

AI: Opportunities, Capabilities and Limits

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Hospitals-on-FHIR: Preparing Hospitals for
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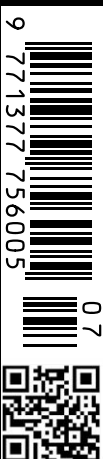
Rafael Vidal-Perez
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Konstantinos Petsios et al.
Artificial Intelligence in Radiology: Realities,
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Sai Pavan Kumar Veeranki et al.
Learning From Each Other: An Artificial
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Elmar Kotter
Integrating Decision Support and AI in
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†Werner Leodolter
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Innovative Technologies Will Address Health System Challenges

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Innovation is the fuel for any improvement in society because technology always pushes back limitations. Thales envisions to build on its advanced expertise to meet the healthcare challenges of tomorrow. Bringing performant secure health-care access to anyone, anywhere, will overcome critical medical issues.

New Challenges

After the pandemic revealed the weakness of global health systems, our societies have seen public health concerns coming back at their core preoccupations: ageing populations, the rise of chronic diseases, increased cost of health care, and inequalities. Entire parts of societies stalled in accessing care in the past decades: rural and suburban locations, lower-income neighborhood and minorities, elderly and disabled people. Although they displayed outstanding resilience and commitment, healthcare professionals faced shortages issues, with critical impact on patients. These factors are an immediate threat to the sustainability of healthcare systems, in Europe and worldwide.

Governments have implemented ambitious public policies to mitigate this short-term risk, and build more efficient care pathways, in the benefit of the patients. This historical investment effort focusses on recruitment, facilities, equipment and digitalisation. Also, medical desertification is a reality for many patients, and needs to be addressed. Private players need to join forces and help address these challenges.

Technological Answers

Healthcare in 2030 will not look like healthcare in 2020. Digitalisation, territorial mobility, and technological advances will drive significant improvements for the common benefit of all.

Renouncement to care is often a matter of distance. In the coming years, we will see the development of mobile solutions in the territories. They bring the service closer to the patient, relieve the emergency services and tackle the problem of equal access to care. These fleets of lightweight, high-performance connected systems will have to go with fleet monitoring and preventive maintenance solutions to avoid downtime.

Teleradiology will expand to solve the unequal distribution of radiologists worldwide, while providing high-quality diagnosis to every patient. The deployment of 5G makes rapid tele-diagnosis possible, regardless of where the patient is located. This high connectivity comes with new cybersecurity threats, and requires protecting any component of the chain, from systems to data transfer.

Artificial Intelligence (AI) and data analysis will play an increasingly important role in healthcare. Indeed, AI helps radiologists worldwide as a diagnosis companion, and is a way to free up time and resources. The collection of data bundles, from the system component to the clean image, is vital to break new frontiers.

Our Contribution

Thales, a global innovation company in security and critical operational missions, is at the forefront of this urgent tall order. We aim to build an innovation network to pool experts from SMEs, start-ups as well as public organisations. We leverage our expertise to provide our customers with:

- Lightweight, high-end flat panel detectors to unlock the next generation of portable x-ray systems
- User-defined imaging solutions, to smooth the operator's workflow
- Innovative remote maintenance and fleet monitoring solution,
- Cybersecured solutions, leveraging the expertise that Thales already deploys in critical activities such as aerospace, defense and government

More is yet to come, and we look forward bringing these advancements to the market while paving the way for a better healthcare. ■

Thales will be present at ECR 2022 in Vienna, We welcome you to our booth #229 (Hall X2).