

2024

# State of the Market: Field Service Operations in the Oil & Gas Industry



# INTRODUCTION

Oil and gas is a unique and complex vertical within the field service industry. As one of the largest sectors in the world, it generated an estimated \$5.3 trillion in global revenue in 2023, a nearly 10% increase from 2018. Despite significant revenue growth, macroeconomic challenges remain, highlighting the instability resulting from the pandemic, inflation, and current geopolitical risks. Additionally, companies are navigating added pressure to reduce negative impacts on the environment.

As oil and gas executives look for ways to mitigate these challenges, many are turning their attention to field service innovation as a rapid-deployment solution to drive revenue, future-proof their organization, and adopt more sustainable practices.



TrueContext created the State of the Market report in partnership with Service Council™, an exclusive community of Services Executives representing global, industry-leading, service-centric businesses. The mission of Service Council™ is to provide a platform for innovation sharing, shaping and sharpening; where uncommon service-centric businesses can emulate the strategies deployed by Global Service Leaders.

## BREAKDOWN OF OIL AND GAS INDUSTRY SEGMENTS

The oil and gas sector consists of three main segments: upstream, midstream, and downstream. Upstream consists of companies involved in exploration and production (E&P) including onshore and offshore drilling. Midstream companies transport, store, and trade crude oil, natural gas, and refined products. Downstream operations refine crude oil into petroleum products as well as perform and manage wholesale and consumer distribution of these products.

While each of these segments can be individual companies, many large oil and gas organizations are involved in all three segments. Much like other field service verticals, such as manufacturing and medical device industries, the three segments rely heavily on each other for profit growth and company stability.

## COMPLEXITIES OF THE OIL AND GAS INDUSTRY

Many field service organizations have felt the market shocks brought about by global events of the last five years, the most impactful of which are COVID-19 and ongoing geopolitical conflicts. However, the oil and gas industry was arguably hit the hardest, with the pandemic severely limiting the transportation of and demand for fuel while the ongoing war in Ukraine continues to disrupt supply.

These shockwaves were further exacerbated by an already thinning workforce from the retirement and talent crises. The pandemic placed renewed focus on worker safety for field service organizations everywhere, including the oil and gas vertical, which has historically been a high-risk environment with greater potential for workplace incidents and exposure to safety hazards.

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Another key element is that field service in this industry often takes place in remote, sometimes hard-to-access locations. First, these remote locations exacerbate the impact of any field service disturbances which can be highly disruptive to production schedules, and therefore significantly expensive. Here, coordination of the field service workforce with the right data and tools is paramount, such as easy access to the latest asset readings, historical maintenance of the assets in question, or troubleshooting intelligence. Second, the remote nature complicates the on-the-job access to offsite systems of record, creating gaps between the technician’s planned vs optimal workflow upon the assessment of live conditions, thus increasing the dependency on field engineers’ expertise in a context where the talent crisis is well-known and growing.

Additionally, oil and gas is a highly regulated sector both within the United States and globally. Adding to the complexity is the constantly evolving nature of policies and regulations as the energy landscape continues to shift and countries around the world adopt carbon neutrality targets to limit global warming.



