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INNOVATION AND TALENT MANAGMENT IN THE GOOGLE COMPANY AND ITS ROLE IN PROJECT MANAGEMENT

Introduction

The aim of the article is to present the best practices of the Google company as regards talent and innovation management and to show solutions thanks to which it implements innovatory projects by skillful innovation and talent management despite its chaotic structure.

The necessary condition for an innovation-based company to develop is to apply such tools of personnel policy that the best employees possible would be attracted to it.

The significance of innovation and talent management was widely proved by research run by N. Nohria, W. Joyce and B. Roberson[1] within the framework of the Evergreen project, which analyzed the functioning of 160 companies. Both innovation and talent management were classified there as the two out of four secondary or supplementing practices. In the case of Google it can be proved that the synergy of these practices gives perfect results.

The Evergreen Project, in which 160 companies were examined over several years, pointed at 8 management practices that are essential when a company wants to be successful on the market.

The four primary management practices are: strategy, execution, organizational culture and structure. Apart from them, four secondary practices are indispensible: talent management, innovation, leadership, mergers and partnerships. A successful company should implement two out of the four secondary practices. No correlation was found between their choice and the success.

IT companies belong to the most innovative ones. A dynamic development of that sector has been observed since 1990s. After a period of prosperity and boom in the stock prices, a crisis appeared, which was accompanied by the burst of a speculative bubble. Dot-com companies issued shares and offered their clients the vision of participation in future profits.

[1] Nohria N., Joyce W., Roberson B., *Co naprawdę działa: między prawdą a fikcją*, (What Really Works) Harward Business Review Polska, December 2003 r.

However, the reality was less optimistic. Only the IT companies whose operations were not based on attractive slogans but on clear strategies could expect an authentic development.

The aim of the article is to present the selected aspects of talent and innovation management as illustrated by Google since in the case of this company it can be proved that companies - when choosing innovation management - have to implement efficient HRM practices. The case of the Google is important for one more reason. Its main competitor, the Microsoft chose other secondary practices and concentrated on mergers, takeovers and leadership.

For several years now, there have been three companies on the IT market that influence its development: Microsoft, Apple and Google. Quite recently they have been joined by Facebook, while such companies as Netscape or Yahoo! which used to be innovative in the past are losing their market share or have to be closed down.

1. The concept of talent and innovation management

In the Evergreen Project the attention was paid to talent and innovation management as the secondary practices that can be implemented along with the practices of leadership and mergers and partnerships.

The role of talent management has increased, particularly in the rapidly developing industries. The authors of the report point out to the universal possibility of assessing the talent management in a company, which the easiness to replace the staff that joined the competitors. It is a fact that leading companies employ external staff twice as rarely as the unsuccessful companies.

When using talent management, the most successful companies apply internal promotions and can hold their employees. Company owners realize that it is cheaper to bring up a good manager instead of hiring one on the market. Successful talent management results in employment stability which is a value expected both by the employer and the employee.

The care about staff self-development so that they are ready to take new challenges is – apart from good work atmosphere and trainings – an indispensible condition for talent management to be successful. The employer should encourage the staff to take a break from their work in order to gain new competencies and skills.

The authors of the Project also pay attention to a crucial aspect of talent management; they indicate that it is false to think that companies have to choose between internal and external promoting. It turns out that leaders in talent management can engage both practices as the environment that adequately manages staff competencies attracts skillful external

employees and their employee becomes equally important as the client. Companies did not only start to care how to keep a client but they also do it in relation to employees willing to leave.

