**Vocollect**®

a business unit of **Intermec**®

# Enterprise Connectors for Vocollect Voice®

*Learning About the Data Integration Implementation
Options for Vocollect Voice*

June 2012

**A Vocollect White Paper**

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## Executive Summary

Vocollect and its business partners have an unparalleled track record of successfully implementing Vocollect Voice Solutions in distribution center and warehouse environments. In fact, Vocollect Voice has been successfully implemented at more locations than all of Vocollect's competitors combined. Vocollect's success starts with having an extensive understanding of the needs of the challenging warehouse environment and knowing that ultimately, it's the worker's ability to achieve performance gains that will determine a company's true level of success.

One key learning over the years is that, while each facility has common traits, every location has certain unique processes and workflows that need to be accounted for as part of the total plan. Vocollect's high success levels in implementing Vocollect Voice would not be possible unless the voice solution provided had the flexibility to meet your operational requirements and be successfully integrated with your existing technical environment.

Vocollect and its business partners offer you the industry's broadest and most flexible integration options with a number of Enterprise Connectors. Each of these Enterprise Connectors has been developed to meet differing IT infrastructure requirements and you can even mix various enterprise connectors to provide an optimized hybrid environment. You will find this extremely valuable as you implement Vocollect Voice across various workflows, especially if your warehouse management system (WMS) has certain data limitations. Vocollect's ability to provide you with this rich set of technical implementation options helps you develop a stronger business case for leveraging Vocollect Voice throughout your distribution operations.

This white paper will discuss some of the key obstacles that Peerless Research, a leading provider of supply chain research studies, identified as obstacles to implementing voice technology. It also will provide a deeper understanding of the technical advantages and special considerations for each of the Vocollect Enterprise Connector options.

## Understanding What Prevents More Companies from Adopting Voice

Distribution center and warehouse material-handling management approaches are evolving. The fundamental shift from early paper-based systems to handheld computer devices and now to voice-enabled mobile computing appliances is helping thought-leading managers to squeeze ever-greater workflow performance results.
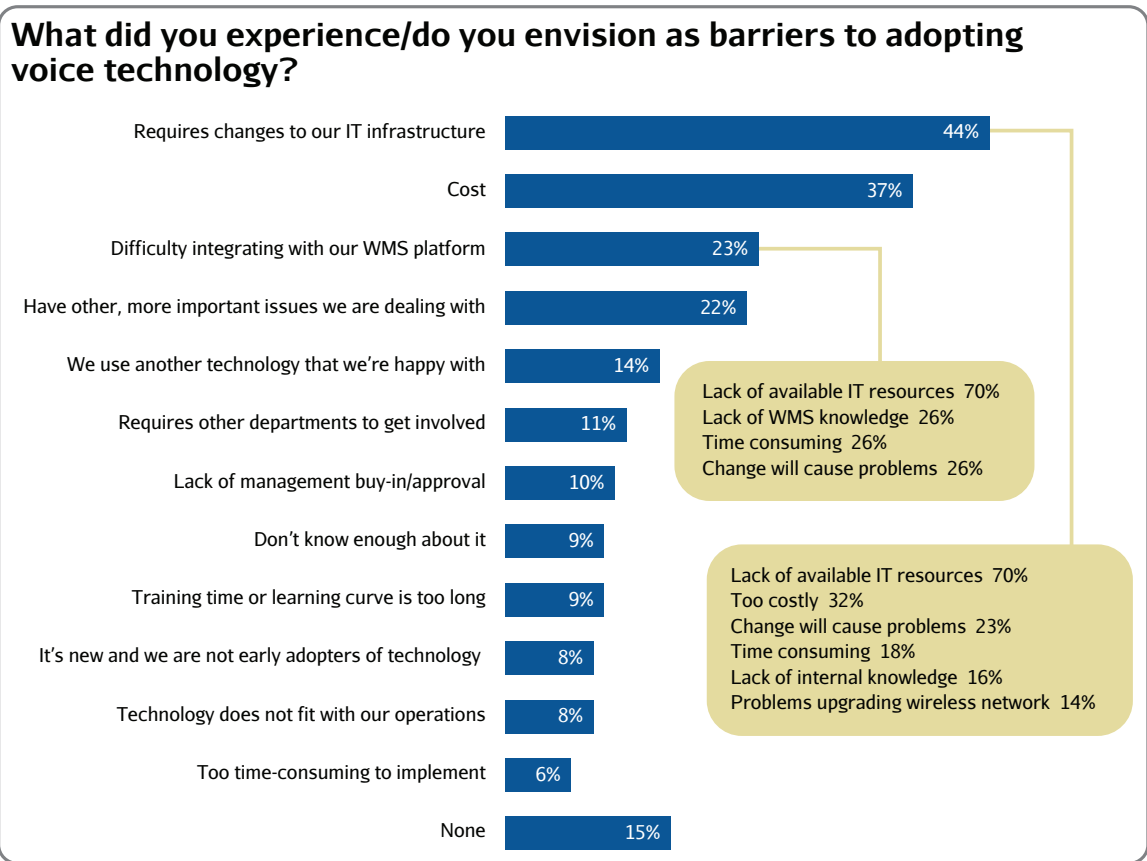
Voice technology has become a catalyst in the reengineering of warehouse processes and systems to deliver next generation business results. Voice has become a standard technology choice and enabler of operational excellence. From a business perspective, voice is attractive because the voice investment typically has a payback in less than nine months and the employees enjoy the voice experience. Voice communication is a "Hands-Free, Eyes-Free®" solution that offers greater safety due to increased worker focus on the business environment.

