Business Innovation

Professional Profile

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Business Innovation

BA in Business Innovation
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- Avans University of Applied Sciences
- Inholland University of Applied Sciences

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Part 1: Business Innovation

1. What is business innovation?

Business innovation is a multidisciplinary area of expertise that bridges the gap between traditional fields of study such as business administration, organizational studies, marketing, arts, design, engineering and entrepreneurship. It focuses on the creation, acceleration and management of new and sustainable business through innovation (Crossan & Apaydin, 2010; Keeley, Walters, Pikkel, & Quinn, 2013).

1.1 Business innovation: a design-oriented expertise

What is the core concept of business innovation and how does it differ from other fields of study? Business innovation is ambidextrous by nature: the word 'business' literarily refers to the matters that one's time and attention is occupied with at this moment, while the linguistic origins of 'innovation' are quite the opposite: "a novel change, experimental variation, new thing introduced in an established arrangement"[1]. The concept of ambidexterity differentiates business innovation from other fields of study in management science.

Romme (2016) argued that while organizational studies originated with early management thinkers such as Taylor and Ford, it has become a more deliberate, explanatory field of science, although practitioners often deal with organizational learning in an emergent, exploratory way. Simon (1991) noted the importance of organizational learning and this idea is still prevalent in today's debate about the concept of management (Romme, 2016; Romme & Endenburg, 2006). Organizational learning is a critical requirement for business innovation (Garud & Van De Ven, 1992) and, more specifically, for business model innovation (Berends, Smits, Reymen, & Podoynitsyna, 2016; DaSilva & Trkman, 2014). Simon (1991) addressed the concept of organizational learning, arguing that organizations that want to gain knowledge about innovation need to simultaneously focus on discovery and validation (a process that is severely hindered by 'bounded rationality', a concept for which Simon won the Nobel Prize). Romme (2016) pointed out that because business innovation requires organizational learning, it also requires a design-oriented approach rather than a more explanatory, deliberate approach to deal with the ever-changing, unsure and unpredictable context of business (Van De Vrande, 2017).

1.2 The role of ambidexterity in organizations: innovation management

As a result, business innovation addresses ambidexterity in organizations: 'the ability of an organization to both explore and exploit—to compete in mature technologies and markets where efficiency, control, and incremental improvement are prized and to also compete in new technologies and markets where flexibility, autonomy, and experimentation are needed' (O'Reilly & Tushman, 2013, p. 2). This paradoxical behaviour in organizational development has been widely studied and is one of the most cited issues in innovation management (i.e. structured ambidexterity; O'Reilly & Tushman, 2008) and leadership (i.e. contextual ambidexterity; Birkinshaw & Gibson, 2004).

Dealing with ambiguity in innovation is not a new idea: traditionally, a rough distinction was made between two trends in business innovation: the 'Schumpetarian approach' and the 'Kirznerian approach'. Schumpeter defined innovation as the creation of something new

[1] Source: https://www.etymonline.com/word/innovation

(De Jong & Marsili, 2010; Schumpeter, 1934), while Kirzner described it as seizing new or existing opportunities to achieve increasing sustainable competitiveness (Kirzner, 1999). While Schumpeter described business innovation as a source of disequilibration – destroying the pre-existing stage of the equilibrium (Kirzner, 1999) – Kirzner chose to describe the role of business innovation as more equilibrative – entrepreneurs systematically displace disruptive conditions to create stabilized market conditions (Kirzner, 1999). Research has shown that innovation is mostly linked to the Schumpetarian view: innovative companies are more likely to be started by Schumpetarian-type founders (Samuelsson & Davidsson, 2009) or engineering students (Johnson, Craig, & Hildebrand, 2006) and are more likely to be created by making new and unique combinations (Shane, 2003). In contrast, the Kirznerian view is more linked to an economic perspective: entrepreneurs are able to see where a good can be sold at a higher price than that for which it can be bought (Busenitz, 1996). Walrave, van Oorschot, and Romme (2011) argued that volatile ecosystems require a more explorative (Schumpetarian) approach than calm ecosystems, and highly competitive markets require a more exploitative (Kirznerian) approach than more monopolistic markets.

