



# A Sustainable Field Service Workforce:

## The Service Council's Guide to Successfully Navigating The Retirement Crisis

While large service organizations are embracing automation to improve predictability, increase productivity, and eliminate unnecessary manual work, their focus on talent continues to be strategic. In The Service Council's 2017 Service Leadership and Strategy benchmark, **workforce and talent issues** were highlighted as a **top two business challenge**. While these leaders are keeping an eye to the future face of their organizations, they are facing talent shortages and challenges now. **One-half of service leaders** polled by The Service Council in 2017, indicated that they were **currently facing a shortage** of resources to adequately meet service demand.

Looking at the future, the talent issue is one that's likely to become more problematic given the dynamic of an aging field service workforce. In talent-specific research conducted by The Service Council in 2016, **seventy percent of organizations** polled by TSC predicted that they would be **burdened by the knowledge loss of a retiring workforce in the next 5 -10 years**. To add to the issue, most of these organizations are struggling to backfill available field service roles or plan for future field service vacancies with the skillsets and knowledge of the incoming field service workforce.

As a result, leading service organizations aren't just thinking about replacing their retiring field service workers. While short-term preparations are being made to capture tribal knowledge and information, longer-term plans are being developed to ensure that talent and service strategies are well aligned. This document highlights how some of the leading organizations are preparing for the service workforce of the future.

### Key Takeaways:

1. There is a looming talent crisis in field service due to a large retiring workforce and insufficient incoming workforce
2. Dispatch-less service models will reduce the overall field service burden, but won't eliminate the need for new field service talent
3. To solve the talent crisis organizations must align their business, workforce, and technology strategies

### Key Data Points (Percentage of Respondents)

1. **70%** are concerned about the knowledge loss from a retiring field workforce
2. **52%** plan to address the aging workforce challenge by developing a succession planning regimen for field service
3. **52%** are looking to introduce mentorship programs to help connect their multi-generational workforces
4. **58%** believe that an aging workforce will drive interest in Augmented Reality technology.

### Recommendations:

In aligning their business, talent, and technology strategies, organizations should:

- 1- Introduce a greater level of self-service options for customers
- 2- Leverage technology to improve service issue diagnosis and efficiency
- 3- Move to a centralized expert model for customer and field support
- 4- Provide career paths to workers at all experience levels
- 5- Reduce the complexity of initial training for field service and leverage on-demand content.

## The Problem.

Population aging is a topic that has significant social and economic significance. It is also a topic on which a great deal of research has been done. The United Nations Department of Economic and Social Affairs<sup>1</sup> publishes a major report on the topic every few years. In its 2015 edition, the organization highlighted:

- By 2015 and 2030, the number of people aged 60 years or older is projected to grow by 56%. By 2050, the population of older persons is expected to double.
- The population of those aged 80 years and older is growing the fastest of all.
- The population of older persons (ages 60+) is growing faster than any other age group. The process is most advanced in developed countries with developing countries showing rapid growth in aging population in the future.

While the UN's research has broader implications, it can be tied back to workforce and talent discussions taking place in today's organizations. The Manpower Group conducts an annual talent shortage survey of over 42000 employers. In its 2016 survey<sup>2</sup>, 40% of employers reported having difficulties filling roles, the highest since 2007. For the fifth year in a row, skilled trade positions (electricians, carpenters, welders, etc.) were the hardest roles to fill, followed by IT staff and sales representatives. Rounding up the top 5 were engineers and technicians. Three of the top five areas have links to field service.

Our research, dedicated to workforce and talent in the service industry, shows that nearly 50% of organizations were unable to fill available field service roles in 2015. Many, including one-half of service business leaders, expect this to continue and are already developing talent plans to ensure sustainable service delivery models for the future.

Looking ahead, 70% envision an outflow of experienced field service talent. This is incredibly concerning as it also leads to:

- The loss of their knowledge and expertise
- The loss of their connections and relationships with customers
- The loss of their work ethic and reliability.

The loss of the workforce is one issue. The lack of interested parties in joining the workforce is another. However, the bigger challenge and opportunity is in ensuring a business model that aligns with a multi-generational workforce of the future.

