INDIAN RAILWAY FINANCE CORPORATION



CSR PROJECT IMPACT ASSESSMENT

Dr. Babasaheb Ambedkar Memorial Hospital Byculla, Mumbai

PROJECT: 4K ULTRA HD COMPLETE ENDOSCOPY SYSTEM

JULY 2022 - JULY 2024

Prepared for:
Indian Railway Finance Corporation (IRFC)

Prepared by:
PHD Chamber of Commerce and Industry (PHDCCI)

ACKNOWLEDGMENT

The PHDCCI expresses its sincere gratitude to the Management of Indian Railway Finance Corporation (IRFC) for entrusting the task of conducting CSR Projects Impact Assessment for the medical equipment procurement project undertaken through Dr. Babasaheb Ambedkar Memorial Hospital (BAMH), Byculla, Mumbai of Central Railway for July 2022- July 2024.

We extend our sincere thanks to the IRFC CSR team, particularly Mr. Shameem Ahmed (Consultant HR & CSR), Ms. Sakshi Saini, and Mr. Manish Chandra for their coordination and support throughout the assessment process.

PHDCCI Audit Team extends its sincere gratitude to the hospital management and staff members of Dr. Babasaheb Ambedkar Memorial Hospital, particularly Dr. Sushma Matey (Medical Director), Dr. Konalchand Vasudev Gajbhiye (Sr. DMO), Dr. Ayush Sharma (Sr.DMO), Dr. Jaikumar Tirkey (Sr. Dental Surgeon), and other medical professionals who shared their experiences and provided crucial insights into the project's real impact on healthcare delivery.

We would also like to acknowledge the support and cooperation of the project stakeholders for their valuable contribution to the impact study through provision of technical documentation.

PHD Chamber of Commerce and Industry

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INDIAN RAILWAY FINANCE CORPORATION

PHDCCI

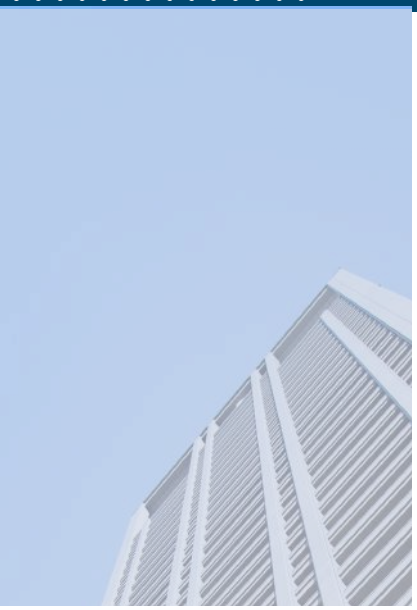


Table of Contents

1 ABBREVIATIONS 04

2 ABOUT THIS REPORT 05

3 EXECUTIVE SUMMARY 06

4 INTRODUCTION 10

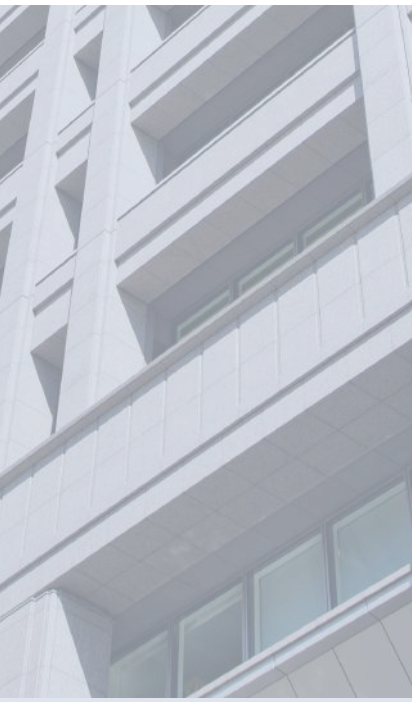
5 SCOPE OF WORK 14

6 METHODOLOGY OF THE STUDY 15

7 ASSESSMENT OF CSR PROJECT 17

8 ASSESSMENT OF IMPACT 26

9 CONCLUSION 31





ABBREVIATIONS

ABBREVIATIONS	FULL FORM
BAMH	Dr. Babasaheb Ambedkar Memorial Hospital
BPMT	Bachelor of Paramedical Technology
CSR	Corporate Social Responsibility
IRECS	Inclusiveness, Relevance, Expectation, Convergence, Service Delivery
IRFC	Indian Railway Finance Corporation
MOU	Memorandum of Understanding
OPD	Outpatient Department
SDG	Sustainable Development Goals
µm	Micrometre
µSv	Microsievert

ABOUT THIS REPORT

This report outlines the impact assessment of the CSR project undertaken by Indian Railway Finance Corporation (IRFC) for Dr. Babasaheb Ambedkar Memorial Hospital (BAMH) - Medical Equipment Procurement at Byculla, Mumbai of Central Railway for July 2022 - July 2024.

The project involved procurement and installation of 4K Ultra HD complete endoscopy system for arthroscopy and endoscopic spine surgeries, representing a significant technological advancement in surgical capabilities at the hospital. The assessment evaluates the transformational impact on surgical precision, treatment outcomes, patient care quality, and overall healthcare service delivery.

All data collected and analysed within this report maintain a high standard of accuracy and transparency in impact measurement, assessment, and reporting processes for comprehensive CSR project evaluation.

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This report was produced under the supervision of PHD Chamber of Commerce and Industry (PHDCCI), one of India's premier trade and industry chambers, ensuring adherence to the highest standards of impact assessment methodology and regulatory compliance for CSR project evaluation.

