infocept systems

Leadership Development Series

Project Management

Managing Successful Projects:
The Project Clinic

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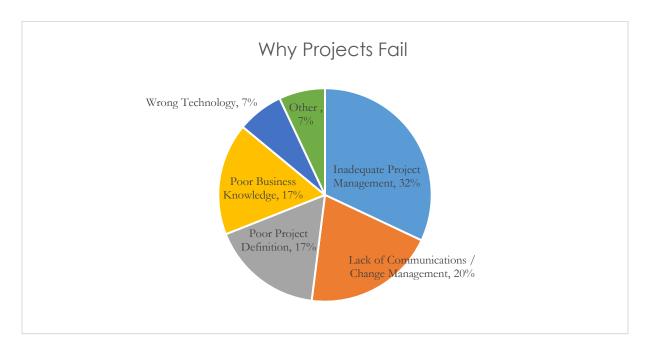# Executive Summary

Using This Document

This is one of a series of professional Leadership Development topics related to Project Management published by Infocept Systems, Inc. It is intended for individuals who want to understand the practical and political side of managing successful projects and complements theProjectDoctor™ series of training courses offered by Infocept. Topic areas are broken down by project lifecycle:

- Project Definition – Project justification and approval stage
- Project Planning – Project preparation & planning for success
- Project Management & Control – Executing on the plan
- Project Closure – Lessons learned & transition planning
- Project Health – The what, how and when to measure along the way

Project Definition

Why Projects Fail

Unfortunately, projects *do* fail! As a project manager, you need to be aware of the causes. According to KPMG Consulting, the top reasons for project failure are:

Why Projects Fail

- Inadequate Project Management, 32%
- Lack of Communications / Change Management, 20%
- Poor Project Definition, 17%
- Poor Business Knowledge, 17%
- Wrong Technology, 7%
- Other, 7%

As you can see, the combination of inadequate project management and poor communications and change management alone account for over half of project failures. Our methodologies address these issues head-on.

Getting Management Buy-in

This is a tough issue. First, management needs to believe that your project is solving a real problem and that you can show real **payback or Return on Investment (ROI)**. Once you get past that, you need to sustain commitment from them. Various techniques can work – but the key thing is to make sure their support is **visible and demonstrable to your team and to the organization.**

Building the Business Case

The Business Case is a feasibility study of the project: the problem you are trying to solve, how it can be implemented, and what you believe it will save, cost to build and cost to maintain. Consider the defining moment to be a meeting with your company's key leaders where you sell moving forward with the project and get funding. The successful business case team walks away with a check for the funding to proceed with the project.

Cost Savings & Justifications

Somewhere along the line, the project **needs** to save direct/indirect costs, improve quality, increase speed, improve productivity or do some combination thereof. Savings may also include intangible items such as improving customer satisfaction or potential revenue or market share increases. All of these taken together form the project **justification**. The costs that need to be considered include project first-costs and **ongoing maintenance** costs. Treatment of costs in the project business case (salaries, consulting fees, hardware, software, facilities, etc.) will depend on your company's accounting rules and policies. Get a project-friendly finance person assigned to help you with this task. The costs, savings and justification are key to the Business Case.

Avoiding Savings 'Backlash'

Business cases can be threatening! As is often the case with being the 'outside' team looking into the organization from a different perspective, the Business Case team will typically find fairly good opportunities for savings during their analysis, as well as unearth practices that should be adopted (or should have been adopted years ago!). This may prove to be a source of **embarrassment** to the current management team - depending on who is sponsoring the project business case - and especially if the opportunities are substantial. The perception could be that

action should have been taken earlier and this may cause people to shy away from your project or cause outright resistance. What to do? Just go with the political flow. Although it seems illogical, some projects may purposely discount savings to the point of just showing marginal payback - enough to approve the project, but avoiding any embarrassing discussions among threatened middle managers. Another source of backlash becomes valid savings that have not been 'cleared' with the affected organization's manager. If you claim that Manufacturing can reduce overhead by 10%, then you'd better get the Manager of Manufacturing to **agree** with you. If you *surprise* him (and his boss) with that in the Funding meeting, he'll blow your head off and sink the project right there. Be sensible - make sure you have consensus on savings from those organizations affected.

