

### State of the IoT & Short-term Outlook – Q1/Q2 2018

For IoT Analytics Research Subscribers, August 2018
Includes 50+ insights from the analyst team on the current IoT market and an updated market forecast

### **About this report**

A comprehensive summary of 52 insights assembled by the IoT Analytics analyst team in Q1/Q2 2018. These insights are based on >100 expert interviews in the industry, discussions and presentations at conferences as well as individual research results derived from different reports and models.

The main purpose of this document is for our readers to broaden their knowledge on IoT and to stay ahead of the tidal changes in regards to current market trends as well as short-medium term developments.

All discussed insights are centered around IoT/Industrie 4.0. The report represents a discussion of 46 current market developments segmented by technology stack (software, connectivity and hardware) followed by 6 noteworthy deep dives. Each insight is substantiated with relevant examples and facts.

The document consists of 4 parts

- Current developments in the IoT market (22 pages)
- Updated Market Sizing & Outlook (8 pages)
- Specific "Market deep-dives" (6 pages)
- 4 List of resources: Conferences attended, recent publications, upcoming publications (12 pages)

This report is available to IoT Analytics Research Subscribers only – the next update will be available towards the beginning of Q1/2019

Author: Knud Lasse Lueth

Contributors: Padraig Scully, Zana Diaz Williams, Eugenio Pasqua, Saverio Romeo, Raquel Artes, Matt Wopata

### **Table of Contents**

Topic	Contents	Page
1 Current Market	Global IoT Market Forecast [in USD] & [in # of connected IoT devices]	5
Environment	Current Market Sentiment	9
Liviloiiiiciic	1. Overall market environment	10
	2. Software/platform-related developments	12
	3. Connectivity-related developments	15
	4. Hardware-related developments	20
	5. IoT adoption in specific industries/regions	23
	6. Emerging Technology Topics	25
2 Market Sizing	Global IoT Market – Segment View (Current Split & Forecast)	28
& Outlook	Global IoT Market – Regional View (Current Split & Forecast)	30
	Global IoT Market – Tech Stack View (Current Split & Forecast)	32
	Global IoT Market – Deep-dive: IoT Platforms	34
	Global IoT Market – Deep-dive: LPWA	35
3 Market deep-	Topic: IoT Platforms	37
dives	<u>Deep-dive 1</u> : How Successful IoT Platforms stand out	
	<u>Deep-dive 2</u> : Successful IoT Platforms have 5 types of partners and 3 distinct program characteristics	38
	Topic: IoT Connectivity	39
	<u>Deep-dive 3</u> : NB-IoT roll-outs proceed at record speed, but its adoption goes slower than anticipated – here is why	
	<u>Deep-dive 4</u> : MQTT emerging as preferred industrial IoT protocol for connection to the cloud	40
	Topic: IoT in specific Verticals	41
	Deep-dive 5: APAC is Leading the Deployment of Connected Streetlights	
	Topic: Emerging Technologies	42
	<u>Deep-dive 6</u> : Enterprises actively looking into synergies between IoT and blockchain technologies	
4 Resources	List of recent conferences attended	44
<b>Definitions &amp;</b>	List of recent experts interviewed	45
Appendix	List of reports published in Q3/Q4 2017	46
	Upcoming publications (current schedule)	47
	Appendix	48

### **Table of Contents**

- **1.** Current Market Developments
  - 2. Market Sizing & Outlook
  - 3. Specific Market Deep-Dives
  - 4. Resources, Definitions & Appendix

