BUSINESS INTELLIGENCE: THE COST OF LOST TIME WHITE PAPER



TABLE OF CONTENTS

Business Intelligence in the FSO	3
Baseline Data	3
Assumptions	4
Criteria	4
How Lost Time was defined	4
Unscheduled jobs	5
Job Movement and Manual Intervention	5
Overdue	.6
On Time Jobs	. 7
Late Appointments	. 7
Summary	8

BUSINESS INTELLIGENCE: THE COST OF LOST TIME

BUSINESS INTELLIGENCE IN THE FSO

ServiceStats, a business intelligence tool, facilitates the planning, forecasting and analysis required by field service organizations (FSOs) to ensure the right mix of skills and geographical coverage to meet regular and seasonal demands, as well as management of cost, margin and customer satisfaction metrics.

ServicePower recently used ServiceStats to analyse data from a leading security firm to demonstrate the potential cost savings through utilizing business intelligence in its FSO.

Time spent on tasks, SLA conformance and FTE cost (full time employee) were reviewed. Several specific instances of 'lost time' in the field service process were identified, and ServicePower subsequently extrapolated an annual impact to the business.

The largest overall impact to the business was 'lost time'. ServicePower estimated savings based on calculating the amount of unnecessary time spent on tasks or potential lost revenue due to late appointment arrivals.

BASELINE DATA

The data set analysed included the following statistics:

# Jobs scheduled per month	220,983
% of jobs in scheduled in areas where techs had little knowledge	19%
% of jobs manually moved	42%
Missed appointments (exception)	38%
Unscheduled appointments (exception)	35%
Overdue appointments (exception)	23%
% appointments late	4%
% contracts (SLA appointments) late	13%

ASSUMPTIONS

Assumptions were made for time utilization, the cost of late appointments and SLAs (contracts). These were used to calculate the ROI.

# of technicians	2,400
Average annual loaded cost per employee	\$70,000
# of hours per person year	1,920
Time spent on allocating an unscheduled job (in min):	0.50
Time spent moving an individual job (in min):	0.50
Time spent dealing with a single exception (in min):	1.00
Average cost of late appointments	\$1.00
Average cost of late contracts	\$1.00

CRITERIA

Below is the criteria used to determine the amount of jobs needed per group of technicians. This was a part of the analysis to ensure data validity to include:

# of minimum jobs needed per month for calculations	100
# of minimum jobs needed per week for calculations	25
Percentile for best in class	10%
% of teams with more than 100 completed jobs per month	98%
# of teams with over 100 completed jobs	263
# of teams utilized for Best in Class cutoffs	26

100 jobs were required to be completed per month by a team of technicians in order to be included in the data for analysis. Of all teams of technicians in the analysis, 263 teams within the organization met this cut off. "Best in Class" designation for the organization was defined as the top 10% of the teams. Therefore, cut off for all analysis was the 26th ranked team of the total 263, setting the benchmark metric to which all teams should aspire to.

HOW LOST TIME WAS DEFINED

In the data analyzed, several instances of lost time were identified that generally happened because key data was not set up completely or planned to address certain demands (based on geography, skills or seasonality) adequately.

In an optimized scheduling environment, automated scheduling software should be configured in such a way that all job, skill, geographical, and time requirements can be accommodated by field resources available to be scheduled. The software should automatically consider technician skills and geography, new incoming work skills and geography, as well as previously scheduled jobs as it creates an optimized appointment schedule.

UNSCHEDULED JOBS

In the dataset we reviewed, the technician data was not set up in such as way as to deliver the highest percentage of booked appointments. Therefore, we found that dispatchers spent unnecessary time manually scheduling jobs.

Time spent on manually scheduling a job (in min):	0.5
% of Jobs Manually Scheduling	31.8%
Best in Class Performers	15.5%
Amount of unneeded job scheduling	497,629
Amount of unneeded hours spent on job moves	4,147
Estimated FTE impact	2.2

To summarize, 31.8% of jobs failed to be automatically scheduled due to incomplete or inadequate data set up in the software and therefore were manually scheduled to a technician. Best in Class teams failed to automatically schedule 15.5% of jobs, marking the target for this organization. The higher number of unscheduled jobs roughly required 2.2 FTEs to manually handle them. *Optimized data set up could have saved this FSO \$151,189.*

JOB MOVEMENT AND MANUAL INTERVENTION

When data within the automated scheduling software is optimized, jobs should not have to be manually moved at all, but not in cases where an exceptional event occurs like a vehicle accident or technician sickness that severely impacts the scheduled jobs. Manual movement of jobs indicates an issue with data set up.

