What's new in

PolyWorks
Modeler™ 2021

Reverse Engineering &
3D Modeling Solution

The Next-Generation Automatic Surfacing Solution for Smart Reverse Engineering
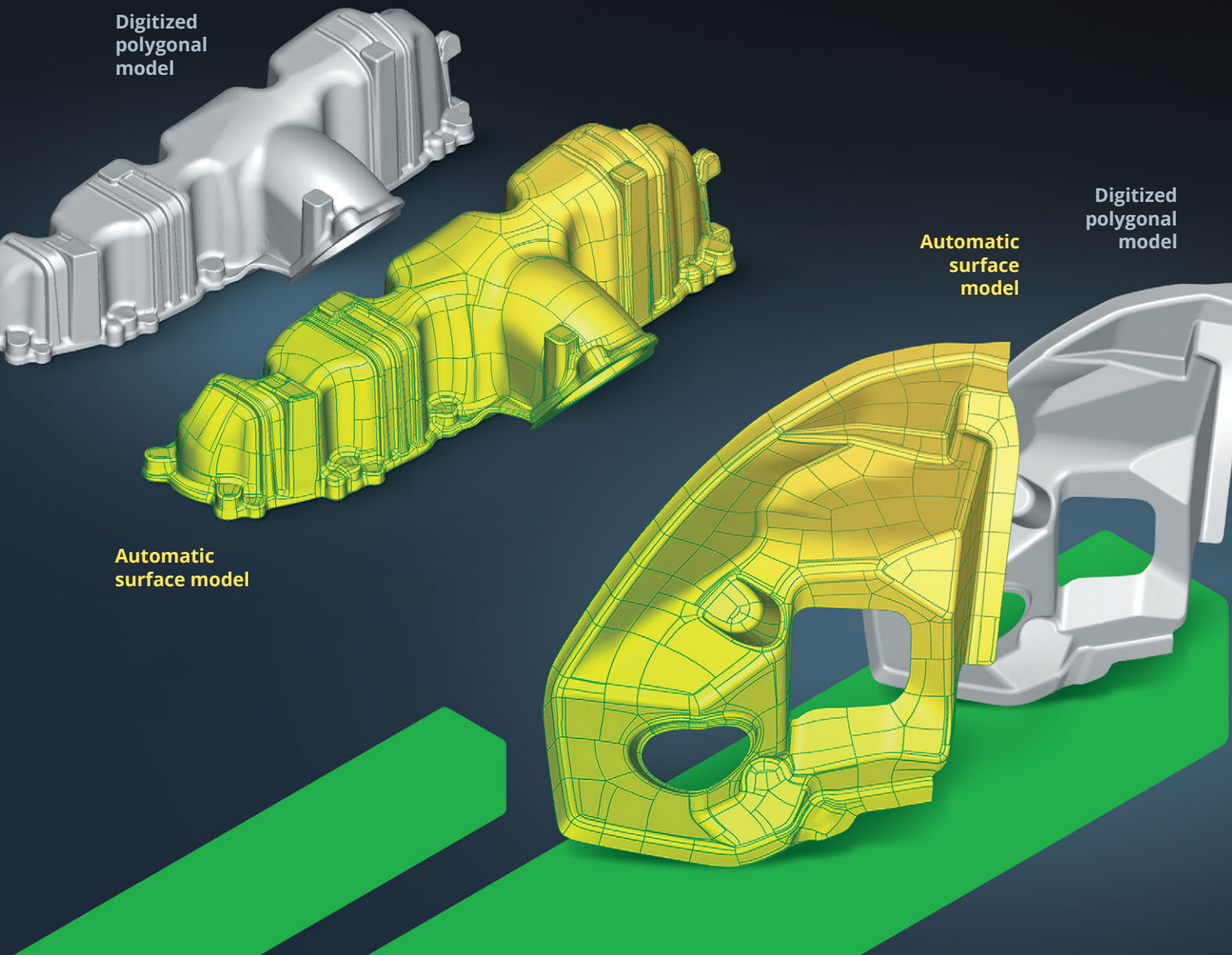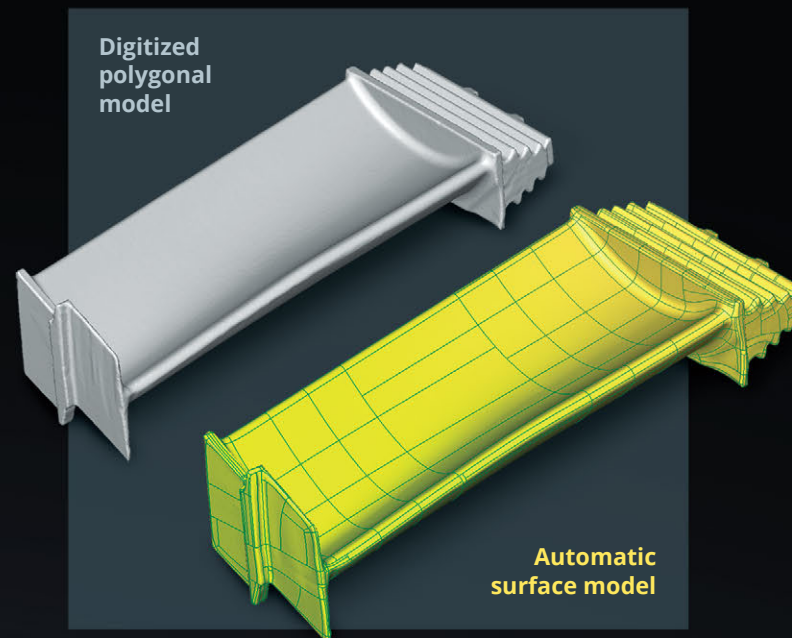
innovmetric

