Impact assessment report for

Strengthening India's Digital Public Infrastructure (DPI)

Project no: 10444 & 10753
Project title: Enabling financial inclusion through development of software product ecosystem
Project duration: 01-Feb-2022 to 31-Mar-2024
Funder: Bajaj General Insurance Limited & Bajaj Holdings and Investment Limited
Implementation Agency: Indian Software Product Industry & Round Table Foundation
Impact Assesment Conducted by: Renalysis Consultants Pvt Ltd (CSRBOX)

Disclaimer For the Impact Assessment Report

This report has been prepared solely for the purpose set out in the Memorandum of Understanding (MoU) signed between Renalysis Consultants Pvt. Ltd. (CSRBOX), BHIL & BGIL undertake the Impact Assessment.

This impact assessment is pursuant to the Companies (Corporate Social Responsibility Policy) Amendment Rules 2021, notification dated 22nd January 2021.

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In preparing this report, CSRBOX has used and relied on data, material gathered through the internet, research reports, and discussions with personnel within CSRBOX as well as personnel in related industries.

With Specific to Impact Assessment, CSRBOX

- Specific to the Impact Assessment of the projects “10444” and “10753” by BHIL & BGIL, CSRBOX has neither conducted an audit nor due diligence nor validated the financial statements and projections provided by HDFC Bank.
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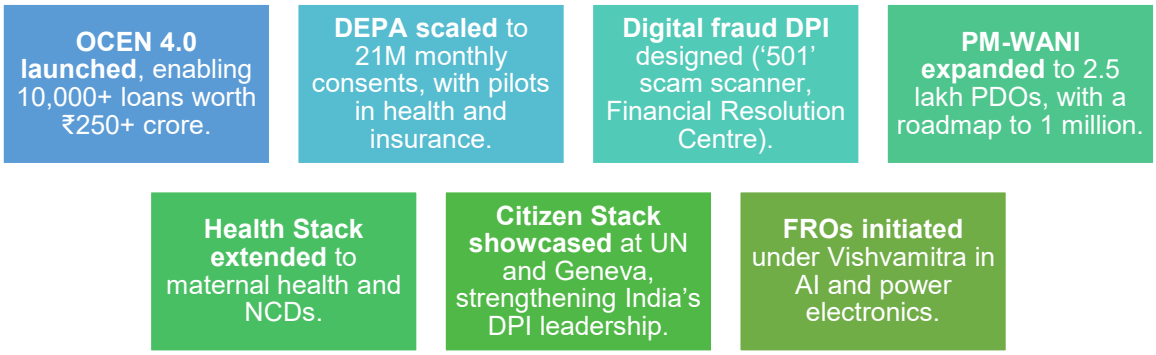
- The premise of an impact assessment is ‘the objectives’ of the project along with output and outcome indicators pre-set by the programme design and implementation team. CSRBOX’s impact assessment framework was designed and executed in alignment with those objectives and indicators.

Executive Summary

The partnership between Bajaj Holdings and Investment Limited (BHIL), Bajaj General Insurance Limited (BGIL) and iSpirt continues to strengthen India's Digital Public Infrastructure (DPI) ecosystem. Over the past decade, iSpirt has been central to developing **India Stack and related platforms**, which demonstrated how digital rails can expand access to identity, payments, and data sharing. Building on these foundations, the current phase of work focuses on sector-specific applications of DPI in **finance, healthcare, data governance, digital safety, and connectivity**, while also advancing India's leadership in global digital standard-setting.

These initiatives are designed to address long-standing systemic challenges: the persistent credit gap for MSMEs, low-cost internet access in rural areas, fragmented health systems, citizen concerns around data privacy and digital fraud, and the need for India to shape international conversations on technology governance. Together, they show how DPI can shift from enabling infrastructure to **citizen-facing applications that directly improve access, trust, and inclusion**.



