Cool Vendors
Tackle Complexity With Connected, Customized and Complementary Solutions: A Gartner Trend Insight Report

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Organizations face fast-paced, increasingly complex changes in external and internal ecosystems. New technologies provide CIOs with approaches to manage complexity and connect and orchestrate across ecosystems, while complementing existing technology stacks and providing customized experiences.

Overview

Opportunities and Challenges

- Ecosystems for organizations are becoming increasingly complex, as networks grow, relationships intertwine, and causes and effects become more convoluted, causing undesirable friction. The pace of change accelerates, as the need to evaluate innovative solutions becomes increasingly urgent and continual.

- Consumers’ needs are increasingly complex, too. Consumers are more diverse and expect personalized, customized experiences that adhere to their privacy preferences, including simple user experience and directed, specific interactions based on their unique roles and personal preferences.

- Organizations are eager to pursue, first, the ability to extend from their existing technical investments by leveraging what they have, as opposed to investing in disconnected, siloed technical solutions. Organizations prioritize managing and minimizing technical debt.

What You Need to Know

To exploit disruptive trends and emerging practices, CIOs must:
Leverage technologies and technology platforms that are open and extensible to plan and respond to increased change and complexity. Orchestrate across end-to-end ecosystems, as opposed to addressing one small component of a larger system or process.

Prioritize the shortlisting of vendors that provide a customized, individualized user experience. Evaluate tools that automatically learn as consumers interact with the technology to provide purpose-driven, augmented approaches to delivering specific, customized results.

Pilot with solutions that can be easily incorporated into the existing technical architecture, providing consistent new functionality, while minimizing redundancy in capabilities.

**Insight From the Experts**

**Connected, Customized and Complementary Solutions Provide a Resilient Response to Complexity**

The 2021 Gartner Hyperautomation Survey indicates that the top two objectives in producing technology and analytics initiatives are related to efficacy and agility. Fifty-six percent of respondents are focused on improving the quality of work or business processes, and 46% are focused on improving the quality or speed of decision making among their top three objectives. ¹

The 2021 Cool Vendors highlighted in this research provide organizations an opportunity to take advantage of innovative technology to drive efficacy and agility. More importantly, they go further in enabling organizations to apply the technology in ways that provide direct and measurable value to address organizations’ top priorities. These technologies are focused on being connected by extending and building ecosystems. The ecosystems grow from and maximize existing processes, infrastructure and customer experience. They are focused on being complementary by leveraging what organizations have and extending from where organizations are, as opposed to providing disconnected solutions focused on one small part of a greater whole.

Many of the solutions connect end-to-end processes across ecosystems with interoperability, embeddability and flexibility that complement existing technical architectures. In addition, the focus is increasingly shifting from providing generic solutions with an inflexible, standard user experience for all consumers, to providing customized, individualized experiences for the end users that learn and evolve as the customer interacts.
In an effort to respond to increased complexity, balanced with demand for personalized attention within the business systems themselves, as well as the ecosystems in which they operate, CIOs must seek innovative solutions that are connected, complementary and customized.

In this Trend Insight Report, we explore how Cool Vendors are providing solutions that increase responsiveness to fast-paced change and increasing complexity by:

- Establishing connections across ecosystems, while coordinating and orchestrating between them
- Building on existing architectures, leveraging what organizations have, as opposed to starting over
- Customizing experiences to drive outcome value and enhanced decision making

Kind regards,

Carlie Idoine

Executive Overview

Definition

Cool Vendors present an opportunity to explore new or emerging technologies that occur earlier in the Gartner Hype Cycle (see Understanding Gartner’s Hype Cycles). Many are pioneers in emerging markets, such as those featured on the post-Innovation Trigger position of the Gartner Hype Cycle.

Using innovative approaches to respond quickly to increasing complexity has become paramount. Additional incentive for considering technologies at the early stage of proof of concept can be provided if it considers an end-to-end complete ecosystem, while complementing existing infrastructure investments, and customizing user experiences. These vendors not only provide solutions that respond to the complex environment in which they operate, but also compensate for the complex expectations and needs of the individual consumers (see Figure 1).
Gartner's 2H21 Cool Vendors research profiles a total of 48 Cool Vendors in 13 reports. The breadth of the capabilities highlighted in the individual reports is expansive. As such, this overview highlights representative Cool Vendors — those that represent a category or class of value for the buyers. These Cool Vendors offer unprecedented opportunities to exploit new approaches to truly transform business models, compress cycles of insight, and take actions to drive business outcomes and value.

