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Open Innovation Across The Prosperity Gap: An Essay On Getting The Caucasus Back Into The European Innovation Society

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Abstract

The paper shows how both intra-national and international strategies of open innovation and crowdsourcing could be used to reduce or even invert the brain drain of Caucasian societies, leading to more sustainable and, above all, local returns on investment in the region's excellent educational infrastructure.

Keywords: *open innovation, crowdsourcing, brain drain, brain gain, Caucasus, innovation competition, Diaspora networks, regional development.*

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Introduction

Regarding the Human Development Index rankings 2007/2008[1], the three Caucasian Republics have a quite similar profile: They are all ranked in the midfield of the overall index (Armenia ranks 83, Georgia 96, and Azerbaijan 98)[2]. All countries are in the top 15 of the adult literacy rate (Georgia 1, Armenia 12, Azerbaijan 15) while showing substandard performance in terms of GDP per capita (Azerbaijan 102, Armenia 103, Georgia 119). This means that all the three countries share a specific problem of transforming their intellectual capital into economic capital. As a result, we can characterize the Caucasus as the region where the best-educated people of the world are living the most average life[3].

Against this background it is no surprise that the Caucasus experiences a tremendous brain drain[4]. In this context the Armenian data are most striking: Six years ago the World Bank (2002) reported that Armenia had lost a workforce of one million people since 1988[5]. There is no denying the fact that this mostly high-skilled migration massively hinders economic growth (Gevorkyan, Mashuryan, and Gevorkyan 2006): being among the top remittance-receiving countries of the world (Ratha and Xu 2008) obviously does not compensate the negative effects of the still continuing brain drain, because, once drained, the brains' interests in supporting not only their own family but also the overall Armenian economic situation becomes very low quite fast (Manasaryan 2004). The same applies to Georgia where "efforts to channel remittances to investment, meanwhile, have met with little success" (Samson 2006: 71). Therefore, the prevention or at least the containment of further brain drain from the Caucasus seems to be the order of the day. Again, the challenge is to sustainably transform the region's still strong intellectual capital into economic capital. Consequently, new organizational forms of co-operation on the "supra-national level attracting necessary human and financial resources and elaborating fair access of the countries to innovative technologies" (Ivakhnyuk 2006: 10) as well as the "transfer of business skills (helping Armenian enterprises to enter world markets; supporting business and managerial training of new business owners and managers in new companies)" (Minoyan and Freinkman 2005: 7) are demanded. And, if

[1] Data from 2005, cf. to http://hdr.undp.org/en/statistics/
[2] Each out of 177 countries.
[3] Last but not least, this is indicated by an average or even sub-standard life experience (Armenia 80, Georgia 95, Azerbaijan 111).
[4] This brain drain is even consciously supported sometimes, e.g. in terms of mono-directional exchange programs for undergraduate students funded by the Azerbaijan government (Abbasov 2007).
[5] This equates to more than 25% of the original population. In Eastern Germany, a much lower brain drain ratio used to be the major building block of the Berlin Wall (cf. Zapf 2000).

the competitive advantage of the Caucasian Republics really is the educational background of their citizens, then the "efficient creation, dissemination, and use of existing knowledge" (Saumya, Andrew and Gyulumyan 2007: 117) truly is the key to a Caucasian success story.

In this paper, we introduce *open innovation* (Chesbrough 2003) and especially *crowdsourcing methods* (Howe 2006) as *business model innovations* (Chesbrough 2007) that a) support such a knowledge based success story, primarily by bringing the knowledge elites of Caucasian societies back into the global innovation society, and that b) by this means help to bridge the prosperity gap which is the major cause of the brain drain. Accordingly, we present the key concepts of open innovation and crowdsourcing, and discuss their relevance against the background of the dusk of the age of closed innovation. We then focus on the practical dimension of open innovation and crowdsourcing by presenting brief case studies from two innovation service providers in Switzerland. Based on these business cases, we deduce Caucasus-focussed strategies for intra-national and international open innovation projects. Finally, we present starting points for further research on trans-national open innovation projects between OECD countries and emerging markets.

