



Risky Business

An Executive Perspective on Measuring IT Value

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An Executive Perspective on Measuring IT Value

A White Paper by ITCentrix

Amazingly, a recent survey by the Financial Executive Institute and CSC established that only twenty-four percent of senior financial executives are satisfied that their organization can measure the success of IT projects.

Measuring the value contribution of IT initiatives in a structured and ongoing way is no longer an intellectual exercise but a business imperative

Investing in IT is “Risky Business.” It is commonly accepted in the trade press and within the IT community that at least forty percent of IT projects fail to meet business objectives. Amazingly, a recent survey by the Financial Executive Institute and CSC established that only twenty-four percent of senior financial executives are satisfied that their organization can measure the success of IT projects.

In part, to address this problem, IT ROI is back in vogue within the business community. Unfortunately, many, if not most IT business cases lack the discipline required by senior executives. This lack of rigor serves to only widen the schism between IT and business constituents often leading top executives to do nothing rather than make what are perceived to be “dicey” technology bets.

Part of the frustration of business executives is that IT is unable to satisfactorily answer questions such as:

- What is the real dollar impact of proposed spending?
- When will the business get a payback from IT infrastructure investments?
- How did previous projects fare?
- When will “in-process” projects yield a return?
- What portion of the “value pie” can IT really claim?

Measuring the value contribution of IT initiatives in a structured and ongoing way is no longer an intellectual exercise but a business imperative.

Executive Summary

In our last paper, “**Managing the Value of an IT Application Portfolio**,” we introduced the notion of measuring the value of critical applications, focusing not only on IT cost factors (total cost of ownership – TCO) but also business contributors such as increased service levels and improved flexibility (see Figure 1). By measuring the contributors to business value and cost, in a comprehensive and structured way, we are able to establish a clearer picture of the financial impact of IT applications.

The approach described allows the setting of a “Baseline” of IT value to address the question: “*What is the value of my application portfolio?*” Once established, that value can be used as a benchmark to measure the impact of projects against the overall value of a portfolio. Like a stock portfolio, visibility on the entire suite of assets, rather than a few select “stocks” is crucial to maximizing portfolio value.

By way of review, Application Value represents the value that users of applications create *while they are actively using the systems*. But how can these high level concepts be used to evaluate the business impact of new IT initiatives? Which factors should be considered and how can they be measured?

This paper presents a methodology to measure business value for both existing applications and planned projects to determine:

- Which projects have the most favorable TCO and Business Value impacts?
- Which projects create the greatest net business value?

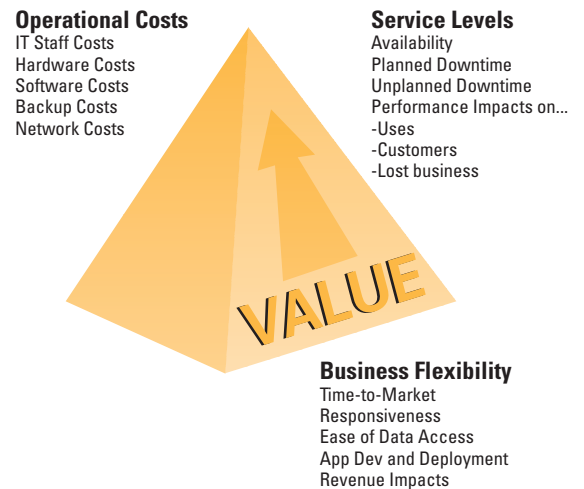
By applying such a methodology to IT planning, companies are *measuring* the value they create, *aligning* with business objectives and *maximizing* the value of their IT assets in a business context.

Principles of Value Measurement

ITCentrix has developed and applied the following four principles of value measurement. The application of these principles is the starting point to closing the gap between technology and business departments within organizations. The four principles are:

IT is inseparable from the business – This means the financial measurements of the business (e.g. revenue per employee, budgets, etc.) must be used when measuring IT value. “Good” IT does not necessarily mean high value IT and in turn, “Bad” IT does not always mean low IT value. *Bottom Line: Business attributes determine the potential value of IT while technology unlocks that potential.*

Figure 1
What is IT Value



Application Value represents the value that users of applications create while they are actively using the systems.