Managing Expectations

As a condition for doing the Business Case or project definition, make sure to document your key assumptions (timing, resources, commitment, technical capability, etc.) that form the basis of your cost and savings estimates. Don't be shy - assumptions are OK - it's better to document and communicate them NOW then try to get people to remember them after the project starts. Also document and communicate your project's Critical Success Factors (CSFs). These are the things that your project needs to be successful such as management commitment, key resources, time, money, etc. Communicate these **early** - they are probably items that you want from the project sponsors and should form your "contract" with the organization and sponsors. Also be sure to leave contingency funding (or **strategic reserve**) in the project, usually 5-10% of the total cost.

Avoiding Failure

Try to constantly keep up your antennas regarding things that can go wrong. List the items that worry you about the project (risks) and then formulate a plan (mitigation) to monitor and contain each potential issue. Also formulate a "plan-b" (contingency) if your worst nightmare comes true about the potential issue. What do you do now? The key here is to constantly poll for potential issues, and put a plan in place to deal with them - even if the worst happens. This way, you've thought out all the consequences in dealing with the potential issue and won't waste important decision-making time when or if the potential issue becomes real.

Using Consultants

This is a two-edged sword; consultants can quickly (and expensively!) supplement process and technical knowledge where you need it, but don't depend on your consultants to be there forever. Learn as much as you can from them - and quickly; but your team has the ***ultimate responsibility*** to perform.

Project Administration & Standards

Don't overlook the day-to-day project tasks such as team logistics, phones, computers, on-boarding and orienting new team members, supplies, security, documentation folders, etc. Set up an administration guide to document all the standard rules once - time charging, timesheets, suggested hotels, allowable expenses, etc. In addition, technical and other project standards should be communicated - PC tools, software development standards, software configuration management, coding conventions, etc.

Another item that tends to come up here is the topic of team collaboration. Co-locating the team is actually a terrific concept if you can do it although a plethora of on-line collaboration tools now exist to minimize travel and other project costs as well as provide configuration management and control of project plans and other documentation. The key thing to watch here is that the team needs to stay in touch with the real world from two standpoints. First - they need to stay connected with their functional organization, their real home - because some day they will return to their boss and you don't want them to be forgotten orphans at the end of the project. Secondly, the world will move on - they will tend to lose their functional edge as they go into project isolation. The solution - keep their functional managers aware of their value, and keep them in an active liaison role with their home organization - this serves as a great communications tool also; remember - you're always in the sell mode!

Financial Management

It is important to demonstrate that your project will have the necessary financial controls and abide by the necessary Federal Accounting Standards Board (FASB) standards for recording expense and capital expenditures. Note that capital spending, cash-flow and net-income impacts of your project must all be taken into consideration as you obtain and manage your funding.

Project Planning

Getting Started - Essential Items in the Project Plan

The essential items of a project plan consist of the project summary (mission, scope and deliverables), project team structure and staffing plan, the project budget, the master and detailed schedules, data conversion plan, project status and contingency planning, issues log and change management process, project communications strategy and plan and the operational readiness review checklist. The Business Case should also be documented along with key assumptions, critical success factors and key risk areas.

Constructing the Project Budget

Numerous worksheets exist for constructing a project budget. Key ingredients are your rough work plan and schedules, the team (roles/responsibility) structure, an estimate of individually-required participation (person-days/mo.), hardware, software and incidental costs (and estimates of timing). Remember that budgets communicate in two-ways. First - the money you need; Secondly - the **people commitment** you need from the organization! Work with a finance person to understand how costs are treated in your organization - this may influence your spending plan. When it comes to financing a project the size and scope of an enterprise wide implementation, the reality of standard budgeting doesn't always apply. Since the length of these projects exceed the time frame of many business budget cycles, there will be changes along the way the dramatically impact your overall budget. Therefore, be sure to build-in project re-evaluation milestones to re-assess cost and schedule as part of your project master schedule.

The Project Communications Strategy

A communication strategy deals with meeting rhythm and two-way communication with the team (status reviews, Change Control Boards CCBs, etc.) and communications upwardly to the sponsors (Management Control Board; steering committee meetings, functional staff meetings, etc.). Also communicate often and personally to other stakeholders and influential parties - lay out a strategy to **continuously market** the project. Take any opportunity to sell the project. Your communications strategy should also include monthly status reports, communications, newsletters, articles in the company news media,

presentations to top management, peers and adjacent organizations impacted, etc.

