OPEN INNOVATION
BEST PRACTICE GUIDE

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OPINET

OPEN INNOVATION BEST PRACTICE GUIDE

This publication was prepared in frame of the "*OPINET – Open Innovation Networking Platform for SMEs"* Subproject of the EURIS (European Collaborative and Open Regional Innovation Strategies) Mini-Programme.

EURIS' goal is to contribute to the Opening Up of all EU Regions Innovation ecosystems. The embracement of Open Innovation, in terms of accelerated cooperation rates among Innovation Stakeholders (companies and research centres) both in the midst of each region, and among EU regions, is the ultimate goal of EURIS, as means to advance on the construction of the European Research Area.

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Chapter 1 – Generic Issues

A basic introduction to Open Innovation

In the year 2003 a book by Professor Henry Chesbrough was published at Harvard by the title "*Open Innovation: The new imperative for creating and profiting from technology*" with the main aim of raising attention to a paradigm shift in innovation practices. This paradigm shift was backed by a crisis: old innovation practices did not work anymore for many companies. Or at least they were sometimes easily outperformed by younger, smaller and more flexible companies. To understand this crisis better we have to take a look at the traditional formula of making innovation "happen" from the perspective of a company with great resources:

If we have the most qualified research personnel, the most expensive hardware and the greatest R&D department in our business, we will be the leaders in innovation. Therefore, the best way for us is to lock down our giant research facility, not to let any valuable knowledge slip away through our doors.

– imaginary CEO –

This concept worked quite good for a while for really big enterprises but then some cracks appeared on the surface of the system:

First: there is no such thing as a locked research facility. You are able to chain down the electron microscope but some of your workforce migrates anyway, thus bits and pieces of information also get away. At the same time, due to the advancement of technology and new media the world outside the walls of big companies got saturated with available ideas and innovations. The trouble is if you made elaborate measures to limit information flow out of your laboratories, chances are you find it hard to access and utilize the ideas of the outside world.

In addition: if you are managing an enterprise you must be quite aware of how difficult it is to valuate an idea in itself. What matters is an idea that has already been successfully turned into a product or service. Back in the R&D department of the companies we mentioned many new ideas emerged. Some were investigated and became the fundament of great innovations. But others were simply left on the shelves, mostly forgotten. Why? Because these ideas and inventions did not fit the profile of the company at that time. Because some of these ideas might necessitate an additional competence which the company did not have...

Thus, in a very rough approach, *we could summarize* **Open Innovation** *as a systematic approach to convert your innovation system*, processes and thinking *into a new structure, which...*

- **Enables the gathering/accessing of external resources** (like the ideas or knowledge of a different company) **to foster your own innovation activity.**
- **Enables the utilization of formerly unused "leftover" ideas and inventions of your own; turning them into products or services with the aid of external expertise, companies,** etc.

While we discuss Open Innovation on the following pages we always mean transition to **a methodology where you consciously try to make use of the external world** in your innovation processes and not just "let such things happen". And at the same time we firmly believe in discussing **sustainable scenarios where all involved parties benefit from the cooperation** (instead of just stealing foreign knowledge and running away...).

SMEs relation to Open Innovation

Professor Chesbrough's book dealt mostly with large high-tech companies. While lessons of Open Innovation extend to the realm of SMEs (even to that of very low-tech companies) these are perceived by a micro-entrepreneur in a way very different from large companies:

An ambiguity of Open Innovation is that *it is done by almost every SME during everyday operations*. Yet it is rarely considered to be a systematic approach.

To be honest *very few SMEs find themselves in a situation where they exclusively possess the best R&D department of their business*. It is natural for them to be on the lookout for new impulses. But this might be a very casual process and therefore tough mistakes could be expected to be no less frequent than occasional visits of business luck.

SMEs can learn from the Open Innovation practices of larger companies to thoroughly evaluate their options on how to share their knowledge and expertise. Is this methodology simply transferable from large companies to small ones? Of course not. Wim Vanhaverbeke just recently published a report[1] about SMEs Open Innovation practices. Among other unique characteristics this report outlines the differences of the impact of Open Innovation on the strategies of larger and smaller companies. Pointing out that SMEs more frequently experience a successful Open Innovation act as a turning point of their strategies (e.g., introduction of a completely new product line or different kind of service, etc.) and not just as a tool to carry out an already well established strategy.

[1] W. Vanhaverbeke – I. Vermeersch – S. De Zutter „OPEN INNOVATION IN SMEs: How can small companies and start-ups benefit from open innovation strategies?" Downloadable at: http://www.innovationmanagement.se/2012/05/10/open-innovation-in-smes/

In this guide we aim to turn your attention to:

- *Being aware of what Open Innovation means*. (Not just the bright side but also the consequences. Like extra resources, protection of ideas, etc.).
- *Being aware of what Open Innovation means for the larger companies surrounding SMEs.* And pointing out how SMEs can participate, contribute to and benefit from the Open Innovation actions of their larger partners.

The Partners involved in the creation of this Guide prepared a *separate brochure further detailing Open Innovation benefits with examples*. In case of interest we advise you to request a copy in English or one of the localized languages at one of the organizations listed at Chapter 2. of this publication[2].

A consequence of open thinking

A significant lesson of Open Innovation, as explained by researchers of this field, is that *ideas/inventions are not so much valuable unless a way is provided to turn them into actual products and services*. Keeping an idea hidden just because it is considered to be extremely good, but never actually growing to be able to exploit this idea, is a rather poor solution.

Those who excel in business are often not the masters of idea generation, but instead masters of business models. They see a clear path to deliver a new product to the market and are able to mobilize both internal and external resources to follow this path. Let this be through acquiring foreign intellectual property or by involving external experts/companies to build upon their own ideas.

While taking a look at the upcoming chapters of this guide, we therefore advise you to forget the individual ideas behind the examples as much as possible, and instead try to search for the business models behind. What did these organizations consider to be important to deliver a proper product/service? What do they share and what do they keep for themselves instead? If we imagine a recipe for their business model, how can they fill in the gaps by grabbing outside resources? In short, look for:

- **A** method to turn an idea profitable.
- **A** way to deliver added value to a(ny) customer.
- **A** model to integrate both internal and external innovation resources into your development.

[2] The Open Innovation – Benefits for SMEs guide can be directly downloaded at: http://opinet.euris-programme.eu/downloads/

Issues of protecting your knowledge

A common question on any forum where we advise companies to share their knowledge: *"But won't they steal my ideas?"*. Let's take a look at some ways to deal with this issue:

First and foremost, "But won't they steal my ideas?" is a very reasonable question which can not be answered with a simple "never mind". This is one of the issues why we say that you better do Open Innovation as a systematic approach, carefully planning what and how to share from the beginning on. (And again, this is one of the things you should seek in the upcoming examples. What do these organizations share and what do they protect as their own instead? How do organizations requesting contributions from others earn their trust?).

Obviously, many legal solutions were developed for concerned enterprises. Intellectual Property protection tools like patents, original designs, trademarks, the advance signing of non-disclosure agreements, etc. If you work for a large high tech company, you'll surely have an own legal department to back you with such solutions properly. If you do not have an own legal department and have only vague memories of this topic we suggest you to refresh your studies before initiating Open Innovation measures. To this end the Partners involved in the creation of this Guide prepared a separate guide explaining Intellectual Property rights issues (including contract agreements guidelines and exploitation and commercial issues) with an Open Innovation viewpoint. In case of interest we advise you to request a copy in English or Spanish at one of the organizations listed at Chapter 2 of this publication[3].

Protecting knowledge and building bridges for a small company

Even if you are well aware of patenting regulations and similar measures, chances are that your business can not utilize them due to their cost. Especially if you are a low tech micro entrepreneur delivering goods to a small local market. And in this case we do not only talk about the costs of acquiring a patent or asking a lawyer to draft an NDA. We also have to consider the costs of enforcing your rights, which might turn out to be astronomical if you are facing a large enterprise.

Is there a way out? Most smaller enterprises we deal with depend on trust in such issues much stronger than on legal tools. Therefore we have to observe

[3] The "Practical Guide to Managing Legal Aspects in an Open Innovation Context" publication can be directly downloaded at: http://opinet.euris-programme.eu/downloads/

the components of establishing trust in cooperative scenarios and the role of trust in Open Innovation actions carefully.

In the opinion of the author of this chapter at least three layers of trust are to be discussed:

1. Trust in character.
2. Trust in competence.
3. Trust in transparency.

"Trust in character" means that all involved parties have to prove that they are not "evil", do not want to do harm and will behave respectably. Maintaining this image is also an obvious challenge for a very large company which would like to cooperate with smaller ones. (Otherwise the SMEs would never share their ideas).

"Trust in competence" means your partners have to firmly believe that you are good at what you are doing. To translate this to the field of Open Innovation: your (future) partners have to know in what you are good at. Analysing various examples of Open Innovation we see ample evidence of a company looking for the best possible partner to contribute a very specific expertise or knowledge to their projects. How can you expect to be the "best possible partner" for anyone if your excellence is hidden and never spoken of in front of the public...?

"Trust in transparency" is a tricky one. We find it comforting to collaborate with partners of whom we are able to guess what the heck they are doing "behind their doors". Without understanding intentions, motivations and to some extent also the internal processes of our partner, we might run into nasty surprises of the "why are they doing that?" sort. This is one of the key reasons why some low-tech micro-entrepreneurs are ready to cooperate with another micro-entrepreneur but avoid cooperating with intermediaries, universities and other "completely incomprehensible, mystical organizations". So, watch out for solutions to make your open collaborations as transparent to your partners as possible. Plan ahead. Make a clear workflow. Explain intentions and milestones. Manage the whole process. It pays out...

Chances are...

Some of you might say there is a simple solution to this whole trust issue: only to collaborate with people you know since ages. Doing so you leave a valuable part of Open Innovation out of the equation: you have to differentiate between partnerships where you exploit already known resources of already known organizations and true opening of your processes to allow a real chance for unknown geniuses to find a way connecting to your activities.

Open Innovation means to make a lot more resources available for contribution than the limited set of tools and people you already see and manage. Our world is so incredibly complex that for most of your ideas there might be somebody "out there in the unknown" who could easily contribute a very specific competence. Or someone who would desperately like to use the idea you had for ages but never considered to be of any value. (Almost) everything is about making such new connections... to build upon the fundament of "I'd never thought that it was possible". This is what many successful open innovators do by acquiring, joining and combining ideas and know-how of very different technological fields into new products.

Following the big ones...

While we aim to share Open Innovation lessons with small enterprises, our examples do not exclusively deal with them. Some of them deal with large companies, from which there are things to learn. But others show organizations breaking new ways in opening up.

We firmly believe that with the advance of time more and more leading companies will decide to open their innovation systems as they will not be able to deny the versatility of the outside world. In this process many new surfaces will emerge even for the smallest SMEs to collaborate with formerly inaccessible giants. Our advice is to participate in this process. Watch out for the struggling university in your neighbourhood trying to bring their IP to the market or for the engineering company offering a prize for new ideas. Make a benefit!

Chapter 2 – Who we are

Layer by layer...

Regional development organizations of five European regions collaborated to launch an international cooperation programme called **"European Collaborative and Open Regional Innovation Strategies – EURIS"** with the aim of better understanding Open Innovation methodologies and the involvement of innovation stakeholders to ensure the exchange, transfer or development of new Open Innovation approaches.

EURIS, supported by the **INTERREG IV C Programme** and financed by the **European Union's Regional Development Fund (ERDF)**, was not a "locked" initiative. Instead, it allowed contribution by additional organizations of the participating regions in the form of "subprojects" with individual goals and activities.

The organizations contributing to this guide reside in **Navarra** (Spain), **Stuttgart** (Germany) and **West-Transdanubia** (Hungary). We all share a common mission: the delivery of innovative services and solutions for Small and Medium Sized enterprises – our primary target group. We also share some similarities of our regions. One such similarity is the fact that most of the SMEs in our region either do not use Open Innovation practices or do not plan ahead systematically while embracing new collaborations.