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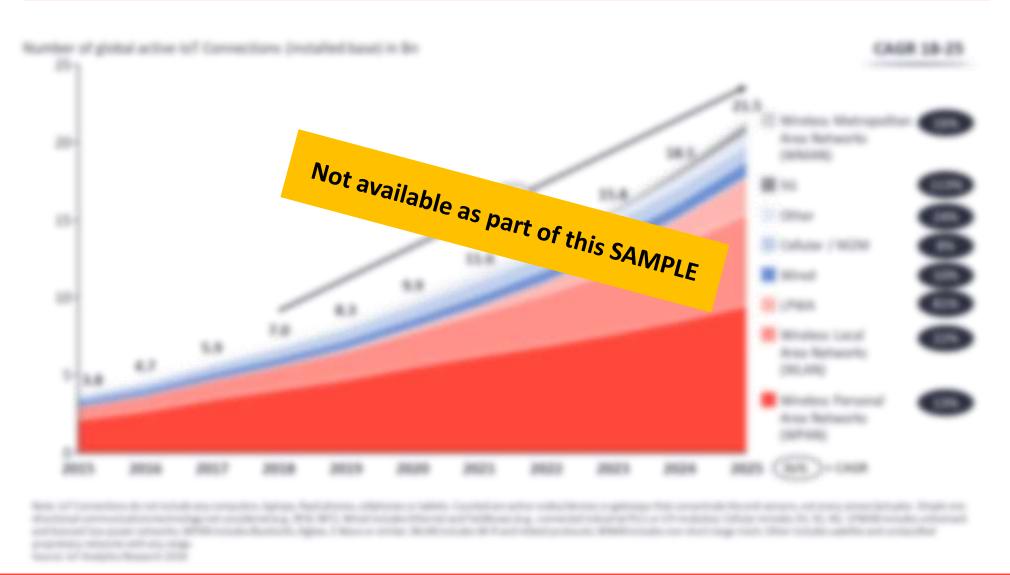
### Global IoT Market Forecast [in USD]: Revised upwards

