An Institutional Approach to Sustainable and Inclusive Development: The Indian Lens on Societal Design

Shashank Mehta *

National Institute of Design, Ahmedabad, India

Abstract: This paper provides a comprehensive examination of a design philosophy pioneered and institutionalized by the National Institute of Design (NID) in India. It is argued that for a nation as complex and multifaceted as India, a successful design methodology must be inherently linked to its distinct cultural heritage, economic realities, and foundational ethical principles. The analysis begins by exploring the profound influence of Gandhian philosophy—particularly its tenets of simplicity, self-reliance (swadeshi), and decentralized "production by the masses"—on this design framework. The paper then systematically delineates the core pillars of Societal Design: the promotion of indigenous innovation, the application of frugal engineering principles, and the strategic empowerment of micro, small, and medium enterprises (MSMEs) and the traditional crafts sector. By analysing NID's role as a trans-disciplinary Centre of Excellence, this research demonstrates how Societal Design transcends conventional commercial objectives, positioning itself as a potent and people-centric catalyst for inclusive growth and sustainable national development.

Keywords: Societal design; Sustainable development; Inclusive development; Developmental framework

https://doi.org/10.59528/ms.jdssi2025.0918a39

Introduction

The traditional discourse on design in the developed world has historically centred on industrial production, commercial viability, and consumer aesthetics. This narrative, focused on efficiency, mass production, and products tailored for a consumer market, demonstrates limited applicability within the multifaceted context of India. The nation's developmental landscape presents a study in striking contrasts, where globally integrated metropolitan centres coexist with a vast rural economy comprising over six hundred thousand villages. In this environment, livelihoods are sustained by indigenous knowledge systems and the enduring traditions of agriculture and craft. Consequently, an effective design approach must extend beyond aesthetic refinement to address foundational issues of poverty, inequality, and environmental sustainability. This paper posits that *Societal Design*, a philosophy institutionalized and championed by the National Institute of Design (NID), offers a compelling, context-specific framework for sustainable and inclusive development that fundamentally challenges conventional, Western-centric discourse.

The intellectual foundation of this approach is traceable to the seminal *Eames Report* of

1958. Commissioned by the Government of India, the designers Charles and Ray Eames were tasked with charting a course for the country's future design education. Their report did not advocate the importation of Western models but instead issued a call for an authentically Indian design ethos. They recognized the imperative of creating a design school that was both globally informed and deeply rooted in India's unique challenges and rich cultural identity [1]." The institutional vision was to train designers to serve the nation rather than exclusively serving industry. This perspective aligns with historian Kapila Vatsyayan's observation that creativity is "as essential and ordinary as the act of breathing" in culturally cohesive societies [2], suggesting that design is an integral and organic component of its socio-cultural and economic fabric. This approach, a marked departure from top-down, commercial models prevalent elsewhere, forms the philosophical bedrock of India's institutional framework (**Figure 1**).

Figure 1. "The India Report" Culture-Centric and Multidisciplinary Design Approach (created by the author)

Despite the vibrancy of India's creative economy, significant structural barriers impede the full potential of design as a developmental driver. The traditional craft sectors, for example, which employ over thirty million people, face substantial pressure from industrial substitutes, shifting consumer preferences, and limited market access. This decline threatens both livelihoods and the cultural heritage they embody, a concern articulated in UNESCO's *Convention for the Safeguarding of the Intangible Cultural Heritage* [3]. Concurrently, micro, small, and medium enterprises (MSMEs), which constitute the backbone of the decentralized economy, often lack the design capabilities necessary to compete effectively in terms of quality, branding, and innovation. These deficiencies underscore the urgent need for a coherent model of societal design that prioritizes people and cultural values, leverages local resources, and integrates global knowledge without eroding indigenous identity.

