LOGO

Applicability of Web 2.0 Tools to Enable Design Management in Collaborative Platforms

Aplicabilidade das Ferramentas Web 2.0 para Habilitar o Gerenciamento de Design em Plataformas Colaborativas

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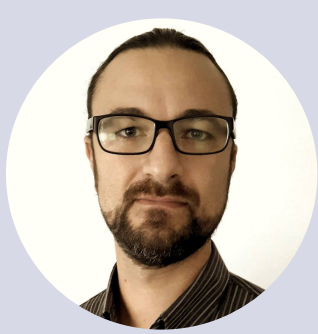

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ABSTRACT

Collaborative platforms associated with Web 2.0 tools provide a space for approximation and interaction between companies, customers, suppliers and interested parties in general, who communicate, share ideas and perform tasks together with the company's team in product development/ services, in a collaborative process. In this sense, this paper presents a research on the applicability of Web 2.0 tools in the feasibility of Design Management in collaborative platforms, seeking to conceive innovative ideas, increase productivity and serve as a competitive strategy. As a result, it is observed that this approach based on the combination of such tools, benefits the company's business, as well as the execution of tasks, facilitating design actions, delivering products/services in a more assertive and effective way.

KEYWORDS

Design Management; Web 2.0 tools; Collaborative platforms.

RESUMO

As plataformas colaborativas associadas às ferramentas Web 2.0 proporcionam um espaço de aproximação e interação entre empresas, clientes, fornecedores e stakeholders em geral, que comunicam, partilham ideias e realizam tarefas em conjunto com a equipa da empresa no desenvolvimento de produtos/serviços, de forma colaborativa. processo. Nesse sentido, este trabalho apresenta uma pesquisa sobre a aplicabilidade das ferramentas Web 2.0 na viabilização da Gestão do Design em plataformas colaborativas, buscando conceber ideias inovadoras, aumentar a produtividade e servir como estratégia competitiva. Como resultado, observa-se que esta abordagem baseada na combinação de tais ferramentas, beneficia o negócio da empresa, bem como a execução de tarefas, facilitando ações de design, entregando produtos/serviços de forma mais assertiva e eficaz.

PALAVRAS-CHAVE

Gestão do Design; Ferramentas da Web 2.0; Plataformas colaborativas.

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INTRODUCTION

In the contemporary context, organizations and society in general are faced with an infinity of information and technological resources that enable communication in real time, without geographical barriers, in an autonomous and participatory way, with freedom to expose and exchange ideas, using Information Technology resources. In this way, consumers moved from passive agents to active contributors, bringing new levels of involvement in consumer relations. To actively participate in this scenario, organizations understood the need to create an entire ecosystem around their business niche, based on collaborative digital platforms, whose main characteristic is to bring people together in a different and dynamic way of working (BAXTER; CONNOLLY, 2014).

In this scenario, collaborative platforms are changing the dynamics of the economy by being allies for the representation and organization of communicated and shared knowledge (HALLIKAINEN; AUNIMO, 2020). Through collaboration, people can benefit from updated information in real time, share experiences and use the group's knowledge, participating in learning, thus expanding their individual knowledge repertoire (BAXTER; CONNOLLY, 2014).

Collaboration is related to the processes of exchanging information and knowledge; joint work between two or more people who have a common goal; to a multitude of people who jointly create products; or to connected individuals and organizations, being able to achieve unprecedented levels of learning and scientific discoveries (SUTHERLAND & JARRAHI, 2018). Therefore, collaboration is a process that favors innovation, and organizations must be aware of new collaborative management mechanisms for innovation. The collaborative processes of communication and sharing, applied on digital platforms, occur in the context of Web 2.0, whose main objective is to make the web a social and accessible environment available to everyone who uses it, also allowing each person to select and control the information, according to their needs and interests (VERMA, 2017).

Communication technologies serve as a means of propagating the creative proposals of people interested in a project, disseminated on platforms, creating an information network that establishes new solutions for products and services (DE FALCO et al., 2017). Thus, it is collaboration

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that allows the breadth and depth of relationships between organizations, their customers, suppliers, etc., that can operate based on relationships of shared interests (TROISE, MATRICANO; SORRENTINO, 2021). When it comes to specific collaborative platforms for the creation of products/services, they require designers and other professionals, who are interested in constantly learning about new functions, to be able to systematize the integrated use of Web 2.0 technologies, such as strategic tools.

