x.OS

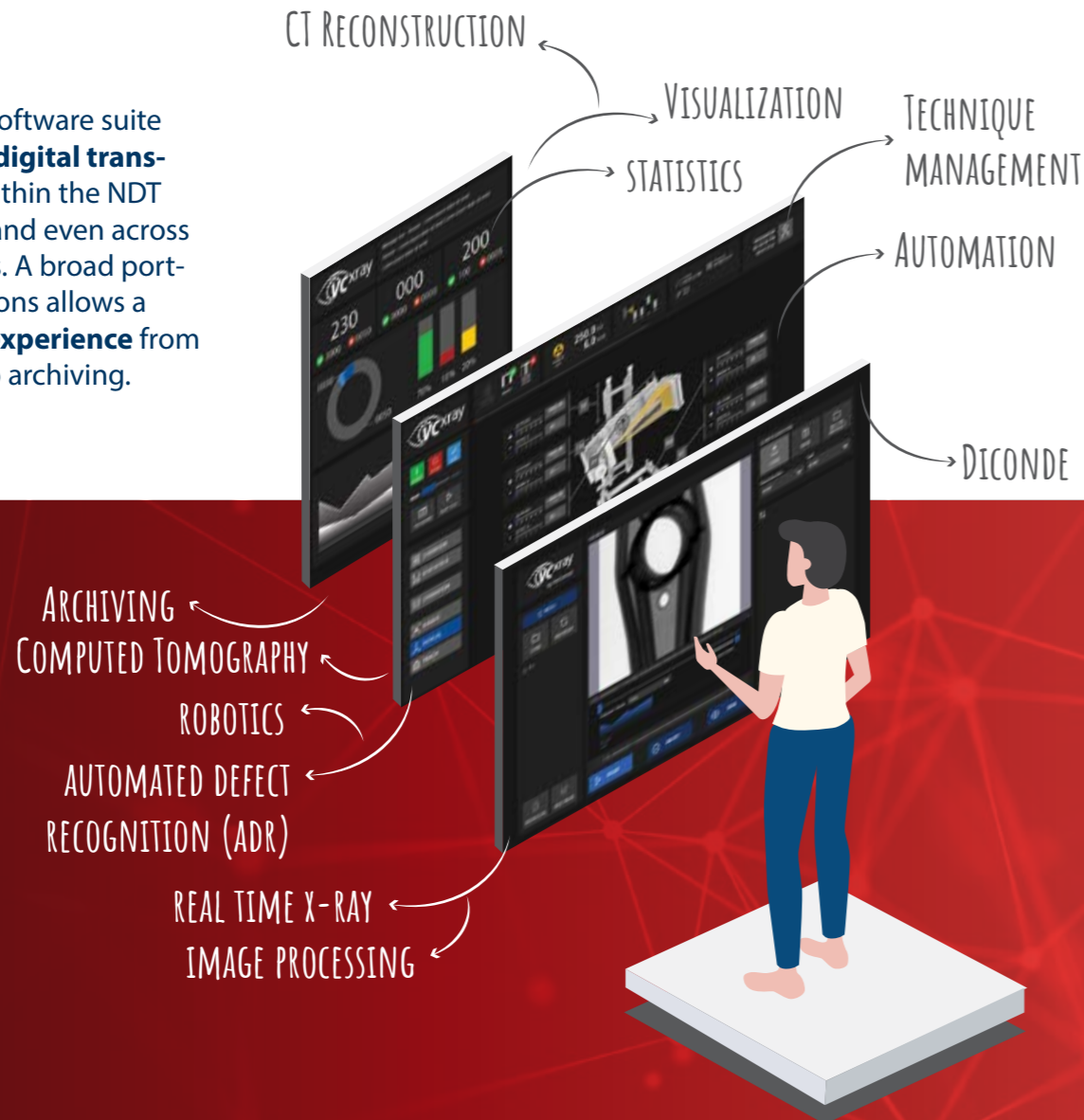## The Comprehensive X-Ray Operating Suite

