

innovativedutch serious games for serious professionals

Instruction Guide Business Ecosystems Game

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INTRODUCTION

Innovation and ecosystem management are more than just skills—they're strategies that shape your organization's identity and success. In the Business Ecosystems Game, you will experience firsthand what it means to leverage ecosystems for innovation and become a leader in this complex and dynamic environment.

Step into the shoes of ecosystem innovators, where your decisions directly impact the performance of your firm, your network, and the broader market. Watch as your strategic choices ripple across your ecosystem, influencing not only your company but also partners and competitors. See how effective collaboration, networking, and creativity within an ecosystem can unlock new opportunities for growth and innovation.

With each round, you'll dive deeper into the art of strategic decision-making, learning to analyze every nuance of your ecosystem approach. Collaborate with your teammates, gain personalized feedback, and refine your tactics. The consequences of your choices are immediate, visible, and impactful, as your firm rises or falls in the competitive rankings. The Business Ecosystems Game is designed for a wide audience—from undergraduate students to seasoned executives, everyone will find new insights and challenges.

Why did we create the Business Ecosystems Game? We live in a connected world, where no company innovates alone. The ecosystem model reflects reality—where innovation is a collective process, driven by partnerships, customer insights, and collaboration across sectors. Innovation must be experienced holistically: it needs to be seen, heard, touched, and felt. It's not just about the theory, it's about bringing those concepts to life. Players will encounter the exhilaration of launching new products, the setbacks of failure, and the thrill of succeeding within a broader network.

This journey began in 2011 with the creation of our first simulation, and now, the Business Ecosystems Game continues to evolve as a powerful tool for learning and practicing innovation management. The game has been refined with input from a diverse range of industries and educational institutions, ensuring that it reflects the latest thinking and real-world dynamics.

We hope that by the end of this game, players will look back and realize they've become more adept at navigating innovation ecosystems. That they've learned the core principles of ecosystem management, understood how failures can fuel future success, and sharpened their ability to detect new opportunities and weak signals in their environments. We want them to feel the excitement of creating value within an ecosystem, tasting the diverse challenges and successes that come with true innovation leadership.

Best regards,

Innovative Dutch: serious games for serious professionals.

1. GAME DESIGN

In this chapter the functional principles of the game – the learning objectives(s) and the learning environment will be introduced.

1.1 PRIMARY LEARNING OBJECTIVES

The learning objectives follow four main learning effects of serious games in teaching innovation sciences as proposed by Bogers & Sproedt (2012) in their article "Playful Collaboration (or Not): Using a Game to Grasp the Social Dynamics of Open Innovation in Innovation and Business Education":

- 1. Enable critical reflection on social dynamics and experience-based learning applying the learning of reflections and experience through iteration. Teams must show their ability on this aspect by a continuous approach on playing the game and a growing amount of awareness of the gameplay and progress based on results and reflections.
- 2. The game enables to students to create a more holistic understanding of complex social dynamics when dealing with novelty. Teams must show their ability on this aspect by preferring a long-term oriented focus and a strategic perspective on running an innovative organization over a short-term oriented focus with a focus on operational results.
- 3. A deeper understanding of innovation sciences. Teams must show their ability on this aspect by taking "wise" decisions in the game. Wise decisions match criteria such as: effectiveness within the changing context of the simulation, efficiency based on the return on investment (in time, quality and money), coherency between different decisions taken and coherence over the years.
- 4. Creating a shared experience of social dynamics and the paradox of co-opetition for the students. Teams must show their ability on this aspect by an indication of strategic focus over the years and a certain amount of logic correlation between the decisions taken in different years. Effective teams collaborate to take well-thought decisions. Less effective teams often don't talk about long-term strategies and don't support each other on taking smart decisions. This will be reflected by a lack of strategic focus in the game.

For the game we translated this into 5 game objectives. Upon successful completion of the game, (future) leaders:

- 1. are able to manage the paradox of both unleashing and harnessing the creativity and entrepreneurial thinking in organizations;
- 2. are able to understand the mechanisms, systems and processes behind commercializing new and innovative solutions;
- 3. are able to take decisions and set prioritizaties in the innovation process;
- 4. are able to realize the impact of a culture of experimentation and collaboration;
- 5. are able to learn quickly, both from team members, customers and themselves;
- 6. are able to deal with ambiguity in the innovation process, removing roadblocks, examining risks and using both analysis and instinct.

1.2 SCENARIO

Sustainable Electronics in the High-Tech Consumer Sector

The high-tech consumer electronics industry is evolving rapidly, with sustainability at the forefront of innovation. Companies are under pressure to balance cutting-edge technology with environmental responsibility, and those that can't adapt will be left behind. In the Business Ecosystems Game, you'll step into a pivotal role at a company driving this transition toward sustainable electronics.

Each team enters as new employees at a mid-sized enterprise that already has a rich history of innovation. These companies have been developing groundbreaking technologies for years, boasting a full innovation funnel—from early-stage ideas to market-ready products. Your company is known for its achievements in the consumer electronics sector, but now it faces its biggest challenge yet: creating sustainable products that meet the demands of environmentally conscious consumers while maintaining profitability.

You and your team are tasked with steering this company into the future. With annual sales of €7.5 million and a solid foundation, you'll have the opportunity to manage a small innovation team and influence how the company allocates its resources. Should you invest in sustainable materials, focus on product lifecycle improvements, or enhance energy efficiency? Every choice impacts the company's trajectory and its position within the broader market.

As the game progresses, you will take on more strategic roles, gaining influence over critical decisions in innovation spending, partnerships, and ecosystem engagement. Your company, although established, is competing with others in the industry, all striving to lead the way in sustainable consumer electronics.

Teams will be able to name their own companies, and each represents a different midsized firm within the same ecosystem. While they may have spun off from a larger corporation in the past, these companies now stand on their own, with a track record of successful innovations.

The challenge is clear: lead your company to the forefront of the sustainable electronics revolution. Will your firm emerge as the leader in eco-friendly innovation, or will it struggle to keep pace with industry shifts? The future of sustainable technology is in your hands.

1.3 THEORY

Why Innovation Matters in Ecosystem Management

In today's rapidly evolving world, societal shifts and technological advancements are creating uncertain and unpredictable market conditions. To stay competitive, organizations must not only focus on operational efficiency but also pursue continuous growth and transformation. This requires mastering innovation, particularly in the context of interconnected ecosystems.

The Business Ecosystems Game explores the critical dilemmas that every organization faces when navigating innovation. It challenges players to manage short-term survival in competitive markets while building the strategic capabilities necessary for long-term success. Unlike previous versions, which focused on types of innovation, this game introduces dynamic capabilities that enable companies to execute their chosen strategies in ever-changing environments.

The core dilemmas that shape the game are:

- Strategic Dilemmas: Will you pursue incremental or radical innovation? Will your company focus on exploiting existing knowledge, or will it explore new opportunities?
- Dynamic Capabilities: What capabilities will you prioritize to support your strategy? These capabilities—such as adaptability, resilience, and collaboration—are crucial for fostering innovation in complex ecosystems.
- Innovation Funnel: How will you balance the demands of short-term operational success with long-term strategic vision? This dilemma lies at the heart of innovation management, as limited resources often make it difficult to invest equally in both areas.

1.4 STRATEGIC DILEMMAS

Innovation is not just about creating new products or services—it's about making the right strategic choices. In a dynamic and complex business ecosystem, organizations face constant pressure to choose a path that balances the need for immediate gains with long-term competitiveness. The core strategic dilemmas that companies must navigate revolve around two key questions: how far should innovation go, and where should resources be focused?

These dilemmas can be broken down into two primary tensions: incremental vs. radical innovation and exploration vs. exploitation. Additionally, organizations must decide at which level—micro, firm, or macro—their focus will have the greatest impact.

Incremental vs. Radical Innovation

One of the most fundamental choices organizations face is whether to pursue incremental or radical innovation. Each approach has its own risks, rewards, and implications for the company's future.

• Incremental Innovation involves making small, continuous improvements to existing products, services, or processes. This type of innovation helps companies maintain competitiveness by refining what they already do well. It's a low-risk strategy, often yielding more immediate, but limited, returns. However,

focusing solely on incremental innovation can leave companies vulnerable to disruption from competitors who embrace more radical change.

• Radical Innovation, on the other hand, requires companies to step outside their comfort zones and create entirely new solutions. Radical innovations can disrupt markets, create new industries, or render existing products obsolete. While the potential rewards are much higher, the risks are also significant. These innovations often require substantial investments in research and development, along with the ability to manage uncertainty and failure.

In the Business Ecosystems Game, you must decide where your company will focus its innovation efforts. Will you prioritize steady improvements to stay competitive, or will you invest in groundbreaking innovations that could propel your company ahead of the competition—or potentially set it back if unsuccessful?

Exploration vs. Exploitation

Closely tied to the type of innovation is the question of exploration versus exploitation. These two approaches represent different ways of allocating resources and focusing organizational energy.

- Exploration involves searching for new opportunities, experimenting with novel ideas, and pushing the boundaries of what is possible. Companies that prioritize exploration are willing to take risks to discover new markets, technologies, and business models. However, exploration can be resource-intensive and may not yield immediate returns, making it a longer-term investment.
- Exploitation, by contrast, focuses on maximizing the value of existing resources, knowledge, and capabilities. Companies that emphasize exploitation refine their current processes, improve efficiencies, and optimize the use of their existing assets. Exploitation tends to deliver more predictable outcomes and faster returns but may limit the company's ability to innovate in the future.

The challenge in the game—and in real-world ecosystems—is how to strike the right balance. Too much focus on exploitation can lead to stagnation, while too much emphasis on exploration can stretch resources too thin. Successful companies often excel by finding ways to blend both approaches, continuously improving their core offerings while also seeking out new opportunities for growth.

