INDIAN RAILWAY FINANCE CORPORATION



CSR PROJECT IMPACT ASSESSMENT

Dr. Babasaheb Ambedkar Memorial Hospital Byculla, Mumbai

PROJECT: 3D Cone Beam CT Scan Machine Upgradation

JANUARY 2022 - APRIL 2023

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 January 2022- April 2023.

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. Jaikumar Tirkey (Sr. Dental Surgeon), Ms. Pisha Singh (BPMT Radiography), 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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PHDCCI

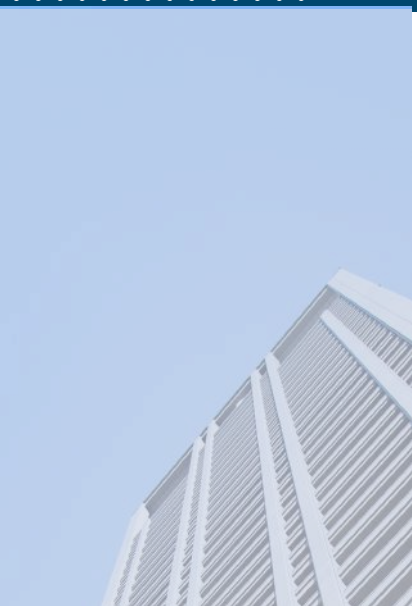


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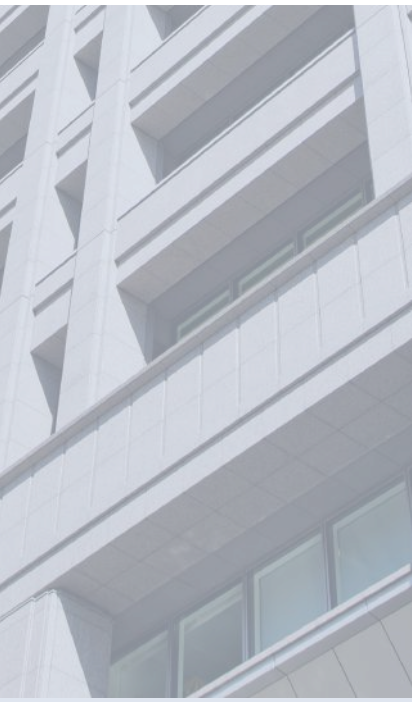
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ABBREVIATIONS

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 January 2022- April 2023.

The project involved upgrading the existing OPG (Orthopantomogram) Unit to a 3D cone beam CT scan (3D CBCT) machine, representing a significant technological advancement in dental and maxillofacial imaging capabilities at the hospital. The assessment evaluates the transformational impact on diagnostic accuracy, treatment planning, 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

This report presents the Impact Assessment of the CSR Project undertaken by Indian Railway Finance Corporation (IRFC) for Dr. Babasaheb Ambedkar Memorial Hospital - 3D kit upgrade of existing OPG Unit to convert it to 3D cone beam CT scan (3D CBCT) Machine at Byculla, Mumbai of Central Railway. IRFC has made a significant contribution towards healthcare technology advancement through the procurement and installation of advanced diagnostic imaging equipment, demonstrating its commitment to corporate social responsibility and railway community welfare.

PHDCCI Report Number: 2025-26/PHDCCI/S/W/IR-001
Date of Project Assessment: Site visit conducted on 13th August, 2025
Date of the Report: 13th September, 2025

A.1 PROJECT BACKGROUND

FUNDED BY	IMPLEMENTATION PARTNER	PROJECT DURATION	IRFC CONTRIBUTION
IRFC	Dr. B.A.M Hospital, Byculla	Jan 2022- Apr 2023	INR 46,17,930/-