About open innovation and crowdsourcing

According to Joseph Schumpeter (1942), the mainstream in theoretical and practical innovation assumes the exclusivity of an innovation to be an innovator's most crucial competitive advantage: "There was a time, not so long ago, when 'innovation' meant that companies needed to invest in expensive internal research laboratories, hire the most brilliant people they could find, and then wait patiently for novel products to emerge. Not anymore" (Chesbrough (2007: 12)). Since Henry Chesbrough (2003) introduced the concept of open innovation[6] we no longer ask whether open innovation will be replacing the former concept of closed innovation. Rather we ask how open or closed specific innovation processes need to be in order to succeed.

More and more often we find that it can be an advantage to integrate as many actors as possible into the innovation process and to do so as early as possible (cf. West and Gallagher 2006). This is reflected in the following three dimensions of innovation (cf. Roth 2009):

• Robust novelties: the early integration of customers' and stakeholders' ideas, knowledge and needs leads to more marketable

[6] i.e., the use of both internal and external ideas and paths to markets by means of systematic integration of customers and stakeholders.

products, procedures, or services.

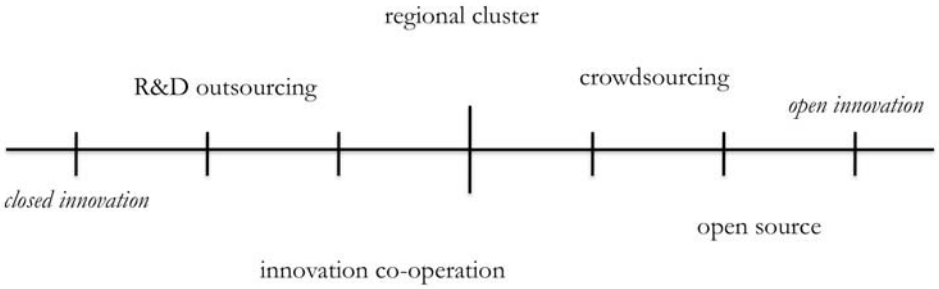
• Robust change: broader participation of members increases the organizational changeability.

• Robust competitive advantage: the early integration of customers and stakeholders into the development process can serve as a marketing strategy as well, because the product is already known to a sometimes large number of potential consumers before its market entry

The bottom line is that open innovation strategies effect more robust innovations. This applies to both IN- and for OUT-processes of open innovation, with the first referring to the insourcing of ideas or knowledge and the second referring to the outsourcing of parts of the innovation process (cf. Gassmann and Enkel 2004).

Sometimes, crowdsourcing is said to be a special case of insourcing as the corresponding methods are most commonly used to significantly increase the idea flow into companies, but they can also be interpreted in terms of the outsourcing of specific elements of the innovation process to large numbers of "working customers" (cf. Kleemann, Voss and Rieder 2008) or "prosumers" (Schelske 2008). In any case, crowdsourcing can be defined as a both qualitative and quantitative expansion of the open innovation concept towards even more openness (cf. figure 1):

Figure 1: The innovation continuum



As within every continuum, there is still a fine line between the categories that, within our specific continuum, underlines the global trend towards more open innovation and the need for corresponding innovation strategies.

On the relevance of transnational open innovation and crowdsourcing

"Many Western companies create productive partnerships to drive innovation activity but these are generally very limited in scope and impact (…) companies in China have become much more adept at mobilizing large networks of specialized partners to support innovation initiatives" (Hagel and Brown 2006: 13). This quotation from a contribution to the World Economic Forum in Davos 2006 reflects two different pictures of globalization at the same time: on the one hand, we are told about a global competition between closed innovation regimes that are shaped by political, economic, legal, educational or scientific borders: China versus the West. On the other hand, "(g)lobalisation is a major driver for open innovation processes, not only because it means more intense and global competition but also because it creates a more global landscape for innovation" (OECD 2008: 27).

Against the historical background, we might even say that open innovation re-creates these global innovation landscapes (cf. figure 2):

Figure 2: Closed innovation as special case of innovation.
Diagram: European Commission (2005).

