

HDFC

TECH INNOVATORS
2025

4TH EDITION

PropTech | From Exploration to Adoption

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Executive Summary

The \$5 Billion PropTech Forecast

India's PropTech sector has moved from experimental concepts to actual implementation by Real Estate Developers. This report focuses on those areas, barriers to implementation and adoption strategy.



Digital Revolution in Indian Real Estate

Unlocking Trillions & Powering PropTech Growth

Massive Market Size

₹6.6 Lakh Crore+

Value of Residential Real Estate Sales

Huge Digital Gap

Less Than 12%

Use Advanced Digital Tools

PropTech Investments in India

\$4.6 Billion

Total capital raised till Dec '24

There is significant change in adoption of Technology in Residential real estate, driven by 4 critical factors: 1. Regulatory pressure 2. New age Consumer Expectations 3. Rising Project Complexity 4. Energy & ESG Imperatives. The technology is evolving along 4 core sub sectors in this space: 1. Construction Tech 2. Sales Tech 3. Financial Tech 4. Sustainability Tech. In Construction Tech, Developers have been experimenting with 3D printing and Robotic excavators / transporters. In Sales Tech, a number of customer engagement tools and Virtual Reality based demos are being used. In Fintech, there are platforms available to help in mortgage origination, loan processing and documentation. ESG Tech adoption is currently centred around practices focussing on Water conservation / Energy conservation / Waste recycling.

Source :
The state of digital adoption in construction 2025 - Joint Study by Autodesk and Deloitte

But there are barriers to the adoption of technologies by Real estate Developers, which revolve around Change Resistance, Cost / RoI Uncertainty and doubts around the scalability of the solution being offered by the startups. The PropTech Adoption strategy can be divided into 3 parts as per the complexity of the internal operations and the maturity of the solutions present. 1. Near Term – Land Diligence, Procurement Platforms and Digital Billing 2. Medium Term – BIM adoption and Robotic Solutions 3. Energy Management and Facility management. The objective of this report is to highlight the state of PropTech in India and the areas where developers can find value for the money they spend on Technology.

From Brick-and-Mortar to Algorithms

The Indian real estate sector has historically relied on manual labour, paperwork and legacy systems. Digital tools are gradually gaining adoption among progressive developers. Traditionally, property acquisition, design management, sales and operations have depended on face-to-face negotiation, physical documentation, handwritten site logs and phone-based vendor coordination. These processes are slow, error-prone and inefficient, particularly as project sizes, regulatory scrutiny and buyer expectations have increased.

Manual Processes



Digital Tools

-  Cloud Document Sharing
-  Building Information Modelling (BIM)
-  Digital Procurement
-  Vendor Management
-  Approvals

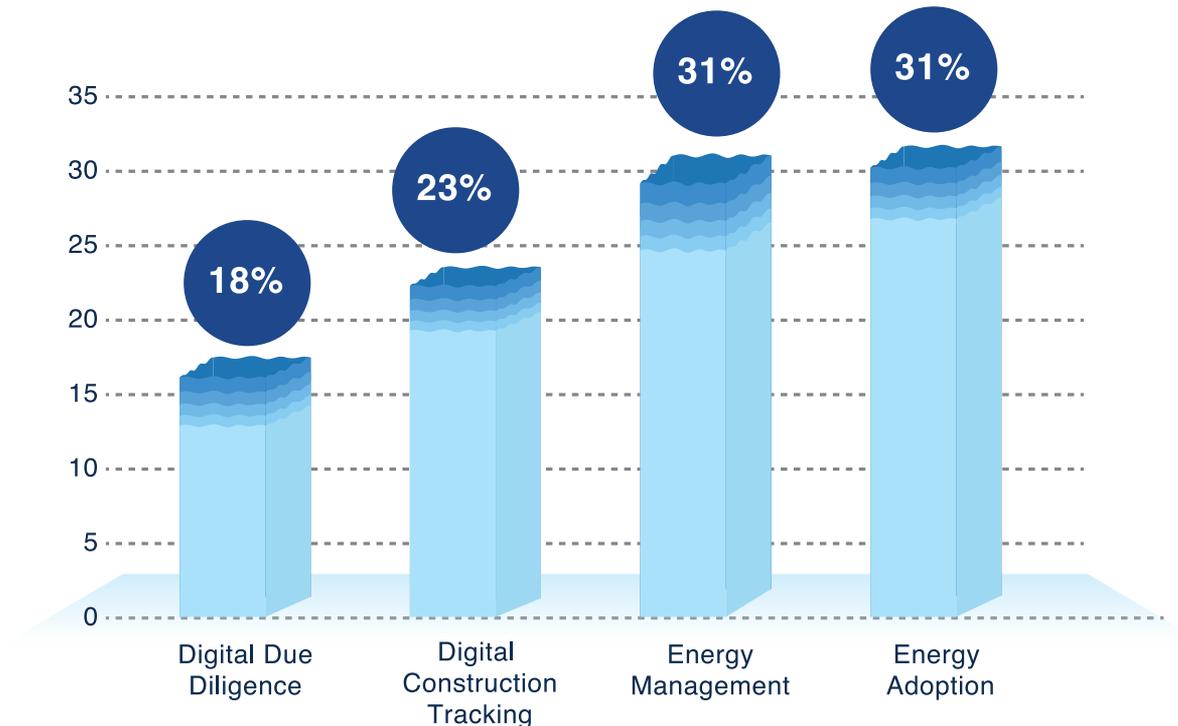
Most residential builders continue relying on manual procurement, physical documentation and in-person approvals via signature. This approach frequently results in delayed projects, budget management challenges and regulatory compliance difficulties. Developers spend weeks gathering land ownership documents, with legal teams visiting government offices multiple times due to fragmented record-keeping.



Digitalisation in real estate refers to technologies that automate or simplify stages of the development lifecycle. Tools such as cloud-based document sharing, property listing portals, Building Information Modelling (BIM), procurement and vendor management platforms, smart energy monitoring and resident engagement applications provide measurable gains in time, cost and operational efficiency.

