Human Causes of IT Project Failures

There are 1001 ways to ruin your project.
To protect your investment,
learn from 74 flaws in 43 common situations,
particularly focusing on the
Business - IT Collaboration.

Notes accompanying the presentation

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HUMAN CAUSES OF IT PROJECT FAILURES

Purpose

Many IT projects fail, or at least know important problems. They decrease the benefits of the projects and may ruin the investment. Even successful projects may suffer from these difficulties. Once these difficulties are understood, many of them can be avoided.

Many of these issues are created by people involved in the projects. The presentation "Human Causes of IT Project Failures" explains 74 common flaws occurring in 43 situations happening in IT projects.

The present documentation explains these 74 flaws. This explanation accompanies the presentation mentioned above.

Please use always the original files, rather than files, possibly already adapted, received from colleagues.

Sources:

Presentation

pptx-format: http://tinyurl.com/dxr94lt

ppt-format: http://tinyurl.com/cwlybsu

Present Notes

pdf-format: http://tinyurl.com/btxqcpx

Slide Explanation

"Problem Solving 1"

End-users notice a need. They will try to solve it by themselves, to find a work-around. They use their own creativity to "adapt" the system in an uncontrolled way. The problem is that information stored in a system is supposed to be "under control".

Flaw 1: Although users face an information need, they try to find ways to "solve" the need. This may lead to a collection of various solutions for a same problem. An "excess" or abuse of freedom leads to anarchy. Chaos is being created.

Flaw 2: End-users go beyond their role. By trying to "solve problems" they actually design a part of the system.

Flaw 3: Users seem to ignore how to deal with information stored in systems. Fields are used for information they are not intended to. Information is put in the system in different ways. Consequently, by abusing the system they are messing up the data stored in the system.

Flaw 4: They don't report the need.

Flaw 5: There is no systematic (unique) way to solve the issue. Each one does it in its own way.

Flaw 6: They use freeware in an uncontrolled way. This type of solutions may lead to a security threats.

Flaw 7: Problems are "solved" without considering a broader view or long term. This is very risky.

Gradually, the end-users will try by themselves to find a unique solution.

Time and effort is being wasted.

"Problem Solving 2"

Users are aware of the existing of a need. This doesn't mean they know and understand the need. And they are also aware that, rather than implementing all different creative "solutions", a single definitive solution has to be put in place. We may engage in tactics like minimisation, adopting a wait-and-see attitude, discussions and other tactics to avoid dealing with the issue.

Flaw 1: Although the message of his team was clear, the manager does the same flaw(s) as the end-users by solving the information need by his own. This is not his role.

Flaw 2: The manager is short-cutting the normal way of proceeding. The reasons for doing this are one-sided. Consequently, the IT department can't play his role and can't take up its responsibilities.

Shadow IT is the IT activities, including their products, performed by the end-users aimed to solve their own information needs and/or IT problems.

All these flaws are driven by goodwill, from a belief in the own competencies, from the lack of insight in the real role of the IT department, from a dislike of "procedures" and maybe also from a lack of trust in the IT department.

Time and effort is being wasted and more chaos continuous to be created.

"Help !"

The business community tries one more time to solve this in an informal way. The business community faces once more the consequences of its own actions. The reasons the end-users (on the previous slide as well) mention are exactly some of the aspects the IT department takes

care of with. If the business community was able to do the job, there would be no need for an IT department.

The IT department gives a right answer.

No flaws on this slide.

"Formal Recognition"

The original information need, as well as the problems newly created by the ad hoc solutions, is, to some respect, recognised.

Flaw 1: The manager asks and end-user to analyse the situation. This is the job of analysts. (Same flaw as in (all) previous slides)

Time continues to be wasted.

"Elaboration of the Business Demand (1/2)"

The formal procedure that leads to the initiation of a project is started.

Flaw 1: It is not the role of an end-user to analyse information needs and related issues. This is the job of analysts. Consequence: The end-user draws a picture of a solution that does not correspond to "best practices", which does not exploit the real possibilities of IT, which might be inefficient or of which feasibility is unsure. It is likely to reflect concepts of the paper-administration. We may expect point solutions dealing and/or solutions dealing only with symptoms and/or creating issues elsewhere.

Flaw 2: The assumption is made that the demand reflects the real solution, which is one that solves the needs and problems. The business community might get what has been demanded. But the demand may describe a solution that solves consequences, one that solves a wrong problem or one that doesn't solve the problem correctly. The requested solution may create new issues elsewhere or in the future. The solution might be a non-solution. So far, the business community has been showing that it is unable to solve the information need.

