

# **The Use of Software Measurement in AD/AM Outsourcing**

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# The Background

- Application Development, Support and Maintenance outsourcing is big business
- It is also a complex business requiring complex governance processes to support the commercial interests of both parties
- Several outsourcing deals have gone very publicly wrong
- This leads to often contentious (and sometimes litigious) disagreements between outsourcer and client
- Disagreements arise from non-delivery of services to the levels demanded in contracts written without sufficient thought

# Alignment with Business

- No matter how good a deal you cut with a supplier – if that deal does not meet the needs of the wider business it is NOT a good deal
- Key to your creation of the RFP is keeping the business agenda at the top of YOUR agenda
- Stakeholder analysis, peer review and business sponsorship are all key to a successful

# Definition of Services

- Many disagreements arise because of the limited definition of the services to be delivered
- When developing your RFP, there is a direct correlation between the effort you expend and the quality of the resultant agreement
- Be clear what you expect of the service provider and what you will therefore assess performance on

# Definition of Services

- Establishing a metric in the RFP ensures all bidding service providers are aware of their obligations

Service Level Indicator	Function Points Delivered Per FTE Per Day
Metric Description	Application Development Productivity
Expected Performance	>3 FP/day/person
Frequency of Expected Performance Attainment	100% of the time
Performance Reporting Required	Monthly performance report of attainment
Method of calculating performance attainment	<i>Vendor to provide</i>
Source of data used to calculate frequency of attainment	<i>Vendor to provide</i>
Maturity of Service Level Indicator	Day 1 metric
Demonstrated Vendor Compliance	<i>Vendor to provide</i>

- Allow the service providers the flexibility to suggest refinements to the process

# Application Development Metrics

- Application Development is a complex area – requiring complex measurement of the many aspects of development projects
- Combinations of metrics that assess performance, cost and quality of service are essential to the effective management of an outsourcing agreement
- Governance of an application development outsourcing agreement is not well served by a single measurement to assess a service provider - but many are!

***“You have to very clearly define the quality factors and KPIs you’re going to use to manage the relationship.”***

**CIO, pharmaceutical company**

# Application Development Metrics - Productivity

- Why would you use productivity to assess an outsourcer?
- After all, you have paid a service provider to provide a *service*, so why do you care how productive the service provider is?
- The answer is to ensure that the service provider is delivering an efficient service
- (Maybe more efficient than a previous in-house service)
- And where the service provision is time and materials



# Application Development Metrics – Unit Cost

- Unit cost defines the cost efficiency of the service provider
- Cost is always at the top of the agenda – so it should always be considered as a mechanism for assessment
- However, as Compass have been telling organisations for many years, outsourcing will not necessarily reduce your costs over the lifetime of a deal!



# Application Development Metrics – Quality of Service

- The service provider needs to be able to demonstrate that the quality of service is in line with the charges incurred
- Quality can be assessed in terms of:
  - Delivery to resource/budget estimates
  - Delivery to schedule estimates
  - Delivery of functionality/scope
  - Defect density
- This is where service providers would often like organisations to assess them on

# Application development Metrics – Speed of Service

- Time taken to respond to a change request  
*or*
- Time taken to provide a quote
- Organisations looking to enhance the service delivered to their businesses may insist on a rapid turnaround on change requests and quotes to ensure a responsive service

# Application Support Metrics - Productivity

- The number of staff needed to support an amount of functionality
- or*
- The number of function points supported by each member of staff
- As with development, in a fixed price environment why do you need to know how many people are involved
- Except of course, too few staff now may mean problems in the future

# Application Support Metrics – Unit Cost

- The cost of delivering support for a given amount of functionality  
*or*
- The cost of resolving each incident  
*or*
- The cost of resolving each fault  
*or*
- The cost of delivering an application support service to each user

# Application Support Metrics – Speed of Service

- Availability of the application
  - But beware when drafting such a metric that you're measuring the availability of the application as opposed to the hardware/operating system/network and so on
- Critical fault resolution
- Major fault resolution
- Definitions of faults vary by organisation

# Application Support Service - Quality of Service

- Numbers of faults experienced given the functional size of the application
  - Needs to be tempered by the age of the application, technology, number of users and so on
- Successful change implementation, that is the percentage of changes implemented without incident or resulting problems
  - Requires mature change tracking (and fault tracking) skills

# Outsourcing Software Measurement in Practice

- The services that are outsourced must be clearly defined
- The measures employed to assess the value of that service provision must be in line with the needs of the business
- The metrics themselves must take into account the environment in which the services are delivered:
  - Market factors, such as availability and price of specialised skills required to perform the services, and the skills mix required by the contract scope must also be considered.
  - The effect of industry specific characteristics should also be included in the OVA.



