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Viewpoint – ITAM Service Level Agreements – Don't Specify What You Can't Measure

A Management White Paper by:

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HIGHLIGHT

There appears to be plenty of debate and advice floating around the industry about what the accuracy of an ITAM repository should be – especially when defining SLAs for outsource engagements. Numbers ranging from 85% to 99% are often discussed and sometimes make their way into contracts. What appears lacking, however, is thought on how to actually measure for compliance.

DETAILS

There was a general rule of thumb that governed the writing of Air Force specifications for weapon system procurements – don't specify what you can't measure. Don't specify a mean time between failure (MTBF) of 1,000,000 hours for a component, for example. The reason - the state of the world in 114 years could not be reasonably predicted, it was probable that the weapon system itself would not be in the inventory then, and certainly no one on the procurement team would be alive to make sure the part had met its design specification. The result of making such a specification, therefore, did nothing but drive cost into the solution for no measurable gain. The same holds true in specifying SLAs for ITAM accuracy.

Before specifying an accuracy SLA for ITAM data, thought should be given as to how the SLA will be measured. It is tempting to simply declare the specification and let the vendor figure it out, but this has two probable outcomes:

1. The vendor adds cost to the solution in order to either hedge against penalties or make the SLA
2. The vendor ignores the SLA during negotiations, counting on the customer's inability to audit future measurements.

In the case of the first outcome, if the vendor senses risk that added cost will likely lose the bid, then more likely outcome #2 happens, Outcome #2, in turn, leads to potential customer satisfaction issues (from the vendor's perspective), and potential internal credibility issues (on the contact procurement/management team).

A real-world example

Consider an account that specified a 99% accuracy requirement that governed asset "static" data fields. (Static data fields are those elements that never change over the life of the asset and include such things as manufacturer, type, serial number, asset number, purchase price, purchase date, and vendor). In this case, a measurement methodology had been considered and specified in the contract. The methodology required monthly physical sampling of installed assets to compare

real-world information to the information held in the repository. The concept specified was to physically visit a statistically valid, representative random sample of assets monthly, and to perform a collection of data to be compared to the repository. When the vendor attempted to put the specified methodology into practice, however, the following issues immediately surfaced:

1. A physical audit of a random sample of machines meant probable interruption to users – especially when having to crawl behind units and/or turn them upside down to access the serial and model numbers. This carried with it the obvious risk of causing outages and/or even data loss due to having to move assets – especially when they were up and running.
2. Not all static fields could be validated by visiting the asset. Purchase date, vendor, and purchase price, for instance, could not be validated by auditing the asset. This required considering a multi-step audit approach.
3. The inherent accuracy of the monthly audit had not been considered. For example, if the monthly audit showed that a piece of information just collected did not match the repository value, then which item was in error? The repository item or the item collected during the monthly audit? The vendor was able to show mathematically that, if the inherent accuracy of the measurement methodology is 99%, then the best accuracy measure that can be produced is 99% - even if the repository is currently at 100% accuracy. Basically, the inherent inaccuracy of both the target and the control groups statistically combine, resulting in higher measured inaccuracy than really exists in either – and this factor must be taken into consideration when performing the measurement.

To compensate for issue #3, the vendor proposed a "calibration constant", to be arrived at by running two passes using the measurement methodology across the exact same random sampling of assets, then comparing one run to the other to determine the inherent inaccuracy of the measurement process. That inherent inaccuracy then became the calibration constant. For example, if one run compared to the other showed a "hit" rate of 95%, then the inherent inaccuracy of the measurement process would be 5%, which would then become the calibration constant. Therefore, the vendor would add the calibration constant to any measurements made using the calibrated methodology, and the adjusted value would be the official SLA compliance measurement. Therefore, if the measurement methodology yielded 94%, the 5% calibration constant would be added yielding an official measurement of 99%.

Obviously the customer was not comfortable with the proposal, but could not debate the soundness of the mathematical proof and ultimately agreed to the concept as long as the customer was allowed to perform the calibration.

The question becomes, had the precise measurement methodology been considered prior to specifying the SLA, would not it have been better to specify 90% or 95% - something that could reasonably be measured? After all, with the calibration constant, that is effectively what resulted – but with the now additional cost of annual methodology calibration – as well as the potential ongoing dispute over the concept in general.

Recommendations

1. Before specifying accuracy SLAs, create a data dictionary of all data elements you feel need to be tracked. Then, from that list, determine the ten elements that are critical to your business. Try to keep the list to no more than ten. Serial number will often be on that list, followed by asset number, manufacturer, product description, purchase date,

purchase price, purchase order, and cost center. For software, it will be publisher, title, version, license type, licenses purchased, purchase price, purchase date, purchase order, and cost center.

