
Manage Your IT Projects Like an Investment Portfolio

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This article was published in the 2005
Handbook of Business Strategy.

Large corporations have many active information technology (IT) projects at any given time. Multiple studies have shown that 40% or more of IT projects will fail due to being late, over budget and/or of poor quality. For application development projects, that figure can be as high as 80%. The odds are so heavily stacked against IT managers that one has to wonder what is going on.

Much time and money is spent on project management training, a clearly defined need in any large organization. But let us look at this from an entirely different direction. Are these managers working on the right projects? Is it possible that many a project fails simply because it's the wrong project at the wrong time?

Managing a collection of IT projects

Much is written about managing IT projects but little is written about managing a collection of IT projects. Think of each project as an investment like buying a stock. Some investments are high risk with big payback potential while others are low risk with minimal upside. Just as investors should diversify their investments, corporations should diversify their IT projects. How? Project portfolio management is the answer.

In managing the entire collection of IT projects like an investment portfolio, we must accept that some projects will do well and some will not. Some are high risk. Some are conservative. Overall, the portfolio should perform well enough to meet corporate goals and objectives (goals are defined, aren't they?).

Ron Kifer, Vice President of program management at DHL, has seen it all. "The last three organizations I've been in had the same scenario. They didn't have defined processes for reviewing project proposals; projects were pretty much recommended by senior vice presidents in each business area," he says. "They were attempting to do many more projects than they had the capacity to do. Bad projects squeezed out good projects. There was no visibility of what was being done throughout the organization."

Does this scenario sound familiar? His approach to taking control of the project portfolio was to take a project inventory, create a master schedule, analyze resource requirements, and reconcile conflicts.

Project portfolio management enables companies to assume control over their IT projects and deliver measurable value to the business community. Portfolio management is founded on a broad view of a company's IT strategy. It requires collaboration among both IT and business leaders in reviewing project proposals and matching them with strategic objectives. The resulting collection of projects is treated like a financial portfolio; projects involving more risk are balanced with those that are safer and more conservative. The project portfolio is reviewed regularly such that projects that need help receive it and projects that have gone awry are cancelled.

Consider these findings from a variety of research efforts:

- Many companies spend 50% of their capital investment dollars on IT projects yet treat these expenditures like an everyday expense.
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- Upwards of 80% of companies do not assess the business case for IT projects or do so only on a select few.
- Around 50% of businesses have no process to evaluate IT investments against business strategy.
- Nearly 90% of companies rely only on finance metrics to track projects, if they use metrics at all.

The result? Lost productivity, downsizing, under-performing investments and, in some cases bankruptcy. Huge spending and fragmented management translates into a train wreck waiting to happen. Senior management should stop reviewing project after project and start managing the project portfolio. Here is how.

1. Understand the strategic goals of the enterprise

Effective portfolio management is impossible without a clear definition of corporate strategic goals. What is the company trying to achieve? What are the most important issues faced by the enterprise? What is the time horizon for achieving the goals and resolving the major issues. How much risk is the organization willing to assume?

If these questions cannot be answered or agreement cannot be obtained, forget about managing the IT portfolio. Any company undergoing major upheaval such that the long term direction is unknown forces IT to maintain a short term focus. The best bet under these circumstances would be to engage in quick hit projects. Deal with tactical (i.e. operational) issues and do not make expensive technology investments. But if the team can agree on the answers, charge ahead with an IT strategy that will deliver tangible results.

2. Assemble a cross-functional portfolio management team

IT projects cut across the entire organization. Even simple changes such as installing new service packs can affect user groups in different and often contrasting ways. For this reason, it is critical to have a cross-functional team involved in all strategic IT decisions. Active participation by key leaders of the business community within the company is essential. While it might be simplest to have a representative from every department on the team, this is rarely required. The number of the computer users within a department and the strategic value of technology within that department are key factors for determining representation.

The team should reflect the diversity of technologies and applications used within the company. Also, any workgroup that is highly leveraged in a technological sense (i.e. the workgroup's productivity is strongly dependent on computers), should be represented on the portfolio management team. Be sure that members of the team can commit to the time required. Often, senior executives cannot devote the time and energy needed. Have them delegate to someone who can.

3. Take an inventory of IT projects

Pull together an inventory of all of the major IT projects in the company. What constitutes "major"? There is no simple answer though a few guidelines apply. Any project lasting for more than 30 days is probably major even if it involves only one person. Any project that requires 5% or more of discretionary IT dollars is major. (Discretionary dollars are what is left after the day to day expenses of running the IT organization are paid.) Some firms will use more or less stringent criteria. When starting out with portfolio management, it is best to focus on the bigger projects only until a comfort level with the process is achieved.



Gather the duration (calendar time), headcount (include full and part time efforts), projected cost, objectives, benefits and return on investment (if available). This effort will be painstaking and complex but well worth it. Good information is critical to building a strong project inventory that will serve as the foundation for implementing the projects that best meet strategic objectives.