Digital Adoption Rates

Source: Indian Real Estate Industry Overview



Reasons for Digital Transformation

- Regulatory Pressure
- Consumer Expectations
- Project Complexity
- ESG Requirements

Sources: The "State of Digital Adoption in Construction 2025" report is a joint study by Autodesk and Deloitte

Recent adoption metrics demonstrate ongoing growth: approximately 18% of tier-1 developers have implemented digital due diligence for land acquisition, 23% use collaborative digital platforms to track construction progress and 31% have adopted digital facility management and energy monitoring solutions.

Real progress comes from incremental adoption: identifying specific operational pain points, piloting digital solutions and scaling where proven. Developers who adopt procurement digitalisation, document management systems and energy monitoring are better positioned for competitive advantage and regulatory compliance.



Why Change Is Happening Now: Four Critical Drivers



1. Regulatory & Compliance Pressure

RERA (Real Estate Regulatory Authority) mandates require digital record-keeping and transparency across all project phases. Developers must maintain project documentation, financial records, buyer communications and regulatory filings in formats accessible for regulatory inspection. Manual systems struggle to meet these requirements, exposing developers to compliance violations and penalties. Government initiatives promoting digital infrastructure have created regulatory frameworks that increasingly mandate digital submission of land records, environmental clearances and building permits.

2. Rising Consumer Expectations

Modern homebuyers, particularly younger professionals and non-resident Indians, expect online property search, virtual property viewing, digital payment options and transparent real-time project progress tracking. Developers lacking these digital capabilities operate at significant competitive disadvantage. Digital engagement has become a market expectation rather than a premium offering, forcing competitive adoption.

3. Project Complexity & Scale

Modern residential projects have increased substantially in scale and complexity. Average project sizes have grown from smaller, single-tower developments to large, mixed-use complexes involving multiple towers, thousands of apartments, complex common infrastructure (clubhouses, gyms, pools, solar installations) and integrated amenities. Regulatory requirements have simultaneously expanded, requiring developers to manage environmental clearances, ESG compliance, transparent fund management and comprehensive safety documentation.



4. Energy Costs, ESG & Investor Requirements

Rising energy costs have made building energy efficiency a financial imperative. Institutional investors and commercial tenants increasingly demand Environmental, Social and Governance (ESG) compliance, including energy-efficient buildings with documented performance metrics. Regulatory changes, including building energy conservation codes, create mandatory energy efficiency requirements. Manual monitoring cannot provide the granular data required for optimisation and compliance reporting. Energy management systems have become critical infrastructure, not discretionary technology.

The Manual Reality

Despite these compelling drivers, most developers continue operating predominantly manually. Typical developers manage projects through physical site coordination, phone-based communication, spreadsheet-based budgeting and manual vendor management. Site engineers maintain handwritten daily logs. Procurement occurs through personal vendor relationships and verbal agreements.

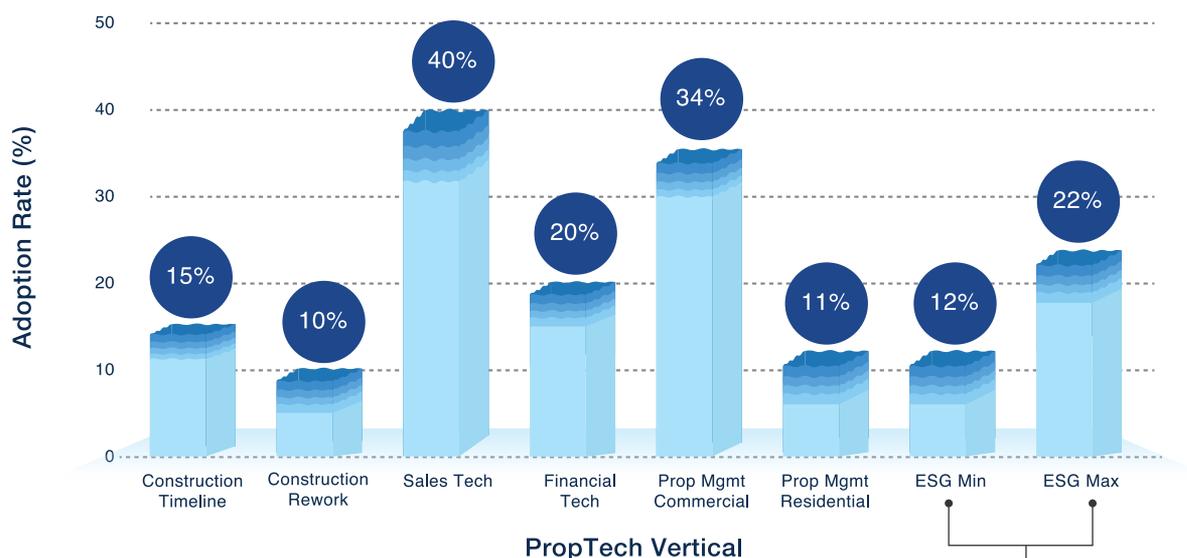
Why does this manual approach persist? Project complexity, margin pressures and accelerated timelines create operational constraints that expose manual management limitations. Developers recognise the need for digital tools but face adoption barriers including change management challenges, implementation costs and uncertainty about vendor reliability.



India's PropTech Ecosystem – Market Maturity and Segmentation

Since 2019, India's PropTech ecosystem has evolved from an experimental phase to a sector with established platforms and sustained institutional investment. Over \$4.6 billion has been channelled into Indian PropTech ventures across fourteen years, reflecting investor confidence in business models demonstrating operational savings and scalable adoption.

