

A leap in the evolution of product development. The application of Project management methodology and Human resources tools in the restructuring of Product development process and teams. A study case of a functionally organized family owned company in Argentina.

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This study case is intended to contribute on the following issues (as described in the invitation for the PDMA India Conference):

- ❖ Managing R&D and innovation efforts in developing countries
- ❖ Managing product development teams within and across developing country markets
- ❖ Reengineering and robust design of products for developing country markets
- ❖ Adapting product development tools and techniques for developing country markets.

Important note: Unluckily I will not be able to attend to the meeting. That is why I decided that, if you considered this paper interesting for academic and practitioners, you may publish it completely.

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Abstract

Most local family owned companies operating in developing countries have problems in applying worldwide best practices in their core processes. Usually, there are various reasons underlying this situation: the organization is usually attached to status quo and traditional practices, especially when these prove to be effective in some way; their strong functional structure clashes with that small but also existing matrix and cooperative structure usually in the Product development area. Last, there is a weak empowerment and a poor level of attraction of the best trained and experienced professionals.

The local industry in developing countries is ploughed with these problems which have a negative impact on the Product development and innovation process and the teams in charge of them. Despite being a vital process, it is often disregarded just as much as their teams are. Companies in this industry usually focus their attention on the production process of existing products because this brings the necessary revenue for present operations. Maintaining a chaotic and inefficient product development process and poorly motivated teams is shortsighted and may severely compromise the future growth and even the sustainability of the company.

This paper shows the situation of an Argentine pharmaceutical and cosmetics company, born in the 20's. Facing a crisis in terms of the development and launching of new products, it had a successful turnaround after implementing the Project Management methodology and Human resources tools especially selected to rebuild the project teams. The lessons learned during the evolution of this turnaround process can be applied with small adjustments to most local small and medium family owned companies seeking to restructure or create a product development area with state-of-the-art practices, allowing them to profit from a pipeline of products.

Two and a half years have passed since the beginning of this initiative and the results are extremely positive. During this period, the company was able to complete 13 product developments, 12 of which were already launched in Argentine and some international markets. As a result, team members experienced a sense of pride which was unknown amongst them up to this time and the quality of deliverables improved in great proportion. The restructuring of the process allows both an evaluation and a project planning that stems from a general consensus before the implementation phase. Also, the new process and the way it is being managed along with the online information tool were praised by ISO external and internal audits as one of the main strengths of the company. This means that the success of the initiative was measured not only by internal standards but also by external agencies with standards of their own which constitute an objective and unbiased point of view.

There are lots of issues pending as far as cultural change in order to give this way of doing things a permanent status. A strong resistance still remains in the hearts and minds of many stakeholders in the organization, so the challenge now is how to turn these practices into natural ways of working and at the same time trying to avoid clashes with other processes.

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Introduction

This work is about a pharmaceutical and cosmetics family owned company with plants and offices located in Argentina. Back in 2005, faced serious problems with the development and launching of new products and with the project teams in charge of performing these tasks. This situation jeopardized the future growth of the company. Nevertheless, this situation had a successful turnaround after implementing the Project Management methodology and Human resources tools especially selected to rebuild the project teams and their above mentioned function.

We think that the lessons learnt during this turnaround process can be Applied, with small adjustments, to a wide variety of companies seeking to restructure or create a product development area with state-of-the-art practices, allowing them to profit from a pipeline of products.

Presentation of the company

This company was created in the 1920's in Spain and the two owners decided to internationalize it a few years later, arriving to Argentina in 1926. The branches were distributed amongst many countries in America and Europe, so when the two partners decided to separate 10 years later, Argentina, Uruguay and Paraguay became a block. The other countries in South America and in the other regions were sold to multinational and other medium companies. As of today the company has most of its sales coming from Argentina. Last year it started a first strong effort to internationalize in Central America, Brazil, China and Chile.

Its offices and main plant are located in downtown Buenos Aires, but there is also a small plant in San Luis, a central west province in Argentina. The building in Buenos Aires is quite old and its distribution is not updated to meet the standards of more modern companies' buildings. Constructed with a vertical design, it has great problems in terms of the production layout and does not foster contact and communication amongst its members.

