IFS Planning & Scheduling Optimization™

Powerful strategic and operational tools for mobile resource planning

IFS

Intelligent, automated planning and scheduling for optimized service

After-sales service and maintenance have become critical components in many organizations' offerings to their customers. In an increasingly commoditized world, it is often a key differentiator. Sometimes, it is the only way to set yourself apart from your competitors.

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.
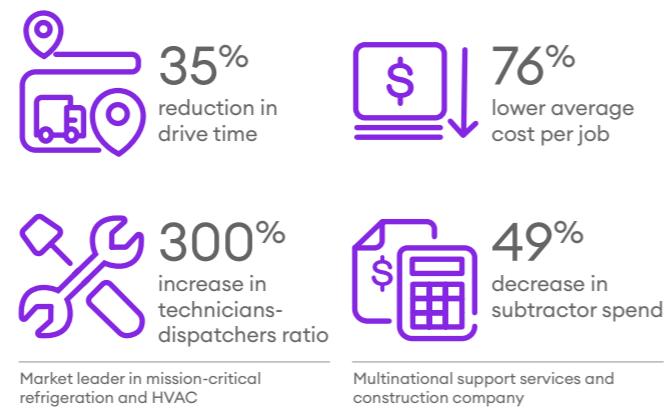
That means higher demand for ever faster responses and more effective service delivery–tighter service level agreements (SLAs)–and less tolerance of failure. If you can meet these expectations, you'll make a significant difference to both the company's brand perception and financial results. To do so, 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 Planning and Scheduling Optimization™ (IFS PSO) helps organizations better manage their field resources resulting in improved customer satisfaction, increased productivity

and better adherence to customer commitments.

IFS PSO consists of a range of modules that can either be implemented separately or integrated to form a powerful tool that provides visibility, scheduling optimization and planning of mobile resources. At its core, IFS PSO also delivers dynamic scheduling that can be optimized by several criteria to increase profit, reduce cost and ensure service level agreement (SLA) compliance.

Success stories with IFS PSO include:

35% reduction in drive time

76% lower average cost per job

300% increase in technicians-dispatchers ratio

49% decrease in subtractor spend

Market leader in mission-critical refrigeration and HVAC

Multinational support services and construction company

		Before	With IFS
Industrial Equipment <100 Technicians	Dispatches	5	1
	Technicians	87	74
	Job/Day	2.92	4.03
IT Services -300 Technicians	SLA Hit Rate	82%	99%
	Travel Time	Varies	-15.2%
	Same Day Response	35%	58%
	Avg. Time of Last Call	13:30	15:00
Telecoms >10,000 Technicians	Calls in SLA	48%	87%
	Tech Utilization	61%	78%

Excellent service is the key to customer satisfaction

Today, optimal service delivery performance must be part of any organization's key objectives if they want to retain customer loyalty, repeat purchasing and a positive word-of-mouth reputation.

The adoption of new technology to improve service delivery has been held back in many companies due to the lack of supporting infrastructure and connectivity. The increasing ubiquity of wireless networks means real-time interaction with the field is now a cost-effective reality–dispensing with the need for an endless stream of paperwork.

This puts pressure on the 'back office' to automate more processes that deliver instant responses to real-time events that are communicated immediately from the field.

Early scheduling software was only able to deliver a start-of-day, or static, schedule. This batch process takes all of the outstanding work and churns out schedules based on available technician resources–using a basic set of business rules and route optimization to reduce travel time and mileage between jobs. But this approach cannot take into account the day-to-day dynamics of the business.

Today's service environment demands more than to simply take care of basic performance parameters such as the number of calls a technician can complete in a day. Now, the focus must be much more on delivering a great customer experience.

A more strategic approach is required. This means a better understanding of the demands on the service team and every aspect of their work to make the required changes and plan effectively for both current and future business requirements. Moving forward aimlessly is not an option.