# Innovation is Key for Service Leaders in 2024 and Beyond

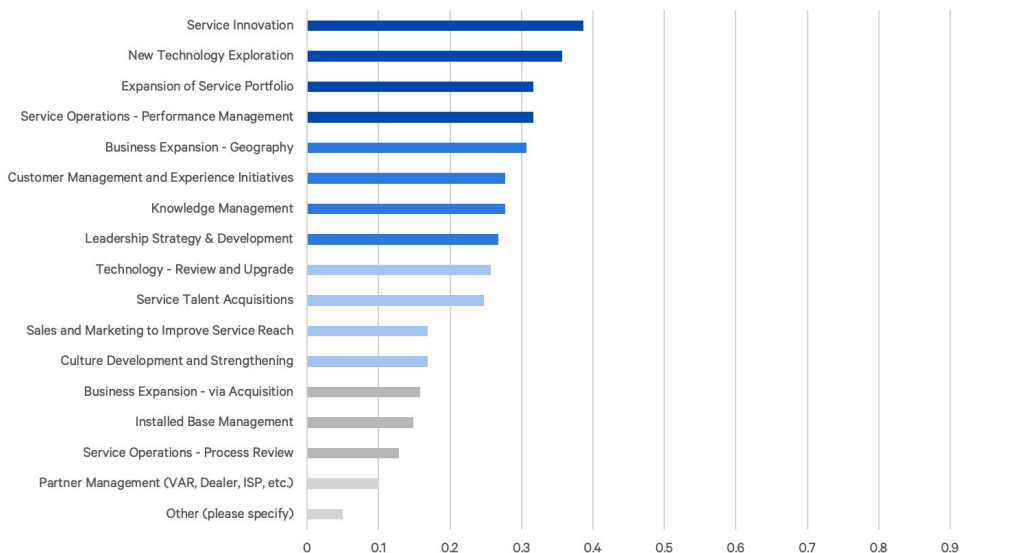
While the field service industry as a whole has been eager and willing to embrace digital transformation, oil and gas has historically been a laggard. As of 2019, the sector ranked last on Deloitte’s digital maturity scale, behind all other major field service sectors. No doubt, this traditional mindset towards technology and innovation hindered the resiliency of oil and gas companies as they faced the challenges of recent years.

In December of 2023, Service Council™ launched its annual Service Leader’s Agenda survey. The purpose of this annual benchmark survey is to hear firsthand from service leaders in all sectors, including oil and gas. When asked to choose the top area of focus for their organization in 2024, Service Innovation moved into the number one spot for the first time, with 41% of respondents reporting this was their key focus heading into this year. Service Operations – Performance Management was number two, with 35% of the vote.

Respondents also indicated that Service Innovation would be their top focus on a longer horizon – for the next five years. Interestingly, New Technology Exploration will be their second priority, outpacing Service Operations – Performance Management and Expansion of Service Portfolio with a 33% year-over-year growth from 2023. These combined data points support an increasing awareness regarding the value of thinking and investing ahead in light of growing uncertainties.

The field service industry continues to embrace technology and innovation at increasing rates to drive operational performance and positively impact revenue. If the oil and gas industry doesn’t follow suit, and fast, it will miss out on the transformative benefits of digitization and continue to be reactionary in an ever-shifting economic, geopolitical and environmental landscape.

Thinking about your service business plan for the next FIVE (5) years, what will be the major areas of focus?



Source: Service Council 2024 Service Leaders Agenda

# Talent and Workforce Challenges in Oil and Gas

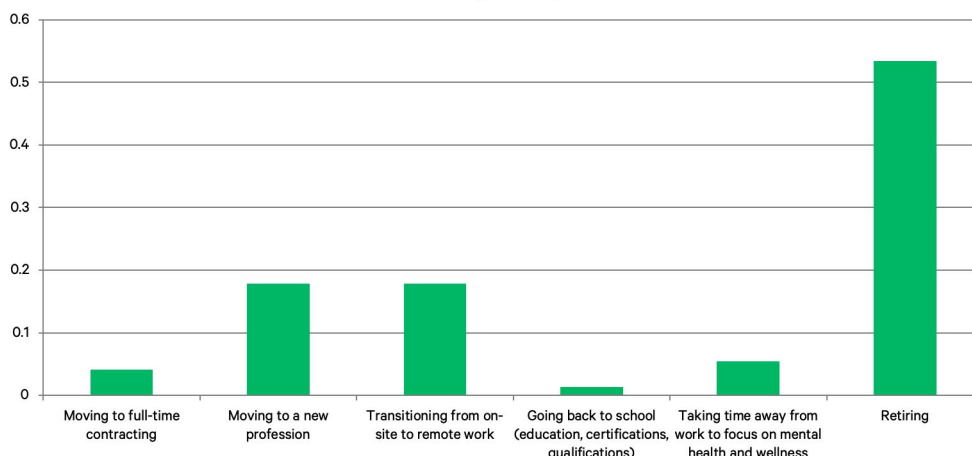
As with many field service sectors, talent levels within oil and gas have yet to return to pre-pandemic levels and service leaders are still struggling to find qualified personnel to fill critical roles. The number of oil and gas workers has decreased 4.4% since 2018, outpacing decline in other large sectors. Employees in global car manufacturing, for instance, have remained steady since 2019, while appliance and electronics manufacturing has increased by 0.7% and 0.9% respectively.

