



# M&A and Corporate Finance Trends in the IoT Sector

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# Introduction to Redwood Capital



# Introduction to Redwood



Global investment banking services for companies across the technology, communications, media, and business service industries

## Mergers & Acquisitions

- Sell Side / Divestitures
- Buy Side / Strategic Acquisitions
- Buyouts
- Mergers of Equals

## Corporate Finance

- Growth Stage Capital
- Buyout Capital / Private Equity
- Mezzanine and Debt Financing
- Acquisition Financing / Project Financing

## Restructuring

- Sale / Refinancing of distressed companies
- Chapter 363 Asset Sales
- Chapter 11 plan / reorganization / sale
- Assignment for the Benefit of Creditors (ABCs)

## Valuation Services

- Fairness and Solvency Opinions
- Financial and Tax Reporting (IRC 409A, ASC 718, 805, 350, 360, and 820)
- Intangible Asset Valuation

## Co-Investment Partnership

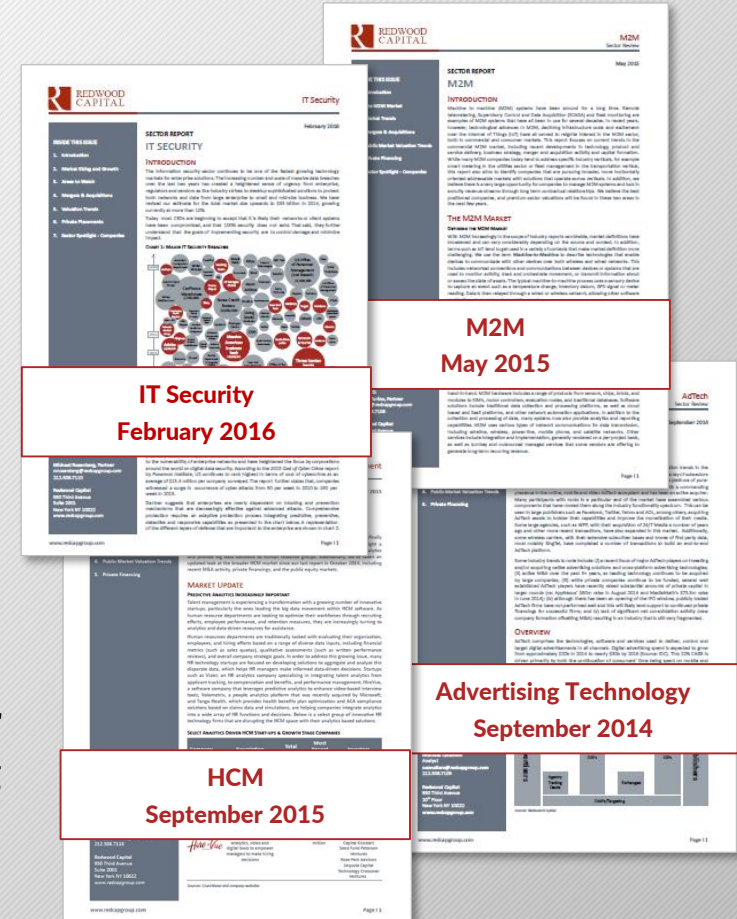
- Invest between \$25m - \$150m per deal alongside select Redwood client transactions worldwide
- Focus on Growth Equity, Buyout, and Mezzanine; no Venture Stage

# Industry and Sector Focus



**Strong technology, media and communication (“TMT”) focus across multiple industry verticals and sectors**

**Industry recognized research and sector focused reporting**





# International Expertise



## Globally recognized cross-border M&A and corporate finance expertise

- **8** locations in Europe and North America
- **50** professionals
- **75** closed cross-border transactions

NEW YORK  
LOS ANGELES  
LONDON  
PARIS  
MUNICH  
BERLIN  
AMSTERDAM



### LD&A Redwood Joint Venture

- Founded by two leading TMT investment banking firms
- Focus exclusively on cross-border transactions
- Fully staffed offices across Europe and North America

LD&A Redwood



# Select Transactions



## Extensive Experience in IoT Technology

 Has sold a majority stake to  January 2016	 Has been acquired by  March 2014	 Has been acquired by  \$45,000,000 January 2014	 Has acquired  May 2013	 Has Been Acquired By  May 2013	 Has sold  April 2013	 Has been acquired by  \$30,000,000 March 2013	 Has acquired  January 2013
 Has acquired  September 2012	 Has been acquired by  \$43,700,000 August 2006	 Has Been Acquired By  February 2011	 Has been acquired by  September 2009	 Has acquired  December 2009	 Has acquired  March 2009	 Has acquired  October 2008	 Has merged with  May 2007

