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KRAKOW
UNIVERSITY
OF ECONOMICS

INFUSSE

digital eNtrepreneurial Skills For UniverSity Education



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Abstract	The present report is produced under PR3 comprising of the following INFUSSE activities: <ul style="list-style-type: none">• PR3/A2. Incubation modules Material Development

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DIGITAL TOOLS FOR NEW VENTURE CREATION

Scope

This chapter aims to introduce various digital tools that can be used by students to enhance their venture creation, and boost collaboration between co-workers. The proposed tools are freemium platforms and can be useful in different stages of the venture creation process. More specifically, the Canvanizer is helpful for the formulation of the business model canvas, and brainstorming activities, the Proto.io could be used for the prototyping stage, and the Trello can be used for coordination purposes, namely for project or team management purposes.

Expected outcomes

- Students would become familiar with multiple collaborating tools
- Enhance the final deliverable of their venture creation

BACKGROUND/DESCRIPTION:

Digital tools could improve the venture creation process and collaboration among team members, and support remote learning and collaboration. However, the choice of tool will depend on the specific needs of the project or program and the preferences of the users. Hence, the selected digital tools must be accepted by all team members.

Here, we present Canvanizer which is useful in the business model creation stage, Proto.io for the prototyping stage, and Trello to enhance coordination among team members.

Digital Tools

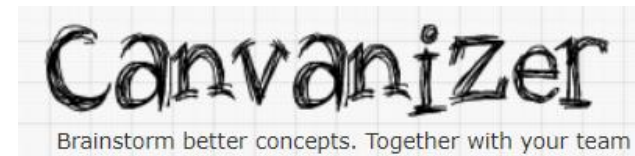
Software, programs, applications, platforms, and (online or offline) resources that can be used with computers, mobile devices or other digital devices, and which incorporate text, audio and visual stimuli.

Digital tools can add value to different stages of the venture creation process.

Canvanizer

Canvanizer is a freemium business brainstorming and modeling tool that allows users to create various pre-structured canvas templates. The platform offers various templates for business, service design, project management, and general purposes. It is a collaborative tool so users can use it to brainstorm, share, and edit at the same time.

After the sign-in process users are landed on their “Personal workspace” (A) and “Workspace” (B) page where there is an overview of the current projects (Figure 1). By clicking the “Add Canvas” (C) the user can see the various pre-structured templates like Content Strategy Canvas, Organization Canvas, Customer Journey Canvas, Pros & Cons Canvas, SWOT analysis, etc.



External links:

[Canvanizer](#)

[Business Model Canvas Tutorial](#)

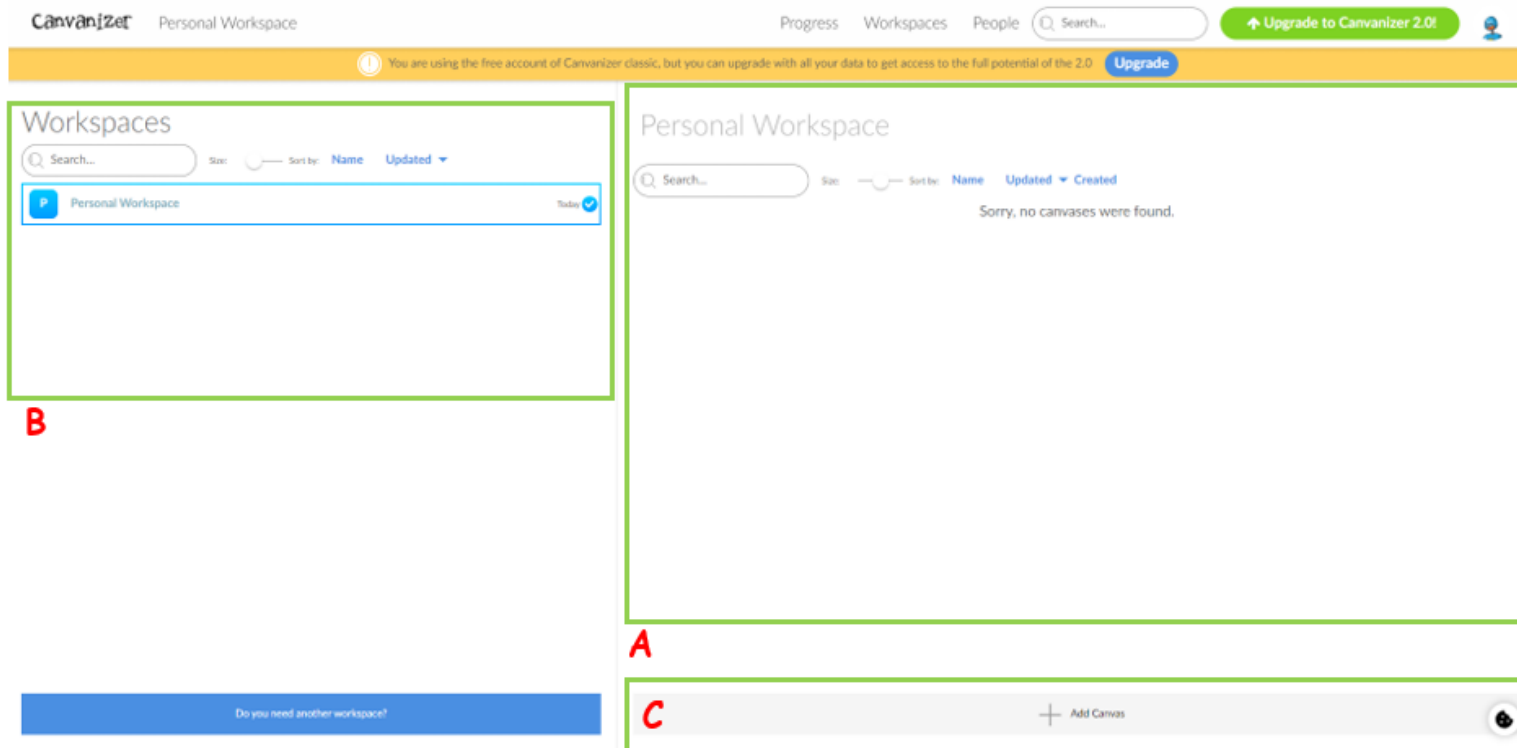


Figure 1: Canvanizer interface.

In this showcase, we will use the “Business model Canvas” template. The interface of the Business model Canvas is quite simple (Figure 2), and a pop-up message will provide general guidelines on how to edit the canvas. On the right side of the screen (D), there are the “Share Canvas”, “Canvas History”, “Canvas Settings”, and “Help?” options. Using these options, the user can share the canvas, see the changes each collaborator made, customize canvas settings and change the name of the canvas and seek additional help. By clicking on “Insert” (E) the user can write and customize notes that will appear in the canvas.

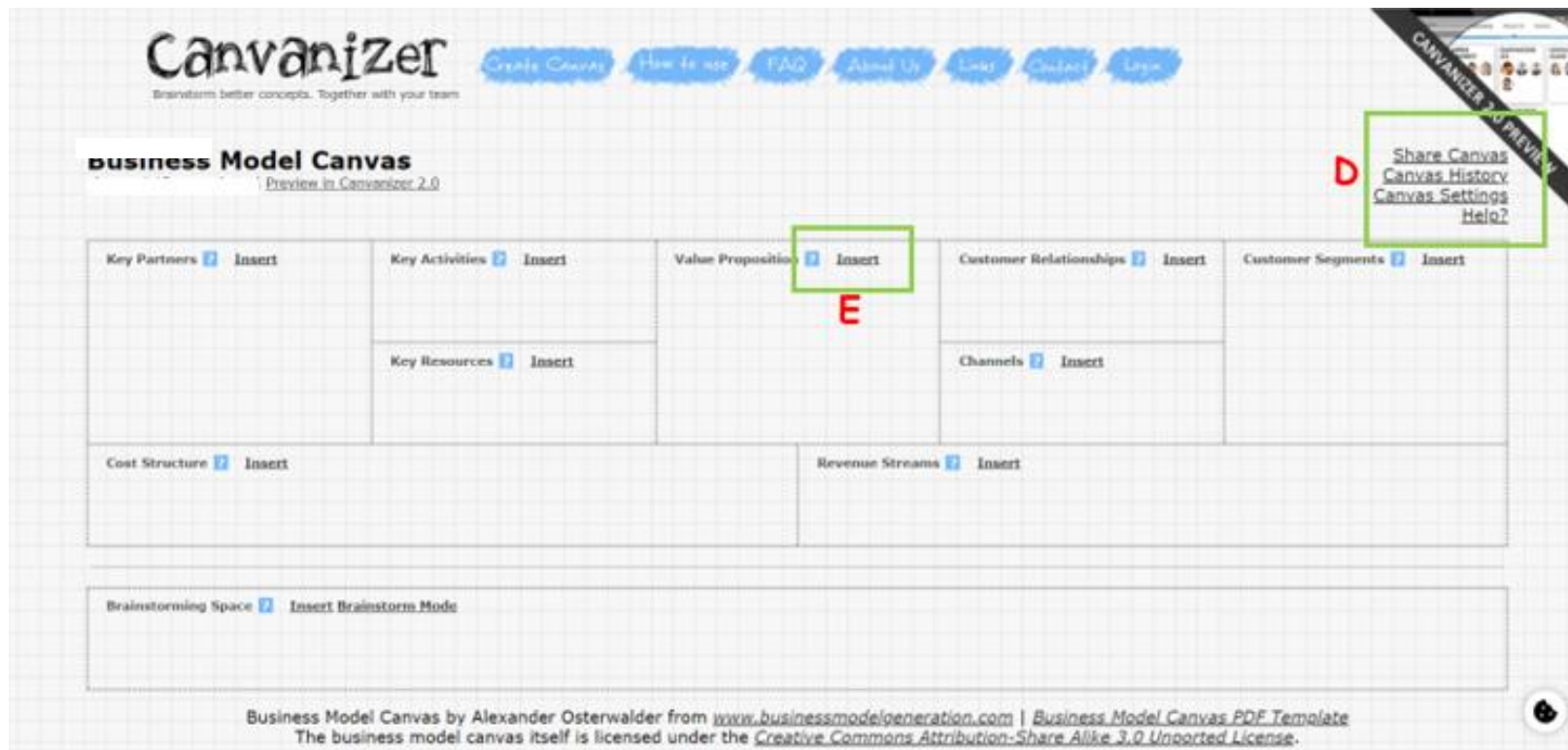


Figure 2: Business Model Canvas Interface.

