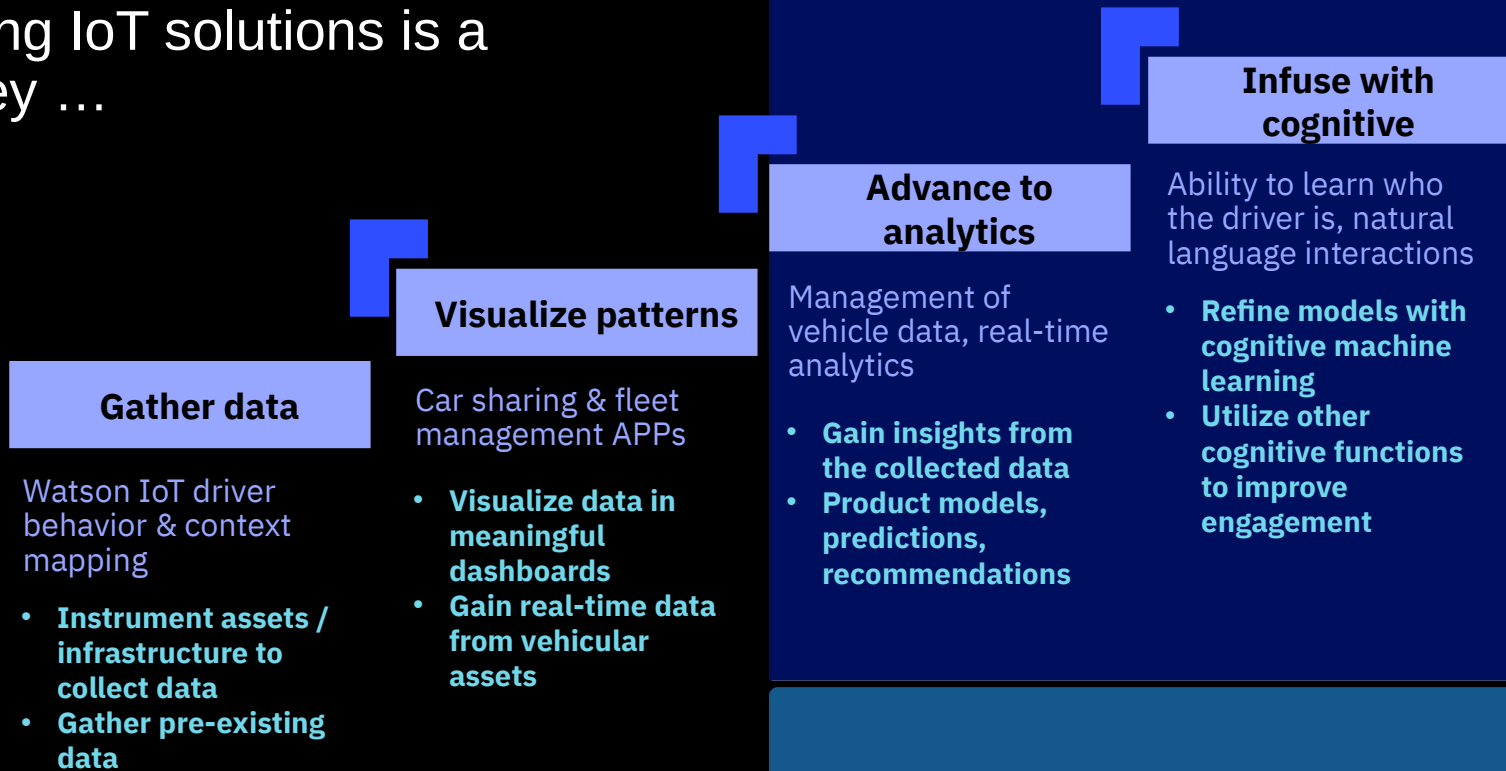


**> 160 forecast
models** serve as
inputs to forecast



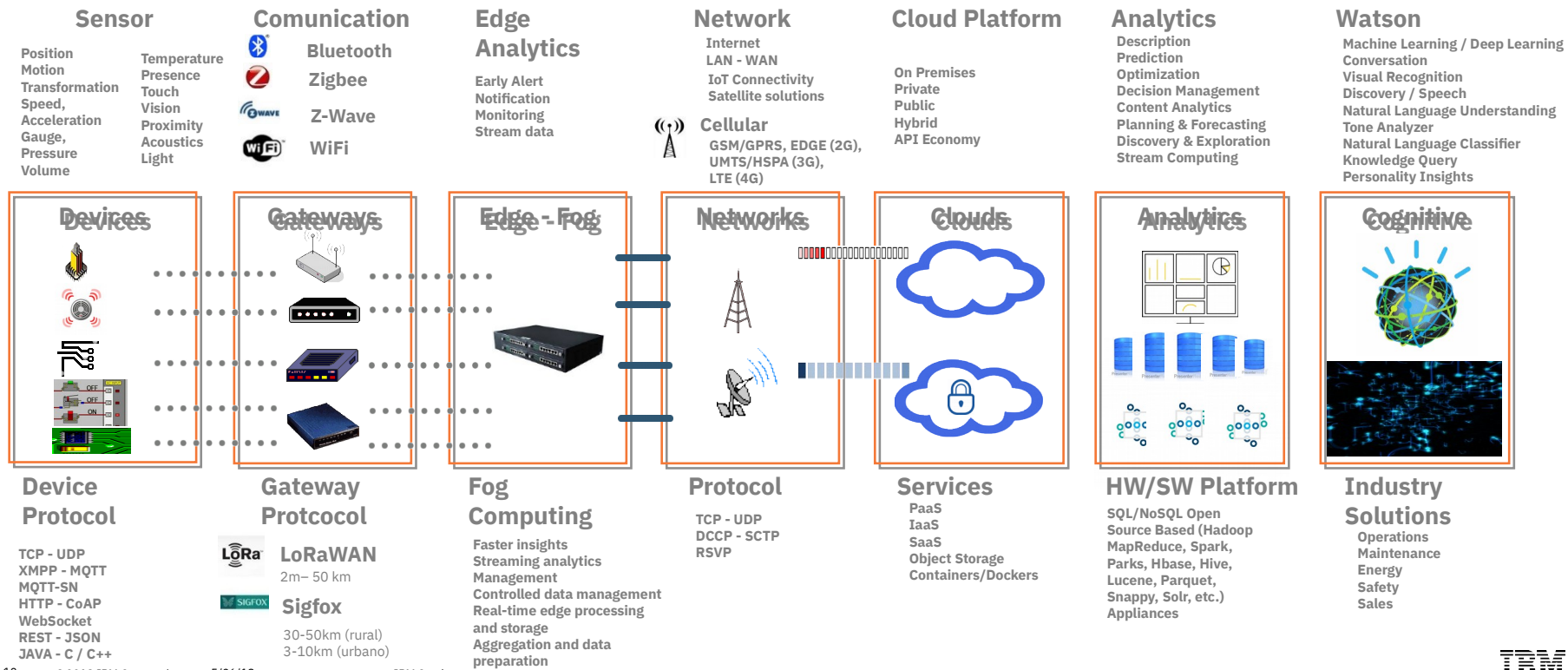
**Insurance | Agriculture | Retail | Distribution |
Transportation**

Building IoT solutions is a journey ...



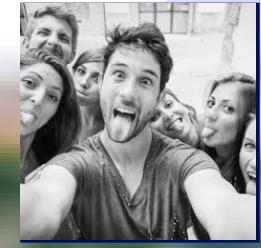
IoT initiatives require a multi-step process to achieve data value realization

Supported by a complete architecture



Privacy matters.
It's **your** data.





People Matter



IBM Metro Pulse Powered by Watson

Optimize
Product Mix

Outage
Prediction

Route
Optimization

Predict
Demand
Spikes

Promotion
Optimization

Optimize
On-shelf
Availability

Dynamic
Pricing









Asset
Placement

Maximize
Occupancy

Personalize
Engagement

IBM Metro Pulse: Data and Signals reveal hidden city dynamics
which unlocks business opportunities across industries

Extending IOT with Blockchain

Industry	Use Case	IoT Data
Logistics	Track, monitor, and report on container status and location Optimize packing and transfer of shipments 	<ul style="list-style-type: none"> • Location • Temperature  • Handling • Carrier
Electronics	Track, monitor, report on meter readings Building management systems  Water heater management	<ul style="list-style-type: none"> • Electricity usage • Building state • Water heater usage
Finance	Enable pay-per-use models where connected devices contribute sensor reading to indicate/log usage that triggers payment	<ul style="list-style-type: none"> • Items consumed  • Location visited • Usage of device
Manufacturing	Communicate and agree on shared information across vendors in manufacturing equipment and supply according to Digital Business Ecosystem (DBE) Core data model 	<ul style="list-style-type: none"> • DBE Core documents • Device state • Location
Electronics	Edge computing in devices Agreements for peer-to-peer appliance, home, vehicle interactions and decisions driven by contracts on a shared ledger 	<ul style="list-style-type: none"> • Location • Temperature • Inventory • Appliance state
Automotive	Warranty and service logging for vehicles, proof of service work performed, and logging of parts installed into vehicles 	<ul style="list-style-type: none"> • Parts inventory  • Service performed

Obrigado

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