For an increasing number of organizations, a real-time scheduling toolset is the only way to sustain service performance, to meet burgeoning customer demands and to grow the business. Being able to satisfy planned demand is only half the battle; being able to respond to, and satisfy, unplanned demand is key.

How often does your day end up as planned?
IFS PSO helps you deal with the unexpected.

- Can you forecast planned/unplanned demand?
- What are your known constraints?
- Do you have enough technicians/ engineers?
- Are they in the right locations?
- Do they have the right skills?

- Do they have access to the required parts?
- Can they be scheduled effectively?
- Can they be rescheduled in a timely way?
- Can you do all of this profitably?

IFS Planning and Scheduling Optimization

IFS Planning & Scheduling Optimization (IFS PSO) 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 scheduling engine

At the heart of IFS PSO is a world-class optimization engine, IFS DSE. Blending sophisticated mathematical techniques with algorithms that are finely tuned for mobile service, the engine solves extremely large scheduling problems overlaid with multiple business-defined constraints—for example skills, SLAs, parts requirements—to deliver highly optimized plans within seconds.

Following our 'always optimizing' philosophy, IFS PSO continually searches for improvements. If it finds a schedule with a better service margin, it changes the part of the plan that has not been committed to reflect the improvement, re-allocating work to resources in a just-in-time decision-making approach.

IFS PSO offers unlimited flexibility in modeling business policies and objectives. Comprehensive setup and configuration options reflect the reality of increasing customer expectations, more demanding service level agreements and your commitment to service delivery consistency and reliability as a competitive advantage.

IFS PSO also brings new models, including 'late-as-possible' scheduling for optimal travel between assignments and depot pick-ups and extended functionality for Pick Up Drop Off (PUDO) locations.

## 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. It uses latitude and longitude for location geocoding, enabling worldwide deployment, with different datasets to suit different needs, like "as the crow flies", street-level routing and custom matrices. These can be supplemented with overlays to take account of varying conditions such as rush hour traffic or weather conditions. Map displays of the optimized travel routes, including individual turn-by-turn directions, are also available and are continually updated to ensure that the latest information is always visible.

Appointment booking

The appointment booking engine in IFS PSO complements the real-time, always-optimizing approach to dynamic scheduling with functions that allow appointments to be seamlessly mixed in with other work types (like break/fix and planned preventive maintenance) while retaining maximum resource flexibility and efficiency. Appointment times are calculated with regard to your existing workload and business policies for cost-effective, efficient scheduling.