Get CAD-friendly surface models from automatic surfacing technology

With a single click, automatically turn your 3D scans into high-quality surface models directly usable in your preferred downstream applications, including FEA and mechanical simulation, machining, and CAD design, thanks to our revolutionary surface modelling approach:
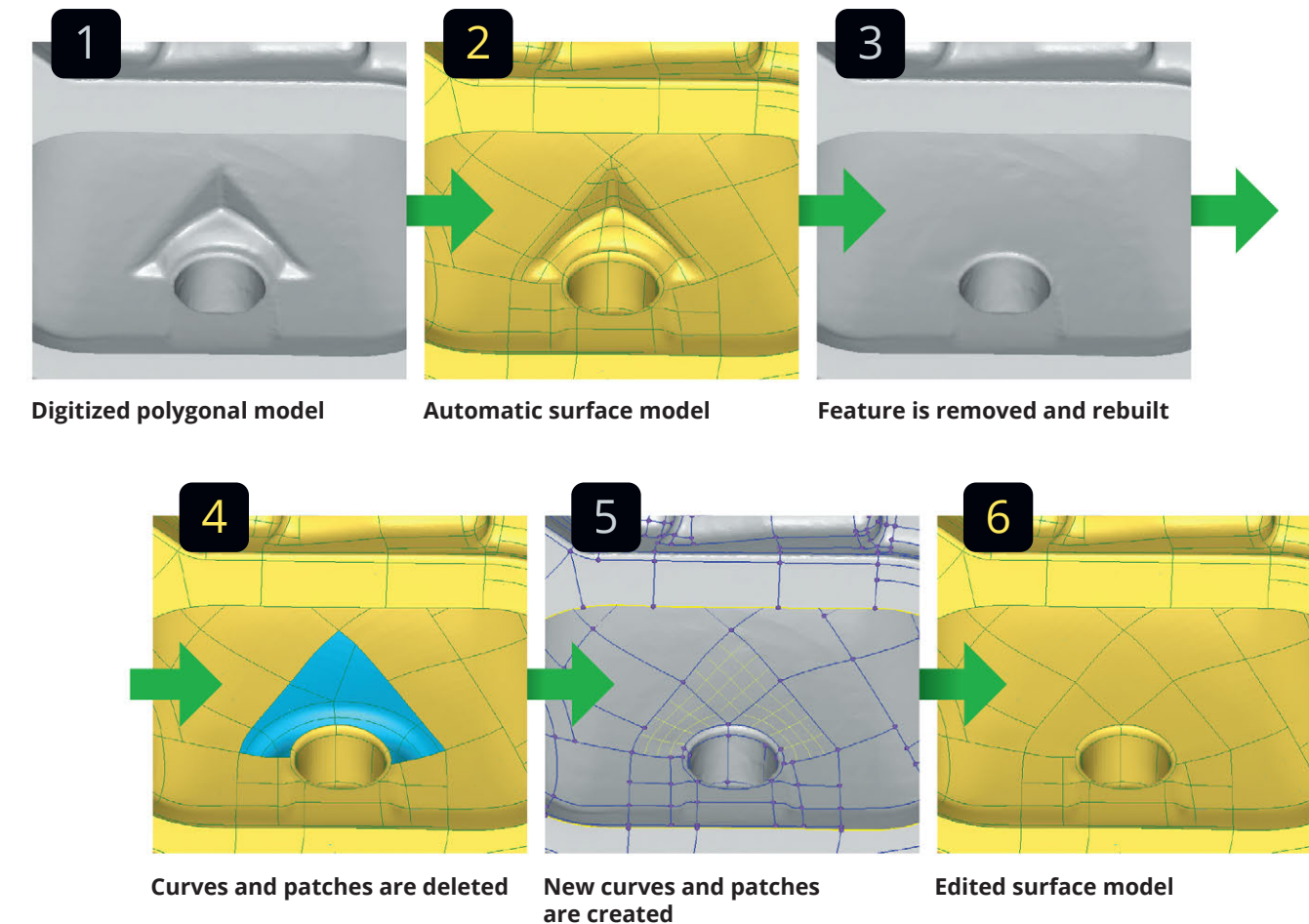
- Model a polygonal surface by automating the creation of characteristic curves and surface patches and fitting a continuous network of NURBS surfaces

