From radiography to
artificial intelligence

ERACLE

DIGITAL RADIOGRAPHY
AND FLUOROSCOPY
ACQUISITION SOFTWARE

digitec
DIGITAL INNOVATION

Digitec Srl | Via Caduti Lecchesi a Fossoli, 17 | 23900 Lecco (LC)
SDI Code T04ZHR3 | Tax Code 00527870141 | VAT n. 01647550134
Email: info@digitecinnovation.com | Tel: +39 0341 36 46 17
digitecinnovation.com

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Digitec

Providing **software solutions** and developing radiological image processing **since 1985**

presents

TIRESYA

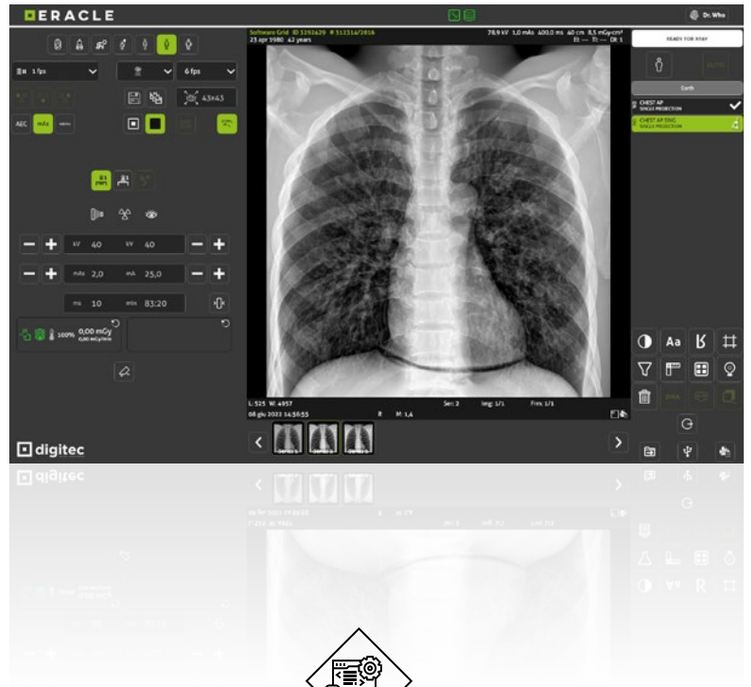
TIRESYA is **our intelligence**, **our innovative approach** to radiology. It is the pulsing heart of our software solutions. Tiresya represents our **expertise**, **knowledge** and our **outlook** on the future. It holds our know-how, our experience in the field, as well as the most innovative features in digital radiology and the most sophisticated **AI algorithms**.

TIRESYA is the core of our products

ERACLE | ODIS | TESEO | ARGO

ERACLE

DIGITAL RADIOGRAPHY AND FLUOROSCOPY ACQUISITION SOFTWARE



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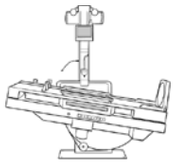


REMOTE CONTROLLED TABLE

Our Plus

WORKSTATION CONSOLE
Our stand-alone software can be supplied on medical or consumer PC (already configured)

MULTI DETECTOR SYSTEM
Compatible with the main static, hybrid and dynamic detectors on the market

X-RAY DEVICES INTEGRATION
Generators, accessories and 3rd party systems

SMART USABILITY
User-friendly interface, touch oriented,multi resolution format, multi language support, customizable UI (on request)

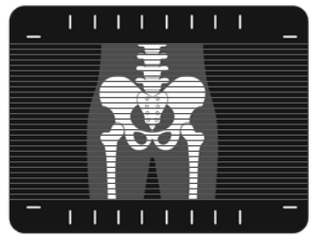
DICOM 3.0 COMPLIANCE
Store, Storage Commitment, Query/ Retrieve, Worklist, MPPS, Print, CD/DVD/USB, Verify, Dose SR

PROPRIETARY ADVANCED PROCESSING ALGORITHMS
FOR IMAGE QUALITY
Grid Suppression, Software Grid, Stitching, Dual Energy, Tomosynthesis, Boost Lines, Bone Suppression, DSA, QA

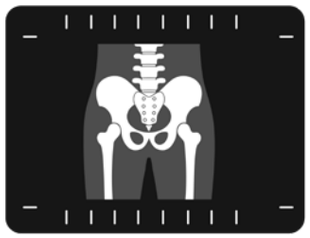
Our strenght is in details

Grid Suppression

Identifies the presence of the typical disturbance caused by an anti-scatter grid and eliminate the artefact.