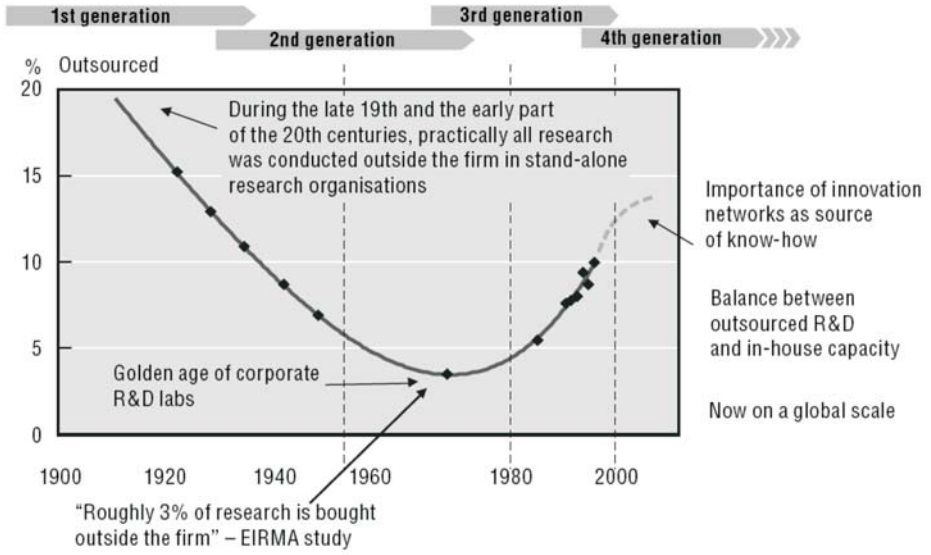


Figure 2 shows that the decline of the open innovation culture bottomed out between 1950 and 1990. With the new millennium, external knowledge sourcing is back to post-war level(s),. Thus, in the long term, it seems as if the age of closed innovation has been just some kind of *cold war mode of innovation*.

Nonetheless, in post-cold war Europe we still experience the logics of closed innovation regimes as well as their consequences: classical forms of open innovation, viz. B2B innovation co-operations or co-patenting, are if at all, then mostly set-up between partners within the same industry, the same country, or the same economic area (cf. OECD 2008: 59ff). Again we find that economic, political, scientific, legal, or educational borders hinder open innovation strategies. As a result we experience a waste of chances and resources (cf. figure 3):

Figure 3: Open innovation as an interface between European economies

While Western European countries are well equipped with economic capital and business knowhow, they suffer from skills shortages and a lack of ideas and are in need of new markets. Over the prosperity gap we experience deficiencies in terms of capital, mobility and market access in the face of a good supply of well-trained talents with relatively high intercultural competence[7]. This means that the both Europes would profit from increasing trans-national open innovation: Western companies could benefit from low cost idea flows from and first-hand information on the Eastern Europe's emerging markets. In return for this now only virtual brain drain, Eastern European societies could profit from income that is earned by local people and that is allocated on-site. Above all, Caucasian countries could profit greatly from transnational open innovation: in terms of capital flows, in terms of transfer of business know-how and in terms of an increasing quality of life that all play a part in stopping the brain drain.

[7] Eastern Europeans know more about Western Europe than vice versa. The same applies to language skills in one language of the respective other part of Europe.

