MANAGING THE PARTNERSHIP BETWEEN SERVICE PROVIDER AND CLIENT FOR MAXIMUM RESULTS

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Summary: This paper summarises recent experiences in developing effective working relationships between clients and the contracted maintenance service providers. The work is drawn across a range of industries including manufacturing, utilities and facilities, with remarkably similar issues being common to all. The emphasis on improvement requires three key attributes in the day-to-day working relationship: a vision for improvement, resource plans to achieve the goals set, and clear measurements that mark progress. It is also necessary to appreciate that in this arrangement, the client organisation has a clear responsibility to contribute, as does the contractor: success is only possible through a well understood, clearly measured teaming between the organisations.

1. INTRODUCTION

The contemporary, best-practice arrangement for the out-sourcing of services is where the client organisation seeks a partnering arrangement in which it relies upon the advice, skill and judgement of the contractor in the planning and performance of the contractors activities. In asset management, which is the author's area of expertise and from which the case study material is drawn, the range of services can incorporate the planning and management of reactive works, minor building works, capital procurements, detailed maintenance programs, developing and implementing continuous improvement strategies, and the performance-based management of sub-contractors and special projects. In such work the contractor will implement and maintain procedures and systems for the management, planning and control of all works.

An effective performance-based service contract seeks to be more than a task specific, closely defined scope of works. It seeks continuous improvement on the part of the contractor, who in turn will be a key member of the client's all-of-business continuous improvement. Further, by sharing risk through the a well measured and well understood contractual mechanism, the contractor is brought into a partnership arrangement where it is in both parties' mutual interests to reduce unforeseen work and deliver a steady, budgeted expenditure on services.

The best Australian organisations who deploy contracted services have demonstrated that they are "aware" clients such that they have meticulous and comprehensive knowledge of the extent of the assets under their care, plus an appreciation of the operational and inherent risks associated with the scope of works. As such, in their tender documents contracting companies have to devise means by which to deliver innovation through the financial model, the works planning system, IT support systems, support technologies

such as condition monitoring, further alliances with specialist experts and providers, one-stop shops for customer contact such as national call centers (with the equivalent depending on size of contract) and the total approach or fundamental intent of the contract.

Supporting the short and long-term strategy necessary to achieve both the goals (or intent) and the requirements (or contractual specification of works) of the contract incorporates the following:

1. The means to analyse expenditure that will identify opportunities for feasible savings and performance enhancement
2. The ability to model projected maintenance costs on the basis of historical performance, risk profile of the site and imposed reactive work. This will allow the future costs of providing services to be reduced through applying the most appropriate type of strategy, whether this be maintenance, capital development, sub-contractor management, labour hire or other
3. The ability to improve the planning of services based on knowledge of the condition of assets (or equivalent to the environment in which the work is to be conducted) and measuring the outcomes of the work
4. An improved format for services reporting and monitoring of outcomes
5. Development of the skills of the services team as well as the client team to improve their capability in diagnostics, decision-making and corrective action

The commitment and success in achieving these five principles will distinguish both a service provider and the beneficiaries of such a contract. The beneficiaries include both the client organisation and the ultimate customers of the client organisation.

This paper considers these principles in the following areas: range of service, achieving the client's requirements, measuring and reporting, and performance-based contracting models. The material contained in this paper represents for many of Australia's leading service supplier what really has become a standard way of conducting business. The imperatives on these organisations, operating within a crowded and increasingly aware market, are driven by distinguishing their services from their competitors. This can be achieved through niche expertise (such as by specialist facility maintainers) or through investment in innovative business systems. The real peril that faces both the contracting and the client community is whether there is sufficient overhead funding to allow investment in the service providers' people for them to acquire and implement the advanced processes and methods their company has established.

2. CLIENT'S REQUIREMENTS

A suggested list of priorities for client's requirements is listed below in order of significance, commencing with most significant. The issues have been extrapolated from the primarily maintenance background of the author, based on observations of service agreements in a number of sectors.