Another communications idea: **Why not put your project on the Web?** The technology is now available to post your project plan on your company's intranet, thereby giving access to your entire project team - this can be a tremendous aid, especially if the project is being managed or staffed from multiple locations. Also, tools such as NetMeeting and Symposium can let you conduct meetings and training over the internet - saving precious travel time and costs.

Getting the Right Team and the Right Resources

Despite management enthusiasm for your project, you will need to lobby hard to get the best people. Use the project sponsors and Steering Committee to assist with this issue. They may be able to work the politics from a different direction. Remember that "inadequate resources" refers to both people and dollars. Most projects consist of an ad-hoc team of people from various departments in the business who are unfamiliar with the process and challenges of managing the technology, tasks and people issues that will exist as the program progresses. What is the right number of people? What areas must be represented? What defines an effective team member? Is there the potential for undermining? Remember, managers may not always "hand over" their top employees for an extended project outside of their departments. You need to take inventory of your project team. To learn how to build a successful team, contact The Project Doctor. We will assess your results, answer any questions and provide you with recommendations specific to your projects teams' particular situation.

The Art of Master Scheduling

Typically, project managers want to immediately run off and create detailed schedules and look for constraints in level 56. Wrong! First create and **play** with a **master schedule**. Take a shot at the desired end date and start to schedule backwards. Start at a high level. Be visual, use colors and do this collaboratively on the wall of a large room to promote team inclusion feedback. **Organize the schedule by responsibility down the side and project phase across the top**. This immediately points out team responsibility by phase so they can visualize their critical paths in relation to the rest of the project. Play with the master schedule;

check out critical paths, note key milestones and integration points, take a shot at type and amount of resources required. Then step back, look at the reality of the schedule in time and resources - is the end-date still do-able? If so, drive down to the next level of detail. If not, adjust your schedule or resources and iterate through the process again. When you've driven down about 2-3 levels, stop. You're now ready for the detail schedules. Of course if you do hit a major snag in level 56 after starting with a master schedule, re-group the team. The key is to get started from the top-down, don't worry about immediate perfection in the detail plan and focus on getting the team to work together and visualize their commitments. Document your assumptions and move forward, don't get stuck in the *paralysis by analysis* mode - the plan will change 10 minutes after the first task starts!

Estimating Task Durations and Levels of Effort

One of the more difficult duties of the project manager as he/she constructs schedules and resources needed is to come up with a method to determine how long will tasks / deliverables take to complete. There is no single 'right' method and in fact on some complex or critical-path tasks, you may use all three at the same time!

We won't get too deep into this topic, but you should be aware of these different techniques. They are:

- Statistical Estimating: This uses a **high-level** high/medium/low 'guesstimate', applies some statistical methods and gives you an answer for average task duration and probable +/- variances (we include a sample of this with this presentation).

- Parametric Estimating: This method uses a technique to figure out how **big** the task is based on key *parameters* (lines of code, skill required, complexity factors, etc.). This technique is also high-level and may be useful at the master-schedule level early-on in the project.

- The Detailed Estimate: This technique is nothing more than breaking down the task into very small chunks (requirements, design, detail design, code, unit test, module test, suite test, user test, etc.) and just detailing out each element of

work and the level of effort required. At some point, this still requires a guess or gut-feel on level of effort, but it makes sure you've *accounted for* every element of work required. This technique is useful at the detailed-schedule level.

One thing to keep in mind is that whatever method is chosen, you should document your assumptions and the way you came up with the estimate – *even if it is a guess*. This 'back-up' documentation is known as your **'basis of estimate'** and you will refer to it often to 'remember' how you came up with the estimate. Remember the **'sanity-check'** – whatever method(s) you use, don't be afraid to test it with other colleagues, compare it with prior history of similar tasks on similar projects, etc. The idea is that another set of eyes is often useful.