4. Align projects with strategic goals

Now it is time to establish a project portfolio management process. A good governance structure is central to making this work. One of the keys for determining whether or not to fund a project is knowing how closely that project meets the company's strategic objectives. Those that match well are fully funded while those that do not are scaled back or killed. There will always be projects in the gray area, that is, they align in some respects but not all. After the "best" projects are fully funded in terms of money and staffing, any remaining resources can be allocated as the team sees fit.

This evaluation process needs to be on the lookout for overlapping or conflicting project proposals. One of the side benefits of this process is the ability to identify areas where money can be saved or re-allocated. Cut off projects with poor value propositions early, even if they have already launched. Meanwhile, the team's efforts will strengthen the alignment between information systems managers and business executives. This alignment will make the portfolio management process simpler and faster in ensuing years.

5. Prioritize projects based on some type of scoring system

After the above evaluation, most organizations will have more good projects than they can afford to fund just like an investor will have more investment choices than money. This is where the team will need to categorize projects and allocate funds similar to how investors practice asset allocation for different types of investment opportunities.

An investor might allocate 50% of investment funds for growth stocks, 25% for bonds, 15% for cash and 10% for micro-cap stocks. Likewise, the project portfolio team might create four project categories as follows:

- a) Enterprise-wide application projects (e.g. a knowledge management system)
- b) Departmental application projects (e.g. a sales force automation system)
- c) Infrastructure projects (e.g. a new e-mail server)
- d) Leading-edge technology evaluations (e.g. 3G wireless networks)

Funding allocations will vary widely among organizations. Take a look at current spending levels to start. If the business community is happy with the overall quality of service, existing spending allocations can be maintained. If not, find out why and re-allocate. A very conservative organization might choose to ignore category "d" and only deploy new technologies once they are proven and ubiquitous. This is similar to an investor who finds micro-cap stocks too risky versus another who chooses to take advantage of these investment choices.

Score the projects within each category using a simple system. The Impact Scoring Table accompanying this article is an example of one way to approach this. Recognize that every company is different and there is not any single "best way" to go about this. If in doubt, keep it simple! The table shows ten "Impact Areas" ranging from Strategic Alignment to Payback Period. Each impact area is assigned a weight between 0 and 1 with 0 being no impact and 1 being very large impact. Each project, there are 5 in this example, is scored in each impact area. The scores range between 1 and 5 with the meaning of each shown at the bottom of the table.



Impact Scoring Table						
Impact Areas	Weights	Project 1	Project 2	Project 3	Project 4	Project 5
Strategic Alignment	1.0	3	5	5	4	2
Revenue	0.9	5	4	3	2	4
Cost Reduction	0.7	4	4	5	4	3
Productivity	0.8	5	4	4	1	5
Customer Satisfaction	0.9	2	5	4	3	4
Employee Satisfaction	0.8	3	3	5	2	5
Intangible Benefits	0.5	3	5	4	3	5
Business Risk	0.8	5	2	3	3	5
Return On Investment	0.7	2	4	4	4	3
Payback Period	0.8	4	3	5	4	2
Cumulative Score		28.6	30.8	33.2	23.6	29.5

Notes: The impact score meanings are shown below from lowest (1) to highest (5).

- Strategic Alignment - none, low, medium, high, very high
- Revenue - none, minor, moderate, positive, powerful
- Cost Reduction - increase, none, minor, moderate, major
- Productivity - negative, none, low, medium, high
- Customer Satisfaction - adverse, none, minor, moderate, high
- Employee Satisfaction - adverse, none, minor, moderate, high
- Intangible Benefits - none, minor, moderate, positive, powerful
- Business Risk - none, low, medium, high, very high
- Return On Investment - none, adverse, low, medium, high, very high
- Payback Period - none, long, medium, short, very short

Based on this example, one would conclude that Project 3 has the most impact on the organization and thus should be given priority. Conversely, Project 4 has the lowest impact score and is a candidate for being re-directed or unfunded. (See the sidebar, “Two scoring approaches worth considering”, for more on scoring systems.)

Dade Behring, a clinical diagnostics equipment company, likes to focus IT on customer service. They control project portfolio risk by keeping the number of initiatives small. Dave Edelstein, CIO, likes to assess risk from multiple perspectives. He says, "We also try to assess risk from a technology point of view, a change-management point of view, the number of people that a project will impact and whether it will involve huge reengineering."

6. Fund the high scoring projects and table the low scorers

Once the allocations are determined and the scores tabulated, it’s time to decide on funding. This is where it can get complex. There is no right or wrong way to go about this and needs will change from year to year. Generally, technology infrastructure demands such as network devices, security, e-mail, web servers, file servers, etc. will consume a large portion of the available budget. Be sure to spend some time anticipating future needs in this area. For example, if a major application is to be deployed in the next fiscal year, it may be necessary to fund an infrastructure project today so the ground work is in place.

