Simpleware Automated Solutions
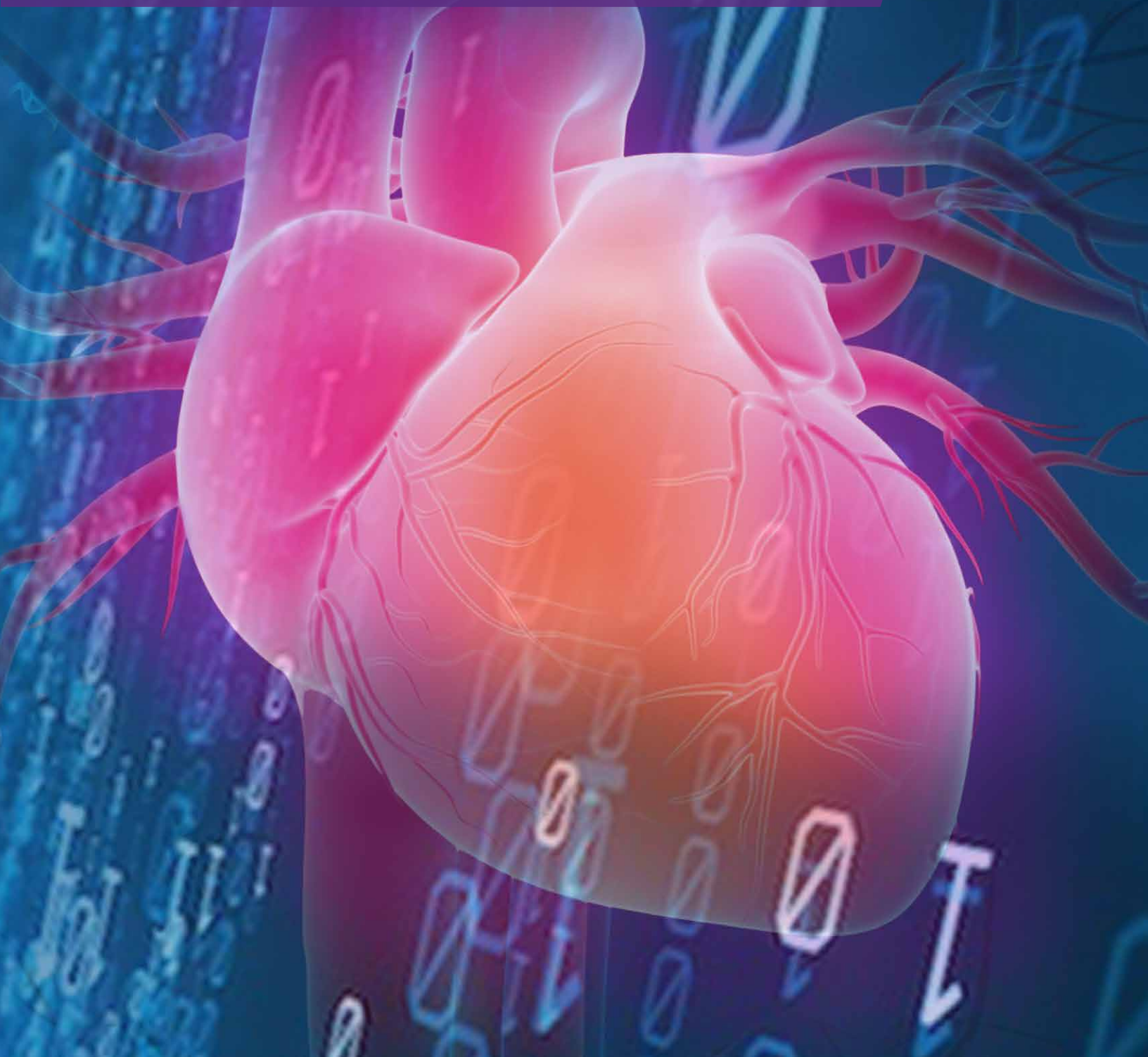
AI-Enabled Image Processing for
Cardiovascular Applications

