







INTRODUCTION: THE IMPORTANCE OF SCHEDULING WITHIN MODERN FIELD SERVICE DELIVERY

For those that have already implemented a scheduling tool as part of their field service delivery, whether it be a fully dynamic system or something simpler that is designed to assist a human dispatcher rather than fully automate the dispatch process, it is almost certain that there will have been some important savings made in key performance areas.

Areas of improvement such as the number of jobs completed per engineer per day, more first-time fixes being undertaken and quicker resolution of jobs can all be improved by the introduction of a scheduling engine.

Indeed, given the quite obvious impact that scheduling systems can have on a field service company's bottom line, whether it be through efficiencies as mentioned above that can enable a company to achieve more work with the same size workforce, or through even more tangible evidence such as reducing fuel costs, then there is little wonder that a solid return on investment (ROI) argument is at the heart of many sales pitches for scheduling solution providers.

However, there is another perhaps equally important argument for implementing some form of scheduling tool – the impact it will have on a company's ability to deliver the highest levels of service excellence.

SERVICE IS NOW A KEY DIFFERENTIATOR

We live in an age where service is absolutely a key differentiator between similar competing brands.

From a consumer perspective our expectations have been moved seamlessly beyond the transactional nature of purchasing a product and building expectations of a brand around that product alone, to much more of a holistic 'brand experience' by the likes of Apple and Amazon.

Apple's move from consumer electronics manufacturer to a platform provider for mass media content delivery was so smooth that the general man on the street didn't really notice what was an incredible seismic shift in both Apple's business and the entertainment industry itself.

Similarly, Amazon have shifted customer perceptions on what is 'good' so dramatically the phrase the 'Amazon effect' has been coined.

It is certainly fair to say that the consumer of the 21st century is more empowered, more knowledgeable and far more demanding than ever before.

But does this translate across from our consumer lives into our working environments?

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- Tom Bowe, IFS

THE EVER-SHRINKING SLA

We have already seen the consumerisation of technology within the working space - very simply the mind-set of many is "If Amazon can guarantee to deliver products to me within 60 minutes for no extra charge why can't my service provider improve his Service Level Agreements (SLA) so I can expect an engineer on site within hours rather than days?"

Similarly, if Apple can train all of their technicians to be consumer friendly, well presented and commercially aware, why can't other service organisations?

In today's business climate whether you are a business-to-consumer or business-to-business organisation, the benchmarks have changed, and service and service delivery are right at the top of what differentiates any company from their competitors.

In our world of service delivery Tom Bowe, Global Field Service Specialist with IFS, believes that we will see further revolution led by technologies such as Big Data and Internet of Things.

"Leveraging the data generated by connected equipment, service companies can get invaluable insights into each asset in terms of use, status, and potential failure," Bowe commented on the IFS blog

"Empowering service companies with an entirely new set of tools, we will see service level agreements (SLAs) transform from specifying reactive, post-event response times to being primarily focused on proactive service."

"In fact, I'm convinced that we will soon be seeing SLAs that feature 15-minute response times, rather than 2 hours, and the goal will be to see just how proactive this can become. The potential for service providers to eventually guarantee zero failure rate is no longer a fantasy, but a very real prospect." He added.

It may seem for many an almost fanciful notion - when Bowe gave a presentation around this topic in San Diego recently, many of the practitioners in the audience were still talking in terms of days rather than hours for SLAs.







However, the fact is that Bowe and his colleagues at IFS have had first hand experience of working with companies to achieve highly impressive SLAs. Cubic Transportation Systems, for example, a leader in providing fully integrated ticketing and revenue collecting systems for the transport sector. With operations across the globe including the iconic London Underground, they can boast a 100% record of meeting 60 minute SLAs through the use of the IFS Field Service Management and Mobile Workforce Management solutions.

So, in a world of high customer expectations can field service companies afford not to assess their own scheduling set up and see what solutions are available?

Scheduling solutions come in many different flavours and across the following pages we will look at some of the considerations field service companies must take into account when selecting a solution that is right for their organisation.