The Indian approach is predicated on a philosophy that treats individuals not as passive consumers but as active participants and co-creators within a shared socio-cultural ecosystem. This perspective was formally codified in the *Ahmedabad Declaration on Industrial Design for Development*, articulated at NID during the 1979 UNIDO–ICSID conference. The declaration emphasized "a search for local answers to local needs, utilizing

indigenous skills, materials and traditions while absorbing the extraordinary power that science and technology can make available [4]." This vision aligns with Ezio Manzini's concept of "cosmopolitan localism," which posits that design, while informed by global knowledge, must remain deeply grounded in local contexts to maintain relevance and sustainability [5]. This declaration established a clear trajectory for India to forge its own path, creating a new grammar of design for development (**Figure 2**).

Figure 2. Ahmedabad Declaration on Industrial Design for Development (created by the author)

1. Societal Design in Practice: The Craft and MSME Sectors

The application of societal design is most evident in two critical sectors: traditional crafts and MSMEs. These domains represent not only significant economic activity but also complex ecosystems of cultural expression and social organization. In these contexts, Societal Design does not impose solutions; rather, it facilitates change from within.

1.1. The Craft Sector

With over thirty million individuals reliant on it, the craft sector is a cornerstone of the Indian economy and a repository of its cultural heritage. The challenge for design is twofold: to preserve these invaluable skills and to ensure their economic viability and cultural resonance for future generations. NID's *Craft Documentation Programme* has been central to this effort, functioning as both an archive and a catalyst for innovation. By systematically documenting the intricate processes, tools, materials, and socio-cultural contexts of various crafts, the program creates a robust knowledge base for informed and sensitive design interventions.

For instance, a project may involve a team of designers and students immersing themselves in a community of traditional block printers to document the preparation of materials and the process of stamping fabric. From this deep understanding, they collaborate with artisans to develop new product designs that appeal to contemporary tastes while preserving authentic techniques. Such interventions may also include the design of more ergonomic tools or the

creation of branding and packaging that communicates the craft's heritage to a global audience. These efforts enhance product appeal, introduce diversification, and develop branding strategies that assist artisans in gaining a competitive edge. The work of Victor Papanek, who championed "design for the real world," provides an intellectual parallel to this approach, advocating for design that serves human ecology and social change [6].

1.2. The MSME Sector

Beyond the craft sector, MSMEs serve as a vital engine of India's industrial economy, contributing substantially to output and exports. This decentralized force, which employs over sixty million people and accounts for a significant portion of the country's industrial output [7], embodies the Gandhian principle of "production by the masses" rather than "mass production". This model prioritizes human-centric, localized production over large-scale, automated manufacturing.

The sector is supported by initiatives such as the *Design Clinic Scheme*, a collaborative program between NID and the Ministry of MSME. This program exemplifies a successful model of embedding design expertise within MSME clusters. Through this scheme, designers have worked with enterprises to improve product aesthetics and functionality, optimize manufacturing processes to reduce waste and increase efficiency, and develop comprehensive branding and packaging strategies. For example, a design clinic may collaborate with small-scale furniture makers to refine a furniture design for improved transportability or introduce a new finishing technique to enhance durability and aesthetic appeal. These efforts not only improve the competitiveness of these small businesses but also foster localized economic resilience and self-reliance, directly linking design to national developmental goals.

2. Inclusive Innovation and Social Enterprise Models

The Indian tradition of inclusive innovation provides compelling examples of how the seemingly contradictory goals of affordability, quality, and scale can be harmonized. This ethos is profoundly shaped by R.A. Mashelkar's formulation of *Gandhian engineering*—the philosophy of "getting more from less for more [8]." This concept has served as the impetus for numerous initiatives aimed at democratizing access to essential goods and services, demonstrating that excellence is not an exclusive luxury (**Figure 3**).

A widely cited example is the *Jaipur Foot*, an inexpensive yet remarkably durable prosthetic limb [9]. Prior to its invention, prosthetic options were often imported, costly, and ill-suited to the daily life and cultural practices of many Indians. Its design simplicity, which utilizes vulcanized rubber and a polyethylene socket, renders it lightweight, water-resistant, and easily repairable in local contexts. Its design is culturally appropriate, accommodating common practices such as barefoot walking and squatting. The designers' understanding was that a prosthetic limb is not merely a medical device but a tool for social reintegration within a specific socio-cultural environment.