The definition of “coolness” is exemplified in technologies such as conversational and natural language, wearable devices, artificial intelligence (AI) core technologies, AI operationalization and engineering, cloud computing, and privacy. Additional technologies that round out the coolness factor include strategic sourcing technology, data management, data for AI and machine learning (ML), monitoring, observability and cloud operations, cyberphysical system security, and supply chain execution. AI and ML are a key thread across technologies for providing customized experiences that augment and, in some cases, even automate key tasks and activities that were previously done manually.
CIOs are challenged to keep up and respond effectively to the rapid pace of change in increasingly complex technological ecosystems. As such, CIOs should consider solutions that not only leverage what they have, but also complement the greater whole across complete ecosystems, while providing customized approaches that account for the vast experience and needs of individual end users. In addition, as complexity and capabilities grow, actively managing and minimizing technical debt becomes increasingly important.

Gartner’s definition of a Cool Vendor is a small company offering a technology or service that is innovative, impactful or intriguing.

The three elements of a Cool Vendor are further explained:

- **Innovative** — A Cool Vendor enables users to do things that they could not do before.
- **Impactful** — A Cool Vendor has or will have a business impact, and does not offer just technology for its own sake.
- **Intriguing** — A Cool Vendor has caught Gartner’s interest during the past six months.

A more detailed explanation of the Cool Vendors selection criteria is available in Note 1 at the end of the document.
Research Highlights

Cool Vendors Provide Solutions That Extend From and Provide Cohesion Across Disparate Systems and Processes

Cool Vendors are delivering systems that enable their users to connect data, systems and processes in ways that previously were not conceivable or feasible. Providing a way to bring together and monitor historically siloed, disparate entities is critical, as complexity grows in terms of the number of entities, data sources available, and processes to manage and maintain. The rapid, syncopated pace of change impacts upstream, downstream and tangentially connected entities, and CIOs must have oversight and a cohesive view to identify as well as respond to these changes.

In addition, this newfound connectedness often comes with the ability to monitor and orchestrate across the comprehensive ecosystem. This enables oversight and risk mitigation, as processes can be coordinated and orchestrated across disparate entities.

These Cool Vendors include:

- **SpaceKnow** has developed an AI platform that enables business and government analysts to more easily and quickly harness the data from satellite imagery. It can automatically analyze optical, infrared and radar imagery from multiple providers on demand and in near real time. The platform coalesces disparate imagery data from a number of providers together, as if they were one, to analyze economies of a country, region or city to understand how it’s performing over time. In combination with augmented segmentation and changed and deleted algorithms, alerts, notifications, and automated reporting, imagery intelligence analysts can shift their focus from time-consuming imagery interpretation to high-value intelligence generation.

- **Astronomer** allows AI teams to centrally develop and orchestrate their data workflows with open-source technology. Customers can programmatically author, schedule, monitor and manage data pipelines that are dynamic, extensible and scalable. Astronomer enables enterprises to build comprehensive data fabrics in support of AI and ML initiatives, using new data sources. It enables migration, stabilization, orchestration and integration of existing data ecosystems in a multitenant environment managed using a unified control plane. Astronomer’s data platform integrates governance, business logic and data that are commonly distributed across an enterprise.
Spell simplifies deep learning infrastructure and operationalization complexities, using a comprehensive platform approach. Spell seeks to transform the entire end-to-end infrastructure-agnostic ML operationalization (MLOps) platform for experiment orchestration, comparing multiple experiments, hyperparameter optimization, model catalog, deployment and governance of models. Spell’s approach is infrastructure-agnostic, enabling data and analytics leaders to unlock innovation across hybrid multicloud contexts. Spell also enables end-to-end AI governance by giving visibility into the full AI pipeline, including data collection, experiment orchestration, model development, model registration, model deployment and monitoring. It provides a complete and auditable lineage for model governance teams.

