



Research Report #18
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BENCHMARKS

Often Misleading, Rarely Actionable

This report is based on the personal experiences of the authors. It is set forth in four sections:

- Section #1: The Problem
- Section #2: Case Studies
- Section #3: Recommendations
- Section #4: Concluding Summary

Section #1: The Problem

CEOs and CFOs frequently ask for IT-focused spending and operating benchmarks because they don't know any other way to determine the *right* IT spending level. Far too often the resulting data is easy to misinterpret and does not lead directly to project and budget actions.

Is it *better* to be spending less than your industry's average? Probably not if that lower spending is causing slower product delivery. What about spending *twice* your industry average? One hi-tech firm doubled its market share (with a commodity product) by having by far the industry's fastest delivery time. Their CFO calculated that every 25¢ spent on IT above the industry average had added a \$1 in net profit.

The fundamental problems with cost benchmarks are:

- #1 - The numbers are typically not comparable.
- #2 - Their focus is on inputs rather than results.

Benchmarking requires establishing the scope of activities to be included and removing the differences caused by non-IT choices such as accounting policies, financing choices and capacity utilization.

The IT organization is usually responsible for a subset of all the computing used in an enterprise. Benchmarking teams can spend entire projects just haggling over where to draw the lines. It is even more complex than organization charts would indicate in that the IT organization may hold the budget for decisions made by others (and vice versa – users are charged for computing purchases and services but required to follow corporate standards). Engineering computing, lab information systems and some types of manufacturing work management systems are additional examples of the scope choices to be made. Is an automated storage and retrieval system (a “lights out” fully automated warehouse) a “device” or part of the inventory management system?

Some companies allow business units to purchase end-user computing directly (off an approved catalog of approved configurations), others have the IT department acquire then deploy the equipment and software along with a chargeback for the capital and the service/support desk.

When the company uses outsourced services for major IT categories, determining the “finance” component of the deal is very tricky and often a major component of the cost incurred. Some deals are essentially well-

collateralized loans. The collateral is the systems running the business – don't pay and the outsourcing vendor shuts down the computers and the business.

There are GAAP standards for the treatment of IT spending. In practice, the capital budgeting process is different than the operating budget process. Companies have widely varying preferences for capital versus expense, and therefore, different criteria and hurdles. Even within a company, differences between regions (countries) can be large. The "preferred" treatment changes over time making time series analysis within a single company difficult.

Calculating the capacity of infrastructure elements, such as the communications network, can be difficult due to the large number of potential uses, and mix of uses, for the infrastructure component. For example, the network bandwidth between two points can carry some amount of video, file transfers, online transactions and control messages. Quality of service strategies can make fixed or fluctuating allocations of capacity. So, computing the cost of a video conference or internal email service is dependent upon capacity allocations.

All of the above issues are encountered in simply compiling IT cost comparisons. The benchmarking team will generally iterate through multiple passes of adjustments to create measurements where the scope, accounting, capacity and financing effects are minimized. The scrubbed and normalized data will reveal differences in spending. Now comes the challenge of explaining why some organizations spend more and some spend less (for equivalent businesses).

Complex product configurations, complex pricing strategies, complex channels, etc may have strategic value but require higher computing costs than simpler products and business structures. This is often the major explanatory variable in comparing financial institution computing costs (same markets but different products).

Companies don't do the same things with computers. Exxon uses field automation to instrument/control every well and locates the engineers centrally. Amoco puts engineers in the field and uses little field automation. Japanese manufacturers tend to use more factory automation (robots) and less office automation than US manufacturers.

The structure of the business itself has a major effect on the measurement of IT costs. Nike outsources all manufacturing. Thus, its costs of the manufacturing computing systems shows up in its "cost of goods sold" not in the SG&A line. U.S. Shoe owns the factories and pays the computing costs as a visible line item. Various types of business process outsourcing, such as HR outsourcing, third-party logistics, independent product design and customer call centers - all of these place the related IT systems, and their costs, outside the direct IT budget.

One additional root cause of differences usually turns out to be significant and politically charged. There are many examples of spending on poorly conceived IT initiatives ... gold-plated projects with questionable (at best) business cases. Naturally, if looking only at "costs" organizations pursuing poorly conceived projects will spend more than comparable organizations doing the smaller set of "optimal" projects. Getting a business executive to agree that their project is unnecessary, or unnecessarily large, can be a major barrier to closing benchmark gaps.

Section #2: Case Studies

The following case studies are based on the authors' personal experiences.

Case Study #1: Bank Merger

Nine banks merged into a new regional bank holding company. Each bank was #1 or #2 in its respective market. The nine bank presidents naturally expected savings from merging nine IT departments into one. The project focus was the IT strategy, selection of all IT components and a migration work plan. As a starting point, the project team did a "quick" benchmark of the IT spending of the nine banks.

