Resilience AI

Resilience AI Solution Private Ltd is a **Tech4Impact** start up that focuses on resilience at every step by digitising climate risk and sustainability lifecycle for private and public enterprises.

It innovates at the intersection of climate and built environment as well as data and science nexus to provide a multi-hazard, simple to use, integrated and end-to-end climate lifecycle management platform.

Our Purpose

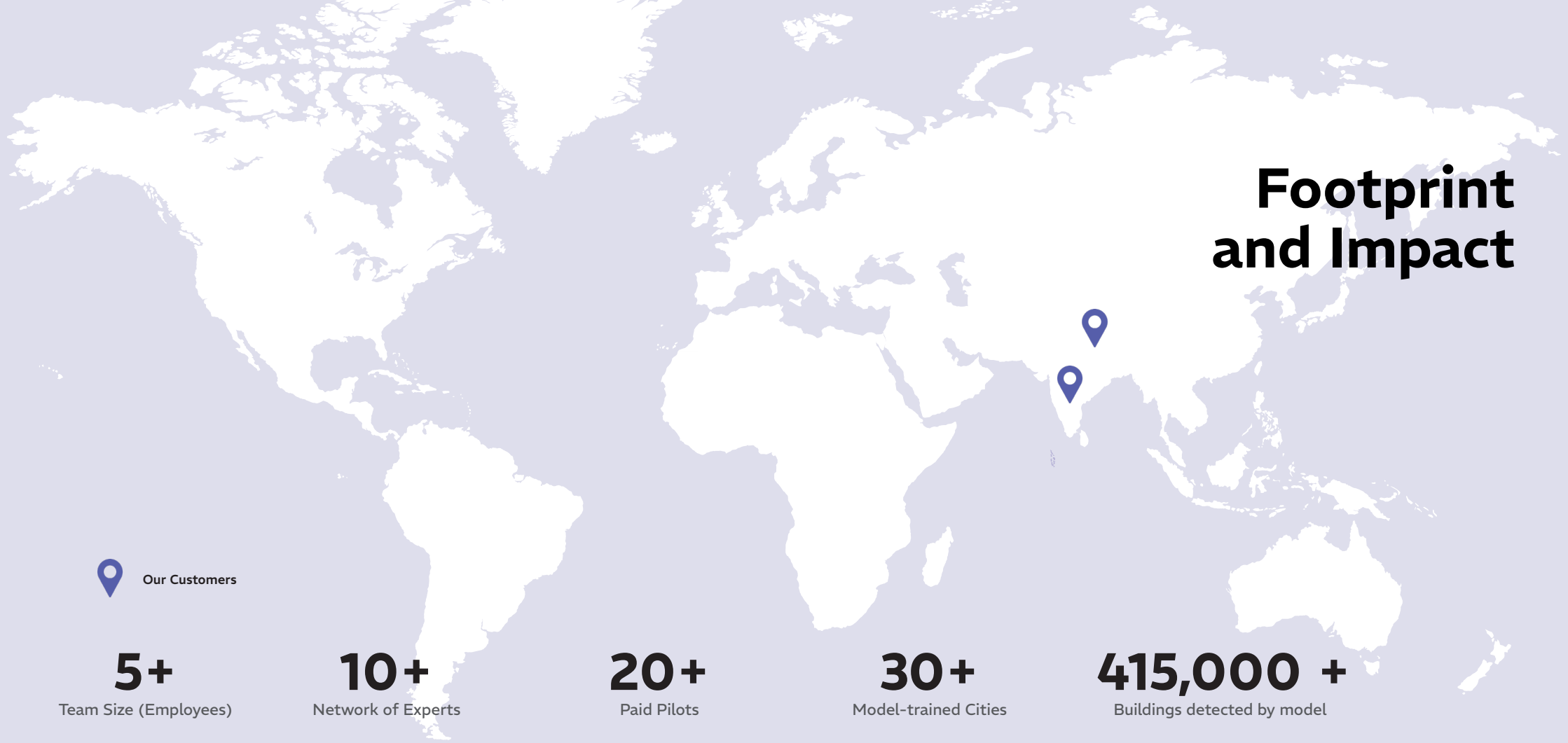
Resilience AI is **building resilience** at every step.

Our mission is to reduce the climate resilience gap to prepare nearly **60%** unaccounted **people, assets, and businesses**.

Did you know?