PARAMETER	DETAILS
Project Category	Medical Equipment Procurement - Healthcare Technology Enhancement
Activity Undertaken	3D kit upgrade of existing OPG Unit to 3D cone beam CT scan capability
Project Location	Dr. Babasaheb Ambedkar Memorial Hospital, Byculla, Mumbai, Central Railway
Equipment Installation	1st April, 2023
Operational Since	1st April, 2023
Scan Time Capability	5-15 seconds per scan
Patient Processing Time	10 minutes per patient
Service Pricing	₹2,100 per 3D CBCT scan (Vary depends on surgery requirement)

A.2 KEY ACHIEVEMENTS

- Successfully implemented advanced 3D diagnostic imaging technology upgrading from traditional OPG to cone beam CT capability for enhanced dental and maxillofacial diagnostics
- Established comprehensive training program with 6 medical professionals trained
- Maintained high equipment reliability with operational status since 2023, supported by quarterly maintenance inspections and technical support
- Demonstrated clinical impact through enhanced diagnostic accuracy, improved treatment planning capabilities, and scan efficiency
- 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
• Advanced 3D cone beam CT imaging technology operational since Apr 2023 • Enhanced visualization capabilities for dental and maxillofacial conditions	• 1,498 total beneficiaries served from Apr.23-Aug.25 (as of data collection) • Railway Beneficiaries of Central & Western Railways as primary target group	• Equipment reliability maintained with quarterly inspections and maintenance support • High stakeholder satisfaction across service parameters

SOCIAL & ECONOMIC INSIGHTS

Target age group 40-50 years receiving specialized 3D imaging services

6-7 patients served monthly since April 2023 commissioning

Referred railway beneficiaries from other Railways expanding service reach

Affordable pricing structure making healthcare accessible compared to private sector (₹2,100 per scan, vary as per surgery)

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 diagnostic imaging 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 medical 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 diagnostic equipment, and high out-of-pocket expenditure affecting millions of patients. This creates substantial financial burden on families, particularly those seeking specialized medical 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 diagnostic and treatment capabilities. The integration of modern imaging technologies like 3D cone beam computed tomography (CBCT) represents a significant advancement in dental and maxillofacial diagnostics.

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 - 3D CBCT EQUIPMENT UPGRADE, 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 3D CBCT equipment upgrade project represents IRFC's strategic investment in advanced medical technology, addressing a critical gap in diagnostic imaging capabilities for dental and maxillofacial conditions. 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 3D imaging 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 Indian Railway Finance Corporation (IRFC), specifically focusing on the upgrading the existing OPG (Orthopantomogram) Unit to a 3D cone beam CT scan (3D CBCT) machine. 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 3D kit upgrade of existing OPG Unit to 3D cone beam CT scan (3D CBCT) Machine 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 3D CBCT equipment upgrade 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 diagnostic reports, and on-site technical verification to assess the equipment's contribution to enhanced diagnostic accuracy and treatment planning capabilities.

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 10th July, 2022 & other project documents.

2. PHYSICAL VERIFICATION & STAKEHOLDER ENGAGEMENT:



- Conducted physical verification of the 3D CBCT equipment 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 treatment success rates using the enhanced 3D imaging capabilities

4. IMPACT ASSESSMENT:



- Conducted survey of beneficiaries by semi-structured questionnaire
- Identified and assessed impact of advanced 3D CBCT imaging technology on diagnostic 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, clinical 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 46,17,930/- from Indian Railway Finance Corporation (IRFC). The entire sanctioned amount was utilized for procurement and installation of the 3D kit upgrade to convert the existing OPG Unit to a 3D cone beam CT scan (3D CBCT) Machine at Dr. Babasaheb Ambedkar Memorial Hospital, Byculla, Mumbai.

IRFC provided funding for the advanced medical equipment aimed at enhancing diagnostic imaging capabilities for dental and maxillofacial conditions at the railway hospital. The project encompassed comprehensive technology upgrade including procurement of 3D CBCT conversion kit and professional installation. Dr. Babasaheb Ambedkar Memorial Hospital undertook extensive coordination and implementation efforts to ensure seamless integration of the advanced imaging technology.

