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## **Report**

SME COMPETITIVENESS: INTERNATIONALIZATION STRATEGY

**“SCIENCE4YOU – EXPANDING THE INTERNATIONALIZATION PLAN IN SPAIN”**

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## **Executive Summary**

After becoming a competitive player in the Portuguese toy market, Science4you aimed at internationalization as a viable option to increase its sales and establish itself as a reliable brand within the niche of scientific educational toys abroad. Despite being established only in 2008, the company has since acquired significant practical knowledge on negotiating with its partners to establish profitable and rewarding relationships. Within the internationalization strategy, focus was and is held upon European countries – with similar markets to the Portuguese – and upon Portuguese-speaking countries, with the intent on facilitating the process of entering the markets. Considering this context, it was not surprising that Science4you would start to sell to the Spanish market by the end of 2009 through an agreement with Fnac. While such partnership allowed for a quick and easy integration, such speedy process also had its drawbacks – as the company started selling to Spain that early, a research on the Spanish market and interpretation of its real opportunities, capacities and trends was never fully developed. As such, despite satisfactory results having been achieved thus far, I feel that this market holds many characteristics that differentiate itself from its Portuguese and other European counterparts, justifying a more thoughtful approach than that already in practice. Through it, Science4you can aim at achieving higher revenues by increases in sales, and to improve awareness in the local and European market.

In this Work Project I will analyse what makes this company competitive, and a research of the industry for this target market will be provided. Then, and keeping in mind the company's strategic objectives, I provide a set of recommendations that I find suited to improve not only its operations in the Spanish market, but to prepare the company for further expansion of its international presence. Maintaining the same mode of entry it employed when it first entered the market – exportation – some structural

changes are suggested as well as developments in terms of its operations, partnerships and presence in the Spanish market, aiming to adapt properly to its specific demands.

## **Business Description**

Science4you is a company which specializes in scientific educational toys, offering a wide range of products from several scientific backgrounds that provide children with practical experiences or do-it-yourself activities which entertain them while aiming to instruct on the subject. Fields like chemistry, physics, geography, mineralogy and others are covered by their products, with each toy being accompanied by a manual that describes and instructs the scientific background of the subject. Besides the toys, which are considered the company's core competence, it also operates in the formation area, with offerings such as birthday parties, mobile laboratories, science workshops and holiday camps. Currently, the distribution of activity per business area stands at around 75% for toy retailing, and 25% for these formation activities.

It was formed in January 2008, following the graduation work-project of Miguel Pina Martins at ISCTE – a business school in Lisbon. Due to an existent partnership between ISCTE and Faculdade de Ciências da Universidade de Lisboa<sup>1</sup> it became an entrepreneurship project that allowed the company to be created, following a market research that identified the lack of offerings on scientific toys on the Portuguese market. The company was financed by risk capital, for which it applied to in the FINICIA<sup>2</sup> program with a social capital of 55 000 €, with this value being raised firstly in May 2009 to 100 000 €, then to 150 000 € in 2010. It is planned that it will raise to 500 000 € in 2012.

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<sup>1</sup> Translation: University of Lisbon's Faculty of Science

<sup>2</sup> FINICIA is a program which aims at facilitating financing solutions for emerging companies with differentiating entrepreneurial projects. It is offered by the Portuguese state through its IAPMEI entity in which it shares the risk of such projects with risk capital and banking institutions.

Its current workforce is constituted by twenty people, including those working abroad in Spain. The Research and Development team, composed by seven people, is responsible for developing the product: considered to be the most fundamental department in the company, it is divided between a team of four scientists from varied backgrounds which envision the diversity of products, apply scientific backgrounds, develop prototypes, and also write the manuals; and three designers who are responsible for the design and aspect of the product, boxes and manuals. As components are provided by suppliers, assembling is handled in the company's warehouse in Lisbon by two workers, which is then complemented by employees from other areas and temporary workforce hired just for the occasion, when higher demand arises – namely during preparation of stocks for the Christmas season. Besides this, six people operate within the management of the company – financial area, contract management, management of retailers and other functions – and four people work in the stores. Currently, the structure of the company is heavily centralized in CEO Miguel Pina Martins who holds responsibilities in the strategy and the commercial area, as the remaining workforce mainly reports the activities to him, with some exceptions (for example, the designers have a coordinator to whom they report, who by turn reports to the CEO, the same happens with the animators of events in the Formation area). With the growth perspective of the company, according to Miguel, there will be a natural tendency to decentralize the flow of information. In management, other functions include logistics management, contract managements, and operations abroad – namely those already presented in Spain.

Finding and associating with trustworthy and reliable partners is considered fundamental for Science4you. These partners range from **retailers**, – such as Fnac, Toys “R” Us, among others – **distributors**, – Sr. Brinquedo is responsible for the

distribution to small retailers – and **other strategic partnerships** that add value to the products' offerings – such as the partnership with the University of Lisbon's Faculty of Science which certifies the quality of the product, or the partnership with several science museums which allows them to include museum tickets with each toy. These are deemed vital to the company and have been very important for the brand to succeed.

Science4you started selling in countries other than Portugal, namely Spain (since October 2009), Angola (since September 2010), and Brazil (since November 2010). They aim at improving their presence in such markets following good starting results, as well as bringing their internationalization to new markets – a purpose for which they are seeking partners. In February 2010 it launched its Internationalization and R&D project, which aims at achieving strong exports of its main offerings. Such project has been partly financed by QREN, a Portuguese economic monitoring association, by a sum of 50 000 €, with the goals of doubling sales volume and increasing the qualified workforce of Science4you, enabling it to compete in the global toy market. Regarding 2010, from total sales the international market represented around 7% of these (16 500 €), focused mostly on European Community markets – namely Spain.<sup>3</sup>

Its **mission** is to “captivate children and the community for the daily questions of science”. The company's **vision** is to be a renowned company in the market of kits, scientific toys and education, with the objective of introducing everyone to science. It aims at achieving such recognition in Portugal by the end of 2012, and to be a well-known player in the European toy market in five years' time.

### **Strategic Objectives**

Science4you's strategic objectives in the near future are as follow:

- To achieve 500 000 € of turnover in 2011;

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<sup>3</sup> Exhibit 1

- Expanding its international presence in the next three years, opening offices and finding partners abroad for the internationalization of the product with special focus on European countries and Portuguese-speaking countries;
- Reaching a goal of 50% out of total turnover being due on international markets within the next two years;
- To open three new stores in Portugal over the next year, and maintain its strong presence in the Portuguese market;

### **Industry Mapping<sup>4</sup>**

**Clients<sup>5</sup>** - Science4you accounts for three different types of clients: *Large retailers* (Fnac, Jumbo, Grupo Jerónimo Martins, Toys r' Us, Bertrand, Staples), *small stores* (serviced through Sr. Brinquedo, please refer to the “Distributors” section below), and *families* directly through their own stores and online retailing. For 2010, the distribution of sales per each of these channels was of 70%, 25%, and 5% respectively. Both the selection of toys that are chosen and the price asked for them depends on the retailer’s intention: Science4you suggests the product’s final PVP to the retailer, though it is the latter’s decision whether it follows this suggestion or prices the toy differently. Besides this, Science4you also sells its products through the entities it holds partnerships with, such as museum stores. However, the volume of sales in such channels is considered residual. The three most sold products of Science4you’s catalogue are “Os Primeiros Passos na Geologia – Vulcões”, “Os Primeiros Passos na Ecologia – Plantas”, and “Kit Solar 6 em 1”.

**Distributors** - Distribution of the product differs depending on the channel that is considered. For small stores in Portugal, a company named Sr. Brinquedo acts as distributor. In this case, Science4you sells the required number of products to Sr.

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<sup>4</sup> Exhibit 2

<sup>5</sup> Exhibit 3

Brinquedo, and from that point on it is that company that deals with the remaining processes, with Science4you no longer promoting its product to the stores. Through this agreement, and since Sr. Brinquedo usually buys larger quantities, it is able to get a better discount than the other clients. For large retailers, a different procedure is taken as at first the company itself usually goes to these stores to promote the product and agree on terms, then it serves as a distributor itself by hiring a transportation company (TNT) to deliver the products to the stores. Discounts given to these retailers vary from one to another, where factors such as past relationship with stores or their relevance in the target market are important.