Cribl’s LogStream provides a controlled abstraction layer for managing log stream pipelines connecting multiple sources with multiple destinations. It offers advanced routing logic with a low-code interface that can visualize the log data flows. LogStream provides native integration for streaming data, with flexibility into major log-monitoring solutions, public cloud object storage and application performance monitoring (APM) tools. It offers an easy-to-use interface to configure routes, and provides out-of-the-box packs for parsing and data manipulation use cases. This enables the organization to stream log data to multiple destinations, based on the metadata and routing logic defined. Cribl’s LogStream enables portability for log collection with a vendor-agnostic approach to switching log-monitoring providers, using a simple configuration and without needing to install additional software.

Recommendations

Utilize wide data to enrich your AI projects with contextual data points that can provide you a competitive edge.

Seek data solutions specifically designed for AI to extend the current data management and accelerate AI development. Cool Vendors in this report illustrate sample AI-specific data approaches.

Analyze Spell’s platform capabilities around enabling AI teams to orchestrate deep learning training and deployment across GPU environments in a hybrid multicloud context.

Observe the full life cycle of your services by including build, test, deploy and release instrumentation. This “shifting left” supports traceability, which is becoming a critical part of the diagnostic workflow.
Related Research

- Cool Vendors in AI Core Technologies — These Cool Vendors enable CIOs to explore how reinforcement learning, decision intelligence and responsible AI can help them propel their initiatives.

- Cool Vendors in Data for Artificial Intelligence and Machine Learning — As AI and ML techniques become common in the enterprise, data is coming to the foreground. Cool Vendors in this report offer data solutions specific to AI and ML.

- Cool Vendors in Enterprise AI Operationalization and Engineering — CIOs must evaluate emerging vendors to build enterprise-grade AI orchestration and automation platforms or solutions to scale enterprise AI initiatives.

- Cool Vendors in Monitoring and Observability — Modernize Legacy, Prepare for Tomorrow — Legacy monitoring solutions may not innovate with sufficient speed to understand modern architectures and applications, so CIOs should look to these Cool Vendors to close their visibility gaps.

Cool Vendors Drive Engagement and Relevance by Providing Customizable Solutions Tailored to Individual Needs

As technology consumers and users grow not only in number but also in terms of diverse needs and expectations, the ability is prioritized to provide contextual, individualized experiences specific to unique needs. Enhanced experience is evident sometimes for the business user who is creating content using the technology itself, and other times for the end user who is consuming the content delivered. This customization offers a more satisfying experience, and often results in efficiency and productivity gains.

These Cool Vendors include:

- **Bid Ops** uses a combination of automation and predictive analytics to accelerate and automate the entire sourcing process. Bid Ops automates the sourcing process by simulating the entire sourcing cycle before it begins to suggest supplier options, determine a “should cost” for each line item, execute the sourcing event, and finally manage the negotiation. Outcomes and supplier metrics are automatically summarized for executive visibility. Bid Ops will automatically provide feedback to suppliers on how strong their bid is and the likelihood that they will win the award. Bid Ops also learns suppliers’ negotiating strategies over time and uses that information to adjust sourcing events to maximize participation and drive savings.
- **Re:infer** ingests customer information from many sources, including emails, chat logs, CRM databases and content management systems, and then analyzes and recommends actions for the business. Two capabilities that differentiate the platform include unsupervised learning approaches and a low-code interface for domain experts. A differentiator for Re:infer is the bridge that it creates between analytics insights on conversational data and the ongoing automation of processes based on these insights. The insights from conversational analytics can be used to create campaigns, recommend next best actions, change processes and better address customer needs. Models can be retrained, and new inferences can be identified on an ongoing basis.

- **Audiodo** offers a unique personalized profile on wireless headphones. Audiodo has developed a complex algorithm that includes intelligent hearing models to map an individual's hearing profile and uses information to personalize sound to fit the individual's hearing needs. Software assesses a listener's hearing capability on six frequencies for both ears separately. Audiodo provides an app that enables users to measure their individualized hearing profiles through a hearing test and uses the information to personalize a sound profile specifically for the individual. In addition, users can save multiple sound profiles in case headphones are shared with multiple users.

- **OptinMonster** enables nontechnical B2B buyers to quickly begin their personalization campaigns. It provides seamless integrations with popular email, e-commerce and website-hosting platforms, removing more-technical barriers to onboarding a new product. OptinMonster offers nine different campaign types to personalize the website visitor's experience and enables marketers to easily customize a campaign with a drag-and-drop feature. The MonsterLinks 2-Step Optin form enables marketers to change any link or image into an opt-in campaign to further improve lead generation and grow email lists. Combining this feature with its yes/no form provides B2B marketers with an additional audience segmentation tool.