Therefore we joined forces to learn, analyze and distribute Open Innovation related information to local SMEs. During our progress we not only disseminate knowledge but also learn on our own at the same time. We try to acquire a better understanding of Open Innovation for ourselves and continuously think about the consequences of Open Innovation in our own organizations. We call our subproject **"OPINET – Open Innovation Networking Platform for SMEs"**. The reason for this name is that we believe that the knowledge we collect about Open Innovation is really a platform. A solid fundament upon which the future services of our organizations are built.

We cannot stress enough that finding out more about Open Innovation and its practical applications reflects as much of a learning process for us as for our readers. We share much similarity with the enterprises surrounding us. We plan our budget, develop and calculate new services, watch out for our cash-flow just like any other company. Thus the lessons and practices we selected for you to review are stories which we believe to be also applicable for ourselves.

We value all possible feedback about this Guide. Do these ideas "work" for your organization? Are there hidden concepts which seem easy in this guide

but are nearly impossible to implement for you? Are there other ideas which are described far too complicated but you might have a simple solution?

How to contact us

Lead Partner of OPINET project is: **The Navarran European Business Innovation Centre (CEIN).**

CEIN is a Public Society of the Navarra's Government at the disposal of SMEs and entrepreneurs in Navarra, Spain, that seeks to consolidate and diversify the region's economic and industrial environment. The organization nurtures entrepreneurial spirit, identifies, promotes and develops business projects and encourages innovation in Navarra's companies.

CEIN's philosophy is European-orientated, both in terms of the work methodology that it employs and in terms of the constant search for innovative services and the detection of new business opportunities or economic development projects that it conducts in collaboration with other European regions.

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Stuttgart Region is represented in the project by:
Virtual Dimension Centre (VDC)

The Virtual Dimension Center is Germany's leading network for Virtual Engineering and Virtual Reality. Since 2002 the VDC creates synergies between the network members and supports technology transfer.

Approximately 100 members and partners - among them research institutions, technology suppliers, service providers, users and multipliers - are cooperating

in the topics of simulation, visualisation, product lifecycle management (PLM), computer aided engineering (CAE) and virtual reality (VR) along the entire virtual engineering value chain. Hence the cluster members benefit from a higher innovation activity and productivity due to information and cost advantages compared to companies outside the network. These competitive advantages are a result of transparent competences, raised information flow and easier business contacts.

The services of the VDC include:

- **Information** search and processing.
- **Marketing** and dissemination.
- **Match** making on national and international level.
- **Technology** transfer.
- **Funding** management.

The VDC organizes each year many workshops, match making events and congresses like the Virtual Efficiency Congress (VEC, www.virtual-efficiency.de), Germany's biggest Virtual Reality congress.

VIRTUAL DIMENSION **CENTER**

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West-Transdanubian Region is represented in the project by:
INNONET Centre of Innovation and Technology

INNONET is an innovation oriented business incubator residing in the Industrial Park of Győr. Work at INNONET is based on the firm belief that long term socio-economic benefits of innovation processes significantly exceed the earnings of individual companies participating in them. Committed to this observation, INNONET was established in 1997 as a non-profit organization to aid innovative small and medium enterprises and thus foster the development of the West-Transdanubian Region.

INNONET's offers office and workshop space for innovative enterprises at a reduced rate. Rental in the facility is bundled with many additional free services for the tenants (including availability of discussion rooms, event organization support, copiers, etc.) and also with services to the enterprises in the region around INNONET. Since the year 2010 services include rapid prototyping by 3D printing.

In addition to direct services, INNONET is aiming to identify new ideas and innovation challenges, framing and management of innovation projects on regional and trans-regional (cross-border) level.

INNONET'S target groups are:

Companies (mainly Start Ups) with a strong technology focus, specialized know-how and high growth potential (supported by basic office and IT services to aid their management to focus on core business activity).

Small enterprises (including Spin-offs) ready to participate in supplier chains (becoming partners of TIER I-II companies, etc.) or act as project partners in research cooperations. (Supported by additional advice regarding available funding, application procedures and project management).

INNONET

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Chapter 3 – Best Practices of Open Innovation

3.1 The Archabbey of Pannonhalma – Tradition-based innovation

While Open Innovation is a modern concept, it seamlessly integrates with tradition. To widen the perspective associated with this paradigm, take a look at an organization with over thousand year's worth of knowledge far away from engineering and electronics dominated technology fields.

The company

The Archabbey of Pannonhalma is not a company in the classic meaning of the word. The Benedictine Pannonhalma Archabbey was founded in the year 996, this is the second largest territorial abbey in the world, after the one in Monte Cassino in Italy. Today there are about 50 monks living in the monastery, mainly working as teachers in the Benedictine High School.

The wonderfully rich flora of the area around the Archabbey of Pannonhalma provides a natural basis for the ancient craft and science of Benedictine monks who keep studying, gathering and utilizing herbs and plants. A multitude of recipes for infusions of herbs and alcoholic drinks have been preserved in manuscripts dating back to the XVI-XVIII centuries.

The innovation

After 1945 Hungary became a communist state, and in 1950 the properties of the Order were confiscated by the state, not to be returned until after the end of communism in Hungary. After the transition the Order realised that they own a huge inactive knowledge and experience captured over the centuries but they are not able to support or market them as they don't have the financial resources and the knowledge for the advanced technologies – but most importantly, the number of the monks are limited. The Archabbey decided to use external funds and technological advancements of companies (external partners) presenting the cutting edge in Hungary.

The Abbey owned several ideas in different fields like herbal teas, receipts for liquires and soaps, etc., but mainly these products were associated with herbs

and viticulture traditionally produced by the Monastery. New partnerships were initialised for each area to reach maximum success on the market. Well known companies and brands were preferred which were already on the market.

The Abbey launched the business just two decades ago and started to manufacture premium quality products. As they say, the name "Archabbey of Pannonhalma" is a trusted brand and a thousand years of tradition is behind it! This was the reason to couple this name with premium quality brands only.

In most cases where Open Innovation emerges, at least two prerequisites are apparent in the background/environment:

- *Enablers – conditions, habits, etc. which make it possible to implement and welcome Open Innovation.*
- *Drivers – events and situations which force the given organization to change and adapt (and thus embrace Open Innovation).*

In case of Pannonhalma, the traditions of the Monastery played a significant role in aiming for innovation. Regular labour is a core part of the Benedictine rules of life; it was self-evident for the community to utilize its resources in the best possible way.

A "Driver", on the other hand, is quite often some sort of a crisis which necessitates external involvement. In case of our example, the return of previously confiscated properties is probably one of the driving forces. Since this moment the Monastery once again owned significant land and infrastructure (unlike the situation many years earlier), yet they did not any more have the financial resources to operate these like previously. This ultimately paved the road for a complex innovation program.

The innovative ideas/goods of the Archabbey of Pannonhalma

The Vineyard of the Archabbey of Pannonhalma

The Benedictine monks have always been closely associated with viticulture and wine making. At the beginning of the 1900s the Archabbey had about 100 hectares of vineyards. The political and social upheaval after World War II put an end to the centuries-old tradition when the single-party state confiscated the Abbey's vineyard holdings and winery. In 2000 the Abbey Winery of Pannonhlama, with a storage capacity of 3000 hectolitres, was established, in which the Abbey would control the majority interest in partnership with the

MKB Bank as the minority owner (45%, approx.: 2 M euros). The facility was designed by the architects of the CZITA firm based in the city of Győr in close co-operation with Tibor Gál, the internationally famed wine-maker of Eger, who oversaw the enological-technical work and was expert consultant of the Winery as well.

Today it is the most important business of the Abbey. They produce 200.000 bottles per year and sell them from 5 to 20 euros per bottle.

Herbal Teas

Healing has always been one of the most important services of the monasteries. There were always monks in Pannonhalma, who cultivated these traditions as professional chemists or surgeons. They recorded their experiments and expertise in manuscripts and manuals. One of the most valuable among these books and booklets is the manual containing over 500 recipes written by the chemist Elek Reisch. Based on these ancient recipes, the Archabbey started the production and sale of Pannonhalma herbal teas in cooperation with Herbária PLC, the most important herb-processing and marketing company in Hungary.

Herbária was established in 1949 to collect, produce, process and trade medicinal plants and to manufacture herbal teas. Before 1993 the company belonged to Hungarian co-operatives. Then it was changed to Public Limited Company owned by Hungarian private investors. Today Herbária Co. is one of the leading companies in the herbal product sector in Hungary. Most of the

products are sold to the Herbária franchise-shops (~100) covering the whole territory of Hungary. The cooperation with Herbária offered several advantages in the herb processing - and most importantly, in the marketing - as Herbária is operating in a franchise system.

Chocolates

The Archabbey of Pannonhalma started to develop the chocolate assortment in 2007, when they began to produce and sell handmade chocolates filled with Benedictine liqueurs. The main components of the chocolates are the traditional Benedictine liqueurs and the first class Belgian cocoa. All the chocolates are manufactured by the "Kis Kézműves Kft.", which is a small sized family run confectionary. Chocolate products are sold mainly by the wine shops.

Liqueurs, vinegars

The centuries-old experience of the monks of the Archabbey concerning the use of herbs is being put into practice by the Distillery of Agárd. Agárdi Distillery was set up in 2002 to introduce a pure, premium-quality selection of Hungary's traditional pálinka. The intention of the founders was to create something unique and luxurious.

The specialty of the Benedictine liqueur is that they are typically made of apple and cherry brandy distilled by the Agárdi Distillery and they do not contain any artificial flavour or colouring agent. The age-old wine and vinegar making tradition of the monks of the Archabbey has met the expertise and modern technology of

the Buszesz Zrt., the successful wine vinegar production company of Óbuda. On 21 August in 2006 Archabbot Asztrik Várszegi and general director László Zentai signed the contract the result of which is the product-family of the Benedictine wine vinegars of Pannonhalma. The recipes for the industrial sized production of the Benedictine vinegars were developed in the laboratories of the company Buszesz, based on Bálint Keller's ones. Of course, the basic material of the vinegars is the wine of the Abbey Winery Pannonhalma, while its flavouring also follows the traditions of Pannonhalma. The herbs of one of the vinegars include is for example lavender, which has been favoured for its cleaning properties, scent and sedative effect since the Antiquity. The other wine vinegar contains nut leaves and sage whose curing effect is also well-known for a long time past: the Latin name of sage is "salvia" that originates from the verb "heal", while nut leaf tea is used for curing dysorexia, for cough relieving and cleaning the blood. The real value of the spice-flavoured Benedictine vinegars lays in the rich content and natural taste of the herbs and the wines of the Archabbey Pannonhalma, which is a message from the past to the men of our age.

Conclusions

"Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas" (Chesbrough, 2003). The Archabbey of Pannonhalma is a good example for the process of open innovation, how traditions could utilize advance technologies to create new products on the market. Several steps and decisions lead to success of the innovation like:

- **Tradition** was coupled with new technologies.
- **Risks** of introducing "new" products in the market were shared by cooperating with companies already present on the market.
- **External** funds (banks) and subventions (EU-funds) were involved to minimise starting investments.
- **The** image and the design of the products of the Monastery were strictly controlled.

While individual components of the Monastery product line are significant innovations, it is even more important for the purposes of this guide to observe the way these seamlessly fit together. They successfully identified what they would like to achieve (high quality products based on tradition and fitting their cultural mission), which offered a strong focus for the elaborated business models and also narrowed the list of candidates for co-operation. Maintaining this focus and an effective orientation of all newly won partners to work for the same strategic aims is the true lesson to be found in this example.

3.2 BootB – Finding the best possible partner

In the previous example the Archabbey of Pannonhalma successfully identified some of the best possible partners for their operations and built co-operations based in this knowledge. But what if you do not know who could be your best partner? Asking around or requesting formal quotes can be burdensome and limits the possibility to test a "virtually unlimited" amount of candidates. BootB is a possible answer to this problem on the field of marketing/advertising tasks.

The company

Pier Ludovico Bancale is the Founder of BootB, a web startup that serves as a pitching engine to connect brands and creative talents. A marketing executive with 20 years of experience -working for companies such as Johnson & Johnson, Colgate-Palmolive, L'Oreal- who jumped out of the offline world to go online. Before starting up BootB, Pier Ludovico has done almost every marketing experience in fast moving consumer goods, long lasting ones, professional products, selective channels and services. He designed a universal tool serving via crowdsourcing the needs of companies in search of creativity - mainly under the form of advertising, marketing concepts and design. With the strong belief that creativity has no boundaries and exists everywhere, BootB addresses people in 13 languages, so as to offer the most diversified product to the companies and the incredible opportunities not only to professional creatives but to all talented people that are passionate about creativity.

