

# The TECHSTER Teacher Toolbox



*15 innovative tools for the  
development of  
entrepreneurial and soft skills*



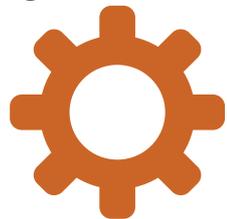


# The TECHSTER Teacher Toolbox

The TECHSTER Teacher Toolbox contains 15 tools, ready to be implemented in the existing curricula by the HE professors in tech education in order to help them contribute to the development of their students' entrepreneurial and soft skills. It will include tools for:

- business modelling, for sustainability,
- pitching and digital storytelling
- creativity and problem solving
- cooperation and workflow organisation.

In this document, a short description for each one will be given to help HE professors in tech education understand better the tool and how it can benefit the students and the classroom.



## Note:

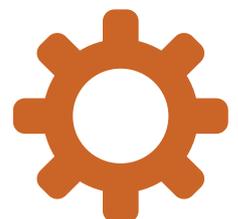
In this document 15 tools are being suggested yet, different policies by HE institutions may apply, making it not feasible for these tools to be used. Please refer to the administration of your university for any possible limitations.





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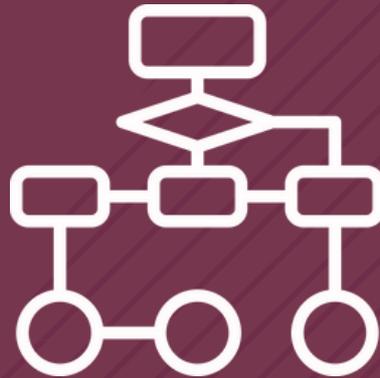




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# Business Modelling Tools



Value Proposition Canvas  
Business Model Canvas  
Business Model Navigator

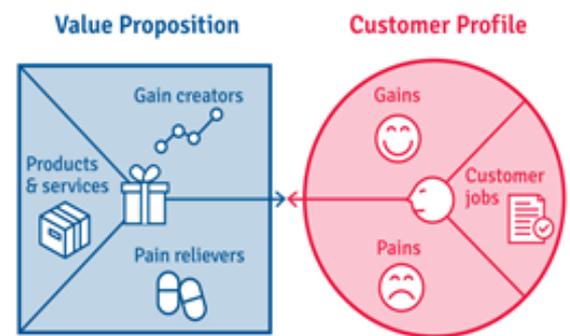




# Value Proposition Canvas

## Description

The Value Proposition Canvas is a tool which can help **ensure** that a product or service is positioned around what the **customer values and needs**.



## Features

- It is a detailed look at the relationship between **two parts** of the Osterwalder's broader Business Model Canvas; **customer segments and value propositions**.
- It enables to **view value** through a different dimension.
- It is **easy to understand** and **guides the business owners** in their marketing efforts.

## Cost

Free

## Languages

In **any** language possible

## Time

**No** specific time frame

## Accessibility and Combination of tools

It can be uploaded **online** (Word Document, Google Drive, Dropbox etc.). **Free to use** for teaching purpose within Lectures, Seminars, and Workshops - all education purposes.





# Business Model Canvas

## Description

Business Model Canvas is a **management template** that is used for developing **new business models** and presenting already existing ones.



## Features

1) **Visual chart** with essential elements to describe a business's structure

## Aims

- 1) Get to know the basic for **starting your own business**
- 2) Evaluate your **business plan**
- 3) Be more **efficient**

## Cost

Free

## Languages

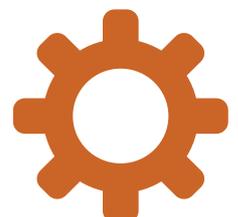
In **any language** possible

## Time

**No** specific time frame

## Accessibility and Combination of tools

It can be used by both, **individuals** and **groups** and it can be **uploaded online** (Word document, Google Drive, Dropbox etc.)





# Business Model Navigator

## Description

The Business Model Navigator aims to **better understand the key drivers** of business model success, as well as fostering business model innovation via a **structured approach**.



## Features

- 1) **WHO** - Who is the customer?
- 2) **WHAT** - What value are you offering to the customer?
- 3) **HOW** - How to build and distribute value proposition?
- 4) **VALUE** - this is about the financial viability of the business model - so how is revenue created?

## Aims

Helps to understand organisations offerings to their **potential customers**.

## Cost

Free

## Languages

In **any** language possible

## Time

**No** specific time frame

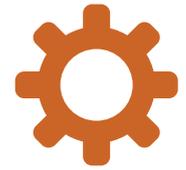
## Accessibility and Combination of tools

It can be uploaded **online** (Word Document, Google Drive, Dropbox etc.). **Free** to use for teaching purpose within Lectures, Seminars, and Workshops - all education purposes.





