The Pinhão Valley Innovation Ecosystem

Region
Latin America and the Caribbean

Themes
Innovation

Sustainable Development Goals
Goal 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

New Urban Agenda Commitments
Sustainable and Inclusive Urban Prosperity and Opportunities for All
Information Technology and Innovation

Summary
Curitiba's Pinhão Valley Innovation Ecosystem has promoted economic development in the city, focused on entrepreneurship and technology to drive sustainable urban economic development.

Background and Objective
Prior to 1940, the capital of Brazil’s southern state of Paraná, Curitiba was a small inland city relying on the wood, coffee and animal husbandry trade. Situated within 100 km of two key ports, Paranaguá and Antonina, it also houses the international airport Afonso Pena in its metropolitan region, and lies in the Southern Common Market which includes Argentina, Brazil, Paraguay and Uruguay, making it a strategic location for the promotion of new businesses. In the 1970s, Curitiba advanced into an 'industrial city' whereby the emergence of thriving industrial activities attracted an influx of businesses and new residents, contributing to a spurt in local economic growth. Subsequently, Curitiba promoted a vision of smart growth and adopted several smart city concepts driving urban economic development and increasing urban quality through which it positioned itself as a ‘reference city’ for urban planning and development globally. However, like other rapidly growing cities around the world, Curitiba faces new challenges brought about by the all too rapid economic development and urban expansion, seeking innovative solutions to ensure a sustainable approach to urban development. As a modern and sustainable city, Curitiba leverages innovation and frontier technology to provide solutions to urban challenges with extensive activity across the mobility and transport, security, infrastructure, health, education and energy sectors. These sectors are thus key in attracting business investment and promoting a creative economy, technological innovation and sustainable urban development. Today, the city is implementing an urban renewal strategy that is supported by sustainability, humanism, enterprise, innovation and entrepreneurship, releasing new legislation to support urban innovation and smart city development. In 2017, the Curitiba City Hall and the Agência Curitiba jointly launched Vale do Pinhão (Pinhão valley) (Decree No. 857/17), a public policy with a global strategy from which the city promotes smart growth in line with the SDGs, created to boost Curitiba’s technological development and connect stakeholders, driving economic growth through the creative economy. With over USD 2.8 million in funding, the programme serves as Curitiba’s innovation ecosystem, strengthening ecosystem players and engaging a diverse set of stakeholders to advance innovation in the city. The programme aims to enable ecosystem players to appropriately scale interventions via effective R&D in one of the most tech-savvy cities in the region, stimulating the development of Curitiba’s entire technology ecosystem. Curitiba has shifted its development focus towards creating an innovative and entrepreneurial culture engaging children, youth, entrepreneurs, adults and senior members of society to adopt new technologies and prepare for the challenges of the future. Accordingly, it has promoted collaboration across the city network, mobilizing the City Hall, start-ups, universities, economic development entities, investment funds, incubators, accelerators, innovations hubs and entrepreneurs via engagement and cooperation. Anchored in Curitiba’s Rebouças neighbourhood, Pinhão Valley has been a pioneering movement, flooding the city with public and private shares, technology, smart city functionality, start-ups and entrepreneurship, driving a creative economy. Gathering momentum since its establishment, it has had positive reverberations across local business generation, job creation and revenue generation. The city now sits in first place in the Brazilian ranking for productivity and efficiency in the technology sector, whilst the current market for start-ups places Curitiba in first place regarding the number of enterprises in Paraná state – 422 companies as mapped by Brazilian Micro and Small Business Support Service (SEBRAE) in 2020. The city is also the leader in the creation of information technology jobs in Paraná state, and was included among the top 13 cities globally for its favourability to fintech. Curitiba was ranked fourth place in Brazil for the quantity and quality of start-ups according to mapping from StartupBlink. It has since been primed as a hub city for technological advancement and creative activity with significant focus on promoting start-ups and entrepreneurship.