- Natural disasters have **almost doubled** in the last decade, whereby, **71%** of such climate events are **more likely or severe**
- Global disaster loss in 2023 stands at **US$250 billion** and closer to home in India, we faced **US$ 34 billion losses** from 2018-22
- India potentially suffered an **income loss of US$ 159 billion** (5.4% of its GDP) in the service, manufacturing, agriculture, and construction sectors due to extreme heat in 2021 (**highest in G20**)
- Even with the best case scenario , we are looking at these events to multiply and intensify (ex - 1.5º scenario will lead to **US$ 2,400 billion** in estimated **productivity related losses due to heat stress** as per ILO)
- Annually, there is a **need to invest USD$ 2 trillion** towards adaptation measures

Footprint and Impact



Our Customers

5+
Team Size (Employees)

10+
Network of Experts

20+
Paid Pilots

30+
Model-trained Cities

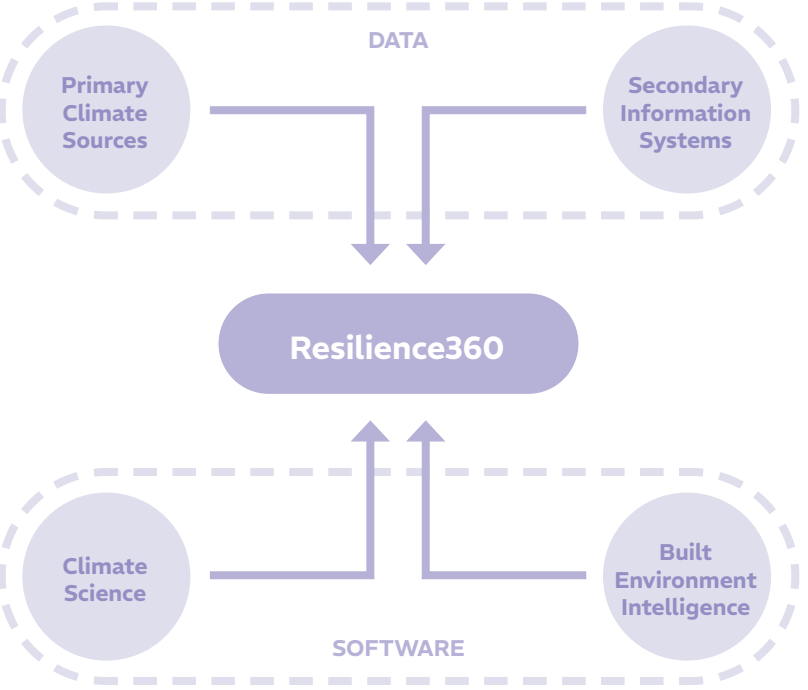
415,000 +
Buildings detected by model

Resilience360

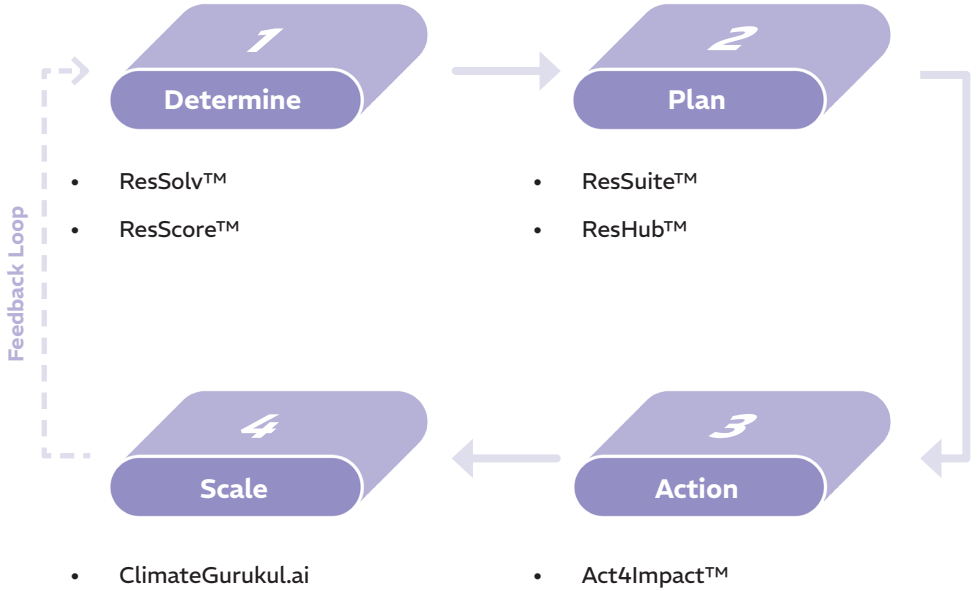
Climate enterprise intelligence software
Resilience360 is a physical climate risk lifecycle management solution. As the impacts of climate change becoming more apparent and climate risk regulations become mandatory, the solution which leverages on-ground knowledge to build a reliable risk profile, while providing actionable interventions towards climate resilience at every step.