Proto.io

Proto.io is a prototyping platform launched in 2011 and developed by PROTOIO Inc. Originally, it was designed to prototype on mobile devices, but now it has expanded to allow users to prototype apps for anything with a screen interface, including Smart TVs, digital camera interfaces, cars, airplanes, and gaming consoles. Proto.io utilizes a drag-and-drop user interface (UI) and does not require coding¹. It's a freemium platform and the user can use it for free for 15 days. Then it can activate a subscription option.

By completing the sign-up process the user landed on the project's interface (Figure 3). At the upper left side, there is a menu with the Projects, Users, and Custom Devices (A). Also, at the bottom of this side, the user can find resources to assist throughout the project development process (B). Finally, there is a real-time assistant feature that can be used throughout the project development project (C).

The logo for Proto.io, featuring the word "proto" in a dark blue, lowercase, sans-serif font, followed by ".io" in a lighter blue, lowercase, sans-serif font.

External links:

[Proto.io](https://proto.io)

[Video Academy](#)

¹ <https://en.wikipedia.org/wiki/Proto.io>

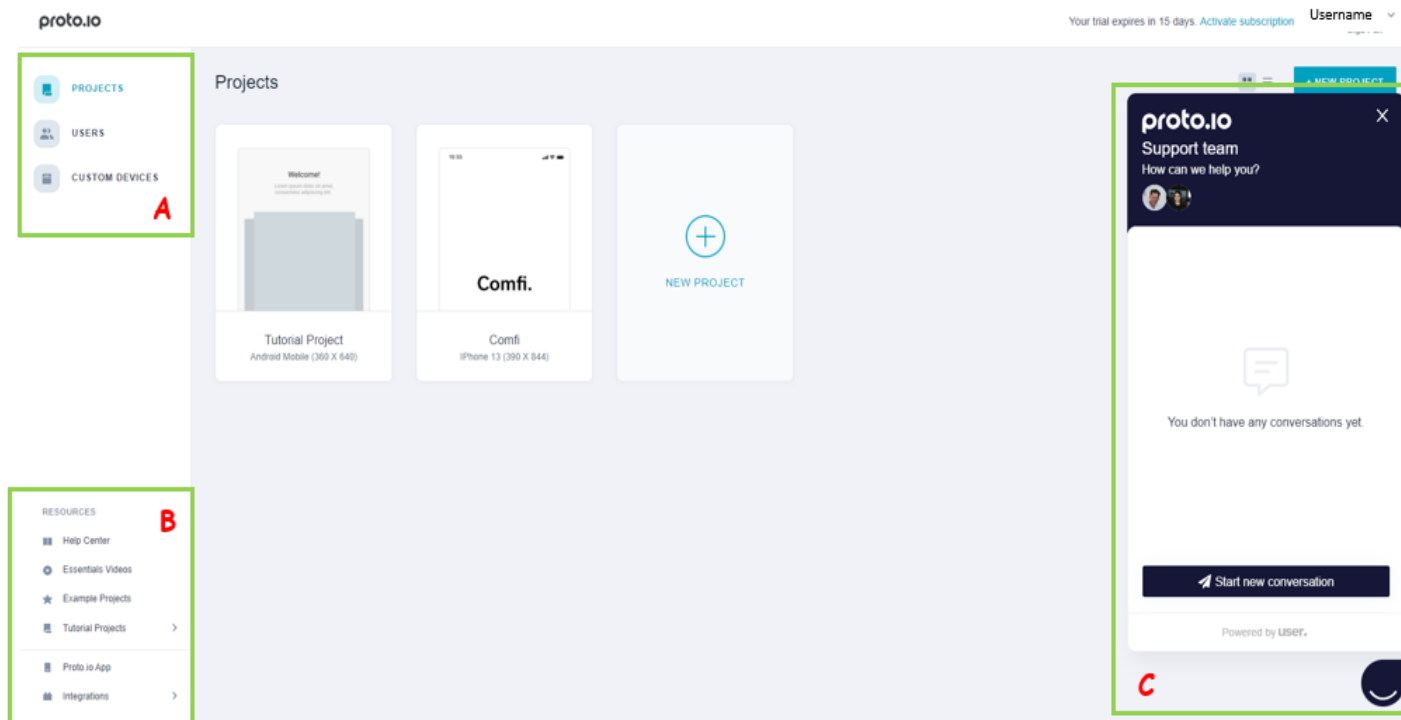


Figure 3: Proto.io interface.

By clicking the “New Project” button user creates a new blank project that can be customized (Figure 4) by defining the “Project Name” (D), the “Project Type” (E), and the “Device Skin/Screen Size” (F). The options for the Project Type are Smartphone, tablet, web desktop, smartwatch, or create a custom type. Finally, the option “Device Skin/Screen Size” defines the size of the prototyping, and the most common and popular screen sizes are iPhone 13 (390x844), iPhone 13 Pro Max (428x926), and Android Mobile (360x640).

New Project
Create a new blank prototype

PROJECT NAME
Untitled **D**

PROJECT TYPE

SMART PHONE TABLET WEB DESKTOP SMART WATCH CUSTOM **E**

DEVICE SKIN / SCREEN SIZE
iPhone 13 (390 x 844) **F**

CANCEL CREATE

Figure 4: New Project interface.

By clicking the “Create” button, the user will land on a new page and an introductory video of the editor screen will appear (Figure 5). The main structure of the editor interface includes:

- **The Canvas.** It is located at the center and used to design the prototype.
- **The Inspector, and the Proto.io Libraries.** They include all the necessary designs that might be needed and are on the right side of the screen. To simplify the design process there are 3 tabs. The first tab includes multiple components that can be used during the prototyping process, and the second tab includes device-specific groups for popular operating systems. In the third tab, there are some ready-to-be-used templates. Also, the platform gives users the ability to upload their assets.

- **The “Layers” and “Screen”.** Both of these features are placed on the right side of the screen. The first feature “Layers” summarizes see every component (IU item) that has been used in the prototype. In addition, the “Screen” window presents an overview of the multiple screens that have been created for the prototype.

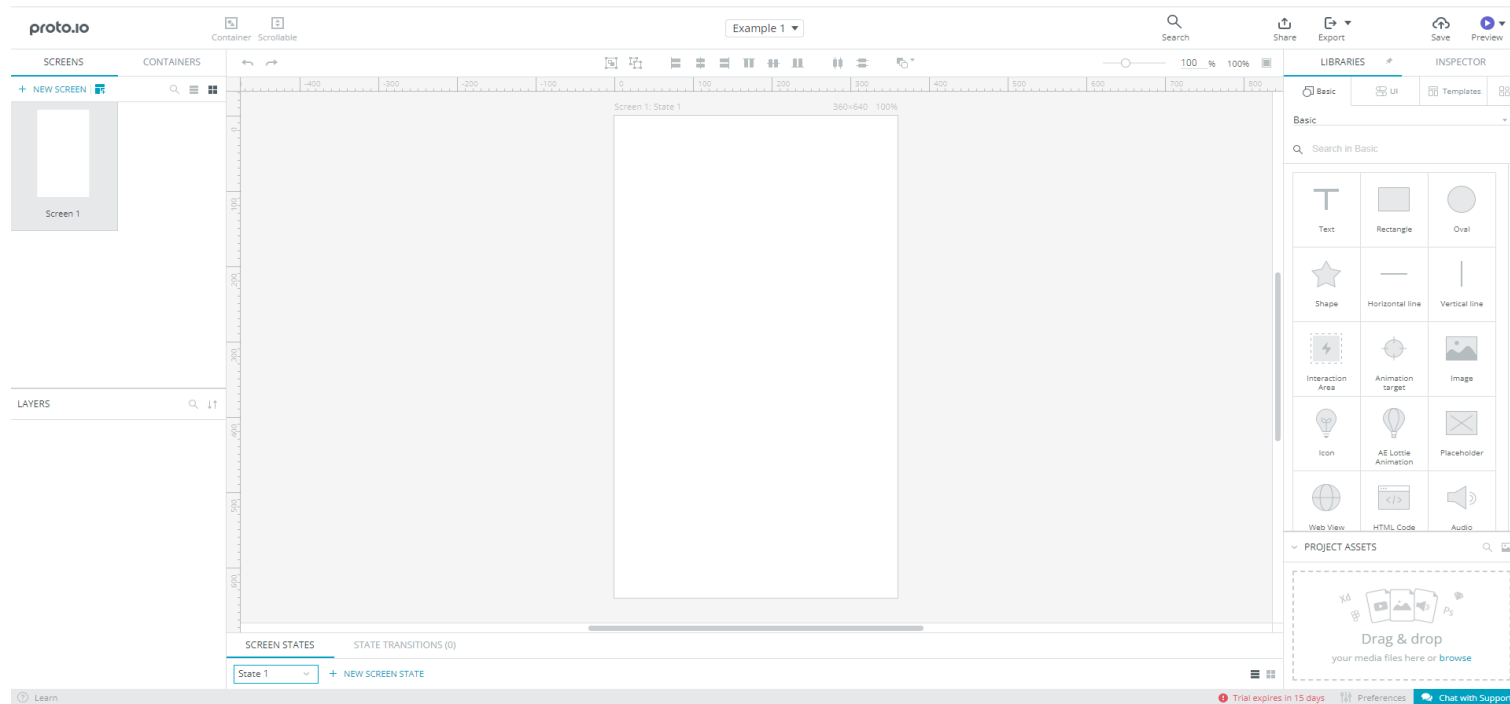


Figure 5: Editor interface.

Trello

Trello is the visual work management tool that empowers teams to ideate, plan, manage, and celebrate their work together in a collaborative, productive, and organized way. By using this software users can create their task boards with different columns and move the tasks between them². There are multiple templates that propose various boards (structured workflows) for project management, brainstorming, meetings, task management, CRM, and other editorial calendar projects.



In Trello language, a Board (A) represents a place to keep track of information — often for large projects, teams, or workflows. Also, on the right side of the screen, there is the “Board Menu” (D) where the user can customize the board, enable power-ups, overview activity, and create automation. In the Board, the user can add Lists (B) and add to them Cards (C). Lists describe specific tasks or pieces of information, organized in their various stages of progress. On the other hand, Cards represent something that must be done or something that must be underlined so usually they represent tasks and ideas. Hence, the cards can be customized and dragged and dropped.