VCxray
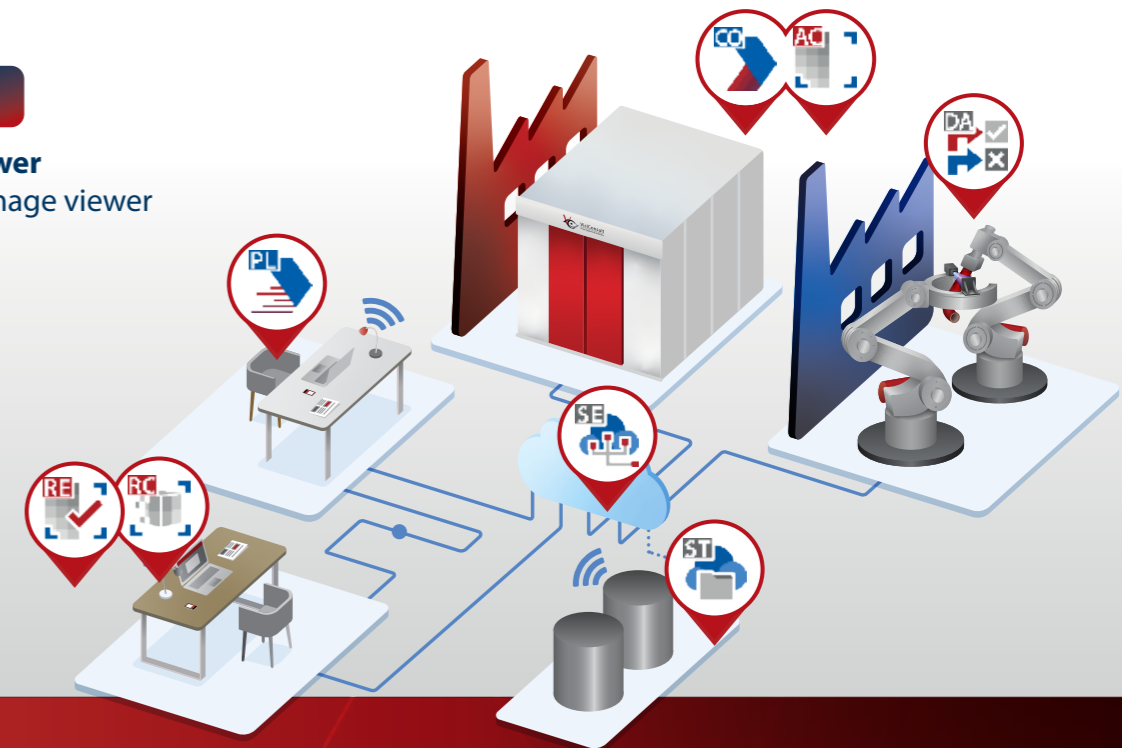
by VisiConsult

What is the x.OS?

The leading software suite that enables **digital transformation** within the NDT department and even across organizations. A broad portfolio of solutions allows a fully **digital experience** from acquisition to archiving.

CT Reconstruction

Visualization

Statistics

Technique management

Automation

Diconde

Archiving

Computed Tomography

Robotics

Automated defect recognition (ADR)

Real time x-ray

Image processing

FREE

VC.viewer
X-ray image viewer

VC.control
System control and automation software

VC.planner
Offline programming solution for systems and techniques

VC.acquire
Image acquisition and enhancement software

VC.review
Image review and post-processing software

VC.recomanager
CT-scan reconstruction and management software

VC.server
Central management and connectivity server

VC.storage
Long-term storage and X-ray image archive

VC.dashboard
Visualized status real-time visualization of inspection status

VC.control

The automation software

The **VC.control** allows the automation and control for a wide variety of hardware. Its clean and touch capable interface make the system operation easier than ever. Operators get a live visualization of the system status, and can create new inspection sequences with a few clicks.

VC.planner

The simulation software

The **VC.planner** allows Level IIIs and supervisors to create and edit new techniques and inspection programs offline. The programs can be easily exported to the system. This results in minimum downtime and maximum efficiency.
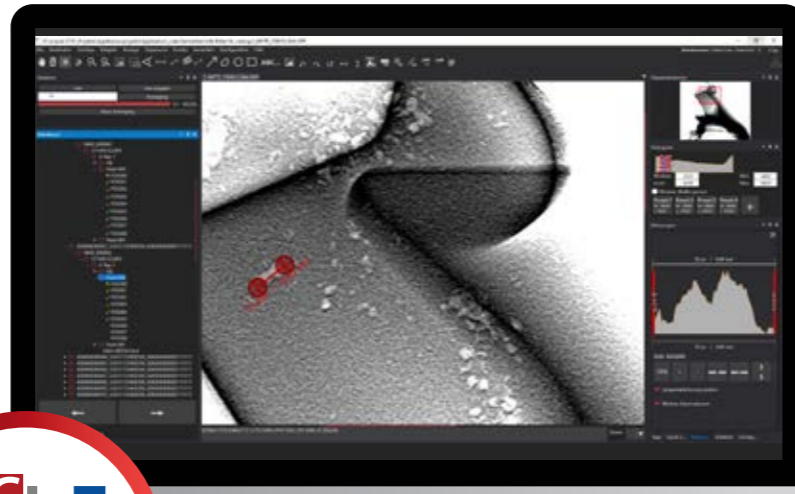
Under development
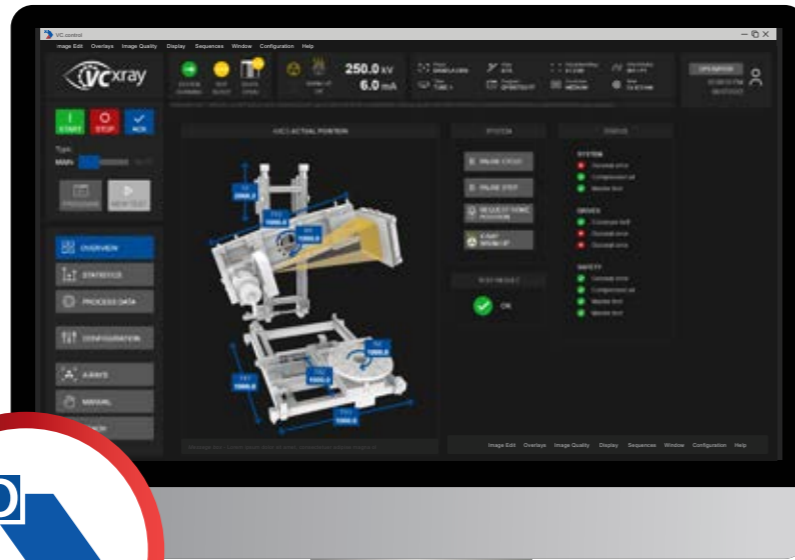
- ✔ Successor of the proven Xplus Handle
- ✔ Control all hardware (axis movement, drives, robots, etc.)

