

The Development of New Ideas for IT Products, Through Social Media

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Introduction

The development of new ideas from a business starts when the need for a new product appears or when new technology becomes available (Awwad et al. 2016). The decision of development and, therefore, the actualization of new ideas constitute one of the most significant decisions, which will be taken by a business, because it is directly linked with the business' progress.

With the term social networking (Indrupati and Henari 2012) or social media, we refer to media for the interaction of groups of people through network communities. More specifically, a business is given the opportunity to “communicate” with its staff and the people related to it. Facebook, as a major representative constitutes a category in social media, and due to its versatile uses, makes it easier for the businesses to fulfill their goals. For example, the creation of a page in Facebook and its enrichment with all the information, which is necessary for its visitors as well as its proper formation, are actions, which any business can perform, and therefore promote its ideas (Ho 2014).

Methods for the Development of New Ideas—Generally

The development of new ideas in a business can be achieved in various ways, each of which has its own value (Wennberg and Berglund 2006). For example, through research and development (R&D) in which departments in a company deal with the research into new technologies (Rudall 2011), follow the latest developments in

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issues that interest them and keep up-to-date with what is new in the market. In addition, another way to create an idea is from the staff itself, as they interact with other people, express opinions, exchange ideas, propose improvements and, as a consequence, a new idea can be developed. These elements are also obtained using simulation modeling of the corresponding processes (Papadopoulou et al. 2017; Plikas et al. 2017; Plessias et al. 2017; Sakas et al. 2015).

Social Networking

If we focus on Facebook (Maiz et al. 2016), we will notice some secondary ways, which contribute to the creation of an idea.

Drawing ideas: Facebook includes pages, many of which have been created for business purposes. Consequently, the opportunity to draw information for business purposes through these pages is given to the staff of a business. In addition, through Facebook, visitors are referred to hyperlinks, which helps with the gathering of more data (Shao et al. 2015).

Exchange of ideas: thanks to Facebook (Kucukemiroglu and Kara 2015), workers in various businesses can communicate with each other, exchange ideas and data and, as a result, each business separately broadens the scope of information it has gathered for the conception and, later, the actualization of a new idea in the field of technology.

Covering of new needs: the businesses, after collecting all the necessary information, can improve the idea they have formed and desire to promote locating, at the same time, the gaps in the market and filling those by incorporating them in their original idea. In order to achieve this goal, Facebook is crucial, because the collection of information as well as the monitoring of the progress in the market can be done through that (Facebook).

Creating new partnerships: communication among the staff, thanks to the features offered by Facebook, can lead to the creation of new partnerships and to the 'promotion' of collective work (Radclyffe-Thomas et al. 2016). This is especially important in the field of businesses since collectivity constitutes a crucial prerequisite for their survival and progress.

Simulation Model

Based on the results of our research, it allows us to be able to ascribe values to the dynamic simulation model parameterized all those involved in our research. The conjunction between generation of new ideas through social media, new product development and IT services, is dynamic.

As seen from the dynamic simulation model in Fig. 1, the results change when changing the provision of resources to agents. Depending on the sources that

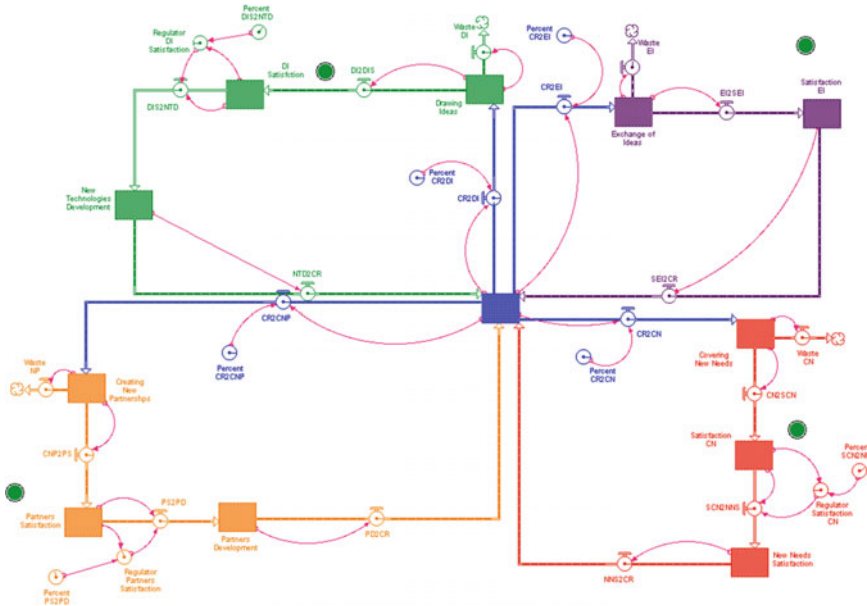


Fig. 1 Model

provided by the Company Resources, involving Drawing ideas, Exchange of ideas, Covering of new needs and Creating new partnerships sections, changing the percentage of new ideas generation from the use of information technology services, through social media.

Implementation of the Dynamic Simulation Model

To create the models, the modeling software tool iThink, from iSee Systems, was used. Simulation model creates stock and flow diagrams to model and simulate processes. It presents you the results of specific defined by the user inputs and connects the interrelationships between procedures and functions. Outputs can be displayed in the form of graphs and tables. The results of the dynamic simulation model are shown in tables and figures that we provide (Table 1).

