

Körber Supply Chain

Intuitive intelligence

Voice inspection
vs paper and tablets



An introduction to voice inspection

Voice technologies are fast being recognized as the way forward for any organization where process inspection forms a major part of its activities. As opposed to more traditional paper- or tablet-based inspection processes, it allows inspectors to keep their hands and eyes free and complete their tasks with maximum focus and minimum distraction.

“Use of voice” as it is sometimes known, allows technicians to follow step-by-step voice instructions and on-screen guidance, then provide their own verbal responses. The outcome is far greater efficiency, accuracy and information quality resulting in better data analysis capability.

First developed for warehouse-picking processes, use of voice is now broadening its applications within sectors such as manufacturing, engineering or preventative maintenance. These typically involve much longer sets of dialogue than you find in a distribution center and could run into hundreds or even thousands of process steps.

Voice inspection vs paper and tablets

Challenges of paper- and tablet-based inspection systems

Double data entry

By their nature, paper-based inspection systems involve manually checking off steps within the relevant columns or fields, then logging the handwritten results into a computer system. This is unergonomic and inefficient, resulting in a huge loss of time. While the use of tablets helps to eliminate the double data entry, inspectors still need to redirect their focus between the task in hand and then keying in the results.

Human error and data analysis

Data analysis is only as good as the accuracy and detail of the recorded input, and both paper and tablet entry leave considerable room for error. It is far easier for a time-pressured inspector to provide a detailed verbal description rather than what might be a rushed written response.

Within a paper- or tablet-driven system, inspectors may not necessarily follow the prescribed sequential order, increasing the chance of error or even missing process steps altogether. Use of voice ensures steps are followed sequentially.



Safety and methodology

The distraction of turning from the task in hand to paper or tablet input leaves inspectors more prone to work-related stress or injury. Through use of voice, inspectors remain completely task-focused and undistracted. At the same time, with the option of using the headset on one ear only, they can remain completely aware of their surroundings.

Cost

From a paper-based perspective, printing can incur its own significant costs. The opportunity costs of storing paper can also be extensive from both a labor and space perspective, and the expense of couriering documents across different locations can mount up. A key example is a US organization which couriered two packages of inspection documents per week from each of its 650 country-wide locations to an off-site third-party storage location, incurring costs of \$280,000 per year.



Advantages of voice inspection

Hands-free

Through use of voice, inspectors hear their instructions hands-free and can verbally record what they are doing in absolute detail. By not redirecting their attention between task and manual information input, they immediately achieve higher productivity, accuracy and cost efficiency. Compared to paper or tablet processes, use of voice can deliver time efficiencies upwards of 20%.

Flexibility and visibility

Organizations can easily build tailored maintenance routines into the dialogue. Using transportation maintenance as an example, age, differing climates or terrain conditions might determine the type and level of inspection steps for the same vehicle model across different locations. Voice also allows companies to set specific parameters on certain inspections processes that have a minimum completion time to ensure they are conducted properly – a pressure test for example.

Process standardization and ease of training

Because process steps are relayed in the right sequential process, use of voice ensures that inspections are carried out consistently and correctly, reducing the chance of error or steps being missed. At the same time, voice technology allows the organization to set some flexibility in the order of process steps on a use-case basis.

The benefits of use of voice extend to training, which allows the participant to follow a consistent process with verbal or on-screen guidance.

Example: North America

A leading global transportation services provider has now far exceeded its 1 millionth voice-directed preventive maintenance inspection across its fleet of more than 270,000 vehicles, exceeding its expectations for shop productivity and customer uptime. The company has also improved its inspection and repair accuracy and consistency, while eliminating paperwork and ensuring full digital documentation and regulatory compliance.



The future of voice inspection

With inspection processes becoming more complex as time goes on, it will become increasingly important for inspectors to work more seamlessly, productively and safely. There is also a distinction to be made between the voice applications used within an industrial setting vs. consumer phone- and home-use. With a highly robust platform for speech recognition and response times, industrial voice performs far beyond the requirements of a consumer application. It is also built specifically for loud environments and can process thousands of information points at ultra-high speed.

Moving forward, case uses will continue to widen. Already use of voice is being considered for the huge turbine blades which drive offshore wind energy installations. The accuracy that these blades need to be manufactured and tested against involves hundreds of detailed datapoints and use of voice is increasingly seen by early adopters as the best-in-class approach for wind and other emerging technologies.



At a glance

- High-speed processing
- Up to thousands of process steps
- The right solution for companies with critical mass
- Consistency, accuracy and improved data analysis
- Huge cost, time and paper-saving implications
- Zero distraction from the task in hand

“Use of voice in an inspection environment is now advanced and well-established. It carries very low project risk for early adopters with a critical mass.”

Glen Theiss

Senior Director, Voice Sales

Critical success factors

When considering the implementation of a voice inspection application, the most important thing is to get it right. Here are some crucial considerations:

- If you run an international organization or have expansion plans, make sure you are partnering with a provider that has the ability to support you globally.
- A successful use of voice implementation does not rest on the shoulders of a particular department – IT or operations for example. It involves a network of different components and needs to include the input from various aspects of the business. It is therefore important to ensure all departments and function levels within – from executive sponsor to shop floor user – are represented.
- Your use of voice solution should be able to integrate with any host system. It is important to ensure, however, that you partner with a provider with the experience and process methodology to perform the integration smoothly and successfully.

Why Körber?

With two decades of dedicated voice experience, Körber has grown to be the world's largest industrial voice integrator. Our strengths lie in:

- Our global presence with local support wherever you are located
- Our process expertise across the distribution, manufacturing, maintenance and inspection sectors makes every voice installation we implement completely relevant for each individual application
- Our technology leadership, with solutions tailored for every company size, sector and use case
- Our software compatibility which integrates with your key host systems
- Our solutions scalability, allowing you to keep aligned with the changing needs of the business

Körber prides itself on being a long-term partner for our clients. We work with you during implementation to ensure every detail of your system works with optimal functionality, and on an ongoing basis while the system is up and running to make sure it is delivering maximum performance. As your business dynamics change, Körber is on hand to support your emerging needs.



Conclusion

When considering use of voice, companies should ask themselves some key questions. Do inspection processes comprise a key aspect of your operations? Do you have a critical mass that makes efficiency crucial to your business – or a defined growth plan where double data entry might impede your progress into the future?

Are you gaining the relevant detail and quality of recorded input to provide insightful data analysis on how you can change, streamline or improve your inspection processes? Are your paper processes costing you time and money in administration, storage space or courier charges?

If the answer to any of these questions is yes, then the solution may well lie in revisiting your processes and transitioning to use of voice.

For more information

Should you consider migrating to a use of voice inspection system, or taking your existing use of voice system to the next level, please visit our website for more details:

koerber-supplychain.com/supply-chain-solutions/supply-chain-voice-solutions

