

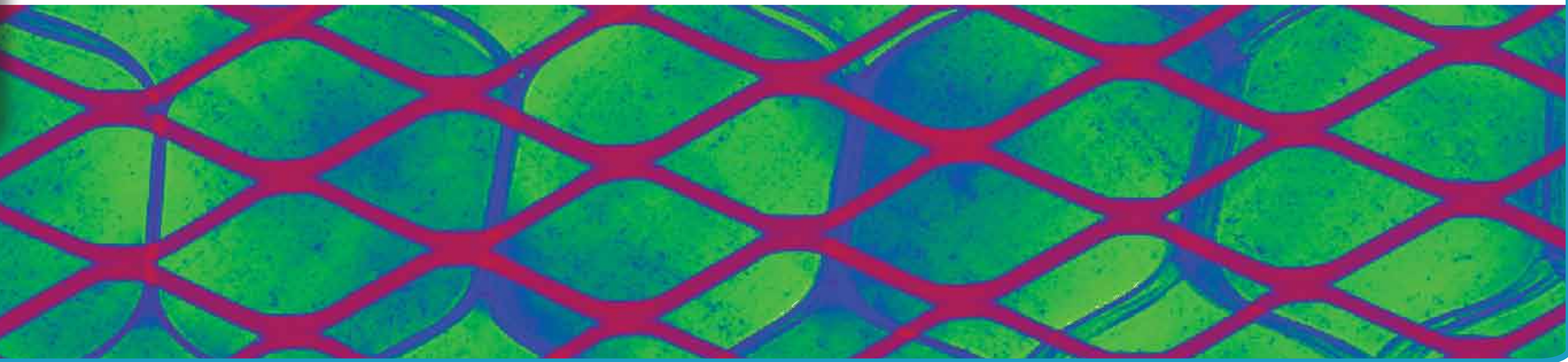
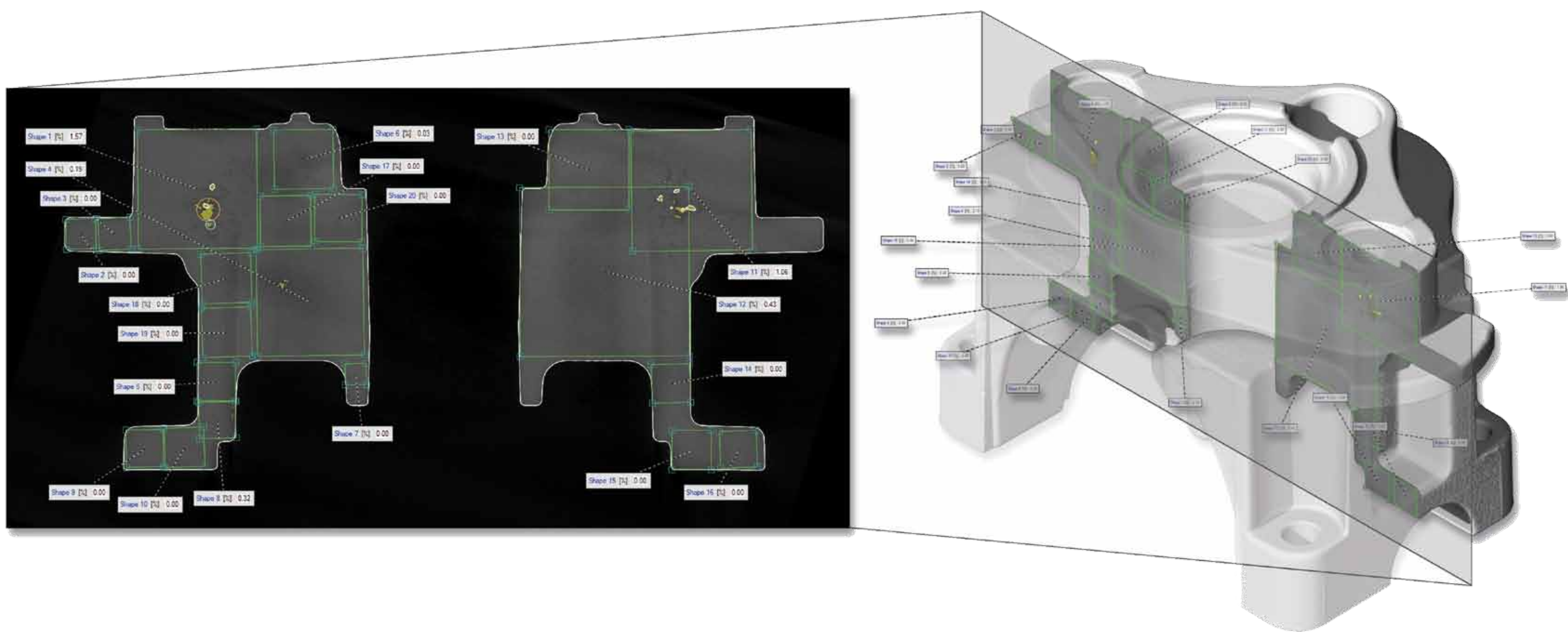