- Create editable models suitable for CAD design and simulation applications by automatically bounding surface patches with continuous curves that naturally describe the part's characteristics

- Produce lighter models with better fitting accuracy and patch continuity for downstream applications by automatically adapting the patch size and aspect ratio to the part's surface curvature
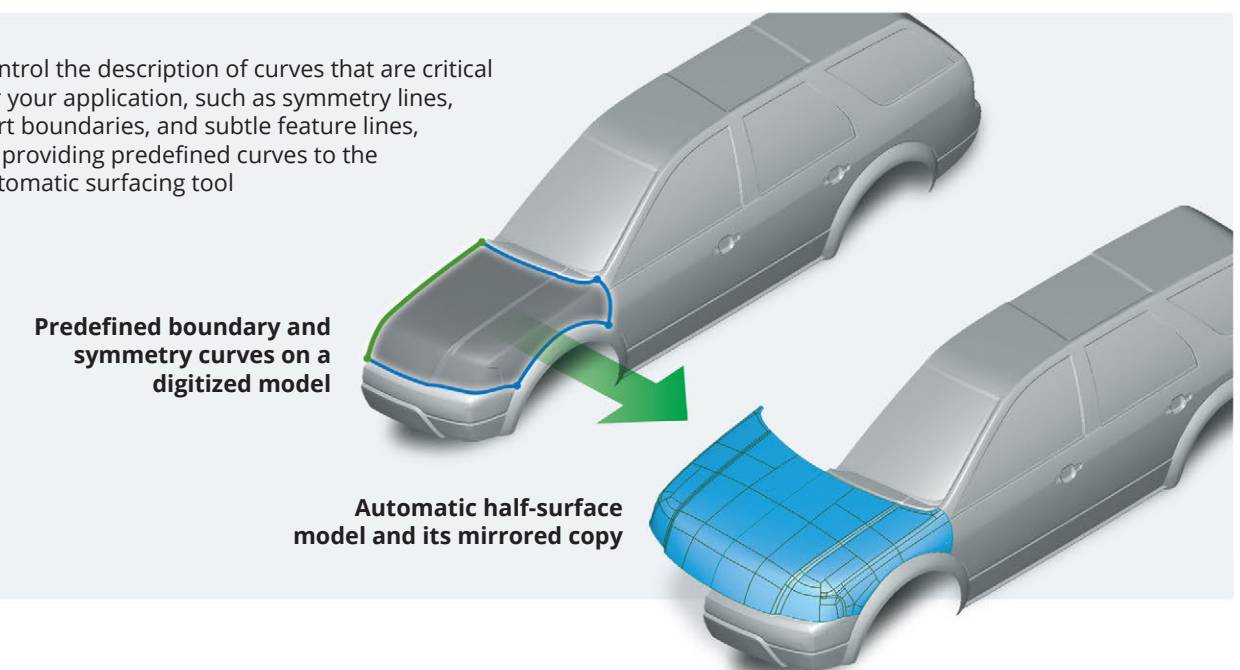

