

GOOD PRACTICES TO TRANSLATE CORPORATE STRATEGY INTO DESIGN STRATEGY

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1. Introduction

Over the last decades, managerial practices in companies have undergone some dramatic changes. These changes have resulted in the introduction of a great deal of significant improvements, in an effort to adapt to an ever changing environment: different crisis, technological advances, new regulations, close markets, global markets, the appearance of new competitors, etc. These, together with other circumstances, account for the newly introduced management practices. Not all of them have survived, some of them have been left behind and others still are in use.

Nowadays, companies have to be able to work under the pressure of a turbulent environment. It is commonly accepted that the most suitable management way for this scenario is the so-called strategic management.

A brief outline of this type of management would present it in the following way. First, the corporate strategy points out which is the aim of the company in the long term. Projects are the actions in the short term designed to drive the organization towards the strategic objective. Projects are initiated with a business perspective and are usually focused on business benefits.

In order to become sustainable, one of the most important critical success factors for an enterprise is the alignment of its projects within the corporate strategy.

Translating the corporate strategy into the project is sorted out by selecting the right project at the aligning initiation phase, making sure it is compatible with the business strategy. A proper project foundation also will contribute, in a second aligning phase, to spread success all over the business results. The paper focuses this second view of linkage.

The aim of this paper is to collect some good practices to lead successful alignment of corporate strategy and project (design) strategy. These practices have been selected out of some SME's (small and medium enterprise) pitfalls found in their management.

2. Corporate strategy

Corporate strategy is mainly focused on five aspects: value, vision, mission, internal environment and external environment. The Board of Directors sets the strategy to be followed over the next five years; this strategy aims at attaining the desired goals for the company. Besides, this Board sets a number of objectives.

The so-called Portfolio Management follows some pre-determined criteria and prioritizes certain objectives over the others.

Regarding product management, it is important to remember that the three main areas are design, manufacture and sales. Obviously, Corporate strategy is bound to be cascaded down to the three departments. However, aligning corporate strategy and project strategy in a company should take into account the rest of the departments, thus becoming a more horizontal alignment. A multidirectional alignment will help to reach the corporate objective comfortably.

In order to reach the strategic objectives, most big enterprises are using Program Management. There is no need for such management when dealing with small and medium enterprises. This paper tries to align company's corporate strategy straight into the project.

3. Design strategy

The strategy of a project decides on the goals to be reached in short time in order to succeed in the long term objective pointed out by the corporate strategy, so corporate benefit is achieved.

In most studies, the definition of the project strategy is ambiguous. There is no real consensus as to the meaning and the implications of the project strategy.

The project must be clearly positioned with respect to its environment, goals, plans, guidelines, methods, management system, measurements, controlling devices, as well as a certain culture. The project's policies must always keep the alignment with the parent organization. All that is a matter of project strategy.



Figure 1. The integration of design system and strategic system

4. The nature of alignment

The project lifecycle is divided into several phase. Each of them is classified not just according to one person's point of view. The classification of these phases derives from the nature and characteristics of each project.

There is a reason for each phase, and in each of these phases there is a job to carry out and a set goal. Since every project differs from the others, the importance of each phase will vary from one project to another. The lifecycle of any project can be divided into four phases: conception, planning, execution and control, and closure:

The **conception** phase is where the project goal and project strategy is defined, according to the corporate strategy.

The planning phase decides how the project will be performed.

The **execution** and **control** phase implies evaluating a PDCA loop. Whatever is agreed in the planning phase must be executed. Temporal cycles will control the deviation between what is planned and what is really executed. Depending on the nature of the divergence, different actions will be undertaken, commanded through the project strategy.

The **closure** phase involves looking back in what has been done and enumerating the **learned lessons**. These learned lessons are critical as a feedback for the next design strategy and for corporate strategy.



Figure 2. Project lifecycle

It is at the beginning of the project where the potential of alignment is maximum. As the project progresses the potential of aligning decreases. In fact, when a project is about to come to an end, it is impossible to re-align the project towards the corporate strategy. It is time to evaluate the success of the project. After the closure phase the corporate level is able to start measuring the benefit obtained from the project in the frame of corporate strategy.



