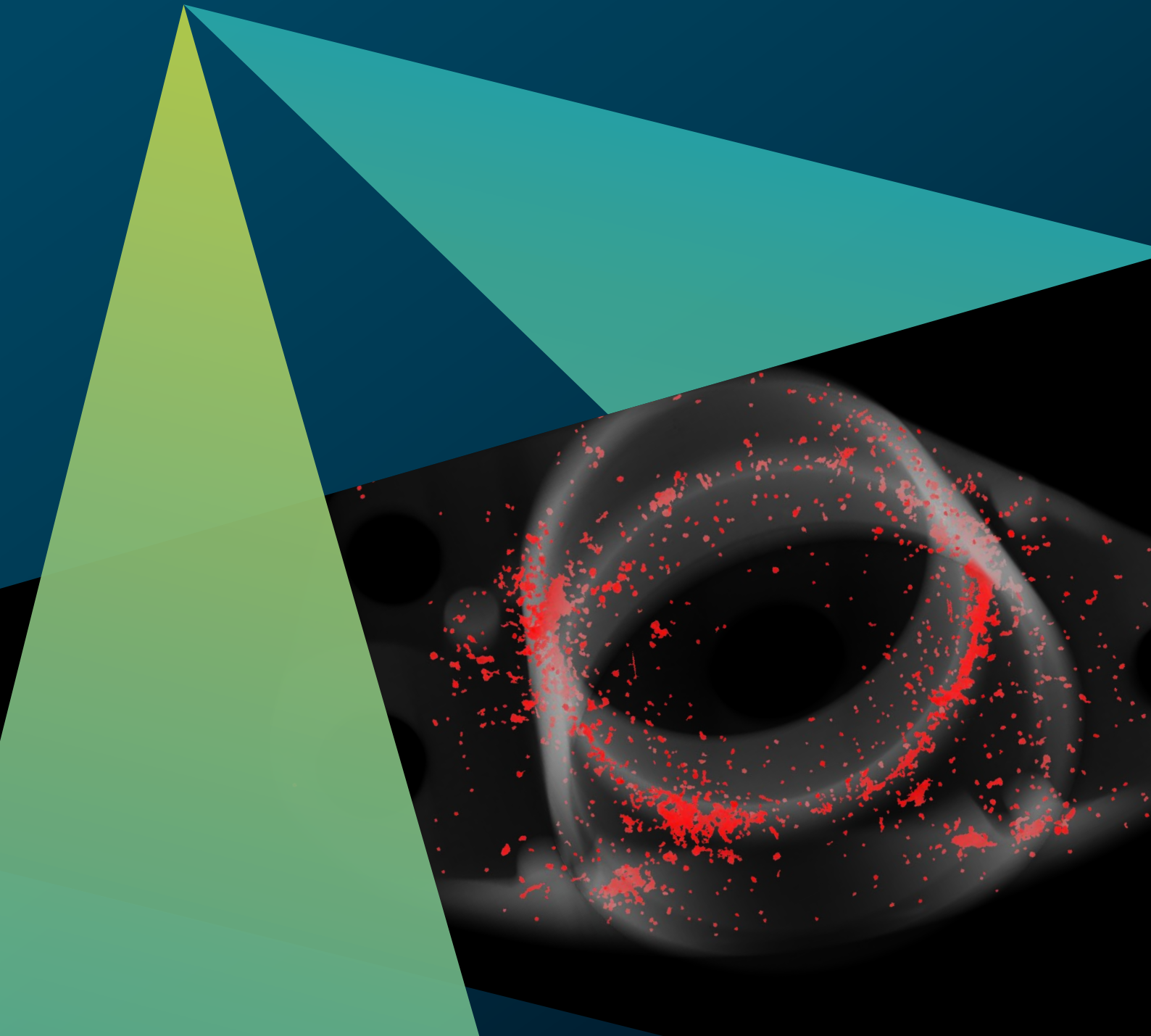VGTRAINER

Limits are off.
When AI is on.

Achieve precise data segmentation at scale
with DIY AI-model training

Smarter segmentation for automated NDE workflows

Automate precision. Maximise efficiency. Eliminate complexity.

VGSTUDIO MAX has always offered powerful tools for segmentation. But when handling large volumes of similar datasets or working with lower-quality scans in inline environments, AI can accelerate the process—helping you maintain the high quality you expect from manual inspection while significantly increasing efficiency. VGTRAINER puts the power of AI into your hands, enabling you to train segmentation models for use in your inspection workflows with unmatched speed and precision—without requiring AI expertise. Whether you're dealing with complex industrial CT scans,

intricate material structures, or high-throughput production environments, VGTRAINER creates the models you need to ensure consistent, reliable segmentation at scale.No more time-consuming manual adjustments. No more guesswork.

Unlock the future of quality inspection—faster, more accurate, and effortlessly automated.