Flaw 3: Filling in a template makes the job somewhat easier. But this is not the essence. All the difficulty resides in gathering all the information, analysing the situation, conceiving a solution and synthesising the information.

Flaw 4: The end-user is filtering information. By doing so, he distorts the situation and exercises on his own a tremendous influence on the future solution and on the project execution without being aware of the consequences on the building process and design decisions. The impact of this influence on cost, time, rework, delivery date, risks, … is not taken into account.

Flaw 5: The role of IT is considered to be to developing the solution demanded by the business community. (slides 1 & 2)

Flaw 6: The role of the IT department is to "automate" existing process or to offer support "to present working methods". (slides 1 & 2)

In the case of flaws 5 & 6, IT will be extremely underexploited.

"Choice of Business Representative"

Flaw 1: The collaboration is not a struggle for power. For example, "negotiations" in the context of a project is not a matter of "obtaining the shortest delays". It's a matter of devising plans based on realistic delays. The representative should have some predispositions in engineering thinking. He/she should preferably be methodical. He/she should be able to deal with problems, to communicate and to collaborate with IT people.

"Meeting Business Representative and Analyst"

Flaw 1: The business analyst should primarily enquire for problems, needs and complaints. Asking for the solution wanted by the business community implies that the business community identified and analysed the issue and conceived already the solution. This is neither their job, nor do they have the required competencies for this work. This is the essence of the responsibility of the analyst.

Consequence: By shifting this analysis to the business community, should also occur a shift in competencies and responsibilities. If this doesn't happen, then there is a mismatch (responsibility without competencies).

Flaw 2: The business analyst already determined in advance that the initiative is about software. He speaks about the solution even before knowing the problem. As a general principle, first the problem needs to be analysed. Once this is fairly well clarified, we can talk about solutions.

Flaw 3: The business representative leads the process. Does he master the process of building information systems? Does he know what the IT project needs to successfully build information systems? You can't lead what you don't understand.

Flaw 4: The business representative clearly underestimates the importance of the analysis. It seems he/she doesn't grasp the real purpose of it. He seems to consider it as an obligatory, but in fact superficial or unimportant, activity in the development process.

"Project Negotiation" (1, 2, 3)

Flaw 1: The business analyst adds his own buffer to the estimate. Often, project team members add their own time buffer in their estimates. Despite of this, estimates on simple tasks are often too optimistic. Worse, the total estimate of a project is often too optimistic as well. Good agreements need to be made with the project manager about how to estimate and how the estimates will be managed. Estimates should be made with the project manager and team members.

Flaw 2: We can't accept estimates without knowing what they include and what not, what method have been used, what parameters have been used, what risks are mitigated with these estimations and which not, what are the assumptions, and so on. Normally, first very rough estimates should be made. They should be refined as the problem, product are known more in detail and as the way the project functions is better known.

Flaw 3 (slide 2): The business community can't estimate the required time and resources. On what are their estimates based?

Flaw 4: The business community takes project management decisions.

Flaw 5: The business community, the client, determined the product. It determined the delivery date. And it also determined the price. The business community determined thus the product, its price and the time of delivery! (This is like a customer entering a shop and he/she determines himself/herself the price he will pay for the goods he wants.)

Flaw 6: The project manager should first make serious computations before accepting any proposition. Here, the project manager is too optimistic and accepts a huge risk from the beginning.

Flaw 7: The project manager should stick with her estimates and report the little resources and time as a risk that must be accepted by the business, even if he/she has no other choice than to accept the project.

Flaw 8 (slide 3): The project manager is short cutting the project process. In some circumstances it can be done. For example, when it is sure that the requirements are rather stable and qualitative of a higher level. But in this phase of the project it is too soon to take such decisions. It only introduces a new risk.

Flaw 9 (general): The role of the project manager is also to protect the project (and the team) and not to put it at risk. He/she has to do what is necessary to lead it to a success.

Flaw 10 (general): The focus is on delivering the project accordingly to the business demand, budget and time. Instead, in the interest of the company, the focus should be on building a valuable enterprise information solution.

"The Project Charter"

Flaw 1: The project charter is not simply a template that must be filled in (the template-flaw has been mentioned earlier).

Flaw 2: The scope is considered as a simple description of the project. The purpose of the scope is clearly not understood. If the scope doesn't perfectly and unambiguously delineate what will be done by the project and what won't be done it becomes impossible to do estimations and to negotiate resources and time.