**Recommendations**

- Develop a business-led focus toward automation adoption by focusing on measurable improvements in business outcomes, rather than a tech-focused approach for process, architecture and technical debt reduction.

- Investigate AI-powered and software-based audio personalization technology to deliver audio experiences, matching a user's physiological (ear profile and hearing capability) parameters.
Personalize digital channels to guide prospects to content and tools that increase buyer confidence and conversions along the customer journey.

Use transformer models to shorten machine training and learning cycles by creating synthetic training data and test data, and using them to generate personalized output at scale for marketing and service experiences.

Related Research

- Cool Vendors in Strategic Sourcing Technology — Hyperautomation, data and analytics, and supplier enablement lead this year’s technology trends in sourcing and procurement.

- Cool Vendors in Conversational and NLT Widen Use Cases, Domain Knowledge and Dialect Support — The vendors included in this report illustrate a second wave of topic and language coverage, as well as a trend to mass personalization.

- Cool Vendors for Wearable Devices, 2021 — The Cool Vendors profiled in this report provide audio, touch and haptic solutions with a high degree of design flexibility that will drive wearable differentiation.

- Cool Vendors in B2B Personalization — CIOs should consider these personalization vendors to increase B2B lead conversion by inferring buyer interests and intent with data that the organization already should be gathering.

Cool Vendors Improve Productivity and Use by Providing Solutions That Are Complementary to Existing Technology Stacks and Ecosystems

Many organizations prioritize starting from where they are and extending from their current architectures and approaches. As such, some Cool Vendors focus on integration with existing tools and processes. They are a complementary extension, as opposed to a replacement of current approaches that is aiming to grow new functionality and capability. Complementary approaches are often embedded and composable and frequently take advantage of the open-source ecosystem. Not only does this approach leverage existing investments, it also often increases productivity through automation, continual monitoring and response, and leveraging existing skills and knowledge.

These Cool Vendors include:
Concourse Labs sells a multicloud, developer-centric continuous compliance automation (CCA) and cloud security posture management (CSPM) tool that is intended to be integrated into continuous integration/continuous deployment (CI/CD) pipelines. Developers are often frustrated by policy enforcement via either first-party cloud provider policies or third-party CSPM tools, because such enforcement can result in a deployment unexpectedly failing for mysterious reasons. Concourse Labs reduces this friction by identifying policy violations during the development and test stage — through integration with software change and configuration management (SCCM) tools and CI tools. And it clearly informs developers of what policy has been violated and how to remediate it.

Stratio simplifies data understanding for business users. By mapping enterprise data into its Business Data Layer (BDL), it drives data consumption and improves business user productivity. Automation is one of the desirable characteristics of a data fabric. Stratio's BDL exposes industry-standard ontologies in a knowledge graph representation. As new business assets and new relationships are discovered, the corresponding graph and semantic schemas are autoestablished within the BDL.

CounterCraft has developed a deception solution that can mimic specific operational technology (OT) environment architectures. Through the use of breadcrumbs with spoofed credentials, the CounterCraft solution can identify how threat actors try to move laterally across OT systems to understand their activities and targets. The CounterCraft platform can also be deployed externally beyond the network perimeter to detect attackers before they compromise the internal network. The targeted real-time intelligence can be used to initiate real-time threat hunting on the internal network and can be used to identify potential weakness in the current security toolset deployment.

Ketch's privacy approach combines the documentation of intent behind the personal data life cycle with the ability to control its operationalization. Through a single centralized permit vault, all decisions that influence the desired availability (or lack thereof) of personal data are sent to all downstream connected systems, both internally and externally. To effectively centralize all control parameters and operationalize the desired results immediately in downstream applications and repositories, Ketch enables automation of the instruction transmissions. Where possible, this is done via APIs. Where it is not possible, automation is done by repurposing existing interfaces — within both internal and external systems (that is, including data processors and subprocessors).
CargoAi is helping with the digitization of the freight forwarding industry by connecting carriers and freight forwarders to help automate some processes that were heavily reliant on manual communication channels like email and telephone calls. The CargoAi solution enables freight forwarders to look for carrier schedules in the system, including charter schedules, visualize their current capacity, and easily book shipments with carriers. It uses API technology to facilitate data sharing and reduce cost, compared with using electronic data interchange (EDI) connection. The system also offers capabilities to view and compare air freight market rates, request quotations to airlines, and compare capabilities to manage contracted rates. CargoAi’s internal chat helps digitize the procurement process, eliminating the need to use other communication channels and keeping all the communications stored in the system. CargoAi uses technology to improve and digitize the entire air cargo booking process. Additionally, the solution provides capabilities that indicate the estimated CO₂ emission of a specific shipment from airport to airport.