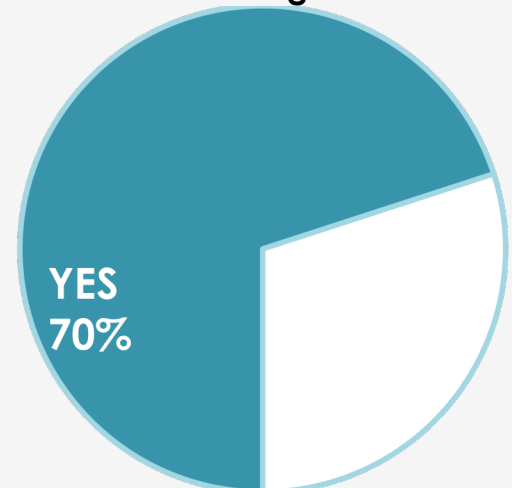
## 2017 Leadership Trends

In The Service Council's 2017 Leadership and Strategy benchmark, the following were selected as the top external challenges facing service companies.

- 1- Changing customer expectations
- 2- Workforce and talent shortage
- 3- Supply chain challenges

When asked about the internal challenges that were most relevant, 53% of service leaders indicated that the lack of resources to cover service demand was a major headache.

## Chart 1: Field Worker Shortage - Next 10 Years



Percentage of Respondents Reported. TSC Data 2015

Of the 70% in chart 1, one-half are dealing with a retiring workforce now, while another half expect to face the challenges associated with a retiring workforce in the next 5-10 years.

## A Sustainable Workforce - The 3 Critical Components

While the immediate reaction to the aging workforce challenge is to invest in knowledge management, this focus is incomplete if not considered to be part of an overall business vision. Knowledge management investments are extremely difficult, and become less valuable if there is no consideration for those who will need to use the knowledge in their day-to-day work.

The Service Council advocates that a sustainable workforce plan requires the alignment of three major strategy areas: Organizational/business strategy, workforce and talent strategy; technology strategy.

### Organizational Strategy

Mature service organizations are looking to **move their service response from right to left**. At the right end of the spectrum is a field service dispatch, quite often the most expensive component of service delivery. On the left side of the spectrum is self-healing equipment or remote resolution (without customer involvement). In-between there are various levels of service interaction and resolution: customer self-service, assisted remote support. In addition to increasing the portion of dispatch-less resolutions, there is also an emphasis on **making dispatches more efficient** by:

- Incorporating multiple tasks into a planned visit
- Reducing avoidable secondary visits

There is an impetus from service organizations to only **use field service agents when absolutely necessary**. In this, organizations are investigating:

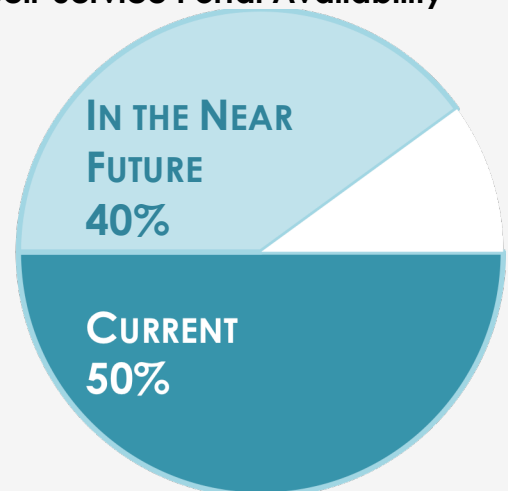
- Centralized service expert models: In this, seasoned field service technicians are gradually taken out of the field and given technical support-like roles where they support escalated customer requests or assist field technicians with troublesome resolves. These centralized experts may also support training initiatives as part of their roles.
- Self-service opportunities: There is a range of self-service activities that customers can perform in the maintenance or repair of their equipment/products.

### Self-Service Trends

Ninety percent of customers polled by TSC are looking to provide net new or enhanced self-service capabilities to their customers via portals. While the focus of these portals is to allow customers to manage their service accounts and view service contracts, they can also be used to inform customers of planned service actions that involve the use of consumables or customer replaceable parts. In this, field service dispatches aren't required for work that can be done by the customer.