Micro-level, Firm-level, and Macro-Level Approaches

Innovation occurs at multiple levels within an organization, and understanding how these levels interact is key to executing a successful strategy. The micro-level focuses on individual capabilities and team dynamics, the firm-level addresses organizational practices and processes, and the macro-level involves ecosystem-wide interactions and partnerships.

- At the micro-level, the focus is on personal skills, motivation, creativity, and collaboration. Individual employees and teams are the driving force behind new ideas and innovation efforts. Building a strong culture of creativity and empowering employees to experiment is critical to fostering innovation at this level.
- At the firm-level, organizations must develop effective processes for managing innovation, from idea generation to commercialization. This includes formal structures, such as research and development (R&D) departments, as well as informal practices like knowledge sharing and cross-functional collaboration.
- At the macro-level, organizations must look beyond their own walls and engage with the broader ecosystem. This might involve collaborating with suppliers, customers, universities, or even competitors. Leveraging the strengths of the ecosystem allows companies to access new resources, share risks, and accelerate innovation.

In the Business Ecosystems Game, you'll need to consider how these levels interact. A strong micro-level approach without firm-level processes may result in great ideas that never come to fruition. Similarly, a focus on firm-level efficiency without engaging the broader ecosystem may limit your company's ability to innovate at scale.

In summary, innovation is a balancing act, and the strategic dilemmas of incremental vs. radical innovation, exploration vs. exploitation, and micro, firm, and macro-level approaches are central to determining your company's success. The choices you make in these areas will define your company's innovation trajectory and position in the broader ecosystem.

Ecosystem Archetypes

As teams navigate the complexities of innovation and make strategic decisions, they assume specific roles within the business ecosystem. These roles, or archetypes, reflect the team's innovation strategy, how they leverage their capabilities, and the way they interact with other ecosystem players. Each archetype offers a different pathway to success, shaping both the team's internal approach and their external positioning.

- 1. **Disruptor**: Teams that adopt the Disruptor archetype are committed to breaking the mold. They focus on developing groundbreaking innovations that have the potential to redefine markets or create entirely new ones. Disruptors thrive on high risk and high reward, challenging established norms and pushing industries into new directions. This archetype prioritizes risk-taking and creative destruction, aiming for transformative change.
- 2. **Customer Champion**: The Customer Champion archetype excels in understanding and responding to customer needs. These teams place their consumers at the center of their innovation efforts, building strong relationships and offering highly personalized products or services. By fostering deep customer loyalty, Customer Champions stay ahead of competitors through superior insights into customer desires, preferences, and feedback loops.

- 3. **Collaborator**: As Collaborators, teams engage heavily with external partners, drawing on the strengths and knowledge of their wider ecosystem. Collaborators prioritize co-creation and knowledge-sharing, forming alliances with suppliers, universities, and even competitors. This archetype uses open innovation to accelerate development cycles and spread risk, ensuring that innovation is a shared, collective process.
- 4. Integrator: The Integrator archetype is focused on creating seamless value chains. These teams excel at coordinating across the supply chain to ensure efficiency and maximize value at every stage of production. Integrators optimize processes, from sourcing raw materials to delivering final products, ensuring all parts of the value chain work together harmoniously to drive innovation and competitive advantage.
- 5. **Manager**: Managers focus on optimizing and fully exploiting existing resources and capabilities. Their strategy revolves around efficiency, stability, and operational excellence. Managers do not chase radical innovation but instead maximize the potential of their current offerings, refining processes and squeezing value from existing assets. Their strength lies in delivering consistent performance while minimizing risk.
- 6. **Navigator**: The Navigator archetype thrives in the global marketplace, adept at managing complexity across borders. These teams focus on expanding their reach internationally, leveraging global supply chains, diverse markets, and transnational partnerships. Navigators understand how to adapt innovations for different cultural, regulatory, and economic environments, positioning themselves as global players in the innovation ecosystem.
- 7. **Improver**: Teams that adopt the Improver archetype excel in making steady, incremental improvements to existing products or processes. Rather than seeking radical change, Improvers focus on enhancing what already works, fine-tuning products and services to increase efficiency, quality, and customer satisfaction. While their changes may seem small, over time, they can result in significant competitive advantage through continuous refinement.
- 8. **Pioneer**: Pioneers are at the forefront of product development, always pushing to be the first to market with new, cutting-edge offerings. Their emphasis is on staying ahead of trends and leading their industry in innovation. Pioneers take calculated risks to develop new technologies and features that set them apart from competitors, often setting new standards for product performance and customer expectations.
- 9. Entrepreneur: The Entrepreneur archetype relies on internal resources and capabilities to drive innovation. These teams prefer to develop new products, services, or processes in-house, keeping their intellectual property closely guarded. Entrepreneurs value independence and control, often taking a more conservative approach by relying on proven internal strengths rather than external collaboration.
- 10. **Inventor**: Inventors are focused on in-house innovation and controlling the entire value chain. They develop new products or technologies without relying on external partners, ensuring that innovation happens internally. Inventors emphasize keeping all stages of production within the company to maintain

complete oversight and control over the innovation process, allowing for deep integration and coordination across all activities.

- 11. Explorer: Teams that adopt the Explorer archetype are dedicated to pushing boundaries and discovering new opportunities. Explorers prioritize research and experimentation, often venturing into uncharted territories or emerging markets. They are open to taking risks in search of breakthrough innovations and are always on the lookout for new trends, technologies, or business models that could shape the future.
- 12. Advocate: The Advocate archetype is defined by its commitment to sustainability and local ecosystems. Advocates focus on creating value not just for shareholders, but for society and the environment. They prioritize eco-friendly innovations, ethical practices, and sustainable business models. These teams often work closely with local communities and partners, ensuring that their innovations contribute positively to the broader social and ecological context.

Each archetype offers a distinct path through the innovation landscape, reflecting your team's strategic priorities and values. Whether you choose to disrupt industries, pioneer new technologies, or focus on sustainability, your role within the ecosystem will shape how your company innovates, collaborates, and competes. In the Business Ecosystems Game, your choices will define your place in a network of dynamic, interdependent players—each striving to lead the future of innovation.

1.5 DYNAMIC CAPABILITIES

Dynamic Capabilities: Enabling Innovation Success

In the context of innovation, success depends not just on having great ideas but on developing and leveraging key dynamic capabilities that enable organizations to navigate the complexities of a constantly evolving business ecosystem. These capabilities are essential for adapting strategies, fostering collaboration, and maintaining a competitive edge. Each capability plays a crucial role in helping organizations achieve their innovation goals and respond effectively to market challenges.

- Authenticity: Authenticity is about staying true to your core values, mission, and vision. In a competitive ecosystem, being authentic means that your company's actions, innovations, and communications align with your true identity and purpose. Authenticity builds trust with stakeholders, differentiates your brand, and fosters genuine connections with customers. It ensures that your innovations are not only effective but also resonate with your core audience and reflect your company's integrity.
- **Creativity**: Creativity is the cornerstone of innovation. It involves generating novel ideas and thinking outside the box to solve problems or create new opportunities. Creative organizations encourage experimentation and embrace unconventional approaches. By fostering a culture where creativity

is valued and nurtured, companies can develop breakthrough products, services, and processes that set them apart from competitors and meet emerging market needs.

- Curiosity: Curiosity drives the quest for new knowledge and insights. It fuels the desire to explore, question, and understand the world in new ways. Curious teams and individuals are constantly seeking to learn, adapt, and discover. This capability is vital for identifying new trends, exploring uncharted territories, and pushing the boundaries of what's possible. Curiosity ensures that organizations remain agile and responsive to changing environments and emerging opportunities.
- **Collaboration**: Collaboration is crucial for leveraging the collective strengths of the ecosystem. It involves working effectively with internal teams, external partners, and stakeholders to achieve shared goals. Collaborative organizations build strong networks and foster open communication, allowing for the exchange of ideas, resources, and expertise. By collaborating, companies can accelerate innovation, enhance problem-solving, and create value that would be difficult to achieve independently.
- **Resilience**: Resilience is the ability to withstand and recover from challenges, setbacks, and disruptions. In the face of uncertainty and adversity, resilient organizations remain steadfast, learning from failures and adapting strategies to overcome obstacles. This capability ensures that companies can persist through difficult times, maintain their competitive advantage, and continue to innovate despite external pressures and internal challenges.
- Ambition: Ambition drives organizations to set and pursue bold goals. It involves striving for excellence, aiming high, and pushing the boundaries of what is achievable. Ambitious companies are motivated by a vision of success and are willing to take calculated risks to achieve it. This capability propels innovation forward, encouraging teams to challenge the status quo, pursue transformative projects, and aim for industry leadership.
- **Openness**: Openness is about embracing new ideas, perspectives, and feedback. Open organizations are receptive to change and willing to consider diverse viewpoints. This capability fosters a culture of inclusivity and transparency, encouraging the free exchange of information and ideas. By being open, companies can harness the collective wisdom of their ecosystem, adapt to new trends, and continuously improve their strategies and innovations.
- Adaptability: Adaptability refers to the ability to adjust to changing circumstances and environments. It involves being flexible and responsive to new information, market shifts, and emerging trends. Adaptive organizations can pivot their strategies, reallocate resources, and modify their approaches as needed. This capability is essential for thriving in a dynamic ecosystem,

allowing companies to stay relevant and seize new opportunities amidst evolving conditions.

Integrating Dynamic Capabilities into Your Strategy

In the Business Ecosystems Game, mastering these dynamic capabilities is key to successfully navigating the challenges and opportunities of the innovation landscape. By developing and leveraging capabilities such as creativity, collaboration, and adaptability, your team can enhance its strategic decision-making, foster effective partnerships, and drive impactful innovation. Understanding and applying these capabilities will enable you to align your strategies with your ecosystem role, adapt to market changes, and ultimately achieve your innovation goals.