1. Development of work systems – formalise how work is raised, region to area service agreements, handling of emergencies, assurance of coverage of services to meet client priorities, point of contact for the client team
2. Condition and risk assessments – develop a baseline, extend current plant surveys or elements thereof, assess operating functionality of the assets or systems being serviced, identification of major threats to business, safety or environment, establishing priorities on the basis of risk issues
3. Reporting – develop simple work performance reports such as total work, work in backlog and compliance to standards (including statutory such as OH&S)
4. Procedures – develop these within the context of normal work, and refine list of procedures to write to focus on high risk items as these become identified – this is a key area whereby continuous improvement of the contractor's people is anticipated
5. Outcomes analysis - downtime logging, reliability assessment, stock out, customer analysis, short falls analysis
6. Competency – continuous training, use of experienced and trained people, work force development, ongoing training for specialists, establish training profiles, training needs for front line work force

Why are items 1 and 2 held at such a high level of significance? There are two principal reasons – firstly, it is recognised that success in these items will lead to success in items listed lower down in the order of priorities. Secondly, the introduction of a service provider is taken as an opportunity for a step change in improvement in business systems. As a consequence, there should be broad level support to allow the contractor to drive through higher priority improvements. Having said this, an "aware" client will retain a strong focus on successes in procedures, outcomes and people development as evidence of tangibles in continuous improvement.

2.1 Criteria for Services

The elements of best practice provision of services, with a strong emphasis in asset management, are tabulated below along with examples of practices to be adopted to assure continuous improvement in maintenance services. The reader who does not come from a maintenance background can use this example to assess their criteria for testing claims made by contractors, bidding for the provision of services. How well does their criteria match those listed below and what is the clarity of answer provided back from the contracting community?

Item	Element – Maintenance Services Example
Clear business goals and expectations of the services, which is reflected in policy	▪ Cohesive approach across the company, with a common practices for work procedures, risk assessment, use of information systems.

Item	Element – Maintenance Services Example
documents relevant to all groups and levels within the organisation	▪ Company level policy statements on maintenance targets, which may be converted into working objectives for area level managers. These are reviewed on an annual basis and alignment between performance and business goals is checked.
Performance measures are reported at senior levels, technical levels and to general staff	▪ Cost tracking – budget to actual. ▪ Work response tracking – responsiveness checked against policy requirements. ▪ Work type analysis – proactive to active work content is checked on a system by system basis in order to test effectiveness of maintenance strategies. ▪ Backlog measurement is in all outstanding work, rather than work past due date. This is managed for criticality with high critical work not staying long in backlog. ▪ Focus on reporting performance to general staff. ▪ Reporting from the computerised maintenance management systems (CMMS) has received a high priority, and there are preliminary moves to review and revise the overall performance reports. The performance measures are reported on a monthly basis and formally reviewed with staff on a quarterly basis. Accuracy of the content of CMMS should be checked monthly with up to 5% of work orders audited.
Outcomes analysis is used to measure effectiveness of services plus identify forward threats to the business. Data is used in cost-benefit justification of work	▪ Tracking of absolute losses of plant, supported by analysis to set priorities for improvement. ▪ Tracking partial loss of availability, using production reporting systems but with the same descriptions of plant as used in the CMMS. ▪ Reporting on work allocations to equipment types. This is a designated responsibility for a team member who is checking accountability of maintenance effort for achieving production goals.
Work management systems are clearly specified as organisation policy. This specifies work types, how such work is to be raised and who has responsibility for planning, execution and quality check	▪ Work types are clearly and consistently identified. ▪ Corporate policy on work management is well understood. ▪ Elements of local asset management policy identified, and then supported by company policy documents. ▪ Planning is mature and well supported by technically competent people. ▪ Quality audit of work completed on a regular basis. ▪ Reliance placed on high quality trades in some instances

Item	Element – Maintenance Services Example
	balanced by good procedural base.
Risk profiles are extensively used in development plans, services priority ranking and reporting on work performance	▪ Competency in risk management and high organisational awareness of the techniques. ▪ Capability to translate risk findings into criticality scores for major maintenance tasks. These tasks are treated as issues in a form of a risk register with criteria associated with them as to their criticality to be completed – the criteria is based on standard risk measurements. ▪ Consistent implementation of risk analysis across the organisation, with work planned on a formal, tested basis, and supported by field input on a continuing basis. It is important that appropriate criticality rankings of plant equipment are established within CMMS and are subsequently used as part of the analysis of historical work and reliability trends. Task criticalities are also assigned on a day-to-day basis by the planner scheduler. A combination of asset criticality and task criticality can be effectively used to measure risk in the plant at any one time.
Work tracking is meticulous, with minimum amortisation of work	▪ Significant maintenance tasks are tracked in the computerised maintenance management system. ▪ Minor tasks are tracked, and there is some recognition that high frequency, small tasks will need to be reviewed for efficiency of work. ▪ Cost accountability supports meticulous work tracking across the organisation. A field system for easily capturing minor tasks, such as the use of hand-helds integrated to the CMMS, is put in place. Hand held computers, either Palm or Windows CE devices, can be set up to operate with CMMS to allow transfer of data between the main computer and the field device.
Stock and inventory management	▪ Inventory holdings are rationalised using a risk-based paradigm, which is applied in a rigorous and formal manner. ▪ Turnover frequencies of stock items are monitored. ▪ Critical spares are shared across relevant sites, and information is to hand to ensure availability as well as minimum holdings. ▪ Rotables policy is developed, with rotables pool identified across sites. Stock turnover is reported on a monthly basis and stock takes can be taken either six monthly or annually. Stores optimisation is possible with smart algorithms attached to CMMS.
Failure analysis and root cause analysis is applied in the case of all	▪ High reliance on reactive maintenance and pressures on fast repair does not impede this process.

