



**'LET'S DO SOME MONITORING
- IT'LL BE FUN,'
they said**

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spongeworks



**Funded by
the European Union**



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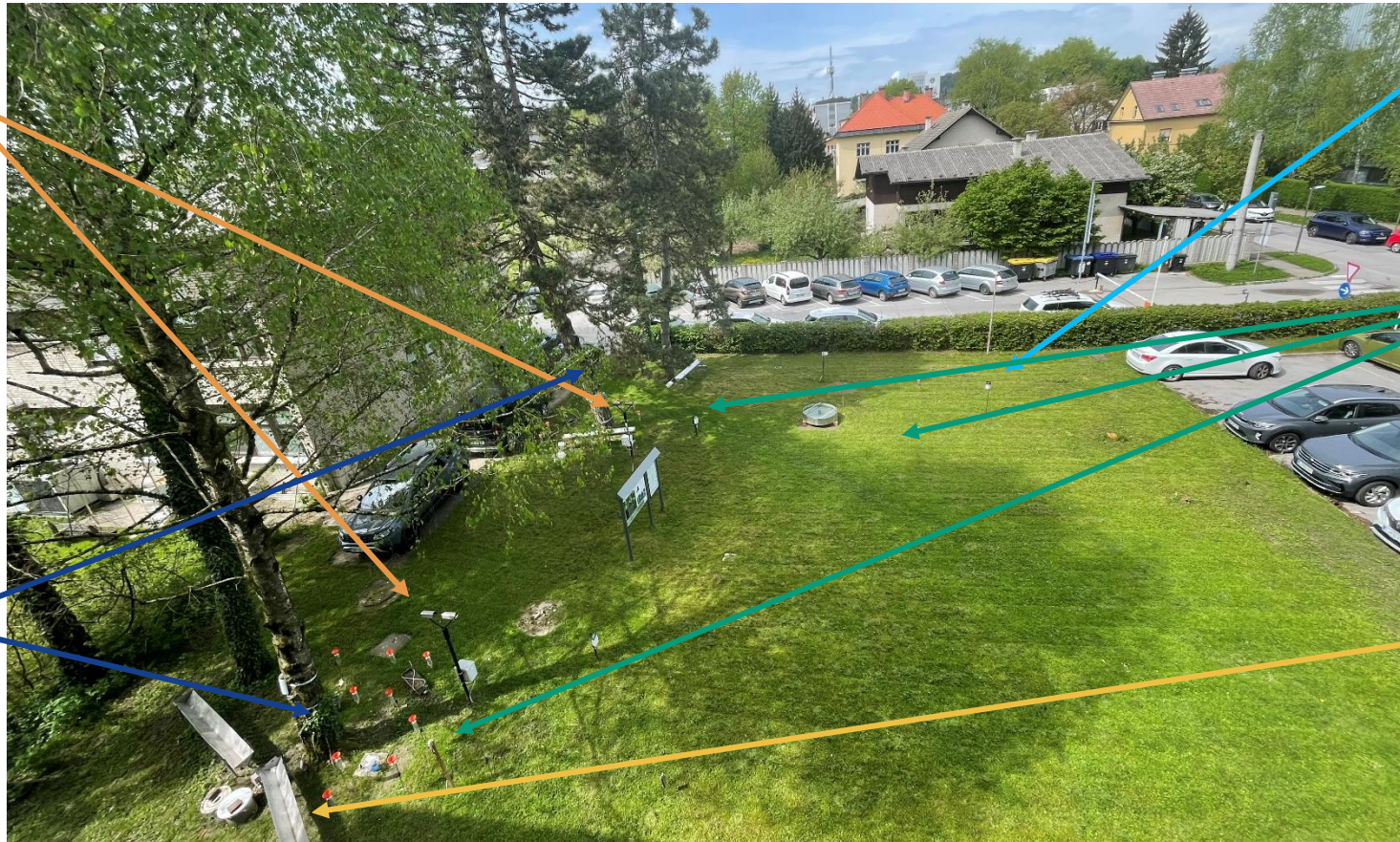
**UK Centre for
Ecology & Hydrology**

Research plot in Ljubljana, where the local water balance is extensively monitored

At University of Ljubljana, Chair of Hydrology and Hydraulic Engineering we have extensive experience in setting up and carrying out measurements to monitor hydrological processes. There were multiple research catchments and sites established, some are discontinued and others are added. In the SpongeScapes project we are participating with a research plot where the local water balance is extensively monitored. The focus is on the role of trees in regulating water.