- ✔ Fully automated using programmable sequences
- ✔ Can also be implemented via retrofits of other manufacturers
- ✔ Clean and customizable GUI for each system type
- ✔ Intuitive and easy to use graphical user interface
- ✔ Can be integrated into automation cells and MES systems

- ✔ Allows sophisticated simulation and offline programming of hardware
- ✔ Comprehensive technique builder to simulate the entire inspection process and create complete inspection programs offline
- ✔ Upon completion, programs can be uploaded to the technique manager in the VC.server and then can be executed on the system
- ✔ Enables Level IIIs to create new inspection programs without blocking the system for production

- ✔ Easy tool to check inspectability (trajectory and X-ray parameters) of a part
- ✔ Offline simulation of X-ray image for rapid parameter establishment
- ✔ Allows visualization of programs created on the system

VC.acquire

The acquisition software

The **VC.acquire** is a comprehensive image acquisition and processing software. It includes highly sophisticated filters and measurement functions, and is equipped with a customizable and easy to use interface.
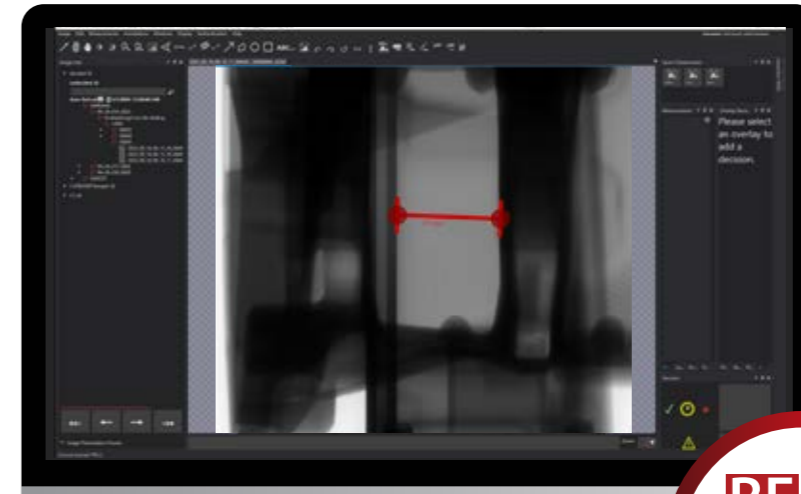

VC.review

The evaluation software

The **VC.review** is a dedicated software optimized to rapidly review and annotate large quantities of X-ray images. It also offers all image processing and measurement functions included in VC.acquire.
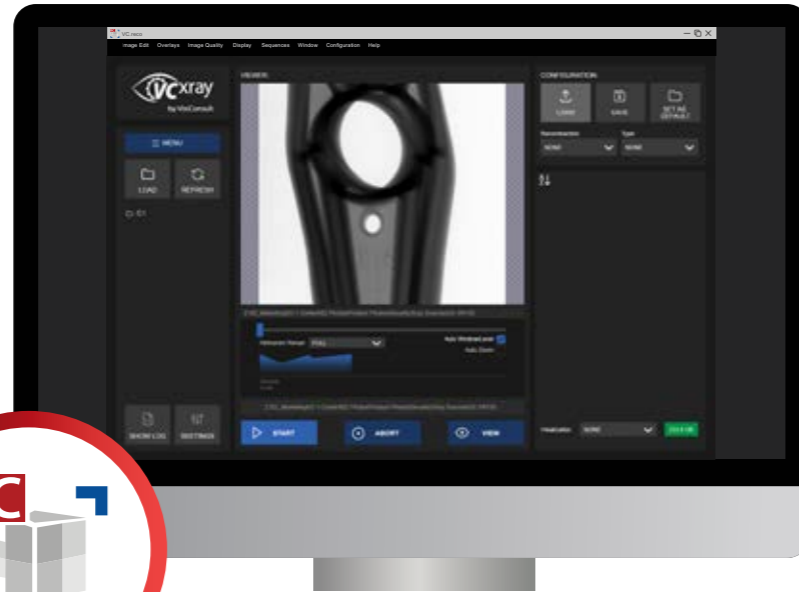

- ✔ Full control of the imaging chain (generator, detector, and peripherals)
- ✔ Extended functionalities: Image processing, filters, measurements, overlays, etc.
- ✔ Customizable and user specific user interface and hot-keys
- ✔ Sequence builder enables the automation of every functionality of the software in a few clicks
- ✔ Multiple and configurable user levels via advanced rights management

- ✔ Optimized for offline evaluation requirements
- ✔ Successor of the proven Xplus Review Software
- ✔ Offers all measurement, annotation and, image processing features
- ✔ Provides quick evaluation and annotation functionalities
- ✔ Fully customizable and configurable according to group policy
- ✔ Allows for customized and complex decision workflows