2. Review the list of critical fields and consider which of those fields you can reasonably hold the vendor accountable for, given the services the vendor will be performing. For example, if the vendor is going to be in the physical presence of the asset, certainly the vendor can be held accountable for manufacturer, serial number, product description, model, and asset type. Furthermore, the vendor can be held accountable for capturing location information. If the vendor is offering procurement services, then the vendor can be held accountable for purchase and warranty information.
3. For those fields for which the vendor cannot be reasonably held accountable, determine your strategy for ensuring accurate capture by your business and reporting to the vendor – the vendor can still be held accountable for recording the changes reported by you into the official repository of record. This is a critical step and is often overlooked. It is unreasonable to attempt to hold the vendor responsible for cost center, for example, as there is nothing on the asset that gives any clue as to the cost center it is in. The vendor has no choice but to ask the employee, and if the employee rarely knows their cost center – or if the employee is not aware that their asset is on loan from another cost center – the result will be far less than the expected or necessary accuracy, yet the vendor really cannot reasonably be held accountable for that inaccuracy. It does no good to write an SLA around one or more fields of information for which the vendor cannot reasonably be held accountable. The vendor will certainly find some "out" in the contract because there is no way they will otherwise be able to comply. It is far better to take a reasonable approach and to think through how that the important data – data for which you must retain accountability – will be captured.
4. Once you settle on the list of fields for which you will hold the vendor accountable through SLAs, then group those fields in order to set accuracy requirements. Here are some guidelines for accuracy expectation by field:
    a. Asset number – 100%, there should be no tolerance for inaccuracy of asset number
    b. Serial number – 99%
    c. Purchasing data and other "static" fields – 99% (if sourced through Advanced Shipping Notices from procurement vendors, 90% otherwise)
    d. Location information – 90%
    e. Cost center, department, employee – 85% (generally the vendor cannot reasonably be held accountable for these "business orientation" fields)

A Final Thought

The customer in the real-world example had several things right – based on their own previous experience with an outsource vendor. First, the customer did specify different SLAs for different classes of data – the 99% SLA only applied to static data. Second, the customer only specified SLAs on data elements for which they could reasonably hold their vendor accountable – they maintained accountability for cost center, department, division, and employee information. Finally, the customer understood the need for physical sampling to truly compare the real-world to the repository. The only meaningful accuracy measurement is between two independent sources – you must be able to compare one source to the other to discover differences. There are other ways to accomplish this – and many immediately think of using autodiscovery in lieu of physical visits. When laying out your critical fields, however, you must consider what

autodiscovery can be expected to give you. Most autodiscovery can only tell you about network-connected Wintel PCs. Autodiscovery can also generally only report on the technical content of the assets it sees – it continues to struggle to reliably report location, and "business orientation" data elements. If you are tracking more than PCs or if you feel it important to know the whereabouts of disconnected assets, then you may find that autodiscovery will not yield a meaningful measurement – one that supports your business needs. In the case of the real-world example, the vendor and the customer finally settled on comparing data forwarded electronically by vendors in the form of Advanced Shipping Notices (ASNs) to the repository. Since the data fields on the 99% accuracy measurement are static in nature, and since ASNs directly from the vendors' fulfillment systems were seen to be highly accurate, the SLA measurement evolved to making sure the vendor faithfully got the vendor-supplied data into the repository.

About the Author

Brett Husselbaugh has over 20 years of experience primarily in the IT industry. He has consulted with over 25 of the leading Fortune 500 companies on strategies for optimizing the IT investment. With experience as both a CIO and a CEO, Brett brings a unique and practical perspective to IT management, promoting the concept of operating as a "business within a business" to deliver measurable value. Brett is a proven business leader, an innovative thinker, a highly effective writer, and an enthusiastic and motivational public speaker.

Brett has experience as founder and CEO of TOBEK Technical Services, an IT Asset Management firm which he started with no outside investment and grew to 80 people in three years. He then positioned the firm and sold it to Inacom, a Fortune 500 company. Brett also has experience as a CIO, Managing Partner for Managed Services, VP of Strategic Development, VP of Services R&D, Principal Consultant, Industry Analyst, and Program Manager.

Brett has published several magazine articles as well as over 50 industry white and position papers. He has spoken on numerous occasions to audiences of senior and executive management teams on optimizing IT investment, developing strategy, and effective IT management.

Brett holds a Masters of Science in Electrical Engineering from the University of Texas at Arlington and a Bachelors of Science in Electrical Engineering from the University of Maryland at College Park. He is currently a member of American Mensa.

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