IoT Market



# Internet of Things - Defined

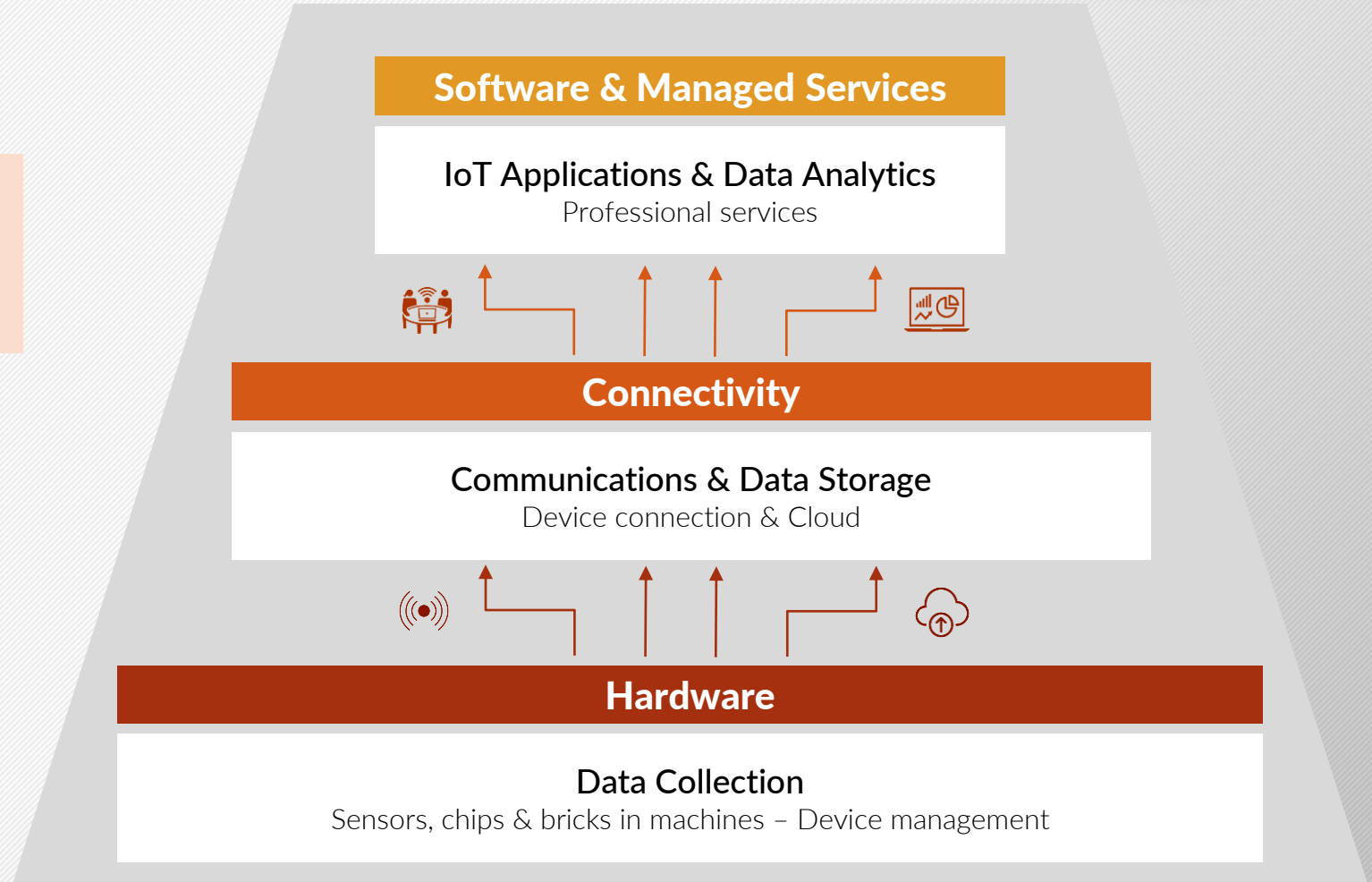


## IoT

The network of physical objects with embedded technology that communicate and interact with themselves or the external environment

- IoT covers a variety of **industries** and **applications** including **consumer oriented applications** such as home automation, fitness etc.
- This presentation focuses on **Commercial & Industrial IoT\***