Figure 3. Aligning potential

So, as stated, the first phase of any project's lifecycle is of crucial importance to profit as much as possible from a good alignment. The conception of a project can be defined as the strategy of the project. In fact, in a design project, design strategy will work as a conductor throughout the development of the project.

Obviously, all projects are initiated as an answer to a defined business need. At the same time, this business need is identified by corporate strategy. So it is of the most importance that design strategy and corporate strategy push in the same direction.

It is true that during the planning and execution phases, a project can loose the desired direction. If the previous phases are correctly aligned, the incidence of the deviation in the final degree of alignment will be lower.

Design strategy will always play a leading role throughout all the different phases.

Translating corporate strategy into project (design) strategy in an efficient way is the key success factor to achieve benefits. The necessary skills for this cascade translation are knowhow in project management and knowhow in design management.

There are multiple ways to align a project. Depending on who is responsible for the alignment, different solutions can be adopted, and each of these solutions will result in a different contribution to the accomplishing of the strategic objectives.

All the successful paths followed by the project have many points in common. Thus, the right methodology in aligning corporate and project strategy must be conformed by these good practices.

5. Good Practices

Corporate strategy has a clear impact on what and how it must be designed.

The main variables to align are structure, product, processes, and methods.

The aligning can be carried out in different manners: using new technologies, via internal development, through outsourcing, creating joint ventures... Each of them involves a different type of risk.

An adequate alignment will result in business value. When translating corporate strategy, some decisions must be taken on the run. It is widely accepted that the decision taking process can sometimes be affected by emotions. Any aligning methodology should take in account the following good practices so some pitfalls could be avoided.

5.1 The discovery

Discovery is a process in the conception phase that decides which projects will help to enforce the strategic objective. It is similar to a portfolio. Potential projects are faced against the resources and the capabilities of the organization. In other words, projects are prioritized according to these four aspects: time, budget, scope and quality.

COST	QUALITY
SCOPE	TIME

Figure 4. The balanced Quadrant

The selected project will be the one offering the best corporate value. This process, depending on the size of the company, can be undertaken by the corporate strategy itself or in a minority by the project board.

This process gives an idea of which are the complexities that the project will face in its lifecycle. Selecting the best projects is a three step process:

- 1. Identifying the opportunity.
- 2. Comparing the opportunity.
- 3. Ranking the opportunity and deciding which is the chosen project.

Some brainstorming is required to identify the opportunity.

Opportunity usually relies on the following benefits:

- 1. Decreasing the costs.
- 2. Increasing the income.
- 3. Improving productivity.
- 4. Reducing risk.

The opportunities must be ranked according to their potential benefits.

Table 1. Ranking of opportunities and benefits

Opportunity	Project	Benefit
Remove manual work from current processes.	Combine process analysis (to remove manual steps) and automation.	Productivity improvement; cost reduction.
Speed up inventory checking.	Connect inventory system with existing customer order system.	Productivity improvement.
Improve tracking of customer orders, queries, and complaints.	Develop additional functionality in the existing customer order system to accommodate queries and complaints tracking.	Productivity improvement; increased income (from increased customer satisfaction).
Allow customers to interact in more ways.	Introduce customer service web site and email address.	Increased income.

Following this table will help corporate strategy or the project board to identify the project that can give the highest benefit at the lowest cost. During the initiation phase, more detailed cost and benefit

estimates are worked out. If these new estimates do not match the figures in the table, the deciding body should go on to consider another project. A project proposal - or project request document - is a document that describes the potential of the project, introducing a background, identifying the value that the project will provide, and giving a rough estimate of resources (time, cost and quality).

Example 1: It is well recognized that the ratios of implementation of a CRM (Customer relationship management) system in a SMEs is in many cases unsuccessful. Enterprises spend high amount of money on hardware, software and consultancy services, but these enterprises do nothing about improving their working methods or reinstructing employees. Thereby a big opportunity is lost.

5.2 Commitment of the groups involved in the project

Two important groups are involved in a project: the project board and the project team.

