

FROST & SULLIVAN

BEST PRACTICES

AWARDS

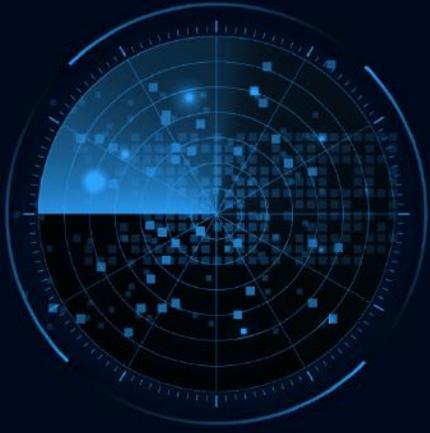
FROST & SULLIVAN

2019

BEST
PRACTICES
AWARD

arm

2019 GLOBAL IOT PLATFORMS
GROWTH EXCELLENCE FROST RADAR AWARD



FROST RADAR

CONGRATULATIONS!

Frost & Sullivan is proud to present Arm with this year's Frost Radar Best Practices Award for Growth Excellence in the Global IoT Platforms Market.

Frost & Sullivan's global team of analysts and consultants continuously research a wide range of markets across multiple sectors and geographies. As part of this ongoing research, we identify companies that consistently develop new growth strategies based on a visionary understanding of the future, and thus more effectively address new challenges and opportunities. This involves extensive primary and secondary research across the entire value chain of specific products. Against the backdrop of this research, Frost & Sullivan recognizes Arm for these valuable achievements.

This recognition is strictly reserved for companies that are market leaders and are achieving high growth in an intensely competitive industry. This includes emerging companies making great strides in market penetration or seasoned incumbents holding on to their perch at the pinnacle of the industry. Achieving Growth Excellence is never an easy task, but it is one made even more difficult considering today's intensely competitive environment, customer volatility, economic uncertainty, and rapid technology evolution. Within this context, Arm's receipt of this Award signifies an even greater accomplishment.

Moreover, this recognition is the result of many individuals (employees, customers, and investors) making daily choices to support the organization and meaningfully contribute to its future. Frost & Sullivan enthusiastically acknowledges and celebrates these achievements. Once again, congratulations on your accomplishments and we wish you great success in the future.