Vocollect Voice can even coexist with RF Scanning (when required) and it also excels in noisy environments.

The ability to obtain expected performance gains with voice can only occur when existing processes are optimized and reengineered for maximum efficiency. Projects that do fail all have one common trait – *poor workflow processes where voice is added perform just as poorly with voice*. This is the key reason why so many competitive voice installations are never rolled out beyond their initial site; but Vocollect Voice implementations leverage best practice processes as a starting point.

While thousands of organizations successfully are using voice technology, Peerless Research recently undertook research about the voice market space and asked some interesting questions which have helped to clarify many core reasons for not adopting voice technology. One of the questions asked was, "What did you experience/do you envision as barriers to adopting voice technology?"

The study respondents were quite clear in that having to lean on IT resources to make changes to the existing WMS/ERP infrastructure was their number one issue. Upon further probing, Peerless Research confirmed that the lack of access to internal IT resources needed to support such a project was also a great limitation to widespread voice adoption.

## What did you experience/do you envision as barriers to adopting voice technology?

| Barrier | Percentage |
|---|---|
| Requires changes to our IT infrastructure | 44% |
| Cost | 37% |
| Difficulty integrating with our WMS platform | 23% |
| Have other, more important issues we are dealing with | 22% |
| We use another technology that we're happy with | 14% |
| Requires other departments to get involved | 11% |
| Lack of management buy-in/approval | 10% |
| Don't know enough about it | 9% |
| Training time or learning curve is too long | 9% |
| It's new and we are not early adopters of technology | 8% |
| Technology does not fit with our operations | 8% |
| Too time-consuming to implement | 6% |
| None | 15% |

Lack of available IT resources  70%
Lack of WMS knowledge  26%
Time consuming  26%
Change will cause problems  26%

