



The Internet of Everything

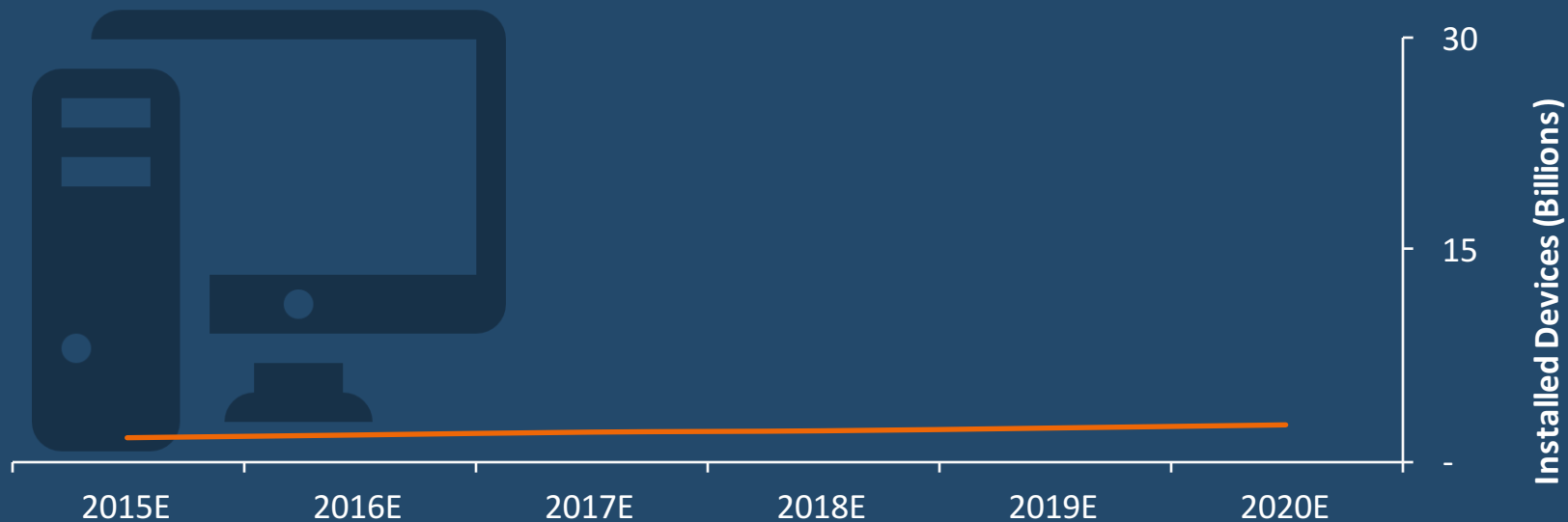


BI INTELLIGENCE

Providing in-depth insight, data, and analysis of everything digital.

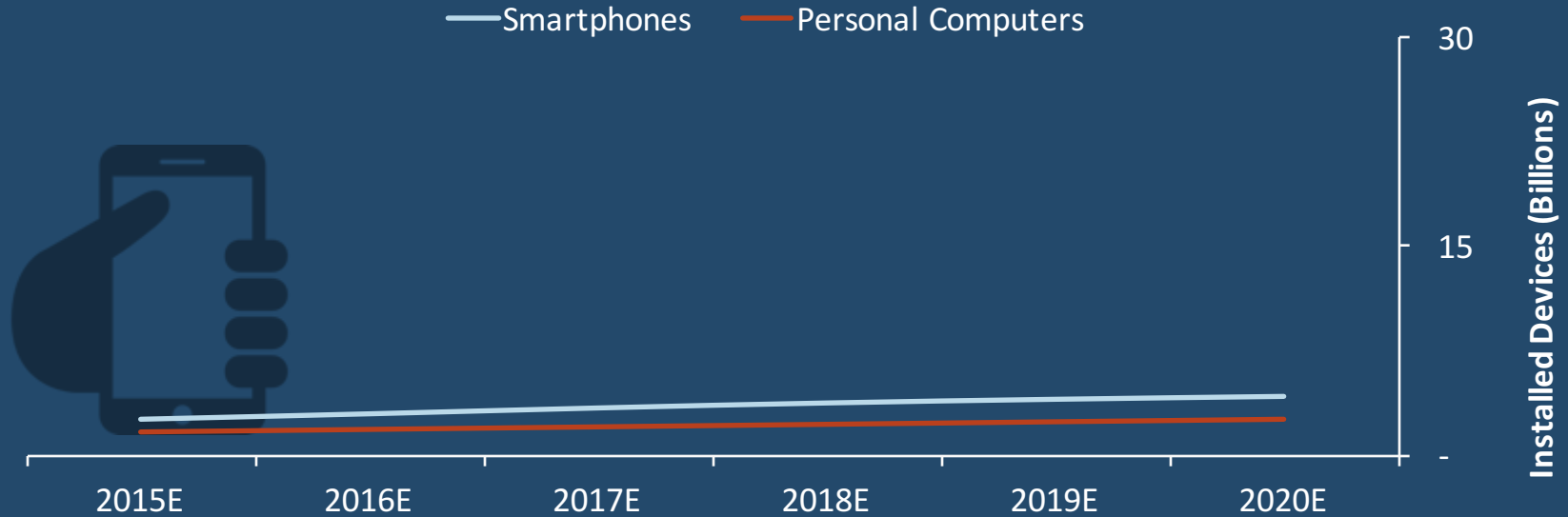
THE INTERNET FIRST CAME TO US ON PCS

Estimated Global PC Installed Base



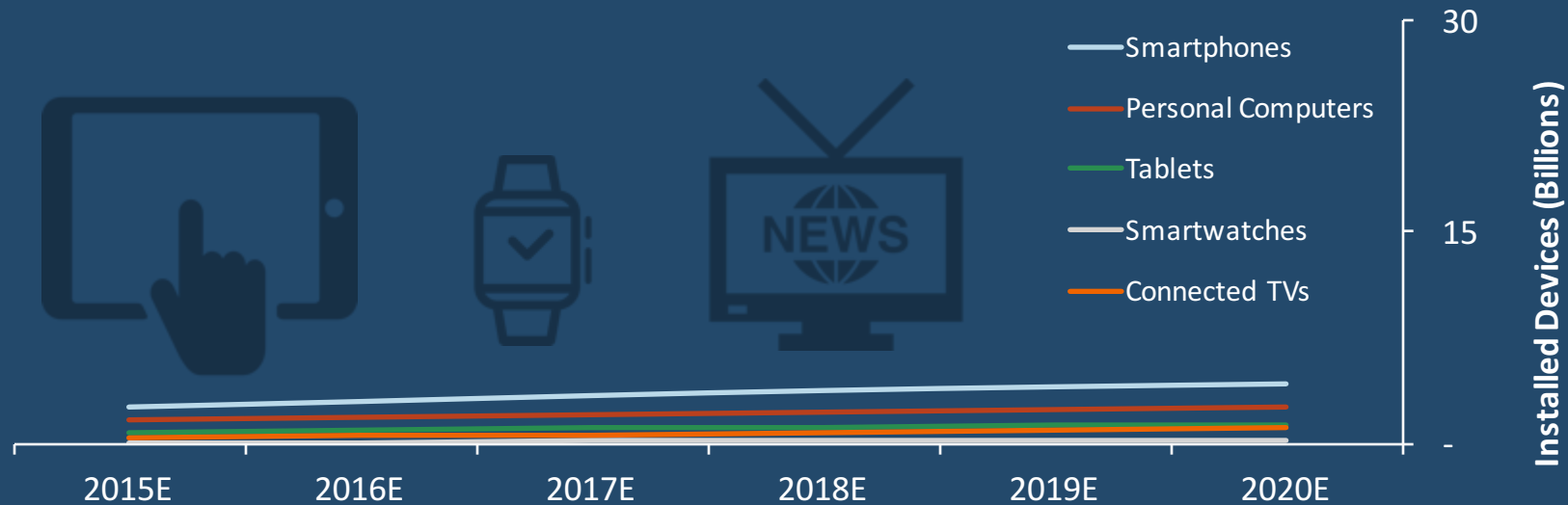
IT THEN MOVED TO SMARTPHONES

Estimated Global PC And Smartphone Installed Base



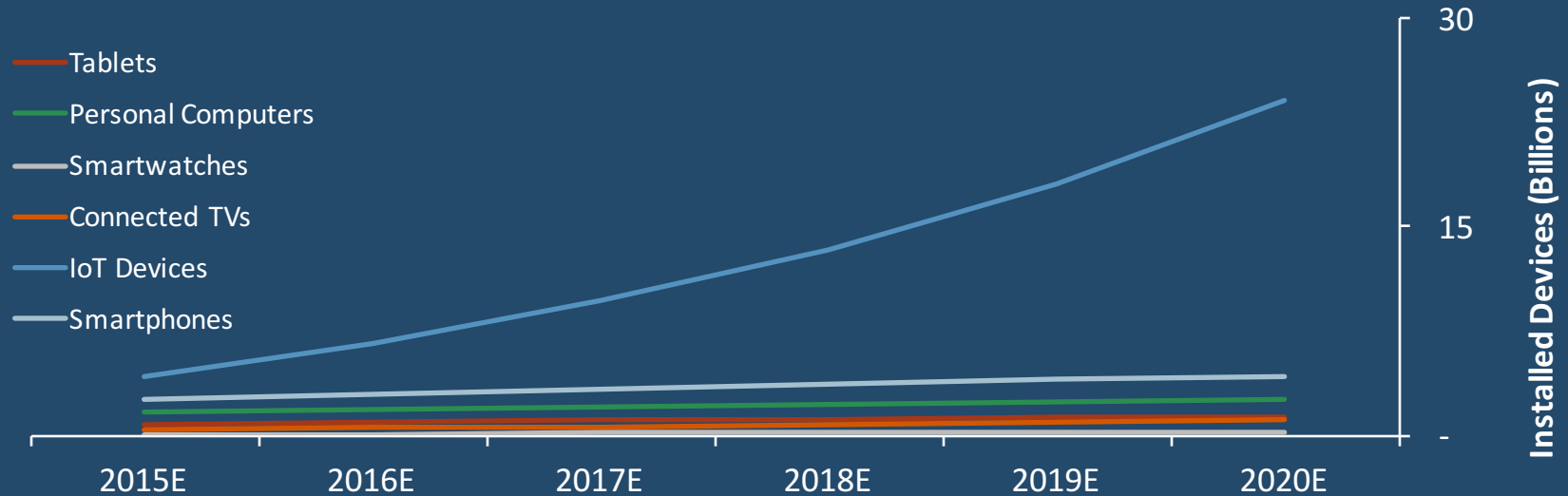
EXPANDED TO TABLETS, SMARTWATCHES, AND TVS

Estimated Global PC, Smartphone, Tablet, Connected TV,
And Smartwatch Installed Base



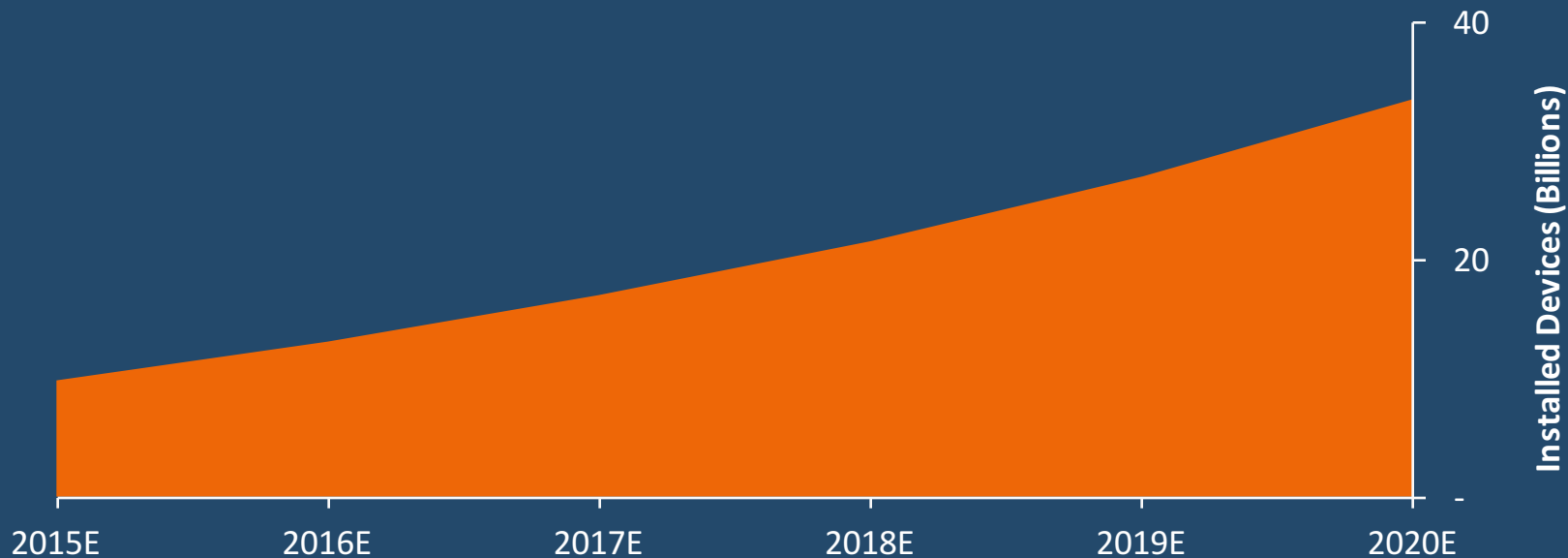
AND IS NOW COMING TO ALL OF OUR EVERYDAY DEVICES UNDER THE INTERNET OF THINGS

Estimated Global PC, Smartphone, Tablet, Connected TV, Smartwatch, And IoT Device Installed Base



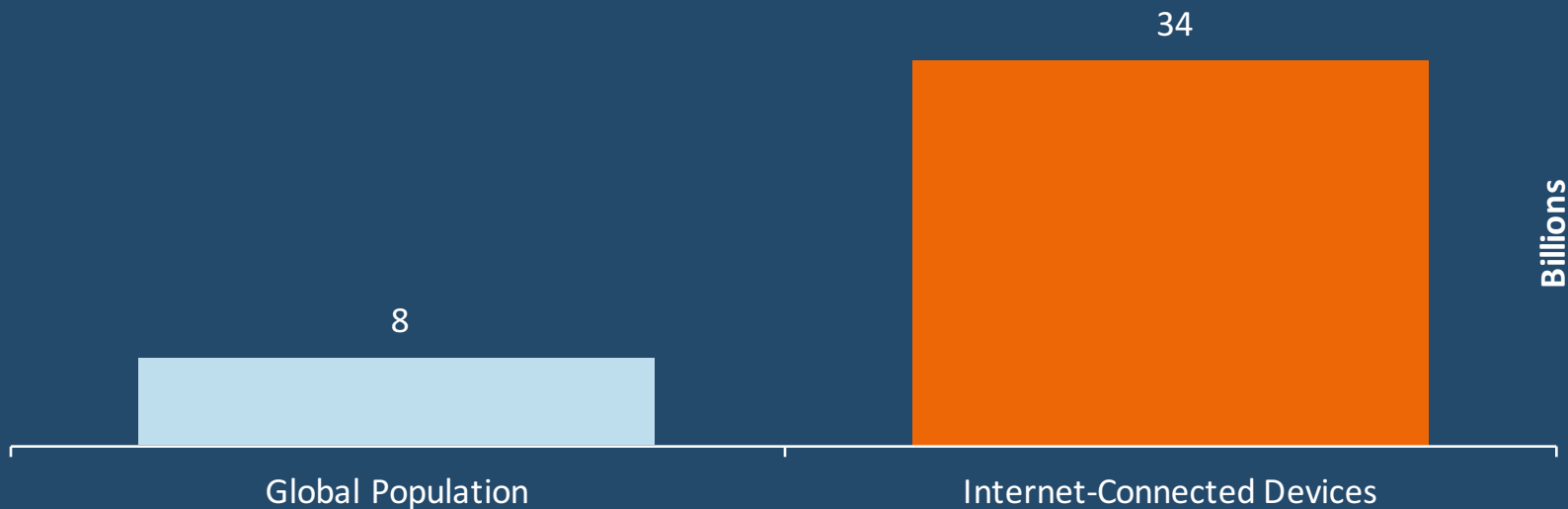
BY 2020, 34 BILLION DEVICES WILL BE CONNECTED TO THE INTERNET

Estimated Global Internet-Connected Device Installed Base



THAT'S MORE THAN 4 DEVICES FOR EVERY HUMAN ON EARTH

2020 Estimated World Population Vs. Internet-Connected Devices



THE INTERNET OF THINGS HAS THE POWER TO REVOLUTIONIZE EVERYTHING



IT'S REVOLUTIONIZED OUR HOMES...



