

# Soluzioni digitali per l'ospedale del futuro

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## Come vediamo l'ospedale del futuro...e la sanità del futuro?







Pensato, progettato e disegnato secondo specifici criteri che tengano adeguatamente in considerazione la complessità di spazi, percorsi, volume, specialità, esigenze del personale e, ovviamente, dei pazienti. Dotato di tecnologie e servizi digitali che abilitino la circolarità delle informazioni e supportino il personale sanitario nella scelta del miglior percorso di cura per il paziente. Con servizi in continuità che abbraccino il territorio



Gestito secondo specifici criteri di valorizzazione ed efficientamento delle tecnologie a disposizione, ma anche di crescita continua delle competenze del personale sanitario



Che sia in grado di rispondere alle nuove esigenze, anche mediante modelli di finanziamento dell'innovazione fondati su una logica di valorizzazione in funzione del valore generato

# Workflow simulation & Digital Twin oggi e domani



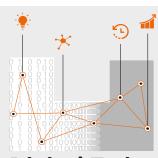








Input



**Digital Twin** 



**Outcome** 



**Future** 

- **Facility layout** e.g., CAD floor plan
- **Pathways** e.g., patient tracks and workflows
- **Activity parameters** e.g., processing times, staff requirements
- **Patient classification** e.g., patient mix, patient characteristics
- **Operational data** e.g., RIS/LIS/HIS/EHR etc.

- **Simulate** future operations and layouts
- **Predict** and compare scenarios
- **Stress-test** your current operations

#### **Improved**



**Patient experience** 



**Staff satisfaction** 



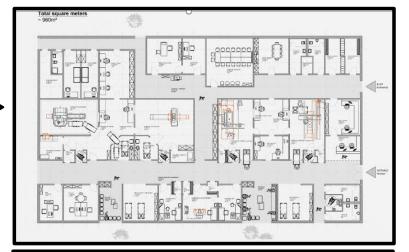
**Clinical efficiency** 

# Il nostro approccio in 4 step















4

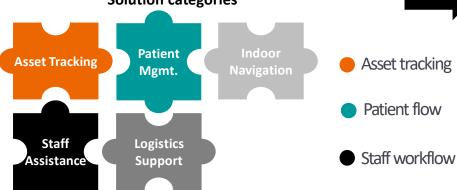
## Tecnologie RTLS: una fonte di dati "in movimento"





**Real-time location systems (RTLS)** are used to automatically identify and track the location of objects or people in real time, using wireless tags and fixed gateways.





60+ dedicated use cases

Complete offering

- Hardware (Gateways, Asset Tags, Smart Beacons)
- Software
- Services (Project management, Installation services, System management, Maintenance)

Advanced use cases

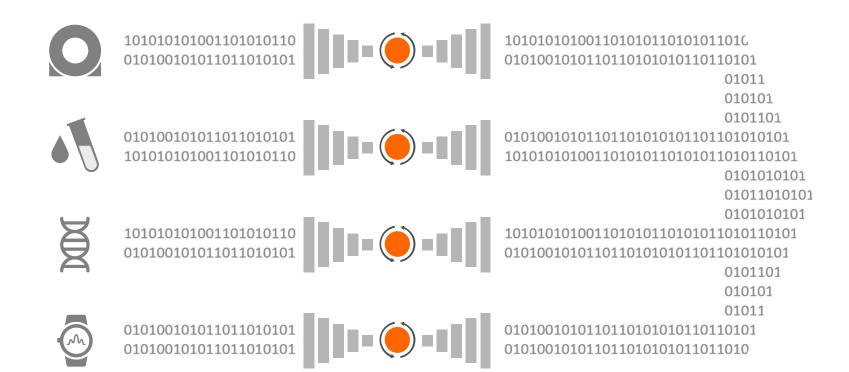
- Advanced applications
- Advanced analytics deep understanding of data
- Scalability (60+ use cases)

Continuously adding value

- Operational management
- Data- and SW-integration
- Workflow Management learning out of data generated
- Consulting and up-front KPIs evaluation

# Digital Twin is an Al-powered personalized bio-physiological model of the patient







Aggregate large amount of curated data

Train multiple deep neural networks to build individual parts of a model

Together they form a holistic Al-powered digital twin of a human

# Soluzioni per il monitoraggio delle attività in diagnostica per immagini: ecosistema teamplay<sup>1</sup>



Performance management applications provided in a secured, cloud-based deployment to enable digital connectedness

Standardize operations to improve clinical and operational outcomes



Analyze and understand performance data to optimize economies of scale across your fleet



Identify causes for outliers to improve quality and compliance with national authorities (e.g., dose exposure)







#### teamplay Dose Simplify radiation dose management and compliance with national regulations



teamplay Usage Simplify utilization management to optimize imaging operations and increase efficiency



teamplay Protocols Simplify protocol management to deliver a high quality of care and standardization



teamplay Images<sup>2</sup> Simplify image sharing and study discussions in a secured environment





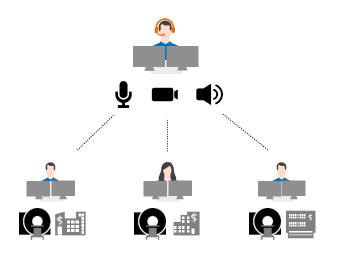
#### teamplay Insights **Build** intuitive dashboards that give you insights about your hospital's analytics

1 teamplay is not commercially available in all countries. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. | 2 The statements by the Siemens' customer described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption) there can be no guarantee that other customers will achieve the same results. | Due to regulations data exchange between data center regions is restricted. The products/features/service offerings are not commercially available in all countries. If the services are not marketed in countries due to regulatory or other reasons, the service offering cannot be guaranteed. Please contact your local Siemens organization for further details.