It is a leader with around +25% of the market share in sun protection products and in the skin care/dermathology category. Nowadays it is one of the 20 first labs in Argentina (based in quantity of units sold). Its "cash cows" are a handful of products with many decades of successful existence in the market. A well trained and respectful team of

salespeople and strict levels of product quality maintain an excellent image amongst doctors. The headcount sums around 500 people distributed in three equivalent parts: administrative, production and sales. Until the first semester of 2005 the development of new products was the responsibility of teams composed by several functional areas with the leadership of a marketing person.

The company belongs to a traditional argentine family with Spanish roots.

This company may be considered as strongly functional, and with a strong power in the hands of technical and sales people. The family is involved not only in top level decisions but it usually intervenes in micro and lower level issues.

This case will try to prove two things. The first one: why we think that the function of product development organized by cross-functional teams faces serious problems when it is located in a strong functional structure, with a questionable leadership and does not use the Project management methodology. Finally we will explain how we carried out a successful turnaround bringing back the work of the project teams and the function of product development and innovation to the best worldwide standards.

Diagnosis of the situation back in 2005 and identification of causes that prevented successful product development

Few new products were launched in the past 4 years before 2005. Some of them were unsuccessful and were discontinued shortly after their launch. Last but not least many of the products under development were inside a vicious cycle, going back and forth with changing decisions, preventing the products to reach the market in a reasonable timeframe. Product development process for many of the product concepts was reaching 5 years, even for cosmetics, while its present standard time for development is 16 months.

Back at the end of that year some of the directors of the company identified the product development as a key problem. This function of the company was not working at all and it was jeopardizing the future growth in local and international markets.

The decision made at that time was very open minded and revolutionary for the pharmaceutical industry operating in Argentina. It was decided that someone with complete knowledge and experience in Project management would be hired to fully implement this methodology for the product development area and its project teams. A special area named “Gerencia de Proyectos/Desarrollo de productos” –Project Management/Product Development- was created designating a professional with many years of experience managing projects in the telecommunications industry and a recently acquired MBA in one of the top argentine universities. Despite being an industry that usually hires technical people with previous experience or knowledge in this sector, the top management decided that someone with a new vision was needed. In this case telecommunications is and industry characterized by its rapid change.

The first step taken by the Project management area was to understand what was happening throughout the company and especially with the project teams.

In order to let the reader understand the context let´s explain that the project teams, back in that year (2005), were 5 and that they were made up by several areas involved in the product development function. The areas participating were: production, production planning, regulatory affairs, graphic and art design, packaging, formula development, purchasing and as ad-hoc members were plant infrastructure, Administration and

finance and quality assurance. The teams were led –dotted line authority- by a product/brand manager of the marketing department with partial time dedicated to them. A series of informal meetings with key stakeholders were held with the purpose of looking for information on the formal and informal sides of their work and relations. The focus was on analyzing the past and the present of the situation they were facing and how these issues affected the company, the product development teams as groups and each individual.

What follows is a list of the topics that were evaluated.

- ❖ Type of relationship between the departments/areas/functions that are permanent members of the project teams. Understanding of potential sources of tension
- ❖ Type of relationship amongst the different levels in the organization.
- ❖ Relationship between the leaders and the team members.
- ❖ Situation inside each area/department/function
- ❖ Identification of key members in the process. Who were the ones performing the majority of the activities?
- ❖ Identification of members' attitude to the cross functional teams and to this special function
- ❖ Understanding of the main facts and the situation regarding decision making. Who were the real decision makers regarding product development?
- ❖ Dynamics of interaction during project meetings
- ❖ Tools used to plan and implement projects. Was there any coordination or logic in the use of tools?
- ❖ Situation regarding strategy. Was there any product strategy in place? Was it communicated and known by all the team members?
- ❖ Management of the portfolio of products. Was there any coordination of the products under development between product managers leading the teams?
- ❖ Decision to start a new development. Who decided it? Was there any intervention of a higher authority in the company prior to start? Was there any tool in place to analyze the convenience and feasibility of starting each product project?
- ❖ Existence and quality of product development process.