OUR BUSINESSES...



AND OUR CITIES...

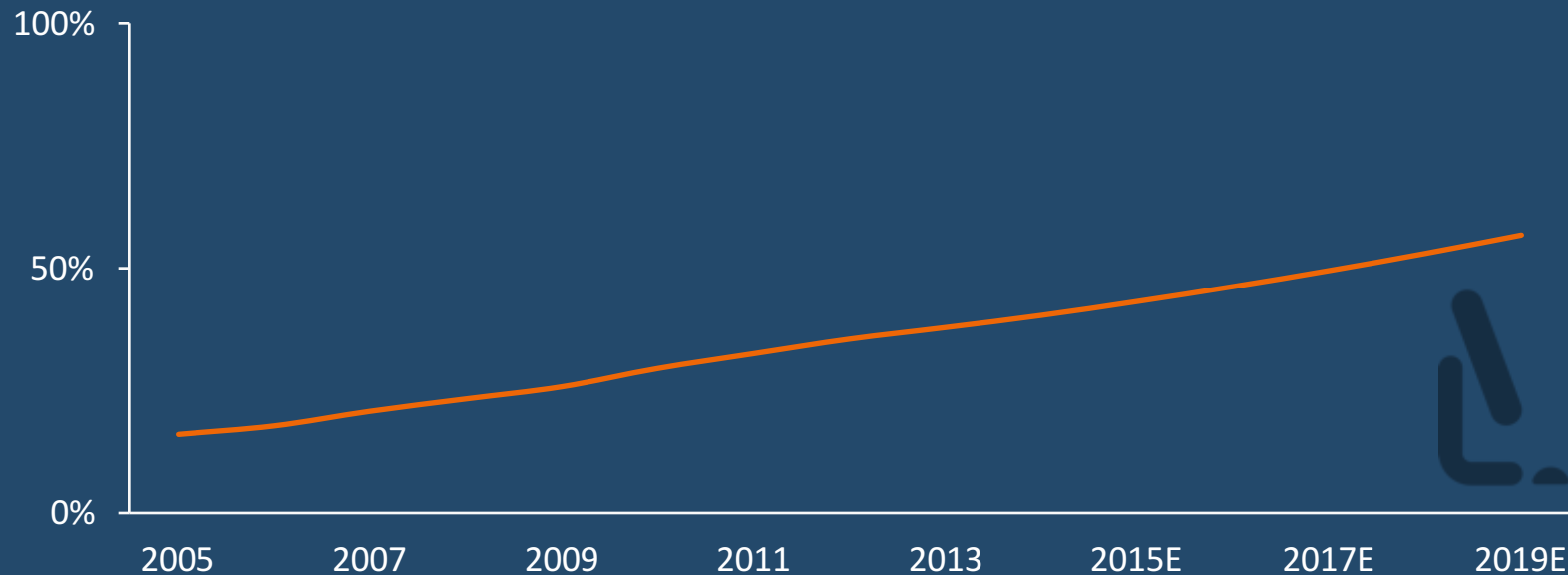




WHAT'S DRIVING THE IOT'S GROWTH?

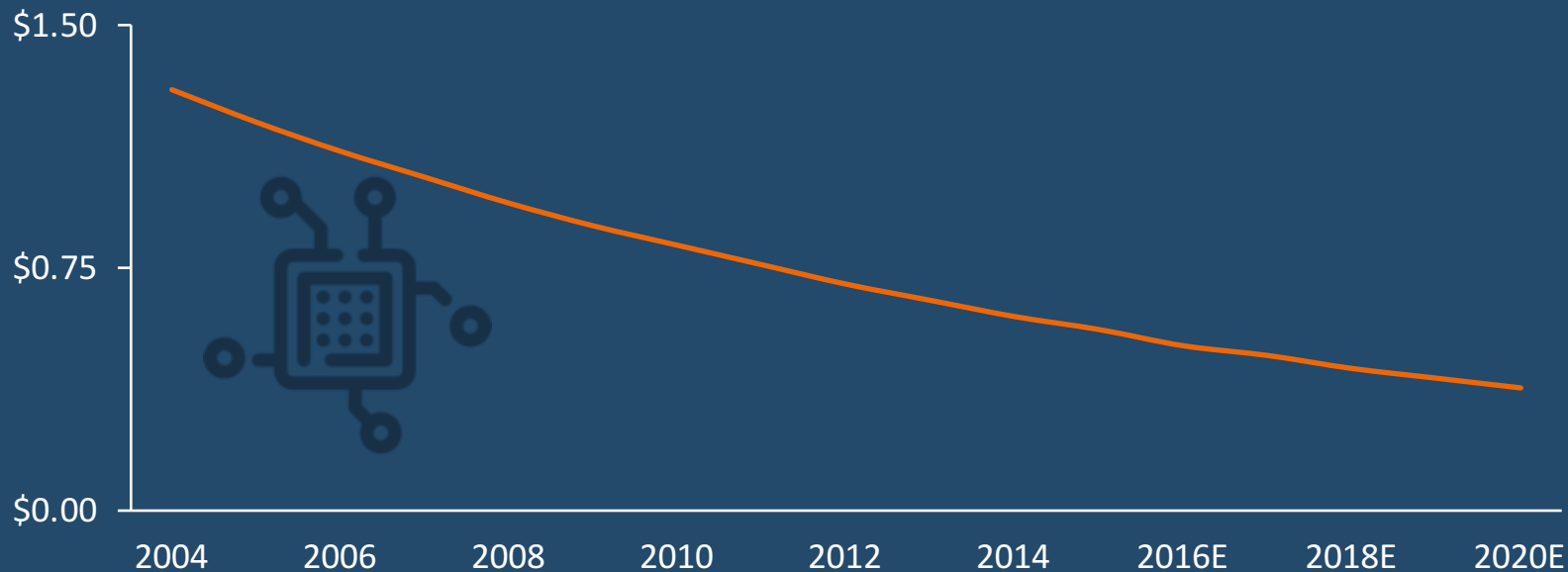
BY 2018, HALF OF THE WORLD WILL BE CONNECTED TO THE INTERNET

Estimated Penetration Of Global Population Using The Internet



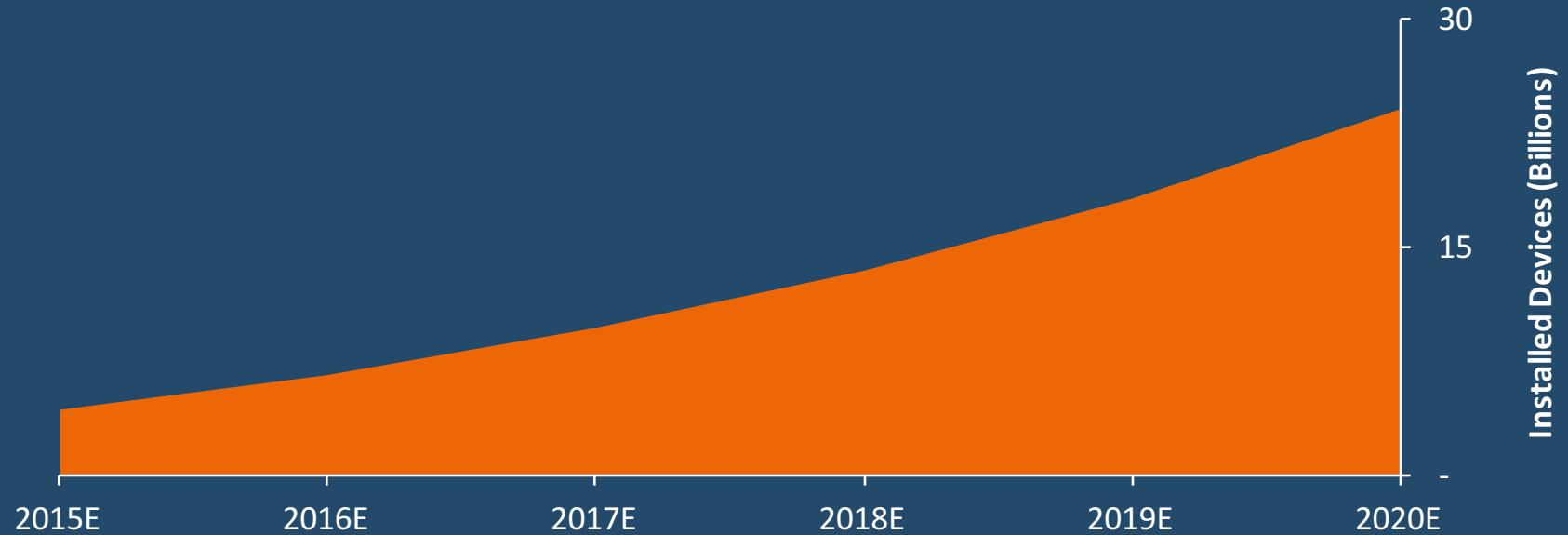
AND THE PRICE OF HARDWARE THAT MAKES THE IOT POSSIBLE IS DROPPING

Average Sensor Cost Forecast



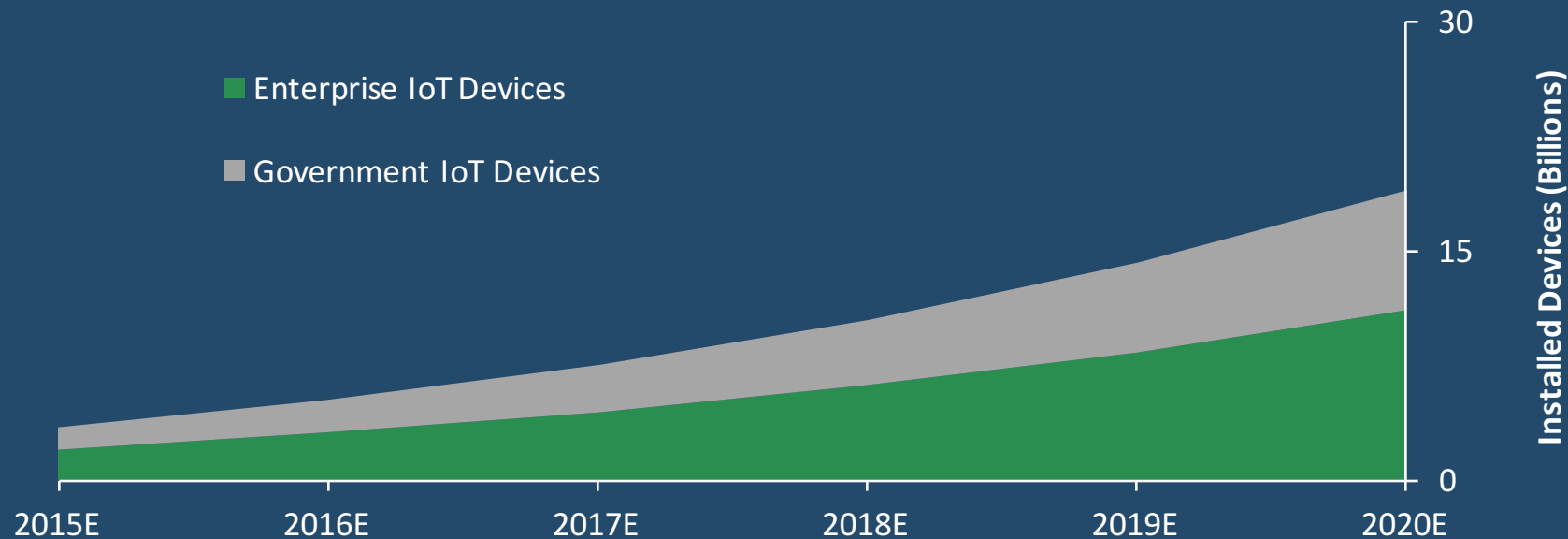
BY 2020, 24 BILLION IOT DEVICES WILL BE INSTALLED