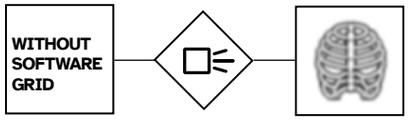
WITHOUT GRID SUPPRESSION

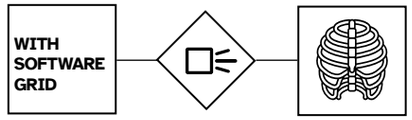


WITH GRID SUPPRESSION

Software Grid

Estimates and removes scatter from images acquired without physical grid enhancing contrast





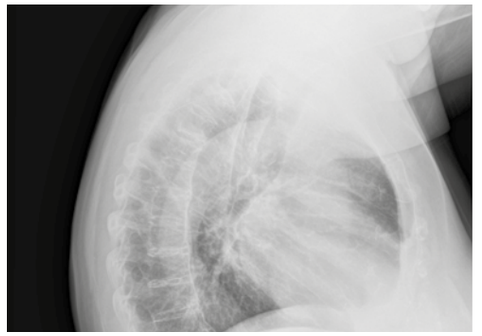


Image **WITHOUT** Software Grid

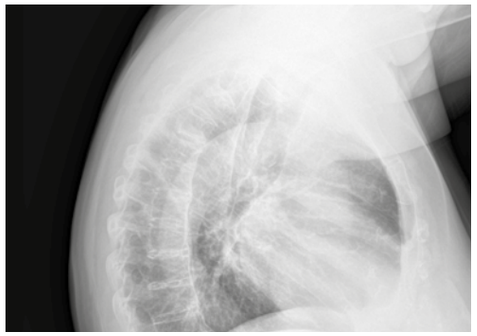
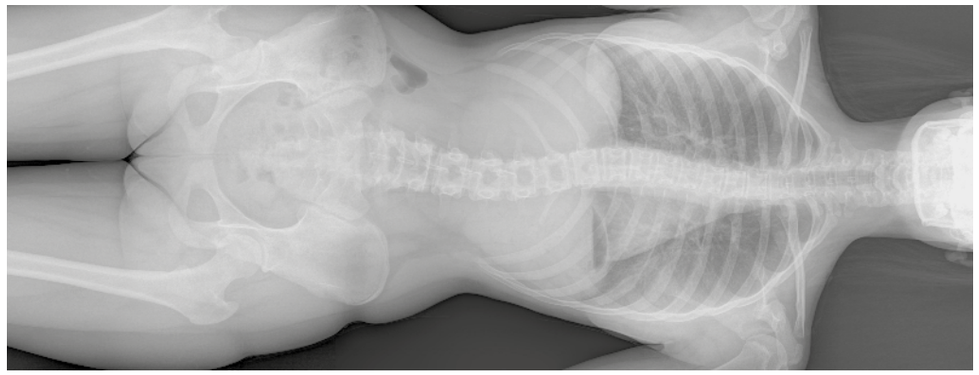


Image **WITH** Software Grid

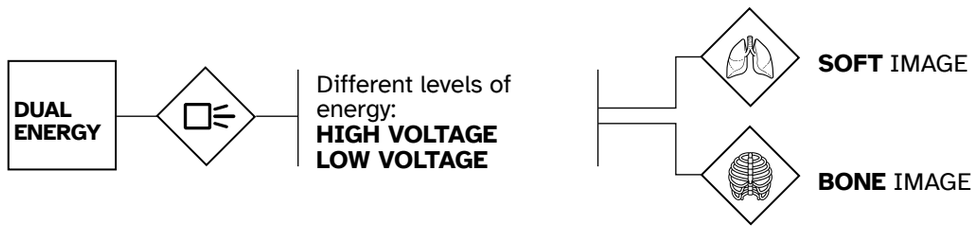
Stitching

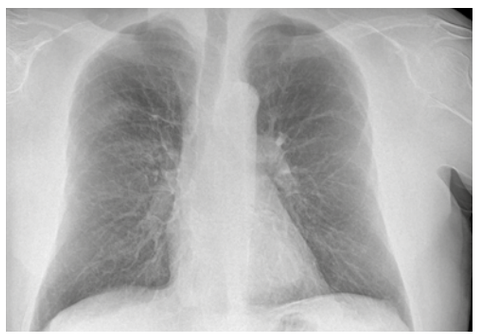
Stitches automatically a series of exposures into a full optimized body image