PropTech Adoption in India



In this chart, the two ESG bars are meant to show the adoption range for ESG-related PropTech solutions, from the lowest to the highest use cases across the market

- “ESG Min” (12%) represents categories or developers where ESG tools (energy monitoring, water tracking, compliance dashboards, etc.) are adopted at the lower end of the spectrum.
- “ESG Max” (22%) represents segments where ESG tools see comparatively higher adoption, indicating that in the best-case parts of the market, about 1 in 5 players are using ESG-focused PropTech.

Source: TechSci Research. (2024). India PropTech Market Size, Industry Growth.



Four Core Verticals

Four Pillars of India's PropTech Ecosystem

Technology categories driving industry-wide transformation



1. CONSTRUCTION TECHNOLOGY (ConTech)

Construction technology (ConTech) encompasses digital solutions that directly impact construction processes, including Building Information Modelling (BIM), drone-assisted site surveillance, AI-powered project scheduling, real-time construction documentation, 3D-printed construction and robotics. The Indian Army has already piloted 3D-printed houses and bunkers with defence and startup partners, while home-grown ventures such as Tvasta and MiCoB are experimenting with rapid, low-waste 3D-printed structures for housing and infrastructure. On-site robotic technologies, from semi-autonomous excavators to automated dump trucks, are beginning to streamline repetitive, high-risk tasks and feed data back into BIM-enabled digital twins that mirror live project conditions for better monitoring and control. Implementation among large developers is rising due to quantifiable benefits such as faster project timelines, reduced rework and data-driven decision-making, while mid-sized and residential builders still face barriers around upfront costs, change management and specialised training.

2. SALES & POST-SALES TECHNOLOGY (SalesTech)

SalesTech comprises customer engagement tools and transaction platforms. Virtual property viewing, AI-assisted customer support and digital transaction processing have reshaped property buying processes. Adoption among tier-1 developers ranges from 40–50%, driven primarily by consumer demand for online accessibility.

Digital property search and online engagement have become standard consumer expectations, particularly among younger professionals and non-resident Indians. Post-sales engagement platforms enable ongoing resident communication and community management, strengthening customer retention and satisfaction. Builders show limited adoption, constrained by upfront costs and staff training requirements.





This uptake is predominantly consumer-driven; buyers expect transparent, accessible and flexible property purchase processes. Post-sales engagement platforms enable ongoing resident communication, community event management and facility booking, strengthening long-term customer relationships and reducing attrition.

3. FINANCIAL TECHNOLOGY (FinTech)

Real estate FinTech focuses on automating mortgage origination, loan processing and documentation. Digital loan platforms are gaining traction among lenders serving homebuyers, with adoption rates approximately 20%. Reduced documentation and faster approval timelines benefit both lenders and buyers. Some developers are adopting internal FinTech tools for buyer financing coordination and transparent payment scheduling.

4. SUSTAINABILITY & ESG TECHNOLOGY (ESG Tech)

ESG Tech addresses energy management, water conservation and waste management. These systems deliver measurable operational returns, with documented annual cost reductions of 12-22% and payback periods ranging from 18 to 36 months. Adoption increasingly aligns with investor and regulatory requirements.

Energy management represents the strongest business case, with documented recurring cost savings driving adoption across all developer segments.

Funding Trends

PropTech investment in India has followed broader technology sector cycles, with notable activity during 2021-2022, followed by moderation through 2023-2024. PropTech demonstrates resilience through direct relevance to industry requirements: efficiency, transparency and scalability in real estate development.

Recent capital allocation has shifted toward platforms demonstrating established revenue streams and operational impact. Investor focus now centres on value delivery clarity, business model sustainability and documented operational benefits. For developers, this shift carries practical implications.

PropTech Across the Real Estate Development Lifecycle

Pre-Construction Phase

The pre-construction stage encompasses land identification and acquisition, regulatory due diligence, design and planning and early procurement strategy. Historically, these have been predominantly manual, relying on site visits, physical documentation and staff-intensive coordination.