The project began with detailed technical planning and vendor selection, followed by equipment procurement and installation activities spanning from January 2022 to March 2022. The 3D CBCT system was commissioned on 1st April 2022 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 diagnostic imaging capabilities by upgrading existing system to advanced 3D cone beam CT technology
- To improve treatment planning precision for complex dental procedures, oral surgeries, and maxillofacial treatments
- 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 healthcare outcomes, enhanced medical staff capabilities, and strengthened position of the railway hospital in providing specialized 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 3D kit upgrade for the existing OPG Unit to convert it to 3D cone beam CT scan capability. The upgrade included high-resolution 3D imaging sensors, advanced software for 3D reconstruction, and enhanced imaging protocols.



- **Technology Upgrade:** 3D Kit Upgrade of Existing OPG Unit to 3D Cone Beam CT Scan (3D CBCT) Machine
- **Installation Period:** January 2022 to March 2023
- **Operational Since:** January 2022 to March 2023
- **Department:** Dental Department (Oral & Maxillofacial Surgery)

Equipment Specifications:

Make & Model (Main Equipment)	Dentsply Sirona; 3D Module 11*10 for Orthophos SL/S 2D
Quantity	1 Set
Voxel Size | Pixel Size| Dose	80 to 220 (µm) | 0.12 mm | 25-300 µSv (Less the better)
Scan Time	5-15 seconds per scan
Patient Processing Time	Approximately 10 minutes per patient
Report Generation	Maximum 2 days (minimum 2 hours)

D.3.2. INSTALLATION AND COMMISSIONING:

- Equipment installed on 1st April 2022
- Vendor selection based on specific technical specifications required for the upgrade
- 3D kit upgrade 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 3 Nos. medical professionals for 3D Kit
- Operational training covering equipment handling, patient positioning, and safety protocols

D.3.4. OPERATIONAL SYSTEMS IMPLEMENTATION:

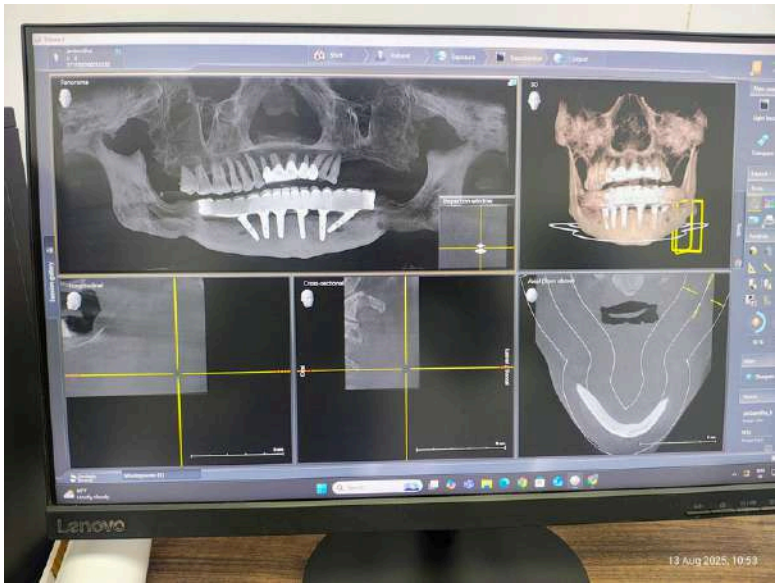
- **Operational Hours:** 8:00 AM to 5:00 PM
- **Patient Categories:** Both OPD and admitted patients
- **Target Age Group:** 40-50 years (as reported by medical staff for 3D upgrade requirements)
- **Pricing Structure:** Vary as per Surgery requirement
- **Medical Applications:** Dental surgery planning, maxillofacial diagnostics, orthodontic treatment planning

