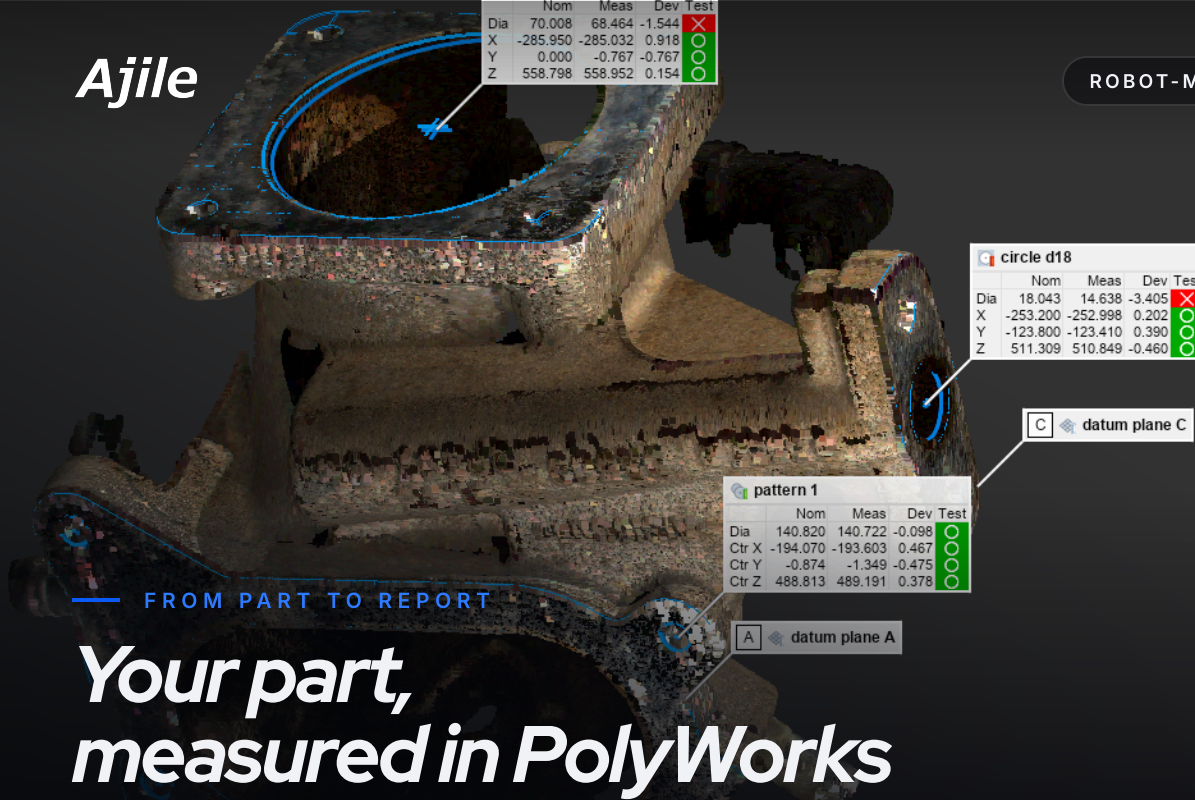




FROM PART TO REPORT

Your part, measured in PolyWorks

A DepthScan 3D Imager on a robot captures the part from the angles your features need, and PolyWorks measures it against your CAD and drawing.

HOW IT WORKS

1 CAPTURE

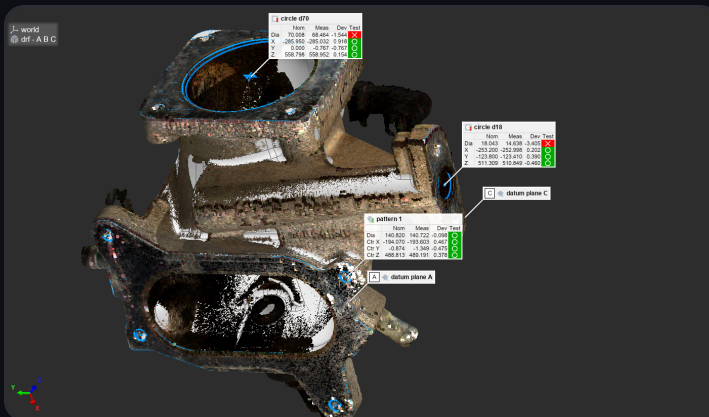
The robot carries the imager to each view, so **bores, bolt holes and side faces** are captured square on rather than at a glancing angle. Change the part, change the views.

2 COMBINE

Every capture is placed into the **robot's coordinate frame** as it is taken, so the views stack into one full-colour point cloud of the whole part.

3 MEASURE

Features, datums and tolerances come from **your CAD and drawing**. PolyWorks reports each control with its deviation and a pass or fail.



Aligned to CAD on datums A, B and C.



Close up on a flange face and bolt hole, straight from the imager.

Set up once, then inspect every part

Setting up a robot inspection cell is the part people expect to be hard, and it is the part we take on with you. It is done once per cell and once per part. After that, the operator presses start.

1 Calibrate the cell AJILE, AT COMMISSIONING

Ajile Calibrate walks through a hand-eye calibration that tells the system exactly where the imager sits on the robot's tool flange. A reference artifact verifies it, so you know the cell measures correctly before the first part runs.

2 Teach the views YOUR ROBOT PROGRAMMER, WITH US

Your robot runs **its own program, moves and safety setup**. At each position it tells Ajile it has arrived, Ajile captures, and the robot moves on. You choose positions where the features you care about are in clear view.

3 Set up the part in PolyWorks YOUR METROLOGY ENGINEER

Features, datums and controls are built from the **CAD model and the drawing**, the same way as for a CMM, so an existing CAD-based plan carries over. The one step specific to scan data is setting how PolyWorks extracts each feature from a point cloud. Saved as a template, the plan is reused for every part.

4 Run it on the floor THE OPERATOR

In **Ajile Inspect** the operator picks the part, enters a serial number and presses start. The robot runs the views, PolyWorks measures, and the screen shows pass or fail with the controls that are out. Results are saved per part and exported as a batch report.

FROM ROBOT TO FIXED CELL

Once the views for a part are proven on the robot, the same angles can be built into a **fixed Multi-DepthScan frame** around the part, with several imagers capturing at once for a shorter cycle. The robot cell is where the inspection is worked out; the fixed cell is where it runs at line speed.

See it on your own part

Send us one part and its drawing. Within about a week we send back the 3D scan and a PolyWorks report against your tolerances, the same way as the casting on page one. **Jack Dewan, jdewan@ajile.ca**