The innovation

BootB's founder Pier Ludovico Bancale said that the marketplace solves the problem of brands being stuck with pre-millennial creative in a Web 2.0 world. "It seems like the creative side of advertising hasn't evolved as fast as the other areas of the industry," Bancale said. "Retail got enhanced by auctions like eBay and Amazon; media buyers have had exchanges and auctions, not to mention search and Google. But creative pitches have been run and managed the same way that they were 20 years ago, and we found that strange".

About the reason to launch BootB Pier Ludovico said: "All my life I developed innovative business solutions, promoting them from shop-floor to board level. I wanted to bring the board down to the shop floor and this can happen only in the internet virtual & democratic world. The creative industries cannot resist

forever to the internet revolution: that's the reason for creating the BootB Republic. Cheaper (democratic), faster (virtual), better (revolutionary)".

The BootB

Brand pitches get posted to the www.BootB.com site, and interested parties can jockey for the jobs, which average in the US$10.000-20.000 range. A pitch remains open for a predetermined length of time, during which applicants upload their submissions – which can include online and offline components – and then the brand chooses a winner. Chosen applicants or agencies get their cash within five days of the announcement, as the funds are initially held in an escrow account. BootB typically charges brands a 10% to 20% fee for each pitch they launch on the marketplace. Although most of the brands that have tested the creative marketplace have been based in Europe, Bancale said the company plans to increase its U.S. promotional focus in the coming months. As to whether creative shops should fear a BootB onslaught, Bancale is on the fence – since submissions can come from individuals, teams or agencies themselves. "Agencies understand that creativity cannot be automated or forced, but also that the way pitches are handled now must change", Bancale said. "The Internet revolution is too big to not affect the creative side."

What is the usual way for brands to quest for creativity? If they have the opportunity to choose, they start a pitch and select the best proposal from a limited number of participants. BootB is an online way to find the best marketing concepts and strategies, graphic design solutions or ideas for advertising campaigns by addressing the unlimited number of creative talents from all over

the planet. At the same time BootB provides job opportunities for freelances, professionals or creative amateurs who get a chance to participate in the creative pitches (tenders) run by top brands.

Accessing an unlimited number of talents from all over the world. This is one of the core ideas of Open Innovation. Quite often a partnership with an external company or expert still means utilizing and managing resources for innovation which you already knew previously. Participants of BootB go a significant step further and aim to attract and involve people they have not known until the pitch. This way they get a far greater chance to find a perfectly fitting solution to their problems. At the same time BootB also defines the contractual framework for these emerging co-operations. Thus the development of ideas occurs in clearly defined partnerships. Without any nasty surprises.

What are the advantages of BootB vs. traditional offline agencies?

FOR BRAND BUILDERS	FOR CREATIVE BRAINS
▪ **Manage** your pitch from your desk: **Save time**! You need no meetings or trips as everything can be managed online.	▪ **Choose** the projects that you like. It's up to you. Top brands have put their pitches on BootB. You're free to select whichever you like!
▪ **Decide** how much you invest: **Save money!** Registration is free and it's you who decides the budget of the pitch.	▪ **Communicate** your idea directly to the brand: No agents between you and the Brand Builder, and no moderation.
▪ **Get** as many **different** and creative proposals as possible: The number of creators registered on BootB is growing each day. They live in different countries, and have different ages, cultures, religions, favorite foods, and hobbies...	▪ **Be** rewarded for your ideas, not for your reputation: The budget allocated to each pitch is a **reward for the best talent, not for the most famous name**. This is because your name and personal information will not be visible until the winner has been chosen by the brand builder.

Currently the major pitching engines are being used by businesses looking for logo designs, website designs, product concepts, print advertisements, TV storyboards and developing marketing solutions.

Conclusions

"The world is full of creative people - especially children - but most of them have no outlet for their ideas. BootB gives individuals access to a lucrative market where they can win business from top brands. The creative world, thanks to BootB, is now open for business." BootB is the pitching engine that brings brand builders and creative brains together from all around the planet. The key aspects of the business model of BootB could be identified as follows:

- ***BootB is free and open for everyone***: The briefs will be published on the BootB website in 13 languages, thus reaching 95 percent of the global population and giving brand builders access to creative solutions from people around the world. Children and housewives in Marrakesh are as eligible as ad execs on Madison Avenue. The registration is free of charge.
- ***BootB is effective***: BootB is already working with some of the world's biggest brands, people who realize that not all the best ideas come from the great marketing conglomerates in New York or London. BootB has secured agreements with some of the world's top brands, such as Auchan, Ferrero, Lego and Peugeot.
- ***Cost efficient***: For every brief published there is a budget tied to it. It allows companies to optimize marketing budget and receive creative ideas.
- ***Integrity*:** The website is SSL encrypted to ensure the integrity of the ideas.
- ***Manages intellectual properties:*** The registration process sets up a legally binding contract between the creators and BootB stating that all ideas remain the creator's property until a client buys the idea.

BootB is of course not the only service provider aiming to connect tasks and professionals. Quite a few similar platforms exist for various technologies / business fields. In the Open Innovation – Benefits for SMEs guide of our project (include URL) another summary is available about one of the most famous such marketplaces – Innocentive (www.innocentive.com). Please observe the similarities between the challenges these service providers face:

- *What is their method to attract the critical amount of participants to make the marketplace reasonable?*
- *How do they ensure that all their clients' ideas get protected?*
- *How do they define their key aims/services to ensure that only relevant members participate in their system?*

A key to these questions is among others the spreading of the feeling that each member can happen to be on "both side" of the emerging co-operations.

3.3 Netflix – Launching an Idea Contest on Your Own

Few companies are able to launch worldwide campaigns to collect new ideas like the following example. Yet similar contests are also possible in a smaller scale. Typical challenges you could face during the announcement of an idea contest are:

- *Attractiveness. Are you able to make your contest visible for people with valuable ideas?*
- *Resources. Even if your contest turns out to be very successful, most of the ideas gathered will be completely useless. Have you got the power to mobilize, motivate and "entertain" hundred times more innovators during the contest than the amount you actually need? (Many investors consider this to be a realistic estimate by the way. Out of all the neat ideas maybe 1% offers the possibility of implementation.)*

The company

With more than 23 million streaming members globally, Netflix, Inc. is the world's leading Internet subscription service for enjoying movies and TV shows. The company was established in 1997 and is headquartered in Los Gatos, California. It started its subscription-based digital distribution service in 1999 and by 2009 it was offering a collection of 100.000 titles on DVD and had surpassed 10 million subscribers. On February 2007, Netflix announced the billionth DVD delivery. In April 2011, Netflix announced 23.6 million subscribers in the United States and over 26 million worldwide. By 2011, the total digital revenue for Netflix reached $1.5 billion.

In the United States, the company provided a monthly flat-fee service for the rental of DVD and Blu-ray Discs. A subscriber created an ordered list, called a rental queue, of movies to rent. The movies were delivered individually via the United States Postal Service from an array of regional warehouses. In 2011 Netflix had 58 shipping locations throughout the U.S. The subscriber can keep the rented movie as long as desired, but there is a limit on the number of movies (determined by subscription level) that each subscriber can have on loan simultaneously. To rent a new movie, the subscriber must mail the previous one back to Netflix in a prepaid mailing envelope. Upon receipt of the disc, Netflix ships the next available disc in the subscriber's rental queue. The discs are returned to Netflix in the same envelopes in which they are sent to customers.

The innovation

The challenge was to improve online DVD rental and streaming service Netflix's movie recommendation system. With viewing choices expanding exponentially Netflix believed that one way of the company could retain subscribers would be to improve the website's ability to predict which movies customers would like. These predictions are based on a customer's own movie preferences. The basic premise is that "*if you love these movies, then here's another load that you're going to be passionate about*".

The Netflix Prize

In October 2006 the company launched the challenge ($1 million prize), inviting anyone to come up with better recommendation software than Netflix's in-house program called Cinematch. The company and the employed engineers have already used codes, programs and algorithms, but could not make any progress (this was the driver or the so called crisis in the innovation). To be in with a chance of winning the prize entries had to be at least 10 percent better than Cinematch. A 10 percent increase would be a valuable boost to the company. It would help Netflix shift more movies, and increase customer satisfaction.

The competition attracted more than 40.000 teams from 186 countries. Competitors were working with a data set of 100 million movie ratings, and with

personal information stripped away they had to come up with new algorithms to predict which movies customers would prefer. The answers were then compared to the movies that customers actually picked.

Observe the great differences between the size/resources of the small competitor teams and media giant Netflix. In order to attract so many participants these had to be convinced that their ideas get utilized in a fair way. Transparency and an easy understanding of what is required, what is going to happen and how all involved parties can benefit from the collaboration is essential in order to carry out Open Innovation. What could have happened instead in a competition: a) without any objective definition of a target – Netflix simply asking for new ideas? b) without Netflix's ability to build up trust in transparency among participants?

In June 2009 a seven-person multinational outfit called BellKor's Pragmatic Chaos surpassed the ten percent barrier. Under the rules of the competition that triggered a 30-day period where other teams had the opportunity to beat them. This prompted a slew of competing sides to join forces, and when Netflix declared the competition closed in late July, two teams had passed the 10 percent threshold – BellKor and Ensemble, with the former being the eventual winner, having achieved a 10.06 percent improvement. BellKor was actually a hybrid formed from several previously competing teams. They worked in different locations and largely communicated by email. The first time they all met was at the prize giving ceremony. The winners attribute their success to the fact that they were able to combine all their algorithms to create an even more complex one.

Some of the algorithms examined movies in bundles of elements, which might include things like genre or actor. One model looked at what movies were rated rather than how they were rated. By bringing them all together BellKor was able to create a useable model. Team manager Chris Volinksy told CNN Money about BellKor's winning strategy: "*You need to think outside the box, and the only way to do that is find someone else's box*."

The prize money has represented such a good investment that he has already launched more Netflix contests with shorter time spans of six and eighteen months before awarding the prize.

Implications

The Netflix Prize could have far reaching implications. The way that teams came together and improved their results suggests that this model of open

innovation could be applied to other complex issues and challenges in science, technology and business.

Challenges of the open innovation and the Netflix Prize

Netflix was able to address several open innovation challenges:

1. **Valley of Death** is when organizations are unable to incorporate outside innovation into delivered products even after acquiring it. Netflix focused open innovation around a problem critical to their business - predicting what movies customers will like. If the outside innovators were able to demonstrate those results, it would be hard for internal experts to resist implementation (because of not-invented-here mentality). More importantly, there would be management attention on the subject because of its importance to overall business - which would surely help overcome the valley of death.
2. ***Managing intellectual property***: Netflix was in a unique position because they did not have to disclose their current implementation in anyway. All they had to do was to publish the output of their algorithm. They were able to provide data to the outside innovators to test performance relative to Netflix's performance. In most Open Innovation problems, it will be hard for organizations to set up a problem so that they do not have to disclose any internal know-how.
3. ***Evaluation Costs***: Although Netflix had to set up an extensive infrastructure to administer Open Innovation, the costs were somewhat mitigated. Netflix was able to device an approach where the community was able to test their algorithms internally before sending it to Netflix. Furthermore, Netflix provided clear guidelines and test data for the outside innovators. This self evaluation by inventors reduced the overhead required to manage/ test innovation ideas submitted for consideration.

Netflix was not able to get full benefit from the prize because of two factors.

1. The cost of implementing the algorithm was very high: "*We evaluated some of the new methods* offline but the additional accuracy gains that we measured did not seem to justify the engineering effort needed to bring them into a production environment". However, all was not lost. Netflix was able to use some of the algorithms developed at early stages of the challenge: "...we still use two algorithms from the team that won the first Progress Prize for an 8.43 percent improvement to the recommendation engine's root mean squared error". That too is an interesting idea: Set up intermediate goals for open innovation and incorporate them into the overall R&D planning process.