External links:

[Trello](#)

[Trello Guides](#)

[Trello Webinars](#)

² <https://en.wikipedia.org/wiki/Trello>

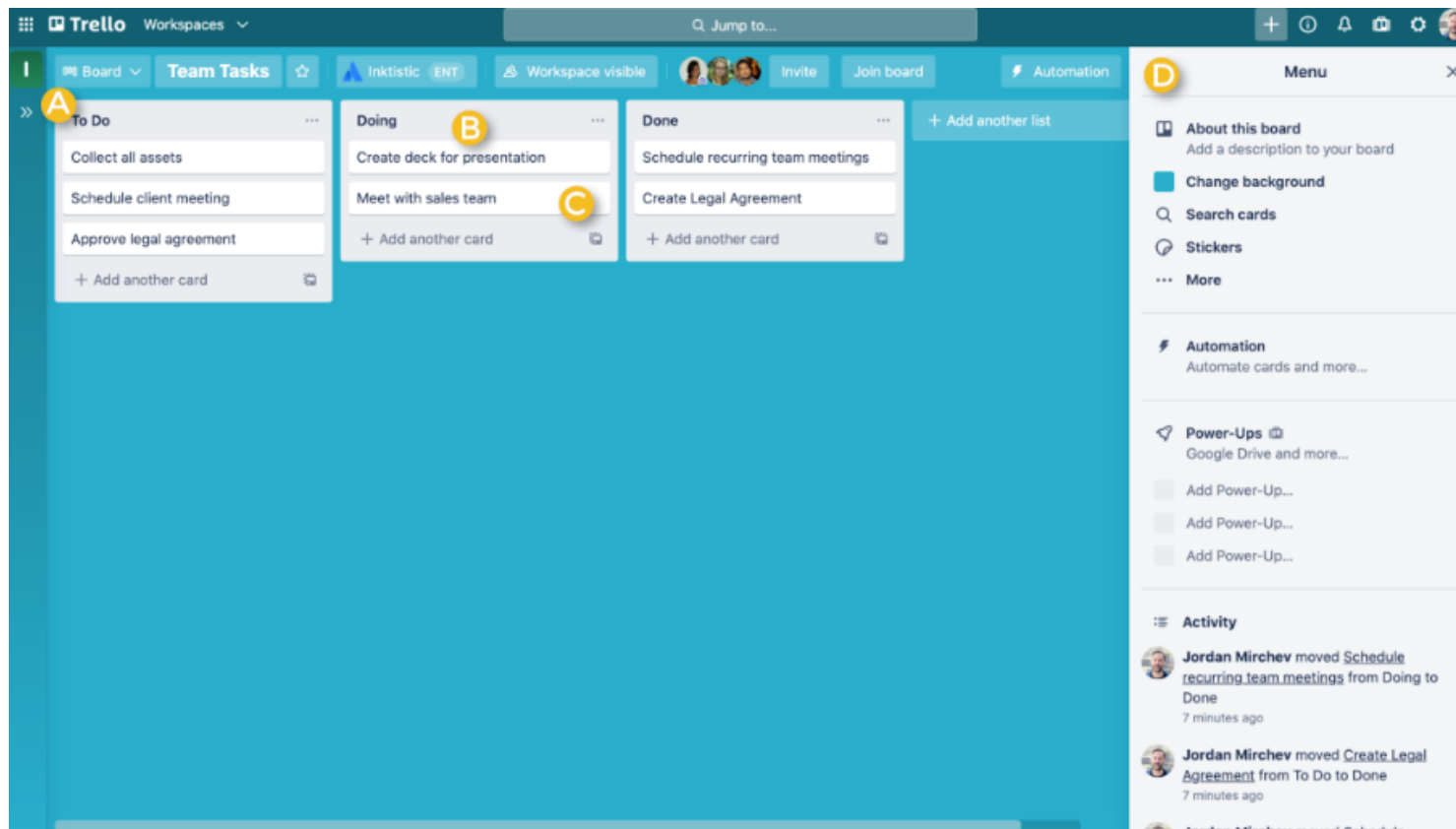


Figure 6: Trello interface.

The “Invite” button user can invite new members to collaborate on the project or to assign specific tasks (Figure 7). In addition, the user can set members' permissions that prescribe their role on the board. There are 3 permission types:

- **Normal** can view and edit cards, they can also edit some board permissions depending on what settings you put together. Great for workspace members actively working on a project.
- **Admin** can view and edit cards, remove members and change all the settings of the board. Great for project leaders or managers who have full control over the project.

- **Observer** can access content displayed on a board, they can't edit cards but you can allow them to comment, emoji react, and engage to the level you define with the board. Great for boards you want to inform people on such as clients, managers, third-parties, etc.

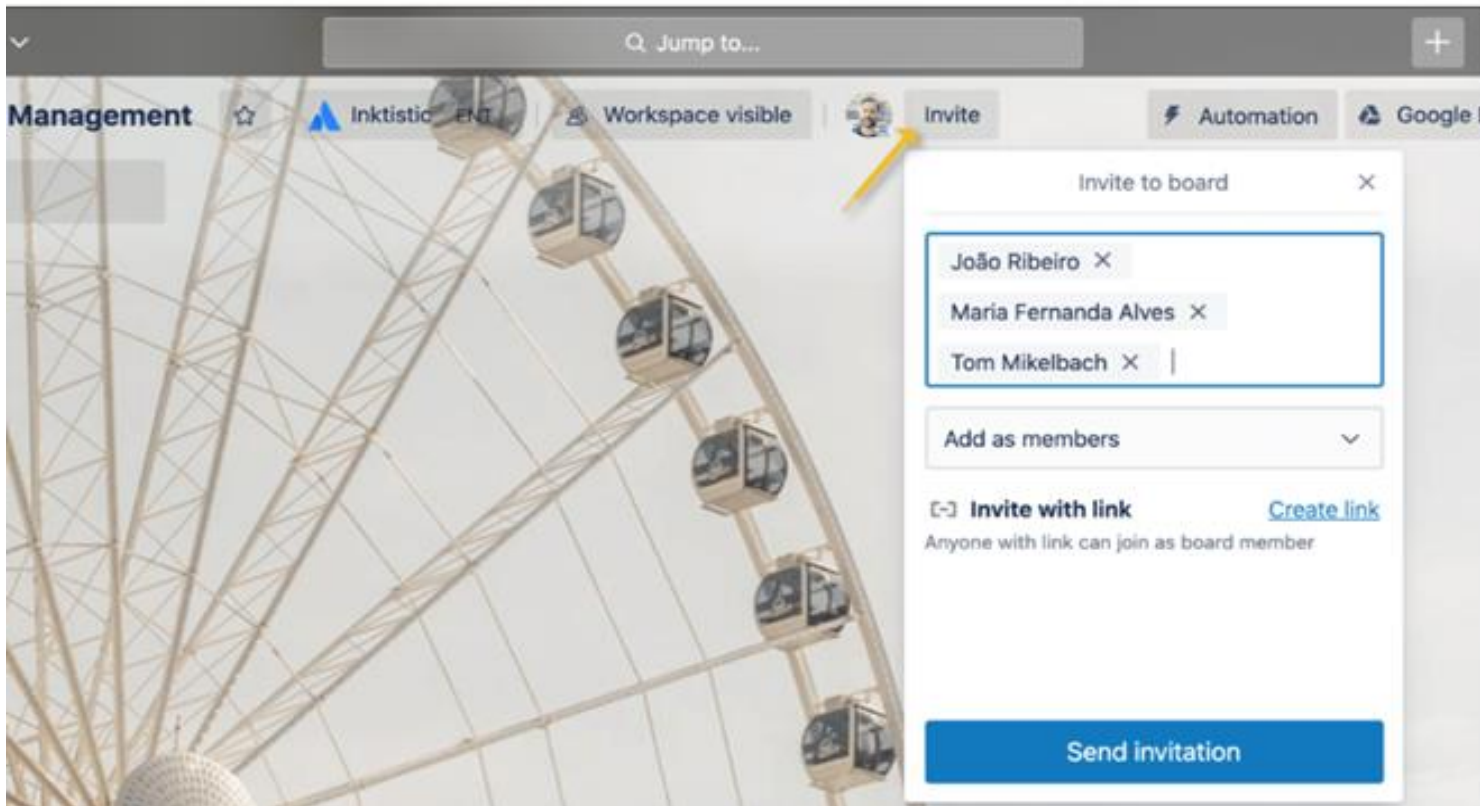


Figure 7: How you can invite collaborators in Trello.

Check your knowledge

1. Management tool	A. Canvanizer
2. Business model tool	B. Proto.io
3. Prototyping and user experience tool	C. Trello

Correct Answers: 1-C, 2-A, 3-B

References

Canvanizer (n.d.), <https://canvanizer.com/new/business-model-canvas>, Retrieved December 19, 2022

Proto.io, (n.d.), <https://proto.io/>, Retrieved December 19, 2022

Trello, (n.d.), <https://trello.com/>, Retrieved December 19, 2022

Igi-global, (n.d.), <https://www.igi-global.com/dictionary/digital-tools>, Retrieved December 19, 2022

GET AGILE!

Scope

This chapter aims to help the reader understand how to get **agile**. To achieve this, we explore the agile manifesto and agile methods and steps. We also provide three examples of agile methodologies and offer several resources that better explain the concept but also for practicing agile methodologies.

Expected outcomes

- identifying the elements and values that define **agile**
- understanding the usefulness of agile
- identifying how and when an agile methodology works



WHAT IS AGILE?



AGILE

Today's world, characterized by volatility, uncertainty, complexity, ambiguity (VUCA) requires a new form of organization which literature named Agile methodology. Also, agile is known as a flexible approach to deliver a solution based on general principles which highlight the abilities needed for taking good decisions.

Agile management

Agile methodology

Agile thinking

BACKGROUND:

"Agil(e)" was first introduced in 2001, in the IT domain but quickly expanded to other domains (Beck et al, 2001). Agile is not only a management method, but also requires a new thinking, perspective, aimed at evaluating and permanently reassessing projects.

Agile management as opposed to traditional management is based on value creation through commitment and motivation of human resources.