- ✔ Seamlessly integrated with ADR functionalities (e.g. assisted or automated defect recognition)
- ✔ Compliant to leading standards including DICONDE
- ✔ Fulfills all latest standards in Aerospace, Space, Automotive, and Oil & Gas industries
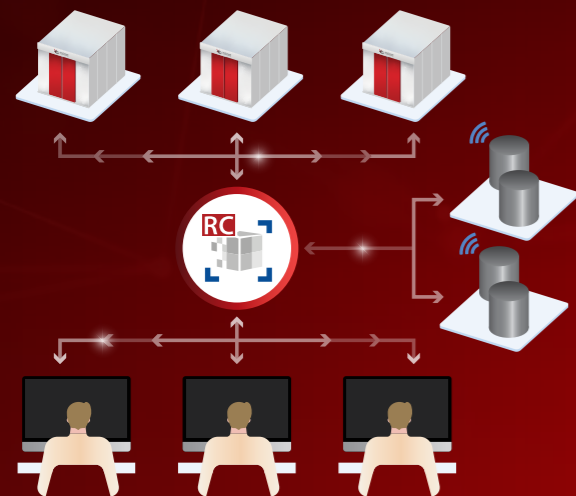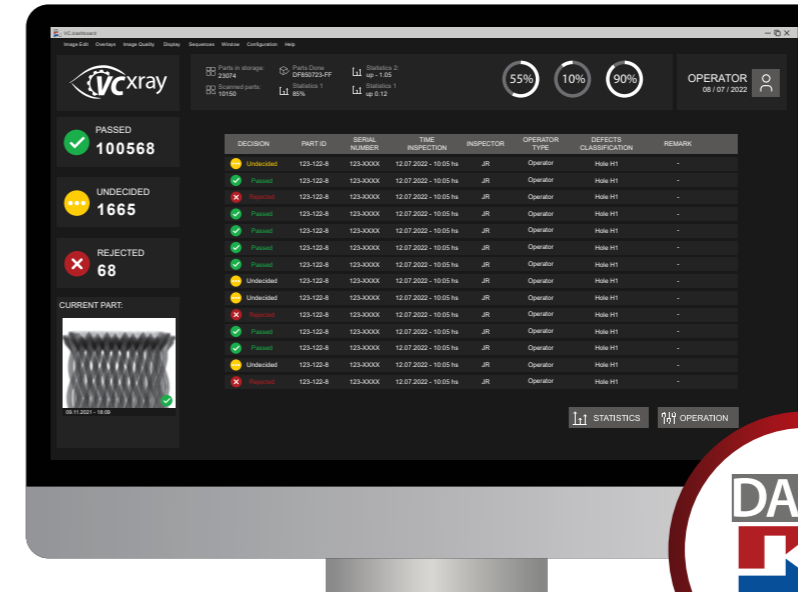
VC.reco

Reconstruction manager

The **VC.reco** is a comprehensive management and reconstruction toolset for Computed Tomography (CT) scans. It can be connected to several CT systems and evaluation stations, and can be utilized via an easy OneClick mode as well as a sophisticated expert mode.

- Integrates with all industry-leading algorithms (CERA, VG, iterative, etc.)

- Manages different reconstruction stations and algorithms, and connects systems with evaluation stations

- Easy OneClick mode for fast achievement of great results

- Advanced expert mode for usage of complex functions and best possible results

- Integrated into the VC.server environment

- Scan preview and optimization features

VC.dashboard

The overview tool

The **VC.dashboard** offers a live view into the inspection process. Get real-time insight into utilization, scrap-rate, work in progress parts, and much more. The dashboard is highly customizable to your needs.

- Dashboard showing the status of parts being processed right now

- Customizable states (e.g. waiting for inspection, in inspection, undecided, scrap, rework, etc.) of parts

- Comprehensive overview of the overall status of shop floor workers and employees

- Easy way to "check out" parts

- Browser based capable to be run on any device

VC.storage

The archiving software

Inspection results need to be stored for an extensive time period in safety critical applications. The **VC.storage** is a lightweight archiving software for long-term storage of X-ray images, metadata, and inspection decisions.
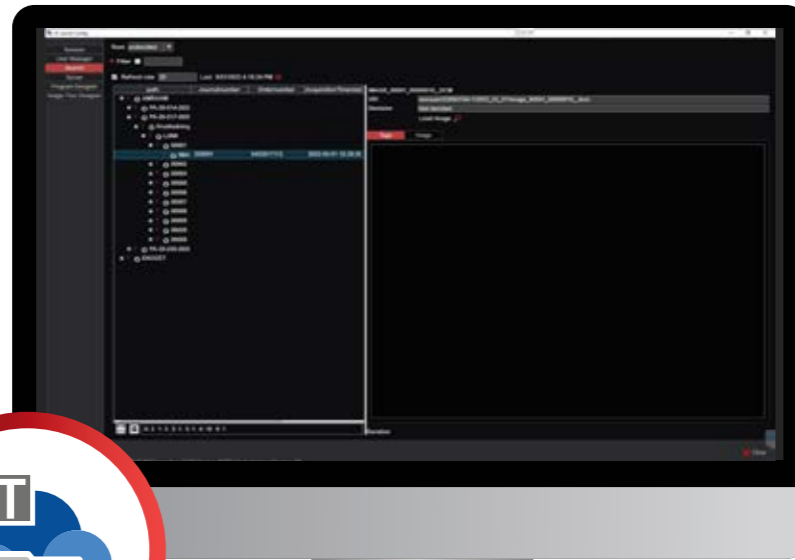
- Storage solution for work in progress images and long-term archiving
- Can be hosted locally, within a company network, or in the cloud
- DICONDE compliant long-term storage of inspection results
- Database optimizes for fast search and data retrieval