THE DIFFERENT TYPES OF SCHEDULING SOLUTION AVAILABLE:

There are a number of differing scheduling tools available ranging from fully optimised and dynamic scheduling engines that are able to process vast amounts of data and continuously react to real time events to produce a schedule that is constantly running at optimum efficiency, through to simpler systems that are often little more than a planning tool to provide the dispatcher with an enhanced level of visibility to allow them to undertake their role more effectively.

The tools can be broadly listed as follows:

Manual input planning tools:

These are the most basic of tools available and are essentially little more than a diary application. However, they do offer a much better viewpoint for the dispatcher than working with sticky notes and whiteboards and can contain some basic functionality such as flagging up if an engineer is allocated to be in two places at the same time.

Ultimately though they are productivity tools to enhance an already skilled dispatcher and offer nothing in terms of automation and optimisation.

Semi-Automated, Drag and Drop, Assisted Scheduling tools:

Here we begin to see a level of automation brought in whereby a computer system will utilise a number of inbuilt algorithms to optimise the day's schedule.

However, the responsibility for assigning a job to a specific engineer still remains with a human dispatcher with the system just making recommendations. Such a system can still deliver significant improvements in efficiency within a field service organisation and can be relatively easy to implement compared to a fully dynamic solution.

Fully automated, Dynamic scheduling tools:

The most advanced technologically, a dynamic scheduling engine is designed to respond to real life incidents such as a traffic accident, an engineer being sick, or a job taking longer than expected and will continuously update the schedule

so it is delivering jobs (often directly to the engineers themselves) in the most efficient manner.

Such a system requires far less input from a dispatcher and therefore can facilitate the shifting of resource levels to have fewer back office staff and more staff in customer facing roles (where they can directly influence revenue and customer satisfaction).

The flip side of such a system however, is that initial implementation can be a much more complex task. Some vendors such as IFS also provide a range of solutions from manual, assisted manual, automated to fully dynamic scheduling, so companies could build up the sophistication over time if they chose to..

SELECTING WHICH IS RIGHT FOR YOUR COMPANY

In terms of selecting the right solution for your business, it is important to conduct a cost-benefit analysis. One common false assumption is that dynamic scheduling engines are suited to the larger companies only.

The decision of whether to implement a dynamic or assisted scheduling solution is as much about the complexity of the service you are delivering as it is about the size of your mobile workforce.

If you have multiple requirements for skills, competing SLA's, jobs requiring multiple engineers, then the workload is likely to be greater for your dispatchers and you will probably see more improvements from an automated scheduling system.

Many scheduling providers, such as IFS, have the experience to provide you with assistance in getting the implementation right, however, it is important that you understand exactly how much support your provider can give you and how much resource you will need to allocate to the implementation beforehand, in order to allow for proper planning.

Additionally, it is important that the project, if not driven by the board has their explicit buy in also.

Remember, the implementation of a scheduling engine can have far wider reaching benefits than just improving field service productivity such as the restructuring of a team to have fewer resources in purely administrative roles.

Therefore, wider considerations such as how such restructuring could be undertaken and how that will be communicated also need to be discussed well in advance of the project start date.

As Daryl Dudey, a scheduling expert with IFS commented in a recent Field Service News webinar: "The more the upper management is driving the project the quicker we will get to live."

"A lot of the time these projects get treated as IT projects but they are not, they are business projects," Dudey commented







"The companies that have got that buy-in from the board, that have got that drive, they are the ones that see significant improvement in their businesses, they are the ones that see the most success."

STAND ALONE VERSUS INTEGRATED

Alongside the question of which form of scheduling engine is correct for your organisation, there is also the additional consideration of should you opt for a solution that is stand-alone/best-of-breed or one which is fully integrated within your other core business solutions such as an ERP or CRM system?

As with every new introduction of technology within a business environment, careful consideration needs to be made as to what will fit best with your existing solutions and your future plans, as ultimately every organisation is unique and will have unique requirements.

However, let's briefly look at the pros and cons of both stand-alone and integrated solutions.

The case for implementing a stand-alone scheduling solution:

If you have an adequate ERP or service management framework in place already then integrating a best of breed standalone scheduling system could help you maximise the efficiency of your service workforce.

Clearly this means that on a one off basis, implementation and training can generally be swifter than implementing a more encompassing solution.