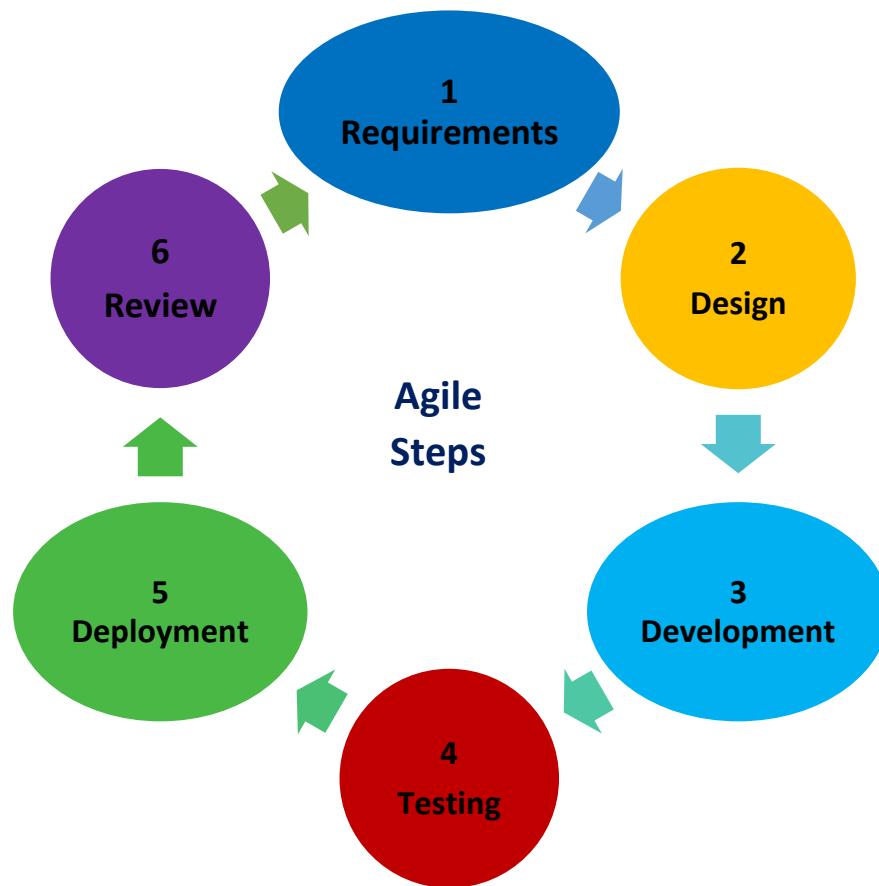
<i>Agile management implies:</i>	<i>Advantages of agile management</i>
✓ <i>Teamwork</i>	✓ <i>Good working collaboration</i>
✓ <i>Collaboration</i>	✓ <i>Good client relationships</i>
✓ <i>Short and often working meetings</i>	✓ <i>Productivity and quality growth</i>
✓ <i>Motivation</i>	✓ <i>Increased transparency of activity</i>

AGILE METHODS

HOW DOES IT WORK?

Agile management methods are based on the breakdown of projects and activities in several phases, in shorter cycles. The results of the project are delivered at the end of each phase/cycle.

Also, **Agile** puts value on: individuals and human interactions over processes and tools; working solutions over extended documentation; collaboration (team work or customer collaboration) over individual work (or contract negotiation) and fast response to change over planning or following a plan (www.agilemanifesto.org).



The most common agile methods are Scrum, Kanban, or Lean Management. Many advantages arise from using these methods:



SCRUM

self-organized team formed by specialized personnel

a master is responsible for promoting and supporting the team in achieving the common goals

the master help the team to understand scrum theory, practices,



KANBAN

often used in production

a whiteboard is used to display the activities „just-in-time“ for production and delivery optimization

offers a better stocks control, reduced production and stocking costs



LEAN MANAGEMENT

considered a new management approach based on different methods, including Kanban

human resource is the central structure

the aim is processes and activities optimization



TIP !

Simulate many agile methodologies to find the most suitable for your organization/team.

External links and addition reading:

[Agile manifesto](#)

[What is agile?](#)

[Agile and Scrum in the Real World](#)

[Agile Methodology Tutorial for Beginners](#)

Check your knowledge!

1. *What do you understand by agile methodologies?*
 2. *Which domain introduced for the first time an agile methodology?*
 3. *What does agile management imply?*
 4. *Which are the agile steps?*
 5. *Describe the advantages of SCRUM methodology.*
-

Resources

Beck, K., et al. (2001) *The Agile Manifesto*. Agile Alliance. <http://agilemanifesto.org/>

Highsmith, S. (2009). *Agile Project Management: Creating Innovative Products*, Addison-Wesley Professional, ISBN: 0321658396

OPEN INNOVATION (OI) – How to collaborate with your local ecosystem

Scope

The aim of the section is to explain the open innovation approach and the importance of the collaboration in the development of a new business or business idea. This section will provide valuable information and tools to support the trainees through the open innovation process.

Expected outcomes

- To understand what open innovation is
- To understand the difference between closed and open innovation
- To learn about the ecosystem actors and with whom we can collaborate
- To understand the INSPIRE Open Innovation Approach



Open Innovation (OI)

Open Innovation is a distributed innovation process based on purposively managed knowledge flows across organizational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organization's business model" (Chesbrough and Bogers, 2014).

BACKGROUND/DESCRIPTION:

To succeed in today's competitive environment, companies must become components of the ecosystem where they jointly develop skills, innovate, and develop Chesbrough, who coined the term "Open Innovation" describes in his book "Open Innovation: The New Imperative for Creating and Profiting from Technology" (2003) how companies have shifted from so-called closed innovation processes towards a more open way of innovating. Open Innovation is the process of growing and developing a company or business line by

Check INSPIRE (H2020) Open Innovation toolbox and discover valuable partnership and business tools & resources: [INSPIRE TOOLBOX](#)

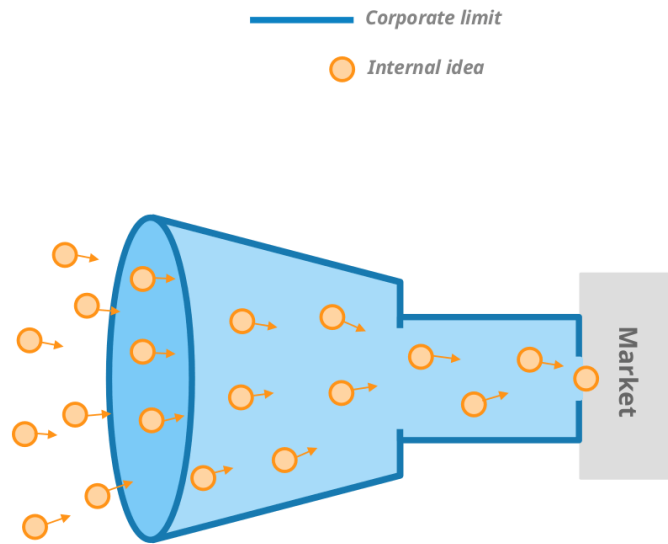
introducing technologies or business models from outside of the company. It is the process of working with outside companies or advisors to introduce technologies and/or expertise into the company's business. A very simple example is where a company is selling goods through well established distribution channels which are changing rapidly.

TRADITIONAL "CLOSED" INNOVATION VS OPEN INNOVATION

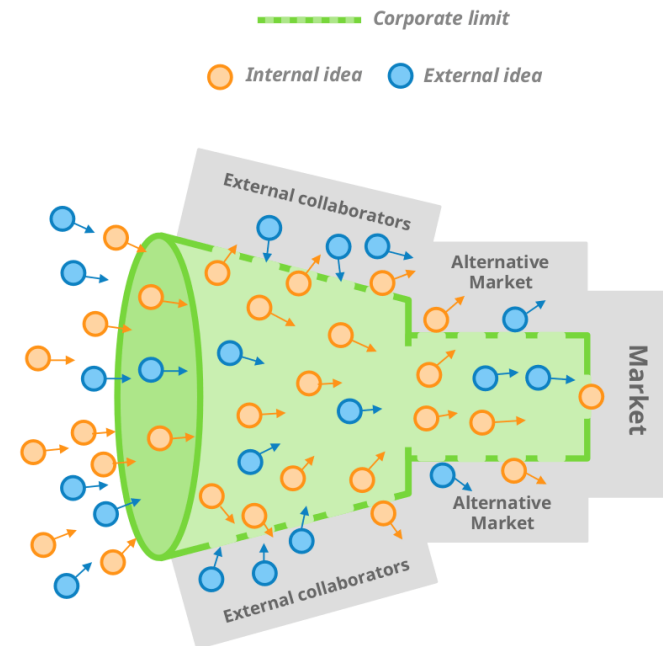
Companies use innovation to generate and apply knowledge, develop new products and services, new business models, and ultimately obtain business results. Traditionally, companies innovated only using internal resources. The main reasons were the non-commercial focus of the scientific community and their need to protect their valuable assets. Such companies prioritized the volume of resources, the number of projects, and the investments in innovation. Consequently, organizations with **closed innovation** models tend to have big research departments generating plenty of in-house knowledge.

The so-called **open innovation** has emerged recently as a new innovation model. It encourages companies to use the existing external knowledge rather than reinvent the wheel. This way, it is considered positive to establish links with other companies, universities, tech centers, and other knowledge sources.

Closed Innovation



Open Innovation



Source: <https://www.viima.com/blog/open-innovation>

Closed Innovation	Open Innovation
The smart people in our field work for us	Not all the smart people work for us. We need to collaborate with smart people inside & outside our firm

To profit from R&D, we must discover it, develop it and ship it ourselves	External R&D can create significant value; internal R&D needed to claim a portion of the value
If we discover it ourselves we will get it to the market first	We don't have to originate the research to profit from it
The company that gets an innovation to market first will win	Building a better business model is better than getting to the market first
If we create the most and the best ideas in the industry we will win	If we make the best use of internal and external ideas we will win

CORE OPEN INNOVATION PROCESSES

A business has a number of strategic choices, in her attempt to innovate, regarding with A) who develops innovation and B) who exploits it result of innovation. This paradigm lead us in three types of open innovation:







- **The outside-in process:** Inbound innovation is about sourcing and acquiring expertise from outside the organisation, and scanning the external environment for new information to identify, select, utilize and internalize ideas. (Example: buying a patent by another company)
- **The inside-out process:** Outbound innovation is the purposive commercialization and capture of internally developed ideas in the organization's external environment. This might be through selective revealing of a product to journalists and reviewers or selectively selling the technology or service to customers with a view to getting feedback. (Example: licensing a patent to another company)
- **The coupled process:** The third process concerns alliances with complementarities, in which there is a simultaneous flow of knowledge from inside to outside and from outside in. The combinatorial process is about co-creation products through strategic alliances, joint ventures and others collaborative methods.

