

MARKET AND TECHNICAL CAPABILITIES IN ASSOCIATED BUSINESS DEVELOPMENT OF BRAZILIAN COMPANY

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Abstract: The study examines the fuzzy front end of the largest Brazilian socks manufacturer when its managers decided to diversify their business. At the time, further growth possibilities were stagnant and the option to increase earnings was to develop a new product platform to support a new business. This paper aims to analyze and understand the content of the decision making that led to the development of new sporting goods platform, brand and franchise. The company's existing capabilities were taken into account for that related diversification strategy. Comparing with International sports brands the company had a larger network of clients. The company finally decided to proceed with the creation of a new and shop franchise focused on sportswear. Despite initial uncertainty, the company's experience with its FFE (Fuzzy Front End) became clearer and less diffuse and the decision to initiate a new platform project tends to be strongly grounded on established capabilities.

Keywords: Fuzzy Front End; Capabilities; Associated business development; Platform development.

CAPABILIDADES TÉCNICAS E DE MERCADO NO DESENVOLVIMENTO DE NEGÓCIOS ASSOCIADOS DE UMA COMPANHIA BRASILEIRA

Resumo: O estudo examina o FFE (*fuzzy front end*) do maior fabricante de meias do Brasil quando seus gestores decidiram diversificar seus negócios. Na época, outras possibilidades de crescimento estavam estagnadas e a opção de aumentar a lucratividade da empresa foi desenvolver uma nova plataforma de produtos a fim de apoiar um novo negócio. Este trabalho tem como objetivo analisar e compreender o conteúdo da tomada de decisão que levou ao desenvolvimento de uma nova plataforma de produtos esportivos, desenvolvendo uma nova marca. As *capabilities* existentes na empresa foram levadas em conta na diversificação estratégica desse negócio

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associado. Comparada com as marcas esportivas internacionais a empresa tinha uma maior capilaridade e um maior número de clientes e decidiu assim levar adiante a criação de uma nova marca e nova franquia voltada para *sportswear*. Apesar da incerteza inicial, a experiência foi tornando o FFE mais claro e menos difuso e a decisão de iniciar um novo projeto de plataforma tende a ser fortemente fundamentada em *capabilities* estabelecidas.

Palavras-chave: *Fuzzy Front End*; *Capabilities*; Desenvolvimento de Negócios Associados; Desenvolvimento de Plataformas.

Introduction

Until a product or service is on the market, it goes a long way from ideas to launch. Usually this process begins without much definition. Various ideas, not always well defined, will be discarded until a few others will remain and proceed to a second stage-development. Some researchers call this process pre-product development (COOPER, 1988; LANGERAK; HULTINK; ROBBEN, 2004), FFE (Fuzzy Front End) (REINERTSEN; SMITH, 1991; KIM; WILEMON, 2002) or product planning (ULRICH; EPPINGER, 1995). It is a process which encompasses all activities from the generation of ideas to the start of the investment in a development process and the creation of a team to see the project through. Managing this phase prior to development can be extremely challenging for companies. This stage is often chaotic and ambiguous (SANDERS; STAPPERS, 2008) and start without much definition, it's open to all kinds of iterations. Despite its diffuse nature, this phase can be a turning point in new products success and its impact will be felt in development cost and runtime (KHURANA; ROSENTHAL, 1997).

This phase can influence a product launch speed, its commercial success, and its useful life. For instance, if a feature is known to be difficult to realize and may delay product development and launch, it can be left out or replaced (ELING; GRIFFIN; LANGERAK, 2013). Depending on the product and intended market, this may bring an advantage over direct competitors, and create a new concept or a niche market. The companies's capabilities play an important role in that stage if company knows how to use it and where to use it. In order to gain support within the organization, these ideas will need to show that they have a connection with the strategy and operational capabilities of the company (MURPHY; KUMAR, 1997).

The questions here are, when developing a new associated business these capabilities are taken into account? What is the role of these capabilities in FFE to development a new product platform? The main objective is to go deeper into the FFE of development of product platform to new business. Thus, this study examines the FFE of a diversification decision on a Brazilian company. We use a case to better understand the decision that led a company, the largest socks manufacturer and a market share leader in Brazil, choose to develop a new sports brand. As shown in this paper the company capabilities played an important role, even if the decision has not been structured, and this made possible develop new products platform.