The four modules of Resilience360
Determine: Know your Climate Risk exposure (socio-economic baseline)
Plan: Design controls to reduce risk (people, asset, business)
Action: Define, authorize, and report action to stakeholders.
Scale: Climate adaptation as a culture (monitor, multiply)

Resilience360 is solving climate adaptation at the intersection of the built environment and climate.



The four services of the Resilience 360 enterprise software are Determine, Plan, Action and Scale

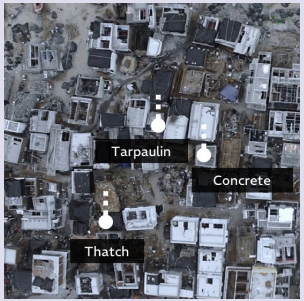


ResSolv™

ResSolv is a climate-risk determination module, which uses three decades of roof-top architecture, built environment, and artifical intelligence (AI)-based classification.

Roofs are a proxy for estimating how vulnerable a building is, with hyper-local knowledge of who lives inside and their socio-economic condition.

ResSolv has already been run in the form of a paid pilot in 21 cities in India, across 1,00,000+ building rooftops.



Every roof is a unique fingerprint ...

... which translates to every building's unique climate risk profile

CASE STUDY 01

Vivekananda Camp

The Chintan Environmental Research and Action Group engaged a climate impact advisory in partnership with Resilience AI to deploy innovative solutions at the climate-health nexus, particularly in implementing AI models for assessing heatwave impacts on vulnerable communities in Vivekanand Camp, Delhi.

OPPORTUNITY

Hyper-local heat disparity. Low-income, highly dense areas such as Vivekanand Camp are up to 6° C hotter than the rest of the city.

SOLUTION

AI for Extreme Weather - Resilience used the AI-generated maps to find high-risk homes, prioritize outreach for early warning and preparation, and demonstrate the significance of heat risks to locals.

IMPACT

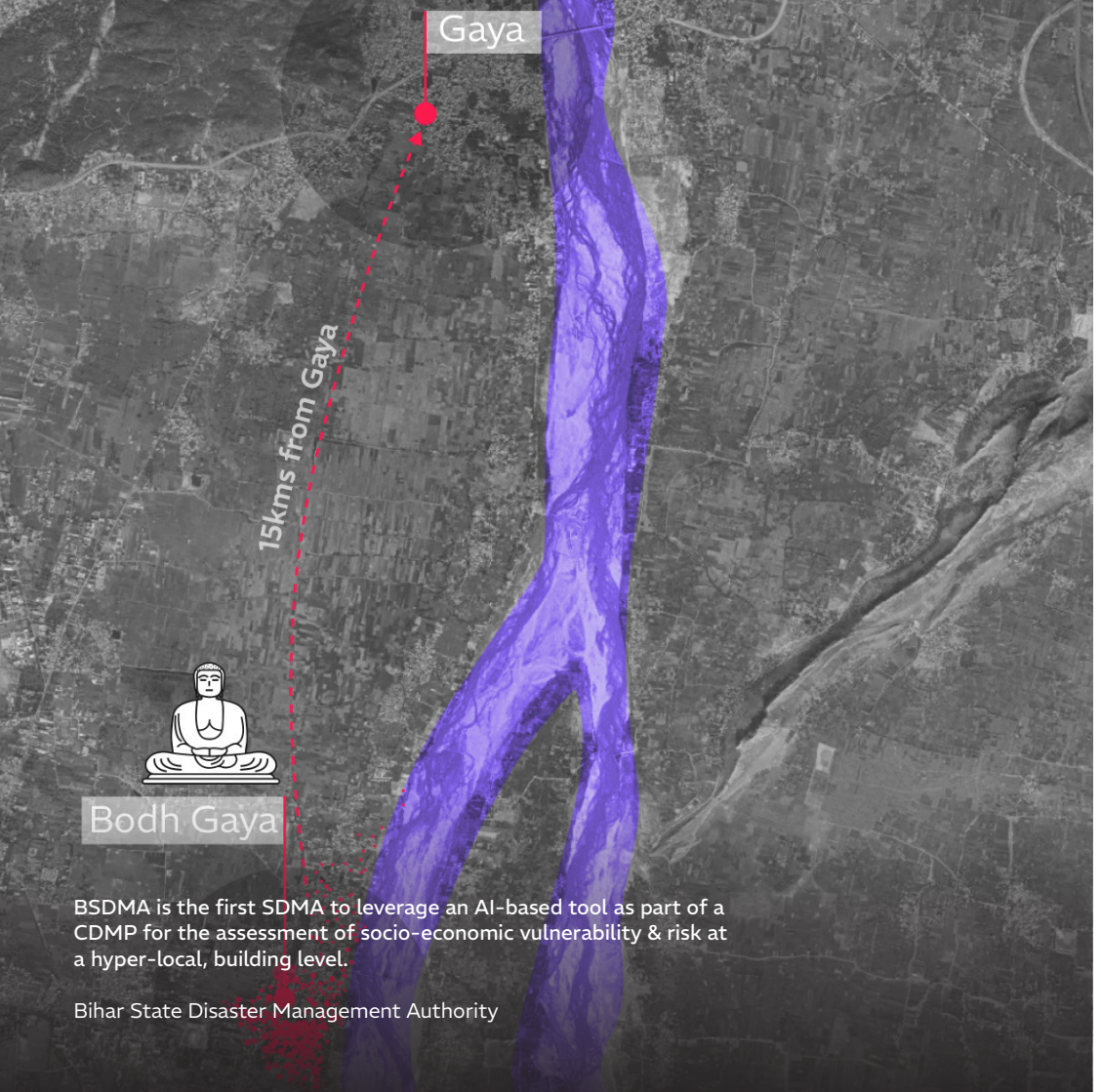
Once at-risk households were identified, the team began outreach to prepare for the upcoming heatwave and implement solutions. Cool roof prototypes were fabricated and tested, with one model resulting in 12ºC lower indoor temperatures.