The Adoption Challenge

Barriers to PropTech Integration in Indian Real Estate

Predominant Reasons





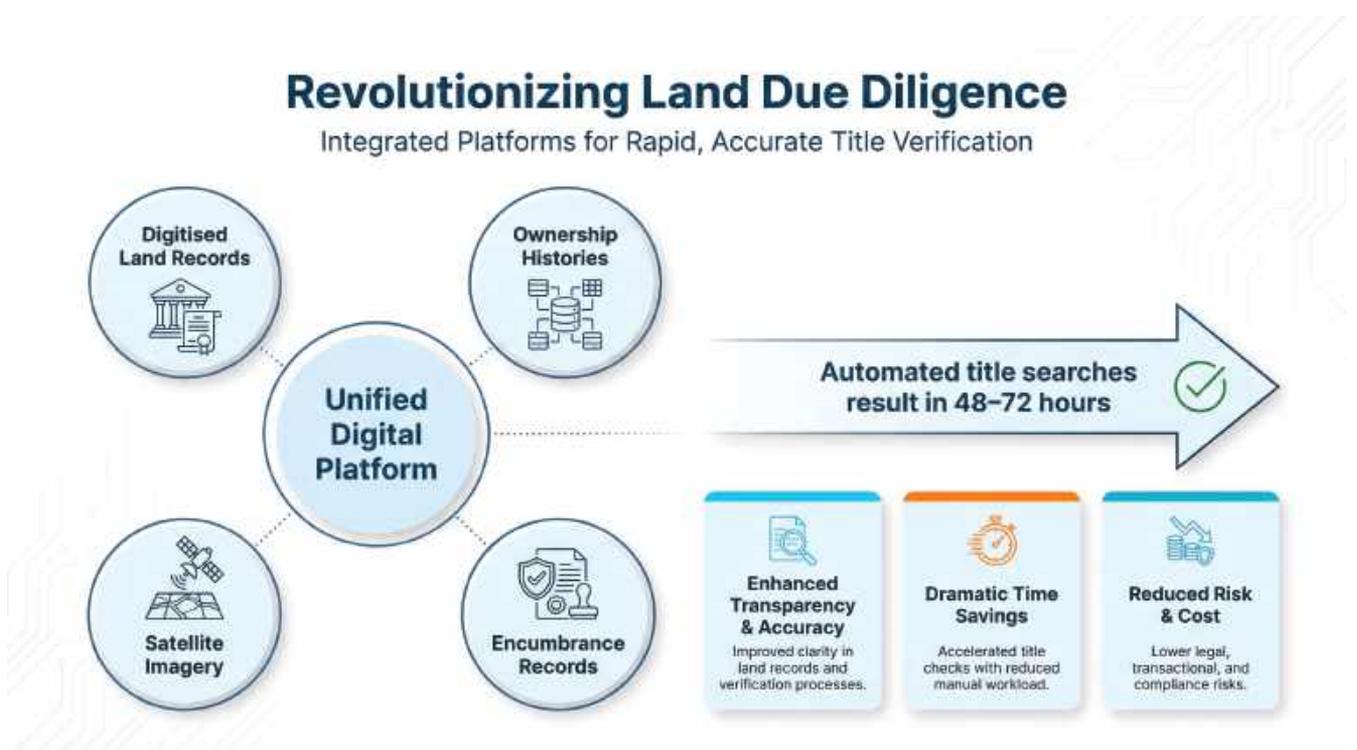
Land Identification and Acquisition

The practical India reality is that digital tools exist but on-ground adoption remains uneven and heavily shaped by legacy behaviour and fragmented records. Land acquisition remains labour-intensive. Developers must verify title, assess encumbrances, confirm zoning regulations and check utility access. Legal teams still travel between multiple government offices and sub-registrar departments to verify physical documentation – a process largely unchanged across most Indian cities.

Paper records are fragmented; digitisation remains incomplete in many regions. Digitisation progress varies sharply by region – metro cities have partial digitised land records, while tier-2 and tier-3 cities still depend on physical archives. Typical due diligence extends from several weeks to multiple months.

Digitally enabled land due diligence platforms integrate government land records, satellite imagery, zoning databases and ownership information into centralised systems. Developers can execute automated title searches and compliance verification. However, adoption remains limited, approximately 15–20% of tier-1 developers use such tools.

Barriers include incomplete national record digitisation and legal advisor preferences for traditional verification methods.



Source:
Landeed: Mapping ownership through AI



Case Study: Mumbai Land Due Diligence

The Challenge

A large Tier-1 developer operating across Mumbai metropolitan area required land due diligence across multiple properties with complex ownership histories and multiple encumbrances requiring verification across multiple municipal departments and state registrar offices.

What Was Implemented

Deployment of an AI-powered land due diligence platform integrated Mumbai municipal records, state land-registry databases, satellite imagery and zoning information into a centralised verification system and was supported by robust ERP back-end solutions such as SAP and Farvision that manage financial planning, budgeting, procurement, property management, payroll and accounting workflows end-to-end.

Impact / Result

- Acquisition timeline: Reduced from 8-12 weeks to 3-4 weeks
- Dispute prevention: Identified ownership anomalies and encumbrance issues missed by traditional methods, preventing costly legal disputes
- Accuracy: 100% compliance verification achieved across all properties assessed

Design and Planning

Traditional design coordination involves architects, structural engineers, MEP (mechanical, electrical, plumbing) consultants and landscape architects working separately. Conflicts emerge during construction when design elements interact. Resolving construction-phase conflicts is expensive and time-consuming.

Building Information Modelling (BIM) creates unified digital models enabling simultaneous consultant collaboration. Software identifies inter-disciplinary conflicts before construction begins. Design changes update across all disciplines. Quantity estimates generate automatically.

The Power of BIM in Real Estate

Driving Efficiency & Cost Savings in Modern Construction



Source:

'Investigation of BIM Adoption in India', International Journal of Engineering Research & Technology (IJERT), 2019.



BIM Adoption & ROI

BIM adoption ranges from approximately 12% for residential projects to 28% for commercial developments.

Documented Benefits:

- Rework cost reduction: 15-20%
- Coordination cycle acceleration: 30-40% faster approval cycles
- Clash detection: Identifies 70-80% of construction conflicts pre-build

Barriers include upfront consultant costs, staff training requirements and government approval processes.

Case Study: Pune BIM Integration

The Challenge

A large residential project (2,000 units across 3 towers) experienced typical multi-disciplinary coordination challenges with separate architect, structural, MEP and landscape design teams working in silos, creating potential for costly conflicts during construction.

What Was Implemented

Deployment of unified BIM model integrating all consultant disciplines into centralised, real-time collaborative platform with automated clash detection.

Impact / Result

- Conflicts identified pre-construction: Detected 89 significant design conflicts before construction commenced
- Schedule acceleration: Prevented estimated 6-8 weeks of construction schedule delay through advance coordination
- Cost reduction: Estimated conflict resolution costs during construction substantially reduced through pre-build identification
- Approval timelines: Reduced from 16-20 weeks to 10-12 weeks

Construction Phase: Construction & Project Management

The construction phase traditionally relies on significant manual effort and physical oversight. Site engineers maintain handwritten logs and communicate progress verbally. Limitations become apparent as project complexity increases. Large residential projects with multiple components and thousands of units demand precise scheduling and coordination. Paper-based management proves inefficient and error-prone.





Digital Construction Management Adoption & Benefits in Indian Residential Real Estate



Source:

India's Construction Sector Accelerates Digital Shift as 84% Firms Boost Tech,' 14 Nov 2025 – adapted analysis of digital construction management adoption in Indian residential real estate.

Digital construction management platforms address these challenges comprehensively across all project phases:

Real-time Project Documentation: Cloud-based solutions enable site documentation with photographic evidence, quality issue reporting and safety incident recording. Daily logs are automated rather than handwritten. Progress documentation is captured digitally in real-time.

