



Percepto Recognized as the

2021

Company of the Year

Global Autonomous

Drone-in-a-Box Solutions Industry

Excellence in Best Practices

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Percepto excels in many of the criteria in the autonomous drone-in-a-box solutions space.

AWARD CRITERIA	
<i>Visionary Innovation & Performance</i>	<i>Customer Impact</i>
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

An End-to-end Solution for Inspection and Monitoring

Various industries realize the benefits of autonomous unmanned aerial vehicles (UAVs) and other autonomous robotic solutions as cost-efficient and safe methods to conduct routine inspection tasks. Though industries' current utilization of UAVs is beneficial without expansive beyond visual line of sight

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- Elizabeth Whycott, Best Practices Research Analyst

(BVLOS) certifications, regulatory reform for BVLOS flight is one of the main challenges the autonomous drone-in-a-box (DIB) solutions industry faces. Gaining favorable certifications from global and local aviation authorities is necessary for those in the industry as it enables clients to utilize autonomous DIB and robotic capabilities fully and maximize their benefits. While many industries realize the benefits of autonomous UAV solutions, many are still not fully aware of their extensive capabilities. The COVID-19 pandemic has pushed the drive towards autonomous solutions for many industries, and the autonomous DIB industry has had to keep pace with the demand, both in output and in gaining regulatory waivers and certifications. For many, the COVID-19 pandemic also shut down in-

person processes, making it challenging to maintain operations, while travel restrictions made on-site system deployment difficult.

The Israeli-based robotic company, and multiple Frost & Sullivan Best Practices Award recipient, Percepto, once again solidifies itself as a global leader in the autonomous DIB solutions industry. The company's Autonomous, AI-Powered, Inspection and Monitoring (AIM) solution and the proprietary Sparrow autonomous UAV, housed in the Percepto Base, and its partnership with Boston Dynamics and integration with the Spot™ autonomous robotic dog, provide the foremost inspection, monitoring, and surveillance solutions. Percepto designs, manufactures, and sells its AIM solution, Sparrow, and Percepto Base for various industries, including thermal energy, solar energy, mining, oil and gas, ports and terminals, and other heavy industrial sites. Furthermore, its end-to-end solutions are used for inspection purposes, modeling and measurement, progress monitoring, security, emergency response, and remote operations.

At the helm of Percepto's innovative vision is its drive towards an end-to-end, remotely managed, fully autonomous robotic solution that can meet the demands of its broad client base and their respective purposes. Even through the COVID-19 pandemic, the company manages to overcome the difficulties it has brought, including navigating travel restrictions when there has been a demanding drive towards remote and autonomous inspection, monitoring, and surveillance to ensure clients have the highest quality capabilities.

Visionary Innovation with Autonomous Software and Robotic Solutions

While the entire company dedicates itself to client success, Percepto has an arm dedicated to innovation. The company continuously shows its innovative spirit by tailoring its solutions to be inclusive of its clients' needs. Percepto's autonomous solutions enable clients to have quick and easy access to relevant site data and ensures appropriate information distributes in an easy to understand format to appropriate action personnel such as management, security, operations, safety, compliance and maintenance units. The benefits of autonomous robots for inspection and maintenance purposes mean reduction of human error, increases in safety, and maintenance optimization for business continuity, all of which increase productivity and a strong return on investment. Percepto's AIM software together with its autonomous UAV Sparrow, are amongst the most deployed solutions in the industry, serving as a testament to the company's advanced and valuable autonomous solutions.

Percepto AIM is an open platform end-to-end solution capable of performing autonomous inspection tasks with DIBs, UAVs, autonomous robots, and other visual sensor units (e.g., GoPro cameras, mobile phones, and CCTV). The company's AIM solution automates, manages, and monitors inspections and workflows for quick risk detection, superior measurement accuracy, and situational awareness improvement. The Percepto AIM platform process occurs when a human actor places an order for information collection on a specific site or an asset within a site. The remainder of the process is entirely autonomous, starting with an inspection robot (e.g., UAV, robot dog). An autonomous robot dispatches to the site to collect data and live-streams the inspection process. The robot streams the visual data to the cloud, and an analytical comparison to historical data occurs. From this comparison, the solution generates an artificial intelligence driven report on trends, anomalies. The solution is also capable of

automatic creation of, three-dimensional models, measurements, and two-dimensional mapping, and sends insights from the analysis to relevant stakeholders.

