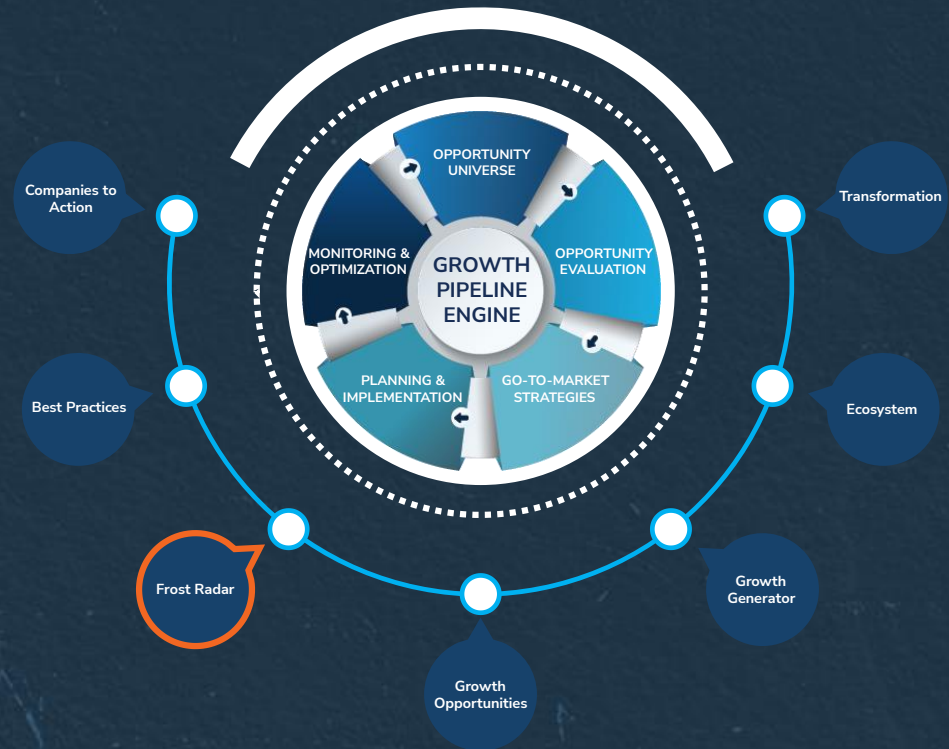


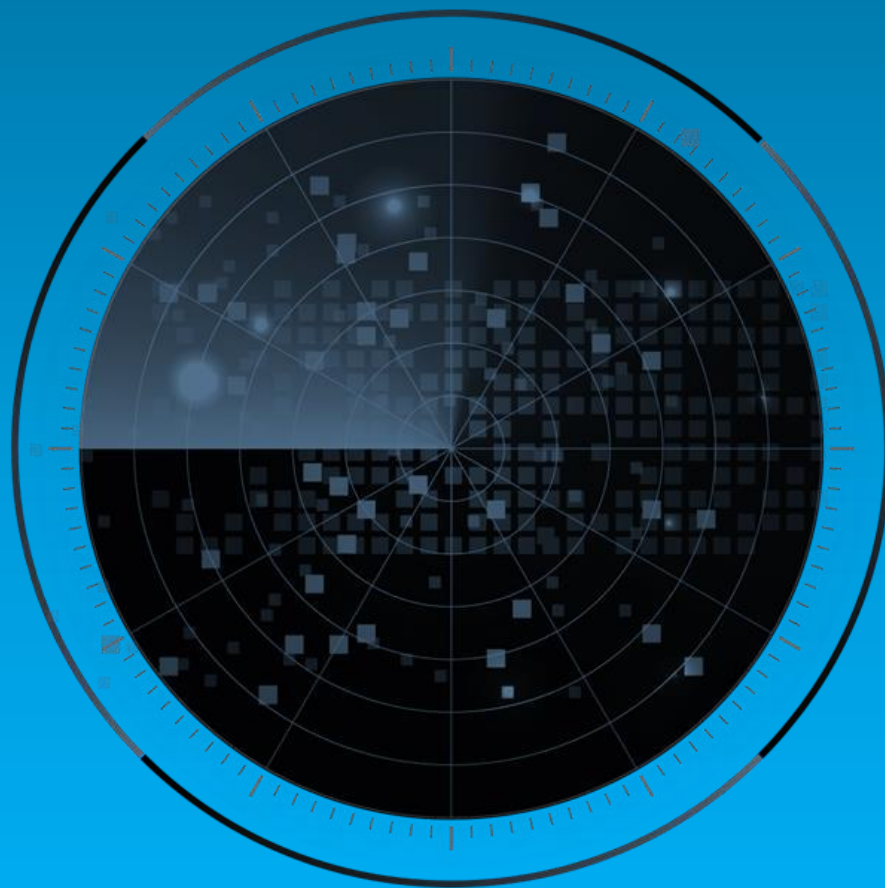
Frost Radar™: Augmented Connected Worker Platforms, 2024

A Benchmarking System to Spark
Companies to Action - Innovation
That Fuels New Deal Flow and
Growth Pipelines



