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Barriers to service success

For many companies, service revenue is a key driver for growth. Yet despite this, too often organisations are constrained by the lack of skilled field technicians they can recruit and the complexity of day-to-day planning for field resources, parts and inventory.

Whilst automated workforce planning and scheduling solutions can offer valuable orchestration and efficiency improvements, not all solutions are created equal. All too often, Platned's consultants talk to service planning and dispatch teams using systems that are clearly delivering minimal value. Recurring system issues we see include:

Scheduling and planning systems typically provide a view of engineers' calendars and availability and make recommendations for schedules. But the actual process can still be very manual because the system considers only a limited set of factors and constraints. If key considerations are often overlooked, optimal planning decisions are

not made. As a result, planners are forced to manually override the system's inflexibility. On some systems, it can be very difficult and time-consuming to make changes when there are exceptions to deal with. As a result, planners often find it faster and more expedient to revert to former manual approaches.

Batch scheduling hinders real-time
 business: Optimisation may run only
 at certain periods or overnight (batch
 process), generating a schedule which is
 not synchronised and updated with events
 in real time. This makes it very hard for
 planners to book and manage appointments,
 and, without a real-time view, impossible
 to manage in-the-moment changes like
 rescheduling for cancellations dynamically.



The Electrolux experience: why real-time scheduling matters

The following ten questions were asked in a recent webinar, "How Electrolux put dynamic scheduling at the core of their quest to customer centricity", and illustrate considerations we are commonly asked about by teams who are evaluating planning and scheduling solutions. These questions and answers are aimed to help businesses understand the full capabilities of a best-of-breed scheduling solution, help define and scope the specific needs of your business and demonstrate how a leading global brand is taking these capabilities and applying them to their own business.



Question 1 – What factors and constraints does the scheduling and planning system consider when calculating the optimum schedule?

Planners must take account of many factors when calculating effective schedules. Typical variables include:

- Technicians who have different skills, experience and certifications
- Staff who work in shifts and need breaks, who may work flexible hours
- Jobs requiring tools, equipment, vehicles, parts, and consumables, all of which must be coordinated
- Complying with regulations stipulating when jobs must be done, how they are performed and who can perform them
- Prerequisites and dependent jobs: other tasks that must be completed first before a specific task can commence
- Balancing the cost-of-service delivery with achieving contracted SLAs
- Adjusting schedules to accommodate urgent service visits alongside preventive and long-term work within industry or regional regulations

On scrutiny, even seemingly simple practical requirements can be significantly more complex than expected. For example, a planner must reconcile the cost versus the value of visits, taking into account complex service level agreements (SLAs). Planning optimal routing requires data about distance, travel time, traffic congestion, vehicle speed and fuel efficiency. In the case of electric vehicle fleets, routing must also factor in the vehicle range between charging and access to charge points in the field.

Ensuring the availability and location of parts to complete scheduled jobs is critical. A system must reveal when parts are in stock for vans, or when parts must be sourced via the supply chain and sent ahead to the site or field technician.

How to simplify factorial-scale complexity

As more factors are considered in your scheduling logic, the number of potential scheduling combinations doesn't grow linearly - it explodes factorially. Even small field teams can face astronomical complexity when trying to optimise manually.

For example, a team of just five engineers handling 70 tasks a day can present over a googol (10,100) possible combinations. The human brain - and most legacy systems simply can't compute the best schedule in this environment.

This is where IFS Planning and Scheduling Optimisation (PSO) stands out. First launched in the 1990s and now powered by more than 100 person-years of development, IFS PSO combines:

- An Al engine trained on 20+ years of field service data
- Over 40 powerful optimisation algorithms
- Real-time learning from service scenarios and exceptions

The result is a system capable of evaluating thousands of constraints and resources simultaneously. It identifies the right engineer, with the right skills and tools, for the right job, at the right time. This powerful orchestration engine ensures your planning team isn't buried in complexity but supported by it.



Question 2 – Can the system handle jobs that need multiple resources with differing skills and have a longer duration than a single day?

Many service tasks - especially installations, commissioning projects, or large-scale maintenance - require coordination across multiple technicians, trades, and days. This is where traditional planning tools often fall short.

A typical scenario might involve a plumber completing initial work, followed by an electrician, then a technician with specialist equipment. These jobs are sequential, skill-dependent, and time-sensitive. Most systems can't plan across these constraints, forcing planners to rely on spreadsheets or manual intervention.

IFS Planning and Scheduling Optimisation (PSO) is built for this complexity. It can coordinate project work across:



Strategic planning (3–12 months)

Forecast demand, model KPIs, and evaluate depot or workforce placements.



Tactical planning (0-6 months)

Develop shift rosters and match skill requirements to future workload.



Operational planning (0-4 weeks)

Manage bookings, daily resource allocations, and known exceptions.