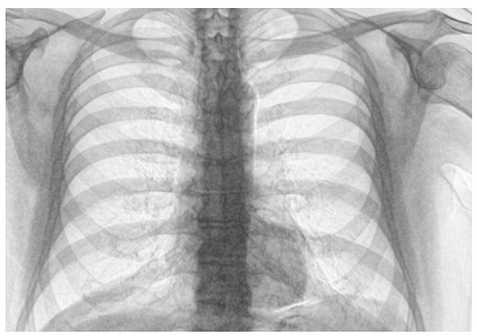
Dual Energy

Allows to separate soft tissue and bones in different images obtained from double chest x-ray exposure





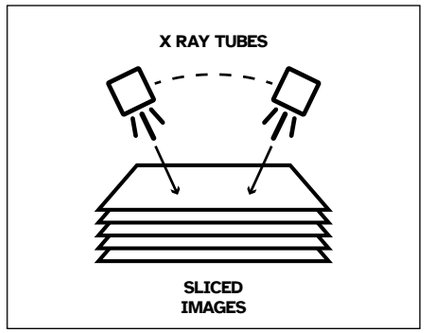
SOFT IMAGE
soft tissue component

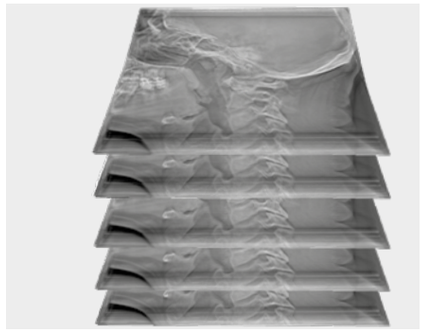


BONE IMAGE
hard tissue component

Tomosynthesis and Iterative Tomosynthesis

Tomosynthesis is an x-ray imaging modality technique that provides volumetric information about anatomical structures. The iterative approach is a novel reconstruction, where the algorithm operates in a recursive fashion, updating the estimates of the object volume until it converges to an optimal solution, so that the reconstructed image has less noise.

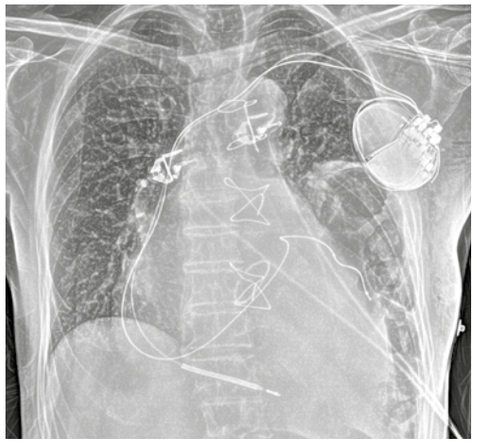




Boost Lines

Boost Lines is an image-processing algorithm to enhance the visibility of tubes and catheters in chest x-ray images, giving a better information about their positions and placement.