However, if a company is intending to roll out an entire suite of best of breed products then the time to implement each will greatly outweigh the time it would take to implement one overall system.

The one area where traditionally best-of-breed solutions have been viewed as the superior option has been in terms of degree of fit.

Generally they are purchased to fit a particular requirement (i.e. mobile workforce scheduling) and you may find that certain companies have developed a strong feel and understanding for specific verticals – meaning an implementation that can be as close to out-of-the box as possible if your organisation is also within that vertical.

Most vendors will showcase their clients somewhere on their website . This could be a good starting point to see if they have clients of a similar size and in the same vertical as your organisation.

Of course the other big benefit of choosing a standalone option is the amount of choice that is available to you. IFS and many other vendors who offer their solution as part of an integrated platform also offer standalone Field Service Management tools. This means that when looking for a standalone solution you have the option to select from the entire marketplace.

A particularly important factor in this wider range of vendors is that aside

from the actual software itself, working with a vendor on what can be such a mission critical tool for a field service organisation is very much about the level of support you need and the level of support any given vendor may be able to provide you.

Would you perhaps require your vendor to work with you on more of a partner basis, helping and guiding you through implementation and beyond?

Such factors should be considered when looking through the varying options available to you as much as the software itself.

Finally, of course with a stand-alone provider, in a worst case scenario there is always the fact that walking away from a solution that hasn't delivered all that was promised is potentially less painful than if you have opted for an integrated solution that sits across a number of different business units.

The case for implementing integrated systems:

When we look at the benefits of integrated systems, again there are a number of key arguments as to why this approach has merits.

Perhaps the biggest of these is the easy flow of data across different business units. In an age of Big Data such seamless transition of data from one business division to another can help deliver a 360 degree view of a customer – something that is seen as the holy grail of business today.

For example, the ability for a sales representative to see that a client has had a number of call outs for service orientated support could open up opportunities for upselling an improved service package. Similarly, an engineer on-site could potentially see an opportunity for selling some consumable items whilst undertaking a service call and could place this information directly into a CRM directly from his mobile application.

Another example of the importance of visibility across a platform could be if an engineer arrives at a site where the client's SLA period has expired. All too often such information can be overlooked resulting in that engineer's work essentially being given away for free.

With the easy flow of data from Dispatch to Field to ERP to CRM the engineer could easily be notified that there is no SLA in place and ensure that either a job is billed correctly, even directly raising an invoice whilst on site.

Indeed, such flow of information is one of the critical tools in enabling many field service companies to move away from being a cost centre and to being a profit centre, possibly even operating on a divisional P&L. and whilst integration of disparate systems is indeed becoming simpler, a platform approach remains an easier, quicker and often cheaper (in terms of hidden costs etc) means of ensuring that integration and free flow movement of data is happening effectively.

Another big benefit of the integrated approach is that many companies will find adoption of new systems a lot easier at the end user level due to familiarity of the tools.







Platforms that have various functionalities across different business units are likely to have a fundamental terminology, shared short cut buttons, and similar menu configurations. The result of this is that those given the task of training end-users are likely to adapt to the new tools quickly leading to more straightforward training schedules and swifter problem resolution during the initial roll out.

This concept also, of course applies to the support IT departments are able to deliver. It is far less demanding for an IT team to deliver support across one platform than various stand-alone solutions. Similarly it can also mean that support from the platform vendor is directed to one location, and often one specific account manager rather than having to have multiple vendor support channels in place.

Again such familiarity can improve issue resolution dramatically and this is also an important factor in terms of upgrading a system.

With a selection of stand-alone solutions in place your IT department may face an unmanageable stream of continual updates, whether you are on a Cloud system or On Premise.

With an integrated system, the vendor is likely to help ease the burden of so many updates by combining many system wide tweaks in each new iteration.

Whilst the implementation of one stand-alone solution may be swifter, the implementation of a business wide system ultimately will be more efficient in terms of man-hours allocated to implementation in the longer term.