Real-time optimisation (0-14 days)

Respond instantly to unexpected events like cancellations, overruns, or staff absences.

By unifying these planning layers, IFS PSO ensures planners can take control of complex project work and integrate it seamlessly with routine tasks like scheduled maintenance or emergency call-outs.

This enables a shift from reactive firefighting to strategic workforce management - driving efficiency, improving service levels, and empowering the planning team.

Question 3 — Is it possible to have a customer booking system that suggests the best times for appointments?

Does the resource planning model also integrate appointment booking (where customers book a specific slot that is available)?

In a modern service environment, customers expect to choose appointment times that work for them, without knowing the complexities behind the scenes. For the business, the challenge is to offer convenient choices without compromising efficiency.

IFS PSO allows planners to integrate appointment booking directly with the scheduling engine, ensuring that customerfacing options reflect what's optimal for the business.

The system calculates and ranks available appointment slots based on:

- 1 The cost to perform the work
- 2 The type of job, customer, or contract involved
- 3 Whether reactive work can be incorporated during that time
- 4 If lower-priority tasks can be rescheduled to free up capacity
- 5 Constraints around premium vs standard services (e.g. same-day appointments)
- 6 Efficient use of overlapping appointment windows

"

The resource planning does integrate with appointment booking. When customers request an appointment, they are offered an available slot. The system grades available appointments in terms of efficiency for the business, so although we do give consumers a choice, we try and guide them to the most efficient slot for the business."

Electrolux Europe, deploying IFS Planning and Scheduling Optimisation (PSO)

This integrated model ensures customers are guided to select slots that align with technician availability, job constraints, and overall business goals.

Appointments can be offered through contact centre agents or self-service portals, helping the business balance demand, meet SLAs, and enhance the customer experience.

Question 4 - Can you schedule jobs or offer appointments based on spare part availability?

One of the biggest obstacles to first-time fix success is part availability. Even if the right technician is scheduled for the job, it's all wasted effort if they don't have the part they need when they arrive.

his is a common frustration for planning and dispatch teams. Without visibility into van stock or real-time updates from the supply chain, planners have no reliable way to guarantee that technicians are properly equipped before they're deployed.

IFS PSO solves this by synchronising technician scheduling with part availability in several powerful ways:

- It monitors van stock in real time and only assigns jobs when the required parts are available.
- It can automatically insert a dynamic part pickup stop along the technician's route.
- It accounts for direct-to-site deliveries and aligns the technician's visit to match the part's arrival.

IFS also includes a predictive parts capability. It analyses previous job history and identifies which parts are typically required for specific types of tasks or equipment. These parts are then surfaced to the planner, helping anticipate needs before the job is even scheduled.

This intelligent integration of people, parts, and logistics is what sets IFS PSO apart - and what enables Platned clients to reduce repeat visits, drive efficiency, and deliver a better customer experience.



Question 5 – On average, how many visits/tasks per day per worker should you have for the IFS solution to create significant value?

It's a common misconception that field scheduling optimisation only delivers ROI at high volumes. While the benefits of IFS PSO scale impressively across large teams (250+engineers), it can also add substantial value in low-volume, high-complexity environments.

Take global packaging leader Tetra Pak, for example. Their field engineers typically visit just one or two customer sites per day. Yet the business still gains significant value from IFS PSO - not by reducing mileage, but by eliminating planning inefficiencies, improving part and skill alignment, and enabling proactive service.

The value comes from the automation of complex decision-making:

- Ensuring that the most appropriately skilled worker with the correct part is assigned to each job
- · Minimising the risk of failed first-time fixes
- Identifying opportunities to combine urgent and preventive work in a single visit

Additionally, IFS PSO continuously optimises the schedule throughout the day. For instance, if a reactive job arises near a scheduled preventive appointment, the system may combine both to reduce travel and increase efficiency.

Whether managing hundreds of daily jobs or fewer high-value tasks, Platned helps organisations use IFS PSO to unlock business value through better planning, reduced manual effort, and improved service performance.

Question 6 — How does the optimiser work if a technician gets a lengthy delay at a job? Or traffic that means they won't be able to attend subsequent jobs? Or they call in sick? What happens when customers cancel appointments?

Planners often start the day with a well-constructed schedule, but in the real world, things rarely go exactly as planned. A technician may get delayed, fall ill, or encounter an unexpected issue on-site. Customers may cancel last minute or ask to reschedule. Traditional systems leave planners to handle these changes manually, with limited support for re-optimisation.

Making good decisions in these moments is difficult. It involves weighing job priorities, technician availability, geography, part readiness, and service level agreements - all in real time. IFS PSO removes this manual burden. Its optimiser runs continuously in the background, evaluating thousands of scenarios as events unfold. It automatically reshuffles schedules to ensure the best possible outcome for the business and the customer.

With IFS PSO, planners can shift their focus from reactive rework to strategic oversight, freeing up their time and improving operational resilience.