KA86-10
September 2024

Strategic Imperative and Growth Environment



Strategic Imperative

- The term “augmented connected worker” (ACW) results from combining the concepts of connected worker (CW) and augmented worker (AW). CW refers to the leveraging of digital technologies, such as augmented reality (AR), AI, and IoT, to access critical information in real time, increase collaboration, and share knowledge. Some sources use the term connected frontline worker (CFW) to emphasize the focus on manufacturing frontline workers, including those in production and maintenance. AW refers to the enhancement of performance in manufacturing tasks using assistive technologies, such as AR, exoskeletons, environmental sensors, and computer vision systems.
- There are similarities between CW and AW, which is why it is common to find sources that use them interchangeably. The ACW combines these concepts to better describe what the future of manufacturing work will look like. Task enhancement, collaboration, and access to information are crucial to creating a seamless and dynamic work environment. Frontline workers’ ability to have a bidirectional interaction with information and systems is as important as integrating that interaction seamlessly into their daily tasks and not creating additional burdens. The main driver of value in ACW solutions is in reducing the complexity of modern manufacturing IT landscapes and enhancing the performance of frontline workers in their daily tasks.
- The ACW industry was born approximately 15 years ago, with several start-ups that aimed to solve specific problems on the shop floor by providing digital tools to frontline workers. Manufacturing facilities started using more point solutions that added complexity to the everyday activities of frontline workers. Due to the demand for a single pane of glass to manage the different systems on the shop floor, many of these start-ups (safety and risk management, learning and upskilling, maintenance-focused productivity, remote collaboration) expanded their functionalities and integration capabilities to become the standard systems on the shop floor.

Strategic Imperative (continued)

- Frost & Sullivan has identified nine functionalities that are essential for a complete ACW solution.
 - Knowledge and data management. The solution serves as a repository of knowledge.
 - Work assistance and productivity. It provides digital tools to enhance frontline workers' tasks, such as digital work instructions, digital Kanban boards, and navigation guidance.
 - Seamless experience. The solution must be easily accessible from available devices (phones, tablets, wearables) to integrate seamlessly into everyday operations.
 - Skills management. This serves as an extension for learning management systems (LMS) and provides supervisors and plant managers the necessary tools to upskill the workforce.
 - Channel for communication. The solution offers native features to enable collaboration across operations, such as remote assistance, multi-site or multi-team workflows, and news feeds.
 - Reporting and analytics. This refers to pre-built dashboards with workforce and task execution data. The ACW platform can also provide tools for configuring custom dashboards and integrating data from other systems.
 - Integrations. The solution comes with a variety of pre-built connectors and tools to easily build new integrations to common systems.
 - Platform capabilities. NC and LC development environments allow the building of digital procedures, workflows, training programs, and dashboards. Standard templates are available to accelerate time to value and the default deployment option is cloud-based.
 - Integrated AI. The solution leverages AI in one or more ways. AI-enabled features include predictive maintenance, automatic creation of workflows/digital work instructions/troubleshooting procedures based on video or worker input, automatic analysis and optimization recommendations for processes, AI-powered search engines, copilots, live translations, and more.

Strategic Imperative (continued)

- Given how the ACW industry was formed, Frost & Sullivan has determined that, for a solution to be considered part of this market, it must fulfill at least six out of the nine essential functionalities.
- This industry is converging and the ACW market is populated with many highly heterogeneous vendors. Frost & Sullivan predicts that vendors will transform into generalists that differentiate themselves in either a specific use case (skills management, for example) with extensive functionality or in the technological stack of their solution (for instance, AI features, ability to manage complex workflows, number of integrations with other systems).
- Labor shortages drive internal challenges for manufacturing companies in Europe and North America. The older and more experienced generation of workers is retiring, and younger prospects are under-prepared and uninterested in manufacturing. In addition, the average tenure of a frontline worker is now lower than the average time it takes to master the job. These factors create a significant problem for manufacturers—some are even forced to shut down operations for the day due to the lack of skilled workers. While many products can help, the ACW is the most appropriate one to solve this problem. It can accelerate new hires' onboarding processes, expand workforce skills to allow more flexibility in production scheduling, standardize work across multiple plants, and capture experiential knowledge so it is available for everyone.
- Competitive intensity is high in the ACW market. Most vendors are venture capitalist (VC)-backed start-ups growing at high double-digit and even triple-digit rates year over year. The market is still highly underserved, and vendors find few or no competitors when making new deals.

Strategic Imperative (continued)

- Companies have just recently started to standardize using a single ACW solution for all their facilities. Formerly, the typical deal was meant for single plants after pitching individual plant managers. This created a scenario where a single company had multiple ACW systems running on different plants. As first adopters (food and beverage, consumer packaged goods [CPG], building materials, and other such industries) become saturated and standardize by implementing single solutions, vendors will face higher pressure to innovate and remain competitive.
- The most successful companies in this market are creating solutions that fulfill the nine essential capabilities mentioned earlier and can address a wide range of applications on the shop floor. In most cases, manufacturers are approaching ACW vendors looking to solve a specific problem, such as increasing the availability of a particular machine by quickly notifying the technicians when a downtime incident occurs, improving the efficiency of customer service by offering remote assistance, or increasing the completion rate of assigned training material by acting as an extension of the LMS. Once manufacturers see value, they adopt more of the solution's functionalities.
- In addition, successful vendors in this market are offering a wide and constantly growing number of pre-built connectors to common systems for manufacturing, onboarding services to accelerate time to value for customers, AI-powered copilots that can act (or at least aim to do so soon) as the primary front end for interacting with the platform, and creative new features such as skills-based scheduling. Finally, given the small size of most vendors in this market and the fact that any ACW will be connected to most systems in a company, compliance with and certifications for data security standards such as System and Organization Controls (SOC) 2 Type 2 and ISO 27001 are essential to building trust with manufacturers. Other types of certifications such as the US Food and Drug Administration (FDA) 21 Code of Federal Regulations (CFR) Part 11 or Health Insurance Portability and Accountability Act (HIPAA) are required for compliance in specific manufacturing industries.