Percepto AIM is a truly robust and efficient platform that allows clients to engage in remote operations, minimize the risk of on-site incidents and shutdowns, and reduce operational costs, all while improving personnel and site safety. While developing the platform, Percepto recognized the limitations of aerial inspections alone and its clients' desire for a more robust inspection and monitoring solution. By making

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- Elizabeth Whyntott, Best Practices Research Analyst

Percepto AIM open architecture, the platform provides unique and powerful benefits, allowing easy integration from multiple inspection sources. Data from aerial, ground, and even sea autonomous robots easily integrate for consistent, continuous, and 360° views of inspections. Percepto AIM also provides an end-to-end solution for non-autonomous inspection programs (e.g., mobile phones, non-autonomous UAVs), and clients can easily upgrade to integrate an autonomous inspection program when they are ready.

Percepto’s Sparrow is a ruggedized UAV, housed in the Percepto Base, capable of conducting fully autonomous inspections, surveillance, and security, and emergency response tasks and has an IP56 rating for use in extreme weather conditions. The Sparrow features computer-vision-enabled cameras, a 4K camera for the day, and a thermal camera for night, allowing for continuous inspections and surveillance. Sparrow

inspection operations use 4G and 5G networks, enabling operations to schedule the UAV for routine tasks or deploy it quickly and remotely manage them from anywhere in the world. The Sparrow also comes with an ASTM 3322-18 standard compliant parachute, a first in the autonomous UAV market, for added safety in the case of an emergency landing.

The autonomous dog, Spot, is a noteworthy third-party offering from a partnership with Boston Dynamics. Spot is the first robot that integrates with AIM and paves the way for other third-party autonomous robots to incorporate with the AIM platform. Spot operates much like the Sparrow in that it can carry out routinely scheduled autonomous inspections from a ground perspective. Spot can also handle varying payloads, including a 360° camera, scanning devices, and sensors to handle any tasks a client needs. Percepto developed a unique base for Spot, empowering industrial facilities to keep Spot on their site at all times, charged and ready for action, without the need for on-site staff to operate it.

Paving the Path for the Unmanned Autonomous Vehicle Industry

Percepto boasts the highest number of DIB deployments and the most extensive customer base in comparison to competitors, markedly establishing its leadership position in the industry. Because the company has the largest number of deployments and the most mature product line, it can gather and gain valuable information, allowing for further product improvement. For example, because of its global

reach, the company can collect information about the Sparrow's weather performance from areas worldwide. Percepto uses advanced AI to identify deficits and make improvements that address clients' needs.

In further working towards meeting its clients' needs and expanding UAV potential, Percepto is adamantly working towards gaining BVLOS and other regulatory waivers throughout the world. The company is included among the first group of the 'Gold standard' FAA's Type Certification (TC) ("special class aircraft") alongside companies such as Amazon Prime Air, and Zipline.¹ The company has gained BVLOS waivers for clients in various countries, including the United States (US), Italy, Portugal, Israel, and soon Australia. In the US, during the wildfires of 2020, Percepto's client, Verizon, was granted a first of its kind emergency waiver to fly the Sparrow and inspect critical communications infrastructure 24 hours a day with less than three miles of visibility, all from a remote location and no observer on site.² In Australia, Percepto's Sparrow now has an EVLOS waiver, allowing it to fly within 1500 meters (.93 miles) of multiples observers, and full BVLOS flight is expected in 2021.³ Another Percepto client in Norway, Aeroview, has a BVLOS certification and can remotely operate the Sparrow anywhere in the country.⁴ Another of the company's clients, ICL Dead Sea, was the first company in Israel to receive a BVLOS waiver, allowing them to monitor and secure their mining operations.⁵ Gaining waivers and seeking regulatory change for UAVs is vital for the industry to grow and for clients and their respective industries to utilize Percepto's systems and UAV flight benefits fully.