1.6 INNOVATION FUNNEL

The Innovation Funnel is a pivotal framework in managing the innovation process, providing a structured path from initial idea generation to successful market introduction. It helps organizations systematically evaluate and refine their innovations to ensure they meet market needs and deliver value. In the Business Ecosystems Game, the funnel consists of four key stages: Ideation, Conceptualization, Development, and Commercialization.

- Ideation: Ideation is the first stage where creativity and brainstorming come into play. It's the phase where new ideas are generated, and possibilities are explored. This stage encourages the free flow of thoughts and concepts, allowing for a broad range of potential innovations. It's a period of discovery and initial exploration, setting the stage for further refinement.
- 2. Conceptualization: In the Conceptualization stage, ideas are transformed into more defined concepts. This phase involves evaluating the feasibility and potential of each idea, refining it into a viable proposition. It requires assessing how well the concept aligns with market needs, strategic goals, and technical requirements. The focus here is on shaping and detailing the concept to prepare it for development.
- 3. Development: Development is where the refined concepts are turned into tangible prototypes or products. This stage involves detailed design, engineering, and testing to ensure that the innovation is practical and meets quality standards. The goal is to create a working model that can be tested and validated, setting the groundwork for eventual market launch.
- 4. Commercialization: The final stage, Commercialization, is about bringing the developed innovation to the market. This phase includes scaling production, executing marketing strategies, and launching the product or service. It's where the innovation's market potential is realized, and efforts are focused on achieving commercial success and generating returns.

Visual Representation of Dynamic Capabilities

Above the Innovation Funnel, dynamic capabilities are visually represented with colored bars. These capabilities are crucial in supporting and enhancing each stage of the funnel, influencing how effectively innovations progress through the stages. While the exact impact of each capability on specific stages is not detailed, their role in the overall innovation process is highlighted through this visual representation.

Understanding the Innovation Funnel and the role of dynamic capabilities provides a comprehensive view of how ideas are developed and brought to market. It allows players to navigate the innovation process effectively, optimizing their strategies and enhancing their chances of success.:

1.7 GAME MODEL

The previous paragraph leads to a model that forms the basis for the game. It integrates the strategic option, the eight types of innovation and the funnel.



1.8 SCOPE OF THE GAME

In the Business Ecosystems Game, players operate within a closed market focused on the high-tech consumer electronics sector. Each company in the game is established with an annual turnover of approximately €5 million and sells products priced between €100 and €500. The market is stable and self-contained, meaning that no new companies enter or exit the market throughout the game, except in the case of bankruptcy. Additionally, the industry remains isolated from other sectors, ensuring that interactions and competition are confined to the high-tech consumer electronics realm.

This scope provides a controlled environment where players can concentrate on leveraging their innovation strategies and dynamic capabilities to enhance their market position and drive success within the specified parameters.

1.9 LEVEL OF ABSTRACTION

The Business Ecosystems Game focuses on innovation management rather than the specifics of innovation creation. Players, acting as 'innovation managers,' are tasked with

overseeing the management of innovation processes rather than developing individual innovations. In this game, you will handle variables such as the number of projects and other key metrics, but specific names and technologies of these innovations are not detailed. This higher level of abstraction emphasizes strategic management and decision-making over the granular aspects of innovation development.

1.10 FORMAT

The game is structured into multiple rounds, each representing one year within the simulation. Given the strategic nature of the game and the typical 3-5 year timeframe required to effectively implement a strategy, we recommend playing approximately 6 rounds. This allows players to fully engage with the strategic elements of the game and observe the long-term impacts of their decisions.

1.10 RULES

The game operates under a straightforward set of rules to ensure smooth gameplay and fair evaluation:

- Timely Submission: All results must be delivered before the designated deadline. Submissions received after the deadline will not be considered.
- Focused Decision-Making: Players must make strategic decisions based on the available data and capabilities. Decisions should align with the company's chosen role in the ecosystem and its innovation strategy.
- Adherence to Budget: Each team must manage its allocated budget for innovation spendings effectively. Decisions that exceed or fall short of the budget will impact the team's performance and overall results.
- Engagement in All Stages: Teams are required to actively participate in all four stages of the Innovation Funnel: Ideation, Conceptualization, Development, and Commercialization. Skipping stages or neglecting any phase will affect the outcome of the innovation process.
- Respect for Market Constraints: The game is set in a closed market with fixed industry parameters. Players must operate within these constraints and cannot influence market entry or exit conditions.

By following these rules, players can ensure a fair and engaging experience, allowing for meaningful strategic decision-making and effective management of innovation.

1.11 POLICY

Failure to adhere to the rules will result in an in-game penalty. If a team violates the rules a second time, they will face bankruptcy and be unable to continue participating in the game. To address and resolve the issue, the team must consult with their company spokesperson or university teacher

1.12 EVENTS AND BONUSES

The game features special events—unexpected occurrences that add an element of surprise and challenge. These events are designed to align with the game's focus on innovation management and enhance the gameplay experience. Additionally, players can earn bonuses by achieving specific targets outlined in the assignment. These bonuses serve as special rewards for exceptional performance and strategic success.

1.13 TEAMS AND ROLES

There is an option to use different team roles in the game.

1.14 INDICATORS

In the game, players will track various indicators to gauge their performance. The four most crucial indicators are:

- Sales: The total revenue generated by your company over the past year. This indicator reflects your company's market performance and directly influences market share.
- Micro-Level Value: This measures the effectiveness of your company's internal processes and strategies at a granular level, assessing how well your team manages day-to-day operations and project execution.
- Firm-Level Value: This indicator evaluates your company's overall performance and growth within the industry, including innovation effectiveness, financial health, and competitive positioning.
- Ecosystem-Level Value: This measures your company's impact and role within the broader business ecosystem, including its interactions with other companies and contributions to the industry's innovation landscape.

1.15 WINNING THE GAME

In this game, the winner is determined in two phases:

 After the First 4 Rounds: At this stage, the team with the highest business valuation is declared the leader. The business valuation is calculated using this formula:

Sales + Sales * (Micro-Level Score % + Firm-Level Score % + Ecosystem-Level Score %)

For example, if your sales are €10 million and your scores are 50% for each value, your business valuation would be €25 million. The team with the highest business valuation after round 4 becomes the **Ecosystem Orchestrator** for the

remaining rounds. The ecosystem orchestrator has the task to make sure that there are as many archetypes in the ecosystem as possible.

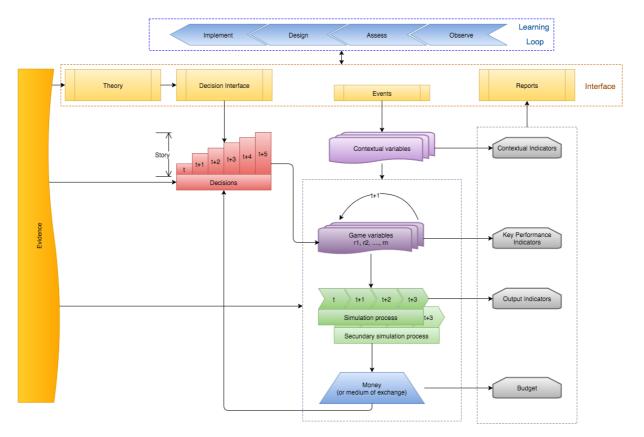
- 2. After the last round, teams will be evaluated based on their ecosystem archetype:
- Unique Archetype Advantage: If your team has a unique archetype (no other team shares it), your team will receive a 100% bonus based on your business valuation (100% * business valuation).
- Merging for Shared Archetypes: If two or more teams share the same archetype:
 - For two or more teams having the same archetype, the 100% bonus will be split, with each team receiving an equal part.
 - Companies with the same archetype will be merged, and their business valuation will be averaged.
- The Orchestrator team has a special rule: they will never have to merge with other teams, even if other teams share the same archetype. However, if there are other teams with the same archetype, the Orchestrator will still need to **split the bonus** equally among all teams with that archetype. This allows the Orchestrator to maintain their unique position while still sharing the rewards fairly.

This approach ensures both competition and collaboration within the ecosystem while encouraging diversity in strategic choices.

In the end, the team with the highest total value, including sales, business valuation, and bonuses, wins the game!

1.16 GAME DYNAMICS

All our games follow the following game dynamics:

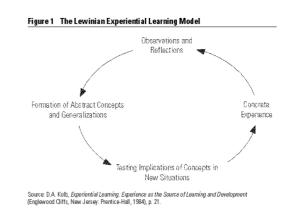


2. GAMEPLAY

This game follows a learning loop.

- Assess (results of your team's strategy in the report)
- ٠ Design (a new strategy)
- Implement (take decisions) •
- Observe (the new annual report)

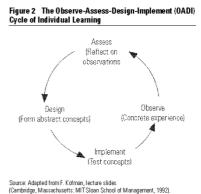
This repeats itself for a number of rounds. Because of the learning loop, this game is specifically oriented for higher education and very well received in master programs and business trainings.



Experiential learning theory is the school of thought that best accommodates these two aspects of learning. One of the theorists associated with this school is Lewin, whose learning cycle is represented in the figure to the right.

As Lewin describes it, a person continually cycles through a process of having a concrete experience, making observations and reflections on that experience, forming

abstract concepts and generalizations based on those reflections, and testing those ideas in a new situation, which leads to another concrete experience. This basic cycle has appeared in a variety of settings. In the total quality management (TQM) literature, it shows up as the Deming cycle of plando-check-act. Deming himself refers to it as the Shewhart cycle of plan-do-study-act. In organizational development, Schein calls his version the observation-emotional reaction-judgmentintervention cycle. Argyris and Schon refer to a



discovery-invention-production-generalization cycle of learning.

At the risk of added confusion, we have based our model of individual learning on Kofman's version of the learning cycle, as shown in the figure to the right. The observeassess-design-implement (OADI) cycle preserves the salient features of the versions mentioned above, but the terms have clearer connections to activities conducted in an organizational context. In the OADI cycle, people experience concrete events and actively observe what is happening. They assess (consciously or subconsciously) their experience by reflecting on their observations and then design or construct an abstract concept that seems to be an appropriate response to the assessment. They test the design by implementing it in the concrete world, which leads to a new concrete experience, commencing another cycle.