While these numbers don't bode well for the oil and gas industry overall, research shows that, at least within field service, the sector is faring better than most. Service Council's annual Voice of the Field Service Engineer (VoFSE) survey explores firsthand, from frontline agents across all sectors, areas such as job satisfaction, future career plans, engagement, likes and dislikes of their role, thoughts regarding technology, and recommendations for improvement. 2023's findings discovered that, while the talent crunch has abated slightly, it continues to be a struggle.

More than 1 in 3 (36%) field service engineers (FSEs) in the industry either don't plan on, or don't know if they'll remain, in their career. While this number is high, it is actually lower than the overall field service industry, in which 45% either don't plan or don't know if they will stay in field service.

Retirement appears to be the major driver for FSE departure. Of those planning on leaving, 53% are leaving due to retirement, a significant 47% year-over-year growth from 2022. This is also 11% higher than the industry average. On a positive note, only 18% say they intend to move to a new profession. Not only is this lower than in years past, but it is also lower than the industry average, in which 25% say they intend to move to another profession. The latter indicates that perhaps oil and gas FSEs have a higher level of enjoyment in their profession than those in other sectors.

If you intend to leave the field service engineer/technician career, what is the primary driver?



Source: Service Council 2024 Service Leaders Agenda

**When we break the responses down by age range, we get even more insight into the state of talent in oil and gas. Data shows that retention within the younger demographics will become a significantly higher challenge:**

- **Generation Z (25-34):** 57% either don't know or don't intend to remain in field service for the remainder of their career (down by 9% year over year from 2022). The majority of those leaving intend to do so after 3+ years (91%) which may be due to the fact that they are staying long enough to gain additional training or experience. Further, 39% are planning on leaving for a new career, 23% are planning on moving to a remote job, and 15% are leaving to focus on their mental health & wellness.
- **Millennials (35-44):** 55% either don't know or don't intend to remain in field service for the remainder of their career (down 12% year over year from 2022). However, 40% of those leaving intend to do so within 1-3 years, a 21% year-over-year increase from 2022. 39% of those leaving cite the desire to move to a new profession and 31% cite the desire to find remote work as their impetus for doing so.
- **Generation X (45-55):** 32% either don't know or don't intend to stay in field service. This is down significantly from 2022, which was 63%. Of those leaving, all are planning to do so in 3+ years. Not surprisingly, of those leaving, the majority (81%) cites retirement as the main reason.

Similar to other sectors within field service, oil and gas is often a specialized role requiring additional training, which adds to the complexity of hiring new talent to replace those leaving. According to the 2023 Voice of the Field Service Engineer survey, 1 in 3 FSEs in oil and gas trained or studied to be an engineer in that profession. This number has also increased significantly from 2022's findings, in which only 19% of respondents said they trained for their role, a reflection of how the work is growing more sophisticated, specialized and complex.