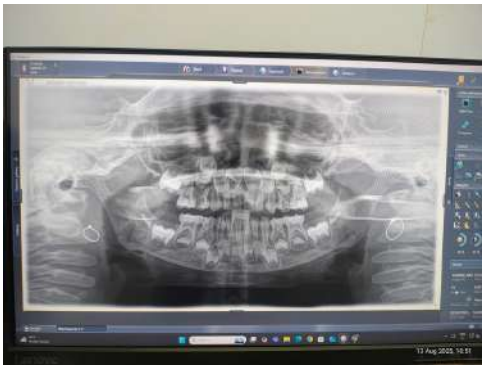
D.4 OBSERVATIONS & ASSESSMENT OF COMPLETENESS OF PROJECT

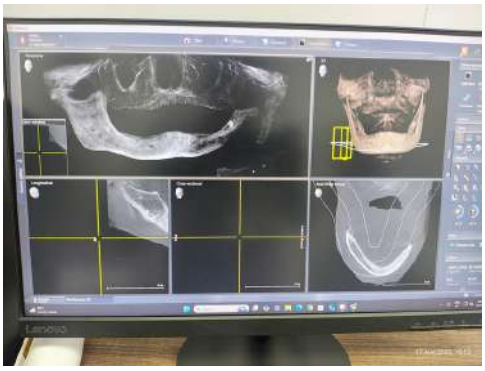
The PHDCCI team conducted comprehensive site assessment on 13th August, 2025 to verify the implementation and operational status of the 3D CBCT equipment at Dr. Babasaheb Ambedkar Memorial Hospital. Various project-related documents were reviewed including the CSR MOU dated 10th July 2022, fund utilization 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	• Advanced 3D CBCT system successfully installed and operational • 3D kit upgrade completed converting OPG to 3D cone beam CT capability • Equipment fully functional with 5-15-second scan time capability • Integration with hospital systems completed
2.	**Staff Training**	Completed	• Training programs successfully conducted-6 Nos. medical professionals trained on 3D CBCT operation
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 • Diagnostic imaging for dental and maxillofacial conditions • Treatment planning support for complex surgical procedures
5.	**IRFC Branding and Acknowledgment**	Completed	• IRFC acknowledgment prominently displayed on equipment • CSR project documentation maintained

D.5 COMPOSITION OF BENEFICIARIES

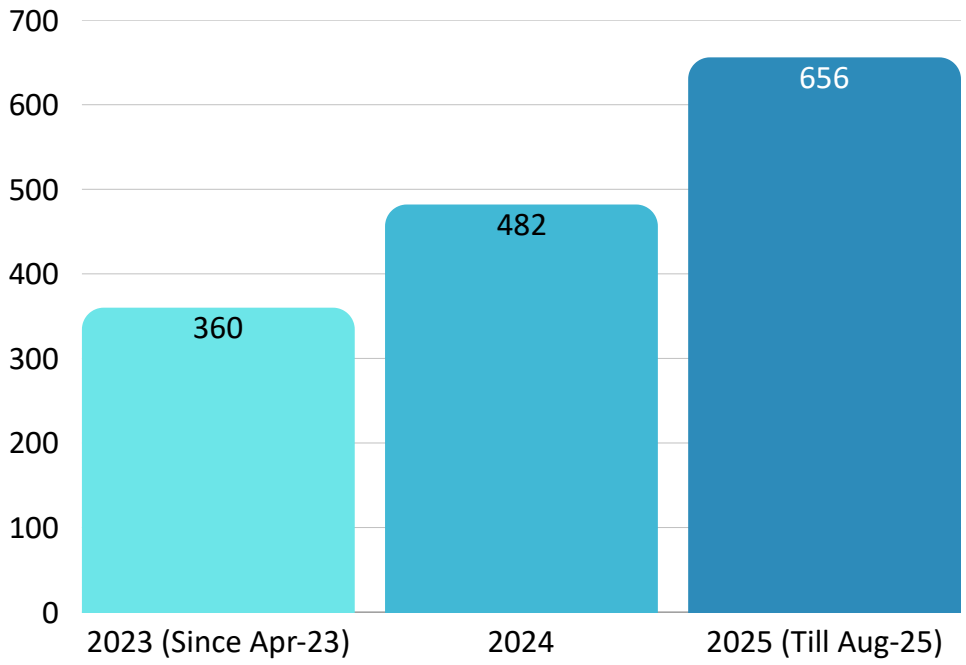
The 3D CBCT equipment has been benefitting patients, medical professionals, and healthcare support staff at Dr. Babasaheb Ambedkar Memorial Hospital. During the operational period since April 2022, the following composition of beneficiaries has been observed:

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 3D imaging

YEAR-WISE BENEFICARIES AFTER UPGRADATION OF MACHINE



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 imaging services, advanced maxillofacial and dental imaging

UTILIZATION STATISTICS:



6-7 patients
Average Monthly Patients for 3D CBCT imaging

80-85 patients per year
Average Annual Patient Volume (Approx.) for 3D CBCT imaging

40-50 years
Primary Age Group (highest utilization demographic)

Both OPD and admitted patients
Service Categories

D.6 BENEFICIARIES INTERACTION

PHDCCI team conducted interactive sessions and structured interviews with various beneficiaries, including patients who underwent 3D CBCT imaging 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 diagnostic accuracy improvements, evaluate treatment planning enhancements, and understand overall satisfaction levels.

BENEFICARY GROUPS:

- **Medical Professionals -** Dental surgeons, radiologists, and specialist doctors utilizing 3D CBCT technology for enhanced diagnostic capabilities
- **Patients -** Railway employees, their families, and general public who underwent 3D CBCT imaging procedures
- **Hospital Administration -** Management personnel overseeing the CSR project implementation and healthcare service delivery
- **Technical Staff -** Radiography technicians & equipment operators trained on 3D CBCT technology

D.7 BENEFICIARIES FEEDBACK (FEW CASE STUDIES)

Dr. Jaikumar Tirkey (Senior Dental Surgeon)

3D CBCT upgrade has significantly enhanced our diagnostic capabilities. Previously with OPG system, we had limited visualization for complex dental and maxillofacial cases. Now with 3D cone beam technology, we can see detailed anatomical structures in three dimensions, which has improved our treatment planning accuracy considerably. Scan time is excellent for patient comfort, and image quality helps us make more precise diagnoses.

Ms. Pisha Singh (BPMT Radiography Technician)

I have been operating this 3D CBCT equipment since its installation. The training provided for operating this advanced system. The equipment is user-friendly and patient processing time allows us to serve patients efficiently. The image quality is excellent.

Patient (Name withheld for privacy)

I underwent CBCT imaging for my dental treatment planning. The procedure was comfortable. The staff explained process clearly. The cost is reasonable compared to other hospitals.

Part-time Dental Surgeon

For orthodontic treatment planning and oral surgery cases, the detailed 3D visualization allows us to plan treatments with much greater precision. We can now handle cases that previously would have required referral to specialized centers.

Dr. Sushma Matey (Medical Director)

3D CBCT equipment has enhanced our reputation in the railway healthcare network. We've seen increased patient satisfaction and improved clinical outcomes. We're very 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	Advanced 3D imaging capabilities with 14-second (Average) scan time efficiency
Diagnostic Accuracy	High	Significant improvement compared to traditional OPG system
Clinical Benefits	High	Enhanced treatment planning and improved clinical outcomes
Staff Training Quality	Good	Comprehensive training programs to 6 Nos. Staff
Patient Comfort	High	Quick scan time and comfortable procedure experience
Cost Effectiveness	High	Reasonable pricing (depend on the procedure) compared to private hospital alternatives
Technical Support	Good	Reliable maintenance support with quarterly inspections
Overall Experience	High	Strong recommendation from medical staff and patients

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

- **Very High:** Reserved for feedback with quantifiable clinical improvements (diagnostic accuracy 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
- Administrative staff operational input
- Technical performance data and Clinical 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 diagnostic imaging capabilities and improved treatment planning precision for dental and maxillofacial conditions through the implementation of advanced 3D CBCT technology. The study highlighted several positive impacts across multiple dimensions including diagnostic accuracy enhancement, clinical efficiency improvement, patient care quality, and medical staff capability building.