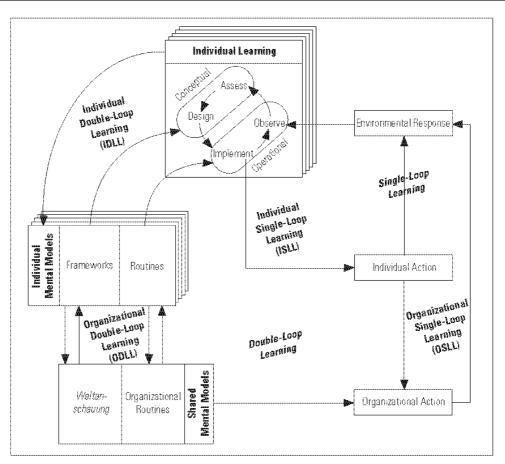
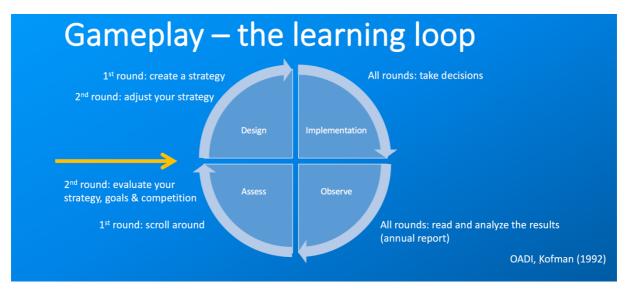


Figure 7 An Integrated Model of Organizational Learning: OADI-Shared Mental Models (SMM) Cycle

In an article on MIT Sloan, Daniel H. Kim describes the way that OADI could be used to increase the effectiveness of organizations. In this game, we therefore use OADI, not only to increase individual learning, but also to increase the learning process of the team and the simulated organization that the teams are trying to run.

In our games, this looks as followed:



2.1 OPEN EMAIL

Check your inbox for an email titled "Business Ecosystems Game Access." Open the email and follow the provided instructions to log into the game platform. If you don't see the email in your inbox, be sure to check your spam or junk folder.

Once you've accessed the game, take note of your team's information and any login credentials you may need for the simulation.

2.2 CLICK URL

Open the e-mail, read the comments and scroll down to your team's **Dashboard url**. Do not share your url with another team!

2.3 DASHBOARD

Once you open the email and log in, you will be directed to the dashboard, where you can find basic information about the game, including your team number. The dashboard provides four important links:

- **Manual** This document provides detailed rules, guidelines, and instructions for playing the game.
- Assignment Your specific objectives and tasks for the current round will be outlined here.
- Annual Report of Last Year (Round) Review the performance of your company from the previous round, including financials, sales, and other key indicators.
- Link to Take Decisions for the New Year (Round) This is where you will submit your strategic decisions for the upcoming year.

Make sure to review all the information thoroughly before making your decisions for the next round!

2.4 STUDY THE THEORY

The theory is implemented in the 'take decisions'. When you hang over a certain decision you will find detailed information about the decision.

- Information: it will give you a general explanation of the topic.
- Star rating for each stage of the funnel: this indicates how much effect this decision has on the amount of new projects in that stage of the innovation funnel (with a maximum of 5 stars).
- Investment costs: the costs of this decision.

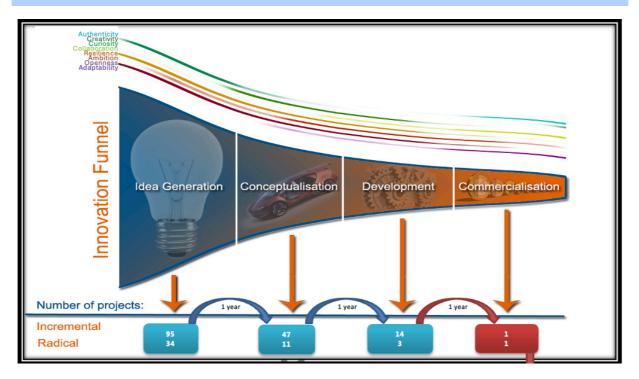
2.5 BONUS

Unexpected events are integral part of this game and make the game more fun. They are written to be fair, for instance by giving extra results in case of special combinations of decisions. In this game you can achieve bonuses and they're part of the assignment.

2.6 ANNUAL REPORT

It's time to open the annual report of your company. We'll walk you through it.

2.7 INNOVATION FUNNEL



This is one of the most critical aspects of your annual report: **your innovation performance**. At the bottom, you'll see all your ongoing projects. **Blue boxes** represent projects that are still in development and costing money, while the **red box** shows projects that have been introduced to the market and are now generating sales. On average, it takes about one year to move a project from one stage to the next. The more resources you allocate to a stage, the greater the chance a project will advance to the next phase.

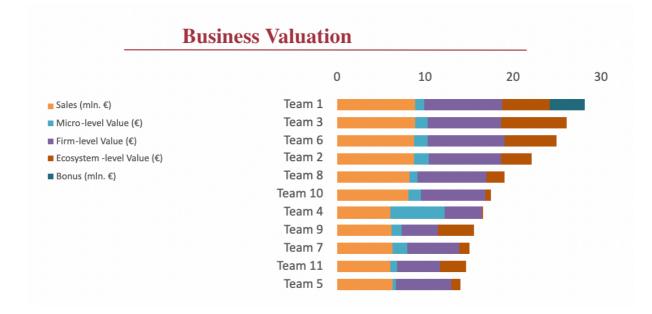
You'll also see an overview of your radical and incremental innovation projects, serving as an indicator of your technological performance. Above the figure, you'll find additional insights into how different innovation strategies impact the stages of the innovation funnel. For instance, investing heavily in Authenticity, Adaptability and Collaboration will likely help move projects from the development stage to the commercialization stage, increasing short-term sales. However, focusing too much on commercialization can reduce the number of new projects being initiated, meaning fewer products may be available to launch in three years' time. Thus, you must carefully balance your investments across all stages, from ideation to commercialization, to ensure both short-term success and long-term sustainability.

2.8 BUSINESS VALUATION

In the **annual report**, you will also find a section on your company's **business valuation**. This is a key metric used to determine your overall success in the game. The valuation takes into account not only your sales but also your performance across three critical areas: **micro-level value**, **firm-level value**, and **ecosystem-level value**.

- Micro-level value refers to the value generated from your internal innovation efforts and team dynamics.
- Firm-level value looks at the broader organizational impact, including your company's overall performance and its ability to execute innovation.
- Ecosystem-level value evaluates how effectively you leverage external networks and partnerships to create sustainable growth.

These factors are combined to give a comprehensive picture of your company's standing. This **business valuation** will ultimately decide your ranking in the game, especially when determining the **ecosystem orchestrator** and assessing final bonuses. So, monitoring these values closely and ensuring balanced performance across these areas is crucial for long-term success.



2.9 MARKET PERFORMANCE INDICATORS

Market Share: In the annual report, you will also find a ranking that displays the **sales performance** of each team. This ranking shows the total sales revenue generated by every company over the last round, offering a clear view of how your team compares to others.

Sales is a critical indicator of your company's market performance, directly reflecting the success of your products in the marketplace. The higher your sales, the more competitive your company is within the ecosystem.

However, it's important to remember that sales alone won't determine the final outcome of the game. While strong sales can boost your overall business valuation, they need to be supported by innovation and ecosystem value to truly succeed in the long term. Keep an eye on this ranking to track your progress, but also consider the broader strategy that impacts your micro-level, firm-level, and ecosystem-level values.

Market		
Team name	<u>Sales (mln €</u>) Share (%)
1. Team 3	8,9	10,8%
2. Team 1	8,9	10,7%
3. Team 6	8,7	10,6%
4. Team 2	8,7	10,6%
5. Team 8	8,2	10,0%
6. Team 10	8,2	9,9%
7. Team 7	6,3	7,6%
8. Team 5	6,3	7,6%
9. Team 9	6,2	7,5%
10. Team 4	6,1	7,4%
11. Team 11	6	7,3%

2.10 ECOSYSTEM ORIGINALITY SCORE

In the annual report, you will also find information about your team's **Ecosystem Originality Score**, which reflects how unique your team's role or **archetype** is within the ecosystem. This score is crucial, as having a unique archetype offers distinct advantages and can significantly boost your team's final ranking.

Each team in the game adopts one of several archetypes, such as Disruptor, Customer Champion, or Explorer, based on the strategic choices they've made. Teams that end up with a unique archetype—one that no other team shares—receive a 100% bonus to their business valuation, giving them a powerful advantage.

On the other hand, if multiple teams share the same archetype, they will be **merged** in the ranking, and their business valuations will be averaged and bonuses split among them. The exception to this is the **Orchestrator**, who, even if sharing an archetype, does not have to merge but still splits the bonus.

This score encourages teams to carefully consider their strategic choices and align their innovation management to carve out a unique position within the ecosystem, which can be the key to winning the game.Unicity: This score indicate how you position yourself against other teams. In the table you can find how each decision contributes to the different strategies. You can achieve a red, purple or blue ocean.

Ecosystem Positioning

Based on decisions taken last year

Ecosystem-level Originality Score: 60%

Your ecosystem archetype is: Disruptor

2.11 ORGANIZATIONAL CAPABILITIES

Short-term Organizational Capabilities:

The table presents your company's short-term focus, reflecting the relative investments in various dynamic capabilities over the most recent round. Each capability is scored from 0% to 100%, indicating its prominence in your current strategy. The percentages show how different capabilities compare to each other in your strategy for this round. This table is crucial for assessing whether your short-term investments align with your intended strategy and whether your approach is balanced with the innovation funnel. It also helps identify where to adjust your investments to refine your strategy.