Question 7 – As a resource planner, can you manually override the system?

In any automated environment, exceptions are inevitable. Senior leaders need to ensure their scheduling solution doesn't just allow for manual intervention, but learns from it.

With IFS PSO, manual overrides are not only possible - they're valuable. When a planner makes a change, the system tracks the scenario, constraints, and decisions, feeding this back into its logic for future optimisation.

Thanks to Explainable AI (XAI), planners also gain visibility into why the system made a particular decision. This transparency builds trust, empowers better interventions, and enables continuous improvement.

By empowering planners rather than replacing them, IFS PSO ensures human insight remains at the centre of an increasingly intelligent system.



Question 8 – Can the solution handle hard and soft constraints?

When automating plans and schedules, every business sets rules that must be followed. Some are strict, non-negotiable "hard" constraints, such as certification requirements or regulatory compliance. Others are "soft" constraints - preferences and adjustable parameters that can be considered when optimising.

IFS PSO is designed to manage both simultaneously. It uses service margin data - the value of an activity versus the underlying cost - to guide decisions and continuously optimise.

Examples of constraints the system can handle include:

- Skills, proficiencies, and personal preferences
- · Availability of parts, tools, and equipment
- Engineer availability, overtime flexibility, and shift patterns
- Real-time traffic data, drive time rules, and geographical constraints
- Timing factors, including add-times per location and GPS tracking
- Complex jobs requiring multi-person crews, sequences, or multi-day planning

By accommodating a degree of flexibility around soft constraints, IFS PSO delivers better automation outcomes without violating essential business rules. The result: improved efficiency, better SLA adherence, and more reliable workforce planning.



Question 9 – We use a lot of contractors. How do we manage activities assigned to them and track their time spent on the job?

Many organisations use contractors instead of their employees for certain geographies or types of work. This requires the ability to assign jobs and track activity and time/cost spent on each job. Most scheduling tools do not provide a solution for subcontractors, so either these jobs are managed manually or customisations are required to build a solution.

IFS PSO offers various methods to schedule subcontractors and track their work execution. Primarily, organisations have two options:

 Individual resource scheduling: Each subcontractor is optimised and treated as a separate resource. This approach is ideal for staff augmentation scenarios where subcontractors are treated as individual contributors. Bucket scheduling: Subcontractors are managed as a collective resource with a shared capacity to perform work. This method allows for better management of subcontractors as a unified group.

Once the scheduling is determined, subcontractors are responsible for carrying out the assigned tasks. For individual resources, they can report progress through IFS portals or mobile apps. For bucket resources, subcontractors can report via contractor coordinator portals or direct API integration.

IFS PSO provides flexible solutions to effectively handle subcontractors, offering different scheduling approaches and real-time reporting mechanisms, ensuring efficient management and accurate tracking of third-party activities.



Question 10 - How can I build a business case that proves the value of investing in a planning and scheduling solution?

Evaluating new technology is never just about features - it's about return on investment. To justify a planning and scheduling solution like IFS PSO, leaders need hard evidence of impact.

That's why IFS offers a structured Proof of Value (PoV) process. In just one hour, you can use your real operational data to simulate how PSO would optimise your workforce and what value it could deliver.

The process includes:

- Importing a sample of your real data into the IFS scheduling engine
- · Applying efficiency parameters like travel, skills, part availability, and tasks
- Measuring key performance metrics such as SLA adherence, overtime, mileage, and effective working time

The system then simulates optimised plans and compares them against your current results, revealing potential gains in:

- First-time fix rates
- Schedule density
- Field productivity
- Cost reduction

For long-term planning, IFS also includes the 'What If Scenario Explorer'. This tool models the impact of variables like a sudden drop in workforce, a spike in job volume, or changes in SLA targets - helping you plan for tomorrow, not just today.

Platned works in partnership with IFS to run these Proof of Value exercises and interpret the outcomes - so you can build a confident business case supported by hard data.



Summary: Turning service complexity into opportunity

Field service planning is no longer just an operational challenge - it's a strategic opportunity. As customer expectations rise and resources become harder to manage, the ability to schedule intelligently becomes a true competitive advantage.

IFS Planning and Scheduling Optimisation (PSO) equips organisations with a modern, Alpowered engine to overcome the limitations of legacy tools. From multi-day, multi-resource projects to minute-by-minute dynamic re-optimisation, PSO gives your planners the tools to be proactive, not reactive.

At Platned, we bring deep delivery experience and a proven methodology to help you extract maximum value from IFS PSO. Whether you're looking to streamline operations, reduce costs, improve SLA adherence, or prepare for scalable growth, we work with you at every stage from evaluation to implementation and beyond.

We don't just optimise your schedule. We help you rethink what service success looks like.



Ready to explore what's possible?

Visit <u>www.platned.com</u> or contact us to start your Proof of Value today.