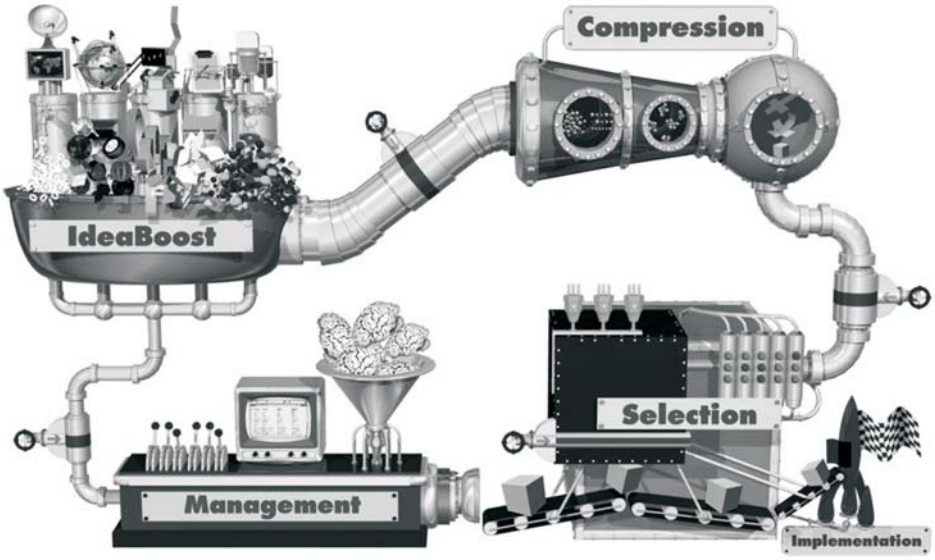
But how could transnational open innovation and crowdsourcing work in concrete terms? What concrete techniques are to be applied? How do they need to be implemented to serve as a bridge across the prosperity gap?

To answer these questions, in the following pages we present two case studies of Swiss open innovation service providers.

The two cases: Brainstore AG, Biel, and Open Innovation GmbH.

Since 1989, *Brainstore AG* has acted as a service provider for open innovation solutions, located at the language border between the German and French speaking part of Switzerland in the bilingual city of Biel/Bienne. Being sited in an ancient factory building, the idea of factory actively cultivates an industrial image: new members of staff are selected on the basis of standardized screening tests and then integrated into a strict division of labour. Ideas are produced by means of an idea machine (cf. figure 4):

Figure 4: The hardcore of Brainstore: industrial idea production (Source: Schnetzler 2006)



The machine is made up of five elements: idea-boosting, compression, selection, management and implementation support. Usually, a project starts with a kick-off meeting where the client defines the problem, the parameters for calibration of the idea machine and the

corresponding management decisions.

During the "IdeaBoosting" stage different tools are used to boost the collection of up to several thousands of inspirations. First results of net-scouting, trend-scouting and different forms of interviews are presented to the participants of "CreativeTeams" in order to stimulate their output. These teams of up to 50 people, consisting of client employees, representatives from particular target groups, lateral thinkers (mostly teenagers) and a management team, then meet in the Brainstore building and develop thousands of inspirations per hour.

The subsequent compression process is made up of three steps: a) an "IdeaCity" in which the inspirations collected in the boosting process are combined and forged into about 200 concrete ideas by a large team, b) a think-tank where experts assess the remaining ideas according to the project criteria, and finally c) the step of the idea design, in which the best few dozens of ideas are clearly and comparably visualized.

The highlight of the selection process is, of course, the idea selection. The best ideas are presented to a panel of decision makers and specialists who systematically evaluate them and provide feedback. Rough evaluation, the valuable first impressions, ranking lists and analyses serve as decision bases for the choice of the ideas to be implemented.

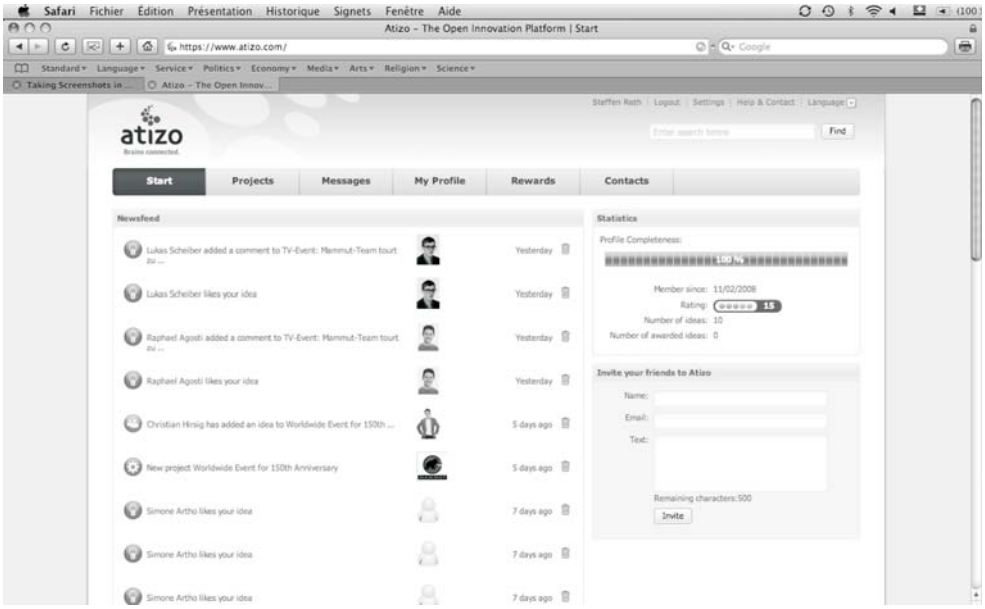
Finally, implementation support is also offered. In "RoadMap workshops", Brainstore develops the further steps required for the realization of each idea together with the project team. Favourite ideas are visually prepared according to their content so that they can emotionally inspire the implementation team on an internal or external level, and so that the significance of the ideas can be grasped. A catalogue of usage possibilities rounds out the programme.