	Short-ferm Organi	zational Capabilities
	Based on decisi	ons taken last year
	Competencies	Tactical Alignment
1.	100% - Authenticity	0% 25% 50% 75% 100%
2.	32% - Collaboration	Team 3
3. 4.	26% - Resilience 13% - Creativity	Team 2
5.	2% - Openness	Team 11
6. 7.	0% - Curiosity 0% - Ambition	Team 6
8.	0% - Adaptability	Team 7
		Team 5
		Team 10
		Team 8
		Team 9
		Team 4

Short-term Organizational Capabilities

Long-term Organizational Capabilities:

This table lists the same dynamic capabilities but as 'values,' illustrating the long-term impact of your previous investments in the innovation funnel. It reflects the accumulated effect of your investments over the last five rounds, providing insight into the enduring impact of your strategy.

	Long-term Organizati	onal Capabi	ilitie	S			
	Based on decisions over	the last 5 years.			-		
	Values	S	trate	egic Ali	ignmei	nt	
The hig	gher the position of the topic, the more important the topic is for your strategy.	The percentage sho competitors		-			
1.	100% - Authenticity		0%	25%	50%	75%	100%
2.	32% - Collaboration	Team 3					
3.	26% - Resilience						
4.	13% - Creativity	Team 2					
5.	2% - Openness	Team 11					
6.	0% - Curiosity	Team 6					
7.	0% - Ambition	Team 7					
8.	0% - Adaptability						
		Team 5					
		Team 10					
		Team 8					
		Team 9					
		Team 4					

Competitors:

The competitive analysis provides a benchmark of your strategy and tactics compared to other teams. A score of 100% means that your investments and the order of innovation types on the agenda match exactly with those of another team. Lower scores indicate greater differences. This benchmark is vital because the success of your innovations depends not only on their quality and marketing but also on the uniqueness of your strategy compared to competitors. A distinctive strategy enhances your market presence and fosters valuable collaborations.

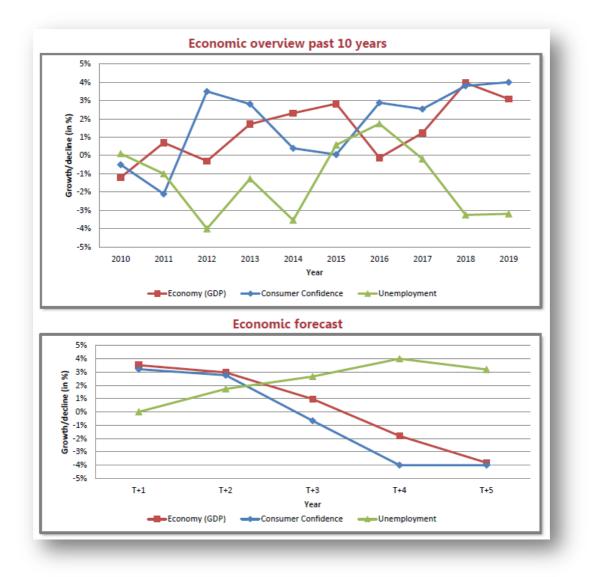
2.12 INNOVATION BUDGET

Write down this number: you'll need it when taking decisions. You are allowed to take decisions up to this amount.



2.13 ECONOMIC OVERVIEW

For advanced users, there is also information about the economy. This will influence the likelihood of success of market introductions and could therefore have an impact on your strategy.



2.14 FINANCIAL OVERVIEW

Note: this option is not turned on by default. The financial statement can be acquired through your game facilitator only.

In the first appendix, you'll find a detailed overview of your company's financial statement and how the innovation budget is created.

			Profit and Loss
		€ 10.098.775,62	Total Sales
	-	€ 8.583.959,28	Costs
		€ 1.514.816,34	Pre-tax Result
	-	€ 272.666,94	Taxes 18%
		€ 1.242.149,40	Result after taks
	-	€ 75.740,82	Dividend
		€ 1.166.408,58	Profit
			R&D Expenditures
		€ 616.651,27	Budget 2013
	+	€ 117.126,51	Remainder budget 2012
		€ 733.800,00	Expenditures 2013
		-€ 22,22	Remainder budget 2013
		€ 1.166.408,58	Profit 2014
	+	-€ 22,22	Remainder budget 2013
	+	€ 0,00	Alliances/Prices/Fines 2014
		€ 1.166.386,37	Budget 2015
		€ 733.800,00	Expected Expenditures 2015
a) b)		€ 432.586,37 7 to 14 you can find information on your decision	Investment space 2015 is and investments over the last years. In case of an an find the actual costs of investing. You've got (b)

2.15 PREVIOUS DECISIONS

Make sure to make print screens to be able to see what decisions you have taken in earlier rounds.

2.16 ANALYZE YOUR STRATEGY

Compare the Results with Your (Desired) Strategy and Prepare a Reflection Report:

- First Round: At the beginning, teams should outline a vision for the next five years. This vision will guide the development of a strategy, which can be formulated using tools like the BCG matrix. Teams are required to set at least three SMART objectives for the first round. These objectives should inform your operational decisions within the game. For each topic or specialization, explain the rationale behind your decisions based on these objectives.
- Subsequent Rounds: In each following round, review and analyze the outcomes from the previous round. Assess which goals were achieved and which were not. Based on this analysis, decide whether to adjust your

strategy. If adjustments are needed, set new goals and make the corresponding decisions.

Additional information on reflection reports and extra assignments will be provided in the next chapter.

2.17 RECHECK YOUR BUDGET

Note: this option is not turned on by default. In a standard game, you can't overspend by default.

Important: your budget is not the same as your sales; it the difference in total innovation investment of the previous year and the maximum you may spend this year. It is therefore common that the budget decreases, while the sales are growing. A decreased budget is not a sign of poor performance. Decreased sales are.

2.18 (RE)DESIGN A COMPETITIVE STRATEGY

Discuss your strategic choices within your team. What do you want to achieve? What goals do you want to aim at? Follow the assignments as a guideline for developing your strategy.

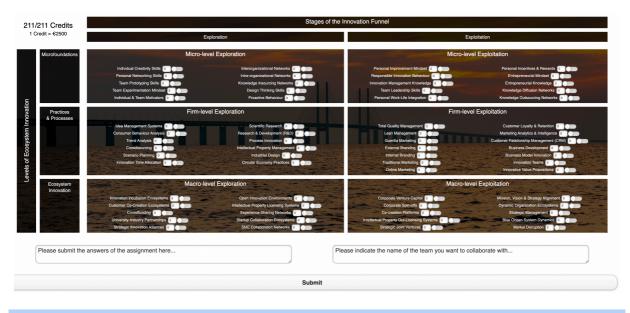
2.19 TAKE DECISIONS

As the game progresses, the number of decisions you need to make will increase each year, requiring you to allocate your budget across a broader range of choices. It's important not to make decisions arbitrarily. Ensure that each decision aligns with your overall strategy and is coordinated with other decisions, as some choices may be counterproductive when combined.

Levels of Decision-Making:

- Micro-Level (Rounds 1 and 2): At this stage, decisions are focused on the individual operational aspects of your company. This includes specific tactical choices related to product development, marketing, and internal processes.
- Firm-Level (Rounds 3 and 4): In these rounds, you'll shift to making strategic decisions that affect the broader firm-level operations. This includes decisions on business processes, resource allocation, and strategic initiatives. Additionally, the orchestrator role is introduced, which will have a significant impact on the direction and coordination of your company's strategies.
- Ecosystem-Level (Post-Round 4): After the orchestrator is chosen, you will begin to make decisions that impact the entire business ecosystem. These decisions involve collaboration with other teams, adapting to ecosystem-wide dynamics, and leveraging synergies within the broader network.

By understanding and navigating these levels effectively, you can ensure that your decisions contribute to a cohesive and strategic approach throughout the game.

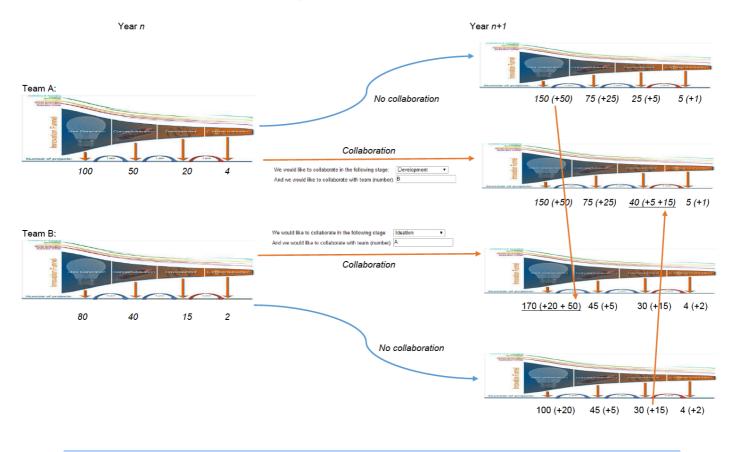


2.20 COLLABORATE

In this game, you have the option to collaborate with other teams to enhance your innovation efforts. Collaborating allows you to 'insource' innovation projects from a stage of the innovation funnel that you are not currently focusing on. When you collaborate with another team, the number of new projects in that stage from the other team will be added to your innovation funnel, reducing the need for investment in that part for the current round.

To form an alliance, both teams must select each other's team number. This means you need to communicate and agree with the other team before making your selection. At the beginning of the next round, your team will receive a bonus of the number of new projects from the collaborating team, in addition to your own new projects. Note that this number can also be negative.

An example:



2.21 SUBMIT

You can now submit your decisions. In case you made a mistake, you can (re)submit until the deadline. We'll only consider the last submission.

Team:		
Jan		
Year		
2013		
Submit Decisior	ns	

3. ASSIGNMENTS

It is quote common for universities to build a larger program around the game. This will increase the likelihood of reaching the learning objectives. We advise instructors or company managers to get in contact with Innovative Dutch to create a specific program that suits your needs.

