

IBM Internet of Things Services

Burak Kircali

Global SME, Electronics Industry



TODAY'S AGENDA

What is
Internet of
things?

IBM's
Point of
View

Consumer
Business
Models

Corporate
Business
Models

IBM
Solution
Offerings

Wake Up & Smell The Bacon — from the Oscar Mayer Institute For the Advancement of Bacon



Consumers lead the Internet of things



Consumers lead the Internet of things



Consumers lead the Internet of things



Consumers lead the Internet of things



<http://www.koubachi.com/>



<https://www.myvessyl.com/>



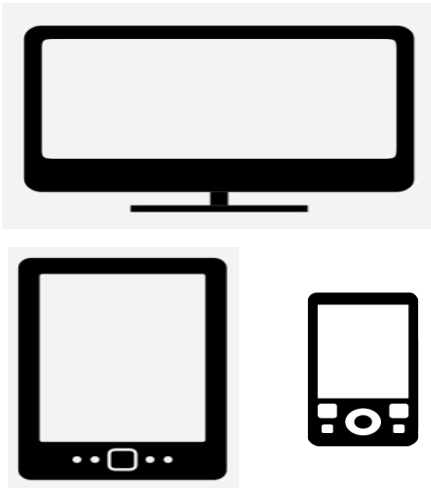
<https://hello.is/>

IBM Internet of Things Vision

Consumers lead the Internet of things

Today

A few connected devices per person...



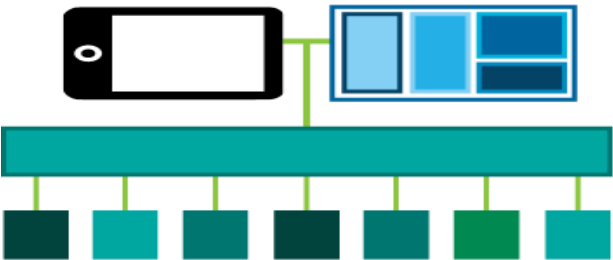
Tomorrow

Almost every device that consumers own will be connected, and many new ones will be created to leverage the value created by consumer connections.

Window Lock Toothbrush
 Door Lock Garage Door
 Dishwasher Garden Moisture
 Home Lights
 Washing Machine Coffee Maker

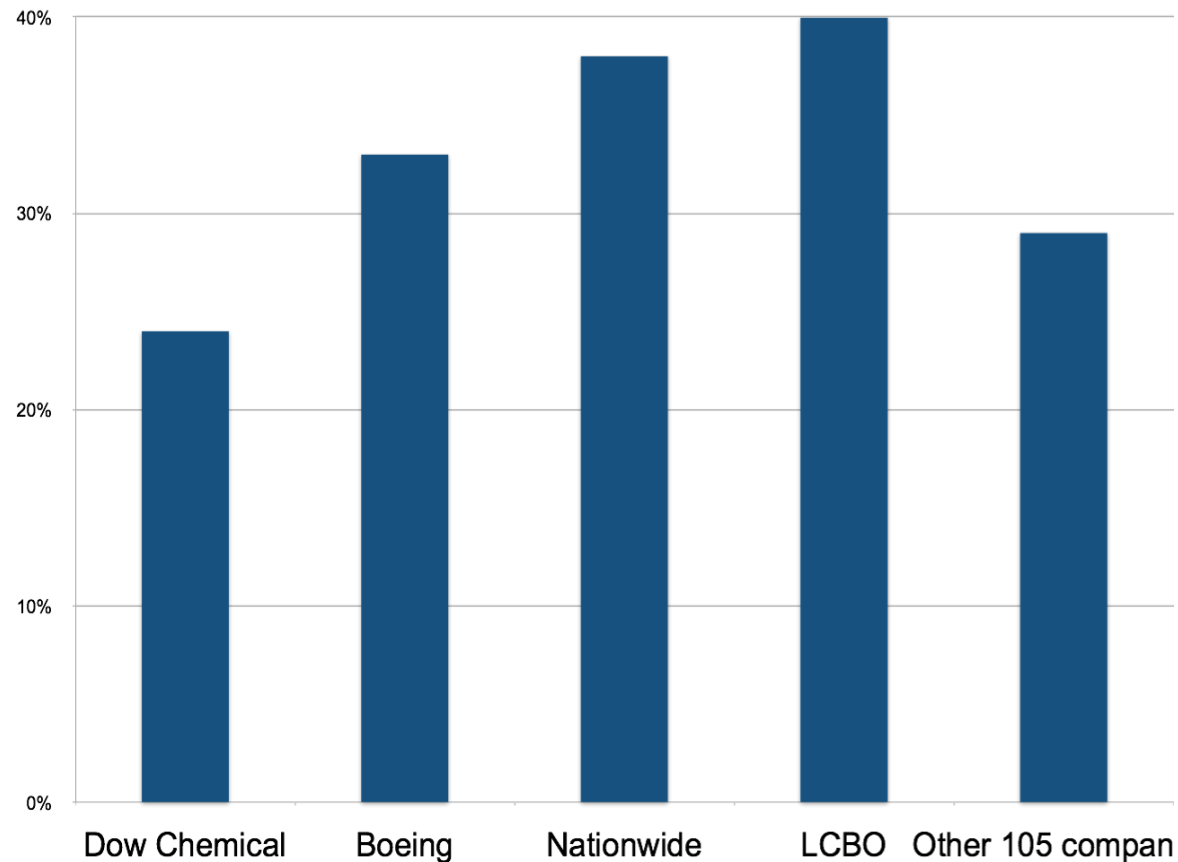
Integration

Cross-platform integrators will connect devices and automate personal activity:



The most compelling reason to use Internet of Things will be to increase the return on assets