Project Management and Scheduling: Digital platforms enable integrated scheduling, critical path analysis and resource allocation. Project managers gain real-time visibility into progress, enabling timely intervention. Schedule deviations trigger alerts, enabling early corrective action.

Cost Tracking and Budget Management: Digital procurement and expense tracking provide real-time cost visibility. Budget deviations are identified immediately rather than discovered during monthly reconciliations.

Approximately 23% of large residential projects have adopted digital construction management tools. Benefits include earlier delay identification, reduced contractor disputes through documented progress and improved accountability. Tier-1 developers increasingly adopt these platforms, while Tier 2 developers show emerging adoption and Tier 3 developers rely primarily on manual tracking.

Barriers include site-level resistance to technology adoption, inconsistent mobile network coverage at construction sites and required change management.



Construction Management ROI

Investment & Returns:

- Platform cost: ₹3–5 lakh for mid-sized projects (500–1000 units)
- Timeline improvement: 10–15% schedule acceleration
- Cost control: 5–8% reduction in budget overruns
- Dispute reduction: 60–70% fewer contractor payment disputes through documented progress

Case Study: Bangalore Multi-Site Construction Management

The Challenge

A developer managing multiple concurrent residential projects (5 concurrent developments, 500+ total units) struggled with multi-site coordination, inconsistent progress documentation and frequent contractor payment disputes due to lack of transparent progress tracking.

What Was Implemented

Deployment of cloud-based construction management platform across all 5 sites with real-time documentation, photo-enabled daily logs, schedule tracking and automated alerts for deviations.

Impact / Result

- Schedule delay detection: Average 2-3 weeks earlier identification of deviations, enabling faster corrective action
- Payment disputes: Reduced from 8-12 monthly disputes to 1-2 through documented daily progress
- Resource optimisation: Enabled effective multi-site resource sharing and labour reallocation
- Budget control: Prevented estimated ₹15–20 lakh in cost overruns through real-time tracking
- Project delivery: 3-4 weeks acceleration across portfolio

Post-Construction and Operations Phase

Post-construction asset management transitions properties from construction to ongoing operations and resident services. Traditional management relied on paper-based record-keeping, physical facility rounds and reactive maintenance triggered by resident complaints. Energy consumption was unmonitored; building systems operated on fixed schedules regardless of actual usage.



Source: Investigation of BIM Adoption in India, International Journal of Engineering Research & Technology (IJERT), 2019.



PropTech solutions transform post-construction asset management across multiple dimensions:

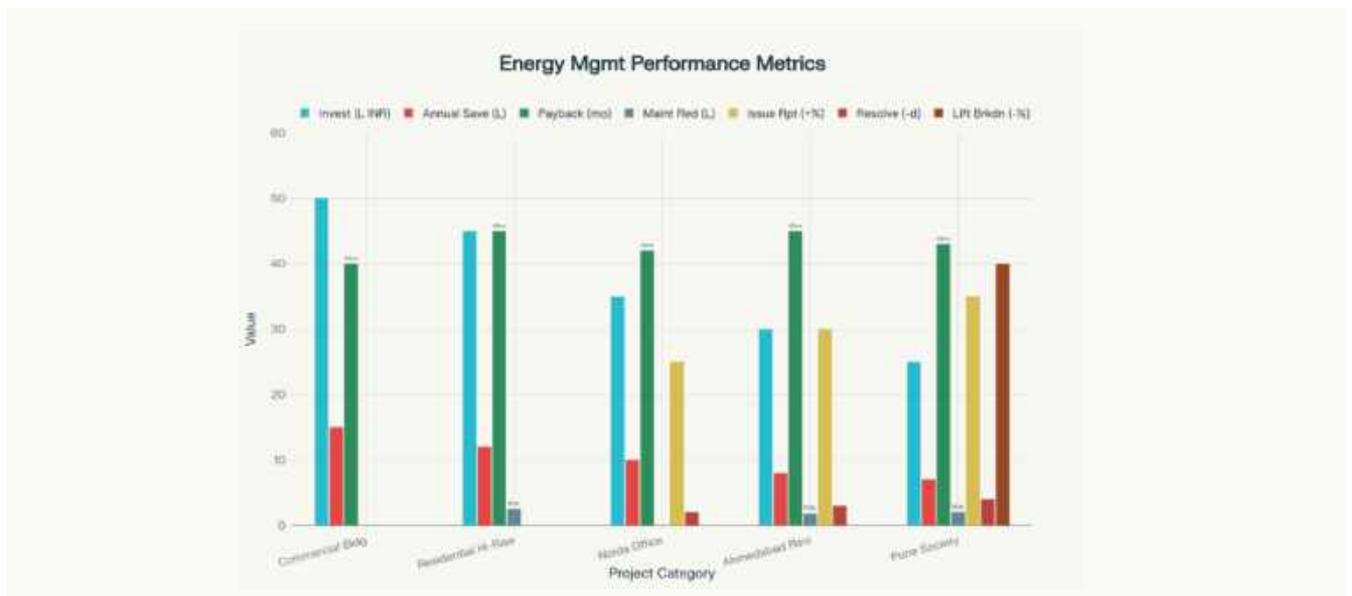
Real-time Maintenance Management: Digital facility management systems enable real-time maintenance request receipt via mobile applications, resolution tracking and preventive maintenance scheduling. This reduces emergency repairs and unplanned downtime.

Resident Engagement: Digital platforms facilitate ongoing resident communication, grievance redressal and community engagement. Residents report issues via mobile applications; systems automatically assign work to maintenance teams. Analytics identify recurring issues enabling systematic resolution.

Energy and Resource Optimisation: IoT sensors and building management systems enable real-time consumption monitoring across energy, water and waste streams, supporting optimisation and cost reduction.

Energy Management Systems

Energy management represents the strongest PropTech business case, delivering measurable recurring operational cost reductions across all building types.