\*Referred to as M2M in Redwood sector reports

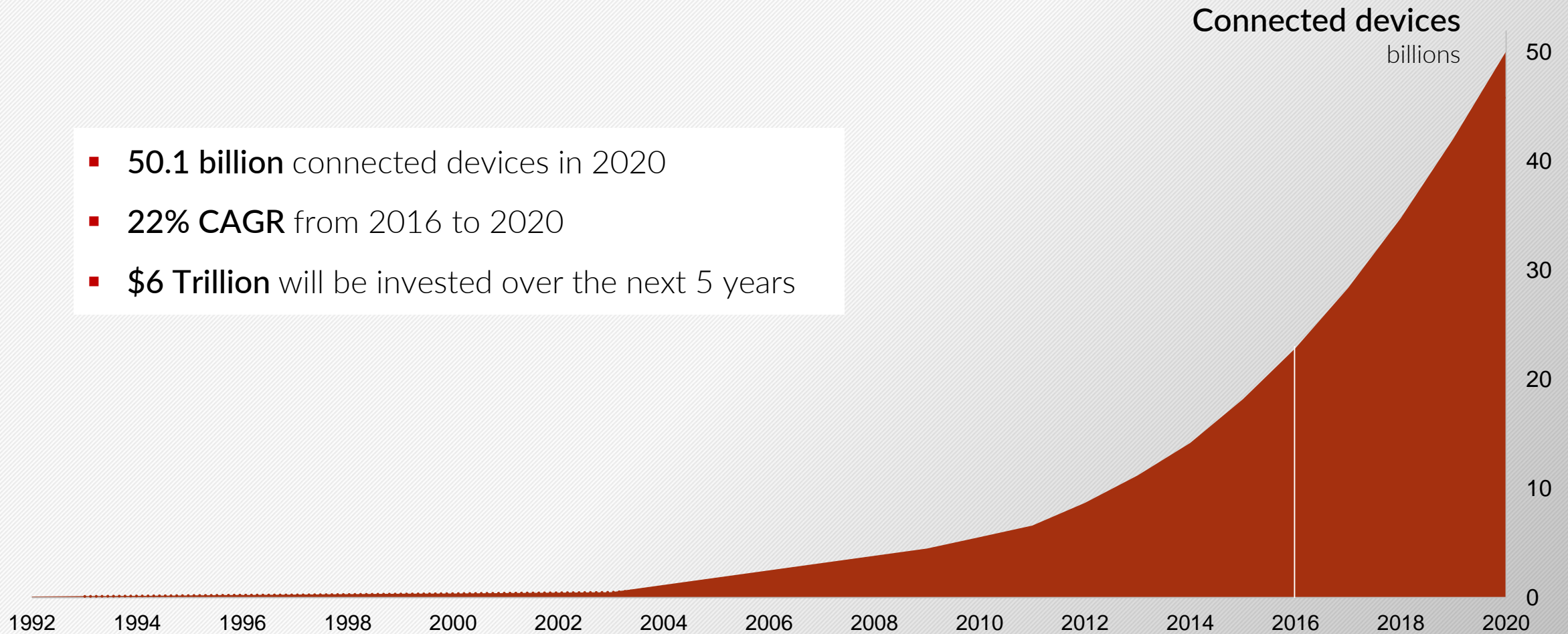




# IoT Market Trends



- **50.1 billion** connected devices in 2020
- **22% CAGR** from 2016 to 2020
- **\$6 Trillion** will be invested over the next 5 years



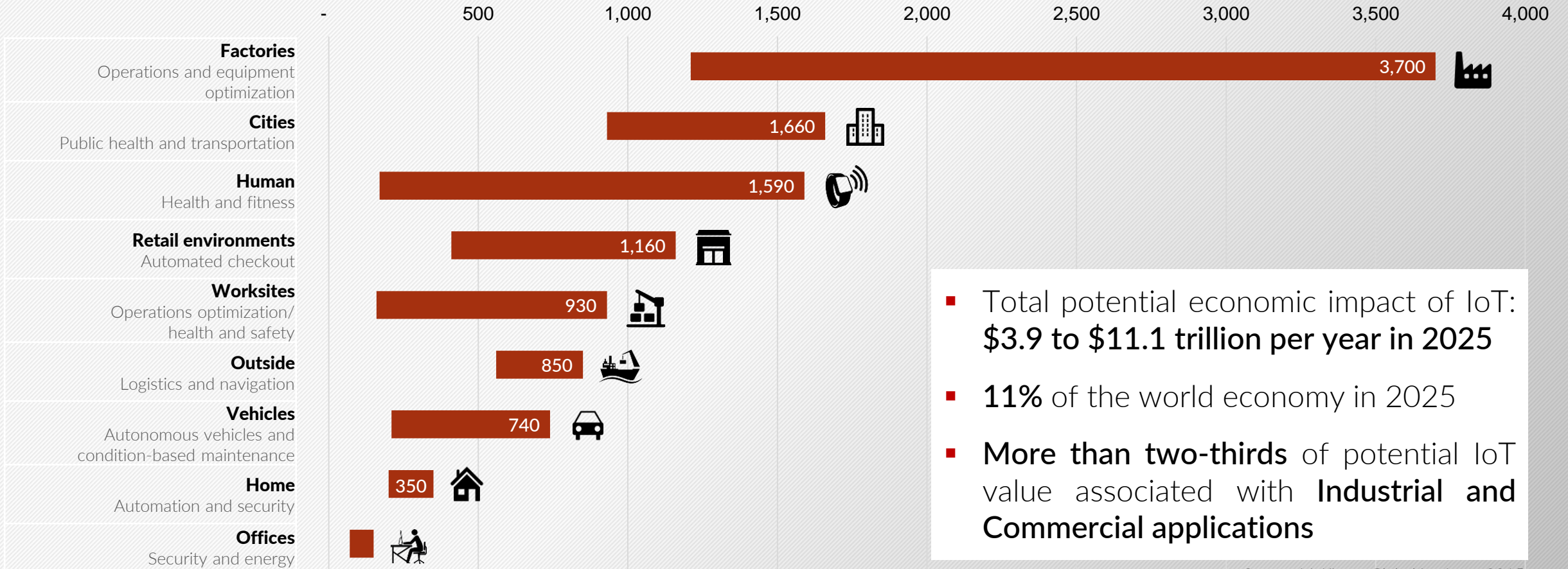
Sources: Forbes, 2015; EIT Digital, 2015; Business Insider - The IoT Ecosystem Research Report 2016

# IoT Market Breakdown



## Potential economic impact of IoT in 2025 (\$ billion)

Ranges represent low and high estimates



- Total potential economic impact of IoT: **\$3.9 to \$11.1 trillion per year in 2025**
- **11%** of the world economy in 2025
- **More than two-thirds** of potential IoT value associated with **Industrial and Commercial applications**

Source: McKinsey Global Institute, 2015

# M2M Market Trends



# Growth Drivers



## High ROI

- Measured in months / weeks vs. years
- Key operational benefits: real time data collection, immediate detection, preventative maintenance, optimization
- “By 2025, best-in-class organizations that extensively use IoT technologies in their products and operations will be **10% more profitable**”<sup>1</sup>

## Higher Network Availability

- Increase in mobile network coverage
- Higher bandwidth availability (4/5G)
- More efficient short range protocols

## Lower Hardware Costs

- Decrease in infrastructure costs of MEMS, sensors, storage, servers...
- Ability to use off the shelf, standardized components

## More Sophisticated Applications

- Both monitoring and controlling
- Trending analytics
- Artificial Intelligence, drones, robotics

<sup>1</sup> Source: Verizon IoT report



# Growth Challenges



## Interoperability

- Adopting open standards – uniform data transmission
- Standard protocols for sharing between IoT systems
- “Without interoperability, at least 40% of potential benefits cannot be realized”<sup>1</sup>

