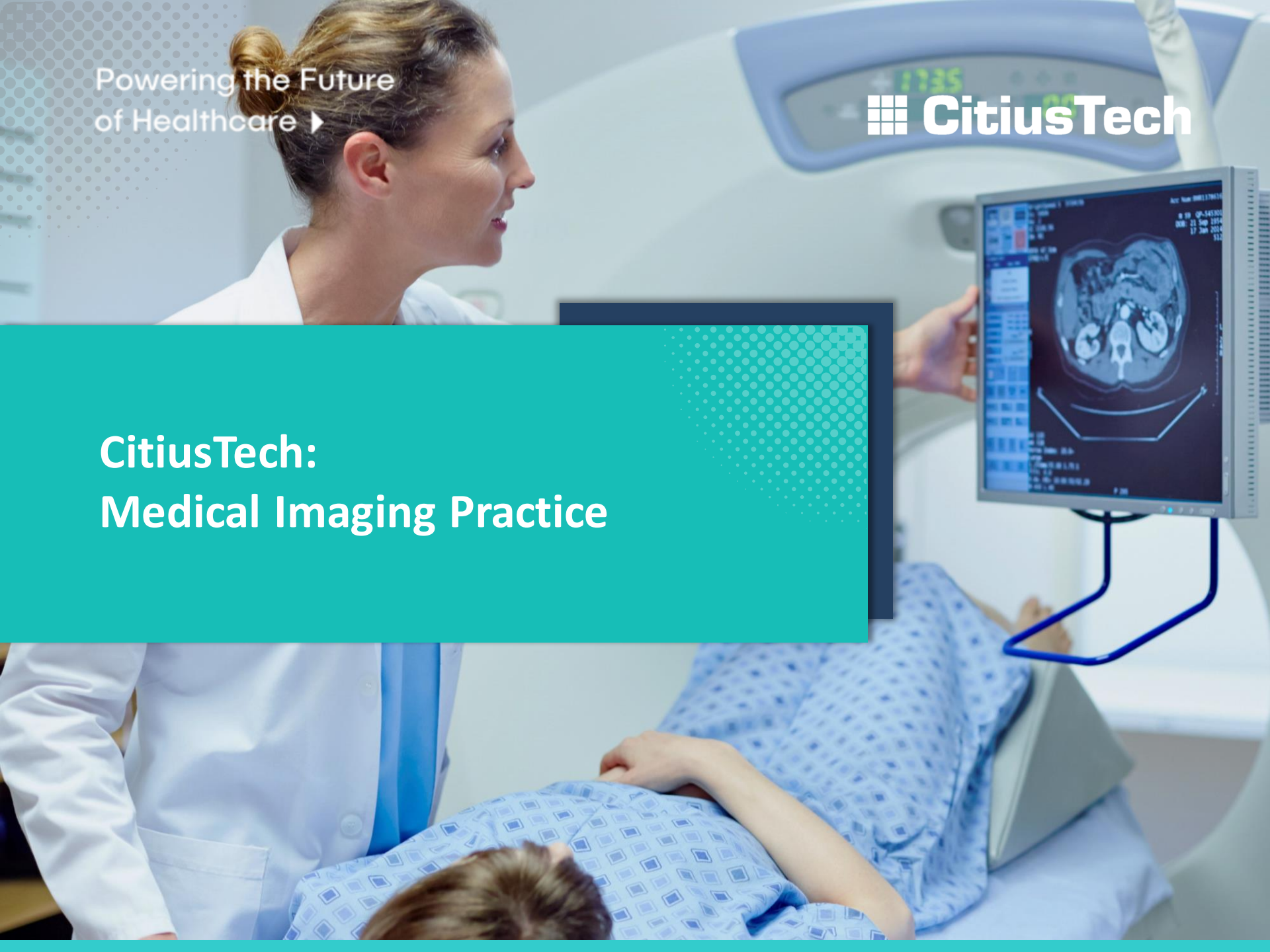


Powering the Future  
of Healthcare ▶

 **CitiusTech**

# CitiusTech: Medical Imaging Practice



[www.citiustech.com](http://www.citiustech.com)

## CitiusTech: Medical Imaging Offerings

*CitiusTech has extensive experience of work with market leaders in medical imaging across the chain – VNA, RIS, PACS, Modalities, Standards and Viewers helping them across their technology needs*

### Domain Experience



#### Image Acquisition

Deep experience in working across various modalities (CT, US, X-Ray, MR, etc.) and vendors



#### Image Review & Reporting

Work across multiple visualization and reporting solution across thin/thick clients coupled with end-to-end reporting integration



#### Workflow Management

Support integration across scheduling, acquisition and visualization products including specialized integrations (PowerScribe, TomTec, etc.)