Item	Element – Maintenance Services Example
in the case of all breakdowns and failures	▪ Lack of scientific skills in the regions such as chemists, metallurgists, condition monitoring technicians and so on is addressed by strategic relationships. This is also addressed in part by awareness raising and limited training, plus the adoption of a formal company system for inspection data management. The maturing of the client's capability in root cause failure analysis is possible under the long term relationship with the contractor. This will combine use of CMMS data and failure analysis principles.

2.2 Information Systems Requirements

A point of contact solution for a widely distributed client, such as a national organisation, is based on utilising a call centre whereby a single, 24-hour available phone number is available for use by a wide range of client (as sometimes contractor) personnel. There are two approaches to the call centre strategy:

- Non-expert support – the call is taken, logged and passed on to knowledgeable personnel who then conduct follow-up. The advantages are that commercial call centres can be used with reduced overhead costs but that the details of the problem are not guaranteed to be sufficient to allow a timely solution to be achieved.
- Expert support – the call is taken, logged and immediately reviewed by a knowledgeable person, who is not necessarily a domain expert but can understand the issues involved. This type of call centre allows rapid solution of perhaps 80% of the common type of calls received and swift dispatch to the right resource of the remainder, which are more complex. The problems with this type of call centre are that they are more expensive in overhead and sometimes do not live up to the marketing claims regarding their capabilities.

The centre piece of the information system is the works management system, services management system, enterprise resource management system, computerised maintenance management system (CMMS) or whatever equivalent term the reader's organisation cares to use. In this paper we have consistently referred to the CMMS since the author is most familiar with this technology for managing costs and labour.

The subject of a CMMS is worth a paper in its own right, and in the context of the current subject, we are more focused on the output from such systems. It is common for a client to link a services contract with the implementation and full exploitation of a legacy system, which the earlier discipline of the internal resources had left under-populated or poorly used. It is therefore imperative for a contractor to commence the flow of reporting from the system to engage the client's confidence that a total solution with the promise of continuous improvement is being established.

Sample reports that have been used are shown below. These are exhibits drawn from in-service CMMS databases using third party software, which is now commonly available. Competency in these systems is increasingly seen as an indicator of a quality contractor or service provider.

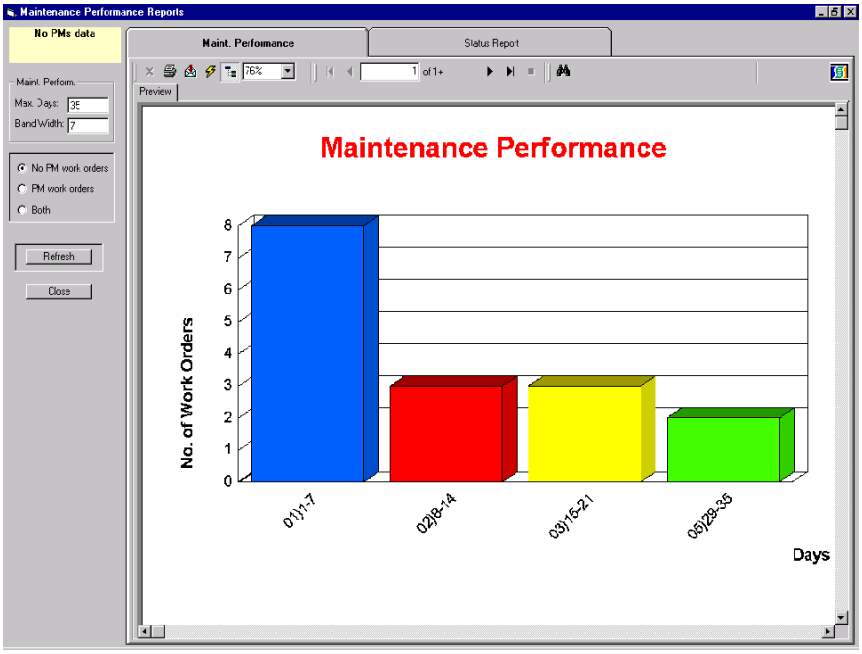

Figure 2.1 Maintenance Performance Report.