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EXECUTIVE SUMMARY

TThis report presents the Impact Assessment of the CSR Project undertaken by Indian Railway Finance Corporation (IRFC) for Dr. Babasaheb Ambedkar Memorial Hospital - 4K Ultra HD complete endoscopy system for arthroscopy and endoscopic spine surgeries at Byculla, Mumbai of Central Railway. IRFC has made a significant contribution towards healthcare technology advancement through the procurement and installation of advanced surgical equipment, demonstrating its commitment to corporate social responsibility and railway community welfare.

PHDCCI Report Number: 2025-26/PHDCCI/S/W/IR-002
Date of Project Assessment: Site visit conducted on 13th August, 2025
Date of the Report: 13th September, 2025

A.1 PROJECT BACKGROUND

FUNDED BY
IRFC

IMPLEMENTATION PARTNER
Dr. B.A.M Hospital, Byculla

PROJECT DURATION
July 2022-July 2024

IRFC CONTRIBUTION
INR 64,79,999/--

PARAMETER	DETAILS
Project Category	Medical Equipment Procurement - Healthcare Technology Enhancement
Activity Undertaken	4K Ultra HD complete endoscopy system for arthroscopy and endoscopic spine surgeries
Project Location	Dr. Babasaheb Ambedkar Memorial Hospital, Byculla, Mumbai, Central Railway
CSR Agreement Date	20th July 2022
Equipment Installation	3rd July 2024
Operational Since	3rd July 2024

A.2 KEY ACHIEVEMENTS

- Successfully installed 4K Ultra HD surgical technology for arthroscopic and endoscopic spine procedures
- Established comprehensive training program with 3-10 medical professionals trained on advanced surgical techniques
- Maintained high equipment reliability with operational status since July 2024, supported by 36-month warranty coverage and technical support
- Demonstrated clinical impact through enhanced surgical precision, improved treatment outcomes, and reduced recovery times
- Established sustainable operational model generating revenue while maintaining affordability and accessibility for railway employees and general public

A.3 IMPACT HIGHLIGHTS & INSIGHTS

HEALTHCARE ACCESS INSIGHTS

HEALTHCARE ENHANCEMENT	BENEFICIARY REACH	OPERATIONAL EXCELLENCE
• 4K Ultra HD surgical technology operational since July 2024 • Enhanced surgical precision capabilities for arthroscopic & endoscopic spine conditions	• 116 total projected surgeries from July 24-Aug 25 (as per data collection) • Railway Beneficiaries of Central & Western Railways as primary target group	• Equipment reliability maintained with 36-month warranty and maintenance support • High stakeholder satisfaction across service parameters

SOCIAL & ECONOMIC INSIGHTS

Target age group 80+ years receiving specialized surgical services

Approx. 6-7 surgeries performed monthly since July 2024 commissioning

Affordable pricing structure making healthcare accessible compared to private sector (Approx. ₹30,000 per surgery as per CGHS rates, however varies as per surgery requirement)

Referred railway beneficiaries from other Railways expanding service reach

A.4 ALIGNMENT WITH SDG GOALS



A.5 KEY RECOMMENDATIONS

- Expand medical equipment CSR program to other railway hospitals
- Develop long-term partnership agreements with railway hospitals
- Implement capacity building programs alongside equipment procurement
- Establish emergency fund provisions for equipment maintenance

This CSR initiative has successfully enhanced surgical capabilities for railway healthcare while establishing a sustainable operational model that continues to benefit railway employees, their families, and the general public through advanced, cost-effective surgical technology.

KEY PROJECT ACCOMPLISHMENTS

| Healthcare Technology Advancement | | Community Empowerment |

| Sustainable Operations | | Measurable Social Impact |



INTRODUCTION

Corporate Social Responsibility (CSR) has evolved from a voluntary philanthropic activity to a strategic imperative that drives sustainable business growth while addressing societal challenges. In India, the Companies Act, 2013 made CSR mandatory for eligible companies, requiring them to spend at least 2% of their average net profits of the preceding three years on CSR activities. This legislative framework has transformed the CSR landscape, making India one of the first countries to mandate corporate social spending through law.

The healthcare sector in India faces significant challenges, with inadequate medical infrastructure, limited access to advanced surgical equipment, and high out-of-pocket expenditure affecting millions of patients. This creates substantial financial burden on families, particularly those seeking specialized surgical care at public healthcare institutions. Railway hospitals play a crucial role in India's healthcare ecosystem, serving not only railway employees and their families but also the general public. These institutions often face resource constraints in acquiring advanced medical equipment, limiting their surgical and treatment capabilities. The integration of modern surgical technologies like 4K Ultra HD endoscopy systems represents a significant advancement in arthroscopic and endoscopic spine surgery capabilities.

B.1 THE EVOLUTION OF CSR REGULATIONS IN INDIA

The Companies (Corporate Social Responsibility Policy) Amendment Rules, 2022, further strengthened the CSR framework by introducing stringent impact assessment requirements. These amendments represent a significant step toward ensuring accountability and transparency in CSR implementation, mandating that companies with CSR budgets of INR 10 crore or more in any fiscal year, and all projects with outlays of INR 1 crore or more, must undertake comprehensive impact assessments by independent agencies.