1.3 The role of ambidexterity in entrepreneurship and business creation

A more organizational perspective on the abovementioned matter has described a roughly similar distinction between causation and effectuation. Whereas causation is more oriented towards a managerial perspective on entrepreneurship, effectuation is oriented towards a more experimental perspective (De Jong & Marsili, 2010). Many scholars have researched the impact of causation and effectuation on organizational outcomes. Generally, it can be concluded that business innovation is about finding the right mix between causation and effectuation (Reymen et al., 2015). As a result, a successful business innovator knows when to act in a causational or effectuative way. When to be creative, when to be managerial. When to create, when to discover. Researchers have also tried to describe the skill sets of ambidextrous innovators: Innovator's DNA (Christensen, 2011), ambidextrous behaviour of individuals (Birkinshaw & Gibson, 2004) and the Ten Faces of Innovation (Kelley, 2005).

Berends, Jelinek, Reymen, and Stultiëns (2014) proved that within SMEs, entrepreneurs use causation and effectuation at the same time. Qualitative analysis shows that this behaviour contrasts with the way larger organizations deal with innovation (in a more structured way). Larger organizations could increase their innovation outcomes significantly by embracing ambiguity in their approach to innovation (Van De Vrande, 2017).

1.4 Definition of business innovation

In conclusion, we can formulate a general definition: **business innovation is a design-oriented field of study that addresses creating and validating new and sustainable business through innovation in ambidextrous contexts.**

2. Why is Business Innovation relevant?

While not a new research topic, reframing 'business innovation' as a separate field of study for the purpose of education is important to legitimize the investment of time and money in the development of curricula and research activities.

2.1 Public relevance

Innovation is an important way to deal with the VUCA world we live in today: volatile, uncertain, complex and ambiguous. A world in which humanity is still far from building social foundations for everyone and is already overexploiting natural resources (Raworth, 2017). Lawrence (2013) argued that chaos is the new normal in business and that organizations should be adaptive to make the shift. Both McKinsey (three horizons of growth; Coley, 2009) and Nagji and Tuff (Innovation Ambition Matrix, 2012) have created typologies for adaptive firms.

Society requires sustainable solutions for its modern challenges. In 2012, the United Nations developed a set of 17 Sustainable Development Goals (SDGs) following the Millennium Development Goals (Griggs et al., 2013; Sachs, 2012). Innovation is highly valued as a means to achieve the SDGs (United Nations, 2017).

Education and knowledge creation play an important role in generating continuous improvement. Knowledge creation leads to more open innovation (Chesbrough, 2006) in an ecosystem and accelerates the diffusion of innovation (Rogers, 2010). A key issue in knowledge creation is the extent to which organizations have access to knowledge and talented personnel. Higher education plays an important role in making relevant and recent knowledge about business innovation accessible to organizations that want to create innovative ecosystems. That makes knowledge transfer a key objective of educational institutes (adapted from Georghiou & Sachwald, 2017, p. 29).

2.2 Socioeconomic relevance

From a socioeconomic perspective, the SDGs increase the necessity for rapid industrial, economic and social change. In turn, there is great labour market demand for educated talent who can take on these challenges. The way economic growth is measured will shift from the Anglo-Saxon perspective (in which GDP, employment and welfare are the most important indicators) to a more global growth perspective (in which sustainability, work-life balance and well-being are the most important indicators). Higher education institutes have traditionally been organized around the Anglo-Saxon model and have only recently begun exploring new directions. In modern education systems, higher education institutes will orient themselves more towards R&D and innovation to guarantee the long-term consolidation of knowledge, productivity and well-being (Manshanden et al., 2014; Zwaan, 2016).

Within Europe, the Netherlands is often see as an innovation leader, together with Switzerland, Sweden, Germany, Finland and Denmark (Hollanders & Es-Sadki, 2017). This position is partly because of its Top Sector Policy, which recognizes and stimulates the socioeconomic importance of innovation. Selected top sectors account for 83% of all R&D expenses in the Netherlands. These expenses come from SMEs and large incumbent organizations (Tidd & Bessant, 2015), which are much more sensitive to market conjuncture (Verhoeven, Span, & Prince, 2015). Other industrial ecosystems are also experiencing increasing competitiveness (Dankbaar, Smals, & Vissers, 2014) which creates a greater need for exploration and innovation (Walrave et al., 2011).

