



Room Mapping as a Service

Modum's next generation monitoring, automation and optimization solutions help you to drastically reduce time and cost of temperature and humidity measurement and report compilation. Chemengineering and Modum joined forces to create a platform that simplifies and automates mapping studies.



About Modum

Modum offers next generation solutions for digital value chain monitoring, automation, and optimization. We create digital ecosystems, powered by IoT sensing, AI and Blockchain technology, for a wide range of applications related to sensitive goods in various industries. Modum not only collaborates with global technology partners such as SAP and AWS, but also joins up with business partners such as Swiss Post to ensure that their solutions are fit-for-purpose and meet market needs. Our team is the best in class, curious and passionate, and is looking forward to helping you reach your supply chain digitalization goals.



About Chemengineering

The Chemengineering Group is a global consulting and planning company with a focus on the GxP-regulated environment. From consulting to concept studies and further on to turnkey solutions, we offer the full range of services in the areas of pharmaceuticals, biotechnology, fine chemicals, medical technology, cosmetics, diagnostics and food. With more than 350 highly skilled employees in Central Europe, we are the preferred partner for many multinational and local companies, and in this capacity we solve our tasks with the experience, skill and fresh ideas of our highly motivated teams.

**Contact us to
Learn More!**

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The Challenge

Pharmaceutical and biological products require controlled environmental storage conditions to mitigate the risks of product degradation. Thus, temperature and humidity controlled storage areas must be mapped to assess the environmental conditions that the products will be exposed to. Until this has been done, it is not safe

to store temperature and humidity sensitive pharmaceutical products in such areas.

Each measurement point in a room or a warehouse needs to be analyzed and consolidated into a report with the corresponding calibration certificate information. After conducting the

mapping study, the challenge remains that the results are only accessible after reading out the data from the loggers, which often requires physically accessing them. In case the room failed, the whole mapping study needs to be repeated after having completed the necessary rectifications, resulting in the loss of time and money.

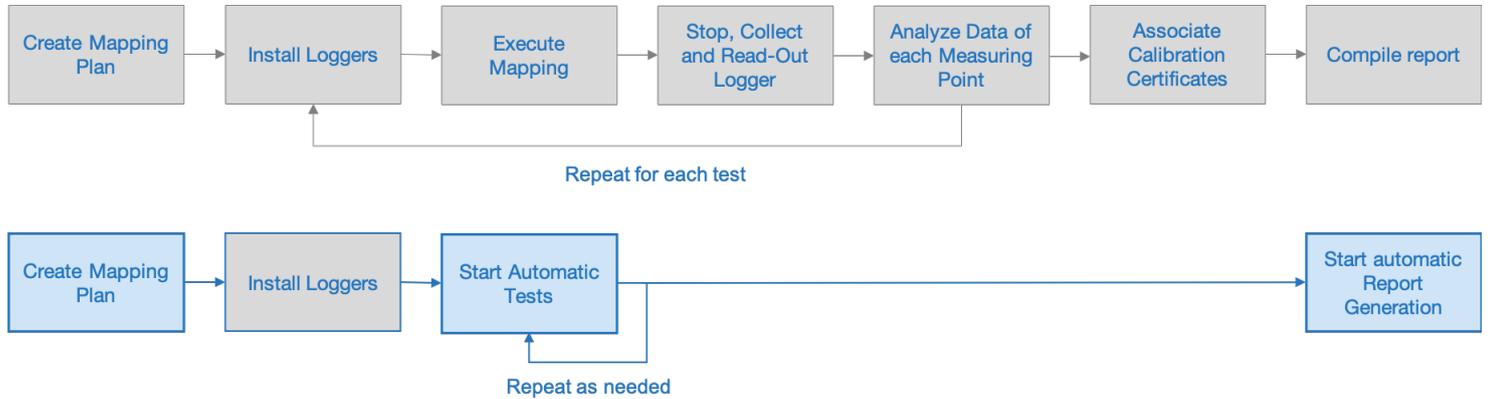


Fig. 1: Traditional mapping process vs. simplified mapping process with Chemengineering's and Modum's Mapping solution

The Solution

Chemengineering and Modum joined forces to create a platform for automating the most time-consuming and tedious steps in mapping studies. Chemengineering adds their long

standing experience in qualification of pharmaceutical facilities (GMP) and validation of computer systems (GAMP), while Modum contributes their next-generation condition mon-

itoring platform and knowledge in supply chain automation to the co-operation. The solution supports GxP professionals in all steps of a mapping study:

Create Mapping Plan

Mapping plans can be created from reusable templates, 3D plots can be imported from standard CAD files, measurement points can be defined in the application and are stored as part of the mapping plan.

Execute Mapping

Once installed, the wireless MOD-sense data loggers can be started remotely in the application. Measurement data is available in real-time and any failures can be detected immediately. Responsible personnel is notified by E-Mail or text message when a deviation occurs. In case of a corrective action, the test can be restarted immediately without the need to remove and replace data loggers.

Key Customer Benefits

- Significantly shorter project duration
- Reduced mapping costs, determined upfront
- High data quality and blockchain-guaranteed data integrity
- Re-usable mapping templates for future studies
- The solution is based on an open platform

Compile Report

Once all steps of a mapping test are completed, the test can be stopped at the click of a button. The data from each measuring point is analyzed automatically and a heat map is generated. Mapping reports including logger calibration certificates can be created automatically using reusable templates.