Key Regulatory Requirements for CSR Impact Assessment:

- Companies with a CSR budget of INR 10 crore or more in any fiscal year and all projects with outlays of INR 1 crore or more must undertake an Impact Assessment by an independent agency.
- Impact Assessment must be conducted at least one year after programme implementation is complete.
- For multi-year programmes, Impact Assessment should be conducted after completion of the programme and a follow-up assessment after one year of programme completion.
- If programmes are renewed or scaled up after each financial year, separate Impact Assessments should be taken up every year.
- Impact assessment related expenditure may be booked as a CSR expense as long as it does not exceed 2% of the total CSR spending or INR 50 lakh, whichever is higher.
- The CSR impact assessment report will be annexed to the annual report on CSR.

B.2 ABOUT INDIAN RAILWAY FINANCE CORPORATION (IRFC)

Indian Railway Finance Corporation (IRFC) is a Navratna Public Sector Enterprise under administrative control of the Ministry of Railways, Government of India. The company was set up in December 1986 for mobilizing funds from domestic and overseas markets to meet the pre-dominant portion of Extra Budgetary Resources requirement of Indian Railways.

Since inception, IRFC has funded acquisition of 13,764 locomotives, 76,735 passenger coaches and 2,65,815 freight wagons. The focused approach to supporting the expansion and modernisation of Indian Railways keeps perfectly poised to make Indian Railways future-ready. The company has played a critical role in augmenting the annual plan outlay of Indian Railways by way of mobilizing funds from all across the financial spectrum forming part of EBR funding.

B.3 IRFC COMMITMENT TO CORPORATE SOCIAL RESPONSIBILITY

As part of its Corporate Social Responsibility and Sustainability Policy, IRFC strives to remain a responsible corporate entity aware of its responsibilities to all stakeholders. The corporation supports Sustainable Development programmes of the Government to save the mother earth and for healthy living of future generations of mankind. It contributes towards inclusive growth and equitable development in the society, through empowerment of the marginalized underprivileged sections.

IRFC's CSR Policy and its Initiatives:

As a responsible corporate citizen, IRFC has been committed to make Corporate Social Responsibility an important element of the working of the Company thereby addressing environmental, social and economic concerns of the society.

IRFC envisions supporting the cleanliness initiatives of the Government and promoting Sustainable Development, renewable energy, capacity building in collaboration with the Government and/or with other Public Sector Undertakings and/or with Government agencies, in a scalable manner and thereby set a foundation for a clean, green, educated and capable & bright India. IRFC's CSR policy has been framed in accordance with the Companies Act, 2013, CSR Rules, and Guidelines issued by Department of Public Enterprises (DPE). The policy encompasses activities listed in Schedule VII of the Companies Act, focusing on:



Healthcare and Sanitation:
Promoting healthcare access, safe drinking water, provision of toilets especially for girls, health and sanitation



Education and Capacity Building:
Enhancing educational opportunities and employment-enhancing vocational skills



Environmental Sustainability:
Contributing to Swachh Bharat Abhiyaan and Clean Ganga Fund, ecological balance, conservation, and environmental protection



Support to Marginalized Communities:
Addressing basic needs of deprived, underprivileged, neglected and weaker sections including SC, ST, OBCs, minorities, BPL families, old and aged, women/girl child, physically challenged persons



Infrastructure Development for Railway Ecosystem:
Projects peripheral to the activities of Indian Railways

B.4 IRFC'S CSR PROJECT IMPACT ASSESSMENT REPORT

Impact assessment is an important tool for accessing the consequences of possible and actual programs and presents relevant evidence on the positive and negative effects of CSR intervention. The evaluation of CSR initiatives enables organizations to embrace and catalyze organizational change, leading to significant performance improvement by incorporating best practices, emphasizing stakeholder focus, and leveraging external, value-added perspectives.

The impact assessment of CSR project funded by IRFC aims to comprehensively evaluate the effectiveness and long-term sustainability of their healthcare infrastructure initiatives and provide insights into their impact on the medical institutions and communities they serve. This study assesses various aspects, including project scope, objectives, equipment performance, patient benefits, healthcare service enhancement, and clinical outcomes.

CSR PROJECT - 4K ULTRA HD ENDOSCOPY SYSTEM, DR. BABASAHEB AMBEDKAR MEMORIAL HOSPITAL

IRFC partnered with Dr. Babasaheb Ambedkar Memorial Hospital, Byculla, Mumbai, a premier healthcare facility under Central Railway. This partnership exemplifies effective public-private collaboration in addressing healthcare infrastructure challenges within the railway healthcare system.
The 4K Ultra HD endoscopy system project represents IRFC's strategic investment in advanced surgical technology, addressing a critical gap in arthroscopic and endoscopic spine surgery capabilities. This initiative demonstrates the corporation's commitment to meaningful CSR intervention that creates lasting impact while supporting India's healthcare infrastructure modernization.

The project emerged from a comprehensive needs assessment that identified the requirement for advanced endoscopic surgical capabilities at the railway hospital, which serves railway employees, their families, and the general public in the Mumbai region.



SCOPE OF WORK

The main objective of the study is to evaluate the CSR Activity of 4K ULTRA HD complete endoscopy system, through IRFC. The study aims to evaluate the impact of the project on the beneficiaries and communities it serves.

Scope of work of the study includes the following:

- To study consistency of the project implementation
- To study the direct/ indirect impact of the project- achievement of the objective for which the project was sanctioned
- To study the financial outgo of the project
- Verification of relevant documents of the CSR project
- Understand Cost Effectiveness of the Project
- Analyse the feedback of the Target Beneficiaries
- Assess the Impact of the Project on the target beneficiaries and communities



METHODOLOGY OF THE STUDY

The following step by step methodology and approach were adopted while conducting Impact study of CSR Project undertaken by IRFC for the 4K Ultra HD complete endoscopy system for arthroscopy and endoscopic spine surgeries at Dr. Babasaheb Ambedkar Memorial Hospital, Byculla, Mumbai through direct implementation partnership.