Simpleware Automated Solutions

Less Segmentation…
More Innovation

- Reduce time spent on tedious manual segmentation

- Free up engineering time for more complex and high-value tasks

- Use Simpleware automated solutions to accelerate your image to model workflow

Example dataset: good quality heart CT with contrast dye

Novice user:	12+ hours
Intermediate skill user:	6 hours
Expert user:	4 hours
Simpleware AS Ortho:	**1.5 minutes (or faster)**

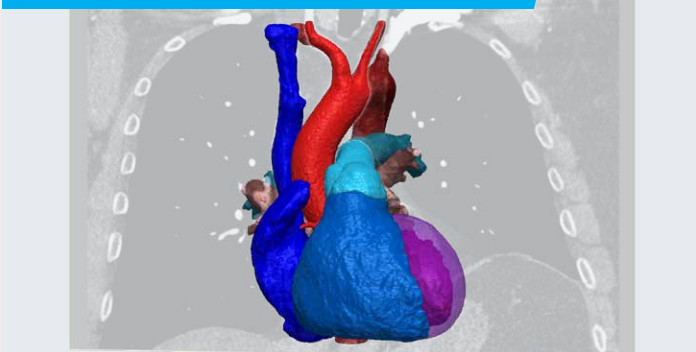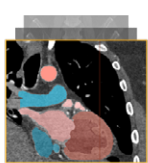## Achieve Consistent
and Reliable Results

- Simpleware automated solutions are powered by AI technology using Machine Learning (ML) algorithms

- Simpleware ML algorithms are trained by experts in 3D image segmentation for hundreds of hours

- Segmented anatomies and landmarks are meticulously reviewed, ensuring precise and reliable results

- Eliminate inconsistencies between different users and datasets, reducing the need for multiple reviews

- Shorten the learning curve for new technicians and engineers

Efficiently Process
Large Numbers of Datasets

- Simpleware automated solutions allow you to scale up quickly and easily

- Process large batches of data 100 times faster, whilst achieving highly consistent results

- Reducing time on manual segmentation frees up engineering time for more complex tasks

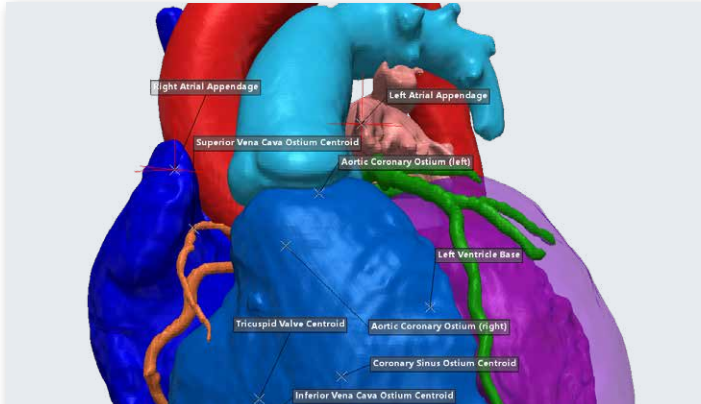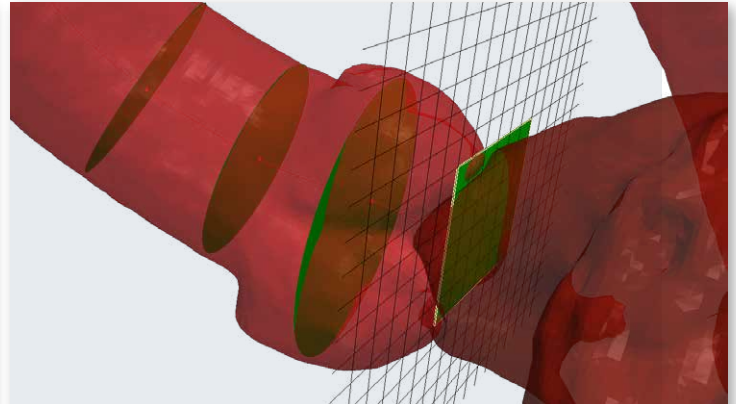| Simpleware Automated Solutions	Quality Assurance	Automated Analysis & Reporting	Optimized Product Design	More Time for Innovation