Estimated Global Internet-Connected Device Installed Base



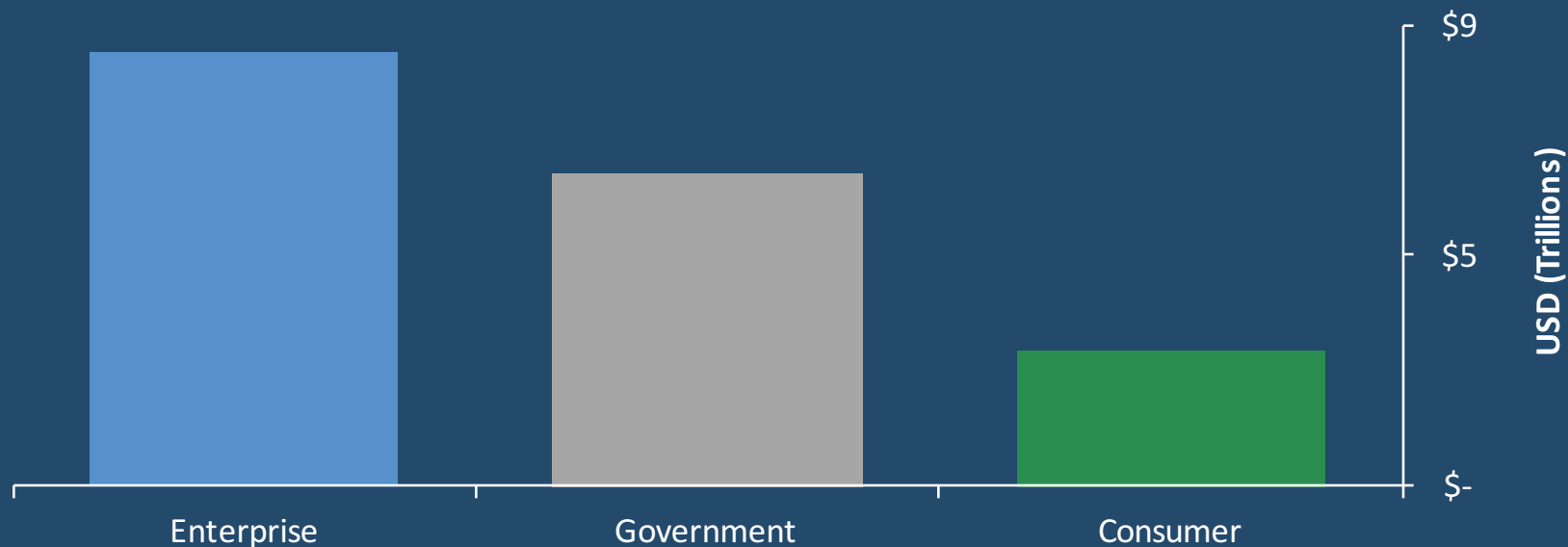
THE MAJORITY OF IOT DEVICES WILL BE USED BY BUSINESSES AND GOVERNMENTS

Estimated Global IoT Device Installed Base



AND BUSINESSES WILL BE THE TOP INVESTOR IN IOT SOLUTIONS

Estimated Global IoT Investments Compounded 2015-2020



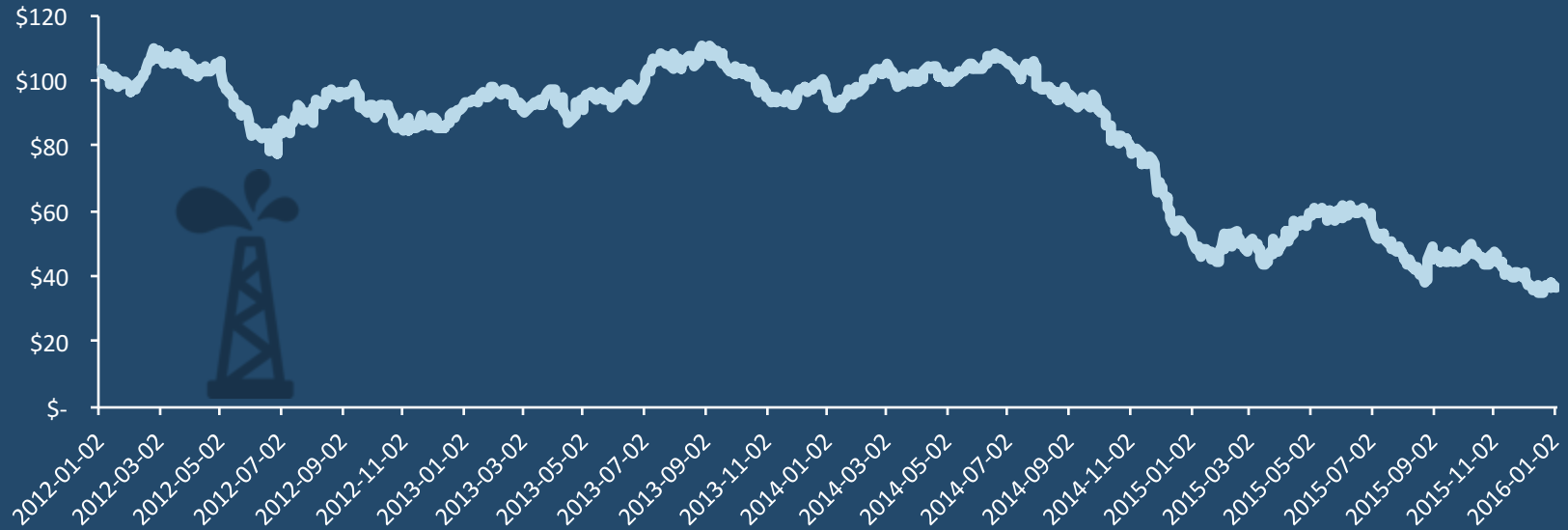
Three stylized human figures, representing business professionals, are seated at a table. The figure in the center is wearing a suit and tie, while the two flanking figures are in business casual attire. The background is a solid dark blue.

HOW ARE BUSINESSES USING IOT DEVICES?

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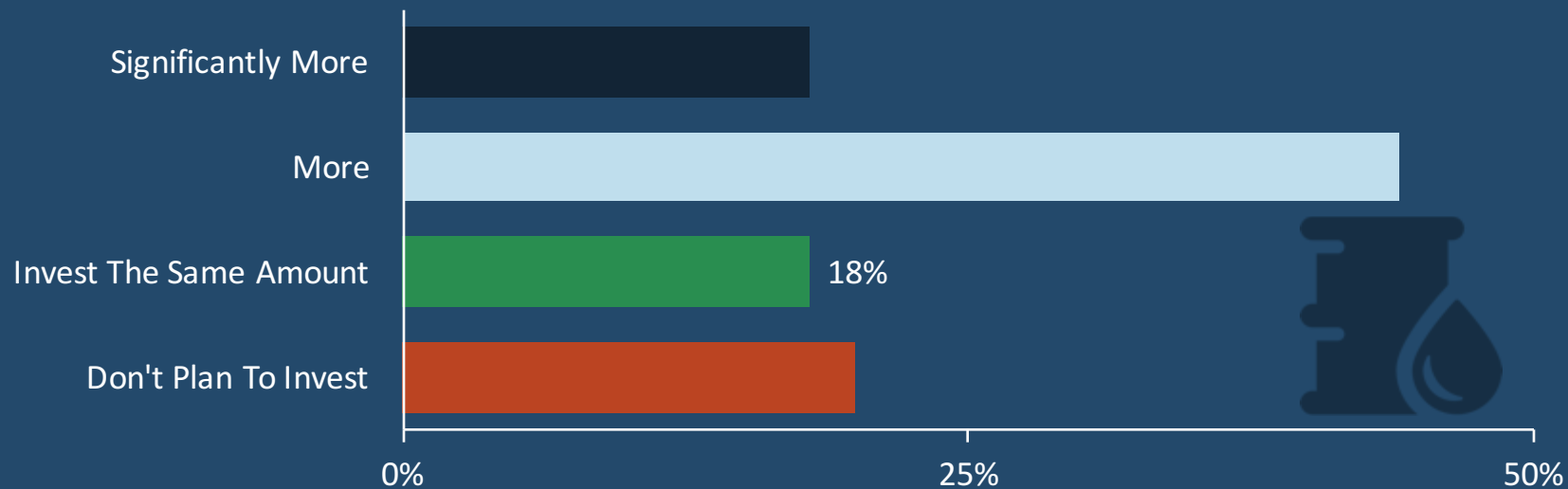
AS OIL PRICES FALL...

Historic Oil Prices



OIL AND GAS EXECUTIVES ARE INVESTING IN THE IOT TO BECOME MORE EFFICIENT

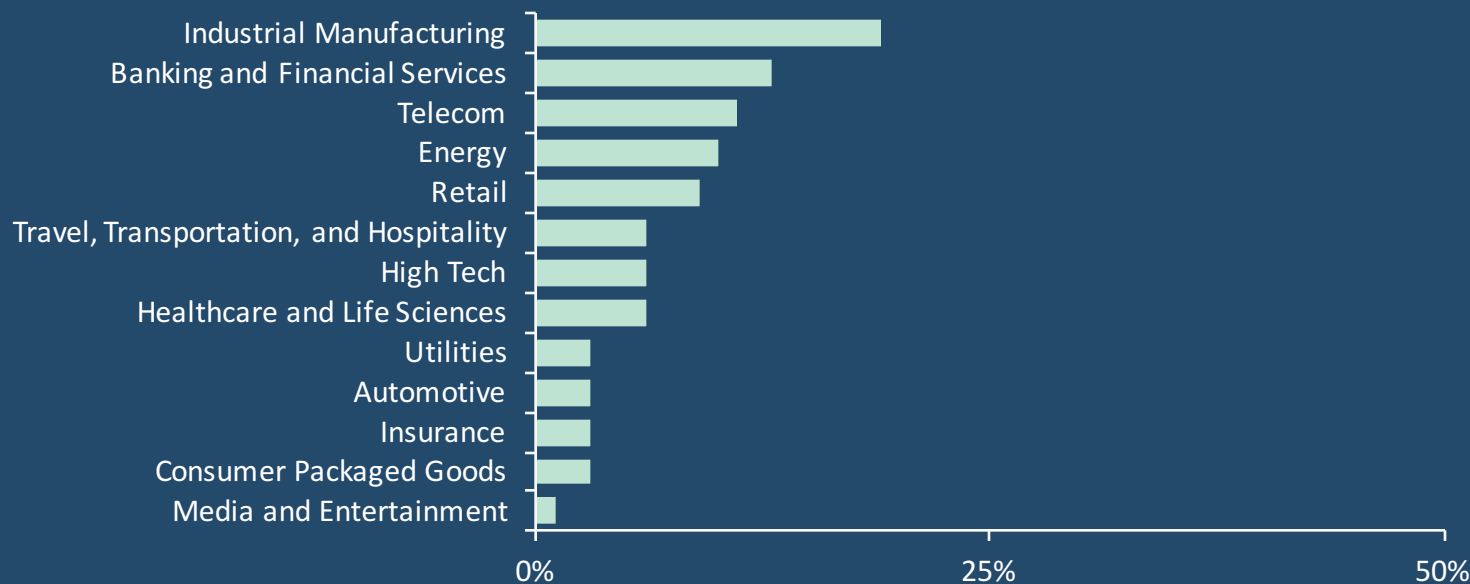
Global Oil & Gas Company Executives' Future Plans To Invest In Digital Technologies Over The Next 3-5 Years



MANUFACTURERS ARE CURRENTLY SEEING THE MOST RETURNS FROM IOT INVESTMENTS...

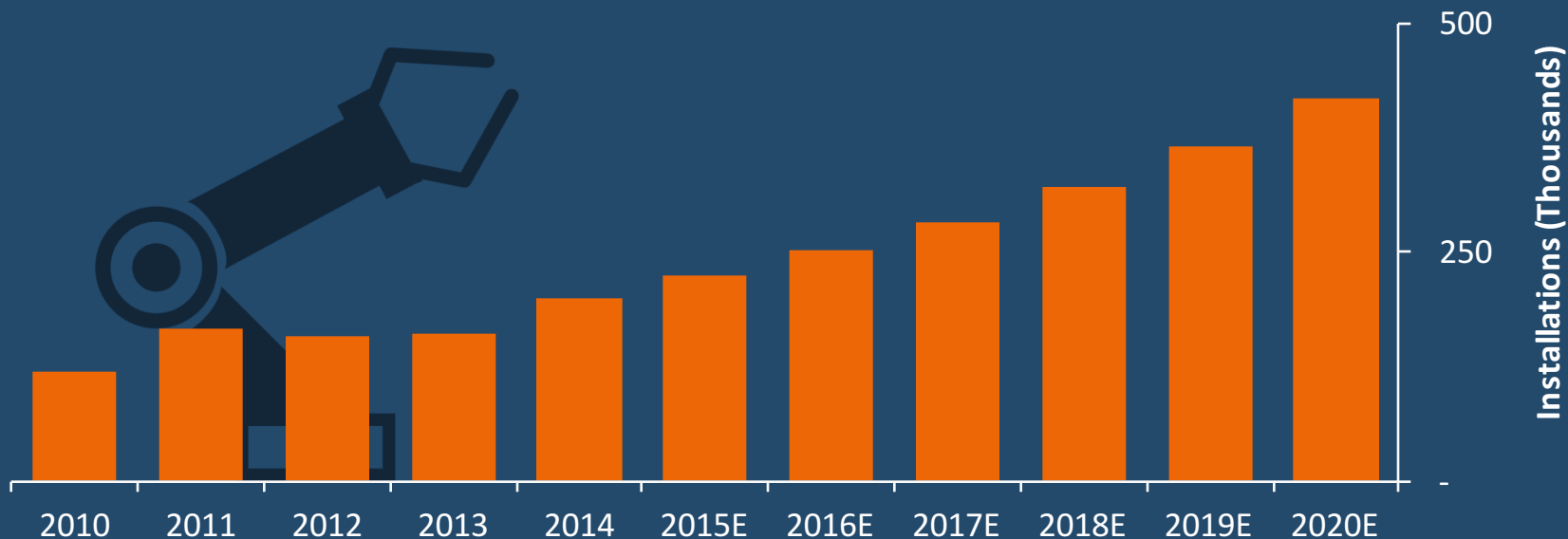
Industries Seeing Largest Returns From IoT Investments