Savings From Shift To Managed Printing & Copying



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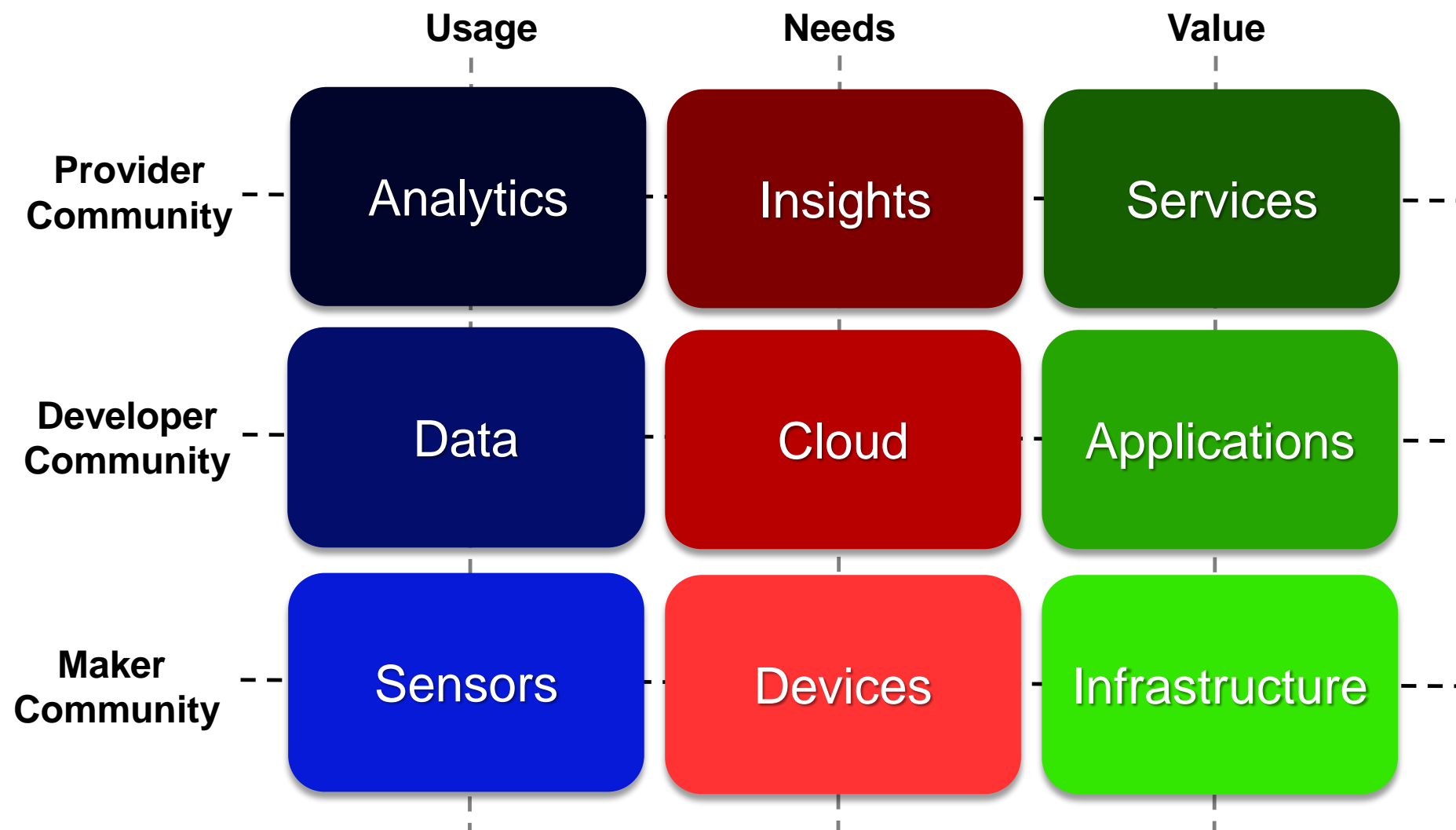
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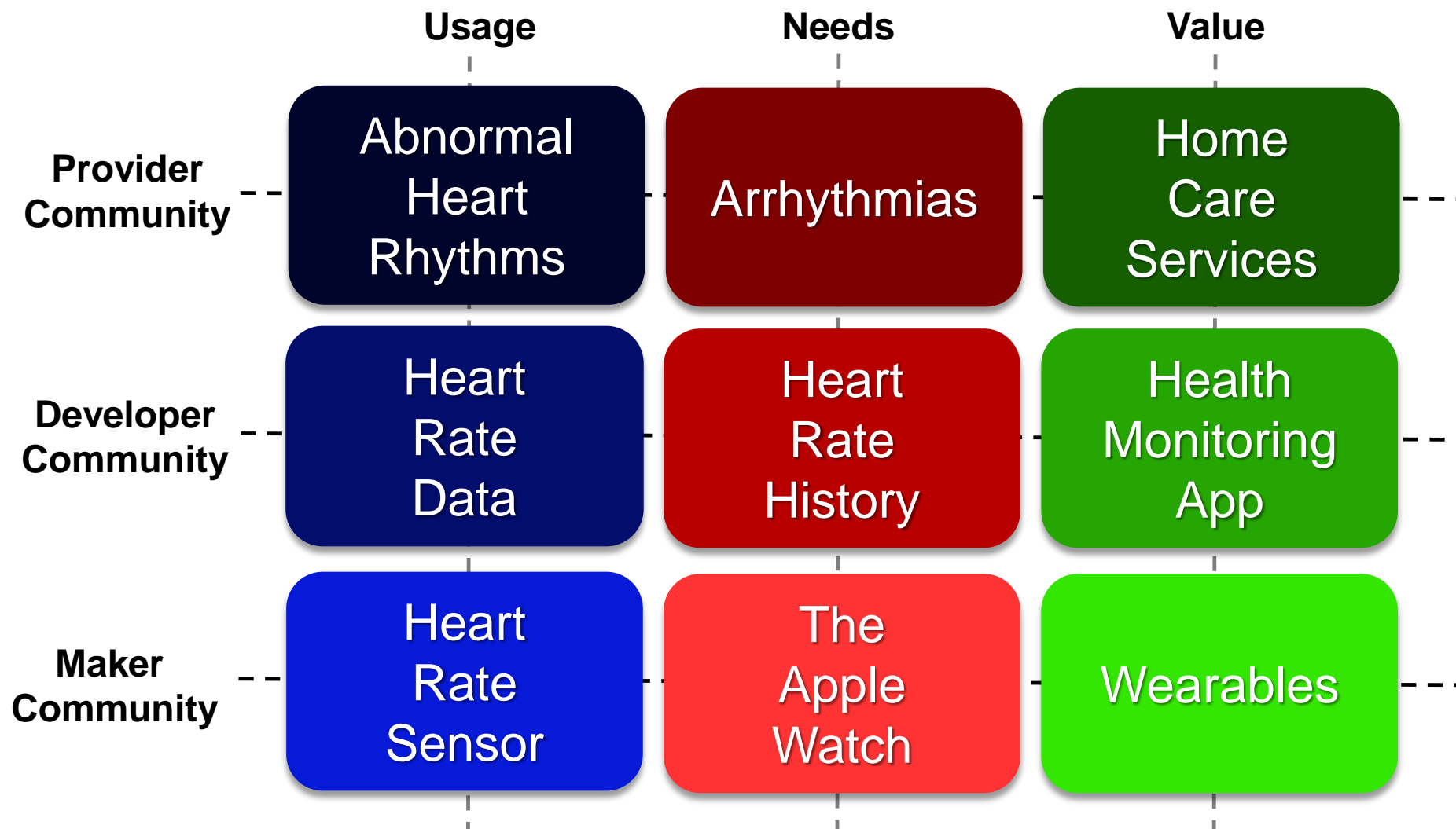
IBM Internet of Things Vision