First, with the company's experience over the years this study pointed out that the FFE became clearer and less diffuse. Second, each new platform is fast aligned with company strategy, especially which exploiting critical existing market and production capabilities,

for example using the capabilities like its huge network of clients and it reached where multinational companies could not act.

The Fuzzy Front End

Many of the problems encountered during the implementation of a project start before the first decision (UPTON; HAYES; PISANO; WHEELWRIGHT, 2008). The development process that leads to a product launch or service starts with an idea. Such ideas, before resources allocation, begin to be refined and are questioned, after which they undergo changes until are implemented.

A crucial point in this phase lies in idea and concept selection. What ideas are good enough to continue to the next stage and which ones should be discarded at this stage. Uncertainty, equivocality, and complexity are the three sources of fuzziness at this stage (STEVENS, 2014). The *uncertainty* occurs when there is not sufficient information available, making identification of the problem and / or its solution difficult; *equivocality* refers to a situation in which multiple interpretations of the same facts, data and information are carried out and several differing decisions can be taken following them; *complexity* occurs due to the multiple interactions of individuals, where there is no way to predict the reaction of each of the parties involved.

The FFE is characterized by this nature at the same time surrounded by doubts and extremely important for any new product or service that the organization intends to materialize in its future. It's a confusing stage for companies where decisions can jeopardize survival. It is a phase of little financial investment compared to the following stages such as the development and launch, but despite being only the first phase it can be the difference between success or failure of a product (COOPER, 1988).

The management of this stage seems to be costly from a financial point of view compared to other phases of development, but it does not mean it is "cheap". Problems could impact FFE and delay the development and / or a product launch. If time is an irreplaceable resource then it means that there is a cost in measurable FFE (YONGCAI; YANFEI, 2006), and that there is a financial value for its problems to be solved as soon as possible without losing the focus. It does not mean that costs should be reduced at this stage, because it can lead to a failure in the following stages (REINERTSEN, 1999).

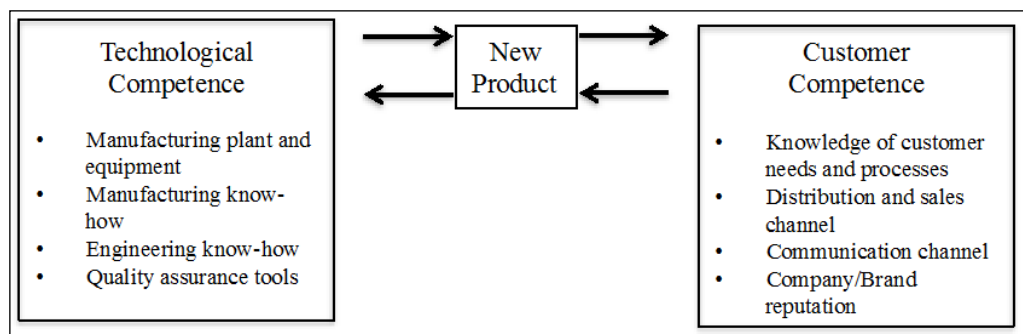
Some recurring problems in implementing are: poorly defined and unclear product strategies; difficulties in developing the concept and the parameters of the project as well as conflicts of the team responsible for the work (KHURANA; ROSENTHAL, 1997). The strategic direction of the product comprises the formulation of the goals and strategies for the FFE and the definition of the company's projects portfolio (MENDES; TOLEDO, 2012). That is the first dimension of this process. At this stage lies the first FFE recognition of opportunities, which reduces the uncertainty of the phase. The new product designs must be aligned to strategic planning to improve the definition of factors involved. The establishment of proper FFE strategies has an impact on the success of the new product, since it directs efforts and creates a vision shared by members of the development team (COOPER; EDGETT; KLEINSCHMIDT, 2004; BARCZAK; GRIFFIN; KAHN, 2009).

The recognition of market opportunities and the strategic alignment of the new product accelerates this phase when thought interconnectedly with the competitive strategies of the company. The collection of market information and possible preliminary assessments, in addition to the technology to be adopted in the new product, are the initial activities of the FFE. The final steps consist in the product concept definition, in project planning and analysis of the technical and commercial feasibility of the product (REID; BRENTANI, 2004).