In 2020, the COVID-19 pandemic was influential in pushing industries towards autonomous solutions to conduct inspection and maintenance tasks, some from remote locations as many workers could not be on site. While many in the autonomous DIB industry were unprepared for the demand increase for autonomous DIB solutions, Percepto maintained production and steady revenue, keeping up with the demand. The company's reliable and consistent market and product performance have recently secured it \$45 million in a Series B funding round, with Koch Disruptive Technologies being the lead investor. Koch's investment speaks to the trust the company has established with its continuous technological innovation.

Establishing Ongoing Client Relationships for Customer Success

Percepto's large client base is financially advantageous and serves as a source to gather information about product performance and client needs. The company recognizes the need to collect and amalgamate data from clients efficiently, and its customer success team helps clients act on those needs. Percepto works in a synchronous and engaging relationship with clients, viewing them as design partners to gather information about production performance, requirements, and the challenges they face daily. Forming a solid relationship with end-users and partners allows the company to understand and anticipate the industry's needs, ensuring its market standing.

¹ www.faa.gov/news/updates/?newsId=96138&omniRss=news_updatesAoc&cid=101_N_U

² <https://www.zdnet.com/article/landmark-waiver-lets-drones-fly-into-fire/>

³ <https://percepto.co/autonomous-inspection-pioneer-percepto-scores-triple-drone-regulation-win/>

⁴ Ibid.

⁵ <https://percepto.co/percepto-drones-gains-bvlos-at-icl-daed-sea-approval/>

As another part of the company's customer success team, Percepto aims to extend the client relationship by providing them with all the knowledge and tools they need when they need them. For example, during the COVID-19 pandemic, travel restrictions made deploying systems difficult, but Percepto persevered by relying on local partners to help set up its systems and hardware for clients. Additionally, for every system activation, the company works alongside the client to workshop the system and ensure they get the most effective use and value from the system.

Percepto not only offers a robust surveillance and monitoring solution but also has a great return on investment. In comparison to competitors, who offer either the hardware, sensors, or software, Percepto leverages its technology to provide a complete end-to-end autonomous service for a value-added solution. Additionally, the company's broad client base and significant market share provide insight into identifying issues early so it can head them off before they turn into major problems. Identifying and averting issues earlier prevents and decreases system downtime, saving clients thousands to millions of dollars.

Conclusion

The need and demand for autonomous drone-in-a-box (DIB) solutions is progressing rapidly. Industry leaders that can provide true autonomy and an end-to-end solution will face several challenges. Demonstrating effectiveness and safety to global regulatory institutions to gain beyond visual line of sight (BVLOS) waivers is a top priority for many. Additionally, as many industries realize the full capabilities and potential of unmanned aerial vehicles (UAVs), there will be an increase in demand many will struggle to meet. A three-time Frost & Sullivan Best Practices Award recipient, Percepto has proven its industry leadership with its advanced Autonomous Inspection and Monitoring (AIM) platform and Sparrow DIB solutions. The company continuously strives to establish strong client relationships to understand and provide solutions for their needs, including demonstrating autonomous UAV flight safety to gain clients' waivers for BVLOS flight. Percepto's commitment to robust and autonomous robotics ensures clients can fully utilize UAV capabilities for a strong value-added and greater return on investment solution.

With its strong overall performance, Percepto earns Frost & Sullivan's 2021 Global Company of the Year Award in the autonomous drone-in-a-box solutions industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends:

Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first to market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at <http://www.frost.com>.

The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create on-going growth opportunities and strategies for our clients is fuelled by the Innovation Generator™. [Learn more.](#)

Key Impacts:

- **Growth Pipeline:** Continuous flow of Growth opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



The Innovation Generator™

Our six analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- Mega Trend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)