VC.server

The supervisor

The **VC.server** is the central routing and management software of the x.OS. It connects all systems and software in a central ecosystem.
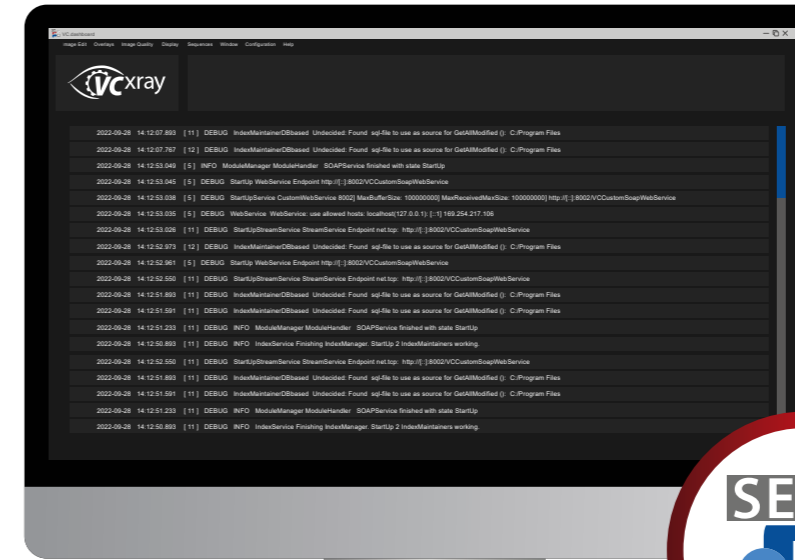
- Central software to manage all modalities (systems, software, etc.) in your company
- Core management of configurations, inspection programs, user rights, licenses, and techniques
- Central user management (certification status, user levels, approvals based on part numbers or techniques, evaluation rights, etc.)
- Management for all of your X-ray equipment, software, operators, and techniques
- Centrally manages updates for all modalities
- Helps manage data streams as needed (e.g. dispatching and queuing CT scans to different reconstruction stations)
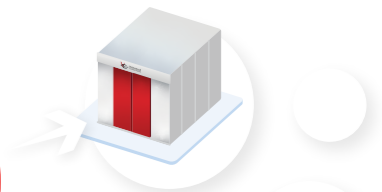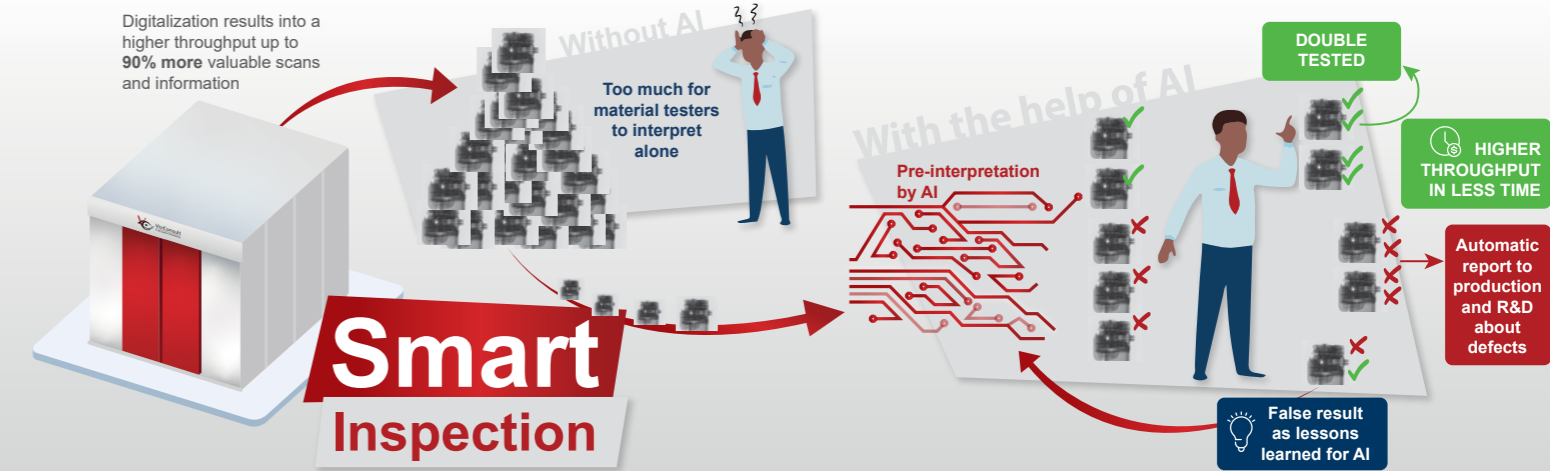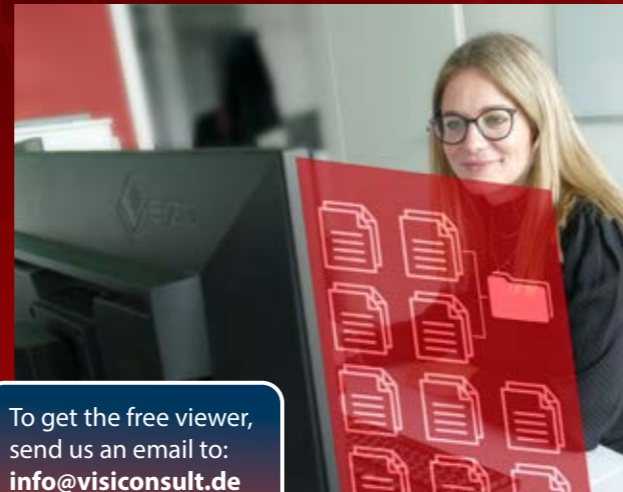
VC.viewer