BENEFITS OF COLLABORATION

Collaboration with the actors of an innovation ecosystem is extremely important for setting up the base for a successful business. Main benefits from collaboration in the innovation ecosystem are enlisted below:

- Lowering innovation costs
- Going to market faster
- Boosting product visibility
- Attracting potential investors
- Increases the access to skilled persons, infrastructures, customers and suppliers, labor force
- Increasing the access in expertise, knowledge and industry trends
- Generate leads

TYPICAL ACTORS IN AN INNOVATION ECOSYSTEM

	RESEARCH INSTITUTIONS	Research Institutions are crucial for innovation due to their role in knowledge creation and diffusion, and are a primary tool for governments seeking to spur research and innovation in their economies.
	INCUBATORS & ACCELERATORS	Incubators and accelerators play an important role in the innovation ecosystem in providing a supportive environment for startup and fledgling companies
	ANGEL INVESTORS	Angel Investors play an important role in helping fast growing small firms overcome common funding gaps. They can sometimes directly advance innovations by taking a position on the board of the start-up
	VENTURE CAPITALISTS	A venture capitalist is an investor who either provides capital to startup ventures or supports small companies that wish to expand but do not have access to equities markets
	PRIVATE EQUITY FIRMS	Private equity firms manage money committed by pension funds, other institutional investors and high net worth individuals.
	GOVERNMENT	Governments play many critical roles in promoting innovation, primarily in terms of creating a supporting policy and regulatory environment in which start-ups operate.

	FRIENDS & FAMILY	For many innovators, their circle of supporting friends and family will often be critical in helping them take their idea forward
	CIVIL SOCIETY ORGANIZATIONS	Civil Society Organizations are a subgroup of organizations founded by citizens and active at local, national or international levels
	DEVELOPMENT AGENCIES	Development agencies have tended to focus on supporting very early stage innovators, helping them with relatively small amounts of seed capital funding to develop / test their idea
	PROFESSIONALS (Human Capital)	People are at the heart of an ecosystem, and the speed and efficiency of the process through which an innovation is designed, tested, adapted and scaled depends on the quality of the people involved in the process.
	STARTUPS & ENTERPRISES	A startup is a company working to solve a problem where the solution is not obvious and success is not guaranteed.
	MARKET FACILITATORS & INTERMEDIARIES	Their role is to link organisations within an innovation ecosystem, and to facilitate the transfer of ideas, technology and other resources to help commercialise them at scale.
	PRIVATE COMPANIES	Business-led initiatives, such as research and development partnerships, knowledge-sharing platforms, technology and skills transfer, and infrastructure investment have the potential to catalyse, develop and scale innovation, while also providing fertile ground for future innovation to emerge.

TYPE OF PARTNERS TO INNOVATE WITH

For the development and exploitation of innovation, there is a variety of type of partners that a business can innovate with.

- R&D service providers

- Complementary partners
- Customers
- Users
- Suppliers
- Competitors
- Communities
- Crowd

HOW TO USE OPEN INNOVATION - METHODOLOGY

The following methodology has been developed in the context of H2020, [INSPIRE project](https://inspire.load.digital/) and aims to help you understand your business challenges, competences and resources, as well as to identify your partnership needs. The tool developed to support this process is called INSPIRE Canvas (<https://inspire.load.digital/>).

The methodology includes two important stages to help you understand the gaps in competences and resources and support you to handle innovation through collaborations.

The first stage is called “The Innovation Journey - Identifying Challenges and Gaps in Competences & Resources” and includes a 4-steps process and the second stage is called “Manage Open Innovation - Developing an Action Plan”.

1st Stage: “The Innovation Journey - Identifying Challenges and Gaps in Competences & Resources”

This stage is accompanied by the canvas depicted in figure 1.



Figure 1 1st Stage: “The Innovation Journey - Identifying Challenges and Gaps in Competences & Resources” (INSPIRE project)

The 4 steps for the identification of gaps in competences and resources are presented in the table below.

STEPS	DEFINITION
✓ STEP1	<p>Identify which stage of the Innovation Journey your current challenge belongs to: Exploring Opportunity / Define Concept / Validate Concept / Introduce to Market / Scale-up / Expand & Diversify.</p> <p>Consider what internal Competences & Resources you already have to help you meet the current challenge.</p>
✓ STEP2	<p>Identify what Competences & Resources your company is missing (i.e. what are the gaps in know-how, expertise, equipment, other resources...) that prevent you addressing the current challenge.</p> <p>Reflect on Competences & Resources gaps at previous stages as well as your current stage. It may be that you need to get external help for gaps in previous stages, before you can concentrate on the current challenge.</p>
✓ STEP3	<p>Consider what future challenges lie ahead and what internal Competences & Resources you already have to meet these challenges.</p> <p>Identify upcoming Competences & Resources gaps and how these may affect the completion of the journey.</p>
✓ STEP4	<p>Now input the results of this stage of the exercise into the Manage Open Innovation (next stage): put your conclusions from step 2 into the “Current gaps in Competences & Resources” box; put your conclusions from step 3 into the “Future gaps in Competences & Resources” box. To continue, please refer to the next set of instructions for the Manage Open Innovation section.</p>

2nd Stage: “Manage Open Innovation - Developing an Action Plan”

This stage is accompanied by the canvas depicted in figure 2. It aims to support you to develop an action plan to manage Open Innovation

Company	Created by
Project	Date









<p>Current gaps in Competences & Resources</p> <p>Which Competences & Resources are needed from external partners to address the current innovation challenge(s) of your business?</p> 	<p>Prepare the business for partnership</p> <p>Which resources should be mobilised to enable the partnership? What changes in operations are necessary to implement the partnership? What aspects of the organisational culture need to be developed to enable a smooth partnership? What changes should be made to the business model to enable effective partnership?</p> 	<p>OI outcome KPIs</p> <p>What are the outcomes expected of the partnership?</p> <p>Examples: Successful proof of concept Validation of new technology, product or service Creation of a working prototype Obtaining IPR for the new product Development of a new product Reduction of development time Scale production</p> 
<p>Future gaps in Competences & Resources</p> <p>Which Competences & Resources are needed from external partners to address the potential future innovation challenge(s) of your business?</p> 	<p>Work with a partner/crowd</p> <p>What is the best model for the partnership (e.g. co-development, licensing...)? What is the best legal structure and what can be negotiated (e.g. IP, royalties...)? What is the best financial model (costs and revenue sharing)? What about joint project management guidelines? What platform should be used to work with the crowd?</p> 	<p>Business growth KPIs</p> <p>What are the business growth outcomes expected of the partnership?</p> <p>Examples: Increase in revenue due to new products Increase in revenue due to access to new markets Increase in profits due to new products / services Increase in profits due to lower development / production costs</p> 
<p>Find the right partner</p> <p>What is the scope of the partnership? Who are the potential partners? What are the criteria to select and assess the most adequate partner?</p> 	<p>Deal with conflicts</p> <p>What is the shared vision of the project? Which are the mechanisms used to build trust and integrate teams? How are conflicts managed and resolved?</p> 	

Figure 2 2nd Stage: “Manage Open Innovation - Developing an Action Plan” (INSPIRE project)

To fill each box of the depicted canvas in figure 2, follow the guidelines below:

CANVAS COMPONENT	GUIDELINES
✓ Current and Future gaps in Competences & Resources	Introduce your Current Competences & Resources gaps and Future Competences & Resources gaps before continuing.
✓ Find the right partner	Reflect on your current and future Competences & Resources gaps. What kind of partner(s) could help you with what you're missing?
✓ Prepare the business for partnership	Consider if your business is ready for such a partnership. Maybe you need to make some changes internally to better deal with this.
✓ Work with a partner/crowd	Working with a partner may have its own challenges, so it's a good idea to take time to get the basics clear.
✓ Deal with conflicts	Repeat for the Deal with conflicts.
✓ OI outcome KPIs	Set some targets to see how your OI partnership is working.
✓ Business growth KPIs	Don't forget to set some targets for business growth too.

External links:

<https://www.idiainnovation.org/ecosystem-actors>

<https://www.forbes.com/sites/theyec/2022/12/20/the-importance-of-a-business-network-and-how-to-build-a-strong-one/?sh=63d80cfb1392>

<https://advancedbusinessabilities.com/why-is-networking-important-for-entrepreneurs/>

[INSPIRE Open Innovation toolbox](#)

<https://inspire.load.digital/>

<https://www.inspire-smes.info/index.php>

https://www.youtube.com/watch?v=n_vgcxG0y88

[Open Innovation cases](#)

[The Open Innovation Model](#)

Check your knowledge SECTION

1. Which phrase is not related with closed innovation?:
 - a) *If we discover it ourselves we will get it to the market first*
 - b) *The company that gets an innovation to market first will win*
 - c) *We don't have to originate the research to profit from it*
 - d) *If we create the most and the best ideas in the industry we will win*
 2. Components of the Manage Open Innovation Canvas are:
 - a) *Find the right partner, Prepare the business for partnership, Work with a partner/crowd*
 - b) *Find the right partner, Prepare the business for partnership, Scale-up*
 - c) *Find the right partner, Prepare the business for partnership, Validate Concept*
 - d) *Find the right partner, Prepare the business for partnership, Explore opportunity*
 3. A food company organizes a workshop with chefs, dietary experts and general public to understand their needs. The company:
 - a) *Innovates with Communities leading to internal exploitation*
 - b) *Innovates with Users leading to internal exploitation*
 - c) *Innovates with Communities leading to Co-Exploitation*
 - d) *Innovates with Users leading to External Exploitation*
 4. An investor who either provides capital to startup ventures or supports small companies that wish to expand but do not have access to equities markets is a:
 - a) *Angel Investor*
 - b) *Venture Capital*
 - c) *Private equity firm*
 - d) *Development Agency*
 5. Components of The Innovation Journey Canvas are:
 - a) *Scale-up, Expand & Diversify, Current and Future gaps in Competences & Resources*
 - b) *Scale-up, Expand & Diversify, Deal with conflicts*
 - c) *Scale-up, Expand & Diversify, Explore opportunity*
 - d) *Scale-up, Expand & Diversify, Find the right partner*
 6. A company wants to design a new logo and publishes an request to an open platform with people who are able to design new logos for the company:
 - a) *Innovates with Competitors leading to internal exploitation*
 - b) *Innovates with Crowd leading to external exploitation*
 - c) *Innovates with Crowd leading to internal exploitation*
 - d) *Innovates with Communities leading to internal exploitation*
-

Utilize digital platforms for extroversion and digital synergies

Scope

This chapter aims to provide key insights on the importance of digital platforms for supporting business development and sustainability. Digital platforms have had a significant impact on businesses across various industries. Some of the key impacts of digital platforms on businesses include increased efficiency, greater reach, improved customer experience, enhanced data and not least support for increased innovation.

