

Using SAS® MDM deployment in Brazil

Ielton de Melo Gonçalves, Dataprev

ABSTRACT

Dataprev has become the principal owner of social data on the citizens in Brazil by collecting information for over forty years in order to subsidize pension applications for the government. The use of this data can be expanded to provide new tools to aid policy and assist the government to optimize the use of its resources. Using SAS® MDM, we are developing a solution that uniquely identifies the citizens of Brazil. Overcoming challenges with multiple government agencies and with the validation of survey records that suggest the same person requires rules for governance and a definition of what represents a particular Brazilian citizen. In short, how do you turn a repository of master data into an efficient catalyst for public policy? This is the goal for creating a repository focused on identifying the citizens of Brazil.

INTRODUCTION

The history of Dataprev has naturally contributed to the creation of a MDM for the identification of citizens of Brazil. Compounding factors such as large and important data bases, constant monitoring of the market, qualified and knowledgeable business staff and management support for changes, the company has great fundamental elements for the establishment of a process for Management Master Data.

Tired of receiving data from various organs and Brazilian institutions, Dataprev has envisioned the possibility of no longer simply be a warehouse of records, but being a supplier of qualified information about citizens of Brazil creating a MDM (Master Data Management).

Trusting in their own departments for the conception of the data to be made available at MDM, we intend to create a product to customers, establishing a new business niche for the company.

This work shows how Dataprev realized MDM as a new business niche, looking inner self and your products available to their customers.

MDM ON DATAPREV

This job comes to show the size of the effort that is being given off by Dataprev to deploying MDM as a new form of business.

ABOUT DATAPREV

Before talking of the MDM project, we must talk about Dataprev and inform the importance of the company to Brazilian people and to the Federal Government.

The technology and Social Security Information company (Dataprev) originated from the data processing centers of existing welfare institutes in the 70'.

It is a Public company established by law nº. 6,125, of November 4, 1974, linked to the Ministry of Social Security (MPS).

To cater to its main client, the National Social Security Institute (INSS), the company developed sophisticated systems and specific infrastructure capable of storing, processing and updating in real time the information of millions of Brazilian taxpayers. In addition to the INSS, Dataprev provides services to the internal revenue service of Brazil and to the Ministries of Social Welfare, Labour and Employment and Social Development and Hunger Alleviation. Also Dataprev maintains agreements with 79 financial institutions for processing information relating to payroll loans granted to retirees and pensioners. Among them, Banco do Brasil, Caixa Econômica Federal, Santander Banc, Itaú-Unibanco, HSBC, Citibank and Banco da Amazônia.

Its staff has more than 3,400 employees, spread across its three processing Centers (Rio de Janeiro, São Paulo and the Federal District), in Units of Software Development (Paraiíba, Ceará, Rio de Janeiro, Santa Catarina and Rio Grande do Norte) and 27 Regional Units, in all Brazilian capitals.

CUSTOMERS

Dataprev provides services to various public institutions. Its main client is the National Social Security Institute (INSS), but the portfolio also has internal revenue service of Brazil, Ministry of Social Security, Ministry of Labor and Employment (MTE), Ministry of Social Development and Hunger Alleviation (MDS) and Ministry of Planning, Budget and Management (MP). Also maintains agreements with 79 financial institutions for processing of information related to the granting of loans to retirees and pensioners.

DATABASES

CNIS-PF (National Registry of Social information of Individuals)

Dataprev is responsible for the database of the National Register of Social Information (CNIS), created in the 80. Since 1996 is used as the basis for the calculation of Social Security benefits. From the beginning of 2009 allows the granting of retirement by contributing time and age and also the maternity salary by up to 30 minutes. Also allows to send a letter to an insured of INSS which had acquired the minimum conditions for his retirement.

The computers of the State-owned shelter, only in the CNIS, stores 220 million of cadastral information of individuals and legal entities. In addition to data on bonds, compensation and contributions, which combined generate more than 14 billion data. Among the entries that make up the CNIS, in the context of this document, we highlight the registration of Individuals, referred to as CNIS-PF.