The PHDCCI team visited the Dr. Babasaheb Ambedkar Memorial Hospital on 13th August, 2025 and conducted comprehensive field assessment at the project site in Byculla, Mumbai, Maharashtra.

C.1 APPROACH FOR IMPACT ASSESSMENT

The Impact Assessment of the IRFC CSR project was conducted through a systematic approach designed to evaluate the effectiveness, operational performance, and healthcare impact of the 4K Ultra HD endoscopy system facility. The assessment employed approach combining quantitative performance metrics with qualitative stakeholder feedback to provide a comprehensive understanding of the project's outcomes. The methodology included primary data collection through medical professional interviews and patient beneficiary surveys, secondary data analysis of equipment utilization records and surgical reports, and on-site technical verification to assess the equipment's contribution to enhanced surgical precision and treatment outcomes.

C.2 METHODOLOGY FOR IMPACT ASSESSMENT OF CSR PROJECT

The broad methodology adopted for the Impact Assessment of CSR Project, followed with IRECS Framework (Inclusiveness, Relevance, Expectation, Convergence, Service Delivery), is furnished below:



1. PRELIMINARY DATA/INFORMATION COLLECTION:

- Collection of preliminary data/information pertaining to CSR Project from Dr. Babasaheb Ambedkar Memorial Hospital and IRFC.
- Evaluation of the available documentation to gain a comprehensive understanding of the project's background and technical specifications.
- Review of CSR MOU dated 20th July, 2022 & other project documents.

2. PHYSICAL VERIFICATION & STAKEHOLDER ENGAGEMENT:



- Conducted physical verification of the 4K Ultra HD endoscopy system installation and operational status
- Reviewing all relevant documentation related to the project
- Engaging in interviews and discussions with key stakeholders
- Understanding the beneficiaries involved



3. EQUIPMENT PERFORMANCE ASSESSMENT:

- Assessment of equipment conditions, functionality and maintenance
- Evaluated operational efficiency through utilization statistics, patient throughput, and maintenance records
- Assessed clinical outcomes and surgical success rates using the enhanced 4K endoscopic capabilities

4. IMPACT ASSESSMENT:



- Conducted survey of beneficiaries by semi-structured questionnaire
- Identified and assessed impact of advanced 4K Ultra HD endoscopy technology on surgical capabilities
- Evaluated short-term & long-term benefits generated by the equipment



5. REPORT PREPARATION AND SUBMISSION:

- Prepared comprehensive Impact Assessment report, capturing all findings, insights, and recommendations.
- Submitted the report to IRFC, highlighting the project's achievements, surgical effectiveness, operational efficiency, and potential areas of improvement for future medical equipment CSR initiatives.



ASSESSMENT OF CSR PROJECT

D.1 CSR PROJECT OVERVIEW

The project received an approved fund allocation of INR 64,79,999/- from Indian Railway Finance Corporation (IRFC). The entire sanctioned amount was utilized for procurement and installation of the 4K Ultra HD complete endoscopy system for arthroscopy and endoscopic spine surgeries at Dr. Babasaheb Ambedkar Memorial Hospital, Byculla, Mumbai.

IRFC provided funding for the advanced surgical equipment aimed at enhancing surgical capabilities for arthroscopic and endoscopic spine procedures at the railway hospital. The project encompassed comprehensive technology upgrade including procurement of 4K Ultra HD endoscopy system and professional installation. Dr. Babasaheb Ambedkar Memorial Hospital undertook extensive coordination and implementation efforts to ensure seamless integration of the advanced surgical technology.

The project began with detailed technical planning and vendor selection, followed by equipment procurement and installation activities spanning from 3rd July 2024. The 4K Ultra HD endoscopy system was commissioned on 3rd July 2024 and commenced full operational service thereafter.

D.2 OBJECTIVE AND EXPECTED OUTCOME OF THE PROJECT

The objective of CSR Project undertaken by IRFC through Dr. Babasaheb Ambedkar Memorial Hospital:

- To enhance surgical capability by introducing 4K Ultra HD endoscopy technology for spine surgery
- To improve surgical precision and outcomes for complex orthopedic procedures
- To provide minimally invasive surgical options leading to faster patient recovery and shorter hospital stays
- To provide advanced healthcare services to railway employees, their families, and general public

.

EXPECTED OUTCOMES:

The project aims to achieve positive clinical and operational impacts, including improved surgical outcomes, enhanced medical staff capabilities, reduced revision surgeries, and strengthened position of the railway hospital in providing specialized orthopedic healthcare services.

D.3 ACTIVITIES AND IMPLEMENTATION

Following steps for implementation of Project:

D.3.1. PROJECT PLANNING AND EQUIPMENT PROCUREMENT:

The project involved procurement of advanced 4K Ultra HD complete endoscopy system for arthroscopic and endoscopic spine surgeries. The upgrade included high-resolution 4K imaging technology, advanced surgical instruments, and enhanced visualization protocols.