2. The market had changed from DVD rentals to on-line streaming so that the benefit of the innovation was minimized. This is also an important lesson, even if we can overcome most of the challenges in implementing Open Innovation, several other factors may still prevent us from gaining full benefit of the investment.

Conclusions

There's an interesting aspect which is how important collaboration was in breaking through. This example has shown that innovation happens much faster when you have the free and open sharing of information, as that mixture of different approaches and ideas allows for breakthroughs to come much faster. The first "team" to break the 10% finish line, BellKor, was actually a group of a few separate teams, allowing them to combine different pieces of different approaches to actually step ahead. They realized it was better to team up to make the real breakthrough. It's another clear example ***of the value of collaboration in innovation***, against the standard myth of the lone inventor having a "flash of genius."

3.4 SourceForge – Once you have "The Team" how to keep it work on your solution?

In the example of BootB we investigated the role of an organization which contributes significantly to the establishment of new contacts, enabling perfect matches between parties previously not aware of each other or each other's competences. But what happens after this first contact? Someone has to take control of the co-operation and manage the work of all involved partners. The upcoming example, SourceForge, shows the growth of a platform addressing this problem. Enabling teamwork even with people residing at many different organizations, newer meeting each other in real life.

The Open Source Software (OSS) development movement is a classic example of a social network; also it is a prototype of a complex evolving network. Open source software, usually created by volunteer programmers dispersed worldwide, now competes with that developed by commercial software firms. SourceForge was one of the most popular OSS hosting web sites, which offered features like bug tracking, project management, forum service, mailing list distribution and more.

The company

Geeknet Inc. owns several computer tech-related websites and the online retailers. Formerly known as VA Research, VA Linux Systems, VA Software, and SourceForge, Inc., it was founded in 1993, headquartered in Mountain View, California.

VA Research built and sold personal computer systems with the Linux operating system installed, as an alternative to more expensive Unix workstations available at the time. At the time they started operations, they were one of the first computer vendors to offer Linux as a pre-installed operating system. Dell and IBM hadn't yet flexed their muscles in this market, so VA Linux could still make a modest profit. The business was profitable and grew quickly, with over $100 million in sales and a 10 percent profit margin in 1998. In 1998, the company received investments of $5.4 million ($8 million adjusted for inflation) from Intel and Sequoia Capital.

VA Linux decided that they would leave the systems-hardware business and focus on software development. During the summer of 2001, all of the hardware-focused employees were dismissed as a result of this shift in the company's business model. In 2001 the company formally changed its name to VA Software, recognizing that the majority of their business was now software development and specialty news and information services.

VA Software changed its name to SourceForge Inc. and merged with OSTG (Open Source Technology Group) in 2007. SourceForge Inc. became Geeknet Inc. in 2009 by creating the latter company and merging SourceForge into it.

The innovation

With a simple philosophy to serve the open source community and help the movement thrive, VA Software decided to launch a website called SourceForge. SourceForge has grown to become the largest and most trusted place for open source software tools and applications on Earth. From the casual consumer to hobbyists to professional developers, SourceForge was the access point to the most imaginative developments in technology. SourceForge provided the best tools to help creative people build innovative software and their platform is how they share it with a global audience searching for easy software solutions. The site was free of charge.

When the site opened in November 1999, growth was modest. The site offered free tools, only a small crowd of projects registered by the end of the year. That soon changed. By the end of 2000, SourceForge had thousands of projects

registered; by the end of 2001, almost 30,000 were coding away. And the following year, the flood commenced. Since 2002, "we've been adding a hundred projects a day," Ross Turk, SourceForge's community manager says.

SourceForge (Geek Inc.) is now home to a sprawling universe of open source developers. Some 350.000 projects – and growing – reside there, covering every conceivable computing function.

There were/are other repositories for developers, like GNU Savannah, hosted by the Free Software Foundation, or Novell Forge, or BerliOS, funded by the German government. But none has reached the critical mass of SourceForge, which boasts 38.5 Million visitors per month, 113 Million page views per month and 3.8 Million downloads per day.

SourceForge was home to, for example, rising star **OpenBravo**, a Web-based application written primarily by Spanish developers; **Inkscape**, a Linux and Windows vector graphics editor, coded by a 7-man team from the U.S. and Europe; and **FreeCol**, a game like Civilization. Some of the projects incubated at SourceForge have broken through to the big league. **Zimbra**, acquired by Yahoo for $350 million, began life as a SourceForge project. **SugarCRM**, launched as a SourceForge project in April 2004, raised $26 million in venture capital; its customer list includes Starbucks and NASA.

The SugarCRM project

SugarCRM is a software company based in Cupertino, California. They produce the web application Sugar, also known as SugarCRM, which is a customer relationship management (CRM) system that is available in both open source and commercial open source applications. Sugar's functionality includes sales-force automation, marketing campaigns, customer support, collaboration, Mobile CRM, Social CRM and reporting. The company operates a number of websites, including its commercial website Sugarcrm.com and a development website (SugarForge.org).

John Roberts, Clint Oram and Jacob Taylor created the SugarCRM open source project in April 2004, and founded the company in June 2004. "SourceForge.net provided an initial infrastructure for our project. With almost no effort, we had trackers for bugs, feature requests, and patches available. The forums have been instrumental in communicating with our community, and the file repositories have been where our 35,000 downloads have been sent from. It not only provided all the critical tools for collaborative development, but it was central to getting the word out about us", said Jon Roberts.

SugarCRM was one of the first commercial open-source-based corporations to raise venture capital. In June 2004, $2M was invested into the startup. With the help of this investment, Sugar expanded quickly and by September 2004, potential users had downloaded 25,000 copies of the application, then named Sugar Open Source. In October 2004, the company was named "Project of the Month" on Sourceforge. Sugar Community Edition is available as a free download on Sugarforge, which has seen over 9.000.000 downloads.

Translate the infrastructure needs of SugarCRM's developers to your own business idea! Think about how challenging it is to keep your own development tasks on track if you are actually able to control everyone involved. (In fact it is sometimes no less challenging in case you work totally alone.) When distant partners appear whose work is not available for you to see/review on a daily basis and multiple organizations contribute limited resources things get more complicated:

- *Who is going to explain/share tasks to those involved? How?*
- *How to take care of critical milestones? How to ensure that different components really fit together?*
- *Can you easily follow what happens at your external partners during the development?*
- *Is it possible to keep track of new ideas emerging? What about different versions?*

Answering all these questions is the responsibility of the managers in control of the open innovation process. (And once again, like at any other innovation process, the final outcome is greatly dependent on management skills).

It is not always necessary to grab external tools like SourceForge to execute collaborative development. But it is essential to have properly planned administrative processes and an efficient management to achieve results. Plan and discuss these issues with your future partners, agree on possible solutions before facing problems.

The innovative idea of SugarCRM

It used to be sufficient for sales people to keep track of deals, prospective deals and customers in one's own proprietary database, but it's no longer the case. Customers want to be talked to in many different ways nowadays. The intrusion of social media has brought new requirements in the traditional landscape of sales force automation.

Of the more than one billion social media users worldwide, only a fraction are using CRM applications to manage their customer relationships. The reason for that is that CRM has been traditionally complicated and difficult to use. Sugar makes CRM simple. Like Facebook changed the way you relate to family and friends and LinkedIn redefined what it meant to be connected at work, SugarCRM has revolutionised the way companies relate to customers. In just the space of six months, the entire landscape of customer relationship management and sales force automation in particular, has changed dramatically.

There are three key aspects in which social can be introduced within customer relationship management:

1. What my customers are saying about themselves on various social media platforms: this is the **listening component.**
2. The way that your customers want to be talked to: this is the **talking component.**
3. The way that your customers want to be engaged with: this is an **engaging component.**

Listening

Listening is important because it enables firms to understand the customer's interests and pain points. There are new ways of listening to customers

nowadays. The possibilities are numerous, and each individual or company chooses their own preferred channel (Facebook, Twitter, etc.). Sugar CRM has developed a way of bringing the information into the CRM platform which is populated by sales people.

Talking

All sorts of customers want to be talked to in different ways. Some prefer LinkedIn, some prefer e-mail or Twitter direct messages or even Facebook chat or instant messaging, etc.; the list is endless. This is probably an area in which changes are the most fundamental. Sugar CRM helps for salesman by telling which preferred channel the customer likes best.

Engaging

Engaging with customers is the ultimate goal of sales force automation. Sugar CRM is investigating and allocating information from different resources to that project.

SugarCRM is known throughout the industry for its continuous efforts to provide the best possible customer experience. Through a productive partnership with IBM, it has succeeded in expanding its services to not just small and mid-market companies, but large enterprise-level companies as well.

It should be no surprise then that SugarCRM is growing. Over the course of 2011, SugarCRM welcomed more than 2,700 new customers around the world. Among the list of the latest SugarCRM customers are Bankai Group, Coface Services, Hilco Appraisal Services, Kaut-Bullinger, Powwownow, Radio Mitre and Tulip Telecom Ltd. With more than 1 million users, SugarCRM is now the third most widely used CRM in the world.

Conclusion

The strentgth of and rapid success of SugarCRM lies in two innovative idea: cooperation and publicity (openness). For the first four months of the project the team worked virtually via Yahoo! IM and VOIP, they didn't have an office. They did a lot of communication through the forums and email. Contributors typically made suggestions in the forums and they followed up with discussions on some of the great ideas, and implemented some of them ourselves. The motto of John Roberts was: "Send an email to dev@sugarcrm.com. We are always looking for smart people to join our project."

3.5 Google – Do the largest companies open up?

Leave the domain of software designing micro-teams and take a look at their giant counterparts. Upon hearing the name of Google the image of one of the largest and most innovative companies in the world comes to our mind. Does this image contradict the idea of Open Innovation? Why would a company like Google care about the external world instead of building upon its own ideas?

The company

The founders Larry Page and Sergey Brin met at Stanford University in 1995. By 1996, they had built a search engine (initially called BackRub) that used links to determine the importance of individual webpages. Larry and Sergey named the search engine they built "Google," a play on the word "googol," the mathematical term for a 1 followed by 100 zeros. Google Inc. was born in 1998, when Sun co-founder Andy Bechtolsheim wrote a check for $100,000 to that entity – which until then didn't exist. Google is the most successful high-margin, high R&D, high-growth tech company of our era, just as Microsoft was in the 1990s, Apple and DEC in the 1980s, and IBM in the late 1960s.

Google is a computer software and a web search engine company that has been acquiring, on average, more than one company per week since 2010, with its largest acquisition being the purchase of Motorola Mobility, a mobile device manufacturing company, for $12.5 billion.

Actually, Google keeps looking for good ideas of the outside world all the time. Many of it's recognized services originated as independent start-up ventures with just a few people aboard. Of course, a large company like Google often finds it much easier to integrate a new external idea by buying it instead of working together with micro-entrepreneurs on the long term. Still, two things have to be considered:

- *Google obviously does not feel uncomfortable by the thought of following and developing innovations based on things invented outside of the company. Instead: even though they have significant own R&D resources, their team is on the continuous search for external ideas ripe for integration to their products/services.*
- *Nevertheless you could still say that these transactions have nothing to do with collaborations. These are just one-time deals without any future*

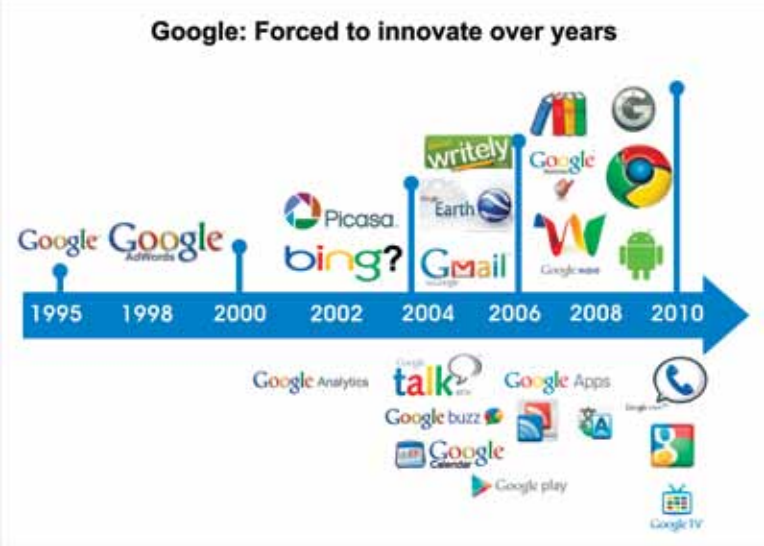
interaction. But if you dig deeper to these products you'll realize that in many cases Google did not only buy the rights to continue research. They bought the whole team behind the idea. Because they wanted to have the best experts of a new domain to work together continuously with their own staff.

