

Planning & Scheduling Optimization

Autonomous, AI-driven optimization
across the full service lifecycle.





The New Expectations of Service: Intelligent, Autonomous & Optimized

Customers want more than mere product performance. They also want swift, efficient recovery when things go wrong. And why not? They expect value from the products, equipment, support and other services they’ve purchased. So, every day, your customers are measuring you against their best service experiences and your ability to maximize the value of their investments. That means greater demand for ever faster responses and more effective service delivery, tighter service level agreements (SLAs), and less tolerance of failure. If you can meet these expectations, you’ll make a significant difference to both the company’s brand perception and financial results. To do so, you need to optimize your mobile workforce to react quickly to real-world events, deal with uncertainty and cope with constant change. And this complexity is increasing at pace.

IFS.ai powered optimization empowers organizations to meet these challenges and better manage their field resources resulting in improved customer satisfaction, increased productivity and better adherence to customer commitments. At its core, IFS.ai powered scheduling delivers dynamic scheduling that can be optimized by several criteria to increase profit, reduce cost and ensure service level agreement (SLA) compliance with:

- **Autonomous decisioning** using 36 complementary AI algorithms
- **Continuous optimization**, not batch scheduling
- **Real-time responses** to unplanned events

With IFS.ai powered optimization, organizations gain:

35% reduction in travel time through intelligent route optimization

81% improvement in SLA compliance through dynamic, priority-based scheduling

300% increase in technicians-dispatchers ratio through automation

95%+ scheduling automation, freeing dispatchers to focus on exceptions

Quick time-to-value with easy integration into FSM, EAM or ERP platforms





Excellent service is the key to customer satisfaction — powered by IFS.ai

Superior service remains the foundation of customer satisfaction and long-term loyalty. What has changed is the speed, complexity and unpredictability of service environments. Customers expect reliability, transparency and a sense of control – not only that issues will be resolved, but that the process will be frictionless. With service operations growing more complex each year, companies now rely on AI powered intelligence to uphold the consistency and quality customers demand – anticipating needs, responding with precision and providing proactive and predictive service experiences.

IFS.ai-powered Planning & Scheduling Optimization brings this to life by providing a deeper, real time understanding of customer needs and operational realities. Rather than viewing scheduling simply as a logistics challenge, the platform elevates it into a customer experience discipline. By continuously interpreting demand signals, technician availability, skills, locations and predicted service outcomes, it ensures that every decision contributes to a flawless service experience. This shift from reactive planning to proactive service orchestration transforms how organizations deliver value.

AI enhances customer satisfaction in several important ways. It enables the system to anticipate how certain decisions – such as the sequence of visits, technician assignment or travel routing – will affect the customer's experience. It can identify when a job is likely to slip, when traffic conditions may impact arrival times, or when a technician may require additional parts or support. Rather than waiting for issues to emerge, IFS.ai reprioritizes work in real time, ensuring that high impact or time sensitive appointments receive immediate attention. With predictive traffic and routing intelligence, arrival times are not only faster but also more accurate and dependable.



Are You Ready for AI-Driven Service Excellence?

In a world where customer expectations evolve by the day, organizations must constantly ask themselves whether their service operations are prepared for the realities of modern, AI enabled service delivery. These reflective questions help leaders assess whether their current capabilities truly support the level of responsiveness, reliability and personalization customers increasingly expect.

Are you able to predict customer impact before it happens?

Modern AI identifies early warning signs – a slipping SLA, an emerging backlog, or a travel delay – long before they become customer visible issues. The question is not whether surprises will occur, but whether your operation can anticipate them quickly enough to act.

Do you understand which scheduling decisions influence customer satisfaction the most?

Every decision – who you send, when you send them, how long they take to arrive – shapes the customer experience. AI helps organizations understand the consequences of each choice so that schedules reflect what matters most.

Can your operation adapt within seconds when the day changes unexpectedly?

Emergencies, cancellations and overruns are a given. What differentiates leading service organizations is how quickly they respond. AI driven continuous optimization rebalances workload instantly, keeping your promises intact.

Are your arrival times accurate and dependable?

Customers judge service quality heavily on punctuality. With predictive routing and real time traffic intelligence, AI ensures arrival times remain realistic – reducing frustration and restoring trust.

Are planners free to improve, or trapped in daily firefighting?

When AI absorbs the operational noise, planners regain the headspace to focus on strategy: capacity planning, scenario modelling and improving service outcomes rather than reacting to disruptions.

Do you have forward visibility into resource, skills and demand alignment?

Strategic AI tools reveal where gaps will emerge weeks or months ahead, helping organizations prevent service degradation before it begins.

Does your scheduling system learn and improve with every job completed?

True AI does more than automate – it learns from outcomes, technician performance, travel patterns and customer history, continually refining decisions.