**Competitors<sup>6</sup>** - On the scope of a toy as an entertainment tool for children, we can consider to be competitors of Science4you all toy manufacturers that provide toys destined for children aged 4 to 14 and, within this segmentation, the main companies that compete in the industry are large multinational companies such as Mattel, Hasbro or Bandai – the top three toy manufacturers in the world. For the niche of scientific and educational toys, we have three fundamental competitors: 4M, Discovery Channel and Clementoni. In Exhibit 4, I present a more detailed analysis of brands available in the market following research among retailers. Main conclusions of such analysis are that in this market niche, depending on the toy, prices mostly vary between 6,99 € and 34,99 €. There is a degree of differentiation between brands in terms of educational value, appeal to the customer and variety of scientific subjects presented by the brand which also is reflected in prices. Among competitors, however, none showcases the background manual and ticket offers shown by Science4you.

**Suppliers<sup>7</sup>** - The main suppliers for Science4you are producers of plastics and raw materials (as chemicals or other ingredients for the experiments). Due to the variety

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<sup>6</sup> Exhibit 4

<sup>7</sup> Exhibit 5

on Science4you's catalogue, and with each toy having different and some very specific components, there exists a wide variety of suppliers. Currently, the company favors portuguese suppliers due to strategic and cost-saving reasons (explained in further detail in Exhibit 5). They choose suppliers on a cost-basis at first, evaluating their standards of quality as well, assessing whether quality is maintained throughout the deliveries.

**External Services** - Accounting and communication services for the company are done externally, and so is the transportation of toys when required – as the case of distribution to large retailers – being handled by TNT.

**Partnerships** - Science4you's strategic partnerships can be divided into three categories: those with faculties, those with science museums, and those with other entities. The first accounts for the relationships with FCUL, ISCTE and Universidad Autonoma de Madrid that provide them several benefits, such as office spaces, contribution in development of the product and certification of quality by the institutions; the partnership with the science museums allows them to include free museum tickets in the products, and to sell in their stores. This is a relationship that is not paid by either part, and serves in mutual benefit: it adds value to Science4you's toys, and promotes the museum and is able to lead into more visits to them. Finally, there are partnerships with some other entities, such as Fnac Kids, which dwell mostly in the Formation area of the company, but also serve promotion purposes for the company, and with energy companies that collaborate with Science4you for specific products.

**Regulators** - There are a series of requisites on both national and European level which are mandatory for a company's presence in the market of toys. In Portugal, ASAE is the responsible authority that checks safety norms and verifies compliance,

issuing penalties or ordering retreat from the market if it finds anything wrong. In the European scope, the European Commission provides official guidance on toys' classification, and currently the Toy Safety Directive of the European Union is the available legislation on requirements for the industry. It also issues the mandatory CE mark that ensures conformity with European directives.

### **Porter's Five Forces Analysis**

Threat of Entry of New Competitors - In the European market, there are community and country-wide regulations in terms of safety and production, whose compliance is required for companies to operate within the market<sup>8</sup>. Other than those, there aren't significant barriers, and companies have steadily become aware of how to comply with such regulations at a low cost. Therefore, there's a **high risk** concerning potential new entrants;

Threat of Substitute Products - Substitute products for Science4you's toys are not only those that fall under the category of "scientific educational toys", but other toys meant for children aged 4-14 as well. Thus, options available in the market are very large, and threat of substitution has a **high risk**.

Bargaining Power of Suppliers - Science4you's main suppliers are producers of the materials used as the toys' components. Despite in total having a large variety of such components needed for production, for each of those exist a sufficiently large number of suppliers so that the company is not left dependent exclusively on one particular supplier, as alternatives are available for similar costs and are little switching costs. Power of suppliers is therefore deemed **medium**.

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<sup>8</sup> For the European Economic Area, compliance with the Toy Safety Directive (2009/48/EC) is required. In Portugal, the law-decree n° 43/2011 24.03 stipulates legislation concerning toy safety, with ASAE acting as regulator;

Bargaining Power of Buyers - Excluding Science4you's own shops and online channel, it relies heavily on large retailers to sell and raise awareness for the products. These have the power to reduce the company's margin and to choose to promote other brands if a consensus is not reached, so the bargaining power of buyers in this case is considered to be **high**. Therefore, its partnerships with such retailers are very important to provide that the relationship between both parties is ensured.

Competitive Rivalry - Despite not existing many other Portuguese toy brands, the ease of entry in European markets enables that foreign products – both on the niche of scientific toys, or the remaining toys for the same age segment - have a great market presence that compete with products available nationally. There are a high number of competitors, and so competitive rivalry is **high** as well.

### **Competitive Advantage**

In an industry as competitive as the toy industry, innovation is the key to success and consumer preference. In fact, even large companies that are major players within the market do not present the same products in the market from one year to another. The consumer-base is also very specific, as the decision-making involved concerning the purchase of a toy is very distinct from any other product: people that want to buy a toy for a child want to make sure that they do not own that one already, so they are likely to go with the new offers available at retailers. As such, I consider that Science4you's main competitive advantage is the outstanding capacity its R&D department has to quickly capture market trends and develop it into a product, and finally making it available to the market at lower prices than those of competitors – although such differences vary depending on the product. In fact, within less than four years of the company's existence, it has been able to launch seventy-two new products into the market, which roughly translates into one toy per month. These are impressive numbers

when it is considered that usually one toy takes about three to six months from its conception to being retailed – while this is an usual rate for larger firms, we have to keep in mind that Science4you is a small-sized and recent company. From all products conceived, only two toys have had its production discontinued, and this is a cost Science4you is able to bear due to the good performance of their other products, and so the R&D department holds an error margin for products that may not succeed. Another competitive advantage that should be mentioned is the company's ability to establish valuable partnerships with entities of diverse backgrounds – retailers, museums, universities – that through a mutually beneficial relationship enable opportunities and add value to Science4you's offerings.

### **Value Chain<sup>9</sup>**

Initially, the Research and Development team idealizes and develops a prototype of the product, following research on toys and experiments that might be attractive to the target audience. After agreeing on a scientific theme they come up with the product, manual and possibilities of experiments. Currently, Science4you operates in a make-to-order model, reacting to the market demands rather than setting up new trends. Materials are then ordered from a multitude of suppliers (whose number and characteristics is different amongst each toy) which are delivered to Science4you's warehouse in Lisbon. As the company favours Portuguese suppliers, time spent waiting for components is usually short. Next comes the assembling of the product, fully developed in the company's warehouse by two employees, where components needed for each toy are assembled together, packaged and boxed as the final product. When stock demand is expected to rise – mainly the months leading to the Christmas season – temporary workforce is hired (non-professional, usually students) and eventually

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<sup>9</sup> Exhibit 6

workers from other departments also contribute to increase output, doing extra hours. The company holds the final product in their warehouses until it gets distributed by Sr. Brinquedo (to small retailers), or by the company's outsourced transportation agency TNT (to large retailers, online orders, and to own stores). They monitor the quantity of products sold according to orders, and they project future orders according to historic data for previous time periods via the seasonality of the industry which assures them certain reliability upon predictions, and through their contacts network with the stores through their managers, which lets them know which and how many products they will be demanding. Stock management is processed by computer, and they have a constant control of current stock, with caution regarding its minimal levels and control. Usually, orders are done with several months in advance, so they are able to manage the stock properly with ease. The company hasn't got a dedicated marketing and promotion department, choosing instead to promote the product by channels with little to no cost – such as newspaper and TV interviews and promotion of the product, website and social networking (e.g. Facebook page). When selling to large retailers, it gets in contact with the store managers and convinces them on having the product for sale, though with the brand getting recognition some exceptions to this procedure have occurred, with the retailer first contacting them and expressing its interest in retailing the brand. Such approach also allows them to get more insight on the latest trends on the product and consumer preferences once it's settled in the store. In terms of post-sales services of the company, if a malfunctioning or faulty product is sold and the customer complains, they handle the replacement themselves. The same happens when, with certain products, a specific material runs out (for example, some reagents in chemical sets), the company offers free refills. It is not significant in cost terms, pleases the customer and can lead into a second purchase, differentiating the company since this is not common practice.