## Public Policy

- Some IoT applications cannot proceed without regulatory approval (ex: self-driving cars)
- Creation of appropriate regulatory standards in health care
- Agreements on fair practices for data sharing and use

## Software & Hardware Technology

- Confidence in security across entire IoT ecosystem
- Additional capacity and bandwidth in the cloud
- Costs of certain sensors still need to drop more

## IP, Security, Privacy & Confidentiality

- \$35 billion spent annually on network and data security but relatively little on IoT security
- From hacks of cars and planes to dams to nuclear plants, people have been shown how unsecure connected devices can be
- A common understanding of ownership rights to data is needed

<sup>1</sup> Source: McKinsey report, 2015

# Business Strategy Overview



# Business Models



Many of the market leaders started here

## Hardware

Primary business	Sensor, server and database infrastructure; integration services
Addressable market (2018 estimates*)	Typically verticalized Worldwide: \$4bn US: \$1.3bn
Typical revenue model	One-time sale; project-based services
Gross margin profile	Low

\* Source: ABI Research, Q4 2014

# Business Models



Strong historical growth and strategic interest

	Hardware	Connectivity
Primary business	Sensor, server and database infrastructure; integration services	Wired and wireless short and long range communications
Addressable market (2018 estimates*)	Typically verticalized Worldwide: \$4bn US: \$1.3bn	Horizontal Worldwide: \$25bn US: \$6bn
Typical revenue model	One-time sale; project-based services	Recurring services
Gross margin profile	Low	Medium

\* Source: ABI Research, Q4 2014



# Business Models



	Hardware	Connectivity	Software
<b>Primary business</b>	Sensor, server and database infrastructure; integration services	Wired and wireless short and long range communications	System management; data collection, integration and analytics
<b>Addressable market (2018 estimates*)</b>	Typically verticalized Worldwide: \$4bn US: \$1.3bn	Horizontal Worldwide: \$25bn US: \$6bn	Vertical and horizontal Worldwide: \$80-120 bn US: \$20-30 bn
<b>Typical revenue model</b>	One-time sale; project-based services	Recurring services	Subscription or perpetual license + maintenance
<b>Gross margin profile</b>	Low	Medium	High

Mostly vertical today; horizontal examples include OS & analytics

\* Source: ABI Research, Q4 2014

# Business Models



Expect to see more in the future

	Hardware	Connectivity	Software	Managed Services
Primary business	Sensor, server and database infrastructure; integration services	Wired and wireless short and long range communications	System management; data collection, integration and analytics	Outsourced system management and monitoring
Addressable market (2018 estimates*)	Typically verticalized Worldwide: \$4bn US: \$1.3bn	Horizontal Worldwide: \$25bn US: \$6bn	Vertical and horizontal Worldwide: \$80-120 bn US: \$20-30 bn	
Typical revenue model	One-time sale; project-based services	Recurring services	Subscription or perpetual license + maintenance	Recurring services
Gross margin profile	Low	Medium	High	Medium-High