Growth Environment

- The global ACW market reached \$956 million in 2023. Frost & Sullivan expects it to reach \$6.36 billion by 2030, growing at a 31.1% CAGR. The market is still in its early adoption phase, with a high percentage of underserved customers. Growth will increase until 2027, and then start a steady decline as the first adopters become saturated and maturity drives companies to standardize through single solutions for all their facilities.
- As mentioned earlier, labor shortages in North America and Europe and the increasing complexity of manufacturing operations are some of the main drivers of growth. Productivity benefits and fast implementations make ACW highly attractive for manufacturers.
- The United States is currently the largest and fastest growing market for ACW vendors, and most start-ups are US-based. Europe follows as a close second and Asia-Pacific (driven mainly by China, India, Korea, and Japan) stands in third place. This situation correlates with the number of vendors in each region and with the degree of urgency of labor shortages. All quantitative market information is derived from the recent Frost & Sullivan study [Growth Opportunities in the Augmented Connected Worker Sector, Global, 2023–2030](#).
- Although the market is highly fragmented, with many heterogeneous vendors, there are some common identifiable trends in their products. Most ACW systems are cloud-based, have digital work instructions/procedures at the center of the solution, integrate into many vertical systems commonly used in manufacturing, and are available on iOS and Android mobile devices. These features address the most critical problem in manufacturing as it pertains to the ACW—a frontline workforce that is not digitized. The entry point for most new ACW deals is digitizing a specific procedure as fast as possible and with few capital requirements.

Growth Environment (continued)

- The need for digitizing manufacturing operations grew and, consequently, vendors of vertical systems—such as manufacturing execution systems (MES) and computerized maintenance management systems (CMMS)—have added digital work instruction features to empower frontline workers, which slows down ACW growth because it decreases manufacturers' urgency. Furthermore, the configurability of this digital work instruction feature is limited and, most importantly, it does not interoperate with other systems on the shop floor to create more complex procedures and workflows—at least not without costly integration efforts. For this reason, many ACW vendors partner with companies such as SAP and Siemens to increase their exposure and enhance these vertical systems.
- In most cases, pricing follows a subscription model based on the number of users, modules selected, or plants. Given that part of the ACW's value depends on the entire workforce using it, it seems counterproductive to charge per user because this disincentivizes adoption (still, many vendors do this and argue that it does not impede their business). This discrepancy may be due to customer size: a larger company, for example, will most likely acquire an enterprise package (or similar) that does not depend directly on the number of users; a small manufacturing company will not acquire such a license and may be reluctant to pay on a per-user basis. ACW vendors specializing in process digitization may benefit from using a different pricing model that attracts these smaller manufacturing companies.
- There was not enough available data to provide an average value of the typical ACW license's price per user per month. However, Frost & Sullivan has determined that they can be up to five times higher than similar offerings.
- The ACW industry is relatively young in the industrial software space and most vendors are still VC-backed start-ups. The systems currently available vary depending on the vendor's background. However, there is a clear trend—vendors want to become the single pane of glass for frontline workers, which is why they become ACW generalists.

Growth Environment (continued)

- A generalist ACW solution integrates skills and learning management, remote collaboration and field services support, AR-enabled content, safety and risk management, and digital work instructions into a single system. This does not mean that no vendors offer additional capabilities, such as inventory and asset management, or that the depth of functionality in each of the listed use cases is completely thorough.
- Naturally, there are plenty of overlaps between the ACW and other systems, such as MES (with overall equipment effectiveness calculation and work order management), CMMS (with failure reporting and generation of maintenance work orders), and LMS (with creation and assignment of training material). The ACW is not meant to replace these systems, but it can be a lighter version, covering 70% to 80% of their functionalities in some cases. While some manufacturers use the ACW to replace one or more of these vertical systems, the ACW should be open and easy to integrate into any current digital infrastructure to act as an extension of these systems.
- If the ACW is truly going to be the single-pane-of-glass solution for frontline workers, all current software on the shop floor that workers interact with must be able to connect to the ACW platform. Vendors try to offer as many pre-built connectors to common systems as possible, and some offer tools that ease the integration process. However, point-to-point integrations will never solve the lack of flexibility toward the common architectures in manufacturing companies based on digital threads. For instance, manufacturers can adopt an open architecture using message queuing telemetry transport (MQTT) brokers to distribute data back and forth between the different systems and a unified namespace, solving the flexibility problem. For vendors in the ACW space, the best approach is to offer pre-built connectors to as many systems as possible, provide tools that simplify the integration process, and have an MQTT connector to seamlessly integrate into a modern digital architecture.

