

HOLISTIC AutoID FUSION

BEST PRACTICES TO MAXIMIZE DATA COLLECTION IMPACT

» *A White Paper*



At their core, automatic identification (AutoID) technologies provide enhanced visibility and control over operations and improve business processes in warehouses, distribution centers, and manufacturing. By having more accurate and continuous data through AutoID technologies such as barcode, radio frequency identification (RFID) and mobile computing, users become more agile and responsive to real-time information. While these business benefits and value propositions are clear, it is with choice among AutoID technologies and capable solution providers that end users traditionally struggle. End users need help in navigating continuous AutoID technology innovation and convergence. As a result, end users actively seek trusted solutions partners, with full domain expertise, that possess the resources and value-added services and expertise to deliver a successful AutoID deployment. This dynamic has given rise to the concept of holistic AutoID fusion and is fundamentally changing how enterprises approach AutoID system specification, selection and implementation.

Introducing Holistic AutoID Fusion

With market maturity and increased commoditization, the AutoID industry has evolved beyond the focus on separate technologies. The rise of hybrid or multimodal solutions that combine, for example, barcode and RFID or voice and mobile computing, has made it clear that AutoID technologies no longer exist in silos. In today's market, it is more accurate to speak of holistic AutoID fusion where solutions support multiple technologies, software packages and value-added services in order to satisfy expanding user systems and application requirements.

Holistic AutoID fusion is the new way to think about automatic identification and data capture solutions. The word "holistic" comes from the word "holism" which means the treating of the whole entity by taking into account all factors,

considerations and requisites. The word "fusion" means the merging of diverse, distinct, or separate elements into a unified whole. In terms of AutoID solution adoption and deployment among end users, the strategy must be holistic, spanning the length of the enterprise and/or breadth of the supply chain. For AutoID providers and their ecosystem partners, holistic AutoID fusion means supporting application requirements and delivering total solutions through a mix of technologies, software and services. In this manner, coexistence can be put forward as a plausible model of the future for the AutoID industry. In open systems especially, it is highly unlikely that a single AutoID device could ever cater for the needs of a complete end-to-end application, rather AutoID technologies usually work in concert to fulfill large-scale initiatives. This in itself increases the need for AutoID diversity that fosters holistic AutoID fusion.

Before end users can achieve holistic AutoID fusion, however, the concept must first be embraced and enabled by the AutoID solution provider community that includes hardware vendors, ISVs and channel organizations such as value-added resellers (VARs) and integrators. To fully realize and accomplish holistic AutoID fusion among these partners, a precise recipe with all the required ingredients must come together. Of the many factors to consider, the key components to enabling holistic AutoID fusion among value chain players include the following:

- Sharing a common vision;
- Taking symbiotic approaches to applications and verticals;
- Enabling core value propositions;
- Aligning AutoID strategies with partners and customers;
- Seeking partners with full domain expertise and technical support; and
- Focusing on value-adding solution components.

Sharing a Common AutoID Vision is Mission Critical

Offering AutoID solutions is simply not enough in today's market. End-to-end solutions must come with a shared vision among partners, for example among VARs and their hardware and software partners *as well as* VARs and their customers. AutoID VARs must move beyond putting the basic pieces of a system together and demonstrate the ability to incorporate multiple AIDC technologies, software and services into cohesive, holistic AutoID solutions. More importantly, by sharing a common vision for AutoID with customer and partners, solution providers are more likely to be viewed as trusted advisors.

Holistic AutoID fusion also requires that the shared vision incorporates the effective communication of the importance of the value of the data and advocates business process change over technology change. If the power of AutoID solutions stems from the data being captured and shared, then solution providers, their partners and their customers must ensure that actionable, reliable data is central to the vision.

In addition, as AutoID becomes further entrenched in enterprises (including small-and-medium businesses) and supply chain environments, there is a growing need for consistency in delivering industry-specific solutions, for example AutoID systems optimized for warehousing and distribution centers. After all, business processes and value propositions often differ from one vertical market or installation environment to the next. The result is that a common vision for AutoID within specific industries is required. Achieving holistic AutoID fusion also necessitates that total solutions providers take a hard look at the industry- or vertical market-specific competencies among their partners.