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# Sustainability / Environmental issues Tools



The Sustainability Balance  
Scorecard  
OpenLCA  
Triple Bottom Line





# The Sustainability Balance Scoreboard

## Description

A classical strategy scorecard (a strategy execution framework) that describes **sustainable strategy of a business**. It focuses on three different perspectives: **economy, ecology and society**.

## Aims

To provide a **strategy scorecard**, which is focused on the sustainability of a business. What is already at place in regards to sustainability and what needs to be done. The main aim is to **set new goals** to lead a business as sustainable as possible.

### Cost

Free

### Languages

In **any** language possible

### Time

Approximately **1 hour**

## Accessibility and Combination of tools

Specific **software** can be used to complete this scorecard, but it can also be done in **Excel** for example.

## More information

<https://www.webbsc.com/user/register>

By registering in this link, the **Sustainable Strategy Template** can be accessed **free of costs**. This template serves as a basis to create own Sustainability Balanced Scorecard.





# OpenLCA



## Description

The open source software for **sustainability assessment** is for modeling the **life cycle** of things.

## Features

- 1) Modeling **compliant** to standards
- 2) **Data Quality Systems** in openLCA
- 3) **Automatic** and **graphical** modeling
- 4) **Monte Carlo** simulation
- 5) **Contribution tree**
- 6) **Parameters**(Global)
- 7) Developer tools
- 8) **Allocation** and **system expansion**
- 9) Product Environmental Footprint (**PEF**)
- 10) **Regionalized impact assessment**
- 11) **Life Cycle** Costing

## Aims

The energy, cost, water consumption and etc. required to **produce things can be calculated without actually producing them**. It aims to provide the **most suitable product selection**.

## Cost

Free

## Languages

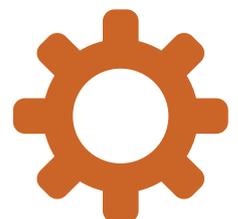
In **any** language possible

## Time

**No** specific time frame

## Accessibility and Combination of tools

**No limitations** for number of users, and it works with **GitHub**. Some scripting tools in openLCA: **SQL, JavaScript, Python, IPC Server**.<sup>9</sup>





# Triple Bottom Line

## Description

The TBL is an accounting framework that incorporates **three dimensions** of performance: **social, environmental and financial**. It includes ecological and social measures that can be difficult to assign appropriate means of measurement.



## Aims

- To increase **revenue**
- To reduce **energy, material** and **water expenses**
- To increase **employee productivity**
- To reduce **hiring and attrition expenses**
- To reduce **strategic and operational risks**

## Cost

Free

## Languages

In **any** language possible

## Time

**No** specific time frame

## Accessibility and Combination of tools

Can be uploaded **online** (Word Document, Google Drive, Dropbox etc.). **Free to use** for teaching purpose within Lectures, Seminars, and Workshops - all education purposes





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# Pitching & Digital Storytelling



StoryMap  
Microsoft Sway  
Animaker





# StoryMap

## Description

A user story map helps you **arrange user stories** into a **useful model** for understanding the **functionality of a system**, identifying holes and omissions in your backlog, and effectively **plan releases** that deliver **value to users** and **business with through releases**.

## Aims

- 1) Understand the **problem to be solved**.
- 2) Create **common understanding** of the problem between stake holders.
- 3) **Prioritize the tasks required** to reach a specified goal

## Cost

Free

## Languages

**Any** language possible

## Time

**30** minutes

## Accessibility and Combination of tools

At least **a few people to participate** are needed in order to make for a realistic story mapping session. A graphing tool such as **LucidChart** is possibly nice to make the cards. But it can also be done with **simple sticky notes**, if an offline environment is preferred.





# Microsoft Sway

## Description

Microsoft Sway is the new app from Microsoft Office aiming to make **easy the creation of interactive reports, stories, presentations, newsletters** and many more.



<https://sway.office.com/>

## Features

- 1) Add **text, pictures** and **audio recording**
- 2) Search and import **relevant content** from other sources
- 3) Use and edit **templates** and search per topic
- 4) **Autoplay** slides

## Aims

- 1) Help people with their **creative** and **design skills**
- 2) Make **more engaging** presentations, reports etc.

## Cost

**Free** for anyone with a Microsoft Account

## Languages

**39 languages** incl. (ENG, PL, GR, NL, TU)

## Time

From **10** minutes

## Accessibility and Combination of tools

**Other web tools** can be easily added in the content

## Similar tool





# Animaker

## Description

A **platform** for beginners, non-designers & professionals to create **animation** and **live-action videos** in any area.