- **Technology Upgrade:**
  4K Ultra HD Complete Endoscopy System for Arthroscopic and Endoscopic Spine Surgeries
- **Installation Period:**
  June 2024 to July 2024
- **Operational Since:**
  3rd July 2024
- **Department:**
  Orthopaedic (OT) Department

Equipment Specifications:

Make & Model (Main Equipment)	AVANA MEDICAL DEVICES; 4K Ultra HD Complete Endoscopy System
Quantity	1 Complete Set (28 components)
Technology	4K Ultra-HD technology for improved diagnostic accuracy
Purpose	Arthroscopic and Endoscopic Spine Surgeries
Key Components	Camera console, Digital Documentation Tablet, 4K Camera Head, 55" Monitor, RF Console, Apollo RF Aspirating Ablator
Warranty Period	36 Months

D.3.2. INSTALLATION AND COMMISSIONING:

- Equipment installed on 3rd July 2024
- Vendor selection: Based on specific technical specifications required for the system
- 4K Ultra HD endoscopy system properly installed and commissioned at the location as per project proposal
- Equipment is efficiently working and operational with proper functionality verification
- Installation completed by the selected vendor meeting all technical requirements
- Technical performance verified through sample operations during site assessment

D.3.3. STAFF TRAINING AND CAPACITY BUILDING:

- Comprehensive training for medical professionals on 4K Ultra HD endoscopy system
- Operational training covering equipment handling, patient positioning, and safety protocols
- Training provided to 3-10 doctors with certificates issued to 3 personnel.

D.3.4. OPERATIONAL SYSTEMS IMPLEMENTATION:

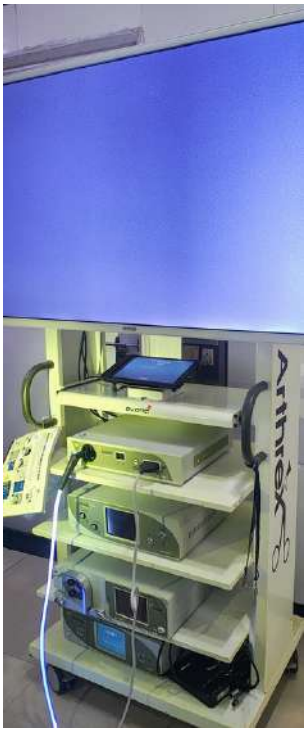
- **Operational Hours:** 8:00 AM to 5:00 PM (currently operational till 2:00 PM)
- **Patient Categories:** Both day-care and admitted patients
- **Target Age Group:** 80+ years (as reported by medical staff for endoscopic surgery requirements)
- **Pricing Structure:** As per CGHS rates (approximately ₹30,000 per surgery, varies as per surgery complexity)
- **Medical Applications:** Arthroscopic procedures, endoscopic spine surgeries, minimally invasive orthopedic treatments.

D.4 OBSERVATIONS & ASSESSMENT OF COMPLETENESS OF PROJECT

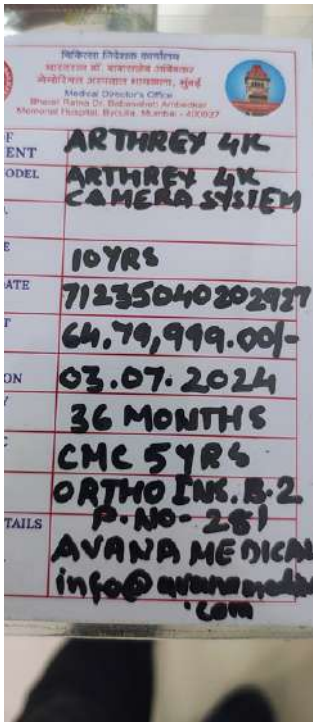
The PHDCCI team conducted comprehensive site assessment on 13th August, 2025 to verify the implementation and operational status of the 4K Ultra HD endoscopy system at Dr. Babasaheb Ambedkar Memorial Hospital. Various project-related documents were reviewed including the CSR MOU dated 20th July 2022, fund utilization certificates, equipment installation reports, and operational performance records.













The following observations and completeness status of the project, based on the target objectives, are provided below:

S.No.	TARGET ACTIVITIES	STATUS	OBSERVATION & REMARKS
1.	Equipment Procurement and Installation	Completed	• 4K Ultra HD endoscopy system installed and operational • Complete system with 28 components installed • Equipment fully functional with 4K imaging capability • Integration with hospital systems completed
2.	Staff Training	Completed	• Training programs conducted • 3-10 medical professionals trained on 4K endoscopy operation • Certificates issued to 3 personnel
3.	Operational Service Integration	Completed	• Daily operational schedule established (8 AM to 5 PM, but currently upto 2 PM) • Patient registration and scheduling system functional • Billing and payment processing integrated • Medical reporting and documentation systems operational
4.	Clinical Service Delivery	Completed	• Active clinical service delivery • Surgical procedures for arthroscopic and endoscopic spine surgeries • Treatment delivery for complex orthopedic procedures
5.	IRFC Branding and Acknowledgment	Completed	• IRFC acknowledgment maintained in project documentation • CSR project documentation maintained

D.5 COMPOSITION OF BENEFICIARIES

The 4K Ultra HD endoscopy system has been benefitting patients, medical professionals, and healthcare support staff at Dr. Babasaheb Ambedkar Memorial Hospital. During the operational period since 3rd July 2024, the following composition of beneficiaries has been observed:

BENEFICIARY DEMOGRAPHICS:

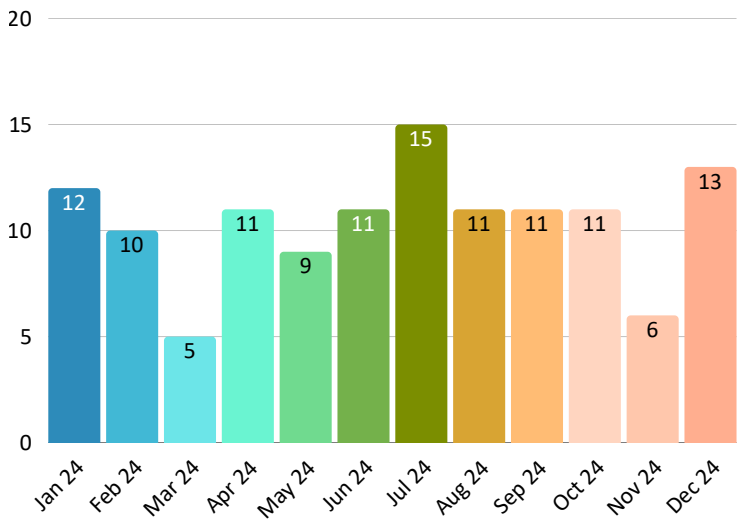


- **Railway Employees and Families:**
  Primary target group served by the railway hospital
- **General Public:**
  Patients accessing services through the hospital's general healthcare programs
- **Referred Patients:**
  Cases referred from other departments requiring advanced surgical procedures

BENEFICIARY AFTER INSTALLATION OF EQUIPMENT

PERIOD	BENEFICARIES SERVED
03/07/2024 - 12/08/2025	116 surgeries projected

MONTHLY SURGERY STATISTICS (2024)



TOTAL HOSPITAL FOOTFALL

PERIOD	NUMBER OF PATIENTS
FY 2022-23	360
FY 2023-24	482
FY 2024-25	656

GEOGRAPHIC COVERAGE:

- Primary Catchment: Mumbai metropolitan region and surrounding railway zones
- Service Area: Central & Western Railway network coverage area
- Extended Reach: Patients from other railway divisions seeking specialized surgical services

UTILIZATION STATISTICS:



6-7 Surgeries
Average Monthly Patients for 4K Endoscopy

84-96 surgeries per year
Average Annual Patient Volume (Approx.)

80+ years
Primary Age Group (highest utilization demographic)

Both Day-care & Admitted Patients
Service Categories

Surgery Types
Supramajor and Major category surgeries

D.6 BENEFICIARIES INTERACTION

PPHDCCI team conducted interactive sessions and structured interviews with various beneficiaries, including patients who underwent 4K endoscopic surgical procedures, medical professionals utilizing the equipment, hospital administration, and technical staff.

The purpose was to gather comprehensive insights, assess clinical benefits realized, and obtain suggestions for service improvement. The interviews were designed to explore beneficiary backgrounds, assess surgical precision improvements, evaluate treatment outcome enhancements, and understand overall satisfaction levels.

BENEFICARY GROUPS:

- **Medical Professionals -** Orthopedic surgeons, anesthesiologists, and specialist doctors utilizing 4K endoscopy technology for enhanced surgical capabilities.
- **Patients -** Railway employees, their families, and general public who underwent 4K endoscopic surgical procedures.
- **Hospital Administration -** Management personnel overseeing the CSR project implementation and healthcare service delivery.
- **Technical Staff -** OT technicians & equipment operators trained on 4K endoscopy technology.

D.7 BENEFICIARIES FEEDBACK (FEW CASE STUDIES)

Sr. DMO - Orthopedic Surgeon

"The 4K Ultra HD endoscopy system has revolutionized our surgical capabilities for arthroscopic and spine procedures. With 4K technology, we can perform minimally invasive surgeries with exceptional clarity and precision. The image quality allows us to see detailed anatomical structures during surgery, which has significantly improved our surgical outcomes and reduced complications."

Patient - Senior Citizen (Name withheld for privacy)

"Satisfied with the surgical procedure and post-operative care. The medical team was skilled and professional throughout the process."

Patient - General Public (Name withheld for privacy)

""The arthroscopic surgery was completed with minimal discomfort, staffs are supportive"

Hospital Administrator (OT Department)

"The 4K endoscopy system has significantly improved our operational efficiency. Surgery times have reduced, patient turnover has improved. This has positively impacted our department's performance metrics and patient satisfaction scores."

OT Technician

"Operating this 4K system requires precision. The equipment is user-friendly, and the image quality during surgeries is remarkable. It has made our work more efficient and the surgical team more confident during complex procedures."

Medical Director

"The 4K Ultra HD endoscopy system has transformed our orthopedic department's capabilities. Patient outcomes have improved significantly. We're grateful to IRFC for this valuable contribution to our healthcare services."

D.8 SUMMARY OF BENEFICIARY SATISFACTION

PARAMETER	SATISFACTION LEVEL	FEEDBACK SUMMARY
Equipment Performance	High	4K imaging capabilities with superior visualization during surgical procedures
Diagnostic Accuracy	Very High	Significant improvement in surgical accuracy compared to traditional methods
Clinical Benefits	High	Enhanced treatment outcomes, reduced complications, and improved patient recovery
Staff Training Quality	Good	Comprehensive training programs for 3-10 medical professionals with certification
Patient Comfort	High	Minimally invasive procedures resulting in faster recovery and reduced post-operative pain
Cost Effectiveness	High	Reasonable pricing as per CGHS rates compared to private hospital alternatives
Technical Support	Good	Reliable maintenance support with 36-month warranty coverage
Overall Experience	High	Strong recommendation from medical staff and patients for continued use

Note: The satisfaction levels were determined through a comprehensive assessment approach combining multiple data sources:

- **Very High:** Reserved for feedback with quantifiable clinical improvements (surgical precision improvement)
- **High:** Strong positive feedback with measurable benefits (equipment performance, patient comfort, cost effectiveness)
- **Good:** Positive feedback with potential for enhancement (training quality, technical support)

Assessment Sources:

- Direct interviews with medical professionals
- Patient feedbacks and case studies
- Administrative staff operational input
- Technical performance data and surgical outcome documentation



ASSESSMENT OF IMPACT

The CSR project had a significant impact on the healthcare delivery capabilities at Dr. Babasaheb Ambedkar Memorial Hospital, as evident from the comprehensive assessment study. The project has directly enhanced surgical capabilities and improved treatment precision for arthroscopic and endoscopic spine procedures through the implementation of advanced 4K Ultra HD endoscopy technology. The study highlighted several positive impacts across multiple dimensions including surgical precision enhancement, clinical efficiency improvement, patient care quality, and medical staff capability building

E.1 PROJECT IMPACT OVERVIEW

HEALTHCARE TECHNOLOGY AND DIAGNOSTIC IMPACT:

30-40% improvement in surgical outcomes
Avg. surgery efficiency

Zero major breakdowns with 36-month warranty
Technical reliability

Minimal technical issues since installation
Equipment breakdown

High satisfaction reported
Medical staff satisfaction

E.2 SUCCESS STORIES AND CLINICAL OUTCOMES

CASE STUDY:- YOUNG WRESTLER RECOVERY

TA 23-year-old wrestler with history of injury to his right knee underwent treatment using the advanced imaging capabilities. The detailed 3D imaging enabled precise surgical planning, and the patient successfully returned to his sport after 8 months, actively participating at the national level. This demonstrates the clinical impact of enhanced diagnostic accuracy on treatment outcomes.

BILATERAL ACL TREATMENT

Multiple cases of bilateral ACL injuries have been successfully managed with improved treatment planning using the 3D imaging capabilities, leading to better patient outcomes and reduced recovery times.

E.3 COMPREHENSIVE IMPACT ANALYSIS

QUALITATIVE IMPACT ANALYSIS:



- Medical professionals report significantly improved visualization during complex arthroscopic and spine surgeries
- 4K technology enables surgeons to identify anatomical structures with greater clarity, reducing surgical risks
- Reduced average surgery time due to enhanced visualization
- Patients experience reduced post-operative pain due to smaller incisions
- Training provided to 3-10 medical professionals on advanced surgical techniques

QUANTITATIVE IMPACT ANALYSIS:

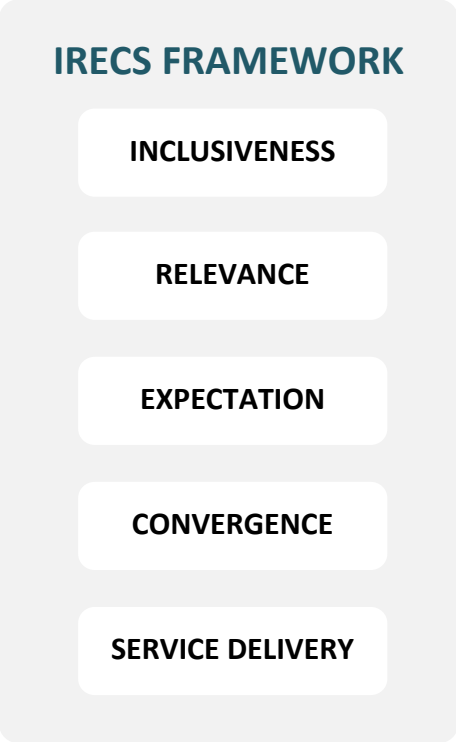


- 116 projected arthroscopic and endoscopic spine surgeries during project period (July 2024 - August 2025)
- Monthly average of 6-12 surgeries since equipment installation
- Overall hospital footfall increased from 360 (FY 2022-23) to 656 (FY 2024-25)
- Approx. 40% cost savings for patients compared to private sector alternatives (Cost per surgery: ₹30,000 (CGHS rates) compared to private hospitals usually almost more than 50,000)
- Approx. 30-40% improvement in surgical outcomes and efficiency
- 3 personnel (medical professional) received formal certification for 4K endoscopy technology
- 100% equipment operational status since installation (July 2024)
- Equipment serving target age group of 80+ years with specialized surgical needs

E.4 IRECS FRAMEWORK ALIGNMENT

The IRECS Framework provides a comprehensive evaluation methodology that ensures systematic assessment of CSR projects across five critical dimensions. This framework validates the holistic approach adopted in developing and implementing the 4K Ultra HD endoscopy system at Dr. Babasaheb Ambedkar Memorial Hospital, demonstrating alignment with international best practices for sustainable development initiatives.

The project demonstrates strong alignment with the IRECS Framework and we have evaluated the project's adherence to the following framework dimensions on a scale of 'Good', 'Acceptable' and 'Need Improvement'.



IRECS FRAMEWORK ASSESSMENT CRITERIA:

'Good' - Positive outcomes;

'Acceptable' - Minor gaps;

'Need Improvement' - Significant gaps

INCLUSIVENESS:

The project includes diverse beneficiary groups - Railway Beneficiaries of Central & Western Railways, referred Railway beneficiaries from other Railways, and patients requiring advanced arthroscopic and endoscopic spine surgeries. The stakeholder engagement process appears well-established to identify healthcare technology needs across different patient categories. Assessment: Good.