Figure 3. "Inclusive Innovation" and the Concept of "Gandhian Engineering" (created by the author)

Similarly, the *Aravind Eye Care System* delivers world-class cataract surgeries at a low cost by employing a highly optimized "hub-and-spoke" model of service design [10]. By standardizing procedures and maximizing operational efficiency, the system achieves remarkable scale while maintaining high quality. *Shantha Biotechnics* further illustrates this model by revolutionizing access to hepatitis B vaccines, producing them at a fraction of the conventional cost while meeting stringent quality benchmarks. These cases demonstrate that innovation, when guided by a societal lens, can deliver both excellence and equity, proving that a frugal approach can lead to world-class results.

Equally instructive are models of social enterprise that combine economic empowerment with community governance. *Shri Mahila Griha Udyog Lijjat Papad* is a women's cooperative that employs over forty-two thousand members through a decentralized production model [11]. Its success is both economic, with an annual turnover exceeding twelve million US dollars, and social, as it preserves the autonomy of its members and provides a dignified source of income. The *Mumbai Dabbawalas* operate a lunch delivery system of extraordinary logistical precision, delivering over two hundred thousand meals daily with a Six Sigma-level reliability [12]. Their system, which predates modern technology, represents a masterful example of service design based on a unique color-coded alphanumeric system. The *Amul Dairy Cooperative* has transformed the livelihoods of over 2.8 million small-scale milk producers, establishing a billion-dollar dairy enterprise rooted in cooperative principles [13].

As noted by Banerjee and Duflo, the success of Amul lies not merely in its product design but in the institutional design of its entire value chain, which empowered small farmers and created a powerful economic force [14]. These examples illustrate that when innovation is anchored in local knowledge systems and cultural practices, it can achieve significant impact.

3. NID's Institutional Approach and Guidelines for Sustainability

NID's institutional approach to societal design is a direct and living legacy of the recommendations of the *Eames Report*. It combines multidisciplinary education, research,

and consultancy in a unique blend. The institution's pedagogy emphasizes experiential learning, cultural grounding, and a profound commitment to social responsibility. Over the decades, NID's projects have encompassed a range of activities, from establishing craft centres to developing the *Grassroots Innovation and Design Studio (GRIDS).*

GRIDS provides a platform for innovators from rural and marginalized communities to develop and refine their ideas with professional design support, bridging the gap between informal and formal knowledge systems. For example, a grassroots innovator with a hand-built device for seeding crops can receive assistance from designers and engineers to refine the device, enhance its durability, and prepare it for larger-scale production. This hands-on experience has provided the Institute with invaluable insights into solving typical problems that arise in MSMEs, the crafts sectors, and at the grassroots level, creating a feedback loop of learning and development.

A core tension within this model is the delicate balancing act between the adoption of global design methodologies and the preservation of local cultural integrity. This tension, recognized in the *Eames Report,* is a central theme in Manzini's concept of cosmopolitan localism. Rather than imposing top-down solutions, NID's strategic interventions emphasize participatory design processes, where the community is engaged as a co-designer. For example, a design project to create new signage would involve workshops with local residents to understand their needs, their visual language, and the way they navigate their environment. The cluster-based approach ensures that solutions are contextually appropriate and culturally resonant, fostering a sense of ownership and long-term sustainability. The legacy of NID lies in its ability to serve as a bridge between tradition and modernity, a crucible where global methodologies are adapted to local realities, not to supplant them, but to empower and uplift them.

From these decades of engagement, a coherent set of guidelines for sustainable design has emerged. Articulated by S. Mehta in 2013, these principles extend beyond eco-friendliness to encompass social and economic sustainability. The guidelines call for the use of local resources and environmentally friendly methods, the preservation of indigenous skills, and decentralized production to generate employment. They also advocate for the design of products that are both affordable and adaptable, process optimization for quality, and the development of products for reparability, reusability, and recyclability [15].

" Design is essentially a human-centered activity. It strongly believes in a holistic approach with an emphasis on generating new opportunites, improving standard of living and preserving the values of traditional society."

" The overall objective of a design education programme is to develop a creative and unique personality of the designer
– a personality characterized by humility, sensitivity to life, empathetic understanding, positive attitude and the confidence to analyze and provide solution to any problem through 'designer thinking.'"

