Neuron7.ai

The Ultimate Guide to
AI for Complex Service

A Better Approach to Resolving Service Issues and Capturing Knowledge

The world operates on complex products: networking and point-of-sale equipment, ultrasound and MRI machines, elevators, cranes, and industrial automation—the list goes on.

For organizations that make, sell, and use complex products, resolving service issues quickly and accurately is critical.

In a complex service environment, there can be tens of thousands of potential issues with hundreds of thousands of resolution paths. The complexity is beyond human capacity to manage.

To address this, Neuron7 created purpose-built Service Resolution Intelligence, featuring turn-by-turn guidance that learns from data and people to help our customers reach 90%+ resolution accuracy faster.

Service Resolution Intelligence requires a combination of **AI technologies, clearly defined use cases, industry specific expertise, and seamless workflow integration.**

This guide covers:

✓ Challenges in complex service environments

✓ Creating a single system of service intelligence

✓ Learning from your data and people

✓ Top use cases for service AI

✓ Critical capabilities of AI for complex service

✓ Neuron7's unique approach

✓ Customer success stories

Common Challenges

Products are increasingly complex

Complex products are all around us: medical devices, industrial equipment, high-tech devices, telecom & utility equipment, the list goes on.

These products are comprised of hardware and software, may be connected IoT devices, and often include thousands of product models or versions.

Service teams struggle to keep up with all the products, versions, and configurations and their associated issues, errors, and bugs with countless potential resolution paths.

The scale and complexity is overwhelming, making it difficult to find the best resolution.

Resolution information is all over the place

Service teams try to find information to resolve issues in knowledge base articles (that may be outdated), documentation, technical manuals, and videos (that need to be searched through), past case notes (usually unstructured), IoT data, Jira notes, and more.

With countless sources of information that are hard to navigate, 81% of technicians "phone-a-friend" to tap into expertise in individual minds around the organization.*

Challenges in complex service environments
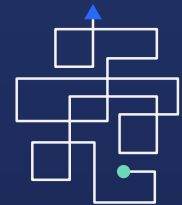
PRODUCT COMPLEXITY

1000s

of potential models, malfunctions, and resolutions

VAST DATA

400

average # of data sources at enterprise organizations

Common Challenges

Continual knowledge loss

Continual knowledge loss If increasing product complexity was not enough, organizations are losing expert knowledge as people leave the business.

Turnover in customer service is already high. Now, a wave of experienced workers are set to retire, and in some cases taking 30+ years of knowledge with them.

As people leave, new hires need training to get up to speed and become productive as quickly as possible.

But with complex products and information all over the place, onboarding can take months. And with experts no longer available to train the new hires, the problems compound.

Global service teams face complexity at scale

Many enterprise organizations operate across countries, with product information, knowledge, and customer inquiries in different languages.

Some teams also have pockets of expertise that are geographically dispersed. There may be an expert on a specific type of product in Japan, but how do you tap that knowledge to fix an issue in Canada?

Challenges in complex service environments
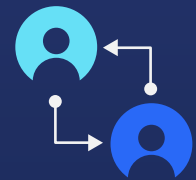
KNOWLEDGE LOSS

64%

of organizations losing knowledge from employee departures

GLOBAL TEAMS

80K

companies operating across regions and languages

Solutions

Create a single system of intelligence with AI

Artificial intelligence (AI) cuts through complexity with its ability to analyze massive amounts of information across systems to identify patterns, predict answers, and continually learn.

Neuron7's AI analyzes vast data sources to identify issues and the best resolutions.

