overIT

How Knowledge Management Drives Performance in Field Service

A mass exodus of talent from the workforce is ongoing. The aging workforce leaving in and a new generation joining creates challenges and opportunities for Field Service. To best harness those opportunities and overcome the obstacles, Knowledge Management is critical.

The Aging Workforce and the Importance of Knowledge Management

According to the U.S. Bureau of Labor Statistics, Baby Boomers have passed, met, or nearly approached retirement. The amount of **people ages 55 and older**

has doubled in the last 20 years (What to do about our aging workforce, U.S. Bureau of Labor Statistics, 2020). Whether the "grey workforce" has decided to retire or work a bit longer, Field Service industries feel the pressure to find solutions that pass down the strong to a new generation.

In a recent survey from Field Service News, organizations pointed to an **aging workforce** as a **significant concern** to their operations with an overwhelming **73%** (Is the Ageing Workforce Crisis Going to Hit your Filed Service Organisation?, Field Service News, Kris Oldland, 2018). These concerns come from a **shortage of skilled workers**, a **gap in Field Service knowledge**, and the **need to onboard many new hires.** While the shortage of skilled workers is an ongoing problem, by promoting trade jobs as a viable option and enticing tech workers and engineers into Field Service, the challenge of a knowledge gap is something that each organization must address. Capturing the knowledge of their experienced staff can be difficult if practices are not documented, if technicians worked solo and if training is not done in group settings.

Technicians hold knowledge on legacy assets, tips, tricks, and tribal knowledge only within their minds. If not correctly passed on and documented, this **knowledge is lost from the workforce when the technician retires.**

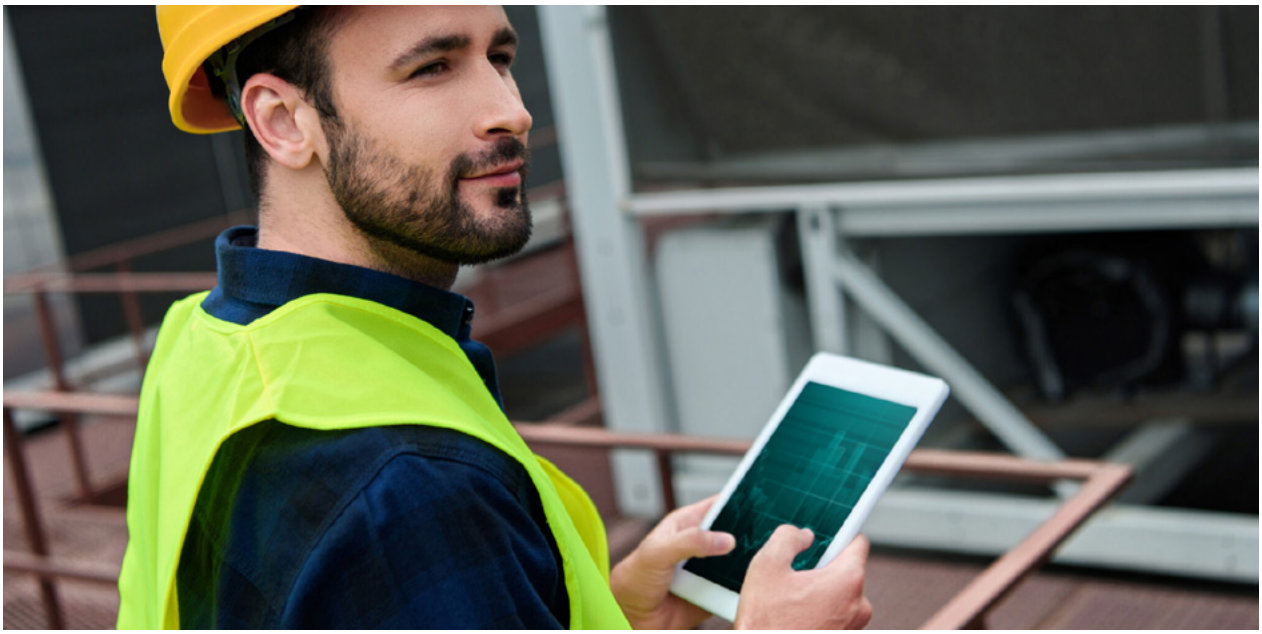
This concern is not isolated; many organizations are facing the same hurdles. In their research, the Service Council found that 70% of service organizations felt that their retiring workforce's **"knowledge loss" would be a significant challenge** over the next decade. Of the participants surveyed, 58% believed an aging workforce would drive interest in Augmented Reality technology (A Sustainable Field Service Workforce, Service Council, 2018).

The Relationship Between Knowledge Management, Augmented Reality and Artificial Intelligence

Innovative technologies are needed to **bridge the gap** between the retiring workforce and incoming talent. The new generation of technologies includes Knowledge Management via Augmented Reality and Artificial Intelligence.

Augmented Reality can be used through mobile devices such as smartphones, tablets, and wearable devices (smart glasses) to present real-time information like digital work instructions, virtual checklists, and interactive video calls.

Artificial Intelligence works with AR to optimize the information given to the user providing just-in-time data, pictures, videos, or instructions. All these work together to offer Knowledge Management that is intuitive, automated, and interactive.



Benefits of Integrating Knowledge Management Capabilities Within an Organization

Quickly Training New Team Members

As new workers join Field Service teams, they will need to be **trained** for their role. To reduce the need to have someone shadowing and paying two people to do the same job, companies can employ Knowledge Management tools to **provide guidance** to novice individuals and provide real-time information. The **just-in-time knowledge** ensures workers get training anywhere, any time, on the job without wasted resources.

- Digital work instructions, even offline
- Training rooms in AR and MR
- Immersive 3D virtual training
- Training on-the-job through see-what-I-see collaboration

Enabling Frontline Workers On the Job

As technicians carry out tasks on-site, they need **assistance, guidance,** and **training.** If workers are physically separate, this can be challenging. Additionally, the need to have **hands-free information** for safety adds another element for consideration. **Just-in-time knowledge sharing**, and the ability to **collect data manually, vocally,** and **automatically** makes task debriefing more accurate and less arduous.

- Remote assistance and mentoring, even in low-bandwidth
- AR annotations and content sharing in real-time
- Digital work instructions, even offline
- Just-in-time knowledge powered by AI

Offering On-Going Support

Knowledge Management plays a part in **capturing essential data** and storing it for when it is needed most. The Artificial Intelligence algorithms that can be a part of Knowledge Management also help to **distribute the data**, files, images, and tag or sort data. This **automated management of data** saves a lot of time and money.

- Automatic data capture by Computer Vision AI
- Image and video tagging and indexing
- Workflow automatic creation from on-field video clips

Conclusion

By utilizing Augmented Reality and Artificial Intelligence tools, Field Service organizations can overcome the challenges of an aging workforce by closing the knowledge gap. Senior technicians can now easily **share processes in real-time** without needing to be in the field, tips can be **documented hands-free**, and Artificial Intelligence can help future users by **tagging through image recognition, transcribing**, and **suggesting content.**

With Knowledge Management, there is a way to provide **remote mentorship, training**, and **ongoing support** with Field Service activities helping to **close the generational knowledge gap.**