What defines best-in-class planning & scheduling optimization?

Going beyond appointment scheduling to true service operations optimization

By Tom Paquin, Senior Manager, Content Marketing at IFS

Optimization means much more than routing

In service, there is no shortage of systems and processes that would benefit from a more optimized approach. As service continues to cement itself as a key business driver for companies, getting the day-to-day of planning, scheduling, routing, and parts processes not just managed competently–but fully optimized–Has become the make-or-break point for many businesses. This is what leading Planning, Scheduling, and Optimization (PSO) utilities strive to accomplish.

This is especially true for those businesses attempting to roll out servitization initiatives across their businesses, as well as organizations looking to support outcomes-based service. Servitization is the act of diversifying products by creating additional offerings based around service. Outcomes-based service is the act of rebuilding your existing service business models around outcomes, such as uptime, performance metrics, time-to-service, fail rates, and other criteria. Servitization and outcomes-based service are both increasingly integral to the success of a service firm today, and both benefit immensely from a thoughtful, detailed approach to optimization across business functions.

What we Mean by Optimization

For many organizations, service begins and ends with the service dispatch. At IFS, we don't marginalize what defines service. We realize that service delivery doesn't exist in a vacuum. Service optimization requires excellence when it comes to your asset, your service delivery, your parts and logistics, and your business at large, and there are a few capabilities that represent the bellwethers of successful management of all of those pieces. Let's break down some of the tools that define modern PSO beyond appointments.

How IFS defines optimization:

Some of the capabilities that set IFS apart:

- Some of the capabilities that set IFS apart:
- Real-time scheduling optimization
- Target-based scheduling
- Dynamic appointment booking
- "What-if" scenario forecasting

Real-time optimization

Appointment booking is of course the baseline of planning utilities for service, but from there, the next step is an optimization engine. At its most basic, this optimization is a function of taking your resources—people, parts, and distance—and identifying the most practical way to manage those resources to close the greatest value of cases in the shortest period of time. The benefits of this are obvious. Proper optimization manages your workforce, eliminates downtime between jobs, lowers the cost per truck roll, and reduces the time from ticket to invoice.

For example, Cubic, an IFS customer who uses IFS PSO to manage job sites in major metropolitan areas, regularly found instances where employees would travel to one job site and spend the whole day there working on various maintenance issues. What the PSO system uncovered, through evaluating the company's skills, parts, and schedule, was that while on paper this seemed like a logical way to manage one's day, because it required parts that other technicians did not have readily available, and overprioritized less important service instances, the PSO system recommended a starkly different schedule that moved service technicians much more. The AI engine powering IFS PSO used its ability to evaluate each piece that went into a job to provide a recommended cadence that more effectively used a technicians' time in order to properly triage cases, and manage logistics. This ensured that people and parts move through the service workflow as easily as possible. You can learn more about Cubic's success here.

"An effective system–Like what IFS offers–can do in fifteen minutes what some systems need overnight to compute."

