

SMS Case Study

Managing Outsourced Supply: Relating process maturity to value for money



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The problem

Some years ago, Gdep outsourced development and maintenance to a software house, SoftHo. The contract was managed by Gdep's Central IT function which already ran a central database used by all GDep's Regional Offices.

The Central IT function managed the commercial arrangements with SoftHo and tried to co-ordinate the production of system requirements, but experienced considerable resistance from the Regional Offices.

The Regional Offices did not have a high opinion of Central IT, and complained that:

- implementing new systems took too long and cost too much
- interfaces between new systems and other systems were poor
- not all Regional Offices had processes that exactly fit the new systems

Reducing costs

SoftHo's support and maintenance costs were escalating and Gdep wanted to know if it had grounds for negotiating lower prices on a couple of major enhancements. Gdep's internal audit had previously asked Central IT to check the value for money they were receiving from SoftHo. Consideration was being given to putting further work out to open tender.

Gdep sought assistance in benchmarking the performance of their supplier, SoftHo, from a major accounting firm with whom they had previously worked. The terms of reference were to measure and benchmark the software productivity of two major systems and assess the process maturity of SoftHo under the CMMI[®] (Capability Maturity Model Integrated.)

The independent specialist

SMS's specialist process performance expertise was brought in to deliver the quantitative and qualitative assessment of the software development and maintenance which GDep were seeking.

SMS acted as independent Scope Manager, looking at the overall software development and maintenance process.

Background

The two common, interdependent mission critical systems were intended to be rolled out to over thirty of Gdep's relatively autonomous Regional Offices. A quarter of Regional Offices had already installed early versions. Regional Offices had their own IT Service Management functions who would run the systems.

Although there were proven and significant benefits associated with implementing the new systems, these had not been communicated effectively to all the stakeholders.

The Gdep systems were in the Extra Large (XL) category at roughly 5000 Function Points (FP) each and had a number of interfaces to other systems which were subject to change.

The systems were also provided on two technology platforms to meet the needs of the Regional Offices infrastructure.

Evaluating the current state: benchmarking

Measures of productivity and quality for the support and maintenance of two different systems were examined. There is often a trade-off between the two in low maturity organisations.

The first key measure was function points per Full Time Equivalent Worker. This gave a measure of support and

maintenance productivity. Defects per function point were looked at to measure quality. The results showed that while the defects were close to the norm, productivity was very low, particularly on one of the systems.

Several factors could explain this low productivity. The vendor attempted to “test-in” quality. The system was relatively new and there were several versions being supported. There was a high level of releases (about 2 a month). These factors could affect productivity by a factor of 2-3. The system was also highly complex with several external interfaces and had a high level of reported incidents. A cumbersome bureaucratic process for moving changes (including data) into the live environment via test, training and live systems contributed to the poor productivity figure.

The team then did a similar study (productivity and defects) for a planned major enhancement of one of the systems. Again the productivity was well into the lower quartile. It became apparent that a lengthy process involving several test systems and approvals meant a huge amount of time was spent on testing. However, the enhancement had been delivered much faster than normal. This impacted productivity as more staff were put on the work to deliver a quick result.

A major enhancement to a third system (even more mission critical) which had a different profile and was owned by SoftHo showed good productivity, within the normal range against benchmark data.

Evaluating the current state - process maturity

Having looked at process performance, SMS’s next step was to investigate the maturity of the underlying processes with respect to the Capability Maturity Model.

There are five levels of CMMI maturity, and a number of process objectives have to be fulfilled at each level. In isolation, SoftHo was not far off achieving CMMI Level 3 (the minimum expected by the US DoD). But looking at the joint organisation (ie the end-to-end process), a different picture emerged. Not only would most Level 3 process objectives be “not satisfied” or at best “partially satisfied”, so would many Level 2 processes. **The overall maturity level was CMMI Level 1.**

A lack of maturity within Gdep was resulting in lack of collaborative working and ineffective management of SoftHo. There was a focus on *efficiency* rather than *effectiveness*.

Focus on effectiveness

Good supplier processes don’t automatically mean high productivity. While GDep had been focused on getting the system to meet user requirements, the clear benefits of the system can only be realised when it is rolled out across all the Regions. This required a better relationship between GDep’s Central IT and the Regional customers, as well as between GDep and SoftHo.

It was clear from the study that changing supplier in this situation would be very unlikely to provide greater value for money. Clearer strategy (common systems and common processes) could significantly reduce cost and time.

GDep and SoftHo needed to work together on improving the effectiveness of the end-to-end process. More attention needed to be paid to adoption and take-up, and on eliminating the pockets of waste that were having a disproportionate impact on overall effectiveness.

Conclusion

In order to achieve higher productivity, both supplier and customer processes must be balanced and mature.

Partnership is more effective than an adversarial approach. Such partnership can often be facilitated by an objective 3rd Party Scope Manager with the expertise to evaluate the end-to-end process and the experience to facilitate a strategy for taking the partnership forwards constructively.

The bigger picture

The bigger picture looks at the value delivered to the business by the software development process