By bringing resolution knowledge together, service teams can tap into a single system of intelligence instead of searching through systems, documents, and videos for answers.
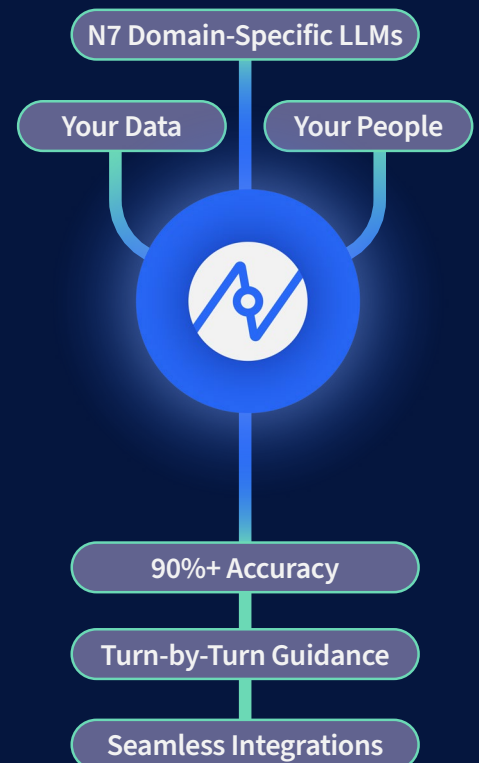
Learn from data *and* people to achieve accuracy

Capturing resolution knowledge from data sources is only part of the Picture.

You also need to capture the expertise of individuals across service and engineering who have deep, hands-on expertise with products, issues, and resolutions.

To achieve the highest levels of accuracy, AI needs to learn from both data and people, in real time, and continually optimize resolution paths.

Smart Resolution Hub
The Future of Service

N7 Domain-Specific LLMs

Your Data

Your People

90%+ Accuracy

Turn-by-Turn Guidance

Seamless Integrations

How Neuron7 Solutions Learn and Adapt
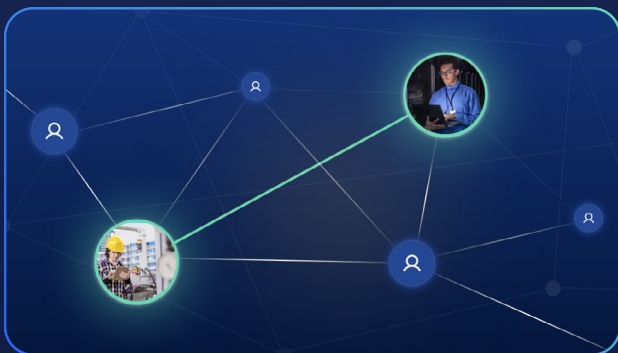
Neuron7 learns from your data

Neuron7's AI analyzes structured or unstructured service data from any source including manuals, documents, cases, notes, technical bulletins, videos, and IoT data and distills into the best resolution paths for every issue, and every product.

Step 2

Neuron7 learns from your subject matter experts

Neuron7's large language models (LLMs) are pre-trained to understand service language and industry-specific terminology. Your experts validate the resolution paths to fine tune the model's AI predictions.

Step 3

Neuron7 learns from your people

Neuron7's AI guides technical support agents and field service technicians turn-by-turn through resolutions. You can add a new resolution directly into Neuron7 and the optimized resolution path is shared across the organization in real-time.

Top Use Cases for Service AI

Service Resolution Intelligence is transforming how service teams operate—delivering faster resolutions, higher customer satisfaction, and measurable ROI.

These results are powered by AI, which now ranks as the top investment priority for service leaders, according to Service Council's 2025 State of Artificial Intelligence & Service Technology report.

Here are **7 proven use cases** demonstrating how Service Resolution Intelligence delivers measurable value in complex service environments.

Intelligent Search

Service teams often struggle to find the best way to resolve an issue. The answer may lie in a manual, knowledge base article, service portal, CRM system, or some other data source. These searches can be time consuming and frustrating—especially when all that effort doesn't deliver a good answer.

AI-powered intelligent search analyzes all those data sources and more to understand how issues are solved in their specific environment. As a result, teams get fast, accurate answers, improving productivity and customer satisfaction.

Expert Knowledge Capture

As veteran technicians approach retirement, the risk of losing critical institutional knowledge is a growing concern for service organizations. Knowledge capture ensures that valuable insights, troubleshooting techniques, and product-specific expertise don't disappear when technicians leave the workforce.

