

Case 11 - Am-LAB DIH (Hungary) – prototype development service

[Am-LAB](#) DIH (Hungary) is coordinated by [Pannon Business Network Association \(PBN\)](#) and aims at promoting and assisting the digitisation of SMEs in Western Hungary. Initiated under the Hungarian initiative for digitising industry, [IPAR 4.0 Technology Platform](#), the hub addresses the needs of more than 100 local, national and international SMEs on an annual level and has a diverse network of industry partners especially in mechatronics, which is a strong sector in Western Hungary.

Am-LAB hub's list of [services](#) to SMEs ranges from prototype printing to series production, and from custom animation (CGI) and augmented reality (AR) solutions for product launches, to artificial intelligence-based algorithms for increasing profitability. Indicatively, [augmented reality solutions](#) target manufacturing and other SMEs that can benefit from testing real-time visualisation of their production data (smart phone, tablet, HoloLens) and simulating a product's development process through incorporating marketing applications (smart phone, tablet, webAR). In addition, the hub's [robotics lab](#) allows SMEs and start-ups design and manufacture custom grippers and accessories for their collaborative workflow using 3D printing technology. Finally, the hub's data analysis lab supports SMEs develop solutions that can strengthen their profitability and efficiency using existing data. This can be achieved at the hub's facilities through segmentation and classification analysis as well as by employing National Language Processes. Regarding skills development, Am-LAB offers an extensive list of trainings on digital scanning, 3D printing, 3D modeling, collaborative robot applications, hololens (augmented reality applications), mobile robot (on-site logistics automation) and sensor applications for conventional machines.

Example of service provided to SME

The hub as recently supported a multinational automotive supplier, with a production unit in Szombathely region, who had a supplier contract where small batches had to be produced on a frequent basis. The item was expected to be fire resistant and cost efficient at a low quantity number. With traditional production technologies this was not feasible and although the company possessed filament-based printers did not manage to produce the right characteristics. To address this challenge, the hum provided a polymer printing solution by combining the application of SLA printer with the solid experience of in-house engineering experts of Am-Lab. Special design and placement technologies were needed and once the solution was developed, the client was trained on how to apply it on its own machinery specific needs and characteristics.