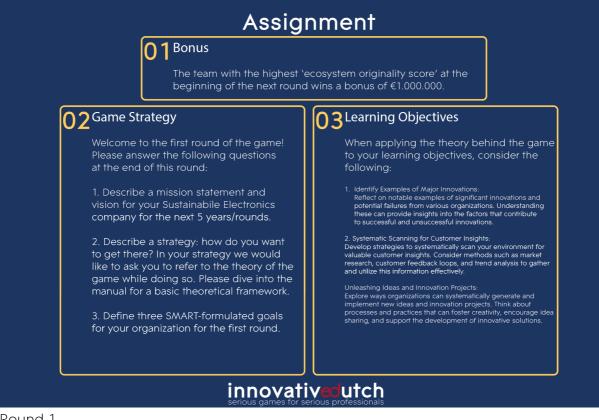
3.1 TYPES OF ASSIGNMENTS

There are 4 categories of assignments built into the game. They can be used at any time.

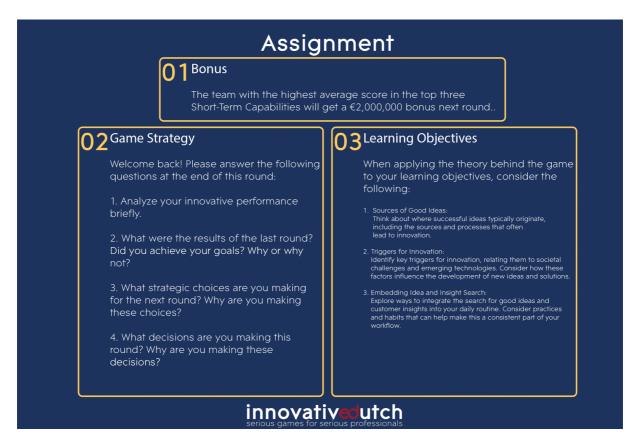
- Analysis: analyse your performance in detail.
- Strategy: create and redesigning a strategy.
- Literature Review: literature study on innovation (management).
- Reflection: reflection.

It is worthwhile mentioning that none of the assignments have a direct impact on the game result. Usually, the assignments will be used by the instructors/lecturers for grading and feedback purposes.

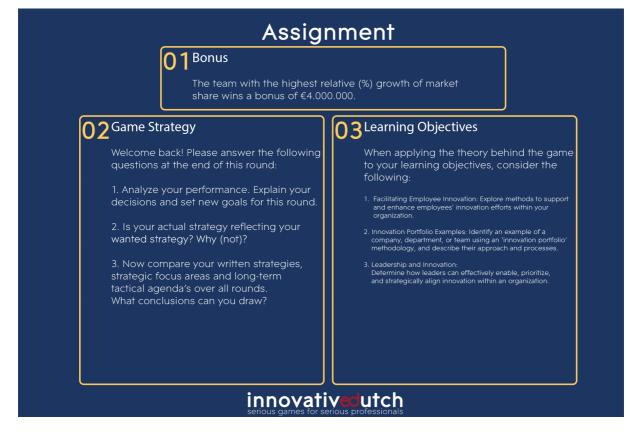
Usually, we'll include predefined assignments in the game. They can be as follows:



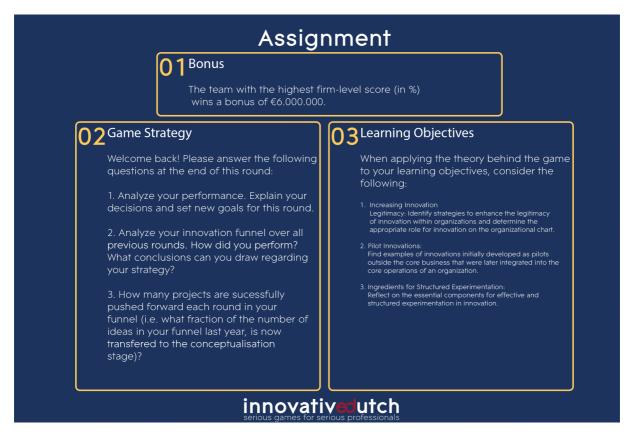
Round 1



Round 2



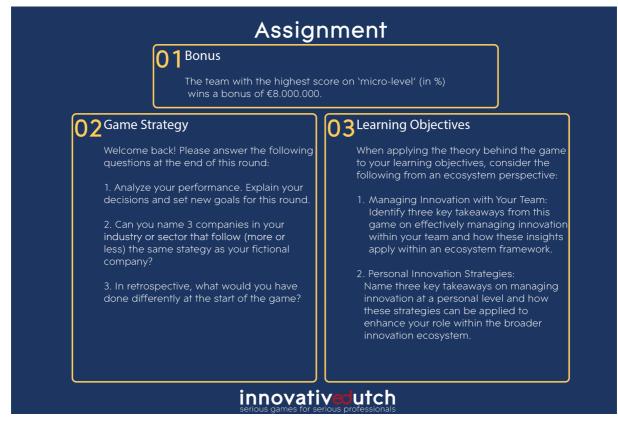
Round 3



Round 4

01 Bonus The team with the highest so (values) of `resilience' and `c	cores on the long-term capabiltiies penness′ win €5.000.000
 O 2 Game Strategy Welcome back! Please answer the following questions at the end of this round: 1. Analyze your performance. Explain your decisions and set new goals for this round. 2. Did you take a good look at the 'stars'? What are they telling you? How did you use that in your decision-making? Did you search for background information on each decision? 3. Did you take a look at the economic forecasts? How do you think you can use them in the game? 	 O 3 Learning Objectives When applying the theory behind the gam to your learning objectives, consider the following from an ecosystem perspective Ambidexterity in Innovation: Reflect on the concept of 'ambidexterity' and identify examples of how this paradox manifests in innovation within an ecosystem. Consider how balancing exploration and exploitation contributes to innovation success. Enhancing Innovation Impact: Explore ways to increase your individual innovation impact within the broader ecosystem of the organization. Consider strategies to contribute more effectively to the firm's succes through collaborative and systemic approaches. Methods for Innovation: Evaluate the methods and tools you favor for innovation and experimentation within an ecosystem context. Explain why th approaches are effective and how they align with the broader innovation ecosystem.





Round 6

3.2 ANALYSIS ASSIGNMENT

In order to answer the following questions, it is necessary to open the current report and all previous reports using URLs from that round.

- Basic analysis: is your actual strategy reflecting your wanted strategy?
 - What did you write down in the 'strategy part' last round?
 - o How did you perform on the archetype value?
 - How do you perform on the long-term and short-term tactical agendas?
 - o If you compare the first three questions, what conclusions can you draw?
 - Now compare your written strategies, archetype and long-term tactical agendas over all rounds. What conclusions can you draw?
 - Where are you going to focus on in the next round if you want an unchanged strategy?
- Advanced analysis: what are the most important indicators telling us?
 - Analyze your innovation funnel over all previous rounds. How did you perform?
 - o What conclusions can you draw regarding your strategy?
 - What conclusions can you draw? Also, in relation to your funnel performance?
 - Analyze your market share and sales graphs over all previous rounds. How did you perform?

- o What conclusions can you draw?
- Analyze your micro-level and firm-level scores over all previous rounds. How did you perform?
- o What conclusions can you draw?
- o If you compare the results of your sales with your micro-level and firmlevel scores, what do you see? Can you explain that?
- Take a look at your business valuation over the last couple of rounds. What do you generally think of this indicator?
- How will you improve your business valuation in the next few rounds?
 Where will you focus on?
- What capabilities (values) are you going to focus on in the next round, give your results on the innovation funnel and sales?
- How are you going to reformulate your tactics (and decisions) to perform better next round?

• Expert analysis: what are the details telling us?

- Did you take a good look at the 'stars'? What are they telling you? How did you use that in your decision-making? Did you search for background information on each decision?
- Can you create any other indicators by doing some basic calculations on for instance your funnel, your sales and your scores? For instance: the ratio between incremental and radical products for each stage? What do these indicators tell you?
- Did you take a look at the economic forecasts? How do you think you can use them in the game?
- Do you see any decisions that are synergetic? That means: if you combine them, the effect would be much bigger? Which ones?
- Do you see any decisions that have more likely a longer lasting effect in the game? Which ones?
- Did you use collaborations to its fullest extend? How? With whom did you collaborate? Did you also collaborate with other teams to create a unique archetype i.e. increase your originality score?
- Did you read the strategies of other teams? Can you foresee, based on their strategies, what archetypes they will be in?
- Did you use the 'memory' of the game, i.e. the fact that the game will still remember previously taken decisions?
- Did you use the 'product portfolio'-overview under sales? How do you think you can increase the number of 'cash cows' and 'dogs' product sales?
- To what extend did you use the feedback of our facilitator? Did you ask any questions to other teams or to our experts? Why or why not?
- o Did you use the AI-feedback? How did you use it? Why or why not?

3.3 STRATEGY ASSIGNMENT

In order to answer the following questions, it is necessary to open the current report and all previous reports using URLs from that round.

- Describe a mission statement and vision for your company for the next 5 years. Use between 100 and 200 words to do that.
- Describe a strategy: how do you want to get there? In your strategy we would like to ask you to use a reference to both the capabilities used in this game and to the innovation funnel. You can also use another strategy formulation model, such as the BCG-matrix, Ansoff-matrix or Treacy & Wiersema. Use between 300 and 450 words to describe your strategy.
- Answer the following tactical questions:
 - o Analyze your innovative performance briefly;
 - What were the results of the last round?
 - o Did you achieve your goals?
 - o Why or why not?
 - What strategic choices are you making for the next round?
 - Why are you making these choices?
 - o What investments are you making this round?
 - o Why are you making these investments?
- Define three SMART-formulated goals for your organization for the first round.