Google is not just buying ideas. They also want to make sure these ideas can be implemented. A key to this is having the best possible people work on this challenge. As long as the approached innovators successfully convince the buying company that they are the best people to work on their innovation, there is no need to fear being left out of the business.

The innovation

"The innovation management results not only in a convergence of technologies but also in a convergence of companies which often collide with each other for the first time as competitors in the new mobile innovation arenas." Dr. Rolf-Christian Wentz.

Google's innovative search technologies connect millions of people around the world with information every day. Google, after all, has done an amazing job



with its search engine and, thanks to the profits from all the ads it sells, has an enormous war chest to invest in research and development. The company is so keen on innovation that it allows its engineers to spend 20 percent of their working time on projects that aren't necessarily part of their job description. It's that "20 percent time" that helped spawn such projects as Google Suggest, AdSense for Content and Orkut. And what Google can't invent, it can buy. Its Google Voice application, which it acquired when it bought GrandCentral Communications in 2007, is a stellar product, as is YouTube, which Google acquired in 2006.

With such a farsighted mission, the short-term profitability of a new offering doesn't seem to matter as much to Google as it might to other businesses. The company's managers were strategically patient. Eric Schmidt has estimated that it will take 300 years to achieve the mission of organizing the world's information. His forecast might invite smirking; still, it illustrates Google's long-term approach to building value and capability.

Google, unlike many companies, can afford its broad mission and collection of innovations simply because its search-based advertising is a fantastically profitable product that provides cover for many unprofitable ones. The company certainly cares about accumulating customers, but its executives believe that over time the business model and the money will take care of themselves. At a 2007 Bear Stearns conference, Schmidt put it this way: "Ubiquity first, revenues later....If you can build a sustainable eyeball business, you can always find clever ways to monetize them."

Conclusions

Firms may choose from several strategies for external knowledge acquisition, such as inter-organizational cooperation, venture capital investments, outsourcing of Research and Development, or licensing-in. Chesbrough introduced the 'open innovation model', which emphasizes that the innovation process should be flexible and may cross organizational boundaries, so that it enables the transfer of knowledge and capabilities from and to other independent organizations. According to the open innovation model, firms should not only consider internal, but also external knowledge, capabilities and paths to market. "We should profit from others' use of our knowledge, and we should buy others' knowledge whenever it advances our own business model."

But are knowledge acquisition strategies favorable for incremental improvements of existing products (incremental innovations) as well as completely novel innovations that are new to the market (radical innovations)? Acquisitions do

have a positive effect on innovation performance in general. Apparently, there is greatest potential for learning and innovation when the knowledge bases of the firms to be integrated are diverse enough to encourage creativity and novel solutions, but also have sufficient overlap to be able to understand and assimilate each other's specific knowledge.

3.6 Open innovation via client sourcing – "Ask Your Customers!"

The previous examples offered Open Innovation opportunities with any possible partner outside the company/organization. In the following best practices we narrow the field of possible partners a little bit.

A usual first step towards opening the internal innovation system is to utilize the knowledge of clients/customers. Why?

- *Because Open Innovation has to be based on a benefit for all participants. In case of an already established customer base, this benefit is easy to identify: both the company and it's clients want better products/services. (This benefit is often so much important to the customers that they participate voluntarily in the improvement of products/services, without asking for extra payments).*
- *In addition: aiming to connect to external partners (especially in case of new collaborations) necessitates the recognition of knowledge and expertise of such candidates. And in case of customer relations, such information gets available for both parties.*

First, take a look at models to ask for a direct contribution or opinion of the customer:

Migipedia – Customer based Solution

The company

Migros is one of Switzerland's largest enterprises, its largest supermarket chain and largest employer. Migros keeps the cooperative society as its form of organization. A large part of the Swiss population are members of the Migros cooperative – around 2 million of Switzerland's total population of 7.2 million, thus making Migros a supermarket chain that is owned by its customers.

The innovation

Migros launched in 2010 an own Social Network platform under the name of Migipedia, where consumers are invited to discuss products, ask the brand questions and, recently, to "*invent their favourite jam*". The idea behind the network, which is currently still in its beta phase, is to offer a discussion platform for Migros products and services, where customers can express what they think. It is not setup as an online store, meaning buying products over Migipedia is not possible.

On Migipedia, users have the possibility to register and create profiles. Users can participate in polls, contests, post comments on products or use the forum area. In addition, all Migros products are listed in a database, which allows visitors gather information about a particular product. It is a combination of information platform, as well as feedback and open innovation tool.

An example for the innovation is the regular opinion survey performed by Migros. Users get to choose which products are to be added to the existing range of products, as well as the shelves. In other words, customers get to choose what they want and Migros will add the product, if the demand is high enough. Migros expects to fine tune its product range with the help of this platform. Furthermore, customer concerns about products can be expressed, which allows Migros to act fast if certain products are compromised.

Conclusion

A real innovation, but with few takers. The home page of Migipedia displays the last 10 contributions, received over the 5 preceding days. Migros offers opportunities through Migipedia but does not really maintain a dialogue. The brand is satisfied with just responding to some of the posts.

The MyStarbucksIdea.com – Share, Vote, Discuss, See website

The company

Starbucks Corporation is an international coffee company and coffeehouse chain based in Seattle, Washington. Starbucks is the largest coffeehouse company in the world, with 19.555 stores in 58 countries, including 12.811 in the United States, 1.248 in Canada, 965 in Japan, 766 in Great Britain, 580 in China and 420 in South Korea.

Starbucks sells drip brewed coffee, espresso-based hot drinks, other hot and cold drinks, coffee beans, salads, hot and cold sandwiches and panini, sweet pastries, snacks, and items such as mugs and tumblers.

The innovation

Starbucks launched in 2008 "www.MyStarbuckIdea.com", a portal that permits customers to suggest improvements to the store, products, pricing, etc., and for other customers to vote and identify the most popular ideas. Real-life Starbucks employees actually respond to the ideas, suggest improvements, identify logistical issues and, when an idea is selected for development and launch (which they actually are!), providing timetables and commentary on the launch. The motto of the website is: "You know better than anyone else what you want from Starbucks. So tell us. What's your Starbucks Idea? Revolutionary or simple, we want to hear it. Share your ideas, tell us what you think of other people's ideas and join the discussion. We're here, and we're ready to make ideas happen. Let's get started".

Starbucks customers share their ideas on products, experiences in coffee shops, collective commitments, discuss among themselves, and with the brand, which commits itself to implementing their ideas. Starbucks contacts are identifiable and a counter displaying the ideas that were shared and those that were implemented is shown to prove its authenticity. The brand assumes, discusses, listens, commits.

Conclusion

The idea of soliciting ideas from customers is not new, but the execution is so clean, the relationship so transparent and results so clear for www.mystarbuckidea.com that it may help to motivate customers to return and refer. Constant proactive contact with the community and constant stimulation can improve customer engagement, and will gain improved retention and profitability as a result.

The Starbucks website is undoubtedly a model that is exemplary among client sourcing. There are at least two suggestions for small and medium sized enterprises that can be executed from Starbucks:

1. **Engage your "Best Customers" and ask them questions.** This can help you to understand the special needs of your customers and to highlight the weak points of your business model.

2. **Interview Best Customers who are heavy users or purchases of specific product/service categories.** This can help to understand the strength of your company, to improve competitiveness and overcome the barriers.

It must be also outlined that though the opinion of consumers is often available free of charge, the system collecting them requires significant resources. This again indicates a need to thoroughly plan Open Innovation actions. Otherwise you might get into serious trouble with administering the external requests, and might lose important information or even annoy contributors.

3.7 Living Labs – User driven innovation with deep involvement

Earlier examples of this guide indicated options for harvesting customers' knowledge as an input for the R&D processes. A recent lecture by Marcel Bogers[4] reasoned supporting such initiatives on the example of the United Kingdom. An estimated 6,2% of all customers are involved there in some similar innovation action, which means a total of over 3 million people

[4] University of Southern Denmark

contributing some of their time to conceive/improve new products and services versus only 22.000 paid innovation professionals of the same country. Even if the contribution of individual persons is microscopic, the overwhelming amount of customers is something that cannot be neglected anymore.

But is there a way to further utilize consumers' knowledge other than asking them to fill an occasional questionnaire?

The example below is a confirmation of this. Living Labs like Botnia are typical tools for user-centered open innovation. Some organizations discovered a common challenge in their innovation systems. While their research departments were quite smart they still operated somewhat isolated from the real world. Their ideas originated from basic research, were evaluated, refined and carefully brought to the market, but it was still rather hard to make sure that the outcome of these processes is exactly the product/service which is most required by their consumers.

Why not turn the whole process "upside down"? Create environments where end users are the ones who generate new ideas, new applications. Living Labs are such real-life testbeds, not only for the verification of already established concepts, but also for direct interaction and co-creation with consumers.

The Living Lab research concept

A Living Lab is a user-centered open innovation ecosystem often operating in a territorial context (e.g. city, agglomeration, region), integrating concurrent research and innovation processes within a public-private-people (business-citizens-government) partnership.

User centered research method such as action research, community informatics and other usability methods, already exist, but fail to sufficiently support users for co-creating into open innovation environments. The philosophy of living labs is to turn users, from being traditionally considered as observed subjects for testing modules against requirements, into value creation in contributing to the co-creation of emerging new ideas and innovative concepts.

Living labs could also be used by policy makers for designing, exploring and refining new policies and regulations in real-life for evaluating their potential impacts before their implementations.

How Living Labs work

The living lab process integrating both user-centred research and open innovation, is based on a maturity spiral concurrently involving a multidisciplinary team in the following four main activities:

1. Co-creation: bring together technology push and market pull (i.e. crowdsourcing) into a diversity of views, constraints and knowledge sharing that sustains the ideation of new scenarios, concepts and related artefacts.

2. Exploration: engage all stakeholders, especially user communities, at the earlier stage of the co-creation process for discovering emerging scenarios, usages and behaviours through live scenarios in real or virtual environments (e.g. virtual reality, augmented reality, mixed reality).

3. Experimentation: implement the proper level of technological artefacts to experience live scenarios with a large number of users while collecting data which will be analysed in their context during the evaluation activity.

4. Evaluation: assess new ideas and innovative concepts as well as related technological artefacts in real life situations through various dimensions such as socio-ergonomic, socio-cognitive and socio-economic aspects; make observations on the potentiality of a viral adoption of new concepts and related technological artefacts through a confrontation with users' value models.

Living Labs provide structure and governance to user participation in the innovation process. There is nothing that prevents the use of Living Labs methodologies in private companies. In fact, some well known companies have largely explored its use. Living Labs organizations, despite of the difficulties, and thanks in part to the support of the EU, in the last two years have grown fast, and a network comprising 129 members from Europe, Brazil, South Africa, Mozambique, China and Taiwan has been established.

Botnia / Skygd - Living Labs benefitting SME Innovation

Testbed Botnia is one of Sweden's first and largest operating open testbeds for mobile services. Geographically Botnia is located in the northern Swedish town of Luleå, but tests are conducted all over Sweden. Today the number of Botnia "test-pilots" are over 5900, and they aim to have at least 10 000. Test-pilots are private persons of all ages that have registered voluntarily. The most important assets of Botnia are the technical platform and the unique evaluation method, developed in cooperation with scientific researchers.

Botnia aims first of all testing new technologies and its applications on a small scale with a representative group of the potential customers drawn from their "test pilots".