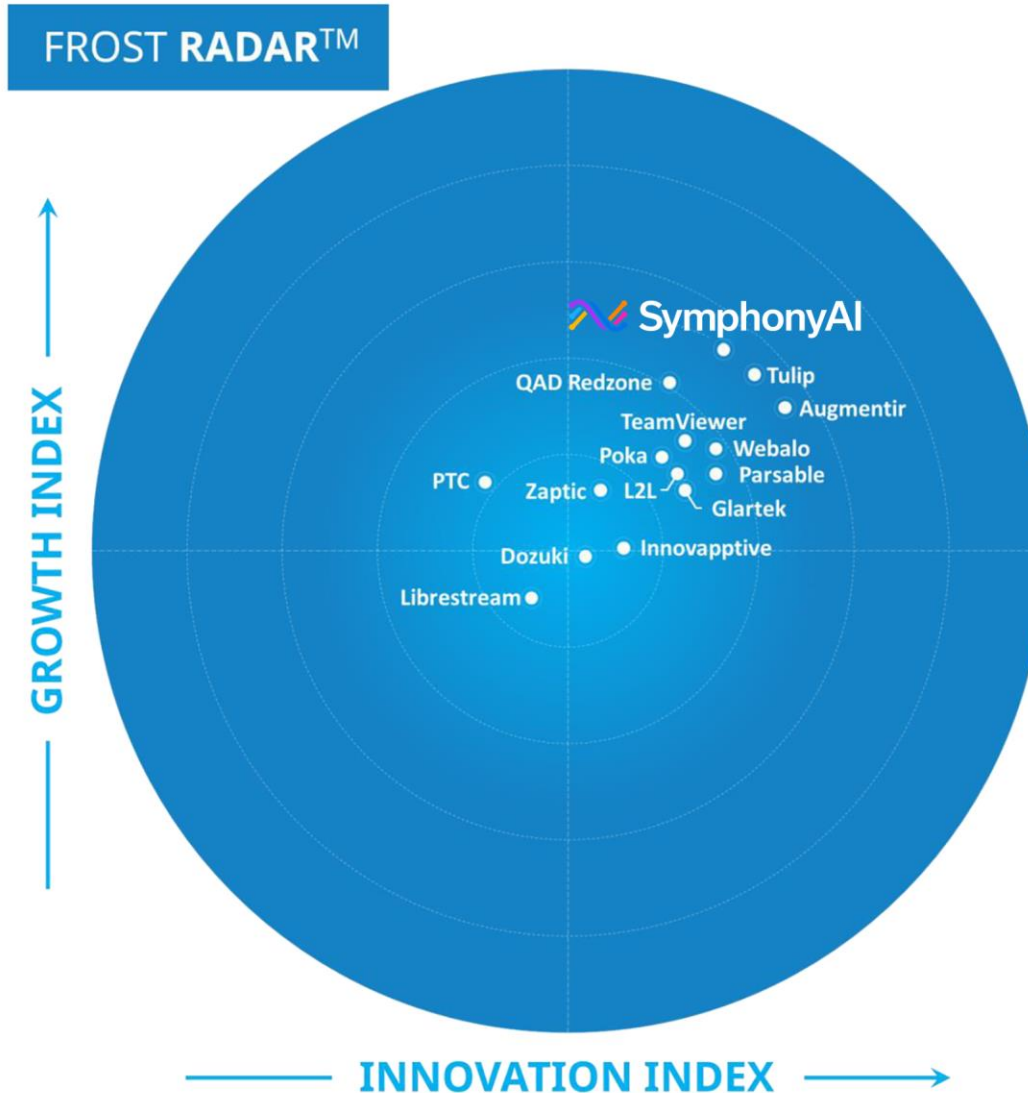
Growth Environment (continued)

- ACW systems can easily create digital procedures, which is one of their key capabilities. Different ACW systems may offer templates and configurability features tailored for a certain set of procedures, such as maintenance, field services, assembly, and learning. Each vendor's approach depends on its expertise and vision for the solution. Ultimately, Frost & Sullivan believes that generalists will be more likely to succeed in this market.
- NC/LC environments for creating apps and configuring screens are crucial to enabling the seamless creation of digital procedures. All ACW systems in this Frost Radar™ analysis offer some NC or drag-and-drop functionality for configuring digital procedures. In contrast, only some ACW systems offer LC extensibility for creating more complex digital procedures that interact with other systems in real time. The degree to which an ACW system can do this task is an important differentiation factor.
- Vendors also differ in their intended use for LC and NC features. While all use them to speed up implementations and quickly demonstrate value, only a few present NC and LC as the centerpiece of their solution. These vendors offer platforms with no out-of-the-box apps and provide onboarding services, templates, and training material so that customers learn to build their own solutions. Frost & Sullivan believes that this build-it-yourself approach will ultimately provide the most value to most manufacturers in the long run.

Frost Radar™: Augmented Connected Worker Platforms, 2024



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Frost Radar™ Competitive Environment

- The ACW industry is highly fragmented, with the top 5 vendors holding more than 35% of the total market share. Frost & Sullivan has identified more than 50 vendors that fit the inclusion criteria for the ACW, and almost all of them are in the United States and Western Europe. The industry will consolidate during the next 5 years through M&As and companies going out of business due to intense competition.
- Most vendors on the Radar are generalists—SymphonyAI Industrial, Augmentir, Glartek, Innovapptive, L2L, Parsable, Poka, QAD Redzone, Zaptic, and Webalo. PTC and TeamViewer are specialists in AR-enabled digital procedures, Librestream is an AR-centric specialist in remote collaboration and field services, and Dozuki is a specialist in digitization of work procedures and workforce upskilling.
- Tulip is a platform for building apps on the shop floor sometimes considered an MES. While it is possible to build most or all functions that ACW covers using the platform, a certain degree of pre-built functionality or templates is necessary for anyone to consider it a true competitor for other ACW platforms. Tulip consistently develops templates to ease the creation process of many apps using the platform, which is why Frost & Sullivan has included it on the Radar.
- Besides the ability to create complex workflows that interact with multiple systems using LC, there are many other differentiators for ACW platforms, including inventory and asset management, skills-based scheduling, innovative AI features (copilots for building dashboards or accessing information and work instructions, predictive maintenance analysis, automatic creation of digital procedures, live translations), support for nearly 100 different languages, advanced AR capabilities (3D work instructions, no QR code access, navigation guidance), on-premises deployments, and complementary services.

Frost Radar™ Competitive Environment (continued)

- Some of the vendors analyzed in this Frost Radar™ lead the way in implementing generative AI for the ACW. SymphonyAI Industrial, Tulip, Augmentir, Parsable, and Webalo have released AI-powered copilots that provide frontline workers with the insights and guidance they need. For many of these companies, the goal is for the copilot interface to be the primary way in which users interact with the ACW platform.
- The Radar plot has three clusters of vendors. The first one, at the top, consists of Tulip, Augmentir, SymphonyAI Industrial, and QAD Redzone. These companies are leaders in innovation and growth.
- SymphonyAI Industrial, Tulip, and Augmentir were some of the first vendors to develop highly functional AI copilots for their platforms, and each vendor has its unique differentiation points. Augmentir innovates with creative features for skills management and workforce engagement, SymphonyAI Industrial leverages its Industrial Reasoning and Insights Service (IRIS) Foundry integration to enable closed-loop optimizations for its customers, and Tulip offers the most unique build-it-yourself approach to the ACW.
- QAD Redzone has created hundreds of templates to enable fast time-to-value for its customers, offers AI-assisted customer support, and is currently the market leader in revenue.
- The second cluster consists of TeamViewer, Poka, L2L, Glartek, Parsable, and Webalo, which achieved similar scores on the Radar.
- TeamViewer is a publicly traded global company that released an AR-centric ACW platform that could be almost categorized as a generalist. It has implemented AI for automatic step-checks, tool verifications, and other innovative use cases. TeamViewer has ventured beyond manufacturing to establish its footprint in warehouse/retail contexts by leveraging its pick-by-vision functionality.