Digitized polygonal model

Automatic surface model

Digitized polygonal model

Automatic surface model

Digitized polygonal model

Automatic surface model

Simplify your reverse-engineering workflow

For even greater flexibility, the automatic surfacing technology is perfectly integrated within our intuitive curve-based surfacing workflow, letting you interactively edit the curve network to create optimal surface models:
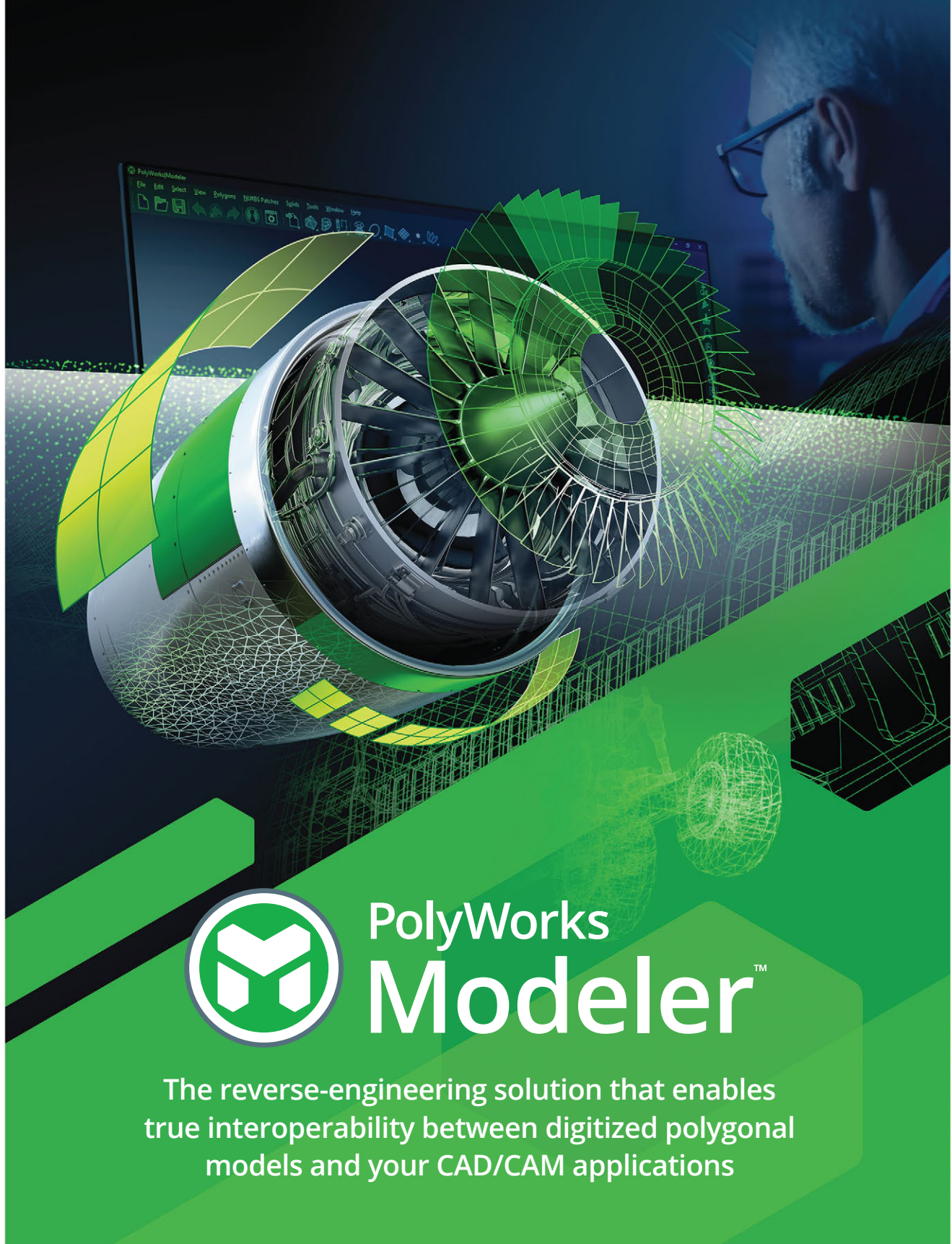
- Edit the automatic surfacing results intuitively by adding, deleting, or reshaping curves, as you would do in a manual reverse-engineering workflow

1 Digitized polygonal model

2 Automatic surface model

3 Feature is removed and rebuilt

4 Curves and patches are deleted

5 New curves and patches are created

6 Edited surface model

- Control the description of curves that are critical for your application, such as symmetry lines, part boundaries, and subtle feature lines, by providing predefined curves to the automatic surfacing tool

Predefined boundary and symmetry curves on a digitized model

Automatic half-surface model and its mirrored copy

PolyWorks
Modeler™

The reverse-engineering solution that enables true interoperability between digitized polygonal models and your CAD/CAM applications