In summary, whilst stand-alone may be more suitable in terms of degree of fit, a fully integrated package is ultimately likely to be more effective in terms of time, cost, resources, simplicity and project management in the mid-to long term. A stand-alone approach does allow you to spread the cost and resources required for implementation and given the ability for scheduling engines to provide clear, tangible ROI within a generally short time frame, stand-alone solutions could be the right option for those companies looking for direct improvements in the short term.

WILL THE CONVERSATION BECOME MOOT WITHIN THE NEXT 5 YEARS ANYWAY?

There is of course an argument that the conversation around stand-alone scheduling solutions versus their integrated equivalents will become all a bit moot in the next few years anyway with the current trend for major platform providers to either develop or acquire scheduling solutions and roll these into their wider offerings.

Within the last two years we have seen Oracle purchase TOA and integrate that into their Field Service Management suite of products as well as Microsoft doing the same with FieldOne.

In addition to this, within the last month Salesforce, who have an almost

symbiotic relationship with ServiceMax (who in turn have a close partnership with scheduling provider ServicePower) have launched their own suite of field service management tools, Field Service Lightning, that incorporates a scheduling tool called Smart Scheduling.

Indeed, the move for platform providers to incorporate scheduling tools within their offering was originally led by IFS who were decidedly ahead of the trend. When IFS acquired what was widely regarded as the leading scheduling engine of the time, 360 Scheduling, back in 2010, giving them more than half a decade's head start on their competitors in terms of getting the system fully embedded within their ERP solution.

Of course there are exceptions - SAP who are a global heavyweight in the ERP sphere with massive market share in their heartland of Germany and her surrounding countries, were long anticipated to acquire ClickSoftware but the move failed to materialise, meaning that those companies who are using SAP for their CRM have no choice but to opt for a stand-alone solution currently.

What is clear however, is that back-end systems are changing and evolving. Part of this is largely due to the impact of Cloud computing which has changed the way companies think about their core operating systems.

Simultaneously, the traditional role of the CRM has been rapidly expanded by platforms such as Salesforce to incorporate the wider functionalities we normally expect from an ERP.

Another option is the concept of CRM embedded within an ERP which IFS pioneered as part of their Applications 9 roll out in 2015.

Therefore, whilst the discussion around stand-alone versus integrated systems will almost certainly continue to be held in five years time, and many of the factors raised within this White Paper will inevitably remain key considerations, it is important to be aware of the changing nature of the tools available.

It is vital, therefore, that when a company begins searching for information from potential vendors that they not only have a clear roadmap of their own goals and aims across a five year period, but also that they ask any potential partners to outline their own roadmap so that it is clear that both paths are heading in a similar direction and that any investment today is future-proof.

WHAT DIFFERENTIATES SCHEDULING ENGINES/WHAT ADVANCEMENTS SHOULD WE BE LOOKING FOR WHEN SELECTING A SCHEDULING ENGINE?

With so many different options available for field service management companies seeking a scheduling solution, whether it be stand-alone or integrated, let's look at some of the key functionality could separate one option from the competition?

Parts and inventory management integration:

Whilst getting the right engineer to the right place at the right time is, of







course, an absolutely critical part of field service management it is of little value if the engineer is unable to access the right parts and tools in order to undertake the repair.

Therefore, the ability for both dispatch and the engineer to have visibility into the parts ordering and inventory systems is a huge benefit and one that can help dramatically improve first time fix rates – meaning less cost wasted on multiple visits and greater client satisfaction.

Mobile worker access

By giving field engineers remote access to the scheduling system they can feed additional information in as and when it happens.

For example, if an engineer is over-running on a job the ability to update the job length quickly via the same app that pushes jobs out to him is going to be far quicker and more reliable than him having to communicate directly with a dispatcher via phone or email etc.

IoT and scheduling:

This is one that we can certainly expect to see emerging across the next year or so.

The Internet of Things has the potential to dramatically change the way companies approach their field service operations as intelligent assets in the field begin identifying the need for an engineer to provide repair and maintenance before the asset even fails.

Scheduling engines that are able to take data from the assets in the field directly and then schedule preventative maintenance call outs with a suitably qualified engineer, whilst simultaneously delivering any required parts to arrive on site ahead of the engineer may sound like a sort of field service nirvana from the distant future but it is technology that is just around the corner.