The company has offices in Lisbon, Porto and Madrid, with a warehouse and assembly line in Lisbon which supplies all areas in which Science4you is present. As mentioned previously, the company employs currently twenty people with its structure being heavily centralized on the CEO as the person most people report to. In terms of quality management, when the company began approval of quality was part of the partnership the company had with the faculty in Portugal, as even in the boxes it mentioned “certified by the Faculdade de Ciências”. However, over time this aspect of the partnership got neglected and nowadays it is the company itself that provides the quality management of components and the final product: they contact suppliers on the type and quality of materials they require exactly, and from then on either they comply in totality, or they don’t and Science4you switches supplier. It has occurred however that faulty products arrive at stores and get sold (rare events most noticed concerning new products). In such case, and as mentioned previously, the company replaces the part for free.

### **Tows Analysis**

As previously mentioned, one of the strongest assets of the company is its R&D Department. Since the company's creation, it has released seventy-two different products, which stands as an impressive number if we consider it has less than four years of existence, which translates to around one new product per month. Such ability, coupled with the decisive role of partnerships should account as a way to overcome possible threats and take advantage of opportunities. Already implemented partnerships and the firm's experience in mutually beneficial relations can be extended to new partners, both nationally and abroad to have a quicker and more efficient implementation and expansion in new markets. The R&D department, through its quick chain of operations, can be able to overcome the industry-wide threat that is the

requirement of constant innovation of products, reinforcing brand awareness in the market. Such can also be accomplished by the wide portfolio of products which, combined with the fast launching speed of products to the market, can improve the visibility of the brand among its target customers and, in turn, raise awareness. Also, the increasing demand for educational entertainment experienced in the toy industry constitutes a major opportunity for Science4you to expand its operations and strengthen its operations abroad.

### **The Toy Industry<sup>10</sup>**

Fundamental characteristics of the toy industry are its high seasonality, with business peaks happening (approximately 60% of its turnover) in the Christmas period – November and December - and its demand for innovation. Meeting consumer needs is key to success in the whole toy sector and this is further evidenced in the niche of scientific educational toys, as these have a higher potential on terms of originality and innovation. Market analysis, research and development and protection of intellectual property are usually recognized by the major players as important topics in the industry.

In 2010, global toy sales were of around 62 billion €: the largest toy market was the American, with sales of 16.5 billion €, followed by the European toy market – where the toy industry is one of its most dynamic sectors - with sales of 15.5 billion € despite fluctuations in the exchange rate that influenced negatively its export capacity. A large share (around 73%) of sales in Europe took place in France, Germany, Italy, Spain and the United Kingdom. These five countries are considered to be the industry's largest in Europe.<sup>11</sup> It is worth noting the Asian market, ranked third in this analysis, which experienced a strong growth of an estimated average of 9.2% for the last years. Concerning the mentioned group of countries that are responsible for the largest share

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<sup>10</sup> Exhibit 8

<sup>11</sup> Source: Toy Industries of Europe – Facts and Figures 2010

of sales in Europe, turnover increased by 3.5% in 2010<sup>12</sup>. This scenario was positively received by the industry, as it is needed to take into account the difficult economic situation felt by Europe that year. Additionally, the Christmas season of 2010 was described by GPD group analyst Frédérique Tutt as “one of the most difficult season ever experienced by the toy industry.” While the toy market is one that does not suffer too much from crises, as it is a matured industry and has certain characteristics that allow it not to suffer too much from economic downturns: in a Christmas season, save for extreme situations, children are likely be offered toys as gifts, no matter how is the economic scenario (even though toys offered can be those of a lower price). On the downside, it is an industry that also does not benefit greatly in periods of economic prosperity. In terms of the European market, the most relevant channels for toy retailing are toy stores and super/hypermarkets, with shares of 39.5% and 27.9% respectively. Retailing within the industry has also a regional factor as, for example, online retailing accounts for only of 0.3% of toy sales in Spain in 2010 as opposed for Germany’s higher result (13.3%) for the same period. Also important in the industry are the Toys Fairs and Expositions which allow companies to present new products, establish relationships and be introduced to markets. In Europe, some of the most attended and renowned Toy Fairs are those in London, Paris and Nuremberg.

In 2010, there were approximately 78.3 million children under the age of fourteen in Europe; in Spain, the percentage of these accounted for 14.5% (approximately 6,5 million), this being slightly lower than European Union’s average of 15.4%. In Portugal, this percentage was of 16.30%<sup>13</sup>. A distinction should be made on the fact that, within the toy industry, consumers and clients should not be taken as the same entity. Final consumers of the products usually are children under the age of

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<sup>12</sup> Source: NPD Group – Eurotoys Brief

<sup>13</sup> Source: CIA – The World Factbook

fourteen, while clients of the company are often families or relatives who purchase the toys themselves. As such, the products' **target audience** is defined as "families with children aged four to fourteen".

### **Spain: Criteria of Country Selection**

Science4you began selling in Spain in 2008, in a move that was considered by Miguel Pina Martins somewhat rushed but that has achieved satisfactory levels thus far. For a Portuguese company, regardless of the industry it belongs to, expanding its operations for Spain is usually considered a first step towards internationalization for a diversity of reasons: it is a country with a market that's easy to reach, both geographically, economic, and socially due to similarities with Portugal. Also, being included in the European Union and sharing the same currency facilitates implementation costs and decision-making. Finally, Spain has a more central participation in Europe's global economy, and it is able to reach other markets more easily – infrastructures that allow for quicker access to other countries, for instance – that, when combined with the important role that large international retailers (such as Fnac) play in the European market, has the potential to speed up a more expansive internationalization process. In addition, there are also three industry-specific key motives why Spain is a very attractive market to Science4you: it is one of the five largest European markets for toys as mentioned (73% of total sales in Europe took place in this group of five countries), so for a toys company being present in the competitive Spanish market acquires them not only experience but can generate a good inflow of revenues. Secondly, in economic terms, despite Spain having one of the most affected economies in the wake of the 2008-2009 financial and banking crisis, education has been an important focus on a country-wide level. This means that the Spanish society –

one with 97.9 literacy rate and 0.975 Education Index (ranked 15<sup>th</sup> worldwide)<sup>14</sup> – gives great importance to offer their children higher levels of education. Not only for Science4you but for the whole industry on scientific educational toys this provides large ground for development and expansion of the market. Finally, regarding the country's scientific profile<sup>15</sup>, it is one of the leading countries in terms of development, research and production of renewable energies, being world leader in production of solar energy and Europe's largest producer of wind energy, with a strong focus on other methods (biomass, hydroelectric, marine, and others). As Science4you offers many products that have renewable energies as theme, this stands as a great opportunity in this specific market since this is a trend with a strong social presence.

### **The Toy Industry and Market in Spain**

In industry-specific terms, Spain is the fifth largest country in the European toys' industry: in 2008, 7.9% of its sales corresponded to Spanish companies, which account for around 10% of the total European companies. 78.8% of exported toys from Spain were directed towards the remaining member states of the European Union, whereas imports of toys to Spain accounted for around 10% of total toy imports from Europe from other countries. Since 2001, the evolution of sales of toys in Spain was very positive, going from 644 million € in 2001 to 1 187.27 million € in 2008. Also relevant were the figures on toy consumption per child in Euros by year in that period, going from 110 € to 183 €, with an accompanying increase in units sold per child (average seven toys to twelve toys in 2008), despite the average price of toys in Spain being the same since. Due to the increase in supply brought by the imports of toys, prices decreased post-2001 and in result there exists high price elasticity in demand for the toys category.

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<sup>14</sup> Source: Human Development Reports - 2007

<sup>15</sup> Exhibit 9

Analyzing the macroeconomic perspectives in Spain, the main conclusions are the following<sup>16</sup>: the toy industry in Spain is mainly of importer characteristics, as from 2002 the imports/exports gap has been widening for most of the time. However, and as suggested by the decrease in imports for 2008, in accordance with the country's economic situation it might happen that such gap might be narrowed in the following years. Real consumption has been stable over the years with little deviation, which is comfortable for a consumer goods industry such as this one.

Geographically, most companies, turnover and resources were concentrated at the Valencia and Catalonia Communities. Workers' distribution by operating areas is of around 65% of workers per company acting within the manufacturing area (in contrast with the European average of 50%), with 15% representing administration and management operations, 10% operating in the commercial and sales area, and the remaining 10% being distributed across other non-outsourced activities which vary according to the company in discussion. It is considered a workforce-intensive industry, with lower costs than most of other Spanish industries.