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# The Voice of the Oil and Gas Field Service Engineer



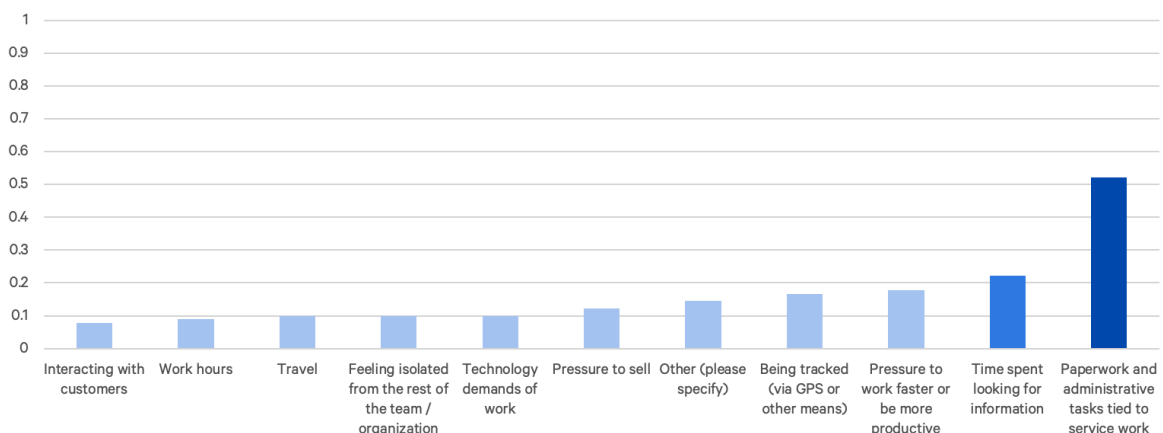
Across all industries, there is one universal truth: employee engagement is the crucial factor in attracting and retaining quality talent. Engaged employees produce better outcomes for their company, their coworkers and their customers. According to Gallup, companies with a high level of engaged employees have a 43% lower turnover, 64% fewer safety incidents, 23% higher profitability and 18% higher productivity than those with low employee engagement. The key piece of intelligence to inform proactive actions on this is understanding the elements which can sway employee engagement for better or worse. These elements are covered in the remainder of the report.

## Sources of Friction

Friction in field service, such as inefficient processes and inadequate access to knowledge, tools, or equipment, is one of the biggest contributors to low employee engagement. It leads to frustration, burnout, and ultimately, employee turnover. Field service engineers in oil and gas are no exception. According to the 2023 Voice of the Field Service Engineer survey, over half (52%) of oil and gas FSEs say paperwork and administrative tasks are their least favorite aspect of the job.

Additionally, nearly 1 in 4 (22%) say it is time spent looking for information. This is also in line with FSEs across all verticals, which reported the top two most disliked aspects of their job were paperwork and admin (52%) and time spent looking for information (26%).

What are the least favorite parts of your day-to-day work?



Source: Service Council 2024 Service Leaders Agenda

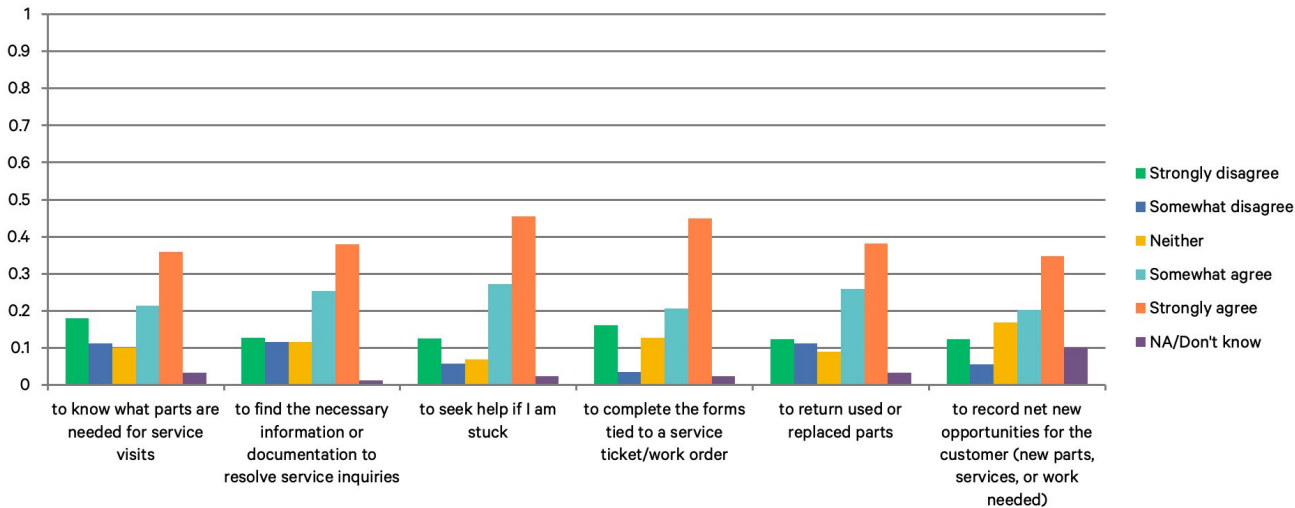
In terms of friction that they face on the job, 49% of oil and gas FSEs say they spend too much time on paperwork each day. The good news is that, while the percentage is still significant, it is slightly lower than FSEs across all verticals (55%). Additionally, 25% of oil and gas FSEs say their company does not make it easy for them to find the necessary information or documentation to resolve a service call. This is also 6% higher than FSEs across all verticals. However, it is down 4% from 2022, a reduction that may be due to the increased interest in, and eagerness to adopt technology, as we'll see later in this report.