Appointments can be offered and confirmed by your staff or self-served via an online portal, safe in the knowledge that the promise can be kept.
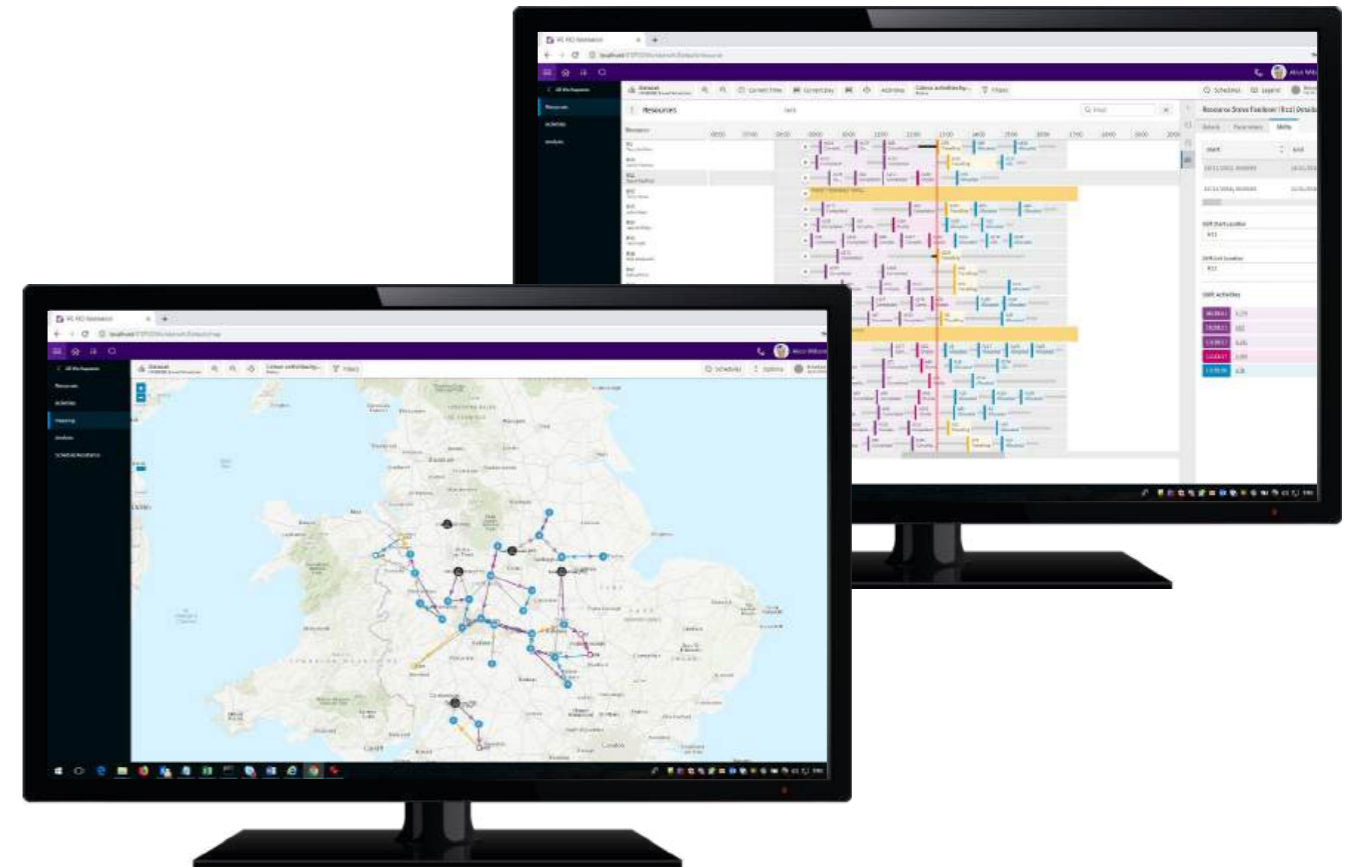
IFS What If Scenario Explorer enables you to benefit from:

- Cost-saving territory rebalancing

- More accurate bidding costs for additional work

- Better alignment of your resource locations to demand locations for reduced travel costs

IFS Dynamic Scheduling Engine lets you:

- Solve extremely large and complex scheduling problems in seconds

- Continually search for improvements to 'always optimize' planning

- Model business objectives and policies with unlimited flexibility
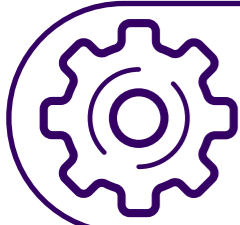
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IFS 'What If Scenario Explorer' (IFS WISE)

IFS WISE, an advanced planning tool for organizations with a mobile workforce, lets you test ideas thoroughly before you commit to a course of action to minimize risk and maximize profits. 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.

An ideal complement to the IFS DSE, IFS WISE combines operational and strategic scheduling disciplines and can be deployed as an additional module to existing IFS software or as a standalone component.

Target-based scheduling

Target-based scheduling allows you to focus your scheduling directly on the KPIs that matter to your business, such as the percentage of emergency calls that you respond to within the target SLA (time window).

Using the best of artificial intelligence (AI), IFS PSO provides intelligent solutions to the objective you set. Based on your unique business goals, customer contracts and SLAs, it uses AI to make scheduling decisions that ensure the best service delivery and enhanced customer satisfaction. This includes automatically changing system parameters and suggesting actions such as overtime for specific staff who will make a difference.

