



AN EHRHARDT PARTNER GROUP INDUSTRY PERSPECTIVE EBOOK

Voice Software in the Warehouse 2009-2019: Has Anything Really Changed?

EPG® Ehrhardt
Partner
Group
Smarter Connected Logistics™

An EPG Publication

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INDUSTRY PERSPECTIVE EBOOK

Voice Software in the Warehouse 2009-2019

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Executive Summary

“The value proposition for having distribution center workers use voice technology has not changed these past twenty years. What has changed is the world around those workers and it’s vital that voice solutions embrace the reality of today, or risk becoming irrelevant.”

THE #1 REASON WHY BUSINESSES MOVE TO VOICE TECHNOLOGY IS TO SQUEEZE IMPROVED PERFORMANCE FROM EXISTING OPERATIONS. THAT WAS THE CASE IN 2009 AND IT IS STILL THE CORE BUSINESS RATIONAL TODAY.



An editor of a leading publication recently asked me what has changed around voice software in the distribution center in the last decade. It gave me a chance to reflect on my role in 2009, when I was responsible for Vocollect’s Global Marketing. To prepare for our conversation, I did some research to help not only refresh my memory, but to develop a list of documented changes since 2009 – changes that have impacted voice software in the distribution center.

As I thought about the past, my gut told me that the “core” value proposition around voice-driven workflow offerings has not really changed much. The following quote from a Modern Materials Handling magazine article published in 2011 applies in 2019 as much as it did then.

Executive Summary

“Voice-directed warehouse applications are improving distribution efficiency in industries from grocery and foodservice distribution to apparel and industrial supply. Combined with other warehouse systems, voice enables hand- and eyes-free operations that drive new levels of worker productivity and accuracy across picking and other warehouse tasks.”

Another example comes from a whitepaper published in July 2009: “The adoption rate of voice inside the DC/warehouse has greatly increased in the last decade. As more and more companies become aware of voice technology and its benefits, the technology is being accepted more readily, and vendors are beginning to offer voice as a value-add solution to their DC/warehouse management solution (WMS) product suites. By being able to leverage the existing architecture of their WMS and ERP systems, voice provides an ROI driver that allows companies to leverage their existing technology investments while taking their DC/warehouse operations to an entirely new level of performance.” Again, this statement is as applicable today as it was ten years ago.

While the value proposition around applying voice technology for a warehouse worker has not really changed much over the last decade, the business environment, the shopping/buying experience, and technology options certainly have evolved and changed quite a bit. After all, ten years ago, Amazon sales were less than \$25 billion. To give that some context, during the last Amazon Prime Day, sales were reported to be approximately \$4 billion in a single day.

The core value proposition for voice in the warehouse has always been about:

- **Increased Productivity:** More tasks completed in less time or lower costs per transaction
- **Improved Accuracy:** Enhanced customer experience and reduced returns management costs
- **Increased Safety:** Associates are hands-free and eyes-free and now, possibly headset-free
- **Improved Demand Management:** Faster, more productive workers allow for greater capacity utilization of existing storage space
- **Empowering Employees:** More confident workers are happier workers; reduces turnover
- **Faster New Employee Onboarding:** Reduced training time for full-time and temporary workers

This industry perspective eBook focuses on voice technology, some of the key changes we’ve seen since 2009 and explores how voice solutions are adapting and needing to embrace the reality of today. In addition, it will address some of the key changes in the software and hardware technology landscape and the impact being felt within the distribution center from e-commerce growth.

Chapter 1: Understanding the Core Benefits of Voice in the Warehouse

Before we dive into some of the industry and technology changes since 2009, I wanted to first make sure we covered the basic benefits driven by the hands-free nature of a voice workflow driven solution. Voice technology for use in the distribution center was created with one purpose in mind: maximizing operational efficiency in the warehouse. Most other warehouse technologies require workers to transfer their attention from the task at hand to a piece of paper, screen, or light and back, taking time and increasing the likelihood of error. With voice, workers are hands-free and eyes-free, with the voice system feeding their instructions through a headset. This allows workers to perform tasks quickly and efficiently, increasing productivity and accuracy throughout the warehouse. Using voice also provides a large decrease in training time, as voice training can take as little as an hour.

Voice is typically used to support tasks such as order selection, put-away, replenishment and cycle counting within the warehouse, but it can be deployed into many other areas as well. The expansion into other workflows is aided by the fact that the voice system is directly connected to the WMS or ERP, allowing live updates to be transmitted as workers are on the warehouse floor. This not only helps with inventory management, but also allows supervisors to stay up to date with productivity of their workers on an individual level.

The core benefits of voice include:

Productivity. Workers are provided clear and concise voice directions with an optimized workflow driven process. As a worker completes an assignment or moves through the distribution center, the worker can focus on what they are doing, walking to a new pick location, using a forklift to get a pallet, or counting inventory slots. There are no intermediate needs to turn their attention away, stop to read, or get off the forklift to confirm a pallet. All interactions with voice-enabled mobile computing device are internal to the motions of the workers' activity, saving valuable time.

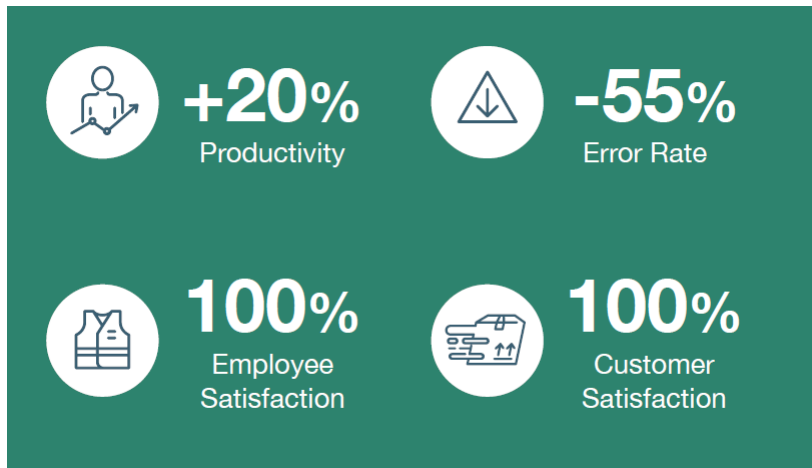
Accuracy. Because the worker is enabled to move about freely, without having to stop and read a document, look down at a small screen, enter data or pick-up and re-holster a scanner, the worker's focus is always on the task at hand. As a worker approaches a pick slot, they hear the location and can look for it at the same time. A worker confirms the location (via a check-digit) as they are picking the product. The opportunity to look away and forget, or misread a location/product is minimized therefore, increasing accuracy.

Training. Because the entire process is driven by voice, there is no need to train workers on reading printouts, knowing when/where to apply labels, or confirming information through a keyboard. Once a worker attends training and creates their voice templates, which on average, takes about 30-45 minutes (which often has to be repeated monthly to further reduce worker productivity).

Understanding the Core Benefits of Voice in the Warehouse

The entire process is driven step-by-step through voice commands. Workers are typically up and running in about 50% less time than other methods, because they have one tool to use, versus paper for one task and scanning for another.

Safety. Because focus is never removed from the task at hand, instances of product damage or worker injuries are greatly reduced. A worker has no need to take their eyes off the box cutter or off the racking as they place a pallet in a tight spot. As a result, there are fewer injuries, dropped products, and punctured pallets, providing a direct reduction in overall costs.



Chapter 2: E-commerce Ordering Has Exploded Since 2009

Remember the days of shipping full cases and simple mixed pallets, when fill-in orders for specialty items only occurred once in a while, and you actually fulfilled your weekly replenishment order? Boy, have times changed, and it's all due the explosive growth of e-commerce and the necessity to adapt to smaller order quantities. While much of the media attention is focused on the consumer buying online, the real, and often overlooked stress is occurring behind the scenes within the logistics operations responsible for ensuring accurate and timely deliveries. Virtually every business has been impacted by the challenges of e-commerce within their warehouse – welcome to the smaller order world.



The warehouse team has been tasked with meeting these new demands, which can be especially challenging when their IT infrastructure was more than likely designed and implemented prior to the increase in e-commerce transactions. While you may be meeting these changes head-on with success, more than likely, your team is working much harder to achieve results more easily attained in the past. The real impact from these changes is on your people. They are tired, they are worn down. Overtime, once welcomed, now is the norm instead of the exception - it never seems to stop. The balance of work and personal life for many on the floor has lost its balance. It's one of the reasons why turnover is so high. It's time for the business to think about transforming its operations to better support their workers in an e-commerce world.

Today, fewer industrial orders are full pallet and the days of weekly deliveries and stocking high levels of inventory are a remnant of the past. Now, businesses must develop an IT supply chain strategy that

E-commerce Ordering Has Exploded Since 2009

meets the increased number of orders, single line orders and rapid delivery schedules. The exponential rate at which technology is developing, mutating, and adapting is so fast that you can't help but get swept away in a tidal wave of progress—whether you're ready for it not.