Take Symbiotic Approaches to Verticals and Applications

AutoID solution providers, in particular VARs, are zeroing in on industry sectors that will benefit from their collective expertise, solution delivery capabilities and value-added services. In other words, vertical market specialization and core competencies are critical to achieving holistic AutoID fusion within specific industries and applications. Moreover, symbiotic relationships should not be rooted in the ascendancy of a single AutoID technology. Instead they must be founded on support for and integration of the right technology or technologies to meet specific application and system requirements.

Symbiosis should not start at the device level; it must start at the infrastructure level by looking at the strategic objectives, data requirements and value-add services that may be needed to support an AutoID implementation within a particular vertical or application. Again, holistic AutoID fusion is more focused on enabling business process change rather than primarily concentrating on the associated technology change. Symbiotic approaches to verticals and applications ensure that it will be business process improvements and operational efficiency enhancements that ultimately drive selection and implementation of the most appropriate AutoID infrastructure and end-to-end solution.

While sharing similar targeted and served vertical and application markets is also critical among partners looking to develop turnkey AutoID solutions amid a symbiotic relationship, recall that AutoID hardware, software packages and services do not exist in neatly defined silos. There are unique needs emerging across verticals and applications that require tailored, specialized solutions utilizing one or more AutoID technologies, various software packages and diverse value-add services.

Proactive VARs and their partners are therefore engaging with industry associations, conferences and domain experts to better understand the unique business problems faced within specific verticals and applications. Involvement in these activities allows VARs and their partners to develop and market enhanced AutoID solutions that are optimized for a select industry or application.

Enable the Core Value Propositions for AutoID Solutions

While single business objectives can be served by an AutoID system implementation, many end users consider multiple value propositions that address multiple business problems through the use of AutoID. A little foresight during the planning phase goes a long way in terms of maximizing the overall impact an AutoID system can have on enterprise or supply chain operations. Holistic AutoID fusion invokes a strong desire to enable core value propositions from the most basic to the most complex.

To illustrate the point, if the basic application is to enhance automation and throughput through the use of barcode technology, that application should also provide a foundation for later developments and system expansion such as enabling improved end-to-end visibility into operations, assets, inventory position and more. The AutoID solution could then be extended to support increased security by adding new technologies such as RFID, augmenting existing software, or leveraging value-add services. Finally, and adding the most complexity, the holistic AutoID solution could deliver enhanced awareness to power advanced decision support.



AutoID solutions providers and their partners are encouraged to first discuss value propositions as well as associated business process change with their customers and, perhaps more importantly, with each other. End users that support multiple value propositions discover that the business case for AutoID solutions becomes much stronger and the cost justification much easier.

A similar logic can be applied to AutoID solution partners. Vendors, ISVs, VARs and integrators that showcase their individual core competencies and can enable multiple value propositions are more attractive to customers and strategic partners. Value propositions become the foundation for holistic AutoID fusion and are meant to be built upon.

Therefore, the value propositions must be as scalable and flexible as the AutoID system should be.

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A key to achieving holistic AutoID fusion is partnering with innovative players who not only complement the solution portfolio but also multiply or

enhance support for core value propositions. World-class partner ecosystems are comprised of companies that can effectively link and enable multiple value propositions through repeatable, extendable solutions.

Align AutoID Strategies with those of Partners and Customers

Aligning AutoID strategies is similar to aligning the tires on a car. It is critical for driving down the winding AutoID solutions highway and navigating nimbly. The alignment of AutoID strategies beyond a general theme such as “visibility” or “automation” is a critical success

factor to achieving holistic AutoID fusion. For example, partners should develop end-to-end solutions capable of delivering on the concept of real-time, connected intelligence through higher forms of automation and data capture.

