



**International Competition**

# **Make-IT Digital Talents 2024**

as part of the city partnerships Berlin

**Handout for participation  
in the competition**



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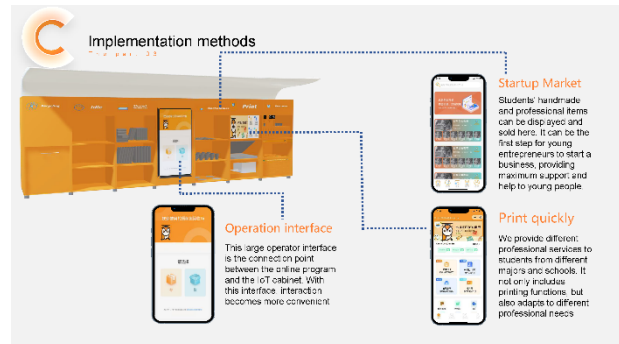


## What was the character of the previous competition entries?

Below we have selected some of the competition entries to give you an insight into the selected tasks and the range of digital solutions.

### Developing new products

In the “Campus Rookie APP” project, the team at Shaanxi Xinhua Computer School (China) developed a locker system for students to exchange learning materials. The focus was on the possibility of simply exchanging teaching materials and other everyday items that are no longer needed with each other via a communication platform. With the help of the app, students can either put their own old teaching material online for future years and pass it on via a locker system or access the material of their older fellow students.



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### Improve operating resources with digital tools

In the “3D-printing failure detection with computer vision” project at Mercedes-Benz AG in Berlin, a 3D printer was expanded to include an image recognition system. The software created for this purpose compares the active print with the production data provided. If there is a deviation, an error message appears and the process is aborted. This avoids unnecessary use of material and further printing errors and reduces unnecessary operation of the 3D printer.



### Expanding traditional learning through the use of digital teaching and learning materials

In the “New mechanical workshop” project at C2M “Campus Métiers Marzy” (France), trainees and their trainers planned the redesign of the training workshop on their campus. In particular, teaching and learning materials with digital technologies were identified, selected, procured and integrated into the training process. The trainees therefore had a significant influence on the equipment and were able to contribute and expand their skills.



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## Redesigning the operational work process with digital tools

In the “Digitization of the order folder” project at stahlotec GmbH in Hagen a.T.W., trainees from various disciplines were able to convince the management to digitize the previously paper-based order process. With the transformation measures developed, the entire order processing for the company now takes place on the PC and on the tablet.

### Advantages

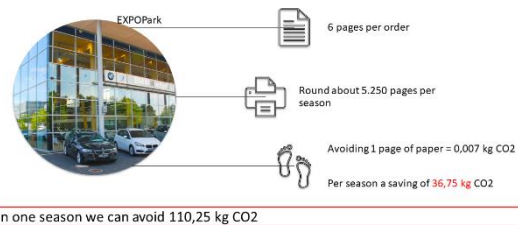
- Save paper/printer ink
- Simplified scan storage for documentation
- Access to documents is possible at any time
- Better view of documents
- Visible comments, for everyone
- No loss of documents
- Digital storage



## Overcoming traditional role and task attributions in digital problem solving

In the “Digital concept Rädersaison” project, four budding businesswomen from the BMW branch in Hanover show how even people from outside the field can implement a digital process transformation with the right idea and the appropriate support. By using digitized documents and forms, they reduced the use of paper and the workload of customers and employees. At the same time, they adapted the workflow to the new processes and made them more effective. CO2 was also saved in the process.

### SUSTAINABILITY.



Digitales Konzept Reduktion | NLP-PB

## Trying out new forms of cooperation

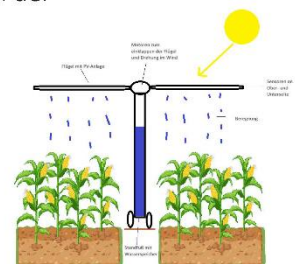
In the “AgriProtect” project, Evangelisches Gymnasium Nordhorn and Krone GmbH & Co. KG have joined forces to develop an agricultural protection system. The team developed an automated plant protection system that protects plants from excessive solar radiation by mounting solar panels, thereby generating energy at the same time. Students and trainees are equally involved in the project.