Lack of available IT resources  70%
Too costly  32%
Change will cause problems  23%
Time consuming  18%
Lack of internal knowledge  16%
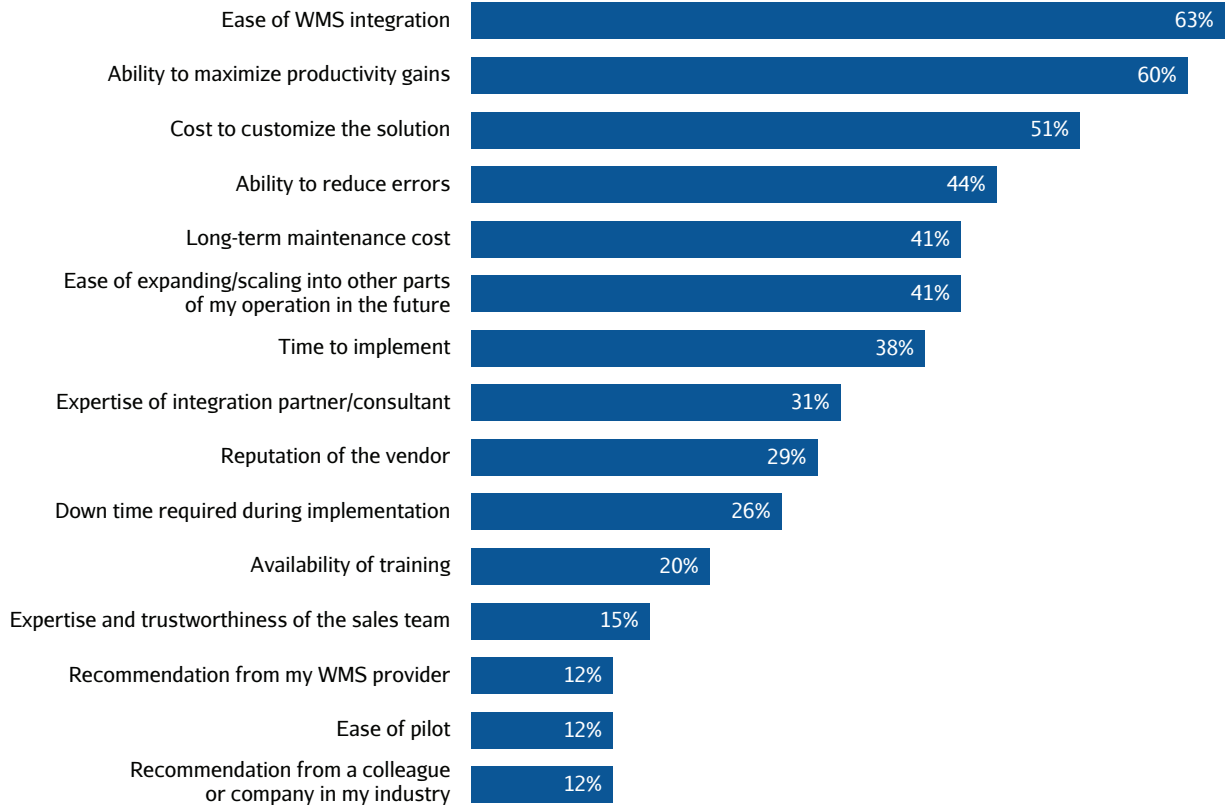Problems upgrading wireless network  14%

Source: Peerless Research- May 2012

This finding is consistent with the interaction that Vocollect and its partners have witnessed first-hand from many years of helping companies to reengineer processes and in offering innovative workflow improvements. This knowledge helps challenge Vocollect to design solutions that minimize technical and resource barriers.

The Vocollect VoiceExpress™ Enterprise Connector was specifically designed and developed to address the issues that many distribution leaders have shared about their lack of desire to make changes to an existing WMS or ERP platform in order to implement Vocollect Voice. VoiceExpress has been designed and developed to not require extensive internal IT resource time commitments.

In addition, the Peerless Research study results clarified why the VoiceExpress Enterprise Connector option has such a high-level of attraction for so many companies. When Peerless posed the question, "Thinking about the way you evaluate technologies for picking/selection, which of the following priorities are most important in evaluating vendors?", ease of WMS integration was the number one limiting factor. This clearly indicates the importance of simplifying the integration effort with the WMS, as well as minimizing involvement from internal IT resources.