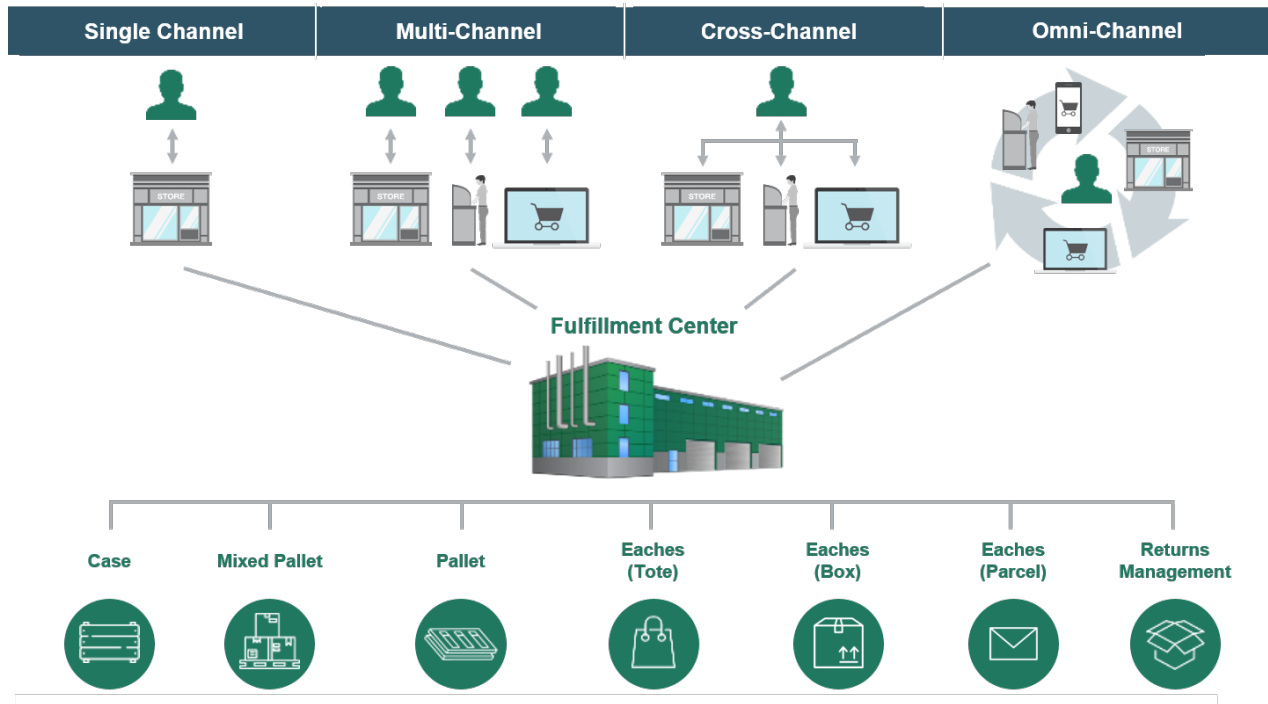
For example, it makes more sense to ship a customer a product from a local retail store than from a distribution center a 100 miles away. There are many use cases for omni-channel logistics:

- Online order fulfilled directly to the buyer's home
- Online order sent to a brick-and-mortar store for in-store pickup which is a successful way to drive new traffic to brick-and-mortar storefronts
- In-store purchase of an out-of-stock item delivered at a later date to the store or directly to the buyer's home
- Online order submitted via eRetail channel and fulfilled directly to the buyer's home via eRetailer's or seller's distribution infrastructure
- Order drop-shipped directly to consumer from a product manufacturer or CPG business via online retail storefront
- Online order and in-store purchase returns management

E-commerce Ordering Has Exploded Since 2009

The real stress of delivering today's customers' expectations is occurring behind the scenes in your logistics operations. It's a world where change is occurring rapidly and those that embrace the new paradigm and use technology to stake out a competitive differentiation will thrive.

While e-commerce is still in the early stages of maturity, it is incumbent upon those managing warehouse and logistics operations to be forward-looking and to plan for a future where flexibility is the key to competing in an evolving digital world.



Chapter 3: Warehouse Automation – A Decade of Phenomenal Growth

The ongoing rapid growth of e-commerce and its effects on fulfillment requirements continue to be the leading factors contributing to the growth of the warehouse automation and control market. Its effects are global and across industries. More recently, shortening fulfillment horizons have intensified pressure on retailers and contributed to additional sales. Automation now is organized to provide better localization. Localization requires sending stores smaller, customized shipments from nearby “flow centers” that keep stores in stock with only what they need — in theory — and enables a store-focused fulfillment strategy with a thriving buy-online-pickup-in-store option.

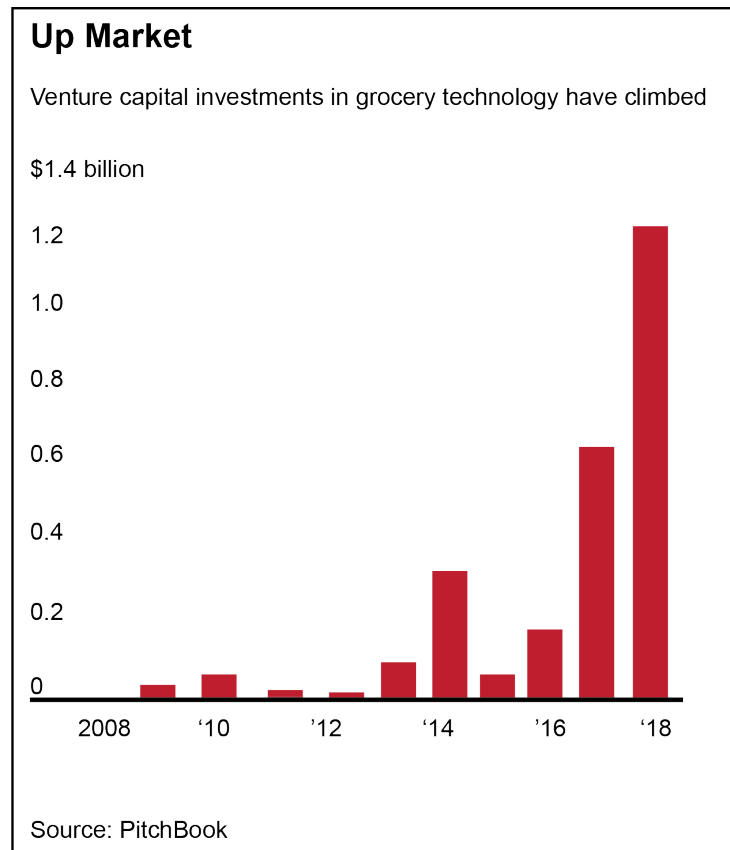


System adaptability and scalability are top priorities for today’s warehouse automation projects. This is being achieved through greater software intelligence in warehouse control systems, layout of subsystems in the warehouse, and within subsystems themselves.

Equipment subsystems in high demand include shuttle systems, high-density storage, pocket sorters, AGVs, and traditional conveyor and sortation systems. Warehouse automation vendors are expanding and improving upon their control and material flow systems with new optimization algorithms and real-time monitoring and response capabilities that proactively avoid bottlenecks.

Warehouse Automation – A Decade of Phenomenal Growth

The biggest change and the new area of automation and robotics investments is geared toward packing up online orders to deliver groceries direct to a customer's home. Instacart Inc. and Shipt LLC already provide grocery delivery and Uber Technologies Inc.'s UberEats is considering expanding its restaurant meal delivery operation to include delivering groceries as well.



Altogether, spending on technology by many of the biggest U.S. food retailers could accelerate the adoption of online ordering for groceries. Deutsche Bank expects online orders to represent roughly 10% of the \$800 billion grocery market by 2023, up from 3% today.

It was interesting to read the following quote. "We have to find a model where we can deliver groceries to customers' homes and do it in a more profitable way," said Narayan Iyengar, senior vice president at Albertsons.

It will be intriguing to watch how all these new technologies impact the distribution center operations and what's really affordable to companies beyond the industry gorillas.

Chapter 4: The Urban Vertical Warehouse - Big New Trend

Multi-story warehouses are already common in Asia, but the concept is now taking off in supply-constrained American cities. Initially there was the misconception that only the major e-commerce companies would occupy last mile space, but all retailers in the city will need to offer same-day delivery if they plan on competing with e-commerce giants.



Warehouse space keeps getting harder to find as the drive toward online retail sales pushes more goods into already-squeezed U.S. distribution centers. The availability of industrial property declined in the third quarter as nearly 50 million square feet of warehousing capacity came onto the U.S. market in the three-month period, according to real-estate brokerage firm CBRE Group Inc. Distribution and e-commerce fulfillment operations are moving into new space just as quickly as it is being built. “The underlying story is a really strong consumer economy,” said Richard Barkham, global chief economist at the firm. “But we’ve also got this big structural shift, which is the growth of e-commerce.”

Vertical warehouses make perfect sense in urban areas such as New York, which is unusual due to the sheer-size of its boroughs—Brooklyn and Queens have more than 2.6 million and 2.3 million consumers

The Urban Vertical Warehouse Big New Trend

respectively — and a citywide population of more than 8.5 million. Other dense urban markets where land zoned for industrial use is in short supply and property values are at a premium. Candidates for vertical warehouse construction include Manhattan, Chicago, the District of Columbia, San Francisco, Seattle, Miami, Philadelphia and Northern New Jersey. It's interesting to follow the facility designs, we are now seeing multilevel warehouses designed with ramp accessible logistics space.

Prologis has built six- to 12-story industrial buildings in Asia, but the design utilizes spiral ramps that reach all levels. This configuration is only possible because trucks in Asian nations, including Japan, Singapore and China, are only 25' long, compared to 40' long in the U.S., which are driven by shipping container size and warehouse height. Expect design changes to support US transportation needs to become common place over the next few years.