Summarizing this we find that the core business of Brainstore is idea production based on real-life interaction between up to 100 clients, target group representatives, external experts and lateral thinkers. Basically, the company makes an annual turnover of more than 5,000,000 Swiss Francs (CHF) with three products: the "IdeaPackage" (idea production), the "IdeaEvent" (production of support for ideas) and the "IdeaFactory" (the implementation of in-house idea production processes based on the Brainstore method). Depending on the dimension of the project, the prices for the first two products range from less then 100 CHF to up to several 100,000 CHF. The prices are a matter of negotiation. Depending on age, qualification, availability and action time, participants

in the idea production process are rewarded mostly within a range of 100-800 CHF (plus catering and transport).

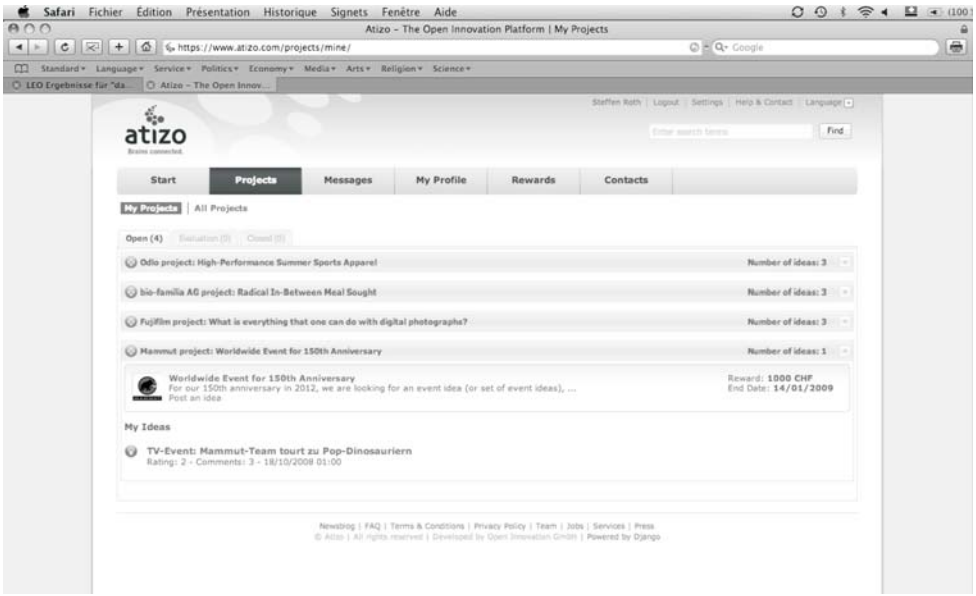
Brainstore operates on a multilingual and international basis: projects can be realized in German, English, and French both in Switzerland (Biel) and Germany (Frankfurt am Main). The company's list of clients includes Allianz, BASF, BMW, British Telecom, Coca-Cola, CreditSuisse and many more.