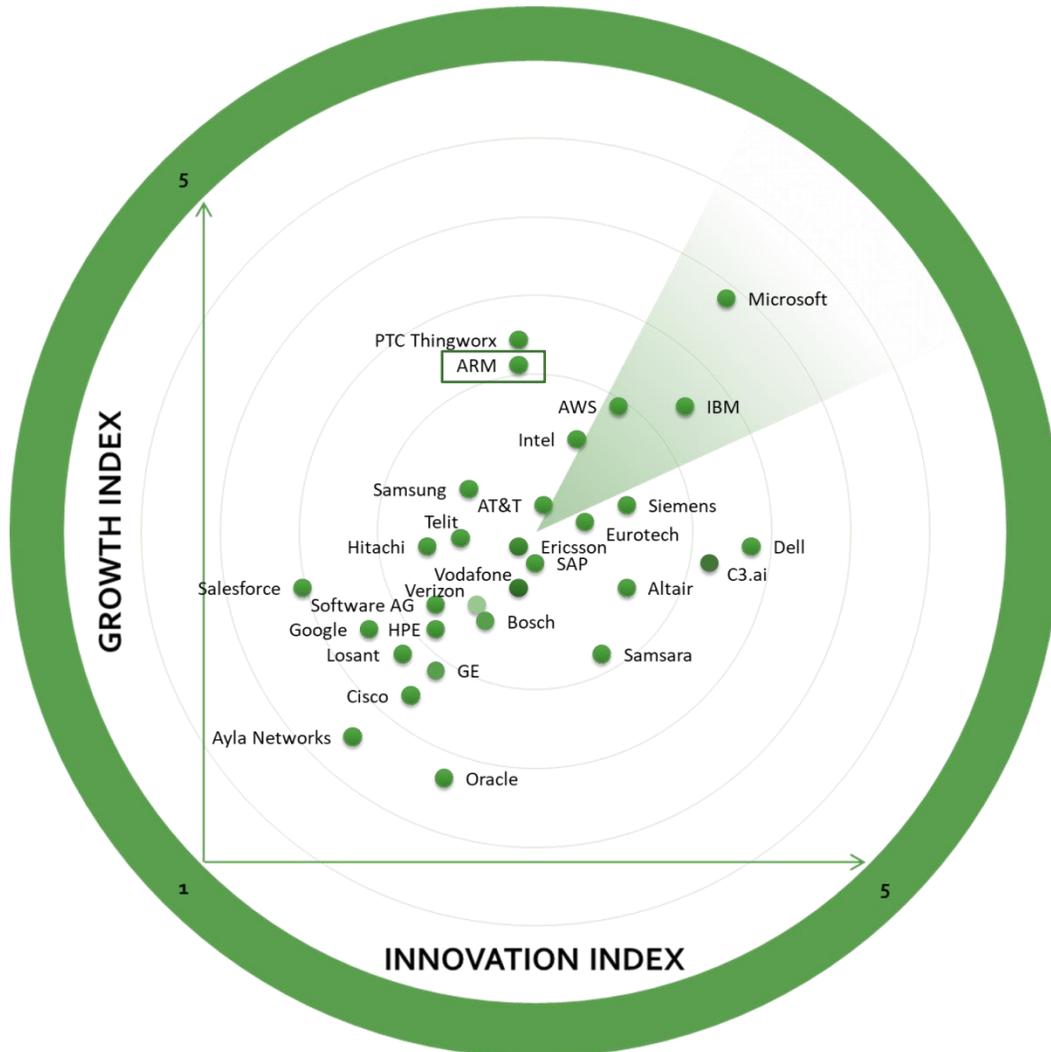
Sincerely yours,

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The Frost Radar

Global IoT Platforms Market



Source: Frost & Sullivan

In a field of +400 global industry participants, Frost & Sullivan has independently ranked the top 30 companies in the above Frost Radar analysis.

The key parameters independently analyzed by Frost & Sullivan include:

- Innovation Scalability
- R&D
- Product Portfolio
- Mega Trends Leverage
- Customer Alignment
- Growth Pipeline
- Vision and Strategy
- Sales and Marketing

Frost & Sullivan studies related to this independent analysis:

- Global IoT Platforms Market, 2018
- Frost Radar on Global IoT Platforms, 2019

Industry Overview

Internet of Things (IoT) is a complex ecosystem that integrates information technology (IT) with operations technology (OT) to generate data that can be analyzed to increase revenues and improve business productivity. From Big Data and analytics to ubiquitous connectivity to artificial intelligence (AI) and computing, IoT touches every technology and industry. Survival and growth in this digital world is only possible with strategic partnerships and collaboration.

IoT platforms are the building blocks of IoT solutions, offering multiple services such as application enablement, device management, and connectivity management. Typically, an IoT platform serves as the bridge between IT and OT. This includes layers of software and computing capabilities across the whole IoT solution—from the edge to the cloud. This distributed architecture is essential for the successful deployment of an IoT solution in enterprises and government agencies.

DEMYSTIFYING THE DEBATE BETWEEN CLOUD VS. EDGE

Over the past few years, there has been a constant debate in the industry about edge vs. cloud-based deployment. Deploying at the edge has been touted to reduce operation costs, increase security, and provide users with the ability to gain almost real-time insights. Deploying at the cloud has been touted to aid in managing multiple locations and gain more operational insights across locations and deployment sites.