For being the one of the first from the information systems of Dataprev, with its first information being extracted manually from paper sheets, the oldest one of the CNIS have low quality of information. In addition, business rules and Government policies have been modified throughout its existence.

On certain occasions, to meet any population emergency that had suffered a catastrophe and allow the distribution of some sort of assistance, benefit obligation rules and presentation of documentation have been relaxed, contributing to the generation of future registration problems.

There is also the case that people are registered more than once. By a misleading understanding of an attendant of the organ, either by a rule that differentiated those firms which workers are considered professionals. The latter are people who work without a formal link with a company. To make adjustments of this record there are some initiatives such as the convening of the people, directly by mail or by the press. Even so, many times these entries are corrected only when the person needs a benefit. However the quality of the register prevents the full success of the letters sent by mail. Convocations are costly and contribute to disrupt the routine of work Social Welfare agencies.

IMO (Labour Brokering)

Another important base administered by Dataprev is called Labour Brokering (IMO), belonging to the Ministry of Labor and Employment (MTE). This system is responsible for making the intermediation of job offers by employers as well as workers in the search for a new job. In other words, help people who are looking for a job to find out who has job openings idle. It helps in reducing unemployment, helping workers find occupation according to their qualifications and the requirements of the companies. This base has about 33 million records of workers.

The IMO is a system that went into production a few years ago. Its base is recent and has available update routines on the internet by the workers themselves. To remain available in the database of the IMO, the worker needs to update his data every three months. If he wants a job, need to be with his information registered correctly.

CNIS-PF and IMO

The two systems have data of people, and has their separate bases and with well-defined business niches. The CNIS-PF with the purpose of provision of benefits, the IMO in order to find work. There is information on IMO that only relate to itself, being the reciprocal true.

Due to business requirements, for belonging to different clients and there is no agreement between the owners of the systems, the IMO and the CNIS-PF are interconnected but are not integrated.

Before registering someone at IMO, the CNIS-PF is consulted to see if that person is already at the base of the CNIS. If it exists, its information is copied to the IMO and complemented then. Failing these, the IMO receives the

information and includes the CNIS-PF. Thus, whenever a person is registered at IMO, will also be included in the CNIS-PF, but the converse is not true.

There is also a peculiarity: cadastral updates made by the worker to remain active in IMO, are not directed to the CNIS-PF. In other words, the basis of IMO tends to be more updated than the CNIS-PF, unless the employee attend the INSS Agency to update their registration, which occurs only when you need a social benefit.

NEEDING BUSINESS AND ESTRATEGY COMPANY AND THE MDM

Attentive to market movements and to the needs of its customers and other potential stakeholders, the business areas of the company discovered a new niche: the provision of identification services of people. This idea finds shelter in the policy of the Presidency of Dataprev that is necessary for the company to be able to generate information with the data we already have today.

The initial conception is the creation of a data bank from which bases the Dataprev manages today. This new database would need to be reliable, no replication and it was able to contain the best information from their registers that serve as sources.

The MDM project was created. He is a reflection of current business policy of Dataprev and a step towards solidifying the company's "be the preeminent provider of technological solutions for social security information management, labor, social and civil records of the Brazilian population" as says its business vision statement.

To start the project were chosen the CNIS-PF and IMO to serve as source for the MDM. The choice was made because of the similarity of the bases, containing related information concerning workers and mainly by its strategic importance. In the future other bases will be added to the product, thus generating more inputs for the creation of an increasingly reliable base.

Today acting as data sources, the CNIS-PF and IMO will in future benefit from the services provided by MDM in order to qualify your data.

RESTRUCTURING AND MDM

Throughout its history, Dataprev has always been in constant adaptation to fit the reality of its customers and to the market of information technology. When the customers need a great record, Dataprev developed one; when needed to extract analytical information of the bases, Dataprev developed products aimed at Data warehouse. With the new policy, the company will create a product and will introduce you to customers, anticipating their expectations.

From this reality, Dataprev knows that needs to be constantly reviewing its processes and adapting them to new services, prospecting and qualifying their technology teams.