IFS PSO continuously monitors what is currently possible, and what is being achieved, and gives you the management information you need before it is too late to act.

Resource planning

IFS Advanced Resource Planner™ (IFS ARP) provides visual and automated tools to drive the planning and rostering of human resources over time. This can be based on predicted workloads or specific projects or might simply be used for shift planning. Resource management policies and legislative constraints (like Working Time Directive) plus shift patterns, skills and breaks are enforced when building the plan.

The results can be sent to the IFS DSE to enable dynamic scheduling of the reactive work alongside the planned commitments.

Reporting and analytics

Automated planning and scheduling optimization generates huge volumes of data. This data can change second by second, making reporting and analysis especially difficult. How can you measure performance and provide action-ready insights in such a fluid situation? IFS PSO meets this challenge with a multi-layered approach to match the needs of different user communities. Some users need real-time reporting and insight, whereas others need to look at data and trends over longer periods of time.

For example, the Exceptions Board reports potential service problems or jeopardy situations in real time, focusing on 'exceptions' to eliminate issues before they escalate and impact customer satisfaction. Other analyses provide managers with insights into actual performance by monitoring KPIs. Real-time access to statistics like SLA hit rates, time on-site and distance traveled can be critical to making intra-day adjustments that fine-tune service delivery and ensure that KPIs are met, which is more efficient and customer friendly than trying to understand what has already gone wrong.

Empowering businesses to deliver faster, smarter customer service

Enabling businesses to deliver rapid, smarter customer service, IFS PSO is part of the wider IFS Field Service Management™ and IFS Applications™ product set. IFS PSO can be integrated to these products as well as third party software.

IFS Applications™

IFS Applications is a single, integrated application suite for global and demanding business. With non-proprietary technology and a component-based service- oriented architecture (SOA) built on open standards, it is a truly flexible and agile solution with a great user experience.

IFS Field Service Management™

IFS Field Service Management covers the entire, end-to-end service lifecycle. Its IoT capabilities make it the most complete and connected field service software on the market, helping you to maximize operational efficiency, increase revenue, reduce costs and improve customer satisfaction.

IFS Enterprise Operational Intelligence™

Understand enterprise performance and enable better decision-making with IFS Enterprise Operational Intelligence. IFS EOI enables a full, 360-degree, enterprise-wide, top-down perspective of processes and performance that are aligned with your service business's strategy.

IFS Customer Engagement™

Delivering faster smarter customer service, IFS CE combines Omni-channel contact center technology with CRM in a configurable, AI-powered agent desktop. From chatbots and virtual assistants to online portals and knowledge bases IFS CE offers a complete range of self-service options.

IFS IoT Business Connector™

Good strategies increase revenue, boost profits and enhance efficiency. Build your IoT strategy around the IFS IoT Business Connector and see how your service company's operational data becomes business intelligence and how business processes become more efficient.

IFS Planning & Scheduling Optimization™

IFS Planning and Scheduling Optimization is designed to enable an organization to manage its mobile workforce more efficiently, facilitating higher productivity and improved adherence to customer commitments. It consists of a range of modules that can either be implemented separately or integrated to form a powerful tool that provides visibility, scheduling optimization and planning of mobile resources.

About IFS

IFS develops and delivers enterprise software for companies around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations. Within our single platform, our industry specific products are innately connected to a single data model and use embedded digital innovation so that our customers can be their best when it really matters to their customers—at the Moment of Service™.

The industry expertise of our people and of our growing ecosystem, together with a commitment to deliver value at every single step, has made IFS a recognized leader and the most recommended supplier in our sector. Our team of 4,500 employees every day live our values of agility, trustworthiness and collaboration in how we support our 10,000+ customers.

Learn more about how our enterprise software solutions can help your business today at ifs.com.

#MomentOfService