



## Brazil: the digital revolution is underway

With a population of 206 million people and the world's ninth largest GDP, at \$1.8 trillion, Brazil has considerable economic potential. The country has emerged from its recession and sustained growth is expected in 2018.<sup>1</sup> According to the OECD, recent reforms have put Brazil on the right track but must be pursued, particularly when it comes to reining in public spending, to allow for optimisation of the country's capabilities.<sup>2</sup> Technology has already made impressive headway there: 58% of the population uses the internet and over 100 million Brazilians use smartphones.<sup>3</sup> Brazil appears extremely well suited for e-government, as evidenced by the proliferation of IT projects and the launch of a brand new digital transformation strategy.

### A digital transformation modelled on Denmark

Brazil **modelled its digital transformation on Denmark**, which Brazilian officials visited on several occasions to study public service portals such as *borger.dk* and the joint platform shared by municipalities, *sundhed.dk*. A cooperation programme was set up between the Danish Business Authority and Brazil to leverage the Danish experience. Denmark stands as a frontrunner in the EU for paperless public services.<sup>4</sup> In addition, an innovation lab was created in close partnership with Danish innovation institute MindLab to focus on the work processes involved prior to computerisation.<sup>5</sup>

The other mainstay of Brazil's digital strategy is a **public consultation** launched in August 2017.<sup>6</sup> Brazilian citizens were consulted on nine topics: infrastructure, research and development, cybersecurity, education, international development, data, connected devices, new business models, and e-government.<sup>7</sup> Although internet usage is widespread, internet access remains a major hurdle for the strategy's implementation. According to the National Telecommunications Agency, 75% of households lacked broadband access in 2016.<sup>8</sup>

### Brazil's digital strategy: comprehensive and structuring

On 21 March 2018, President Michel Temer signed a decree enacting "E-Digital", Brazil's digital transformation strategy, and ratifying the creation of CITIDigital, the interministerial committee made up of six ministers, which oversees these issues.<sup>9</sup> The strategy spans four years and seeks to achieve inclusive economic and social development by promoting innovation and supporting competitiveness and employment. Several measures are planned with regard to protecting personal data, respecting privacy, and strengthening cybersecurity. This new policy

<sup>1</sup> <https://www.tresor.economie.gouv.fr/Ressources/pays/bresil>

<sup>2</sup> <http://www.publicfinanceinternational.org/news/2018/03/brazils-reforms-improve-growth-must-go-further>

<sup>3</sup> <http://www.urban-hub.com/technology/brazil-embraces-the-digital-age-with-an-ambitious-internet-of-things-strategy/>

<sup>4</sup> <https://www.visitdenmark.com/denmark/denmark-most-digital-country-european-union>

<sup>5</sup> <http://brasilien.um.dk/en/news/newsdisplaypage/?newsid=3cd182d7-7400-4c27-8663-26a49e0dc67c>

<sup>6</sup> <http://www.mondaq.com/brazil/x/631422/new+technology/MCTIC+Issues+Public+Consultation+On+Strategy+For+Digital+Transformation>

<sup>7</sup> <https://www.zdnet.com/article/brazilian-government-debates-first-national-digital-strategy/>

<sup>8</sup> <https://www.zdnet.com/article/most-brazilian-homes-lack-broadband-access/>

<sup>9</sup> <http://www.kqvlaw.com.br/en/publicacoes/o-sistema-nacional-para-transformacao-digital-e-a-estrategia-digital-brasileira/>

relies on a collaboration between the scientific community, the private sector, and civil society and provides for the involvement of all public sector entities competent in the digital field.<sup>10</sup>

In May 2016, the Ministry of Communications and the Ministry of Science, Technology, and Innovation were merged to create the Ministry of Science, Technology, Innovation, and Communications, illustrating **strong determination to bridge digital technology and innovation**.<sup>11</sup> Back in 2013, similar initiatives had already been launched with the creation of several innovation labs exploiting new technologies at local level. Working conjointly with Rio-de-Janeiro-based innovation lab Lab.Rio, two entities, PENZA Salas de Ideias and Rio Operations Center, manage data analysis projects aimed at improving public policies. Projects include urban mobility, public safety and natural disaster management.<sup>12</sup> Another interesting approach, **complementary to Brazil's digital strategy, is the implementation of an innovation lab** tasked with proposing alternative solutions to public policy management, prior to starting the dematerialisation and computerisation process.<sup>13</sup>