The maintenance performance report presents the number of outstanding work orders in different time period bands. Figure 2.1 shows that there are 8 outstanding work orders issued in period between last 1 to 7 days, 3 outstanding job in period between last 8 to 14 days, and so on. In the interactive system exhibited here, users can change the bandwidth and the maintenance work type.

2.3 Core Service Processes

The following processes are critical in assuring business processes are well supported:

Procedures update

> This covers how the procedures base will be managed, how they will be issued and what happens with deferred items. An important part (as indicated above) refers to how procedures are to be generated for new circumstances. The example for maintenance is the management of the preventative maintenance system and updating schedules of planned work when new equipment is purchased in.

Work management process:

> This process describes what happens when a work order is released, how the services staff will handle it and how it will be acquitted. The handling of backlog is a crucial issue to ensure that the work schedule remains under control.

Urgent call-out management process

> There are a number of ways in which an urgent call-out can be raised. At some stage the information has to be passed to a single point of contact to enable

allocation of the resources and to action the job to higher levels, depending on its criticality.

Documentation control and update management

The services team is expected to manage the relevant manuals, drawings and technical information associated with the equipment or systems under their care. A process is required to receive and receipt documentation, manage its whereabouts using a log process and to update or revise the information as necessary.

Stores and services procurement process

Stores and services may purchased under a CMMS or services system work order number to assist in consolidating services costs, or may be purchased and separately invoiced to the client and later reconciled. In either case a process is required to ensure internal control of expenditure.

Inventory management process

Once an item is procured and received, it should pass through a stores system to ensure that history is captured of its holding time and to which job it is allocated.

Financial management and budget process

Obviously this is a key process for a commercial entity. Management will require seeing detailed budgets of how money will be spent, including labour, material and external resources. In the case of periodic maintenance contractors, the client will also need to agree to the proposed method for invoicing including the frequency and timing of claims.

Client review and improvement process

As part of the quality process of the maintenance team, it is reasonable to expect that a service level agreement with the client operations team will establish the expected level of service is being provided. This process may also take on greater significance if the client team binds the services team to an obligation for satisfactory reviews. This process takes on increased significance when subsequently applied to the actual contract, whereby such contracts move to a performance-based model.

Quality assurance management and supervisory process

This involves the auditing process for procedures and the means by which the services team will satisfy themselves (and the client) that they are providing the requisite level of service.

3. MEASURING AND REPORTING

In this section, the case study material is drawn from the author's immediate experience in contract maintenance. The techniques are equally valid with an in-house service provider. The case study is a medium sized manufacturing plant with an experienced maintenance provider in place. The factory is experiencing a downturn in total

production due to industry sector problems. The challenge is for the contractor to justify continuing services to the site, even though to date they have provided a sterling job.

The first parameter to assess is workload. In Figure 3.1 the current level of backlog is plotted.

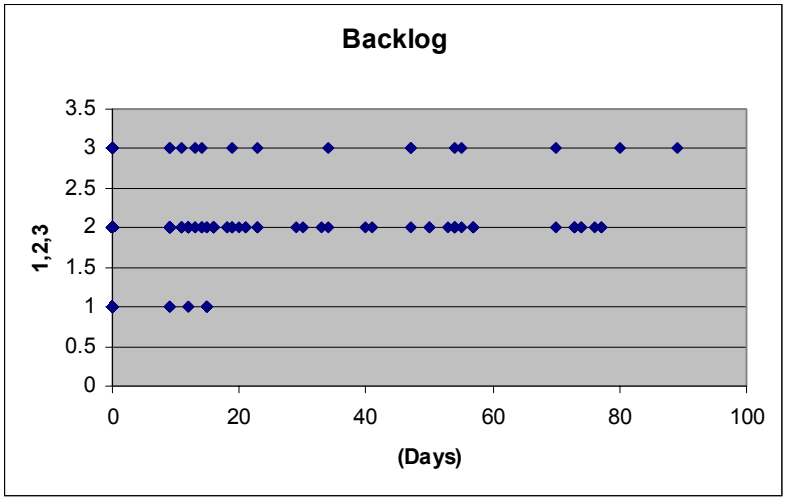

Figure 3.1 Backlog analysis

Each point in Figure 3.1 represents an outstanding work order as at the time of an audit. In this case the highest criticality is awarded a "1", whereas low criticality jobs are awarded a "3". There are many ways in which criticality of work is presented by an organisation. What we are seeing in this report is:

1. High criticality jobs are being completed within two working weeks
2. Low criticality jobs are being delayed until optimum times for access become available, say an Easter shut.