### Aufbau und Abläufe in der Anlage



#### Aufbau

- Standfuß mit Rädern steht zwischen den Maisreihen.
- Im Inneren des Standfußes befindet sich ein Wassertank.
- Auf dem Standfuß sind ein- und ausklappbare sowie schwenkbare Flügel befestigt.
- Auf den Flügeln sind Sensoren für Umweltbedingungen und eine PV-Anlage zur Stromerzeugung befestigt.




## Using artificial intelligence

In the “Orch\_ai\_d” project, the team from Humboldt-Gymnasium Berlin looked at image classification to determine the health of orchids and implemented it in an app. This allows a picture of orchids to be taken with a smartphone in order to assess their condition and display the results. For this purpose, the individual parts of the orchid were analyzed, an AI-based evaluation system was trained using sample data sets and implemented in the form of a cell phone app.


### Data

Where did we get our data from?

- Image data needed for training the main classification systems
- 1513 high quality images for the type classifier
- 100-150 low quality images per class for the health classifier
- This reflects data reality in Life Sciences
- All other subunits use metadata



Typical image for type classifier (with labels)



Typical image for health classifier (labels missing)

You can find more projects on our platform: [Make-IT Digitalprojekte](#).



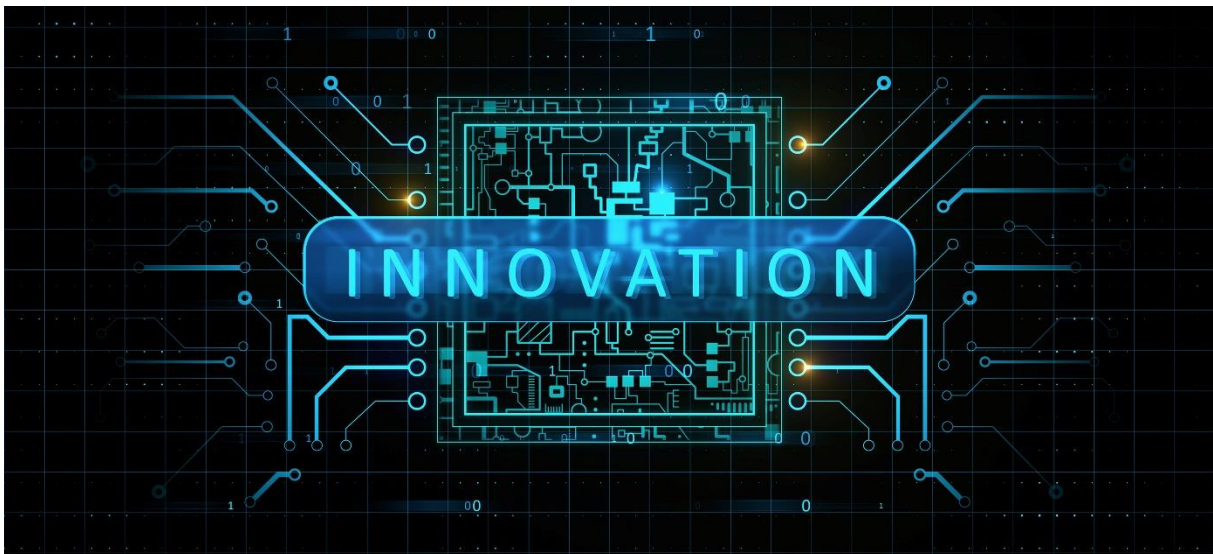
## Which topics will be in focus in 2024?

**Advancing digitalization is fundamentally changing the way we think and work.** The competition therefore places particular emphasis on supporting young people in developing innovative and sustainable solutions and preparing them for the various digital challenges. The focus is on topics that demonstrate the diversity of modern digital technologies.

**Virtual worlds and digital design media are fundamentally changing the way we work and opening up new perspectives.** The aim here is to create immersive experiences, whether in virtual reality or through innovative digital design concepts. The promotion of intelligent solutions in everyday life and research into mobility and logistics in a digital context are important aspects of the competition.

**Digital processes, robotics and app development are subject areas in which participants can present their ideas and skills.** The focus is on the development of efficient processes, robotics applications and innovative mobile applications.