Source: Puravankara – "ESG in Real Estate: Why Sustainability and Wellness Are the New Luxury" (2025)

Energy Costs in Residential Developments:

Energy constitutes the second-largest operational cost for residential buildings after staffing. For residential complexes, common-area energy costs directly impact monthly maintenance charges levied on residents. Buildings without monitoring systems cannot optimise consumption, operating on fixed HVAC and lighting schedules regardless of actual occupancy or weather conditions.

Digital Energy Management:

IoT-based Building Management Systems enable real-time consumption monitoring across all building systems. HVAC systems adjust based on occupancy detection. Lighting adjusts based on natural light and presence sensors. Real-time dashboards identify consumption patterns and inefficiencies. Predictive analytics enable proactive equipment maintenance.



Energy Management System ROI

Investment & Returns:

- Investment (residential): ₹25-40 per sq. ft. of common area
- Annual savings (residential common areas): 12-18% of baseline consumption
- Payback period: 24-36 months for residential complexes
- Commercial buildings: 15-25% annual cost reduction, 18-24 month payback

Comprehensive Facility Management

Digital facility management extends beyond energy to encompass maintenance scheduling, vendor management, resident services and asset performance tracking. Residents report issues via mobile applications. Systems automatically assign work to maintenance teams. Analytics identify recurring issues. Planned preventive maintenance reduces emergency repairs.

Case Study: Residential Society Facility Management Transformation

The Challenge

A large residential society (2,500 units, 8 towers) operated with manual maintenance processes relying on phone-based grievance submission, paper-based work orders and reactive maintenance triggered by resident complaints. Average issue resolution exceeded 7-10 days. Energy consumption was unmonitored; preventive maintenance was minimal.

What Was Implemented

Deployment of mobile-based facility management system with real-time grievance reporting, automated work order generation, IoT-based energy monitoring and preventive maintenance scheduling.

Impact / Result

- Issue reporting: Increased 50% due to ease of digital submission (previously unreported issues now captured)
- Resolution timeline: Reduced from 7-10 days to 3-5 days average
- System breakdowns: Reduced critical failures through preventive maintenance scheduling (35-40% fewer emergency repairs)
- Annual maintenance expenditure: Reduced 8-12% through optimisation and preventive approaches
- Resident satisfaction: 60% improvement in facility management ratings





Sales & Post-Sales Engagement

The traditional buyer journey in Indian real estate depended on physical interactions. Prospective purchasers visited sales offices during business hours, reviewed physical documents and viewed properties by appointment. The purchase process involved multiple face-to-face meetings for documentation.

Digital transformation has reshaped this experience. SalesTech platforms offer virtual property viewing enabling buyers to evaluate properties online at any time. 3D imaging and video technology enable remote property evaluation. AI-assisted platforms answer buyer queries instantly, reducing response times from hours to minutes.

Electronic document signing and online payment systems have streamlined transactions and accelerated deal closure. Digital sales adoption accelerated during 2020–2021 and has sustained as consumer preference for remote property evaluation has continued.

SalesTech adoption among tier-1 residential developers ranges from 45–50%, representing the highest consumer-facing adoption level among PropTech verticals. This uptake is predominantly consumer-driven; buyers expect transparent, accessible and flexible property purchase processes.

Post-sales engagement platforms enable ongoing resident communication, community event management and facility booking, strengthening long-term customer relationships and reducing attrition.



Emerging Technologies and Future Capabilities

Emerging technologies within India's PropTech ecosystem are playing transformative roles by improving operational efficiency and decision-making.

The Indian PropTech Ecosystem Startups Transforming Real Estate Challenges



Source: GrowthJockey – "Top Real Estate Startups in India: PropTech & Ideas (2025 Edition)"

Artificial Intelligence (AI) and Machine Learning (ML) are used to support various applications such as property valuation modelling, customer service automation and demand forecasting. These technologies allow developers and stakeholders to make data-driven decisions that optimise resources and investments. Predictive analytics enable early identification of construction delays, cost overruns and maintenance issues.



The Internet of Things (IoT) connects disparate building systems including HVAC, lighting, security and water management through sensors and actuators that monitor real-time data like occupancy, temperature, humidity and energy usage. This connectivity enables automation of lighting and climate control based on building use, predictive maintenance to minimise downtime and extend equipment life and comprehensive energy management to reduce waste.

Together, these technologies form the technological backbone that supports smarter, more efficient and sustainable real estate development and building management processes in India, driving tangible operational improvements across the development lifecycle.



Barriers to Scale – The India Reality Check

Despite demonstrated use cases, PropTech adoption in India remains limited across most segments. Understanding these barriers is essential for realistic implementation strategies.

Trust and Change Resistance:

Developers express reluctance toward operational changes that expose existing processes. There is apprehension that technology implementation may complicate workflows. Lack of peer examples demonstrating large-scale successful adoption contributes to hesitation.

At the site level, staff often view digital applications with reservation. Additional data entry requirements are seen as burdensome. Phased implementations beginning with minimally disruptive tools, pilot demonstrations and training support build confidence.





Cost and ROI Uncertainty

Navigating Upfront Costs in a Fragmented Market



Source:
Cadcrowd – "Latest Industry Rates for BIM Services & Building Information Modeling"

Upfront PropTech investments can be substantial. BIM coordination adds consultant costs. Annual project management software incurs subscription fees. Energy management systems require capital investment depending on building scale. This financial outlay is challenging, especially for developer segments with tight margins.

Calculating ROI is complicated by difficulty quantifying avoided costs such as saved time or rework prevention. Developing standardised case studies with documented outcomes helps reduce risk perception. Starting with low-cost, high-impact tools allows developers to build confidence before scaling adoption.

India's PropTech Vendor Landscape

India's PropTech vendor landscape remains highly fragmented, with uneven platform quality and uncertainty around long-term reliability. This fragmented ecosystem comprises numerous companies operating across segments. Quality and reliability vary. Absence of standards means each platform requires separate learning. Additionally, vendor longevity is uncertain; many ventures may not sustain long-term support.