The **project board** is a small group of people who take the most important strategic decisions. The project board in made up of three people: the project sponsor, the technical advisor and the business advisor.

The **project sponsor** is the person for whom the project is being delivered, the main concern of this person is to ensure that the value of the project in the context of the strategic objective is delivered. The ultimate decision making is under his/her control, even the decision to cancel the project if necessary.

The **technical advisor** and the **business advisor** advise the project sponsor on the best decisions to be taken regarding the aspects of the project they know in a more detailed way.

The project board is responsible for the success of the strategic goals.

The project team is the group who plans and executes the project.

It is good practice significant commitment between the project board and the project team for a nice alignment.

Example 2: An automotive big enterprise is working together with many SMEs and has running lots of projects with them at the same time. The human resources is not effective enough paying the required attention to each project. This is the scenario of a certain project where collaborative technologies are necessary. The lack of commitment from the root enterprise ends up not describing the collaboration strategy as it should, so incorrect guidelines, undefined policies are approved. In this situation the SME is unable to follow the desired path, and what is worse the strategic objectives of the SME and the big enterprise could be affected.

5.3 Stake holders

The term stake holders refers to all the groups of people involved in the project: customers, administrators, members of the local community, union representatives, clients, contractors, designers and other parties associated with the design, such as suppliers, manufacturers, sales and marketing teams, fund-providing institutions, politicians, consumer groups...

In order to determine the extent of the stake holder's influence in the project, it is necessary to identify them all and understand their point of view, as well as the pressure they are going to exert on the project, either negative or positive.

There are some basic questions that can tell who they are:

- 1. What are we designing?
- 2. What business process are we changing?
- 3. Who are the people involved in those processes?

For a certain strategic objective, a certain design strategy must be drawn. But it cannot be forgotten that other departments such as manufacturing, sales, marketing, and customers will be affected by the decisions taken in the design strategy.

It is a good practice to identify and list their opinions and make sure they are taken into account by the design board. The strategy of the project is to maximize the interaction of the stakeholders that support the project, and minimize the force that can produce the other stakeholders.

The success of a project is directly proportional to the involvement, trust and contributions of the stakeholders. During the conception phase the project board must also ensure, if possible, alignment with the stake holder's expectations. Example 3: A joint venture of three SMEs were trying to build up

a little factory. The goal of the SME was collect industrial waste with high calorific power to prepare a mixture to use it as fuel in an industrial kiln. The preliminary design of the factory was prepared and evaluated from the local institution. All licences seemed to be right, suddenly a non recognized stake holder, green party, came in and started playing. Their interaction towards the project was so strong that ended up sinking the project.

5.4 Design team

The project team members are the human resources that will work in the project. In a design project, the members can work for different companies and be allocated in different geographic areas. PLM (Product Life Management) is a suitable way of managing these scenarios.

In order to succeed in aligning, when different abilities are put together in a group, it is necessary to have everybody working in the same direction. This harmony must always be present in the design strategy.

In that sense, it is important for the the project manager to know which is the personal motivation of each member, how everybody feels about working in the project, whether they see the project as an opportunity for their professional career...

The design team is indirectly accountable for the project goals and consequently, for the success of the project.

A simple organization chart can be drawn to illustrate 5.1, 5.2 and 5.3:



Figure 5. Organization chart

The organization chart helps to take into account everyone involved in the project. The project team must have the necessary skills to drive the project in the outright direction, hence taking the right decisions.

5.5 Defining success criteria

The success criteria for the project must be properly defined. These criteria will drive the project (design) to a successful outcome. The success factors are those variables that will affect the criteria and should be defined in the first stage of alignment, portfolio management.

It is necessary to reach a consensus among all the stakeholders regarding what they consider "proper" success criteria. All stakeholders must be involved in the making up of this criteria that is commanded from the enterprise strategy.

The project success indicators do not have to be the same ones used by the corporate strategy to assess the performance of its strategy.

In the conception phase, corporate strategy must agree with stakeholders on which are the success criteria of the project. These are the key elements to be followed to lead the project towards the set goals. The success criteria will help to guide the project during its lifecycle.