And most importantly: Are customers noticing the difference?

In the end, service success comes down to the experience customers feel. AI enabled operations deliver fewer surprises, faster resolutions and more meaningful interactions – and customers respond with loyalty.



IFS.ai-powered Planning & Scheduling Optimization

IFS.ai powered scheduling enables you to manage the strategic, operational and tactical elements of resource planning. It allows you to forecast and model requirements for better strategies, improve planning and rostering for more efficient operations and deliver tactical benefits through IFS Dynamic Scheduling Engine™ (IFS DSE).

The Dynamic Scheduling Engine – Powered by IFS.ai

At the heart of IFS.ai PSO is the Dynamic Scheduling Engine, redesigned for an era where service operations need both speed and intelligence. Rather than relying on static rules or start of day plans, the engine continuously interprets what is happening across the field – demand spikes, traffic patterns, overruns, emergencies – and adapts instantly.

It evaluates thousands of possibilities per second, balancing customer commitments, technician skills, SLAs, travel time and operational cost to determine the best decision in each moment. And with explainability built in, planners can now see why a decision was made – a level of clarity that builds trust in autonomous scheduling.

Travel Time and Routing Optimization

IFS PSO delivers extremely accurate travel time estimates based on real road networks and actual travel times to ensure travel plans are both achievable and reliable. Leveraging TomTom's real-time and predictive traffic intelligence transforms the reliability of travel time calculations. Where older systems relied on static maps or broad estimations, IFS.ai PSO understands how traffic behaves across hours, days and seasons, ensuring that travel plans are both achievable and continuously refined. The result is more accurate arrival times, less technician frustration, and a more dependable customer experience.

Appointment Booking – Promises You Can Keep

Booking an appointment is a promise – and one that customers expect you to keep. With IFS.ai, appointment booking becomes a strategic extension of the scheduling engine.

As customers choose a slot, the system evaluates real time workload, skills availability, location, traffic and business priorities to ensure the offered times are truly feasible. Whether appointments are made through an agent, customer portal or mobile app, each commitment is backed by AI driven validation that ensures reliability. This transforms the booking process from a guess into a guarantee.



One Intelligent Planning Model From Forecasting to Real Time Decisions

IFS.ai brings structure and confidence to the entire planning lifecycle by ensuring that strategic, tactical and operational decisions all work in harmony. Instead of treating planning as a single action or a one off exercise, IFS.ai-powered scheduling enables organizations to understand the full picture: what resources they will need in the future, how best to deploy them day to day, and how to respond instantly when reality shifts. It creates a connected planning model in which long range thinking, shift design and real time scheduling reinforce one another, delivering a smoother, more predictable service operation.



Strategic

3-12 months

- Models demands & KPIs
- Test staffing levels
- Depot/staff location



Tactical

0-6 months

- Shift planning
- Skill requirements
- Staffing levels



Operational

0-4 months

- Appointment bookings
- Scheduling
- Exeption management



Real-time

0-14 months

- Dynamic scheduling
- Always optimized
- Target exceptions



Strategic Planning: Shape the Future of Your Workforce with Predictive Insight

IFS PSO WISE (What-If Scenario Explorer), an advanced planning tool for organizations with a mobile workforce, provides clearer forward visibility and lets you test ideas thoroughly before you commit to a course of action to minimize risk and maximize profits. Seasonal patterns, emerging customer behaviours, regional variations and long term growth all influence how many people are required, which skills must be developed and where investment is most effective. With IFS WISE you can plan the number of staff you require, what skills they should have and where they should be deployed and calculate the business performance (KPIs) that they can expect to achieve.

Decisions that were once based on instinct can now be backed by data, simulation and intelligent predictions.



Stay in Control with Continuous, AI Driven Adjustments

Finally, the real time horizon is where true service intelligence happens and the Dynamic Scheduling Engine (DSE) provides continuous, real-time schedule optimization. As the day unfolds, disruptions are inevitable – traffic slows, jobs take longer than expected, emergencies arise, technicians finish ahead of schedule. In this moment, real time optimisation becomes critical. AI continually interprets what is happening across the field and reshapes the schedule, accordingly, protecting SLAs, reducing delays and maintaining service consistency. Real time planning ensures that even when the unexpected happens, the customer still receives a dependable and high quality service experience.



Create Schedules that Balance Workload, Skills and Service Levels

The operational horizon translates plans into executable schedules. Here, IFS.ai - Appointment Booking Engine (ABE) - determines how best to allocate work under real-world constraints such as service levels, skills, parts, travel time and cost. Operational planning focuses on creating a daily schedule that is achievable, efficient and aligned with customer expectations. It ensures that the plan for the day reflects both the workforce's capabilities and the business priorities set earlier in the planning cycle.