The viewing software

The **VC.viewer** is a free desktop application which allows free image sharing with anyone for interactive viewing, presentation, and configuration.


- Lightweight viewing tool for TIFF and DICONDE images
- No installation required
- Customers can send the tool to their stakeholders for evaluation
- Simple way to open all of your scans (DICONDE, TIFF) with part in hand
- Control file access and prevent misuse with password protection
- Software is customizable depending on viewer preferences

To get the free viewer, send us an email to:
info@visiconsult.de

Automated Defect Recognition (ADR)

Automatic detection of defects through advanced image processing or Artificial Intelligence (AI) algorithms can offer significant savings. VisiConsult has over 25 years of experience in this field and has a comprehensive in-house developed ADR toolbox. It fulfills international quality standards like ASTM, as well as the demanding company standards in the automotive industry. Typical ADR applications include the detection of porosities, inclusions, and cracks, as well as geometric measurements and feature recognition. It is possible to define specific ROIs to check many metrics like density, distance, size, occurrence per area, and many more tools that can be dynamically defined – even via machine learning. The best ADR solution for your application may require traditional algorithms OR perhaps an AI solution will work – we can help you determine this.
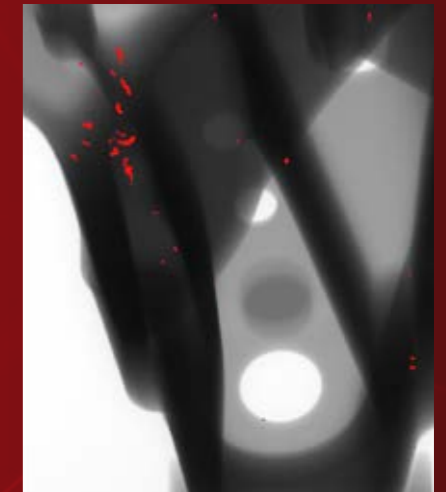
NDT X-ray toolbox

The **NDT X-ray Toolbox,** is a free smartphone app. It offers many useful features designed to make the handling of demanding quality standards easier

- International unit converter including distances, time, weight, and much more

- Easy calculation of optimal magnification, intensity, or image blur

- Calculation of required projections, penetration, geometry, etc.

- Comprehensive overview of all X-ray standards (including ASTM and ISO)

- Overview and converter for many different image quality indicators

- Overview and explanations of common formulas and terms
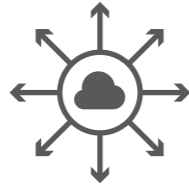
The app is available for iOS and Android for **free:**