As far as innovation is concerned, one can also point out to a substantial evolution of the leaders' approach. Insignificant upgrading of products on the rapidly developing markets is not as important as it used to be. Market leaders look for technological solutions that would revolutionize the industry and, consequently, they focus on significant and breakthrough innovations. Such an important change in the approach to innovation leads to the cannibalism of their own products. Until some time, the rule was strictly obeyed that the offer should be complementary. The present-day companies decide on product cannibalism. The make crucial changes in the existing product, replace them by new ones or give up the advantage of having a cash cow in their offer. The practice of innovation management on the market of new technologies can be illustrated by the Apple and Nokia companies. The launch of iphone increased the market value of Apple causing the market value of the Nokia company drop by over 90%. The lack of substantial innovations resulted in trouble on the part of the Scandinavian manufacturers of mobile phones that in recent years are expected to have several new functions.

2. Google – the origins

Practically everybody who uses the Internet has had a contact with the Google company. It is a California-based company whose colorful logo is an inseparable element and almost a symbol of the World Wide Web. As the world's leading search engine, Google is one of the best known world brands and most irreplaceable tools of navigation in the cyberspace. In May 2007 Google had a 55.2% American market usage share, while Yahoo! and Microsoft only 20.7% and 7.7%, respectively. Ten years ago the Google's market share in online search engine activity was over 65% [2], and five years later, in the middle of 2012, it became in fact a monopolist. At present it has 91% global share, while Yahoo! only 3.2%. Other players are practically of no significance.

The history of Google started in 1996 when two Ph.D.students at Stanford University, Larry Page and Siergiej Brin developed an innovatory algorithm for online search assistance. Its innovativeness consisted in sorting the websites by means of a mathematical analysis of the dependencies among them. The dependency index is determined by the number of hyperlinks on different websites that lead to the website being searched for. Moreover, the

[2] G. Hamel The Future of Management Harvard Business school Press 2007, p. 133.

search results are ranked so that the list should reflect the hierarchy in terms of importance rather than popularity. Thus, both the frequency of the usage of a given dependency and the fact whether it was really used are taken into consideration – beside a quantitative assessment, a qualitative index was introduced. The Google search engine started operation in 1998 and it quickly exceeded half a million of searches a day. In the following years Google developed as rapidly as the Internet itself. At present the number of searches amounts to 1 billion per day. In contrast to other dot com companies, Google was successful in commercializing its services by applying the Internet advertising. In 2004, thanks to a widespread access to the product and the commercialization of advertising , Google was listed on the stock exchange. Three years after its IPO, the market value of the company reached the amazing figure of 140 bn USD.[3] In 2012, the value of Google exceeded 24 bn USD and it was higher than that of Microsoft.

3. Google – the new management model

The management model adopted by Google is substantially close to the one presented by Wernecke in the early 1990s. Google, while applying the elements of a fractal enterprise, takes an approach that is close to the management by chaos. The most important features of such a model are: paper-thin hierarchy, a dense network of lateral communications, a policy of giving outsized rewards for outsized ideas, a team-focused approach to product development and a company credo that forces the employees to think from the point of view of the user.

That unique management system is the result of Brin's and Page's interpretation of their company's initial successes. Both founders admit openly that luck played a significant role in the development of Google. The history of companies in the Silicon Valley is full of successes and failures. The Google company is one of the few one that can boast of spectacular successes. The company owners realized quickly that one-time domination is not as important as the long-term domination. As a result, they wanted to create a company that can change as quickly as the Internet. The consequences of their desire are that Google cannot be associated only with the search engine any more.

In the course of almost 15 years the business model of Google went through five basic stages:

[3] http://www.fastcompany.com/magazine/97/open_google.html (Accessed: 03.01.2014).