Abbreviations

Abbreviation	Details
ABHA	Ayushman Bharat Health Account
AI	Artificial Intelligence
BHIL	Bajaj Holdings and Investment Limited
BGIL	Bajaj General Insurance Limited
BFSI	Banking, Financial Services and Insurance
BRSR	Business Responsibility & Sustainability Reporting
CSR	Corporate Social Responsibility
DEPA	Data Empowerment and Protection Architecture
DPI	Digital Public Infrastructure
ESG	Environment, Social and Governance
FRO	Focused Research Organisation
FY	Financial Year
IDI	In-depth Interview
ITES	Information Technology Enabled Service
ITI	Industrial Training Institute
KII	Key Informant Interview
MSME	Micro, Small and Medium Enterprises
NCD	Non-Communicable Disease
OCEN	Open Credit Enablement Network
PDO	Public Data Office
PM-WANI	Prime Minister's Wi-Fi Access Network Interface
SRO	Self-Regulatory Organisation
SDG	Sustainable Development Goal
SEBI	Securities and Exchange Board of India
TReDS	Trade Receivables Discounting System
TSO	Technology Standards Organisation
UN	United Nations

Table of Contents

Chapter 1:

Overview & Project Alignment

Context

India's progress towards inclusive growth depends heavily on how well its digital infrastructure can serve diverse communities. While rapid strides have been made in building digital systems, gaps remain. For example, Micro, small and medium enterprises often lack access to affordable and timely credit. Rural areas continue to experience weak internet connectivity, leaving large segments excluded from the benefits of digital participation. Similarly, Public health systems, though strengthened in parts, remain fragmented and struggle to reach vulnerable groups at scale. Regulatory processes are still cumbersome, creating inconvenience for both citizens and businesses.

These challenges underline the need for open and interoperable systems that can act as digital public goods. Instead of relying solely on top-down, centralised models, India has been experimenting with Digital Public Infrastructure (DPI) that provides foundational rails on which diverse solutions can be built. The iSpirt collaboration is part of this larger national journey of creating inclusive and trusted digital systems.

Programme Background and Overview

iSpirt has been a pioneer in designing and advancing DPI for India. Its early work with India Stack, Sahamati, and CredAll demonstrated the power of shared digital platforms. These initiatives reduced transaction costs, enabled secure data sharing, and opened up new pathways for inclusion in finance and beyond.

In FY 2022–24, the collaboration with Bajaj Holdings and Investment Limited & Bajaj General Insurance Limited entered a new phase. The focus shifted from proof-of-concept pilots to large-scale deployments and sectoral deepening.

Introducing the names described below

OCEN 4.0 made short-tenor loans more accessible for MSMEs. DEPA scaled rapidly and entered highly regulated domains such as healthcare and insurance. PM-WANI crossed 2.5 lakh deployments, bringing affordable internet to more villages and small towns. Health Stack expanded from building digital registries to creating citizen-facing use cases in maternal health and non-communicable diseases. At the same time, new systems were designed to address the rise of digital fraud, while international recognition of India's DPI model grew through Citizen Stack.

Alongside these initiatives, the Vishvamitra programme laid the groundwork for strategic autonomy by launching Focused Research Organisations in areas such as artificial intelligence and power electronics. Taken together, these activities reflect a shift from building digital infrastructure as an enabling layer to positioning DPI as a driver of systemic social and economic change.

Project Activities

The iSpirt collaboration, supported by BHIL & BGIL, adopted a structured approach to building Digital Public Infrastructure, ensuring that critical systems moved from design to scale. By focusing on finance, healthcare, data governance, and connectivity, the initiative established a comprehensive framework that addressed systemic barriers to inclusion and trust in the digital economy. This programme not only created pathways for MSMEs, rural communities, and citizens to access essential services but also strengthened India's leadership in digital innovation. The following were the key activities undertaken as part of this initiative.

Open Credit Enablement Network (OCEN 4.0):

- Rolled out with six borrower agents, seven live lenders, and twelve loan products. Over 10,000 loans were disbursed, with a total value of more than ₹250 crore, strengthening the flow of working capital to MSMEs.