\* Source: ABI Research, Q4 2014

# M&A Activity



# Top 10 M&A Deals (2010 to 2016 YTD)



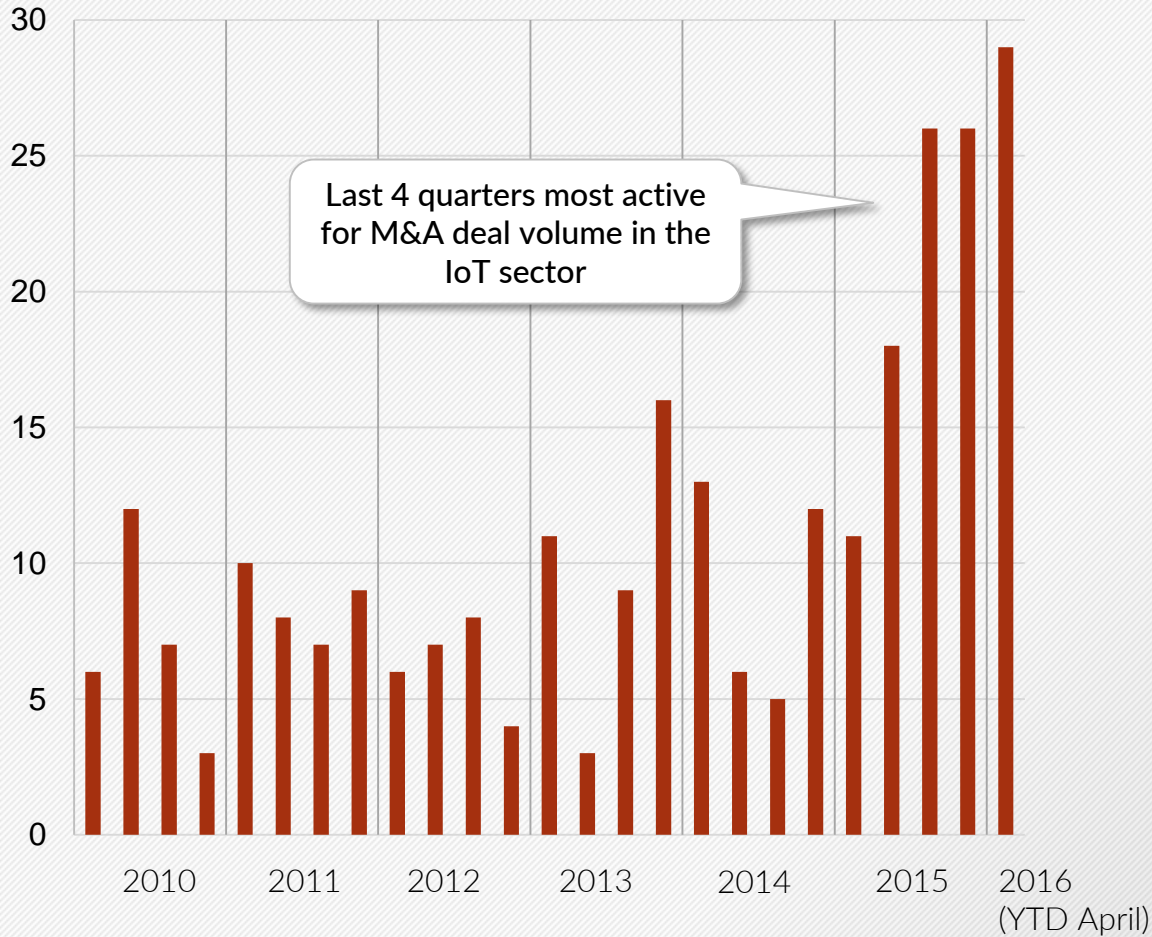
	Year	Transaction Value	Target Sector	Target	Buyer	Revenue Multiple	EBITDA Multiple
1	2016	1,400.0	Connectivity Services & Software	 Jasper™	 CISCO	7.5x	n.a.
2	2013	788.0	Fleet Management Software Platform	 OmnitracS	 Vista Equity Partners	n.a.	n.a.
3	2012	713.1	Telematics Services	 HUGHES TELEMATICS, INC.	 verizon	9.2x	n.a.
4	2014	546.9	Telematics Services	 OCTO Telematics	 RENOVA GROUP	n.a.	n.a.
5	2016	500.0	Fleet Tracking & Risk Management Solutions	 lytx DriveCam	 GTCR	n.a.	n.a.
6	2016	480.0	Safety & Security Sensors	 xtralis.	 Honeywell	n.a.	n.a.
7	2011	473.8	Fleet Tracking Solutions	 TRACKER	 Actis <small>The positive power of capital</small>	n.a.	n.a.
8	2010	313.2	Traffic Safety Sensors	 REDFLEX TRAFFIC SYSTEMS	 THE CARLYLE GROUP	2.3x	7.8x
9	2013	252.8	Connectivity Services	 TELULAR™	 AVISTA CAPITAL PARTNERS	2.6x	12.3x
10	2010	198.6	Connectivity Services	 CINTERION <small>a Gemalto company</small>	 gemalto*	1.1x	n.a.