AI plays a pivotal role in capturing and retaining expert knowledge, transforming it into structured, accessible data that can be shared with support agents, technicians, and engineers. Service organizations can create digital repositories, automate workflows, and ensure that insights are readily available for the next generation.

This strategy is already paying off: "increased ability to capture expert knowledge" ranked fourth among the greatest impact of AI investments, only after improved customer service and improved experience for field service engineers and remote agents, according to the Service Council.

Guided Troubleshooting

Frontline service workers are under pressure. Products are becoming more complex—with combinations of hardware, software, electronics, and connected IoT data—and that trend seems likely to continue.

According to the 2024 Voice of the Field Service Engineer survey, 86% of technicians believe the job requires greater technological expertise, and 83% feel that the knowledge needed to service products is constantly changing.

Guided resolutions address this challenge by leveraging all sorts of data to deliver clear, step-by-step guidance and troubleshooting for the issue at hand. Service technicians can follow AI-guided pathways to reduce downtime and enhance the overall service experience.

Faster Onboarding

Onboarding new service team members in complex service environments can be time consuming and resource intensive. Traditional training methods often involve long learning curves, with new hires relying on a mix of documentation, mentorship, and hands-on experience.

AI-driven solutions transform onboarding by accelerating knowledge transfer and ensuring that new technicians have immediate access to the information they need. New hires get real-time access to knowledge—from manuals to troubleshooting guides—allowing them to resolve issues as quickly as experienced technicians.

Service leaders recognize this benefit: In the Service Council's 2025 report, one in four survey respondents said "improving frontline employees onboarding and skills" is an urgent challenge to address through their AI and service technology efforts.

Customer Self-Service

Many service organizations are looking for ways to "shift left" and empower customers to solve issues independently. In addition to enhancing customer satisfaction, self-service helps organizations reduce field service costs and experience faster resolutions.

AI is at the core of innovative self-service capabilities, making it increasingly possible for customers, agents, technical support, and field service technicians to resolve issues on their own.

Parts Reduction

Managing service parts efficiently is a constant challenge for service organizations. Unnecessary part replacements, inaccurate diagnostics, and inefficient inventory management can drive up costs and lead to wasted resources.

By leveraging AI-driven diagnostics, predictive maintenance, and intelligent search, service organizations can minimize excess parts usage, improve first-time fix rates, and reduce unnecessary orders and costly returns.

AI helps technicians pinpoint the exact issue before ordering a replacement, recommends the correct parts based on historical data, and even enables self-service options that eliminate the need for parts in certain cases.

Preventative Maintenance

Traditional maintenance approaches often rely on scheduled servicing or reactive repairs—both of which can lead to inefficiencies and unnecessary part replacements.

For service organizations, preventative maintenance is a better strategy. It helps keep equipment running smoothly, minimizes unexpected failures, and reduces costly downtime.

By leveraging AI-driven diagnostics, real-time data analysis, and predictive insights, organizations achieve preventative maintenance that's smarter, data-driven, and proactive. Service teams can anticipate failures before they happen, ensuring that equipment receives maintenance at the right time—not too soon and not too late.

Critical Capabilities of AI for Complex Service

While AI is the foundation of Service Resolution Intelligence, most AI tools weren't purpose-built with service in mind. They can suggest documents or spit out search results, but don't help service teams resolve complex issues faster.

Generic search and enterprise AI tools struggle with "service logic." They weren't trained to understand error codes, product families, symptom chains, or the difference between firmware resets and part replacements. A manual with a generative AI interface may look helpful at first glance, but it's ineffective because customers describe issues differently every time.

→ **Purpose-built for service** pre-trained to understand how your customers describe issues so service teams can narrow in on potential solutions.

→ **Trained on both structured and unstructured data** like technical manuals, resolution paths, service case notes, and tacit knowledge so it doesn't just search, it solves. It should be multilingual and multi-region so it can reach across borders and scale.

→ **Step-by-step resolution pathways** based on what's worked before in similar scenarios, across products and geographies, with explainable sources.