The inference is that the maintenance strategy has been adjusted to align with a slow down that was observed at the time in the factory performance. This relates to two factors: the machinery is not so stressed that the outstanding work orders represent potential failures, and secondly, due to the current reduced manning by the contractor, the work load is being optimised so that critical tasks are completed despite the reduced number of people.

A three-month snap shot of work taken from the CMMS indicated the following statistics:

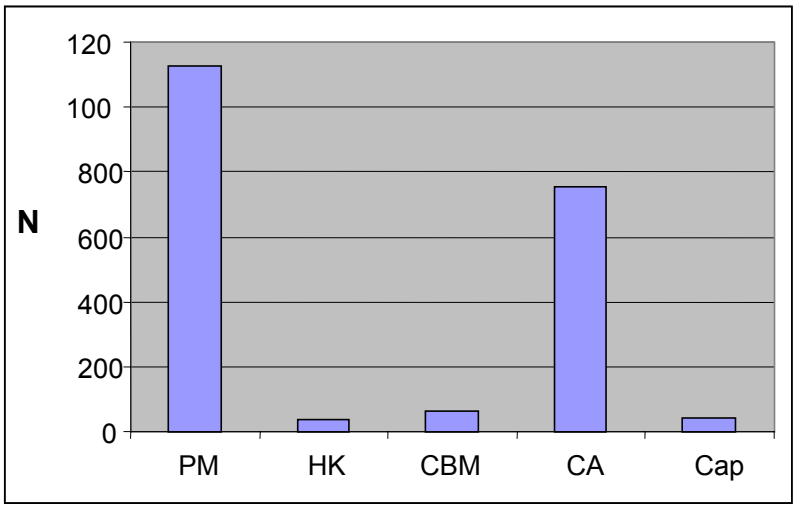

Figure 3.2 Number of tasks

N is the number of work orders analysed in the control period. PM refers to preventative maintenance work, CBM to condition-based maintenance, CA to corrective action. HK and Cap are minor categories of work.

The following points are relevant to the particular case study being discussed:

1. Very few jobs of the category CBM are being driven by the large number of PM tasks. This means that there is a high likelihood that plant is being over-inspected, and the frequency of inspections can be backed off.
2. The high number of CA jobs did not correlate with forced plant downtime, which was quite low. This indicates that one of two things is occurring: selective improvements are being made that in the current climate, add little value to the total output of the factory, or secondly, production personnel are requesting corrective actions that again, do not specifically add to increasing plant output.

A key focus for services improvement is to reduce the quantity of CA work. This work ensures that the plant maintains its current levels of capability or includes minor modification work.

It is well understood that breakdowns are to be avoided, noting that Breakdown jobs are not included in the CA category. However CA work also represent inefficiencies that include unnecessary cost:

- Travel time including time spent in setting up the job and time spent in determining what spare parts are required and tools needed.
- Individual overheads in ordering spare parts and organising one-off tasks.
- Time spent in access to the equipment, which is not in part defrayed to other similar jobs requiring the same levels of access.

These time elements lead to accumulations in man-hours that often avoided by bundling work into minor projects when an entire line or process is made available for working through a range of minor repairs.

The CA tasks in the sample set provided for this analysis were studied. They were divided into four groups:

	%work in CA category
Repair, replace, overhaul, fix fault	77
Operations support, eg start-ups	2
Inspect and clean	6
Modify or install	16

The process by which the CA category work can be reduced involves the following:

1. Identify high critical work (divided between immediate and must be completed within the short term using the current task criticality rankings) that must be completed within the ongoing maintenance plan.
2. Identify work that may be left to the current planned outage periods.
3. Identify work that the contractor would recommend be handled by either:
    - Review again after a nominated period, given the cost down pressures on maintenance spending.
    - Lumped as low critical minor project work that will be completed by the maintenance team, but at an opportune time that will incur less man hours than if currently worked on similar to the tasks covered in item 1 above.

The intent of this process is to reduce the man hours spent in the CA category, not the actual number of tasks. This savings will be achieved by:

- Delaying release of some work to nominated and budgeted overhaul periods.
- Delaying some work as not cost effective for the factory at present.
- Undertaking a package of work when the line can be released for extended periods of time during Day shift hours, exploiting the fact that the factory is running at less than full production.

There are three key issues to be considered here:

1. With the optimisation of manning, the backlog of low criticality tasks will increase and the residual risk in this backlog will need to be managed. An example is Figure 3.1 where high-risk work orders are completed within two weeks and low risk items remain in back log until they can be completed efficiently as part of an overhaul.
2. Short overhaul plans need to be prepared so that total man-hours spent in CA category work are reduced.
3. The repair of some items will wait until either the item warrants replacement or a complete rebuild. By this it is meant that a number of smaller tasks for minor fixes

will be replaced by one off tasks with complete rebuild. This means that where the criticality is low, the plant condition will deteriorate until such time a rebuild is warranted. It is up to the contractor site manager to ensure that this strategy does not impact on production reliability.