3.4 LITERATURE STUDY

There is a different assignment for each round in this category:

In case literature is provided in the course:

- Summarize each article in a few sentences and name at least three key learnings from each of them. Are the learnings applicable to the game?
- Select three papers and compare them in a table, for instance by naming the advantages and disadvantages of each of them for innovation strategies.
- Please search for a couple of new articles related to 'corporate venturing' on scholar.google.com. How can they influence your strategy?
- Can you describe your team's 'unique way of working' (a method you use every round for instance)? Find at least three sources that back up your 'innovation process'.

In case the literature is not provided in the course:

Round 1:

Scan the web for three recent blog posts that are about the role of marketing in innovation (management). Summarize the articles and name at least three key learnings from them. Are the learnings applicable to the game? How? Use maximum 200 words.

Round 2:

Scan the web for articles and news about the role of creativity in the innovation funnel or innovation process. Name at least 3 articles and build your own opinion. Why is, or isn't, ideation important for an innovative strategy. How will this impact your strategy in the game? Use between 150 and 250 words.

Round 3:

Find at least 3 academic papers on scholar.google.com about co-creation, crowdsourcing and crowdfunding. Name the sources. Make a comparison between the three in a tabel, for instance naming the advantages and disadvantages of each. Use between 200 – 300 words.

Round 4:

Write a short literature review on corporate entrepreneurship, intrapreneurship, corporate venturing. Use and name sources of at least 4 academic papers on scholar.google.com. How could the review be used for your strategy? Use between 200 – 300 words.

Round 5:

Write an opinionate peace about the 'new business modeling'. Is it a hype or a trend? Use at least 3 newspaper articles and 3 academic papers found on scholar.google.com to strengthen your opinion. How could this influence your strategy? Use between 200 – 300 words.

Round 6:

Write a "white paper" on innovation processes: 'an #-step guide to innovation'. Design your own process and explain how and where it could be best used. Use at least 3 references to existing innovation processes. Make a visual of your process and explain how it works. Use between 200 – 300 words.

3.5 REFLECTION ASSIGNMENT

In case you're only doing a reflection once:

- Take a look at the table in chapter 1.3 of the Instruction Guide. Score every team member on all 15 elements.
- Review your team's performance during the game. Please write at least three different STARR-reflections (200-300 each) to reflect on certain situations.
- Please write down one personal goal for the future for each team member regarding innovation management.

In case you're doing this every round:

• Round 1: Take a look at the table in chapter 1.3: behavior. Score every team member on all 15 elements: are you awakening, accelerating, advancing or adapting?

- Round 2: Reflect as a group on your team behavior on the topic "collaborative". Name at least one situation that was about collaboration and use the STARRmodel to reflect on that situation. Please define 3 tasks for the group to work on during this round.
- Round 3: Reflect on the goals of last round. Now do the same as last round on the topic "imaginative".
- Round 4: Same as last round, but the new topic will be: inquisitive.
- Round 5: Same as last round, but the new topic will be: persistent.
- Round 6: Same as last round, but the new topic will be: discipline.

3.6 EXTRA TASKS

There is a different assignment for each round in this category:

Round	Focus topic in game	Example tasks for Business- related courses	Example tasks for Engineering- related courses		
1	Micro-level	 Market- and Desk research Idea Generation / Concept Development Target Group Analysis for concept Positioning of concept Marketing mix for concept 	 Idea generation Theoretical framework Concept development Marketing plan 		
2	Micro-level	 Implementation plan for concept. Business plan for concept. Full Business Model Canvas for concept 	 Concept Design Product Design Prototyping 		
3	Firm-level	8. Organization plan for concept or Canvas.	 Using the crowd to enhance product design. Using human capital to enhance product design. 		
4	Firm-level	 (Corporate) entrepreneurial / investment plan for organization. New Product Development for organization. 	6. Business plan for product.		
5	Ecosystem-level	 Vision/strategy for organization. Innovation Management plan for organization. 	 7. Strategy for product and business. 8. In- and outsourcing plan 		
6	Ecosystem-level	 New Business Development plan for organization. Future profit models for organization. Spin-off/-out strategy. 	9. Business Model Canvas. 10. Profit model plan.		

FREQUENTLY ASKED QUESTIONS

Below, you'll find some of the questions that have been asked most frequently.

4.1 INTERFACE

1. We cannot open something.

Please contact us at <u>info@innovativedutch.com</u> if something is not working normally and we will try to solve it for you.

2. Is there a way for our team to get the older reports from previous years?

No, there isn't. Please download the reports and save them each round.

3. We made a mistake. Can we resend our submissions?

If you find out the mistake - or if you just want to change something to your tactics - you can always resubmit the last round up to the deadline of the that round. We will only look at the last submissions received.

4.2 BANKRUPTCY

5. Due to bad decisions, we went bankrupt in the third week, what are the possibilities for survival?

You'll have to talk to your instructor or university teacher. If he or she agrees to it, we'll let you back in.

4.3 CONTEXT

6. How long have we been operating as a company?

Keep in mind that bringing a product from one stage to another takes 1 year in the game. The fact that you currently have projects in all stages (including dogs and cash cows) assumes you are in business for at least 5 years.

7. I went through all the materials and have started to analyze the data but I was wondering about the product we are selling. Secondly, do we have any idea of the products' life cycles?

The product itself doesn't really matter, because the game looks at the innovation process from a more abstract perspective. However, we usually tell players to imagine they are in the Sustainable Electronics sector where R&D is moderately slow (4 years, each phase of the funnel represents one year), the life cycle is relatively fast (1-4 years, depending on your investments, resulting in stable cash cows and declining dogs), and where turnover is relatively small.

4.4 STRATEGY

8. How can we create our own strategy & how can we know that the strategy that we have is right?

You'll have to find out a strategy based on the innovation (management) literature (or your intuition) and then try to take decisions in the game that are in line with that. In the next round, reflect on your strategy by using the annual report. If you're not seeing the results you had expected to see, you'll need to adjust the decisions that you'll take. There is no such thing as a right strategy: this depends on your competitors and the current market situation.

4.5 DECISIONS

10. Will we still have the decisions of last round in the new rounds?

Yes, they will exist until the end. They will continue to influence your strategy on the background.

11. In the decisions, they are about all the company's products (including the dogs and the cows) or the ones we are newly producing only?

The decisions effect everything in your company. But it depends on the decision. This is explained with the stars in the knowledge management system. The stars indicate whether a decision is effective a certain stage in the funnel. So, for instance: if you want to invest in the commercialization stage, you need to invest in decisions that have more stars for that stage.

12. Does each decision work only in the specified category?

Each decision is categorized under one of the innovation types. For instance [tapping into] "Scientific Research" is labelled under Technology. However, if you take this decision, it will not only contribute you your company's strength on the category "Technology" but also to a serious extent on the category "Open Innovation" - and perhaps to some extent to other categories. If you read the literature on a single topic, you will find out why.

So, if you would take only the decision "Scientific Research" in a specific round, your tactical agenda in the next report would say: 1. Technology and 2. Open Innovation, etc. It's a way to invest indirectly in categories that are not yet in the game or to enhance your strategy.

4.6 INNOVATION BUDGET

14. How is the budget calculated? We got increasing sales but decreasing innovation space.

The budget basically is the difference between the spendings on innovation of this year and the spending on innovation of last year.

If your sales increase, it usually results in an increased budget. However there are some mechanisms in place that may give you (temporary, they are deducted in the rounds after) increases in budget in order to make sure that your company stays competitive.

15. How can I make sure that I'm not spending too much on a certain type of Innovation?

You can't spend too much on 1 type of innovation, you can only spend too much if you are spending more than your budget allows you. However, it is wise to spread your investment over 2-4 different types to be able to invest in every aspect of your funnel.

16. We are lower on the Sales (and ranking) than Team number X, but we have a higher budget. How is that possible?

Because your current (and past) spendings on innovation are (much) lower than the current (and past) spendings of Team X. If you are close on sales, that means that your team achieved almost the same with less investment, thus meaning you made smart decisions. You still have space to increase your innovation spendings giving you advantage over the other team.

17. If you do not invest the budget, are unspent amounts carried forward to the following year? Or are they lost?

Yes, the unspent budget will be carried forward.

4.7 INNOVATION FUNNEL

19. How/why would a company lose a product, either radical or existing?

Just like in every other sector, also these products have a certain lifetime. Most products in this game will be in your portfolio for a number of years. During the first year, they are (in BCG Matrix-terminology) in your "stars", which is also the last stage of the funnel. So, these are only the new radical/incremental products that you have created in the last year.

The year after, some of your products move to being "cash cows" (existing products) or "dogs" (declining products). The number of products you will be able to keep profiting from is dependent on your decisions. For instance: investing in quality, service or reputation (long-term) will keep your products longer in your portfolio.

20. We have invested heavily into conceptualization and development, but this is not reflective in the no. of projects in our innovation funnel. Are we doing something wrong or are these numbers not very affected by our decisions?

Normally, investments should lead to an increase in the number of projects in these stages of the funnel, compared to the other stages of your funnel.

There can be few reasons why this is not (directly) visible can be numerous, such as the fact that the number of projects in conc/dev is dependant on the number of projects in the ideation stage in earlier years. Also, it could be that the economic circumstances or some other company-specific variables (such as reputation) are worrisome and therefore pressing the number of projects in all stages downwards. The reason could also be that the specific decisions you take have a stronger effect on the longer term.

If you scan all the literature, you'll find numerous reasons that could cause this behaviour. More important than addressing the specific problem is to try to understand how the dynamics of innovation management work, find a balance in using them in your strategy and reflecting on them.

21. At what stage are we in the innovation funnel currently?

The innovation funnel is a "photo" of the current status of all your projects. So, you currently have a number of projects in ideation, a number in conceptualisation, and so on.

22. We have invested strongly in the Commercialization Stage. How is it possible we are not bringing as much products to the market as other teams?