Rainfall and throughfall microstructure (number, size and velocity of drops)

Growth and transpiration of trees



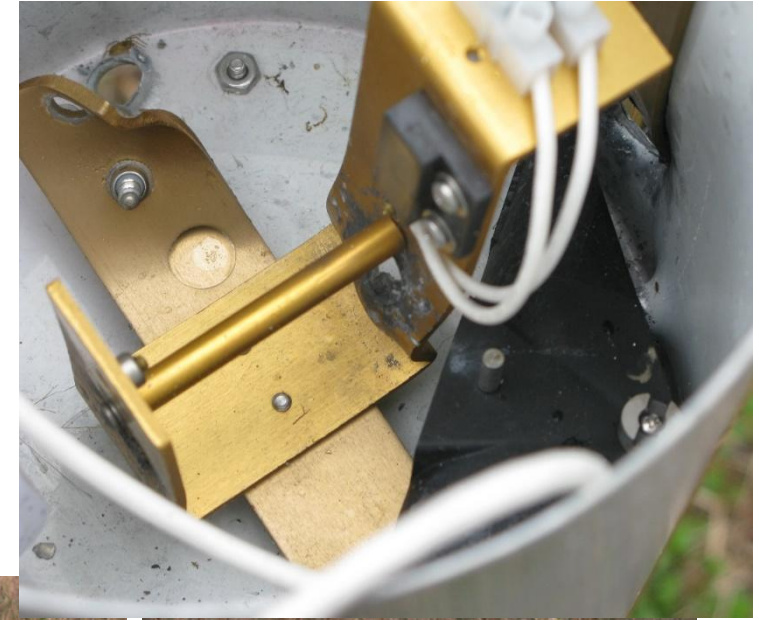
Rainfall in the open

Soil moisture (VWC) in the open and under the trees in three depths

Throughfall and stemflow

FUN OF FIELD WORK - damaged equipment

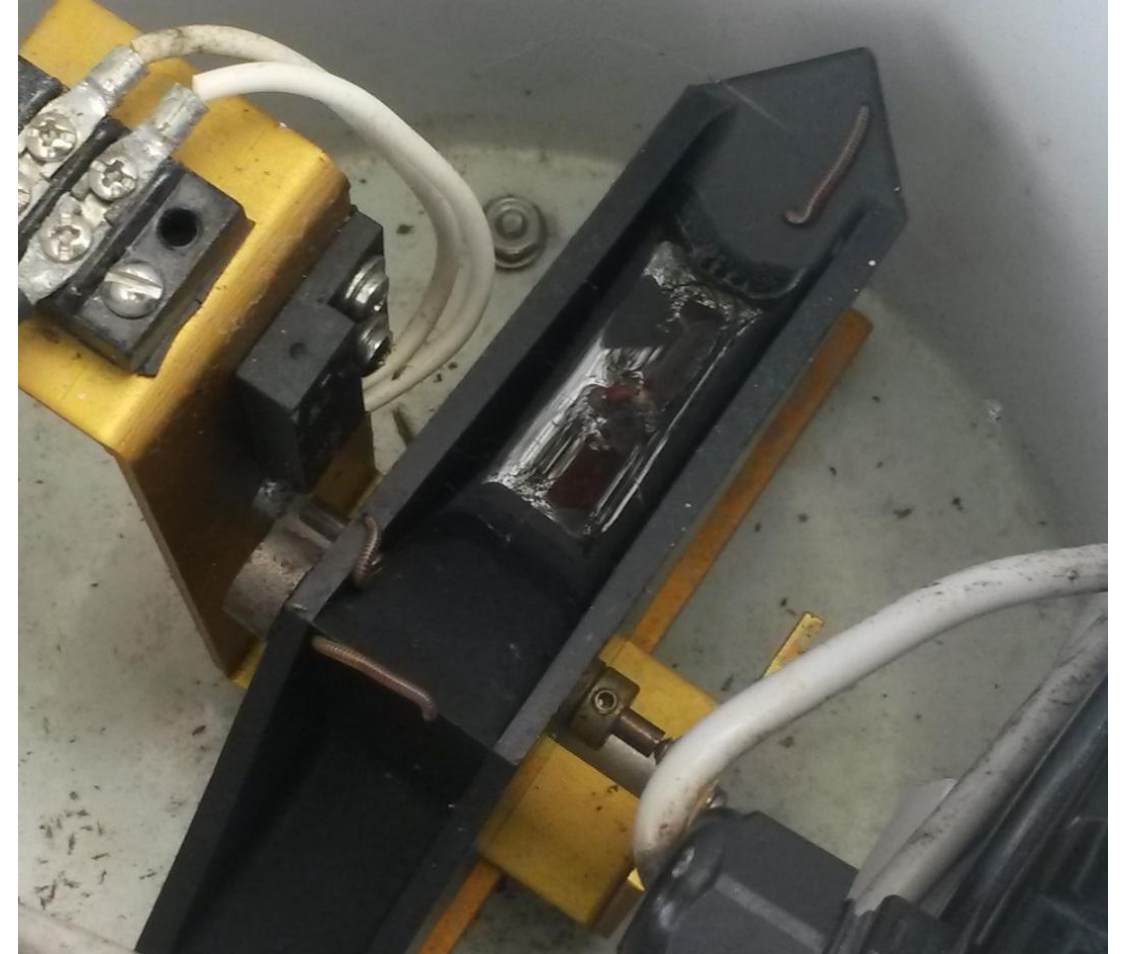
On the picture you can see a tipping bucket rain gauge, quite a standard piece of equipment used to monitor rainfall. There is a hunting lodge in the background. If you're still not sure what you're looking at: the hunters have chosen the rainfall gauge as their target. If people don't understand or are not familiar with the measurements, they can unintentionally destroy the equipment. There was a case of a rain gauge positioned by the river, where people often have picnics or swim. A rain gauge was used as an ashtray. Of course, some people think equipment is just stupid and destroy it intentionally. It is certainly one of the things to think about when deciding where to put the equipment and how to monitor.