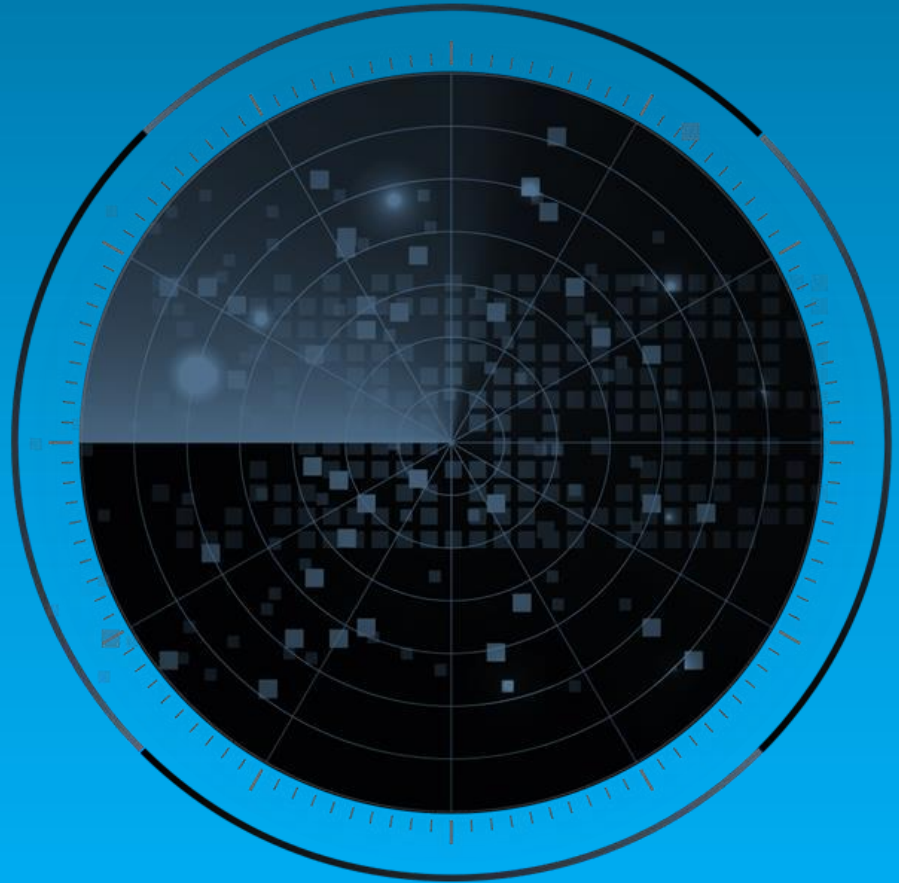
Frost Radar™ Competitive Environment (continued)

- Poka is one of the best ACW platforms for skills and learning management. It recently developed compatibility for its platform with the Apple Vision Pro AR headset, focusing part of its R&D efforts on AR.
- L2L is one of the best ACW platforms for maintenance and is sometimes used as a replacement for traditional CMMS. It features an AI copilot for maintenance and is expanding its capabilities through R&D and acquisitions.
- Glartek is the only AR-centric platform that can be classified as a generalist. Although it is still a small company, it is one of the fastest-growing vendors in the market.
- Parsable offers one of the most advanced platforms for building custom dashboards and performing analytics on the shop floor. Its new AI tool allows users to access data and build their own dashboards easily.
- Webalo is also a generalist ACW platform with advanced capabilities for data analytics. In its latest release, Webalo launched a new AI copilot, much like vendors from the first cluster have done before.
- The last cluster includes Innovapptive, Librestream, Zaptic, Dozuki, and PTC.
- Innovapptive offers extensive functionality, including inventory and asset management, integration with geographic information systems (GIS) systems, and other features tailored for its customer base in process manufacturing industries. Librestream is best known for its remote expert support solutions and has recently launched an ACW platform that includes an AI copilot for accessing information. Both Librestream and Innovapptive possess strong ties to their customer base, which limits their potential for growth in adjacent industries.

Frost Radar™ Competitive Environment (continued)

- Zaptic is a generalist, but its platform lags behind other vendors because many of its features are still under development. Dozuki has been historically considered a digitization platform. However, it has developed skills and learning management functionalities as part of its vision to help digitize and upskill the workforce. Finally, PTC's Vuforia is one of the best AR platforms for creating 2D and 3D AR apps. However, the company's focus on the digital thread and the recent announcement by its new CEO to move away from IoT and AR show that the company is not looking to be a major player in the ACW industry.
- While developing this Frost Radar™, Frost & Sullivan found that many organizations provided valuable qualitative and quantitative data and insights, and others either did not respond, declined to take part, or refused to provide any information to support their growth strategy, revenues, or innovation strategy in the global industry. As a result, this Radar reflects the best estimations of revenue and revenue growth metrics for those companies that do not publicly disclose their overall financial status or the financial performance of their ACW platform.