Align Skills, Shifts and Territories for Consistent Service Delivery

The tactical horizon uses Advanced Resource Planner (ARP) to bridge strategy and execution and provide short to medium term resource planning – managing the transition from strategic forecasts to daily operational schedules. This is where organizations determine how to structure their workforce for the months and weeks ahead – designing shift patterns, balancing territories, and ensuring teams are positioned to meet expected workloads. Tactical planning ensures that the right blend of skills, coverage hours and geographical distribution is in place so that frontline teams are ready for what the day will bring. It is in this layer that organizations build resilience: smoothing demand, reducing overtime, and aligning resources with customer expectations.

Together, these four horizons create a connected planning framework that strengthens operational resilience and improves customer outcomes. Strategic insight guides long-term investment; tactical planning builds the workforce around demand; operational scheduling sets the foundation for a smooth day; and real time intelligence ensures every moment unfolds as effectively as possible. By synchronizing all horizons within a single intelligent ecosystem, organizations gain the clarity, agility and confidence needed to deliver exceptional service at scale.

AI Optimised Scheduling for the Industries That Depend on It Most

IFS.ai **Planning & Scheduling Optimization** is purpose built for industries where service complexity, geographic spread and time sensitive response make intelligent resource planning essential. While every organisation benefits from greater efficiency and automation, certain sectors face pressures that make IFS.ai not just valuable, but transformative.



Utilities

(Electric, Gas & Water)

- Respond faster to outages and mass fault events with continuous re-optimisation and GIS aligned crew routing.
- Reduce Mean Time to Repair through orchestrated crew, route and priority alignment during storms and spikes.
- Strengthen regulatory performance with consistent SLA protection through real time decisioning.



Transportation

(Rail & Transit)

- Shape long term workforce strategy and resource investment with predictive modelling (WISE + ARP).
- Coordinate inspections, maintenance and network access window jobs with dynamic real time scheduling.
- Reduce downtime with intelligent job and route sequencing across large, distributed transport networks.



Manufacturing

(Life Sciences)

- Protect critical production windows with AI-driven continuous re-optimization that adapts instantly to overruns, delays or urgent tasks while keeping high-risk work sequenced correctly.
- Ensure precision scheduling for specialised technicians through skills-aware, certification-aware and location-aware job matching.
- Reduce disruption to batch-dependent and sterile operations by offering only feasible appointment times, validated in real time against workload, travel, availability and operational constraints.



Facilities & Residential Services

(HVAC, plumbing, electrical & property services)

- Manage diverse workloads (reactive repairs, inspections) with real time workforce optimisation.
- Ensure consistent service across internal and subcontractor teams with unified scheduling governance.
- Reduce travel inefficiency via territory balancing and shift planning.



Telecommunications

- Optimise dense urban, rural and multi day jobs at scale with AI powered scheduling.
- Improve first time fix rates and SLA performance through skill based job matching.
- Restore service faster during outages with priority based continuous re-optimisation.



Manufacturing

(High Tech and Industrial Equipment)

- Increase uptime for high value industrial assets with priority driven, rapid dispatch scheduling.
- Improve first time fix performance using skills aware and parts aware job matching.
- Support complex service events through continuous, autonomous AI optimisation.



Your AI Journey Starts Here

To understand the real impact IFS.ai Planning & Scheduling Optimization could have on your operation, you don't need to imagine it – you can quantify it.

Use our IFS.ai **Field Service Optimization Value Tool** – a powerful, interactive resource designed to help you quantify the benefits of true workforce optimization. Explore how AI powered optimization can reduce travel, improve SLA performance and boost technician productivity in your own environment.

Scan the QR code to see your potential savings in minutes and take the first step toward building a smarter, more efficient service operation.



Scan the QR code to understand the potential impact!





About IFS

IFS is the world's leading provider of Industrial AI and enterprise software for hardcore businesses that make, service, and power our planet. Our technology enables businesses which manufacture goods, maintain complex assets, and manage service-focused operations to unlock the transformative power of Industrial AI™ to enhance productivity, efficiency, and sustainability.

IFS Cloud is a fully composable AI-powered platform, designed for ultimate flexibility and adaptability to our customers' specific requirements and business evolution. It spans the needs of Enterprise Resource Planning (ERP), Enterprise Asset Management (EAM), Supply Chain Management (SCM), and Field Service Management (FSM). IFS technology leverages AI, machine learning, real-time data and analytics to empower our customers to make informed strategic decisions and excel at their Moment of Service™.

IFS was founded in 1983 by five university friends who pitched a tent outside our first customer's site to ensure they would be available 24/7 and the needs of the customer would come first. Since then, IFS has grown into a global leader with over 7,000 employees in 80 countries. Driven by those foundational values of agility, customer-centricity, and trust, IFS is recognized worldwide for delivering value and supporting strategic transformations. We are the most recommended supplier in our sector. Visit ifs.com to learn why.



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