



MYOW and Innovation

How is innovation taking place and being implemented in Germany?

In 2018, Germany was the most innovative country in the world, surpassing the United States of America with a score of 87.5 out of 100 in the Innovation capability area - one of the 12 drivers of a country's productivity defined by the World's Economic Forum ([We Forum report of 2018](#)). In 2020, it was still one of the leading countries in innovation in the world and number one in Europe ([We Forum report of 2020](#)). Germany indeed offers a wide range of attractive institutions and research centers, making it a very attractive location for conducting research and development projects.

The MYOW-project was instigated within this flourishing ecosystem. Launched in 2018, during the prime success of German innovation. The project is funded by the Federal Ministry of Education and Research, and is supervised by the Project management agency PTKA, a dedicated division of the Karlsruhe Institute of Technology.

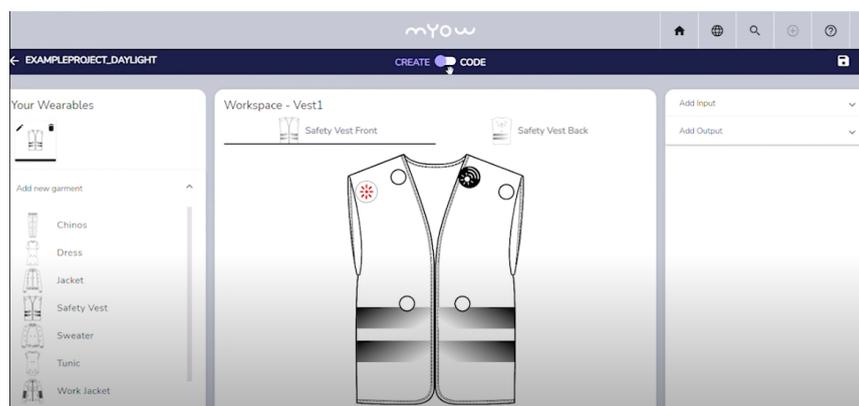


MYOW Team together: Condat AG, Wear It Berlin, The August-Wilhelm Scheer Institute, The German Research Center for Artificial Intelligence (DFKI) GmbH, Stilnest, Freyer & Siegel Elektronik GmbH & Co

Ending in September 2021, MYOW, which stands for "Make Your Own Wearable" has brought together Researchers, Scientists and different actors of the German wearable

industry. Before presenting the final results and development of the project, it is interesting to understand what brought the project to life and how it will make its mark in the landscape of German innovations. To do so we have the pleasure to introduce Christoph Ziegler from PTKA. Mr. Ziegler is involved in MYOW and describes how the project was launched and its potential future developments.

At the start, the MYOW-Project was pitched to the Federal Ministry of Education and Research and other external experts alongside 70 other project ideas. What made MYOW stand out was that the project was aimed directly at the Makers, which was a criteria expected by the project funding. The proposed consortium was also a strong argument for choosing MYOW as it was made of makers and designers, Research partners, as well as the innovative Product-Service System.



Screenshot from MYOW Portal: new service space provides various services to support the design, prototyping, and creation of innovative wearables

After the application process two challenges arose from the suggested concept. First the data management. The question was how was the personal data collected going to be processed and managed during the project. Another challenge was that the consortium, although various and very qualified, was mainly based in the German regions of Berlin and Brandenburg. The concern was how the project would be broadened and disseminated outside of that region.

After thorough applications and review, the final decision was made by BMBF with the help of external experts. This is how MYOW was selected and launched.

We understand that what makes the project so special is on the one hand the innovation it brings to wearable technology designs and products. But also on the other is the enabling of cooperation between experts from all industries and fields. This is first shown in the consortium but also among the users of the platform. The platform enables people with different skills to work on the same project and makes it easy to create a concept and design a wearable tech product.

To this Patrick Stadler from DFKI says: *"Even people who have little or no previous experience in programming wearables, are able to realize their ideas. MYOW is intuitive and simple and still provides all the necessary tools to realize even complex projects."*

How does MYOW solve the problem of adding and integrating technical components into a wearable product?

The MYOW Consortium created a user-friendly platform as well as innovations for the integration of technical components into the textiles. Fabian Jaenicke from Freyer & Siegel explains what makes MYOW so special and innovative. As part of the Consortium, Freyer & Siegel developed the technical components of the toolkit, such as the platines and conductors.

“There are two challenges with technical components in textile wearables: size reduction and optimising the textile integration.

The size of the electronic assembly depends largely on the miniature electronic components to be used. Their dimensions are negligible with the ongoing development of miniaturisation.

However, there is more potential for optimisation in textile integration. This is also where we started in the MYOW project. Both the textile conductors and the electronics developed in the project are ironed onto the textile by the maker. The conductors are flexible and adapt to the movements of the fabric. Another example of textile integration optimization is the choice of the type of circuit board. A completely rigid PCB is difficult to iron onto the textile. Tests have shown that the temperature achievable with an iron or ironing press is not sufficient to melt the solder through a PCB. A completely flexible circuit board is also not a solution for the application, because under the strong mechanical stress in the wearable, the electronic components separate after only being bent a couple of times.

A semi-flex circuit board was therefore chosen for the application. The circuit board is only thick and rigid in the area with the electronic components and thus offers the necessary mechanical stability. The other areas are made of flexible material.”



Operator Jacket: Final Prototype made by Workshop participants Simone Syhre, Georgina Koschke, Pauline Stockmann, Katja Jahn and MYOW Team

Innovation is the key criterion for launching a research and development project. The MYOW consortium saw a flaw in the conception of Wearable tech Products, in particular the integration of technological components to textile. They used this knowledge to launch the project and start working with PTKA. The MYOW research project is coming to an end this year and has been reporting great success in integrating the platines and conductors to flexible textiles. The consortium is ready for the next step to bring MYOW to the public.

Please visit the MYOW Website for further information: <https://www.myow.net/>

Contact

Press

Manon Montant, Project Manager
Wear It Berlin GmbH
manon@wearit-berlin.com
+33 7 83 60 63 90

Project Coordinator

Rolf Fricke, Condat AG
rf@condat.de
+49 172 399 1959

Funded by the Federal Ministry of Education and Research