Data Empowerment and Protection Architecture (DEPA):

- Enabled more than 21 million consent artefacts per month. Pilots were launched in sensitive sectors such as healthcare and insurance, with early traction also visible internationally in France, Brazil, and Japan.

Digital Fraud DPI:

- Designed a prototype system consisting of the "501" scam scanner and the Financial Resolution Centre to allow real-time detection and redressal of fraud, addressing a critical gap in citizen protection.

PM-WANI:

- Expanded to more than 2.5 lakh Public Data Office (PDO) deployments. Policy and technical work began to address the issue of PDO profitability, while a roadmap was developed to scale the model to one million deployments.

Health Stack:

- Expanded beyond ABHA IDs and health registries to cover maternal and child health, along with non-communicable diseases such as diabetes and hypertension, thereby extending the system's relevance to everyday healthcare delivery.

Citizen Stack and Globalisation:

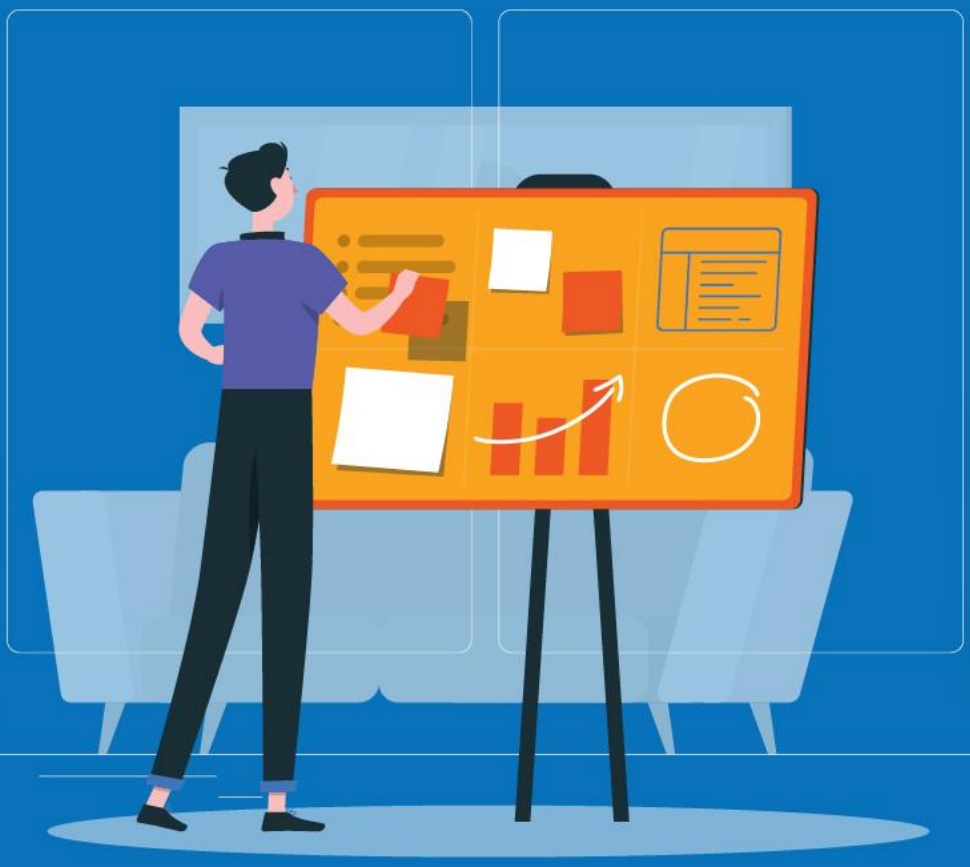
- Showcased India's DPI model at the United Nations in New York in 2024 and at Geneva in 2025, establishing India as a reference point for the Global South in building inclusive digital ecosystems.

Strategic Autonomy through Vishvamitra:

- Initiated new Focused Research Organisations in areas such as artificial intelligence and power electronics, signalling India's intent to secure leadership in critical frontier technologies.