IoT a \$150B market today – expected to grow 39% to 2025

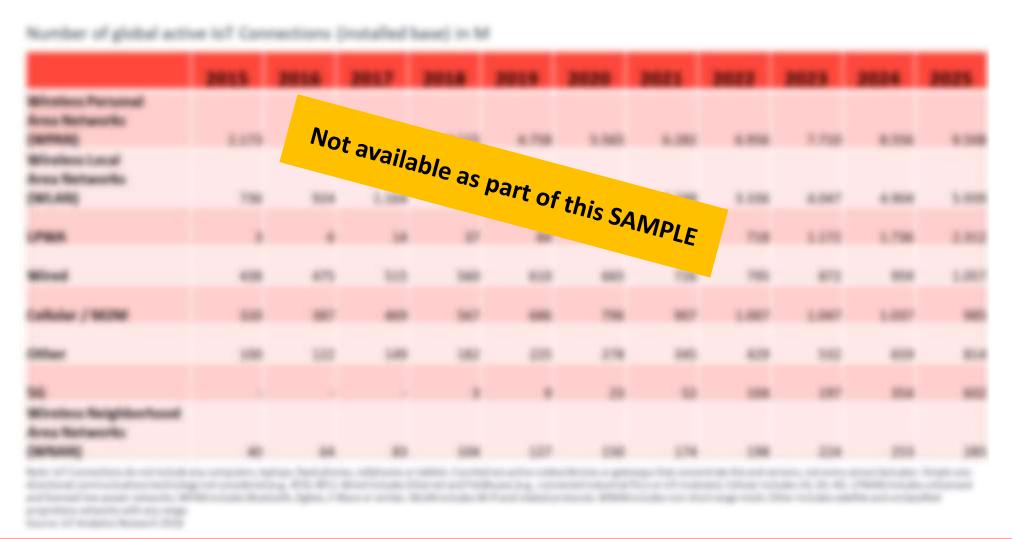


### **Global IoT Market Forecast [in # of connected IoT devices]**

7Bn in 2018– expected to grow 17% to 22Bn in 2025

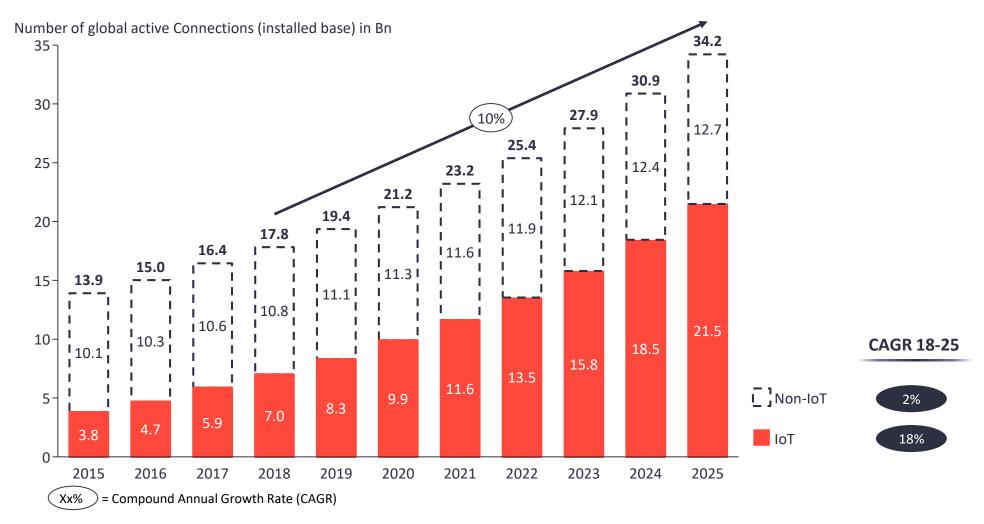


### **Global IoT Market Forecast – Data Table**



### **Backup: Total number of device connections (incl. Non-IoT)**

17.8Bn in 2018- expected to grow 10% to 34Bn in 2025



Note: Non-IoT includes all mobile phones, tablets, PCs, laptops, and fixed line phones. IoT includes all consumer and B2B devices connected – see IoT break-down for further details

### **Current Market Sentiment: Positive Outlook**

	Discussed elements	Business senti- ment last 6m <sup>1</sup>	Outlook next 12m <sup>2</sup>	Overview of discusse	d insights (selection)
1	Overall market environment	*		Market acceleration in Sp.75; Mod. Trape rather was transaction. Self-controllers were failed approach.	Military control of the service of t
2	Software / Platforms	.4			
3	Connectivity	•		Not available as p	art of this SAMPLE
4	Hardware	*		Section possible control to the cont	art of this SAMPLE
5	IoT adoption in specific verticals/regions	Not app	licable	of apaths and charges from Automotive and Agriculture of the brieffort of calling edge reconstruc	Measure case entire region solorinally region reduction software refundant to reason to the closel
6	Emerging technology topics	Not app	licable		
	= Bett	er than expected ac	ross the board	= In line with expectations	Worse than expected across the board
	= Exp	ect strong further gro	owth/successes	= Expect few changes =	Expect less growth / significant drawbacks
<ol> <li>Indica</li> </ol>	ites whether revenue/earnings expectations of IoT firm	ns in the tech stack has be	en met vs. what has b	peen communicated to the public/shareholders	

- **Expectations of IoT Analytics Research Team**

### 1. Overall Market Environment (1/2)

### 1. Overall market environment

**Business sentiment last 6 months** 



Mostly better than expected

**Outlook next 12 months** 



Expect further growth

**Analyst Opinion** 

Recent market acceleration is here to stay



- **Market acceleration in Q1/Q2.** Overall, growth in IoT markets across all verticals accelerated in Q1/Q2 2018 as many end-users doubled down on their IoT initiatives.
  - Examples/Proof-points: Reported growth rates and bookings for IoT-focused vendors are extremely solid –quarterly revenue expectations were beaten by IoT vendors across the board. IoT Analytics estimates that the overall IoT market will grow 37% in 2018 to \$151B (vs. 35% growth originally forecasted for 2018). End-user perspective: Every elevator that Schindler now ships is IoT-connected. Vendor perspective: New big investments. Microsoft <a href="mailto:announced">announced</a> in April that it will invest \$5B "over the next 4 years to develop new IoT products/ services". Rockwell Automation announced in June that it would make a \$1B equity investment in PTC.