Botnia Living Lab tested the Skygd mobile security service. The security service was developed in collaboration with researchers at Luleå University of Technology, and the purpose of this Test Pilot Mission was to examine the usability of the service and how it responds to the need for personal security in a real environment. Test pilots' feedback was also important input for the further development of the service.

The Luela Sweden based Skygd AB was founded in 2007 to provide mobile security services. The service was originally based on the fact that many of us experience that the level of insecurity is increasing in our society. Security businesses are working hard to develop products and services which offer a feeling of security. As we bring the mobile phone with us everywhere, it has been a matter of time before it would turn into a tool for a security solution.

Innovation

The mobile phone is connected to GPS satellites so your exact position can be shown on a detailed map. Hence, when you send an alarm the receiver can follow your position in real time on a web-based map at the same time as an audio connection is created and pictures from the mobile phone are transferred to the receiver.

The beta testing of the software was carried out in frame of the mobile living lab operations by the involvement of 20 young girls (target group) who used the service in their real life and were asked to share their experiences afterwards. The real life test was used to fine tune the service before launch to open market. In addition to the end user involvement, experts of the living lab aided the software company to prepare for the test scenario. During and after the test period, interviews and questionnaires were used as follow up and evaluation methods. After this test the service has been launched on the open market.

Recognising issues in the mobile services surroundings that might influence users' attitudes, when performing tests and evaluations in an uncontrollable context, are important.

When evaluating innovations such as mobile services during a short test period, it is difficult to get results on the degree of impact that the innovation has in its context. However, if the test period is extended the risk of ending

up with evaluation results without an impact on the innovation becomes even more increased.

Conclusions

User-driven open innovation methodologies can significantly improve the efficiency of the innovation process and contribute to better take-up of R&D results, thereby improving the competitiveness of industry, in particular for SMEs, including microentrepreneurs.

The strength of the Living Labs could be summarized as follows:

- **Feedbacks** from the "test-pilots" could serve as new input for the further development of the service/technology originally not considered (direct feedback from the end-users).
- **Real** world users provides the best possible testing environment available, and therefore results are more reliable for the future marketing.
- **Test** pilots are volunteer and willing to participate. Thus, feedbacks are unbiased compared to interviews or opinion polls.
- **Living** labs did not require extreme resources / organizational background for the execution. Therefore, it could motivate even SMEs or microentrepreneurs to launch innovation actions based on strong end-user interaction.

3.8 Technique-oriented gastronomy – Hunt for new impulses

Companies looking for external knowledge and ideas to extend their own innovation can be categorized by a wide spectrum. On one end there are enterprises looking for a very specific competence. They have a well defined problem for which they seek an optimal solution. The other end of this spectrum is represented by organizations which search the outside world for completely new knowledge, often residing on technology fields very different from their own, looking for things they "never even dreamt of" previously. The reason for this attitude is to get new impulses which alter their products and services in a substantial way, thus differentiating these from competitors' offer. One recent example of this phenomenon is "molecular gastronomy", where fundamental scientific knowledge of chemistry meets and upgrades gastronomy experience.

Where science comes to the kitchen

The term “molecular gastronomy” was coined in 1988 by the late Nicholas Kurti, a renowned low temperature physicist and cooking enthusiast from Oxford University, and French physical chemist Hervé This. Kurti became interested in applying his scientific knowledge in the kitchen after he retired, and together with This, organised the first molecular gastronomy workshop attended by chefs, scientists and food writers in Erice, Sicily.

In the pure sense, molecular gastronomy is the scientific study of the chemical and physical processes that accompany cooking. Today, this term has also, rightly or wrongly, come to describe a style of cooking that creative and innovative chefs have developed using advances in science, technology and even psychology.

To see the effect that embracing such emerging technologies might has on a traditional enterprise, take a look at the history one of the best restaurants of the world, El Bulli, Spain.

The El Bulli restaurant

Originally founded by a German couple in 1961 near the town of Roses, Catalonia, Spain, the small restaurant overlooked Cala Montjoi, a bay on Catalonia's Costa Brava. The restaurant was always trying to be creative by attempting to innovate in an industry that in the 1960s was underdeveloped in Spain.

In present days El Bulli is a Michelin 3-star restaurant described as "the most imaginative generator of haute cuisine on the planet", offering a very high quality culinary experience for a select few customers. (There is no menu a la carte, but a fixed one. Each customer taste 40/45 dishes per night. The average cost of a meal is €250). In the past years the interest of the public grew to receive 2 million booking request annually. Still, only 50 people per night were allowed in the restaurant (meaning 8,000 people per year). As of 2012 the restaurant is closed to the public while the management is working on the transition to a new business model. The reasons of which are to be explained later.

Restaurant Magazine judged El Bulli to be Number One on its Top 50 list of the world's best restaurants for a record five times - in 2002, 2006, 2007, 2008 and 2009, and #2 in 2010. Head chef Ferran Adrià is one of the top 100 influential people in the world, and the number one in a list of the "Ten Most Influential Chefs" in the last ten years.

The innovative open business model of El Bulli

El Bulli was founded with the aim to belong to a small number of restaurants of outstanding quality. However, since the restaurant won one Michelin star in 1976 meaning "very good cuisine in its category", El Bulli wanted to be "exceptional" rather than "very good".

Ferran Adrià joined the staff of El Bulli in 1984, and was put in sole charge of the kitchen in 1987. He actively contributed to the evolution of the successful business model of El Bulli which had at least four very important milestones:

1. **The innovative idea – a new concept in gastronomy ("Creativity means not copying")**

At the end of the 80's Ferran Adrià realised that the world of gastronomy almost never applies the new advances of chemistry and physics.

"*After getting back to the restaurant, we were convinced that we needed to use major cookery books less and less and try to find an identity of our own. This was the start of our plunge into creativity in El Bulli"* (Ferran Adrià, 1987).

Ferran began to revolutionalize El Bulli first of all by innovating in the kitchen through reducing taste sensations to the molecular level, which results in exciting flavours never existed before. This new technique-oriented gastronomy concept was linked to the innovative identity of El Bulli.

"*In 1994 we began to suspect that for our cuisine to develop at the pace we wanted, we would need to expand our idea of creativity and orientate our search not so much towards mixtures of products or variations on concepts that already existed in order to create new recipes, but to create new concepts and techniques. From then on, the technique-concept search was our main creative pillar, without abandoning other styles and methods, and this gave rise in subsequent years to our foams, new pasta, new ravioli, the frozen savoury world, new caramelisation, and so on. Technique-concept creativity almost certainly marks the most important difference between a cuisine that is merely creative and one that is constantly evolving*".

As a result, El Bulli received its second Michelin star in 1990 and the third in 1997, and became a well-known place on the map of the world's gastronomy. The team of El Bulli spent half of the year in Barcelona with searching for new methods and techniques to create new dishes for the following season.

This huge investment (both in time and money) has slowly converted the restaurant to a "test-site", where the outcomes of the new techniques and methods were tested. In the business model this investment resulted that the most valuable product of Ferran was not any more the food itself, but the know-how on the techniques of producing and serving them.

2. Acquisition of new external knowledge

Part of Adrià's success lied in his ability to absorb the new ideas that emerge outside the organization.

Ferran's kitchen was always open for new creative colleagues. "*I am the creative director", announces Adrià forcefully (...) If I ran a company, I would be in charge of creativity issues and (...) I would never have a permanent staff. I prefer temporary employees, to allow for a free flow of ideas and to avoid routine.*" As a result many of those who have worked with him have taken his techniques and ideas back to their part of the world.

El Bulli also participated in the INICON project, financed by the European Union, which was aimed at promoting collaboration among scientists, chefs and restaurants. "Recently, Harvard's School of Engineering and Applied Sciences agreed to provide El Bulli with scientific and technical knowledge about the configuration of foods, textures and structures".

3. Sharing the knowledge ("...if you cannot patent, publish...!")

El Bulli has also published books on its development, menu and philosophy since 1993 ("The taste of the Mediterranean", 1993) in both large format and small format for supermarket sales. This first book of Adrià not only included recipes but mainly concentrated on the analysis of styles and creative methods.

"...We had of course kept the recipes for each of them, but it had not yet occurred to us that it might be a good idea to catalogue them as well. [...] So we began to review our output year by year and started giving a number to each recipe. This task was fundamental when we decided to tackle our General Catalogue and the first evolutionary analyses".

Ferran Adrià, Juli Soler and Albert Adrià published "A Day at El Bulli" in 2008. The book describes 24 hours in the life of El Bulli in pictures, commentary and recipes.

These first steps of cataloguing and analysing all own progress, including each and every piece of the acquired knowledge, highlight an essential milestone for everyone interested in sharing knowledge and resources by open innovation. To find corresponding partners, or at least to indicate possible options and requirements for future collaborations, each enterprise has to define:

- *What are my competences? ...the things that I am really good at? How could I explain it to others?*
- *What is in my possession that could be valuable for external partners or future projects? Can I define parts of my knowledge as an intellectual property that would be interesting for someone else? Is it to be sold/ licensed in its current form?*

Meanwhile, El Bulli was more and more influenced by the management's radical hunt for innovative solutions. In the past years El Bulli was only open for 6 months in a year and even then only open for dinner time. The rest of the time the 70 head team worked in research creating the new dishes of this avant-garde cuisine. No wonder that the restaurant itself operated with a loss since 2000, with the significant operating profit resulting from El Bulli-related books and lectures and other ways of disseminating El Bulli knowledge.

Ferran Adrià has announced he will be closing El Bulli in 2012, and will reopen it in 2014 under a totally new format, focused on the limits of creativity from an interdisciplinary view. "*El Bulli will have completed its journey as a restaurant.*

We will transform into a creativity center, opening in 2014. Its main objective is to be a think-tank for creative cuisine and gastronomy, and will be managed by a private foundation." Ferran's willingness to share his knowledge means his influence now spans the globe, and he is the number one in a list of the "Ten Most Influential Chefs" in the last ten years.

4. El Bulli for co-branding

Despite its fame and recognition, the restaurant operated with a loss, but this was far from being a problem. The role of the restaurant "*is nothing more than an R&D laboratory which they didn't expect to be profitable by itself. The restaurant generated the knowledge that was needed for the profitable areas in the El Bulli business model*". Other companies could have access to these profitable resources, principally its brand and its knowledge.

In 1999, the restaurant decided to share its knowledge about creating oils, sauces and aperitifs with Borges, the food manufacturer. Borges launched products that were co-branded by both companies. This became a new source of revenue for El Bulli, which concluded similar co-branding agreements with other companies such as NH Hotels and Nestlé. This strategy, based on a small number of close alliances, aimed to avoid any loss of control over the brand. The company also preferred to establish deep and long-lasting relationships with its partners, because the resources that it shared with them are technology processes, so they are harder to protect legally.

Conclusions

El Bulli offers a classic example of an open innovative business model approach. "The company actively looks for new external sources of innovation in the world of gastronomy. It closes for long periods of time with the goal of finding and absorbing new ideas. That enables the restaurant to stay one step ahead of other restaurants that try to copy its formula for success".

"El Bulli markets its brand and its knowledge through a variety of tightly managed relationships that have enabled its brand to penetrate business sectors far beyond the typical business activities of a restaurant. So, while the restaurant is not profitable, its overall group of businesses does make money".

Ferran's success in building the innovative organization could be summarised as follows:

- **Knowledge** is created in but mainly outside the organization.
- **Partnerships** enable knowledge acquisition (i.e. Harvard).

- **Sharing** knowledge with others ("...if you cannot patent, publish...!").
- **The** restaurant operates as an R&D laboratory, with no profit, but it provides the necessary knowledge for other businesses that are highly profitable.
- **Other** companies approach El Bulli for co-branding.
- **Teamwork:** individual talent to enhance organizational talent.
- **Extreme** creativity.

3.9 VISENSO – based on collaborations since the start

The previous example described the dramatic influence new external technologies might have on a company deciding to utilize them. The impact of such external knowledge and technology transfer is so great that indeed many enterprises are conceived from the very beginning based on the successful exploitation of external knowledge for a mutual benefit of all partners involved. A rather typical situation for such a scenario is the transfer of research results originated from a university or research institute to an organization with solid management skills for the commercial utilization. Stuttgart based VISENSO GmbH. is an excellent example of such a collaboration.