VGTRAINER

Use AI to analyse hundreds of parts per day
The VGTRAINER workflow

01 Prepare your training data

Curate accurate, consistent training data in VGSTUDIO MAX.

02 Train the AI model in VGTRAINER

Use VGTRAINER to develop a segmentation model tailored to your needs.

03 Apply the model

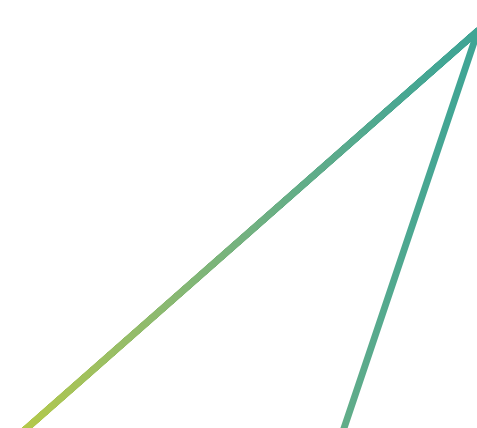Use the Deep Segmentation module to import the trained model into VGSTUDIO MAX for precise, automated analysis.

04 Prepare automation

Set up your workflows in VGSTUDIO MAX to streamline your inspections.

05 Automate your quality control

Use your AI-driven inspection in VGinLINE for high-speed, inline analysis.

Built for those who demand precision at scale

If you're a...

- Quality engineer in manufacturing.
- CT applications engineer at OEMs.
- R&D professional developing AI-enhanced workflows.
- Academic researcher in materials science and inspection.
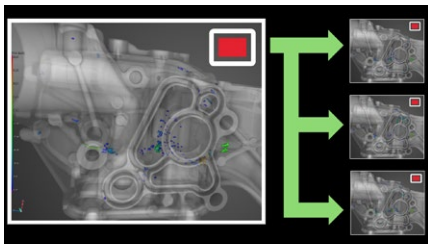
In one of these industries...

- Battery manufacturing.
- Aerospace and automotive.
- Medical imaging and implants.
- Electronics and additive manufacturing.

Trying to achieve...

- Faster, more reliable segmentation of CT data without the need for manual adjustments.
- Inline and at-line automation for quality control.
- In-house control over AI models without reliance on external vendors or AI expertise.
- Scalability: Ability to process hundreds of parts per day.

Then VGTRAINER combined with the analysis power of VGSTUDIO MAX and the automation power of VGinLINE is the solution you need.

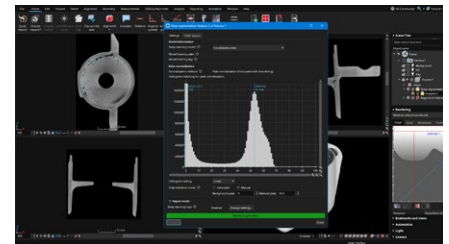## Do these challenges sound familiar?

- Time-consuming manual segmentation.
- Lack of AI expertise among engineering teams.
- Security and compliance concerns preventing outsourcing of data.
- Inconsistent segmentation results impacting quality assurance.
- Difficulty handling complex or noisy CT data.

Use VGTRAINER to solve them

- No-code AI model training – Enables anyone to train deep-learning segmentation models.
- Secure on-premise solution – No cloud dependencies, keeping sensitive data in-house.
- Automated and repeatable segmentation – Ensures stable, high-quality results.
- Faster decision-making – Reduces segmentation times from hours to minutes.
- Seamless integration with VGSTUDIO MAX and VGinLINE for full workflow automation.

Seamless integration

VGTRAINER doesn't just train segmentation models—it ensures they integrate effortlessly into your inspection workflows through VGSTUDIO MAX. Once your model is trained, use the Deep Segmentation module to import it into VGSTUDIO MAX, allowing you to:
- Apply trained models instantly to automate segmentation on new datasets.
- Enhance accuracy and efficiency without disrupting existing workflows.

With this intelligent, AI-powered integration, VGTRAINER enables a smooth transition from model training to real-world application, ensuring you maintain precision, control, and efficiency throughout your inspection process.

Proven results:

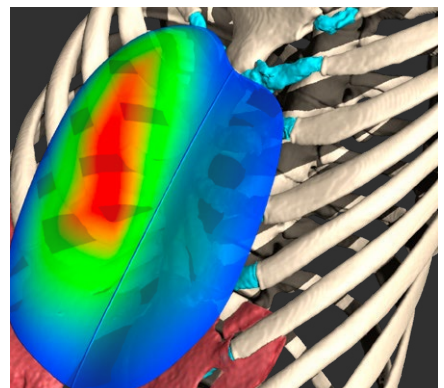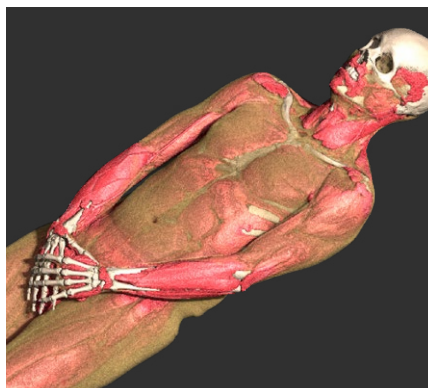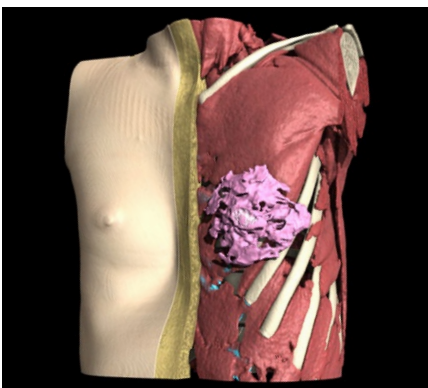## 98% accuracy achieved with an incredible 99.58% time savings

Customer: Anatomik Modeling

Challenge:

- Segmenting five different tissue types (bones, muscles, cartilage, fat, skin) from human CT scans required manual segmentation, which was slow and labour-intensive.
- Each dataset took at least an hour to segment accurately, making large-scale processing impractical.

Solution:

- Trained segmentation model with just 20 datasets using VGTRAINER.
- Automated segmentation, reducing processing time from one hour to just 15-20 seconds.
- Achieved 98% accuracy in segmentation.
- The trained model generalised beyond the initial datasets, accurately segmenting other body parts with similar structures.

> **The results are very impressive. After training a model with just 20 labeled datasets, the resulting segmentation is about 98% accurate. It's very impressive, very efficient."**
>
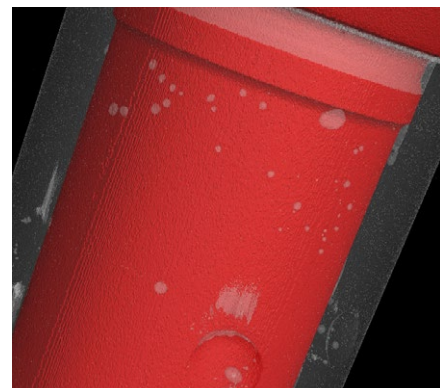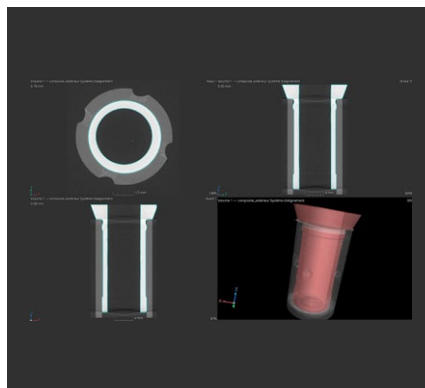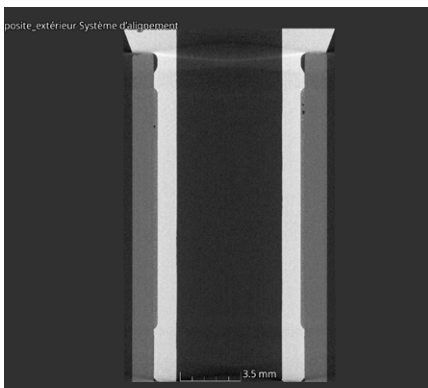> **Benjamin Moreno**
> CTO & Associate
> Anatomik Modeling SAS

Customer: ELEMCA

Challenge:

- Manual segmentation of carbon vs. glue was time-consuming due to similar grey values.
- The process took up to one hour per dataset, slowing down workflows.

Solution:

- Used VGTRAINER to train a machine-learning model with just eight segmented datasets.
- AI model automatically segmented materials into separate Regions of Interest (ROIs).
- Enabled automated porosity detection in VGSTUDIO MAX.
- Reduced segmentation time from one hour to just 10 minutes (80%+ time savings).

> **We anticipate that the time savings of more than 80% that AI is delivering will help us improve customer satisfaction across a broader range of industries as we leverage our evolving capabilities."**

Discover how VGTRAINER can transform your workflow.

Get in touch with our team or request a demo today.

HEXAGON

Hexagon is a global leader in digital reality solutions, combining sensor, software, and autonomous technologies to boost efficiency, productivity, and sustainability across industries.

With decades of research and development experience, our Manufacturing Intelligence division has pioneered cutting-edge portable measuring arm technology, delivering unmatched innovation and quality.

Our global presence ensures world-class support with 35 service centers offering full ISO certification, repair, and training. Hexagon's mission is to empower customers to harness data for a smarter, more sustainable future.

Learn more about Hexagon at hexagon.com and follow us @HexagonAB.