3 x 3 Building Blocks



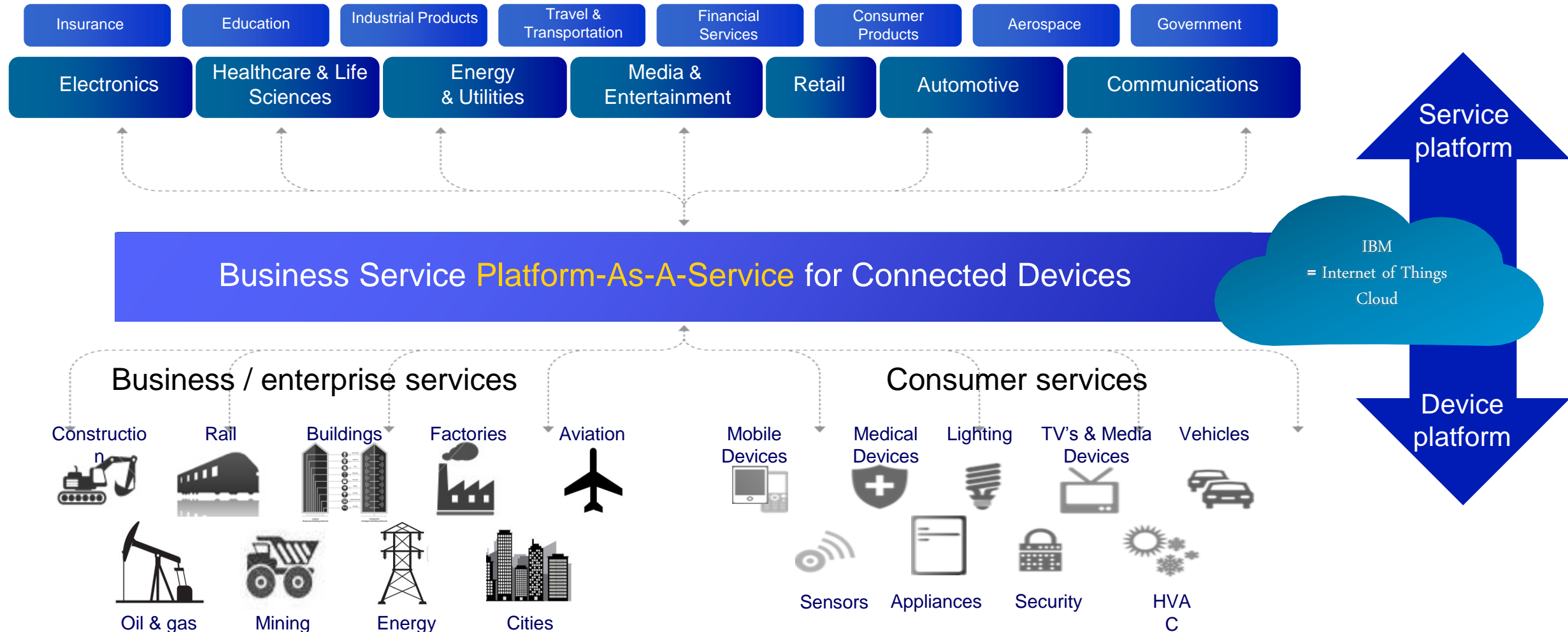
IBM Internet of Things Vision

3 x 3 Building Blocks – Healthcare Sample







IBM Internet of Things Vision

Individual Industries have Enterprise and/or Consumer Requirements



IBM Internet of Things Vision

Driving Industry Conversations

	Banking	Healthcare	Automotive	Retail	Transport	E&U
 <p>Monetize</p>	<p>Cash replacement solutions</p> <p>Mobile Banking</p>	<p>Paid home care family services</p>	<p>Pay-per-drive car rental</p>	<p>Cash replacement</p> <p>Sensor enabled Loyalty cards</p>	<p>Paid Alerts to travellers</p> <p>Congestion charging</p>	<p>Pay-per-use energy</p>
 <p>Optimize</p>	<p>Optimized Cash management</p>	<p>ER Bed Resource Mgmt</p>	<p>Component predictive replacement</p> <p>Fleet mgmt</p>	<p>Delivery and stock replenishment optimization</p> <p>Store layout optimization</p>	<p>Smart Cities Traffic mgmt</p> <p>Airport Management</p>	<p>Delay non-essential supply during peak loads</p>
 <p>Extend</p>	<p>Banking the un-banked</p> <p>Biometrics</p> <p>Smarter Subsidies</p>	<p>Life style monitoring</p>	<p>In-car Movies, Music, Games</p> <p>Highly Automated Driving</p>	<p>Smart Vending Machines</p> <p>Delivery Lockers</p>	<p>Mobility Services</p>	<p>Smart home services</p>
 <p>Control</p>	<p>Remote ATM Management</p> <p>Dynamic Authorization</p>	<p>Remote Hospital environment Mgmt</p>	<p>Remote Drive-train optimization</p>	<p>Store energy mgmt</p> <p>Store parking mgmt</p> <p>Dynamic price labels</p>	<p>Crowd mgmt</p> <p>Timetable mgmt</p> <p>Asset mgmt</p>	<p>Remotely control consumer devices</p>

TODAY'S AGENDA

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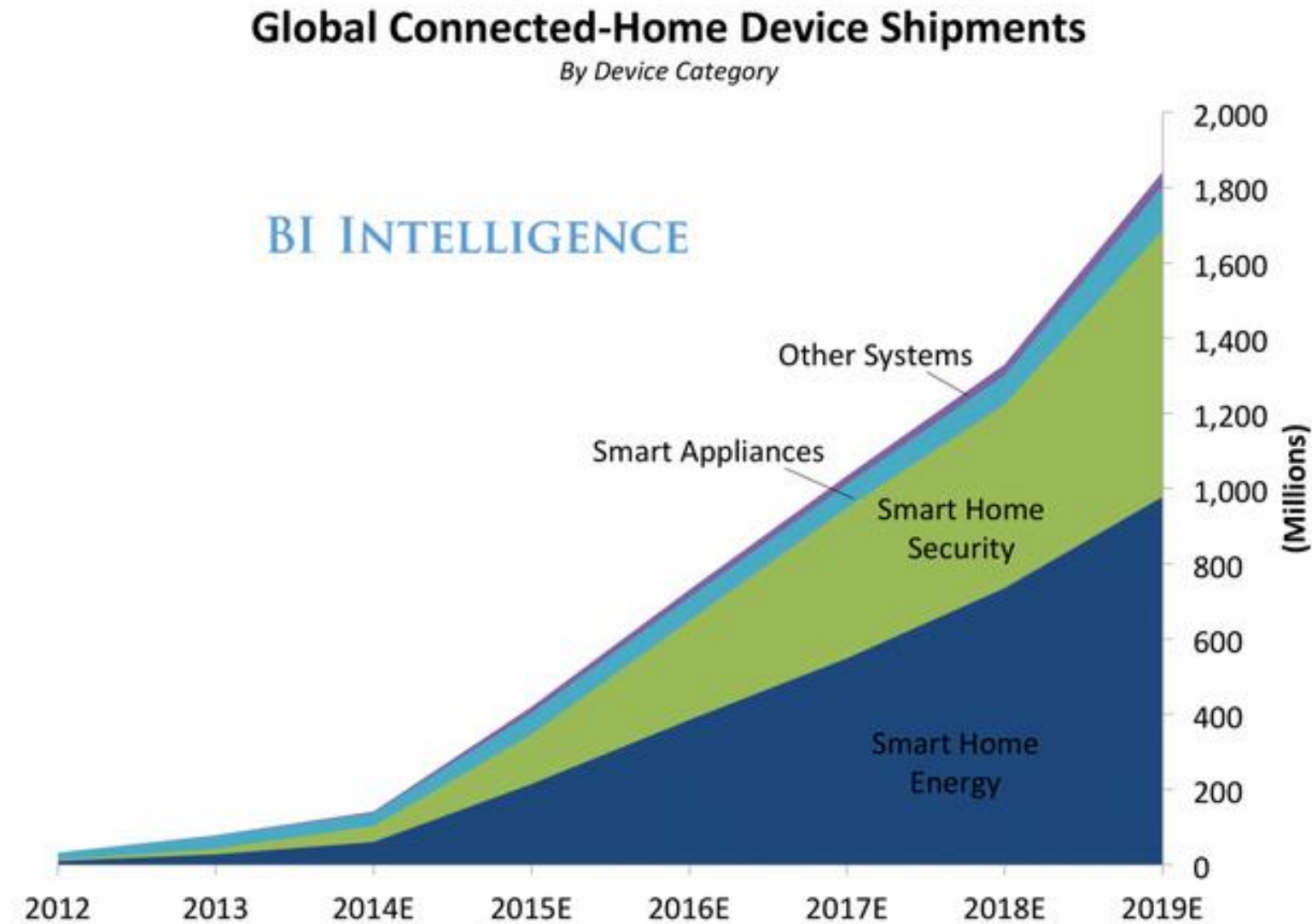
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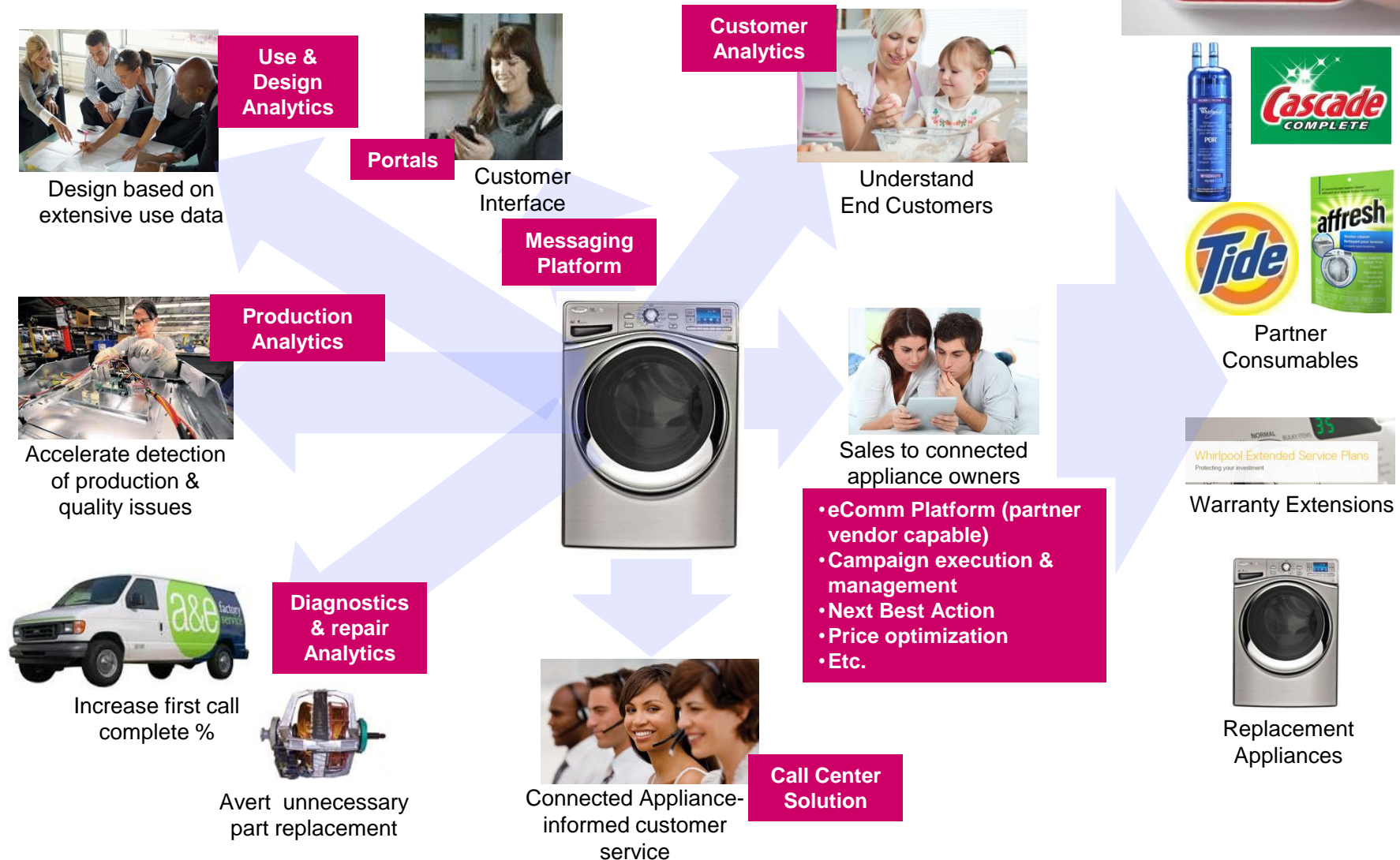
IBM
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Connected-home device shipments will grow at a compound annual rate of 67% over the next five years