The first stage of the diagnosis (the one that was used to start implementing the new methodology and human resources tools) took several months of research and analysis. Despite this first stage being the most important to start changing and operating the area, many issues were confirmed and many more were detected along the two and a half years that have yet passed since the inception. This continuous flow of information was key to advance in the learning curve and to achieve frequent evolutionary leaps in the product development function. The presentation of what was diagnosed is divided in two sections, the first one contains the facts that the laboratory was experimenting in relation to product development; the second one shows the root causes that were identified.

First section: Problems that the company was facing

- ❖ Extremely long product development periods resulting in uncertainty in the expected deadlines, impacting directly on the planning of product launches by the product/brand managers.
- ❖ When the development of the products was reaching its final stages, frequently the Products attributes did not necessarily match what was expected by the board of the company and the marketing department. This resulted in last minute changes causing tension amongst members and other levels of the company.
- ❖ Many product development projects were discontinued at advanced stages.
- ❖ Quality of deliverables and creativity along the product development process was poor.
- ❖ Team members had an important sense of frustration because the launching of new products was a very difficult objective to achieve and because of the constant reworks.
- ❖ There was a sense of discontent among team members as they were held responsible for not achieving the objective of finishing the different product development projects.
- ❖ The leadership by the product managers (brand managers acted as leaders, one for each project team) was questioned by the members. The relationship between product managers and the team members was tense. Product managers were not seen or treated as *customers*. They were often ignored by many stakeholders in the decisions or requests during the process.

- ❖ Very low commitment of team members with the product development teams and the process itself.
- ❖ Despite being one of the most critical ones, the product development and innovation process was often disregarded.

Root causes of the poor performance

The root causes mentioned below were related to the areas of human resources management and organization (this one integrated mainly by processes and methodology).

- ❖ No agreed-upon product design and development process in place.
- ❖ No agreed-upon and defined requirements for the products under development neither at early stages of the process nor at late ones.
- ❖ The product managers did not apply any proven methodology or even a methodology for leading the teams, for integrating stakeholders of competing functions and for following-up projects. The approach and rules used by the product managers to lead were not unique causing confusion among team members and other stakeholders.
- ❖ Brand managers could not make the follow-up of projects or act as leaders because they were almost entirely dedicated to their main responsibility of making each product line profitable. The leadership by the product managers (one for each project team) was questioned by the members because no one used a proven methodology to manage the projects turning the process in a back and forth continuous situation. No worldwide best practices were applied to this core process or others that might have impacted the product development.
- ❖ Human and material resources inefficiently used.
- ❖ Poor empowerment.
- ❖ Poor recognition for each individual and for the team as a whole when important objectives were achieved.
- ❖ Lack of rewards when something went well or if the team achieved a milestone. Members of product development teams usually were not invited to product launching events.

- ❖ No financial, economic or technical evaluation of new product projects entering the process.
- ❖ There were also no “gates” during the process that allow top management to approve key milestones, such as prototypes, launching strategy or special product art work.
- ❖ The board of the company, composed by members of the family, was also included in making decisions about details of product attributes. They were not informed or consulted, at an early stage of conception, of the proposed requirements that would be used as the basis for development. This usually ended in that the various points of view amongst the different members of the family caused last minute changes in the characteristics of the products along the development process. This usually happened at an advanced stage of the process.
- ❖ All the company focused the attention on the production process of existing products as this brought immediate revenue.
- ❖ Functional managers of team members were not convinced of the results of the product development function, so they allocated priorities in existing products and complicated the operation of the project teams.
- ❖ The company was stuck to an organization based on separated and competing functions opposed to a matrix one
- ❖ The product development function lacked a stronger sponsorship from top management. The issue of not leaving the distribution channels with no stock of products was assigned top priority by the General Manager, transferring this understanding to all the areas of the company.
- ❖ Lack of integration activities within teams plus a spatial distribution that went against integration and the establishment of informal relationships.
- ❖ Difficulty to attract the best trained and experienced professionals and lack of ongoing professional development.

Restructuring of the function of product development

It was a big challenge to produce a turnaround in this company. Many factors interfered with the crucial changes that needed to be made: people were very attached to certain ways of doing things and had little interest in allowing someone to tell them how to do

things in a new way; a very complex organization (processes and procedures for everything that made the company very bureaucratic and not dynamic), and people were skeptical and disenchanted with the company and specially with the product development function because of the past facts.