1. Google 1.0: the founders develop the algorithm of a search engine which is widely used on the Internet and has millions of supporters but does not bring any profit.
2. Google 2.0: Google sells its indexes to AOL, Yahoo! and other big portal sites. The cooperation results in the generation of income and the increase of the number of searches.
3. Google 3.0: Google develops a method of selling advertisements together with search results. Unlike Yahoo!, it refrains from ad banners and applies a distinct division between advertisements and search results. Moreover, the advertisers pay only for actual clicks on the links. Google is on its way to become a leading supplier of the Internet advertising space.
4. Google 4.0: The initially controversial analyses of the messages in the Gmail service as regards the accompanying ads are an inspiration to develop the AdSense. The breakthrough system of contextual advertising makes it possible for the Google advertisements to appear on all websites.
5. Google 5.0; Google takes advantage of the advertising income to finance a whole range of new services such as Google Desktop (a set of information tools accessible directly from the user's desktop), Google Book Search (an ambitious project to develop and make accessible a digital database of the world's biggest libraries), Google Scholar (a search engine that indexes scholarly literature) [4] or Google Car (a driverless car).

4. Innovation Management in Google

In 2001 Eric Schmidt, the former CEO in Novell became a CEO in Google. He recalls that he wasted 90% of his time in Novell fighting for the company key operations to have at least a small increase of the market share. In Google he discovered that there is a well proven formula thanks to which innovations are not wasted. The formula –the 70-20-10 rule – obliges Google to spend 70% of software resources on servicing and developing the core businesses; 20% is reserved for the needs of the services that improve the existing products such as Google Checkout (which makes online shopping easier), Images (a search tool for photos), Directory (topic-oriented search engine) and Translate (to browse sites in foreign

[4] G. Hamel, *The Future…,* op. cit., p.138.

languages); and the remaining 10% goes to company's marginal activities, e.g. to help municipalities in constructing wireless networks.[5]

The above rule presents the very essence of the Google innovation management. Marissa Mayer, the first woman to become a manager in Google[6], when asked how to explain the company strategy to a new employee, said that she would start with the 70-20-10 concept. At the beginning of 2006, the internal website of Google listed 370 current projects and 230 of them accounted for the 70% of resources devoted to the extension of activities and the remaining 140 (30%) were focused on initiatives.

At the very beginning, Page and Brin created a company where they would like to work – a place full of ambitious entrepreneurs who are inspired by the opportunity to work on some most significant global problems. The management model is based on small working teams, a high number of experiments, an active exchange of tasks and the mission to make the world a better place. The position in the company hierarchy is not decisive in solving arguments, and the founders want it to stay that way.[7]

Google changed many market standards that had been introduced by Microsoft. It delivers its products through the Internet in the form of network services and not as boxes distributed by traditional channels. In contrast to Microsoft, whose income is generated mainly by license fees, most of the Google's income comes from the clicks on advertising that is displayed on all sorts of websites. Unlike Microsoft, whose applications are developed to cooperate closely within the Windows, the majority of the Google services such as Gmail of Google Maps search engines are fully independent. As a result, Google does not encounter software problems that Microsoft has to face when upgrading its products.[8] This is particularly important from the marketing strategy point of view. Only a few years ago the American antimonopoly authorities made attempts to force Microsoft publish the source codes to its products so that the competitors were able to develop applications along with the Microsoft standards. Microsoft became trapped by its hitherto source of the competitive advantage.

Google Apps – a set of personal applications that are directly competitive to the Microsoft Office solutions – is a good example of the care over the development of new business models. The set, which is designed mainly for business people, includes a whole

[5] http://www.newsweek.com/id/49613
[6] Marissa Mayer has been working with Yahoo! since July 2013. Her task is to save the company from bankruptcy.
[7] G. Hamel, *The Future*…, op. cit., p. 27.
[8] http://www.fastcompany.com/magazine/69/google.html?page=0%2C1 (Accessed: 03.01.2014).

range of basic office applications, including an e-mail, an online calendar and a text editor. Google does not offer its services free of charge. However, it charges all registered commercial users with an amount which is only a fraction of the one-time license fee charged for a similar set of the Microsoft applications. Nobody knows if the founders of Google will be able to anticipate the requirements of the future. Only some of the initiatives that were not related to the indexing of the Internet – like Gmail, Google News or Google Maps were successful; the users were not interested in other products. However, Marissa Mayer, the executive responsible for search products, defends Google's policy stating that many of its products may be thrown away to wastepaper baskets but people will remember the ones that are important and the ones with the potentials for the user. The product manager estimates the number of unsuccessful Google products at 80%. However, by the standards of capital investors, this is an average result on the IT market. Moreover, the development budget of Google, which already surpasses 1 bn USD per year, makes it possible to diversify the company's search for new products .[9]