Source: ABI Research, TechNavio, Pike Research, BI Intelligence Estimates

Smart appliances have many use cases



Retail and Utility companies are leading this business model innovation

Retail companies are moving into service provider business model



Telecom companies are providing digital lifestyle services



Retail and Utility companies are leading this business model innovation



There are currently 4 business models around smart home

Retail Product Sales



Hue
Withings
Nest
Belkin
Nexia

Digital Lifestyle Services



Lowe's Iris
Staples Connect
Home Depot Revolv
Smarthings (Samsung)
AT&T Digital Life
Comcast
Qivicon
Apple Home Kit

Vendor Smart Solutions



Samsung
LG
Panasonic
GE
Whirlpool
Bosch
Electrolux

Traditional Home Automation



Control4
Vivint
iControl

AT&T Digital Life is the leading smart home services



Best Consumer Mobile Service

AT&T for AT&T Digital Life

Home – More than 80 markets in US
 Connected Car – 10 Million 2017
 Healthcare – Digital Life Care
 Platform Licensing – Telefonica

AT&T Digital Life Services	One Time Equipment Fee (USD)	Monthly Service Fee (USD)	Services and Equipments
Simple Security	149,99	29,99	24/7 Monitoring, 24H Battery Backup, Smart Phone Access, Keypad, Keychain Remote, Indoor Siren, Contact Sensor
Smart Security	149,99	39,99	Simple Security, Smoke Sensor, Glass Break Sensor, Carbon Monoxide Sensor, Motion Sensor
Camera Package	99,99	9,99	1 Camera
Door Package	99,99	4,99	1 Door Lock, 1 Garage Door Sensor
Energy Package	199,99	4,99	Light Control, Thermostat, Smart Plug
Water Detection	49,99	4,99	3 Temperature and Water Sensors
Water Control	249,99	9,99	3 Temperature and Water Sensors + 1 Water Shutoff
TOTAL	799,95	69,95	All Services with no additional equipment

Lowe's, the home improvement retailer, sees IoT as a Future Growth Catalyst

CES: Lowe's Sees Iris as a Future Growth Catalyst

By [Dan Moskowitz](#) | [More Articles](#) | [Save For Later](#)
January 11, 2014 | [Comments \(0\)](#)

Lowe's believes that in the future, every electrical device it sells will be Internet-ready and controlled by an app. Thanks to significantly reduced costs, industry analysts now believe that the home-automation market will grow 47% annually over the next four years. If this proves to be true, then it will benefit Lowe's

Safe & Secure Kit	Comfort & Control Kit	Smart Kit
Iris Hub	Iris Hub	Iris Hub
Contact Sensors	Smart Plug	Contact Sensors
Motion Sensor	Smart Thermostat	Motion Sensor
Keypad	\$179	Keypad
Window Decal		Smart Plug
\$179		Smart Thermostat
		Range Extender
		Window Decal
		\$299

BASIC SERVICE - FREE

- Basic control of your Iris devices
- Email, text or voice call alerts to the account holder if your alarm is triggered

PREMIUM SERVICE - FREE for 2 months Then \$9.99 a month

- Advanced control of your Iris devices
- Email, text or voice call alerts to up to 20 contacts if your alarm is triggered
- Extended video camera live streaming, recording and storage
- Iris Magic for configuring rules across multiple Iris devices
- Home Modes settings across all of your devices
- Voice Control through the Iris mobile app

Staples, the office superstore, thinks IoT as a next generation sales platform

One app. One hub.
Connected home made easy.

One app controls all the best brands.

Staples Connect is the first and only connected offering to bring together all the top brands of smart electronics. With our app and hub, you can control these devices individually, or they can collaborate with each other to carry out synchronized activities.



Staples Connect lets you control lights, thermostat and more from all the brands of connected home products you trust.

Staples Connect Hub

ONLY \$99

The low cost of connecting.

With Staples Connect, there's no monthly fee and the app is free to download. All you pay is a one-time price of \$99 for the Universal Wireless Hub, plus the cost of compatible devices. It's the best and most cost-effective connected solution available.

SHOP NOW

FIND A STAPLES CONNECT STORE

Safety & Monitoring

All the smart Safety and Monitoring products you could need. These are just the beginning.

Lighting

An extensive assortment of Lighting Control products. Check out some of our favorites.

Environmental Control

A wide selection of smart Environmental Control products. Here are just a few.

Staples Connect Customized Activities

They're easy to set up, and let you activate multiple devices with a single touch of the app button. With Customized Activities, there's no end to the number of activities you can create.

POOL PARTY

SMALL BUSINESS

MOM & KIDS

Everybody in the pool!

Create a "Pool Party Activity" to get the fun started with a single touch of the screen.

Automatically unlock the pool gate, turn on the stereo and custom lighting, and heat up your hot tub.

3 Companies and 3 Business Models

AT&T Digital Life: Business Model Innovation



Objective: To become a digital lifestyle service provider

- We're simplifying people's lives. We call it Living Mobile: When the home, the car, the office, the wallet are all connected to the network and to each other and you don't even have to think about it. They want to reinvent the security and home automation experience by controlling all aspects of the service

Lowe's Iris: Services Innovation



Objective: To use data in the cloud to develop new home services

- Lowe's Iris Home Management System allows homeowners to monitor and control their various devices through a cloud-based remote interface which is available through a Web browser or a smartphone application. It has partnered with Verizon Wireless and Iris is now being sold in Verizon Wireless stores

Staples Connect: Product Sales Improvement Platform



Objective: To generate more sales of all the stuff in its stores

- For Staples the immediate objective of its smart home platform called Staples Connect is to generate more sales of all the stuff in its stores. Staples is also looking to generate sales of new products through their ability to be controlled via the smart home platform

Why AT&T's Digital Life Services Should Terrify Insurers

Real-time
Usage
Data

More accurate picture
of the exposures,
hazards and risks

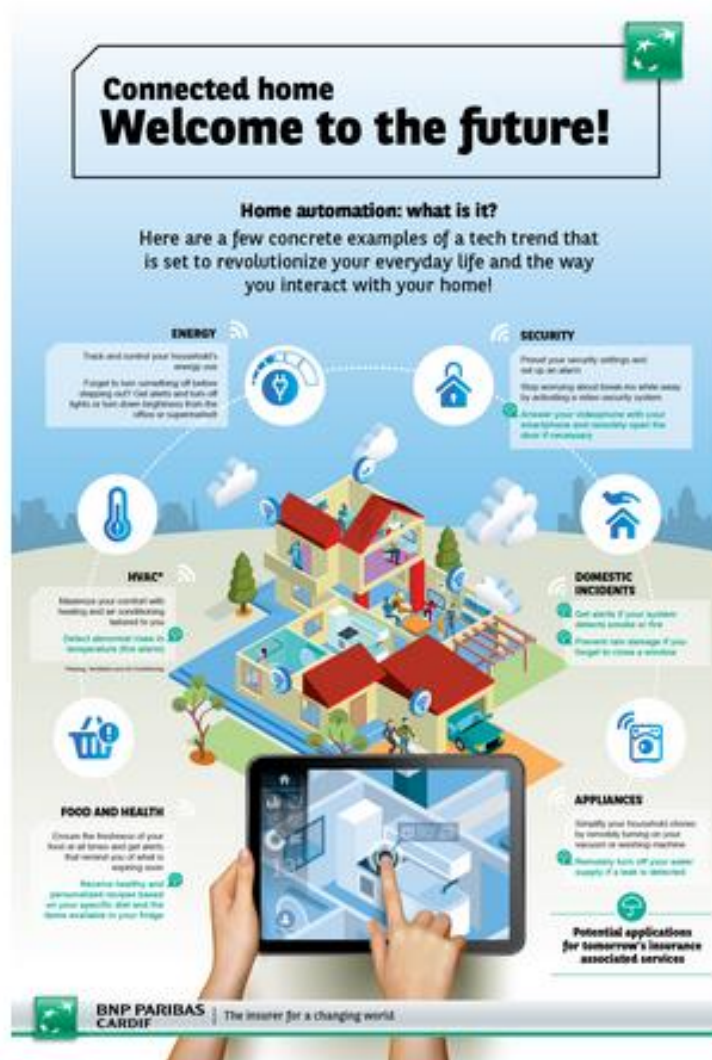
Better Risk Scoring,
Product Pricing and
Reduced Loss Costs

The Internet of Things will change every part of the insurance value chain, including product design, pricing, underwriting, service and claims

Xiaomi Launches A Money Market Fund, Pushing Further Into Online Financing



BNP Paribas Cardif offers Habitat, an innovative insurance package that uses technology to secure your home



BNP Paribas Cardif developed an offer with Follow Analytics, a startup specializing in mobile marketing.