An alumni study conducted by KBA Nijmegen (Schellingerhout & Frietman, 2018) for the development of a new curriculum in Arnhem also concluded that, in the Netherlands, there is a growing *regional* demand for over 300 business innovators per year. This emphasizes the enduring need for business innovation expertise.

2.3 Academic relevance

Due to its complexity, business innovation is still not fully understood and is an ongoing topic of research. Van De Vrande (2017) mentioned three trends that are inextricably linked to the increasing demand for professionalization of innovation processes in organizations. Organizations need to:

- continuously invest in the exploration of new business and innovation – and develop agile business models in response;
- adopt new (digital) technology at an early stage, combine it with existing capabilities and adjust their business model towards it;
- open up to exchanging (new) knowledge and co-create new business models with others.

She argued that these trends directly result from the fourth industrial revolution and cause unpredictability and uncertainty for organizations.

Start-ups and large companies both benefit from having an innovation strategy. Crossan & Apaydin (2010) cross-checked 13,995 academic papers that were published over 27 years to derive general topics that belong to an innovation strategy. Their overview makes a distinction between 'determinants of innovation' (i.e. the innovation processes, methodologies and procedures that companies build to structure innovation) and the 'dimensions of innovation' (i.e. the managerial levers of innovation that enable the processes, such as leadership, culture and business models). In line with that, and following the reasoning of McKinsey's model of the three horizons (Coley, 2009), DaSilva and Trkman (2014) argued that companies need to create an 'innovation strategy' for the long-term, develop 'dynamic capabilities' for the mid-term and be able to exploit a business model in the short-term.

3. Business Innovation Framework

Combing the frameworks of Crossan and Apaydin (2010) and DaSilva and Trkman (2014), and including the body of knowledge sketched in this chapter, an introductory framework for business innovation can be drawn.

	Leadership	Dynamic Capabilities	Business Model	Innovation as a Process	Innovation as an Outome
Body of Knowledge and Skills (examples)	Creative Leadership (Puccio, Mance, & Murdock, 2010), Innovation Management (Crossan & Apaydin, 2010), Strategic Management (Kotter, 2014), Scenario planning (van Rijn & van der Burgt, 2012), Forecasting (Diamandis & Kotler, 2015), Change management (Berends, Boersma, & Weggeman, 2003), systems thinking (Meadows, 2008)	Open Innovation (Henry William Chesbrough, 2006), Co-Creation (Hienerth, Lettl, & Keinz, 2014), Entrepreneurship (Berends et al., 2014), Corporate Venturing (Van De Vrande, 2017), Innovation Climate (Crossan & Apaydin, 2010), Innovation Teams (Kelley, 2005), Agile organizations (Blank, 2013)	Business modeling (Osterwalder & Pigneur, 2010), profit modeling (DaSilva & Trkman, 2014), marketing, branding, business planning, communication, partnering (Henry W Chesbrough, 2007), organization design (Tushman, Lakhani, & Lifshitz-Assaf, 2012)	Idea Management (Cooper, 2008), Design Thinking (Brown, 2009), Lean Startup (Ries, 2011), Value Proposition (Osterwalder, Pigneur, Bernarda, & Smith, 2014), Innovation Cycle (Spruijt, Spanjaard, & Demouge, 2013), Innovation Funnel (Katz, 2011), Facilitation (Puccio et al., 2010)	Creative Research (Kumar, 2012), Technology, Digitalization, Trends, Discontinuities, Product Design (Buijs & Valkenburg, 2005).

Table 1: Business innovation framework

Part 2: Business Innovation Education

4. Education Concept

The framework of business innovation is in accordance with the standard for universities of applied sciences (HBO council procedure, 22 November 2010, 10-1089). It meets the following thresholds:

1. thorough foundation of knowledge,
2. research abilities,
3. professional craftsmanship,
4. professional ethical behaviour and responsible social orientation.