3 years	**5 hours**
Product development timespan	Projected runtime from pilot order initiation

" It is true that the repercussions for heatwaves are long felt and there is pressing need for AI tools such as ResSolv to help understand the hyperlocal risks of communities. "

Bharti Chaturvedi

Director, Chintan Environmental Research and Action Group



BSDMA is the first SDMA to leverage an AI-based tool as part of a CDMP for the assessment of socio-economic vulnerability & risk at a hyper-local, building level.

Bihar State Disaster Management Authority

CASE STUDY 02

Gaya CDMP

Bihar State Disaster Management Authority (BSDMA) engaged a climate impact advisory in partnership with Resilience AI to contribute to the City Disaster Management Plans (CDMP) for Gaya, an important tourist city in Bihar.

OPPORTUNITY

Traditional disaster response mechanisms lack precision in identifying hyper-local risk zones, leading to generic alerts and inefficient evacuation plans. This results in longer recovery times and greater disruptions.

SOLUTION

Resilience AI team worked with BSDMA to leverage ResSolv in the preparation of the Gaya City Disaster Management Plan to enhance the Early Warning Systems (EWS) and optimized resource allocation, evacuation & recovery planning.

IMPACT

The focal point of this output was the creation of a modern-day CDMP that works to reduce disaster risks at a household level, through a synergistic integration of advanced technologies and community-centric approaches.

2 years	**48 hours**
360° climate planning timespan	Projected runtime from pilot order initiation

CASE STUDY 03

USBRL

The Konkan Railway Corporation Limited (KRCL) engaged a climate impact advisory in partnership with Resilience AI to draft a disaster risk report for the Udhampur-Srinagar-Baramulla Railway Link (USBRL), a railway line of national importance that is built in a geographically challenging region.

OPPORTUNITY

The USBRL is a vital transportation link in Jammu and Kashmir which faces constant threats from natural disasters, posing significant risk to the railway line's infrastructure, stations, and surrounding communities.