Quantitative Inspection of Complex Composite Aeronautic Parts Using Advanced X-ray Techniques

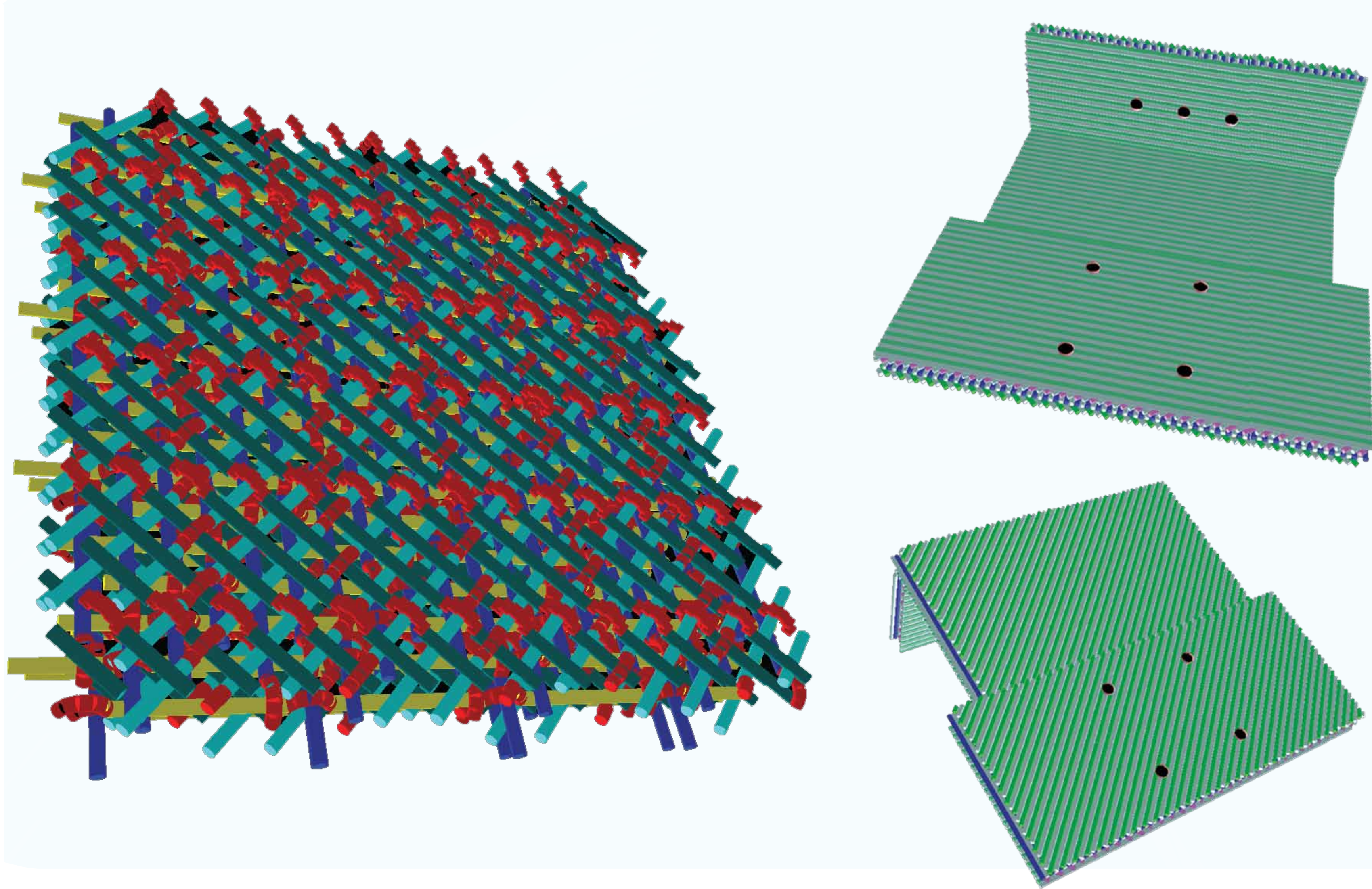
Phase 1: Specifications for techniques, methods, software modules and showcases

In the first phase of the project the specifications for the required techniques, methods, software modules and showcases were defined. The end-users presented the industrial needs and the test components for the different application areas. Furthermore, sample specimens together with conventional NDT data have been collected.