## Thinking about the way you evaluate technologies for picking/selection, which of the following priorities are most important in evaluating vendors?
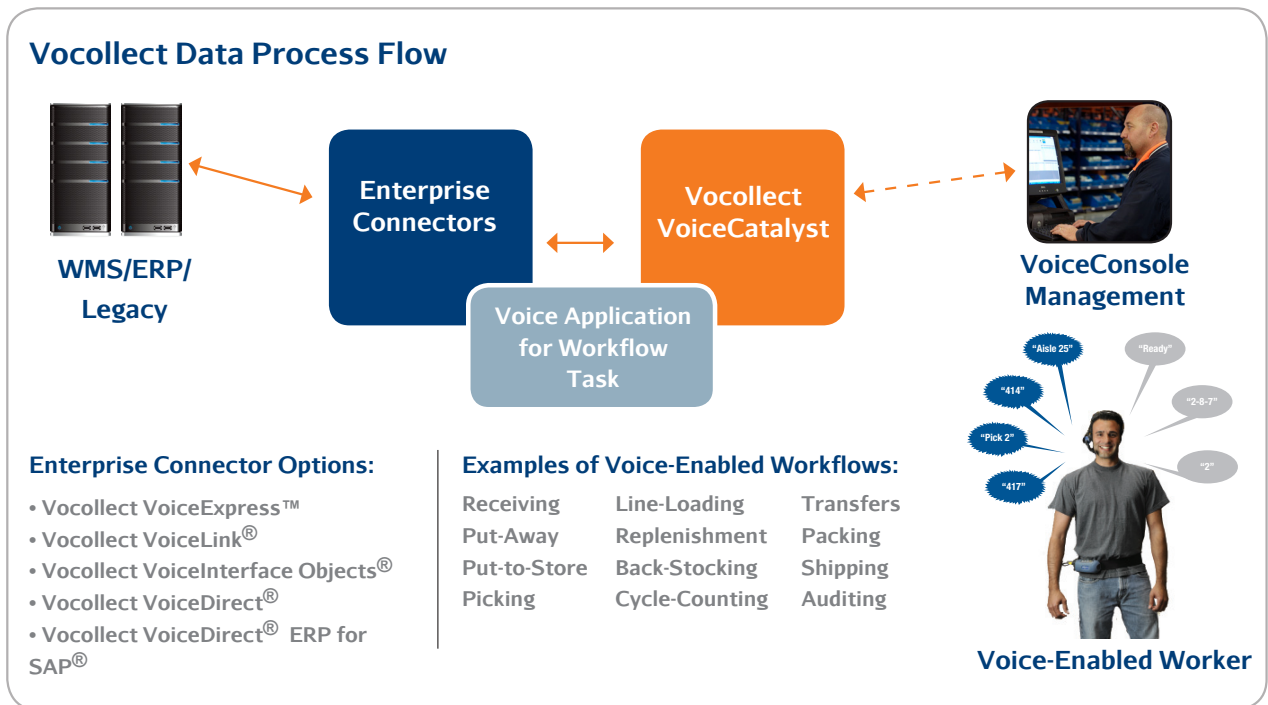
| Priority | Percentage |
|---|---|
| Ease of WMS integration | 63% |
| Ability to maximize productivity gains | 60% |
| Cost to customize the solution | 51% |
| Ability to reduce errors | 44% |
| Long-term maintenance cost | 41% |
| Ease of expanding/scaling into other parts of my operation in the future | 41% |
| Time to implement | 38% |
| Expertise of integration partner/consultant | 31% |
| Reputation of the vendor | 29% |
| Down time required during implementation | 26% |
| Availability of training | 20% |
| Expertise and trustworthiness of the sales team | 15% |
| Recommendation from my WMS provider | 12% |
| Ease of pilot | 12% |
| Recommendation from a colleague or company in my industry | 12% |

Source: Peerless Research- May 2012

# The Vocollect Voice Solution Data Process Flow

Vocollect Voice seamlessly integrates data from your host WMS or ERP system. Your enterprise integration options range from using our Vocollect VoiceExpress Enterprise Connector for fast implementations that eliminate the need to make changes to your WMS, requiring minimal IT support; our VoiceLink® Enterprise Connector option that provides an open and flexible integration solution with pre-built, best-in class optimized workflow processes; to our VoiceInterface Objects® and VoiceDirect® Enterprise Connectors that enable your WMS partners to quickly integrate Vocollect Voice Solutions with their various data systems.