# Outsourcing Software Measurement in Practice

- Measurement is a key component of outsourcing agreements
- All service providers provide information to their customers on a regular basis
- The more mature service providers consider measurement a key part of their service delivery

CSC Balanced Scorecard Vital Signs Report

Overall Scoring in Grade Conversion Scale						Overall Scoring	0.594	
A >= 9	B >= .82 &lt; .90	C >= .70 &lt; .8	D >= .5 &lt; .7	F < .5	Overall Grade	B		

Performance	Metric	Service Level	Reporting Frequency	Target	Actual	Pass/Fail	Weighting Factor	Scaled Score	Weighted Score	Adjusted Weighting	Adjusted Score	
<b>Development &amp; Enhancement - Measures of Discretionary Work</b>												
	On Time Delivery - Projects > 200 hours	N/A	Monthly (rolling 6)	Y	90%	100.00%	Pass	14.50%	1.000	0.1450	15.25%	0.1530
	On Budget Delivery - Projects > 200 hours	Monthly	Monthly (rolling 6)	Y	90%	100.00%	Pass	14.50%	1.000	0.1450	15.25%	0.1530
	Development & Enhancement productivity - Projects > 200 hours	Monthly	Monthly	N	TBD	N/A	N/A	5.00%	N/A	N/A	N/A	N/A
<b>Category Score</b>								94%	2.000	0.2000	90.53%	0.9169
<b>Maintenance - Measures of Non-Discretionary Work</b>												
	Severity1 Problem Resolution Time	4 Hours	Monthly	Y	90.00%	100.00%	Pass	10.00%	1.000	0.1000	10.53%	0.1063
	Severity2 Problem Resolution Time	8 Hours	Monthly	Y	80.00%	0.00%	Pass	10.00%	1.000	0.1000	10.53%	0.1063
	Application Availability	N/A	Monthly	Y	98.00%	99.75%	Pass	12.50%	0.988	0.1210	13.16%	0.1274
	Quality of Production Code	Monthly	Monthly	Y	TSD	23.5	Pass	7.00%	1.000	0.0700	7.97%	0.0737
<b>Category Score</b>								40%	3.988	0.2910	41.58%	0.4116
<b>Client Satisfaction - Measures of End Customer Satisfaction</b>												
	Client Satisfaction - APAR	N/A	Quarterly	Y	3.0	2.0	Fail	1.00%	0.975	0.0098	1.09%	0.0099
	Project Customer Satisfaction	Monthly	Monthly (rolling 6)	Y	3.0	3.0	Pass	3.00%	0.750	0.0225	3.16%	0.0237
	Task Customer Satisfaction	N/A	Monthly	Y	3.0	3.8	Pass	5.00%	0.845	0.0422	5.29%	0.0445
<b>Category Score</b>								0.00%	1.970	0.0685	9.47%	0.0721
<b>Bringing Future Value - Measures of Investments in Employees</b>												
	SECMM Assessment Level 2	N/A	Monthly	Y	1.00	1.04	Pass	6.25%	0.800	0.0500	8.59%	0.0528
	SECMM Assessment Level 3	N/A	Monthly	Y	1.00	1.04	Pass	6.25%	0.800	0.0500	8.59%	0.0528
<b>Category Score</b>								19%	1.800	0.1800	18.16%	0.1869

# Outsourcing Software Measurement in Practice

- Mature service providers have developed principles of benchmarking for outsourcing agreements
- These principles identify the need for measurement
- They often identify the mechanisms by which the results can be used by customer and service provider alike
- The aim is always to demonstrate value and frame initiatives for improvements in delivery

# The Compass Approach to Outsource Measurement

- Compass provides Outsourcing Value Analysis (OVA) services to customers and service providers
- OVA evaluates whether the charges and service quality provided under a particular contract have remained competitive over time
- As part of its commitment to providing the highest quality services, Compass has formulated the following principles that underpin its OVA methodology

# The Compass OVA Quality Principles

- Transparency

No OVA report is complete or credible unless the data, methodologies, estimates, decisions and judgments used by Compass in the analysis are disclosed and fully explained to the client and the service provider.

- Specificity

Both the services to be benchmarked and the comparative peer data will be examined at a fine level of granularity. Comparisons of pricing across broad categories of services are generally invalid.

- Commercial price and cost data

Compass will only use validated actual cost or price data in OVAs because experience demonstrates that comparative peer data generated from compilations of client data gathered through surveys and self assessments are unsuitable for OVAs.

# The Compass OVA Quality Principles

- Number of peers

OVA's will be based on comparative data from a reasonable minimum number (e.g., 4-6) of the most similar peers, selected based upon key operational and contract criteria.

- Similarity of peers

All comparative data must be based on peers within a reasonable range of key operational and contract criteria.

- Normalisation

Normalisation must capture accurately the incremental difference in what services providers would charge due to each specific difference in services characteristics.

- Age of peer data

Unless specified in the benchmarking clause, comparative peer data must be current, e.g. not more than 18 months old from the end of the OVA measurement period.

# The Compass OVA Quality Principles

- Locale of peer data


Comparative data must be based on peer services performed in the same locale or a locale with substantially similar services costs or pricing.

- Range of Results and Tolerances:

OVA final results will be expressed as a range of prices for comparable peers. Compass does this so that customers will gain as clear an understanding as possible as to level of reliability of the benchmarking results.

- Documentation

All methodologies used in an OVA will be fully documented.



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## Questions