Overall, digital platforms have revolutionized the way that businesses operate, enabling them to work more efficiently, reach new customers, and improve their performance. As such, they have become a critical component of business strategy for companies across industries.

Expected outcomes

- Defining the concept of digital platform
- Key understandings on the types and features of digital platforms
- Understanding of the benefits the digital platforms bring to businesses

BACKGROUND/DESCRIPTION:

The advent of the digital revolution has enabled organizations to revamp their various business operations and processes in order to achieve greater growth in the face of fierce competition. Digital transformation has brought about the creation of cutting-edge digital platforms that utilize the latest technologies to empower organizations to develop new business strategies, gain market dominance, provide exceptional customer experiences, and generate novel forms of value creation and innovation.

What are the digital platforms?

Digital platforms are online software-based systems that enable different parties, such as individuals or businesses, to interact and transact with each other. These platforms are designed to facilitate communication, collaboration, and commerce, and are built on top of digital technologies such as the internet, mobile networks, and cloud computing.

A digital platform is a software solution that enables organizations to effectively serve their products and services through online businesses. According to Gartner, these platforms exist at various levels, from high-level platforms that provide a business model to low-level platforms that offer technology and/or business capabilities for other products or services to consume in order to deliver their own business capabilities.

At its core, a digital platform is a technology-enabled business model that facilitates exchanges between two or more interdependent groups. By bringing together different business users, the platform allows them to transact with each other and create value for the organization.

Digital platforms enable companies to quickly share quality and accurate information with users, fostering collaboration and innovation in the creation of new products and services. By connecting different sides of the business, digital platforms create powerful network effects, increasing value as more members participate.

Integrating third-party application programming interfaces (APIs) can accelerate the development of digital platforms, allowing participants to share data and create new services. Many digital platforms are available on a "as a service" basis, using modern technology stacks.

Digital platforms operate under clear governance conditions that protect data ownership and intellectual property and promote trust among users.

Characteristics, forms and features of a digital platform

The main characteristics of the digital platforms can be described as follows:

Open and Shared Data – Digital platforms enable organizations to access open and shared data that can be intelligently mined by experts to gain insights about the industry and create new forms of value. This also enables companies to monitor customer behavior at scale, driving transparency in business processes and accuracy in data management by allowing all participants access to the data.

BY ENABLING COMPANIES TO LEVERAGE
ACCELERATED BUSINESS GROWTH,
DIGITAL PLATFORMS HAVE
REVOLUTIONIZED THE COMPETITIVE
LANDSCAPE ACROSS ALL INDUSTRIES.

Network Effect – Implementing a digital platform brings together different users of a business ecosystem under a single roof, allowing partners and merchants to attract more customers and share the burden of creating a market. This networking effect is particularly useful for businesses that want to connect users such as organizations, suppliers/vendors, and end customers.

Confluence of Technologies – Advanced technologies like cloud computing, artificial intelligence, machine learning, automation, industrial internet, analytics, and mobility can be harnessed while developing a digital platform. A modular, scalable, and plug-in service approach to developing the platform can help small to large-scale organizations integrate business processes, infrastructure, and software, reducing investment levels, cost to serve, and time to market. The major advantage of a digital platform for enterprises is quick and easy access to new markets and distribution channels without the full cost of a platform investment up front.

Digital platforms can take many different forms, including social media sites, e-commerce marketplaces, online communities, peer-to-peer sharing platforms, and more. Some examples of well-known digital platforms include Facebook, Amazon, Airbnb, Uber, and Etsy.

One of the key features of digital platforms is their ability to create network effects, where the value of the platform increases as more people use it. This can result in very large and powerful platforms with significant market power and influence. However, digital platforms have also faced criticism and regulatory scrutiny over issues such as data privacy, content moderation, and competition.

Digital platforms are online systems that facilitate the exchange of goods, services, or information between different groups of users. Here are some common types of digital platforms:

- E-commerce platforms: These are platforms that facilitate the buying and selling of goods and services over the internet. Examples include Amazon, Alibaba, and eBay.
- Social media platforms: These are platforms that enable users to create and share content with others, as well as connect and communicate with other users. Examples include Facebook, Twitter, and Instagram.
- Sharing economy platforms: These are platforms that enable users to share or rent assets, such as cars or homes, with others. Examples include Airbnb, Uber, and Lyft.
- Online marketplaces: These are platforms that allow multiple sellers to offer their products or services to a large pool of buyers. Examples include Etsy, TaskRabbit, and Fiverr.
- Content platforms: These are platforms that provide access to digital content, such as music, movies, and books. Examples include Spotify, Netflix, and Kindle.
- Crowdfunding platforms: These are platforms that enable individuals or organizations to raise funds from a large number of people to finance a project or venture. Examples include Kickstarter and Indiegogo.
- Online learning platforms: These are platforms that provide online courses and educational resources to learners. Examples include Udemy, Coursera, and edX.
- Gig economy platforms: These are platforms that enable individuals to offer their services or skills on a short-term or freelance basis. Examples include Upwork, Freelancer, and Guru.

The features set offered by a digital platform also categorize them in two major types of platforms:

Basic Digital Platform - Digital platforms enable organizations to conduct their business online, providing all the necessary facilities to optimize their business processes. These platforms offer eCommerce capabilities to sell products online and enable digital transactions with suppliers/vendors, retailers, and customers. These are common features found in almost all popular digital platforms.

Advanced Digital Platform - Leading digital platforms provide more than just product, content, and commercial transaction management. With a custom-built digital platform, businesses can manage customer, vendor, supplier, and distributor information, as well as all marketing operations to promote and grow their business using a single platform. Essentially, an advanced digital platform encompasses all the activities necessary for the post-production phase.

Digital platforms development frameworks

Product Information Management (PIM) is crucial for businesses to sell products online, as it enables them to manage large volumes of product information in a structured and logical way. A modern digital platform with PIM capabilities can offer support for multiple languages and currencies, making it easier for target audiences to consume information and take action instantly. PIM capabilities include product data modeling, management, integration, delivery, and quality/semantic, as well as workflow management.

A Digital Experience Platform (DXP) or Content Management System (CMS) empowers businesses to make changes to their web content as per changing business needs and customer expectations. The advanced digital platform supports multiple languages, allowing businesses to build websites in their preferred language and promote them in different regional languages. DXP/CMS capabilities include managing personalized experiences, providing a single source of truth, multi-channel publishing, content, commerce, contextualization, marketing automation, scalability, and usability.

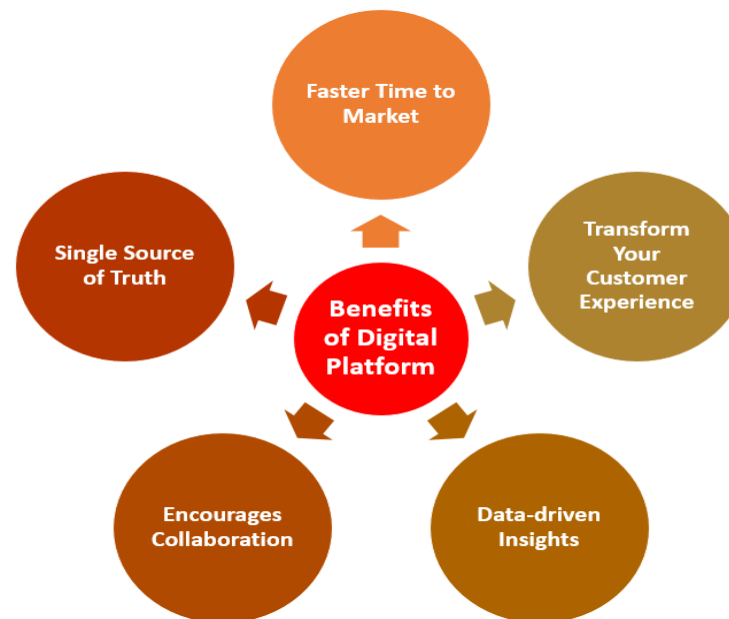
Digital Asset Management (DAM) enables businesses to manage all their digital assets, such as images, videos, intellectual properties, policies, rules and regulations, documents, and other files in their preferred format. DAM capabilities include digital asset consolidation, meta data management, asset portal extension, workflow management, and digital asset delivery.

A Digital eCommerce Platform simplifies the complex digital transformation by creating personalized experiences for targeted users, allowing manufacturers and retailers to easily manage their B2B and B2C businesses. Digital eCommerce capabilities include B2B & B2C eCommerce framework, customer experience management, eCommerce for PIM, catalog management, and complex product price management.

A Customer Data Platform (CDP) allows businesses to understand customer behavior and drive customer engagement, thereby improving conversion rates. CDP capabilities include customer data integration, modeling, profile unification, real-time personalization, and automation.

Finally, a Master Data Management (MDM) framework enables businesses to manage all their organizational data, including product, customer, supplier/vendor, retailer, employee, partner, accounting, and operations data. MDM allows organizations to manage data hierarchy, structure, validation, enrichment, and versioning with translations, documentation, descriptions, and other data. MDM capabilities include data quality/semantic, hierarchy management, rich content integration, audit trail, superior connectivity, and workflow management. Understanding these frameworks is crucial to understanding how a digital platform can help businesses achieve their goals.

The advantages the digital platforms bring to businesses



Developing a digital platform that would support the business growth would be able to offer the following benefits:

1 – Faster time to market: a digital platform streamlines online business processes, providing all necessary components to establish a strong online presence. By centralizing organizational data, the platform enables faster product launches, giving customers immediate access to your offerings.

2 – Transform customer experience: Customers expect quick, valuable solutions to their challenges, and businesses must focus on providing a seamless experience. Developing a digital platform with the latest technologies improves customer experience, boosting a company's reputation and authority.

3 – Gaining data-driven insights: these are a critical benefit of digital platforms, offering the ability to collect, consolidate, and analyze data for optimized business strategies. Leveraging data throughout the organization helps reduce operational costs and increase revenue, providing agility, personalization, real-time feedback, and relevancy to customers.