Download on the
 App Store

GET IT ON
Google Play

The software platform for maximum reliability

Proven
Approved by industry leaders and quality experts

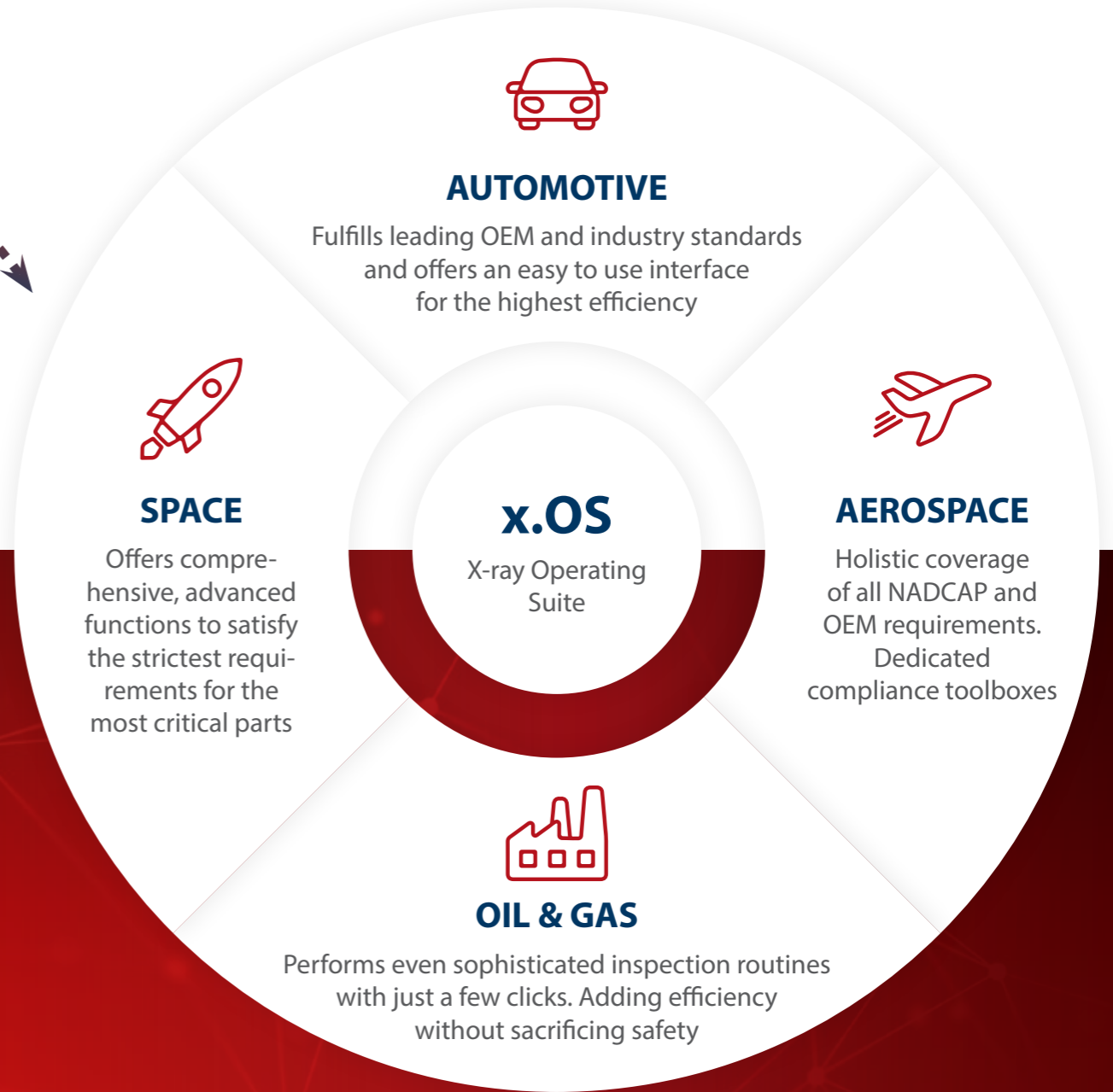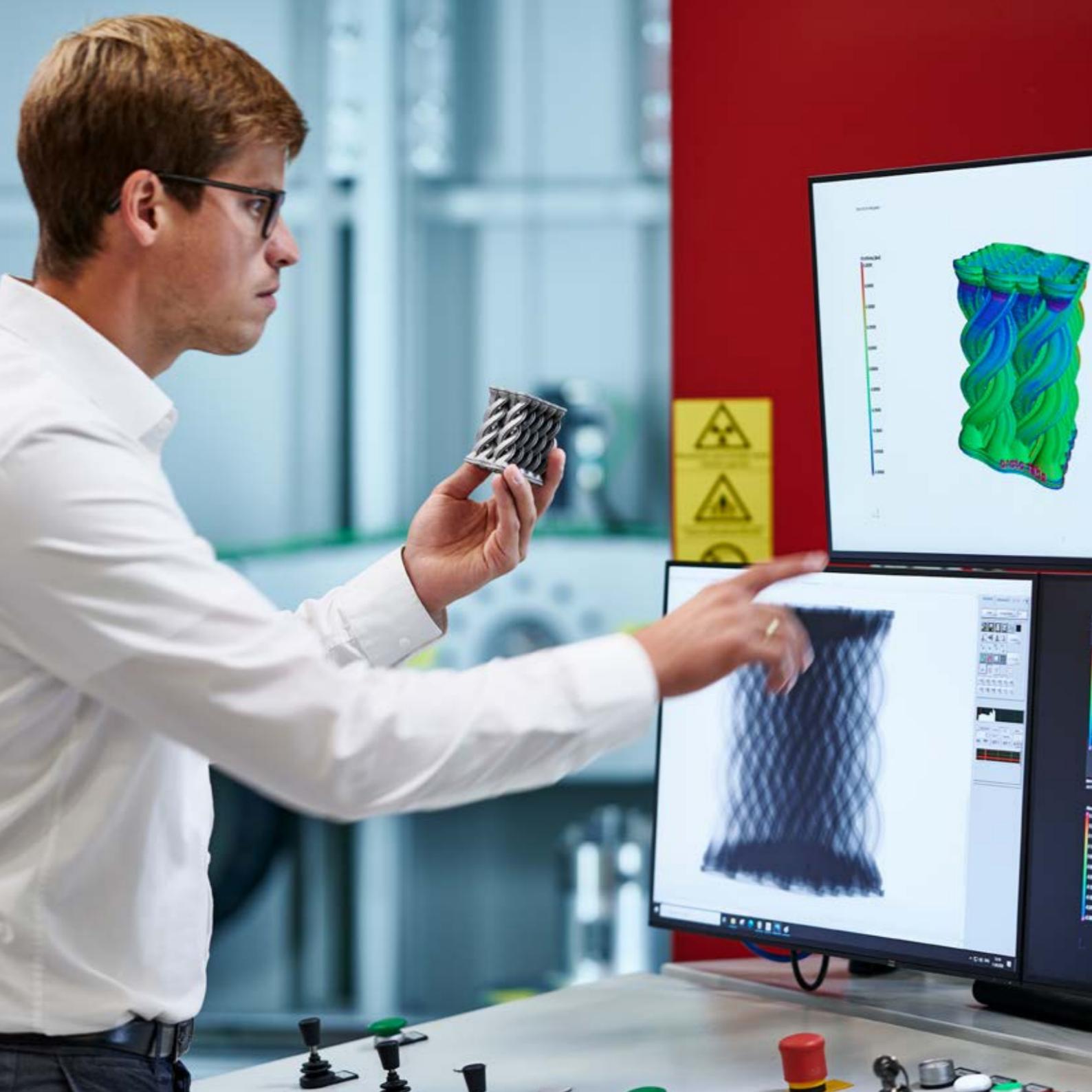**Flexible**
Holistic software ecosystem for all NDT tasks