Built on the SAMIO cloud platform by Samsung, the solution helps boost personal safety and limit domestic risk by aggregating and analyzing various data collected by sensors and connected objects.

IBM creates Industry Journey Maps – Smart Home



Connected Home Ready App Journey Map

To meet the expectations of today's digitally connected customer, companies must exploit new service models to engage with customers through the use of digital experiences to manage control and convenience.



IBM MobileFirst
ibm.com/mobilefirst
#ibmmobile



Meet Derek

"When I am away from home, keeping my home secure is my top priority."

As a divorced father with two young children, safety and security is his top concern. He relies on his nanny to care for his children, and he wants to make sure they get home safely. Spending most of his time on his smart phone, he likes knowing he is in control when he is away from home, with convenient solutions.

Since Derek spends most of his time visiting clients and at work, he wants to actively monitor his home security using his mobile phone to keep an eye on his children.

Remote monitoring and real-time access provides him with a peace of mind. He also likes knowing he can manage his energy consumption and can save money.

Engaged

1 Learn about App

After moving to a new neighborhood, Derek notices a drop in his electricity bill, and is now able to accurately estimate his monthly energy bill. With summer quickly approaching, he receives a message from his mobile app letting him know that his water bill will increase, given the sunny weather conditions. It predicts this based on his current lawn watering schedule and water levels in his pool. The mobile app provides a proactive prompt for Derek to change his sprinkler schedule to occur earlier in the morning than the current afternoon schedule. Agreeing with the suggestion, he taps on ok to automatically update his sprinkler schedule.



2 Set up Preferences

While on the mobile app, he sets up his profile, opting to be alerted when the front/back door, and pool gate is unlocked. He is happy to see that he can align his electricity usage based on the Time of Use program he is enrolled in, and can set his thermostat at an optimal temperature to lower his utility bill based on fluctuations in the temperature during the day.



3 Earn Tax Credit and Save Money

Based on his preferences, Derek can easily view all the controls from the dashboard view on his mobile app. After a month of usage, he receives an alert that the back of the house seems to be consuming more energy than the other rooms. In the mobile app on the dashboard view, he sees an ad for a tax credit related to energy efficient windows. He taps on the ad to learn more, and is directed to a home improvement store on his phone browser. After confirming his window size dimensions, he purchases two panes, and saves the e-receipt on his phone.



Transacting

4 Optimize Settings

Two months later, Derek notices a drop in his electricity bill, and is now able to accurately estimate his monthly energy bill. With summer quickly approaching, he receives a message from his mobile app letting him know that his water bill will increase, given the sunny weather conditions. It predicts this based on his current lawn watering schedule and water levels in his pool. The mobile app provides a proactive prompt for Derek to change his sprinkler schedule to occur earlier in the morning than the current afternoon schedule. Agreeing with the suggestion, he taps on ok to automatically update his sprinkler schedule.



5 View Real-time Video Feed

Two weeks later, while at work, he gets an alert that the pool gate is open. He quickly taps on the real-time video feed for the back door, and quickly sees that the nanny is with both kids in the pool. Relieved, he focuses back on work.



6 Open Front Door

Derek's oldest son, Charlie is enrolled in a summer camp nearby, and has been walking home. The nanny is usually at home to let Charlie in, but she is running late at the supermarket with Derek's other child. Derek receives a frantic phone call from Charlie that he can't get into the house. Calmly, Derek taps his security code on his mobile app, and unlocks the front door. Charlie is excited that he is able to get in the house and surprises the nanny and his sister when they return home.



Interacting

7 Plan for Vacation Mode

A week later, Derek leaves and takes his kids on vacation for a few days. As a security precaution, he has set his lights to turn on and off in a staggered schedule, as a security deterrent. He also lowers the blinds and modifies the air conditioning preferences to vacation mode to minimize costs. He pre-programms the thermostat settings to turn on the air conditioning in "normal mode" two hours before they return, so the house will be cool by then.



8 Report a Burglary

The next day, he receives an alert that his sliding glass back doors are now unlocked. Surprised, Derek turns on the live feed, and sees a burglar breaking into his home. Instantly, he takes a screenshot of the burglar, capturing a picture of his face. While Derek does not have cameras installed inside the house, he quickly taps Emergency Services to report the incident. He tells the police he has a picture of the burglar. By the time the police arrive, the burglar is gone.



9 Receive Targeted Offer

While in a rush to return home to assess the damage, Derek gets an alert on his mobile app that his batteries in the smoke detector are low. Just then, his mobile app dashboard flashes a real-time offer for batteries at the local supermarket. He swings by the supermarket and uses the discount before getting home, saving him an extra trip.



Delighted

10 Assess Issues with Appliances

While at home, Derek assesses the damage and completes the police report. Not much was taken, but he needs to replace his back door. He schedules to have his contractor install wood doors. He eventually remembers to change the battery in his smoke detector when it starts chirping. In the midst of this, he hears a strange gurgling noise coming from the water heater in the garage. He scans the barcode from the water heater to check its service history, and the date it was purchased, since he was not the original owner. It conducts remote diagnostics and provides him with the service history.



11 Remote Diagnostics

The next day, Derek calls a repairman, and emails him the remote diagnostics and service history. The repairman is able to confirm that he has parts in inventory for the specific model, and brings them with him during the service visit. The repairman identified the gurgling noise to a slow leak in one of the pipes. Pinpointing the exact problem, the repairman finishes the repair swiftly in the first visit. Before leaving, the repairman uploads his repair history to the water heater.



12 Catch Burglar

One week later, Derek receives a call from the police that they caught the burglar. Since Derek had the image from the real-time feed, they were able to locate him and retrieve Derek's items. Relieved, Derek was grateful for his mobile app.



Benefits

Enablers



Enhance social marketing campaign effectiveness



Gain insight into customer preferences and behavior trends



Leverage connected relationship for increasing sales of products and services



Increase customer insight and propensity to drive revenue



Offer real-time and targeted offers at the right moment



Effectively manage, monitor, and store data securely to improve accessibility



Supports better collaboration between customers and business partners



Optimize mobile experience through service enablement



Connectivity-enhanced first call resolution service event experience



Manage Digital Campaign



Single View of the Customer



Cross-channel Strategy



Predictive Analytics



Contextual Marketing



Cloud based collaboration platform



Optimized Service Delivery Processes



Richer Advanced Mobile Capability



Smarter Service

Moving Forward

1 Confirm and Align your Enterprise Mobile Strategy

Receive guidance with your mobile transformation. Schedule a workshop with IBM SMEs today and learn how IBM can help you deliver on your technical strategy and business vision as it aligns with your UX strategy. Accelerate the time to market for your mobile apps by using IBM's customizable "starter" apps.

2 Ready the Delivery Ecosystem

Evaluate your architecture maturity and identify gaps early on to address your enterprise's readiness to proceed. Set your enterprise up for success by assessing and selecting the optimal delivery method, including alignment with capability building managed by a solid governance model that will support your implementation roadmap.