*A large player in the medical device field is currently sending predictive alerts to its customers via a customer portal. These alerts also recommend actions that the customer can take to correct a current issue or to prevent a future event.*

### Chart 2: Self-Service Portal Availability



Percentage of Respondents Reported. TSC Data 2016

## Workforce Strategy

In preparing for the workforce of the future, many organizations make the mistake of planning solely for millennials or Gen Z-ers. (Millennials are those born between 1981-1997, and Gen Z-ers are those born after 1997, according to the Pew Research Center). The truth of the matter is that most workforces will be multi-generational in nature and it's important to plan for learning and work styles that apply across generations. That said, a workforce strategy should look at four primary areas:

- 1- Attracting new talent
- 2- Onboarding new talent
- 3- Connecting the workforce
- 4- Managing retiring talent

**Attracting Talent:** A senior VP for a large North American HVAC organization quipped: "We don't tuck our kids into bed at night dreaming that they will one day become field service technicians."

Field service is not considered to be a lucrative job. Our research shows that **less than 30% of field service technicians studied to become technicians**. Most were in other professions and moved to field service out of chance, due to connections, or looking for a change in work. Organizations looking for field service workers are going to have to **rethink how they position the role of field service**. Salary and benefits are key components of that positioning, but flexibility in benefits might be something to consider when looking at new talent streams.

It might also be beneficial to position the field service role as one where participants are not only working to fix things, but they are also:

- Solving customer problems
- Working collaboratively in teams
- Driving innovation in the organization
- Working with the latest tools and technology

In TSC's 2016 research involving front-line field service technicians, the following were identified as the best parts of the technicians' work day:

- 1- Solving customer problems
- 2- Fixing or repairing things
- 3- Meeting and dealing with customers
- 4- Learning about new tools and technologies

A job description that solely focuses on the task at hand or the compensation misses out on things that technicians like best.

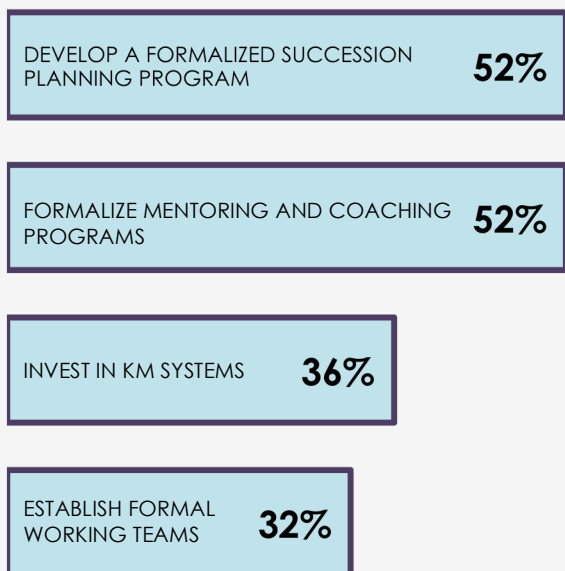
## Field Service Talent Trends

In 2015 research on field service talent, organizations outlined the top 4 factors that were critical in developing the 'right' field service workforce.

- 1- Competitive compensation
- 2- Focus on personality traits and behaviors in the hiring process
- 3- Customized training programs
- 4- Provision of a career path

When looking at the knowledge loss (Chart 3) of the aging workforce, participating organizations indicated a heavy focus on parts 3-4 of TSC's workforce strategy, indicating an opportunity to work on new talent attraction and onboarding.

## Chart 3: Dealing with Knowledge Loss



Percentage of Respondents Reported. TSC Data 2015



# A Sustainable Field Service Workforce

In sourcing new talent, organizations have also had success in looking for certain skillsets and behavioral characteristics that can be found in other types of workers or industries. Many commercial field service businesses have had **success in hiring and creating programs for military veterans**, especially those with mechanical and technical expertise. Others have looked at their partner or customer networks to bring in new talent.

Other organizations have deepened their **relationships with vocational and technical institutions** in order to develop a pipeline of talent that is already familiar with the organization's equipment and procedures. These relationships often involve the contribution of equipment for hands-on workshops and training as well as the contribution of time from a teaching and coaching perspective. Other organizations have gone even deeper to work with students at the middle or high school level. These organizations primarily expose these students to engineering and design work through group projects, workshops, and scholarships.