Actions and Implementation
As a synergistic creation, the Pinhão Valley programme was inspired by Curitiba’s Mayor, Rafael Greca, in 2017 and has been operating as a movement to recover innovative traditions in the city. The programme is organized into five pillars aligned with the SDGs: 1) education and entrepreneurship; 2)
sector, supported by the council and the diversity of all Pinhão Valley actors. Partnerships are currently being finalized, helping transform the innovation System Industry Campus in the Jardim Botânico neighbourhood, the park will aim to help identify innovative solutions and provoke competition in the professionals working across research, development and innovation, articulation and infrastructure, and market and employee training. Located in the Fiep graduate students to enter local technology focused enterprises. To meet the demands of the automotive and auto parts sector, Curitiba will establish a people for modern business management, focusing on the digital world. During the COVID-19 pandemic, 1°Empregotech was also established, a concept. Cooperative partnerships with educational institutions, professional and development agencies, and management specialists have prepared 4,440 these companies generate 16,000 jobs and turnover BRL 5.7 billion. It has also secured BRL 124 million in investments for registered companies since its competition, income and job creation. It now accommodates 113 registered companies dedicated to the development of new technology. In combination, service tax (from 5 per cent to 2 per cent) to companies that invest in technology and innovation in the city. As a hub which connects innovation stakeholders to modern infrastructure, the park is helping to drive sustainable economic development and has increased productivity, international competition, income and job creation. It now accommodates 113 registered companies dedicated to the development of new technology. In combination, these companies generate 16,000 jobs and turnover BRL 5.7 billion. It has also secured BRL 124 million in investments for registered companies since its launch. In 2018, the Bom Negócios programme was also resumed offering free, impactful entrepreneurial education courses in line with the Pinhão Valley concept. Cooperative partnerships with educational institutions, professional and development agencies, and management specialists have prepared 4,440 people for modern business management, focusing on the digital world. During the COVID-19 pandemic, 1°Empregotech was also established, a partnership between Agência Curitiba and Curitiba Social Action Foundation, offering free computer programming courses to youths, encouraging graduate students to enter local technology focused enterprises. To meet the demands of the automotive and auto parts sector, Curitiba will establish a Technological Park 4.0 for the car industry, the result of work by the Automotive Industry Sectorial Council. The council consists of representatives from industry, teaching and research institutions, the government and the Federation of Industries of the State of Paraná (Fiep) system with roughly 90 professionals working across research, development and innovation, articulation and infrastructure, and market and employee training. Located in the Fiep System Industry Campus in the Jardim Botânico neighbourhood, the park will aim to help identify innovative solutions and provoke competition in the sector, supported by the council and the diversity of all Pinhão Valley actors. Partnerships are currently being finalized, helping transform the innovation
space into a global reference through, for example, cutting-edge technological processes which will enable the recycling of electric car batteries – an unprecedented process being developed between BMW do Brasil and the Senai Institute for Innovation in Electrochemistry. Through the mobilization of Pinhão Valley, Curitiba has made strides in increasing job opportunities, maintaining investment and minimizing the impact of the COVID-19 pandemic. In 2021, the city started with the second highest positive balance in regard to the generation of formal jobs among capitals with 5,264 hires in January 2021 according to the Ministry of Economy’s General Register of Employed and Unemployed. Engaging in Curitiba’s post-pandemic economic recovery, the programme has enabled the city to maintain a sustainable and efficient economy and social structure whereby measures such as the Guarantor Guarantee Fund allowed entrepreneurs and companies to take a break and prepare for a new post-COVID economy. Launched in October 2020, the fund provided over BRL 6 million in loans to Curitiba’s small businesses with resources fluctuating from BRL 5,000 to BRL 150,000, reaching a range of recipients such as restaurants, beauty salons and coffee shops, among others. Partnerships between the City Hall, Agência Curitiba, SEBRAE PR and the Municipal Tourism Institute have helped to strengthen the economy in local neighbourhoods through focused action on the sustainability of micro and small companies. Training courses have been offered including 2,222 hours of consulting focused on the digital world for 3,534 tourism companies and artisans, as well as 25,000 services providing guidance business formalization and credit in Ruas da Cidadania. A total of 1,446 entrepreneurs also benefited from a digital retail course and 278 companies attended the Accelera Digital course. With substantial impact on investment and job creation, the tech-based start-ups Ebans and MadeiraMadeira became the first unicorns in the south. These two companies have been pivotal in driving economic growth. Ebans (focused on tackling international payments) hired 200 new employees in 2020 after receiving major funding from FTV Capital (an investment fund in Silicon Valley, United States of America) and MadeiraMadeira (the largest platform for home products in Latin America) secured USD 190 million from the Softbank Latin America Fund and guaranteed BRL 124.1 million in investments for companies benefiting from the municipal service tax reduction. In terms of geographic space, the development centre of the Pinhão Valley Plan is in the Rebouças neighbourhood where in 2019, the government established a multifunctional zone for the reconstruction and development of the neighbourhood and the surrounding areas. Today, new factories serve as public buildings for innovation, interaction and collaboration between different contributors in the innovation ecosystem. In terms of implementation, the Pinhão Valley Plan integrates participants and entrepreneurs into an innovative environment by promoting forums, symposiums, events, lectures and conferences such as Smart City Expo Curitiba, Paiol Digital, Innovation Expo and Curitiba Movement which make the entire innovation ecosystem dynamic and positive.