The objective of a business innovation programme is to prepare early-career professionals for a smooth start on the labour market. To accomplish this objective, the programme is based on the education model developed by Andriessen, Sluijsmans, Snel, and Jacobs (2017) in their protocol for graduating in higher education. These scholars have a background in developing education for design-oriented fields of study, which makes this approach especially relevant to business innovation.

The concept of a business innovation programme focuses on real-life assignments and tasks that require the systematic creation, design and facilitation of solutions. These assignments are representative of professional tasks and outcomes that may be expected of business innovators and are supported by an 'open approach' to learning in which collaboration, attitudes and behaviour are continually important in the learning process. The professional tasks and outcomes are focal points in the assessment programme and the curriculum and design of the full programme. Being able to accomplish these tasks with the expected deliverables makes a professional 'professionally competent' (Andriessen et al., 2017).

Each business innovation programme will address specific focal points that are relevant to their specific changing context, environment, institution and student base. These focal points will lead to programme-specific competences or meta-skills needed to meet the programme qualifications. These will be written down in programme-specific profiles.

The following qualifications are central to each Business Innovation programme. These qualifications enable young professionals to apply the Business Innovation Framework into practice and as such behave competently in an environment that requires their expertise, skills and talent.

Assignment / brief / challenge	Professional action	Performance / outcome / results	Disciplines and behaviour
Discover the real innovation challenge	Research content, context and stakeholders	Context analysis, brief/debrief	Research, critical thinking, accuracy, inquisitiveness, initiative, listening/sensing, holistic view, postponement of judgement, creativity, wonder
Generate new and innovative ideas	Diverge and converge Organize and facilitate creative processes	Initial concepts that add value	Collaboration, multiple perspectives, in- and out-of-the-box thinking, resourcefulness, openness, wonder, imaginative, creativity
Develop and test a concept	Prototype Iterate Study feasibility Test and validate Experiment	Minimum viable solutions	Collaboration, perseverance, visualizing, critical reflection, crafting, ethical and sustainable thinking, creativity, pushing (own) limits, risk taking
Set up and run an appropriate innovation process/system (or part of one)	Mobilize resources/information Define necessary actions Design the solution Monitor progress	Innovation journey Innovation design	Systematic thinking and acting, vision, pragmatism, negotiation, enthusing, (personal) leadership, business sensibility, risk taking, creativity, critical reflection, detail-orientation, decision-making
Create innovative business	Model the business Plan	(plausible) sustainable (market) value	Business sensitivity, dealing with uncertainty, entrepreneurship, financial and economic literacy, dealing with risk, creativity, courage, goal-direction

Table 2: Qualifications of business innovators

5. Student Profile:

The previous chapters illustrated the demand for young professionals in the field of business innovation. While the demand for innovation professionals has mainly been focused on engineers, there is now an increasingly visible demand for professionals who understand that innovation is an integral element of organizational studies: creative leaders who can work in design teams, communicate a vision, manage projects and accelerate the innovation process across an organization (Tidd & Bessant, 2015).

A confirmation of this pattern is found in the successful work 'The Innovators DNA'. That book describes innovators as ambidextrous leaders who reveal themselves as 'start-up entrepreneurs', 'corporate entrepreneurs', 'product innovators' and 'process innovators' (Christensen, 2011). In that approach, a typical innovator is an entrepreneurial person who draws upon ideas, designs concepts and implements those concepts in the market.

5.1 T-Shaped Professionals

This requires a specific 'ambidextrous' skillset: one with both depth and breadth. On the one hand, innovation professionals need to be able to bring enough expertise to the table, but on the other hand they need to be agile to manoeuvre themselves across organizations. This profile is described as a 'T-shaped professional': a professional who has acquired a certain depth of expertise (mastery skills) and who is simultaneously able to connect the dots across different disciplines (discovery skills; Christensen, 2011; Hansen, 2010). This view is in line with Crossan and Apaydin (2010): the level of expertise is related to the dimensions of innovation, whereas the ability to work in a multidisciplinary way is related to the determinants of innovation.

Research indicates that the higher the level of expertise, the higher the potential for creativity. In multidisciplinary teams, this leads to creative friction, which is a good predictor for an increasing level of innovative capacity. The same friction could lead to quite the opposite in teams without T-shaped professionals (Karjalainen, Koria, & Salimäki, 2009).