Open Innovation GmbH is a specialist in crowdsourcing and IT-based open community management located in the Swiss capital Berne. Founded quite recently in May 2007, the company has already been able to attract an impressive list of partners: PostFinance, CreditSuisse, Swiss Post, Toshiba, Fuji, Mammut and Google are among the clients of the provider of Switzerland's first crowdsourcing platform https://www.atizo.com/ (cf. figure 5):



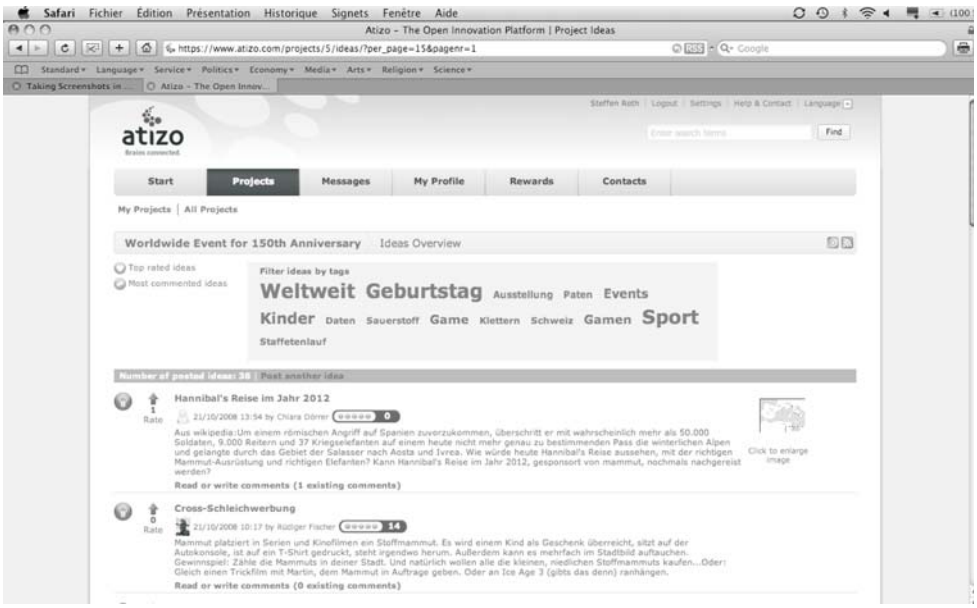
At first sight, Atizo looks like just another Web 2.0 platform: after the login there is a start page informing the community member about the activities of other members, each member can create a profile, there is a message function, and a contact management area. But, unlike facebook.com, xing.com, or odnoklassniki.ru, at atizo.com the community is not the client but the business partner of the platform provider. This is indicated by two further links called “projects” and “rewards”: by

following the first link a community member enters an area where Atizo-clients, i.e. companies with a need for ideas, call for solutions to a given problem. In the present case, the Alpine sports supplier MAMMUT invites ideas for global marketing event on the occasion of its 150th anniversary (cf. figure 6) and attracts community members with a prize of 1,000 CH for the best ideas. This rather small financial incentive[8] indicates that the company relies much on its brand power, which is indeed quite strong in Switzerland.



If, for whatever reasons, a community member is interested in contributing an idea to the concrete project, then he fills in a form consisting of a headline of max 50 characters, an idea description of max 500 characters, at least three keywords, and an optional visualization of the idea. All this data is then included in a list of all ideas posted by Atizo community member (cf. figure 7).

[8] Currently, standard prizes range from 3000-5000 CHF



Besides the idea description, this list also includes information on the creative mind that gave birth to the idea. Most important are both the dots and the number next to the innovator's name indicating his activity level as well as the number of ideas that have been rated or commented by further community members. Often rated or commented ideas are more likely to be perceived and therefore rewarded by the clients. Nonetheless, the client may also reward non-rated ideas when he considers them to be the best.