Chapter 2:

Design & Approach for Impact Assessment



Objective of The Study

The central purpose of this study is to assess the progress of iSpirt's initiatives during FY 2022–24 and to interpret their contribution to India's wider developmental goals. As with the previous year's assessment, the evaluation does not examine a direct service-delivery programme but rather a set of systemic interventions that function at a national and sectoral scale. iSpirt's work creates foundational layers that enable markets, governments, and communities to interact more efficiently and inclusively rather than reaching out to individuals and communities in a conventional sense.

With this in mind, the objectives of the study were:

- To review the initiatives undertaken in FY 2022–24, with a focus on their scope, design, and stage of implementation.
- To analyse how these initiatives, align with policies and programmes such as Digital India, BharatNet, Ayushman Bharat and emerging global discussions around Digital Public Infrastructure taken up at a National level.
- To identify how each initiative addresses structural barriers faced by stakeholders such as MSMEs, rural households, healthcare workers, or regulators.
- To synthesise the broader implications of iSpirt's work for inclusive growth, citizen empowerment, and India's international positioning.
- To highlight areas where further strengthening is required to ensure sustainability and long-term impact.

This approach recognises that the outcomes of DPI interventions are indirect and cumulative. For example, the launch of OCEN 4.0 does not result in immediate benefits for an individual household but opens up systemic access to credit markets that can, over time, transform MSME financing. Similarly, the expansion of Health Stack to maternal and child health does not equate to a direct health service but lays the foundation for better coordination and efficiency across healthcare providers.

Approach and Methodology

In light of the fact that iSpirt's interventions operate as public infrastructure, shaping the ecosystem within which multiple actors function. the assessment has been designed as a qualitative and interpretive study. It combines three main methods:

1. **Interactions with iSpirt project teams**: Structured conversations and consultations were carried out with teams leading OCEN, DEPA, Health Stack, PM-WANI, Citizen Stack, and other initiatives. These interactions provided first-hand insight into milestones achieved, operational challenges, and emerging opportunities.
2. **Secondary research and literature review**: The assessment draws on policy documents, industry reports, research papers, and media analyses that have

examined the evolution of India's DPI ecosystem. This review allowed the findings to be contextualised against broader sectoral trends and independent assessments.

3. **Triangulation of evidence**: The report integrates the perspectives from iSpirt teams with insights from secondary sources to arrive at balanced inferences. Where direct verification was not possible, multiple references were cross-checked to establish consistency.

The evaluation therefore rests on a qualitative framework where the focus is on narrative evidence and interpretive insights rather than numerical indicators. For example, the assessment does not measure the exact number of end-users impacted by PM-WANI but examines how PDO deployments are expanding access to rural connectivity and what systemic barriers still exist. Similarly, it does not quantify improvements in loan accessibility through OCEN but reviews how the design of loan products and the participation of lenders has changed the MSME financing landscape.

, the qualitative approach provides a holistic understanding of the initiative's direction, strengths, and gaps. It allows us to assess whether iSpirt's work is moving towards its stated objectives and contributing to long-term goals of inclusion, transparency, and efficiency.

This framework also acknowledges the unique role of iSpirt within India's development ecosystem. Unlike conventional CSR projects which are often bounded by geography, beneficiaries, or a fixed timeline, iSpirt's initiatives are open-ended public goods. Their success depends on adoption, trust, and convergence with government and industry. Evaluating them therefore requires a narrative approach that can capture nuance, interpret linkages, and highlight systemic value.

Chapter 3:

Findings of the Impact Assessment Study

Digital Public Infrastructure can only be considered transformative when it is able to withstand rapid change, build citizen trust, and deliver inclusive access across sectors. An integrated approach to finance, healthcare, data governance, and connectivity is vital for enabling equitable growth and strengthening India's digital economy. By creating open and interoperable systems, iSpirt's work empowers individuals, enterprises, and institutions to participate more fully in the digital age, thereby fostering socio-economic stability and long-term resilience.