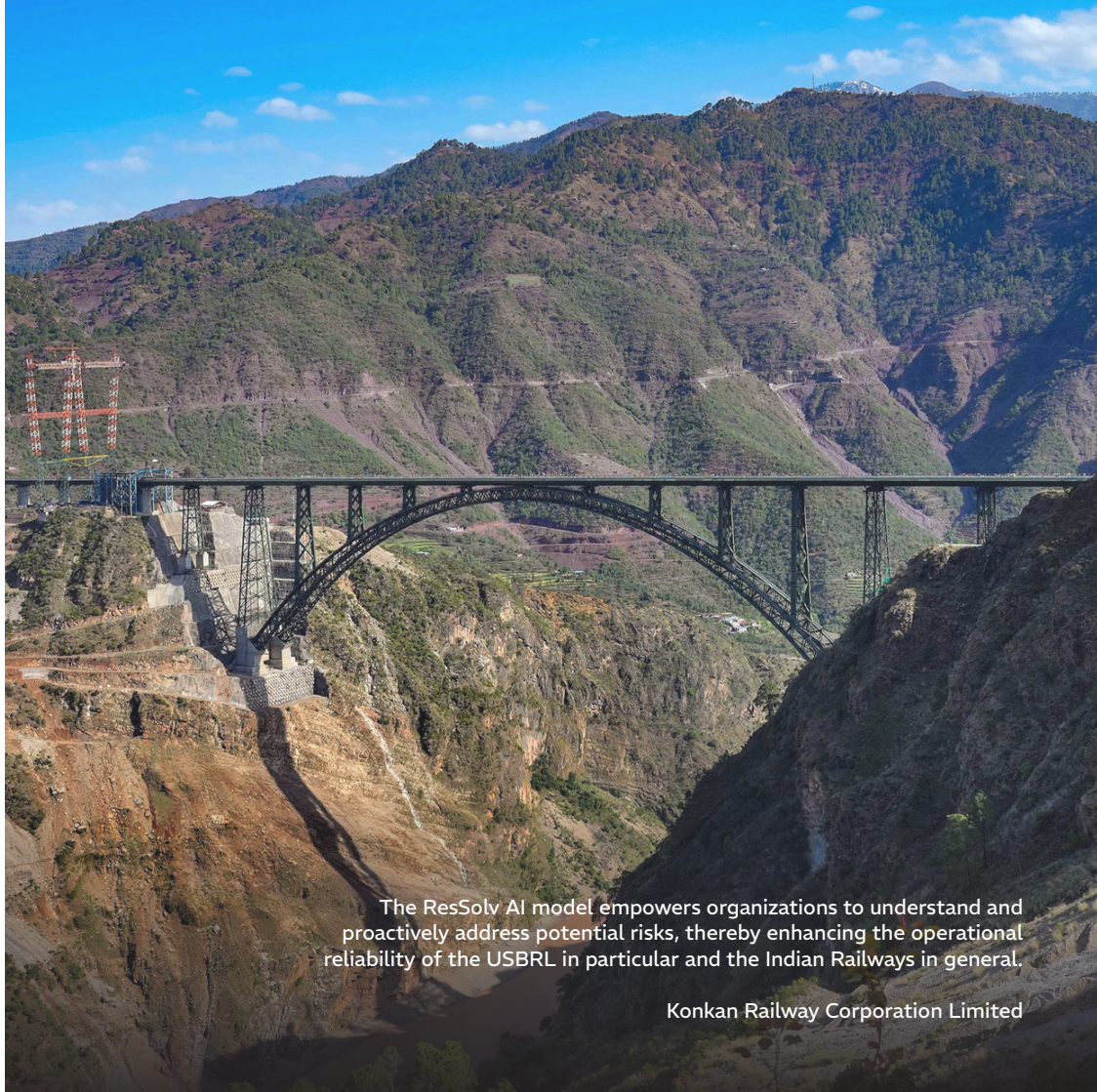
SOLUTION

Our AI-enabled tool, ResSolv, was run by using geospatial datasets, with physical environment intelligence & other relevant parameters to assess vulnerabilities within a 1 km buffer zone around each of the railway stations.

IMPACT

1. Prioritized Risk Mitigation
2. Infrastructure Protection
3. Data-driven Decision Making

2 years	**13.5 hours**
360º climate planning timespan	Projected runtime from pilot order initiation



The ResSolv AI model empowers organizations to understand and proactively address potential risks, thereby enhancing the operational reliability of the USBRL in particular and the Indian Railways in general.

Konkan Railway Corporation Limited

Founders Story

Resilience AI started with Dr. Anshu Sharma, Samhita R and Dr. Manu Gupta with a team of urban planners, architects, advanced technology engineers, humanitarian innovators and climate experts.

Anshu and Manu are urban planners from the School of Planning and Architecture, Delhi who co-founded SEEDS, a not-for-profit which has been awarded the UN Sasakawa Award and the Subhas Chandra Bose Aapda Prabandhan Puraskar by the Government of India. Anshu has been solving for dignity in disasters for 3 decades and Manu building community-owned-operated Tech4Good for 30 years.

Samhita comes from a successful career in Tech4Impact strategy planning, turning around businesses and setting up new ones that create social impact at scale.

Resilience AI was officially incorporated in November 2023 after 22 months of extensive collaboration.

Together, we aim to provide owners and operators of buildings and assets with credible and co-owned intelligence that will enable them to build their resilience to clmate-induced events.

EPO-4-022, Emerald Plaza, Emerald Hills,
Sector -65, Badshahpur, Badshahpur,
Gurgaon, Haryana - 122101, India
Phone +91 6385815052

www.resilience360.ai

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