Several researchers have attempted to describe the unique skill set of the innovation professional (i.e. Christensen, 2011; Hylén, Van Damme, Mulder, & D'Antoni, 2012; Marin-Garcia et al., 2016). For the purpose of the education profile, we have created our own set of qualifications (see Chapter 4).

5.2 Attitude towards innovation

Much harder to describe than knowledge and skills, but no less important, is the attitude that innovators hold towards innovative challenges. How do they deal with ambiguity? The developments described show the need for a new generation of executives: tech-savvy leaders who are able to manage rapidly emerging technological change, and innovative entrepreneurs who are aware of how to manage innovation, set ambitious visions, attract talent and execute profitably on a global, interdisciplinary and multicultural scale (i.e. 'directors of innovation'). The future requires professionals who can stage encounters – between individuals, disciplines, departments, companies, sectors, cultures and countries – and act as connectors at the meeting points. These professionals work in 'the blur': i.e. on the edge of both the traditional business world and the creative industry.

In their attitude towards innovation challenges, the business innovator shows ambition, perseverance, guts, organizational sensitivity, a hard-working mentality, collegiality, passion, originality, personal leadership, agility, open-mindedness, reflection, generosity and humour.

6. Working environment

Business innovation graduates can find job opportunities in any business they want. Every type of organization needs strong innovative entrepreneurs and leaders, be it the service, entertainment, health, financial or technology industry. What makes these graduates valuable to virtually any employer worldwide is that they know how to combine discovery (innovation) skills with delivery (implementation) skills. They are also fully up to date with new developments and prepared to learn. They are *idea fusers* ('[a person with] the ability to pull two unlike things together to create a beautiful third'; Fryer, 2012, para. 1), and *knowmads* ('nomadic knowledge and innovation worker – a creative, imaginative, and innovative person who can work with almost anybody, anytime, and anywhere'; Moravec, 2013, p. 18).

To describe the future roles of business innovators, we have developed a typology for organizations that reveals cultures of innovation. This model is drawn upon a combination of Quinn & Cameron's values framework (2011) and Nagji and Tuff's innovation ambition framework (2012). Combined, the typology reveals four types of organizations that each have three levels of innovation ambition. Innovation professionals will preferably work in the outermost circle. An extra 'central spot' was added to show the important role of innovation brokers: consultancy firms, education professionals and knowledge brokers who do not directly work with innovation, but accelerate it (Chesbrough, 2007).

Based on this typology, business innovators will seek innovation roles in the following types of companies:

- Start-ups or agile SMEs: typical roles include entrepreneurs, designers, user experience experts and interaction designers;
- Grand challengers or social enterprises: roles include trendwatchers, engagement experts, coordinators and concept developers;
- Disruptive unicorns or agile corporations: roles include project managers, product developers and category managers;
- Innovation agencies or research institutes: roles include policymakers, lecturers and researchers;
- Innovation brokers or facilitators: roles include consultants, facilitators, trainers and incubators.