According to Kazantsev and Martens (2021), Web 2.0 tools capture and share knowledge, in the development of the corporate culture, in the training of new employees, in the contact between people in a large and/or fragmented organization, in the exploration of the concept the wisdom of the crowds, and also, in the easy and agile access of people to the information necessary to carry out their activities. Considering the environment of digital platforms, Design Management encompasses management activities, according to the design principles and strategies of organizations, making it possible to understand and manage actions related to creative processes, in problem solving, as a strategic instrument, also in the digital space of platforms (MARTINS; MERINO, 2011). In this sense, Design Management can be understood as a creative coordination of tools and resources (FIALKOWSKI; KISTMANN, 2018), and can also be thought of for application in collaborative platforms.

Therefore, for collaborative processes to take place, organizations need to encourage collaboration, involving employees, suppliers, business partners and customers. Members of organizations must know how to work together, interacting so that information, knowledge and creative skills are shared, which intensifies the production of knowledge of all participants and the organization as a whole. However, many organizations still face some restrictions regarding the dissemination of the solutions found, mainly due to the geographic dispersion between the operational units, which in some cases are multinational (LAAMANEN, BARROS; ISLAM, 2018). Another issue refers to the confidentiality of information and the drop in employee productivity, leading to restrictions on the use of platforms in social networks, in the organizational context (OLIVEIRA; MARCHIORI, 2012).

Given the above, the objective of this research is to show the applicability of Web 2.0 tools in enabling Design Management in

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collaborative platforms, in search of conceiving innovative ideas, increasing productivity and serving as a competitive strategy. The importance of this work is justified by the relevance of collaborative platforms for product design, as organizations can disclose problem situations, facilitate communication, as well as the sharing of ideas between designers and other team members interested in the project. All participants can benefit from the debate around information, knowledge and new ideas that can lead to innovations using Web 2.0 tools. The relevance of the research is also highlighted, because digital collaborative platforms can enhance open innovation, through the development of virtual communities, social networks that include companies and consumers that act as co-creators in innovation processes.

2 METHODOLOGY

The research carried out is of a basic nature. Regarding the approach to the problem, a qualitative research was carried out, which respected the criterion of presenting a dynamic relationship between the real world and the subject, not being based on statistical methods and techniques. Considering the objectives, this study is characterized as a descriptive research. Firstly, a literature review was carried out on the following contents: (i) principles and applications of Web 2.0 tools; (ii) characteristics of collaborative digital platforms; (iii) tools available for application on collaborative platforms; and (iv) Design Management in the Collaboration Era.

Then, six Web 2.0 tools were selected, which can be used in collaborative platforms. This selection was guided considering the following criteria: (i) having free access; (ii) be geared towards application in project management; (iii) use the experiences of employees, professors and clients in the solution of projects. Data analysis was used in an interpretive way, based on the assumptions of the qualitative and descriptive research technique, as it aims to understand, describe and interpret the collected data that prove the applicability of Web 2.0 tools in the feasibility of Design Management in collaborative platforms. Next, the theoretical framework used in the research and the six selected tools will be presented.

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2.1 Principles and Application of Web 2.0 Tools

The World Wide Web is a way in which information can be spread over the Internet. According to Diard Jr. (2000, p. 24), the Web is a public space that allows the circulation of all types of information, be it text, images, sounds, graphics, videos, etc. However, the Web in its beginnings was static and served to make content available where the end user could not change it. The pages had read-only hyperlinks, with no interactivity between the page creator and the user. This generation of the Internet is known as Web 1.0. However, with technological evolution, the Web has grown, has undergone changes in terms of volume, data and power, and in the dynamics of how information is produced, captured, organized, stored, retrieved, interpreted, transmitted, and finally used (The 'REILLY, 2005). This dynamic change in which technologies can enhance creativity, collective information and, above all, collaboration between users, was called by O'Reilly (2005) as Web 2.0, a network, a platform, covering all connected devices, whose applications are those that take full advantage of the intrinsic advantages of the platform. Therefore, Web 2.0 emerged as a way to create a new space for interaction, collaboration, information sharing and global communication, fostering collective intelligence.