Each Vocollect Enterprise Connector enables seamless integration with our market-leading voice software, VoiceCatalyst®.  Each of them enable voice software and voice device management with our industry-leading VoiceConsole® Management solution. No matter the integration option you select, your Vocollect Voice Solution will provide your business with the flexibility to support your needs today and be able to support your future best practice business needs. The graphic below portrays visually how all of this comes together:

## Vocollect Data Process Flow

**WMS/ERP/ Legacy**

**Enterprise Connectors**

**Voice Application for Workflow Task**

**Vocollect VoiceCatalyst**

**VoiceConsole Management**

"Aisle 25"     "Ready"

"414"     "2-8-7"

"Pick 2"     "2"

"417"

**Voice-Enabled Worker**

### Enterprise Connector Options:

• Vocollect VoiceExpress™
• Vocollect VoiceLink®
• Vocollect VoiceInterface Objects®
• Vocollect VoiceDirect®
• Vocollect VoiceDirect® ERP for SAP®

### Examples of Voice-Enabled Workflows:

| | | |
|---|---|---|
| Receiving | Line-Loading | Transfers |
| Put-Away | Replenishment | Packing |
| Put-to-Store | Back-Stocking | Shipping |
| Picking | Cycle-Counting | Auditing |

# The Spectrum of Vocollect Enterprise Connectors

Today's IT landscape is changing too quickly to embrace the previous generation's closed and inflexible technology offerings. No matter what WMS or ERP solution you are using, or if you are running a home-grown IBM iSeries (AS/400-based) solution, Vocollect Voice will seamlessly integrate with your data.