We expected to see a scale curve – IT cost per transaction declining as the number of transactions (size of the bank) increased. We measured bank "size" three different ways: in terms of number of accounts, transactions (debits and credits posted) and assets. Regardless of how we measured the "size", and after multiple rounds of scrubbing IT cost details, we found that the smaller banks had a lower average IT cost per transaction (less than \$.10/transaction) than the medium sized banks (about \$0.11 to \$0.13 per transaction) or the large banks (over \$0.20 per transaction). Putting the small bank technology into the larger banks did not seem like a good idea. So, we had to explain the "reverse scale curve" to the bank presidents and the lessons for their new IT organization.

The root causes of IT cost differences included bank strategy (low cost/high volume versus highly customized services), number of products offered in the market, type of technology and utilization level, vendor pricing error (one bank was receiving a subsidy from a correspondent bank) and management expectations (larger banks allowed IT spending to grow in proportion to overall bank growth – not expecting, therefore not receiving, economies of scale).

Case Study #2: Cost Drivers In Aerospace IT Spending

The president of a commercial aerospace company asked for insights into the cost drivers of his \$1billion annual IT budget. Because each "program" had its own set of supporting information systems, and the programs began at different points in time, we had significant internal IT cost benchmark data. Furthermore, since the analysis was all within one company, many of the reconciliation issues were minimized.

Nevertheless, IT costs were more fragmented than expected. After identifying and including the obvious IT spend in business units, not including the formal IT department, we found that total spending for IT were 1.4 times the initially reported number. Furthermore, suppliers to the client were including IT costs, particularly the computer-aided engineering system costs, in the cost of the components supplied to the client. This allocated IT cost was driving significant variances in the overall program budgets.

The project identified several IT governance practices that, when corrected, would reduce the IT spend by 30%. These changes included stopping government cost accounting on commercial projects (huge overhead in generating, approving and matching costs to serialized items) and fostering greater software reuse among programs.

Case Study #3: A Business Process Benchmark

In the mid-1990s, one of our larger semiconductor industry clients asked us to prepare an IT Planning Process "benchmark" comparing and analyzing the IT planning processes of several similar firms. The client knew we had good relationships with these firms and asked us to use our "good offices" to see what we could do. We invited six firms (including the client) to participate and every one of them agreed to do so. We

were given extensive insight both to each participants planning process and the resulting plans - with very few *confidential* elements being excluded. One participant offered to visit the lead client and present their process and their plan in full detail - an offer that was quickly accepted. The deliverable from this project was a report describing and contrasting the six processes - including comments regarding perceived problems, special virtues, etc. Each participant received their own copy of the report - with the participants being identified within the report by the alphabetic letters a,b,c,d,e,f. The report was well received and the lead client made several responsive changes in its IT planning process (and, relatedly, to its IT governance approach and its IT budget).

Some might call the above a "comparison" instead of a "benchmark" but isn't a comparison truly central to a benchmark? The results of this highly successful "benchmark" were both comparable and actionable. Yes, it was narrowly focused both as to industry and to content - which is consistent with Recommendation #1 below.

Case Study #4: IT Discretionary Budget Benchmark

A few years ago, one of our computer hardware manufacturing clients was concerned about the very low level of "discretionary" funds in its IT budget. Almost everything seemed to be, in one way or another, *mandated*. We did a careful "totem-poling" of the IT budget, visually highlighting the amounts for basic services such as email, PC support, contractually required software maintenance, infrastructure/network, and so forth. At the top of the totem-pole was a thin band, about 1.7% of the total, identified as *discretionary*. It was this very modest amount that the CIO (in keeping with the guidance of her IT Council) could spend on new development and non-mandated enhancements.

Management felt this was insufficient but, being cautious, asked for a benchmark comparison to several industry peers. No existing report (Gartner, Meta, IDC, Forrester, AMR) quite fit the bill. Conveniently, the client's CFO knew the CFO of a close competitor. The other CFO agreed, in view of the potential mutual benefit, to a detail IT budget comparison. The result was both firms decided they were spending too much on numerous small maintenance projects and far too little on the few larger projects that really counted. Literally hundreds of small, low impact projects were cancelled and a few long under-funded major projects finally received the funds they needed to succeed. Also, the two involved CFO's expanded their discussions and within a year the two companies merged.

Section #3: Recommendations

If, in spite of the problems outlined above and the challenges described in the case studies, the reader remains intent on moving forward with a benchmarking project, consideration of the following recommendations might prove helpful:

Recommendation #1: Carefully focus the benchmarking effort on the exact issue you are concerned about.

The more tightly focused the benchmark, the more actionable will be the results. This should include measures of the business activities and results supported by the information services. The most obvious, and least reliable, business measure is revenue. The more useful measures tend to be operational such as number of orders, products, locations, customers, etc.