**Onboarding New Talent:** Not every field service hire needs to be trained on every service procedure for every product. This lengthens training times and doesn't necessarily increase training retention and effectiveness.

More organizations are rethinking their new employee training content to factor in:

- On-demand learning environments
- Performance support tools and capabilities
- Overall job roles and classifications

The third bullet is very relevant as it not only creates various levels of expertise in the workforce, but it also provides **career paths and opportunities within field service**, something that has been missing in the past. To accomplish this, organizations have created standardized roles for their field service technicians across geographies. These roles typically align with Level of expertise but could also be aligned with varying responsibilities.

*For instance, a large medical device manufacturer has initial service agents split into level 1 field service engineers or level 1 service and sales engineers. The field engineers focus solely on service work while service and sales engineers can conduct basic service work while engaging the account for sales opportunities. On top of these level 1 agents, there are other higher-level agents and experts to resolve more complex service problems. Some of these are assigned to clients and field work, while others are situated in remote or technical assistance focused command centers. At the highest level of field technician is one who is tied specifically to a customer, often onsite, as a part of premium or white glove customer service package.*

## Outsourcing

**"Any low utilization asset is ready to be disrupted by the sharing economy."** These were the thoughts echoed by a senior service official at a large heavy equipment manufacturer. Many field service organizations view their field service labor as an asset that needs extended flexibility. While most organizations look at outsourced workforces to increase their service coverage, many organizations are beginning to look at third parties to augment the field workforce in areas where it doesn't make sense to bring in or extend a full-time employee. With greater access to workforce management tools, these flexible workforce options are becoming more lucrative.

Chart 4: An Augmented Workforce

Reliance on	Percentage of Organizations Reporting INCREASE	
	In Next 12 Months	In Next 5 Years
Dealers	11%	17%
3 <sup>rd</sup> Party Service Organizations	45%	59%
Regional Service Providers	41%	60%
Independent Contractors	36%	53%

Percentage of Respondents. TSC Data 2016





## A Sustainable Field Service Workforce

This tiered labor model is also supported by an assessment and competency evaluation strategy that outlines the strengths and characteristics of each incoming service worker. While a hired field agent may only be brought in initially for field service work, his/her strength in sales areas may be seen as a future career path and option.

**Connecting the Workforce:** As seen in Chart 3, more than one half of organizations polled by TSC **are relying on mentorship and coaching programs** to help combat future knowledge loss. The issue with most mentorship and coaching programs is that they focus on information flowing from the experienced technician to inexperienced technicians. While this is generally ok for most knowledge-related discussions, it's important to **consider how a younger workforce might be able to support a more experienced group**, especially when it comes to the use of technology. As organizations expect a greater use of tools from the older workforce, perhaps they can look to guidance and support from their younger counterparts.

Learning studies have shown that **workers prefer to learn from one another** as opposed to formal learning. These mentor relationships also foster a greater level of camaraderie within the workforce. Mentorship programs also help workers identify various career paths that might be the best fit based on their needs.

It's also essential that organizations extend **succession planning discipline** to their field service workforce. Typically, succession planning has only been considered for field service leadership or more, but formalized succession planning for regional field hierarchies is a worthwhile exercise. It helps the organization identify potential risk areas that need to be addressed, either with a new talent input or with the transfer of talent from a neighboring geography or line of work. Discipline in succession planning also shows the front-line workforce the multitude of paths available for future progress.

*A large home automation organization hosts quarterly field service succession plan reviews with its field leadership team. These reviews include the head of field service, the head of HR, field directors, and regional field service managers. The focus of these succession plan reviews is to identify future coverage gaps due to attrition and to select candidates (internal or external) who might be ideal to fill these gaps.*

**Retaining Knowledge:** When we talk about career paths, we typically focus on paths of younger workers or those from the millennial or Gen-Z workforces. That said, paths should also be afforded to more experienced service workers. If workers in the experienced group are looking to minimize their time and travel commitment, an office-based training or support role might be lucrative. Part-time opportunities for those who are nearing retirement might also drive interest if these workers are looking to continue to stay involved in their work and careers.

**Career paths are still a relatively new concept in field service.** Only 43% of companies studied in our field service talent research highlighted the use of career paths for front-line field service agents. Those with paths in place reported lower turnover rates and higher employee satisfaction and engagement rates.