To enable the vital connection between your technology and Vocollect Voice Solutions, we offer five main enterprise connector options: VoiceExpress, VoiceLink, VoiceInterface Objects, VoiceDirect and VoiceDirect ERP for SAP. Vocollect also offers you the opportunity to create a "hybrid" environment by combining multiple approaches across different workflows or different sites in your enterprise to support your unique needs.
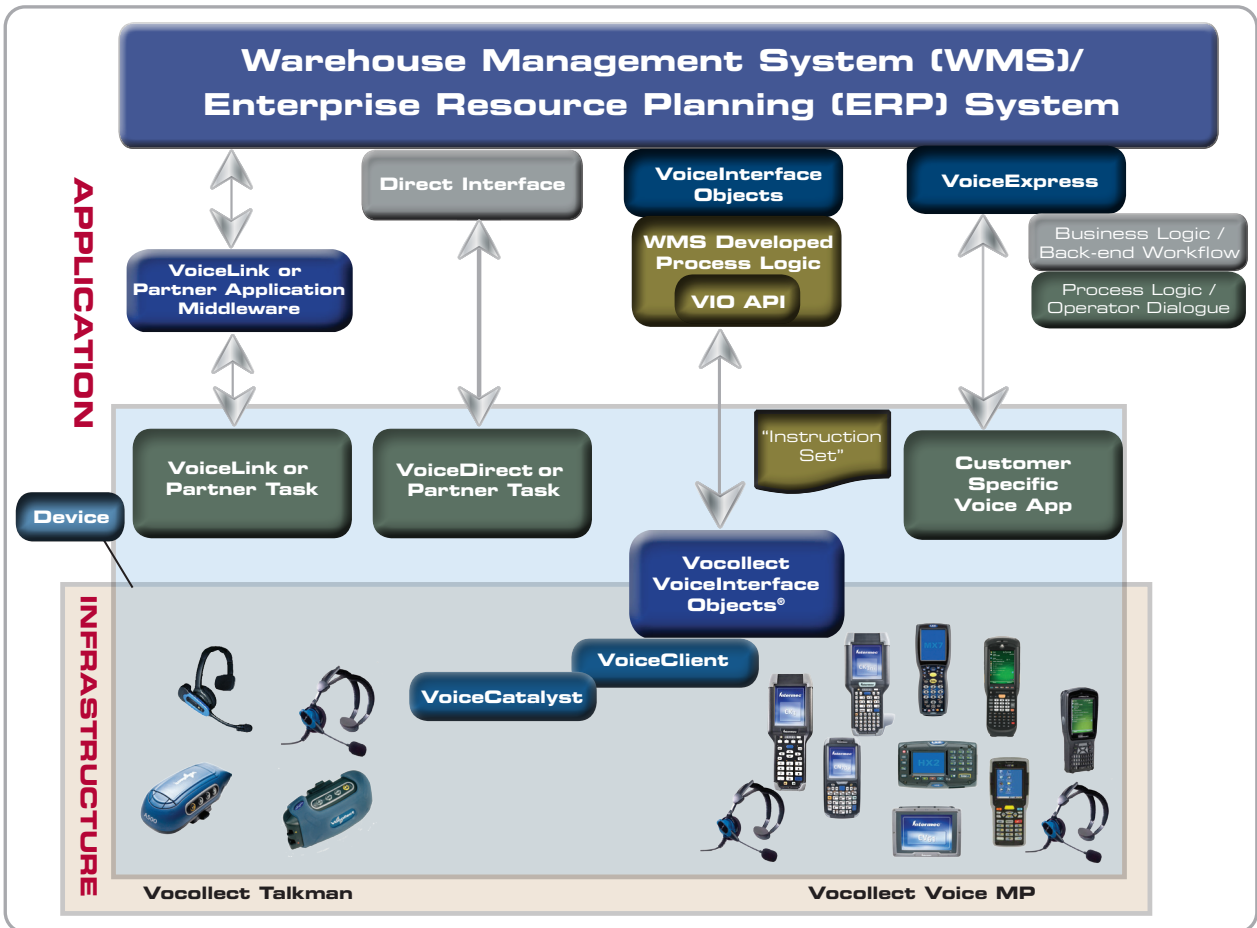
# Understanding Vocollect Enterprise Connector Options

These proven enterprise connectors offer different implementation approaches, out-of-the-box functionality, WMS vendor support, along with powerful features that span all five options:

| Enterprise Connector Option Summary | Consider Option if Many of These Statement are True | Issues to Be Aware of with this Enterprise Integration Option |
|---|---|---|
| **VoiceExpress**<br>• When IT resource constraints/barriers exist<br>• No interest in making changes to WMS/ERP<br>• Fast installation of various workflows with a limited number of workers | • IT resources are very constrained<br>• Number of workers per workflow is small<br>• Limited process re-engineering needed<br>• Good RF coverage in place | • WMS/ERP doesn't support Telnet for the workflows you want to voice-enable<br>• VoiceExpress supports the following Telnet protocol: VT220, IBM 5250 or IBM 3270 workstation emulation<br>• An existing RF process is a requirement for VoiceExpress<br>• WMS/RF screens could change frequently<br>• WMS/RF screens are different across sites<br>• WMS does not provide performance reporting<br>• Processes don't use batch-picking but could benefit from it<br>• An additional middleware solution isn't desirable |
| **VoiceLink**<br>• Streamlined integration with WMS, with some IT resources required<br>• Leverage best practice optimized workflow/tasks | • Current RF process doesn't use batch- picking but could benefit from it<br>• Unmet labor-tracking needs<br>• Significant process re-engineering may be required for the greatest level of productivity and overall accuracy gains<br>• WMS/host appears to be very slow<br>• RF coverage is spotty in places | • Customer needs a real-time interface<br>• Customer doesn't want a middleware/ single point of failure solution<br>• Workers are interleaved (unsupported)<br>• IT resources are very constrained to support workflow process change enhancements |
| **VoiceInterface Objects**<br>• For the WMS that needs a single development environment and code stream for process management<br>• For other software solutions where process logic is not located on a device, but in host or middleware | • The WMS doesn't want to use another development environment (VoiceArtisan™ and Voice)<br>• The WMS supports interleaving<br>• The WMS has interest in committing resources to project<br>• Middleware/ single point of failure solution not wanted | • WMS provider has constrained resources<br>• WMS resources are too busy to engage in learning VoiceDirect Enterprise Connector protocol |