Principles of Value Measurement

- IT is inseparable from the business;
- Value measurements must reflect the uniqueness of each business;
- Value measurements must be ongoing in nature;
- Users of application are the prime drivers of value.

The simplest way to measure productivity, at a high level, is to evaluate revenue per employee (or budget/funding per employee in a non-profit situation).

Figure 2
Industry Productivity Ratios*

Industry	Productivity Ratio*
WHOLESALE	18.0
PHARMACEUTICAL	11.3
INSURANCE	10.6
RETAIL	7.5
FINANCE	6.6
MINING	6.3
TRANSPORTATION/COMM./UTILITIES	5.6
MANUFACTURING	5.5
CONSTRUCTION	5.4
REAL ESTATE	4.5
AGRICULTURE/FORESTRY/FISHING	2.9
SERVICES	2.5
OTHER	4.3
AVERAGE	7.4

*Per employee
Source: ITCentrix ValueBase™ and U.S. Census Data

Value measurements must reflect the uniqueness of businesses – An application that may be valuable to one company, department or line of business may have little or no value to another. *Bottom Line: Blending subjective inputs that come from the knowledge of the business, with the empirical financial data of an organization will allow unique business attributes to be reflected in the measurements.*

IT Value measurements must be ongoing in nature – Static, “snapshot” approaches like a point-in-time TCO measurement or an ROI percentage do not inherently lend themselves to monitoring an IT investment over time. *Bottom Line: Deriving a “Net Value” metric that accounts for “above the line” value and subtracts out “below the line” costs (IT and business) should be monitored in an ongoing fashion.*

Users of applications are the prime drivers of IT value – The productivity of users, while they are actively using applications, is the key to understanding value creation of IT. *Bottom Line: Understanding users and how they exploit applications enables value measurements.*

How then, can these concepts be used to actually measure the value of IT applications? ITCentrix uses a process, tested at hundreds of organizations, to establish the value of applications and then assess that value, either in aggregate or on an application-by-application basis, to net out all the costs (IT and business) of application delivery.

To begin, we look at productivity. The simplest way to measure productivity, at a high level, is to evaluate revenue per employee (or budget/funding per employee in a non-profit situation). Dividing revenue per employee by the average cost per employee yields a ratio. This ratio is an average, per employee “Productivity Ratio” for the organization as a whole.

Figure 2 displays data from the ITCentrix ValueBase™ benchmarking database of IT value metrics. The data show average productivity ratios (per employee) from a number of industries, which obviously vary widely.

Applying a productivity ratio to establish IT value requires answering the following questions:

What portion of employees’ time, on average, is spent actively using IT applications?

What is their productivity while using these systems?

The first question establishes a full time equivalent (FTE) figure for IT users. The key concept here is active usage, not simply logged on to the system. While subjective, the answer to the second question is the best indicator of the impact applications have on productivity. Overall organizational productivity can be used as a proxy to determine the level of adjustment that is appropriate when evaluating IT usage (or the contribution of an individual application).

By applying the notion of productivity, while the users are actively using IT, to establish overall IT value, the value of IT applications can be calculated by multiplying user FTE costs (fully loaded) by the derived productivity multiplier.

Simply stated, the value of IT is equal to the fully loaded cost of the users multiplied by their productivity while using IT (See Figure 3).

Once established, the IT and business costs of delivering that value can be subtracted from Application Value to determine Net Application Value (NAV). NAV represents a key metric that can be measured in an ongoing fashion, and importantly, to compare project initiatives.

The IT and business costs that are netted out include (see Figure 4):

- Inflexibility – The opportunity cost of application maintenance;
- Unavailability – Downtime costs (application value lost due to downtime), including disaster exposure (probability adjusted);
- IT Costs (hardware, software, networking, staff, services);
- User costs – The fully loaded costs of active users (FTE users).

Evaluating Project Initiatives

To apply these principles to evaluate project initiatives, organizations need to consider the IT impact on business drivers. Fundamentally, the linkage between IT and the business should pass through a series of filters to understand and map how IT contributes to business results, and the relative impact of new initiatives.

Specifically, businesses are focused on items such as revenue generation, cost reduction, cycle time / speed, market share, brand, margins and pricing (see Figure 5). IT focuses on providing applications that serve users, with the lowest cost and highest availability within a secure operating environment.