Frost Radar™: Companies to Action



SymphonyAI Industrial

INNOVATION

- In 2021, SymphonyAI Industrial acquired Proceedix, an ACW platform, and offers it as a per-user or enterprise license option. The company also offers Proceedix as a bundle with its IRIS Foundry Platform on a transaction-based model.
- Since acquiring Proceedix, SymphonyAI Industrial has added several functionalities to the solution, including eLearning and skills management, an AI copilot for frontline workers, and an NC workflow builder tool.
- The company has transformed Proceedix's back-end, which was previously native for iOS and Android, to Flutter, allowing it to maintain high performances while managing a single codebase.
- SymphonyAI Industrial has integrated Proceedix into its IRIS Foundry Platform. This integration greatly enhances the AI capabilities of the ACW solution as it leverages the company's state-of-the-art industrial large language model to create closed-loop workflows between the assets and frontline workers.
- Proceedix comes with a variety of out-of-the-box connectors to popular systems (SAP PM, IBM Maximo), Microsoft apps (MS Teams, Outlook), and cloud storage services (Google Drive, Dropbox). The IRIS Foundry Platform also has extensive connectivity capabilities to industrial software, assets, and programmable logic controllers supporting several communication protocols, including MQTT and OPC UA.
- The company has recently launched Collaborative Workspace, a digital whiteboard tool integrated into Proceedix and IRIS Foundry, with extensive AI functionality and support for up to 24 concurrent users. The feature is sold as an add-on to Proceedix.

SymphonyAI Industrial (continued)

INNOVATION

- The company's R&D budget to revenue ratio is higher than the average across the companies on this Radar, which is evident in the fast development of new features. These developments center on new AR functionalities, achieving HIPPA compliance, and gathering feedback related to the Collaborative Workspace tool.
- Some of Proceedix's noteworthy features include its AI capabilities for automatically creating workflows using voice or text, the persona-based UIs, and the ability to use a device's native AR capabilities and the geotagging information associated to assets to automatically show the information related to an asset by just pointing a camera toward it.

SymphonyAI Industrial (continued)

GROWTH

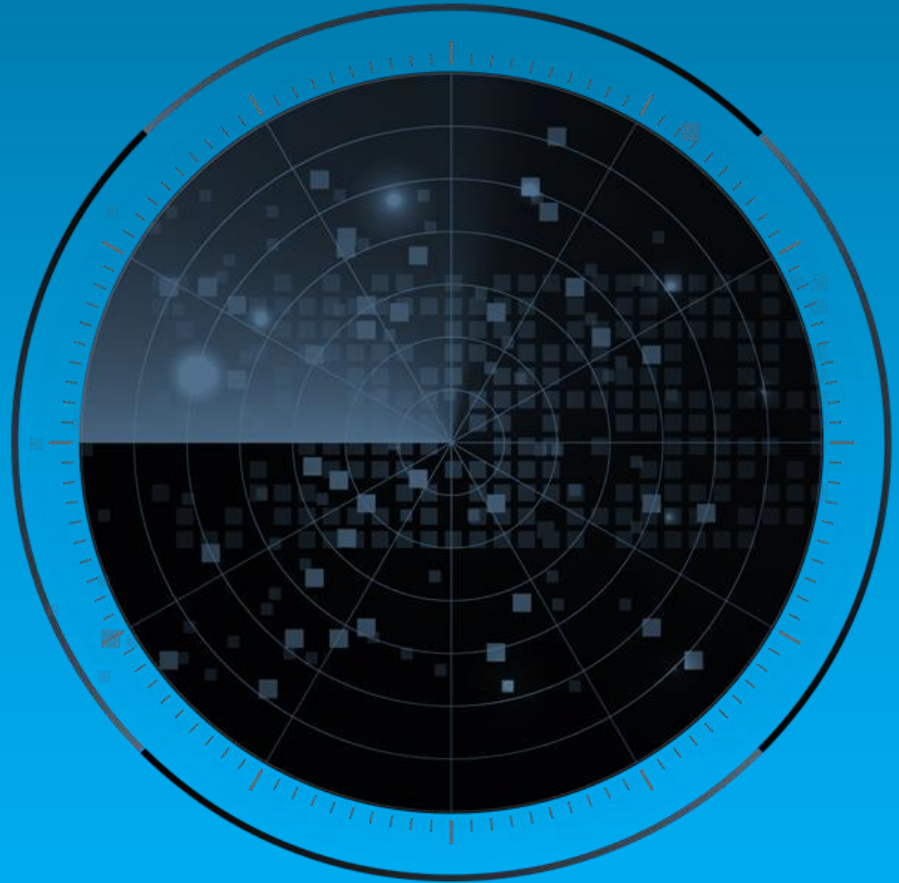
- SymphonyAI has grown at an approximately 30% rate in 2023, with more than \$500 million in revenues and a positive bottom line. The company has also announced plans to go public in 2025. Proceedix has been growing at triple-digit rates.
- The company won the 2024 Microsoft Business Transformation Partner of the Year Award for AI Innovation, demonstrating its strong focus on developing AI features for its customers. Being an MS partner is a significant growth driver.
- Proceedix is one of the few ACW solutions in the market that offers complete flexibility in deployment. The system is available in a public or private cloud, single or multi-tenant, hybrid cloud, or on-premises.
- Its product portfolio compliments the ACW offering. It includes APM, machine vision, batch optimization, MES, predictive maintenance, and vibration analysis.
- More than 80% of retail stores in North America use SymphonyAI Industrial's products. As a result, many retail companies are showing interest in Proceedix to use it in warehouses and distribution centers.
- Proceedix complies with GxP for pharmaceutical, FDA CFR Part 11, ISO 27001, and SOC 2 Type 2. This has helped SymphonyAI Industrial transform its sales approach from targeting individual plant managers to talking with C-level executives, significantly increasing new deal size.