According to Shuen (2018), the Web 2.0 concept is closely linked to the domain of collaborative learning that allows the user, in addition to access to information, by also building himself as its producer, and developing collaborative processes of sharing and global communication. Shuen (2018) also explains that Web 2.0 makes software available as a continually updated service, which gets better as more people use it, consuming and recombining data from multiple sources, including individual users, providing their own data and services in a way that allows editing by others, creating network effects, through an "architecture of participation".

Today's society is increasingly dependent on these technologies. Updating such technologies has become of great importance in almost all social niches. Web 2.0 offers users countless possibilities of communication that can help in the management of collaborative platforms. Complementing, Tarapanoff and Alvares (2015) emphasize that Web 2.0 can be a work platform, reinforcing the practices that will allow the

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appreciation of experiences among users. For the authors, the dynamics of its open participation interactivity enables the exchange of information and collaboration between users through platforms, such as: blogs, microblogs, monoblogs, videosharing, wikis, Facebook, Instagram, etc., whose architectures information are handled differently.

Tarapanoff and Alvares (2015) report that organizations can benefit from the application of Web 2.0 tools, with: (i) the possibilities of interacting with their users, in real time, through the use of this platform; (ii) use of the large volume of data (Big Data), made available from the generation and exchange of information between users, including organizations, as a basis for analysis; (iii) use of new methodologies and tools for accessing and retrieving information, available for application on the platform, and (iv) using methodologies from different areas of the human and social sciences that focus on the individual, communities and society . In addition, the large volume, veracity and speed with which the data are produced make it extremely difficult to organize data and prevent dynamic and timely access to information.

Given the above, with the availability of Web 2.0, the competitiveness of the contemporary market grows, with changes in customer behavior patterns and the intense consumption of products, creating a need to develop new products and services more efficiently and quickly, by the companies. In this environment, like Web 2.0 tools, collaborative platforms are created, whose characteristics will be presented below.

2.2 Characteristics of Collaborative Digital Platforms

The phenomenon of social networks, with real-time interaction, collaboration and information dispersion are part of the reality of a significant portion of the world's population. Human life has come to depend on these information systems, as they have become the basis for practically all branches of human activity. In this environment, digital platforms have gained dimensions never thought of, with the main characteristic of bringing people together in a different and dynamic way of interaction. Its objective is not only to gain productivity, but also to improve communication and collaboration between the employees of the organization and society who are involved in this process.

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Another important feature refers to how companies benefit from collaborative digital platforms to overcome the challenges imposed by the market and innovate their processes. For this, organizations have invested in customer participation in the process of creating value for the product, through collaborative platforms for managing ideas. The process of remote collaboration and innovation are being combined and generating a trend called open innovation associated with social networks and collaborative platforms (GABRIEL et al., 2016). Open innovation practices made it possible for companies to use knowledge external to the organization to generate improvements in internal processes, increase revenues and create and modernize products (MCCORMACK, FALLON; CORMICAN, 2015). The purpose of using collaborative platforms is to promote the involvement of customers, suppliers and employees in the creation of products. According to Gabriel et al. (2016), this approach has become a strategy and trend in the business market.

Thus, companies began to explore the creativity, ideas and knowledge of the final consumer for their own benefit, especially with regard to the identification of better solutions to be implemented. From the combination of the different knowledge and skills of employees, value is created more effectively and efficiently (FROW et al., 2015). Therefore, it is understood that the purpose of using social networks and collaborative platforms refers to promoting the involvement of customers, suppliers and employees in the creation of products and in the improvement of the platform itself and the product itself.

Collaborative digital platforms provide tools that support joint actions and activities of their members, and the discovery of affinities among themselves, fundamental for the agile establishment of partnerships. They also have great potential to, through collaboration and networking, solve problems and develop proposals more effectively.