Example 4: This is a SME that designs and manufactures all type of industrial tanks. The SME accepted an interesting offer from a petrochemical to build eight new tanks. The company never worked for that industrial sector before, but they new it was a good opportunity to introduce in a new market.

The designer tried to introduce new innovated control devices in the tank, which never before was used in such factories. In the other hand the manufacturer decided to use his folding machine, which was technically insufficient to fold big metal sheet.

The project ended up as a failure: the control devices did not work, non-functional. The folding sheets labour ended up outsourced, extra cost.

All that could be avoided if a project success criteria was defined in the conception phase.

5.6 Identifying risks

In the conception phase, issues never appear. Anyway, they will certainly arise during the execution phase. Therefore, a good practice is to be aware of them and beforehand, draw up a process to deal with them.

Risks are the problems that will not allow the design to be developed as planned. When they arise, the design will be forced to adjust to the situation. If, before they appear, the design strategy has decided on the measures to adopt if these risks appear, these measures should be executed if they do so.

When a risk arises, design is not in track. If it is a very severe issue, decisions must be taken at both corporate and project level. The impact of these issues goes straight into cost, quality and time. In the long term, it can have an indirect impact in the business revenues.

When managing risk, the following process should be applied:

- 1. Identify potential risks.
- 2. Rate them by severity and likelihood of their actually happening.
- 3. Draw up plans to deal with those risks.

There should not be a plan for every single risk; only for those which have a high overall score in the following selection. The score goes from one to five.

Risk	Likelihood	Severity	Overall
Insufficient drawings.	3	4	12
Insufficient content.	2	3	6
Client does not participate in design reviews.	3	3	9

Table 2. Risk rating

Those plans in response to risks before they actually occur are called mitigation plans. They allow for a much higher quality in the project's planning and execution.

Some risks may go far beyond the scope of the project itself. But if a proper corporate strategy has been managed, there is no need to panic because that corporate strategy will certainly avoid their appearance.

If a risk does not occur during the project, the degree of alignment should not vary.

The risks that should be handled more carefully are those that have a direct bearing on the project's purpose in the frame of strategic objectives.

Managing risk is a good practice for re-aligning possible deviation.

Example 5: A European new directive forces to adapt a new filtering chimney system in all petrochemicals. A specialized SME in fluid mechanic is involved in that project. The SME spends five months designing the new system. In the execution phase, the project manager confirms that the plans over where the SME has design the new system are obsolete. All the piping assemblies outsourced do not fit. The petrochemical insists on that is not responsible for the extra cost. The SME can not afford the deviation because is working with tight profit margin. The intervention of an arbitrator is required.

5.7 Resourcing

There are two perspectives regarding the resourcing of a project:

The first one consists in the team assigning the different tasks to specific people. At this point, one of the pitfalls is assigning work to people who do not have those skills.

The second possibility is defining the scope of work and then, decide which team is going to work on it. In this case, the project manager must have enough technical knowhow to be able to assign the different tasks.

To succeed in his/her decisions, the project manager works with other functional managers. This allows them to correctly enunciate a milestone plan and a responsibility plan at the strategic level. The design team is formed by taking into account the responsibility chart (Responsibility Assignment Matrix) and the required skills. This team determines how the work is going to be approached. The project manager agrees and authorizes how the work is going to be completed.

The process of resourcing a project includes:

- 1. Identifying what is to be achieved.
- 2. Identifing the skills required to do the work.
- 3. Identifing available people.
- 4. Assessing the competence of the available people.
- 5. Identifying any required training.
- 6. Negotiating with resource providers.
- 7. Ensuring that the appropriate facilities and equipment are available.

Example 6: This is a familiar SME that manufactures iron globe valve bodies. The director of the company has recently retired, so a familiar is running the business. The design drawings of new models are elaborated in a well known engineering firm.

The new director does not understand the purpose of geometric tolerances so the first thing he does when constructive plans do arrive is erase the tolerances.

This practice can impact in short and long term: renouncement of a set of manufactured valves and loosing a client.

5.8 The process of initiation

The purpose of initiation is to develop a project blueprint aiming at providing the project with a foundation. The project initiation document will give the project board some very helpful information to check if the expected corporate benefits can be reached or not.