CHEST X-RAY IMAGE
WITHOUT BOOST LINES

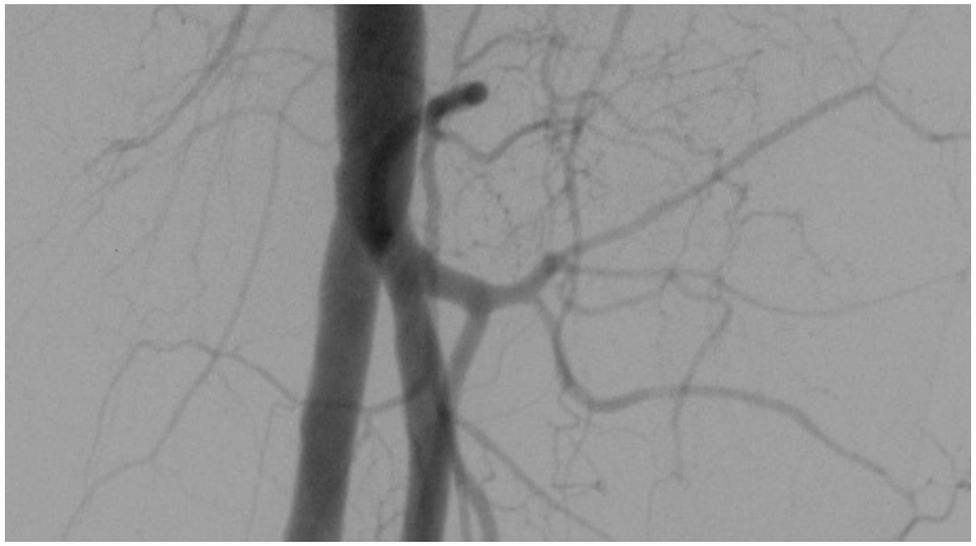


CHEST X-RAY IMAGE
WITH BOOST LINES

DSA

Digital Subtraction Angiography

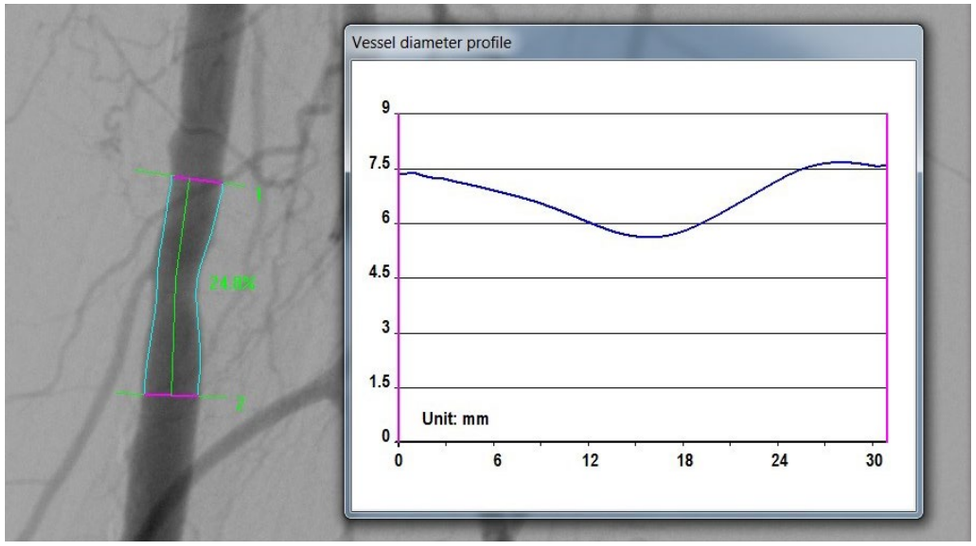
DSA is a multiple shot radiographic technique used in radiology to visualize vessels. Radiopaque structures such as bones are eliminated (“subtracted”) digitally from the image, thus allowing for an accurate depiction of the blood vessels.



QA

Quantitative Analysis

Algorithm that performs quantitative analysis in angiographic images, to automatically identify vessels edges and stenosis.



Bone suppression

Artificial Intelligence algorithm that automatically removes bones from single shot chest x-ray images

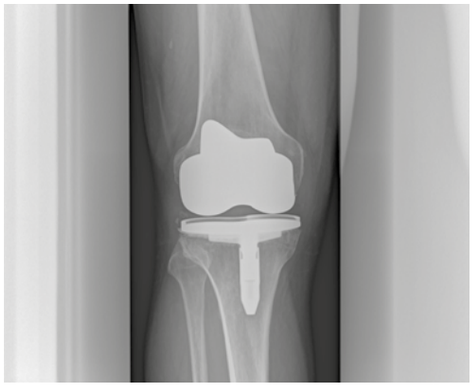
CHEST X-RAY IMAGE
WITHOUT BONE SUPPRESSION