Conclusion

Where cities are becoming increasingly central to business activity, they are also becoming more interdependent, reinforcing the need to cultivate urban environments in which businesses can grow and prosper to drive long-term economic growth. Within Curitiba, business founders and entrepreneurs are fortunate to have access to an abundance of resources for their development through the Pinhão Valley Plan innovation ecosystem. Within the city, local start-ups can gain access to the market and connect with companies providing them with clients and knowledge, inspiring them to develop and commercialize new technologies. In addition, the introduction of pro-business legislation and regulation mechanisms has eased the process of business formalization, resulting in a greater influx of new start-ups and businesses, investment and financial capital. To enable prosperous economic development, municipal governments should integrate processes that foster an ease of doing business, nurturing entrepreneurs and businesses through the development process by minimizing red tape, ensuring consistent policymaking, and offering accessible and approachable government agencies. Curitiba’s focus on entrepreneurship has helped catalyze a shift towards an innovative, creative urban economy. Driving the smart city shift, entrepreneurship helps to locate and exploit opportunities in the market; generating innovative solutions to emerging challenges whilst boosting capital formation and investments as well as per capita income. Where technological interventions and innovations are largely driven by entrepreneurs in the city, they also help cities to undergo economic and socio-technical transitions, changing the relationship between workers and the workplace, and realizing new modes of economic development. Converting latent and idle resources into ideas, and goods and services, entrepreneurs and start-ups spark collaboration and cooperation, and open up diverse employment opportunities which help to produce a more productive workforce and improved economy. Cities therefore contain untapped potential to actively encourage entrepreneurs and start-ups as a means to foster growth. Innovation-based start-up ecosystems are emerging in urban areas across the world with cities best placed to meet the needs of entrepreneurs via their high concentrations of capital, diversity and interaction. As exemplified by the Pinhão Valley Plan, urban ecosystems can unlock new jobs and economic opportunities emerging from new business models propelled by start-ups and innovation. In addition, they help pool resources for local innovation in areas such as R&D and out-of-city ‘innovation leaders’ which serve to further diversify local economies and boost competitiveness between cities and regions. They therefore play a vital role in facilitating new urban business environments, altering the economic dynamics of the city and stimulating greater levels of innovation compared to traditional industry, driving economic growth. Understanding the benefits of local innovation ecosystems is thus of great significance through which cities can foster entrepreneurship that creates new sectors and businesses, and which strengthens local and regional economies.