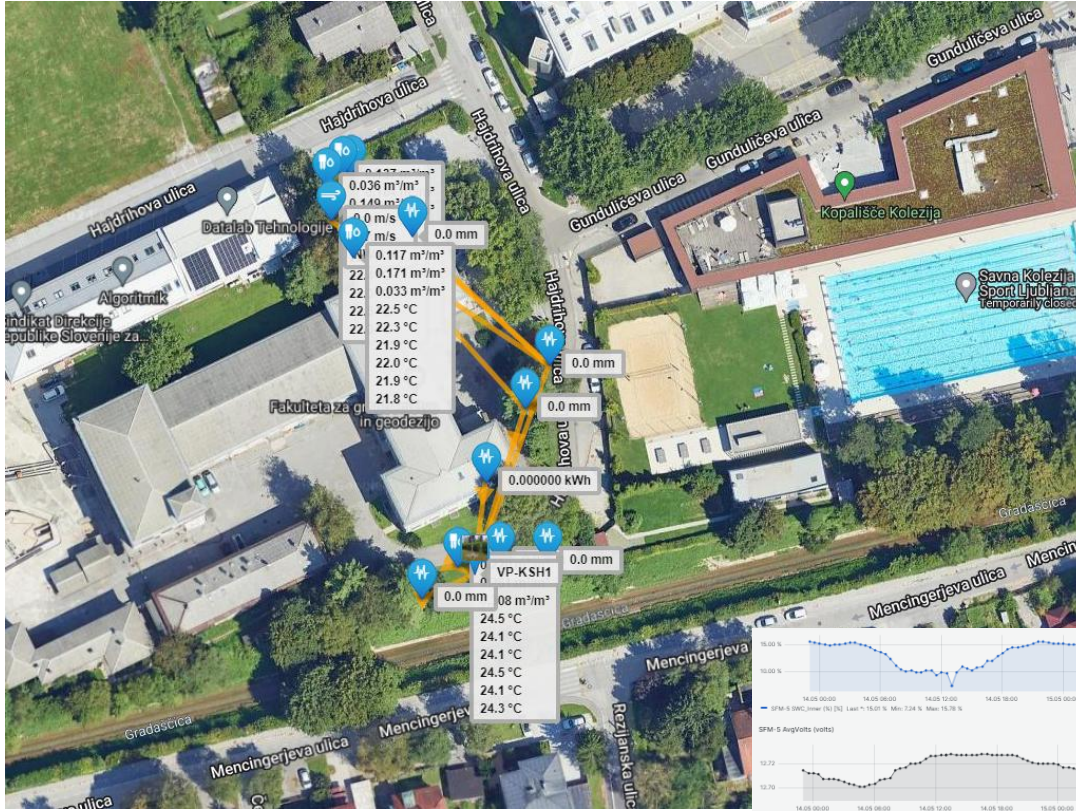
FUN OF FIELD WORK - unwanted

guests

Another thing to have in mind is that monitoring takes place in the nature. Even if we manage to avoid bad weather, or if we don't mind it, there are other things that can surprise us out there, such as colonies of ants or worms that settle in the equipment or angry cows trampling electricity cables, as they look just like snakes.

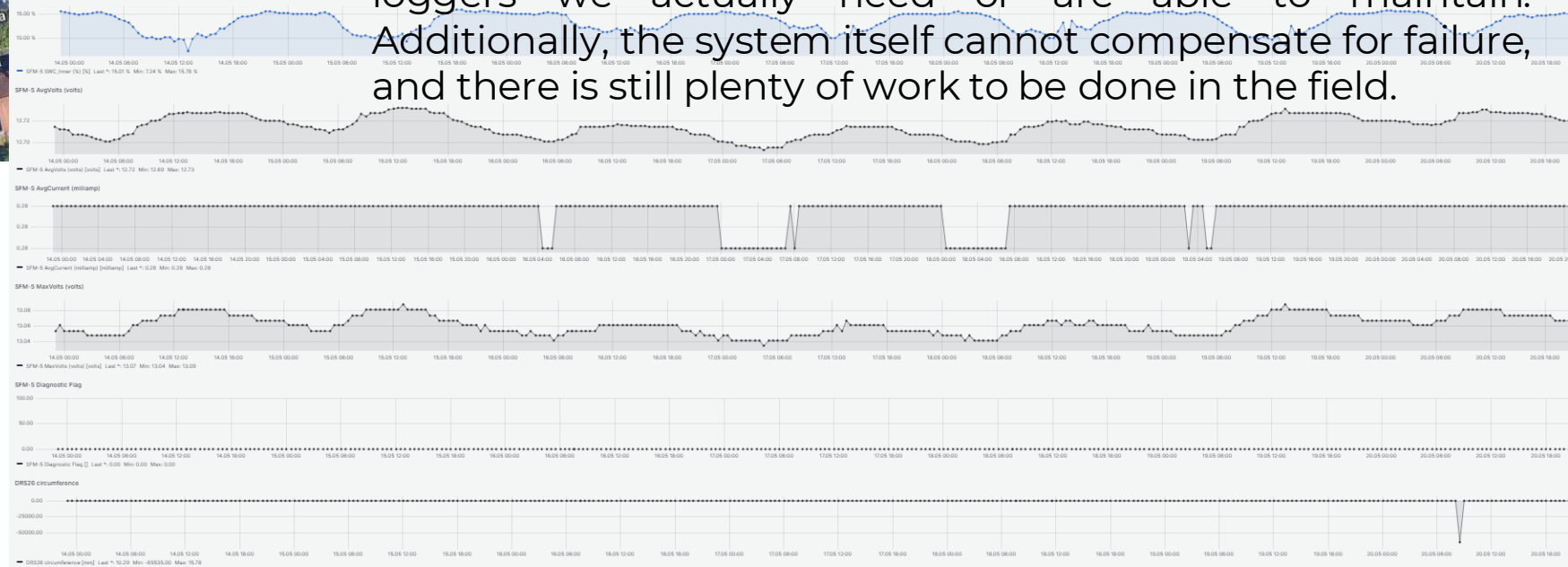


WORK THAT REQUIRES CONTROL AND MAINTAINANCE



The development of sensors and the establishment of data clouds has made many things easier and, hopefully, more manageable. The figure shows an example from our research plot in Ljubljana, where all the sensors are connected to the cloud. We can observe the measured values in real time, download the data, and check that everything is OK from the office or even from home. Measurements are quickly visualized, so any issues can be observed very quickly.