While this debate continues to rage, the reality for most enterprises is to use a hybrid approach that distributes computing capability in every layer of the IoT solution. Certain services/applications are suited to be performed at the cloud layer, such as machine learning or deep learning. Once the machine learns the process and finds ways to improve it, the insights are downloaded to the edge where they help enterprises maximize the value of their IoT deployment. To gain real-time insights, edge devices and gateways have additional processing capabilities to support these deployments.

In reality, the debate is not really cloud vs. edge—rather, it is picking the right hybrid approach that enhances security, convenience, and value to the enterprise.

THE INDUSTRY MUST ADDRESS THE CHALLENGE OF MARKET FRAGMENTATION

The IoT Platform Market is highly fragmented, with over 1,000 companies touting themselves as IoT platforms. Of these, about 400 have true platform capabilities—some are focused on managing certain IoT applications, others manage a range of devices in certain vertical markets. Choosing the right platform for your enterprise is an essential step because an IoT solution deployment can take up to a year and this solution is likely to be deployed in the enterprise for the foreseeable future.

Filtering through a list of over 400 service providers, Frost & Sullivan has identified the Top 30 service providers in this space that:

- are constantly delivering innovative solutions for their customers
- are growing as a result of this innovation and value to enterprises
- have the ability to support their customers for the foreseeable future through investments in R&D, while they maintain their growth through sales and marketing efforts.

As with the mobile phone platform market, the IoT platform market must consolidate around a few ecosystems to simplify application development and help reduce confusion among enterprises looking to deploy IoT.

The best practice companies in this space are those that are leading the industry with growth, innovation or both.

Frost Radar Growth, Innovation & Leadership Award - Arm

COMPANY DIAGNOSTIC

- The Arm Pelion IoT platform is a flexible and secure platform of composable IoT services that provide device management, connectivity management, and data management capabilities to enable partners and customers to quickly deploy IoT solutions.
- With device management capabilities both in the cloud and at the edge, Arm empowers its customers with the ability to extract real-time information from IoT devices to effectively make quick decisions.
- Arm has an extensive portfolio of products and a robust ecosystem to enable customers to gain a competitive advantage in a secure IoT environment.

FROST RADAR POSITIONING

- Arm is positioned in the upper left of the Frost Radar as one of the rapidly growing IoT platforms.
- Arm's heritage of providing highly secure semiconductor IP that is used in hardware devices provides customers peace of mind when deploying devices on the network.
- Arm Pelion Connectivity Management service allows for an easy, secure, and cost-effective connection of IoT devices on multiple network standards with a single global mobility contract.
- The Pelion Device Management service enables secure and scalable management of any device type - from contained devices to edge gateways - with deployment options of on-premises or any public cloud.
- Its enterprise-class data management solution extends data usability capabilities past device-only use cases to valuable enterprise transformation use cases, which incorporate multiple data sources and data consumption needs.

COMPANY STRENGTHS

- Arm is one of the leaders in growth in the industry.
- With a comprehensive portfolio of solutions—spanning from semiconductor IP to operating system (Mbed) to device management, data management, and connectivity management—Arm leverages its ecosystem to help customers develop comprehensive IoT solutions.
- Arm provides layered security through its hardware IP, IoT operating system, device management, connectivity management and data management to ensure that its customers can

develop solutions that will operate and connect securely with data management capabilities in the cloud and at the edge.

COMPANY OPPORTUNITIES

- Security and simplicity are two features that attract most end customers to IoT deployments.
- Arm ensures that it develops secure hardware IP that can be deployed easily with device management capabilities on-premise, in the cloud, or in hybrid environments.
- In addition, the Arm Pelion IoT platform provides its customers with the flexibility to add devices (both new and legacy devices) as needed. With most customers looking to grow their IoT deployments over time, this modular approach is highly attractive and the company is poised to grow its platform in the future.

What is the Frost Radar?

A Practical, High Impact, Scalable C2A (Companies to Action) Tracking Solution

WHAT IS IT?

A robust analytical tool that benchmarks companies' innovation focus and growth performance in a given market.