Developers express concerns about vendor continuity and data portability. These concerns contribute to cautious procurement decisions.



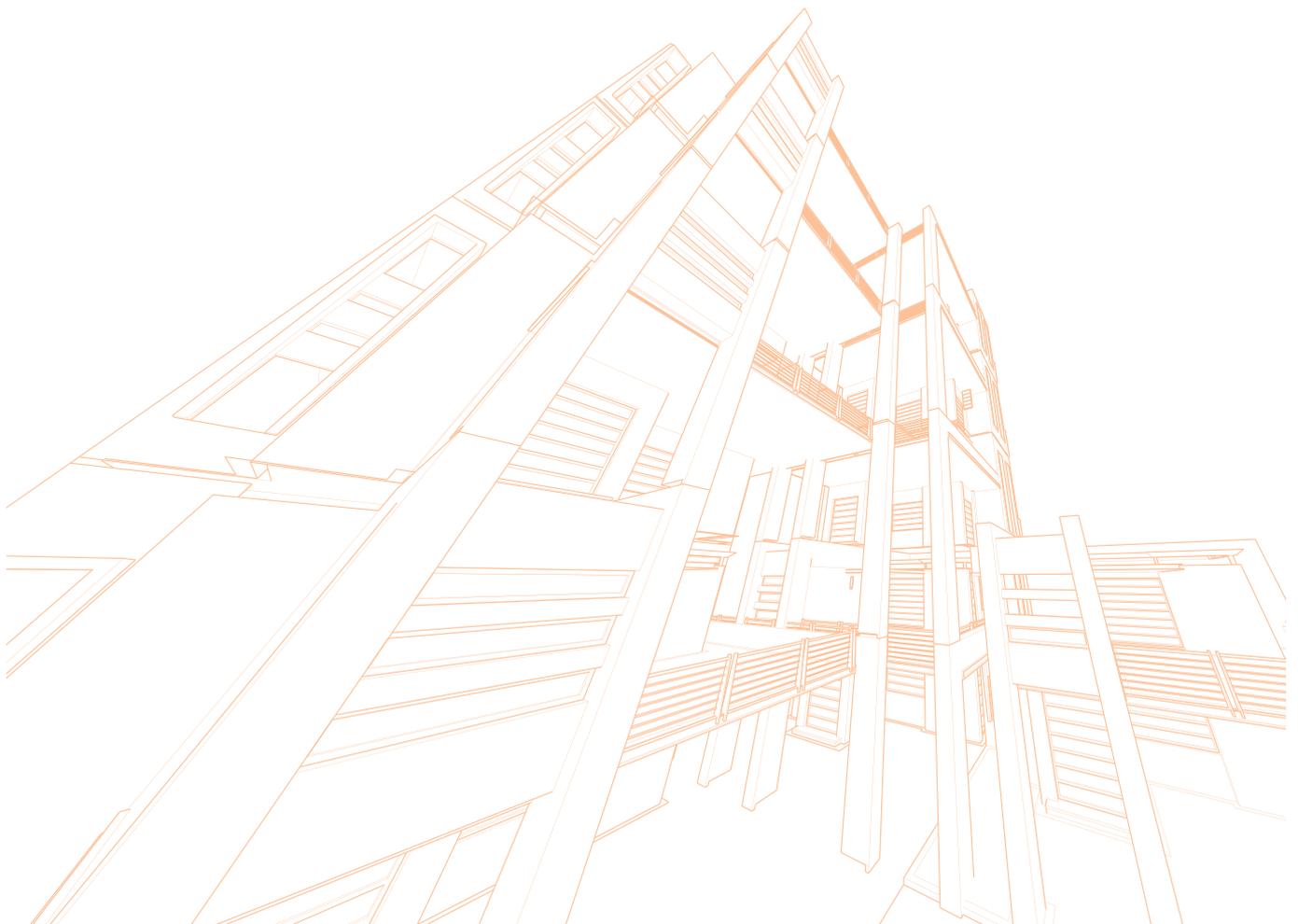
Infrastructure Limitations

The practical India reality: Construction sites face practical barriers - weak mobile connectivity, dust-heavy environments and unreliable power backup, limiting seamless digital adoption.

Approximately 40% of construction sites experience poor or intermittent mobile connectivity. Power supply reliability is inconsistent. Harsh construction environments damage sensitive equipment.

Pragmatic solutions include:

- Hybrid systems that operate offline and synchronise data when connectivity is restored
- Deploying ruggedised hardware suited to construction environments
- Initially focusing digital adoption within office functions before extending to remote sites
- Redundant power backup systems for critical monitoring equipment
- Dust-resistant and weather-sealed device specifications



Strategic Opportunities and Growth Drivers – The Path to 2030

PropTech adoption across India’s real estate sector is projected to increase through 2030, driven by regulatory requirements, investor expectations and cost pressures.

Near-Term Phase (2025–2027)

Procurement Digitalisation

50-60%

Procurement Digitalisation: Expected to reach approximately 50–60% adoption among large developers by 2027. Supply chain pressures will drive adoption of digital ordering and competitive bidding platforms. Government project mandates for digital procurement records will further encourage adoption.

Energy Monitoring

45% | **20%**
Commercial | Residential

Energy Monitoring Systems: Rising energy costs and ESG reporting requirements are driving adoption. Approximately 45% of large commercial buildings are projected to adopt energy monitoring solutions by 2027. In residential complexes, adoption is projected at approximately 20%.

Documentation & Compliance

40%

Project Documentation and Compliance: Rapid digitalisation is expected, driven by RERA mandates for digital record-keeping. Institutional investor demands for transparent, real-time project tracking will intensify adoption. Approximately 40% of large projects are projected to operate with fully digitalised documentation systems by 2027.



Medium-Term Phase (2027–2030)

BIM Adoption: Expected government mandates for BIM on large projects. Adoption levels are projected to reach approximately 60% for commercial and 30% for residential developments by 2030.

