Digital Convergence
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Talking Interoperability

A dialogue series for advancing interoperability in the social protection sector.

The Brazilian Emergency Benefit (Covid-19 pandemic)

This brief summarizes key learnings from the dialogue on Brazil's Emergency Benefits held on 29 November 2022. The keynote was presented by the CEO of DATAPRE (Social Security Data Processing Company), **Gustavo Canuto**, specialized in Public Policies and Government Management, he is a former Minister of Regional Development. The discussants were **Philippe Leite** Senior Social Protection Economist, World Bank; and **Verónica Alvarez** Department Lead on Analysis of Social Information, Ministry of Social Development and Family, Chile. The session was moderated by **Rodrigo Assumpção** Social Protection Management Information Systems Specialist, International Labor Organization.

Please click here to access the recording and presentation.

Background And Overview

The Covid-19 pandemic resulted in a public health crisis as well as a severe socioeconomic situation that harmed the population, particularly informal workers. **The Brazilian federal government had to develop the legal framework, institutional arrangements, and governance structure quickly to implement Emergency Aid (EA).** During the Covid-19 pandemic, Brazil was able to identify beneficiaries and was able to provide them with benefits thanks to the interoperability of the National Database of Social Information (CNIS) with other information systems such as Cadastro Unico, Bolsa Familia Assistance Program, GFIP (Document systems informing of Labor contracts).

Beneficiary Coverage Challenges

The country faced an unexpected crisis during the Covid-19 pandemic and had no time for traditional software development methods. Each programme previously had its own data collection tools and processes for identifying beneficiaries. Registries were kept separate even within the same ministry. As a result, the social protection landscape was disjointed and inconsistent, resulting in limited outreach and numerous inclusion/exclusion mistakes. Because of the abundance of separate databases and the lack of an interoperability among them, there was a lack of information on large parts of the population, making them invisible to the policymakers. On April 2nd, 2020, Emergency Aid was sanctioned, to mitigate the effects of the

reduction of economic activity on the income of informal workers and those with low social protection during the pandemic period. [1]

Following was the procedure for enrolling beneficiaries for Emergency Aid.

Step – 1: To access this emergency assistance, CadÚnico provided the initial list. All persons registered with CadÚnico by March 20th, 2020, who fulfilled the assistance conditions, automatically became beneficiaries. To register those people not enrolled in CadÚnico by that date, a digital platform (mobile application and a website) from the Caixa Econômica Federal bank was launched. It received 151,126,615 requests from its citizen for emergency assistance. There was a need to identify multiple scenarios and processing rules that could deal with databases of various origins, structures, and frequency of updates to identify and reach the beneficiary to whom benefits needed to be transferred. Aside from that, the government required a data analytics tool that could ensure efficacy as well as data privacy and protection.

Step 2: After receiving the applications the next step was to begin the registration process. Hence it was critical to identify the beneficiaries for this emergency aid; The data collected by CAIXA was then sent for processing to Dataprev (a government-owned ICT company), which manages the National Register of Social Information (CNIS)[2].

Step 3: National Register of Social Information (CNIS)[3] ran the eligibility check on the applicant's data through the rules established by the Ministry of Citizenship and though interoperability with other ministry databases like Ministry of Employment, Brazilian Federal Revenue, INSS National Institute of Social Security, Ministry of Planning, Budgeting and Management and Ministry of Social Security. Using the rule sets, a list of eligible beneficiaries was generated who needed to be contacted, which included 68 million people out of which 35 million were missing middle who were previously unknown to the government policies. Those were the people who did not required the social assistance prior to the pandemic but required it during the pandemic.

Step 4: National Database of Social Information (CNIS) came in handy during the pandemic when the Brazilian government needed to generate statistic samples of the results for faster validation by the ministry of citizenship and develop new modules for concession, consultation, and contestation during the execution period.[4] To analyse the data, 27 sources of information were used to develop analytical processes. Constant enrichment through attribution flags was performed and as a result 68 million social security numbers were identified who needed the benefit the most during the Covid period.

Step 5: The beneficiary data prepared by Dataprev was then forwarded to the Public Policy Manager (Ministry of Citizens) for approval. Upon receiving of the approval, the data was then

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[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8261333/

[2] This database contains more than 230 million records of individuals and over 35 million legal entities (companies or institutions), documenting the development of employment contracts, payroll, and contribution amounts for each registered individual. It is the main registry that allows Brazilians to receive pensions, social insurance in cases of illness or disability, and several other types of pensions and social benefits.

[4] https://www.dfat.gov.au/sites/default/files/integrating-data-information-management-social-protection-a1-brazil.pdf

sent to CAIXA (Brazilian Public Bank) along with beneficiary bank details to pay the benefits directly to population.