Project Management & Control

Running the Project - Conducting Status and QA Readiness Reviews

Once the project gets rolling, status reviews must happen! They need to form a rhythm that fulfills a necessity to communicate vision and direction **down**, and progress and issues **up** the project organization as well as capturing real-time **lessons-learned**. A typical sequence is to have sub-project reviews on Mondays, Project Reviews on Tuesdays, Management Reviews (if necessary) on Wednesdays, and Steering Committee meetings monthly on a standing basis and with a standing agenda. The reviews can take on a standard look and feel so you don't re-invent the status summaries every week. Avoid wordy word-document status reports; get people in a room once a week, have them share information and have them **look** each other in the eyes!

Preventing and Managing Late Task Completions

The best technique here is to break up tasks into small milestones so you can test for progress in smaller chunks. Instead of having a 6-month task for software development, break it into a 2-month task for design, 2-months for code, and 2-months for test. This way you can **spot unfavorable trends early**. Also, since most delays in tasks are caused by issues and indecision, make sure you (and your team) **stay on top of issues** and their impact on getting tasks accomplished on time - use date-driven issues management. Another contributor to late task

completions is *late starts*! Always review task start dates to ensure timely completion of tasks. Scheduling products such as MSProject, TurboProject, etc. can also assist in managing project tasks. The choice is up to you.

Scope Definition / Scope Creep

Begin using the Change Control Board (CCB) process on day-1. This will provide a forum for managing new / changed requirements, discussing priorities, and evaluating impacts to costs and schedule. All scope issues should be forwarded to the Management Change Board and/or Steering Committee for approval *prior to starting any work*. This way, you can make sure you have relief from costs and schedules before making any commitments to the requestor.

Issues & Indecision

Again, the best forum is the CCB, with definitive DUE DATES on decisions required and impacts determined. Then, begin the escalation process to the MCB and Steering Committee. Make sure leadership knows the implications / importance of getting a decision when needed!

Date-Driven Issues Management

A successful technique we've employed in some projects is something we call date-driven issues management. This is especially useful when we've come into a project in trouble. The technique here is to identify key project milestones and dates. We then surround each milestone with the known and *potential* issues (risks) preventing its successful completion – like little 'storm-clouds' hovering over the date. The issues are then documented, assessed for impact, prioritized and attached to the milestone by date. This technique helps sort out the real issues and priorities and *visually* identifies each issue to the milestone it is affecting, especially if the project team is in a swirl over what to focus on. We then focus our status reviews on the critical issues needing resolution relating to the upcoming milestones.

Motivating and Rewarding the Project Team

Remember that the project team is an ad-hoc collection of diverse individuals, ripped away from their comfy jobs and brought together for the purpose of completing a thankless job of implementing and transitioning your project into reality. How well you motivate depends on your personality, personal style and

passion in the belief of your project. People will follow your lead, but you have to lead! Reward often, even if small awards. The value of the reward to the individual and team is in the message of what you're doing, not the actual cash value awarded. Also make sure that individual's real manager knows the good (or bad) job the person is doing so that appropriate adjustments can be made to annual performance and salary reviews. Also remember to reward for Team behavior; individual rewards are OK, but remember that you don't want heroes, you want a **Team.** Remember to **budget for rewards** and recognition programs.

Dealing With Fear of Change

The fear of change is a people issue ranging from entry-level staff to seasoned executives. There will be loyalty to the antiquated systems you will be replacing, no matter how limited or outdated they may be.   Senior staff are the key endorsers of the new system; and end users will ultimately be the determining factor in making your system implementation successful.   Therefore, Project (Attitude) Change Management must also be managed accordingly.

Active and passive resistance are as much a part of projects as project management tools. Remember that your project is intrusive; it's causing change, it's upsetting the apple cart, and it's challenging the heroes in the organizations who thrill in doing things the old way so they could swoop down from the heavens at the last moment to save the day with their specific knowledge of age-old traditions. Often times the heroes are greatly respected by the leadership team for their feats of danger and will whisper bad things about your project to influential people. How do you deal with this phenomenon? Knowledge and organizational politics (next section). Resistance is based on fear and fear is based on lack of knowledge. The key here is to constantly communicate, educate and train. Head off the fear by being proactive and visible. Try to involve the heroes, let them be part of the solution. Active resisters can be dealt with easily; but keep an eye out for the passive resister - you've got to be street-smart to catch this guy, but when you find him, educate and train - **douse the fear factor**.