The company

VISENSO GmbH. is a leading provider of visualization and virtual reality (VR) software and complete solutions (software and hardware). It develops tools that supports engineers in the evaluation of complex lines in the development process of digital product data (e.g., in fluid and structural mechanics) either locally or at the VR visualization cooperatively with partners around the world. The core of this is the COVISE software. COVISE is the "Total Physical Interface", which allows the comprehensive visualization of all the physical characteristics of the virtual products and to optimise the users. Based on the CAD model, the entire product development and manufacturing process could be simulated. In addition, there is the possibility for collaborative visualization of the design and sizing results, i.e. CAE data could be visualized and analyzed at the same time by the enterprises.

VISENSO offers basically to medium-sized enterprises complete VR solutions at affordable prices on their specific requirements, but the customers of VISENSO includes Audi, BMW, Daimler, Dieffenbacher, Faurecia, Festo, Hyundai, Kärcher, Miele, Porsche, Stihl, Voith, Siemens and Volkswagen, as well as numerous well-known research institutions, such as the FH Aalen, Fraunhofer IPA, IPT and LBF, ETH Zurich, KTH Stockholm, IWR Heidelberg, among others.

The roots of VISENSO GmbH. are linked to the scientific research of the High Performance Computing Centre (HLRS) of the University of Stuttgart since the first development steps of COVISE in the nineties. Yet the work invested into developing COVISE could have disappeared in theoretical publications without those involved aiming to make it a functional tool serving industry needs in real life scenarios.

Backed with research conducted at the university, COVISE could already be implemented in 1995 at the Weissach Development Centre of Porsche AG in frame of a joint research project (COVAS).

Strong connections to research facilities remained a key element of VISENSO's strategy. And this connection is not only represented by co-founder and chairman of the advisory board Dr. Andreas Wierse who spent 7 years as a researcher of Stuttgart University after graduation.

Today scientific partners of VISENSO are multiple universities from countries including Austria, Finland, Poland and of course Germany as well as non-educational research organizations like the Max Planck Institute or Fraunhofer Institute.

Working together with internationally acclaimed leaders of their research field reprsents both an incentive but also a committment towards customers to deliver the newest possible trends and technologies as explained on the company website.

The Innovation

Software for visualization and Virtual Reality is vital for competitiveness, to deal with the increasing variety and complexity of products and to absorb decreasing margins. For example, product development in the car supplier industry: Designers of aluminium wheels have used prototypes up to now to test fatigue of material or rupture. They manufacture these prototypes by means of moulds. Even preparing these moulds requires more than one test to get the correct temperature, speed of filling up, pressure, and cooling. In case of an error the whole process has to be repeated. A time consuming and expensive procedure because it requires new tools and new test objects every time. Virtual prototypes significantly reduce costly failures with physical prototypes and the expense for tools to manufacture new ones. This is environment-friendly, reduces material consumption and costs; on the other hand it increases quality and speed of innovation. In this so-called "digital mock-up", virtual prototypes replace physical ones. Designers of engines optimize combustion processes and torque by using a virtual engine. Virtual Reality enables you to carry out crash tests without damaging anything.

Software for visualization and Virtual Reality is now established in the market. Virtual Reality works as “turbo” even in other branches of business. Globalisation, e-business and increasing competition accelerate this trend. This technique to “grasp” something is no longer in its infancy. It offers real advantages.

Frost & Sullivan analysts estimate that in the European computer-aided design, computer-aided manufacturing and computer-aided engineering markets alone, turnover will increase by around 40 percent. And this is only part of the business. Trade analysts estimated that the world wide market for Visual Simulation/ Virtual Reality Systems was around 25 billion US dollars.

As a leading provider of interactive virtual reality standards, VISENSO engineering developed solutions in all fields of application of innovative virtual reality technologies. In cooperation with academic partners, VISENSO first developed a new 3D visualization software and 3D modules for use in university education.

This innovative approach in scientific simulation and development tools provided 3D visualization capabilities through which users can understand complex issues better, quicker and implement the project-knowledge.
The heart of the innovative approach of VISENSO originates from the COVISE software. COVISE stands for COllaborative VIsualization and Simulation Environment. It is an extendable distributed software environment to integrate simulations, postprocessing and visualization functionalities in a seamless manner.

From the beginning the work of VISENSO was designed for collaborative working allowing engineers and scientists to spread on a network infrastructure. An application is divided into several processing steps, which are represented by modules. These modules, being implemented as separate processes, can be arbitrarily spread across different heterogeneous machine platforms. Major emphasis was put on the usage of high performance infrastructures such as parallel and vector computers and fast networks.

In a collaborative session there are as many user interfaces as there are participants. One user is the master and has the complete control over the environment, while the others are slaves and can do nothing besides requesting the master role. This allows several users to work in a collaborative way. One can invite other users on different hosts to participate in the current project. The user who initiated the collaborative session becomes the master.

Modules can be started on any host participating in the session. Renderer modules play a special role: in a collaborative session Renderers run locally on

each machine. When the master user manipulates the objects in the Render window, only small synchronisation information has to be sent to the other renderer modules. When the master rotates the scene, the new transformation matrix is sent to the controller, which in turn sends it to all other (slave) renderers. Of course every user can request the master role.

Networks established

In addition to university/reserach roots, VISENSO built strong collaborative connections with many enterprises in their domain over the past years. One characteristic group of partnerships was established to ensure an international presence. To this end VISENSO cooperates with leading companies on the field of engineering, numerical calculations, collaborative working and visualization. An equally understandable and self evident connection is kept to key technology partners like Hewlett-Packard or SGI. Yet VISENSO's aim for partnerships did not end by establishing the network for day-to-day business operations.

VISENSO is an initiator and a member of the competence center for digital product development, the Virtual Dimension Center (VDC) in Fellbach, Tuttlingen and St. Georgen in the Black Forest.

VDC and many similar cluster- network- and competence organizations are all based on the idea that companies which share a certain technology field (or value chain, etc.) should combine their resources in order to ensure a greater

impact on both market and development. At the same time similar organizations enable the sharing of information among their members for many reasons, from benchmarking to the elaboration of joint strategies.

From an Open Innovation perspective the greatest value of enterprises collaborating in such networks and clusters is the ability for members and managers to draft a clear overview of the entire portfolio of individual capabilities and competences otherwise hidden in the member companies. This offers the opportunity of matching ideas and abilities, kickstarting new innovation projects based on true open collaborations.

VISENSO writes about these goals set for VDC by its foundation in the following way: *"In order to be able to expand the strong status of the region in the areas of calculation, simulation and visualization, and above all to make the entry into these fields of research by the medium-sized industries (synthetics and metal casting, tool- and mold and die production, chip design, pharmaceuticals, etc.) possible, and so that the sustained economic power of the area is strengthened (insuring the competitive position of these industries), the Virtual Dimension Center has set itself to the goal of furthering the innovations in the areas of evaluation, simulation, virtual reality and cooperative work. Workshops and Events to the different ranges of the VR technology and their surrounding field are periodically organized".*

Observing the way enterprises interact and form open collaborations in networks, one critical challenge has to be mentioned in case of customer and distributor partnerships all collaborating members share the same goals. But in case of innovation shared among competitive enterprises, individual aims for market dominance, profit, etc. can stress the collaboration and cause major disturbance.

Realizing this, many experts on the field of innovation aim to differentiate two stages of possible collaborations depending on how mature the chosen idea/technology is:

- *The "Pre-Competitive" phase, where a (scientific result or) idea is first addressed, tried, tested in real life. In this phase most collaborations are manageable as actual sales operations are still quite far away.*
- *The "Competitive" phase, which is just a few moments before market implementation. Confrontation between multiple companies fighting each other on the market might get serious, Therefore, most competitive enterprises aim to avoid such scenarios. Unless of course they are able to make an agreement regarding the joint utilization of the results (e.g., in a joint product/service of the two companies...).*

Conclusions

This best practice proves that embracing Open Innovation does not necessarily mean a paradigm shift in the life of a small enterprise. It is also possible to design all actions and operations of an enterprise from the very beginning to be based on open principles.

According to Dr. Chesbrough, "Not all the smart people work for us. We need to work with smart people inside and outside the firm". VISENSO aims to be the leading provider of collaborative working in the analysis of numerical results.

To ensure this position VISENSO applies a cooperative open approach keeping connections to numerous research and industrial partners. This enables the company to detect and access many external resources and combine these with their own capabilities.

VISENSO maintains and encourages collaborations with industry partners which not only offers direct benefits during product development, but also contributes to the strengthening of the whole engineering virtualization technology field therefore offering wider future perspectives.

3.10 Széchenyi István University – creating the structure for opening

The example of VISENSO shows reasons for open collaboration between a spin-off company and its academic partners from the perspective of the entrepreneur. But why is such a partnership valuable for a university or research institute? It is important to understand the mindset of these organizations as well since win-win situations are truly necessary to build open innovation. As an example for a university aiming to share knowledge we show the practices of one of our partners - Széchenyi István University - residing in Győr, Hungary. The challenges and possible solutions described in this example are shared by many similar organizations across Europe. It may well be that a local university or research institute in your region is addressing them right now.

There are many differences between the daily routine and strategic aims of a university and a large company. Still, with respect to open innovation both have some very similar problems:

Key output at a university campus is a large amount of well educated people and scientific results/publications. While this output is “produced” additional knowledge is generated at the campus (much like the inactive knowledge and unused ideas/inventions of large enterprises). Of course each university is aware of the fact that such knowledge is being generated. But finding and utilizing this knowledge is a completely different cup of tea.

Where could the additional knowledge hide? In the head of lecturers? In the head of students? In various publications like thesis works?

Which bits and pieces of this hiding knowledge could be valuable? How much? How to evaluate them?

How to make this hiding knowledge visible?

How to turn this knowledge into actual products and services?

Face it: most academic sites are not very good at introducing products and services to the market on their own. It is thus a reasonable step to search for external partners. Or to encourage (former) staff members and partners to launch their own enterprises. Assuming that this Technology Transfer is essential to make profit based on university knowledge, proper management and workflow is needed to ensure it.

The organization

Széchenyi István University is a young organization with perceptible momentum. A former technical (and later multidisciplinary) college elevated to the rank of university in the year 2002, Széchenyi István University now offers 21 BA/BSc and 19 MA/MSc courses on five faculties/institutes, including Law and Political Sciences, Engineering, Economics, Health and Social Sciences and Musical Art. Further education is supported by three doctoral schools.

As a university with technical roots and strong industrial contacts, Széchenyi was destined to serious contribution to the field of applied sciences. Yet by the turn of the millennium, many challenges were apparent which blocked reaching its full potential. While a significant amount of hardware, software and human capital accumulated at the different departments, most of such improvements were based on individual projects and not an all encompassing strategy. As a result of this the competences of the organization were rather fragmented and difficult to manage.

The university also lacked a clear methodology and incentive system to promote and monetize ideas emerging at the various departments.

The innovation

Realizing that instead of gradual adjustments on the level of departments a unified strategic approach is needed to answer the above mentioned problems, the university founded and launched in 2009 a new horizontal organizational unit, the **Knowledge Management Centre**, with staff responsible for the design and maintenance of technology transfer services.

The Centre is described as "*aiming on one hand to explore, utilize and support the evaluation of new research, innovation and technological transfer opportunities, based on the research resources and competences of the university and, on the other hand, to promote the university to become a regional knowledge centre*". Being responsible for generating value based on serving industry needs, the key design principle of the Centre is a very market oriented approach. It is hoped that successful operations of the Centre are going to initiate a feedback for the whole campus to clarify and harmonize research strategy with real market needs. With respect to open innovation the following initiatives of the Knowledge Management Centre are to be mentioned:

Collection, analysis and dissemination of scientific competences

In order to achieve this goal the Centre builds and updates multiple databases in a structured manner. The internal data mining is accompanied with the

organization of various events for the general public to show the strengths of the university on different fields.

Based on these activities the Centre and university management does not only draw a picture about competences valuable for the core scientific/ educational mission of the organization. At the same time they are able to identify inventions, ideas and other scientific results which could serve as a basis for future cooperation with market oriented external partners to be turned into real products and services. Data collection about personal competences of staff members ensures the identification of those colleagues who can be entrusted to manage the further development of these ideas and innovations.