Step-6: The Brazilian government was able to reach 56% of the Brazilian population and was able to pay $11.9 million within six days of the law's publication. [5]

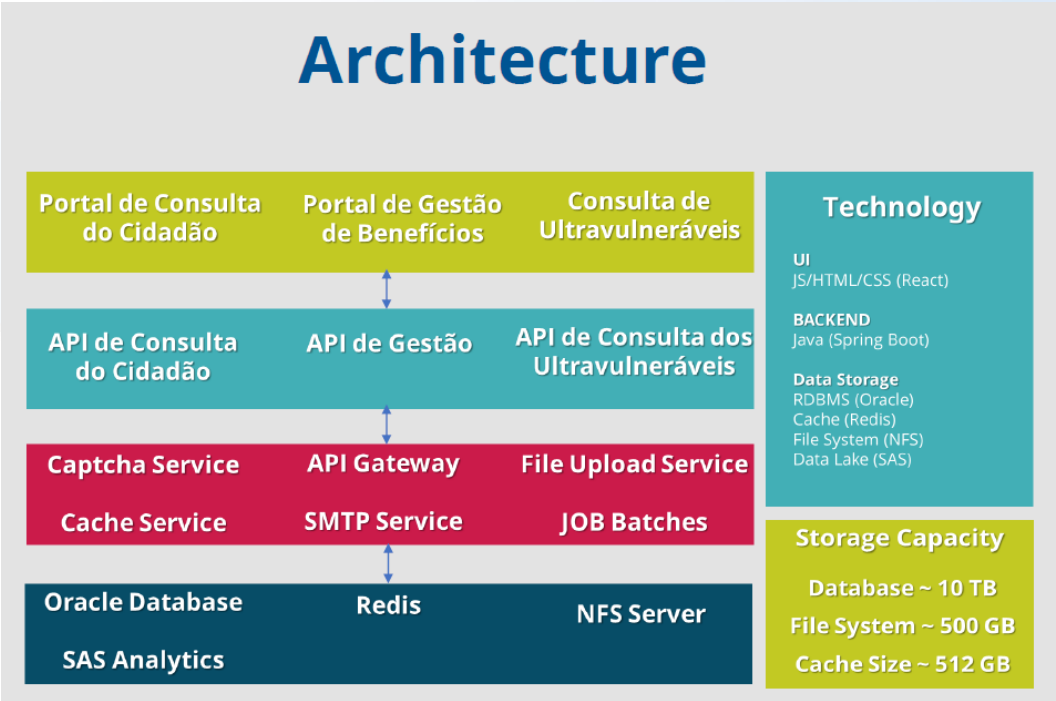
The complete process of citizen reach out is describe in the diagram below.

Technology Used

To integrate with multiple systems, an API gateway was used. Data was obtained from the CAIXA portal and other government-managed beneficiary registries. A rules-based engine was developed to identify the ultra-vulnerable population. At the backend, the engine was built in Java (Spring Boot), and data was stored in Oracle database, Cache, File System, and Data Lake (SAS).

Regular batch jobs were monitored in order to extract data using the API Gateway, and data was shared with the Ministry of Citizens via File Upload Batch Jobs. In total, the system processed approximately 10TB of data and 500GB of filesystems to provide an integrated environment for reaching out to the beneficiaries.

[5] https://home.kpmg/xx/en/home/insights/2020/04/brazil-government-and-institution-measures-in-response-to-covid.html



Main challenges and lessons learned:

- Brazil currently has multiple sources and registries of personal data, thus despite the lack of a unified national identification number, the country managed to match data between different databases The use of diverse "match keys" (name, mother's name, birth date, and tax number are some examples) resulted in a very fast and accurate beneficiary list.
- More work is required to enable automatic and online database integration with multiple programmes. Further, integration with existing databases may aid in streamlining the process and decreasing data collection efforts.
- In addition to the foregoing, policy programming could be further integrated to provide single-window access to all social assistance programmes via the Cadastro ***único*** database, while also integrating key operations (most notably M&E and planning) and services — ultimately increasing the inclusiveness and responsiveness of social policy and addressing households' changing vulnerabilities throughout their lives.
- Because the entire system is managed online, connectivity and technology gaps in several regions of the country- particularly in the north was a challenge.

Conclusion

The pandemic created an unusual situation. It demonstrated the importance and power of integrated and interoperable information systems to build agile shock responsive systems. Because each crisis is unique and requires different approaches to reach to target population, the systems must be constantly improved to provide robust social protection program delivery.

Authored by Komal Malhotra with contributions from Anita Mittal and Rodrigo Assumpção.