→ **Easy deployment and maintenance** if your "AI solution" requires you to bolt together infrastructure, data pipelines, model governance, feedback mechanisms, analytics, and visualization tools, it's not purpose-built AI. It's an IT project you don't need.

→ **AI that learns and adapts** as your service business evolves—with new products, new issues, new fixes. If your AI doesn't adapt automatically, it becomes stale fast.

→ **Agentic AI capabilities** that combine reasoning, memory, and goal-driven behavior to actively guide users through complex, multi-step resolution processes.

Many service environments are using generic AI agents for managing simple, predictable tasks like FAQs or scripted chatbots. But teams in complex service environments aren't answering FAQs—they're handling nuanced, technical issues that require domain expertise, precise resolutions, multi-system troubleshooting, and escalation coordination.

Don't waste time, money, or resources on AI solutions that can't handle the heat of complex service environments. Make sure Agentic AI is part of the package, in combination with highly accurate AI built for service.

Agentic AI meets 90%+ Accuracy

Neuron7 integrates directly into Salesforce's Agentforce and ServiceNow AI Agents to bring accurate resolution guidance into your service issue workflow.

About Neuron7.ai

Neuron7 is the leader in Service Resolution Intelligence, helping customers achieve 90%+ resolution accuracy by bringing together knowledge from data and people.

Service Resolution Intelligence brings purpose-built AI into the heart of your service operations–helping service teams fix issues faster, smarter, and with less guesswork.

Domain-Specific AI

Neuron7 uses an "AI cocktail" including domain-specific large language models (LLMs) Agentic AI, Gen AI, and other approaches that are fine-tuned for precision in complex service environments.

Seamless Integrations

Because Neuron7 smoothly integrates with your CRM, chat, portal, and other existing workflows, it eases adoption across your service team— which in turn drives accuracy as Neuron7's AI learns from team members' interactions.

AI-as-a-Service

Neuron7 provides expertise at every step of your Service Resolution Intelligence adoption—from strategy, planning, and implementation, to ongoing accuracy tuning. A dedicated technical account manager ensures accuracy throughout your engagement.

Improve service and quality metrics

✓ **Resolution Time**
Resolve issues faster with answers in seconds and turn-by-turn guidance.

✓ **First Call Resolution**
With 90%+ accuracy, resolve issues the first time.

✓ **First Time Fix**
Ensure you have the right skills, parts, and resolution steps.

✓ **Parts Wastage**
Prioritize resolutions that don't require parts to cut costs.

✓ **Next Likely Error**
Proactively address problems with predictive analytics.

✓ **CSAT**
Measurably improve customer satisfaction and retention.

Solving Complex Service Challenges Across Industries

Neuron7 helps enterprise service organizations with complex products, vast product catalogs, and global teams resolve issues faster.

Key industries with complex service environments and unique challenges we solve for include:

Medical Devices

Uptime for complex (often lifesaving) medical devices is critical.

Industrial Equipment

Parts wastage, long-fix times, and repeat visits negatively impact CSAT and the bottom line.

High-Tech Manufacturing

Devices are becoming more complex, increasing potential for more hardware, software, firmware, and IoT issues.

Telecom Equipment

Telecom equipment keep the world connected and customers expect issues to be resolved quickly.

Utilities

Aging infrastructure and unexpected outages challenge service teams to ensure reliability and efficiency.

Read on for case studies...

Case Study

How NCR Atleos Reduced Technical Support Cases by 50% and Revisits by 13%

NCR Atleos, a $4.1B enterprise that delivers ATM solutions, wanted to make it easier for field service engineers to do their best work. With articles, manuals, and parts data spread across systems, engineers were spending too much time finding information and answering repetitive inquiries.

NCR Atleos Integrated Neuron7.ai into its Global Field Service Operations

The strategy involved:

- Consolidating knowledge from 17 different sources into a unified, AI-powered search system.

- Enabling technicians to quickly find the "one right answer" from manuals, training videos, call notes, and engineering documents.

