
KINEDRIK
K·NEXUS
Desarrollo
profesional
Circular Economy
Aprenderás los principios de los sistemas regenerativos para maximizar el uso de recursos y reducir el impacto ambiental, permitiéndote anticipar riesgos por volatilidad de precios de materiales y cumplir con normativas ambientales estrictas.
01 EDICIÓN | Revista K.NEXUS 2026 | Powered by KINEDRIK - El criterio también se entrena

Circular Economy as a Management Strategy in AEC Projects

Autor: Liliana Velázquez

Keywords: Circular economy, sustainability, strategy, projects.

Discover how the circular economy becomes a key strategy for project management in Architecture, Engineering, and Construction (AEC). This article explains its principles, implementation strategies, and benefits, highlighting its role in addressing climate change and sustainability, as well as its importance for professionals in the sector.

The circular economy has been consolidated as an essential paradigm in the transformation of the Architecture, Engineering, and Construction (AEC) industry. In the face of challenges posed by climate change and the urgent need to advance toward sustainability models, this approach promotes regenerative systems that maximize resource utilization, reduce environmental impacts, and foster infrastructure resilience. For professionals in the AEC sector, understanding and applying the principles of the circular economy is not merely a trend, but a strategic competence that directly contributes to the quality, viability, and sustainability of projects, ensuring their alignment with global objectives of climate mitigation and adaptation.

Importance for AEC Professionals

Knowledge of the circular economy enables architects, engineers, and project managers to anticipate risks associated with the intensive use of raw materials, waste generation, and energy dependency. By integrating these principles into professional practice, it is possible to:

million jobs

+ / - 142

- Improve operational efficiency, reducing costs through the reuse and recycling of materials.
- Comply with increasingly strict environmental regulations, avoiding penalties and strengthening institutional reputation.
- Innovate in construction processes, generating differentiated solutions that position organizations as leaders in sustainability.
- Increase project resilience, in the face of price volatility and resource scarcity.

Basic Principles

The circular economy seeks to replace the linear model with a regenerative system that optimizes resource use, reduces waste, and extends the life cycle of materials and products. In engineering projects, its implementation involves designing processes and solutions that integrate sustainability from the initial phase.

Implementation Strategies

- Sustainable design: Incorporate criteria of energy efficiency, modularity, and ease of disassembly in infrastructures and products.
- Material selection: Prioritize recycled, reusable, or biodegradable materials, reducing dependence on virgin resources.
- Waste management: Implement systems for separation, recycling, and valorization of by - products generated during construction or operation.
- Project life cycle: Assess environmental impact at all stages (design, construction, operation, and closure), applying life cycle analysis (LCA).
- Technological innovation: Use digital tools (BIM, IoT, artificial intelligence) to optimize resources and monitor circular performance.
- Community collaboration: Involve local stakeholders in material reuse and in the creation of circular value chains.

Basic principles

- Reduction of operating costs through resource reuse.
- Decrease in carbon footprint and overall environmental impact.
- Greater project resilience in the face of regulatory and market changes.
- Generation of social value by integrating sustainable practices within communities.

Conclusión

For a professional in the AEC sector, mastering the concepts and tools of the circular economy means being prepared to manage projects with a comprehensive vision, where sustainability becomes a factor of competitiveness and social responsibility. The incorporation of this approach not only optimizes technical and economic outcomes but also contributes to the construction of more inclusive, efficient, and environmentally respectful cities. Consequently, the circular economy should be considered a critical competence in the training and continuous development of leaders in the AEC sector.

Regalos disponibles en la revista completa

Optimiza tu tiempo y gestión con estos recursos listos para usar.

K·NEXUS

Powered by KINEDRIK - El criterio también se entrena

KINEDRIK Upskill tech partner for AEC industry