Digital technology also serves as a means of **fighting corruption, reducing bureaucracy**, and therefore **increasing the satisfaction of the public service citizen-user while enabling new engagement opportunities**.<sup>14</sup> For example, 165,000 Cariocas have so far interacted with Lab.Rio through its various platforms.<sup>15</sup>

The goal is also to achieve significant **economic** impact. Increased use of digital technologies could boost Brazil's GDP by almost \$97 billion by 2020.<sup>16</sup> Concurrently, digital technology must also foster **social inclusion**. Several measures rolled out in 2017 have already shown meaningful impact. Namely, a law allowing four small banks to create financial products aimed at low-income workers, such as the ability to open a bank account online from a mobile phone, has generated 70,000 new accounts in only nine months.<sup>17</sup>

## Impact and applications across several public management areas

The spread of digital technology in the public sector will lay the groundwork for **artificial intelligence**, which is likely to rapidly develop real-life applications.<sup>18</sup> Indeed, **in the fight against corruption**, Brazil has made enormous progress in recent years thanks to the 2011 Access to Information Law which requires all public entities to make their data publicly accessible. A Brazilian group built **a robot named Rosie** that monitors the reimbursement of deputies' entertainment expenses. In September 2016, a crowdfunding campaign helped launch a project dubbed "Serenata de amor" through which 8,000 suspicious refunds were identified.

In 2017, a strategic plan was adopted by the Brazilian government to expand **the Internet of Things (IoT)** in the private and public sectors. IoT technology offers strong growth potential, with projects that could bring \$132 billion to Brazil's economy by 2025. Its main implementation areas are likely to be "smart cities", health care, the agri-food industry, and industry in general. The first projects to emerge have been "Hospital 4.0", which aims to reduce wait times in hospitals, and "Fazenda Tropical 4.0", which raises crop yields by optimising crop management based on biological characteristics.

São Paulo, South America's largest city, has become a **smart city** under the leadership of Mayor João Doria. With a view to reducing costs and bureaucracy, public services are set to become fully digital by end of 2018. Since May 2018, registering a new business now takes only two days. Other applications are being considered in the realm of public safety: 10,000 CCTV cameras connected to a surveillance system used by São Paulo's military police have been deployed, and five drones monitor high crime areas.<sup>19</sup>

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<sup>10</sup> <https://www.bnamericas.com/en/news/ict/brazil-launches-digital-transformation-strategy>

<sup>11</sup> <https://www.innovationpolicyplatform.org/content/brazil>

<sup>12</sup> <https://publications.iadb.org/Bitstream/handle/11319/7874/innovation-for-better-management-the-contribution-of-public-innovation-labs.PDF?sequence=8>

<sup>13</sup> <https://www.visitdenmark.com/denmark/denmark-most-digital-country-european-union>

<sup>14</sup> <https://www.oecd-forum.org/users/80160-carlos-santiso/posts/29680-going-digital-restoring-trust-in-government-in-latin-american-cities>

<sup>15</sup> <https://publications.iadb.org/Bitstream/handle/11319/7874/innovation-for-better-management-the-contribution-of-public-innovation-labs.PDF?sequence=8>

<sup>16</sup> <https://www.export.gov/article?id=Brazil-Digital-Economy-Initiatives>

<sup>17</sup> [https://apolitical.co/solution\\_article/brazil-boosts-financial-inclusion-digital-bank-accounts/](https://apolitical.co/solution_article/brazil-boosts-financial-inclusion-digital-bank-accounts/)

<sup>18</sup> <http://repositorio.enap.gov.br/bitstream/1/2886/2/2017.07.04%20-%20Peer%20Review%20OCDE%20-%20Digital%20Government%20Review%20of%20Brazil-towards%20the%20digital%20transformation%20of%20the%20public%20sector%20-%20OECD.pdf>

<sup>19</sup> <https://www.zdnet.com/article/sao-paulo-mayor-outlines-smart-city-plan/>