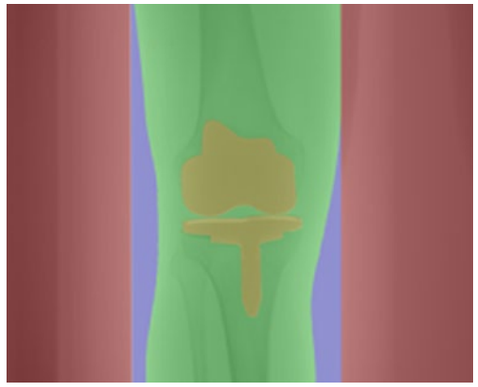
CHEST X-RAY IMAGE
WITH BONE SUPPRESSION

Our future*

Anatomical Artificial Intelligence

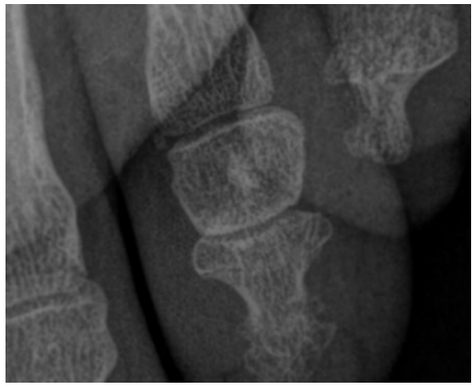
Artificial Intelligence algorithm that classifies image regions into anatomical parts, shutters, direct irradiations and metal objects





Super Zoom

Artificial Intelligence algorithm that increases the sharpness of the details within the zoomed image area



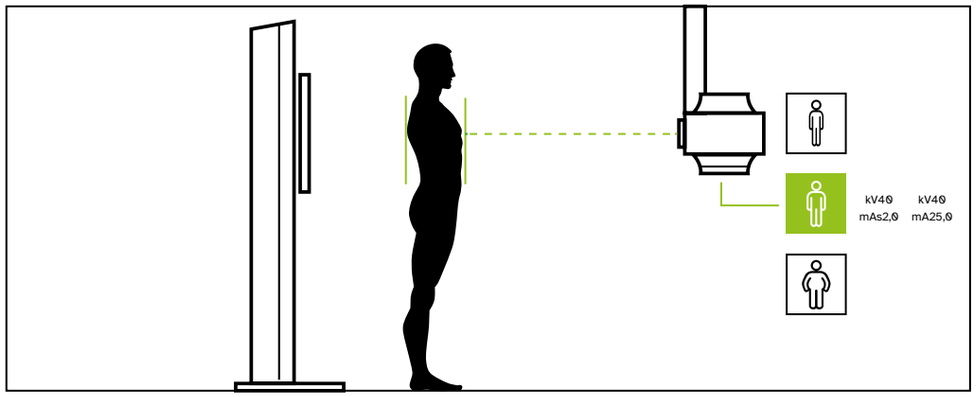
*Algorithms under development

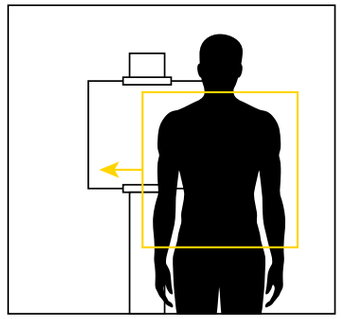
CAD Algorithms

Artificial Intelligence solution to detect abnormal findings and assist radiologists or clinicians in the interpretation of chest x-ray images.

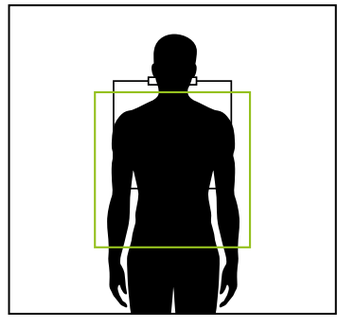
Camera 3D

Integrated in our acquisition software, it allows:
Patient positioning support - Patient size suggestion - Simplification of the acquisition workflow
Reduction of errors and repeats - Radiation dose optimization