The maximum number of projects you can bring to the market next year is limited by the number of projects in the Development Stage this year. So investing in Development will indirectly also help to bring products to the market next year. So you'll always have to invest in having a balanced funnel.

INSTRUCTOR'S MANUAL

5.1 SECONDARY OBJECTIVES

The game also intends to bring a radical new way of learning to students and it aims to enhance their learning experience. These are called secondary objectives:

- Individual learning: the games enhance a personalized learning experience. Through a wide range of possible combinations and choice in the game, and personalized feedback, players will be able to adjust the learning outcomes to their individual preferences.
- Industry-University collaboration: the games enhances a practical approach towards business, entrepreneurship and innovation by simulating real-world happenings in a game-environment. Moreover, the games are able to work with real-world cases and are designed and tested by professionals from the field. They are actualized on the fly and increase collaboration between industry and university.

3. Interactive learning environment: the games are designed on a virtual and interactive interface that can be accessed from anywhere and anytime.

5.2 TYPE OF GAME

The Innovation Management Game is an Academic Simulation-based Game

- 1. Academic: it's primary audience is academic students or academically-educated professionals
- 2. Simulation-based: the dynamics of the game are largely based on a complex simulation of real-world systems, processes, problems and challenges.
- 3. Game: a battle in which participants compete against each other using a number of iterations with increasing complexity and a scoring system.

5.3 TARGET GROUPS

This game is oriented at students in higher education preferably with 0-4 years background in business studies or relevant courses. We assume the basics of organizational science are known to the players (through school or experience) or are taught at the same time as the game roll-out. This game is also oriented at business professionals in training: people that would like to become better innovation professionals.

The game is best played in the context of engineering. It has a focus on innovation management in a (high-)tech business-to-consumer market. The terminology is slightly focused towards an environment of technical development. Study programs that are most likely to get the most out of this game:

- Business Administration
- Small Business & Retail Management
- Innovation Management
- Industrial Engineering
- Mechanical Engineering
- Public Management
- Management and Leadership
- Marketing
- Commercial Studies

5.4 GROUP SIZES

The game is usually played with 4-10 groups battling against each other. When there are more than 11 groups, several games will run next to each other (results are still comparable). The group size is 3-5 players; however it can be played with every possible number of group members: 1-many. Within one game a maximum number of 10 teams can compete against each other.

5.5 TIME FRAME

Each round takes about 1-3 hour to complete, depending on the number of assignments that are included in the gameplay. Usually, we set deadlines beforehand and your team must deliver the results before the deadline of the next round. The rounds can be played over a longer time span, for instance once a week, or a shorter time span, for instance 5 rounds in one day.

5.6 LOCATION

The longer games, with intervals of at least 1 day, can be played online, worldwide. It is advisable to form teams that know and see each other in real life to make discussions about the strategy more liveable. Moreover, collaborations only work effectively when agreed upon in real life. Shorter games, such as a pressure-cooker-workshop, need physical attendance of the game manager and all the players in order to work efficiently.

5.7 MATERIALS

The game is played on a computer or tablet, so every team needs to have access to at least one device with broadband internet access.

5.8 GAME MANAGERS

Every game has a game manager: an expert that will provide feedback to every team after every round and that is available for questions during the game. The game manager cannot interrupt in the game algorithm, but is able to adjust or reset mistakes. In physical sessions, he/she will walk around to ask questions, give feedback and enhance the game experience.

5.9 FULL COURSE PROGRAMS

We usually suggest to run the games in one of the following three formats:

- Pressure Cooker Format (3 days 2 weeks)
- High Intensity Format (3 weeks)
- Standard Format (6 weeks)

Our games are always thoroughly integrated with the curriculum. Please find example programs of our games below:

2-week program:

Round	Week	Topics	Lecture	Start	Support	Finish	In-game written assignment	Grading assignment	Feedback
1	4	Marketing &	Monday 10-11	Monday	Monday 11-13 Kick-	Tuesday 13:00	Strategy &		Wednesday
-	· ·	Branding, Ideation	Introduction	13:00	off Session		Goals		before 13:00
2	4	Technology, Co-	Wednesday 13-16	Wednesday		Thurday 13:00	Strategy &		Friday before
2	1	L Creation	Innovation Processes	13:00			Goals		13:00
3	1	Social Innovation		Friday 13.00	Friday 10-13 Feedback Session*	Friday 18:00	Strategy &		Monday before
5				Filuay 15.00			Goals		13:00
4	2	Entreprenurship	Monday 13-16 Open	Monday		Tuesday 13:00	Strategy &		Wednesday
4			vs. Closed Innovation	13:00			Goals		before 13:00
5	2	Open Innovation		Wednesday		Thurday 13:00	Strategy &		Friday before
				13:00			Goals		13:00
6	2	Business Model		E-11-12-00		E	Strategy &	Assignment 2:	
		Innovation		Friday 13.00		Friday 18:00	Goals	Analysis	

3-week program

Round	Week	Topics	Lecture	Start	Support	Finish	In-game written assignment	Grading assignment	Feedback
1	1	Marketing &	Monday 10-11	Monday	Monday 11-13 Kick-	Tuesday 18:00	Strategy &		Wednesday
-		Branding, Ideation	Introduction	13:00	off Session		Goals		before 12:00
2	1	Technology, Co-		Wednesday		Friday 18:00	Strategy &		Monday before
2		Creation		13:00			Goals		12:00
3	2	Social Innovation	Monday 10-12	Monday	Monday 13-16	Tuesday 18:00	Strategy &		Wednesday
5			Innovation Processes	13:00	Feedback Session*		Goals		before 12:00
4	2	Entreprenurship		Wednesday		Friday 18:00	Strategy &	Assignment 1:	Monday before
4				13:00		Fluay 16:00	Goals	Teaching Case	12:00
5	3	Open Innovation	Monday 10-12 Open	Monday		Tuesday 18:00	Strategy &		Wednesday
2			vs. Closed Innovation	13:00			Goals		before 12:00
6	3	Business Model		Wednesday		Enide: 10.00	Strategy &	Assignment 2:	
		Innovation		13:00		Friday 18:00	Goals	Analysis	

6-week program:

Round	Week	Topics	Lecture	Start	Support	Finish	In-game written assignment	Grading assignment	Feedback
1	1	Marketing &	Tuesday 13-14	Tuesday	Tuesday 14-16 Kick-	Friday 12:00	Strategy &		Monday before
1	1	Branding, Ideation	Introduction	16:00	off Session		Goals		12:00
,	2	Technology, Co-	Tuesday 13-16	Tuesday		Friday 12:00	Strategy &	Assignment 1:	Monday before
2	2	Creation	Innovation Processes	16:00			Goals	Analysis	12:00
3	3	Social Innovation	Tuesday 13-16	Tuesday	Tuesday 12-15	Friday 12:00	Strategy &		Monday before
3			Innovation Teams	16:00	Feedback Session*		Goals		12:00
4	4	Entreprenurship	Tuesday 13-16	Tuesday		Friday 12:00	Strategy &	Assignment 2:	Monday before
4			Corporate Venturing	16:00			Goals	Literature review	12:00
5	5	Open Innovation	Tuesday 13-16 Open	Tuesday		Friday 12:00	Strategy &		Monday before
5			vs. Closed Innovation	16:00			Goals		12:00
6	6	Business Model	Tuesday 13-16	Tuesday		Friday 12:00	Strategy &	Assignment 2:	
		Innovation	Strategic Innovation	16:00			Goals	Reflection	

Please note that the feedback sessions are not included in the basic fee, as are grading the assignments, which is typically done by the university professors.

5.10 REGISTRATION

Players should be registered with at least their names and e-mail addresses before the start of the game. After showing interest in the game, we'll get in contact to introduce you to our registration process so that we can set-up the game for you.

5.11 TEAMS

The players should be placed in teams before the start of the game. We need to see those teams. When the game has started, it's not possible to switch teams anymore.

5.12 TEAM NAMES

It is possible to choose a team name if wanted. This is only possible beforehand and not after starting the game. Please contact the game manager if you would wish to pursue this option.

5.13 DEADLINES

We need to plan the deadlines of each round beforehand. They will be communicated through the university guide or e-mail.

5.14 WORKSHOPS

There is a possibility to have one of our experts introducing the game, playing a demo round, being present at a feedback session and leading the final session. Please get in contact with us if you would wish this opportunity.

5.15 INFORMATION

We'll handout necessary information to the players before starting the game in order for them to prepare playing the game.

5.16

Pre-work Package

In order to get the most out of the simulation, you are kindly asked to prepare yourself for the program. Please follow these steps to prepare yourself:

- Log in to your team's game dashboard and take a look at the information that is already available. The dashboard contains a) details about the program, b) the first annual report, c) first assignment, d) the decisions you can take in the first round and e) the manual of the game, which explains the game scenario and gameplay. You will receive the login information for your team separately.
- 2. Please read the following papers in order to acquaint yourself with theory on bringing innovation to the market:
 - a. <u>Lichtenthaler, U. (2011)</u> Open Innovation: Past Research, Current Debates, and Future Directions;
 <u>Read, S., Dew, N., Sarasvathy, S. D., Song, M., & Wiltbank, R. (2009)</u> Marketing Under Uncertainty: The Logic of an Effectual Approach;
 - <u>Katz, G. (2011)</u> Rethinking the Product Development Funnel;
 - d. Cooper, R.G. (2016) The Stage-Gate® System: A Road Map from Idea to Launch An Intro &
 - Summary; e. <u>Crossan & Apaydin (2010)</u> - A Multi-Dimensional Framework of Organizational Innovation: A Systematic Review of the Literature;
 - f. <u>M.P. Hekkert et al. (2007)</u> Functions of innovation systems: A new approach for <u>analysing</u> technological change
 - g. <u>Saebi, T. & Foss, N. (2015)</u> Business Models for Open Innovation: Matching heterogenous open innovation strategies with business model dimensions