Dealing with the Politics

This issue is almost never discussed as a Critical Success Factor for projects, but is real and must be dealt with. Politics is based on dealing squarely with fact and

obliquely with emotion. Project politics is divided into defensive and offensive modes. The defensive mode is used in response to an issue that someone "puts out there" for you to defend - it could be a person threatened by the project, a hero blowing ill words in some ones ear, or a bad situation (project slippage, overruns, etc.). These items must be dealt with fact first, and then the emotion. The offensive politics strategy uses preemptive communications, education, personal touch, favor-trading or whatever to build confidence and trust in you and your project. So even if the bad stuff happens - and it will, you'll be ahead of the political curve a bit. Work the room like it's a performance.

Measuring Success along the Way

Implementing new Information Technology Systems has reached the complexity, costs and expectations that make the stakes too high for failure. The investment being made demands outstanding results… and fast. Unfortunately, Information Technology projects require extensive behind the scenes planning, which often is construed as an 'underground network'. Your project cannot drop out of the limelight. Your success, your team's morale and yes, your budget - rely on internal public relations.

- You need to build in "Quick Wins" along the way.
- You need to ensure that project communications are consistent and candid.
- You need to make sure that funding is secure for the duration of the project

Project duration is often very long and delivery of savings most always comes towards the end of the project. In addition, most people measure project success by the budget-under runs and earlier-than-planned schedule completions. Wrong! Remember the Business Case and the defining reasons for implementing your project? Well, as a project manager, you need to keep those in mind. At every opportunity, sell your successes and their connections to the original project justifications, even if they are small steps towards the bigger picture. A good technique here for long projects is the 'Quick-Win' - a small deliverable (or series of deliverables) that keeps interest alive in your project by delivering small benefits along the way. Keep track of the **'goodness' items** - in real business terms; make a list because people tend to forget why your project is in business and will always question what you accomplished.

Project Cost Accounting

There will be a necessity to collect labor, consulting expenses and other hardware / software costs at least monthly. You then need to compare them against your budgeted spend plan, add them to your remaining estimates to complete (ETC) the project and come up with your estimate at completion (EAC) or forecasted actual costs. It is also helpful to collect your labor hours at some appropriate task level and track them against your budgeted task times. This will help you figure out in progress reporting and indicate if a task will take longer and cost more than expected.

There is a balance over collecting too much data versus not enough. Chances are, your timesheet / payroll will not have the ability to collect the data at the level you need it and you may have to come up with a separate accounting process for labor. Our advice is to collect data at least at the major task or milestone level. Get a routine going to collect the data weekly but report it monthly.

Successful Implementation Techniques

The successful implementation of large scale projects depends upon four key factors – the proper make-up of the project team, a solid process for buy-in and knowledge transition to the owning entity, recognition of the resistive forces that constantly challenge the success of projects and a process to ease the implementation disruption.

These techniques begin on the first day of the project:

The Team… The first step is to have the proper team representation from the user community that will ultimately be responsible for the new system. This could be line managers, even vendors and clients of the affected process area. It's a good idea to get them on the project team early as workers, ambassadors, potential implementers and eventual caretakers of the changes left behind by the new system and process. Having them on the team ensures getting the right requirements, quells any political issues and gives you a pool of implementation talent for the deployment phase.

The Process… Follow the Quality Assurance Review process, especially the various Quality Checklists and the voting process before proceeding to the next project phase. This ensures due-process and asks for a vote of confidence from the team reps before proceeding with each additional phase of the project.

The Enemy Within… Projects will be challenged by those organizational warlords most threatened by the project's success. The approach is to recognize the issues and deal with them as appropriate. Sometimes the head-on approach will work, sometimes guerrilla tactics are called for. You'll have to judge the right tactic for each individual or situation. Most certainly, an approach that uses the proper representation and is air-tight from a process standpoint will help the situation.

Easing Disruption - The CBEEs… The Construction Battalion Combat Engineers or 'Sea-Bees' were often landed ahead of assault landing forces in WWII to clear mines, construct airfields and so on. On especially difficult and repetitive deployments, you may actually **want** to use this technique. Groom your line of business team reps from the outset to be your advance troops or contact liaisons with the areas affected most by your implementation. Empower your CBEEs to communicate early and ease user apprehension. Use fool-proof implementation checklists, and get out there well ahead of implementation day to 'clear the beaches' of any issues.