Silva (2018) presents some of the main positive points in the use of collaborative platforms indicated in the idea management process: identifying potential co-creators; foster the efficiency of employees in acquiring, sharing and managing knowledge; create elements of collaboration and competition as a promising approach; collect innovative ideas generated by consumers; generate collaboration for valuable results in terms of idea quality; develop significant potential for learning and creative insights; generate opportunities for innovation and ease of

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interaction; improve the efficiency of the innovation process; develop contacts between employees; arouse interest in new projects or ideas; form digital platforms for generating ideas; enrich ideas using collaborative incremental contributions; reduce risks of rejection and disappointment; improve the quality of established relationships; improve communication between experts; and identify professional opportunities.

In collaborative platforms, companies are able to have subsidies related to the knowledge needed for their projects, fostering the efficiency of employees in acquiring and sharing information, exchanging ideas, in collaborative networks around the world as a way to reduce distances and allow possibilities increasingly promising collaborations. For that, there are tools available for application in collaborative platforms. The six tools selected for the research will be presented below.

2.3 Características das Plataformas Digitais Colaborativas

Many tools are available to organizations in order to foster project management based on efficiency and flexibility, which streamline the execution of the entire project. For this study, six platforms applied to project management were selected: Design Sprint, Trello, Slack, Bitrix24, Artia and Hibox.

Design Sprint is based on a five-day approach to solving critical business issues by designing, prototyping and testing solutions with customers. It was developed in 2011 by Jake Knapp, John Zeratsky and Braden Kowitz at Google Ventures and has become a practical guide on the subject. Since then, it has been used by companies from different areas to quickly and efficiently resolve issues related to their business (PERPÉTUO, 2018). The method adopted in the Design Sprint quickly aligns teams under a shared vision, with clearly defined objectives and deliverables, being a tool to develop hypotheses, prototype an idea and test it quickly, with the least investment possible in a scenario, as realistic as possible. (BANFIELD et al., 2016). Known for imposing speed and innovation on product development, Sprint can also be used to create new processes, create or update a brand or even define a vision for the impact an organization wants to bring to the world (BANFIELD et al., 2016).). Google Ventures has already applied Sprints to hundreds of companies such as

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Nike, Flatiron Health and Medium, Adobe, L'Oreál, Nestlé, and Roche, helping them to enter new markets, design new products, develop new features, define marketing strategies. , among other issues (GOOGLE VENTURES, 2018).

Trello is a project management platform tool that uses a scheme of lists, cards and boards to organize all the tasks that must be done in the development of a project. It also allows the inclusion of other materials belonging to the project, such as email, spreadsheets, photos and invoices (PEREIRA JR., SCHROEDER; DOLCI, 2019). Its internet connection makes it possible to monitor and control the activities of the boards, move cards between lists, attach documents, transmit messages and update the progress of projects and processes in real time. It also makes it possible to diagnose problems during the execution of processes and their correction in a timely manner, aiming to allow all team members to visualize each other's tasks and to interact remotely, without the need to be gathered in a place for this purpose. activity (MELLO; SOUZA, 2018).

Slack is a full-featured collaboration tool, from online file sharing and video conferencing meetings, that lets you connect with remote teams through real-time chat channels. It facilitates project management by bringing together in a single platform the varied needs of different types of professionals and teams (CAPTERRA, 2020).

Bitrix24 is a tool that provides a series of resources for a company to take advantage of, which facilitate document management and communication between company members and management tools for project teams. For project management, it presents a complete Kanban that includes a column “in approval”, for tasks that need moderation, generating reports of each activity so that the manager can visualize how much time each employee spent in each stage of the project (SILVA, 2018).

Artia is a project management tool that has functions that include: financial control (comparing the estimated cost with the real one), employee hours recording system, performance reports and Kanban, facilitating the work of all those involved (EUAX, 2020).

Hibox is one of the most communication-focused project management tools, with features that help teams exchange information: group and individual chat, file sharing and video calls. When a task is assigned to a person, they are automatically alerted about it, preventing miscommunication. Hibox works together with some Artificial Intelligence

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tools, which replace about 7% of team members, freeing up the team of professionals to focus on creativity. It is also worth noting that some of the digital technological tools that can be used to share projects of products, services and processes.

In these digital environments, Design Management can show itself as a differentiating action, within the strategic management of the product, being able to stand out in the era of collaboration.