A restructuring begun in 2012 created the General Coordination of Intelligence Information (CGII) in order to centralize efforts of BI (Business Intelligence) about the databases on Dataprev. Below this, the overall Coordination of Information Governance (COGN) with the responsibility of stimulating, prospect and forward information qualifying actions.

In the course of 2013 were performed the first qualification demands of data using SAS ® Dataflux performing crossing part of the CNIS-PF with the data reported by the companies on the formal links for workers of the Brazilian market. The good results obtained were used to stimulate customers to new actions of qualification and even data settings.

This environment has become conducive to creation of the MDM project. Leveraging the Foundation obtained by learning in Data Quality, MDM brings with it the need for definitions of a data governance policy. We can observe that the overdue steps so far have been naturally leading to the creation of the MDM. The initial steps were related to structuring the environment.

However, as we know, MDM in absolute sense is not a project, it is a process, a policy which must involve the areas of business and strategy definition. Only with the support of these important areas we can affirm that MDM is not just another database. He needs to be strategic in order to ensure their effective adoption as product data quality, security and performance.

TRANSLATE DATA GOVERNANCE POLICY

To the deployment of an effective data governance policy is necessary for a Committee composed of people who know the information and who have the autonomy to indicate the business rules to be adopted by managed databases. Without this, MDM doesn't have the foundation necessary to establish themselves as a strategic element for the Organization, in other words, will be just another database.

Usually, Dataprev has in its customers requirements and defining rules. For example, the CNIS-PF has a Committee composed of representatives of the organs that are used today and the feed. They define rules for use of the CNIS and their policies. For MDM, because it is a stand-alone initiative, Dataprev preferred to make a different approach, deciding to use on your behalf all the experience accumulated throughout its forty years of existence, decided to use the knowledge of their own teams of business areas and customer service to set the MDM. The approach turns out to be fairly straightforward and gains in agility.

After the final deployment of the MDM, it is studied the possibility of Dataprev mount your own exemption Committee, bringing in relation to government policies specific to each customer, besides leaving it clearer still that MDM is a product that Dataprev offers its clients.

THE MDM PROJECT

Started in August 2013 and ending forecast in June 2014, the MDM bank project for the citizen of Brazil has scope set to be delivered to the development and homologation environments. Even because he will be available for approval of internal Department.

Among the products to be delivered are the definition of a methodology for the MDM process. The proposed model are in the areas of quality evaluation of Dataprev. It is the result of the adaptation of parts of the existing processes in the company for software development projects, PMBOK and adequacies obtained in literature about MDM.

However the main objective is to obtain a unified and reliable version of the data of citizens from the CNIS-PF and IMO, being able to provide clean and accurate information for strategic systems of Dataprev. The client systems can access MDM from SOA services.

Despite all the relative data governance challenge, the project has a lot more character of structuring and technology solution that the policy approach to address the MDGS. For both, the tool that we will use will be the SAS ® qMDM suite.

Technological environment

was made available for the following MDM application server environment:

CRISC with 20 cores and 80 GB RAM

Database: ORACLE 11 g

Application: SAS Dataflux 2.5

CONCLUSION

To create a database with a unified view about a topic is a purely technological issue, make this reliable base and keep it working properly, with follow-up required, definitions and rules revisions and involvement of the areas strategies is what makes a MDM.

With the knowledge accumulated by its functional body throughout its existence, available to suit new realities and the support provided by the strategic areas of the company, we can say that the first steps have been taken already on the way to the consolidation of the MDM on how a differentiated product Dataprev to be offered to the customers.

The consolidation of this product will be an important milestone in the achievement of the goal set in your business vision to become the leading provider of technology solutions for social security information management, labor, social and civil records of the Brazilian population.

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CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author at:

Name: Ielton de Melo Gonçalves
Organization: Dataprev
Address: Av. Santos Dumont 3060, sala 801
City, State ZIP: Fortaleza, CE 60743-760
Work Phone: +55 (85) 3089-1911
Fax:
Email: ielton.goncalves@dataprev.gov.br
Web: www.dataprev.gov.br
sascommunity.org: *(Provide your home page or presenter's page)*

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