

The Democratization of Web Development: Trends, Technologies, and Societal Impacts

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Abstract: *Web development has undergone a significant transformation in recent years, expanding participation beyond professional developers to include a broad range of “citizen developers.” This literature review integrates findings from 87 academic and industry sources published between 2019 and 2025, focusing on the role of low-code/no-code platforms, AI-driven development assistance, and blockchain integration in reshaping development workflows. Quantitative and qualitative analyses demonstrate that organizations adopting these technologies experience development-time reductions of up to 60 % (Sapio et al., 2023) and report a surge in non-technical staff creating deployable applications with minimal coding expertise (Forrester Research, 2023). However, studies also highlight critical challenges: security vulnerabilities in citizen-developed solutions (Chen & Williams, 2022); risks of vendor lock-in due to proprietary dependencies (Thomas, 2023); scalability constraints of visual tooling architectures (Singh, 2024); and growing market consolidation that centralizes infrastructure control among a few dominant providers (IDC, 2024). This juxtaposition reveals a paradox: as interface-level accessibility increases, underlying governance and control become more concentrated. Based on this synthesis, we propose evidence-based recommendations for platform vendors to enhance extensibility and transparency, for educators to integrate governance and security best practices into curricula, and for policymakers to establish interoperability standards and regulatory frameworks. By identifying the tensions between democratization and centralization, this review contributes to strategies for achieving genuine inclusion in web development without inadvertently erecting new digital gatekeepers..*

Keywords: *web development; democratization; low-code platforms; no-code development; blockchain; artificial intelligence*