3.1 Reactive work and manning considerations

A primary reason for contracting out services such as maintenance is flexible manning, as discussed above. A frequent area where manning can be optimised is where non-value adding work in reactive mode consumes labour hours. The brief example here is a process used to demonstrate to a client that work being released to the contractor needs to be understood by client team members, so as to avoid unnecessary expenditure and allow the contractor to man down.

In this case the factory stoppages data was analysed. This snapshot was intended to capture a period of activity when maintenance requirements were expected to be high and with machine performance known to be at a low level.

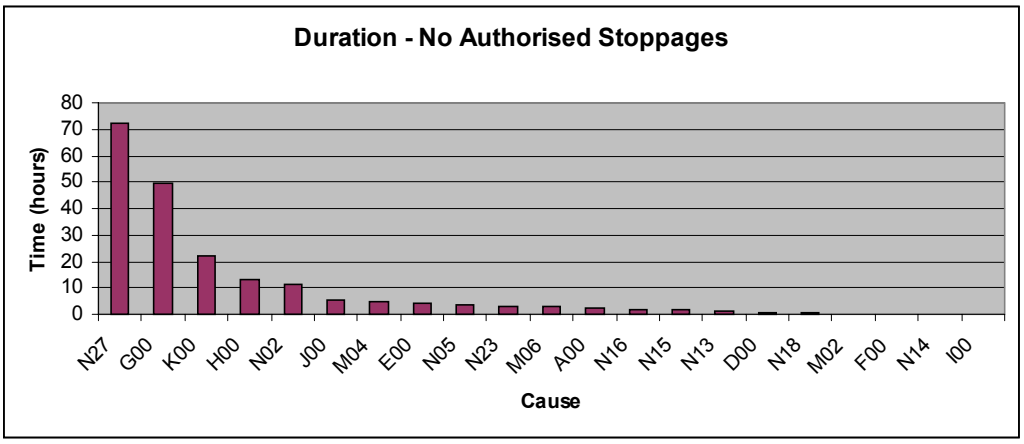

Figure 3.3 Time lost – Authorised stoppages removed

Along the x-axis are listed codes for stoppages of the factory equipment. N27 is the code for planned cleaning downtime. The y-axis is the cumulative hours lost in machine stoppages, which is a measure of output from the maintenance effort combined with the impact of production limitations. In the case of Figure 3.3 the component due to authorised stoppages as production was not required has been removed. Note that this is a facility which cannot sell all that it can make, which is a completely different style of contract to servicing a facility that can sell everything it makes, or is required for 24 hour operations.

The first four codes represent approximately 80% of the time lost, and of these the first category (planned cleaning) is also related to scheduled down days. As a consequence, the time lost due to problems or forced down time was found to represent 55% of the lost time not associated with authorised stoppages.

From the above figures, in this case study the proportion of likely time spent in addressing plant time lost was calculated to be about 20% of the time. For the purposes of resource planning (using flexible manning considerations) we can play safe and say that perhaps 50% of the CA work is not associated with getting the plant working from a problem or stop. The implication here is that there is considerable scope to look carefully at the CA work and prevent future tasks that consume man-hours but are not adding to the factory output.

A reasonable target for reducing CA man-hours in this case study would correlate to around one man-year. Hence on the analysis presented here, albeit in a fuller form, the contractor would be planning to accomplish the same current levels of work with one less member on the team. However to achieve this, the contractor also has to work with the client so that less non-value adding CA work is issued. Invariably this is a client-based problem, as client team leaders initiate work that they do not understand does not provide value to the client's business.

4. PERFORMANCE-BASED CONTRACTING MODELS

Typically each month a fee is charged for the contractor's services within a performance-based contract model. There are a number of key principles in such a contract, illustrated in the figure below.