Modules Overview

Simpleware AS Cardio: Auto Segmenter for Cardiology

Simpleware AS Cardio provides an anatomy-specific automated segmentation tool for hearts from CT scans. It segments blood pool cavities and selected muscle tissue, identifies and places common key landmarks, and performs aortic valve analysis.

Segmentation & Landmarking

- Segmented parts: Left and Right Atriums and Ventricles, Aorta, Pulmonary Artery, Myocardium & Coronary Arteries

- Landmarks on: Aorta Commissure, Coronary Cusp, Coronary Ostium, Tricuspid Valve, Inferior & Superior Vena Cava Ostium, Left & Right Ventricle, Atrial Appendages
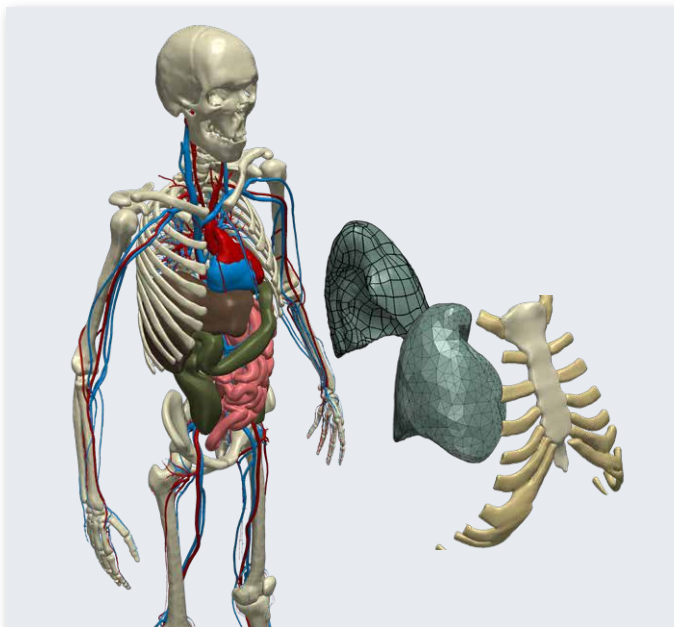
Heart Valve Analysis

- Efficient analysis of heart valve location and dimensions

- Location of: Aortic, Mitral, Tricuspid, and Pulmonary Valves

- Computes: Cusp locations, Ostia distances, Sinus Valsalva, and Sinotubular junction

Please note: Simpleware AS Cardio requires a hardware specification with a NVIDIA graphics card with a minimum of 4GB of video memory.