4 – Creating and supporting synergies: a digital platform encourages collaboration by bringing internal and external business entities together in a single platform, enabling teams to manage data and work more effectively.

5 – Building frameworks for trust: a digital platform provides a single source of truth for all organizational data, allowing top management to make informed decisions based on a holistic view of all data from multiple systems. Integrating third-party systems ensures that all data is accurately managed in one place.

Check your knowledge

1. *What are the digital platforms? Are they software, hardware or both?*
2. *Identify the three main characteristics of a digital platform.*
3. *Name three forms of digital platforms*
3. *Describe one of the frames for development of a digital platform.*

References

<https://www.adobe.com/acrobat/resources/digital-entrepreneurship-starting-a-business-online.html>

<https://startup.google.com/>

<https://pimcore.com/en/resources>

Utilize ICT to boost creativity and digital business models

Scope

In today's fast-paced digital world, businesses need to be creative and innovative to stay ahead of the competition. One way to achieve this is by utilizing ICT tools and technologies to boost creativity and develop digital business models.

How important ICT is?



ICT has become an essential part of daily life and is widely used in various industries, including education, healthcare, finance, entertainment, and many others. It has also transformed the way people communicate, work, and access information, leading to increased efficiency, productivity, and collaboration.

DEFINITION

ICT stands for Information and Communication Technology. It is a broad term that encompasses all technologies and tools used for the collection, processing, storage, and dissemination of information. ICT includes hardware devices such as computers, smartphones, and other electronic devices, as well as software applications, networks, and telecommunications infrastructure that enable the exchange of information and communication between people and systems.

BACKGROUND/DESCRIPTION:

ICT

With the help of ICT, businesses can leverage advanced data analytics, machine learning, and artificial intelligence to identify market trends, consumer preferences, and emerging opportunities. These insights can be used to develop new products and services that cater to the evolving needs of customers.

Moreover, ICT tools such as cloud computing, social media, and e-commerce platforms can provide businesses with a wider reach and help them connect with customers in new and innovative ways. This can lead to the creation of new business models that are more agile, flexible, and responsive to changing market conditions.

Digital Business Models

Digital business models refer to the ways in which companies use digital technologies and platforms to create and deliver value to their customers. Digital business models are often built around innovative ways of using technology to solve customer problems, improve processes, or create new opportunities.

Digital business models can take many forms, such as:

E-commerce: Online retail platforms like Amazon and Alibaba have disrupted traditional brick-and-mortar retail by offering a seamless and convenient shopping experience.

Subscription-based models: Companies like Netflix and Spotify offer subscription-based models that provide customers with access to a large library of digital content for a monthly fee.

Freemium: Many software companies use a freemium model, where basic features are offered for free, but users have to pay for premium features.

Platform-based models: Companies like Airbnb and Uber have built platforms that connect buyers and sellers, enabling them to exchange goods and services.

Sharing economy: Companies like TaskRabbit and Fiverr provide platforms where individuals can share their skills and expertise, creating new opportunities for freelance work and entrepreneurship.

Digital business models are often characterized by their ability to scale quickly, reach a global audience, and adapt to changing market conditions. By leveraging digital technologies and platforms, companies can create new revenue streams, improve customer experiences, and stay competitive in a rapidly evolving digital landscape.

Example how ICT boost creativity:

Let's say you're a graphic designer working on a new project for a client. In the past, you might have relied solely on your own creativity and skills to come up with design concepts. But with ICT tools and technologies, you can now take a more collaborative and innovative approach.

Using cloud-based collaboration tools like Google Drive or Dropbox, you can easily share your work with other designers, receive feedback, and work together to refine your ideas. You can also use online design platforms like Canva or Adobe Creative Cloud to access a vast library of design resources, templates, and assets that can help inspire new ideas and streamline your workflow.

External links:

[Boost Your Productivity and Creativity with the 5-Hour Rule | by Mark and Sweet Sour Sauce Co | Feb, 2023 | Medium](#)

**TIP | Helpful ICT technologies**

Communication tools: Tools like email, instant messaging, and video conferencing platforms like Zoom or Microsoft Teams make it easy to stay connected with colleagues and clients, regardless of their location.

Cloud computing: Cloud-based tools like Google Drive, Dropbox, or OneDrive provide a convenient and secure way to store and access files and data from anywhere, using any device.

Project management software: Tools like Asana, Trello, or Jira help teams collaborate on projects, track progress, assign tasks, and manage deadlines.

Data analytics tools: Platforms like Google Analytics, Tableau, or Power BI enable businesses to collect, analyze, and visualize data, gaining valuable insights into customer behavior, market trends, and business performance.

Automation software: Robotic Process Automation (RPA) tools like UiPath or Automation Anywhere automate repetitive tasks, reducing manual workload and increasing efficiency.

Virtual and Augmented Reality: VR and AR technologies like Oculus or HoloLens can help businesses to create immersive training programs or simulate complex scenarios in areas like manufacturing or healthcare.

Check your knowledge:

Which ways/methods boost creativity?

What is ICT?

References

<https://medium.com/@marksss/boost-your-productivity-and-creativity-with-the-5-hour-rule-4f7cf7161b52>

Technical aspects linked with the digital necessary networking tools, as well as the MOOC production and the necessary digital implementation on the eplatform.

Scope

The aim of this section is first of all to explain what digital networking is.

The main purpose is also to show you top business networking tools along with networking tips to help you make meaningful connections and build stronger professional and business relationships.

Expected outcomes

- To acquire the knowledge what digital networking is.
- To acquire the knowledge on how to get advantage of digital networking tools.



DEFINITION

Digital Network refers to the social network built through the use of digital technologies. It supports digital switching and digital transmission of voice, video, data, and other network services. It has marketplaces, data networks, and communications networks that provide a platform that align the network to business needs.

QUICK FACTS SECTION

“Digital Networking enables plenty of business opportunities. It helps to create sustainable business relationships and generate trust while positioning the brand’s image”

BACKGROUND/DESCRIPTION:

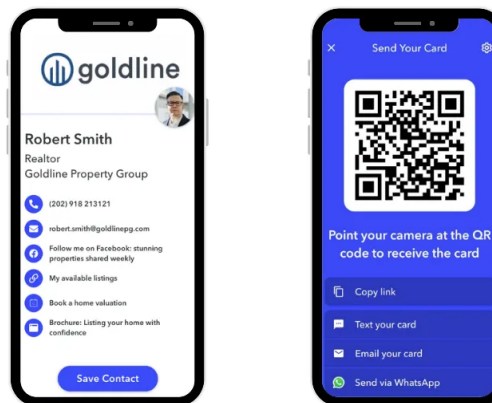
There was once a time where all the people we knew lived close by, and where every relationship we built was in person. In recent decades the world has changed a lot. We are living in a whole new business environment, where physical events aren’t always an option anymore. Therefore we have created digital technologies which enable us to overcome great distance whilst connecting with others in real time, and expanded the reach of our networks beyond the confines of our immediate environment. And now digital networking has become a solution for many businesses to keep functioning. Although, digital transformation has been going on for many years, many companies fail to effectively use the digital tools at their disposal or take the necessary steps to see results. Being late to the digital game can pose real problems.

TYPES OF NETWORKING TOOLS

By reducing or eliminating the need for physical proximity within our social environments through digital technology, we can create an added opportunity to network and build personal or professional relationships more scalably around the world. And for starters, networking gives you access to people and opportunities essential for your growth. It’s an avenue to connect with like-minded individuals in your field, brainstorm ideas and learn. Therefore, it’s worth getting to know top business networking tools.

1. Blinq:

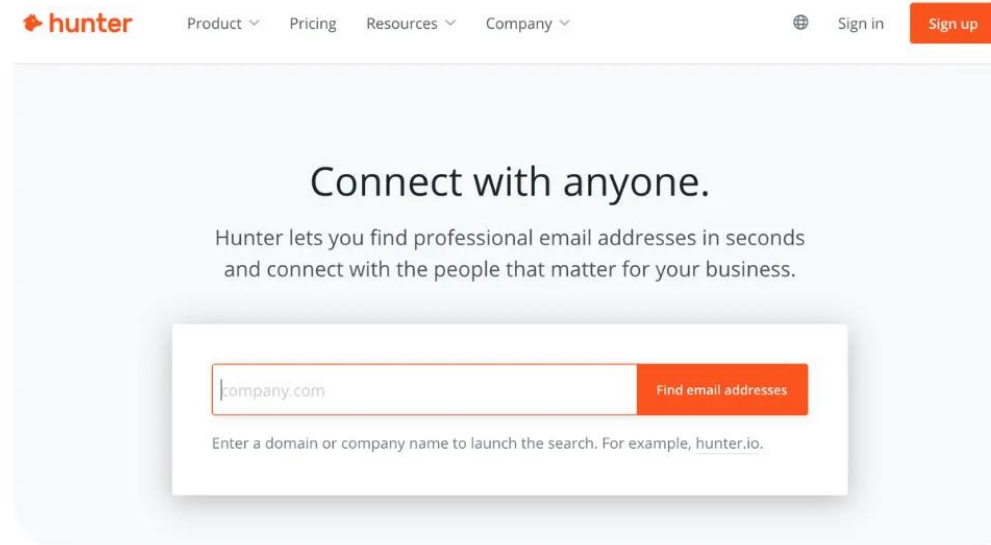
Blinq offers an easy way to create a memorable first impression and share your identity when networking online and in person. With Blinq, you can create a quick digital business card containing all your professional details and share it with a single tap.



2.2. Hunter.io: Find Emails of People You Want to Network With

Hunter helps you find emails of specific persons within organizations.