- **Fewer radical new innovations.** New technology innovations around IoT are becoming more scarce. Innovation is mostly centered around edge-to-cloud concepts as well as the underlying cybersecurity architectures. Expect an innovation-boost in IoT connectivity with some LPWAN tech just entering the market (NB-IoT), new mesh networks just being introduced (e.g., Bluetooth Mesh) and 5G on the doorstep.
  - **Examples/Proof-points:** A recent analysis of IoT Platforms showed that most platforms now cover >60% of the technical building block of an IoT Platform. If one takes out the Cloud/IaaS layer, that number is at around 90% with most of the differentiation in AEP platforms.
- End-users take a more holistic approach. IoT often still starts in small and uncoordinated POC and pilot projects. However, it is becoming evident that more and more end-users take a holistic approach at the topic.
  - Examples/Proof-points: An automotive OEM we recently spoke to, for example, is working on their own private cloud setup that aims to integrate all major IoT initiatives including connected cars and connected factories. Smart Cities are also increasingly moving from single-projects in parking or lighting to larger coordinated efforts (Examples include Barcelona, Amsterdam, Dubai and Bristol).
  - ... (continued on next page)

### **Table of Contents**

1. Current Market Developments

- 2. Market Sizing & Outlook
  - 3. Specific Market Deep-Dives
  - 4. Resources, Definitions & Appendix

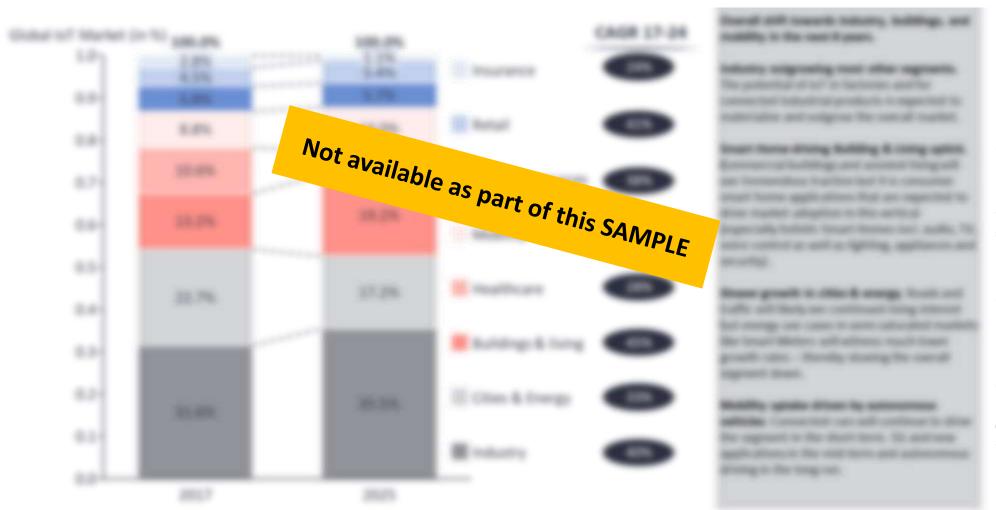
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Source: IoT Analytics Global Internet of Things Market Model

### Global IoT Market (2/8) – Segment View

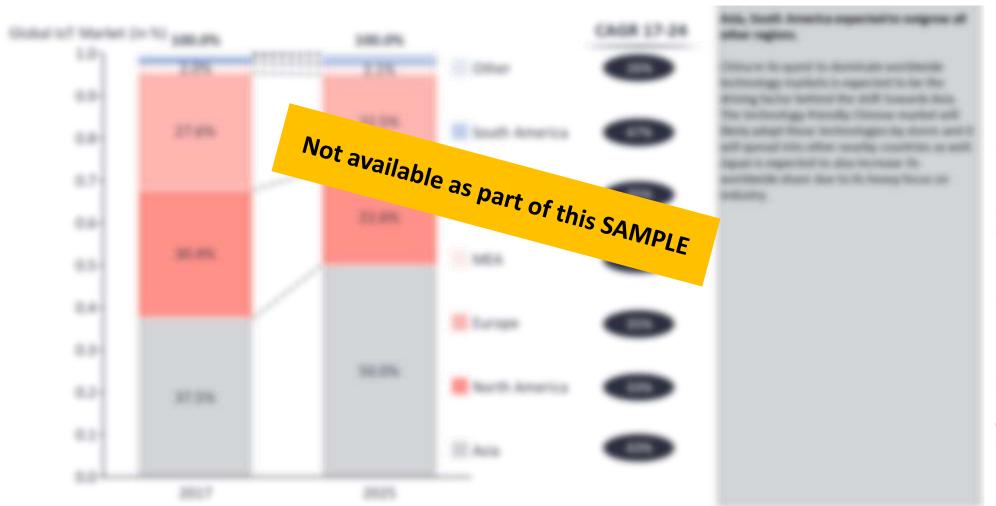


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Source: IoT Analytics Global Internet of Things Market Model