Those who provide turnkey AutoID solutions should not only future-proof solutions for their customers, they must future-proof their own business/relationships with their customers and partners by aligning their AutoID strategies. Put another way, it is through constant interaction, feedback, and knowledge exchange between users and solution providers and among AutoID partners that assist in designing solutions, in which end user needs are met, strategies are united, and on-going innovation is assured.

Meeting requirements to new business problems increases the range and depth of AutoID innovations and should be understood as an evolutionary step in the development of AutoID strategies and the industry at large. Today's AutoID solutions are backed by proven methodologies, best practices, and demonstrable value. The AutoID solutions of tomorrow will be driven by holistic AutoID fusion backed by strategic alignment, a common vision, and support for multiple value propositions.

Why Holistic AutoID Fusion Matters

So, why is holistic AutoID fusion critical in today's market? The response to this question is fairly straightforward. There are three key points as to why it matters:

- VAR partnerships and end-to-end solutions can help speed adoption and implementation by enabling end users to start with proven hardware, software, and platform combinations and expertise;
- Partnerships and solution collaboration should be strongly considered within industry verticals where significant growth opportunities exist as well as within application segments where specialized end-to-end solutions are highly attractive to end users such as warehousing and distribution; and
- Value-driven solutions and the VAR relationship with customers should be able to expand to cover other business processes and applications through AutoID program extension.

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Achieving Holistic AutoID Fusion

AutoID reseller and system integrator communities are expected to deliver on holistic AutoID fusion through a mix of AIDC products, software, services and integration expertise.

Central to achieving this goal are hybrid or multimodal AutoID solutions that bring together distinct, yet intertwined data collection technologies to enable new and more streamlined business processes.

Research reveals that, in addition to total solutions preferably from a single source, end users now demand domain expertise and demonstrable value from their AutoID systems and vendors. To accomplish holistic AutoID fusion, there needs to be a conscientious shift by VARs, integrators, ISVs and other partners to build these end-to-end solution relationships

and demonstrate a clear understanding of end-user process and technology requirements.

As AutoID technology matures, turnkey configurable systems are in high demand. In fact, end users have signaled that in today's increasingly commoditizing AutoID market, loyalty and legacy relationships are being replaced by value-driven relationships. Users are more educated than ever and they seek resellers and solution providers that are not only AutoID specialists, but experts in the vertical market or industry in which they (the customer) competes.

For years, the goal of the AutoID industry was to develop "plug-and-play" solutions. Although customization remains a part of total solution development and implementation, the plug-and-play objective has largely been achieved, most notably in traditional technology segments such as barcode. The new game for solutions providers, however, is to "plug-and-stay" in end-user accounts by nurturing long-standing, value-added associations with their customers. As established AutoID players face new competition from low cost hardware coming out of Asia and the rise of low value-add distributor channels, they are challenged to add value through holistic AutoID solutions in order to maintain their existing customer base and competitive advantage.



Delivering "Value" as a Value-Added Reseller is Critical to Enabling Customer Success

More than ever, enterprises (including SMBs) are demanding value-based solutions, especially from the VAR community. With so many choices in the AutoID solutions landscape, VARs need to stand out through differentiated offerings and services. And, it is this push to differentiate that is putting the "value" back in value-added reselling. VARs must effectively communicate the value of AutoID solutions as well as the captured data and message business process change from start to finish.

The unique core competencies of VARs such as offering turnkey solutions, technical services and mobile device management are creating cohesive AutoID solutions.

Value-driven solutions can include a host of unique combinations of offerings, including hardware, infrastructure development, networking, integration services and support. By partnering with different players and developing strong internal capabilities, an AutoID VAR can be recognized as a trusted advisor and work toward

promoting holistic AutoID fusion, raising brand awareness, and reaching new customers (and partners).

Again, while end users require total solutions from the AutoID industry, the reality is that they are actively pursuing trusted partner/advisor relationships from those that can deliver the most value along with end-to-end solutions. To deliver maximum value and enable customer success with AutoID, VARs are now at the forefront of solution design and development. VARs are highly focused on creating and deploying more powerful software, advanced

technical services, and robust AutoID technologies that work together to streamline or resolve issues across multiple business processes.