Carefully focus on specific types of organizations to include in the comparison. For example, a generic comparison of a financial service company's IT spending level to, say, other financial services companies, will tell very little since there is such a broad range of types of financial service companies. If you are a small

bank catering to high net worth individuals, your benchmark should focus on banks of a similar nature.

However, even narrower is better. Try to answer the question, "Just what am I concerned about?" with as much precision as possible. If you think you're spending too much on infrastructure, or on business application maintenance or on in-house development, focus your benchmarking on that exact concern.

There is considerable evidence suggesting that the more narrowly focused the benchmarking effort, the more informative will be the results. My personal experience, that of my colleagues, and the several well prepared reports on this topic by the Oxford Institute for Information Management (OXIIM) - all support this conclusion.

Recommendation #2: Develop a very specific cost model and carefully define each line and column.

The cost model must be easily reconciled to the official ledger statements of the participants but does not have to match a specific chart of accounts; indeed the charts of accounts of the benchmark participants will not match each other exactly. We have found it helpful to be able to cross-tie vendor spend (from accounts payable), department budgets (IT unit and select line items from business units) and project budgets. Matching to the accounts payable is extremely valuable in uncovering unexpected pockets of IT spend.

This can be extremely detailed but reconciling to three different points of view generates very high confidence with CFOs and senior executives. The reconciliation to multiple points of view also generates insights into the cost drivers for subsequent action.

Keep the number of columns and rows low, no more than twenty each and work closely with each participating CIO to make doubly certain that he/she understands what is in/not-in each row and column. Having an "other" account ("not elsewhere classified") is not illegal, immoral or fattening - as long as it is not more than 5% of the total budget. Most CIOs pretty well understand their budgets and can, with relatively little effort, do the transliteration required from their company's chart of accounts to the multi-company cost model used for the benchmark.

Recommendation #3: Offer all participants a meaningful reward for their participation in the form of a detail copy of the final results (with participant anonymity preserved).

For particularly large and complex benchmarks, offer a meeting of all participants to discuss the results and try, as a group, to understand the causes and consequences of the differences. For example, in one large, multi-company benchmarking project, several of the participants got together at the lead participant's site (the company that started and was funding the whole thing) and spent two days in detail discussions - with each participating IT organization (involving some companies that were DIRECT competitors) explaining their budgets and their plans (in considerable detail).

This feedback should focus on developing hypotheses of root causes of the differences. The root causes are the actionable elements. The supply / demand division of root causes is very helpful in these debriefing sessions.

Recommendation #4: Select participants with considerable care.

Define "same industry" as narrowly as possible. For example, there are many types of insurance companies. Include only the type(s) most similar to that of the lead participant. Ditto for semiconductor firms, banks, etc. ad nauseum. Similarity of size is also important, as is geographic breadth (regional, national, global).

We have also found it helpful to include some “best practice” peers from outside the core industry. For a computer maker, we included telecommunications equipment and test equipment “peers” who faced similar product configuration challenges. For an HR call center benchmark, we included IT call centers.

Recommendation #5: Be careful not to turn benchmarks into performance measures

Benchmarks can illuminate opportunities for improved performance. Careful thought needs to go into deciding when and how the opportunities are addressed. The current performance is a line in the sand – a baseline for future improvements in time, cost and quality. The choice of which areas to improve is dependent upon the company’s strategy and promise to its customers.

For example, a service-oriented company might not want to make call completion time a performance measure. Service agents would be incented to conclude customer calls as fast as possible whether or not the customer was satisfied.

However, benchmarking call completion time can generate insights into barriers to serving the customer. Removing the barriers to service is worthy in respect to the company’s strategy and value proposition. The call itself might not be shortened at all as the conversation could turn to up-selling and cross-selling products and services.

Section #4: Concluding Summary

Benchmark efforts can generate a mosaic of improvement opportunities. Acting on the improvement opportunities requires credibility in the results and insights into the root causes of the differences. All too often, however, benchmark participants are seeking confirmation of some prior concept – all is well, in the IT manager viewpoint, or spending “plenty” in the executive viewpoint.

Defining, collecting, normalizing and assessing the financial and operating results are a tedious and time-consuming effort. The reward for the effort comes from identifying the root causes of valid differences in results. Addressing the root causes generates the improved time, cost and quality of IT projects and services.

Readers interested in a more extensive discussion on this topic are invited to contact the lead author, David Rader, at david.rader@scc.cc or via phone at 650-283-9296.

This report was prepared by the Systems Consulting Consortium, Inc. (SCC) as a service to our past, present, and future clients. The lead author, David A. Rader, has served as a senior IT executive for one of the world’s largest Food & Beverage firms and, earlier, for one of world’s largest computer hardware firms. Earlier in his career, he was the Vice President for IT Consulting for a large and highly regarded management consulting firm. His co-author, James M. Spitze, is the Founder and Managing Partner of our firm. For more information about SCC and our services, please visit our website at www.scc.cc or contact us directly at:



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