

# Final SRS Report On Capital Radiology - Online System for Magnetic Resonance Imaging (MRI) Lab

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**Contents:** 1.1 Business Problems Specification

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# **1.1 Business Problems Specification**

## **Problem Statement**

Capital Radiology applies a manual MRI consultation process which has caused inefficiency in the operation of its services and inconvenience for the patients. The paper process utilized in the current facility necessitates the patient to attend the site of the MRI for the patient to get the MRI report is time consuming, attracts travel expenses, and enables poor resource utilization.

## **Current System Challenges**

Patients currently are obligated to travel to MRI referral institutions, only to wait in a physical line until they see a doctor for the review of their scan results. This process incurs enormous direct costs to the patient, such as travel costs (averaging between \$20-50 for every visit); difficulty with time duration where waiting time is 2-3 hours on average; time allocated with staff having to use 40% of their time for manual document processing; and time lost with a paper-based model results in a review time of 3-5 days from the time of scan to report delivery, limiting this organization capacity to accommodate more patients productively.

## **Core Business Problems**

Capital Radiology faces five critical operational challenges that necessitate digital transformation. Patient accessibility issues create barriers for elderly and mobility-impaired individuals while generating unnecessary travel burdens and costs. Operational resource waste occurs through manual document handling, physical storage requirements, and inefficient workflow processes that underutilize medical equipment and professional expertise. Communication delays between radiologists, referring physicians, and patients extend diagnostic timelines and create risks of document loss or damage. Security vulnerabilities in the paper-based system present compliance risks with HIPAA and GDPR requirements due to limited audit trails and access controls. Scalability limitations prevent efficient accommodation of increasing patient volumes without proportional infrastructure expansion, constraining business growth potential.

## **Business Impact and Solution Requirements**

These operational inefficiencies lead to declining patient satisfaction, competitive disadvantage and increased costs with operations. The Capital Radiology MRI Online System proposal alleviates these operational challenges for Capital Radiology by removing the need for physical consultations, allowing secure digital workflows, and enabling remote access for radiologists and doctors to MRI images and reports. The online branding or digital solution will reduce administrative burdens, improve the patient experience, have regulatory compliance, and provide solid grounds for endless scalability for sustained business growth through online offerings.