The business impact of IT is measured by four factors, and only four including:

- Improved productivity
- Revenue generation
- Lower costs
- Reduced risk

As with the base portfolio, productivity is measured by assessing Revenue per Employee (or budget per employee in a non-profit situation). Forecasted productivity improvements are applied to projects and can come from improving the productivity of users while they are actively using applications (e.g. delivering better application function) or indirectly improving productivity for the non-users. Cycle time reductions (reducing the elapsed time to perform a task) can also be measured in productivity terms (doing the same with less or doing more with the same).

Figure 3
Calculating Application Value

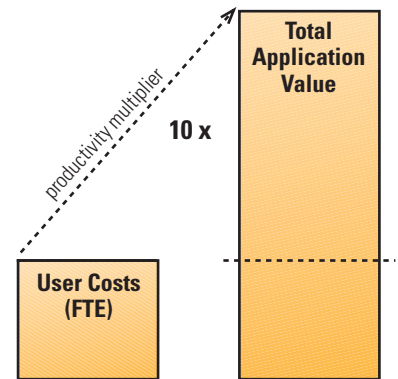


Figure 4
Calculating Net Application

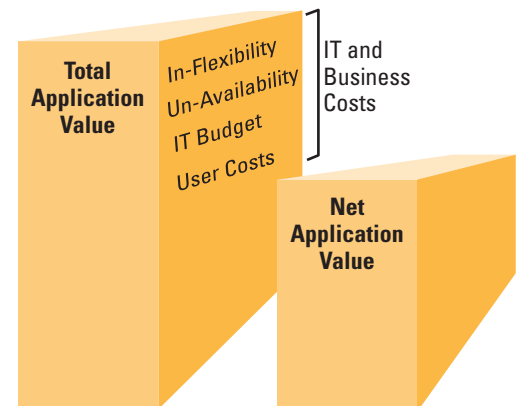
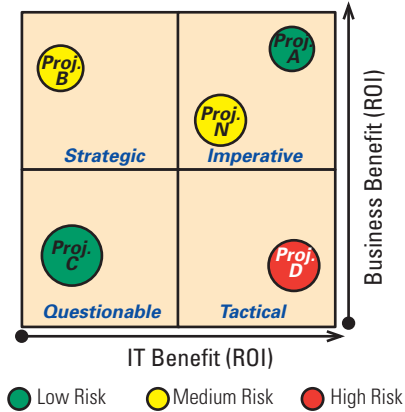


Figure 5
Measuring the Business / IT Link

<u>Business Drivers</u>	<u>IT Domain</u>	<u>Business Impact</u>
Revenue generation	User productivity	Productivity
Cost reduction	IT Costs	Revenue
Cycle time/speed	Downtime costs	Cost
Market share	Deployment speed	Risk reduction
Brand	Disaster recovery	
Margins and pricing	Security	

As with the base portfolio, productivity is measured by assessing Revenue per Employee (or budget per employee in a non-profit situation).

Figure 6
Project Selection



IT Benefit = TCO reduction/initial project costs

Biz Benefit = Net application value impact/initial project costs

Revenue generation enabled by IT is straightforward and needs little explanation. Frequently, Web-based initiatives involve forecasting and assigning direct revenue affects to value measurements.

Costs include IT costs (hardware, software, services and staff) and business costs, including user costs, one-time costs, downtime reduction and reduced opportunity costs (e.g. reduced application maintenance costs).

Risk reduction can come from reducing the probability of a business disaster, or the chance of a security breach.

Evaluating IT initiatives involves applying the measurements described above. The four-step process roughly should flow as follows: 1) Identify the proposed initiative/project; 2) Evaluate the business benefits (in the above categories); 3) Evaluate the IT and business cost factors, including the elapsed time to implement and the duration of the benefits; 4) Run a comprehensive business case assessing net value change to the application portfolio with a complete financial analysis.

Figure 6 represents the dimensions of IT decisions in a classic quadrant analysis. The horizontal axis represents IT Benefit expressed in simple ROI terms (TCO reduction divided by initial project costs). The vertical axis represents Business Benefit also expressed in simple ROI terms (Net Application Value Impact divided by initial project costs). Frequently, business cases over-emphasize the former and struggle to express the latter.