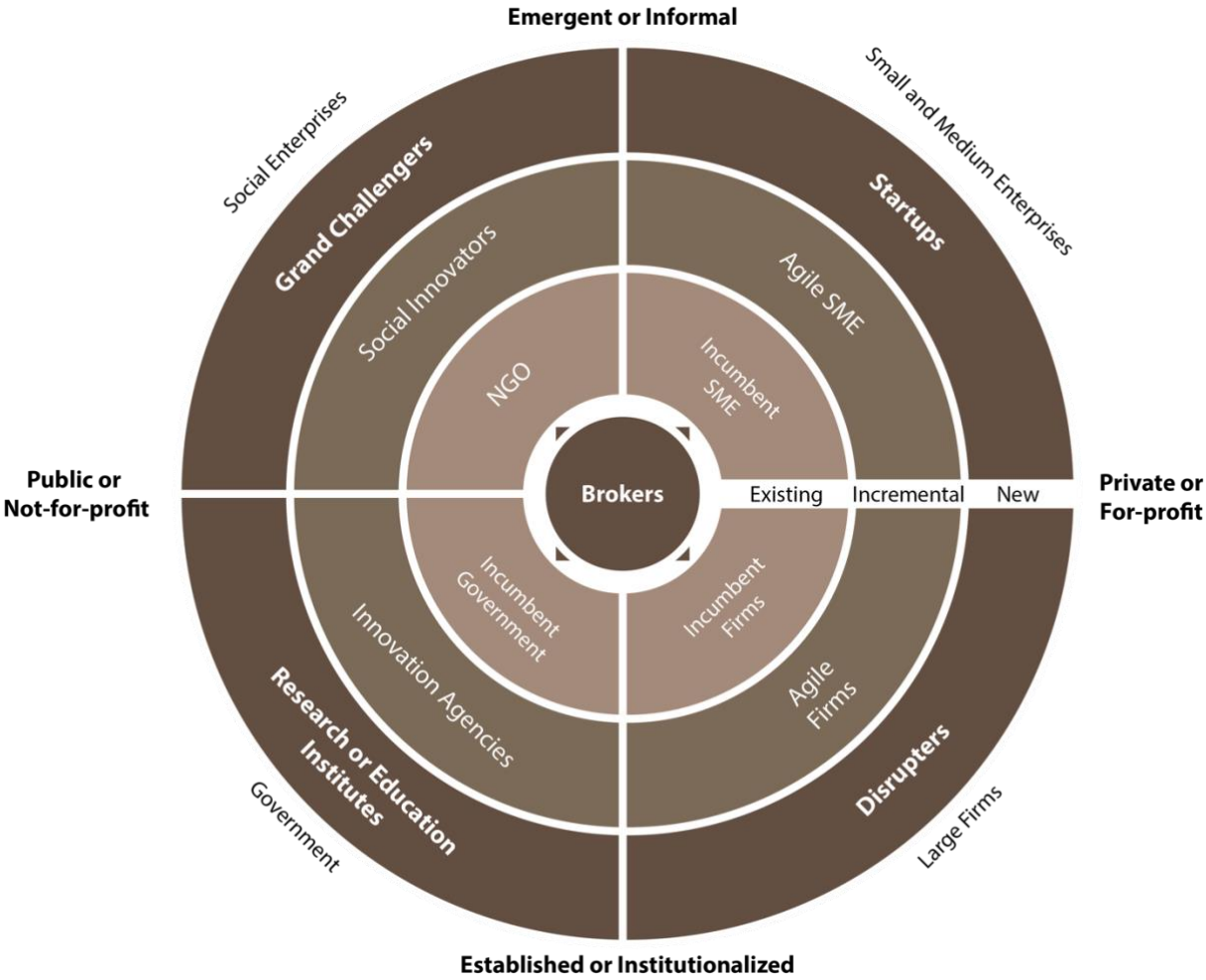

figure 1: typology for innovative organizations

7. Business Innovation Ecosystem

The business innovation ecosystem supports collaboration between all stakeholders to continuously improve business innovation programmes.

Business innovation initiatives are welcome to contact, build and join the BA in Business Innovation in line with the education philosophy described previously. Every programme will provide a full scope of business innovation expertise (see Figure 1). It will also profile itself and be actively involved in the regional context of sustainability and innovation. Every programme will publish a programme-specific document (profile part B) that at least:

- Describes its unique context;
- Describes its geographic spread (local innovation necessities);
- Has an adjacent innovation focus;
- Creates sustainable value in a business context as a core;
- Teaches innovation in an innovative manner (curriculum & philosophy);
- Explains how they are engaged with the most important quadruple-helix stakeholders.

To maintain diversity in the innovation educational ecosystem, each institute or university of applied sciences will have only one business innovation programme. We will all participate in the innovation educational ecosystem through:

- The CoBI/LoBI (Committee for Oversight of Business Innovation programmes);
- The business innovation learning cycle (fully transparent);
- Joint quality monitoring aspects;
- Co-assessors in each other's programme;
- Student mobility between programmes;
- Student exchange in specific modules;
- Borderless teacher exchange;
- Adding delegates to the Business Innovation Advisory Board.

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