The company managers also believe that the increase of income from activities other than the core one is one of the methods to assess the development of the whole company. From their point of view, the Google's ability to expand dramatically its key competences is an equally important symptom of success. The Internet advertising is still increasing and constant innovations are the only way to maintain the company's position. It is said that the competitive advantage of Google in not decreasing; in fact it is increasing despite lavishly financed attempts on the part of Microsoft and other companies that have been made in recent years. The success of Google is largely due to the unique system of new product development that is based on a group of small autonomous teams. Every team is driven by a dream: to think of a new breakthrough indexing and information search solution or to develop a new indispensible Internet application. For the sake of comparison: as many as 4 thousand people worked on Vista – a new and several times delayed new version of the Windows which was finally launched at the end of 2006, - while Google is based on a loosely linked multidimensional approach to programming. The logic behind it is simple: a significant number of independent teams that are full of energy increases the chance that the company will come across a further breakthrough invention. According to Eric Schmidt the point is in the fact that Google is a Web service[10].

[9] http://www.fastcompany.com/magazine/97/open_google.html (Accessed: 03.01.2014).
[10] http://www.fastcompany.com/magazine/69/google.html?page=0%2C3 (Accessed: 03.01.2014).

Having in mind the overall adaptation ability of the company, it is easy to understand Schmidt's favorite comparison of company's innovation strategy to a game of basketball. Basketball, in contrast to American football where the game is precisely arranged and planned, is a sport where practically there is no chance to stop the action and regroup the team. Consequently, dynamics and improvisation play a dominant role. The players must react instinctively to the changes of the opponents' tactics and be really fit to survive the hectic pace of the match[11]. The Google's experience clearly indicates that evolutionary abilities are significant as regards innovations. The contemporary success of innovations requires the ability both to create and to improve the created products. That is one of the conclusions that can be drawn from the Evergreen project which was mentioned at the beginning – the common feature of the best companies is the ambition to be leaders and the readiness to cannibalize their own offer, even at the cost of short-term profits.

5. Talent management and work organization

The founders of the company realized that Google attracts talented people because it gives them a chance to change the world. It is not a coincidence that Goggle employs evidently more talented people than the statistical average. This is due to the fact that daring targets appeal to the ones who absorb the significant and seemingly incurable problems of the world[12] and in many companies the only important targets for the employees do not go beyond the scheduled plan. It is obvious that this does not mobilize the imagination and audacity that are required by constant strategic adaptation.

The managers in Google believe that an outstanding technician with a secondary education is much more valuable than a mediocre engineer with a degree and, consequently, they exert pressure to employ the best of the best. Their thinking is clear: the best ones want to work with the ones like them, while the mediocre ones will feel endangered by the ones who are better than them; as a result they will prefer the company of the equally mediocre ones. To make matters worse, mediocre employees also like to be outstanding so they may support hiring employees worse than them, the ones that are not self-confident and will not object to any opinions. With the growth of the mediocre staff layer it is increasingly more difficult to hire and maintain outstanding employees. Thus, it is obvious that the recruitment procedure in Google is fairly complex. The applicant are interviewed several times for several

[11] http://www.fastcompany.com/magazine/97/open_google.html?page=0%2C1 (Accessed: 03.01.2014).
[12] http://www.fastcompany.com/magazine/97/open_google.html?page=0%2C2 (Accessed: 03.01.2014).

weeks. Computer specialists are given complicated problems to be solved on the spot. Rarely does it happen that the decision is made without cross examining questions asked by a recruitment commission consisting of well experienced employees and managers. It cannot be denied that the procedure is brutal but, on the other hand, it does what it is meant for: it rejects the ones who are merely good. [13]