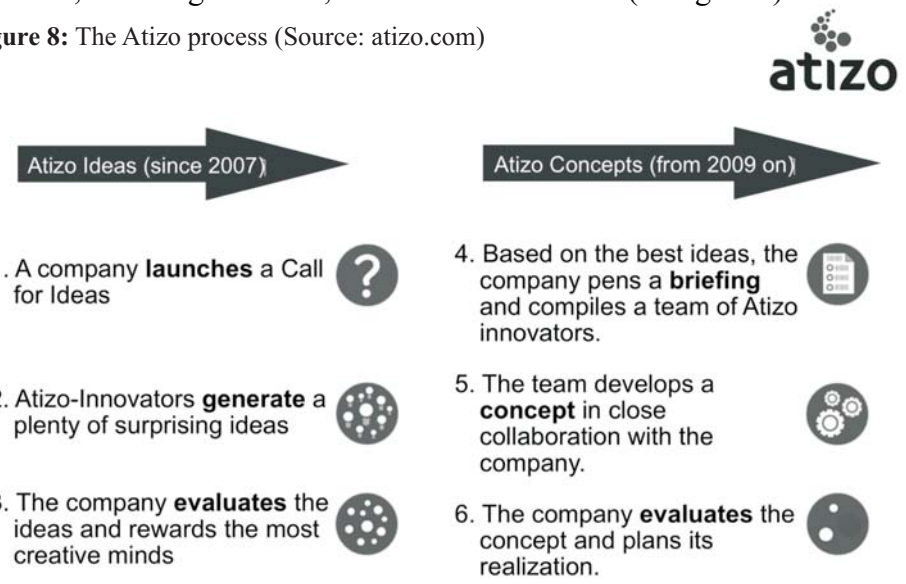
So far, since the set-up of the platform in May 2007, 90 innovators have received rewards of 40,000 CHF for ideas on 12 projects, which equates to an average price of 3,333 CHF per project and an average prize of 444 CHF per top idea.

Right now, two weeks after the start of the first three of the current five projects, a pool of over 2000 innovators has already been contributing more than 600 ideas. 80% of the innovators are men, 70% Swiss, and 90% German speaking[9]. The average age of the community is 32 years. It is obvious that atizo.com would benefit from more female, non-Swiss, English or French-speaking contributors, and more mature community members from all over the world.

[9] Even though there is an English and a French version of the platform.

As of 2009, Open Innovation GmbH will also provide its clients with a concept development service that complements the triad of the call for ideas, the idea generation, and the idea evaluation (cf. figure 8):

Figure 8: The Atizo process (Source: atizo.com)



Based on his experiences in the idea development stage a client may ask specific members to support him in a more closed product development process and to earn more exclusive rewards.

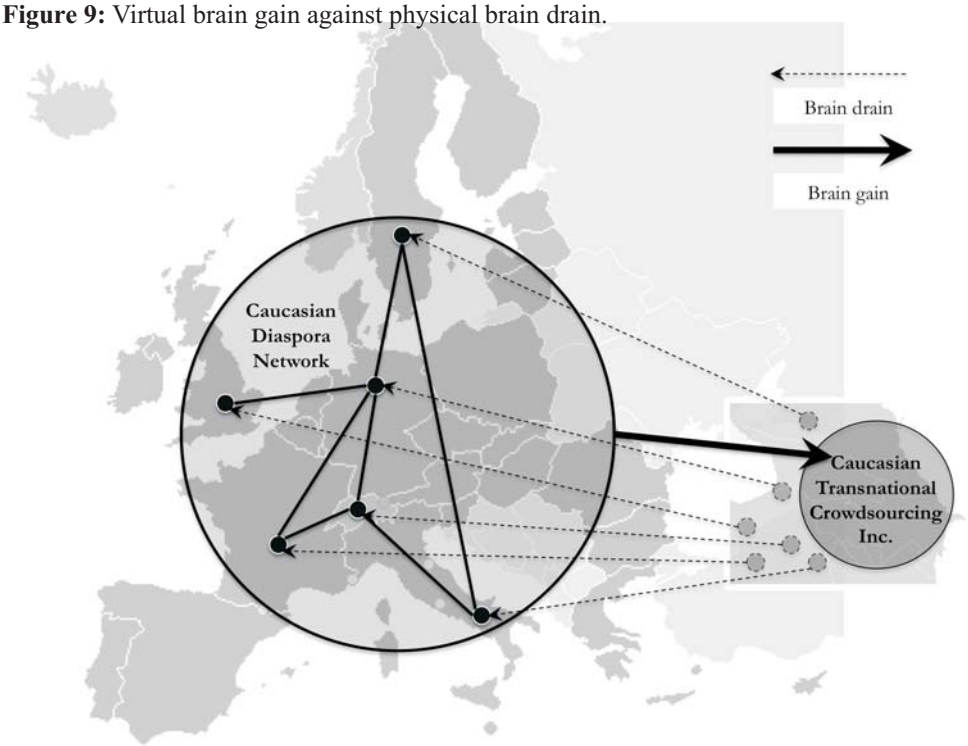
Two open innovation strategies for the Caucasus?

