The Internet of Things

Devices Connectivity Platforms Applications Security Analytics Services

The Internet of Things (IoT) has the potential to be as transformative as the Industrial Revolution

1 Overview 4
Definition 4
Top Technologies in next 10 years (McKinsey) 4
IoT at top in Gartner's Hypercycle 2014 4
The IoT Ecosystem 4
Highlights 5
Investments on IoT 2015-20 6
Return on IoT Investments 6
2 Market Drivers & Industry Dynamics 7
IoT – The Promise 7
The Reach of IoT 7
The IoT value proposition 7
Cost Reduction 7
Increased Revenues 7
New Business Model 7
Enablers of IoT 8
The rise of Industrial IoT 8
IoT is gaining huge momentum 2010-2015 9
IoT Market Challenges 9
Top Issues making IoT more vulnerable: 10
Existing Big Data Analytics Products don't fulfill IoT Requirements 11
Diversity of Devices & Applications 11
Not All "things" are created Equal 12
Market Drivers and Inhibitors 12
3 Market Segments & Product Requirements 13
Segments by End User Groups 13
Top Market Segments Adopting IoT 13
Segments by Vertical Industries 13
Verticals benefitting from adoption of IoT 14
Segments By Value-Added Ecosystem 15
WW IoT Revenues 2020 by Market Segments 15
Product Requirements by Value-Add Market Segments 15
IoT Barriers to Overcome 15
IoT Requirements – Deriving Business Value from Connected Things & Processes 16
True value of IoT lies in converting from telematics and resulting insights to actions 16
Devices 17
Requirements - Remote Devices pose unique challenges 17
Connectivity 17
Connectivity – Requirements vary by Application 17
Platform 18
IoT Requirements - Big Data & Cloud 18
Applications 18
Same application but very different service level requirements 18
Analytics 19
Different Applications necessitate optimal Infrastructure required for Analytics 19
IoT Requirements – Distributed Big Data Cloud 20

Security **20**
Verticals **20**
Carriers need advanced analytics to predict new IoT Traffic and Service Demands 20
IoT Requirements 21
IoT Technology Roadmap 21
IoT Requirements vs Reality 23
Need for a new architecture 23
4 Market Forecast & Shares **25**
Market Size – Devices Installed 2015-2020 25
Market Forecast – WW IoT Revenues & Units 2015-2020 ..... **25**
WW IoT Revenues 2015-2020 25
WW IoT Units 2015-2020 25
Rise of Embedded Internet 26
WW IoT Revenues 2020 by Market Segments 27
WW IoT Revenues Forecast by Vertical Industries $B 2015-2020 28
WW IoT Revenue 2020 by Region 29
5 Enabling Technologies & Standards **30**
Intelligent Devices **30**
Device Identification System for IoT 30
Edge Analytics 31
Emerging Standards **31**
Race for Standardization – Fragmentation & Conflicts 31
Communications Protocols **32**
6 Ecosystem & Competitive Positioning of Suppliers **32**
Value Add Ecosystem –Devices to Professional Services **33**
WW IoT Revenues 2020 by Market Segments 33
Potential of IoT Ecosystem 2020 by Market Segment 33
Seven Layer Value Add Ecosystem Reference Model **33**
Sensors Devices/Intelligent Systems **34**
Connectivity **36**
Platforms **36**
Applications **36**
Analytics **36**
Security **37**
Professional Services **37**
Use Cases (Typical) **38**
Use Cases – Health Real-time Disease Prediction 38
Use Case - Food Tracking & Compliance Application 39
Use Cases – Home Automation 40
IoT Reference Model **41**
IoT Stack: Sensors>Connectivity>Cloud>Analytics>Prof.Services 41
7 Suppliers **45**
Top 150 IoT Suppliers Profiles by Market Segment **45**
Most Active IoT Investors 46
Top Suppliers Profiles & Strategies HW Devices, Connectivity Platforms 47
Top Suppliers Profiles & Strategies Analytics, Applications, Security 49
Top Suppliers Profiles & Strategies in Vertical Solutions & Services 51
8 Routes-to-Market/GTM Implementation **53**
9 Recommendations for Suppliers/Integrators/EUs/Investors **55**
Suppliers **55**
System Integrators/VARs **55**
Vertical Industry End Users **55**
VCs/Investment Bankers **55**

10 Appendices 56
Research Methodology 56
References/Sources/Citations 58
Technologies 58
Ecosystem Stack 58
Target Markets 58
Suppliers 58
Investors 58