Speed of processing:

Whilst today's dynamic systems are fast and very often real-time (based upon inputs), with the likely amounts of data being fed into a system set to increase dramatically with the onset of IoT based scheduling solutions, it is evident that many of today's systems could slow down significantly under such additional strain.

Therefore if IoT is a route your organisation is looking at exploring it is important to select a scheduling tool with the potential processing power to cope with your plans in the future.

For example ServicePower have recently sponsored research into Quantum Annealing whilst IFS introduced in-memory optimization in the recent release of Applications 9, which can process analytical queries thousands of times faster than before.

Accessible, configurable dashboards:

Access to multiple layers of information is vital to the modern field service manager and many systems now come with the ability to access this data

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- Daryl Dudey, IFS

through graphical interfaces. Such dashboards can also be highly customisable by the end user with customisations being made on the fly.

Such tools are invaluable for a manager aiming to eke out every last ounce of efficiency from their field service operation. They can also be an incredibly powerful customer satisfaction tools if your solution offers you the ability to create customised portals, giving your customers access to information relating to how you are meeting the SLAs in place, the performance of their assets, and other KPIs you are willing to share.

CONCLUSION/NEXT STEPS:

As we bring this White Paper to a close there are some clear takeaways we should reaffirm.

Firstly, for those companies still not operating with a scheduling solution, the message is really, truly loud and clear – adopting any form of scheduling system, whether it be a fully automated and dynamic or a semi automated assisted style scheduler, the weight of evidence stating that you will see a return on your investment is overwhelming.

However, before rushing out and implementing the first scheduling solution you come across there are certain factors that need to be considered.

There is a highly competitive market place out there, with many different companies providing scheduling solutions of varying complexity with varying levels of support.

Before you even begin looking at what is available within the marketplace, as a company you should be able to understand your own five year roadmap in order to help you define exactly what you are looking for in a scheduling solution.

For example, do you envisage your company adopting a preventative maintenance path based around an IoT focussed roadmap?

Do you already have an existing CRM or ERP in place?







Are you prepared to change existing business systems (i.e. is this a company wide project) or are you only looking to introduce one scheduling solution and keep everything else as is?

If not already driven by the board it is also vital to ensure that there is buy in for this project at the executive level.

The business case for implementing a scheduling engine is fairly straight forward given the strength of the ROI argument.

It is also crucial that this project is understood to be a business project rather than just IT, so ensure those at board level understand the potential impact this project could have on positively reshaping the workforce as well as the benefits to customer satisfaction.

Once you have this support in place it is a good idea to write down realistically where you are today, the challenges you are facing and where you would like to be within the next five years and how you see a scheduling solution being part of that journey as you aim to reach your goals.

With this clearly documented you are in a perfect position to begin identifying the right solution and the right vendor for you.







ABOUT IFS

Automate your field service processes with powerful, native mobile apps for Android, iOS and Windows devices.

With our configurable, secure mobility platform, your field workforce can quickly accept jobs, use GPS to find nearby parts and get directions, order parts, enter labour and expenses, take pictures, notes and payments, fill-out check-lists and capture signatures.

Online or offline. Smartphone, tablet or laptop. IFS proprietary mobile synchronisation technology works in the cloud, underground or on-site. With the right information at their fingertips, your empowered field workforce will dramatically improve productivity, fist-time fix rates, on-time SLA performance and customer satisfaction.

BENEFITS

Benefits for the user

- Better customer knowledge and communication
- Embedded maps and turn-by-turn navigation
- Easy-to-use and learn (no training)
- Take videos and edit pictures
- Increase productivity (more jobs, less admin)

Benefits for the business

- Increased resource accountability (GPS tracking)
- Faster service-to-invoice cycle times
- Improved compliance and standardisation
- Accurate time tracking and expense reporting
- Device-agnostic (BYOD), configurable and upgradeable
- Blazing fast performance, secure and scalable

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With a wide range of guest commentators comprised of key industry figures, exclusive quarterly research, and a library of free educational resources that is added to on a monthly basis, Field Service News was created to help Service Directors and Managers make informed choices in running their service operations.

This White Paper was written by Kris Oldland, Editor-in-Chief, Field Service News.

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