### **The Scientific Educational Toys Market Niche in Spain<sup>17</sup>**

Considering the four categories in which Science4you's products can be sorted, the cumulative market share of these in the Spanish market is of 24%. However, that would prove to be an inaccurate measure, since for some categories the number of products are fewer and it is unlikely the share for that category represents realistic possibilities. Likewise, the company is able to exert higher shares in categories where it is more present. As such, considering the company's portfolio segmentation presented in Exhibit 1, I assume that the market share of this niche is between 10% to 15%. Thus, and considering that Spain's total volume of sales in 2010 are estimated to be of around

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<sup>16</sup> Exhibit 10

<sup>17</sup> Exhibit 11

1 224.5 million € (considering the Spanish toy market represents the same 7.9% of the European total as it did in 2009), the market share for this particular niche should be of around 150 million € for the same period.

Following an analysis on the market concerning availability in the main retailers, there are three main brands operating in this market niche in Spain: CefaToys, EurekaKids and 4M, this last one having considerable presence in the Portuguese market, as previously mentioned. For each brand, and as studied in greater detail in Exhibit 11, I selected a product which could be comparable with a Science4you product in Portugal, so we can distinguish what are the main differences and notice market opportunities.

### **Science4you's Current Presence in the Spanish Market**

Science4you started exporting to Spain in 2008 through Fnac, taking advantage of the relationship established with the Iberian manager of the retailer, and in May 2011 the company opened an office in Madrid, where its main activities regard mainly the commercial area – getting in contact with retailers, finding places where the product can be sold, and negotiating these orders – and its partnerships – with retailers, museums and universities. Currently, Science4you delivers its products from Portugal directly to their retailers in Spain, without any intermediaries. Besides studies available on the Spanish market, most of their research is done personally, through connections established with retailers and going directly to the main places of interest – main retailers – acknowledging what is being sold and how can the company enter the market. Then, as seen in the analysis above, they compete in product differentiation relatively to those already existing in the market – through products that do not exist already (for example, their offerings on Engineering Sciences) and by the extra offerings that competitors do not present (museum tickets) – and in terms of price – for

toys already present on the market, they have the cheapest one. The company applied a model very similar to that in practice in Portugal in terms of partnerships, as they have the university certification – through the Universidad Autonoma de Madrid – and are in the process of securing museum partnerships, with them already offering tickets to three museums.

In my opinion, despite the presence in Spain having been positive thus far, there is room for improvement and to take advantage of opportunities in the market. In fact, considering how entry has occurred in the market and their performance since, I feel that the Spanish market has been treated as an extension to the Portuguese when it should be looked upon as a similar market but with some very specific characteristics. My following propositions are oriented to this analysis and understanding the industry, always keeping in mind the factors that make Science4you a competitive firm, and ensuring that such propositions can be sustainable and profitable to the firm in this scenario.

### **Mode of Entry<sup>18</sup>**

As mentioned, Science4you is already present in the Spanish market through exportation. Currently, it stands in an initial Exporting Phase, where it does mostly sporadic exporting. It already holds a partnership with Universidad Autonoma de Madrid, and it is already present in Fnac stores in Spain – both Portugal and Spain share the same regional manager for Fnac stores in the Iberian Peninsula, which facilitated the agreement. However, the Spanish market is one full of potential that has not been fully explored yet, and neither does the current structure of Science4you allows it to keep up with the higher demands of a much more competitive market as is the Spanish. It is advisable that Science4you rethinks its strategy within the Spanish market to have a

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<sup>18</sup> Exhibit 12

better chance at becoming a more successful player there. This can be achievable without a complete redesign of operations and structure, but rather an with an expansive approach of the company to fully use its competitive advantages, maximizing its potential without jeopardizing its sustainability in terms of costs, risks and solvability. My propositions aim at Science4you becoming a much more regular exporter, increasing turnover and acquiring experience in this market, and by setting up necessary structures and operations to allow further expansion towards other European markets. As Science4you is already present in the Spanish market, some of the procedures presented are already on an initial phase which facilitates the overall strategy implementation.

## **Implementation**

The implementation plan I have designed accounts for a period of three years minimum, with its total duration being dependent on the results brought by the earlier phases. As I consider the process to be progressive, steps will be dependent on the correct implementation of previous ones and the results brought by them. To achieve objectives mentioned, the strategy that I hereby propose to be implemented and improved is comprised of four main topics, by order of priority:

**- Reaching out for the small toy retailers in Spain to capture market share.**

In Spain, Toy Shops are the channel with the highest sales percentage of the industry – 43%<sup>19</sup>. This is further reinforced when, among the mentioned five top European countries in the Toy Industry, only France has a higher percentage of sales to this channel. Currently, Science4you does not sell to many toy stores other than large retailers. In a market where such channel is of considerable importance, it is highly recommendable that the company is able to come with a way to reach such retailers.

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<sup>19</sup> Exhibit 8, “Sales per Channel in the top European markets”

This can be done by hiring a distribution company that tries to replicate the relationship with Sr. Brinquedo in Portugal – where as soon as they buy the toy they have the responsibility on the remaining processes until the toy is displayed in the stores for purchase. This has the objective of capturing higher market share, raise awareness among clients and to bring revenues to the company;

- Analyzing the Spanish market as a distinct one, **developing strategic partnerships**, and **answering its specific market trends**. In terms of retailers, and excluding the mentioned small toy stores (serviced through the distributors), there are some that should be considered as viable opportunities – El Corte Ingles, Imaginarium, Carrefour, Alcampo, EurekaKids and Casa del Libro, with the first four having the advantage of being present in Portugal – as it occurred with Fnac, negotiating with them can be facilitated by this fact and can enable further retailing in the brand in other countries. Concerning museums and other places of scientific interest with whom Science4you can establish a partnership, examples could be the Museo Nacional de Ciencia y Tecnologia in Madrid, or CosmoCaixa Barcelona – taking advantage of the fact that they already offer tickets for the CosmoCaixa in Madrid. Finally, Science4you should also seek partnerships of other areas – In Portugal they partnered with GALP for the production of a toy, something they aim at replicating again in the future, with that company and with others such as Iberdrola and EDPR. Keeping in mind such partnerships and the trends of the Spanish market, Science4you should also focus on products related to renewable energies, given the development in this area that for the Spain has experienced for the last decade.

- **Establishing presence in the Catalanian and Valencian provinces**. Both these provinces are among Europe’s main regions of toy production<sup>20</sup>. While

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<sup>20</sup> Exhibit 13, “Main EU Regions of Toy Production”

Science4you does not nor plans to hold any relevant production in Spain, in such main regions supporting activities that are very important to the success of a company – such as distributors – are highly concentrated in the area creating dynamics of economies of scale that allow companies to reach markets in better and cost-efficient manners. Setting a company office in one of these areas would allow the company to benefit from these and to have better coverage of the whole Spanish market.

- **Establishing a distribution center.** One of Science4you's strategic objectives is expanding its international presence to countries where it isn't already present. Setting a distribution center in Spain that allows coverage of European markets (mainly located within Central Western Europe) can prove to be much more efficient than having the Portuguese warehouses being in charge of such task, as it allows for a more centralized reach to those markets and can be cost-efficient. We should however note that this would only make sense when Science4you starts selling to French and Italian markets, as this is a somewhat more ambitious project whose cost-savings would only be justifiable if a reasonable increase in foreign demand were to occur.

These four main topics dwell on managing the operations abroad. However, if we want the strategy to be successful and create growth for the company in the future, there are changes that need to be made in the structure of Science4you to suit it for such expansions. The ones I consider to be the most important are **expanding its production force**, and **securing a quality management** system that is able to keep up with an increase in demand brought by the presence of such a competitive market. I suggest that two extra workers are hired for the assembly line, one of which responsible for an improved quality management of the product, and that operations get further decentralized by the CEO to other management staff.

## **Men, Money, Minute and Memo**

### **Men**

Regarding the aforementioned first phase, Science4you should hire two additional workers to work in the assembly line to cope with higher demand, with one of them having functions as overseer of quality of the final product. As three people already operate in Spain within the management and commercial areas, the company would not require additional workforce for the remaining set of strategies, as they can be dealt with the current workforce. However I would suggest that, depending on the results in the first or second years, an office could be opened in Barcelona. In such case, one of the workers currently in Spain could be mobilized to that location. If the second phase happens, with a distribution center being placed in Spain, sufficient staff would be necessary to ensure proper functioning of the operation line and distribution.