SymphonyAI Industrial (continued)

FROST PERSPECTIVE

- SymphonyAI Industrial has demonstrated a significant commitment to developing Proceedix by quickly adding several new capabilities. The company's extensive expertise in AI and integration with the IRIS Foundry Platform has made Proceedix one of the most advanced AI-enabled solutions on the market. The company should continue its development efforts, measuring the adoption level of the new features to avoid overspending on R&D.
- The company's ecosystem of partners and installed customer base for complementary products will ensure that Proceedix remains on its high growth path.
- The team at SymphonyAI Industrial has demonstrated its commitment to making Proceedix suitable for pharmaceutical companies, a vertical that shows significant promise for the ACW. However, the company should not lose sight of other fast-growing industries, such as food and beverage, CPG, building materials, plastics, and chemicals.
- Frost & Sullivan expects SymphonyAI Industrial to become one of the market leaders in the ACW space in the next 5 years.

Best Practices & Growth Opportunities



Best Practices

1

Most ACW vendors that are achieving high growth have a set of tools to show fast time to value, including return-on-investment calculators, NC and LC environments for building digital work instructions, AI-powered features to automatically create digital work instructions, and vast libraries of pre-built templates. These tools help vendors shorten implementation times, demonstrate value faster, and then scale.

2

Successful ACW vendors' platforms are easy to use for frontline workers. The ACW needs to become the single pane of glass for them, or else it will just be another piece of software that they are forced to interact with. To achieve this, vendors provide simple configuration tools for customizing screens and provide simple and intuitive interfaces out of the box. Vendors also ensure that their apps are accessible through most devices available on the shop floor so that there is no added burden of interacting with them.

3

Top-performing companies in this market share a common theme: communicating the ACW's value for the entire enterprise. The ACW is generally considered software for frontline workers. However, some vendors target higher-level executives by leveraging the ACW's data capture, process standardization, and analytics capabilities. As a result, these vendors see a higher percentage of new deals as enterprise-wide initiatives to implement a single ACW system for all facilities.

Growth Opportunities

1

The need for a single-pane-of-glass solution to perform operations on the shop floor is growing, so ACW vendors should leverage the opportunity to partner with providers of widely adopted vertical systems, such as SAP enterprise resource planning (ERP), Siemens product life cycle management (PLM), Infor CMMS, Plex MES, and Workday LMS.

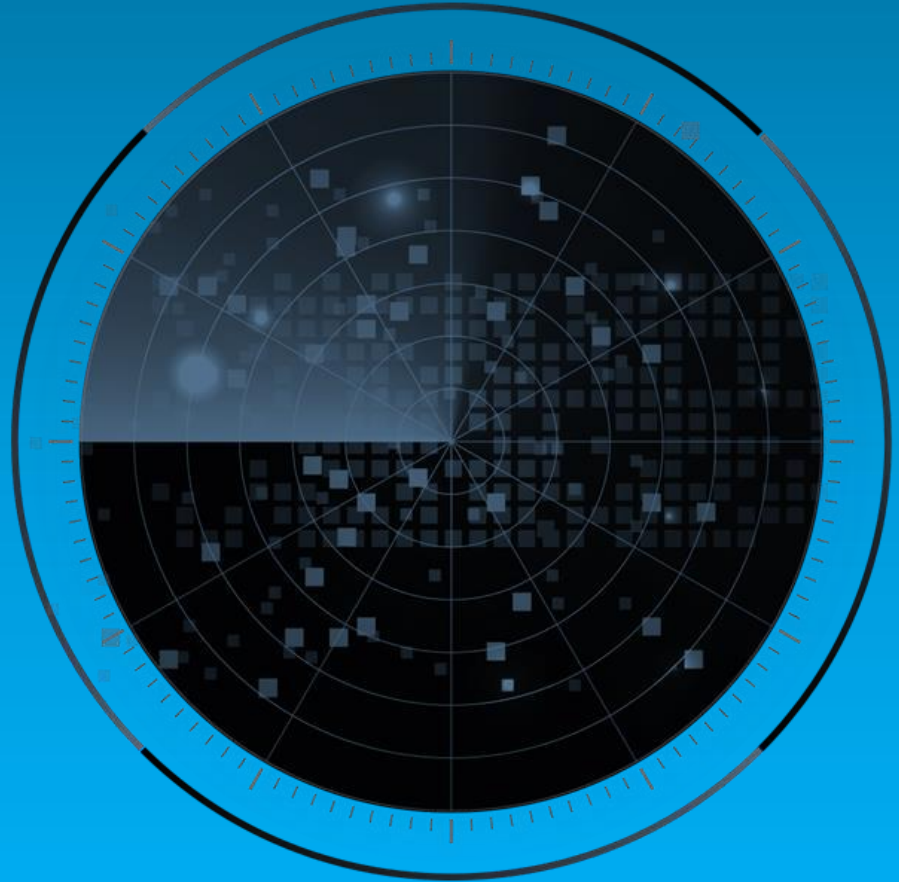
2

As the industry matures, most ACW systems that remain on the market will be generalists differentiated in one or more aspects of their platform. Vendors should aim to cover all the basic functionalities of a generalist while developing some differentiation, such as managing highly complex workflows and offering innovative AI applications.

3

Vendors and integrators use NC and LC environments to speed up implementations. However, they should also use them to empower the workforce and create their own apps and digital procedures, engaging with the company's continuous improvement cycle. ACW vendors that adopt this approach will experience more growth thanks to word of mouth.

Frost Radar™ Analytics



Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

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)

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 that a 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.

Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform (continued)

Innovation Index

Innovation Index (II) is a measure of a company's ability to develop 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.

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. An explanation of Mega Trends can be found [here](#).

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.