From a program point-of-view, there is no easy fix to knowledge management (KM). A KM improvement can't be limited to the purchase of a solution. There needs to be a **dedicated focus on the capture, organization, and management of service knowledge**. This is made more complex when you consider the creation of knowledge and information in multiple formats (document, video etc.). In global service organizations, the translation into multiple languages is another major challenge. Many large organizations are bringing knowledge and learning and development together. While they continue to focus on knowledge retention and organization, they're also evaluating when access to knowledge is the most valuable or the most relevant. This ties into continuous learning or on-the-job performance support.



# A Sustainable Field Service Workforce

## Technology Strategy.

It's easy to get lost in the wide array of technology tools that can have some sort of impact on worker knowledge and productivity. From The Service Council's perspective, technology tools that drive predictability in business, improve efficiency, and promote knowledge sharing and collaboration will impact how organizations address talent and knowledge loss.

## Efficiency Drivers

These solutions are designed to increase the efficiency of the field service workforce. This means increasing the volume of tasks that can be completed without a corresponding increase in workforce levels.

**1- Mobility** - While most organizations indicate that their field service technicians carry a mobile device, we are still in the early stages of mobile empowerment in field service. What we mean by this is that there are significant opportunities for mobile-led efficiency gains that are yet to be tapped at most field service organizations.

Most mobile investments have focused on automating administrative tasks typically completed on a paper form. The completion of these tasks is still inefficient and time consuming; it's just transferred from paper to a mobile device. The benefit in paper replacement is in reduced paperwork and related management, decreased errors, and faster time to billing. These aren't benefits enjoyed at the point-of-service, and this is why technicians still find paperwork and administrative tasks to be the least favorite part of their day.

As organizations get more mature in using mobile tools to remove the obstacles from their technicians' workdays, we will see a greater boost in productivity and workforce utilization. The removal of obstacles isn't only tied to information access. It's also tied to information entry. This is where virtual assistants, voice-driven applications, and natural language processing can drive further enhancements.

**2- Internet of Things** - The Internet of Things (IoT) has its challenges and its naysayers. Yet, we are moving to a world where most equipment will have sensors that can transmit usage and performance information to someone who is willing to work with that information.

## Chart 5: Average Level of Connectivity

Timeframe	Average Result (Percentage of Assets Monitored Remotely)
Current	36%
12-Month Goal	41%
3-Year Goal	58%

Average Result, TSC Data 2017

Many service organizations in our community are already leveraging connectivity-enabled data streams to increase the efficiency of their service businesses.

This comes in several flavors:

- Elimination of primary dispatches through remote resolves or remote support
- Elimination of secondary dispatches through improved diagnosis procedures and information access
- Elimination of unplanned dispatches through predictive alerts that lead to remote resolves or the pooling of predictive work with other scheduled reactive work

In our recent work on IoT, most organizations are making headway on cases 1 and 2, and are beginning to compile the data and tools to become more predictive in their service delivery.



# A Sustainable Field Service Workforce

## Predictability Enhancers

From a predictability point of view, the tools and solutions that help organizations uncover patterns, trends, and anomalies in their service data are gaining a great deal of interest in the service space. In this endeavor to become more intelligent, organizations typically need two sets of resources:

- Technology – Analytics, Intelligence, Machine Learning
- People – Analysts, Data Scientists

One might argue that the technology associated with machine learning is intended to do away with the need for data scientists. That isn't true as of today and it will take several cycles before data analysts and scientists work themselves out of a job by enabling the technology that they work on. In the current structure, analytical tools augment the work done by data scientists and enable them to run a higher volume of models needed to uncover predictive behavior. While these data models are primarily being constructed to predict future events, they can also be applied to other disciplines, specifically in talent and workforce management.

## Knowledge Expanders

These solutions focus on accessing, organizing, and extending tribal know how and expertise to a wider service workforce. With the aid of these tools, not everyone in the field needs to be a subject matter expert, as they are able to easily tap into the knowledge of an existing expert or community of experts.

**1- Knowledge Management** - The use of the term knowledge management is inappropriate if considered in its traditional form that references the existence of a knowledge base that contains technical information, service procedures, product documentation, and other structured data.