The FFE phase, contrary to the development phase, is intrinsically non-routine, dynamic, and uncertain (KIM; WILEMON, 2002), but the problems in project conceptualization bases can be resolved at this stage. To Lynn, Morone and Paulson (1996) the paradigm of product development showed that companies used numerous ideas that over time were discarded until just a few pass to a development phase, i.e. the later stage. In this view the ideas seemed to be generated without much guidance as well as the choices among them. By doing so, it is in the later stages that we find the solutions to problems which were not identified in the FFE. These problems often require costly solutions for the enterprise, such as tests in the search of learning.

The decision to proceed with an idea can affect the entire strategy of an enterprise and there is need for choice criteria. These criteria can bring greater strategic alignment and this is the best stage for choosing to discontinue or change a project, since it still is in an early stage. Alternatives may arise stemming from these criteria and can impact the development phase and even after the product launch (SHARPE; KEELIN, 1997).

Fig. 1: Product innovation as linking of technology and customer competences



Source: Danneels (2002).

Furthermore, decisions need to be as accurate as possible since they carry an implicit critical impact. The objectives specified by these ideas can often only be obtained by carrying out certain activities that require the development of new skills (IANSITI, 1995). These new capabilities need to be taken into account for the FFE. The cost of learning can not be supported by the organization if it is very displaced in relation to what the company has internally. Resources are the basis for the renewal of the firm and the direction that innovations happen are no accident, but rather related to the nature of existing resources and the type and range of productive services that they can perform (PENROSE, 1959).

This vision entails both high technological expertise involved in any pre-development as well as a strong strategic thinking on the understanding of the markets to position the product (UUSITALO; MIKKOLA, 2010). The companies have a need to identify which competences they have and which they do not, so that new products are developed in concert with them; in the framework Fig. 1 presents these competencies (DANNEELS, 2002).

Success is linked to routines and approaches to the selection of technologies, evaluation and adaptation (IANSITI, 1995). Companies need to have a vision that these are competence portfolios and not product portfolios (DANNEELS, 2002). These competences open the door to new products that in the future may meet the latent needs of the company's clients. Thus, the technological competences and customer competences are the factors that will lead the company to develop new and innovative products.

Platform Projects

Platforms are projects that involve a great deal of development. These projects are the basis for new product families (WHEELWRIGHT; CLARK, 1992). The product family refers to a set of similar products that are derived from a common platform and still have specific features or functionality to meet specific customer needs. The platform concept is widely used in the automotive, electronics and software industries, which usually include a number of models that use the same technological base. Platforms can also be business units that use the same brand and produce similar products (VEENSTRA; HALMAN; VOORDIJK, 2006).

As the families of products from a company tend to increase, the process can lead to overlapping. In this context there is a need for coordinated branding strategies throughout the product family by applying the concept of platform, that is, the brand management of a company may be treated as a mutual support system which can increase the market scope and reduce costs and also increase the overall revenue of the company (SAWHNEY, 1998).

The more mature the industry, the more important it is to focus on platform projects (WHEELWRIGHT; CLARK, 1992); this is because after subdued market share growth becomes difficult. Industries where incremental innovations have little impact, find themselves forced to shift focus and seek a way to ensure growth not to lose the profitability (JOHNSON; CHRISTENSEN, 2008). In addition, companies operating in fashion markets need to react to changing customer consumption habits. There is need for constant change in the operation of businesses and in the different relationship between the platform and derivative projects (WHEELWRIGHT; CLARK, 1992). The derivative project, that is, one with only minor changes, lends itself to maintaining an established market position, while the new platform would be the winning strategy of a new market or niche market that has been identified but is not being tackled by the company.

Methodology

This work departs from the questioning of companies about how and when they decide to diversify their markets, but choose to align their new product and business ideas

with their existing *capabilities*, in order to ensure competitive advantage. For this purpose, it was necessary to consider whether in fact these capabilities were taken into account and which adherence to the theories of FFE (KIM; WILEMON, 2002) and pre-development (COOPER, 1988) were present in the case.

In the *extended method case* the researcher, having a pre-established theory, starts observation. This observation, anchored in the previous theory, will rebuild the theory based on the data obtained (BURAWOY, 1998).

