

F R O S T & S U L L I V A N

BEST PRACTICES

AWARDS

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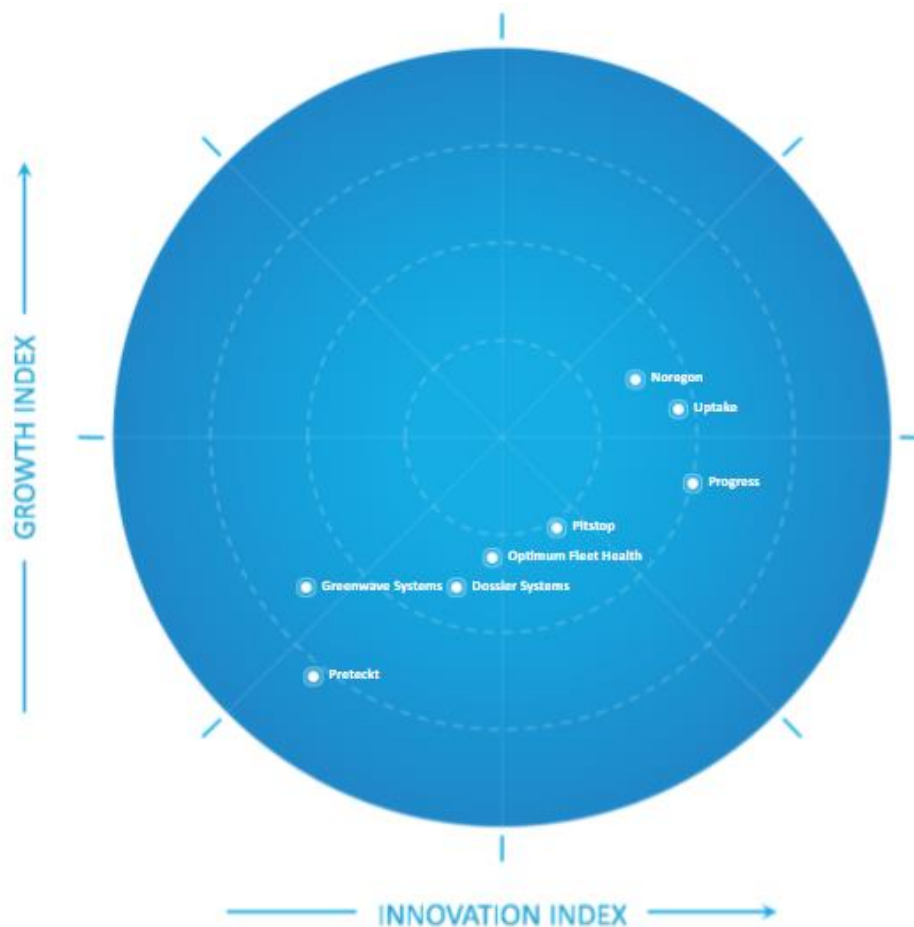
2020 BEST PRACTICES AWARD

UPTAKE[®]

**2020 NORTH AMERICAN PREDICTIVE
MAINTENANCE IN MEDIUM-TO HEAVY-DUTY
VEHICLES GROWTH, INNOVATION &
LEADERSHIP FROST RADAR AWARD**

The Frost Radar™

Predictive Maintenance in Medium- to Heavy-duty Vehicles



Source: Frost & Sullivan

In a field of 8 industry participants, Frost & Sullivan has independently ranked the top 3 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
- Revenue Growth
- Market Share Growth

Frost & Sullivan studies related to this independent analysis:

- Prognostics and Its Implication in NA and EU Commercial Vehicle Telematics, Forecast to 2025
- EU & NA CV Telematics Opportunity Analysis by Industry, Forecast to 2025

The Growth Environment

The present role of predictive analytics solution providers revolves around consolidating/compiling and analyzing fleet data supplied by condition monitoring devices/sensors. This is used to develop accurate predictive insights about expected failure before it occurs and recommend an action plan to minimize downtime.

Predictive analytics solutions were most commonly used by fleet operators who were early adopters of telematics, but more fleet operators have started seeing the value in using PdM solutions. Predictive analytics enable fleet organizations to take actions based on logical insights that improve vehicle safety and reduce the process and time spent on the decision-making process for vehicle maintenance.

The increased fleet operator need to make timely maintenance decisions that improve uptime and to avoid costly repairs that are due to late identification of asset failure will drive PdM demand. Moving forward, PdM solutions will be based on artificial intelligence and machine learning techniques. Relying only on historical data and performing maintenance based on time intervals will lose significance in the coming years.

Trucks possess the potential to generate large amounts of data, while the costs associated with storing, transferring, and generating valuable insights will also see improvements as competition and the need for value addition increases among PdM solution providers.