Prologis Japan

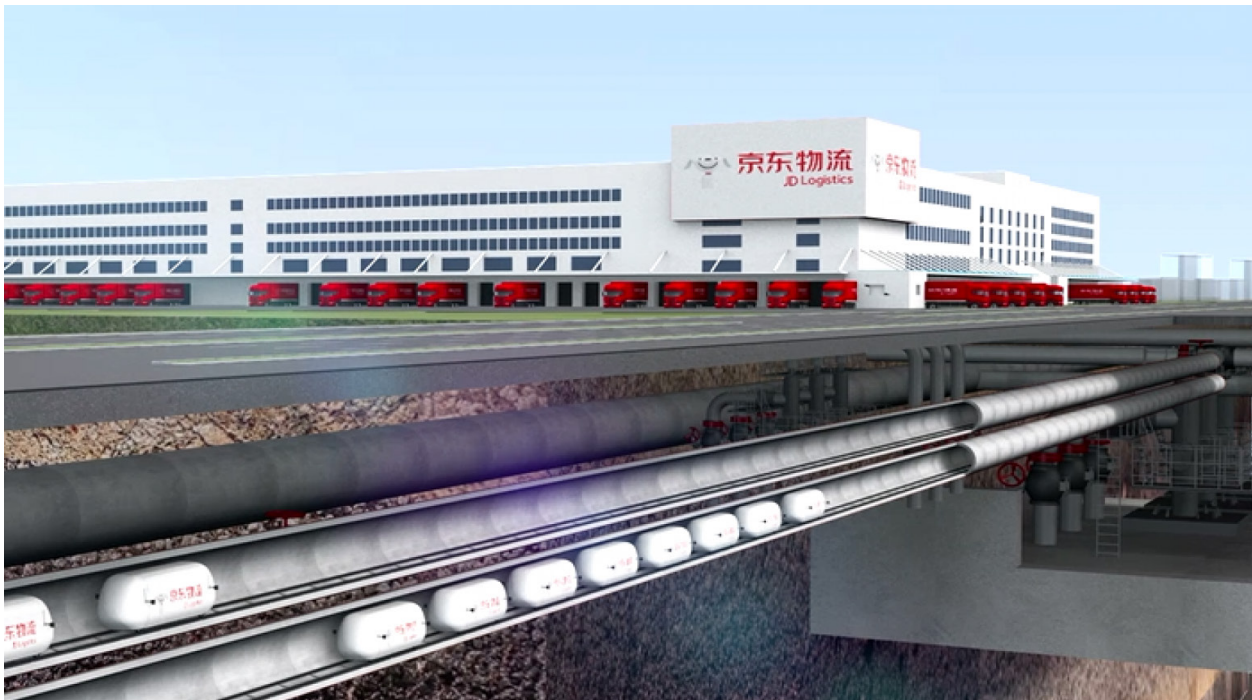
For voice technology, this is just another market change that creates a new opportunity. The flexibility driven by voice-enabled solutions makes the solution an optimum choice as businesses configure these constrained urban environments for each picking.

I'm sure you are saying to yourself, great, even more traffic! Increased freight transportation on the roads, along with passenger traffic and urbanization equals more congestion nightmares in cities around the world. Traffic jams create headaches not only for drivers and passengers stuck in what seems like perpetual traffic, but also for businesses trying to fulfill the last mile.

The Urban Vertical Warehouse Big New Trend

In searching for solutions to this challenging final leg of the supply chain, some companies have looked up for urban deliveries — utilizing drones to deliver parcels to consumers. JD.com claims it was the first e-commerce company to launch commercial drone deliveries. Now the e-retailer is looking down, re-searching how parcels can be moved below ground.

The Urban Smart Logistics Institute (and probably others) is now examining underground logistics for businesses like JD.com, by using tracks and pipe corridors to fulfill and deliver parcels, ensuring smooth and efficient urban logistics with minimal disruption to daily life.



The underground solution has the potential to alleviate traffic and environmental problems and save urban space. While we are talking about underground logistics, don't forget to think about the future possibilities Elon Musk's Boring Company and their tunnel efforts in major cities such as Chicago and Los Angeles bring to the table.

Chapter 5: Big Changes Occurred in the Workforce Makeup Since 2009

I was surprised when I read a Pew Research Center study that stated that millennials were now the largest generation in the workforce; and I bet that the largest segment of workers you are adding to your team are millennials. As the e-commerce fulfillment industry experiences rapid change, millennials are both a blessing and a curse. They offer valuable skills and insights, especially in the warehouse, but expect a great deal more digital engagement than past generations.

Having grown up in a connected world, they can quickly grasp and advance new technologies to promote understanding and efficiency. More importantly, to keep them engaged they have certain expectations and will only stay with your business if they are using modern technology solutions, no matter the hourly wage rate.

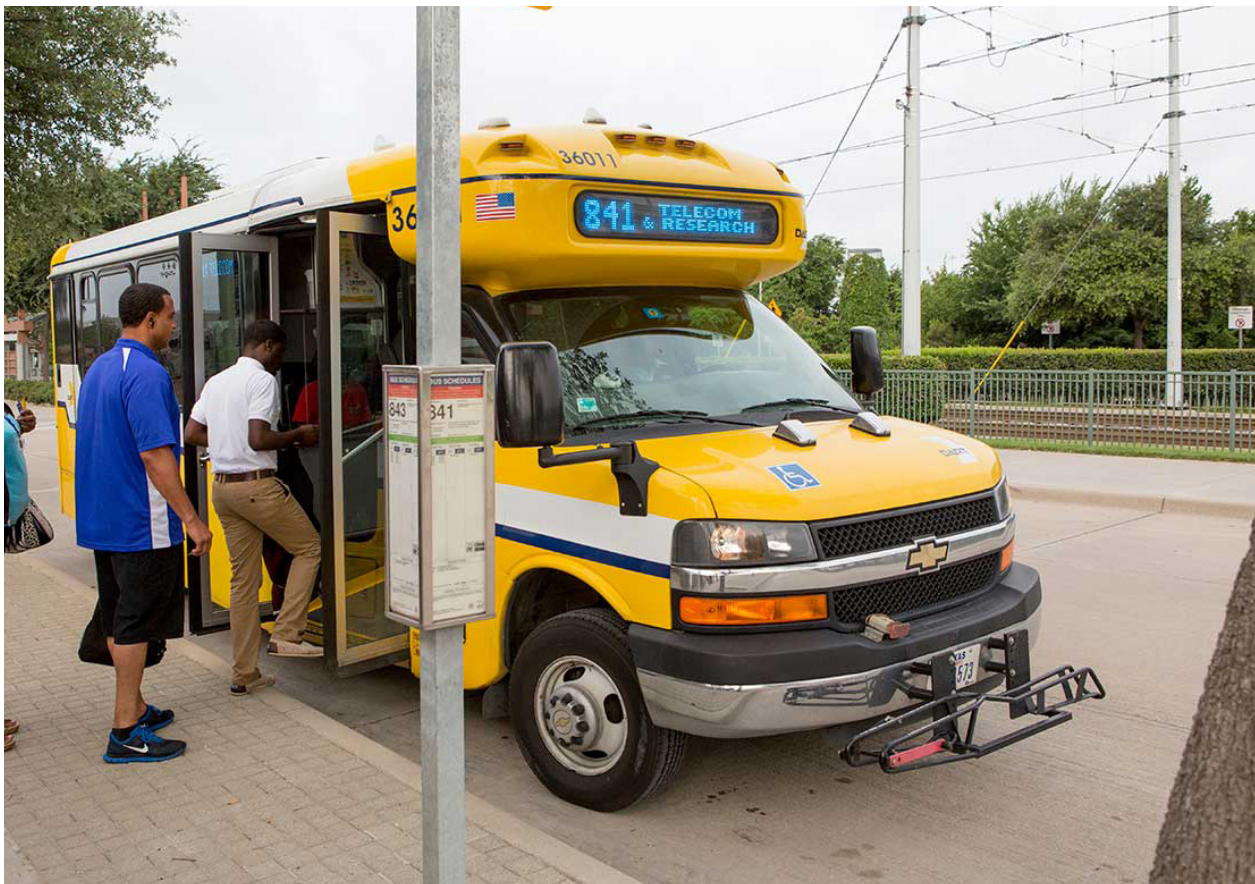


You'll never be able to maintain a positive relationship with your new staffers unless you understand their approach to work and life balance. Voice technology helps elevate their role and helps them achieve a higher level of pride, a key aspect of employee retainage. They expect more and want to be challenged to be better.

The other key change in warehouse worker makeup is due to the boom in the need for warehouse positions. Warehouse jobs are booming with new massive facilities springing up everywhere. A key aspect now impacting these new site selections is the need for not only easily accessible for freight deliveries

Big Changes Occurred in the Workforce Makeup Since 2009

and pickups, but also with easy access to “traditional transportation networks”. More and more cities are following the cue seen in the Dallas-Fort Worth area where they are redrawing their transit services as



companies move into centralized industrial zones with growing logistics and distribution centers. As an example, Dallas Area Rapid Transit (DART) has adjusted its route system to address an area south of the city that is the home of distribution centers for brands such as Amazon, Home Depot, FedEx and L’Oréal, just to name a few.

With many operations employing a few hundred people over nontraditional hours, there isn’t enough ridership to justify regular service with a full bus, said DART President Gary Thomas. Instead, DART developed an on-demand service through a smartphone app. The Dallas Inland Port “GoLink” service makes about 50 trips a day and costs DART an additional \$150,000 annually.

Big Changes Occurred in the Workforce Makeup Since 2009

“It’s not in our normal wheelhouse, so it’s causing us to think differently,” Mr. Thomas said. In another interesting development, the labor crunch has driven QPS Employment Group, a staffing agency serving industrial clients in outlying locations around the Midwest, to take transit into its own hands. Under an agreement with Enterprise Rent-A-Car, the company runs up to thirty Enterprise vans daily from urban-core areas to logistics and manufacturing sites in Kansas, Missouri, Iowa and Wisconsin.