The iSpirt initiative, supported by **BHIL & BGIL**, successfully advanced this vision by scaling key DPI interventions such as OCEN, DEPA, PM-WANI, Health Stack, and Citizen Stack. Each of these efforts contributed to expanding access, building trust in digital systems, and positioning India as a leader in global digital innovation.

The following section presents the **key findings and insights from the impact assessment**, offering a comprehensive view of progress during FY 2024–25. The analysis is based entirely on **qualitative interactions with iSpirt project teams and secondary research**, given the systemic nature of the work. This approach ensured that the study captured both the achievements and the continuing challenges of building inclusive and sustainable digital infrastructure.

Inclusiveness

The most visible contribution to inclusiveness came from **OCEN 4.0**, which widened access to credit for smaller businesses by enabling short-term tenor loans based on transaction flows rather than collateral. **This design directly addressed barriers faced by MSMEs that are new to formal credit**, creating space for a more diverse set of enterprises to participate in the financial system.

PM-WANI also advanced inclusiveness by creating over **2.5 lakh Public Data Offices**, many run by local entrepreneurs. **By lowering the cost of connectivity in rural and semi-urban areas, the initiative brought digital access closer to households and small enterprises that are often excluded from mainstream broadband services.**

Health Stack's expansion to maternal and child health, as well as non-communicable diseases, further strengthened inclusiveness. **By embedding underserved populations such as mothers and patients with chronic conditions into digital health infrastructure, the initiative ensured that vulnerable groups are not left at the margins of technology-driven reforms.**

Relevance

The relevance of iSpirt's initiatives was reinforced during the year, as they addressed some of India's most pressing national priorities. **OCEN directly responded to the working capital gap in the MSME sector**, which is vital for employment generation and supply chain resilience.

DEPA gained importance as questions of consent and data protection became central to India's digital economy. Its focus on privacy-preserving data sharing aligned closely with the implementation of the Digital Personal Data Protection Act and growing citizen demand for trustworthy systems.

PM-WANI's emphasis on low-cost, distributed connectivity models made it highly relevant for bridging the rural–urban digital divide, a persistent barrier to equitable digital participation.

Health Stack's shift from backend registries to **citizen-facing use cases in maternal health and chronic disease management** showed strong alignment with national health priorities such as Ayushman Bharat and the reduction of maternal and infant mortality.

At the global level, **Citizen Stack demonstrated India's relevance in shaping international conversations on Digital Public Infrastructure.** Presentations at the United Nations and Geneva positioned India as a thought leader in designing digital systems for the Global South.

Expectations

Expectations were partly met and partly recalibrated across initiatives. **For MSMEs, OCEN met expectations around speed and ease of access to credit, but lender adoption and diversity of products still lag behind the potential.**

In the case of **PM-WANI**, stakeholders expected reliable and affordable connectivity. While deployment scaled rapidly, questions of PDO profitability remain unresolved, creating a gap between infrastructure creation and sustainable service delivery.

DEPA met core expectations around consent and privacy, but broader adoption outside highly regulated sectors is still evolving. Awareness of how citizens can exercise consent rights also remains limited, suggesting that expectations of widespread uptake are yet to be fulfilled.

Health Stack's expansion into maternal and child health was a welcome step, but expectations of fully integrated service delivery at the state and district levels will take more time to materialise.

Internationally, **Citizen Stack exceeded expectations by gaining visibility in global forums.** However, expectations of sustained global leadership will require overcoming regulatory bottlenecks and building coalitions across diverse countries.

Convergence

Convergence was one of the strongest features of iSpirt's work.

OCEN connected financial institutions, technology providers, and MSMEs, creating a networked system rather than isolated pilots.

DEPA aligned with both regulators and private actors, particularly in sensitive sectors like finance and healthcare, demonstrating that consent-based systems can operate across institutional boundaries.

PM-WANI's effectiveness depended on convergence with BharatNet and telecom service providers, ensuring that backhaul infrastructure supports last-mile delivery.