### **Money<sup>21</sup>**

In the first phase, the main costs will be the salaries of the two hired workers, which will vary between 500 € and 750 €. It is expected that the team in Madrid is able to manage the negotiations with intermediaries, so travel expenses from Portugal to Spain will not be needed. Even so, there will exist transportation costs accounting for fuel or others (plane tickets, etc.), and for other expenses concerning negotiations (reunions, meals, etc.). Currently, Science4you pays around 1 200 € plus living expenses (accommodation, food and transport) to its employees working in Spain. However, these already happen and should not be considered incremental for these new projects. Considering that margins asked by distributors and considering additional costs, Science4you would need sales of 18 000 € for the investment to be repaid in the first years. In case a new office is opened, incremental expenses are expected to be of

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<sup>21</sup> Exhibit 14

around 8320 € (of which 6000€ are yearly). If the distribution center is considered in the future, we would need to account for the cost of necessary equipment and personnel as well. Please refer to Exhibit 14 for a more detailed cost breakdown.

### Minute

	Activity #	Activity Description	Dependency
<b>Already Implemented</b>		Adapting packaging to the Spanish Market	
		Establishing some partnerships	
		Entering the market	
<b>Phase 1</b>	1	Hiring new employees for assembling line	
	2	Formation and training for new employees	1
	3	Developing the quality management system	1,2
	4	Develop partnerships with retailers and museums	
	5	Partnering with energy company	
	6	Scanning the Spanish market for the best available distributor	
	7	Negotiating contracts	6
	8	Choosing the most adequate portfolio of products	4,5
	9	Begin sales in an expanded number of retailers	2,3,4,6,7
	10	Set office in other Spanish regions	all
<b>Phase 2</b>	11	Consider possible investment in a distribution center	all

Please refer to Exhibit 15 in the Appendix for the detailed timeline of the Minute analysis;

### Memo

Strategic Theme	Objectives	Measurement	Target	Initiative
<i>Financial</i>	Expand sales and number of customers	Sales Volume and number of clients	Cover costs (1st year), Increase sales up to 100% (3rd year)	Reaching <i>jogueterias</i> through distributor
<i>Customer</i>	Offering higher value than competitors for a lower price	Market study on product awareness	High awareness (80-90%) on distributors, increasing on final costumers (20-30%)	Partnerships with museums, retailers and other entities, Participation in toy fairs
<i>Internal</i>	Training and hiring assembly line workers, new quality management policies	Number of workers and production rates	Cover costs (1st year), Increase sales up to 100% (3rd year)	Recruiting and Training
<i>Learning</i>	Productivity gains, achieving economies of scale, higher quality	Productivity, sales volume and portfolio of products	Double the number of new products in the first two years,	Partnerships with energy companies

## **Contingency Plan<sup>22</sup>**

In case the plan doesn't happen as intended, in each phase there are steps that can be taken to adjust the flow of operations so that Science4you can act accordingly and maintain its presence. As the presented plan is a progressive one and compliance with previous steps is recommended in order to advance in the strategies, these stand as cautionary proposals since they do not risk past operations. In case results aren't being achieved as desired and costs are higher than expected, I would suggest that Science4you could try a different approach, hiring instead a company representative which would hold full responsibility in representing the brand in Spain – however this holds different costs, namely in terms of risking a spill-over effect on the company's competitive advantage, which would have to be accounted in the context in such would occur.

## **Conclusions**

Concluding the market study and implementation analysis conducted in this Work Project, I believe that Science4you's presence in Spain could be greatly expanded relatively to its current operations: The Spanish market holds certain specific market trends and characteristics which differentiates itself from its Portuguese and other European counterparts. That, allied with the company's competitive factors and its capacity to establish partnerships which add value to the product for the final consumer can prove critical to increasing its market presence and awareness on one of Europe's largest toy markets. Success in the Spanish market means not the possibility of higher revenues from a highly competitive market, but it can bring the experience and awareness necessary for the company's objectives of further internationalization.

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<sup>22</sup> For the Risk Analysis leading to the Contingency Plan, please refer to Exhibit 16 in the Appendix.

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### Publications

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- [www.aefj.es/](http://www.aefj.es/) - Asociación Española de Fabricantes de Juguetes;
- <http://www.iapmei.pt/> - Instituto de Apoio às Pequenas e Médias Empresas e à Inovação;
- [www.portugalglobal.pt/](http://www.portugalglobal.pt/) - Agência para o Investimento e Comércio Externo de Portugal;
- [www.ec.europa.eu/eurostat](http://www.ec.europa.eu/eurostat) - Eurostat;
- [www.oecd.org/](http://www.oecd.org/) - OECD;
- [www.einforma.pt](http://www.einforma.pt) – Commercial reports for Portuguese companies;

All product research was conducted either by research in the market or on websites of retailers of toys, Portuguese and Spanish, mentioned throughout the Work-Project;

Information on the company supplied in interviews with CEO Miguel Pina Martins;

A Work Project, presented as part of the requirement for the Award of a Masters Degree  
in Management from the Faculdade de Economia da Universidade Nova de Lisboa

# Appendix

SME COMPETITIVENESS: INTERNATIONALIZATION STRATEGY  
“SCIENCE4YOU – EXPANDING THE INTERNATIONALIZATION PLAN IN SPAIN”

João Diogo da Rocha Pereira

Number 750

A Project carried out on the Management course, with the supervision of:

Professora Sónia Dahab

Professor Filipe Castro Soeiro

6<sup>th</sup> January 2012

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**Exhibit 1 – Science4you Sales in 2010**

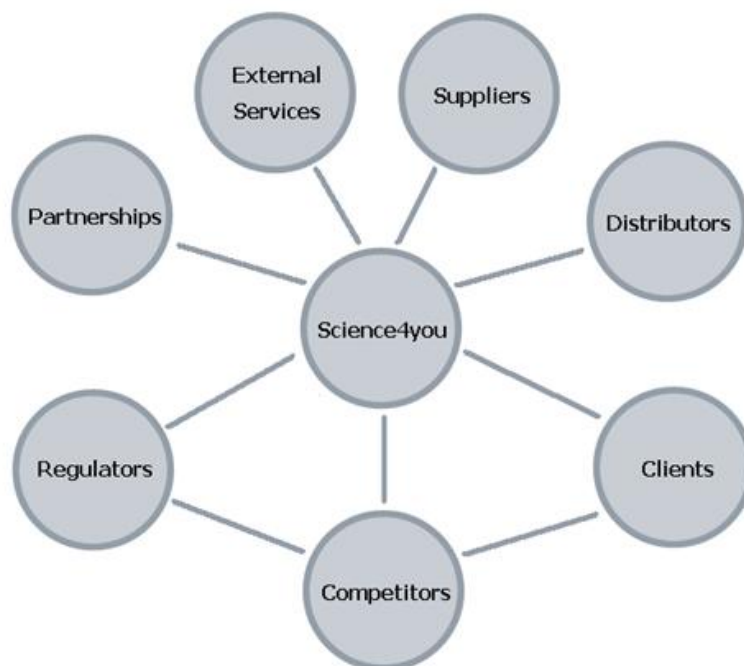
Sales		Value	%
<b>Internal Market</b>		228 025 €	93 %
<b>External Market</b>	<i>European</i>	16 442 €	7 %
	<i>Other</i>	564 €	≈ 0.1 %

**Science4you’s portfolio of products**

Toy Category	%
Building Sets	31 %
Games/Puzzles	29 %
Arts/Crafts	8 %
Learning	32 %

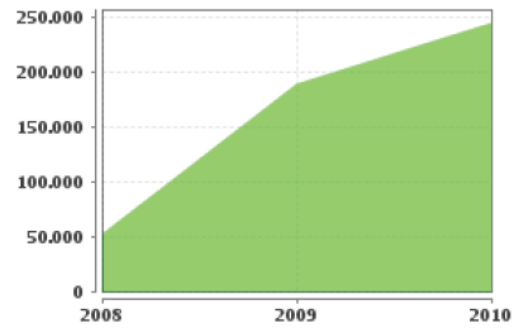
Please note: While all Science4you’s products mostly fall under the “Learning” category, this segmentation on toy categories was made to allow for more accurate estimates in terms of market shares, in this Work Project. Those here labeled as “Learning” toys account for those who do not fall under the other three presented categories (e.g., books);