If the project board gives ok to the project, then this document will assist the project with the decision taking when the project arrives at a bottle neck or/and a milestone.

Controlling whether the project is in track and whether it gives the deliverables constitutes a very important information for the project board. The controlling devices should be defined in this document.

The following information must be collected:

- 1. What is the reason for the project.
- 2. What needs to be delivered (projects objectives) and how it will be reached.
- 3. Who is involved.
- 4. The timings and the costs in which the project will incur.
- 5. Project's strategy.
- 6. Control devices.

This document is of great importance in alignment because of its linkage between corporate and project level. Once this document is approved the planification phase commences.

Example 7: This is a SME that wanted to buy a new tromel. The cost of the order was quite high, so the project team expended nearly a year to decide what they exactly wanted. They ordered that pelleting machine, and the manufacturer said: "We can not deliver that machine, we do not have the parts of that machine and the supplier doesn't manufacture them anymore."

5.9 Culture

One of the most remarkable characteristics of an enterprise that is mature in project management is its own culture.

In the literature. several types of cultures can be defined depending on the nature of the environment:

- 1. Cooperative cultures. Communication is fluid.
- 2. Non-cooperative cultures. Employees worry more about themselves than for the team or company.
- 3. Competitive cultures. Project teams compete against each other, and employees demonstrate more loyalty to the project than to the project manager.

- 4. Isolated cultures. Their organization allows for the development of their own project management cultures.
- 5. Fragmented cultures. The team is geographically separated from the rest.

Competitive cultures can work in the short term, especially when faced with a lot of work. But the long time effects for the project team are usually not favourable in these cultures.

5.10 Leadership

Leadership is an outstanding feature of successful projects. A project manager must lead the project in many directions.

- 1. Upwards: Keeping the support from the corporative level.
- 2. Outwards: Earning the support of resource providers and the different stakeholders.
- 3. Downwards: Leading the project team. The commitment of the project team must be constantly fed throughout the project lifecycle.

Over the last decades, a great number of theories have appeared as to how to lead a team. Any project manager should demostrate his/her leadership.

Regarding leadership, six types of schools can be recognized in the literature: the trait school, the behavioural school, the contingency school, the visionary school, the emotional intelligence school, the competence school. Each school has its own traits.

Depending on the environment where the project takes place, one these types of leadership, even a mixture of leadership types will help to succeed in a project's strategy alignment.

6. Strategy for a successful alignment

Each structure has its own features, which can be described in terms of **practices** (attitudes), **human factors** (emotions) and **capability** (aptitudes).

The strategy to achieve a successful alignment involves a clear understanding of which are the drivers of alignment. The drivers for alignment are **knowledge**, **communication** (language) and **culture** (sensibility).

These drivers aim at coming up with certain behavioural rules that make it easier for new policied to be introduced.



Figure 6. Drivers for alignment

7. Some characteristics of a correctly aligned project

The following is a list of some of the main characteristics shared by different projects correctly aligned:

- 1. They have supporters in the organization.
- 2. They are important for the future of the organization.
- 3. They deliver benefit in the long term according to defined indicators.
- 4. They show enough investment in different resources (people, equipment and budget).

8. Conclusion

Aligning projects within the strategy it is a knowhow that relies in personal skills and also depends on the environment surrounding the project. Regarding the alignment of projects, the following topics have proven to be a good practice:

- 1. It is at the beginning of the Project lifecycle when the potential of alignment is at its maximum. Before the planning phase, all projects need a conception phase.
- 2. To ensure the alignment of the project with the business goals, the project sponsor must be really involved in the project, so that the main decisions will be correctly taken.
- 3. Stake holders'role, both in corporate and project strategy, interact directly in the project. Knowledge of their actions toward the project is essential.
- 4. The project board is responsible for the strategic objectives. The project team is responsible for the project goals.
- 5. The success criteria of any project must be developed.
- 6. Risks must be identified so mitigation plans can re-align the direction.
- 7. The size and type of a project requires a specific resource.
- 8. The project strategy must be formulated and reflected in the Project Initiation Document.

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