These systems are still extremely relevant and valuable in extending service expertise, but comprehensive knowledge management must consider:

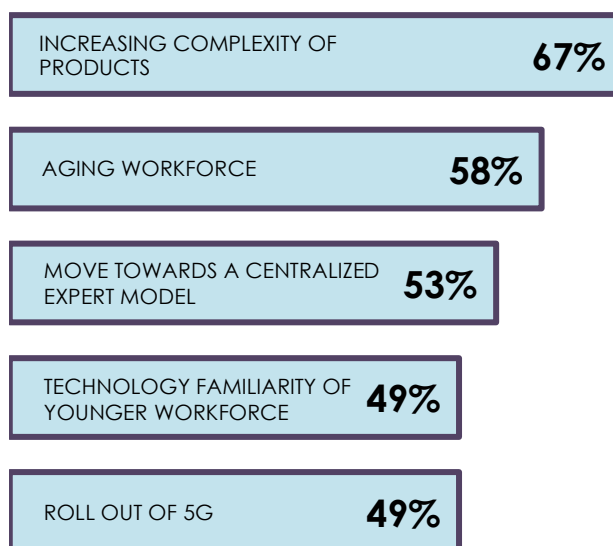
- On-demand training content management (in multiple formats)
- Learning management
- Enterprise collaboration

This approach not only focuses on the content needed for service excellence but also considers the context in which technicians seek information and knowledge.

**2- Augmented Reality** - In The Service Council's 2017 research on augmented reality in service, more than 6 out of 10 companies were evaluating the technology for use in a field service or customer support environment.

Most organizations using or evaluating augmented reality saw value in applying the technology in field service execution and field service performance support. The technology is expected to garner greater interest partly due to the issue of the aging workforce. (Chart 6)

## Chart 6: Driving Interest in Augmented Reality



Percentage of Respondents Reported. TSC Data 2017





# A Sustainable Field Service Workforce

## Augmented Reality - continued

In most instances, companies are stepping into AR to increase the efficiency of their field service operations. With the aid of telepresence (or virtual presence), a field technician can get live support from an expert located centrally. This expert presence can be of great use in unsuccessful visits thereby improving first-time fix.

The telepresence use case is just one opportunity for AR in service and support. In field service, AR has extensive implications in training delivery and dynamic content creation. Therefore, as technicians are better prepared for their upcoming tasks with the aid of improved (or augmented) content, they are quickly able to resolve service tasks with the most efficient use of parts and information.

AR can also be used to improve remote support, where customers are able to work with technical support to appropriately resolve service issues without a field service dispatch. If a dispatch is needed, the AR session can be used to determine and diagnose the service issue to ensure that the right service technician is sent on site. This focus on diagnosis and triage is seen as the top strategy by field service organizations to tackle the metric of first-time fix.

## Summary

*A global office equipment manufacturer added a fourth customer-oriented component in their strategy to combat the aging workforce. While they looked to align their organizational, workforce, and technology strategies to ensure a sustainable workforce for the future, they also inserted customer feedback into the equation. Their customers not only wanted self-service opportunities, but also wanted to be routed to the right subject matter experts when connecting with the service organization. In field service, they demanded efficient and prompt resolution. Therefore, the organization used technology to ensure that incoming calls and requests from customers were appropriately identified and immediately routed to the appropriate experts for issue resolution. In the past, these calls would have been routed to level one call handlers before being routed to the appropriate expert. This centralized expert workforce is comprised of experienced service individuals who have been taken out of the field to help with customer support, field support, and training. If the expert isn't able to resolve the situation remotely, they are able to create detailed notes and information for the visiting field service technician to ensure appropriate resolution.*

Many service organizations are looking to capture the voice of the customer in order to support customer experience initiatives. Very few take a holistic view of the voice of a customer as a strategic input into a future business and workforce strategy. For those envisioning a very different service workforce of the future, the voice of internal and external customers can be a powerful ingredient in ensuring continued and sustained success in service performance.

1 – United Nations Department of Economic and Social Affairs - <https://www.un.org/development/desa/en/key-issues/population.html>

2 - Manpower Group 2016-2017 Talent Shortage Survey - <http://manpowergroup.com/talent-shortage-2016>

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