# M&A Activity

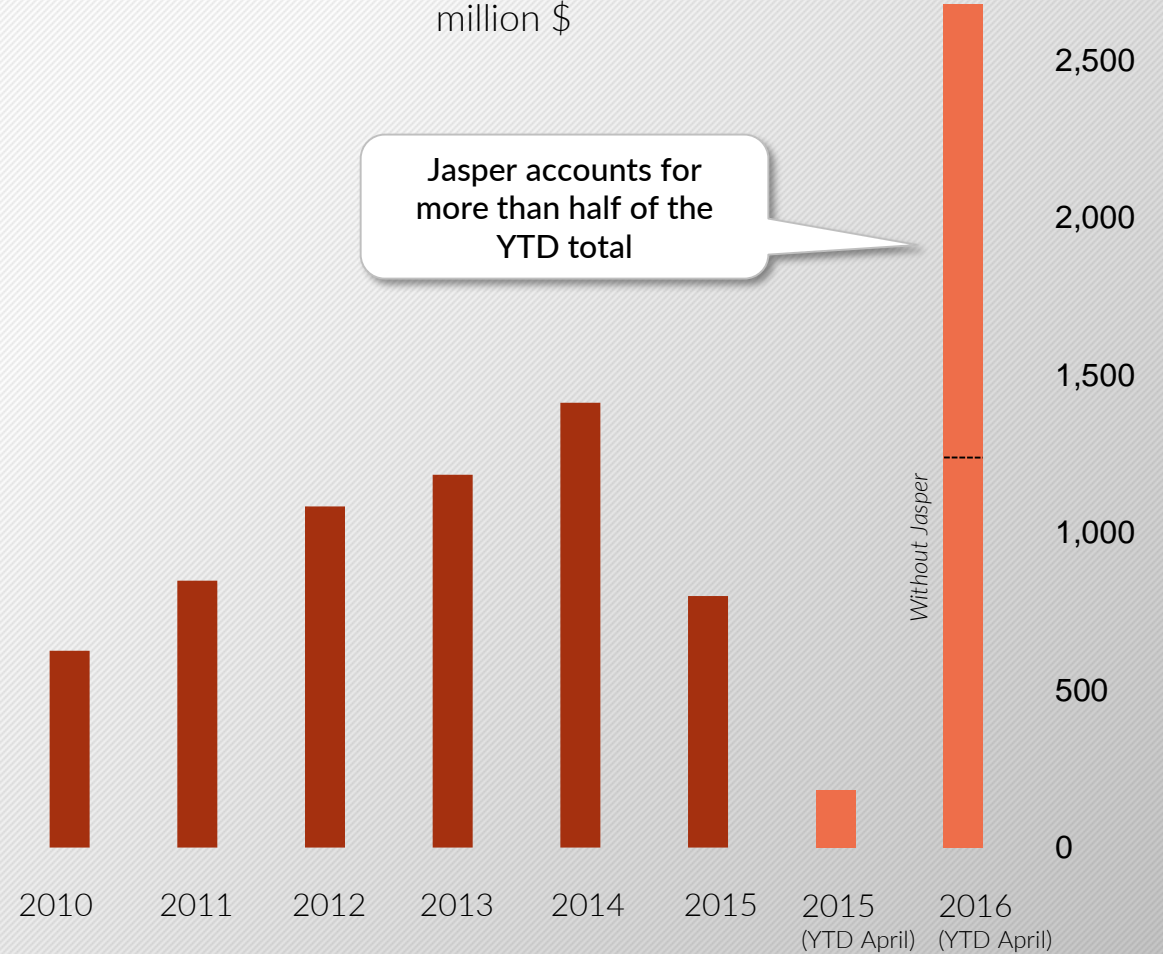


### Deal Volume Per Quarter



### Total Disclosed Value

million \$



# M&A Activity - Valuations

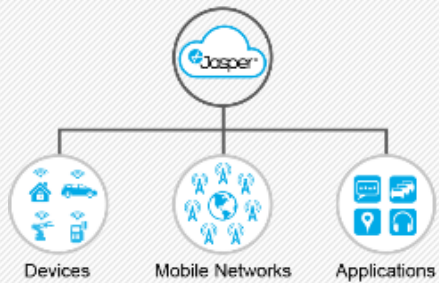


	Median			Mean			High		
	Deal Value	Revenue Multiple	EBITDA Multiple	Deal Value	Revenue Multiple	EBITDA Multiple	Deal Value	Revenue Multiple	EBITDA Multiple
2016 (YTD April)	101.5	1.1x	8.8x	297.8	2.7x	8.8x	1,400.0	7.5x	8.8x
2015	20.0	0.9x	10.0x	40.3	1.2x	17.6x	184.2	3.0x	64.5x
2014	23.9	1.5x	18.3x	74.4	1.7x	27.2x	546.9	3.1x	55.4x
2013	6.8	1.4x	7.2x	56.4	1.5x	8.0x	788.0	3.5x	12.3x
2012	13.5	1.0x	8.2x	98.5	2.1x	12.2x	713.1	9.2x	24.9x
2011	12.6	n.a.	n.a.	47.1	2.3x	25.8x	473.8	n.a.	n.a.
2010	13.3	n.a.	7.8x	56.8	1.6x	7.8x	313.2	2.4x	7.8x
<b>Total</b>	<b>16.2</b>	<b>1.2x</b>	<b>8.8x</b>	<b>16.7</b>	<b>1.7x</b>	<b>8.8x</b>	<b>1,400.0</b>	<b>9.2x</b>	<b>64.5x</b>

# M&A Activity - Case Studies



## Jasper Technologies



Feb 2016



## Elecsys Corporation

Nov 2014



Jasper Technologies is a **cloud-based IoT platform** that enables businesses to **launch, manage, and monetize** IoT services worldwide

Elecsys provides **custom electronic equipment**, data acquisition and management systems for **industrial applications** worldwide

- Revenue Model: Connectivity Services & Software
- Transaction Value: \$1,400 million
- TTM Revenue: \$185 million (est.)
- TTM Revenue growth: > 50% (est.)

- Revenue Model: Hardware & Services
- Transaction Value: \$71 million
- Revenue: \$30 million
- Gross Margin: 38 % - EBITDA Margin: 13 %
- EV/LTM EBITDA: 18.3x
- Growth: ~20% per year