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## Global IoT Market (4/8) – Regional View



Source: IoT Analytics Global Internet of Things Market Model

### Global IoT Market (6/8) – Tech Stack View



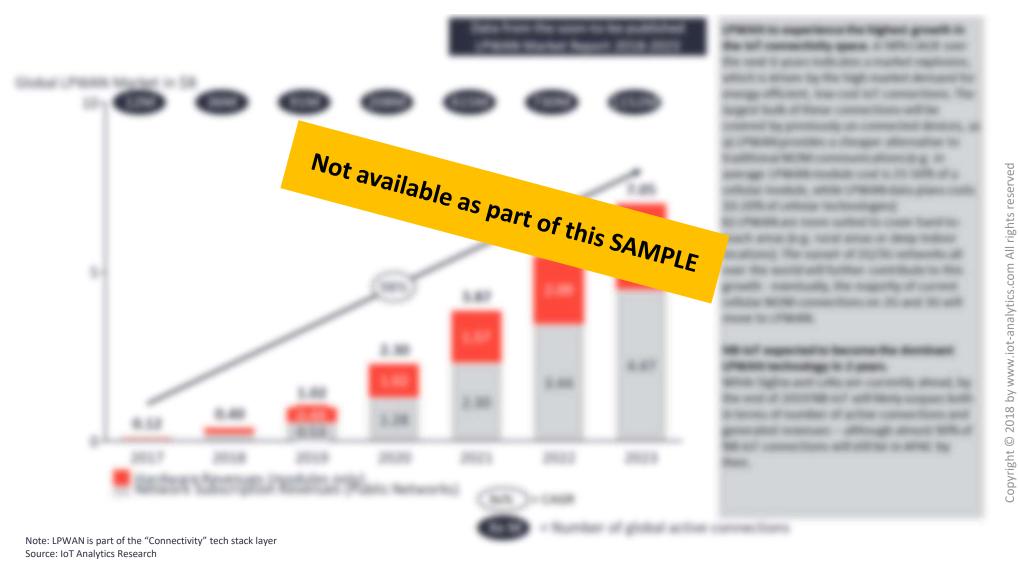
Source: IoT Analytics Global Internet of Things Market Model

### Global IoT Market (7/8) – IoT Platforms Breakout



Note: IoT Platforms is part of the "Platforms, Cloud, and Analytics tech stack layer Source: IoT Analytics Research

## Global IoT Market (8/8) – LPWAN Breakout



### **Table of Contents**

- 1. Current Market Developments
- 2. Market Sizing & Outlook
- 3. Specific Market Deep-Dives
- 4. Resources, Definitions & Appendix

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### List of conferences attended in Q1/Q2 2018

16 shows attended in person by the analyst team

Conference name	Focus	City	Country	Date	Comments
Vodafone Asia Industry Analyst Summit	IoT, Connectivity	Singapore	Singapore	Jan 2017	
Bosch Connected World	Industrial IoT, Industrie 4.0	Berlin	Germany	Mar-18	
IoT Tech Expo	IoT	London	UK	Apr-18	
Al Tech Expo	Analytics/Al	London	UK	Apr-18	
Blockchain Tech Expo	Blockchain	London	UK	Apr-18	
IOThings Milan	IoT	Milan	Italy	Apr-18	
Hannover Industrial Fair	Industrial IoT, Industrie 4.0	Hannover	Germany	Apr-18	
Trumpf Intech	Industrial IoT	Stuttgart	Germany	Apr-18	
Internet of Supply Chain	Supply Chain	Berlin	Germany	May-18	
LPWAN Forum	LPWAN	London	UK	May-18	
PTC Liveworx	IoT	Boston	USA	Jun-18	
ConnectTech Asia	IoT and Smart City	Singapore	Singapore	Jun-18	
GSMA Mobile World Congress Shanghai 2018	5G, Smart Mobility, Smart City, IoT	Shanghai	China	Jun-18	
IoT Tech Expo	IoT	Amsterdam	Netherlands	Jun-18	
Al Tech Expo	Analytics/AI	Amsterdam	Netherlands	Jun-18	
Blockchain Tech Expo	Blockchain	Amsterdam	Netherlands	Jun-18	