% of respondents in their industry with 2014 revenue gains from IoT of > 30%



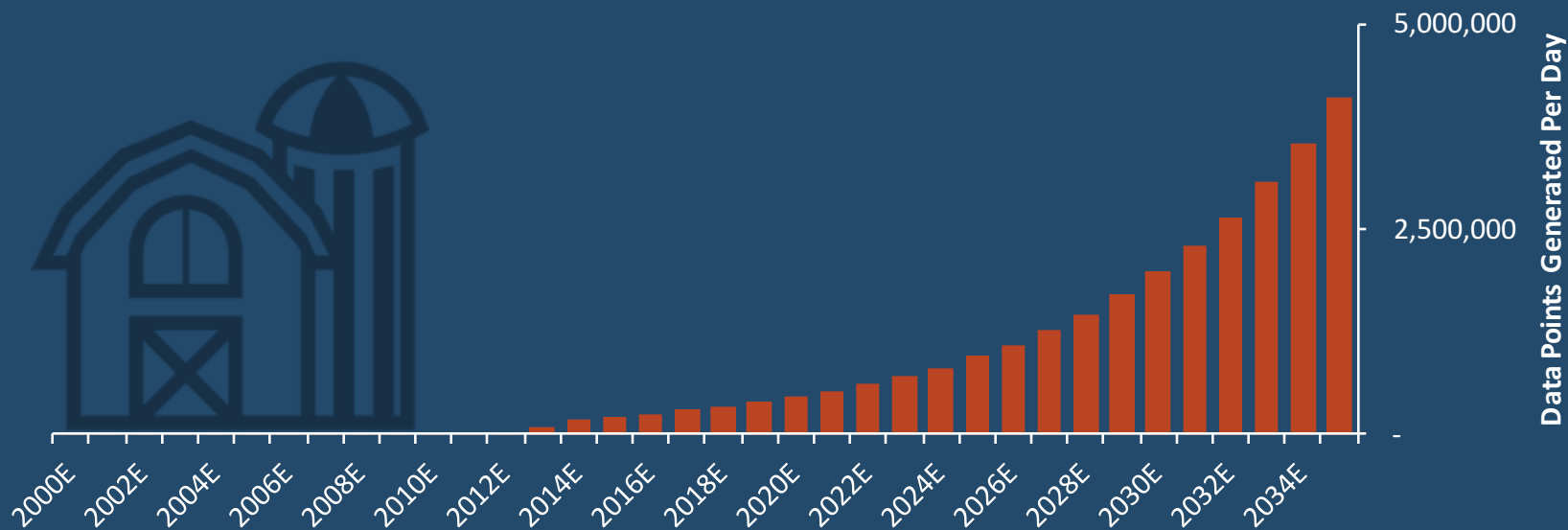
AUTOMATING THEIR PRODUCTION THROUGH INTERNET-CONNECTED ROBOTS

Estimated Global Industrial Robot Shipments



AGRICULTURAL COMPANIES ARE USING SENSORS TO COLLECT DATA FOR PRECISION FARMING

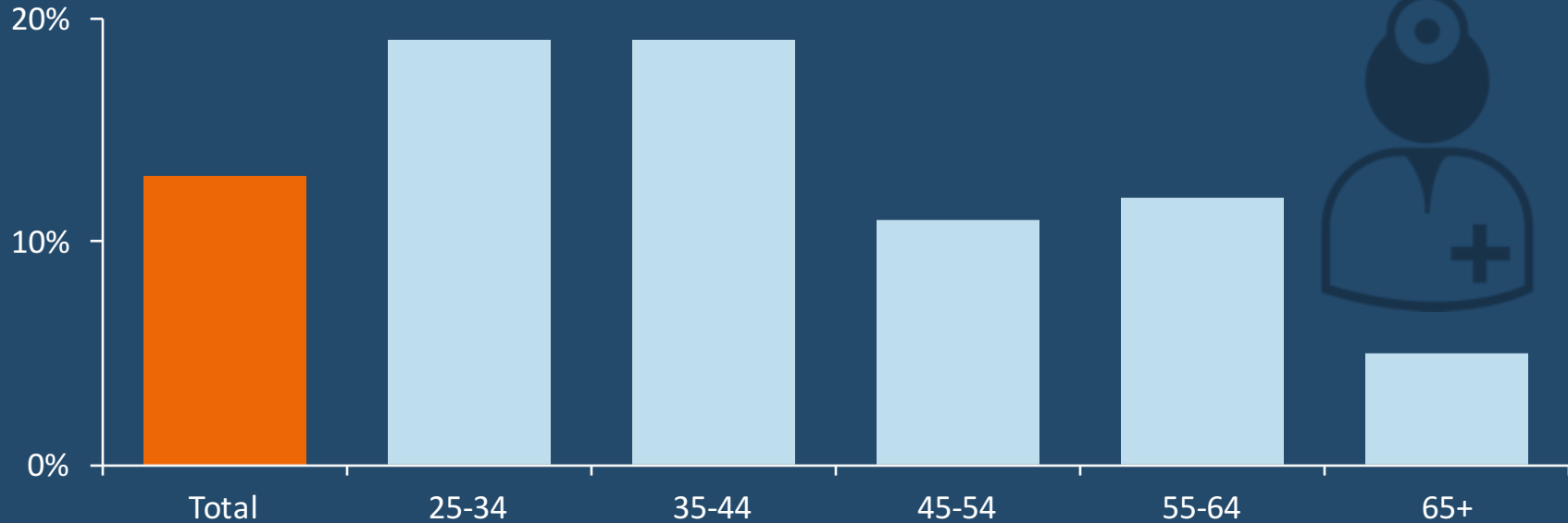
Estimated Amount Of Data Generated By The Average Connected Farm Per Data



DOCTORS CAN REMOTELY MONITOR THEIR PATIENTS

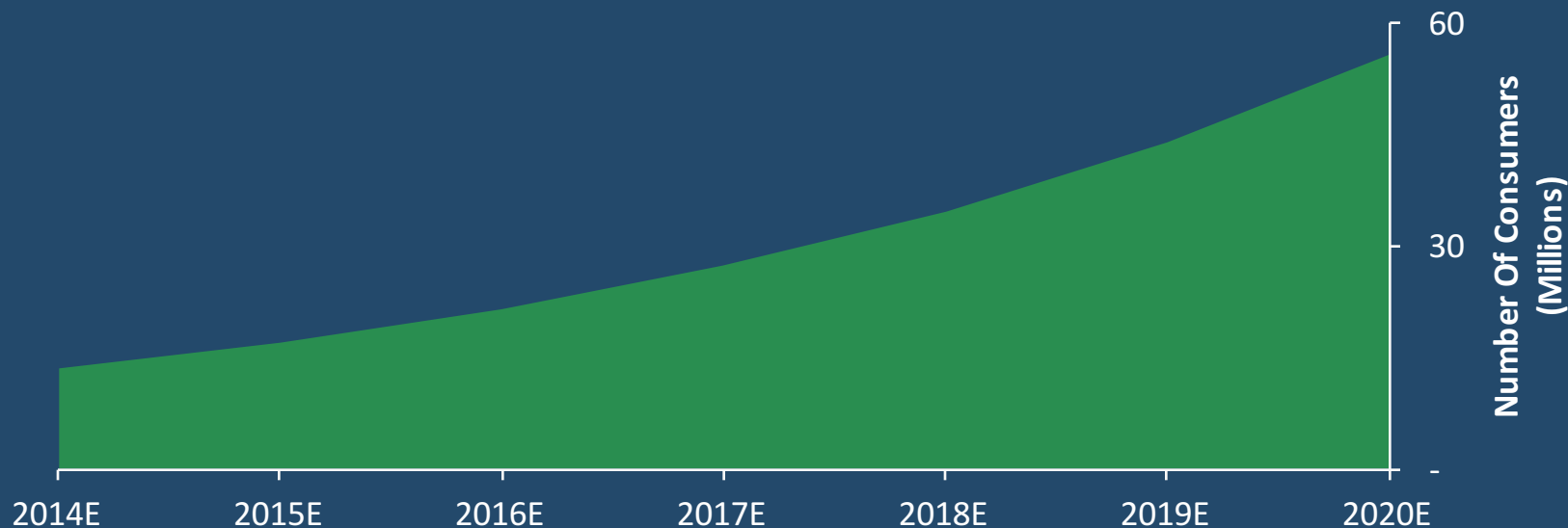
Percent Of Americans With A Wearable Fitness Tracker

By Age



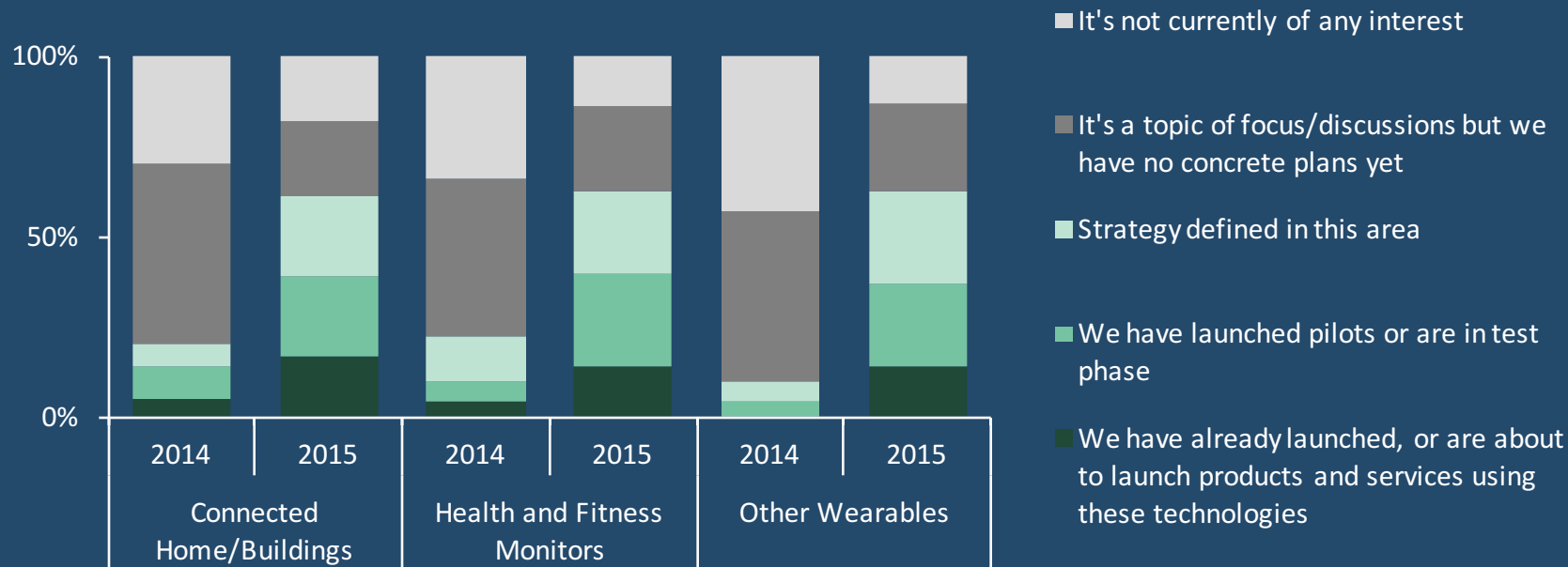
INSURANCE COMPANIES ARE TRACKING CUSTOMERS' DRIVING HABITS FOR USAGE-BASED INSURANCE...

Estimated Number Of US Drivers Who Have Or Have Had Usage-Based Insurance



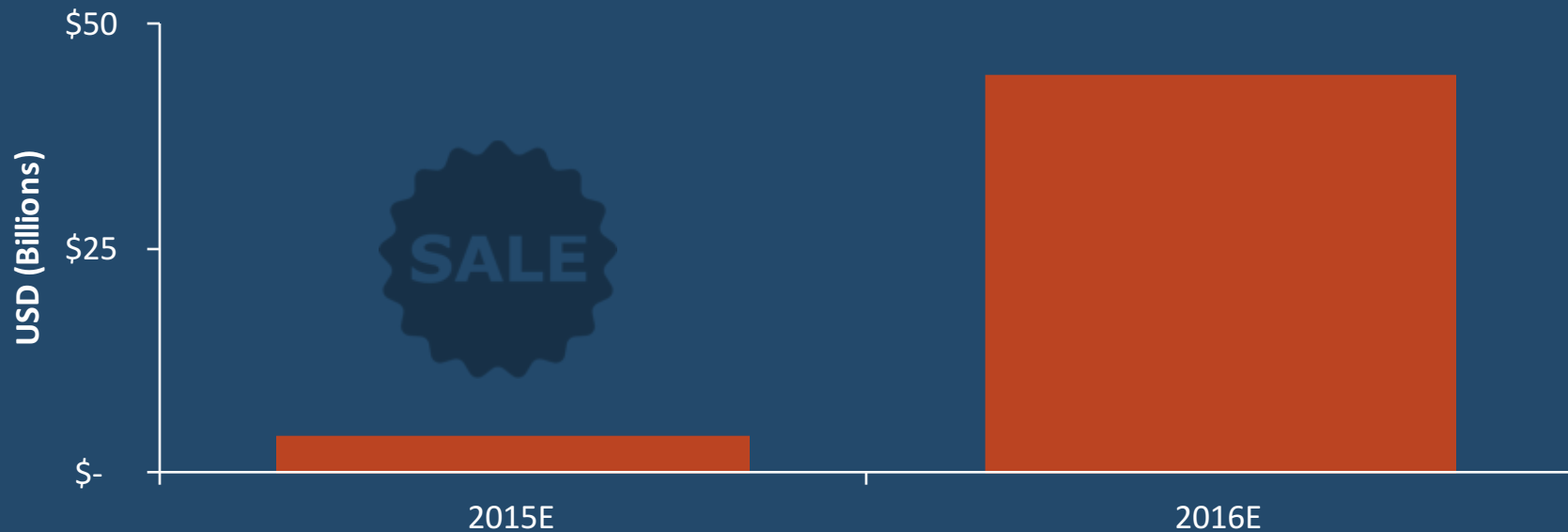
AND ADOPTING IOT DEVICES RAPIDLY

Q: How far, if at all, has your company progressed with these IoT-related connected insurance initiatives?