If we compare the two open innovation concepts of Brainstore AG and Open Innovation GmbH against the background of the specific open innovation demands of Caucasian societies, then we soon find that the Brainstore model of open innovation can hardly be considered as an interface that links the Caucasus to the European innovation society: The Brainstore model is based on the physical co-presence of and the direct interaction between the clients, a handpicked small community, and the management of the idea factory. Thus, on the one hand, the model can hardly be of use in a transnational context where visa restrictions and transport costs hinder personal encounters. On the other hand, the example also indicates that open innovation can perfectly work without a large IT-infrastructure. Thus, maybe, the Brainstore model could be an inspiration for intra-national open innovation strategies within societies whose members favour direct interaction and lack of IT-infrastructure.

By contrast, crowdsourcing methods like Atizo require access to the

World Wide Web, which is still more a privilege than a standard in Caucasian societies. But, once a person is provided with access, atizo.com works perfectly at the transnational level because it transcends mobility barriers by means of virtual integration. One could easily imagine the well-educated and IT-equipped elites of the Caucasian societies working at the intellectual workbenches of a pan-European innovation society without even leaving their countries.

Figure 9: Virtual brain gain against physical brain drain.



Of course, for the Caucasus this means still suffering from a brain drain to Western societies. But, at least, this specific form of a brain drain would be merely a virtual one: gains in terms of money and knowledge would be realized within the idea-giving Caucasian societies, and not in the context of distant Diasporas that are hardly connected to their home countries anymore.

Furthermore, crowdsourcing can also be used as a strategy to turn the tables on the brain drain (cf. figure 9): if we can imagine crowdsourcing agencies situated in Caucasian countries and specialised in sourcing knowledge and ideas of their Diasporas, then we are talking about a brain drain in the opposite direction. In such a way, crowdsourcing could effect

an immense "brain gain" for Caucasian societies.

Actually, this big leap is just a small step away: Where web 2.0 platforms like odnoklassniki.ru are concerned it simply means stimulating existing virtual Diaspora communities to exchange not only snapshots of their latest beach holidays but also ideas on how to solve the problems of companies and other organizations in their home countries.

Conclusions and research questions

In this paper we have shown that both intra-national and transnational strategies of open innovation could be used to reduce or even invert the Caucasian brain drain to the Western societies. This especially applies to transnational IT-based crowdsourcing strategies that could both virtualize the current physical brain drain and effect "brain gains" by means of the re-integration of the Diasporas' know-how into the Caucasian innovation systems.

With regard to the first aspect, the major problem with the virtual integration of resident citizens of Caucasian countries into a pan-European innovation system is a legal one: the theft of intellectual property is perceived to be the most significant risk of transnational open innovation (OECD 2008: 42). Thus, the question is whether and how Caucasian states could guarantee the IPR compliance of their citizens in transnational open innovation projects.

The second vision of turning the tables on the brain drain draws our attention to possible immaterial incentives that stimulate the Diasporas' contributions to crowdsourcing projects that are set up by resident Caucasian companies, research institutes, or (non-) governmental organizations.

At any rate, we have to keep in mind that only strong brands can attract a critical mass of participants in crowdsourcing projects (Füller, Matzler and Hoppe 2008). Hence, it is crucial to find out what foreign and home market brands are popular in the Caucasus.

Finally, the impact of cultural differences on transnational open innovation projects between Western European and Caucasian societies must be studied against the background of their innovation systems. This also means focussing on a very basic research gap in the field of innovation management in emerging markets (Pillania 2008).

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