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When it comes to innovation in Asia, one country stands head and shoulders above the rest, and that is Singapore. The city-state consistently ranks among the top 10 innovative countries in global surveys.

In the Global Innovation Index for 2014, a joint project by Cornell University in New York, INSEAD and the World Intellectual Property Organization, Singapore ranks seventh out of 143 countries.

Solidiance, a Singapore-based corporate advisory group, recently ranked Singapore as the leading city in Asia Pacific for innovation.

With strong footholds in areas such as manufacturing, medical science, energy production, IT, sustainable resource development, and international culture and the arts, the city-state has created a vibrantly diverse center for innovation, analysts say.

"Singapore had no other choice," says Damien Duhamel, Solidiance managing director for Asia Pacific. "It had to adapt and change if it was to remain relevant in the 21st century."

Bruno Lanvin, executive director of INSEAD's European Competitiveness Initiative, agrees.

"Innovation has been the key to Singapore's success," he says, adding that Singapore has come a long way to become a city-state driven by technology.

Duhamel says although Singapore is still a young city and "things are not always perfect", it has built an attractive ecosystem for companies to innovate.

"The constantly evolving melting pot is not always easy to manage but creates real opportunities for those who are willing to grab them," he says.

So what makes Singapore so successful?

In just a few decades it has evolved from being a labor-intensive manufacturing transhipment port to a high-tech production and world-class research and development center.

A report by the Massachusetts Biotechnology Council notes that Singapore is "aiming to move up the value chain and position itself as a world-class center for R&D through significant government investment".

Singapore's key strengths, the report says, are its educated and skilled workforce; a supportive government, business, and regulatory environment; and government-supported research institutes.

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The shift from low-cost labor-intensive manufacturing did not happen overnight. The transition has its roots in the 1970s when the island-state began to face competition from developing countries in the region.

The world was changing too, with the focus shifting to new, emerging technologies.

Singapore realized that if it was to develop, it needed to focus on high-value-added, technology-intensive industries. In order to do that, however, a highly educated workforce would be required to meet the challenge.

Today, that focus has paid dividends many times over. Singapore has become the regional center for R&D and innovation in such diverse sectors as petrochemicals, biotechnology, aviation and nanotechnology.

"Singapore's transition was no accident," says Desai Arcot Narasimhalu, director of the Institute of Innovation and Entrepreneurship at Singapore Management University.

"It was carefully planned and designed. It was a realization by then Prime Minister Lee Kuan Yew that Singapore's future was in having a knowledge economy and focusing on technology - highend technology," he says.

Narasimhalu says Singapore's small population has been an advantage in its development.

"Because it does not have a large domestic market, Singapore has had to think beyond its own borders for markets," he says. "It simply could not afford to hang on to low-end manufacturing and maintain a workforce with low skills."

MIT Technology Review, a publication by the Massachusetts Institute of Technology, has described Singapore's transition as a "Cinderella story of how a small island - less than half the size of London - transformed itself from a colonial backwater into one of the world's most affluent, most fully wired places in a single generation".

Earlier this year, P&G opened its multimillion-dollar Singapore Innovation Center - the largest private research facility in the city-state.

With more than 250 research laboratories, the center is P&G's international innovation hub and home for 500 researchers, engineers and PhDs.

The city-state is investing S\$16.1 billion (\$12.9 billion) between 2011 and 2015 to support research, innovation and enterprise development - a 20 percent increase over the previous five-year period.

"Research and development has become a cornerstone of the nation's economic strategy," says an article in WIPO Magazine.

By next year, it says, Singapore aims to increase gross expenditure on R&D to 3.5 percent of GDP.

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"Singapore's tertiary sector - its universities, research institutes and polytechnics - play a key role in spawning the innovation that sustains its economic performance," the magazine says.