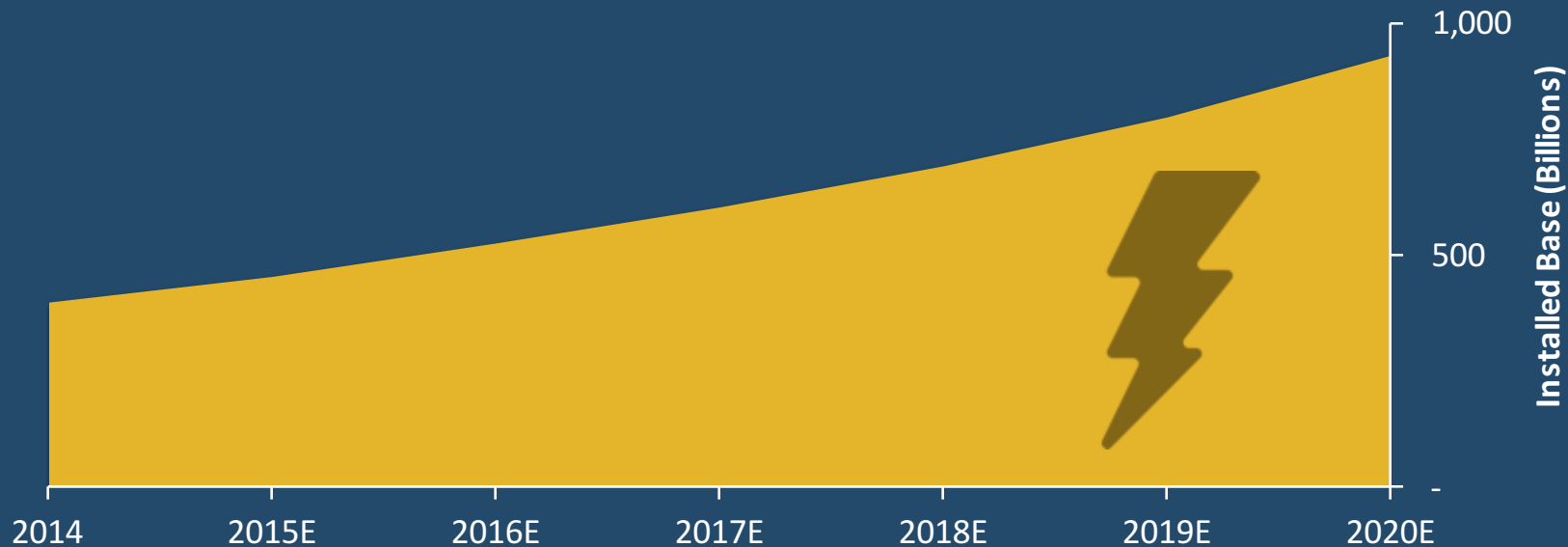
RETAIL STORES ARE USING BEACONS TO TRACK THEIR IN-STORE CUSTOMERS AND PUSH DISCOUNT OFFERS

Estimated US In-Store Retail Sales Influenced By Beacon-Triggered Messages



UTILITIES COMPANIES CAN REMOTELY MONITOR THEIR CUSTOMERS' POWER USAGE

Estimated Global Number Of Smart Meters Installed





THE POSSIBILITIES ARE ENDLESS

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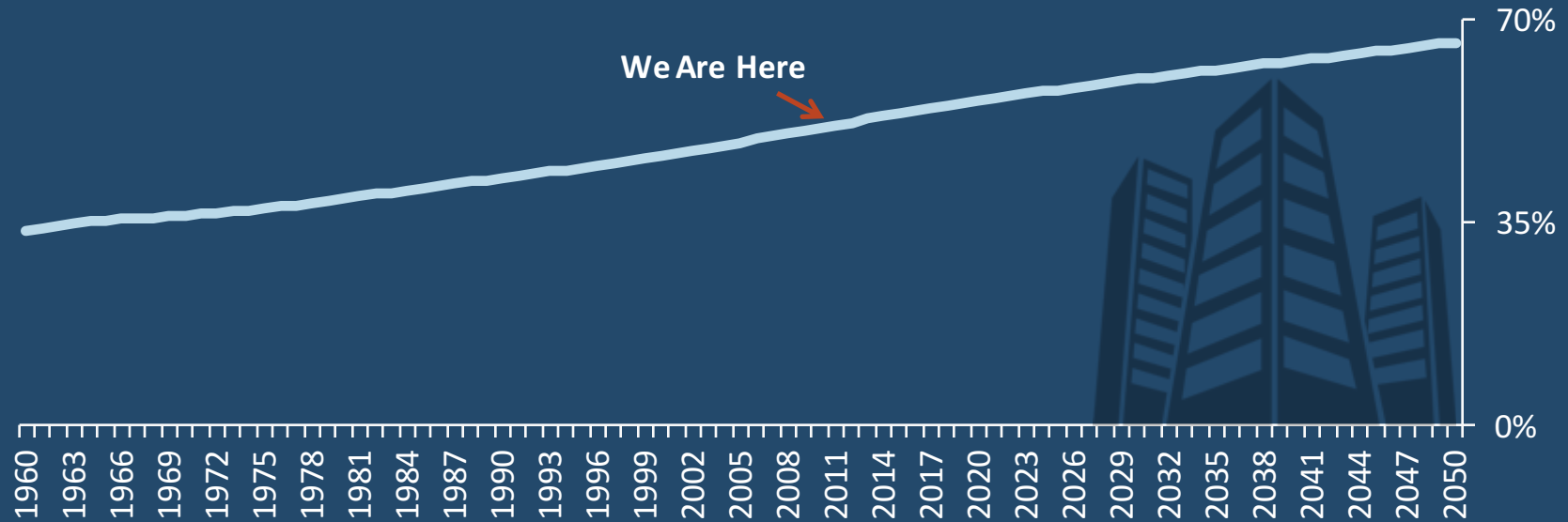
A dark blue silhouette of a classical government building, featuring a large dome and a series of columns. The building is centered in the background, with the text overlaid on its front facade.

HOW ARE GOVERNMENTS USING IOT DEVICES?

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AS THE URBAN POPULATION RISES...

Estimated Percentage of World Population Living In Cities

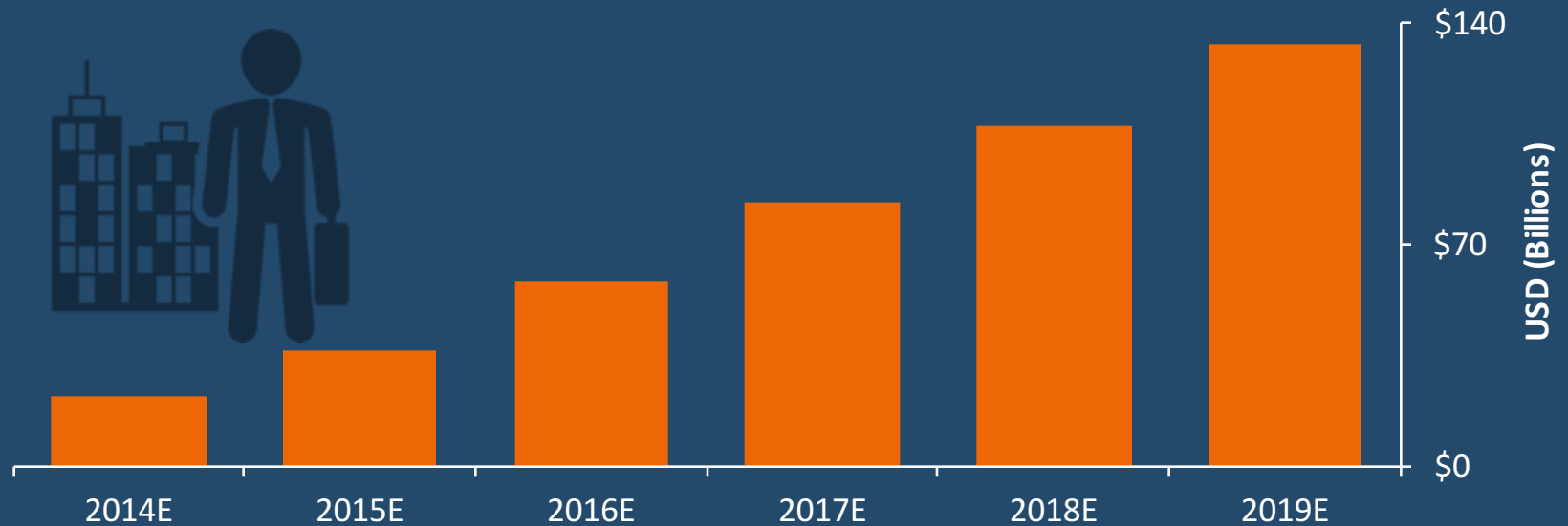


URBAN PLANNING FOR CONNECTED CITIES WILL BECOME MORE IMPORTANT



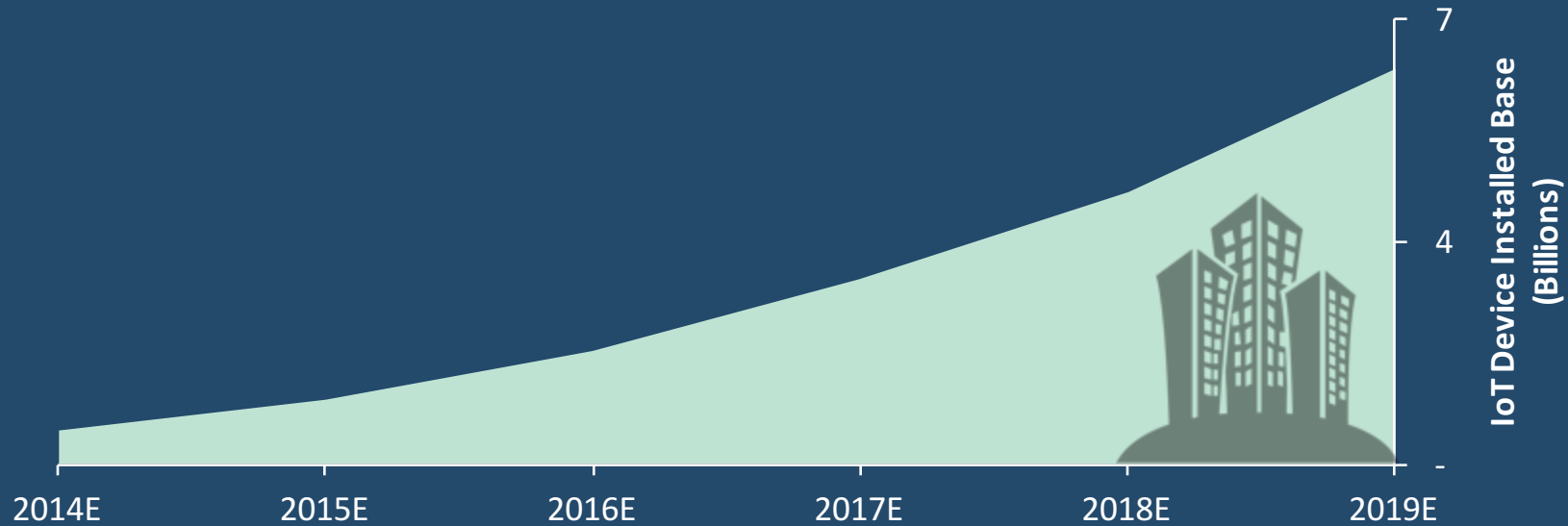
AND CITIES' INVESTMENT IN THE IOT IS SOARING

Estimated Connected Cities' Investment In IoT Systems Per Year



BY 2020, 6 BILLION IOT DEVICES WILL BE USED BY CITIES

Estimated IoT Device Installed Base for Connected Cities



Libelium Smart World

Smartphones Detection

Perimeter Access Control

Radiation Levels

Electromagnetic Levels

Traffic Congestion

Smart Roads

Smart Lighting

Intelligent Shopping

Noise Urban Maps

Water Leakages

Vehicle Auto-diagnosis

Item Location

Waste Management

Smart Parking

Golf Courses

Water Quality

Quality of Shipment Conditions

Air Pollution

Forest Fire Detection

Wine Quality Enhancing

Offspring Care

Sportsmen Care

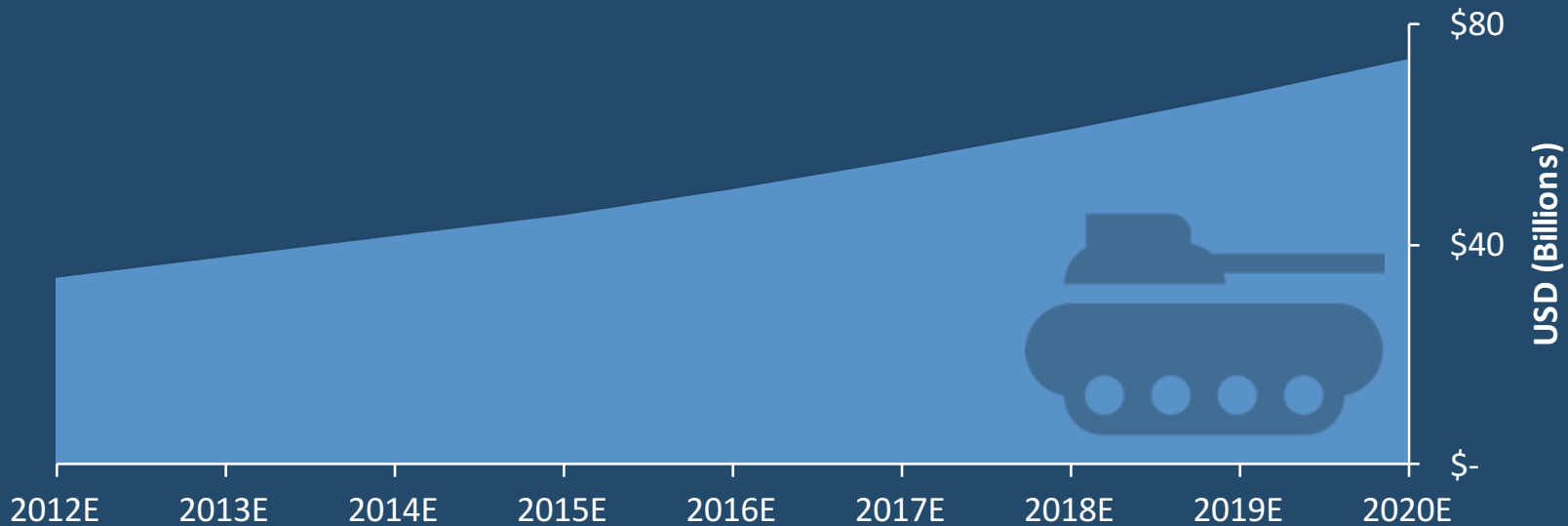
Structural Health

libelium
www.libelium.com

Source: Libelium

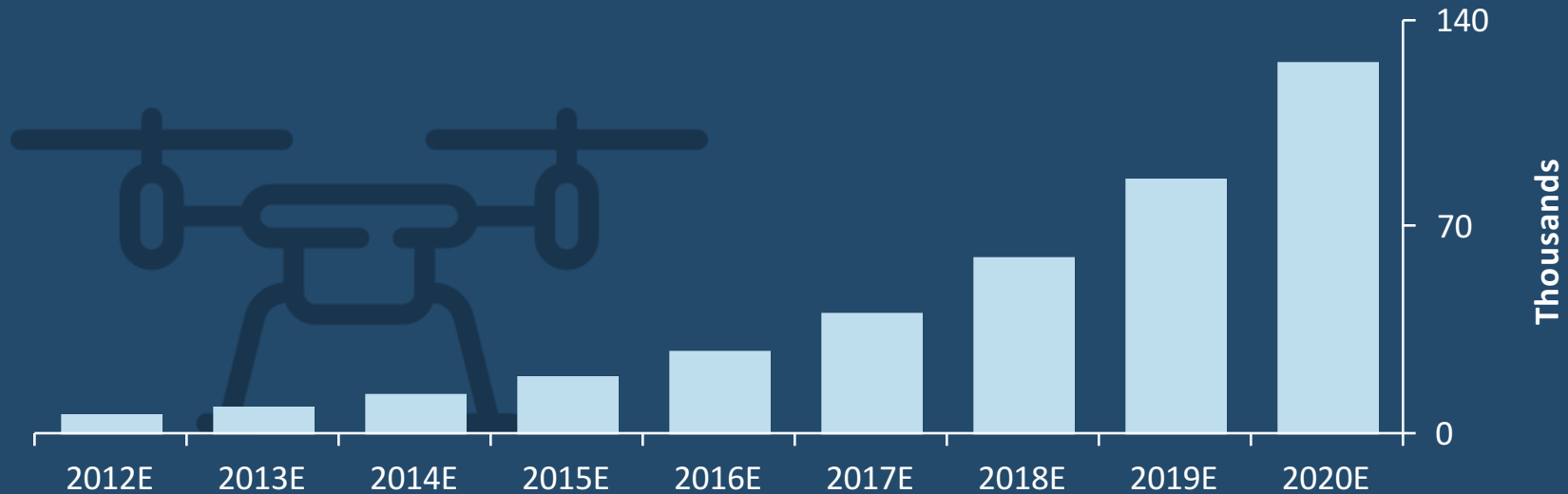
GOVERNMENTS ARE ALSO AUTOMATING THEIR DEFENSE