Jim Roy, senior regional vice president at QPS, says it is providing an important incentive to workers. “Our labor pool is really shallow for talent, especially for that three-month push as we prepare for Christmas, it’s as shallow as I’ve ever seen it in 25 years,” he said.

Before we leave the workforce subject, I think we do need to talk about the issue also confronting businesses with workers not interested in committing to a traditional shift work assignment. This is for people not available to work the traditional Monday through Friday shifts, but want work to “fill-in” as available. Think of the number of parents and students, and those without cars who rely on public transit. Companies are offering new options, like:

- Job sharing
- Split shifts (early morning and later in the evening shifts, so the employee can work a full-time job traditional shift job elsewhere)
- Part-time shifts, like three nights per week instead of five
- Allowing workers to leave an hour early to pick up children from day care
- Accommodating shift times for transportation issues like bus schedules

Another model that seems to be working is similar to a ride-share model we have already explored. Aerotek, a national recruiting and staffing firm, uses social media to send out a mass text to workers, and the first 100 who respond and show up for a specific shift get the work. So far, these flexible shifts can be seen in markets like Nashville and Memphis, Columbus, and Allentown, Pennsylvania. Port cities and hubs tend to be more flexible, as well, as there is more demand. Results, so far, have been positive.

Chapter 6: Hands-Free, Eyes-Free and Now...Headset-Free is Here!

“When you research and investigate the potential utilization of voice-enabling workflow processes, you will find universal agreement from all resources that voice technology generates dramatic and quantifiable productivity and accuracy gains. This is a proven fact - the data is indisputable.

Its success is attributable to voice technology directing the worker. This workflow driven process is the secret sauce for worker engagement and ensures a consistency amongst all workers to follow standard operating procedures. In addition to keeping the worker’s eyes and hands free to perform the task, this process helps reduce errors that can occur when a worker optically scans a slot and accidentally picks from another location, which happens more than anyone is probably willing to admit. As a result, voice typically eliminates nearly 80% of picking errors caused by picking the wrong product or the wrong quantity.



The voice-directed process is quite straight forward. The worker wears a wired or wireless headset and is directed to a specific location, they say a check digit number, which the system then confirms that they are in the correct bin location.

All data is generated from the ERP or WMS system and the voice-enabled mobile computer verifies the check digits, and directs the worker to pick a specified quantity, which the worker confirms. There are a set of workflow rules that address issues such as shorts and partial order fulfillment rules to ensure optimum productivity.

Since the first incarnations of voice-directed warehousing were implemented in distribution centers in the early 1990s, there has been one common component: the headset. The worker uses a headset to listen and engage with voice commands.

While over time headset quality has improved, but if you look at the headsets of today vs. ten years ago, not much has really changed, except perhaps the headset may be wireless. Although headsets have been the one common denominator with every voice solution, workers have not exactly been in love with wearing a headset eight to ten hours a day.



Hands-Free, Eyes-Free and Now...Headset-Free is Here!

Manufacturers have improved the headset experience over time, but the ergonomics have basically stayed the same since 2009. Some of the realities around the headset are related to the challenges around its environment, especially in open door distribution centers in hot and humid locations in Florida and Texas. In these environments, the worker's head sweats which causes the headset to move from a secure position as the worker moves.

A key change has taken place very recently with the introduction of Ehrhardt Part Group's Lydia Voice VoiceWear, a solution that supports voice in the warehouse without the need for a headset.



This new innovative product in human engineering adds many positives to the overall Lydia Voice worker's ergonomic experience. Thanks to integrated speakers and microphones, workers no longer need a headset while picking by Voice. This increased freedom of movement creates a distinct advantage for the warehouse worker.

All the technical components for voice- directed tasks are combined in Lydia Voice VoiceWear, providing optimal protection against environmental hazards. With Lydia VoiceWear, headsets have become obsolete. Lydia VoiceWear provides equal comfort for both men and women and it only takes seconds to put on the compact vest, thus reducing preptime at shift start up. Your advantage: **Hands-Free, Eyes-Free, and Headset-Free™**.

While the VoiceWear vest eliminates the need for a headset, it also eliminates other infrastructure costs such as battery chargers and batteries for those of you using Bluetooth headsets vs. wired headsets. For those operating with open door environments with heat and humidity, the vest is lightweight, ventilated and its internal components are washable to alleviate worker's health concerns. Larger businesses can even customize the vest colors and add their own logos.

Chapter 7: Why Don't More Recommend Voice Technology?

So, why would a technology that has been around for decades, offers proven metrics like 25% or greater order picking productivity gains than traditional handheld scanning devices, not seen greater market traction from WMS providers? It's called ACCOUNT CONTROL.



EPG will always recommend the optimum operational solution to help your business reduce costs, while enhancing worker productivity. Virtually every one of our customers has used voice technology from Day One due to the tremendous business benefits the technology offers.

Our customers have found implementing voice technology in their order picking areas dramatically reduces the payback period for overall WMS modernization project by many months. The voice technology investment typically pays for itself within nine months.

From early paper-based systems to handheld computers and then to voice-enabled mobile computing environments, voice technology has become a catalyst in the re-engineering of warehouse processes and systems to deliver the next generation of business results.

It's unfortunate that most WMS sales compensation packages are a roadblock for greater adoption. And if a WMS provider does promote voice technology, they typically only offer a single solution versus providing viable options and alternatives, which keeps them in the power position.

Chapter 8: The Voice-Enabled Distribution Center Data Integration Reality

Have you noticed that rarely does your WMS provider recommend you evaluate the use of voice technology in your distribution center? It is most unfortunate that most of the top WMS providers are nothing but roadblocks and obstacles for greater voice adoption. And when they do promote voice technology, they typically will only offer a single sourced solution option, more than likely based upon a decade or more old relationship with the voice vendor, versus providing viable and more modern options and their customers.

This age-old practice helps keep prices artificially high and creates fear in customers if they inquire about any other voice solution. They create fear and uncertainty with customers by stressing that only the one voice solution that will work, the same one that they integrated ten years ago with older versions of their WMS.



Unless you do your homework and challenge your WMS company, you will be stuck with a sole source voice option and one that most likely costs 35% to 40% more than other voice solutions on the market. Needless to say, it's not a wise business choice today any more than it was in 2009. Most WMS companies try to hide behind is really nothing but a "data integration mirage" - a mirage not based on today's facts. The mirage is simply used to keep the customer believing only the WMS provider understands what data integration requires, and to try anything different could result in catastrophe.

So, let's turn our attention to the realities of data integration today. The reality is that EVERY Tier One voice solution can be integrated with virtually any WMS, since their solution has the ability to integrate with other systems. The number of ERP/WMS solutions that cannot integrate with another system can be

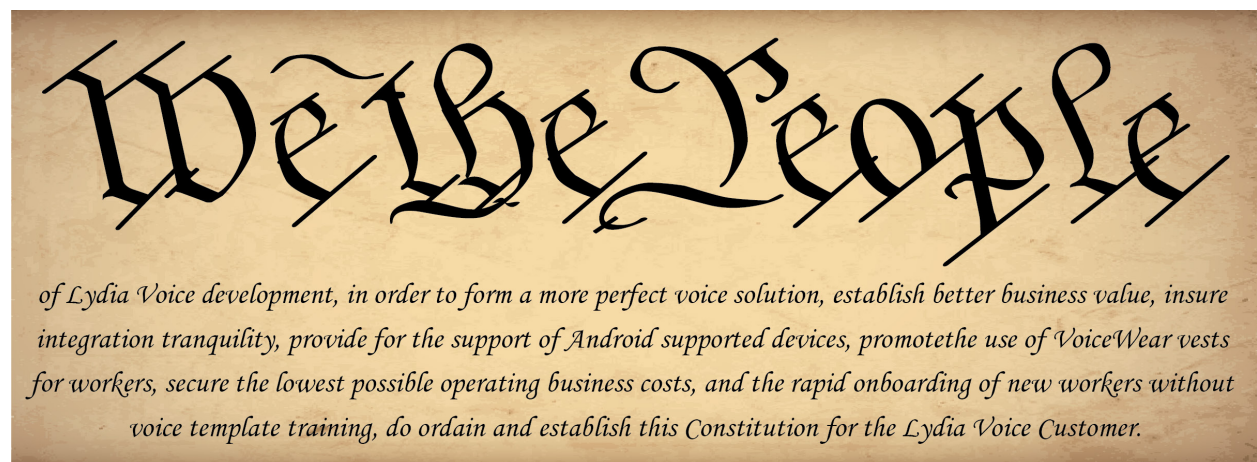
Chapter 8: The Voice-Enabled Distribution Center Data Integration Reality

relegated to a handful of a few, very old legacy systems that service very boutique segments and serve very small customers who have virtually no internal IT resources. While integration of voice solutions with any WMS is ubiquitous today, certain WMS providers will still create very controlled selling environments and cause great fear in customers with their mirage.

One of the key ERP/WMS companies that does not practice this approach is SAP. SAP is one of the few companies that embraces other solutions that integrate with their offering, while still offering their own options. I wish more ERP/WMS companies had the confidence to be as open as SAP.

Over the years, most voice suppliers have had to work hard to build their own integrated solutions but have only done so through actual customer engagements. Each one of these integrations required the end-user customer to “force” their WMS provider to provide integration support as needed. These days, the actual support required from the WMS provider is quite limited. Over time, it has become easier and the dependence of working with the various WMS companies has been greatly reduced.

