

GUIZHOU | DIGITAL TRANSFORMATION

Leapfrogging with All-Round Digital Transformation in Guizhou

Guizhou's development and digital transformation in the recent decade is a showcase of China's pioneering efforts and success in implementing its national big data strategy.



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Zhaoxing Village in Guizhou - one of the largest Dong minority villages. The province has the highest number of traditional villages under China's national protection - 757 in total.
Image: Collins Zhao / Pexels

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The Challenge

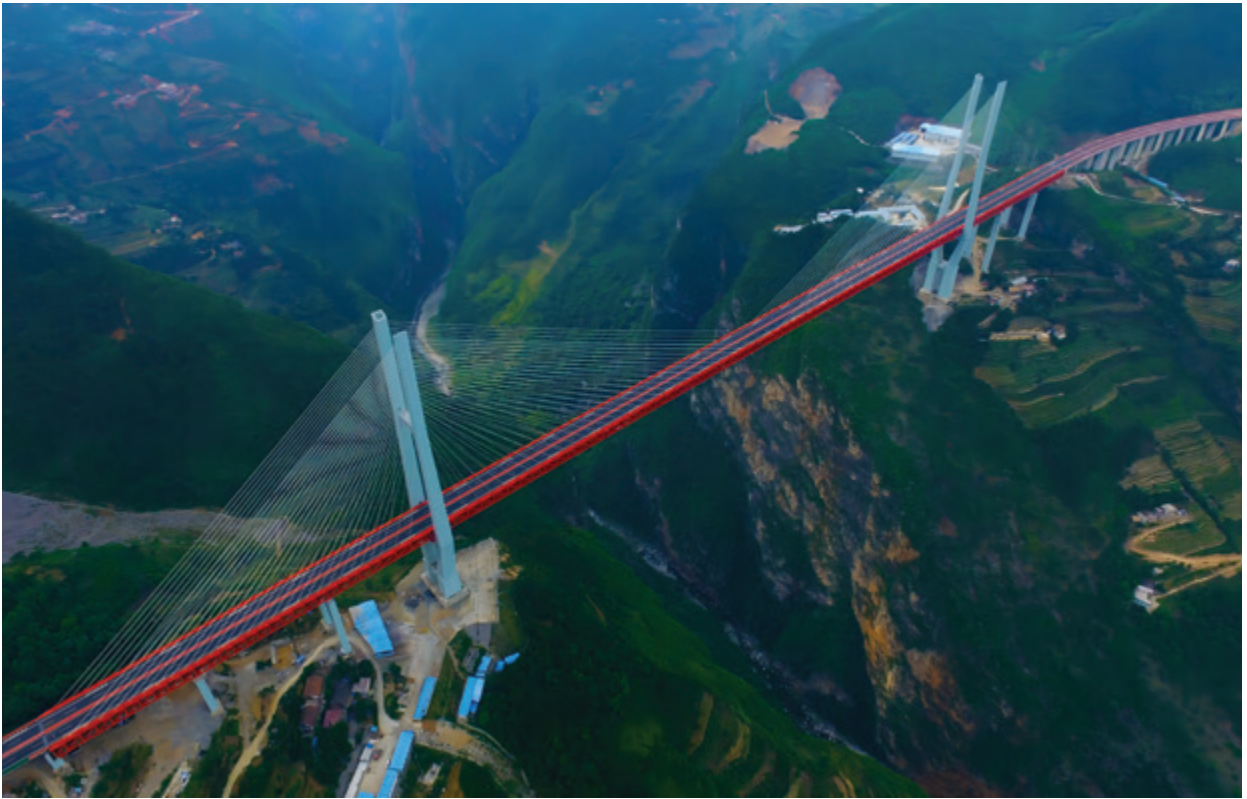
Typical of China's southwestern plateau lands, Guizhou Province's rugged terrain creates challenges for transportation and communication, which in turn contributes to its geographical isolation. Home to many ethnic minority groups, Guizhou was long considered one of the poorest and most disadvantaged provinces. As the ancient saying goes:
*The sky is not clear three days;
 the land is not level for three miles;
 the people don't have three cents.*

For decades, limited resources and challenging environmental conditions slowed Guizhou's pace of development of traditional industries and industrialisation.

About 60% of value-add from larger enterprises came from traditional industries, including coal, electricity, tobacco, and *baijiu* (Chinese traditional distilled liquor).

As a result, Guizhou's economic level ranked among the lowest in China, with per capita GDP falling far below national average. In 2015, 4.93 million people in Guizhou were living in poverty, the highest among all provinces.

To overcome this, Guizhou needed to cultivate new industries, businesses and better governance processes.



■ The world's highest bridge, Beipanjiang Bridge, above the Beipan River Canyon in Guizhou.
Image: Xinhua



■ Five-hundred-metre Aperture Spherical Telescope (FAST) in Guizhou.
Image: Xinhua

Guizhou's digital economy has become a major growth engine for the province.