Google's organizational structure is similar to the one of the Internet – it is democratic, closely interconnected and …. completely flat. The reasons of such a radical decentralization can be found in the previous experience of the company founders who do not like authorities and do not like to be told to do something. Brin and Page know that breakthroughs are closely related with questioning the assumptions and attacking the paradigms. The rule in the Google company is that nothing should be done only because it was told to be done. The motto of the employees: *question the authorities* is not a slogan of anarchists but a principle of innovators.[14] The company managers cooperate closely with the employees. Thanks to that, they are also innovative, which does not often happen in other companies. Such an evolutionally approach to the structure was confirmed by the Evergreen project whose guiding motto was to create a dynamic, flexible and flat structure.

The Evergreen research evidently emphasizes the operational effectiveness. At the end of the last decade Google experimented with formal planning which was initiated by the employees and not their superiors. The managers started the process with asking some obvious questions: *How can Google develop a service offering film downloading and what should be done for the service to be used? How can the service offer be extended to the hundreds millions of mobile phones? How can a scalable software infrastructure be developed?* 14 teams were formed to deal with these and some other problems. After an initial analysis it turned out that the suggested structure was difficult to accept by the employees and practically it only helped to get to know one another in particular teams. As a result, although the company did not establish a planning model, the experiment resulted in several new ideas. Thus, one of the main principles of management is that final decisions should be made by all parties and the role of the managing staff is to strive at making the decision rather than to press on its essence.[15]

The Google company also experimented in the area of staff supervision. Previously there was an attempt in Google to set up a supervising structure that would be typical for

[13] G. Hamel, *The Future…*, op. cit., p. 23.
[14] http://www.businessweek.com/magazine/content/05_40/b3953093.htm (Accessed: 03.01.2014).
[15] Ibidem, p. 27.

software companies. However, it turned out very soon that the excess of supervision hampered innovation; the new structure was dissolved and its staff joined back the work teams. At present, a medium level manager in Google deals with over 50 and some are responsible for even 100 projects.[16] It turns out that in the situation when adequately motivated and paid employees share a common vision of the company there is no need for implementing any bureaucratic rules of supervision. And the reason is not that the well motivated innovators do not require any supervision or counterbalance to their unrestrained imagination. The company owners came to the conclusion that they prefer to rely on an honest and free exchange of the opinion of employees working in hundreds of small almost completely autonomous teams as bureaucratic procedures may only restrain their creative potentials

About half of the company's employees – that is the ones who deal with product development – work in small teams of, on the average, three programmers. This principle is applied also in the case of big projects, such as Gmail for example, where even 30 people are involved. In such cases, the employees are divided into teams of three or four, which focus on particular improvements of a service function under investigation. Every team has a leader, but the position is not permanent and the team members take the position one after another with the advance of the work. Most of the specialist belong to more than one team and the management's agreement to change the team is not required. The aim of the company is that the employees will follow the rule: if you see the opportunity, seize it.[17]

The work in small teams has several benefits. Due to the fact that the project is divided into small elements, new initiatives are implemented more quickly as there are fewer people to be convinced and limitations to be considered. Another advantage is that small projects are simpler. This is the reason why so many Google projects remain in their beta versions for a long time and seem to be incomplete. Solving 80% of a major problem is more valuable than meddling with the remaining 20%. However, there are some drawbacks of such approach: some users complain that Google does not rush with the completion of raw services. [18]

The idea of small teams also results in an intimate atmosphere in the company. Another advantage is that – in contrast to big teams – the achievements of individuals are not attributed to superiors or undermined by less talented colleagues. Small groups in Google

[16] D. A.Vise, *The Google story*, Random House 2005 p 83.
[17] G. Hamel, *The Future*…, op. cit., p. 147.
[18] D. A.Vise, *The Google*…, op. cit., p. 124.

make it possible to see the relationship between the actual work of a particular employee and his/her achievements.