EPG and Lydia Voice have been successful with these customer driven integration efforts and continues to expose the data integration mirage whenever possible. Now, EPG is adding a touch of creativity to our communications and our commitments. This creativity has enabled EPG and their Lydia Voice solution help empower customers to select and determine their preferred voice solution of their own choosing (hopefully Lydia Voice), without fear. In fact, EPG is going further than ANY voice supplier that I am aware of. It all starts with the EPG Voice Constitution - a first for the voice industry.



The Voice-Enabled Distribution Center Data Integration Reality

Based on the United States Constitution, we leverage core concepts and beliefs, with an accompanying Bill of Rights, which communicates our corporate commitment to our customers. We believe it is much more than a “marketing” concept. Our goal is to ensure each and every Lydia Voice customer is confident that we mean what we say and execute upon our commitments.

In keeping with thought process and theme, we have ten amendments to our Voice Bill of Rights, believing the First Amendment to be the most important. It sets the stage for providing comfort and full confidence in any customer selecting Lydia Voice and addresses any integration concerns, regardless of their WMS provider or what they’ve been told.

Bill of Rights

The conventions of Ehrhardt Partner Group executives having, at the time of adopting the EPG Constitution, expressed a desire, in order to prevent misconstruction or abuse of its powers, that further declaratory and restrictive clauses should be added, to extend the public’s confidence in using Lydia Voice, will best insure the benefits of its implementation. Resolved by the North American Board of Directors, that the following articles be proposed to the decision makers who choose to implement Lydia Voice into their businesses, as amendments to the EPG Constitution of Lydia Voice, all or any of which amendments, when ratified by three-fourths of the said Board of Directors, to be valid to all intents and purposes as part of the EPG Constitution, namely:

AMENDMENT I:

Ehrhardt Partner Group North America shall extend a Lifetime Integration Guarantee to customers with active support agreements that establishes the ongoing maintenance of the integration between Lydia Voice and the customer’s WMS system, be it SAP, JDA Manhattan, Infor, Oracle, NCR, Retalix, HighJump, Netwuite, SAGE, or Microsoft. This amendment ensures the customer is protected from ERP/WMS providers from establishing fear and uncertainty or denying the customer’s freedom to choose a voice solution. This amendment enables a customer’s right to confidently choose Lydia Voice and to petition Ehrhardt Partner Group North America for a redress of future voice enhancements to support newly added WMS functionality.



The Voice-Enabled Distribution Center Data Integration Reality

Amendment One makes an undeniably strong statement. EPG offers a Lifetime Integration Guarantee to customers on active software support agreements to provide ongoing maintenance of the initial integration with their WMS/ERP solution. Yes, you read that correctly. Over the lifetime of your utilization of Lydia Voice, EPG commits to ensure that when your ERP/WMS provider upgrades their software that Lydia Voice was initially integrated with, that EPG will not charge a professional services fee to ensure the integration continues to work with a new software release.

How's that for putting our money where our mouth is? How's that for providing comfort and security to any actively supported Lydia Voice customer? Now more than ever, there is no reason to be concerned about selecting Lydia Voice as your new voice solution, no matter who your WMS provider is. It's time to live in 2019, not 2009.

Chapter 9: Ten Years Later, Customers are Refreshing their Voice Solutions

It's hard to believe that 2009 was ten years ago. You might recall that in 2009 the economy was really struggling. It was a difficult time for businesses who were focused solely on cutting costs and saving cash wherever possible. 2009 was also during the initial hyper-growth period for voice use in the warehouse.

The hyper-growth period, which I call the timeframe of 2004 to 2011, was the first wave of wide voice adoption, especially in businesses with slim profit margins, such as the grocery industry. This is the period where the voice industry grew up to have its first \$100 million provider. That's a lot of software and a lot of new customers. It's also now what is creating the next 'mega' wave of voice software growth as more than \$1.0 billion of potential customer investments is expected to happen over the next few years. This high level of growth is also driven by the end of life of Windows Mobile on most of the voice dedicated devices sold during this timeframe, which I will expand on later.

While some customers will simply renew and refresh with their existing voice provider, many will investigate and compare various voice provider options and select a new voice solution. EPG and its Lydia Voice solution has won more new business from existing voice customers than any other voice solution. I challenge anyone to prove this claim to be wrong - here is just one example:

SIMBA · DICKIE · GROUP



- Vocollect Voice user since 2010
- 24% improvement vs. previous solution
- Over one million voice picks per year
- Transitioned to Lydia Voice in 2017
- 50% of workers using Lydia VoiceWear by worker request
- Changing to Lydia Voice increased worker performance by **11%** compared to the previous voice solution
- Increase was a big surprise - the customer didn't expect an improvement since they had already been using voice

"What is certain is that we have found a system with which we are well positioned for the future."

Simba Dickie Executive

Ten Years Later, Customers are Refreshing their Voice Solutions

I think it is important to point out four key result changes from this existing voice customer who recently upgraded to Lydia Voice after using a previous voice solution for more than seven years.

1. The most important point is that this customer obtained an 11% increase in productivity vs. their older voice solution. Impressive and totally unexpected by the customer.
2. The ability for workers to determine their ergonomic experience was something new for the business because of the selection of Lydia Voice. Almost half of the users chose to use the VoiceWear vest option as it eliminated the need for a headset. This resulted in a lower total cost of ownership (TCO) for the customer as they were able to reduce the need to purchase headsets and the respective headset infrastructure, such as batteries and chargers, need to manage and support their workforce.
3. Another key aspect that the business gained was the ability to better support their full-time workers as well as their temporary, seasonal workers by eliminating the older voice template training process. It also eliminated the constant re-training required due to poor voice recognition, often encountered with workers who have distinct dialects or accents.
4. Finally, Lydia Voice will give the customer a total cost savings of around 35%.

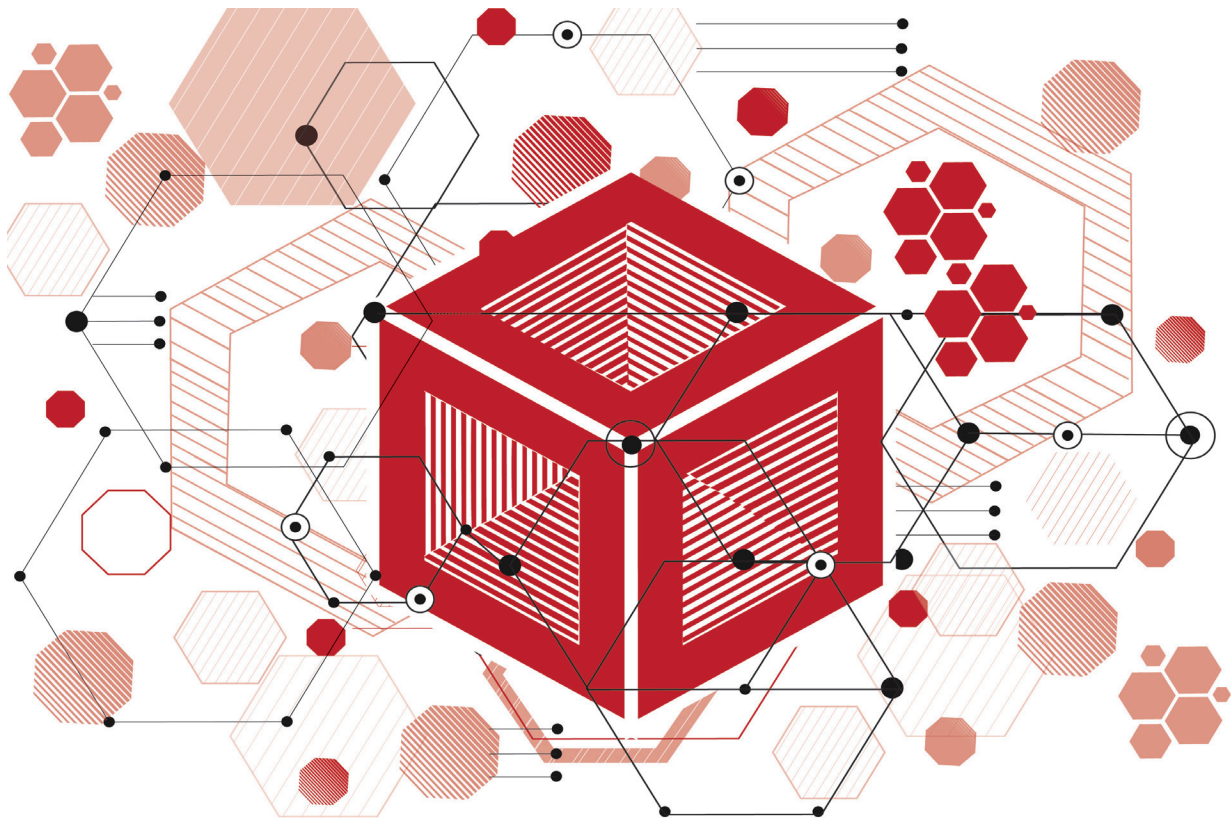
The reality is that in 2009, there weren't a lot of options in voice technology and the average voice installation was at businesses with less than 25 workers. Not exactly the level of product development and customer support desired, nor did it provide the financial return for voice technology vendors to survive and prosper. Most of those voice technology vendors are either out of business or shells of their former selves simply surviving to fight another day, but without the financial strength to invest in product development.

These privately-held businesses have turned into financial albatrosses for their owners without much resale value, due to their poor growth or limited profitability. EPG's Lydia Voice is fortunate to be part of a larger and successful global company with more than 500 people and experiencing rapid growth.

Chapter 10: Extend the Life of Your Customized WMS!