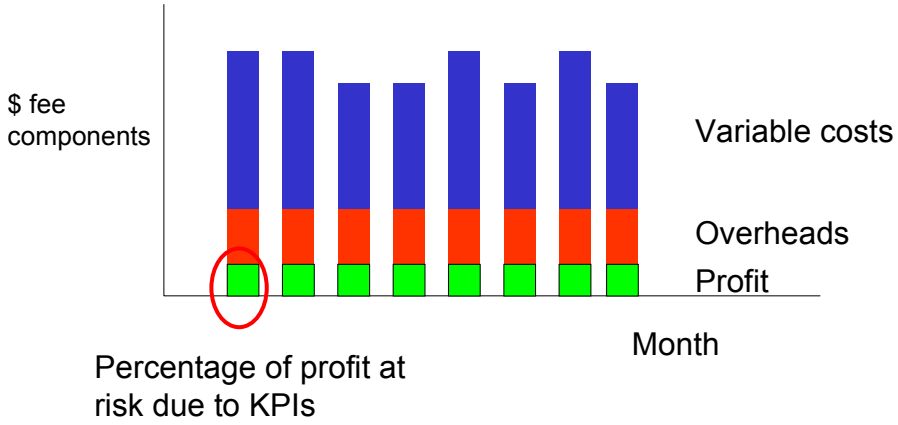

Figure 4.1 Performance-based Model

The fee is split between a fixed component and a variable component. The fixed component is composed of a declared profit and the cost of overheads for the project. Overheads include the contract management and administration, corporate overheads, and equipment and tools. By separating out this component, the actual labour rate for work done in the contract is relatively low. The profit is also separated to allow a portion of it, the amount of which is to be negotiated in final discussions, to be placed at risk subject to performance in the contract. This performance is measured and reported by Key Performance Indicators (KPIs), discussed below.

The primary intent of this model is to separate overheads and profits from actual work done. Hence there is clearly no incentive for the contractor to extend work, and in fact

the contractor will be penalised by excessive or over-budgeted work through reduction in the KPIs. Examples of work to be avoided include:

- Non-operator induced breakdowns such as equipment wear-out
- Excessive and inefficient corrective maintenance
- Overruns in major maintenance projects due to lack of knowledge of the condition of the equipment

Hence the variable cost component is the summation of labour, material and services/third party costs associated with individual work orders, and which is at direct cost to the contractor. This is a variable amount that is tracked to budgets set by the contractor but will vary due to numbers of breakdowns and corrective work.

The contractor will specifically seek the following:

- Agreed operator-induced breakdowns will be identified and not included in the calculations of the KPIs, since this is an unfair penalty on the contractor's profit
- Greater than budgeted requirements on manpower required by the client's request for expedited return to service of breakdowns will be charged at cost, with no profit element to the contractor. Where manpower requirements remain within budget, there is no additional charge to the client

One of the benefits of this approach is that the client can budget for a monthly maintenance cost with reasonable assurance, just allowing for a contingency when circumstances require an immediate injection of a flexible work force, which will be provided at cost. Hence the client will not be subject to continuing requests for payments over and above the agreed contract amount, but where isolated requests do occur, they will be accompanied by the prior approval issued by the client for the provision of flexible manning.

4.1 Key Performance Indicators

The KPIs for a performance-based contract need to be tailored for a site, be sufficiently flexible to allow goal setting for the contractor's team, and ensure that the intent of the contract is met. This is critical in ensuring a long-term relationship where contracts are extended over time and with consistent excellent service into partnering agreements.

Typically the KPIs are gathered into Key Result Areas, four of the more of common of which are listed below:

1. Safety and Environment
2. Work to Plan
3. Cost Down
4. Quality

Safety and Environment ensures statutory compliance and protects the client's commercial risks in these key areas. The KPI set is a mix of lead and lag indicators: those that measure that systems are in place to prevent problems and those that measure performance.

Lead indicators would include provision of site-specific safety and environment plans, the provision of audits and continuous improvement. Lag indicators include Loss Time Incidents (LTIs), Medical Response Incidents (MRI's – visits to the nurse), environmental breaches and unsatisfactory scores in periodic audits.

Given that very high percentages of work will be planned and then scheduled in advance, it is important that the success of this intent is measured. This becomes a lead indicator to determine that a site has its maintenance in control, there are few surprises and the work management system established by the contractor is effective.

The Work to Plan concept has three attributes:

- Effective and proactive work needs to be planned and then scheduled in advanced
- Compliance to the schedule is necessary to ensure proactive work is undertaken and benefits ensue
- Measurement of Work to Plan will drive better planning, efficient work practices and correct resources used in understanding equipment needs

Work to Plan is seen as a lead indicator of good service provider practices that will assist in assuring appropriate work outcomes and ensure value for money in maintenance expenditure.

Cost Down is a commitment by the contractor to drive the budget cost down. In this area the contractor is risking a portion of its profit to match a performance outcome. A fee that matches budget will not achieve 100% of the KPI. Obviously cost down cannot be sustained indefinitely and this KPI will have to be revised to ensure against cost overruns once cost savings have been achieved for client.