Frost Radar™ Growth, Innovation & Leadership Award Uptake Technologies Inc.

Growth

- Uptake Fleet is a mature offering in Uptake's product curve and is the company's highest revenue generator.
- Uptake Fleet is built around pre-trained predictive models. Uptake deploys machine learning-based anomaly detection to analyze and correlate different signals in real time when something deviates from the normal pattern. This approach gives Uptake a future-proof advantage when a new technology or configuration is introduced to the vehicle.
- The company operates a customer advisory board to gather feedback and incorporate it into upcoming product development activities.
- Uptake's future investment focus areas are image optimization, enhancement of remote diagnostics, and digitalization of the entire predictive maintenance process.
- Uptake attained the second-highest position on the Growth axis.

Innovation

- Uptake deals with multiple horizontal product lines for various industries. For medium to heavy-duty vehicles, Uptake Compass and Uptake Fleet deal with key aspects of predictive maintenance, such as work orders, data science, and advanced analytics.
- Uptake demonstrates unique use of real-time signal data to predict failure accurately and well in advance when compared with other predictive models. Most competitors offer predictive modeling that uses fault codes (diagnostic trouble codes) sent by original equipment manufacturer (OEM) assets only when the engine indicates something is going wrong. In contrast, Uptake's solution relies on real-time signals and contextual data (like weather, terrain data) for predicting issues.
- The Uptake Compass product does not require hardware at all and is capable of running a survival analysis at the component level for recommending parts replacement. The predictive maintenance offering Uptake Fleet does not require specific hardware. The software is designed to work on most third-party telematics hardware
- Uptake achieved the second-highest position on the Innovation axis.

Frost Perspective

- OEMs are expected to take control of data, which will ultimately diminish the importance of telematics providers. To face this evolution, Uptake needs a clear understanding of expected developments in the value chain, particularly where telematics providers' focus will change.
- Frost & Sullivan suggest Uptake initiate collaborations with leading OEMs because right-to-access data will become a challenge. In fact, OEMs have started introducing pre-connected trucks into the market to take control of vehicle data.
- Uptake should continue investing in its cross-industry horizontal platform to fortify its strength in this arena. Investments in horizontal platforms should be focused on new business use cases and applicability on new asset types, especially on the sub-component level. Doing so could give Uptake a competitive edge.

What is the Frost Radar™?

Companies to Action – Benchmarking Future Growth Potential

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 Frost & Sullivan's 360-degree research methodology (primary and secondary research) and objective rating of companies in a given market.

Why do you need it?

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

What will it accomplish?

Companies can gain an objective, independent perspective of their innovation and growth strategies, including their robustness, effectiveness, relative competitive strength, and implications for their long-term success.

How to use it?

The Frost Radar™ is a dynamic tracking tool that offers frequent rating and positioning of companies that are leading the industry in growth, innovation, or both. Because of changes in the operating environment and internal organizational changes, their positioning in the Frost Radar™ will change over time. It is important to leverage the 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™?

Companies have been chosen to be in the Frost Radar™ because they have proven themselves to be worthy by demonstrating excellence in 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 are poised to do great things.

All companies on the Frost Radar™ could be Companies to Action. 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 upon companies that are achieving high growth in an intensely competitive industry. This includes emerging companies making great strides in market penetration and seasoned incumbents holding on to their perch at the pinnacle of the industry.

Innovation Excellence Award

The Innovation Excellence best practice award is bestowed upon companies that are industry leaders outperforming their competitors in this area, or new market entrants contending for leadership through heavy investment in R&D and innovation.

Growth, Innovation & Leadership Award

The Growth Innovation Leadership (GIL) best practice award is bestowed on companies that are market leaders at the forefront of innovation. These companies consolidate or grow their leadership position by continuously innovating and creating new products and solutions that serve the evolving needs of the customer base. These companies are also best positioned to expand the market by strategically broadening their product portfolio.

Frost Radar™ – Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

Vertical Axis – The Growth Index

Growth index 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. The elements of this index include:

- **GI1: Market Share (previous 3 years):** This is a comparison of a company's market share relative to its competitors in a given market space for the previous 3 years.
- **GI2: Revenue Growth (previous 3 years):** This is a look at a company's revenue growth rate for the previous 3 years in the market/ industry/category that forms the context for the given Frost Radar.
- **GI3: Growth Pipeline:** This is an evaluation of the strength and leverage of a 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 it drive demand and achieve its growth objectives.

Horizontal Axis – The Innovation Index

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

- **II1: Innovation Scalability:** This determines whether an 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 a company's product portfolio, focusing on the relative contribution of new products to its annual revenue.
- **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, as well as how its innovation strategy is influenced by evolving customer needs.