After the diagnosis, certain steps were taken to fully understand how the planning and implementation of the turnaround should be done. More individual and group meetings were organized with different members of the teams and the top management. They were intended to continue the investigation and to test the main ideas of how to implement the change. It should be noted that, besides the existing skeptic context people were very open and collaborative with the newly appointed person to lead the new area. These attitudes may have surfaced as a consequence of their feeling respected and recognized as important professionals in their area.

The three stages of the process of change

The change process can be divided into three stages.

The first one included a complete package of actions that were directed to show the project teams, the internal customer and the top management of the company that change was going to be radical because of the seriousness of the situation. It was also intended to implement the minimum set of project management tools needed to establish an efficient and organized way of working. There was no way of following up more than 30 projects at the same time without, for example, a project management software or an established and agreed-upon product development process. Apart from the actions taken to reorganize, a major change of direction was needed in the human resources area. With such a low motivation and self esteem in almost all of the team members, and the existing context of skepticism the idea of starting to work was impossible. The rapid speed in project execution required to achieve some key product launches did not match the morale and commitment of the team at that moment.

The second phase included almost one and a half years until approximately January 2007. During this period the new area in charge of managing the product development projects worked in two major assignments. First of all they were dedicated, along with the teams, to finish the development of some key products and to manage the other projects under the new methodology. The second big task was to make the team

members and the rest of the company understand and acquire the newly implemented methodology, processes and tools. The intention of this last task was to consolidate the new approach. It was implemented through several in-house training sessions and the day-to-day work.

The last stage started in January/February 2007 with a series of debating meetings and continues until the present. At the beginning of this year the project management/product development area organized a series of breakfasts outside the company with two main objectives: to continue the integration of the cross-functional team members (remember that there was some reminiscence of inter-areas conflicts) and to listen to their opinions and views of the past period (one and a half years) with the new approach to product development. The objectives were to understand the positive and negative facts and which things they considered that were yet to be done. The intention during 2007 was to produce a new evolutionary leap in the interaction between project teams members and in the application of the project management methodology.

Below is the selection of actions that were proposed, back in 2005, to start the first phase of the turnaround.

Methodology and tools. Selection and implementation

Note that the actions were led by the newly appointed manager of the Product development area with the exception of his appointment.

- A certified (PMP) Project Manager with an MBA from a top argentine university was appointed as the unique leader of Product Development area and leader of the Project teams. He had several years of experience in the Telecommunications industry managing projects with multicultural and multifunctional teams
- A consciousness that brand managers should be treated as customers was generated in team members.
- Proven PMI (Project Management Institute) methodology was applied. Only key parts of the PMI approach were used so as not overwhelm people. The previous analysis showed that the dimension of the cultural change was huge so implementing the whole set of project management tools could end in a paralysis. It

was implemented by the product development manager by giving in-house training courses to all the stakeholders and by transmitting the know-how in each weekly meeting.

- ❖ A major restructuring of Product design and development process was done with the consensus of all the stakeholders and the top management of the company (including one member of the board).
- ❖ A set of thoroughly analyzed approvals was incorporated in the Product design and development process. This design was based on the “Stage-gate”® methodology created by Cooper¹. Having key gates throughout the process allows the brand managers, the general manager and, exceptionally, the board to check if the main deliverables meet their expectations and the initial requirements. This way of structuring the process had some other objectives, such as: generating consciousness of the delays that changing decisions could cause, commit the teams to specific milestone deliverables that they should accomplish. The main gates were aligned with the opinion of authors recommended by the Product Development and Management association methodology (PDMA). The most important approvals were: of the idea, of a preliminary business case, selection of a prototype among two or three alternatives, of the functional and customer tests of units not yet presented to the market, of the final art of the packaging (remember this is a cosmetic company too) and of the final marketing plan.
- ❖ Many activities were created to integrate stakeholders as collaborating members in opposition to previous rivalry
- ❖ Project team members’ work was recognized and praised, especially in the circles of the new Product development area and by most of the top managers. This was a key decision to improve their motivation and self esteem.
- ❖ Special events outside the company are organized when a product development reached an end. This was intended to congratulate all the people that worked in the project.
- ❖ Weekly and ad-hoc meetings were planned in advance and with a specific agenda. This decision was directed to respect people’s time. Also refreshments and snacks were permanently available when the project teams got together. These amenities were intended to make the time spent in product development meetings more pleasant and comfortable.

