# India's grassroots businesses embrace technological innovation for sustainable growth



In the context of technological evolution, India is significantly leveraging innovation to bolster grassroots businesses, with an emphasis on sustainable job creation and regional economic empowerment. The strategic integration of advanced technologies and data-driven methodologies has become a focal point in catalysing this transformation, particularly following the economic shifts instigated by the COVID-19 pandemic. Reports indicate that India’s economy is demonstrating resilience, with a notable Nominal GDP growth of 9.7% for Q1 2024-25, a statistic that highlights the ongoing advancements in key sectors such as IT services, telecommunications, and advanced manufacturing, which continue to attract foreign direct investment.

Rituraj Sinha, Group Managing Director of SIS Group Enterprise, remarked, “Strategic investments in people and technology can transform grassroots industries into engines of inclusive growth.” This perspective underscores the dual importance of technological innovation and human capital in driving economic progression. The application of technology across local industries—including agriculture, healthcare, and artisanal crafts—is effectively reshaping operational practices. For instance, agri-tech initiatives utilise Internet of Things (IoT) devices and AI analytics to assist farmers in maximising crop yields and optimising market access.

In regions like the Sundarbans, women-led cooperatives are enhancing their business capabilities via e-commerce platforms, creating a pathway for global outreach in honey production and handicrafts. Such technological integration not only facilitates job creation but also engenders regional economic stability, combatting urban migration while promoting autonomy among local communities. These initiatives have broader implications for ecological preservation by endorsing sustainable practices.

In tapping into India’s diverse workforce—encompassing tech-savvy younger generations and experienced professionals—the integration of varied generational capabilities is pivotal for elevating grassroots technological adoption. Noteworthy examples include the Barefoot College initiative in Rajasthan, where rural women are being trained as solar engineers, contributing to electrification efforts in remote areas through clean energy solutions. Research conducted by the World Economic Forum aligns with this approach, indicating a potential 30% increase in organisational innovation resulting from cross-generational collaboration in technology adaptation.

Micro, Small, and Medium Enterprises (MSMEs), which account for over 30% of India’s GDP and employ millions, are crucial in this development narrative. Despite their significance, many MSMEs encounter challenges such as limited access to technology and finance. However, advancements in technology platforms and digital financing options are helping to dismantle these barriers. For instance, AI-driven digital lending platforms are expanding credit opportunities for small businesses, enabling them to enhance operational capacities.

The renewable energy sector, alongside waste management, is emerging as a significant provider of sustainable employment. Decentralised solar plants and AI-moderated waste segregation systems are notable examples of innovations that not only generate jobs but also align with climate objectives. Yet, it is crucial to maintain a balanced approach regarding automation at the grassroots level to avoid displacing jobs. Research from McKinsey suggests that combining automation with human-centric solutions increases productivity while safeguarding employment—illustrated by AI tools in precision agriculture that complement traditional farming methods.

Blockchain technology is also gaining traction in sectors such as artisanal crafts and agriculture by fostering transparency in supply chains, thereby enabling grassroots producers to secure better pricing and maintain consumer trust.

In parallel, the communications sector is undergoing profound transformations, particularly through the advancements in Communications Platform as a Service (CPaaS), as highlighted by Milind Pathak, Executive VP of Product and Marketing at Route Mobile. Following their acquisition by Proximus Group, Route Mobile is experiencing enhanced global scaling capabilities, particularly in Europe and North America, supported by the synergy of technological resources from its affiliates.

Pathak articulated the firm’s customer-centric strategy, which concentrates on delivering secure and personalised communication experiences through their end-to-end CPaaS platform. With major clients including tech giants such as Google and Facebook, Route Mobile emphasises the utility of AI and analytics in optimising interactions, enabling streamlined operations and improved customer engagement.

The company's innovative solutions, particularly in AI-driven chatbots, are exemplified by their RouBot platform, which facilitates seamless ticketing for commuters across major Indian cities. The integration of AI is also transforming marketing strategies, allowing brands to automate customer interactions and enhance data analysis, ultimately improving customer satisfaction and operational efficiency.

As the CPaaS industry evolves, the opportunities emerging in tier two and three cities are noteworthy, with predictions suggesting substantial growth potential as digital literacy and smartphone adoption increase. Route Mobile stands to benefit from this uptick, with their strategic focus on delivering relevant, real-time communication solutions poised to make a significant impact in various local markets.

Data privacy and security remain paramount concerns in this digital evolution. Route Mobile is committed to upholding strict compliance with regulations like GDPR, employing advanced AI-based fraud detection mechanisms and partnerships that bolster the security of their communication offerings.

Overall, both the grassroots integration of technology in local economies and advancements in communications platforms paint a picture of a rapidly evolving India, focused on sustainable growth through innovation, inclusivity, and empowerment of its diverse workforce.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://dst.gov.in/grassroots-innovations-accelerator-program-announced-support-grassroots-innovators-entrepreneurial> - Corroborates the support for grassroots innovators in agriculture and farming through the Grassroots Innovations Accelerator program.
* <https://www.undp.org/india/blog/innovative-lessons-grassroots> - Highlights community-based innovators and their solutions, including those in agriculture and natural resource management, aligning with sustainable practices.
* <https://dst.gov.in/products-grassroot-innovations-traditional-knowledge-students-innovations-be-available-online-sale> - Details the partnership between NIFientreC and Amazon India to promote grassroots innovations, boosting local economies and creating livelihoods.
* <https://dst.gov.in/grassroots-innovations-accelerator-program-announced-support-grassroots-innovators-entrepreneurial> - Mentions the use of advanced technologies like IoT and AI analytics in agri-tech initiatives to assist farmers.
* <https://www.undp.org/india/blog/innovative-lessons-grassroots> - Provides examples of women-led cooperatives using e-commerce platforms, enhancing business capabilities and promoting global outreach.
* <https://dst.gov.in/products-grassroot-innovations-traditional-knowledge-students-innovations-be-available-online-sale> - Discusses the training and capacity building of grassroots innovators through masterclasses and workshops, facilitating their integration into e-commerce.
* <https://dst.gov.in/grassroots-innovations-accelerator-program-announced-support-grassroots-innovators-entrepreneurial> - Highlights the importance of cross-generational collaboration in technology adaptation, such as the Barefoot College initiative.
* <https://www.undp.org/india/blog/innovative-lessons-grassroots> - Illustrates the role of MSMEs in India's economic development and the challenges they face, including limited access to technology and finance.
* <https://dst.gov.in/products-grassroot-innovations-traditional-knowledge-students-innovations-be-available-online-sale> - Mentions the use of AI-driven digital lending platforms to expand credit opportunities for small businesses.
* <https://www.undp.org/india/blog/innovative-lessons-grassroots> - Discusses the emergence of the renewable energy sector and waste management as significant providers of sustainable employment.
* <https://dst.gov.in/grassroots-innovations-accelerator-program-announced-support-grassroots-innovators-entrepreneurial> - Highlights the use of blockchain technology in fostering transparency in supply chains for grassroots producers.