Project Closure

Transitioning the Team

Transitioning back to a normal job is tough; ensure proper individual recognition is given and make sure that the functional manager of the individual is aware of the employee coming back to his home organization.

Ongoing Training & Support of Using Organization(s)

The sponsoring functional organization should be prepared to accept responsibility for ongoing training and system support of its users. This should be part of the transition plan. It may be necessary to team-up outgoing project training members with key functional and IT individuals to ensure proper transition of responsibility.

On-going Issues Management / Change Requests

Change requests will be a natural part of the day-to-day operating mode. Ensure that a formal change-management process is put in place as part of the transition plan.

Functional System Administration

The sponsoring functional organization should be prepared to accept responsibility for ongoing functional administration of its new system. This should be part of the transition plan. It may be necessary to team-up outgoing functional team members with key individuals to ensure proper transition of responsibility.

Production Support Transition

The IT support organization should be prepared to accept responsibility for ongoing support of the new system. This should be part of the transition plan. It may be necessary to team-up outgoing IT team members with key individuals to ensure proper transition of responsibility.

Doing a Lessons-Learned Session

While lessons-learned should be centrally captured **continuously** during the project, a formal lessons -learned should be conducted to catalog the learning experience for the entire project team.

Project Health

Project Diagnostics

Project diagnostics can be a big help in preventing major headaches. The purpose in utilizing Project Diagnostics is as follows:

- They aid in managing complex, diverse projects
- They are key indicators of project performance - gets to the bottom line!
- They provide early-warning signals for potential problems
- They give you reaction time to address issues

Project Diagnostics includes three dimensions: what key indicators to measure, the process used to measure them and when to measure them. The 'when' is often monthly. The process and the key indicators are summarized below.

The Process of Measuring Health

Project Quality Assurance audits and Health Checks should be conducted. Someone outside the project team should sometimes do them. One technique for analyzing project health was originally developed by the Software Program Managers Network under Contract to DoD for Software Project Management – it consists of a Nine-Point Audit Questionnaire to Determine Project Health in the following areas:

- Staffing and skills assessment
- Work Breakdown Structure (WBS) and Task structure Management
- Cost and Schedule
- Project Management Knowledge
- Domain Knowledge (Subject Matter Expertise)
- Overall Risk and Risk Management

Typical Measures of Project Health

Progress (progress made for dollars spent)

- Budgeted vs. Actual Cost and % Complete - Earned Value (CPI)
- Efficiency
- Task Completions and Tasks Overdue

Change Management (amount of project 'swirl')

- Number of change requests and aging of changes

Staffing (Team satisfaction)

- Team turnover
- Overtime spent

Risk (outstanding threats & strategic reserve)

- Number of open issues and aging
- Exposure & Strategic Reserve (contingency funding)

Quality (product quality & user satisfaction)

- Number of software bugs / rework
- User Acceptance Testing / requirements verification
- Feedback surveys

About Infocept Systems, Inc.

Who We Are

Infocept Systems, Inc. is a professional services consulting company providing business and technology strategies, solutions and services that help your business grow profitably. We passionately believe that innovative use of the right information technology and related processes in your business or institution are essential to increasing revenue, increasing consumer engagement, reducing costs and ensuring mission success. With our extensive industry and consulting experience in working with Fortune 50 companies, we can partner with you to rapidly assess, design and implement the right IT solution to improve your margin and competitive posture to *make your business thrive!*

Our Qualifications

Our credentials and work experiences in consumer-facing, operational management and supply chain systems & best practices span a variety of municipal government, manufacturing, retail, managed-services industries and non-profit institutions. We have extensive experience in business transformation, information technology and large project management within those business segments. Our clients have included such noted agencies, companies and institutions such as the City of New York Office of Management & Budget, GE, Lockheed Martin, KPMG, Panasonic, Lehigh Cement, World Airways, Canam Steel, JE Morgan Mills, ARCO Chemical, Allen Organ, Philadelphia Gear, Aramark Corporation and most recently, the American Bible Society and others.