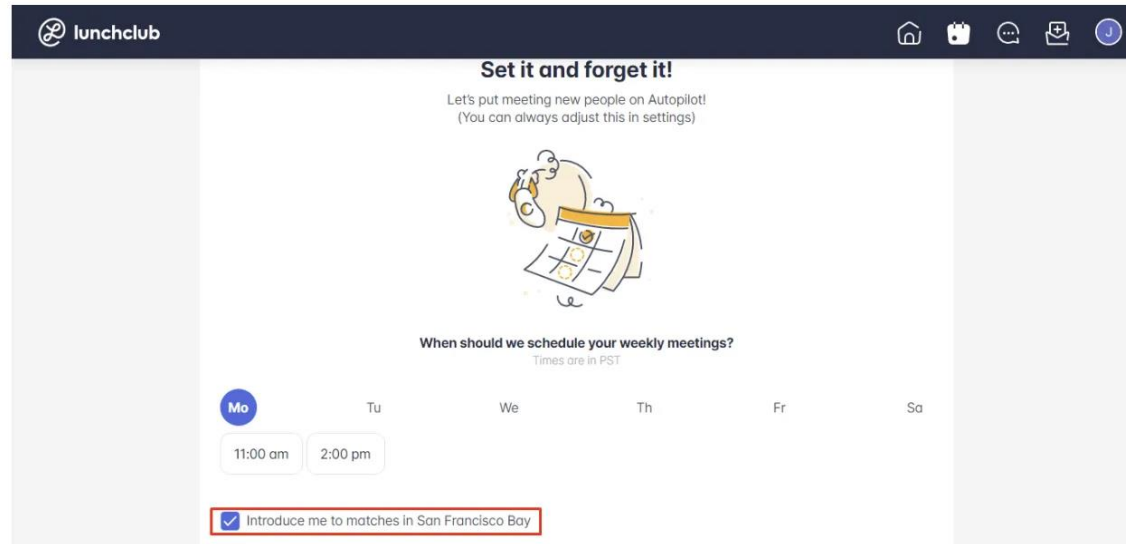
Hunter has a chrome extension you can install on your browser to quickly find emails anywhere on the web when you visit a website. If you find email addresses elsewhere, quickly pop them into Hunter's email verifier tool to confirm they're correct and valid.



3. Lunchclub: “Make Professional Connections, Powered by AI”

Lunchclub is an AI super-connector that facilitates virtual calls between business professionals with similar interests. Therefore, if you as a business owner are looking to grow your network, you sign up for Lunclub for free and provide basic information about

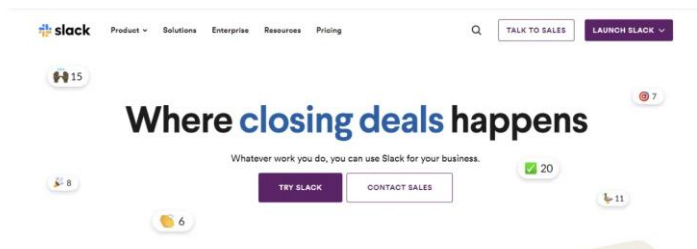
yourself, your goals and your interests. And then the AI platform will make personalized introductions and connect you with other professionals who match your interest.



4. Slack: “Communicate, Collaborate and Network in One Place”

Slack is a messaging app for business that connects people to the information they need. By bringing people together to work as one unified team, Slack transforms the way organizations communicate.

Slack helps you work in a more connected, flexible, and inclusive way.



5. Twitter Communities: *“Join Conversations That Create Opportunities and Improve Visibility”*

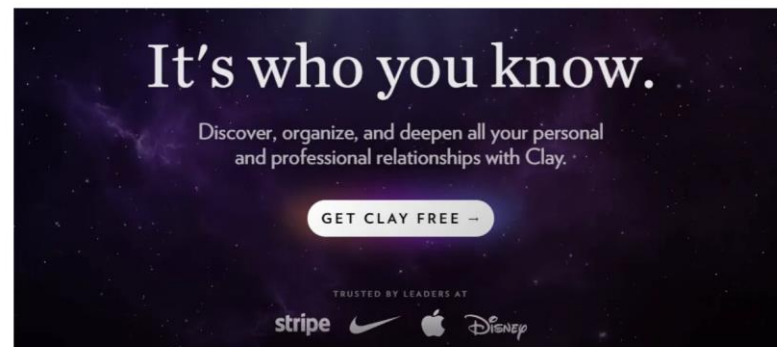
Twitter communities are similar to Slack and Facebook groups. They’re dedicated forums where like-minded people meet to forge new connections and discuss issues that interest them.

Twitter is a social media site, and its primary purpose is to connect people and allow people to share their thoughts with a big audience. Twitter allows users to discover stories regarding today's biggest news and events, follow people or companies that post content they enjoy consuming, or simply communicate with friends.



6.Clay: “Manage Your Network and Stay in Touch With the People That Matter”

Clay, a new relationship-building software, works like a personal CRM to allow you keep in touch with your network regardless of the channel or platform you’re connected on.



A few words about MOOC

- Massive Open Online Courses (MOOCs) are free online courses available for anyone to enroll. MOOCs provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale.
- MOOC is a combination of video lectures, exercises and assignments, open for anyone to follow for free. Most of our courses require 5-7 weeks to be completed and are used by our students in complement to on-campus classes.

External links:

<https://slack.com/help/articles/115004071768-What-is-Slack->



TIP !

*Using the right software and hardware is an essential part of successful professional networking. Having a firm grasp on technology makes it easy to **meet, connect, and manage new relationships**. And that's how you turn an acquaintance into a collaborator, client, or coworker.*

Check your knowledge SECTION

This section should include some questions to verify the knowledge accumulated during/after the lecture.

References

https://www.oerknowledgecloud.org/archive/MOOC_Final.pdf

<https://www.tricycle-europe.com/why-is-digital-networking-important/>

<https://bling.me/blog/top-business-networking-tools-to-supercharge-your-growth>

Create your own startup

Scope

The aim of this section is first of all to explain what start up businesses are.

The main purpose is also to show you the steps that you can take to create your own start up.

Expected outcomes

- To understand what start up businesses are.
- To acquire the knowledge on how to create your own start up.



DEFINITION

“A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty.” (Eric Ries, the creator of the Lean Startup methodology)

A startup is a young company established by one or more entrepreneurs to create unique and irreplaceable products or services. It aims to bring innovation and building ideas quickly.

QUICK FACTS SECTION

Start-up success is not a sprint, but a marathon. It takes time to grow a start-up into something meaningful.
Kralingen, www.qs4e.com)

BACKGROUND/DESCRIPTION:

The origins of startups can be traced back to the United States in the 18th and 19th centuries. The first recorded use of the word "startup" was in a newspaper article in 1851. The word was used to describe a new business or enterprise.

The concept of a startup began to take shape in the early 20th century. In the 1920s and 1930s, a number of new businesses were founded in the US. The modern startup ecosystem began to take shape in the 1970s and 1980s. This was a period of economic turmoil, with high inflation and interest rates. However, it was also a time of great opportunity.

A number of important startups were founded during this period, including Apple, Microsoft, and Genentech. The success of these companies inspired others to start their own businesses.

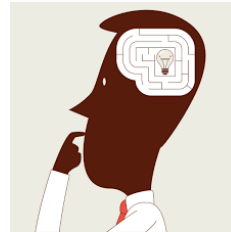
Today, startups are a vital part of the global economy. They are responsible for creating new jobs and driving innovation.

METHODOLOGY section

Creating a new business is a process comprising by several phases. Starting a business can be hard work, but if you break down the process of launching your new company into individual steps you can make it easier.

1. Define your BUSINESS idea.

If you're thinking about starting a business, you likely already have an idea of what you want to offer or sell, or at least the market you want to enter. Do a quick search for existing companies in your chosen industry. Learn what current brand leaders are doing and figure out how you can do it better.



2. Carry out a market study.

Carry out a good idea is not enough to join the world of entrepreneurship. All business creators will tell you that market research is essential to determine whether there is a clientele to buy your products or services. It also allows you to find out about the sector of activity concerned, the number of competitors established and the relevance of your arrival on this market. market study



3. Write a BUSINESS plan.

Once you have your idea in place, you need to ask yourself a few important questions: What is the purpose of your business? Who are you selling to? What are your end goals? How will you finance your startup costs? These questions can be answered in a well-written business plan.



4. Assess your finance.

Starting any business has a price, so you need to determine how you will cover those costs. Do you have the means to fund your startup, or will you need to borrow money? If

you're planning to leave your current job to focus on your business, do you have savings to support yourself until you make a profit?



5. Build your BUSINESS team.

Unless you're planning to be your only employee, you'll need to recruit and hire a great team to get your company off the ground.



6. Brand yourself and advertise.

Before you start selling your product or service, you need to build up your brand and get a following of people who are ready to jump when you open your literal or figurative doors for business. Creating a marketing plan that goes beyond your launch is essential to building a clientele because it should continually get the word out about your business. This process is just as important as providing a quality product or service, especially in the beginning.



7. Grow your BUSINESS.

Your launch and first sales are only the beginning of your task as an entrepreneur. To make a profit and stay afloat, you always need to be growing your business. That takes time and effort, but you'll get out of your business what you put into it.

6 Types of startups:

- Scalable startups
- Small business startups
- Lifestyle startups
- Buyable startups
- Big business startups
- Social startups

WHAT ARE SOME COMMON START-UP MISTAKES?

- not having a clear vision. When you're starting a business, it's important to have a clear idea of what you want your business to achieve and how you're going to make that happen.
- not investing enough time and energy into the research. Before you start your business, it's important to spend time researching your industry, your target market, and your competition. This will help you make sure that your business is well-positioned for success.
- not having a solid business plan is another start-up mistake. Your business plan should be a roadmap for your business, outlining your goals and how you plan to achieve them.

External links:

Comprehensive Business Startup Workbook

<https://www.youtube.com/watch?v=Ez671hHxeak>

<https://blog.hubspot.com/sales/startups>

**TIP !**

What to do to avoid startup failure:

- *Have a clear plan and focus on your target market*
- *Work hard and don't give up*
- *Learn from your mistakes*
- *Build the right team*
- *Track your progress and pivot if necessary*

References

<https://sendpulse.com/support/glossary/startup>

[https://www.gs4e.com/best-tips-for-start-up-](https://www.gs4e.com/best-tips-for-start-up-success/?qclid=Cj0KCQjwk7uqBhDIARIsAGuvqPZOW_k7ZHwnPtjQB12yiebHeC_890EOBwP3xuQTAaaMvqD59xTn5mwaAtDREALw_wcB)

[success/?qclid=Cj0KCQjwk7uqBhDIARIsAGuvqPZOW_k7ZHwnPtjQB12yiebHeC_890EOBwP3xuQTAaaMvqD59xTn5mwaAtDREALw_wcB](https://www.gs4e.com/best-tips-for-start-up-success/?qclid=Cj0KCQjwk7uqBhDIARIsAGuvqPZOW_k7ZHwnPtjQB12yiebHeC_890EOBwP3xuQTAaaMvqD59xTn5mwaAtDREALw_wcB)

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