The survey also found that 20% of oil and gas FSEs say their company does not make it easy for them to complete forms tied to a service ticket/work order, rising 3% from 2022. This is notable because, across all verticals, FSEs are reporting decreased difficulty in this area. This may be a missed opportunity in terms of tech adoption for service leaders in the oil and gas sector.

Another possible contributor to low engagement among oil and gas FSEs is the intensive environment. According to the survey, 83% of frontline workers work 40+ hours a week, which is 4% higher than the industry average.

25% of oil and gas FSEs say their company does not make it easy for them to find the necessary information to resolve a service call, 6% higher than FSEs across all verticals.

Please rate your level of agreement.  
My company makes it easy for me.....



Source: Service Council 2024 Service Leaders Agenda



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## Service Delivery Challenges

Across the service industry landscape, customer expectations are shifting. No longer is the traditional reactive delivery model sufficient to remain competitive and profitable. Yet, according to the *2024 Service Leader's Agenda* survey, service leaders are still struggling to adapt to these new expectations. When asked what stage of service delivery evolution service leaders expected to achieve in 2024, nearly 1 in 3 (31%) say they anticipate still being in reactive mode.

Oil and gas service engineers continue to be challenged in the field as both asset complexity and customer expectations for more advanced service increase. 71% of FSEs in oil and gas say that customer demands are higher. Not only has this not decreased from previous years, but it is 2% higher than the industry average.

The majority of FSEs are also feeling pressure from management, though this has abated significantly from previous years. While 64% say management demands are higher than when they first started as an FSE, this has decreased by 17% from 2022. It's also slightly lower compared to all verticals, which found that 74% of FSEs felt management demands were higher.

On another positive note, we are seeing challenges around asset complexity decrease as organizations invest in more technology and training. Revisiting the *2023 Voice of the Field Service Engineer* survey, Service Council found that 88% of field service engineers in the oil and gas industry agree that the knowledge required to service assets is changing. This is down 5% year over year from 2022. Additionally, 88% of FSEs say that the work requires greater technological knowledge, which is down 6% year over year from 2022. Finally, 74% of FSEs in oil and gas say that assets they are servicing are much more complex, which is down 5% from 2022.



# The Role of Technology to Mitigate These Challenges

The oil and gas industry is rife with complex challenges. Unlike years past, however, organizations are making more strides toward mitigating these challenges through digital transformation. Field service engineers in the sector are also eager to adopt technology, even more so compared to other sectors. According to the 2023 Voice of the Field Service Engineer survey, 65% agree that available technology makes their job easier, versus 56% across all verticals.