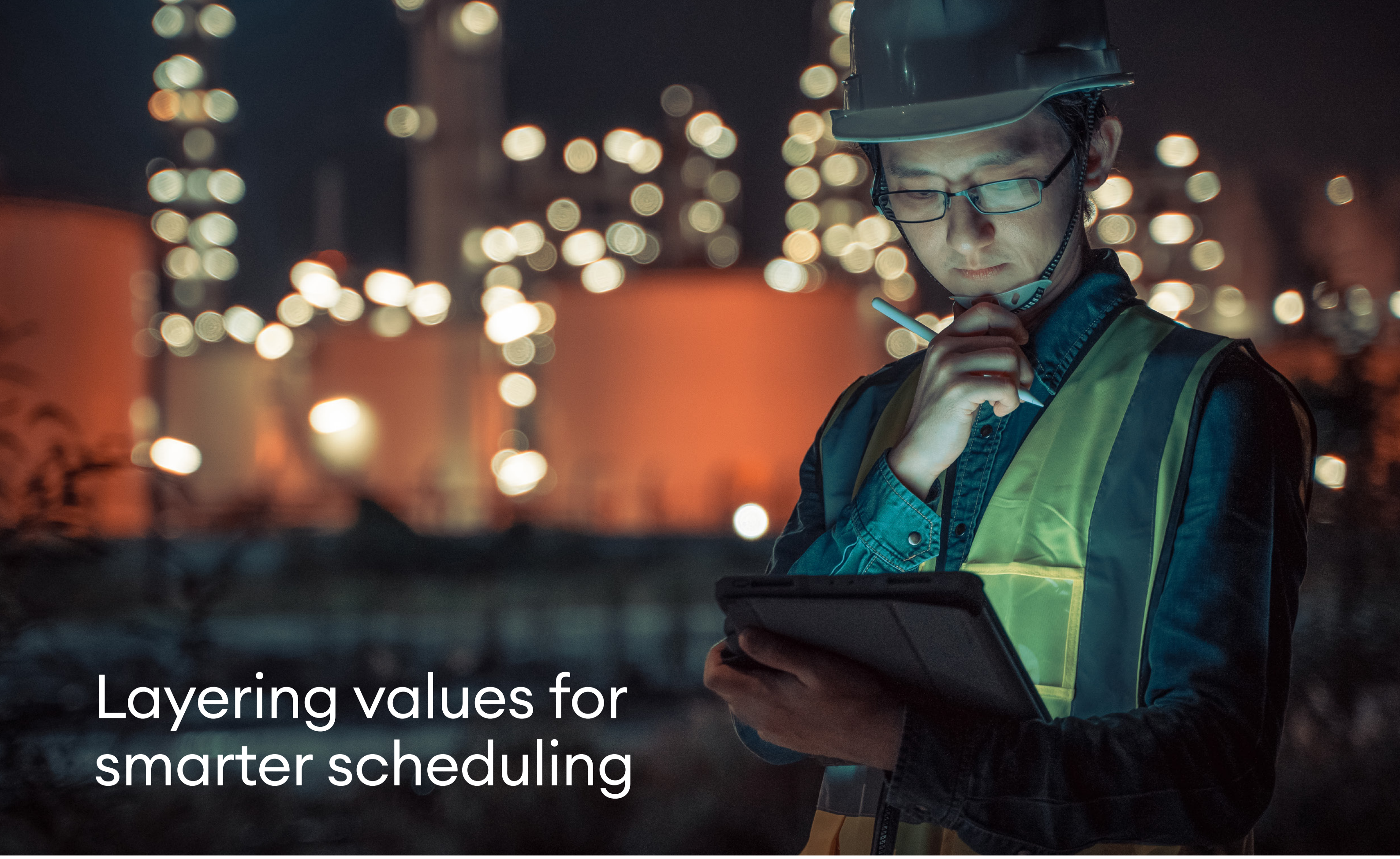
The other element of real-time optimization is the real-time aspect, one that is of key importance for a variety of reasons. The primary reason why optimization in the moment is key is fairly obvious—when customers cancel, appointments run over, and parts need to be allocated, you need a system that can react in minutes, not hours. This is where the importance of AI-powered optimization truly shines; An effective system—Like what IFS offers—can do in fifteen minutes what some systems need overnight to compute. The other important aspect of real-time management is the broader consideration for business or AI-driven rules. If capacity is inhibited, for example, or a client's Service-Level Agreement (SLA) calls for a fast turnaround time, the system needs to incorporate those considerations and adjust schedules without friction. Optimization is the benchmark, but the real-time element, and the flexibility to define business rules from a variety of data touchpoints, defines the best-in-class.

Value based scheduling

In the previous section, we briefly discussed the importance of building your optimization engine with value-based metrics in mind, but given the potential complexity of the topic, this concept deserves additional elaboration to determine what sets the best-in-class apart.

Learn more

Click here to learn more about cubic Transporation's success with PSo, allowing them to deliver exceptional outcomes-based service



Layering values for smarter scheduling

Example rules that define value-based scheduling:

- SLA-based priotization of resolution management
- Customer service requirements based on historical performance
- Regulatory requirements, such as emissions standards that need to be maintained
- KPIs and metrics valued at the department or company level

On its surface, value-based scheduling takes the maximization of your key KPIs into consideration when delivering short and long-term schedules to your employees. More specifically, it allows an organization to layer specific values over the engine powering its planning optimization to ensure that appointments are triaged effectively. Let's take a minute to chart out a hypothetical web of those layers. As discussed previously, this should begin at the top:

Company-level rules. These would be your business-level KPIs that you've chosen to emphasize. For instance, some businesses prioritize time from ticket to invoice, and can build their scheduling to prioritize that as well. Others want to maximize value per job, and can cater schedules to ensure that high-value jobs are given a different ruleset. Others may want to maximize technician utilization, parts allocations, and so on. The best systems can stack, score, and synthesize all of these disparate elements.

Regional rules. These are often (though not exclusively) regulatory, and it's particularly important to get this right when centrally managing optimization. Regional considerations need to be triggered immediately. For instance, some countries have hefty fines for service delivery outside of SLA compliance, so it's necessary to take an extra degree of care with respect to those areas. Regional rules can also be geographic. A major metropolitan area does not play by the same traffic, workforce, or even internet rules that a rural area does.