Flaw 3: The project charter should be elaborated in collaboration with some key members of the project and should be used to manage the project and to elaborate further plans.

"Planning the Project"

Flaw 1: A project can only be planned once the problem and solutions are known. In many IT project learning to know the problem and the conception (design) of the solution is part of the project itself. Plans must be regularly reviewed as the project progresses.

Flaw 2: Plans, and particularly the estimates, depends mainly on the quality of the project members, on the collaboration and on the coordination. Sometimes, it also depends on the work environment. The project members should have their say in the project plans. As long as the project isn't staffed, the plans are only preliminary plans.

"Working on the Requirements and Specs"

Flaw 1: The focus is not on building an enterprise information solution, but on executing the business demand.

Flaw 2: There is no link between the project and the business objectives. Consequently, the project team can not propose solutions that allow better reaching the business objectives.

Flaw 3: The (business) analyst considers the demand as for reliable. This is what the business community demands, and this is what they will get. He neglects his responsibilities.

Flaw 4: The business demand may never be considered as an analysis, as a substitute or as a part of it. The business demand is no more than an initial input giving a first possible view of the problem. And this together with the broader problem area should be verified and further analysed.

"Availability"

Flaw 1: The business representative should be available to the project. Agreements about the availability should be made. A lack of availability may quickly cause important delays on the project. Plans must take a limited availability into account.

"Decision Making"

Flaw 1: A slow decision process can be a cause of late projects. Agreements about this should also be made early in the project.

Flaw 2: The "decisions" are no decisions. Decisions shouldn't be taken lightly. They should be firm. People do work based on decisions that are taken. Changing decisions is a cause of rework and thus of delays. They may also create a lot of frustration.

"Changing Requirements"

Flaw 1: Ever changing requirements or getting requirements piecemeal is a cause of project delay. (cfr the changing decisions on the slide "Decision Making"). This should be avoided.

Some changes are justified or acceptable. Particularly when the changes are due to superficial understanding of the problem and the problem area, inappropriate analysis, immature ideas, ill-conceived solution or no clearly determined objectives. Continuously changing requirements means rework, increases the cost of the project, delay the delivery and decrease its overall return on investment.

"Scope Creep"

Flaw 1: Continuously adding "small features" is often possible, particularly when the scope is badly defined. This may turn the project into a never-ending story.

"Discussing the Requirements with the Expert"

Flaw 1: The business community should assign a representative that is somewhat familiar with IT and IT projects. He or she should be able to talk with IT. If this is not the case, the IT department should provide an introductory course in IT and IT projects. (this flaw has been mentioned earlier)

Flaw 2: If IT artefacts are not clear to a business representative, he or she should ask for clarification until it is perfectly clear.

Flaw 3: The analyst should verify that the business representative understands the IT artefacts.

"Discussing the Requirements with the project manager"

Flaw 1: The analysis and design are of the responsibility of the analysts, architects and engineers. The role of the project manager is to manage the project as a temporary organisation and process. He/she should not interfere with authority in the design of the solution. Only when the design exceeds the agreed scope or when it requires more time or resources than planned, then the project manager should intervene. But even in those cases, he/she has not to take design decisions. Nevertheless, he/she can always provide advice on the design.

Flaw 2: As often in these cartoons, the (business) analyst accepts whatever other parties are saying. He doesn't assume his real responsibilities.

It's not the "project manager's project".

"Terminating the Analysis"

Flaw 1: Wasted time, impatience or plans and delivery dates are never good criteria/reasons to qualify the readiness of analysis, design or any other artefact.

"Last Review of Requirements"

Flaw 1: Being a client, a manager, an expert or a sponsor doesn't imply a freedom to do whatever one likes or prefer. This can be a cause of project failure. It is advised to respect the rules, principles, ideas, agreements, guidelines, policies, and so on of the project.

Flaw 2: Requirements and ideas should be expressed earlier in the project. There is a right moment. Every meeting, document, request, … has a specific purpose. Stakeholders and project team members should (as much as possible) respect this purpose and make use of it.

Flaw 3: As a general rule, the client, sponsor or any other person of the business community shouldn't interfere with the design and chosen technologies. There are some exceptions. A veto-right is not the same as a right to impose an idea or solution.

"MoSCoW Rules"

Flaw 1: The client should be able to indicate in a reliable way what capabilities, features and requirements are more important or have a greater priority. This is essential to better support the business.

