Complex shapes are achieved in unusual materials by using human dexterity and skill to bring computational designs to life.

**Spotted:** The Kirtvs Winery’s newest building appears to be made from undulating brick walls. Using a new process named Augmented Bricklaying, the structure combines digital design with master craftsmanship. Designed by a team from ETH Zurich’s Gramazio Kohler Research department and built by local craftsmen, the wine processing and storage facility is in Pydna, Greece.

Augmented Bricklaying is an interactive design process. An augmented reality interface uses an optical guidance system to allow masons to inspect the exact location of each brick. Adjustments are made immediately. The combination of dynamic design checks and artisan skill meant that the entire build was completed in three months. A total of 13,596 handmade bricks were used in the structure.

Depending on the location of the light, the walls seem to flow in different directions.

Mortar is a striking feature of the building and variations in the amount used to contribute to the wave-like look of the walls. The gaps between bricks allow light and air to filter inside without damaging the wine from extreme summer temperatures.

For industries steeped in tradition, new technologies must meld well with a brand’s heritage and culture in order to be considered for use. Two areas in which Springwise has spotted innovations making a difference are agtech and fashion. Algorithm-analysed soil health is helping vineyards...
manage land with fewer pesticides and “design-your-own” has been taken a step further by a startup that laser cuts single sheets of leather for handbag assembly at home by customers.

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Takeaway:

While mixed reality projects are becoming more common, particularly in tourism and gaming, many industries have yet to consider working with the technology. Combining artisanship with augmented and virtual reality technologies is an interesting approach to building and creating. Sharing ideas and goals for circularity and scalability will be essential to the success of any project. With so many future, technology-led jobs yet to be created, partnerships that cross boundaries and combine skills could result in new types of master crafts.