Global Spending on Smart Weapons



THROUGH DRONES AND ROBOTS

Global Shipments of Military Robots

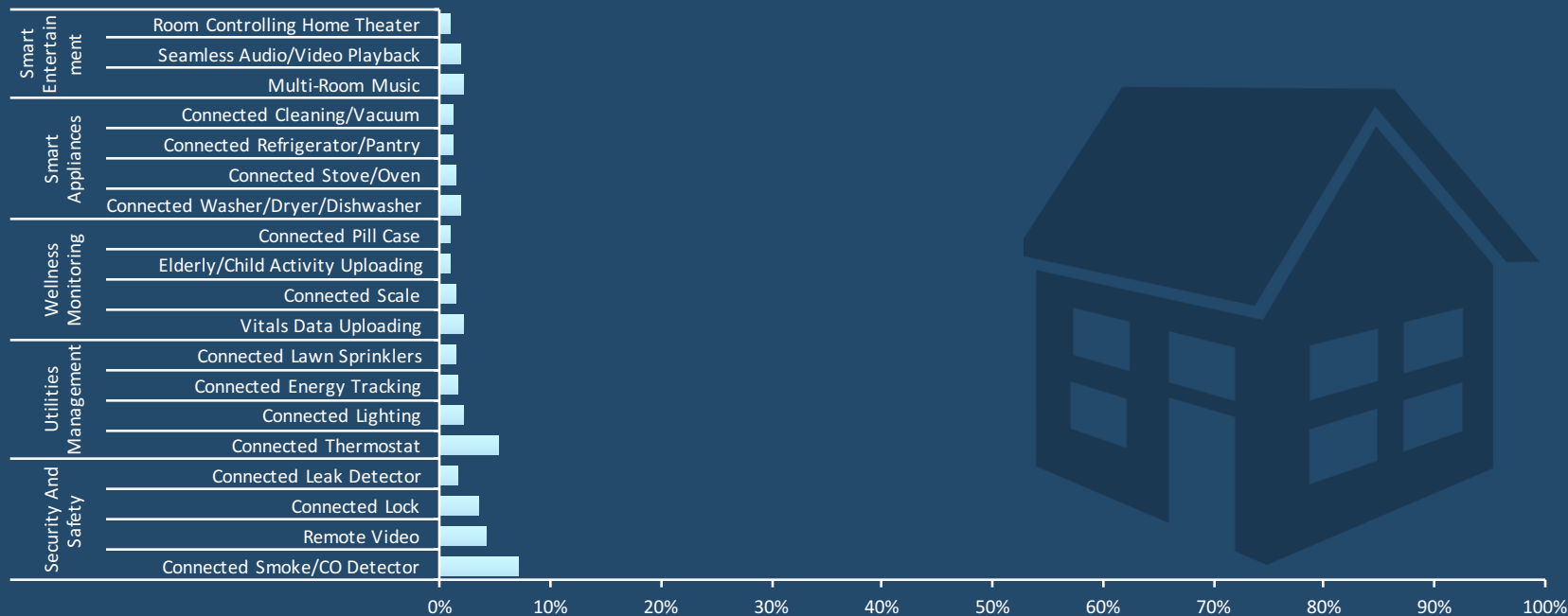




HOW ARE CONSUMERS USING IOT DEVICES?

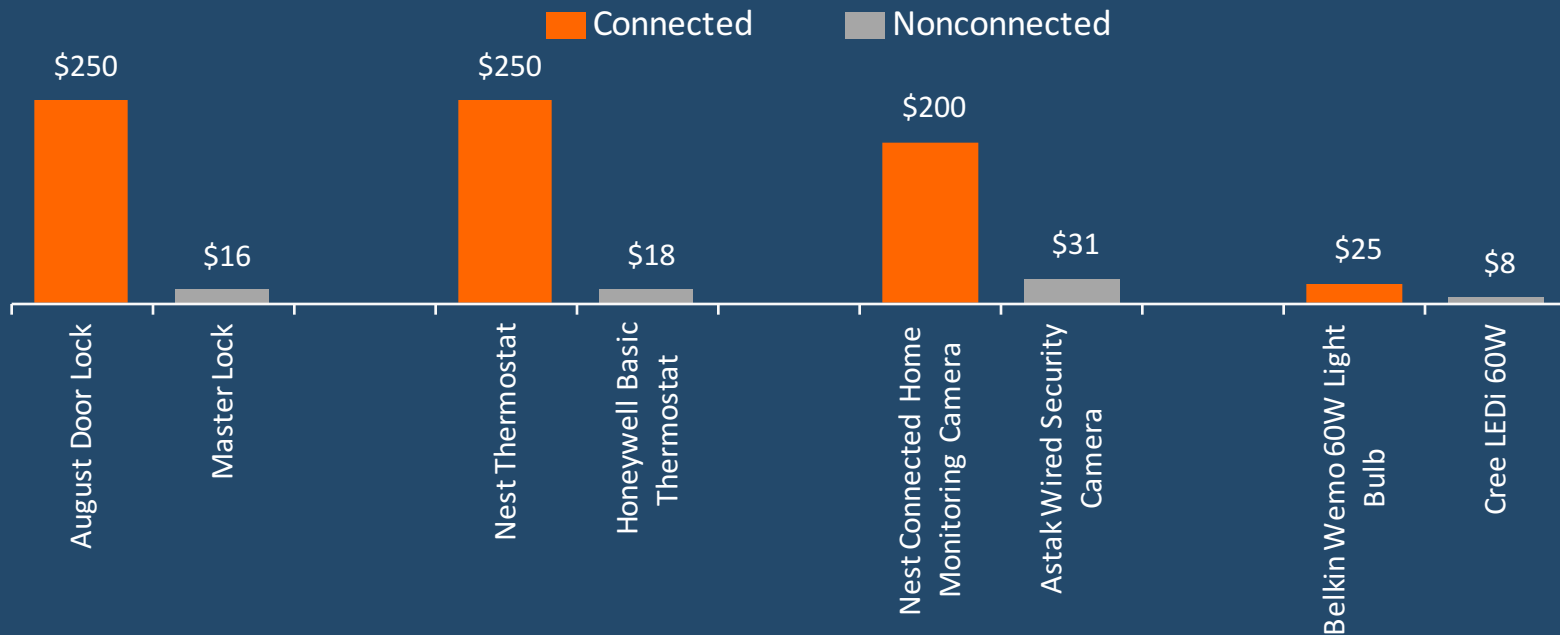
THE SMART HOME MARKET HAS BEEN STRUGGLING TO TAKE OFF

North American Smart Home Device Penetration



BECAUSE THE DEVICES ARE TOO EXPENSIVE

2015 Advertised Prices Of Connected Vs. Nonconnected Home Products

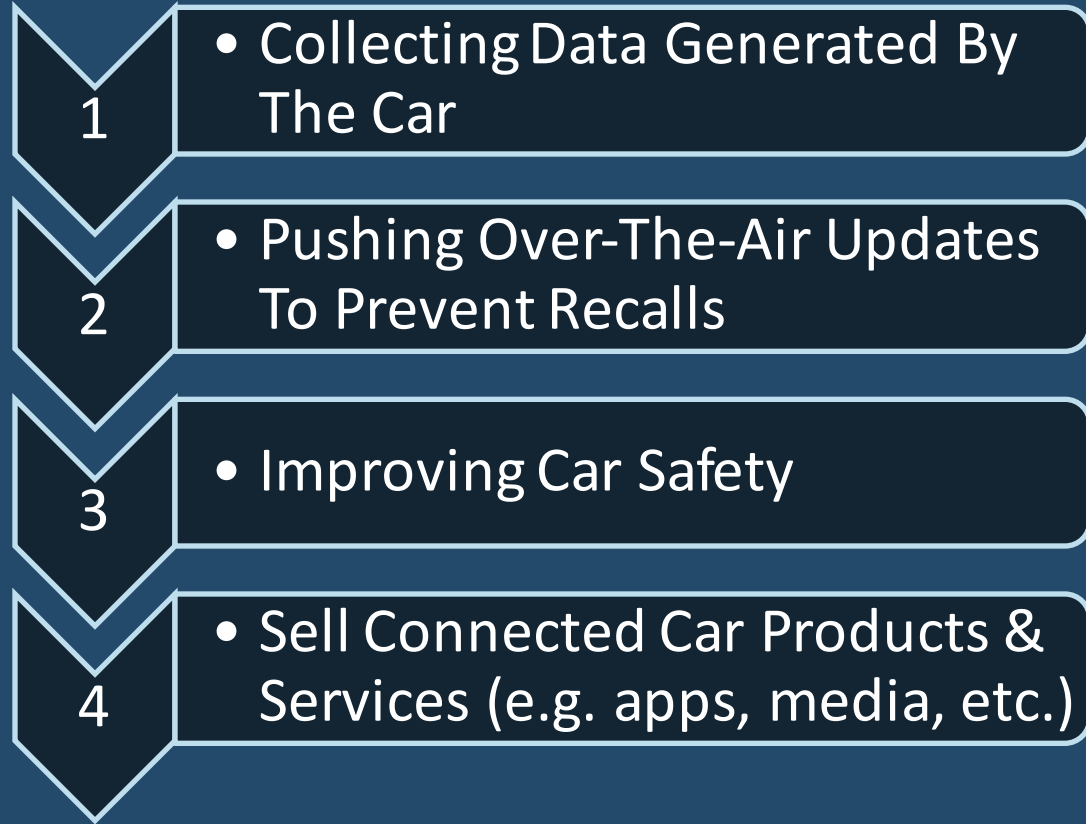


HOWEVER, THE CONNECTED CAR MARKET EXPLODED IN 2015



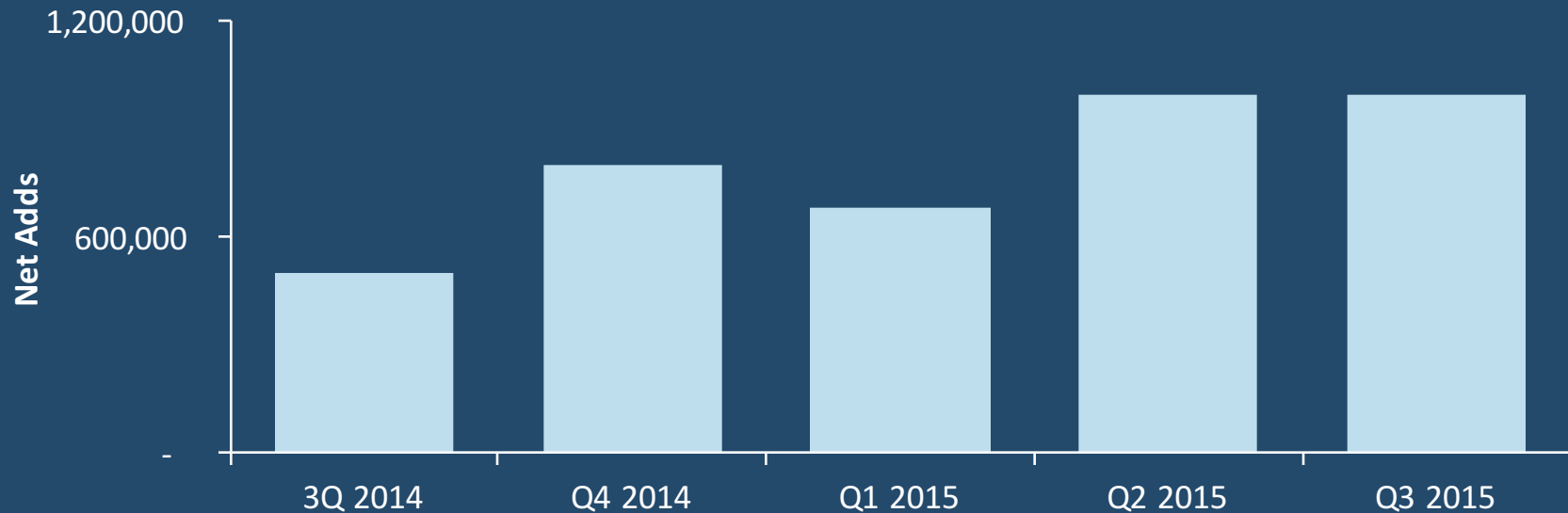
**PRIMARILY BECAUSE
AUTOMAKERS SEE
MULTIPLE INTERNAL
BENEFITS FROM
CONNECTING THE
CARS THEY SELL**

