

Press release  
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## Solar Decathlon: Miele supports university team in sustainable living competition

- ▶ Düsseldorf MIMO project explores new avenue towards the more energy-efficient use of domestic appliances
- ▶ Event campus in Wuppertal opens its doors in June

**Gütersloh, May 5, 2022. – Wuppertal to become idea pool for climate-neutral living in June. That is when the Solar Decathlon takes place in the city, at which 18 international university teams are due to present their concepts on sustainable living and ways of life. One of the teams is from the Düsseldorf University, participating in the architecture competition for students as MIMO, which stands for Minimal Input - Maximum Output. Miele is partnering with MIMO and is presenting a new approach to further improving the energy efficiency of domestic appliances in the project.**

Currently, all hands are on deck putting the finishing touches to the so-called MIMO Home Demonstrator. This is a two-storey block measuring ten metres square with a height of 7 m. Alongside two living units, the building includes communal areas such as the kitchen and a roof patio offering plenty of space for urban gardening. The Home Demonstrator, built from solid wood, features a climate shield made from horizontal louvres. These regulate the intake of fresh air and also serve as a PV array to generate electricity.

An energiBUS including a heat pump connected to hot and cold water circuits constitutes the central energy management system. This is where Miele domestic appliances enter the equation: They run namely on 'home-grown' solar power. This tie-in to the central heat pump opens up additional potential for savings as the washing machine and dishwasher are supplied with hot water from the pump so that the machines themselves only marginally need to top up the heating to reach the temperatures required by individual programmes. The dryer on the other hand uses the refrigeration cycle of the central heat pump for condensation. A further option is heat recovery from the waste water from the washing machine and the dishwasher. This, however, has not been included in the first stage of the demonstrator.

In the simulation, this sophisticated technology saves a further 15% to 20% of (green) electricity compared with highly efficient heat pump systems. These savings are to be validated under real-life conditions when the MIMO module commences operation in Wuppertal in the first half of June. 'Such an installation is admittedly complicated but it

impressively demonstrates what can be achieved nowadays', says Sven Schneider, Head of Future Business Design at Miele. 'To achieve our sustainability goals, a solution like this can be important as the biggest handle on further reducing CO2 emissions is during the usage phase of appliances. In this area, we aim to reduce CO2 emissions by 15% by 2030 – compared with products sold in 2019'.

The MIMO Home Demonstrator as will be presented on the exhibition campus is a fully functional building. The big advantage of this modular approach is its scalability. As part of the Solar Decathlon competition, the Düsseldorf project has been planned as a three-storey installation for existing premises in the centre of Wuppertal. The building in question is Cafe Ada, a former factory complex with a flat roof which has been used for many years as an event location. Whether this system will actually be installed on top of the Cafe Ada still remains undecided. What is planned, however, is to continue operating the Home Demonstrator as a hostel once the competition ends in order to gather long-term experience with the project.

One thing is already certain: the Düsseldorf students with their partner companies will be presenting a prime example of the sustainable restoration and extension of building fabric, a field offering enormous potential in promoting energy transition in an urban setting.

The Solar Decathlon exhibition opens its doors in the Mirke district of Wuppertal on June 10 and runs until June 26, at which time a jury will assess the best ideas in the various categories.

More information on the Düsseldorf University project is available via <https://mimo-hsd.de/> and on social media channels (Instagram: hsd.mimo; LinkedIn: HSD MIMO; Facebook: HSD MIMO).

The Solar Decathlon international architecture competition presents itself:

<https://sde21.eu/de/>

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**Company profile:** Miele is the world's leading manufacturer of premium domestic appliances including cooking, baking and steam-cooking appliances, refrigeration products, coffee makers, dishwashers and laundry and floor care products. Their product portfolio also includes dishwashers, air purifiers, washing machines and tumble dryers for commercial use as well as washer-disinfectors and sterilisers for use in medical and laboratory applications. Founded in 1899, the company has eight production plants in Germany, one each in Austria, the Czech Republic, China, Romania and Poland as well as two production plants belonging to its Italian medical technology subsidiary Steelco. Sales in the 2021 business year amounted to around € 4.84 bn. Miele is represented with its own sales subsidiaries and via importers in almost 100 countries/regions. Throughout the world, the family-run enterprise, now in its fourth generation, employs a workforce of around 21,900, of which approx. 11,400 employees work in Germany. The company has its headquarters in Gütersloh in Westphalia.

## There is one photograph with this text



**Photo 1:** The Düsseldorf University project as part of the Solar Decathlon, open to the public in Wuppertal from June onwards, includes Miele domestic appliances for energy management of the future. (Rendering: HDU – Cameron Juna Wiest & Gabriel Abu Rabia)

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