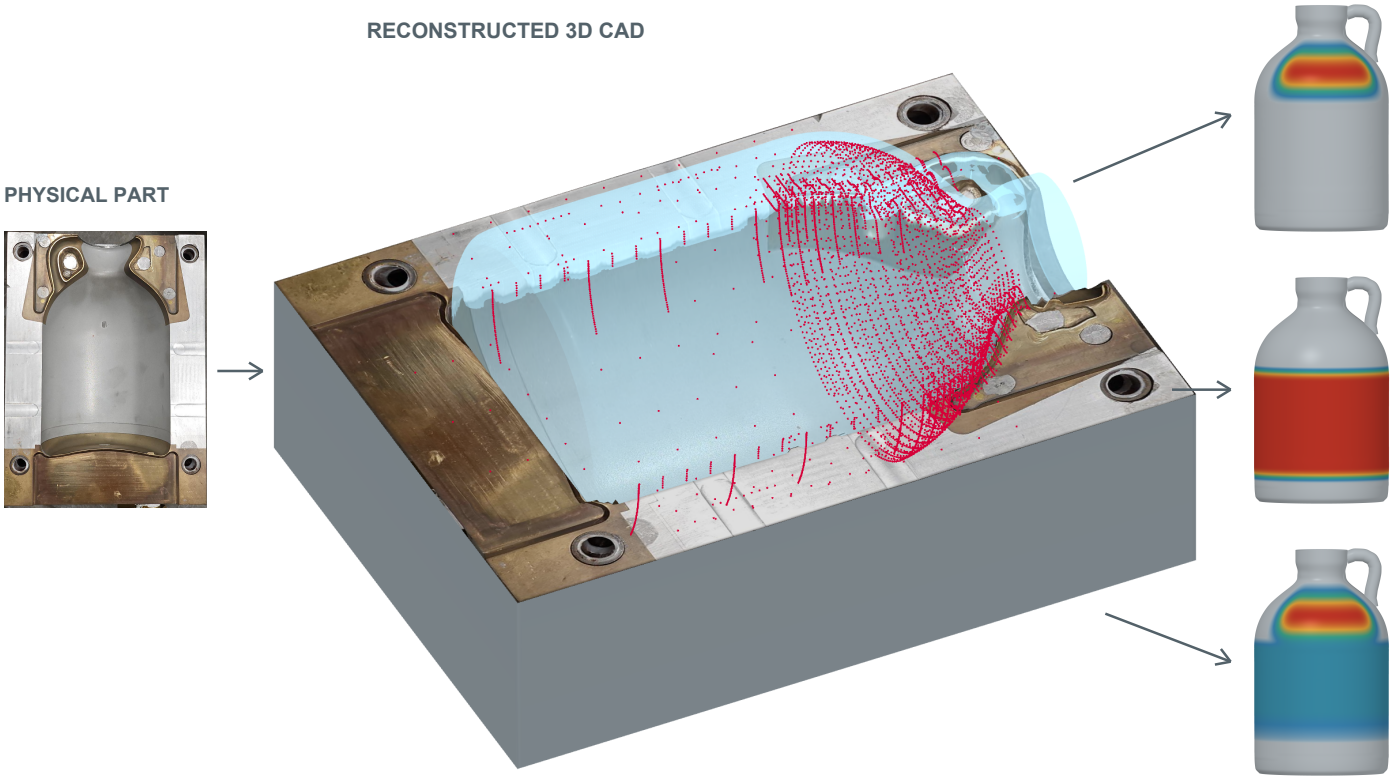
In-machine geometry mapping

From a physical part to 3D geometry for machining

We use photogrammetry or reference CAD to plan in-machine probing, then build a detailed surface model from the measurements. The result gives CAM programming a reference tied to the actual part and its machining setup.



6,328 recorded probe sites across a two-part mold created a CAD model for customer review and CAM program for CNC milling.

The same fixture from measurement to machining

We map the geometry in the same fixture and coordinate system used for CNC cutting. This complements CMM inspection and scanning by connecting the measured geometry directly to toolpath planning, with additional probing where more detail is needed.

Less uncertainty before cutting

Identify shape differences and available machining stock before committing to a cut.

More flexibility with variable parts

Adapt machining plans to cast variation, existing tooling and incomplete CAD.

Reliable mapping of unknown surfaces

Replace assumptions about unfamiliar geometry with a measured reference for CAM.

More predictable execution

Resolve geometry questions earlier to reduce avoidable rework and interruptions.