If a major enterprise application is being deployed this year, it may demand a large share of the budget. This could involve some give and take as other areas may be under funded in order to get the big project done. This can unsettle the team. Always come back to strategic corporate goals and a long-term view for



achieving them. Ultimately, this process is about making informed decisions so that limited resources are spent in the most effective manner.

7. Re-evaluate regularly

Now that projects are defined, funded and staffed, there is a tendency to turn attention to other matters. Big mistake! The entire effort thus far will be debilitated quite quickly if the portfolio is not actively managed. This requires monitoring all projects at relatively frequent intervals, at least quarterly. The actual frequency depends on organizational needs and overall reporting procedures followed by the company. Quarterly is the minimum update cycle that should be followed. Semi-quarterly is better and monthly is preferred.

At CKE Restaurants, the IT steering committee meets monthly to review at least three of the initiatives under way. "In my opinion, quarterly is too long," says Jeff Chasney, CIO.

Follow a simple system for keeping everyone informed. Do not waste everyone's time with cosmetic updates stating that the project is on time and on budget. A simple green, yellow, red status indicator works well. If the project is green, there is nothing to talk about. If yellow, discuss why and what is being done. If red, get ready to kill it!

Do not be afraid to kill projects that get too far off track. This can result from poor management, of course, though often changes in corporate strategy, direction or priorities make a project unneeded. It is not essential to finish every project that's started.

"People have an aversion to stopping projects, but the majority of projects I cancel are done because there's a change in company strategy—a change in priority or direction," says Jeff Chasney.

8. It is payback time

A significant effort is required to get to this point. The thorough evaluation and prioritization that takes place forces everyone involved to come to grips with what really matters to the organization. During the process, communication between the technology leaders and the business leaders improves tremendously. The technology side learns more about what the business really needs and why. The business side develops an understanding of the complexity and overall impact of IT initiatives.

Some people may feel threatened by the apparent loss of control over the decision-making process. However, it is important to have them reflect on the win-win situation created by generating an open discussion of IT issues and goals as they relate to corporate strategy.

Done properly, a genuine team atmosphere should develop with shared responsibility for getting projects done. There will also be people who try to scream the loudest as the way to get their pet projects funded but having a structured, team-oriented process in place muffles their voices. Furthermore, when responsibility is shared, everyone becomes more cooperative as they have a vested interest in the results.

Remember, the goal is not to make every project a success just as a stock trader does not expect every investment to generate a good return. The goal is to have the portfolio of projects meet strategic business objectives. This change of mindset can liberate an organization too narrowly focused on project minutiae and produce powerful results.

Some companies that have adopted a portfolio management model have seen a real bottom-line impact. For instance, Merrill Lynch saved between \$25 million and \$30 million by slowing down or stopping



planned initiatives and redirecting project funding faster and more effectively according to Marvin Balliet, Chief Financial Officer for the company's global technology and services division.

So, how is your project portfolio performing?

Two scoring approaches worth considering

One of the hardest parts in managing a project portfolio lies in scoring the projects. There is no right or wrong way to go about this. Much depends on how the organization operates and what type of justification the CFO likes to see. Return on investment is a frequently used indicator for the worth of a corporate undertaking. Unfortunately, there is no widely accepted formula for calculating ROI. Getting to the "return" is easy once the "investment" is fully quantified but therein lies the problem. Every company calculates investment differently thus the same project delivered at two companies will have widely different ROIs. The most important point is to be consistent. As long as ROI is calculated the same way for all projects, it's a meaningful metric.

Further complicating matters, ROI only examines financial implications. There are non-financial benefits and risks associated with technology initiatives. These include positive and negative effects on competitiveness, employee morale, customer satisfaction, growth potential, etc. To see the big picture, a broader system for determining value is needed.

There are two approaches that have been publicized and provide significant documentation. Intel Corporation has made available its *Business Value Index* (BVI). (The basic tools can be downloaded at www.itsharen.net by doing a search for "BVI".) The BVI approach encompasses business value, IT efficiency value, and the usual financial criteria. Business value measures the alignment of a project with business strategy and priorities. IT efficiency value takes aim at how well the project uses or enhances existing IT infrastructure. Financial criteria measure the investment attractiveness using standard financial metrics.

Meanwhile, the United States government commissioned Booz Allen Hamilton consultants and academic leaders associated with the Kennedy School of Government at Harvard University to design a methodology and make recommendations for measuring the value of e-services. The result was a framework called the *Value Measuring Methodology* (VMM). (Background documents can be obtained at www.cio.gov under "documents".) VMM attempts to fully account for costs while identifying and considering risks.

These approaches are not simple or perfect but they represent some very deep thought on the subject of measuring value and are well worth the time required to understand them. There is no single software package that does everything. "There are really good budget packages, resource management packages and fairly good portfolio management packages, but no package that ties it all together," says Gordon Steele, CIO and Vice President of IT at Nike.

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