We first identify the capabilities, studying the history of the company. While obtaining the information, the observation was focused on the phase of FFE and its subsequent materialization as a new platform within the company studied. We interviewed two executives, a director and company manager on at least five occasions, having as a basis the in-depth interview method (GUBRIUM; HOLSTEIN, 2001) where the researcher only guided the conversation and executives explained the whole process of development and how the plans to launch a new brand emerged; they were also probed for the success of the project and the next short-term steps that are already confirmed. Besides the interviews, publications and secondary documents also guided in obtaining the data based on the theories described.

Data analysis included the organization of the material collected and the encoding procedure that allowed the construction of the analysis and the confrontation with the relevant theoretical literature.

Case Study

The company studied is one of the longest-lived consumer goods companies in Brazil. Founded in 1921 as a small sock factory, the brand Lupo (Wolf in Italian) took only 26 years to become the country's largest socks manufacturer, position it still occupies today. In 70 years, the company had no need to attack another segment, remaining in the socks market, only increasing its share. The first foray outside the world of socks occurred only in 1991 when the company started to produce underwear.

Before developing the second platform, the company had already experienced the diversification of its line and also began outsourcing to other brands, usually with license agreements. The company not only manufactures but also distributes designer brands socks as well as socks with famous children's and teen's characters. The second platform, focused on underwear, came from a FFE seeking a product that was not strange within the outlets of the company. The underwear market was being served by the company's sales channels. According to executives, the board pointed to this market as being the first 'strange' product to the current line. By this time the company had already started manufacturing female pantyhose. Therefore introducing male underwear was a natural evolution of the process.

Thus, the study shows that the decision to develop the second business platform came from a desire to make new business taking advantage of current customers. In the development of new products for the second platform, technological skills were improved. The capability in manufacturing pantyhose enabled the company to develop seamless bodysuits that would be used on the second platform. The company had already been

supplying the sports market since the 1960s. This business was restricted to its flagship product, socks. This sports product was present in the company's portfolio, so its sales area supplied sports and traditional shops, i.e. not necessarily those that operated with other sporting goods. With the emergence of this product, many other stores - not related to sports goods, purchased the product and made it available to their customers. A new channel was thus formed by distributors of different types from those working with an entry item in the sports field. It was the rise of a new opportunity which was not used by the company for years. The opportunity may be a short-term response to a competitive threat (KOEN et al., 2001) a possible breakthrough for capturing a competitive advantage, or a means to simplify and reduce the cost of operations.

The doors were open on all fronts, sports or not, and the possibility of scale economies was clear. Supplying the same customers with a new line seemed to be the answer to a big jump and an opportunity for growth within the points of sale already constituted. In addition, the company had already restructured its channels and started to operate the franchise system since 1994. In 2010, the year the new platform was launched, the company had more than 150 franchised units exclusively selling the company's products.

The possible performance, when compared to international brands operating in the domestic market without a distribution network of comparable size, was the critical factor and main driver in FFE, but not the only one. The already developed productive capacity was also decisive in the pre-development. Besides, comparing with the statement (KIM; WILEMON, 2002), this was not a chaotic phase since the basis of conceptualization had already been defined. The new platform would again be associated with existing capabilities and developed under this light. In the very words of an executive connected to the franchise division of the company, "the strategic differentiation of the new platform took place on 2 points: Distribution and Technology. In "distribution", we offer capillarity to the market, managing to place the products in distributors where international brands do not operate. In the case of "technology", the competitive advantages of products are the seamless parts (seamless Dry Technology)."