Next Steps: Leveraging the Frost Radar™ to Empower Key Stakeholders



Significance of Being on the Frost Radar™

Companies plotted on the Frost Radar™ are the leaders in the industry for growth, innovation, or both. They are instrumental in advancing the industry into the future.

GROWTH POTENTIAL

Your organization has significant future growth potential, which makes it a Company to Action.

BEST PRACTICES

Your organization is well positioned to shape Growth Pipeline™ best practices in your industry.

COMPETITIVE INTENSITY

Your organization is one of the key drivers of competitive intensity in the growth environment.

CUSTOMER VALUE

Your organization has demonstrated the ability to significantly enhance its customer value proposition.

PARTNER POTENTIAL

Your organization is top of mind for customers, investors, value chain partners, and future talent as a significant value provider.

Frost Radar™ Empowers the CEOs Growth Team

STRATEGIC IMPERATIVE

- Growth is increasingly difficult to achieve.
- Competitive intensity is high.
- More collaboration, teamwork, and focus are needed.
- The growth environment is complex.

LEVERAGING THE FROST RADAR™

- The Growth Team has the tools needed to foster a collaborative environment among the entire management team to drive best practices.
- The Growth Team has a measurement platform to assess future growth potential.
- The Growth Team has the ability to support the CEO with a powerful Growth Pipeline™.

NEXT STEPS

- **Growth Pipeline Audit™**
- **Growth Pipeline as a Service™**
- **Growth Pipeline™ Dialogue with Team Frost**

Frost Radar™ Empowers Investors

STRATEGIC IMPERATIVE

- Deal flow is low and competition is high.
- Due diligence is hampered by industry complexity.
- Portfolio management is not effective.

LEVERAGING THE FROST RADAR™

- Investors can focus on future growth potential by creating a powerful pipeline of Companies to Action for high-potential investments.
- Investors can perform due diligence that improves accuracy and accelerates the deal process.
- Investors can realize the maximum internal rate of return and ensure long-term success for shareholders.
- Investors can continually benchmark performance with best practices for optimal portfolio management.

NEXT STEPS

- **Growth Pipeline™ Dialogue**
- **Opportunity Universe Workshop**
- **Growth Pipeline Audit™ as Mandated Due Diligence**

Frost Radar™ Empowers Customers

STRATEGIC IMPERATIVE

- Solutions are increasingly complex and have long-term implications.
- Vendor solutions can be confusing.
- Vendor volatility adds to the uncertainty.

LEVERAGING THE FROST RADAR™

- Customers have an analytical framework to benchmark potential vendors and identify partners that will provide powerful, long-term solutions.
- Customers can evaluate the most innovative solutions and understand how different solutions would meet their needs.
- Customers gain a long-term perspective on vendor partnerships.

NEXT STEPS

- **Growth Pipeline™ Dialogue**
- **Growth Pipeline™ Diagnostic**
- **Frost Radar Benchmarking System**

Frost Radar™ Empowers the Board of Directors

STRATEGIC IMPERATIVE

- Growth is increasingly difficult; CEOs require guidance.
- The Growth Environment requires complex navigational skills.
- The customer value chain is changing.

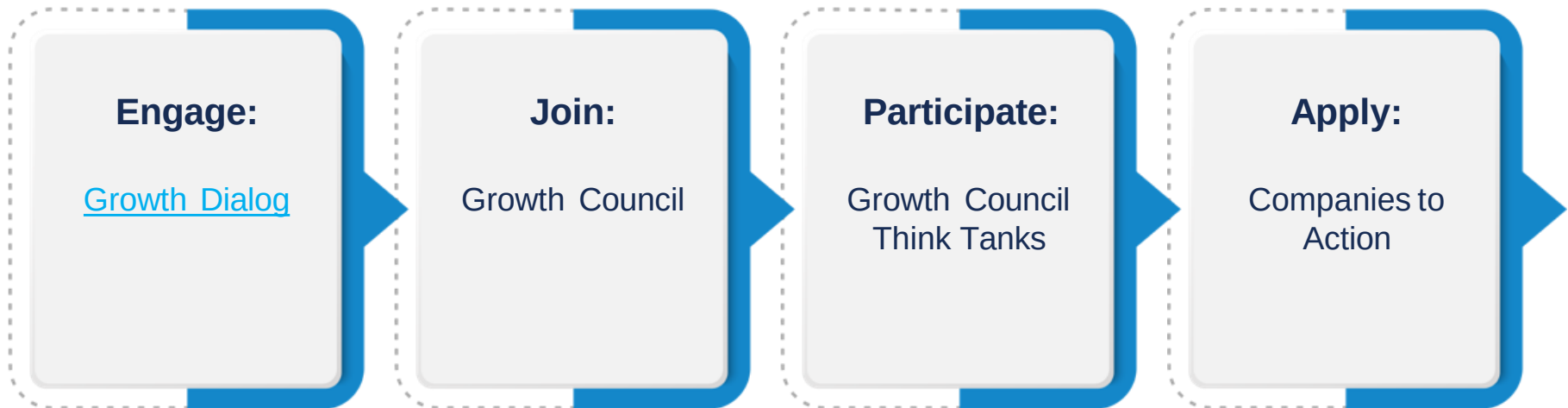
LEVERAGING THE FROST RADAR™

- The Board of Directors has a unique measurement system to ensure oversight of the company's long-term success.
- The Board of Directors has a discussion platform that centers on the driving issues, benchmarks, and best practices that will protect shareholder investment.
- The Board of Directors can ensure skillful mentoring, support, and governance of the CEO to maximize future growth potential.

NEXT STEPS

- **Growth Pipeline Audit™**
- **Growth Pipeline as a Service™**

Next Steps



Does your current system support rapid adaptation to emerging opportunities?

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