## List of experts interviewed in Q1/Q2 2018

> 100 interviews in total

### Small selection shown only

Position	Company	Country	Main Topic	Date
Vice President, Enterprise Business APAC	Telecom Operator	Singapore	Connected Streetlight	Jan-18
Principal consultant	System integrator	UK	IoT Platforms	Feb-18
Senior Product Manager	Analytics firm	USA	IoT Platforms	Feb-18
lead of Global Product Management	Industrial conglomerate	Germany	IoT Platforms	Feb-18
Marketing Director of IoT	Telecommunications Firm	China	Connected Streetlight	Feb-18
virector Smart Cities	Telecommunications Firm	Singapore/ Belgium	Connected Streetlight	Feb-18
echnical Sales Support Manager	Streetlight Vendor	Singapore	Connected Streetlight	Feb-18
hairman and CEO/ Chief Technology Officer	Streetlight Vendor	USA	Connected Streetlight	Feb-18
lliance Manager, Public Segment	Streetlight Vendor	United Kingdom	Connected Streetlight	Feb-18
Pirector, Digital Engagement	Industrial conglomerate	Canada	Connected Streetlight	Feb-18
enior Director of Solution Management, Smart Citio	es IoT Vendor	USA	Connected Streetlight	Feb-18
Pirecció de Telecomunicacions i Infraestructures	City	Spain	Connected Streetlight	Feb-18
Slobal Sales Director, Smart Sustainable Cities	Telecommunications Firm	Sweden	Connected Streetlight	Feb-18
enior Director of Product Management	IoT Platform Vendor	USA	IoT Platforms	Mar-1
ead of Innovation and Commercialisation	Streetlight Vendor	Malaysia	Connected Streetlight	Mar-1
SO	MES Software Provider	Austria	Industrial IoT	Apr-18
ngineer	MES Software Provider	Germany	Industrial IoT	Apr-18
EO	MES Software Provider	Germany	Industrial IoT	Apr-18
lanaging director	Transportation firm	Germany	Supply chain	Apr-18
x Senior Special project manager	Automotive OEM	USA	Industrial IoT	May-1
x CIO	Automotive OEM	Germany	Industrial IoT	May-1
enior Manager	Automotive OEM	Germany	Industrial IoT	May-1
enior Project Manager	Automotive OEM	USA	Industrial IoT	May-1
artner Manager	Automotive Tier-1 Supplier	Germany	Industrial IoT	May-1
P of IT	Automotive OEM	Germany	Industrial IoT	May-1
rocess and Quality engineer	Automotive Tier-1 Supplier	Germany	Industrial IoT	May-1
resident	Automotive SI (Denso integrator)	USA	Industrial IoT	May-1
x MD and Chief Engineer	Semiconductor	USA	Industrial IoT	May-1
roduct Engineer	Semiconductor	Germany	Industrial IoT	May-1
Factory Automation Technical Support Engineer	Semiconductor	USA	Industrial IoT	May-1
enior project manager	Blockchan management consulting firm	Germany	Blockchain	May-1
P of Strategic Commuications	IIoT software provider	USA	IoT Platforms	Jun-18
то	Industrial automation supplier	USA	Industrial Connectivity	Jun-18
CEO/Founder	Blockchain vendor	USA	Blockchain	Jun-18