The design of the **Digital Fraud DPI brought together technology providers, financial intermediaries, and law enforcement,** marking an important step in building an integrated redress system.

At the international level, **Citizen Stack provided a platform for convergence between India and global partners,** reinforcing that digital public goods must be developed through collaborative governance.

Service Delivery

Service delivery across initiatives was generally strong. **OCEN matured from protocol to active deployment**, with multiple lenders and products available. **DEPA moved from conceptual design to live pilots,** demonstrating technical robustness in regulated sectors.

The **Digital Fraud DPI responded to a growing national concern** by developing both preventative (501 scam scanner) and redressal (Financial Resolution Centre) mechanisms. **This signalled a shift towards protecting citizens rather than only enabling transactions.**

PM-WANI demonstrated rapid scale in deployment, though long-term delivery will depend on addressing PDO profitability.

Health Stack advanced from creating digital identities and registries to building use cases that matter to citizens, showing progress in moving from infrastructure to practical application.

Citizen Stack was delivered as a global good, extending service delivery beyond India's borders and demonstrating that India can build systems that resonate internationally.

Chapter 4:

Recommendations

Based on the assessment of activities undertaken, the following recommendations are proposed to strengthen the design, delivery, and sustainability of the iSpirt initiatives:

1. Strengthen Sustainability of PM-WANI

While PM-WANI has demonstrated rapid scale, **PDO profitability remains a critical bottleneck**. To ensure long-term sustainability, models that blend **community ownership, micro-entrepreneurship, and telecom partnerships** should be developed. Exploring mechanisms such as **targeted subsidies, revenue-sharing with service providers, or bundling with local services** will help make PDO operations viable in rural and semi-urban markets.

2. Deepen Adoption of OCEN

OCEN has proven its ability to disburse loans at speed and scale, but **greater lender participation and product diversity are needed**. Expanding the ecosystem to include **regional rural banks, NBFCs, and cooperative institutions** would broaden the base of lenders. Parallel efforts to design **sector-specific loan products** for small manufacturers, agri-enterprises, and digital sellers will ensure OCEN meets the varied needs of MSMEs.

3. Enhance Public Awareness of DEPA

DEPA has demonstrated technical robustness, but its **value to citizens depends on awareness and trust**. Efforts should be made to **educate citizens about how consent-based systems protect their data**. Partnerships with consumer organisations, digital literacy campaigns, and sector regulators could amplify the message, ensuring that the system is understood and adopted beyond the early pilots.

4. Translate Health Stack into Frontline Use Cases

Health Stack has moved into maternal and child health and NCDs, but its **impact depends on deeper integration at the state and district level**. Demonstration projects with **frontline health workers, local hospitals, and state governments** can provide proof points that the system improves real health outcomes. Focus should also be placed on **user-friendly tools for citizens and health workers**, ensuring that technology translates into improved service delivery.

5. Operationalise Digital Fraud DPI

The design of the **501 scam scanner** and **Financial Resolution Centre** is a promising step. The next stage should focus on **operational pilots with banks, payment providers, and regulators**, so that the system can move from design to live deployment. Integrating citizen feedback loops will also be essential to ensure that the system reduces complexity for users instead of adding new layers.

6. Advance Global DPI Leadership

Citizen Stack has established visibility for India in global forums, but **sustained leadership requires institutional capacity**. Accelerating the launch of the **Technology Standards Organisation (TSO)** and ensuring it has the right legal and organisational framework will be critical. At the same time, **building coalitions with countries in the Global South** can provide India with allies in shaping global digital governance.

7. Build a Long-Term Knowledge Agenda

Given the scale and ambition of iSpirt's work, **systematic documentation and research should be embedded** into each initiative. This would allow learnings to be captured for future policymakers and practitioners. Independent evaluations, policy briefs, and cross-country comparisons could strengthen India's position as a thought leader and ensure that the benefits of DPI are continuously improved.

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