Figure 2 indicates that the satisfaction percentage, as regarding all the four factors, is rising significantly during the first months and then those satisfactions gain stability. The development of new ideas as regarding the contribution of social media regarding IT products gives successful and satisfied results.

Also, Fig. 2 shows that company resources in the beginning, given in the four leading factors, lead to company resources replenishment in a steady rate and the four factors are eventually tending to stabilize their resources.

Table 1 Table results

Months	Satisfaction CN	Waste CN	Percent CR2CN	New Needs Satisfaction
Initial	27.00			5.00
1	53.64	2.96	5.00	0.00
2	77.30	2.63	5.00	0.00
3	80.14	2.22	5.00	17.14
4	80.20	1.95	5.00	22.85
5	79.52	1.83	5.00	24.39
6	78.84	1.79	5.00	24.50
7	78.27	1.77	5.00	24.24
8	77.78	1.75	5.00	23.90
9	93.31	1.73	5.00	7.56
10	91.16	1.70	5.00	9.74
11	89.51	1.66	5.00	10.09
12	86.86	1.64	5.00	12.97

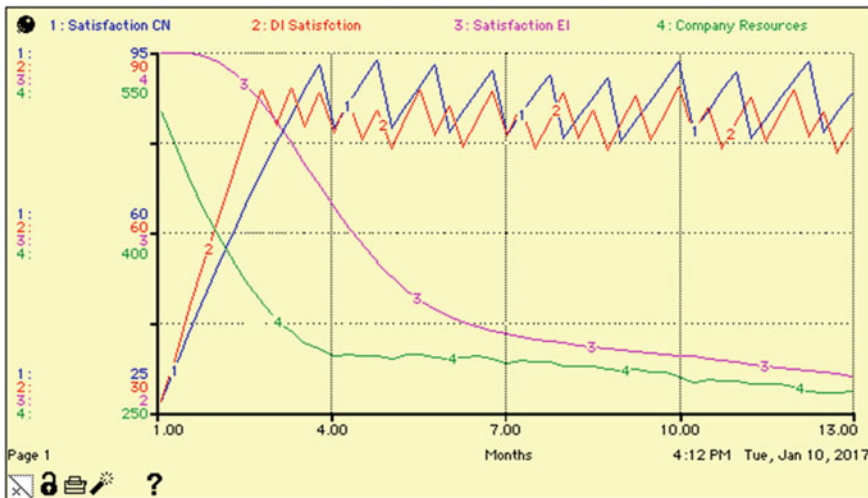


Fig. 2 Graphical results

Support for Decision-Makers

There is need to create the interface of the dynamic simulation model, to enable the user to change the values that the factors can get, studied in the research we have done. Figure 2 shows the main user interface of the simulation model. There are four main sections on this user interface: Drawing ideas, Exchange of ideas, Covering of new needs, and Creating new partnerships sections (Fig. 3).

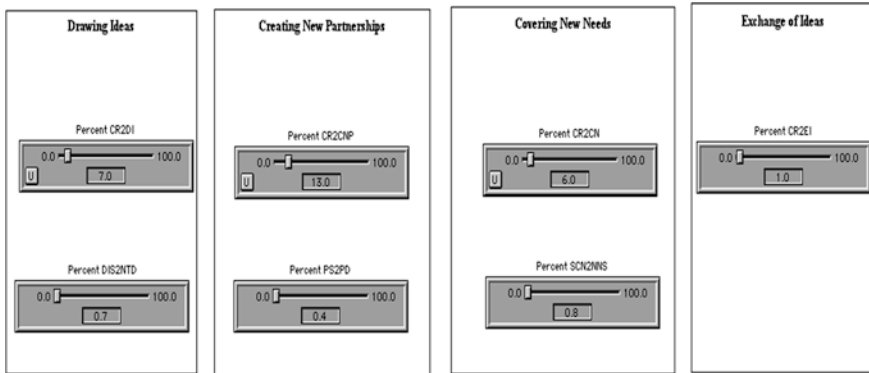


Fig. 3 User interface

Conclusions

New product creation still remains the higher challenge for companies. Most companies have knowledge of the important role new products must play in their production and quest for prosperity: companies are continuously searching for ways to refresh, modify, and redesign their new product development orders and procedures for maximum results.

This standard suggests that to achieve productivity, new product development companies should have a specific and well-designed product policy. These companies should have determined new product target markets along with a lot of confidence, with clear targets. Winning businesses and groups of new product development have devotion toward the choice of the customer. It is important that company should collect as many concepts as possible and most should come from clients so that the company can be in a situation to plan and develop new better products.

This paper investigates and resolves the generation of new ideas for new product development processes through social media and attempted to acknowledge fields in which companies can upgrade their implementation when present new products, mostly through the research of points that are crucial to success. These points were highlighted through an extensive study of the experience and implementation of successful companies presented in the new product development bibliography. The critical success factors which have been presented in the bibliography are generally determined for the complete development process, in order to especially addressing each section. To face this problem, this paper search crucial success agents for each step of the process.

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