- Reducing reliance on multiple knowledge platforms and streamlining access to key service data.

- Expanding resolution intelligence globally in multiple languages to create a standardized, scalable engineering approach.

NCR Atleos Wins "Best AI Use Case and Implementation" in the Field Service Awards 2025

NCR ATLEOS

Neuron7 gets to exactly what we needed. A product that levels the playing field for newly onboarded technicians to be just as successful as a 10-year.

Bill Girzone
SVP Global Field Services

50%
Reduction in support cases

13%
Reduction in revisits

92%
Accuracy

Neuron7 paid for itself in **2.5 months**

Case Study

How Ciena Enabled Self-Service and Improved CSAT by 14%

Despite robust knowledge base articles and search engines, Ciena, a $3.6B networking and telecom equipment provider, logged 7,000+ support cases each year for issues that should have been easily resolved.

Give Call Center Agents "One Right Answer"

Ciena partnered with Neuron7 to create a Smart Resolution Hub.

This single system of service intelligence allows them to identify and deliver only the most relevant resolution information to call center agents (instead of multiple, confusing options).

ciena®

"

The team at Neuron7 said, 'let's work with you to make this happen' and that continues to this day. This is not just off-the-shelf products or static algorithms. It is truly a collaborative effort.

Chandan Banerjee
Director Global Services
Digital Innovation

14%
Increase in CSAT

46%
Faster resolutions

50%
Increase in call deflections

48,000
Searches with
"one right answer"

Case Study

Translogic Empowers Field Service While Reducing Wait Time by 45%

TransLogic's healthcare transport systems play an integral role in patient care. Uptime is critical and service delays have a direct impact on CSAT and customer retention.

With retirements on the horizon, they needed to find a better way to level the playing field for their newer service team members.

Capture & Share Knowledge

TransLogic partnered with Neuron7 to identify the best resolution for every issue, and every product.

Neuron7 learns and shares optimized resolution paths in real time so Translogic's field service teams – from junior to expert – receive fast, accurate turn-by-turn guidance.

translogic
a swisslog healthcare company

The beautiful thing about Neuron7 is that you can take resolutions from case history and instead of 3 hours of troubleshooting, the technician has the answer in 3 seconds.

Dave Hartley
VP Customer Care

96%
Accuracy

18%
Increase in service level

960
Warranty hours saved

45%
Reduction in customer wait time

Case Study

How Terumo BCT reduced escalations and decreased parts cost by 24%

As Terumo BCT entered new markets with limited service history, devices were going offline and cases were escalated to internal support teams.

With no structured knowledge base in place, the team faced mounting pressure to maintain service quality and reduce parts usage while navigating product complexity and incomplete data.

Connect the right fix to the right case, every time

Terumo BCT partnered with Neuron7 to bring AI-powered service intelligence to their contact center and field service teams.

By guiding support and service teams with accurate AI-driven guidance, Terumo BCT is deflecting escalations and resolving issues faster, while using fewer parts along the way.

They've unified service processes and laid the groundwork for a scalable support model across products and regions.

TERUMO
BLOOD AND CELL TECHNOLOGIES

Neuron7 helped identify realistic targets backed by real data, giving us the confidence to expand on the value we saw with Neuron7 integrated in our existing service platforms.

Rachael Castroverde
VP of Global Services

13%
Increase in resolutions without parts

20%
Deflected escalations

24%
Decrease in average part cost per escalated work order

Nearly 3x ROI in first year

Neuron7 Partners with Leading Service Platforms

Neuron7 seamlessly integrates into existing service workflows, providing fast, accurate resolutions where your teams work.

The reaction has been wonderful. They love it. We literally have it interfaced directly in with the consoles that they use out of Salesforce on a daily basis. So we get better customer service, we get more fficiency, and we get happier employees as we're doing this.

John Page
President of Global Services

Contact Us

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Get in touch to learn more about Service Resolution Intelligence and start mapping out your path to success with AI for service.

Get Started

More Tools to Start Building Your AI Strategy ⟶