The 70-20-10 formula is the best guarantee of development for the Google's programmers. Every employee can devote as much as 20% of the working time to his/her own ideas. In this way Google can constantly replenish its resources of strategic options and keep the best people. Thanks to the rule of 20%, the employees do not have to leave the company when they want to make their dreams come true. In practice, a programmer who completed a 6-month project, takes a 6-week break to try out his/her new ideas. More than half of the new products of the Google company started as the offspring of the 20% concept. [19]

Moreover, thanks to this concept, the short-term projects do not involve 100% of the company resources and everybody participates in innovation processes. As a result, at every moment a number of employees are unavailable; however, this is the consequence of the unique structure of the company and nobody tries to fight with it.[20]

The adaptation ability is not the result of some great plan but it is the effect never-ending experiments, either successful or not. The company's important target is to achieve work efficiency higher than in competitors. The success lies in early tests and the encouragement to test the selected services by potential users at the initial stage of development. The company offers the Google Labs program. A free access to some laboratories makes it possible for the curious Google users to test the services that are not completely ready. This way the company receives the feedback and new ideas for solutions. It is the case of presumption and for the company it is also a perfect tool for testing new solutions by potential customers and lowering the costs. On the other hand, the hobbyists receive their chance to help develop a product and to start their own careers as the tests in Google Labs give the opportunity to apply for internships in the company

Such an approach to early product testing sometimes brings amazing results: the idea of AdSense i.e. contextual ads related to the page's content, started within the Gmail project. Having answered the question how to attach adequate adverts to messages, the specialists started considering whether a similar mechanism could be applied to web sites. Consequently, Gmail itself may not bring substantial financial benefits, but the technology developed thanks to Gmail has already brought some profits.

The company remuneration policy rewards the participation in projects and development of solutions that are promptly commercialized. The basic salary equals or is slightly below the

[19] http://money.cnn.com/2005/11/28/news/newsmakers/schmidt_biz20_1205/ (Accessed: 03.01.2014).
[20] http://www.businessinnovationfactory.com/weblog/archives/2007/02/googles_702010_1.html (Accessed: 03.01.2014).

average in the sector. However, the deviations from the average company salary are more substantial than in most companies. Annual bonuses amount to 30 – 60% of the basic salary and sometimes are even higher when the idea is commercially successful.

In 2004 the Google company initiated the Founders' Award given in the form of stock grants to the teams that contributed significantly to company's success. The first award was given to Eric Veach's team for the development of an Internet advertising algorithm called SmartAds. The Google advertising model charges are based on "pay-per-click", so the company earns money only when the user opens an ad banner. Thus, the advertiser may beat the competitors with the number of ad impressions but this does not guarantee the final click. As a result, a bad advertisement is good neither for the advertiser nor Google. The uniqueness of the SmarAds algorithm consists in the fact that it can distinguish a separate click value for particular ads, which makes it possible for Google to recognize them and eliminate.

Conclusion

The article aims at the analysis and assessment of the impact of innovation and talent management on company's competitive advantage due to the cost-effective and prompt implementation of projects in companies with a low degree of planning and formal supervision.

It points out to the fact that the success of innovational companies is related to high class human resources that are capable of quick implementation of modern projects, which is possible when the projects are developed by small teams and the targets of the projects are precisely defined.

The Google company can certainly be a benchmark and its example indicates that innovative companies can ignore formal procedures, planning or strict supervision. However, the key to success lies in adequate motivation and staff.

The conclusion is in contrast to the hitherto knowledge in the field of project management which attributes significant importance to planning and supervision. The approach applied by Google resembles most the agile approach to project management.

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Abstract

The aim of the article is to present the best practices of Google as regards talent and innovation management and to show solutions thanks to which the company, despite a fairly chaotic structure, implements innovative projects through skillful management of innovations and talents.