#### Cloud Integration

Enable Cloud adoption across multiple imaging applications and supported integrations of next-gen technologies around mobile and AI/ML algorithms

### Recent Experience

- *AI dev. & MLOps pipeline for automated analysis using data for classification, segmentation & measurement*
- *Remote Service & Monitoring for remote upgrades & installs and 24x7 remote support*
- *Cloud Integration to implement VNA solution & de-identification of imaging data before upload to Cloud VNA*
- *HL7 based RIS/PACS Integration using HL7 – DICOM – IHE for sharing of work lists & remote viewing*

**400+**

*FTEs with strong background in Medical Imaging*

**Multiple specialized offerings**

*like Interoperability, Mammography, Oncology, Cardiology etc.*

**30+**

*Active projects across the Imaging practice*

# CitiusTech: Medical Imaging Domain Footprints



## Visualization

- Product development for Thin and Thick Client (Client Server architecture)
- Integration of AV tools, real-time 3D processing over web
- UX modernization



## Interoperability

- Imaging solutions based on healthcare standards IHE, DICOM, DICOMweb, FHIR, HL7.
- Imaging workflow with EHR integration using FHIR resource
- IHE based imaging workflows



## Archiving

- VNA, PACS, Data Migration, CD import
- Data aggregation from imaging, clinical, pathology, financial, operational, etc.
- Encounter based care workflow



## Enterprise Imaging Workflow

- Seamless access to patient data using cloud-based imaging solutions (case exchange)
- Longitudinal view of patient data, de-identification
- Third party integration



## Image Acquisition

- Console application development for modalities CT, MR, USG
- Endoscopy, portable modalities
- Protocol management
- Workflow optimization



## AI & Machine Learning

- Automate customer service with chatbot
- Operational & financial efficiency
- AI-based imaging solutions, e.g., worklist prioritization, image pattern recognition, etc.



## Next-Gen Services

- FHIR based mobile applications
- Teleradiology
- Image sharing networks & Edge gateways
- IoT, Cloud & Big Data
- Cybersecurity & vulnerability assessment



## Product Deployment

- Remote serviceability
- Continuous integration & continuous delivery
- Customized deployment
- Docker & container approach of development & deployment



## Case Study: Cloud-Based Medical Image Exchange

### Client Requirements

Client is a leading provider of medical imaging systems. Client wanted to build a cloud-hosted image exchange platform with image viewing capabilities. CitiusTech was selected owing to its deep expertise in cloud and mobile app development.

### CitiusTech Solution

CitiusTech deployed a cloud-hosted exchange platform with the ability to interact with multiple systems, including distributed PACS, VNA and physician / patient portals. The key requirements for cloud-based medical image sharing and viewing included:

- Ability to support all major browsers on tablets and mobile devices through an HTML5 interface
- Capability to distribute consolidated data (DICOM and non-DICOM) to clinicians and/or patients that are not employed by the hospital and do not have direct access to content without the need to access multiple systems
- Healthcare standard-based recommendations on the product roadmap

### Value Delivered

- Enabled clear definition and efficient implementation of product roadmap owing to domain expertise
- Accelerated development through timely availability of wireframes and test data as well as enabled faster query resolution

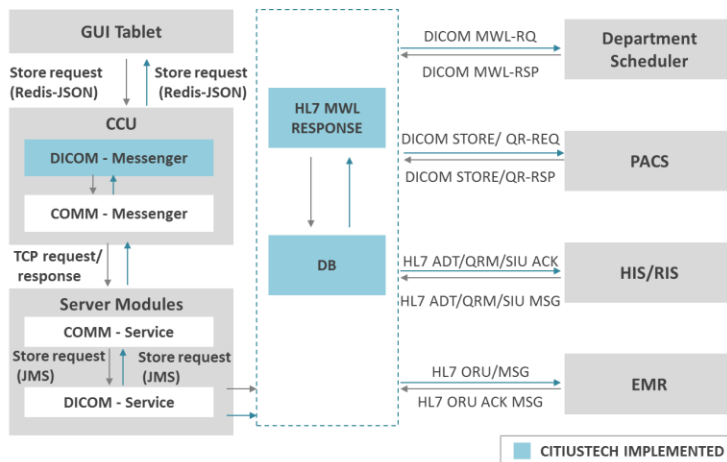
# Case Study: Interoperability for Imaging Solutions

## Client Requirements

Client is a global leader in solutions for orthopedics. It wanted to achieve interoperability between its image management solutions and RIS, PACS and other hospital applications. CitiusTech was selected for its expertise in interoperability and standards-based messaging using DICOM & HL7.