How Automakers Benefit From Connecting Cars



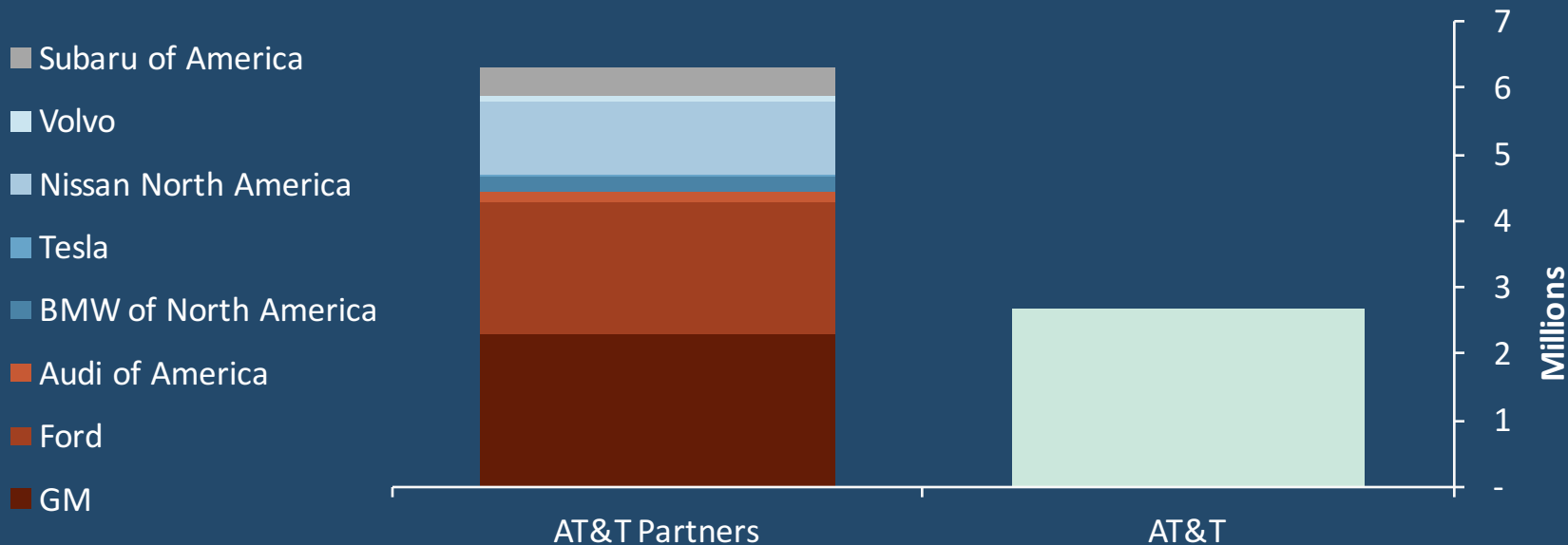
AT&T CONNECTED NEARLY 3 MILLION CARS IN THE FIRST 9 MONTHS OF 2015

AT&T Connected Car Net Adds



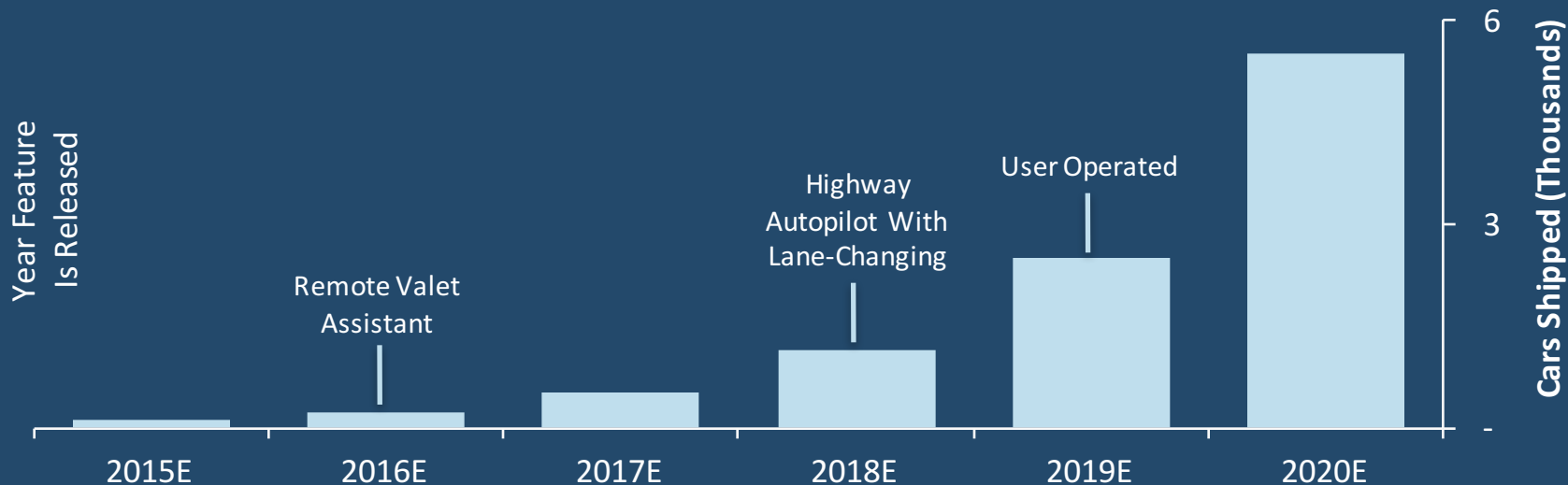
THAT'S 43% OF THE CARS THEIR 8 AUTOMAKER PARTNERS SOLD

AT&T Net Adds Vs. Total Car Sales Of 8 Partners



THESE TECHNOLOGICAL ADVANCEMENTS WILL LEAD TO A SELF-DRIVING CAR

Global Self-Driving Car Shipment Forecast

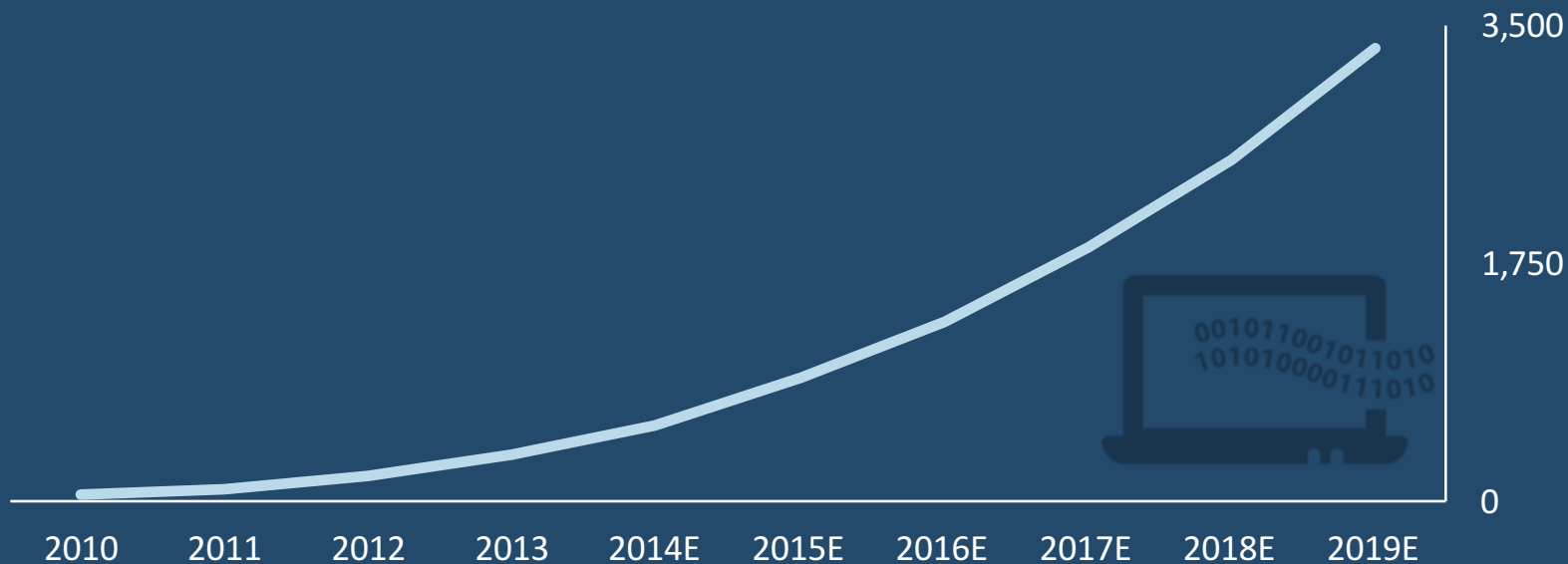




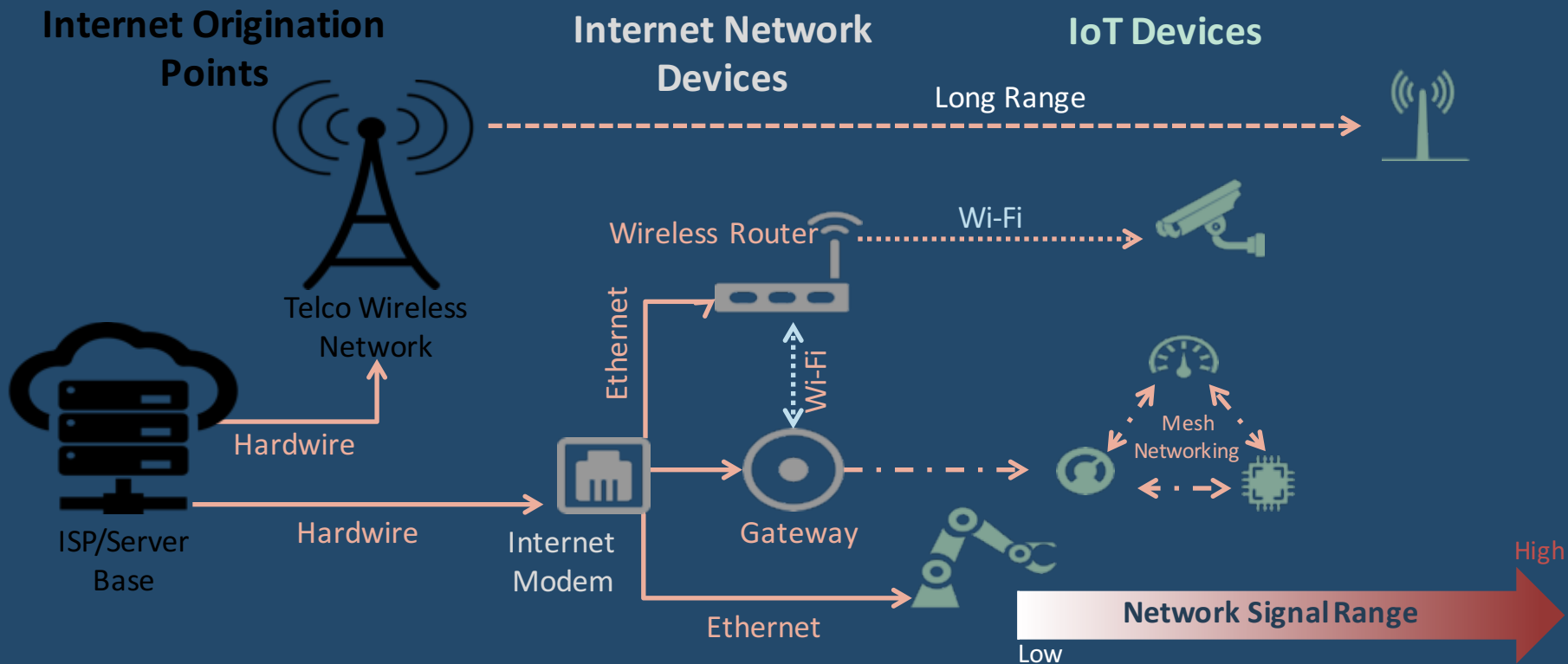
WHAT'S SLOWING THE IOT DOWN?

THE CURRENT INFRASTRUCTURE CAN'T HANDLE THE INTERNET TRAFFIC

North America Mobile Data Traffic Forecast In Petabytes Per Month



THEREFORE, NEW NETWORKS ARE BEING INTRODUCED



ALL OF THESE NEW NETWORKS ARE CONFUSING TO BUSINESSES, GOVERNMENTS, AND CONSUMERS





**THERE ARE ALSO 3 PRIVACY
AND SECURITY CONCERNS**



1.

**IOT DEVICES OFTEN LACK BASIC
CYBERSECURITY PROTECTIONS
(I.E., STRONG PASSWORDS, ENCRYPTION)**

2.

**IOT DEVICES GIVE CYBER CRIMINALS NEW
AVENUES TO STEAL SENSITIVE DATA FROM
ENTERPRISES, CONSUMERS, AND GOVERNMENTS**

3.

**STATE-BACKED HACKERS AND HACKTIVISTS
CAN USE IOT DEVICES
TO DO PHYSICAL DAMAGE**

THESE VULNERABILITIES HAVE BEEN BROUGHT TO LIGHT BY RECENT HACKS

engadget

Hackers shut down power grid in Ukraine

It's thought to be the first cyber attack to cause a blackout.

WALL STREET
JOURNAL

6:40 pm ET
Dec 18, 2014

SECURITY

Cyberattack on German Iron Plant Causes 'Widespread Damage'

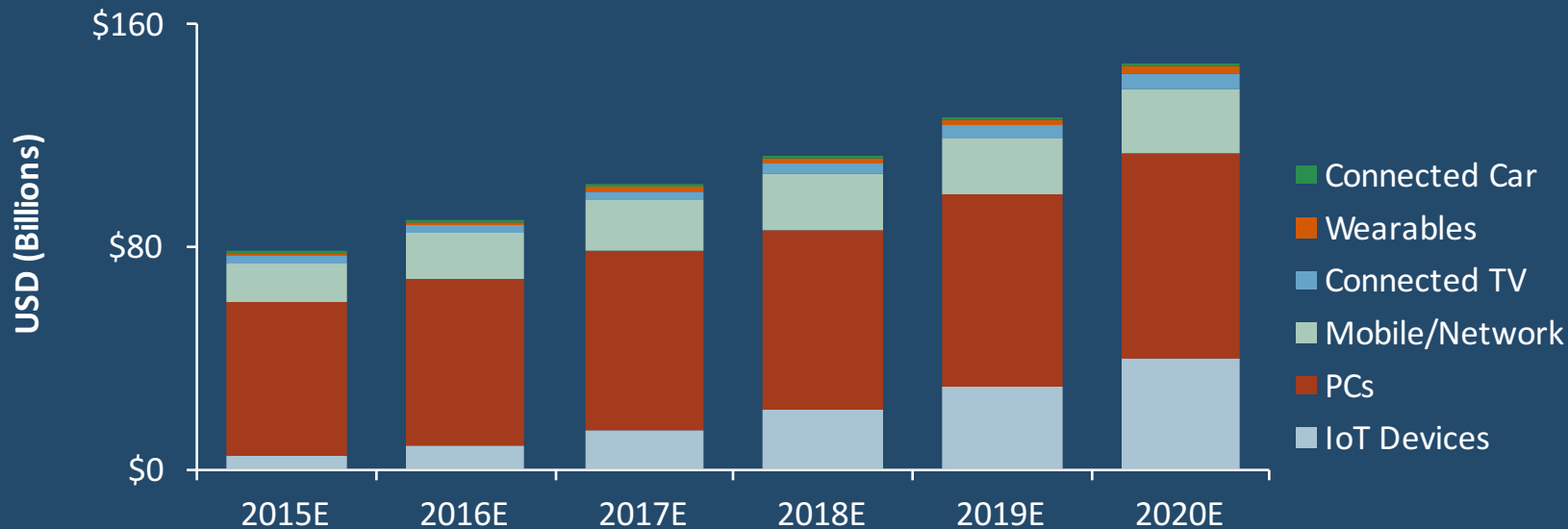
ANDY GREENBERG SECURITY 07.21.15 6:00 AM