<https://www.animaker.com/>

## Features

Create:

- 1) **Videos**
- 2) **GIFs**
- 3) Live **video editing**

## Aims

- 1) Create **different types** of videos (explanatory, educational, promotional videos storytelling etc.)
- 2) Engage students in developing **soft skills** such as their **creativity**

## Cost

Free with **paid plan** for more advanced versions

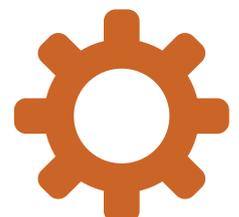
## Languages

In **any** language possible

## Time

From **10** minutes

## Similar tools

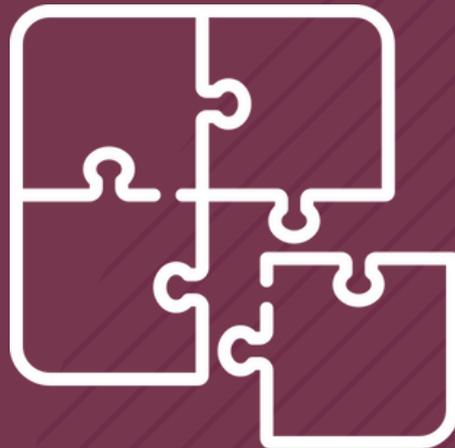




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# Creativity & Problem Solving



Ideabordz  
Mibo  
MindMeister





# Ideabordz

## Description

IdeaBoardz is a **team collaboration** tool. It is simple and easy to use. It enables to create and maintain boards, and to collect data.

**IdeaBoardz**

<https://ideaboardz.com/>

## Features

- 1) Collectively **brainstorm**, gather inputs, **reflect** and **retrospect**.
- 2) **Online collaborative** work.
- 3) Collect **inputs** over some days and then be able to discuss them.

## Aims

- 1) Remote **collaboration**
- 2) Ideation and **Brainstorming**
- 3) Research and **design**
- 4) **Planning**
- 5) Online **workshops**

## Cost

Free

## Languages

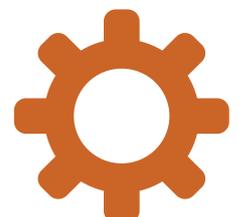
English

## Time

From **10** minutes

## Accessibility and Combination of tools

- (1) **Online direct communication platforms** eg. Teams, Zoom
- (2) **Cloud services for files sharing** eg. Google Drive, Dropbox, One Drive etc.





# Mibo

## Description

Mibo is a new **videochat tool** made for (informal) meetings, social mixers, networking by which you can work around freely in a **3D world**.



<https://getmibo.com/>

## Features

- 1) **Walk around freely**: decide to who you want to talk, what groups to join
- 2) **Distance-based sound**: people closer to you are louder
- 3) **Present** and **share** your screen during workshops, social events and meetings

## Aims

- 1) Make virtual interactions similar to **real-life** social ones
- 2) Make meetings more interactive to **engage people** and motivate them to **actively participate**

## Cost

Free plan with

## Languages

ENG

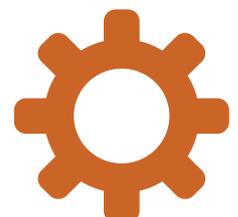
## Time

From **10** minutes

## limitations

## Accessibility and Combination of tools

**Limited** free features, a **paid plan** may be needed. By the feature of sharing the screen, **other tools** can be used.





# MindMeister

## Description

MindMeister is an **online mind mapping tool** that allows to capture, develop and share ideas **visually**.



mind  
meister

<https://www.mindmeister.com/>

## Features

- 1) Collaborative **brainstorming**
- 2) Customize **designs**
- 3) Attach documents, visuals, URLs
- 4) View the history: see **all contributions** and swap to former versions, manage the **tasks** and create **slideshows**.

## Aims

- 1) Brainstorming
- 2) Project **Planning**
- 3) Taking **notes**
- 4) Improve **collaboration, teamwork, productivity**
- 5) Facilitate **creativity**

## Cost

Free with **paid plan** for more advanced versions

## Languages

In **any** language possible

## Time

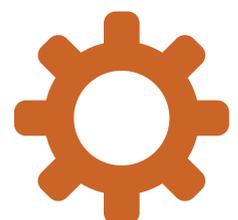
From **10** minutes

## Accessibility and Combination of tools

MindMeister is completely **web-based**, therefore, there is no need for downloads or updates.