### List of reports published in Q1/Q2 2018

As a research subscriber you have access to all of these<sup>1</sup>

		an or these-
Name	<b>Publication Date</b>	Selected insights
List Of 1,600 Enterprise IoT Projects	January 2018	<ul> <li>IoT case studies which are part of Smart City initiatives make up the largest part of identified projects (23%), followed by projects implemented in Industrial settings (17%) and projects evolving around Connected Buildings (12%).</li> <li>Most identified projects are set in North America (43%), however, Europe (35%) and Asia Pacific (16%) also play an important role.</li> </ul>
IoT Platform Market Update Q1/2018	April 2018	<ul> <li>2 Insights regarding the technical offerings of IoT Platforms</li> <li>5 Insights on customers and platform selection</li> <li>6 Insights on open source in IoT Platforms</li> <li>2 Insights for Partnerships</li> </ul>
Connected Streetlights Market Report 2018-2023	June 2018	<ul> <li>There will be 41 million IoT connected street lights installed globally by 2023</li> <li>The overall market will surpass US\$3.6B in 2023, growing at a CAGR of 21% from 2018</li> </ul>
IoT Platforms Market Report 2018-2023	June 2018	<ul> <li>The IoT Platforms report forecasts a compound annual growth rate (CAGR) for IoT Platforms of 39% over the time frame of 2018-2023, with annual spending surpassing US\$22 Billion by 2023</li> <li>Microsoft and PTC are identified as the leading vendors in terms of market share in their respective platform types, cloud and AEP.</li> </ul>
IoT Platforms Vendor Comparison 2018	June 2018	<ul> <li>The majority of IoT Platform vendors cover 60-100% of all analyzed platform building blocks.</li> <li>Most platforms have rather strong partner ecosystems. 16 of 21 analyzed companies have their own partner program and 20 of those are also involved in IoT consortia and standardization organizations. The highest number of those partnerships are with system integrators (30%).</li> </ul>
Q1/Q2 Analyst Insights	July 2018	This document

### **Outlook:** Upcoming publications (current schedule)

13 further publications planned in 2018

Schedule may vary slightly

Name / Topic	Type of Report	Research Stream	Estimated publication Date	Lead Analyst
State of the IoT (Mid-2018) -Current State & Short-term outlook	Short Report (~30 pages)	General	Q3 – This document	Knud Lasse Lueth
LPWAN Market Report & Outlook	In depth Report (~200 pages)	IoT Connectivity	Q3	Eugenio Pasqua
Blockchain in IoT Applications & Outlook	Short Report (~50 pages)	Blockchain	Q3	Saverio Romeo
IoT M&A Update (Mid-2018)	Short Report (~30 pages)	General	Q3	Zana Diaz Williams
Industry 4.0 Market Report & Outlook	In depth Report (~200 pages)	Industrial IoT	Q3	Matthew Wopata
Smart Parking Report & Outlook	In depth Report (~100 pages)	Smart City	Q3	Raquel Artes
List of IoT Platforms & short-to-mid- term market dynamics	List / Database	IoT Platforms	Q3	Padraig Scully
IoT in Supply Chain & Outlook	Short Report (~50 pages)	Supply Chain	Q4	Confidential
Industrial Connectivity	Short Report (~50 pages	Industrial IoT, IoT Connectivity	Q4	Matthew Wopata
Predictive Maintenance Market Report & Outlook	Short Report (~50 pages)	Industrial IoT	Q4	Zana Diaz Williams
List of IoT software startups	List / Database	General	Q4	Zana Diaz Williams
Smart City (Topic TBD)	TBC	Smart City	Q4	Raquel Artes
State of the IoT (End-2018) —Current State and Short-term outlook	Short Report (~30 pages)	General	Q4	Knud Lasse Lueth
IoT & AI, Analytics Report & Outlook	Short Report (~50 pages)	Al	Q1/Q4	TBD
5G	TBC	IoT Connectivity	Q1	Eugenio Pasqua

<sup>+</sup> Further individual research summaries

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### For information regarding citation permission, write to:

IoT Analytics GmbH Zirkusweg 2 20359 Hamburg, Germany insights@iot-analytics.com

### **IoT Analytics Research Team**

For questions, please reach out to: Knud Lasse Lueth, Managing Director

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