The primary purpose of a WMS is to manage the overall activity within a warehouse and process worker transactions, including receiving, put-away, order selection, and shipping. A WMS also handles the movement of materials from one location to another, physical inventories, and cycle counting. Although WMS functionality differs from one vendor to another, all address the same basic needs of a warehouse operation.

WMSs often utilize technology such as barcode scanners, RF terminals, voice, mobile computers, wireless LANs, and potentially RFID to monitor the flow of products. Depending on the scope and cost of the WMS, it may include advanced functionality such as cross-docking, labor management, yard management, slotting, transportation management, and value-added services. Benefits include reduced inventory, cost savings, improved space utilization, higher productivity, and improved customer satisfaction.



If you were a part of the process to implement your WMS, you will recall the challenges the business was confronted with as new processes and workflows were implemented.

Extend the Life of Your Customized WMS!

As the business nears the end of the WMS life-cycle, typically there are common signs that's it's time. Signs such as:

1. Your WMS architecture is challenged to maintain older versions of related infrastructure such as databases, operating systems and other software integration linkages.
2. Your internal technology directions are at odds with your older WMS technology infrastructure.
3. Your WMS does not have the sophistication to allow your business to pursue continuous improvement initiatives.
4. Your WMS processes are constrained by information silos and your systems' inability to freely communicate and integrate with other system. Your static WMS is posing severe interoperability problems as the necessity for sharing and synchronizing operational data across business systems increases.
5. Customization is becoming cost prohibitive, since only a few resources have the skills and knowledge to engage with your older version and your WMS has been so customized that it is becoming an internal headache, especially as your internal team with tribal knowledge retires or departs.
6. The growth of external requirements by customers and/or government agency compliance are especially expensive due to older WMS technology infrastructure.
7. The upgrade cost is as much, if not more, than the purchase of a new WMS.

So, what's this got to do with voice technology you ask? It's simple really. One of the core reasons that businesses use when justifying their voice project is that it helps them quantify a business delay by being able to squeeze a couple more years from your existing WMS. All voice systems can show operational improvements by optimizing outdated workflow processes, while being able to show an ROI in under nine months; something a new WMS cannot achieve. Yes, there are strategic reasons to modernize your WMS solution, as outlined in the seven points above, but that's a whole other topic to discuss.

Chapter 11: Business Intelligence/Analytics Come to Life

One of the most significant technology shifts over the past ten years has been the technology advances around business analytics and business intelligence platforms. The visual-based data discovery is a defining feature of the modern analytics and business intelligence (BI) market. This wave of disruption began in around 2004 and has since transformed the market and new buying trends away from IT-centric system of record (SOR) reporting to business-centric agile analytics with self-service.



As Gartner points out, “modern analytics and BI platforms are characterized by easy-to-use tools that support a full range of analytic workflow capabilities. They do not require significant involvement from IT to predefine data models upfront as a prerequisite to analysis, and in some cases, will automatically generate a reusable data model. A self-contained in-memory columnar engine facilitates exploration, but also rapid prototyping.

Modern analytics and BI platforms may optionally source from traditional IT-modeled data structures to promote governance and re-usability across the organization. Many organizations may start their modernization efforts by extending IT-modeled structures in an agile manner and combining them with new and multi-structured data sources. The modern analytics engine is becoming a viable alternative to traditional data warehouse approaches”.

Business Intelligence/Analytics Come to Life

These technology advancements have also created new players and new market leaders. If you look at the latest Gartner Magic Quadrant, many of the names are new, or they have been acquired by larger software companies. For example, remember Cognos before it was part of IBM? Or BusinessObjects, now a part of SAP?

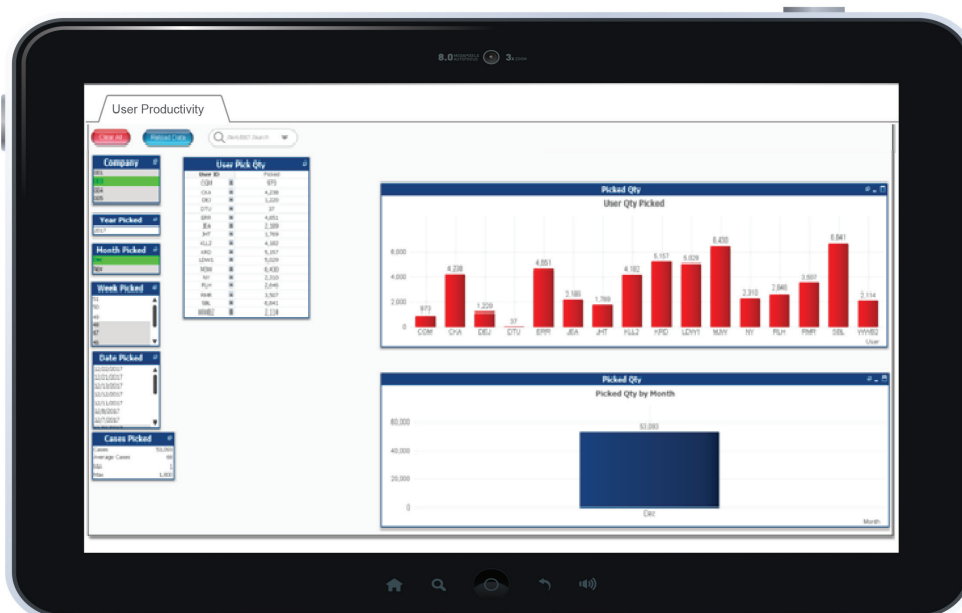
These market changes have had wide impact on the voice marketplace as well. The interest in providing management reporting and enhanced analytics has become a main stay for distribution center management to use business intelligence to help them operate a smarter connected logistics business in the last ten years.

Data workers need to access their data and act—all in the same workflow. BI platform vendors are responding by offering capabilities like mobile analytics, embedded analytics, dashboard extensions, and APIs. Embedded analytics puts data and insights where people are already working so they don't have to navigate to another application or shared server, while dashboard extensions bring access to other systems right into the dashboard. While these capabilities bring action and insight together within platforms and tools, mobile analytics allows users to access data wherever they are physically, and empowering different business teams and verticals with on-demand data in context.

The following are examples of data that Lydia Voice customers can obtain using our BI tools.

User Productivity

Sort how many picks a user completed overall by Company, Year, Month, Week and/or Date



Business Intelligence/Analytics Come to Life

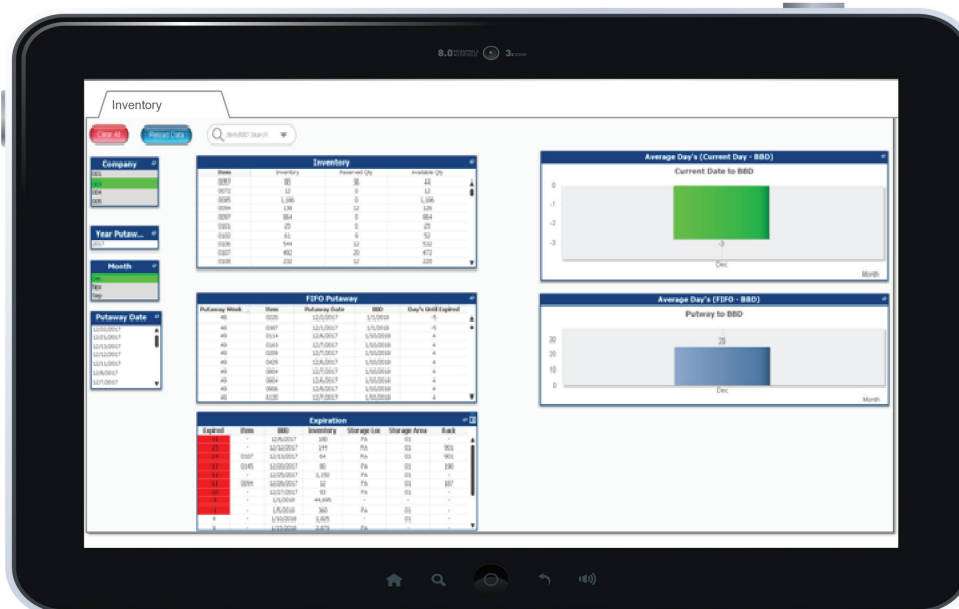
Shipping Order Information

Sort information by Company, Year, Month, Week and/or Date



Inventory Information

Review Inventory Put-Away by Available Quantity, FIFO or Best-Before Date



Business Intelligence/Analytics Come to Life

EPG also offers TimesSquare Cloud Analytics with the benefits of integrated BI, planning and predictive capabilities – available through the EPG cloud. Our solution provides everyone in your logistics organization the ability to discovery actionable insights, eliminate silos, and easily explore information from across the organization, with intuitive self-service features. It also delivers insights to stakeholders, at the point of decision, with dynamic interactive-stories:



Chapter 12: Growth of WMS Partner Ecosystems

One of the most significant changes that has occurred over the last ten years has been the strategic changes in the go to market approaches for virtually every WMS provider. Their increased partner ecosystem began by providing partners with more resources, making it easier to do business, and increasing the amount of business that they drove through partners.

The increase in the WMS partner ecosystem has been good for businesses like EPG and their Lydia Voice solutions because these supply chain and logistics partners have a more holistic view of the world and focus on excelling at providing superior customer service.



Our partner ecosystem provides 'full service' capabilities, in contrast with the WMS salesperson who focuses solely on achieving sales quota or services quota. These new and growing partners are helping reduce the complexity and challenge the data integration mirage.