Account-level rules. Taking it down a step further, we get to the account-level triggers that organizations much address. One IFS customer has an SLA requirement that a resolution be reached within 90 minutes. Furthermore, customers who have switched to an outcomes-based service structure for delivering solutions to customers need to manage another layer of KPIs, like asset uptime and performance.

Escalation rules. In spite of company, regional, and account guidelines, there are often instances where intervention in the moment will be the key to success. The decision whether this should supersede any of the above rule layers will obviously differ on a company-by-company basis, but best-in-class optimization doesn't mean slotting in an appointment with no oversight; it means triggering the escalation and letting the system do the work.

These are just a few example layers, and even within these individual layers, there will of course be nuance, differentiation, and further considerations. Getting them all to work together in a single, cohesive system that builds rules-based plans for your business is the key to making best-in-class service work. IFS furthers the value of that work by creating performance lobbies that can be used internally, or shared with customers, to display your success in providing service, and give customers the reassurance that you actually care about the unique nature of their business. This makes best-in-class PSO not just an operational tool, but a tool for differentiation and customer retention.

"What-if" scenario forecasting

The term "predictive analytics" has been a favored buzzword in a variety of industries for the last decade or so, but when it comes to best-in-class PSO, it's more than just noise. "What-if" scenario forecasting can run a variety of models for your business to ensure that you're prepared for any eventuality.

Here's an example–what if you expect a 50% spike in appointments? Scenario planning software can run a variety of models to ensure that you're staffed up, or help connect you to the tools to leverage contingent labor. Other examples that you can test for would be reductions or increases in your labor pool, backoffice restructuring, new clients and regions, and travel restrictions, to name a few.

A multi-horizon planning utility like the one that IFS has built is designed to save you money and minimize disruptions as they arrive. This allows you to plan for business changes without risk, an invaluable utility, especially in the face of increasing demands for fast, effective service delivery from your customers.

Learn more

Click here to read more about "what-if" scenario forecasting

Preparing your Business to Capitalize on Best-in-Class Optimization

With all of the above capabilities, alongside the various other key capabilities that a best-in-class planning and scheduling utility employs, there are some pretty obvious things to consider, right out of the gate. As with any technology, the tool itself needs to be complimented by the right internal systems. There are a great many that will need to be considered, and that is a conversation to have with your team, and with the vendors that you're considering, but here are three key points to keep in mind as you're preparing to adopt a new PSO system:

1. Make sure your data house is in order.
2. Find the right technology partner.
3. Identify and benchmark the outcomes for success.

We'll start with number one, which is key to managing your PSO system effectively. An AI-powered system is only as capable as the inputs being fed into it. While a best-in-class PSO system will come with a wide variety of inputs out of the box, even more if attached to a full suite of field service management (FSM) tools, the system's effectiveness is further enhanced through a strong system of APIs that are derived from different triggers in your business.

Depending on your scale and industry, this could include parts and dealer management, asset performance management, or resource management across your business. Your PSO system, like any growing intellect, gets smarter the more material it's able to consume. Furthermore, good data is key. Bad data begets bad data in a negative feedback loop that can undermine the effectiveness of your work.

Much of this can be assuaged with point number two: finding the right technology partner. And while the software is key, and should have the right triggers and management systems inherent, implementation, especially in terms of a PSO system, is just–if not more–important. With dozens of business rules to consume, finding a partner who will support connecting the dots, both out-of-the-box and down the road, often is the difference between success and failure.

To that end (and with guidance from your technology partner) point number three stresses the importance of regular audits. Truthfully, KPI criteria can often be preprogrammed with implicit bias in order to lean into specific metrics. Uncovering the potential bias in reporting or metering those metrics takes time, and often an independent eye. Any technology purchase reflects an ongoing process, which is why it's so important to create smart, repeatable criteria for evaluation.

For forward-thinking organizations, planning and scheduling optimization in many ways represents the backbone of successful service delivery. Getting PSO right means that the onus of operations management is no longer a time sink, allowing businesses to free up back office resources and concentrate more of their time and effort on delivering exceptional service, instead of the means to deliver that service. With this in mind, planning and scheduling optimization not only helps align your operational resources, but your business development ones as well, and rightly puts the focus of your efforts where they belong: on your customer.

Remember

Any technology purchase reflects an ongoing process, which is why it's so important to create smart, repeatable criteria for evaluation

About IFS

IFS develops and delivers cloud 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 4,000 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.

Americas
+1 888 437 4968

Asia Pacific
+65 63 33 33 00

Europe East
+48 22 577 45 00

Europe Central
+49 9131 77 340

UK & Ireland
+44 1784 278222

France, Benelux and Iberica
+33 3 89 50 72 72

Middle East and Africa
+971 4390 0888

Nordics
+46 13 460 4000

Production: IFS, June 2021.