**Universal**
One platform for all applications and industries

The easy road to **digitalization**

AUTOMOTIVE
Fulfills leading OEM and industry standards and offers an easy to use interface for the highest efficiency

SPACE
Offers comprehensive, advanced functions to satisfy the strictest requirements for the most critical parts

x.OS
X-ray Operating Suite

AEROSPACE
Holistic coverage of all NADCAP and OEM requirements. Dedicated compliance toolboxes

OIL & GAS
Performs even sophisticated inspection routines with just a few clicks. Adding efficiency without sacrificing safety

VCxray is a division of VisiConsult, **a global market leader in the field of customized and standard X-ray inspection systems**. Our division serves a broad variety of markets from automotive to aerospace supplying cutting-edge X-ray inspection systems for non-destructive testing (NDT), quality assurance, and process improvement.
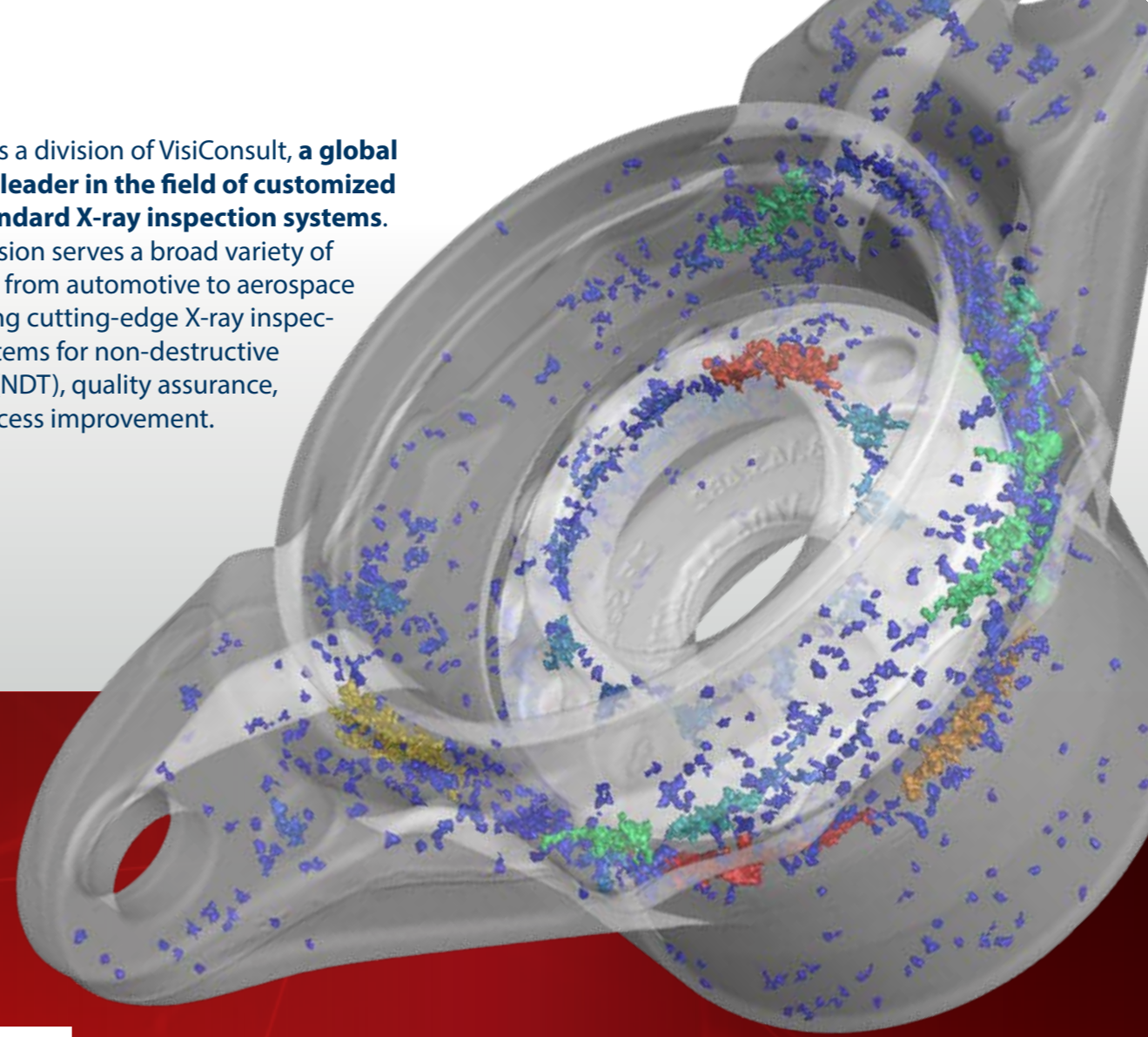
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