Discussion and analysis

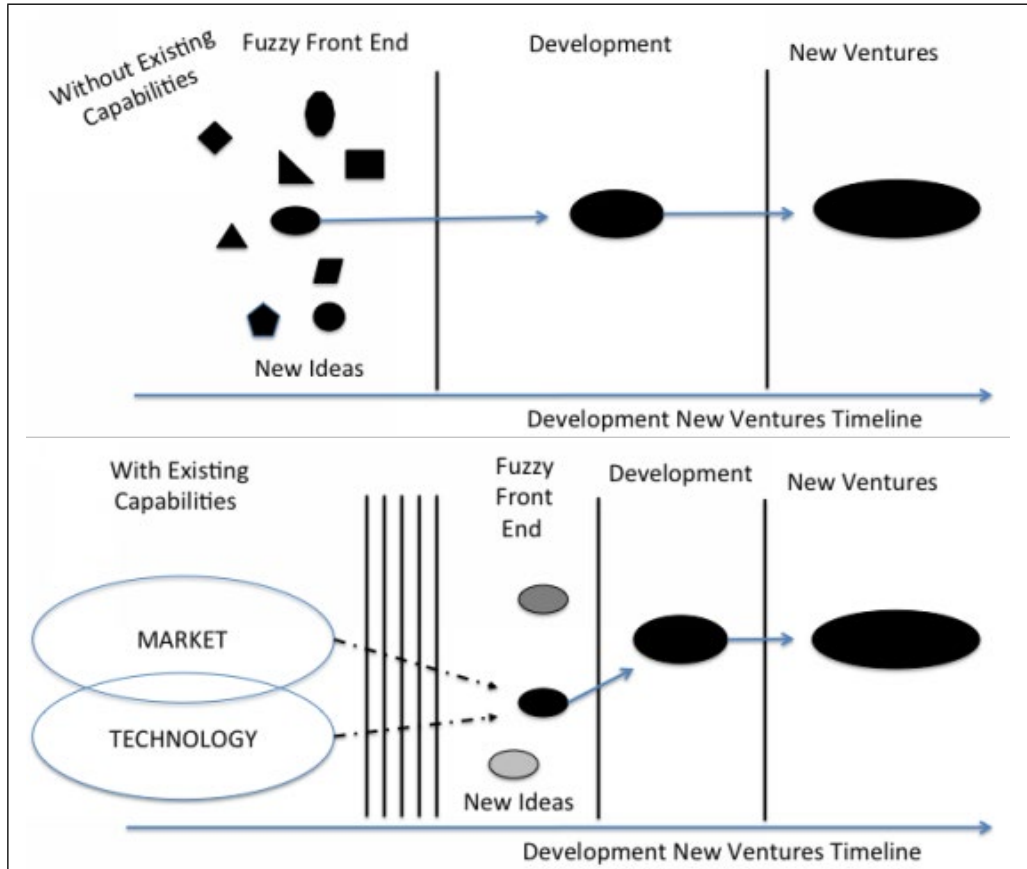
In line with executives statements, about company capabilities, give us a hint that in the FFE, seen as chaotic and ambiguous by the literature (SANDERS; STAPPERS, 2008), the company's skills gives guidance to the strategy. Clearly in line with the claim, by Penrose (1959) the existing resources are the basis for the renewal and give the direction for innovation. Following this scheme, the company used existing capabilities to focus idea development in the FFE, as we can see in second framework in Fig. 2.

The Figure 2 shows that the company ideas were close, in which case are all represented by ellipses and which, after venturing into other businesses, like shopping centers for example, which didn't part of the core business, had focus pre-development phase of a new business grounded on technological and market skills that the company already had. Thus, both the time spent in the FFE and the development time were reduced because of the need for learning was diminished. The objectives were aligned to skills, ie, the activities do not require the development of new skills as IANSITI (1995). Using the

technological resources to longer dominated sure that company would have a distribution network, as seen in Danneels (2002), it was possible:

- I. improve the time of selection of ideas in FFE;
- II. shorten the time of new business development.