**EV/LTM Revenue: ~7.5x**

**EV/LTM Revenue: 2.4x**

# Private Placement Activity

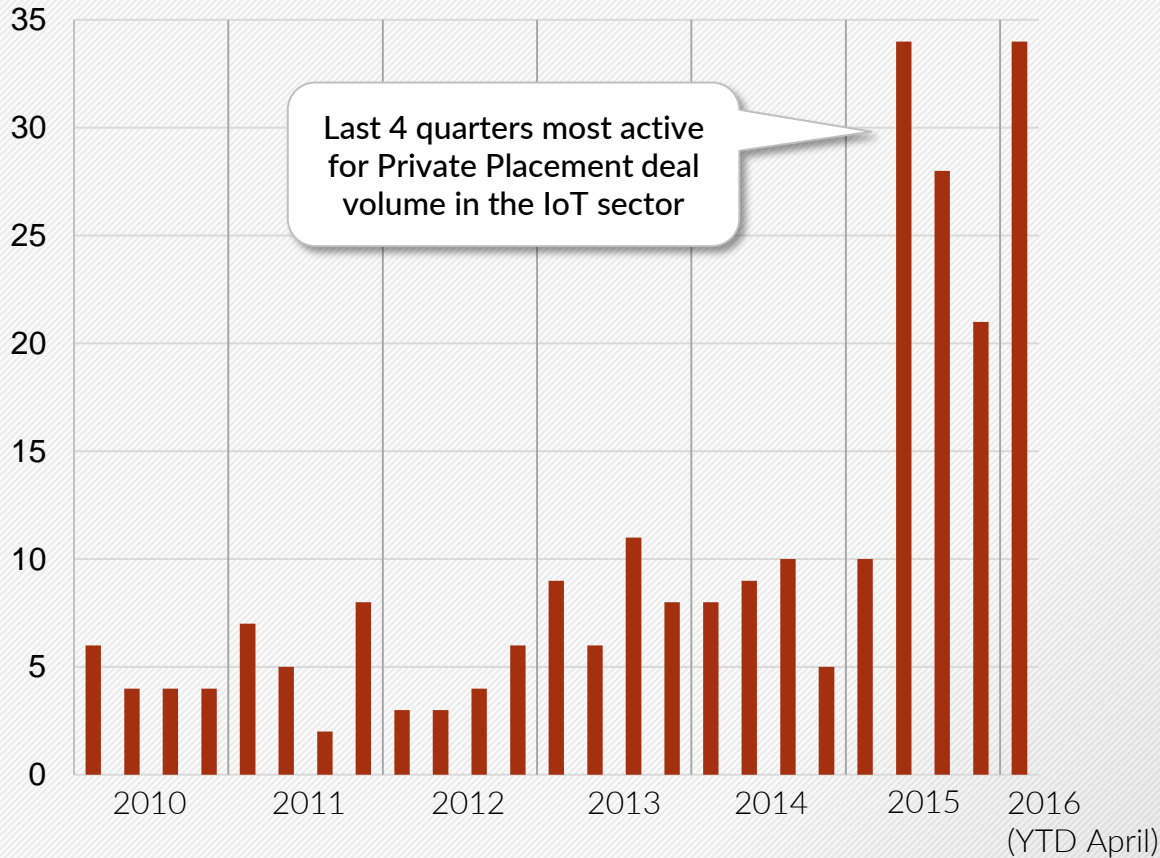


# Private Placement Activity

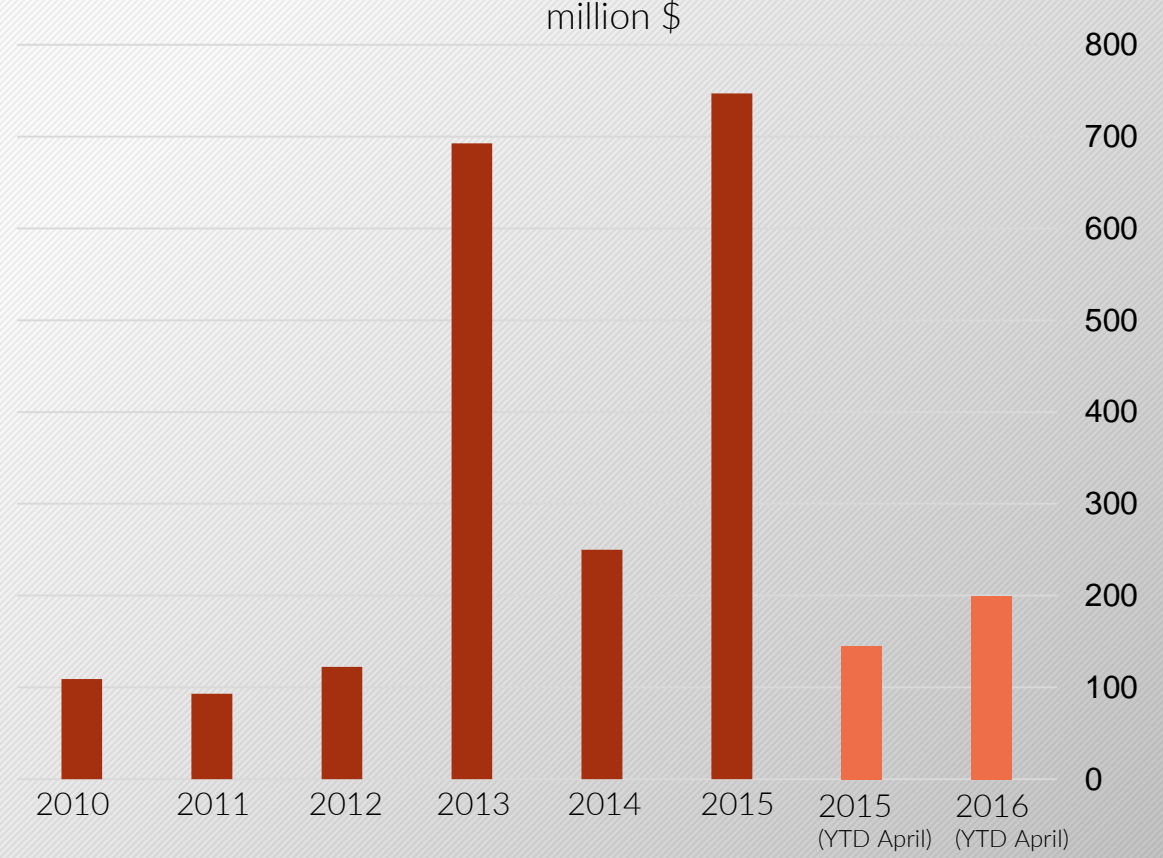


Private Equity invested in IoT since 2010: \$ 2,248 million

Deal Volume Per Quarter



Total Disclosed Value





# Most Active Investors



## Most Active Investors in IoT

## Most Active Investors in Industrial IoT

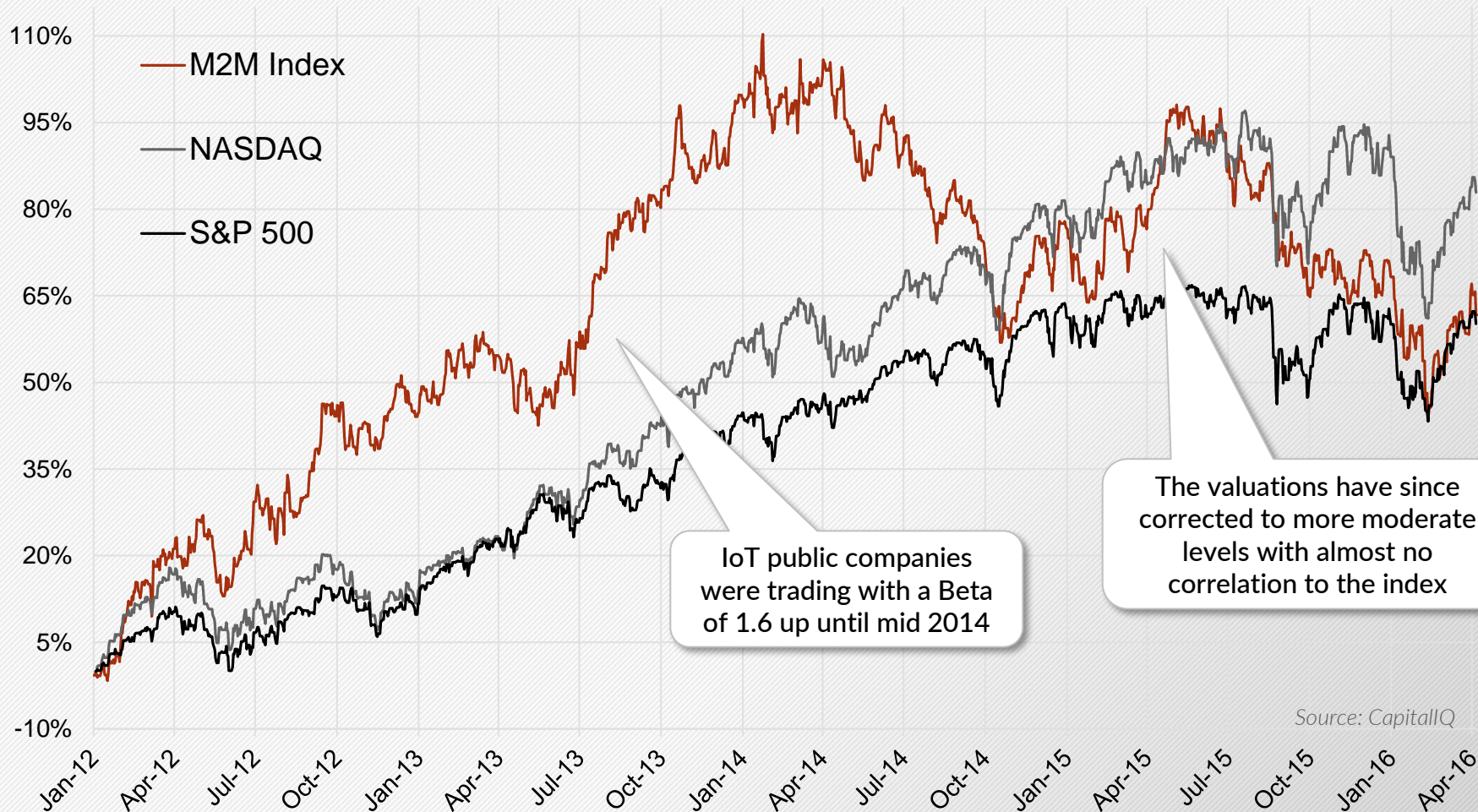



Source: CBInsights, 2015

# Public Market Valuation Trends



# Public Market Valuation Trends



## M2M Index Constituents:

- Baylin Technologies Inc. (TSX:BYL)
- CalAmp Corp. (NasdaqGS:CAMP)
- CSE Global Limited (SGX:544)
- Digi International Inc. (NasdaqGS:DGII)
- ESCO Technologies Inc. (NYSE:ESE)
- Feelingk Co. Ltd. (KOSDAQ:A064800)
- Gemalto NV (ENXTAM:GTO)
- HMS Networks AB (publ) (OM:HMS)
- Inmarsat Plc (LSE:ISAT)
- Lantronix, Inc. (NasdaqCM:LTRX)
- M2M Group S.A. (CBSE:M2M)
- Novatel Wireless Inc. (NasdaqGS:MIFI)
- Numerex Corp. (NasdaqGS:NMRX)
- Option NV (ENXTBR:OPTI)