# Understanding Vocollect Enterprise Connector Options, *cont.*

| Enterprise Connector Option Summary | Consider Option if Many of These Statement are True | Issues to Be Aware of with this Enterprise Integration Option |
|---|---|---|
| **VoiceDirect**<br>• Enables WMS vendors and large IT shops to leverage and customize Vocollect's "secret sauce"<br>• Direct interface that does not require a middleware data communications layer<br>• For high code reuse<br>• Leverage best practice optimized workflow/tasks<br>• Optimized voice performance results | • VoiceDirect for WMS out of the box workflow is good fit for their customers and requires minimal modification<br>• A real-time interface is desired<br>• Customer doesn't want a middleware solution<br>• Have "hands-on" IT capabilities<br>• RF coverage is bad<br>• Large number of workers with VoiceDirect enabled tasks and workflows | • VoiceDirect for WMS requires substantial modification costs that jeopardize ROI<br>• VoiceDirect for WMS not applicable and customer has IT constraints<br>• Number of workers per workflow is small |
| **VoiceDirect ERP for SAP**<br>• Want Vocollect Voice, done the SAP way<br>• Have the necessary tools, documentation and reference examples to integrate SAP WM and SAP EWM using NetWeaver transactions<br>• For SAP environments needing support for multiple business processes such as: picking, put-away, cycle-counting, receiving, replenishment, transfers<br>• Want to leverage NetWeaver, ITS and ABAP<br>• Supports both standard SAP and customized SAP mobile data entry transactions | • SAP-centric solution desired<br>• Utilize standard SAP transactions (LM05, LM07 and LM45)<br>• Prefers to use SAP technology to develop workflow and business logic<br>• Prefers to support just like other SAP applications, while delivering the quality performance of Vocollect Voice | • Must understand SAP environment and SAP-oriented tools as a starting point for developing customer solutions<br>• Must be capable of leveraging ABAP code that has been written logically and optimally for Vocollect Voice using best practices default Vocollect VoiceAttributes enable best-practice voice configuration<br>• Recommend ECC 6.0+ or ECC 5.0+ and can also support R/3 4.7 and R/3 4.6c<br>• Vocollect VoiceLink WCS for *use with* SAP may also be an integration option, by using Intermediate DOCument middleware interface and not NetWeaver |

# Getting Started

Getting started is easy. The first step is to start a dialogue with a Vocollect representative to discuss your business needs before trying to tackle the most applicable method for optimally integrating Vocollect Voice with your data systems.

This white paper has briefly addressed some of the key obstacles that Peerless Research identified as obstacles to implementing voice technology. In discussions with your Vocollect representative, you will gain a deeper understanding of the technical advantages and various considerations for deploying each of the Vocollect Enterprise Connector options.

For more information, visit www.vocollect.com, or call +1.412.349.2515.

## Improved Accuracy. Increased Productivity. Real Business Results.

In the complex supply chain industry, accuracy and productivity are of paramount importance. The proven track record of voice in driving quantifiable performance improvements has made it a natural fit for process reengineering efforts to solve key business challenges. Vocollect, a business unit of Intermec, is the number one provider of end-to-end voice solutions for mobile workers worldwide, helping customers achieve a higher level of business performance. Together with our partners, we enable over 400,000 workers at almost 2,000 companies around the globe to distribute US$4 billion in goods every day.

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