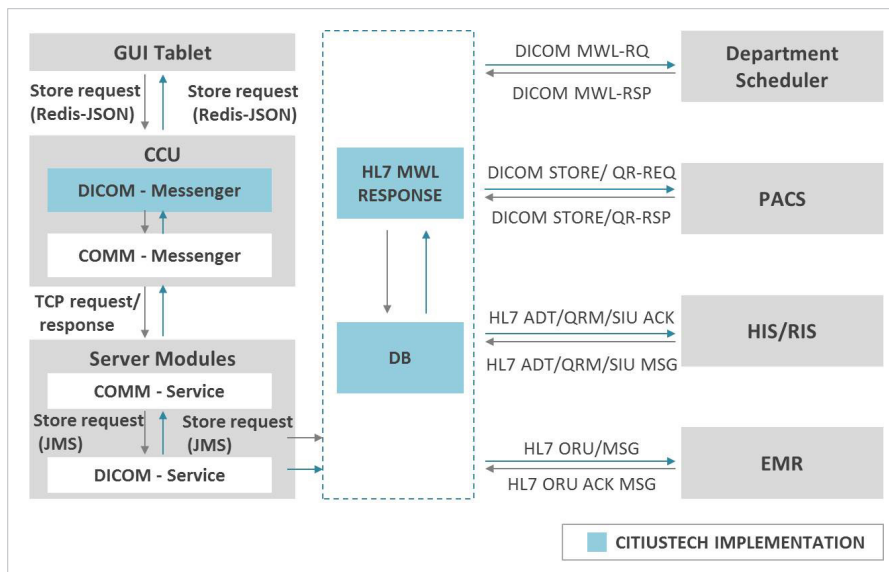## Client Requirements

Client is a global medical device company and a leading solutions provider for orthopaedics. Client wanted to integrate its image management solutions and RIS, PACS and other hospital applications. In order to ensure interoperability, the solution required support retrieval of Worklist. The solution also needed to receive and store incoming HL7 messages while case results are sent back in outgoing HL7 format to the HIS.

CitiusTech was selected for its expertise in interoperability and standards-based messaging using DICOM and HL7.

Solution Design

CitiusTech established a team of interoperability professionals with expertise in interface design and development. CitiusTech services included:

- Integration of image management solution with RIS, PACS and hospital systems in DICOM and HL7 standards using InterSystems Ensemble
- Provision of a platform for communication in JSON, TCP, JMS and XML formats between applications
- Image conversion using dcm4che open source imaging library to DICOM format and sending them back to PACS

CitiusTech Solution

Requirement Analysis
In order to achieve interface requirements, the following DICOM functionalities/ HL7 messages were required to be implemented/ supported by the backend application:
- DICOM – Echo, MWL, Store, and Storage commitment
- HL7 Messages – Incoming ADT, ORM, SIU and Outgoing ORU
- DICOM and HL7 conformance for clients'proprietary modality for images and videos

Value Delivered

By partnering with CitiusTech, the client was able to:

- Leverage CitiusTech's expertise to provide effective interoperability between client applications and RIS, PACS, and other hospital information systems
- Develop a standards-based solution to enable extensibility to other applications
- Ensure the solution was compliant to the DICOM standard for its modality device

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About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to medical technology companies, providers, payers and life sciences organizations, with over 2,700 professionals worldwide. CitiusTech's services and solutions include healthcare software development, healthcare interoperability, regulatory compliance, BI/analytics, consumer engagement, care coordination and population health management. CitiusTech helps customers accelerate innovation in healthcare through a number of solutions and accelerators for clinical quality reporting, healthcare big data, cloud computing, mobile health and predictive analytics. With cutting-edge technology expertise, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare clients worldwide.

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