**Exhibit 2 – Industry Mapping**



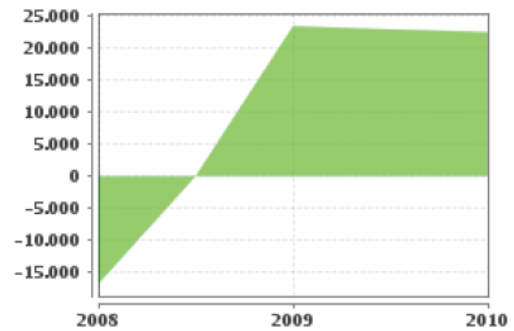
**Exhibit 3**  
**Sales in the past three years**

<b>Year</b>	<b>Value</b>
2008	52 919,65 €
2009	189 549,26 €
2010	245 028,96 €

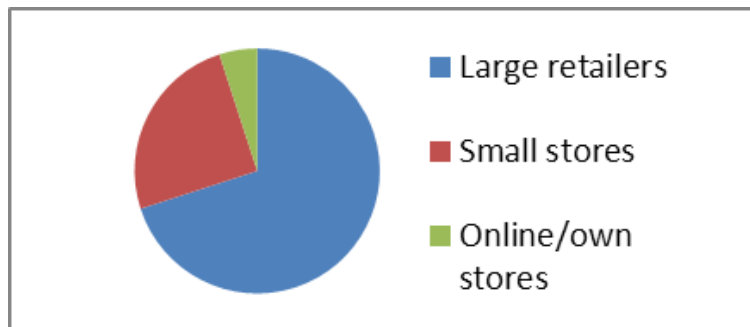


**Net Results**

<b>Year</b>	<b>Value</b>
2008	-16 854,19 €
2009	23 434,41 €
2010	22 494,55 €



**Sales per retailing channel**



<b>Retailer</b>	<b>% Sales</b>
Large retailers	70
Small stores	25
Online/own stores	5

**Exhibit 4 – Competitive Assessment (ranked from \* [low] to \*\*\* [high])**

	<b>Price</b>	<b>Presence</b>	<b>Variety</b>	<b>Appeal</b>	<b>Value</b>
<b>Science4you</b>	*	***	***	***	***
<b>4M</b>	**	**	**	***	**
<b>Discovery channel</b>	**	*	**	**	**
<b>Clementoni</b>	**	**	**	**	**
<b>Dino Horizons</b>	*	*	*	***	**

In the Portuguese market, considering the offers in the market niche of the scientific educational toys, we have four main companies - Science4you, 4M, Discovery Channel, and Clementoni, with other brands existing more focused on a particular segment – as an example, I analyzed the brand Dino Horizon. Depending on the type of toy, prices vary between 6,99 € and 34,99 €, with Science4you's being always below the competition, in average by 1 € (although Dino Horizons and other brands also have cheaper products like figures that lack higher educational features). Also among these, Science4you is the company that is located in most retailers, lacking only presence on Group Sonae's stores due to these having licenses for retailing the Discovery Channel brand. In terms of variety, both Science4you and Discovery Channel have a large variety of products. However, Science4you's portfolio is slight broader featuring, for example, geography-oriented toys related to Portuguese specific places. Other brands focus more on specific fields – like Dino Horizons focused on Dinosaur and Archeology-oriented products. Appeal in terms of consumer perception is slightly higher on Science4you and 4M due to the design and general look of the packaging and toys themselves, looking more elaborate and durable than those of others competitors. Finally, concerning value brought by each product, Science4you's product with its

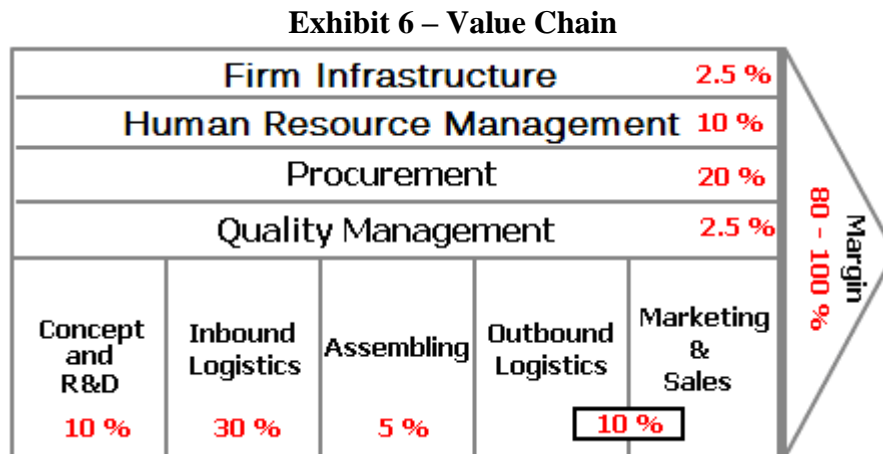
background manual and ticket offers stands out as a differentiator between itself and the other brands, as no other provides elements such as these that set the product apart from others in the market.

**Exhibit 5 – Science4you’s Suppliers**

Year	Region	Value	Percentage
<b>2008</b>	Internal Market	17 115 €	24 %
	Foreign Market	54 592 €	76 %
<b>2009</b>	Internal Market	137 712 €	100 %
	Foreign Market	-	-
<b>2010</b>	Internal Market	147 045 €	71 %
	Foreign Market	59 428 €	29 %

Since its creation, one of Science4You’s main strategies to succeed in the Portuguese market was to keep themselves confined mostly to Portuguese suppliers, whenever possible and cost-efficient. This serves as both a competitive advantage in terms of cost-efficiency, as they are able to get lower costs upon production, and as a differentiation strategy from the competitors, as since they are the only ones to use materials from primarily portuguese suppliers (around 70% of suppliers are portuguese) they use it as a way of promoting a “buy what’s national” strategy in Portugal, even displaying such on the packages of the products. Contrarily to what other established firms do, it’s not as efficient for Science4you to have many foreign suppliers: usually, their lower prices come from the existence of economies of scale when large orders are required. As for the time being the company does not require such large quantities to fulfill its demands, the cost they are able to get from Portuguese producers is similar and doesn’t require additional costs such as agents to get their orders – they are able to contact them personally and agree on prices and quantities without significant effort.

With internationalization prospects, the question of having foreign suppliers arises. However for the time being, while they can keep getting steady profit margins such is not priority. The company won't look exhaustively for these opportunities, but if they occur they will be considered.



### Exhibit 7 – SWOT Analysis

#### Strenghts

As of now, the main strengths of Science4you are its wide range of products offered, its coverage of several scientific fields and answering to the trends of the market. Their products cover fields within geography, physics, chemistry, energy, botany, anatomy, mineralogy, meteorology, and even economics. This diversity allows them to have a strong presence within its market niche, as most competitors often tend to offer products of a more limited variety. Their strategic partnership should also be considered one of their main aspects as it allows them not only to be present in all the most relevant retailers, but also to add value to their product. Furthermore, these partnerships are somewhat exclusive, as they allow Science4you to provide offerings that competitors do not, as they do not hold similar partnerships with the mentioned entities. Lastly, price should be considered a strength as it is always placed lower than those of competitors. While the difference in price isn't large ( $\pm 1$  Euro lower on

average, but there are specific products where they have a considerable lower price), it is likely that upon purchase it can also influence decision of the final consumer.

### **Weaknesses**

Science4you largely depends on the large retailers where it's currently present, as this channel accounts for the largest percentage of the company's sales – such presence is deemed vital and without selling on these, awareness for the brand would be largely reduced. This brand awareness, despite being achieved through these retailers, is still considerably low in comparison with other players in the toy industry. This can be due to the company being relatively new, operating in a smaller market niche than others, and due to its low focus on marketing services. Other relevant weakness of the firm is its low production rate – due to the fact that it accounts for only two people on the assembly line of the product (being complemented by other staff in demand peaks).

Since the firm operates in a make-to-order procedure, it is likely that it falls short of supply. Finally, I would mention that its lack of proper quality management and excessive centralization of activities in the CEO can be inadequate in case the company is set to expand its operations.

