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## Open innovation in SME's: How can small companies and start-ups benefit from open innovation strategies?

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# Creating added value by innovating together

Business models built through open innovation  
can yield rich rewards

Dynamic and creative small firms can dominate tough markets by forging innovation partnerships to create and capture value from new opportunities even if they are low- or medium-tech companies.

# “Networks are only sustainable when the jointly created value is significantly larger than that realised by partners on their own.”

**D**ifficult market conditions force small and medium-sized firms to adapt or reinvent their businesses through new technologies or unique value propositions, but they often lack resources and technical capabilities and must thus collaborate with others to compete.

Those that succeed in this transition often employ “open innovation” – using the knowledge of external partners to create new products and services, or licensing their technology to others.

A study by Dr Wim Vanhaverbeke, in collaboration with Ine Vermeersch and Stijn De Zutter of Vlerick Leuven Gent Management School found that open innovation can create new opportunities for all types of SMEs – from start-ups in high-tech markets to players in traditional markets – because they can change business models without having the required technologies in-house.

Key actors in 10 diverse Flemish, Dutch and Danish SMEs that changed strategy were interviewed and revealed how they devised new business models to leverage value from technologies in other organisations or co-developed with partners.

This analysis of a phenomenon well known among large companies is the first anywhere to focus in depth on the little-understood theme of how SMEs employ open innovation.

The researchers learned that SMEs in both high- and low-tech industries which know how to manage a network of innovation partners can seize new opportunities to become highly profitable – but networks are only sustainable when the value jointly created is significantly larger than that realised by partners on their own. Next, the value which is jointly created should be divided in an equitable way to ensure the cohesion of the network in the long run. Value creation and value capturing is not an automatic process and has to be managed by a central partner in the network.

Their findings call for close attention to links between open innovation and business modelling and they identify how best to manage partnerships and networks.

## **INSPIRATION: Insights and experience**

SMEs drive job creation but commoditisation of their products and price competition can threaten companies that fail to adapt.

A way forward is the use of open innovation to develop new opportunities – but small companies need to change their business model to unlock the value of collaboration.

Small companies with limited resources may begin by identifying a trend or need intuitively based on a basic insight into how to deliver value for a target customer. Game-changing business model innovations cannot be anticipated because so many variables are unknown. Experimentation is key, because new opportunities will be discovered along the way.

For example, the experienced Philips manager Toine Janssen took just a week to see the potential of a new biotechnological process to develop aroma substances for the flavour and fragrance industries that had been put aside by DSM, a Dutch chemical company. DSM had abandoned the project because the company was not seeking to develop a strong position as a supplier of flavours and fragrances. After analysing the idea, Janssen concluded that using DSM’s process could drastically reduce the cost of producing flavours and generate new types of fragrances. He came to an agreement with DSM and founded the company Isobionics.

New offerings create value in many different ways – from better functionality to lower prices – and some successful SMEs decide to give customers new “experiences”.

DNA Interactif Fashion’s business model innovation changes shopping into a new virtual experience that optimises browsing from a customer’s perspective. This starts with a body scan of customers and then enables them to see themselves on large screens as virtual, three-dimensional models dressed in clothes from various collections. Scans can be extended to customise hair, glasses, or accessories, and changing outfits becomes a virtual process allowing customers to try out more clothes and to see themselves walking on a catwalk. The innovation replaced the sometimes awkward process of viewing and fitting clothing in stores.

Small firms can make technology-driven strategies work by playing to their strengths: acting fast, tapping niche markets, migrating between opportunities and bundling technologies.

Regulatory shifts also drive innovation. The market of Dingsens Barometers and Clocks was turned on its head when the EU banned the use of mercury in barometers. The Flemish company decided to reinvent the high-precision barometer – and with its innovation partners devised the Innovacelli barometer that uses vacuum chambers sensitive to atmospheric changes to measure air pressure.

### **How to set up with innovation partners:**

- Analyse new strategic objectives using a business model innovation framework.
- Start with a proposition aiming to create value for a particular target customer.
- Be patient: conceptualising a model may take time, customer needs may not be explicit, and there will be uncertainty about which technologies to use and which partners to team up with.
- Experiment to discover new business models. Many variables cannot be foreseen.
- Consider creating experiences for customers, which can be a profitable strategy.

### **STEPS TO SUCCESS: An evolving model**

Business model innovation develops incrementally and change may occur several times because uncertainty prevents rigid planning from the outset. Successful SMEs build on opportunities detected along the way to move in consecutive steps.

Bike accessories company Curana responded to the rise of the mountain bike by becoming a design and innovation company collaborating closely with designer Pilipili, polymer extruder Anziplast and VKC, the Flemish synthetics centre, to develop its hi-tech B-Lite mudguard. Curana undertook three strategic changes in a single decade eventually arriving in 2008 at a brand-based strategy that built on its reputation as a trendsetter hard for rivals to imitate.

When companies face problems in existing markets they first try to fix them by introducing new technology – but might detect new applications.