Tenant and Resident Platforms: Digital resident engagement platforms are projected to become widespread, particularly for new developments. Approximately 50% of new residential projects are projected to incorporate such platforms by 2030.

2030 Outlook: A Hybrid Digital Real Estate Market

Varying Digitalisation across developer segments



Source:
Cushman & Wakefield – "Indian Real Estate 2030: Technology, Sustainability, & Growth" (2025)

Larger developers (top 50 by revenue) are expected to have adopted digital tools across core operations. Mid-sized developers are projected to reach 30-40% adoption. India will maintain a varied market: digital tools will be standard for large developers and institutional assets but remain less common for smaller, regional developers, especially in tier-2 and tier-3 cities and affordable housing segments.



Building India's PropTech Future

For developers considering PropTech adoption, a phased, incremental approach reduces implementation risk and enables systematic ROI evaluation.

PropTech Adoption Strategy: A Phased Approach

Incremental Digitalisation for Mitigated Risk & Maximised Returns



A structured roadmap to phased PropTech transformation.

Source: CBRE India – “How Innovation is Transforming the Indian RE Landscape” (2024)

Phase 1: Low-Hanging Fruit (0-6 Months)

Initial digital transformation efforts in the PropTech sector focus on achieving quick, measurable benefits while minimising operational disruptions.



Digital land due diligence accelerates acquisition timelines by enabling faster title verification and zoning compliance checks, which collectively reduce the risk of legal disputes related to property ownership.

Procurement digitalisation through competitive bidding platforms enhances transparency and vendor competition, resulting in cost savings that generally outweigh platform subscription expenses within the first few purchasing cycles.

Digital payment and billing systems improve financial management by streamlining cash flow and enhancing collection efficiency for existing properties.

Together, these foundational digital initiatives enable developers and property managers to improve operational efficiency early in the adoption journey while establishing a reliable framework for further technology integration.

Phase 2: Project Implementation (6-18 Months)

Once initial digital successes are achieved, developers can advance to piloting more complex solutions such as Building Information Modelling (BIM) and site project management platforms.

BIM facilitates enhanced coordination among architects, engineers and contractors by providing a centralised, shared digital model accessible in real time. This integration reduces miscommunication, allows simultaneous updates and supports clash detection, resulting in fewer errors and faster approval cycles. It also enables improved construction planning through 4D scheduling that links the 3D model to project timelines, optimising resource allocation and predicting delays.

Site project management platforms further support real-time tracking and documentation on construction sites, improving accountability and enabling faster interventions in case of schedule deviations.

Together, these solutions elevate project collaboration, accuracy and efficiency, helping developers manage complex construction challenges better.

Phase 3: Asset Optimisation (18+ Months)

The final phase of digital adoption in real estate focuses on achieving operational excellence through advanced solutions such as energy management systems and facility management platforms.

Energy management systems are designed to continuously monitor and optimise energy consumption in completed buildings, reducing operational costs while contributing to sustainability goals. These systems aggregate data from various sensors and metres to provide real-time insights and enable proactive decision-making, often incorporating predictive analytics to anticipate energy needs and detect inefficiencies.

Facility management platforms support the efficient operation of residential assets by streamlining service



delivery and reducing unplanned maintenance. These platforms leverage technologies like AI and IoT to automate routine maintenance, improve resource allocation and facilitate proactive issue resolution, ultimately enhancing occupant satisfaction and lowering operational downtime.

Together, these solutions form the foundation for smarter, more efficient building management in the PropTech ecosystem.

Common Mistakes to Avoid:

- Attempting comprehensive digitalisation in a single implementation phase
- Selecting tools based solely on feature lists without operational clarity
- Skipping training and change management
- Neglecting integration between platforms
- Expecting immediate ROI across all investments

Tailored Advice for Stakeholders

Real estate developers are encouraged to identify critical operational challenges and pilot targeted technology solutions to address these areas. Through careful measurement and evaluation, they can ensure that decisions regarding scalability of these solutions are based on documented results, improving effectiveness and resource allocation.

Energy management represents the strongest business case, with documented recurring cost savings driving adoption across all developer segments.

Financial stakeholders benefit from enhanced project visibility enabled by digital tracking tools, which support improved risk assessment and contribute to better asset quality and performance predictability.

For facility managers and property teams, the shift from reactive maintenance to systematic optimisation is key. By upskilling in data analysis and preventive maintenance, they can maximise the effectiveness of PropTech platforms, leading to more efficient operations and improved occupant satisfaction.

This multi-stakeholder approach facilitates a coherent strategy for PropTech adoption across real estate development and management functions.





The Road Ahead

PropTech adoption in India has progressed beyond the experimental stage. Practical tools exist that address specific operational challenges in residential real estate development, with documented operational benefits in real-world implementations. Adoption rates across development phases range from approximately 18% to 31%, indicating growth potential. Technologies delivering direct operational benefits show documented cost reductions. These translate into improved project delivery, reduced operational expenditures and predictable asset performance.

Investment payback periods for most PropTech implementations range from 18 to 36 months, providing business justification for capital outlays. However, digital transformation faces significant barriers. Cost pressures remain obstacles, particularly for smaller developers and margin-constrained projects. Trust concerns within traditional teams slow adoption. Infrastructure constraints limit seamless integration. Vendor fragmentation presents integration and support challenges.

The optimal path forward is a phased, problem-focused approach. Rather than pursuing comprehensive digitalisation projects, developers should identify key pain points and systematically pilot targeted solutions. Pragmatic implementation reduces rollout risk while accelerating gains in efficiency and operational consistency.

Developers adopting digital tools establish competitive positioning. Early adopters establish cost advantages, faster project delivery, and superior asset quality; critical differentiators in competitive real estate markets. Ultimately, the decision is not whether to digitalise but when. Early movers establish positioning and market share, while late adoption creates competitive disadvantage. India's PropTech evolution depends on this adoption trajectory.





Sources:

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