Recommendations

- Reduce the risks of working with a startup by choosing vendors that can deliver quick ROI, have flexible pricing models, and have demonstrated capabilities to solve your most pressing business or technical challenges.

- Employ a technical architecture that is composable and modular, not monolithic, for increased flexibility. On the business side, follow a similar practice, and do not attempt to centrally control all data. Instead, provide business users with tools that they can learn and use on their own.

- Stretch the deployment of cyberphysical system security tools beyond traditional network-centric firewalls and segmentation, or even the deployment of multifunction OT security platforms.

- Support progressive uses of personal data by investigating the trending family of privacy-enhancing computation (PEC) techniques and identifying techniques suitable for target use cases.

- Maximize the value and shorten the time to value of ecosystem enablement investments. First, target specific, not end-to-end, integration efforts, whether these are integrating heterogeneous fleets of robots or connecting with carriers and freight forwarders.
Related Research

Cool Vendors in Cloud Computing — CIOs should assess these Cool Vendors that have built innovative multicloud products focused on ensuring effective governance, integration and cost optimization, as they formulate their cloud adoption strategy.

Cool Vendors in Data Management: Creating Operational Efficiencies — These Cool Vendors focus on measurable, delivery-focused data management, pushing the boundaries for what it means to be both practical and innovative.

Cool Vendors in Cyber-Physical Systems Security: Novel Approaches Enter the Scene — These Cool Vendors have developed innovative solutions that improve the security, safety and resilience of cyber-physical systems (CPSs), whether born out of OT-IT convergence; Internet of Things (IoT); Industrial IoT (IIoT); or smart city, building or grid efforts.

Cool Vendors in Privacy — This research highlights three vendors with solutions that support scalable privacy programs — covering data discovery and governance, consent management, and PEC techniques.

Cool Vendors in Supply Chain Execution Technologies, 2021 — These Cool Vendors target the need for better supply chain execution productivity from digital investments in difficult economic conditions.

Evidence

¹ The 2021 Gartner Hyperautomation Survey was conducted online during March 2021 among 558 business technologists from North America (n = 226), Europe (n = 146), LATAM (n = 78) and APAC (n = 108). This survey was a follow-on of another survey effort. After completing the Gartner Reimagining Technology Survey, respondents were asked to take a few more optional questions. To be qualified to answer the Hyperautomation Survey, respondents would need to:

- Have created, built or coded analytics or technology capabilities on their own or with input from others in the past 12 months.
- In the same time period, have used at least one of the tools to produce analytics or technology capabilities for work. They considered 21 tools under four categories: application development tools, automation tools, integration tools, and data science and AI tools.
The survey was developed collaboratively by Gartner analysts and the Research Data and Analytics team.

Disclaimer: The results of this survey do not represent global findings or the market as a whole but reflect the sentiments of the respondents and companies surveyed.

Note 1: Cool Vendor Selection Criteria

- The vendor should be less than 10 years old.
- The vendor must not be featured in a Vendor Rating or Magic Quadrant reports.
- The vendor must not be previously featured in a Cool Vendors report.
- The vendor must be an independent business, a discrete subsidiary (that is, tracks or reports revenue separately), or spinoff of another vendor. In this way, subsidiaries of major vendors may be considered unless they are majority-owned entities.
- The vendor’s annual revenue must be less than $100 million.
- The Cool Vendor product needs to be available at point of submission for inclusion in a Cool Vendors report.
- The vendor must be considered innovative or transformative for IT products, services or initiatives. A Cool Vendor is not just about technology; it may also include services.
- Previously profiled Cool Vendors can be profiled again only in the retrospective “Where Are They Now?” section of a Cool Vendors report.

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