Similar to profit oriented enterprises, one of the key challenges for the university is the ranking of ideas/results identified within the walls of the campus. Given a thorough search of all facilities, an abundance of seemingly interesting and valuable ideas might emerge. But turning these ideas into products and services means a significant investment: first spending on a better definition of the idea (maybe even additional research expenses) than ensuring the protection (patenting, etc.) and the proper method of marketing, approaching possible partners consumes money. Keeping in mind that only a very small percentage of ideas can actually be realized under market conditions, it is clear that promoting all the identified pieces of knowledge campus-wide would not be very wise. (And it would definitely consume an infinite amount of funding).

Policies and models for the valuation of all the emerging knowledge extend beyond the scope of this guide. Still, finding the right balance and investing to the promotion of ideas respectively must be a key element for Open Innovation thinking.

Innovation management

Some tools like project management, desk research and market analysis to foster innovations in this intervention area are self evident.

On the other hand there are two important internal contests running year-by-year which deserve some explanation. The “hunt” for new ideas within an organization in a top-down approach can only dig as deep as the accompanying incentives make it possible. Some hidden ideas are maybe very personal. In other cases they could be extracted from already available documentation, but identifying the right pieces of information would be too much of a hassle.

The contests of the university aim therefore to ensure the interest of all employees offering clear benefits to those presenting reasonable ideas for evaluation.

In the “SZE-Duo” calls students and staff members have to collaborate to present a new idea/invention with a short description and a preliminary cost calculation: Chosen winners get funding to turn their ideas into functional prototypes or other measures bringing them closer to a proof-of-concept stage.

In the “Business Model Competition” entrepreneurs are sought. People within the campus who are already in possession of an idea of at least proof-of-concept quality and are willing to work on a business model for proper commercial exploitation. A verb is lacking in the phrase starting by “People within”. Contestants selected in the first round get external help from industry mentors to further elaborate their business models.

In case of both competitions incentives for employees are bundled with channelling their ideas to a thorough internal development process. Once these ideas are strong enough to be turned into spin-off enterprises the *newly built business incubator of the campus* awaits them. The same incubator is available for external start-up companies who wish to collaborate with the university, thus trying to ensure the commercialization of ideas/knowledge from the campus for the common benefit of all parties involved.

Conclusions

The most important lesson of this example is to be found in the “institutionalized” approach of Széchenyi István University. Once the university management realized that opening measures are necessary for the future of the organization, a decision was made to not to handle the problem on the level of the individual departments. Instead they opted for a transition with strategic impact, founding a new organizational unit: the Knowledge Management Centre.

A basis for building open partnerships to exploit (yet) unused knowledge is a thorough internal search for possible ideas/innovations. As further development (but also the mere presentation to external partners) requires financing, the identified ideas have to be ranked and evaluated. (If an in-house evaluation is limited, cost-effective – yet still safe - methods have to be used to introduce ideas to external partners).

In case of organizations with multiple employees, open innovation actions for the mining of not-yet-used ideas often require a clear incentive system to be introduced. To ensure the participation of the individual employees they should be aware of clear benefits of involvement.

Organizations – like universities – which are very good at generating knowledge but are not experienced in selling products/services to end users are in a continuous struggle to find partners for commercial exploitation. In many cases such partners also provide feedback to these organizations by which they shape and alter research strategies. SMEs aware of this struggle may decide to use it as an opportunity to access knowledge otherwise unreachable for a small company. Establishing “first contact” to a university initiated by an SME is not always easy though. Success requires not only the identification of professors with the sought technical knowledge but also that of contact persons who consider the built co-operations essential for their organizations’ strategy.

Chapter 4 – Afterword

The authors of this Guide thank you for your kind interest while browsing the selected examples. We understand that Open or Closed innovation is not a "black or white" issue for most SMEs. Almost every small company has some experience with external impulses or innovation partners. Yet few of them make the decision to make such external factors a key element of their product- and service development processes. In the hope that some of the strategies and considerations depicted on the previous pages can be adapted to your specific business needs, please scroll through the following checklist for a final assessment of your Open Innovation readiness.

	FOR PROPOSERS...	FOR SEEKERS...
DEFINITION	Can you define what you offer to external partners on your own? Or is the knowledge you wish to share more of the sort where your new partners have to share their needs first before relating to them?	Can you define the idea / knowledge you are looking for? Is it something specific related to a well defined problem? Or are you looking for a surprise instead?
VISIBILITY	Do you know your strengths? Do others know your strengths? Enough to make them consider you a partner? Are you visible enough for external partners?	Do you know where to look for possible new ideas? Are you able to motivate external thinkers to visit you and share their ideas? Or do you have to hunt for the new external ideas on your own?
COMMON BENEFIT	Have you any idea how to come to a win-win agreement with your partner candidates? What would you offer for your future partners? What is going to be your benefit?	
PROTECTION	Do you have the measures to protect the rights and interests of both parties while coming to this agreement? Did you consider intellectual property issues thoroughly? Are there certain things you should avoid to share?	
METHODOLOGY	Who is going to be responsible for keeping the established cooperation alive? Can you work together with external partners continuously on a solution? Are your employees accepting external ideas to use them as their own? Who is covering the costs of the collaboration (being available, etc.)?	

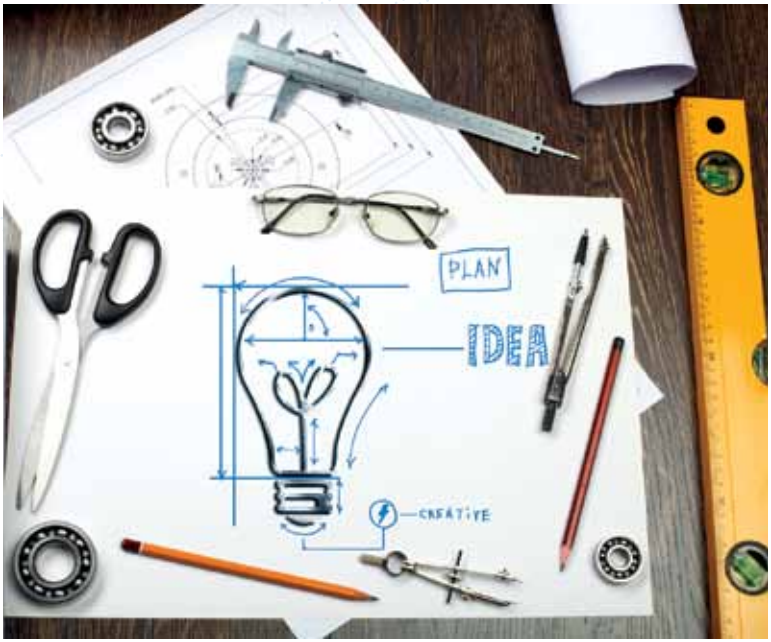
We advise you to take one more look at those examples in this guide which were interesting for you. Find them on the internet. Read additional information. How did those organizations deal with the questions above? How could you? In short, find answers for

- **definition**
- **visibility**
- **common** benefit
- **protection**
- **methodology**

Make Open Innovation a habit of your enterprise instead of an accident. Support Open Innovation by clear strategy and thorough organization instead of casual circumstances.

Share your stories!

Feel free to contact the authors of this publication using the following e-mail address: **innovation@innonet.hu**



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OTHER EURIS Subprojects

The EURIS (European Collaborative and Regional Open Innovation Strategies) Steering Group approved on February 21st, 2011, 6 sub-project proposals submitted to EURIS Call for inter-regional Subprojects. OPINET is one of these approved Subprojects. In order to enable information exchange and access to all the results of EURIS we include a short summary and contact addresses for each of the other 5 initiatives:

InfoPro. Open Information processing within Innovation Networks

Sub-project Participants

- **Lead** Participant: Virtual Dimension Center Fellbach (VDC), Stuttgart, Germany.
- **Association** of Economic Consultants Pro-Akademia, Lodz, Poland.
- **Zala** County Foundation for Enterprise Promotion, West-Pannon, Hungary.
- **Eindhoven** University of Technology, Eindhoven, The Netherlands.

Lead Participant Contact

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Summary

InfoPro targets the information processing needs of innovation stakeholders and Innovation Networks, aiming at improving the impact of the information and data shared and exchanged, by the transfer of best methods and tools, in order to ultimately promote the ability of the participating Innovation Networks to support their members to innovate in a more effective and open way.

Website

http://infopro.euris-programme.eu/

HYBRISECTORS. Open Innovation in sectors with potential hybridation.

Sub-project Participants

- **Lead** Participant: Navarra European Business Innovation Centre (CEIN), Navarra, Spain.
- **University** of Stuttgart, Stuttgart, Germany.
- **Pannon** Novum, West-Pannon, Hungary.

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Summary

HYBRISECTORS will develop a new method aiming at the identification of new business opportunities at the intersection of different sectors, markets and areas of knowledge (hybridization), to be developed on an Open Innovation environment, and which will allow to draw on policy recommendations on how to promote such interdisciplinary approaches.

Website

http://hybrisectors.euris-programme.eu/

ORP. Open Research Platform

Sub-project Participants

- **Lead** Participant: University of Stuttgart, Stuttgart, Germany.
- **University** of Lodz, Lodz, Poland.
- **Széchenyi** István University, West-Pannon, Hungary.
- **Public** University of Navarra, Navarra, Spain.
- **Medical** University of Lodz, Lodz, Poland.
- **Technical** University of Lodz, Lodz, Poland.

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Summary

ORP proposes the development of an open and collaborative platform which will allow regional Universities, research organizations and companies to exchange available knowledge and to tap on the Intellectual Property potential of regional knowledge, as well as the provision of collaborative forum for the development of joint Research and Innovation projects, or the creation of technology based new companies, following Open Innovation schemes.

Website

http://orp.euris-programme.eu

SFFS. Open Innovation through Shared Facilities and Facility Sharing

Sub-project Participants

- **Lead** Participant: City of Helmond, Eindhoven, The Netherlands.
- **INNONET** Centre of Innovation and Technology, West Pannon, Hungary.
- **Navarra** European Business Innovation Centre (CEIN), Navarra, Spain.

Lead Participant Contact

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Summary

SFFS focuses on one of facilitators of Open Innovation environments, the facility sharing or use of shared facilities by different companies and research organizations looking for the promotion of open and collaborative frameworks. Specifically the project will identify and exchange good examples and best practices on shared facilities and facility sharing as a support structure for Open Innovation on the automotive sector, as well deliver practical guidelines, business models and policy recommendations for regional policymakers in this field.

Website

http://sffs.euris-programme.eu/

BMOI. Business Models for Open Innovation.

Sub-project Participants

- **Lead** Participant: Eindhoven University of Technology, Eindhoven, The Netherlands
- **Public** University of Navarra, Navarra, Spain
- **University** of Stuttgart, Stuttgart, Germany.

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Summary

BMOI aims to generate actionable insight through case studies and good practices, generic principles, training contents, and policy recommendations, to help firms transform their business models to profit from Open Innovation. Focus is in particular on established firms, and how they can transform their business models towards more open approaches taking into consideration the features of regional contexts and the policies deployed in target regions.

Website

http://bmoi.euris-programme.eu/

EURIS PROGRAM

European Collaborative and Open Regional Innovation Strategies – EURIS, is an inter-regional cooperation programme which aims to help regions to embrace "Open Innovation" leading to open and accelerated cooperation rates between Innovation Stakeholders on a globalised knowledge economy.

EURIS is supported by the INTERREG IV C Programme financed by the European Union's Regional Development Fund (ERDF), helping Regions of Europe to work together to share experience and good practice in the areas of innovation and the knowledge economy.

www.euris-programme.eu

INTERREG IVC

The Interregional Cooperation Programme INTERREG IVC, financed by the European Union's Regional Development Fund, helps Regions of Europe work together to share experience and good practice in the areas of innovation, the knowledge economy, the environment and risk prevention.

EUR 302 million is available for project funding but, more than that, a wealth of knowledge and potential solutions are also on hand for regional policy-makers.

www.interreg4c.eu

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