## Similar tools

MindMup





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# Cooperation & workflow organisation



Miro  
Wonder  
Figma





# Miro

## Description

Miro is an **online whiteboard platform**. It enables teams to **collaborate effectively** by supporting communication and using different tools. It offers **ready-made templates** to get work started.



<https://miro.com/>

## Features

- 1) To **draw and write** on whiteboards
- 2) To create **sticky notes** and add **links**
- 3) To **upload photos, PDF and Office files, videos** from online and post them directly to the whiteboards

## Aims

- 1) Remote **collaboration**
- 2) **Ideation** and **Brainstorming**
- 3) Research and **design**
- 4) **Strategy** and **planning**
- 5) Agile **workflows**
- 6) **Mapping** and **diagramming**
- 7) Online **workshops**
- 8) **Problem solving**

## Cost

Free option with **paid plans**

## Languages

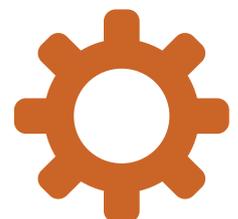
ENG

## Time

From **10** minutes

## Accessibility and Combination of tools

It can be used with **online direct communication platforms, Cloud services, design platforms** and **video platforms**.





# Wonder

## Description

**Online space** where groups can meet and talk **more spontaneously** and **fluid** than through other video conferencing tools.



<https://www.wonder.me/>

## Features

- 1) Use **broadcasting** to speak to own public as all group conversations are paused
- 2) Use **room structure** to get together with like-minded people
- 3) Use a variety of very nice **backgrounds** and start with an **ice-breaker question**

## Aims

- 1) Give the world an **online space** where groups can meet and talk
- 2) Make **human connections** online a **delight**
- 3) Foster **creativity**

## Cost

Free

## Languages

ENG

## Time

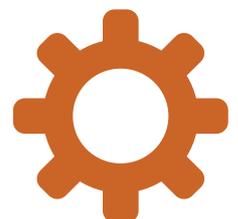
**No** specific time frame

## Accessibility and Combination of tools

The rooms can include a maximum of **1500 people**, with maximum of **15 per area**.

## Similar tool

 Trello





# Figma

## Description

Figma brings teams together to **design better products** from beginning to the end of the development.



<https://www.figma.com/>

## Features

- 1) Use the **pen tool**, to enable a **user-friendly drawing method**
- 2) Use **prototyping** to enable the creation of prototypes of **webshops** with the option to create **multiple layers of interactive content overlays**
- 3) Have a **variety of possibilities** when designing systems so that the designing experience (with their team) is great

## Aims

- 1) Give people access to **powerful design tools**
- 2) Give access to people to **work in the same design file**
- 3) Make **designing together possible** and to make design **available** to everyone

## Cost

**3 pricing options**, the more of the features, the higher the price.

## Languages

ENG

## Time

**No** specific time frame





# Guidelines - Number of people

These 15 tools have been briefly explained and presented above. Here, you can find the suggested number of people that can use each tool simultaneously.

- |  |                                       |
|--|---------------------------------------|
| • Value Proposition Canvas             | <b>no limitation</b>                  |
| • Business Model Canvas                | <b>no limitation</b>                  |
| • Business Model Navigator             | <b>no limitation</b>                  |
| • The Sustainability Balance Scorecard | <b>no limitation</b>                  |
| • OpenLCA                              | <b>no limitation</b>                  |
| • Triple Bottom Line                   | <b>no limitation</b>                  |
| • StoryMap                             | <b>at least 5</b>                     |
| • Microsoft Sway                       | up to <b>3</b> people                 |
| • Animaker                             | up to <b>3</b> people                 |
| • Ideabordz                            | up to <b>15</b> people                |
| • Mibo                                 | up to <b>12</b> people (free version) |
| • MindMeister                          | up to <b>10</b> people                |
| • Miro                                 | <b>15-20</b> people                   |
| • Wonder                               | up to <b>6</b> people                 |
| • Figma                                | up to <b>200</b> to edit              |





# The TECHSTER Teacher Guide

These 15 tools that have been briefly explained and presented above, are developed more in depth in the TECHSTER Teacher Guide. In fact, the TECHSTER Teacher Guide is the next step after the creation of the Toolbox. Its aim is to facilitate the integration of the tools introduced in the Toolbox in the classroom by providing HE professors in tech education with guidelines, advice and, more specifically, with a day by day plan for 15 days as well as suggestions for later on.





# The TECHSTER consortium



Federacja Stowarzyszeń  
Naukowo-Technicznych NOT  
Rada Regionu Zachodniopomorskiego  
w Szczecinie



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