Figure 4. Design, a Holistic Approach (created by the author)

Figure 5. The Overall Objective of a Design Education Programme (created by the author)

The principle of designing for reparability, for instance, serves as a direct counterpoint to the planned obsolescence of many commercial products, ensuring items can be fixed and reused rather than discarded. These principles align with the United Nations Sustainable Development Goals, particularly those concerning decent work, innovation, sustainable cities, and responsible consumption, underscoring the global relevance of NID's localized approach (**Figures 4** and **5**).

Conclusion

The institutional experience of the National Institute of Design, along with the case studies examined herein, demonstrates that design, when deeply embedded in cultural and social contexts, can serve as a powerful driver of equitable and sustainable development. By bridging tradition and modernity, affordability and quality, and localism and globalization, the Indian model of societal design offers a globally relevant template. This approach is uniquely adapted to the realities of a diverse nation, proving that design is not just a tool for commerce but a force for social good. Strengthening this ecosystem will require sustained institutional investment, greater policy integration, and an enduring commitment to the communities whose knowledge and skills form its foundation. The "Indian Lens on Societal Design" presents a compelling and comprehensive framework that positions design as a powerful instrument for national development. Its principles, with their emphasis on local solutions, frugal innovation, and human-centric values, offer a powerful template that could be adopted by other developing nations seeking to leverage design as a tool for holistic, people-driven growth. The ongoing challenge is to continue evolving this philosophy to meet new and emerging challenges while remaining true to its foundational principles of equity, self-reliance, and sustainability.

About the Author(s):

▪ Shashank Mehta is a veteran design educator and researcher with over three decades of service at the National Institute of Design (NID), where he held key leadership roles in education, research, and international programs. Trained as a mechanical engineer and product designer, he has worked across diverse sectors, from industry to crafts and social innovation, while consistently advancing NID's core values and academic benchmarks. He spearheaded the nationwide Design Clinic Scheme for MSMEs, organizing more than a thousand design-focused seminars and workshops, and has authored numerous scholarly works on design, technology, sustainability, and indigenous innovation. He has also co-authored and co-edited influential publications, including *Design at the Doorstep* and *Entrepreneurial Empowerment through Design*. He currently serves as a strategic advisor in design and education.

References

1   Eames, Charles, and Ray Eames. *The India Report*. Government of India, 1958.

2   Vatsyayan, Kapila. *Convocation Address*. National Institute of Design, 1989.

3   UNESCO. *Convention for the Safeguarding of the Intangible Cultural Heritage*. 2003.

4   UNIDO–ICSID Conference. *Ahmedabad Declaration on Industrial Design for Development*. National Institute of Design, 1979.

5   Manzini, Ezio. *Design, When Everybody Designs: An Introduction to Design for Social Innovation*. MIT Press, 2015. [CrossRef]

6   Papanek, Victor. *Design for the Real World: Human Ecology and Social Change*. Thames and Hudson, 1985.

7   Ministry of MSME. *Annual Report 2018–19*. Government of India, 2019.

8   Mashelkar, R. A. "Gandhian Engineering: Affordable Excellence for the Masses." *Current Science* 100, no. 12 (2011): 1741–1747.

9   Bhagwan Mahaveer Viklang Sahayata Samiti. "Jaipur Foot." Jaipur Foot. n.d. www.jaipurfoot.org.

10 Aravind Eye Care System. "Our Story." Aravind Eye Care System. n.d. www.aravind.org/our-story/.

11 Shri Mahila Griha Udyog Lijjat Papad. "About Us." Shri Mahila Griha Udyog Lijjat Papad. n.d. www.lijjat.com.

12 Mumbai Dabbawala. "About Us." Mumbai Dabbawala. n.d. www.mydabbawala.com/about-us/.

13 Amul. "Amul Cooperative." Amul. n.d. www.amul.com.

14 Banerjee, Abhijit, and Esther Duflo. *Good Economics for Hard Times*. PublicAffairs, 2019.

15 Mehta, S. *Sustainability: Context and Design*. National Institute of Design, 2013. [CrossRef]