HOW IS IT BUILT?

Through in-depth analysis built on our 360-degree research methodology (primary and secondary research) and objective rating of companies in any given market.

WHY DO WE NEED IT?

To understand how companies benchmark against each other in their ability to innovate and grow against a backdrop of industry transformation and evolution.

WHAT WILL IT ACCOMPLISH?

Enable companies to gain an objective, independent perspective of their innovation and growth strategies, including their robustness, effectiveness, relative competitive strength, and implications on their long-term success.

HOW TO USE IT?

Frost Radar is a dynamic tracking tool that offers frequent rating and positioning of companies that are leading the industry on growth, innovation or both. Due to changes in operating environment and internal changes within these organizations, their positioning in Frost Radar will change over time. It is important to leverage Frost Radar to ensure that companies are aware of changes to their ecosystem

and their relative positions to it.

WHAT DOES IT MEAN TO BE ON THE FROST RADAR?

Every company that finds itself on the Radar has been chosen because they have proven themselves to be worthy by demonstrating excellence in either growth, innovation, or both, and are able to translate that into proven solutions that benefit their clients. At times, companies with high market share may not place on the Radar. Companies are chosen because they are already doing great things, or because they are poised to do great things.

Frost Radar → C2A

All companies on the Frost Radar could be C2A. Best Practice recipients are the companies that Frost & Sullivan considers the **Companies to Act On Now**.

GROWTH EXCELLENCE AWARD

The Growth Excellence best practice award is bestowed on companies that are achieving high growth in an intensely competitive industry. This includes emerging companies making great strides in market penetration or seasoned incumbents holding on to their perch at the pinnacle of the industry.

Frost Radar

2 Major Indices, 10 Analytical Ingredients, 1 Platform

VERTICAL AXIS – THE GROWTH INDEX

Growth index (GI) is a measure of a company's growth performance and track record, along with its ability to develop and execute a fully aligned growth strategy and vision; a robust growth pipeline system; and effective market-, competitor-, and end-user focused sales and marketing strategies.

- **GI1: Market Share (previous 3 years):** Market share relative to its competitors in a given market space for the previous three years.
- **GI2: Revenue Growth (previous 3 years):** Revenue growth rate for the previous three years in the market/industry/category that forms context for the given Frost Radar.
- **GI3: Growth Pipeline:** This is an evaluation of the strength and leverage of the company's growth pipeline system, to continuously capture, analyze, and prioritize its universe of growth opportunities.
- **GI4: Vision and Strategy:** This is an assessment of how well a company's growth strategy is aligned with its vision. Are the investments the company is making in new products and markets consistent with the stated vision?
- **GI5: Sales and Marketing:** This is a measure of the effectiveness of a company's sales and marketing efforts in helping the company drive demand and achieve its growth objectives.

HORIZONTAL AXIS – THE INNOVATION INDEX

Innovation index (II) is a measure of a company's ability to innovate products/services/solutions that are developed with a clear understanding of disruptive Mega Trends, are globally applicable, are able to evolve and expand to serve multiple markets, and are aligned to customers' changing needs. Key elements of this index include:

- **II1: Innovation Scalability:** This determines whether the organization's innovations are globally scalable and applicable in both developing and mature markets, and also in adjacent and non-adjacent industry verticals.
- **II2: Research and Development:** This is a measure of the efficacy of a company's R&D strategy, as determined by the size of its R&D investment and how it feeds the innovation pipeline.
- **II3: Product Portfolio:** This is a measure of the product portfolio of the company, focusing on the relative contribution of new products to its annual revenues.
- **II4: Mega Trends Leverage:** This is an assessment of a company's proactive leverage of evolving long-term opportunities and new business models, as the foundation of its innovation pipeline.
- **II5: Customer Alignment:** This evaluates the applicability of a company's products/services/solutions to current and potential customers (7-year horizon), as well as how its innovation strategy is influenced by evolving customer needs.