

Nepal Construction Industry: Some Perspectives

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My Vision for Nepal

- Nepal is a land of opportunity
- Graduating from LDC, and aspiring to be MIC by 2030.
- Current GDP: \$40 billion Per capita: about \$1,500

GDP Aspiration:

- \$100 billion by 2030, \$300 billion by 2035
- \$1 trillion by 2050

Nepal becomes a fully developed high-income economy by 2050

Nepal: Fully developed economy by 2050

- **Economic Planning:** Strategic economic planning and development policies that focuses on industrialization and modernization.
- **Infrastructure Development:** Massive investment to support industrial and urban growth.
- **Export-Oriented Growth:** Focus on export-led growth with significant investments in technology and manufacturing sectors.
- **Education and Skills Development:** Develop a highly skilled workforce to support rapid industrialization.
- **Technological Advancement:** Embrace technology and innovation to drive industrial growth and competitiveness.

Key Question: How do we achieve this?

Construction Industry: Nation Builders

- Oldest form of profession and technology from stone, industrial, to the tech-age
- Creates livelihoods for millions of people-skilled and unskilled.
- Provides us with shelter, employment, and relaxation
- Covers all aspect of our lives: homes, offices, roads, schools, hospitals, industry, tourism.
- Part of our dreams: kind of house we want to live to the company that we would like to work in
- Creates new cities and towns, and aspirations
- Construction is the mother of all development and progress. It is a means to help create a prosperous, inclusive, and modern 'Nepal'. Contributes 7-8% of GDP.

Let us salute these nation builders and the construction industry. They will help us.

Nepal: Fully developed economy by 2050

- **Economic Planning:** The government should implement strategic economic plans and policies that support industrialization and construction growth, including financial incentives and subsidies for construction projects.
- **Government Investment:** Invest heavily in infrastructure, including roads, bridges, power plants, and public buildings. This investment will create jobs and stimulate economic growth.
- **Urban Development:** Focus on building modern cities and improving living standards. This will drive construction demand. Rapid urbanization and extensive development of housing and commercial properties will be pivotal.
- **Public Works Projects:** Large-scale public works projects, such as the construction of highways, airports, railways, and public transit systems, will be central to economic development and job creation.
- **Technology and Innovation:** Adopt advanced construction technologies and practices, which improve efficiency and quality.

The key to success of this would be partnerships between the public, private and tech sectors

How Public Sector can help Construction Industry

- **Policy and Regulatory Support:** The government can streamline bureaucratic processes, such as obtaining permits and clearances, and create favorable regulatory frameworks that encourage investment and innovation.
- **Infrastructure Development:** The public sector can invest in essential infrastructure—like roads, railways, electricity, and water supply—which is foundational to efficient construction operations.
- **Funding and Subsidies:** The government can offer financial incentives such as tax breaks, low-interest loans, or subsidies to construction companies engaged in critical infrastructure or affordable housing projects.
- **Disaster-Resilient Infrastructure:** The public sector can lead initiatives to build earthquake- and flood-resilient infrastructure, ensuring long-term safety and sustainability.
- **Transparency and Governance:** The government can promote transparency in public procurement and contract awards, reducing corruption, which hinders project progress and inflates costs.

How Private Sector can help Construction Industry

- **Investment in Infrastructure:** Private companies can invest in large-scale infrastructure projects, such as roads, bridges, and housing, using innovative financing modalities which will spur growth and job creation.
- **Innovation and Efficiency:** The private sector can drive innovation by adopting modern construction techniques, like pre-fabrication and modular construction, improving project timelines and reducing costs.
- **Skill Development:** Companies can partner with technical institutions to provide training for workers, enhancing skill levels in the industry.
- **Public-Private Partnerships (PPPs):** The private sector can collaborate with the government on major public infrastructure projects, bringing in both funding and expertise to ensure timely project completion.

How Tech Sector can help Construction Industry

- **Digital Transformation:** The tech sector can support the construction industry by providing digital solutions such as Building Information Modeling (BIM) for design, planning, and project management, increasing efficiency and reducing errors.
- **Automation and Robotics:** They can introduce automation in areas like bricklaying, excavation, and other repetitive tasks can reduce labor shortages and speed up construction.
- **Smart Building Technologies:** The tech sector can drive the adoption of smart technologies in buildings, such as energy-efficient systems, IoT-enabled sensors, and real-time monitoring, which will enhance sustainability.
- **Supply Chain Optimization:** Tech companies can create platforms for tracking and optimizing supply chains, reducing material shortages and delays.

Adopting modern technologies will be key to developing a competitive construction industry.

Technologies to help Construction Industry

- **Prefabrication and Modular Construction:** These methods can reduce construction time and costs, especially useful for remote and hilly areas.
- **Geosynthetics:** Use of geosynthetics for soil stabilization and erosion control will be beneficial for hilly terrains.
- **Earthquake-Resistant Design:** Technologies and materials for earthquake-resistant construction, crucial for Nepal's seismic activity.
- **Green Building Technologies:** Incorporate sustainable building practices and energy-efficient designs.
- **Drones and GIS:** Use drones and Geographic Information Systems (GIS) for surveying and planning in challenging terrains.

AI Technologies to help Construction Industry

- **AI-Driven Design:** Utilize AI for advanced design and simulation of construction projects, especially in challenging terrains.
- **Predictive Analytics:** AI can help in predicting construction project outcomes, improving efficiency and cost management.
- **Smart Infrastructure:** AI can be used to develop smart infrastructure with real-time monitoring and management systems.
- **Maintenance Optimization:** AI can predict maintenance needs and optimize resource allocation for infrastructure projects.

Early adoption of AI can help construction industry leapfrog and become more competitive

Key Takeaways

- Nepal can become a fully developed trillion dollar economy by 2050.
- Construction Industry can help Nepal achieve this vision by contributing 12-15% of Nepal's GDP.
- This will revitalize industry and services, which will drive economic growth and development across the country.
- Collaboration between the private sector (innovation, investment, and skill development), and the public sector (policy support, transparency, and infrastructure investment) is essential.
- Modernizing the industry with advanced technologies and techniques such as BIM, automation, AI will be key to making the industry more efficient, sustainable, and resilient.

Thank you

Happy to converse!

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