**Digital learning is also changing how and where we learn in the future.** The competition encourages the design and presentation of technologies that advance digital education in new and effective ways. The breadth and depth of modern digital technologies promotes solutions that are not only technologically impressive, but also make a positive contribution to society and to artificial intelligence, which plays an important role in the automation of processes and the development of intelligent machines and can fundamentally change the way we work in the coming years. The competition supports participants in presenting solutions that are not only technologically advanced, but also ethically and socially responsible.



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## What prizes can be won?

Three **main prizes** are awarded in the international Make-IT Digital Talent competition:

<b>International City Award</b>	The winning team that convinces the jury as a whole of its innovative and sustainable approach to digitalization will receive the <b>International City Award</b> .
<b>Innovation Award</b>	The <b>Innovation Award</b> goes to the project team with the highest degree of innovation.
<b>Sustainability Award</b>	The <b>Sustainability Award</b> goes to the project team with the highest sustainability score.

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Up to four additional prizes will also be awarded:

Digital Solution:	The “Digital Solution” prize is awarded for a special achievement in the field of developing or upgrading hardware or software products.
Digital Process:	The team received the “Digital Process” award for outstanding achievements in the area of digital process transformation.
Digital Training:	The “Digital Training” prize is awarded for the development of a digital teaching and learning system.
Digital Media:	The “Digital Media” award goes to convincing media achievements. The jury was impressed by the development of a digital media system or a virtual system.

The winners will receive **prize money** of up to €1000. There is also a **trophy** and a **certificate** from the Berlin Senate Department ASGIVA and the GFBM Akademie.

The jury has the option of awarding other teams a special prize without prize money.

## What deadlines must be met in 2024?

Register by **Sep. 30, 2024** at <https://make-it.berlin> for participation in the competition.

Also submit the required documents - see the following explanations - in **English** to the GFBM Academy by **Sep. 30, 2024**. Please use the e-mail address [make-it@gfbm-akademie.de](mailto:make-it@gfbm-akademie.de) with the keyword “Participation in the 2024 competition”.

The award ceremony will be held as a public event on **November 22, 2024** in Berlin.

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## What documents must be submitted and what purpose do they serve?

In any case, you should first register on our website so that we know that you want to take part in the competition. To enable the jury to evaluate the project and present it on our website, we have developed a list of questions to make it easier to submit the project. Simply answer the questions on the points:

### Projektdokumentation

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#### Idea development

**Inspiration from outside, creative ideas workshops, long discussion evenings in a team or with friends:** Tell us briefly and concisely about the basic idea behind your project. What motivated you, what goals did you pursue?



#### Concept development

A clear concept is needed to turn a good idea into a real project.

#### Research - schedule - distribution of tasks - required resources

Tell us how you went about developing your idea, what planning you did and where you looked for support.

#### Realization

**In the end, it's always the result that counts, but the journey is also part of the goal.**

Give us an overview of the realization of your project so that the jury can better understand how you arrived at your result. What target group is your digital project aimed at, what responsibilities did the team have, what steps did you take, were there any prototypes that you discarded, what were the biggest challenges?



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## Functionality

### In which area will your project be used?

Describe which target group your project result is aimed at and give an insight into the exact functionality, the technologies used and the hardware and software used.

If there are already positive experiences regarding the use of your project, you should definitely include these in the project documentation.



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## Innovation and Sustainability

### How well can your approaches and developments be transferred to other areas and does your project promote the sustainable use of resources?

Describe the advantages of your project, especially in terms of ecology, economy and society.



## Optional documents

### Project presentation

In contrast to the project documentation, the presentation is about presenting your project to the outside world in order to give the jury an additional impression of your project. Whether PowerPoint presentation, video or your own website, you are free to choose the means that best suit your project. Try to present your project and your approach as vividly as possible, using graphics, images, text or animations. Everything is allowed as long as it serves the understanding of your project.

Please consider the following restrictions when creating the presentation:

#### PowerPoint or pdf

- **Text:** max 1 page as a supplement to your project documentation
- **Number of foils:** max 10 slides in the form of a PowerPoint presentation or as a pdf file

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## Video

- **Qualität:** Video in Full HD-Resolution 1920 × 1080p/MP4
- **Format:** landscape format
- **Duration:** max. 3 Minutes

## How will your competition entry be judged?

The entries are judged by an independent jury made up of representatives from business, education and public administration.

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## Contact

We are happy to answer any questions and provide support.

Your Make-IT Team

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