While all these systems are great, it is important to note that they require an annual subscription. Therefore, when buying equipment, we need to consider what type of loggers we actually need or are able to maintain. Additionally, the system itself cannot compensate for failure, and there is still plenty of work to be done in the field.





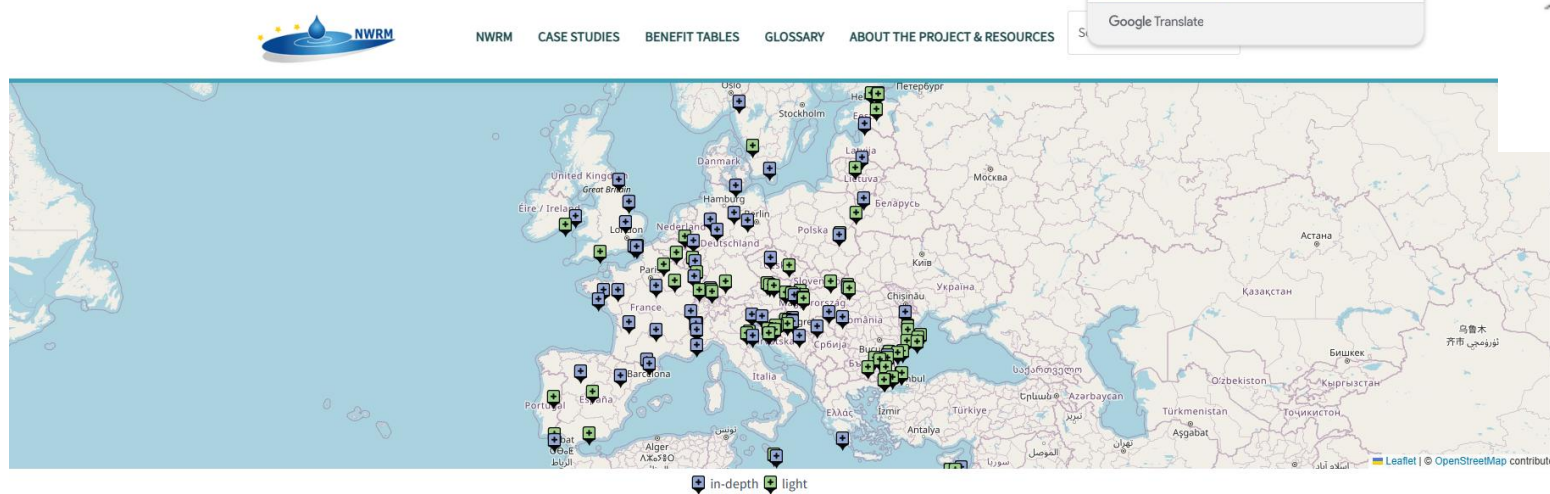
Fieldwork can be great fun. It is also very important. Therefore, setting up the monitoring system is essential when introducing sponge measures, and this should be planned alongside the construction of the measures themselves. No matter how advanced the devices and systems you choose are, bear in mind that they will require maintenance. And having a person who sees the fun in it is priceless and the only thing that will make your monitoring effective and long-lasting.



