Innovation through developing consumers’ community. Part I: Innovation in action

E Gălățanu (Avram) and S Avasilcăi
1“Gheorghe Asachi” Technical University of Iasi, Department of Engineering and Management, Bd. D. Mangeron 29, Iasi, Romania

E-mail: egalateanu@tex.tuiasi.ro

Abstract. Technological changes and need for innovation represents the main concerns for organizational growth and profitability. However the main priority is still about achieving high performance through product development and consumers’ engagement activities. As implementation of open innovation applications increased and value co – creation became well known and major process, companies were engaged into value co – innovation activities. From this point of view the need for joint efforts with consumers in product development arose. Thus the primary condition for an organization to be consumer centric is to define clear the vision and mission which reflects the common efforts for co – creation and diffusion of innovation. As Research & Development processes evolved and interest for innovative concepts and products arose, companies started to implement the specific instruments for consumers’ attraction and engagement into design and product development. The digitalized innovation became the main source for establishing the direct communication with the consumers. In order to achieve organization growth, profitability and recognition, the companies should be aware of the innovation importance and the need for internal change. From this point of view, there is necessary to assess the organizational structures, to implement new policies and to establish strategic targets. Basically it is justified the need for platform occurrence and development. Based on case study of BMW Group, recognised leader in automotive industry for innovative concepts, there will be analysed main features within organizational context which promotes the innovation implementation. There will be provided the review of the BMW Group experience of innovation activities, main consumers’ engagement strategies, the values which promote the consumer – centric product development, new opportunities assessment, major policies and concerns. The foreseen result is to understand how companies are adapting to the technical and innovation changes as the main criteria for future product development and consumers’ engagement motivation through the platform – based communication.

1. Introduction
Nowadays, the need for innovation became the main concern within economic and research context. The evolution from supply chain to value network stands out for new creative and innovative ways of doing business. From this point of view companies became aware that in order to achieve organizational growth and profitability, they should be open for collaboration with the final users. As
result, social communities are seen as a part of product or service development process, valuable source of value for innovation processes [1]. Based on these aspects, the companies are adopting open innovation as mechanism for innovative instruments creation and implementation. Buur and Matthews identified the linkage between lead – users and innovation and defined the participatory design, as identification the “right” users and their involvement in product development processes [1]. According to their vision, the final users can be perceived as co – designers and product evaluators [1]. However, this requires considerable changes in organizational business models or structures through open innovation implementation and social communities’ engagement.

2. Open innovation within organizational context

2.1. Open innovation and organizational change
LEGO Achieving profitability and growth through innovation implementation represents the key goals for organizational development. From this point of view open innovation is promoted as an important direction for “trial – and – learn” process development [2]. It has been defined as the mechanism for organizational accelerated growth [3], as necessary organizational change process [4], methods for knowledge sharing between the participants [5], techniques used by companies for opportunities’ exploration [6], readiness for internal innovation [7], enterprise adaptation feature in terms of technological changes and globalization [8]. Gassman and Enkel presented open innovation as a process where internal organizational change represented the essential feature for value co - creation, as it is shown in figure 1 [9].

![Figure 1. Open Innovation as a process [9].](image)

However, the collaboration between the company and its end – users is highly explored by outside – in open innovation process [5, 9]. The inside – out component of open innovation emphasize innovation transfer outside the organizational boundaries, rather than its development inside the organization [7]. Coupled process of open innovation represents the joint effort for innovation creation, which is mostly defined as co – innovation [7]. Basically, the companies explore external knowledge, emphasize it into product development process and commercialize the innovation as joint – effort – based products or services [7].

2.2. Social communities as co – creators
Nowadays, collaborative networks became an important unit for innovation analysis, as they comprise not only the web of companies but also the social communities as co – creators. The final users’ knowledge combined with organizational capabilities (resources and processes) represents a source of competitive advantage and an essential driver within coupled process of open innovation [7, 10]. Romero and Molina stated that in the era of “internet – of - things” it is important to explore virtual opportunities, so that the customers can access and create easier their own product, the companies’ awareness about consumers’ needs increases and co – innovation process is adopted in order to create significant value [10]. From this point of view, the consumers are engaged into innovation activities starting from idea generation until the final product development [10, 11]. However the motivation of social community as co – creators depends on the degree of consumers’ voluntary engagement [12].
3. Case study: Innovation management at BMW Group

3.1. BMW Group: innovation history and development

Established in 1917, nowadays, BMW Group represents one of the largest vehicle manufacturer and global leader in automotive industry [13], general headquarter at Munich, Germany. As a public liability corporation, the company’s main concern is to sustain the main strategy based on four essential pillars: growth, profitability, future development and the access to the technology and clients [14]. The image and trust were remarkably built due to the innovative solutions developed by highly specialized teams of designers and engineers. From this point of view BMW Group has known a successful development in terms of organizational growth and innovation implementation (table 1).