2.4 Design Management in the Age of Collaboration

Design Management encompasses management activities in accordance with the principles of design and the organization's strategy, enabling the understanding and administration of actions linked to creative processes in the development of products and services. For Bess (2011), the objective of Design Management is to identify opportunities for the organization to understand the target audience of the project, as well as the market, and to identify and communicate the ways in which the project can contribute to the strategic value of the organization.

Design Management is the administration of project activities, based on the company's objectives in the short, medium and long term. It helps the organization to increase its efficiency, remain competitive and differentiate products and services (MARTINS; MERINO, 2011). Design Management is strategic and innovative. Its actions and scope involve the knowledge and skills of the organization's members, as well as the concern with customers (internal and external environment), and with the perception of their experiences, which lead them to the desire for the product. They encompass the processes, which focus on the design and development of products or services, new technologies, the application of creativity and innovation processes, in view of the benefits that can differentiate the company in the market, promoting its competitiveness. In this sense, Design Management can be understood as a creative coordination of tools and resources, and can also be thought of for application in innovation processes, such as open platforms. Mozota (2011) presents that design should be thought of as a strategy, process and/or style, while management should be thought of as command and control, as an art of collective action and how to manage change. In this

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way, Design Management allows for a better understanding of customer needs and promotes innovation, committed to its goals, mission and objectives, coordinating its resources at all levels, being built in the long term. The concern of Design Management is concerned with tangible and intangible assets, allied to processes and the creation of a product or service. It involves the entire company, seeking to develop a creative environment, with a vision of the future, with innovative ideas, for the business model and products, always maintaining the essence of the brand. In this sense, Design Management is integrated, it presents itself with levels of design insertion whose approach shows how companies observe it (GERLITZ, 2016).

The level of strategic design corresponds to the implementation of design to unify and transform the company's vision (strategy, culture, identity, core competence, market information, innovation in the management process). At this level, design is incorporated into the organization's policies, mission, and strategic vision. It assumes that Design Management must be used from the highest level of organizations, that is, it must be seen as a strategic tool. Design, then, must be a tool to achieve organizations' goals through the adequacy between their capabilities and the operating environment (MOZOTA, 2011; SILVA, 2018). The tactical (functional) design level refers to the organization and assignment of design functions in the company. In other words, organize work methods, integrate innovation management, manage the communication process, manage the production process, integrate and interact, catalyze. At this level, design presents itself as part of the organization's system/process, linking to other sectors of the organization. Therefore, the tactical level is concerned with the place of design in the organization and with identifying the specific functions of design adapted to solving the organization's management problems. Depending on the relationships with different departments or sectors, there will be different positions and uses of design as a tool in the company (MOZOTA, 2011; SILVA, 2018). The operational design level corresponds to the execution of projects in the company. This involves the project itself, product development, web page development, packaging design, brand management. At this level, design has its tangible manifestations in the physical form of products (MOZOTA, 2011; SILVA, 2018). The Design Management Manual (SPADA, 1997) states that having management at an

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operational level means: determining the nature of the project, which consists of evaluating the difference between the objectives and the company's capacity; organize and develop the entire process that must be followed during all phases and decision levels, bringing the knowledge of the administration and socializing with the team members; and define the technical team.

It is possible to perceive, at these levels, a need to highlight the insertion and influence of design within business organizations. However, when verifying that design is inserted in an organization at an operational level, it is not possible to affirm that this is Design Management, unless design permeates throughout the organization and is part of its strategies (BAXTER & CONOLLY). , 2014). Based on Mozota (2011), Bess (2011) and Silva (2018), the following is a summary of the actions that can be taken at the performance levels of strategic, tactical and operational design.

Performance of Design Management at the Strategic Level: with a prospective vision of the business; increasing competitiveness, carrying out situational diagnoses, defining fields of action; in business planning, market strategies, product creation and production; maintenance of the brand's corporate identity; in product design and its entire cycle; in the dissemination of products and services; in the inclusion of the culture of design and innovation; in the formalization and management of detected problems, and customer feedback that impact the brand's positioning; in the dissemination of trends and the unfolding of the strategic vision (as an opinion maker).