In the data reviewed, 42% of jobs were manually moved.

Time spent moving an individual job (in min):	0.5
% of Jobs Moved	42%
Best in Class Performers	26%
Amount of unneeded distinct jobs moved	427,334
Amount of unneeded hours spent on job moves	3,561
Estimated FTE impact	1.9

The distribution of jobs should be dispersed in such a way that there is a decreasing amount of jobs from the best known/understood to least known/understood geography. The percentage of Moved Jobs should be lowest (with almost none) in best known/understood geography and highest in the least known/understood geography.



In this situation, 65% of the jobs were scheduled in a very good area. Out of the jobs in the very good area, nearly 36% of those jobs manually moved. This indicates more effort than necessary moving jobs to and from resources.

1.9 FTEs were essentially wasted on unnecessarily manually moving jobs, *resulting in \$129,833 in costs.*

OVERDUE

Missed appointments indicate that a technician has not yet arrived at a scheduled appointment as reported by the mobile devices or GPS data. Dispatchers generally assess the situation and move the job or contact the customer to communicate expected timeframes.

Our analysis revealed:

% of jobs with overdue	23%
Best In Class	9%
# of unneeded missed appointments	375,539
Amount of unneeded hours spent on jeopardy jobs	6,259
Estimated FTE impact	3.3

Further analysis revealed that the distribution is also spread very wide, indicating that some data must be better configured.



The overdue appointments resulted in 3.3 FTEs required to manually deal with those jobs **costing \$228,192.**

ON TIME JOBS

On time job compliance is critical to ensuring and improving customer satisfaction, as well as meeting SLA (contract) commitments.

LATE APPOINTMENTS

For the purposes of analysis, \$1 is tracked against potential lost customers based on late appointment arrivals to estimate future lost revenue. We also tracked \$1 per late arrival against the cost of the contracted SLA times versus the probability that the customer will choose a different business partner in the future.

SLAs are defined as contract jobs, which require a specific response time.

Our analysis revealed an estimated \$60,612 in lost revenue due to late appointments:

% jobs are late	4.1%
Best In Class	1.8%
# of unneeded missed appointments	60,612

LATE SLAS (CONTRACT JOBS)

Our analysis revealed an estimated \$204,826 in lost revenue due to late arrivals for SLAs jobs:

% jobs that are late contracts	12.7%
Best In Class	5.0%
# of unneeded missed appointments 204,826	

SUMMARY

Running an FSO does not require a dart board, it requires intelligence and data.

The results of this particular analysis highlight critical points in the FSO scheduling process. Leading FSOs rely on data accuracy at each stage in the field service process, from the initial appointment to the customer's doorstep. Within this particular organization, the volume of jobs being manually moved resulted in \$705,926 in additional costs. Additionally, \$265,438 in estimated lost revenue resulted from late arrivals.



The ability of a scheduling and optimization software tools, like <u>ServiceScheduling</u>, to perform at its full potential directly relates to data quality and completeness configured by the FSO. If data is missing or simply isn't optimized then the results provide less productivity and efficiency than possible. Failure to adhere to optimized schedules, due to lateness, for instance, impacts the FSO's ability to meet its customer commitments. This results in lower customer satisfaction, increased costs and a potential loss in revenue.

Similar analysis can be applied to FSOs that do not use business intelligence currently. However, for FSOs that do use business intelligence as an integral part of their forecasting, planning and analysis process, it is critical to compare best in class performers against peers to define the critical components that lead to better performance. Business intelligence is not the big brother; it is a change mechanism that leads to improvement across the FSO.

Perhaps just as important as business intelligence in an FSO are <u>optimization</u> and <u>workforce planning</u> tools. Both are critical components of the FSO, because without these, the data available for business intelligence may be lacking.

In summary, FSOs must rely on business intelligence tools to plan and forecast the skills, geography and capacity needed to meet general and season demand. However, ongoing analysis is critical to ensuring the FSO continues to operate at optimum levels, meetings key business metrics, such that costs are maintained and revenue is optimized.

ServicePower offers a wide range of planning, forecasting and analysis tools, consulting services and scheduling products.

Contact ServicePower to find out how our Scheduling and Business Intelligence products help you decrease the cost of lost time. www.servicepower.com

About ServicePower

ServicePower Technologies Plc (AIM: SVR), is the only company that provides a complete global, mobile, field management platform enabling clients to mix labor channels, utilizing employed, contracted resources, and on demand resources while controlling all elements of the field service lifecycle, from planning, to execution to analysis. We offer a range of integrated software products and services that are used by some of the leading manufacturers, third party administration, insurance, and telecommunications companies, world wide.

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