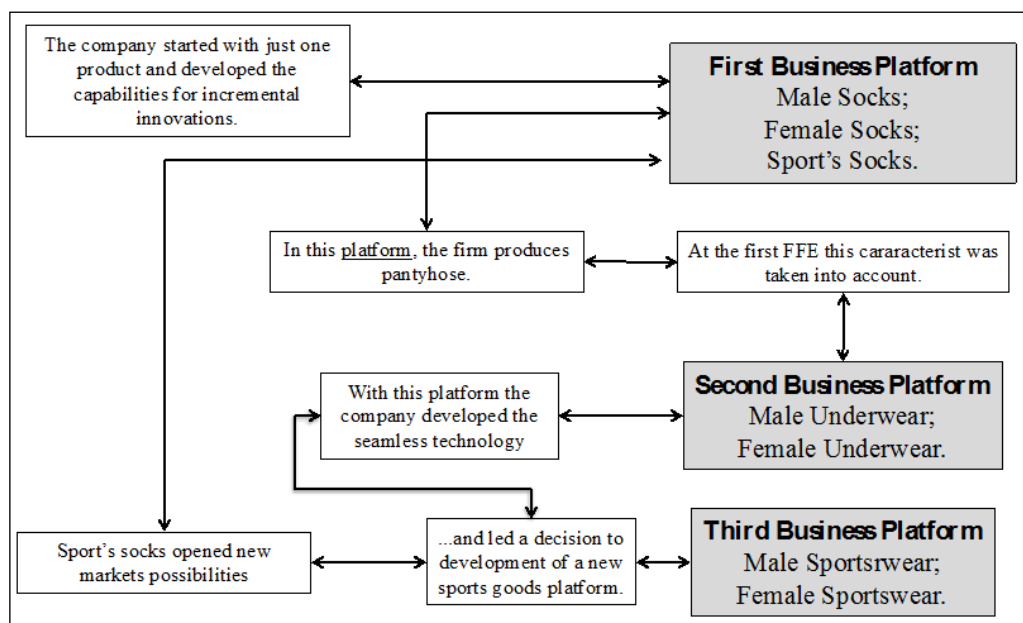
Fig. 2: The FFE with and without existing capabilities



Source: Developed by the authors.

Figure 3 shows the three platforms that company is now working on and the key technological guidance to development provided by existing capabilities. The first business platform was based in socks. Many incremental products were developed from 1921 until 1991. During this period began producing for a market that already demanded special attention, women. This platform has been adapting and increasing capabilities gradually to not lose profitability (JOHNSON; CHRISTENSEN, 2008).

Fig. 3: Evolution of technological path of platforms



Source: Developed by the authors.

The second platform was strongly based on a product that was very successful, the pantyhose. The company was already selling to the underwear market and the evolution was natural. From experience, extremely successful, rather than the development of new platforms the company decided to expand its distribution channels, and in 1994 opened its first franchise. The main driver was the economic outlook in the country in the 1990s.

The third platform is a combination of commercial and technological path of the company. Two core capabilities of the company were taken into account: a network not accessible to large distribution by big sports brands; and develop seamless technology. The greatest influence of the two was the distribution network. Due to outsource socks for major sports brands company has acquired expertise and contacts in this market.

The Lupo's new associated business platform from the 1990s until 2010, had a great aligned with existing capabilities and also played an important role in the choice for the FFE.

Conclusion

This work shows that the vast capillary system in distribution was one the decisive capability for choosing the new platform. In the last two decades, the company established an exclusive network of franchised stores for their products. Even though crucial, this distribution capability was not the only one. There was also the distinctive technical skill in seamless manufacturing capability for the underwear market.

The study pointed out that, with the company's experience over the years, the FFE began to develop in clearer and less diffuse way. The decision to initiate a new platform project now tends to be strongly focused on existing competitive capabilities, since it reduces the need for large investment to learn and implement new capabilities and reduces uncertainty.

The initial questions here: when developing a new associated business these capabilities are taken into account? What is the role of these capabilities in FFE to development a new product platform? Yes, the capabilities were taken in account and the role was accelerate decisions and improve their quality at that fuzzy stage. Despite the false impression that the company's are very similar businesses, they are not. The communication with the end user, for example, is totally different. They require new structures for manufacturing, marketing and developing new products.

Two important points must be emphasized. The first point is that the company has a culture of innovation and these innovations were responsible for supporting the company's competitive advantage over the years in a market that can be defined almost like a commodity. Second, and the company is always willing to try and even participate in suppliers new developments, and they are always willing to present their newest technological solutions to a company with two thirds market share (more than 600 million dollars in 2014).

A company that launches many new products per year is accustomed to risk. Despite the low unit value of each product, a minimum acceptable lot in the company's current state is considerable. For example, only for all franchised stores the minimum order for a new product are 19,000 units.

This paper improve the theory of FFE in platforms. The field focus in pre-development usually is on method, on how the companies do the process, which steps were involved. We point that focus on capabilities reduce uncertainty, time required, and improve FFE in platform development. Another point is that each new platform become more complex, because it can to include more capabilities.

As this is a single case, we suggest investigating other companies, to bring more detail and clearer evidence about the role of dominated capabilities - market as well as technological - in new platform and associated business development.

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