E.1 PROJECT IMPACT OVERVIEW

HEALTHCARE TECHNOLOGY AND DIAGNOSTIC IMPACT:

14 seconds
Average scan time achieved

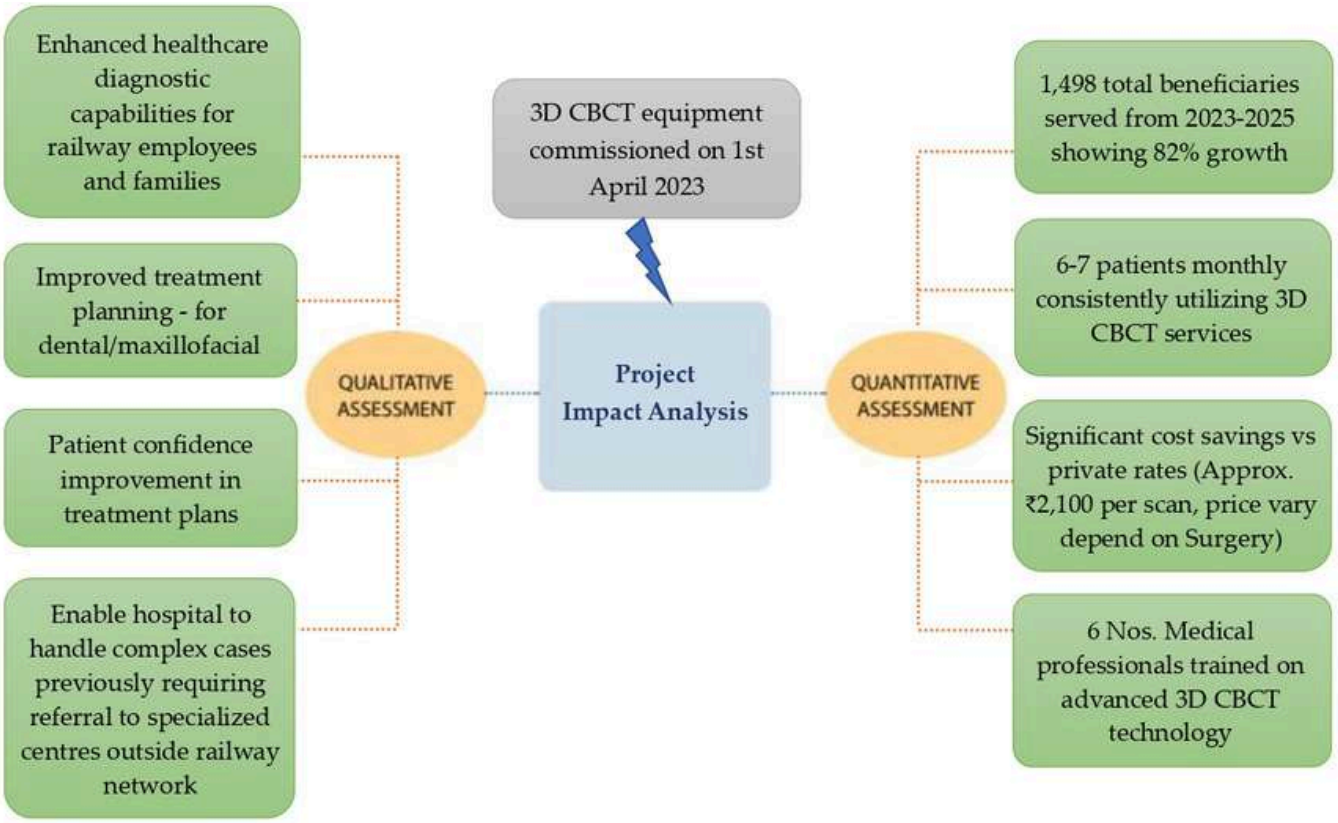
Approx. 20% increase
Revenue increase reported

2 breakdowns in 2 years
Equipment breakdown history

High satisfaction reported
Medical staff satisfaction

E.2 COMPREHENSIVE IMPACT ANALYSIS

QUALITATIVE AND QUANTITATIVE IMPACT ANALYSIS:



E.3 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 3D CBCT equipment upgrade 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 maxillofacial and dental imaging. 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 diagnostic needs for dental and maxillofacial conditions at the railway hospital. The CSR intervention addresses authentic medical technology gaps and critical diagnostic limitations faced by patients requiring 3D imaging capabilities. Assessment: Good.