Simpleware Custom Modeler: Fully Customized AI/ML Solutions

Simpleware Custom Modeler is an automated solution purpose-built for your needs using problem-specific data and techniques. Harness the power of Simpleware software and our expert engineering knowledge by working with our team to create a tailored solution for your current processes.
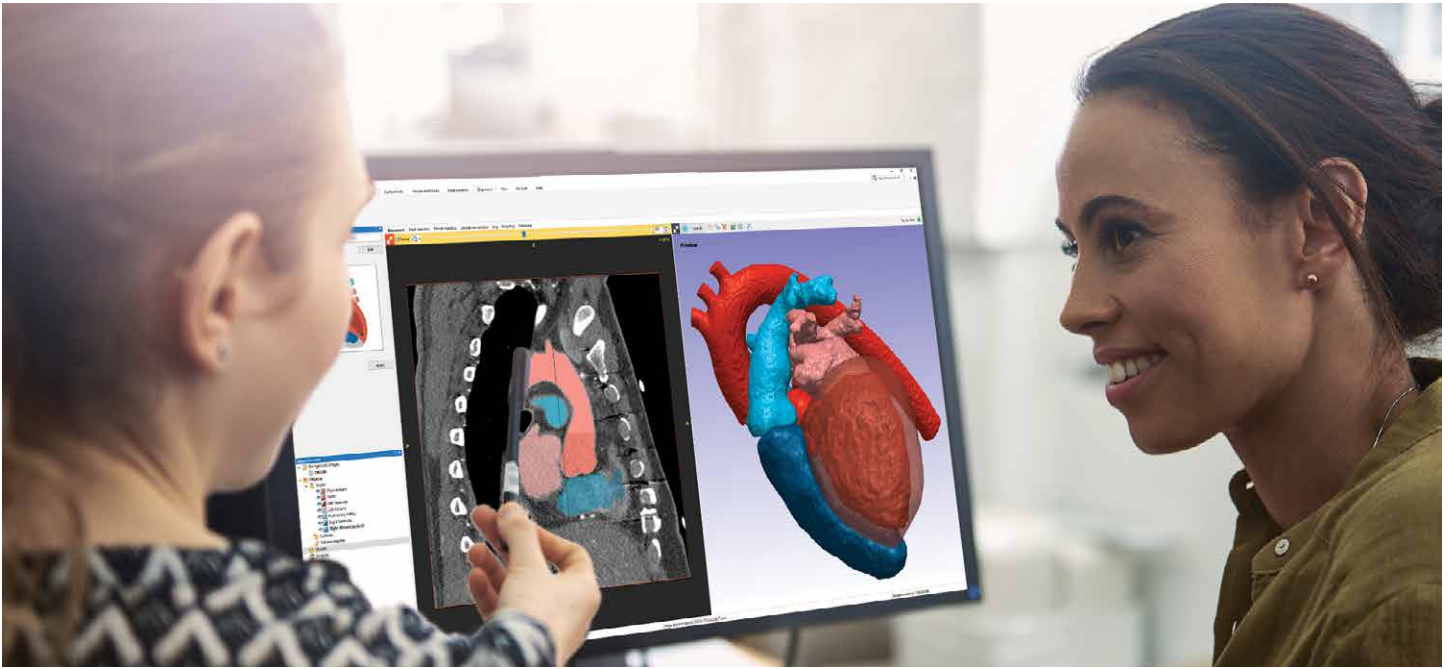

In addition to automated segmentation, your custom solution can include fully automated:

- Image processing (such as noise reduction, smoothing, or artefact reduction)

- Landmarking

- Measurements and statistics

- Report generation

- Models meshed and ready for 3D printing, CAD or simulation

- And much more...

Want to know more?

Show us your processes and work with our engineers to fulfill your requirements and create a perfect solution.

State-of-the-Art Technology

Our industry-leading 3D image processing platform leverages patented technology and enables comprehensive analysis of even the most complex anatomical scans. Increase confidence in clinical decision-making through reliable, repeatable software workflows.

Expert Support for your Requirements

All licenses come with full support from our team of experts. Our engineers can help you develop your unique and customized workflows, ensuring your use of the software is as efficient as possible, and your final output matches your requirements. Work with our engineers to solve your challenges and find the best solution for your needs.

Training at All Levels

Receive step-by-step training on all areas of Simpleware software. We offer classroom training courses at local Synopsys offices or at your site, as well as customized one-to-one sessions at your place of work, or through web meetings. Our interactive courses include a combination of lectures. demos and hands-on tutorials.

Try Simpleware Software

Try the software for yourself with a free evaluation version, available on our website. The trial is fully functional and gives you access to the complete Simpleware software suite, a full range of tutorials and technical support.

The software modules in this brochure are intended for non-clinical research use only, and have not been cleared for use as a medical device in accordance with U.S. Food & Drug Administration (FDA) 510(k) or European Union CE marking standards.

For more information, go to **www.synopsys.com/simpleware**

Email: **simpleware@synopsys.com**

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