3 Activate your Ecosystem

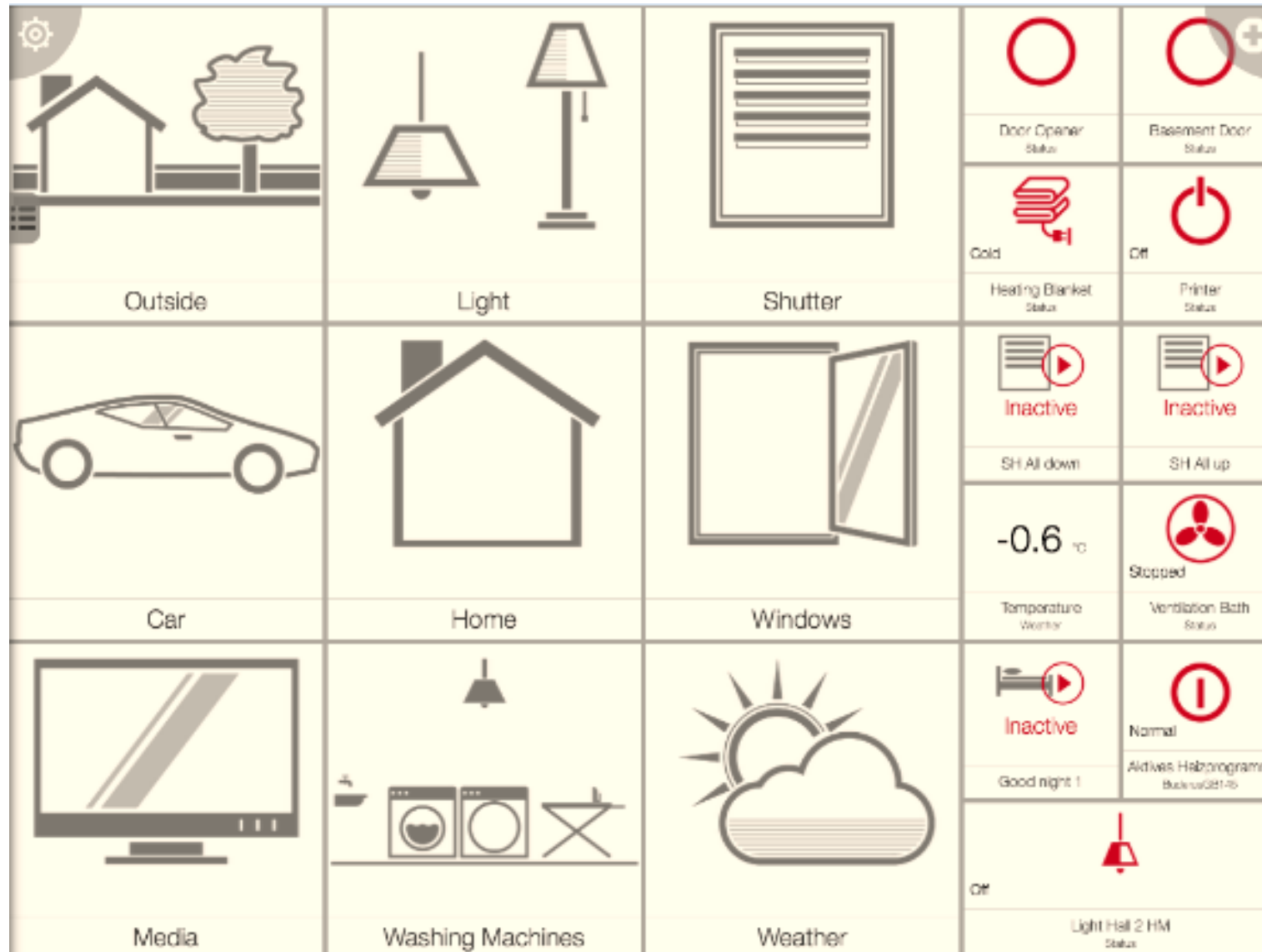
Deliver your implementation road map and begin to differentiate yourself from your competition. Design, assemble, and integrate your mobile strategy, carefully managed through the release management framework. Define a benefits realization model to monitor and track your success.

4 Launch and Evolve

Plan and adjust your marketing communications by incorporating customer segmentation insights. Measure and monitor your progress using defined KPIs through dashboards. Engage with and listen to your customers once your mobile strategy has launched. Begin future evolutionary phases by scheduling release workshops.

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IBM develops Template Mobile Apps for Smart Home Service Providers



IBM provides 'insight as a service' IoT solutions for different industries



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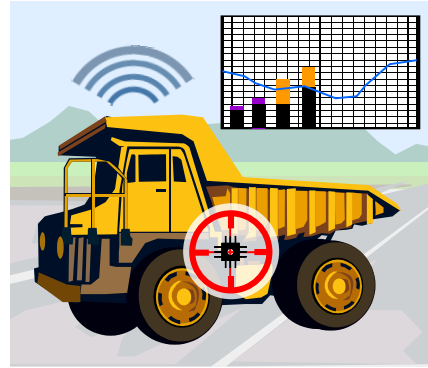
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Predictive Asset Optimization is one of the most important corporate use cases of Internet of Things

Truck publishes data from hundred of on-board sensors



Data indicates fault developing in critical component



Predictive analysis reveals component failure is imminent



Warns driver and instructs him to make a stop at services



Identify and dispatch best skilled repairer with right components



Truck is rapidly and completely repaired on site



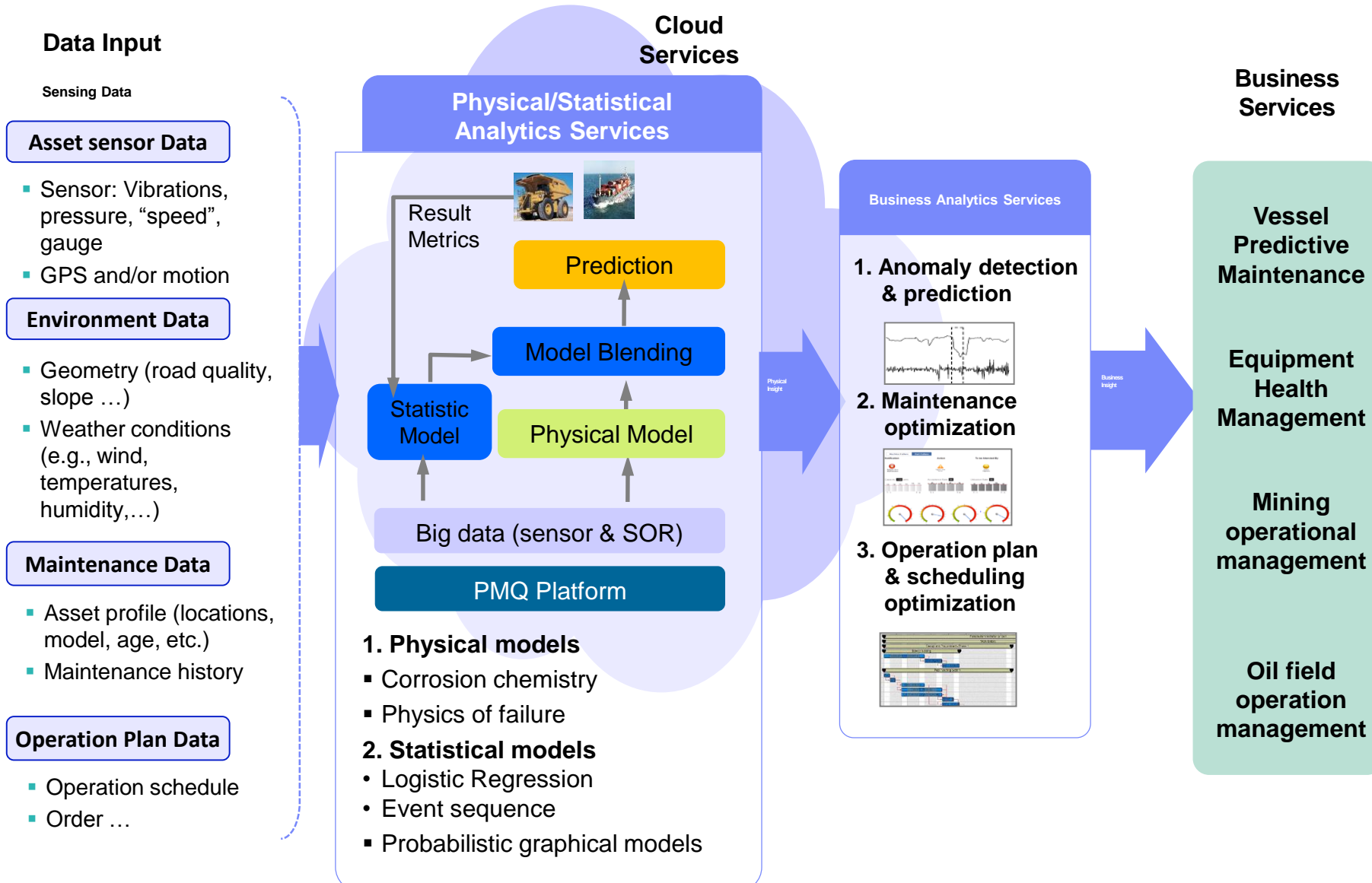
Truck is back en route to client site in full working order