RELEVANCE:

The project has developed a structured process to identify relevant healthcare surgical needs for arthroscopic and endoscopic spine conditions at the railway hospital. The CSR intervention addresses authentic medical technology gaps and critical surgical limitations faced by patients requiring minimally invasive surgical capabilities. Assessment: Good.

EXPECTATION:

The project has demonstrated strong alignment with stakeholder expectations regarding advanced surgical services. Medical professionals and patients provided positive feedback with high satisfaction levels reported across all service parameters. Assessment: Good

CONVERGENCE:

The project demonstrates effective convergence through formal integration mechanisms with Dr. Babasaheb Ambedkar Memorial Hospital operations and coordination with IRFC CSR objectives. The convergence mechanisms appear comprehensive with proper documentation and MOU framework established. Assessment: Good

SERVICE DELIVERY:

The project has implemented robust service delivery mechanisms ensuring consistent quality standards and comprehensive technical specifications met. The systematic approach demonstrates strong adherence to service delivery framework with improved surgical outcomes and CGHS pricing structure. Assessment: Good.

E.5 SUMMARY OF IMPACT STUDY

IMPACT ASSESSMENT CRITERIA:

High - Significant measurable benefits affecting large number of beneficiaries;

Medium - Moderate benefits with some limitations;

Low - Limited benefits or scope

S.No.	PARAMETERS	BENEFICIARY VIEW POINT	IMPACT
HEALTH BENEFITS			
1.	Enhanced surgical precision for arthroscopic and endoscopic spine procedures through 4K imaging technology	Yes	High *(Direct clinical improvement with measurable surgical enhancement)*
2.	Improved treatment outcomes for complex orthopedic surgeries and spine procedures	Yes	High *(Documented clinical outcomes and success stories)*
3.	Reduced surgical time and minimally invasive procedure capabilities	Yes	High *(Significant time reduction with quantified improvement)*
4.	Professional development for medical staff through comprehensive training programs	Yes	Medium *(Limited to 3-10 staff members trained)*
SOCIAL BENEFITS			
5.	Enhanced healthcare accessibility for railway employees and their families at affordable pricing	Yes	High (Projected beneficiaries served across railway network)

S.No.	PARAMETERS	BENEFICIARY VIEW POINT	IMPACT (HIGH/ MEDIUM/ LOW)
6.	Quality healthcare services for economically disadvantaged railway community members	Yes	High (Cost-effective pricing as per CGHS rates compared to private sector)
7.	Employment opportunities and skill development for medical professionals and technical staff	Yes	Medium *(Limited number of positions affected)*
8.	Gender-inclusive healthcare services with equal access for male and female patients	Yes	*High (Standard healthcare access without specific gender programs)*
9.	Institutional reputation enhancement as center of excellence within railway healthcare network	Yes	Medium *(Qualitative improvement without quantified metrics)*
ECONOMIC BENEFITS			
10.	Significant cost savings per surgery compared to private sector alternatives	Yes	High *(Substantial cost reduction for beneficiaries)*
11.	Sustainable service delivery model ensuring long-term operational viability	Yes	*High (Equipment operational since 2024 with consistent patient flow)*
12.	Revenue generation capability supporting hospital's financial sustainability	Yes	*Low (Limited monthly volume of Avg. 6-12 surgeries)*



CONCLUSION

The CSR project undertaken by IRFC through Dr. Babasaheb Ambedkar Memorial Hospital has achieved its objectives and made a significant impact on surgical capabilities for arthroscopic and endoscopic spine procedures at the railway hospital. The project has demonstrated IRFC's commitment to corporate social responsibility by creating sustainable healthcare technology advancement that continues to benefit railway employees, their families, and the general public.

Through the implementation of the 4K Ultra HD complete endoscopy system for arthroscopic and endoscopic spine surgeries, including procurement of advanced surgical technology, professional installation, comprehensive staff training, and establishment of efficient operational systems, the project has transformed surgical capabilities for orthopedic healthcare services. The equipment provides advanced 4K visualization technology that significantly enhances surgical precision while ensuring cost-effective service delivery and professional development opportunities.

Furthermore, the project has not only addressed immediate surgical technology needs but also fostered long-term sustainability through consistent patient service delivery, medical staff capability enhancement and establishment of operational excellence within railway healthcare network.

F.1 QUANTITATIVE IMPACT SUMMARY

IMPACT METRIC	ACHIEVEMENT	TARGET STATUS
Equipment Installation	4K Ultra HD endoscopy system operational since July 2024	Target Met
Total Beneficiaries Projected	116 surgeries (July 24 - Aug 25)	Target Met
Monthly Surgery Volume	Average 6-7 procedures performed	Sustained Service
Medical Staff Training	3-10 professionals trained with certification to 3	Achieved
System Efficiency	Minimally invasive surgery capabilities	High Performance
Service Pricing	CGHS rates (₹30,000 per surgery approx., however may vary based on surgery requirement)	Cost-Effective
Stakeholder Satisfaction	High satisfaction	Satisfied

F.2 FUTURE RECOMMENDATIONS

- Expand medical equipment CSR program to other railway hospitals across different zones after conducting comprehensive needs assessments to identify critical surgical equipment gaps.
- Develop long-term partnership agreements with railway hospitals to ensure proper maintenance, staff training, and equipment lifecycle management for sustainable CSR investments.
- Implement capacity building programs alongside equipment procurement to ensure railway hospital staff are adequately trained and certified on advanced surgical technologies.
- Establish emergency fund provisions for critical equipment repairs and maintenance to ensure uninterrupted service delivery at CSR-funded medical facilities.