Flaw 2: The client should be careful with priorities based on personal reasons.

"Requirements Validation"

Flaw 1: The business community shouldn't validate artefacts based on a superficial understanding and assumptions. It is unacceptable to have at the moment of validation still any uncertainty, white spots, vagueness's, ambiguities and assumptions or simply not to fully understanding the artefact and the presented solution. It's about a true understanding and not about believing the artefact is right.

Flaw 2: As a general rule, the business community should see the validation as a binding agreement. Therefore, the insight in the problem and the solution is crucial. It must offer sufficient certainty. Validating while having already doubts or with the knowledge that some changes are (already) necessary is unacceptable. Evidently, we can never fully exclude the need for later changes. But there is a great difference between having an in depth insight in the problem and in the solution and rushing into the choice or design of a quickly conceived solution based a superficial understanding.

Flaw 3: Impatience, agreed dates and plans are no criteria to validate.

"Requirements Additions/ Changes" (1, 2)

Flaw 1: As a general rule, requirements can't just be added whenever one wants during the course of the project. The work within a project is organised. It is during the analysis phase that a maximum of requirements should be elicited and recorded. This should happen under guidance of the analyst. Requirements come from the analysis. If many requirements pop up later in the project, this means that the analysis hasn't been done very well. Even with a good analysis some new requirements may still be accepted later in the project. However, there should be a good reason for every authorised change. They may have an impact on the project. And they may have a positive or negative impact on the overall solution.

"Development Team"

Flaw 1: The developers shouldn't interpret the requirements and specifications.

Flaw 2: The developers should report strange and inconsistent logic.

Flaw 3: The developers shouldn't be primarily driven by the need to show their capabilities or what technologies can do.

Flaw 4: The developers shouldn't take shortcuts, for example by leaving out logic.

"You are the IT guy, right? Then …"

Flaw 1: Thinking that IT people know everything of IT and can do anything is an illusion. IT is a very broad discipline. Therefore, IT people are often specialised in sub-domains or in specific products.

Flaw 2: IT people have their role and responsibilities. Some IT people are assigned to help end-users on specific topics. But others aren't there to help people with their daily issues.

"Project versus Operations"

Flaw 1: It is very tempting to ask the help of IT people who have the right competencies to solve unexpected issues or to answer questions as they pop up in the mind. Unfortunately, these people may be working on a project with a (more than) tight schedule. These interruptions and additional tasks can be one of the causes of a "late" project. It can jeopardise the project schedule. If different projects are linked, the impact can spread through a set of projects or other initiatives.

"Reporting Project Progress"

Flaw 1: Even small delays should be reported. Small delays do not always appear on the numbers. But they give quit early an indication on the project's progress. During the whole course of the project they add up. True gut feelings about the progress of the project and the numbers should send the same signal. If not, something might be wrong.

"Testing"

Flaw 1: If resources are promised, they should be delivered. Else, the project plan and the delivery date must be reviewed. This is true for any promised collaboration.

Flaw 2: Some tests require the participation of the business community. The business community must foresee resources for testing.

"Shortening the Testing Phase"

Flaw 1: It is true that testing doesn't build the software application. Testing is not a time buffer either. It shouldn't be shortened. Testing verifies whether the product is appropriate and is "a last chance" to correct some features before the product is being used in operations. The result of the testing activities leads also to the decision to transfer the product to the operations, or not. Errors that aren't detected during the testing will remain in the software once operational. These errors may cause a severe damage.

"Project Success / Failure" (1, 2)

Flaw 1: It is easy to declare the product to be a failure based on a missed planned delivery date or based on a feeling of dissatisfaction. Project success or failure is a more complex issue. The criteria should be defined at the beginning of the project.

Flaw 2: Methodologies are never meant to be followed literally. It is no substitute for knowledge or for critical thinking. A methodology doesn't discharge someone from his/hers responsibilities.

"Project Closure"

Flaw 1: "The project was a failure. Let's forget about the project and move on". Especially when a project fails, it is important to analyse why it failed in order to learn from it and not to repeat the failure. The capability of managing and executing projects is too important to the company for not learning from failures.

"Business Analyst as Liaison"

Flaw 1: Limiting the role of business analyst to a liaison / translator is insufficient. The role of the analyst is to do the analysis, which starts with analysing an environment, discovering information needs, and so on.

Note: This approach is reactive and fully dependent of the business community.

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