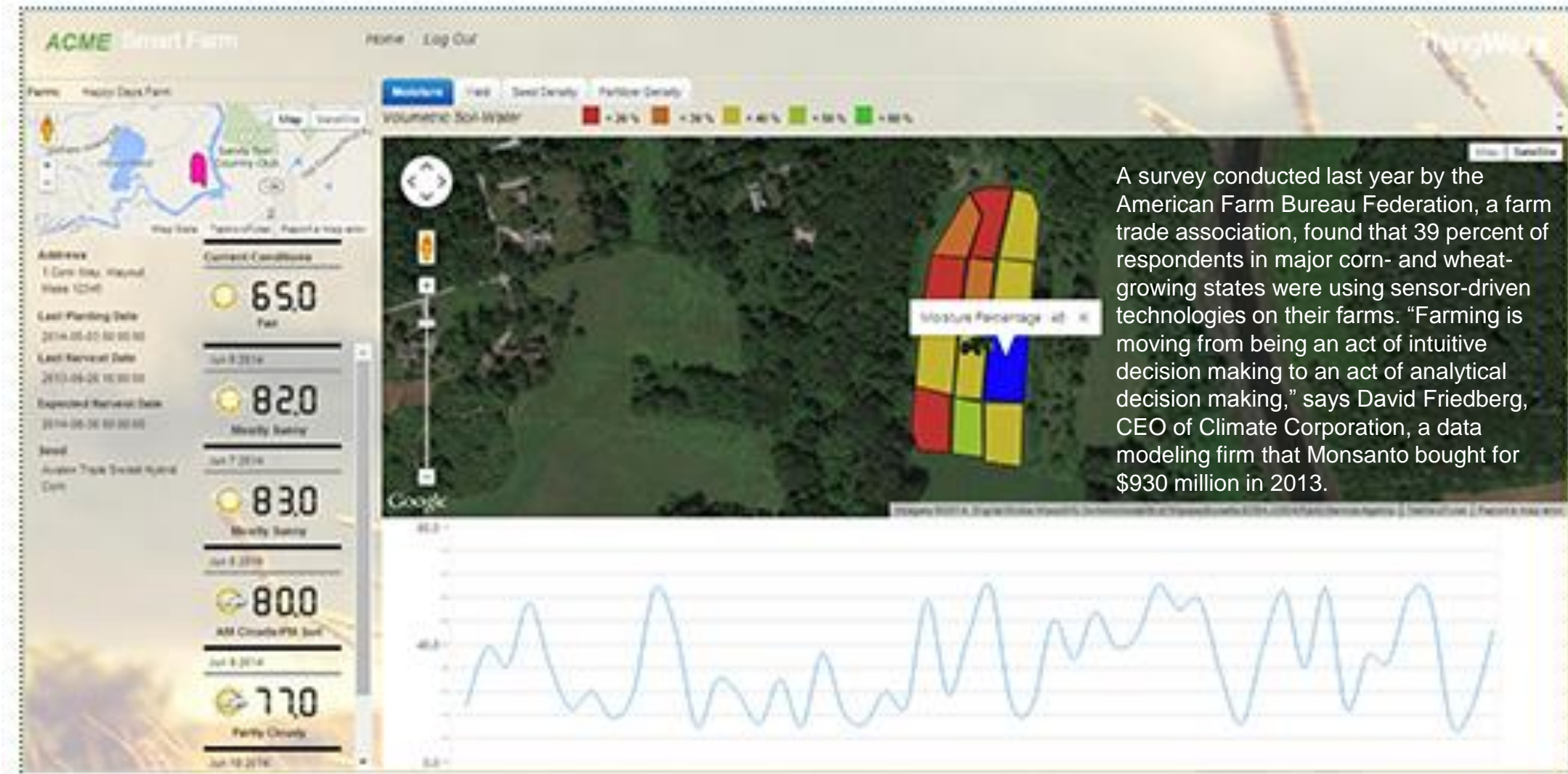
Manufacturers sent aggregated component performance analysis



1% improvements in healthcare, aviation, rail, power and oil and gas industries could bring \$276 billion in efficiency savings to the global economy in 15 years.



Internet of Farm Things: Companies are competing to turn data into advice on how to farm better, and attracting investments from the likes of Google and Monsanto.



IBM creates Industry Journey Maps – FarmSight



Bill Thompson

Owner: Thompson Farming
Location: Nebraska
Age: 48

Bill is a 3rd generation farmer who grew up on his family's farm and now runs the 15k acre operation. He is married and has two daughters and a son.

His oldest daughter recently completed her Bachelors of Science in Agricultural and Food Business Management from the University of Nebraska and has been working closely with him on the farm.

Bill, and especially his daughter, are business and tech savvy. Both use tablets and smartphones, and his daughter is very active in social media.

Bill's farm grows corn and soybeans, and with the exception of a few bad years, his crops have performed well. He is interested in ways to reduce cost and increase his yield.

Bill has access to a lot of data – weather, soil moisture, agronomy reports, government policies, etc. – but it is not centrally located and not easy for him to use.

Empowering the Customer Keeping it Simple.



Analytics



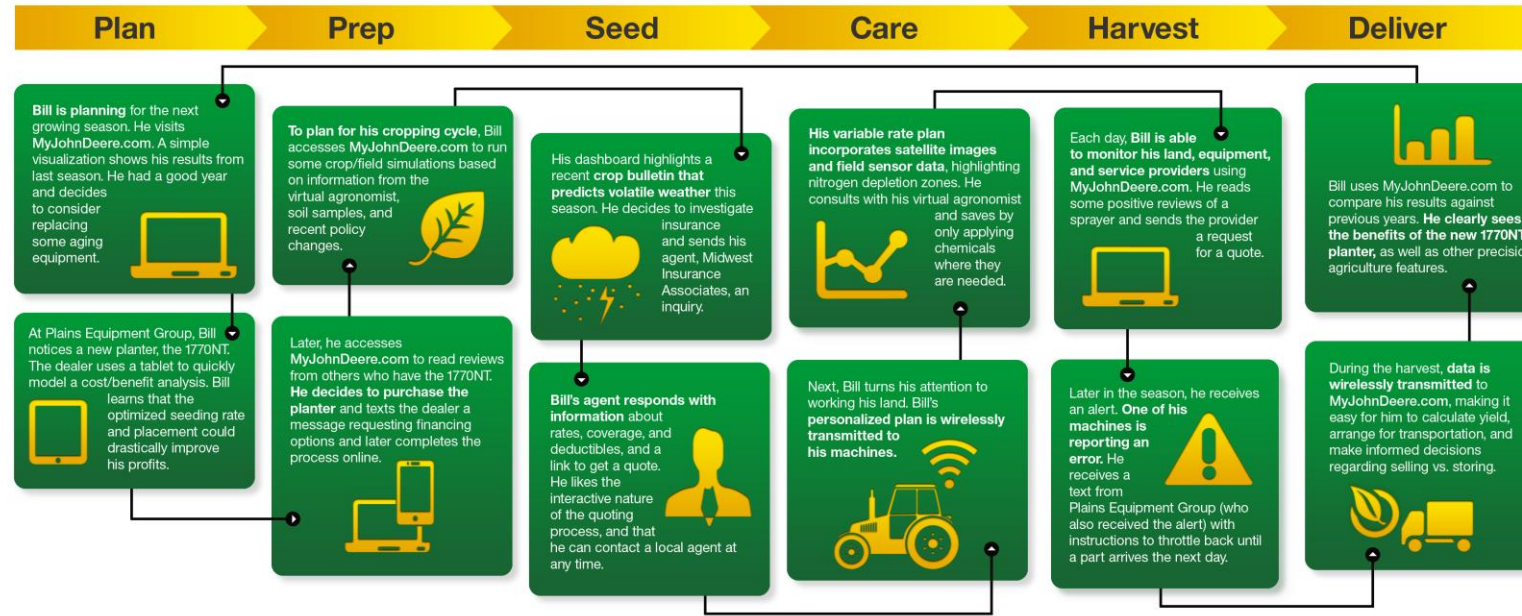
Mobile



Social Business



Cloud Computing



JOHN DEERE

JDLink

Field Connect

Mobile Farm Manager

Machine Synch

Automated Crop Reporting



Virtual Sales Coach



Scalable Service Eco-System



Customer Experience



Next Best Action



IBM Research

Moving Forward with Velocity

1. Size the Prize

- Business Value Assessments and Technology proofs of concept
- Utilizing rapid prototyping techniques, an envisioned customer experience drives a range of innovations or "big ideas". These are analyzed and the underpinning capabilities drawn out
- Capabilities are turned into a to-be architecture and a road map prioritization completed to plan a series of transformational programs
- The entire process is iterative; at each time testing hypotheses with the environment of real customers



2. Prove the Value

- Rapid prototyping, industry solutions & assets, and market experiments
- A focused, yet flexible offering that is intended to help you understand how to most effectively integrate the unique capabilities offered by MobileFirst devices into business
- Delivers a strategy and plan for achieving the business benefits associated with MobileFirst technology
- Identifies proven MobileFirst architecture, design, development, security and management practices



3. Scale to Win

- Global, regional & local development centers
- Global research labs
- Global client centers



IBM creates Industry Journey Maps – FarmSight



Bill Thompson

Owner: Thompson Farming

Location: Nebraska

Age: 48

Bill is a 3rd generation farmer who

Keeping it Simple.



