

ROKE



Video and Image Analysis

G Cloud 15
Service Definition

roke.co.uk

TABLE OF CONTENTS

Table of Contents	i
Video and Image Analysis – Service Definition.....	1
Service Offering	1
Detailed Service Definition.....	1
Image and Video Understanding.....	1
Image and Video Search and Triage.....	1
Image and Video Enrichment	1
Automated Visual Inspection	1
Key Services.....	2
Image and Video Understanding.....	2
Image and Video Search and Triage.....	2
Image and Video Enrichment	2
Automated Visual Inspection	2

Video and Image Analysis – Service Definition

Solutions to understand, enrich, search, triage, and inspect image and video data at scale and speed.

Roke has over 30 years' experience in the research and development of novel solutions for analysing, enriching, and generating video and image content.

We combine extensive knowledge of traditional approaches to image processing with the latest in Artificial Intelligence (AI) technologies.

Roke has developed video and image analysis technologies for multiple Government clients. We perform video and image research, technology selection, implementation, consultancy, and training.

Service Offering

- Image and Video Understanding
- Image and Video Search and Triage
- Image and Video Enrichment
- Automated Visual Inspection

Detailed Service Definition

Image and Video Understanding

Roke provides solutions to enable humans and downstream processing to reason about the nature of the image and its content. Solutions can be applied to static data or to data as it is collected in real-time.

Roke develops technology to automatically detect the presence of and extract information about the content of images (such as people, or vehicles). The solutions are applicable across a variety of datasets, including overhead imagery, and day-to-day scenes.

Roke's image and video understanding offering extends to image forensics. We have researched and developed solutions to detect

fake imagery, generated both through traditional methods and through Generative AI techniques such as Diffusion models and Generative Adversarial Networks (GANs).

Image and Video Search and Triage

Roke develops AI solutions for efficient triage of image and video data according to operational requirements. Solutions can be applied to static data, or to data as it is collected in real-time.

Roke has developed Media Miner™ and TensorGrid – tools that enable rapid searching and triaging of large quantities of image and video data through extracting high-level content, semantic image search, and a range of plug-ins including text extraction, adult content identification, and custom classifiers.

We also develop tailor-made solutions, such as the ability to search images and video through unconstrained natural language text.

Image and Video Enrichment

Roke provides solutions to enrich image and video content when the ability to capture high quality data by the camera sensor is constrained, where the available digital image is low quality, or a feed has been interrupted.

We use a combination of traditional and AI methods and have experience in developing enrichment pipelines for specialist processing.

Automated Visual Inspection

Roke has developed automated visual inspection solutions for a commercial customer to detect degradation in mechanical components and provide advance warning of mechanical failure. We have demonstrated this

technology in the context of mechanical components, medical imagery, and microscopic detail on electronic components.

The solution uses AI to learn to detect anomalies relevant to the domain. We can provide consultancy, feasibility studies and developed solutions in this area.

Key Services

Image and Video Understanding

- AI solutions to extract and identify specific image content
- AI solutions to extract and identify specific video multi-frame content
- AI and traditional image forensics
- Detecting deep fake videos and GAN images

Image and Video Search and Triage

- Media Miner™ and TensorGrid products for rapid and intuitive search of videos and images
- Tailored AI solutions to effectively search and triage large datasets

Image and Video Enrichment

- Traditional and AI solutions to enrich image and video content in an operational environment
- Image creation using generative AI (GANs/deep fakes)

Automated Visual Inspection

- Custom automated visual inspection for anomalies and patterns



Pioneering Technology for Global Security & Future Warfare

At Roke, we stand at the forefront of defence and security, delivering cutting-edge intelligence and engineering solutions that protect nations, troops, borders, critical national infrastructure and businesses. We bring the credibility of a long-standing defence and security leader, the precision of a specialist, and the agility to solve complex, high-stakes challenges with purpose and impact.

Roke is at the forefront of shaping the future of digital defence, intelligence, and national security.

We are Roke. We are Changing Worlds.

Roke Manor Research Ltd
Romsey, Hampshire, SO51 0ZN, UK
T: +44 (0)1794 833000
info@roke.co.uk www.roke.co.uk

© Roke Manor Research Limited 2026 • All rights reserved.

This publication is issued to provide outline information only, which (unless agreed by the company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contract or be regarded as representation relating to the products or services concerned. The company reserves the right to alter without notice the specification, design or conditions of supply of any product or service.