Dingsens' Innovacelli barometer, for example, opened up whole new markets in Japan for earthquake-proof instruments and in the US for use in high-altitude facilities.

Building a reputation or brand is usually part of the strategy to differentiate products or shift to providing an experience but is expensive, so SMEs must be clever.

The owners of Quilts of Denmark (QOD) had a driving conviction that a healthy night's sleep was a growing need in western societies. The company developed a functional quilt branded TEMPRAKON using technology developed for NASA that was recognised by the Space Foundation as a Certified Space Technology. QOD won Danish government and Tuborg Foundation innovation awards, its products were approved by chemicals, allergies and hygiene standard-setting bodies, and its founder Hans-Erik Schmidt was frequently asked to speak at conferences.

Partnerships are crucial to innovation networks but forging them is challenging because SMEs are not accustomed to sharing information, co-aligning objectives, and managing them.

Most SMEs rely heavily on value chain partners, universities and research labs but radical innovations require a larger network.

DNA Interactif Fashion teamed up with a dense network of partners to develop the displays and 3D scanning that make virtual shopping possible. It had to collaborate with technology providers and fashion retailers because the final product was based on integrating visualisation, scanning, and content (clothing, hairstyles, spectacle frames and accessories).

Jaga radiators formed the Jaga Experience Labs test facility open to scientists from around the world to conduct research, and spurred creativity among staff and suppliers by organising events in which they were encouraged to present their own ideas for future products.

Firms in open innovation networks not only have to create value but to appropriate it. However, open innovation can make intellectual property issues complex and small firms must be careful – but if partners trust each other and co-operate, they can solve problems.



### How to avoid tensions over IP:

- Define clear arrangements from the beginning.
- Agree in advance who will own a patent and how the partners get rights to use this.
- Adapt IP deals over time so that partners can collaborate comfortably.
- Watch costs: patenting is expensive, especially if a company has to apply in many countries.
- Consider whether you can generate enough sales to comply with a licensing deal. Excessive sublicensing to other companies can erode a small company's position and profitability.

## COURTING GIANTS: Collaboration with large companies

Many small firms need to collaborate with large companies to develop and commercialise their technology and a growing number are successfully employing open innovation.

Large companies increasingly rely on the technology of small companies or monetise unused technology by licensing it, selling it, or spinning off a venture.

Isobionics established a promising venture by licensing the unused technology of DSM, which Toine Janssen concluded was a game-changer. He established Isobionics and launched BioValencene™ that is likely to transform the market.

Small, high-tech firms are also sources of new technology but often lack the resources to commercialise it and license it to larger companies.

Philips tapped into the need for environmental sustainability with its Airfryer, which uses 80% less fat than a conventional fryer. It developed a process to fry food using hot air rather than oil but its engineers struggled to transform the technology into a feasible product. In 2009 it was approached by a small engineering company with a solution, and they signed a licensing agreement. This radical innovation is now likely to change how we all cook.

But collaborating with giants can only be successful if the relationship is managed well and successful collaborations start by sketching out a win-win outcome. Vanhaverbeke, Vermeersch and De Zutter propose 10 golden rules for SMEs to follow (see box below).

SMEs should also do their homework: some large companies are more trustworthy partners than others because they have built a reliable reputation among venture capitalists.

### How to manage partners in open innovation

#### networks:

1. **Select the right partners:** Open innovation succeeds only if an SME chooses partners well. Screen candidates: they need to have the same attitudes towards collaboration and risk.
2. **Exercise leadership:** The company that took the initiative to develop a new product should display clear leadership, organising and managing the innovation network.
3. **Stay active:** Inactivity is deadly for networks. Phasing, a sense of urgency and continuous progress are strong motivators. SMEs should set agendas and stimulate each other.
4. **Rules matter:** A well-oiled network increases the speed and productivity of innovation and strong leadership means disciplining partners that do not play by agreed rules and values.
5. **Be open:** Innovation partners need to communicate and report openly. They have to trust each other to charge a reasonable price for products or services to others in the network.
6. **Aim for balance:** Reconcile the needs of your company with management of the network – and keep your workers in the loop.
7. **Size matters:** It is easier to collaborate with partners of a similar size and small firms work well together because they have similar decision-making processes, financial limitations, approaches to innovation and business cultures. But they also need to have similar ambitions.
8. **Control costs:** Different partners are preoccupied with their own parts of the project and send invoices to the central firm. Make sure costs do not soar. Set priorities with partners.
9. **Never stop learning:** The central company in an innovation network must know the partners' competencies inside out. When partners hit a problem, it should know who can solve it.
10. **Tackle tensions:** Deal proactively with tensions that emerge. Do not delay until small but irritating problems get out of hand. Be diplomatic and communicate openly with partners.

#### Reference:

*Open innovation in SMEs: How can small companies and start-ups benefit from open innovation strategies?* by Dr Wim Vanhaverbeke in collaboration with Ine Vermeersch and Stijn De Zutter, (Flanders DC Knowledge Centre at Vlerick Leuven Gent Management School).