Our partner ecosystem mirrors much of the channel and partner strategy SAP induced years ago. These best of breed WMS providers have expanded their partner ecosystems only because their customers and the market demanded the freedom, but also due to competitive threats from partners willing to expand their investments in monolithic ERP providers such as SAP and their eWM solution. One of the positive outcomes from the growth in partner economics is that the partners participate in the WMS partners annual conference as exhibitors. The WMS partners were smart to include exhibiting at user conferences as part of their annual partner fees.

Chapter 13: SAP Changed the Voice Landscape

One of the biggest changes that has occurred to the voice market has been the growth of SAP and their success of eWM. The latest industry reports show SAP as the leading supplier of supply chain software solutions with almost 30% market share. This strong market position has helped break down barriers to voice adoption because eWM includes a seamless interface for voice solutions.

When you look at the standard capabilities available in eWM vs. WM (the older WMS product from SAP), you will see has standard support for voice enablement.

FUNCTIONALITY	SAP WM	SAP EWM
Handling Unit Management	✓	✓
Managed Stock at Storage Location	✓	✓
PickLogic	✓	✓
Placement Strategies	✓	✓
Removal Strategies	✓	✓
Replenishment	✓	✓
Standard Mobile RF Technology	✓	✓
Storage Unit Management	✓	✓
Warehouse Bin Management	✓	✓
Yard Management	✓	✓
Analytics Enablement		✓
Deconsolidation		✓
Dynamic Cycle Counting		✓
Enhanced Configurable RF Technologies		✓
Expected Goods Receipt		✓
Labor Management		✓
Opportunistic Cross Docking		✓
Slotting and Re-Arrangements		✓
Standard Dock Appointment Scheduling		✓
Standard Integration with SAP TM		✓
Standard Material Flow System Integration		✓
Standard Voice Picking		✓
Standard Weigh Scale Integration		✓
Task and Resource Management		✓
Task Interleaving		✓
Unloading/Loading of Transportation Units		✓
Value Added Services		✓

While SAP may have made it easier to integrate voice solutions, most voice suppliers have not used this opportunity to leverage the architectural benefits provided by SAP. Unfortunately for the SAP customer, most voice suppliers continue to either use a middleware solution (not what SAP customers want), or they have overly complicated the interface activities that require an SAP partner as well as voice partner.

SAP Changed the Voice Landscape

Managing a project with a single partner is hard enough, it becomes too complex when two partners have to be engaged. It's probably the main reason why other voice suppliers struggle to successfully penetrate the SAP market opportunity. Lydia Voice is different than other voice suppliers because our solution is native within the SAP environment.

The Lydia Voice Enterprise Connector for SAP allows native integration as the entire application logic is within SAP. This enables the customer to use all standard SAP functions and eliminates the need for a complex engagement processes requiring two different partners. The advantage to the customer is that they can carry out all adaptations and extensions to their Lydia Voice application with their own SAP team.

The screenshot displays the SAP ControlCenter interface for Warehouse Number 001. The interface includes a navigation menu with tabs for Picking, Loading Devices, Shortfalls, Loading Device Statistics, IOC Report, Picker Statistics, Users, Devices, and Configuration. The main area shows a list of warehouse orders with columns for Part Order, In. No, Del. Date (PL), State, Prio, No. Items, Item Complete, %, Tgt Qty, Act Qty, Unit (Amnt), PbV ID, ParkNo, Order Type, and PickA. Below this, there are sections for Warehouse Task and Loading Devices, each with their respective data tables and navigation controls.

Part Order	In. No	Del. Date (PL)	State	Prio	No. Items	Item Complete	%	Tgt Qty	Act Qty	Unit (Amnt)	PbV ID	ParkNo	Order Type	PickA
1	4	05/14/2014	Parked by System	123	1	1	100	1	1	ST	124		Regular Order	Food
1	20	05/20/2014	In Progress	0	156	11	7	780	55	ST	004		Regular Order	Food
1	19	05/20/2014		0	3	1	33	22	2	ST	002		Regular Order	Food
2	8	05/15/2014	Finished	0	3	3	100	1	1	ST	125		Grouped Order	Food
2	10	05/14/2014		0	2	2	100	1	1	ST	125		Grouped Order	Food
1	11	05/15/2014		0	1	1	100	10	10	ST	007		Regular Order	Food
1	12	05/15/2014		0	1	1	100	2	2	ST	007		Regular Order	Food

Int. No	Part Order	Loading Device No	Tgt Qty	Act Qty	Unit (Amnt)	WT	Item	HU WT
8	2	004114133004	1	1	ST	1	1	
8	2	004114133005	1	1	ST	1	1	
8	2	004114133006	1	1	ST	1	1	

Loading Device No	Picking Area	Task	Order Type	Language
004114133004	Freezer	PF	Q	Spanish
004114133005	Freezer	PF	Q	English

The Lydia Voice Enterprise Connector for SAP results in faster and more efficient data capture, a smoother workflow process and a significant increase in worker productivity. Warehouse operators receive their work instructions via voice on the mobile device and use voice to confirm each step of their work orders. Quite simply put, Lydia Voice works like a microphone on SAP. The Lydia Voice Enterprise Connector works seamlessly with barcode scanning, RFID scanning and manual keyboard entry. Lydia Voice Connector 7.0 is best solution for SAP customers wanting to add voice capabilities to their workflow processes.

SAP Changed the Voice Landscape

The following summarizes why the Lydia Voice solution is the premier voice solution for SAP users.

Lydia Voice Connector for SAP



- **Best:** Native SAP Integration
- **Best:** 100% Online Connection
- **Best:** Application Logic Located in SAP
- **Best:** Based on SAP Voice Properties
- **Best:** All Development in SAP
- **Best:** Lydia Server for Higher Performance and Scalability



The success of Lydia Voice is shown in the largest installed global user base of voice customers using SAP in the world.

SAP Changed the Voice Landscape

Lydia Voice SAP References - Wholesale & Retail



- 1 SAP EWM
- 2 Direct integration via Lydia Voice Connector for SAP

Lydia Voice SAP References - Industry & Production



Logistics Service Providers



- 1 SAP EWM
- 2 Direct integration via Lydia Voice Connector for SAP

Chapter 14: Hello Android. Bye-Bye Microsoft Windows Mobile

I continue to be surprised by the number of companies still not aware of the upcoming Windows Mobile sunset by Microsoft. Very soon, millions of rugged mobile devices in use today running a legacy Windows OS will be affected by the Microsoft® Windows® Mobile Sunset and their ending of customer support and staffing to address security vulnerabilities.

Microsoft announced in 2015 that it is ending support for its current Windows mobile operating systems – Windows Embedded Handheld 6.5 and 6.0 (WEH), and Windows Embedded Compact 7 (WEC). Devices running WEH or WEC are currently on extended support, meaning they are only eligible for security updates through the end of service date. The devices will continue to work after the sunset date, but without regular updates, patches and bug fixes.

Key dates and end-of-service dates by operating system version are:

Operating System	End-of-Service Date	Sample Device
Windows Embedded CE 6.0	April 2018	Vocollect Talkman T2x Vocollect Talkman A500
Windows Embedded Handheld 6.5	January 2020	Honeywell CK70 Zebra Workabout Pro 4
Windows Embedded 8.1 Handheld	January 2020	Honeywell Dolphin 70
Windows Embedded Compact 7	April 2021	Vocollect Talkman A700 Zebra MC9200 Honeywell Thor CV31

Sunset of the current Windows Mobile OS also ushers in the new Windows 10 solution. Microsoft introduced Windows 10 in 2015 as its next-generation OS for all devices, including a version intended for mobile devices, Windows 10 Mobile Enterprise (Windows 10 ME). According to VDC research, only 4% of all new devices introduced in 2016 ran Windows.

Make sure you do a full inventory of your devices and their operating system before the Microsoft Mobile sun goes down. Were you aware that if you are Vocollect Talkman T2x voice device user, your device is long past support for addressing security vulnerabilities? And for Vocollect Talkman A500 voice device users, support for that device was targeted to be the end of 2018?

Hello Android. Bye-Bye Microsoft Windows Mobile

The Automatic Identification and Data Capture (AIDC) market changed forever on April 15, 2014, the day that Zebra Technologies bought the Motorola enterprise unit for \$3.5bn. Combine that with the other red-letter event on December 12, 2012 when Honeywell bought Intermec for \$600m, the market consolidation was effectively over. Together, the two probably have 70% market share.

The AIDC market continues to evolve and yes, online sellers are a very important channel for this market. However, the biggest change in the AIDC market has been the maturation of many of the top tier reselling partners. Years ago, many of these partners determined that their future success was oriented toward offering greater value-added services and capabilities; the online market sellers had removed much of the profitability from simply selling hardware and supplies. The survival of the top-tier partners required them to change their go-to-market approach and would create a greater dependence of professional services skills. It would require a greater software mix and it would require many to differentiate themselves with service offerings such as warehouse labeling, Wi-Fi infrastructure, and device management skill sets.



Honeywell

**PERFORMANCE
PARTNER PROGRAM**

PLATINUM LEVEL

This strategic shift really began to take hold over the past three years after the dust settled from the Zebra acquisition of Motorola. Once Zebra rationalized and modernized its channel program, most partners were left to represent either Zebra, Honeywell or both. These suppliers and revamped partner programs and created new and greater expectations from their top tiered resellers. Zebra Premier Solution Partners are expected to produce greater revenue, as well as achieve higher performance levels focused on expanded skills and customer facing capabilities. These partners are able to invest in new thinking and also further scale their business to grow with new regional offices or fund potential acquisitions.