IBM and The Weather Company Partner to Bring Advanced Weather Insights to Business

- Deeper Understanding of Connections between Weather and Business Outcomes Could Save Industry Billions
- The Weather Company Migrates Data Services Platform to IBM Cloud
- Builds on IBM's Open Platform to Advance Internet of Things Solutions



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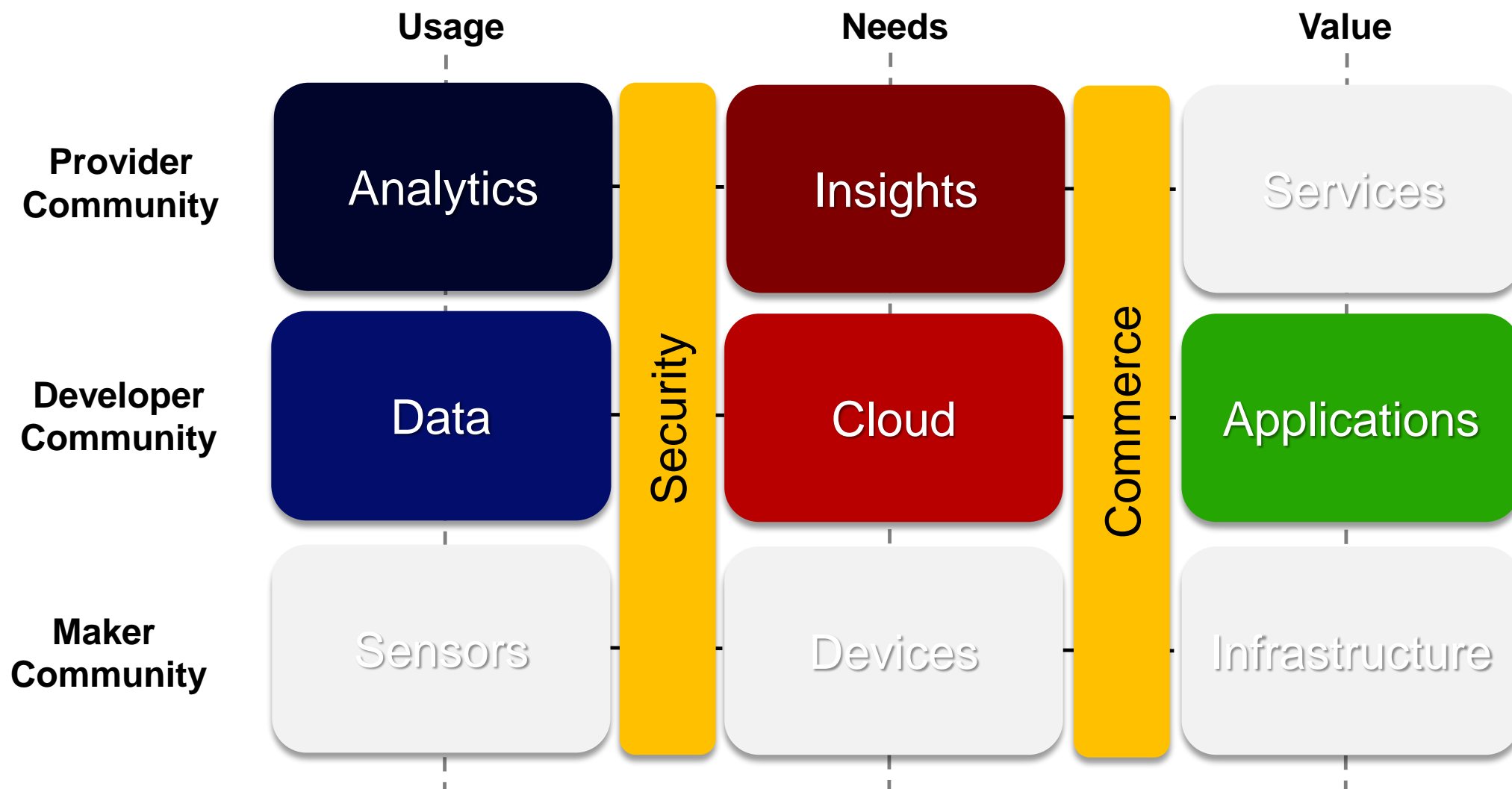
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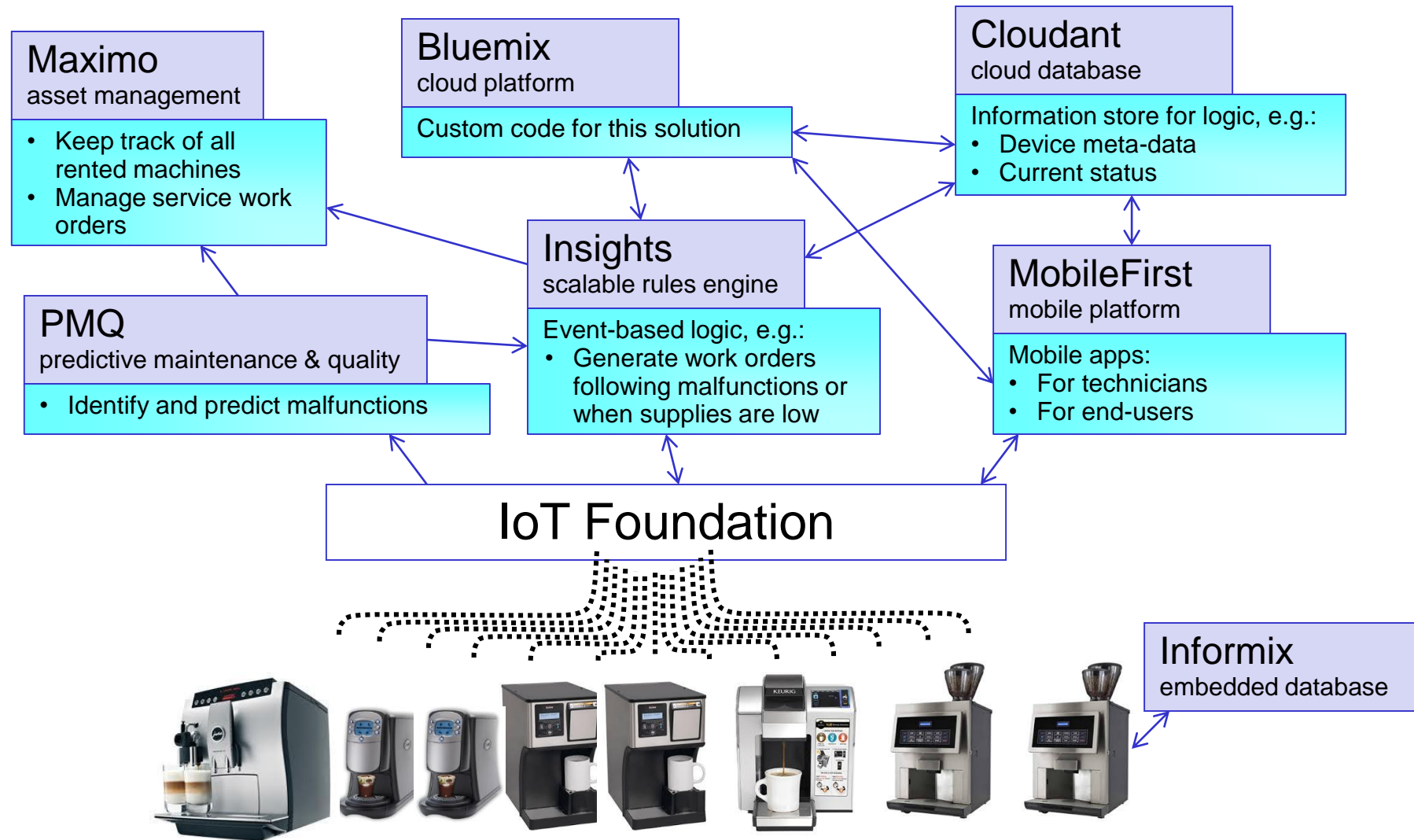
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3 x 3 Building Blocks



Hypothetical example: Coffee machine service provider



Internet of Things (Nesnelerin Interneti) Bankacılık Uygulamaları



Akıllı Şube
Operasyonel Verimlilik



Yeni Bir Kanal
Ve Ödeme Sistemi



Risk Yönetimi
Bireysel/Kurumsal

Welcome to The Internet of Things



Thank you

IBM Internet of Things