Projects are plotted on the quadrant based on their relative value position. The most desirable projects are placed in the upper right hand quadrant (those that yield big IT and business benefits). Projects that cut IT costs but yield little business benefit (“Tactical”) are placed in the lower right and projects that may not cut IT costs but yield good business benefits (“Strategic”) are placed in the upper left. The color of the disk represents risk based on an analysis of experience, technical maturity and size of projects. Net Application Value is reflected by the size of the discs.

The quadrant is a useful way to visualize key projects, but the approach equally ‘weights’ IT and Business Benefit. A more rigorous analysis needs to be done to evaluate the total business impact accordingly.

For example, each of the simple ROI metrics shown on the quadrant can be translated to practical financial terms such as Internal Rate of Return (IRR), Net Present Value (NPV) and Break Even Period. This allows a proper financial analysis to be performed. Risk is also factored into the analysis and adjustments to financials are made accordingly.

The result is an overall view of the projects that deliver the greatest value. Figure 7 shows various projects ranked using Net Application Value Impact (NAVI), shown in the leftmost column. The red line signifies those projects that fall below a certain value threshold.

Projects can be profiled using a number of relevant metrics including funding, degree of business and IT impact, capital requirements, financial thresholds, risk factors, staffing skills, etc. Moreover, agreed upon projects can be tracked with ongoing value measurements to assess the “Value Flow,” similar to a cash flow model, to evaluate the realized value results against expectations.

Executive Actions and Conclusions

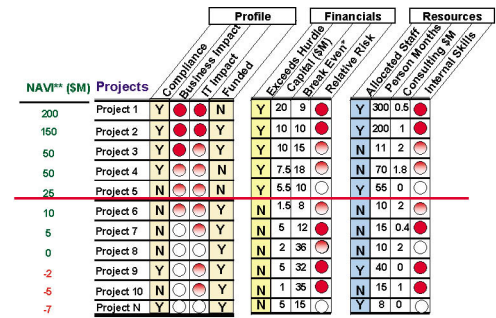
Most organizations do not take an ‘Application View’ of IT assets. The irony here is that an application perspective of cost and value, if organized by business processes, can serve as the missing link between IT and lines of business. By combining empirical organizational information (financials, user counts, budgets, etc.) with subjective knowledge of the contribution by applications to productivity and other business benefits, organizations can objectively identify those assets that contribute greatest business benefit.

Moreover, applying these concepts to new initiatives, and analyzing a project’s impact on the value of the Application Portfolio overall, will allow organizations to objectively focus on those initiatives that have the greatest business impact.

When considering the implementation of a value measurement program, organizations should establish a mid-to-long term vision (see Figure 8). Management buy-in will not ensure success, but lack of upper management support is a “non-starter.” Implementing programs in manageable bite sized chunks will increase the chances of success. The following steps can serve as guidelines to implementation:

- Build a framework. Develop a straw man framework for strategic decision making before a full scale launch to business constituents;
- Introduce tools and training. Provide solid tool sets and training for IT and business people. Focus on incorporating those pieces of the framework that can be executed – try not to put everything in the tool sets first time through;
- Tie results to organizational objectives and incentive plans. Sell the benefits of the system to business and IT executives and provide incentives to participate in earnest;
- Make ongoing adjustments. Flexibility in the system is critical. Anticipate changes in business priorities, strategic objectives and IT and business leadership that will necessitate adjustments to the process.

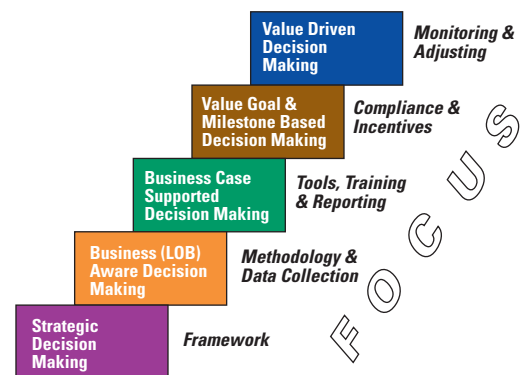
Figure 7
Project Profiles



*Months

**Net Application Value Impact

Figure 8
Establishing a Value Culture





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