Partnerships, Developing Core Competencies and Specialized Services are the Required Means to End-to-End Total Solutions

Formulating partnerships to provide complete AutoID solutions has become standard industry practice. For years, vendors, VARs, and integrators have aggressively built ecosystems of partners. However, as hardware/device partnerships have inundated the marketplace over the years, their value has come under increased scrutiny. Products are commoditizing and the value is shifting to software and services, especially advanced services that take a more consultative approach to solution design, development and implementation.

VARs, in particular, need to offer a full suite of AutoID technologies, software and services to meet customer requirements and they must tailor solutions to specific industries or usage environments – for example, the coexistence of barcode scanning, barcode printing, mobile computing, RFID and/or voice solutions in a supply chain environment, warehouse or distribution center.

Based on decades of analysis and market coverage of AutoID technologies, VDC Research has been able to formulate the “AutoID Customer Equation.” Put simply, the equation is as follows: end users prefer total solutions from a single source that has domain expertise, offers value-add services and can provide qualitatively superior support. These are the fundamental core competencies enterprises look for in the hypercompetitive AutoID market.

While the AutoID industry is long on partnership announcements, it often falls short on *real* partner substance – partners that truly work well together and complement one another. In

this case, companies must take a new approach – one that provides customers with the attractive means to embrace and deploy true total, value-driven AutoID solutions.

The “AIDC customer equation” can be satisfied, however, only through the delivery of partner-based end-to-end solutions. Although many vendor-VAR partnerships are not binding and options for multiple partnerships exist, the relationships among vendors and VARs and VARs and their customers are strengthening. Increasingly, VAR partners are bringing their different strengths to the collective bargaining table and serving notice to value chain participants and end users that they have the value-added services to be a major force in the AutoID industry.

Technical Services are the New Total Solution Differentiators

Leading VARs position technical services as the best way to deliver the most value and differentiate their AutoID solution offerings. The most successful VARs are those that develop “special sauce” through value-add technical services to set themselves apart and achieve holistic AutoID fusion. Depending on the VAR, technical services can be broad and expansive. Example services include site surveys; design, engineering and project management; integration and deployment services; device management; training; service and support; and repair/replace services.

To us, specialized offerings such as technical services are the right vehicles for navigating the AutoID customer highway as they leverage time tested implementation and deployment methods and services that facilitate successful results. VARs with the knowledge and capability to understand the individual business processes within each individual business are in the best position to effectively design and deliver total solutions that meet end users’ AutoID requirements and strategic objectives. By

working closely with customers and partners to implement a system that offers the highest value backed by specialized technical services, it will be those solution providers with this type of “special sauce” who are in the best position to fully realize holistic AutoID fusion, remain competitive, and lead value-driven relationships and the delivery of value-added solutions in the industry.

About Supply Chain Services

Supply Chain Services is a leading provider of best-in-class customized data collection, barcode scanning, barcode printing, rugged mobile computing, wireless networking solutions, and software that offer out-of-the-box automation and improvements for the value-chain processes of manufacturing, distribution and warehousing companies. As specialists in the automated identification and data collection (AIDC) industry, we are a single source for evaluating, designing, integrating, implementing, managing, and supporting data collection technology infrastructures that generate very high and very fast return on investment for our customers.

About VDC

VDC Research Group (VDC) is a technology market research and strategy consulting firm that was commissioned to develop this white paper. VDC advises clients in a number of technology markets including: Automatic Identification and Data Collection, Embedded Hardware and Systems, Embedded Software and Tools, Industrial Automation and Control and Mobile and Wireless. Using rigorous primary research and analysis techniques, the firm helps its clients identify, plan for and capitalize on current and emerging market opportunities. We strive to deliver exceptional value to our clients by leveraging the considerable technical, operational, educational and professional experience of our research and consulting staff. During our nearly four decades of ongoing operation, we have had the pleasure of serving most of the world's leading technology companies, many high-profile start-ups and numerous blue-chip early and later stage investors. Our products and services consist of research reports, annual research

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