Performance of Design Management at the Tactical Level: in the planning, implementation and monitoring of activities enabling the strategies; as a facilitator between the design sector and other sectors; in coordinating design operations, personnel, methods and processes; together with departments to adopt methods of design creativity; in creating structures for innovation, projects and communications, cultivating the concept of design; to acquire and distribute resources necessary for the design strategy; to collaborate in the integration of all sectors in the exchange of knowledge and information; in defining the company's offer (product, service and information); in the delimitation of operating markets; in anticipating customer needs, market trends and incorporation into the company's offerings; in the creation of the project of the physical space of the company – selection of products and collections;

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and inventory management through the product life cycle; in advertising management; in monitoring skills and competences; in the explanations of processes, procedures and standards for Design Management; and in the location of the services, determining the objectives of the responsible team.

Performance of Design Management at the Operational Level: works in the practice of design processes, and in the execution and development of projects; in defining the methodology, the technical team and the functional, symbolic and aesthetic specifications of the product; encompasses the use of research related to production processes and customer service activities; influences the way the company and its brand are expressed and perceived by the public; it involves, in the work relationship, the strategy and operationalization of the design; in the physical organization of the store, showroom or other spaces seen by customers; in the application of the corporate image; in maintaining the quality of presentation of products and spaces; and in maintaining the integrated quality of service.

Based on these fundamentals, Design Management promotes the understanding of design among the company's participants (internal and external), creating a favorable mentality for the implementation of the business strategy.

According to Silva (2018), the practice of Design Management creates value when it generates and applies its three forces: coordinating, differentiating and transforming, through its three levels of action: strategic, tactical and operational, in the organizational environment. In view of the theoretical approach, it is considered that the Design Management used in its three organizational levels (strategic, tactical and operational) will have an impact, both internally in the planning, organization, production activities, as well as in its relationship with customers, in the market positioning, among others. Therefore, it is possible to understand its applicability with the use of web tools in collaborative platforms. In this context, the next section presents the analysis of Design Management in collaborative platforms with the applicability of six Web 2.0 tools.

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3. ANALYSIS OF DESIGN MANAGEMENT IN COLLABORATIVE PLATFORMS WITH THE APPLICABILITY OF WEB 2.0 TOOLS

As presented in the theoretical framework, the concept of Web 2.0 is related to the collaborative process, which allows access to information and exchange of ideas in real time, during the shared development of project execution activities. For this research, a mapping of Web 2.0 tools available for use in collaborative platforms was carried out, six being selected, considering the following criteria: free access, being focused on application in project management, using the experiences of collaborators, professionals and customers in order to generate ideas in the solution of projects, which can be innovative and contribute to the competitiveness of companies.

It was found that the Web 2.0 tools used in collaborative platforms allow the idea management process to take place in real time, exploring the full potential of employee intelligence. This process can take ownership of Design Management and its performance levels, making it possible to direct the development of these types of digital integration systems, at the strategic, tactical and operational levels, necessary for the design process during the development of products and services on collaborative platforms.

Considering the performance of design management at the three strategic levels, the following tasks are summarized:

- **Strategic Level:** identifies and creates investigations and performance conditions, interpreting the needs of the organization and customers, focusing on the contribution of design.
- **Tactile Level:** coordinates design operations, personnel, and methods, and determines the objectives of the design team.
- **Operational Level:** executes and develops the projects already defined by the technical team, as well as the functional, symbolic and aesthetic specifications of the product to be developed.

In this context, the following is an analysis of how each of the tools fits into the three strategic levels.

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TRELLO

- *Strategic Level:* online project management tool.
- *Tactile Level:* organizes and monitors all tasks that involve teams and that must be done in the development of a project.
- *Operational Level:* in the execution of the projects it uses a scheme of lists, cards and tables where the tasks were organized. It transmits messages and updates the progress of projects and processes in real time. Can diagnose issues while processes are running and fix them, allowing all team members to view each other's tasks and interact remotely.

SLACK

- *Strategic Level:* project management tool on collaborative platforms.
- *Tactile Level:* provides users with collaboration tools for organizations to manage documents and communication between their members.
- *Operational Level:* applies multi-functional collaboration tools, from online files, video conferencing meetings, sharing ideas between teams through real-time chat channels.