These samples are real components or cutouts from complex structures representing the wide range of applications where CT could provide effective inspection, as they cover the industrial needs and requirements for the available CT testing systems. In addition, these samples have different kinds of defects and are suitable for several WPs. Work realized in Phase 1 is considered to be a foundation for all WPs.



Phase 2: Development of methods and techniques for targeted QUICOM platform



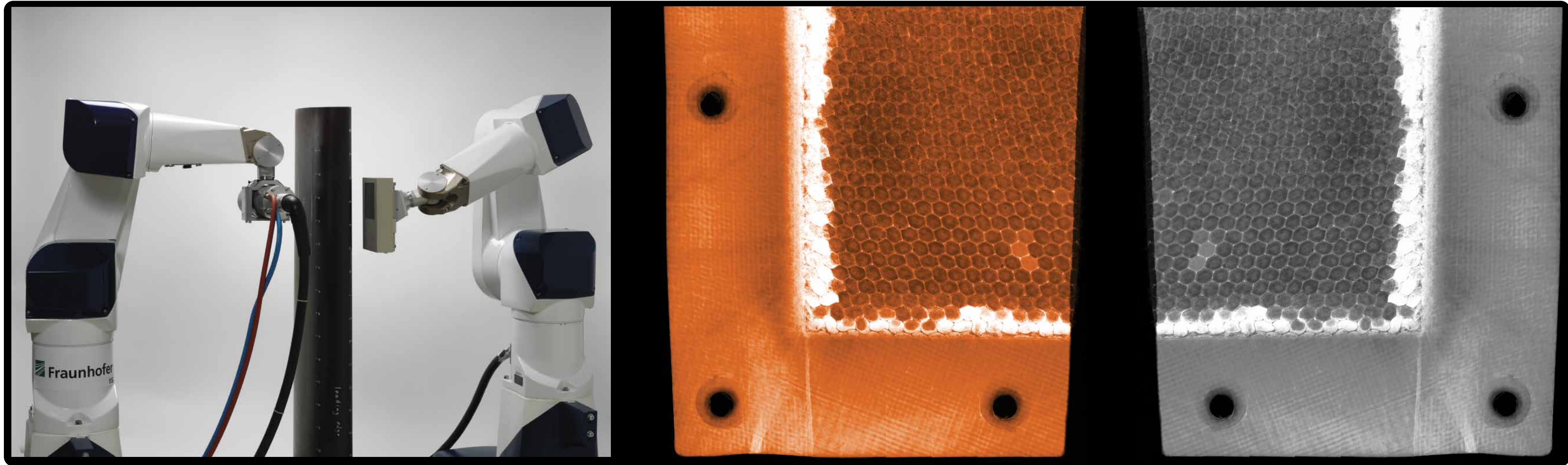
Phase 2 is the core phase of the QUICOM project. This phase aims to develop the targeted technology platform. For each application area individual methods/techniques will be implemented. Phase 2 affects work packages WP4-WP8. It also includes integration of all methods and techniques into a software framework, as well as the preparation of the defined showcases.

The concepts developed within the QUICOM project will be validated through a software demonstrator. Furthermore robot-based XCT for aeronautic components will be demonstrated on a laboratory-scale demonstrator. Existing devices with QUICOM specific adaptations will be used.

Phase 3: Demonstration & evaluation of the developed methods and techniques

In Phase 3 the developed methods and algorithms appropriate for typical aeronautic components, e.g., wing shells, fuselage panels or vertical tail plane, will be demonstrated. Robot based XCT, microstructure analysis of advanced composites, modeling, as well as analysis of composite parts will be included.

The software demonstrator and the software for composite modeling will be used in common during the demonstration of the robot based XCT setup.



The images used are courtesy of Volume Graphics, the University of Patras, Fraunhofer-Gesellschaft and the Czech Technical University of Prague

The Partners



QUICOM Project Website
www.QUICOM.eu



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