HACKERS REMOTELY KILL A JEEP ON THE HIGHWAY—WITH ME IN IT

WIRED

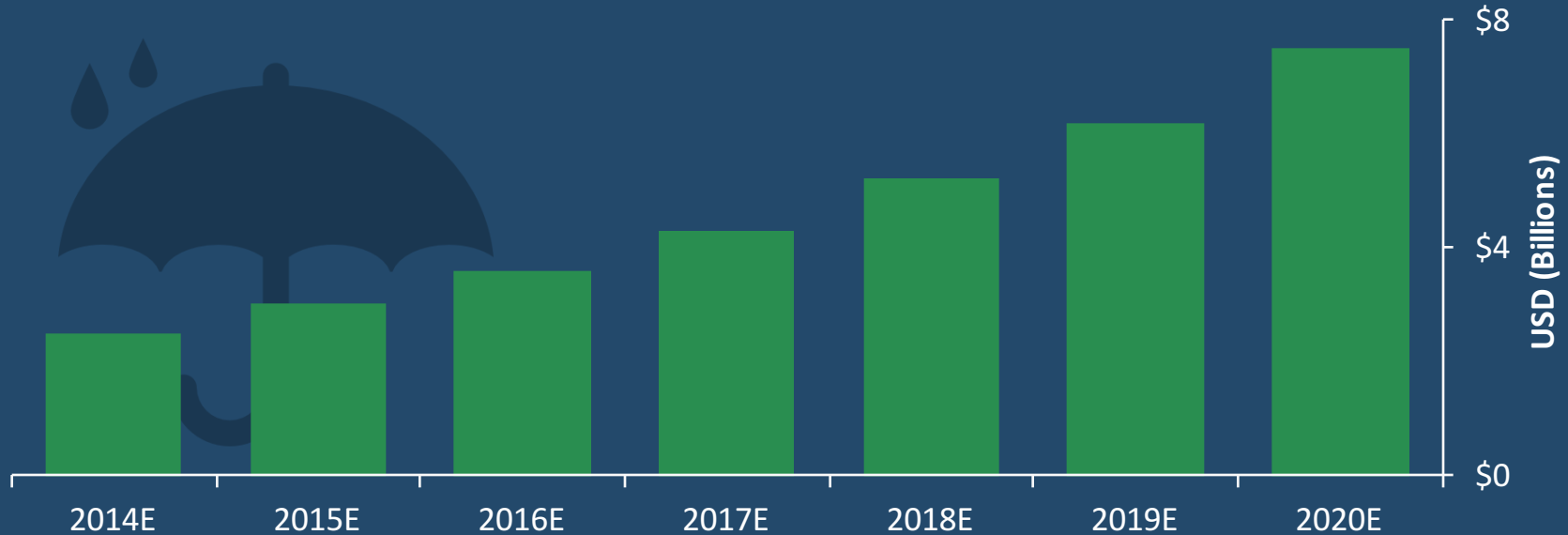
AS A RESULT, IN 2016, WE EXPECT CYBER SECURITY INVESTMENTS TO RISE

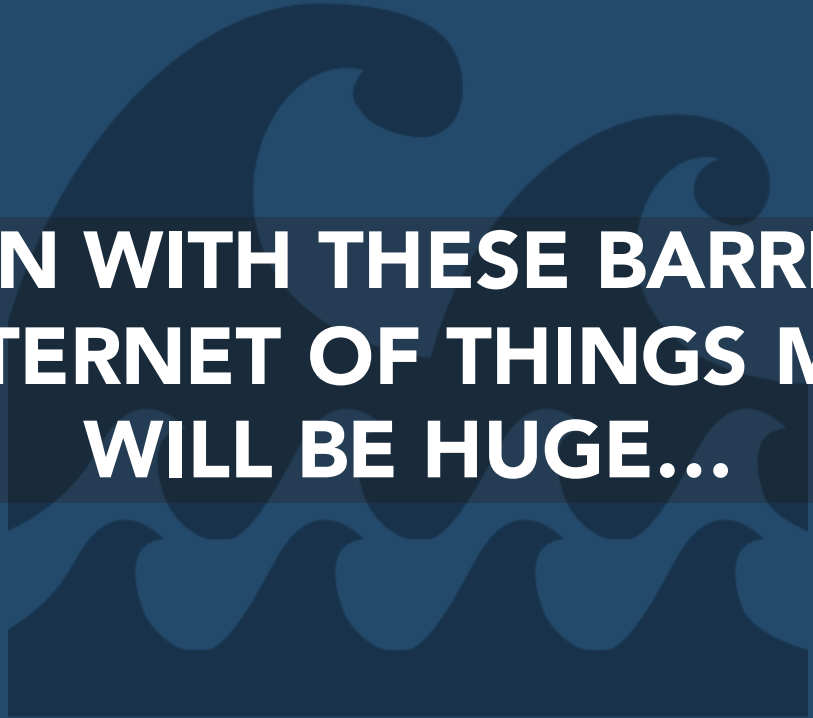
Estimated Global Cybersecurity Market



AND DEMAND FOR CYBER INSURANCE IS SET TO EXPLODE

Estimated Global Annual Cyber Insurance Premiums Written

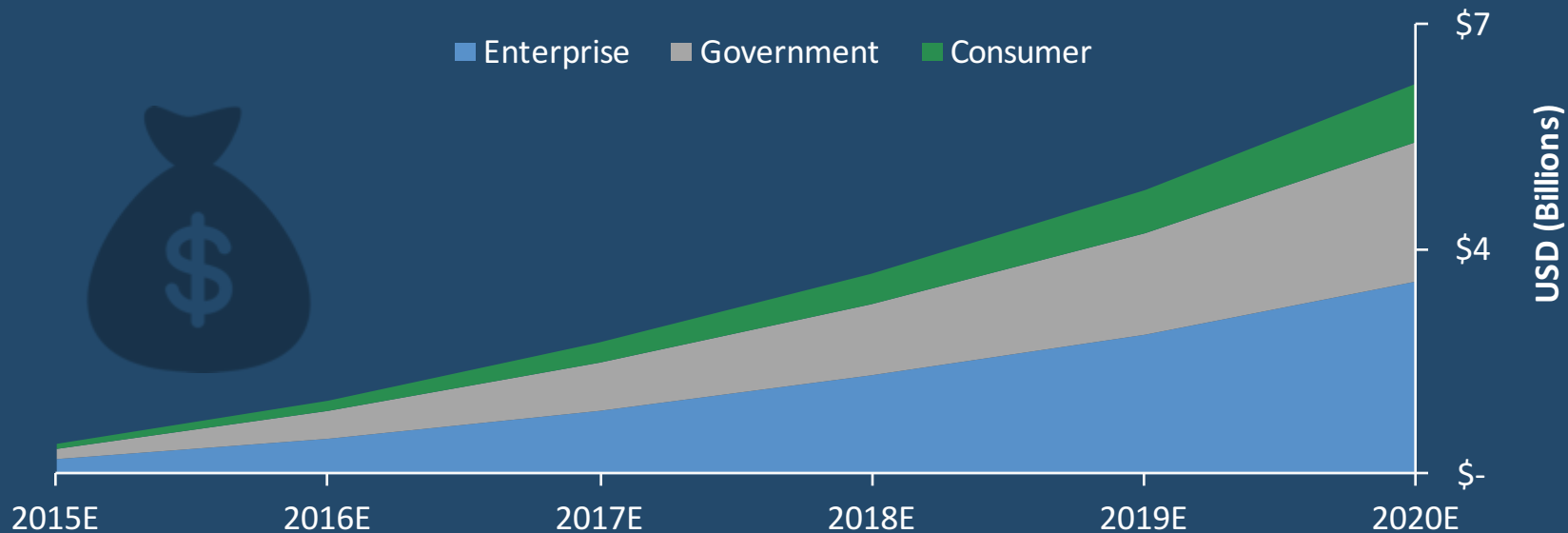


A stylized, dark blue wave graphic with three distinct peaks, centered behind the text.

**EVEN WITH THESE BARRIERS
THE INTERNET OF THINGS MARKET
WILL BE HUGE...**

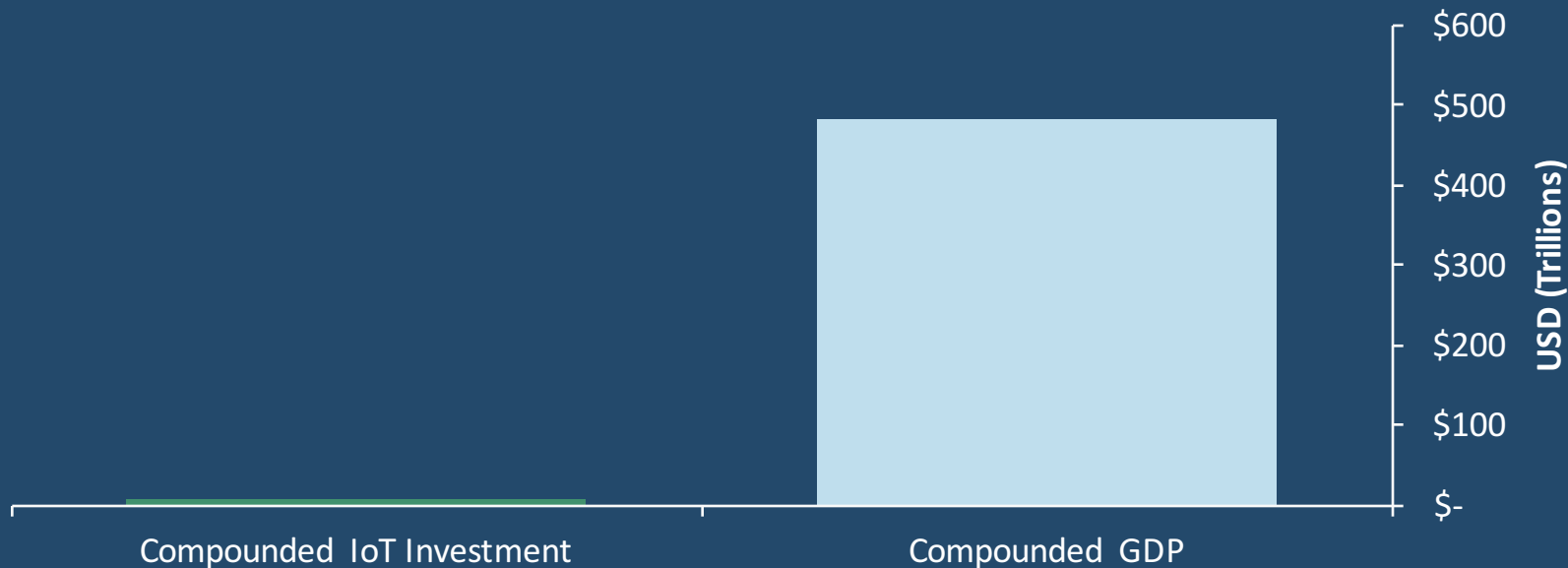
IN TOTAL, \$6 TRILLION WILL BE INVESTED ON IOT SOLUTIONS BETWEEN 2015-2020

Estimated Global IoT Investment Per Year



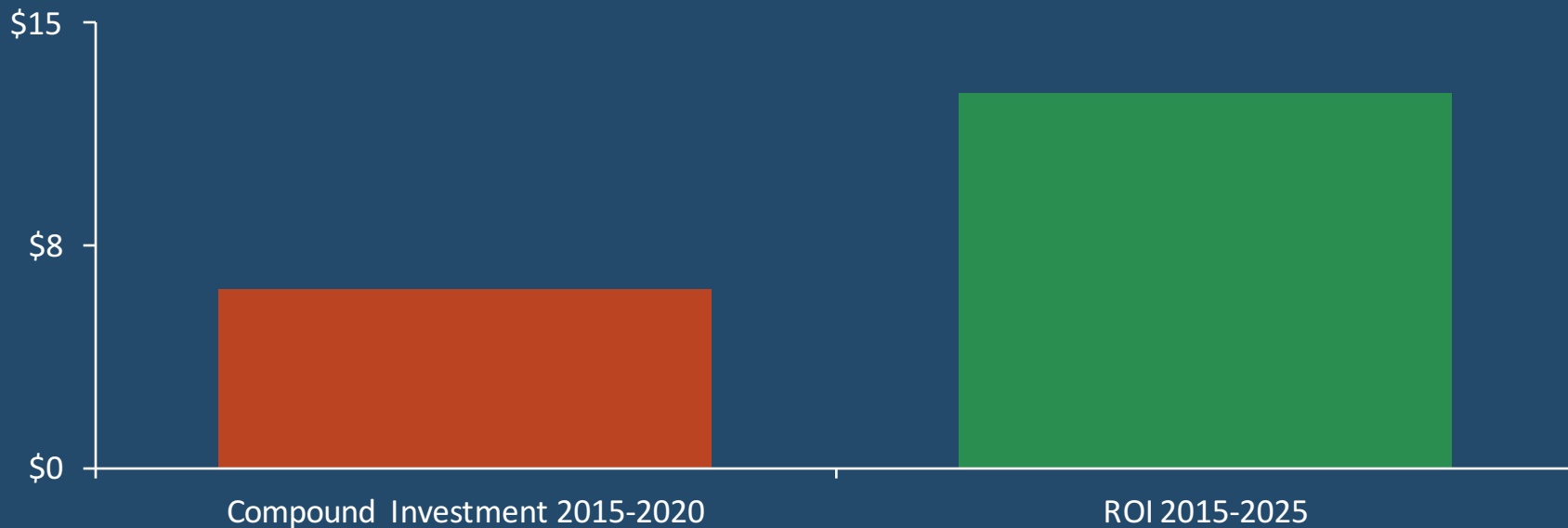
THAT'S 1.25% OF THE GLOBAL GDP DURING THAT SAME TIME

Compounded Global IoT Investment vs. Compounded Global GDP (2015-2020)



THAT \$6T INVESTMENT WILL GENERATE A \$12.6T ROI OVER THE NEXT DECADE

Estimated Global IoT Return On Investment



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"I have found at least one great piece of new, useful information in the BI Intelligence newsletters every single day. They are quick and to-the-point. BII is coming out with new and insightful information every single day."

Peter Sedlarcik, EVP - Business Insights & Intelligence, Havas Media

"BI Intelligence is one of the main resources I use on a daily basis to stay ahead of the ever-changing digital media curve. The BII research team publishes great charts and reports in a timely manner. I find about 4 or 5 reports to be useful every month."

Francis Che, Head Of Insights Strategy & Research – APAC, Yahoo

"BII research has no agenda – it's an objective source of market intel. Plus, BII analyzes info from multiple sources. As a smaller company, that's super valuable to us."

Dee Dee Walsh, VP of Marketing & Business Development, Mobilize.net

"Darwin noted 'It is not the strongest of species that survives nor the most intelligent, but those most responsive to change.' Consider BI Intelligence a critical tool to not just to survive but thrive. You must read it daily, subscribe to multiple lists, review the reports. It is one of the few resource that I rely on to prepare me for change and the future."

Michael Becker, Managing Partner, mCordis

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