- ❖ The leadership of the teams passed through two stages until the chosen scheme was reached. As brand managers feared that they might be overlooked as leaders (remember that before creating the new area brand managers acted as team leaders) the project manager decided to co-lead with them for some months. As they started feeling more comfortable with the service given by the new area and seeing that they could be treated as customers they finally let the project management area to fully take over the lead. Having a fully dedicated area to lead the teams and do the follow-up of the projects had two benefits. First of all the internal customer could dedicate more time to the marketing of their products instead of working with operational issues and, second, the members of the teams felt and had a full support from an area completely dedicated to product projects. All the company benefitted from having a single point of contact when they needed something related to product projects.
- ❖ Primavera® was installed as the chosen software to manage the portfolio of product development projects.
- ❖ A customized and agreed upon implementation plan was done for each product project. These plans were always based on the standard product design and development process and were then discussed with each stakeholder. Each plan was then distributed to everyone participating in the project. This brought about a strong buy-in and commitment by each team member.
- ❖ A standard product profile with all product requirements should be filled by product managers to start the development.
- ❖ One of the bases of product development is trying to adapt new products to existing product platforms and manufacturing lines. However, it should not compromise the potential market success of the product. The objective is to develop products that require no manual work in the manufacturing lines. There is a full participation of the production plant people during the evaluation of the project and the development process. Plant infrastructure and production planning are respected opinions during the discussions of product attributes.
- ❖ Suppliers are included in the project discussions throughout the process. They are only participating when their presence is needed.
- ❖ A Product Development intranet with relevant information for top managers and teams members was created. The first group could get a complete picture of the product pipeline, from 2006 to 2011. The second group could get on demand reports

of pending and near future tasks and could also see the implementation plan. It also had a set of indicators to check the performance of the area.

- In 2007 the Product development area worked with the team members in a complete plan of actions presented to the top management and Human resources area. The objective was to further improve the already good performance of the function. This plan is currently under implementation

Evidence of positive evolution after two years

The set of actions mentioned above contributed to major benefits for the company. The present context of the product development function is now characterized by a very good teamwork, a high level of creativity and a sense of pride amongst team members.

- Fourteen new product developments projects were completed and launched to market in approximately two years.
- Increased certainty in the pipeline among top and marketing managers. This allowed the Marketing department and top management to devise the product strategy and its implementation. They could also count on full online information.
- No more back and forth or reworks for products under development.
- The Product design and product development process and the methodology that are still being used were praised by ISO external and internal audits as the main strengths of the company.
- The level of creativity increased to a great extent. For example, the quality and innovativeness of the packaging alternatives are similar to the ones found in international premium cosmetic brands.
- Important improvement in motivation among members and the collaboration between them.
- Establishment of a new and strong sense of individual and team pride after achieving the end of several developments and seeing “their” products in pharmacies and supermarkets shelves.
- There is a major improvement in the productive efficiency of the new products thanks to product platform thinking and the inclusion of manufacturing people.
- Complete evaluation and agreed-upon planning of projects before entering implementation.

- The General Manager and some members of the board acknowledged the set of approvals and respected them.
- The possibilities of working on product developments not aligned with strategy or with a weak potential in the market was reduced to a minimum. This was because no project could enter development if it did not pass a strict business case analysis first.
- A complete know-how was created thanks to the debates between team members and product development area, of future actions that should be taken to further improve the process.

Conclusions

This process proved to be beneficial in more than one sense even though there were several issues that conspired to make it fail. The successful outcome and the company's turnaround despite the evident adverse conditions make a strong case for applying the Project Management (PMI) and Product Development (PDMA) approach, and constitute excellent examples of its ample scope of reach.

Bibliography

1 Cooper, R.G., Winning at new products, 3rd. ed. Cambridge, MA: Basic books, 113-152, 2001.