- **80%** say it makes them more efficient.
- **76%** say it makes them more productive.
- **79%** say it makes them more independent.
- **69%** say it makes them a better engineer.
- **62%** say it makes them a safer engineer.

Source: Service Council 2024 Service Leaders Agenda

## Operational Blueprint for Oil & Gas Field Service

The sector is clearly seeing an overall decline in attitudes towards perceived friction in the field, as well as access to knowledge and asset complexity. This is a trend that Service Council has been tracking for some time across all field service verticals. Simply put: as positive attitudes towards and investment in technology increase, areas of friction and employee disengagement decline.

## Intelligent Automation is Key

While the focus on innovation through technology is a step in the right direction, it is also important that organizations do not take their foot off the gas pedal when it comes to tech investments. According to McKinsey, while nearly all companies have digital transformation endeavors, 70% have not moved past the pilot stage. A possible antidote for this follow-through challenge is low-code and no-code application platforms, which are easier to implement and stand a better chance of advancing to full scale.

Service Council recommends that service leaders also prioritize automation technology, as this will provide the most “bang for their buck,” because of its unique ability to impact three critical areas that are challenging service leaders in oil

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## Retirement Crisis

The silver tsunami is one of the driving factors behind the talent crisis and subsequent capacity challenges. As organizations lose a significant amount of seasoned, experienced engineers – and their years of knowledge – they must find a way to quickly train and support the new, less experienced workers who are taking their place.

Automation technology that can harness the power of existing field intelligence in the form of guided workflows will not only help onboard new FSEs, but it will also greatly reduce the burden on veteran workers to support newcomers.

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## Safety and Compliance

With multiple governing bodies to report to and high levels of compliance required to do their job safely, both new and seasoned FSEs need to have access to the latest information. In such a highly regulated field, even the slightest human error can have resounding negative consequences.

If organizations want to ensure accuracy, they must provide FSEs with the necessary guidance in a structured way. Guided mobile workflows are the easiest and most effective way to do this. The benefits even go as far as providing well-defined compliance processes, regulatory guidance, and audit trails. Additionally, organizations have greater visibility into data around environmental and sustainability impacts.

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## Reduce Friction

The majority of frontline workers feel they spend too much time and effort on paperwork, administrative tasks, and looking for information. That same survey also asked the frontline what they liked most about their job. The answer? 55% said they enjoyed solving customer problems and 35% said they enjoyed fixing and repairing equipment.

As the engagement crisis worsens, it is imperative for organizations to figure out how to reduce the tasks their employees dislike so that they have more time doing the tasks that they enjoy. This can be approached by either eliminating such tasks or making administration seamless and intuitive. Automation technology is one of the most surefire ways to do this. It can automate administrative tasks, and streamline the intelligence needed for engineers to do what they enjoy doing: helping customers and fixing things.

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## Service Delivery

Preventive and predictive delivery models will be the future blueprint for service organizations across all industries. Service leaders cannot delay if they wish to remain competitive and drive customer satisfaction. This path reduces reliance on talent as emergency cases are mitigated, becoming fewer and farther between.

The best path forward is investing in a solution that works in the field, and whose impacts are immediately felt in the front line. Intelligent data capture technology provide the contextual data needed to minimize asset downtime and power proactive maintenance. Another benefit is the added quality control. As service leaders turn their attention towards performance management and customer expectations, they must invest in technology that can ensure service quality.

# CONCLUSION

The oil and gas sector is volatile and constantly in flux. It is also a vital component of the global economy. This is why avoiding unplanned downtime is crucial to success.

***3.65 days of unplanned downtime costs the average company over \$5 million in lost revenue.***

HART ENERGY

The sector is beginning to emerge from the old guard of field service and embracing innovation and transformation, with an opportunity to learn from the applicable lessons and behavioral responses observed in more digitally mature parallel industries. However, it is imperative that service leaders ensure they are investing in the right technology and processes to prevent ambitious initiatives from getting stuck in transformation limbo.