Quality during the contract establishment phase when services systems are being set up involves both checking feedback from the client's front line supervisors and monitoring the rollout of the contractor's systems as committed. In time however, this KPI can revert to solely monitoring acceptability of the contractor's performance plus avoiding non-compliance and rework.

A sample set of KPIs plus how they can be measured is provided below. But these are provided by way of example only, with KPIs in reality to be established as appropriate for a specific site.

4.2 Sample KPI Drafting

SAFETY – 30% of profit

Safety documentation	5%
Loss Time Injury	45%
Inspection and Test Plan	20%
Environmental compliance as audited	15%
Environmental breaches	15%

PLANNING CONFORMANCE – 20% of profit

Quarterly schedule established	10%
Monthly schedule established	20%
Correct scheduling = {Compliance to work to plan plus Timely response to emergency and urgent work}	70%

The Correct scheduling KPI is calculated as follows:

Compliance to work to plan = % monthly hours spent in work to plan

Timely response to emergency and urgent work = % η x monthly hours spent in emergency and urgent work

η is calculated as follows:

1.0	Excellent response with on time service and optimum manning
0.8	Good level of service but over manned OR Adequate level of service with some difficulties
0.5	Unsatisfactory level of service OR Significant over manning

η is applied by the contract supervisor for the monthly performance where emergency work has taken place. This slight modification is necessary to adjust for a lot of time being spent in emergency work, but the contractor performance does not indicate an approach that assures the client that this type of work will not become the norm.

COST – 40% of profit

This section needs to be carefully weighed to ensure that targets are feasible. There are losses to both sides if the KPI is misused. For example, equipment integrity can suffer if the services budget is blindly driven down simply to achieve a 100% score in this KPI. Hence both the client and the contractor need to develop a joint strategy, noting that the contract is a part of an overall business process of the client which also embraces issues such as life cycle costs, avoidance of future capital spend and management of risk.

110% of KPI achieved – 70% of Budget spent only

100% of KPI achieved – 80% of Budget spent only

80% of KPI achieved – 100% of Budget spent

0% of KPI achieved – 120% of Budget spent

CUSTOMER SATISFACTION – 10% of profit

Supervisor Survey (includes safety and housekeeping as well as work performance)	50%
Superintendent and Manager Survey (includes cost performance, cost reporting and proactive approach to assist the client)	50%

The Percentage of jobs attended with target response times KPI is attended to by the Correct scheduling KPI, and carries more weight in that Key Result Area.

The guidelines listed above can be turned into a set of simple equations in a spreadsheet or equivalent that allows a KPI scoring system to be simply implemented.

5. CONCLUSION

In the positive case where a client have stated that they are pleased with the work completed by the service provider on the site, the ongoing concern is then with respect to the total expenditure in the contract. In such cases a client will query the value for money associated with the contractor overheads as well as the profit to the contractor. In the case that the contractor has achieved a cultural change and labour impediments have been removed, where then is the value with continuing with the contractor? The correct response to this is that the service provider should continue with the client with the following improvements:

- Flexible manning suited for business requirements such as business output
- Revised KPIs to set improved profit drivers for the contractor suitable for the client's current circumstances and where the client wishes to develop
- Improved corporate involvement for early alignment of contractor support with the client's business needs
- Reduction of total cost of contract support at a time of reduced income from the client's business, consistent with the need to ensure plant capability does not deteriorate
- Greater support by the contractor's corporate experts in specialised techniques such as maintenance optimisation to supplement and where necessary strengthen the current work in continuous improvement

It is quite clear that a local client or even a national concern will benefit from leveraging of a contractor's corporate expertise in their focused business such as labour hire or contract maintenance. Continuance of a cost effective contractor presence will mean that the following benefits will be realised by the client:

1. Continuing presence of current contract work force with intimate knowledge of the client's business
2. Flexible manning that will staff reductions as necessary but also the potential to rapidly expand the support base as the client's business grows again
3. Access to the contractor's corporate improvement technologies

    1. Sustained profit-based drivers for continuous improvement that are substantially different from static, budget focused in-house maintenance strategies that are less likely to seek and achieve continuous improvement

Having said this, contractors need to improve their support to clients, particularly in the following areas:

- Delivery of flexible manning, which balances cost savings with continuance of process integrity. For example we need to avoid downsizing so much that maintenance cannot assure machine reliability
- Continuing alignment of the contract to the client's current business issues, which means that the profit of the contract cannot be taken for granted by the contractor
- Leveraging of contractor expertise from other sites

ACKNOWLEDGEMENT

The author acknowledges the assistance provided by many companies, his colleagues at Covaris and many experts within the Australian maintenance community to the research described in this paper.

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