BITRIX24

- *Strategic Level:* seeks social collaboration and communication strategies, as well as management tools for teams in project management.
- *Tactile Level:* provides users with collaboration tools for organizations to manage documents and communication between their members.
- *Operational Level:* for the execution of projects, it uses a Kanban that includes a column “in approval”, for tasks that need moderation, generating reports of each activity so that the manager can visualize how much time each collaborator spent in each stage of the project.

- **ARTIA**
- *Strategic Level:* brings together a set of knowledge, skills, techniques and tools to plan, execute and monitor a project.
- *Tactile Level:* for project management, the tool has financial control functions (comparing the estimated cost with the real one), a system

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for recording employee hours, and performance reports.

- *Operational Level:* uses Kanban, which facilitates the work of all those involved, controlling the flow of activities in a simple, interactive board, in which the team visualizes and updates information on each activity performed.

HIBOX

- *Strategic Level:* your project management strategy is more focused on communication between collaborative team members.
- *Tactile Level:* organizes the functionality of the communication of information and knowledge.
- *Operational Level:* teams exchange information and knowledge via group or individual chat, file sharing and video calling. Team members are automatically alerted of the task that has been assigned. It also works with Artificial Intelligence techniques.

As can be seen in the previous notes, design management at the strategic, tactical and operational levels can be applied in project management, in its strategic definition for the company's business, in the organization of issues related to the problem and its objectives, as well as as their systematized tasks, thus allowing the sharing of ideas, collaboration and incorporation of all those involved in the project solution. For each Web 2.0 tool, design management, at a strategic level, deals with the insertion of the company's design, that is, its transformation value, involving strategies, knowledge management and management of communication networks. The tactical/functional level deals with the function of design, that is, its coordination value and involves structure, technology management and innovation management. On the other hand, the operational level deals with the design action, that is, its differentiating value itself, which involves brand marketing, production and communication.

Therefore, the adequacy of planning and its organization in the management of the product, facilitate communication, collaboration, interactivity and control of the performance of all activities, making it possible to identify weaknesses so that appropriate adjustment actions can be taken. This is in line with what Bess (2011) presents, pointing out that design management is the successful management of people,

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projects, processes and procedures that are behind the creation of products, services, environments and experiences that are part of of people's everyday lives. In this context, the challenge for organizations is the ability to be prepared to adapt to digital tools, innovations and all business opportunities and technological processes, thus ensuring their permanence in the market.

4. CONCLUSIONS

The possibilities of inserting design management in collaborative platforms with Web 2.0 tools, aim at the use of applications and technological tools to help users perform tasks, with a structure to facilitate communication and collaboration between people and with systems with common goals, as well as innovating and finalizing the proposed actions. These virtual spaces record discussions on various subjects, organizing ideas, planning actions, connecting thoughts, organizing schedules and executing deliveries.

The research came across numerous online tools available in the digital world, selecting those intended for the design result, delivering products/services and seeking innovation with the aid of technology.

In view of this, it appears that collaborative platforms carry out the idea management process, exploring the full potential of collaboration between project teams and other collaborators. Design management on collaborative platforms, on the other hand, has great scope and possibilities to define strategic design policies, brand communication, and projection of prospective actions with a view to innovations.

The levels of design management: strategic, tactical and operational, can be applied in the management of design projects, in the solution of problems with the use of systematized methodology, sharing creative processes with exchange of ideas, until reaching the planned objective. It was found that design management, at a strategic level, deals with the insertion of design in the company, with the innovation of products and processes, seeking business strategies, information management in social networks and communication with customers in real time. The tactical level deals with the role of design, coordinating processes, technologies and encouraging innovation. The operational level involves the design processes, including marketing actions for the positioning and

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dissemination of the brand, as well as the communication of information and knowledge among all those involved in the processes.

In this sense, the company can position itself and react in advance, plan products and services up to the operationalization of activities in a virtual and collaborative way, joining its creative team, with suppliers, customers and other interested parties, expanding everyone's knowledge and the possibilities of create innovative products/services.

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