| Timeline     | Company Development                                                                 | Innovation Development                                                                 |
|--------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1917 - 1930  | • BMW logo image                                                                    | • Airplane carburettor engine with aluminium primer and 185 [hp]                       |
|              | • Establishment of Bayerische Motoren Werke                                        |                                                                                       |
|              | • Launching the first motorcycle, BMW R32                                            |                                                                                       |
| 1930 - 1960  | • Launching first airplane division and new plants at Allach, Spandau, Basdorf and Zuhldorf | • Launching the BMW VIIa airplane engine with 600 hp and 12 cylinders                  |
|              | • Became the main manufacturer for German Air Force during the II World War          | • First car designed and manufactured under BMW trademark                             |
|              | • Loose power for own assets                                                        | • Usage of kidney type grid                                                           |
|              | • First attempt for company’s restructuring                                          | • New discoveries in aerodynamics and cylinders heads made off light alloy             |
| 1960 - 2000  | • Gains strong position as successful automotive manufacturer                        | • BMW series 02 launching – original design, compact dimension, excellent quality      |
|              | • Acquisition of Hans Glas GmbH and creation of the biggest manufacturing facility in Dingolfing | • Boxer engine and crankshaft realized from light alloy                               |
|              | • Established the Foundation Herbert Quandt and offers sponsorships for knowledge transfer | • First digital electronic systems (Antilock Braking System) and board computer        |
|              | • The opening of BMW headquarter entitled “Four Cylinders and launching the first “Idea Plant” and Center of Research and Innovation in Munich | • Lightweight car construction, electric door system withdrawal, tubular frame and plastic drum |
| After 2000   | • Concentrates on premium markets with brands: MINI, Rolls – Royce and BMW           | • Internal combustion engine with hydrogen or traditional fuel                          |
|              | • Extended the Center for Research and Innovation by adding Design Division           |                                                                                       |

3.2. Innovation within BMW Group

Established The BMW Group highly promotes the innovation implementation as main driver for sustainable growth through clear mission and vision statements. From this point of view, the organization adopted a horizon 2020 mission: to become one of the leading automotive manufacturer and supplier for individual mobility [17]. “Connected Drive” became a synonym for intelligent connectivity, as BMW seeks to create a new form of interaction between the driver and the car through new technology implementation and intelligent solutions. The key aspect is related to sustainable resource consumption while offering a wide range of experience for drivers, which also is an
important strategic goal [18]. The company promotes the innovation through three main values: design – each product should contain group’s signature, form and distinctive curves, a design for future [19]. engineering – comprises a “what…if...” approach. A perspective to develop a wide range of industrial solutions for mobility, impressive technologies and driving experience [20], innovation – new technology implementation in product development process, as well as new technology creation in order to ensure the driver’s experience [19].

However, these aspects are reflected mostly in product development process. BMW Group adopted a three – staged manufacturing process, which implies employees’ engagement at each stage. Basically the Research & Development activities are based on the mix of highly specialized employees, innovative processes and future projects [21].

![Figure 2. BMW Group product development process [22, 23, 24].](image)

Each stage of product development is strictly controlled and based on collaboration between departments at national or global level, starting from the stage of concept or idea generation.

3.3. Innovation, market opportunities exploration and concerns

As BMW Group stated, in order to become leading automotive manufacturer, it is necessary to gain competitive advantage, to implement open innovation in product development process, but also to explore new market opportunities by using innovative ways. From this point of view, the company perceived the creation of specific instruments, such as BMW configurator. The potential customers can create their own vehicle according to their needs: model, colour, properties (acceleration, CO2 emissions, and consumption) [25]. Although virtual instruments gained a considerable awareness, BMW Group considers that the direct interaction with the specialists in domain and their plant is essential. From this point of view, the company organises “Junior Programme”. It emphasize the learning of the most important concepts: sustainability, team work, environmental protection, vehicle design and technology, but also represents new way of exploring young potential. Workshop “Mobility Mission” represents a new way to explore young potential by given specific tasks and extracting ideas from the created sketches in terms of future development and prototyping future cars [26]. Another approach for innovation promotion is concretised through BMW Exhibition Houses: House of Design, Company House, Motorcycle House, Technology Exposition, Motorsport House, House of Brand and Series House. Each exposition has as objective to present and illustrate the successful implementation of innovation and to explore the consumers’ enthusiasm for BMW trademark [27]. As main innovation concerns, The BMW Group concentrates on elaborating energy efficiency management, hydraulic power steering, ECO PRO Modules for efficient fuel consumption [28], incorporation of virtual features (Google Maps, BMW routes, ECO PRO analyser and other apps), renewable energy for individual mobility, reducing CO2 emissions, technology iDrive
(intelligent mobility for electrical vehicles), usage of hydrogen as alternative fuel and ensuring risk assessment in order to achieve sustainable and innovation targets [29].

4. Conclusions
BMW Group represents a global leader in automotive industry. Their concerns for innovation implementation can be traced in the history of product development. However in order to achieve a greater balance and to gain leading position, the group had to adapt to the technological changes. The “Connected Drive” philosophy basically represents the mission and vision of the BMW Group, as they connected new virtual possibilities with their products and ensured the linkage between the driver, the car and external environment, aspects which were possible due to open innovation implementation.

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