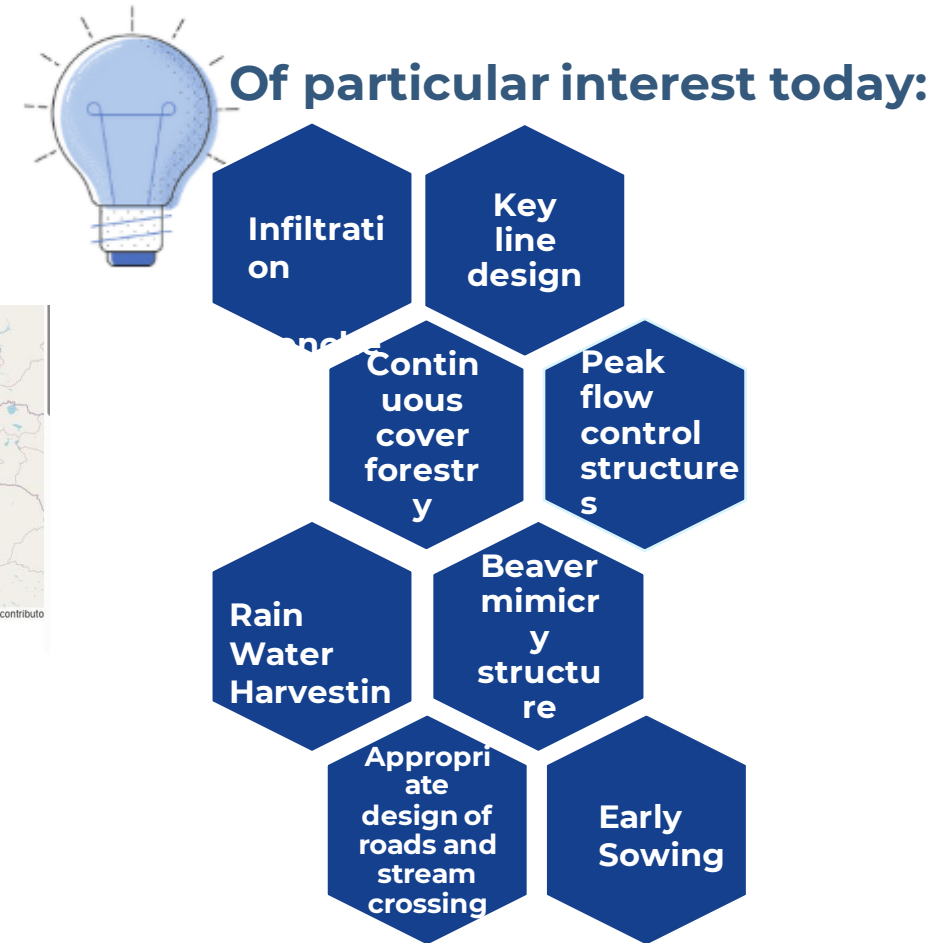
We are looking for case studies

Are you a European case study leader, or do you know of a case study that has implemented sponge measures? Would you like to share your experience on an international platform?

Join the network of 140 existing case studies on nwrn.eu!



- 2013- today
- Service Contract funded by the European Commission DG Environment
- **SpongeScapes** Project is working to **update and improve the NWRM website**
- 54 Natural Water Retention Measures identified yet and more to come!



Contact us !

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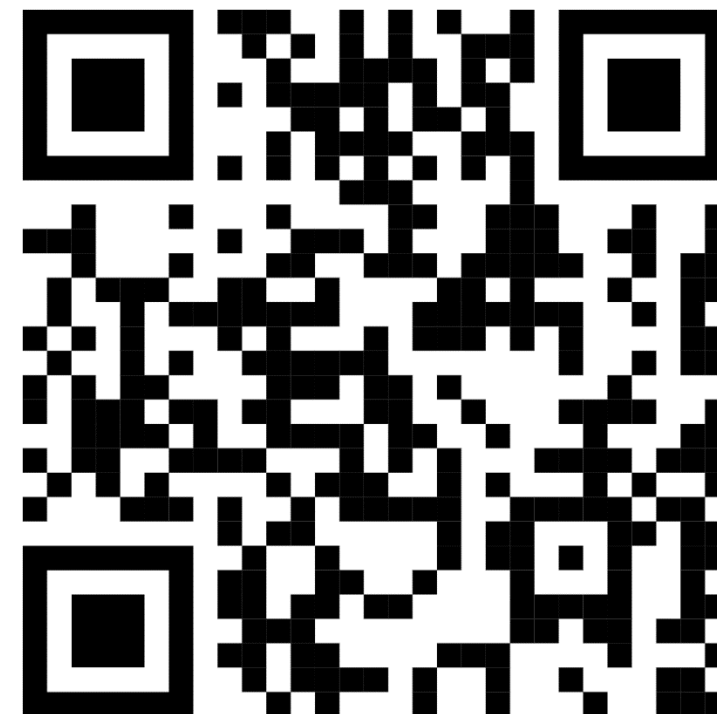
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