The Solution

In 2012, big data developments caught the local government's attention and led to the cultivation of strategic emerging industries in information technology. Guizhou's unique conditions were well-suited for this emerging sector: a secure and hidden geographical location, lower temperatures, along with sufficient water and power supply for reducing energy consumption and costs.

As China's first big data pilot zone, Guizhou received investments to make significant improvements to its public infrastructure, in particular its digital infrastructure. Digital industrialisation and industrial digitisation became the drivers of productivity and growth for large enterprises while creating more opportunities for SMEs with support from the Guizhou government's institutional reforms.

In 2017, the launch of Guizhou's Industrial Cloud Platform promoted cloud services usage among local industrial enterprises. Today, the cloud platform connects more than 170,000 registered users and nearly 3,000 companies with 14,178 main production equipment, 204 industrial software and 2308 industrial apps.

One enterprise, which utilised the Guizhou Industrial Cloud's big data analysis system for customer and market information collection to support new product design, achieved over 50% surge in output, a 15% rise in economic returns, and a 46% decline in site requirements.

Guizhou's digital transformation attracted internet giants and associated investments to further accelerate digital economic development and upgrading of traditional industries. At the same time, the deep integration of governance and digital technologies became the foundation to deliver more sustainable development, benefitting the local population.

Digital transformation at different government levels contributed to building a moderately prosperous society. China's first provincial government data platform was established in Guizhou and extends across provincial and city levels, down to county or village level. The cloud platform gathers data—including income, employment, education, healthcare, and so on—from more than 10 government departments. Such data enables civil servants to identify and provide timely social support—such as jobs or medical insurance assistance—to those who need help.

Public services administration is further enhanced by connecting grassroots service stations with online service platforms. Launched in 2015 and accessible at village service stations, the Guizhou Provincial Online Service Hall delivers online services from all four levels of government – provincial, municipal, county, and township, so that more people enjoy convenient access to "last mile" public services, such as payments for vehicle insurance and social security.

Guizhou's successful transition—from a traditional industrial province into a digital economy—has aligned its economic development, social progress and ecology protection.

In 2015, following President Xi Jinping's Guizhou visit where he emphasised the dual importance of development and ecology, the Guizhou government outlined strategic actions prioritising "big data" and "big ecology". It established an intelligent ecological governance system—leveraging digital tools—to improve environmental management of air, water, forest and mountains.

In 2019, to deepen its cultural focus, the Guizhou government invested financial resources to construct a digital protection platform for ethnic minority villages. This initiative includes building provincial-level traditional village digital platforms and digital museums.



A Tencent data center in Gui'an New Area, in Guizhou.
Image: Xinhua



A screenshot of a digital museums of Nanhua Miao Village in Guizhou.
Image: Guizhou Provincial Department of Housing and Urban-Rural Development

The Outcome

Guizhou's successful transition—from a traditional industrial province into a digital economy that is responsible for pioneering the implementation of China's national big data strategy—has aligned its economic development, social progress and ecology protection.

Guizhou's digital economy has become a major growth engine for the province. The integration of its economy with digital technology brought significant opportunities that support new business models and emerging businesses. As a result, Guizhou's digital economy growth rate ranked first in China for seven consecutive years. In 2021, the digital economy accounted for 35.2% of the province's GDP, with its growth rate reaching 20.6%—this was 4.4% higher than the national average.

The economic progress and poverty rates of Guizhou

YEAR	GDP GROWTH RATE, %	GROWTH RATE OF THE DIGITAL ECONOMY, %	POVERTY RATES, %
2012	13.6	-	26.8
2013	12.5	-	21.3
2014	10.8	-	18.0
2015	10.7	(ranking 1 st in China)	14.3
2016	10.5	(ranking 1 st in China)	10.6
2017	10.2	37.2	7.75
2018	9.1	26.9	4.29
2019	8.3	22.1	0.85
2020	4.5	15.0	0
2021	8.1	20.6	-

Table 2.
Source: Guizhou Provincial Bureau of Statistics; China Academy of Information and Communications Technology (CAICT)



Guizhou's inclusive digital transformation successfully combines data-driven solutions, rural rejuvenation, industrial development, and governance.



Creating a digital government has also modernised Guizhou's governance capabilities. Moving its provincial administrative licensing processes fully online improved the overall quality and efficiency of its public and legal services, and friendliness of its business environment.

The use of digital technologies to support the Guizhou government's management, service and decision-making capacities has boosted public well-being and alleviated poverty. By the end of 2020, Guizhou had eradicated extreme poverty from the nine most impoverished counties in the province.

Guizhou's inclusive digital transformation is an epitome of Chinese-style modernisation, which successfully combines data-driven solutions, rural rejuvenation, industrial development, and governance. Guizhou's practice of leveraging regional advantages to advance economic inclusivity and social well-being may provide lessons for other developing regions. 

The Development Research Center of the State Council (DRC) is a comprehensive policy research and consulting institution directly under the State Council, the central government of the People's Republic of China.