- ORBCOMM, Inc. (NasdaqGS:ORBC)
- Pointer Telocation Ltd. (NasdaqCM:PNTR)
- RigNet, Inc. (NasdaqGS:RNET)
- Sierra Monitor Corp. (OTCPK:SRMC)
- Sierra Wireless Inc. (TSX:SW)
- System and Application Technologies Co., Ltd. (KOSDAQ:A060540)
- Telit Communications PLC (AIM:TCM)
- u-blox Holding AG (SWX:UBXN)
- USA Technologies Inc. (NasdaqGM:USAT)
- Vianet Group plc (AIM:VNET)
- VOXX International Corp. (NasdaqGS:VOXX)
- Westell Technologies, Inc. (NasdaqGS:WSTL)
- Ituran Location and Control Ltd

Source: CapitalIQ

# Public Market Valuation Analysis



	P&L Summary - 2015 - Average values			Valuation Metrics (Average)	
	Revenue Growth	Gross Margin	EBITDA Margin	Revenue Multiple	EBITDA Multiple
Hardware	11.8%	36.4%	3.9%	1.0x	8.9x
Hardware & Services	3.5%	41.6%	11.0%	2.2x	15.3x
Connectivity Services	29.5%	42.3%	22.7%	5.0x	49.6x
Systems Integration Services	-5.6%	51.7%	24.9%	0.9x	4.5x
<b>Total</b>	<b>6.7%</b>	<b>44.7%</b>	<b>17.5%</b>	<b>2.0x</b>	<b>16.5x</b>

Services enjoy the highest multiples



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