## CitiusTech Solution

- 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 DCMTK open source imaging library



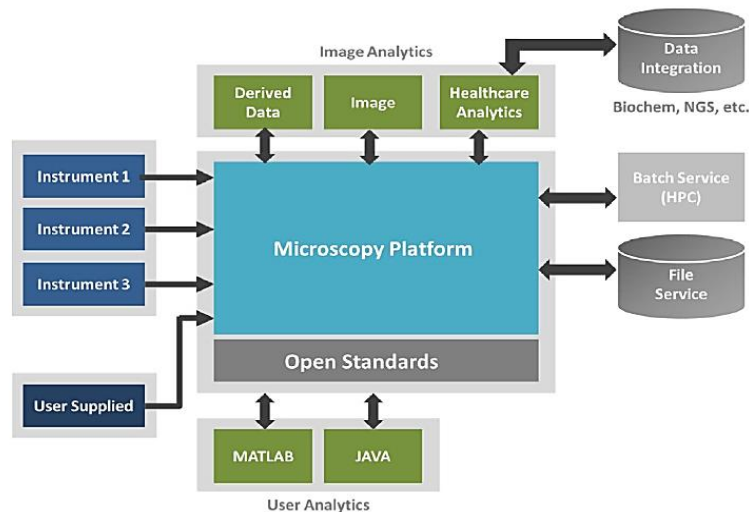
## Value Delivered

- Interoperability between client applications and RIS, PACS, and other hospital information systems
- Developed a standards-based, DICOM compliant solution to enable extensibility to other applications

# Case Study: Image Processing, Visualization & Analytics for Cellular Research

## Client Requirements

Client is a leading provider of medical imaging and diagnostic services to pharmaceutical and life sciences companies. Its platforms produce large volumes of high throughput multimodal imaging data. Client needed to build an enterprise-scale analytics platform to gain visual and clinical insights from the data.



## CitiusTech Solution

- Capturing images configured based on assays
- Analyzing and interpreting data from live and fixed cell assays
- Performing complex subcellular assays
- Quantifying multiple-biomarker expression patterns and correlating to non-imaging data
- Visualizing and interpreting statistical and machine learning analytics results

## Value Delivered

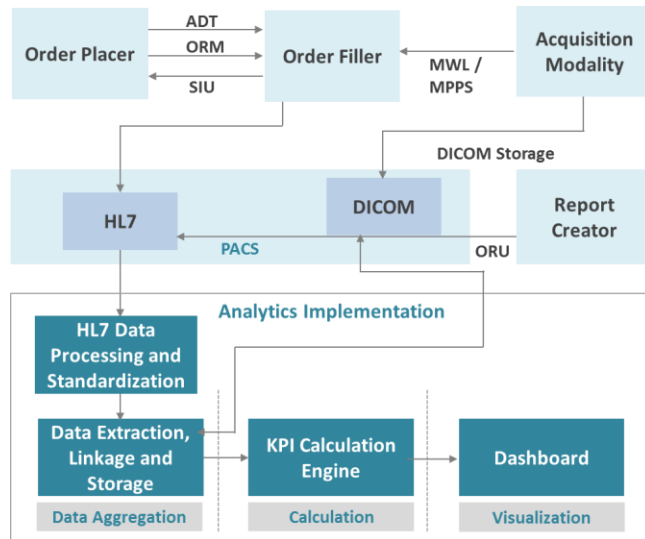
- Unified analytics platform synchronously working with multiple imaging tools, serving varying needs and configurations
- Faster go-to-market by reusing existing technology platforms and components



# Case Study: Imaging Operational Analytics

## Client Requirements

Client is a leading provider in medical imaging space with applications for advanced visualization, imaging practice management and image management. Client wanted to build an application that will help an imaging health system administrator to identify inefficiencies in the system and areas of improvement that can result in an increased revenue or savings in cost incurred.



## CitiusTech Solution

- Identified potential areas in an imaging workflow which has direct impact on revenue and savings in cost
- Analyzed data from an imaging centre to identify and validate potential business process improvements
- Created data models to grade the identified opportunities and compute projected profit margins.
- Created an exhaustive user interface prototype to showcase the business requirements.
- Developed, tested and created product manual documentation of the entire application

## Value Delivered

- Leveraged CitiusTech’s strong healthcare data analytics expertise to accelerate requirement analysis and data modelling
- Leveraged CitiusTech’s UX expertise to develop an intuitive User Interface

## About CitiusTech

CitiusTech ([www.citiustech.com](http://www.citiustech.com)) is a leading provider of healthcare technology services, solutions and platforms to over 130 organizations across the payer, provider, medical technology and life sciences markets. With over 5,000 technology professionals worldwide, CitiusTech powers healthcare digital transformation through next-generation technologies, solutions and accelerators. Key focus areas include healthcare interoperability & data management, quality & performance analytics, value-based care, omni-channel member experience, connected health, virtual care coordination & delivery, personalized medicine and population health management.

CitiusTech has two subsidiaries, FluidEdge Consulting ([www.fluidedgeconsulting.com](http://www.fluidedgeconsulting.com)) and SDLC Partners ([www.sdlcpartners.com](http://www.sdlcpartners.com)), with deep expertise in healthcare consulting and payer technologies, respectively. CitiusTech's cutting-edge technology expertise, deep healthcare domain expertise and a strong focus on digital transformation enables healthcare organizations to reinvent themselves to deliver better outcomes, accelerate growth, drive efficiencies, and ultimately make a meaningful impact to patients.

**130+**  
healthcare clients

**\$300M+**  
worldwide revenue

**5,000+**  
healthcare IT professionals

**40M+**  
lives touched

**80+**  
NPS - highest in the industry!



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