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# Soluzioni a supporto del lavoro "smart": syngo Virtual Cockpit, la piattaforma per la gestione remota dello scanning





syngo Virtual Cockpit enables you to provide comprehensive scanning assistance to imaging personnel – regardless of their physical location.

#### Core features:

- Real-time knowledge sharing
- Live video, audio, and chat functions
- Simultaneous collaboration with up to three scanning workplaces simultaneously
- For MR, MR-PET, CT and PET/CT scanners \*



Routine procedures



Complex procedures



**Training** 



**Bottleneck** management



Home office1

syngo Virtual Cockpit is not yet commercially available in all countries. Its future availability cannot be guaranteed. Prerequisite: Expert-i-enabled modality from Siemens Healthineers.

# Soluzioni AI per il supporto alla refertazione in diagnostica per immagini: AI-Rad Companion



Multi-organ diagnostic decision support system

helping to improve your diagnostic accuracy



Seamlessly integrated image quantification speeding up routine workflows and reducing turnaround time













State-of-the-art algorithm improvement paired with security by design based on teamplay platform







Multi-modality coverage for CT<sup>1</sup>, MR<sup>1</sup>, X-ray<sup>2</sup>



Multiple body regions and organs e.g., Chest, Brain<sup>1</sup>, Prostate<sup>1</sup>



Automation through advanced functionalities e.g., Segmentation, Measurement



Seamless workflow integration with PACS Notifier<sup>1</sup>

# Al-Rad Companion a supporto della diagnosi di COVID-19:

AIRC Chest CT Pulmonary Density<sup>1</sup>

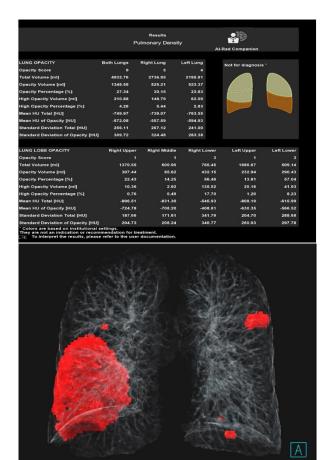
This **new** functionality will automatically identify and quantify hyperdense areas of the lung using non-

The **opacity score** helps to assess the percentage of affected lung tissue.

contrast enhanced chest CT's.

Certain parts of this extension were used in the prototype Siemens Healthineers offered to fight COVID-19, to analyze ground-glass opacities and consolidations. High opacity abnormalities were shown to correlate with lungs of COVID-19 patients.

1 The Pulmonary Density feature is new in VA12A without FDA Clearance. According to FDA policy "Enforcement Policy for Imaging Systems During the Coronavirus Disease 2019 (COVID-19) Public Health Emergency" issued in April 2020, the manufacturer is allowed to market this feature without FDA-clearance. This policy is intended to remain in effect only for the duration of the public health emergency related to COVID-19 declared by the HHS, including any renewals made by the HHS Secretary in accordance with section 319(a)(2) of the Public Health Services Act (42 U.S.C. 247d(a)(2)). Pulmonary Density results are not indicated for the diagnosis of COVID-19. Only in vitro diagnostic testing is currently the definitive method to diagnose COVID-19.



All quantifications listed in one report and the color-coded pictogram offers a quick overview of affected lung lobes.

# Al-Pathway Companion a support delle decisioni diagnostiche e terapeutiche



Aggregate, correlate, and visualize patient-specific **information** along the clinical pathway<sup>1</sup>



Facilitates objective decision-making by multi-disciplinary experts on correlated patient data and preferences<sup>1</sup>



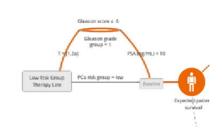
Offers analytical insights into time to diagnosis and time to therapy decision<sup>2</sup>





















Lung Cancer<sup>3</sup>



Coronary Artery Disease<sup>3</sup>



**Breast Cancer<sup>3</sup>** 

<sup>1</sup> Al-Pathway Companion Prostate Cancer is not commercially available in all countries. Its future availability cannot be guaranteed.

<sup>2</sup> Al-Pathway Companion Prostate Cancer Analytics is not commercially available in all countries. Its future availability cannot be guaranteed.

<sup>3</sup> Al-Pathway Companion Lung Cancer, Al-Pathway Companion Coronary Artery Disease and Al-Pathway Companion Breast Cancer are under development and not commercially available. Its future availability cannot be ensured. | 4 This feature is under development and not commercially available. Its future availability cannot be ensured.

#### **Contatto**



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