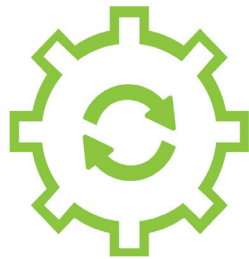
Chapter 15: New Licensing Flexibility Changes IT “Ownership” and Control

One of the biggest changes we have seen recently is the explosive growth in interest to use EPG solutions via a subscription license, a SaaS license and in a managed services environment. The flexibility to license EPG offerings as your business needs is imperative in an uncertain world.

Licensing Flexibility



Perpetual



Subscription



SaaS



Managed Services

No Licensing Transfer Fee from Device to Device

As more businesses gain comfort and confidence in the managed service option for their secure applications and their data, the options increase in their importance. Lines of business owners are interested in this option so they can reduce their internal IT dependence, simply due to their lack of available resources to support their new projects in a timely manner. A managed service option, using the EPG Cloud solution as an Infrastructure-as-a-Service, enables the business to focus on operational excellence and not on their IT support limitations.

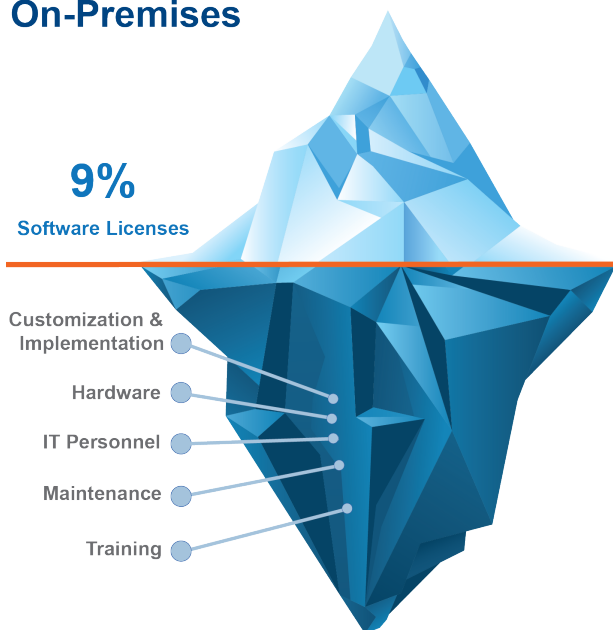
The other key licensing change occurring is the move of enterprise and mission critical solutions to a subscription model. We owe a big thanks to the CRM market for showing businesses the viability of this approach. EPG provides customers the option to license our software via a subscription and run the software either on our infrastructure (the traditional SaaS model) or on their internal infrastructure. The key advantage of the subscription model is that the license costs are spread out across a longer period, often with five (5) to seven (7) year terms. This helps reduce the out of pocket cash for the business and better aligns with the life of the application usage. It also helps simplify and lowering the ongoing costs by including software maintenance and updates for the customer. The logic of the spreading out the software acquisition costs over a longer period makes sense since no one changes their WMS/Voice solution every two to three years.

New Licensing Flexibility Changes IT “Ownership” and Control

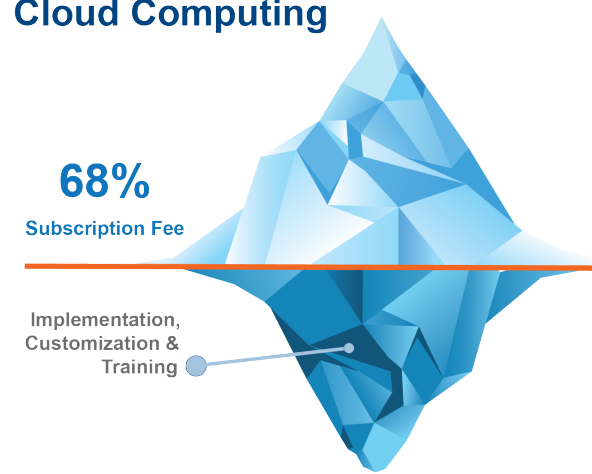
There’s an evolution taking place in the IT industry: the continuous and steady progression from traditionally installed software to cloud technology. In the cloud computing model, the vendor provides Web-based access to applications as a service, through a subscription pricing model. The vendor takes responsibility for everything, including servers, storage, backups, system updates, applications, databases, and maintenance. This eliminates the need for customers to buy, deploy, and manage IT infrastructure, saving the customer large upfront deployment costs and ongoing maintenance headaches.

In recent years the shift of enterprise software to the cloud has intensified, driven by a perfect storm of dramatically lowered cost of storage, increased processor speed, elimination of the need for a software and hardware to be physically connected.

On-Premises



Cloud Computing



Lydia Voice is now available in the cloud delivery model. When evaluating voice providers, it is imperative for every business to understand the total cost of ownership (TCO) — including both direct and indirect costs — of the technology and labor workers with adopting voice technology. The scrutiny of new technology projects has never been higher, and building a business case to justify an investment in supply chain management technology has never been more crucial. While some see cloud as being simply the next level of technology, the shift towards cloud computing also has very tangible financial benefits.

In many companies, as much as 70 percent of the typical IT budget is spent on just making sure the business remains operational— tasks such as keeping servers running and performing upgrades.

New Licensing Flexibility Changes IT “Ownership” and Control

In the best cloud models, your IT staff can devote their time to improving the business, rather than trying to solve infrastructure issues and applying software patches. IT can move from being an interchangeable commodity to a differentiator, shifting from maintenance to innovation.

When an IT team knows they need to run the underlying infrastructure, they realize there will be an inherent expectation that the business will rely on them for broader application support. Using cloud applications forces businesses to think differently about who will truly be accountable for the software and its implementation. If it is determined that the business process owners should “own” the software, the business process owners should likewise be accountable for it. In order to make good business decisions about information technology investments, the business process owner—not the IT department—must make the decision about investment and commitment to information technology.

Sound business decisions about using technology cannot be made if the business owner perceives to be getting the system “for free” from IT. Similarly, a decision to invest in IT should not be limited by lack of internal IT resources or IT project prioritization. If a technology project stands on its own business merit, there should be a mechanism to execute on that project. That means that IT is freed up, and the supply chain department is empowered to make more rapid and informed technology decisions.

While a move away from capital expenses is undoubtedly attractive to most organizations, it is in the total cost of ownership (TCO) analysis that the economic benefits of WMS in the cloud become clear.

Chapter 16: Making the Case for EPG

In these challenging times, driving profitable growth and streamlining existing processes to further reduce costs and make an efficient business run even better is a constant balancing act. Ehrhardt Partner Group (EPG) can help you identify additional ways to reduce your operating costs, while supporting increased workforce productivity and greater worker accuracy. Today's approaches to distribution center (DC) and warehouse material-handling management are evolving, driven by an omni-channel world where service level expectations are changing rapidly. From early paper-based systems to handheld computers and then to voice-enabled mobile computing environments, Voice technology has become a catalyst in the reengineering of warehouse processes and systems to deliver the next generation of business results.

By uniquely offering a 'Hands-Free, Eyes-Free, Headset-Free' solution, Lydia Voice takes voice technology to the next level. Our next generation voice solutions challenge older traditional voice solutions that still depend solely on headsets. While Lydia Voice supports wired and wireless headsets, our Voice-Wear solution offers you a more holistic solution. Lydia Voice also enables customers to break free from the requirement of voice template training. With Lydia Voice you have the option for voice template training, but our smarter technology eliminates "the requirement". Lydia Voice also excels at streamlining the integration and interfacing with your ERP or WMS system.

We provide more options than any voice supplier and our real-time interface technology can have you operational in days, not months. From a business perspective, Lydia Voice provides your business with the option to use our solutions on Android devices, as well as a vast array of industry handheld computers ranging from Zebra to Honeywell to Datalogic. Every one of our customer engagements begins by developing a deep understanding of your unique business challenges. We are then able to apply our extensive warehouse and industry expertise to recommend a solution that achieves your business goals and leverages best-practice processes to optimize your return on investment, while ensuring acceptance and adoption from your team. Lydia Voice provides you the freedom and flexibility to create a smarter connected logistics world.

ABOUT EPG

Ehrhardt Partner Group (EPG) is the leading provider of comprehensive supply chain execution software for smarter connected logistics. EPG's highly configurable and scalable logistics solution, LFS, delivers Tier I functionality inclusive of: warehouse management, warehouse control and automation, resource management, transportation management, advanced business intelligence analytics and its industry leading iBrowser ensures ongoing support for all major browsers, delivering flexibility and platform independence. Our Lydia Voice solution offers unparalleled voice recognition with its deep neural network technology and eliminates the need for voice template training, while interfacing with a multitude of WMS and ERP solutions. EPG is the only company to offer a lifetime WMS integration guarantee to voice customers. To learn more, visit www.epg.com

ABOUT THE AUTHOR



Scott Deutsch is the President of Ehrhardt Partner Group (EPG), Americas, a global WMS/WCS/Voice solutions provider with more than 500 team members and 1,000 customers. Scott's 20 years of sales and marketing experience in vertical application software companies laid the foundation for his extensive experience in growing early stage companies into profitable enterprises. His success is based on his expertise in developing successful communications and defensible positioning strategies, as well as the creation of scalable channel strategies and tactical field marketing lead generation programs. Before joining EPG, he was the Director of Global Marketing Communications at Honeywell Sensing & Productivity Solutions and Director of Global Marketing for Vocollect.

Prior to joining Vocollect, Scott was the founder and President of Ardenno Solutions, a leading provider of connected knowledge management and collaboration solutions for research and development organizations. Before founding Ardenno, Scott served in executive level positions at LabVantage Solutions, Baan, Prophet21 (Epicor) and Primavera Systems (Oracle).



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