### **Opportunities**

The mentioned partnerships can be replicated and extended in several ways that expand the products' value propositions: In terms of international retailers – such as Fnac, for which the general manager for Portugal and Spain is the same – they can base their positive experience with them in Portugal and have it as a starting point for their presence abroad. As for the partnerships with museums and other entities they can also try to expand these agreements with more institutions to expand possibilities, both nationally and internationally. Another major opportunity is the growing demand for knowledge-adding entertainment in the market nowadays – in 2010, in the top 5

countries of the industry, building sets, games and puzzles, and arts and crafts types of toys accounted for around 25% of total toy sales in Europe. Despite operating in a market niche, the products it offers fall under most categories that have been facing increasing demand.

### **Threats**

As analyzed in the Porter's 5 Forces Analysis, there's a high threat of substitutes in the industry – not only scientific toys, but other types of toys as well. This effect of substitution and fierce competition leads into a large diversity of toys in the market that acts as a threat for Science4you. Also important is the constant demand for innovation in the toy industry that demands that companies keep up with the latest trends and market demands to keep themselves sustainable and profitable. Lastly, large toys firms possess economies of scale that aren't affordable for Science4you, as they require a much smaller number of supplied components relatively to the large quantities of said companies.

## Exhibit 8 – The Toy Industry in 2010

### Sales in 2010, by type of toys, in Europe

Infant/Preschool	19.4%
<b>Games/Puzzles</b>	<b>11.9%</b>
Dolls	11.1%
Outdoor/Sports	10.9%
Vehicles	9.7%
<b>Building Sets</b>	<b>8.4%</b>
<b>Arts and crafts</b>	<b>6.5%</b>
Plush	6.0%
Action figures and accessories	5.9%
Youth Electronics	2.6%
<b>All other toys</b>	<b>7.5%</b>

Source: Toy Industries of Europe – Facts and Figures 2010

### Sales per Channel in the top European markets

	FR	GER	IT	SP	UK	TOP 5
Department Stores	1.2%	12.0%	4.5%	17.5%	5.6%	6.9%
Discount/Variety Stores	2.2%	5.2%	4.3%	2.6%	5.5%	4.1%
Mail order catalogues	1.1%	2.2%	0.1%	0.0%	2.6%	1.6%
Online/Internet	5.6%	13.3%	1.3%	0.3%	5.1%	6.1%
Super/Hypermarkets	39.9%	14.7%	38.6%	32.7%	20.0%	27.6%
Toy shops	45.0%	41.3%	34.2%	43.0%	33.8%	39.5%
Video/computer games shops	0,1%	0,0%	0,3%	0,1%	0,5%	0,2%
Other types of retailers	4.9%	11.3%	16.7%	3.6%	26.9%	14.0%
Total	100%	100%	100%	100%	100%	100%

Source: Toy Industries of Europe – Facts and Figures 2010

### Exhibit 9 – Figures on Spanish Energy Usage

	Unit	2001	2002	2003	2004	2005	2006	2007	2008
Energy supply and prices									
Total primary energy supply (TPES)	Mtoe	125.0	128.9	133.2	139.1	141.8	141.5	144.0	137.8
Total primary energy supply per capita	Toe per capita	3.07	3.12	3.17	3.26	3.27	3.21	3.21	3.02
TPES per unit of GDP at 2000 prices and PPPs	Toe per '000 USD	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13
Renewables' contribution to total primary energy supply	%	6.7	5.5	7.0	6.5	6.0	6.6	7.1	7.5
Crude oil import prices	USD per barrel	23.32	23.95	28.13	36.03	50.54	60.99	68.66	94.86

Source: OECD

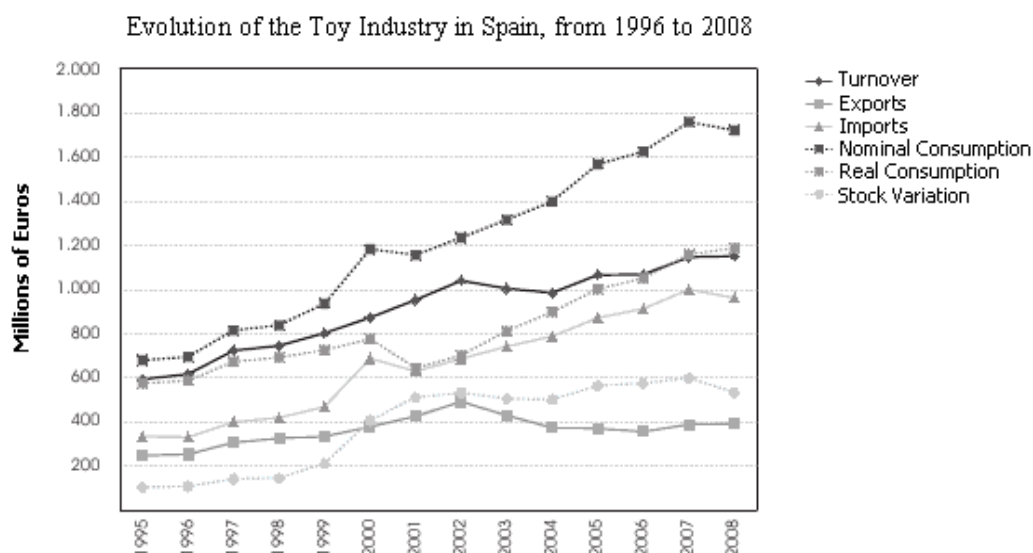
### Exhibit 10 – Figures on the Toy Industry in Spain

In 2007, existed a total of 217 companies registered as toys manufacturers, employing around 5 100 workers, with a turnover of 1 146.40 million €. Outsourcing of operations within the industry has increased steadily, as secondary industries used in various stages of production accounted for around 70% of activity while delocalized production for auxiliary companies (foreign and local) accounted for around 60%. The industry's structure was primarily constituted of SME's, with these accounting for 98.2 % of companies, 80% of workers and 68.1% of total turnover. Large companies, despite accounting for around 1.5% of total companies, still employed 19.6% of workers and accounted for 31.9% of total turnover. The production structure in Spain depends on the processing of plastics, metals, organic materials, and graphic arts with some of these being most of the time outsourced to other companies. The process of production starts with a first phase of designing and developing the toy, after which starts the planning of the production activity, usually starting between January and March – the industry's "holiday period" at the international level. From March to April, there is the demand for suppliers for the components, and from then on starts a phase of approval of raw materials for use, and the production of the toy begins. Once this is finished, the logistic operations begin to ensure that the produced toy is available for purchase in retailers during the Christmas and the Epiphany ("Dia de Reyes") period, from November to early January. This annual planning allows companies to work efficiently, always with the aforementioned November-to-January season in mind. In Spain, as it is the case in

other markets, national manufacturing of toys is strongly directed to guarantee the presence at the market during this period, with an outstanding effort in marketing, through TV ads and others. During the remainder of the year, the toys available are those correspondent to the previous' holiday season campaigns. In the holiday season of 2008/2009, despite concerns on the performance of the industry in terms of sales, its evolution turned out to be remarkably positive. In 2010, however, sales figures decreased by 0.7% despite growth on volume sales by 3%. It is worth noting that on recent events of economic downturn in Europe, Spain was one of the most affected economies. As a consequence, average retail prices were lower than before, which impacted negatively on the increase of sales.

Leading to 2008, existed a considerable decline in exports. Several factors brought this circumstance, such as the currency strength of the Euro against the Dollar in the latest decade, the increasing costs of raw materials such as plastics (particularly after 2006), China's membership of the World Trade Organization in September 2001 which was a benefit to many importers and distributors supplied directly from Asian countries with competitive advantages provided by lower manufacturing costs. As such, general distribution companies in Europe with import infrastructures that were used for other industries such as footwear or textiles were able to use them to import toys of Asian manufacturing, increasing the number of imports and competing with products of European and Spanish origins. By then, such imported toys had lower costs for distributors and were sold to the final consumer by lower prices than those of European origin. As a consequence, Spanish manufacturers reduced prices to remain competitive. This coincided with periods where the Euro was strongest, and where average cost of toy manufacturing was highest, due to the need of compliance with European regulations concerning toy safety, which hurt the competitive capacity of companies.

Non-European companies, while having the same need for compliance, had cheaper production costs that could balance such increase in expenditure. The negative economic effects of the downturn were mostly supported by the manufacturers themselves.