CHECK THE POSITIONING
OF THE PATIENT



READY
FOR X-RAY

Advantages

Image quality

High quality images with automated processing based on anatomy and projection

Easy of use

Intuitive user interface and simplicity of use

Time saving

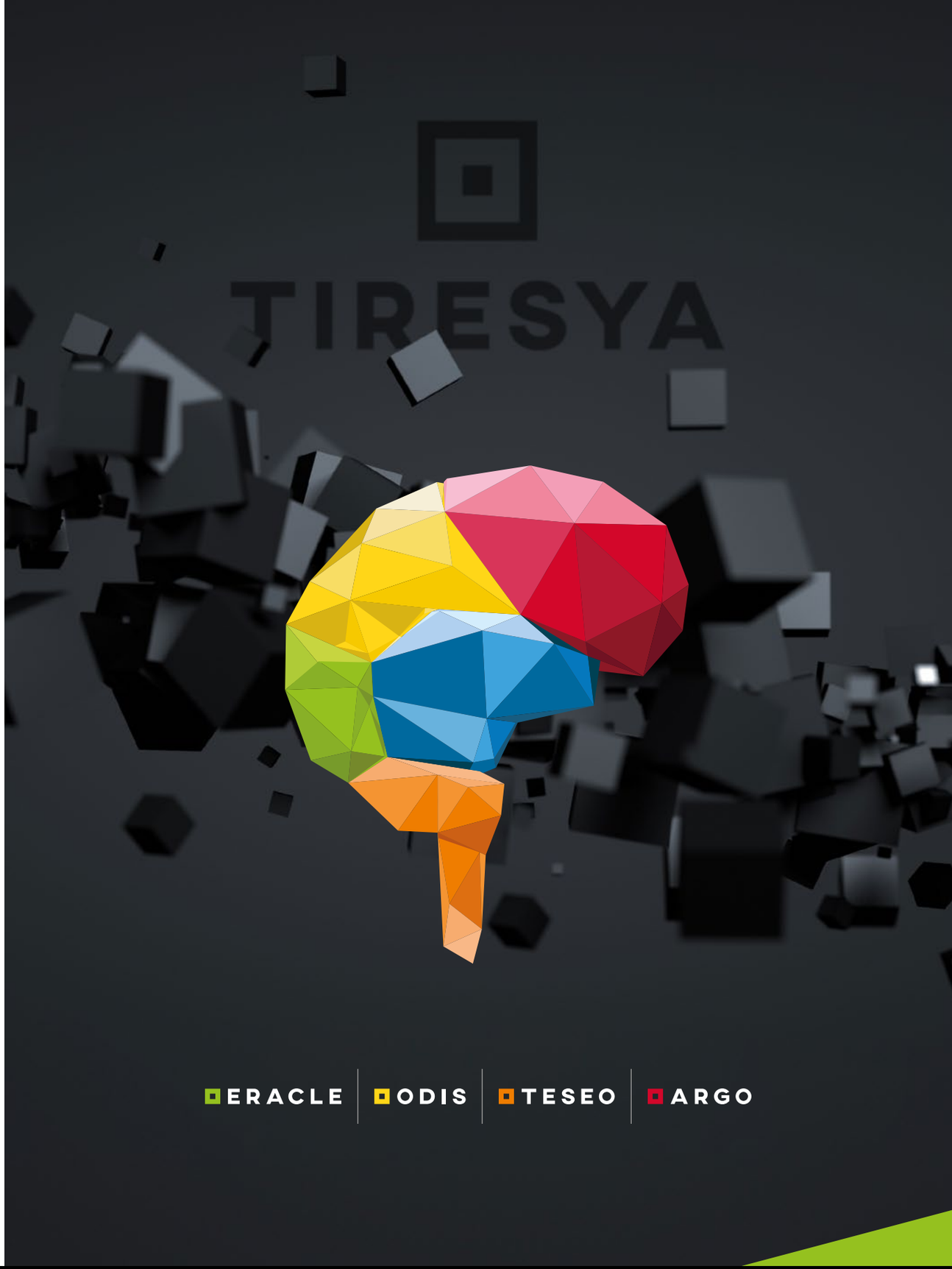
Optimized workflows to streamline procedures and reduce time

Increased Productivity

Accurate and timely diagnosis thanks to the reduction of inaccuracies and the elimination of repeated examinations

TIRESYA: not only a software platform, but it is also a concept, a work method, a philosophy.
What does this mean in real terms?

- A look and feel interface for all our software
- User-friendly interface
- Touch-oriented mode
- High quality images
- Automatic image processing
- Easy reading of the images
- Optimized radiation dose
- Supports radiographers and x-ray technicians

TIRESYA is the **core** of our **products**

All of Tiresya's properties and functions are applied across the entire range of our products, thus extending our know-how to all the application sectors in which we operate: human, dental and veterinary.