IRECS FRAMEWORK

- INCLUSIVENESS
- RELEVANCE
- EXPECTATION
- CONVERGENCE
- SERVICE DELIVERY

EXPECTATION:

The project has demonstrated strong alignment with stakeholder expectations regarding advanced diagnostic imaging 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 with 6-7 monthly patients served and comprehensive technical specifications met. The systematic approach demonstrates strong adherence to service delivery framework with average 14-second scan time and approx. ₹2,100 pricing structure., however varies price as per surgery. Assessment: Good.

E.4 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 diagnostic accuracy for dental and maxillofacial conditions through 3D imaging technology	Yes	High *(Direct clinical improvement with measurable diagnostic enhancement)*
2.	Improved treatment planning precision for complex surgical procedures and orthodontic treatments	Yes	High *(Documented clinical outcomes and success stories)*
3.	Reduced diagnostic time and comfortable patient	Yes	High *(Significant time reduction with quantified improvement)*
4.	Professional development for medical staff through comprehensive training programs	Yes	Medium *(Limited to 6 staff members trained)*
SOCIAL BENEFITS			
5.	Enhanced healthcare accessibility for railway employees and their families at affordable pricing	Yes	High *(1,498 beneficiaries served across railway network from Apr 2023-Aug. 2025)*
6.	Quality healthcare services for economically disadvantaged railway community members	Yes	High *(Cost-effective pricing compared to private sector)*
7.	Employment opportunities and skill development for medical professionals and technical staff	Yes	Medium *(Limited number of positions affected)*

S.No.	PARAMETERS	BENEFICIARY VIEW POINT	IMPACT (HIGH/ MEDIUM/ LOW)
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)*
SOCIAL BENEFITS			
10.	Significant cost savings per scan 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 2023 with consistent patient flow)*
12.	Revenue generation capability supporting hospital's financial sustainability	Yes	Medium *(Limited monthly volume of 6-7 patients)*



CONCLUSION

The CSR project undertaken by Indian Railway Finance Corporation (IRFC) through Dr. Babasaheb Ambedkar Memorial Hospital has successfully achieved its objectives and made a significant impact on healthcare diagnostic capabilities for dental and maxillofacial conditions 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 while maintaining operational excellence and clinical effectiveness.

Through the implementation of the 3D kit upgrade converting existing OPG Unit to 3D cone beam CT scan capability, including procurement of advanced imaging technology, professional installation, comprehensive staff training, and establishment of efficient operational systems, the project has transformed diagnostic imaging capabilities for dental and maxillofacial healthcare services. The equipment provides advanced 3D visualization technology that significantly enhances diagnostic accuracy while ensuring cost-effective service delivery and professional development opportunities.

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

F.1 QUANTITATIVE IMPACT SUMMARY

IMPACT METRIC	ACHIEVEMENT	TARGET STATUS
Equipment Installation	3D CBCT system operational since April 2023	Target Met
Total Beneficiaries Served	1,498 patients (Apr 23- Aug 25)	Target Met
Monthly Patient Volume	6-7 patients consistently served	Sustained Service
Medical Staff Training	6 professionals trained	Achieved
Scan Time Efficiency	5-15-second scan capability	High Performance
Service Pricing	₹2,100 per scan established, however may vary based on surgery requirement	Cost-Effective
Stakeholder Satisfaction	High satisfaction across all parameters	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 diagnostic 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 medical technologies.
- Establish emergency fund provisions for critical equipment repairs and maintenance to ensure uninterrupted service delivery at CSR-funded medical facilities.