Source: Asociación Española de Fabricantes de Juguetes (AEFJ) and Intituto Español de Comercio Exterior

Evolution of the average annual variation of the Toy Industry in Spain

	1996-2000	2001-2005	2006-2008
Turnover	8,10%	4,20%	2,60%
Exports	9,10%	0,30%	2,10%
Imports	16,70%	5,10%	3,50%
Nominal Consumption	12,10%	3,90%	3,20%
Real Consumption	6,30%	6,00%	5,90%
Stock Variation	35%	7,40%	1,70%

Source: Asociación Española de Fabricantes de Juguetes (AEFJ)

**Exhibit 11 – The Scientific Educational Toys Market in Spain  
Evolution of Market Share (% Sales Volume) per year, by category of toy**

	2001	2004	2007	2008
<b>Learning/Education</b>	3,03%	2,08%	4,31%	3,93%
<b>Building Sets</b>	4,36%	4,86%	3,60%	3,79%
<b>Games/Puzzles</b>	12,45%	11,00%	11,94%	11,60%
<b>Arts and Crafts</b>	3,36%	3,89%	4,84%	4,46%

Source: Asociación Española de Fabricantes de Juguetes (AEFJ) based on a NPD study

(Please note: only present are the relevant shares of market categories in which Science4you's products can be segmented.)

**Analysis on Spanish Market & Comparison With Science4You's Products**

**Cefa Toys** *Quimicefa Plus*: Chemistry experiments sets with more than 70 different possible experiments, priced at 35.99 €;

**Science4you** *Química 500*: Chemistry set with 62 available experiments, plus 72-page long instructional booklet dwelling on chemistry. Offered as well is a 105€ value in thirteen Museum tickets. Priced at 31.99 €.

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**4M** *Solar Rover*: Toy car that moves with solar energy captured by a solar panel, priced at 21.50 €.

**Science4you** *Energia Solar em Carros*: Buildable toy car that moves with solar energy received by a solar panel, plus 52-page booklet that explains the notions behind renewable energies – solar energy in particular – with a total of 5 different experiments. Also included are thirteen Museum tickets with a total value of 105 € to thirteen different museums and science centers. Priced at 19.99 €.

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**EurekaKids** *Los Minerales*: Block of plaster with 13 types of minerals inside, plus tools for excavation, cleaning and inspection of the materials. Priced at 16.95 €.

**Science4you** *Primeiros Passos na Geologia*: Kit with tools and reagents to identify minerals in a total of six experiences, plus a 40-page booklet explaining the properties of minerals and their appliance. Also includes thirteen museum tickets with a total value of 105 €. Priced at 9.99 €.

Source: Analysis of products through Fnac.es, ToysRus.es, and other retailing websites

**Please note:** As in the comparison I used Science4you's products available in Portugal rather than Spain, there are differences in terms of museum tickets offered – in Spain this offering only amounts to an extra value of up to 33 € currently. However, as developed in the work project, the expansion of these partnerships are key to Science4you's development in the market, so I use such features in this comparison to further differentiate the product value possibilities.

### Exhibit 12 – Mode of Entry – Exporting Phases



In the analysis, I consider Science4you’s exporting phase stands in-between phase 2 and phase 3, as described in the figure.

### Exhibit 13 – Main Regions of Toy Production

<b>MAIN EU REGIONS OF TOY PRODUCTION</b>	
<i>France</i>	Franche-Comté, Jura, Rhône-Alpes
<i>Germany</i>	Bavaria, Baden-Württemberg
<i>Italy</i>	Lombardia, Piemonte, Marche, Veneto
<i>Spain</i>	Valencia, Catalonia, Alicante

Source: Toy Industries of Europe – Facts and Figures 2010

### Exhibit 14 – Expected Costs (in Euros)

Increasing market share/Securing partnerships	Hiring two new employees	625*2*12 (yearly)
	Travelling/Marketing/Other expenses	3 000
		18 000
Setting office in Catalonia/Valencia	Plane tickets (estimated)	4*80
	Office rent	500*12
	Office supplies	2 000
		8 320

For this analysis, I considered that the wages of the hired assembly line workers would be of average 625 €, accounting for an increased 15 000 € yearly cost. Besides this, I also considered that travelling and other expenses necessary for establishing the desired relationships (such as presence in international toys fairs) would be of approximately 3 000 €. I did not consider as costs the margins of sales asked by retailers and distributors since these are costs over sales made – mostly (save for contract bonuses) occur only over the total volume of sales made through said retailer/distributor and such estimate is unlikely to be accurate. Concerning later plans of a possible office space in another Spanish region, I assumed that trips would have to be made four times per year, from Portugal or Madrid, to set the office, align objectives and check on performance. Office rent was calculated of being around 6 000 € with office supplies costing 2 000 €. For this project to be solvable we would need results of 8 320 € to cover costs. I did not compute the costs of my final proposition – a distribution center – as it is a project to be taken only if the previous ones discussed bring sufficient revenue and build the brand enough so that an expansion towards other markets justifies such. Even if this occurs, it will take sufficient time so that any predictions made by now can be deemed inaccurate in the future context, as the company structure can have changed due to external factors that are not predictable.

### Exhibit 15 - Minute

	Months											Years		
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	1-3 years	3-5 years
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
<b>Phase 1</b>														
<b>Phase 2</b>														

## **Business Model & Partnerships**

Partnerships play a significant part in Science4you's success, hence it is highly dependable on how such partnerships are able to be established and sustained. Accounting for this, there's the risk that Science4you might not be able to establish with the desired entities the relationships it would want to by a diversity of reasons: museums could not want to associate with the brand without compensation, or retailers might prefer to choose Spanish brands instead. To overcome this possible risk, the company should continue to be present in the international toy fairs, showcasing its capacities, building its brand, and raising awareness among possible clients and partners. From our business model, a major risk arises from compromising the competitive advantage the company has, particularly within the Research and Development department. Losing such dynamic capacity of launching products is a serious risk for Science4you upon internationalizing, however by maintaining certain control over its operations, the option of exporting minimizes this risk.

## **Financial**

As the investment on internationalization increases throughout the implementation plan, there will be pressure to generate revenues in the short-term in such markets. As this creates some budget constraints, it is likely to limit the company's expenditures in other areas – possibly concerning internationalization plans to other regions. A cautionary approach in this matter, such as the one that has been practiced thus far, is advisable: riskier investments should not take place if satisfactory results are not been achieved for previous ventures.

### **Operational**

Concerning operational risks, Science4you may not have the capability to answer the demand for a market which is several times larger than the one it is used to deal with. This risk can be avoided if the company's coordination between each division is ensured - achievable through strict reporting rules or a more efficient customer database system.

### **Implementation**

Despite trying to predict the market's reaction to the plan presented in the Work Project, it is still highly dependent on the real reaction and adjustments that might occur when the recommendations are brought in practical terms. During the first period, customer feedback on the product, considering the newest focus on types of toys, expansion of partnerships and higher presence on retailers, might show us if the strategy is appropriate or not. Until then, there is the risk that assumptions made (that considered that such would be reliable strategies) do not correspond to their "real life" counterparts.

### **Commercial**

Despite Science4you's products offering several competitive advantages over those of the competitions (price, value, partnerships, etc.) there is the risk that some of the commercial strategies are not suited for Spanish retailing - lower prices may lead the customer into thinking it's a product of lesser quality, for example. The partnerships with the faculties and other entities can be important regarding this risk, as they certify both the quality of the products in the eyes of the consumer, and the value of the learning experience.

## References

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- [www.aefj.es/](http://www.aefj.es/) - Asociación Española de Fabricantes de Juguetes;
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- [www.portugalglobal.pt/](http://www.portugalglobal.pt/) - Agência para o Investimento e Comércio Externo de Portugal;
- [www.ec.europa.eu/eurostat](http://www.ec.europa.eu/eurostat) - Eurostat;
- [www.oecd.org/](http://www.oecd.org/) - OECD;
- [www.einforma.pt](http://www.einforma.pt) – Commercial reports for Portuguese companies;

All product research was conducted either by research in the market or on websites of retailers of toys, Portuguese and Spanish, mentioned throughout the Work-Project;

Information on the company supplied in interviews with CEO Miguel Pina Martins;