

# Brasil

CAEd

Center of Educational Public Policy and  
Evaluation

Federal University of Juiz de Fora



# Introduction: CAEd and FLIP

- CAEd is a research and development center on educational management and assessment technologies of the Federal University of Juiz de Fora, a public university located in the State of Minas Gerais, around 150 km of Rio de Janeiro city.
- In 1999, the University started a technical cooperation program with the National Education Ministry of France, that helped at the moment when we started our activities the building of expertise in test item construction.
- The most recent cooperation agreement, established in 2017, included CAEd among the participating institutions of FLIP.



1

# A brief presentation of CAEd



# CAEd

## Center of Educational Public Policy and Evaluation

Three areas of activity, integrated by information and communication technologies.

- Education, training and professional development using learning platforms
- Educational districts and schools management systems
- Basic education students assessment



# CAEd: Education and Professional Development

CAEd maintains a professional postgraduate program in educational evaluation and management, with four lines of research, among which item and test development stands out.

Researchers from several universities participate in the program, courses vary in hours and degrees, and students are mostly managers of public education.

- The short term training programs for school principals and supervisors, lasting between 6 to 18 months, certifies professionals according to criteria established by education departments in the country.
- The professional master program in educational management and evaluation, lasting two years, has certified 696 professionals with a master's degree between 2010 and 2017, among which 80% are working professionals in state basic education teams.



# CAEd: Educational districts and school management

CAEd develops and implements school management systems in Brazil's states and municipalities basic education districts;

Manages data repositories for state and municipal education secretariats;

And monitors, for state and municipal secretariats, some of the main management processes in public education:

- Access to education of school-age population: enrollment, transfers and the formation of classes
- Teaching organization: curricula, school hours, schedule of activities, teacher allocation
- Record of school activity: class diaries, attendance and student assessment
- School year closing: student progression, performance and efficiency indicators



# 1. CAEd: Student Assessment

National assessments are carried out through a consortium of institutions of which CAEd is a member.

- “Prova Brasil” evaluates students graduating finishing stages of Brazil’s basic education system: 5<sup>th</sup> and 9<sup>th</sup> year of elementary and lower secondary education and 3<sup>rd</sup> year of upper secondary education. Reading and math competences and skills are assessed.
- The National Literacy Assessment – ANA – evaluates all students at the end of the 2<sup>nd</sup> year of elementary school and includes the assessment of writing skills.



## 2. CAEd: Student Assessment

- State assessment programs conducted by CAEd reach about 17 federal units in different stages of education and areas of knowledge.
- Assessments of a formative nature are conducted by CAEd, integrated to the state educational management systems, in order to support school supervision and principal activities.
- In 2017, more than 10 million tests were applied by CAEd, reaching a population of about 6 million students.





2

# The transition to CAEd Digital



# 1. CAEd and the transition to digital assessment: the renewed challenge of system integration

- Student assessment through apps and websites are integrated to CAEd data repositories, item banks and platforms.
- Professional development in learning platforms integrated to data repositories.
- Management systems integrated to data repositories and platforms for student assessment and professional development.



## 2. CAEd and the transition to digital assessment : the challenge of the Digital Item Bank

- Equalization of measures with simultaneous use of printed and digitally applied tests (through smartphones, tablets and computers).
- Adoption of standards for the elaboration and storage of digital items and their use through apps and assessment platforms.
- Creation and maintenance of a library of standardized interactions associated with bank items.
- Specification and validation of protocols for the elaboration of innovative items in a collaborative way.



# Our experience in digital assessment

- Application of several test models with integrated operation to the data repositories and administrative systems (2016):  
Experimental assessment using smartphones and computers with multiple choice items for high school graduates with access and authentication performed by the state educational secretariats and integrated with CAEd's data systems and repositories.
- Reading fluency tests (2017):  
Assessment of fluency in reading words, false or invented words and texts using smartphones for recording, web application for correction and delivery of results in web platforms and digital apps for parents and teachers.



# Goals for 2018

1. Experimental application of computer based tests using the TAO platform deployed on CAEd servers:
  - State of Espírito Santo: current assessment of 30.000 students of the 3<sup>rd</sup> year of high school through multiple choice tests in mathematics and Portuguese language.
  - States of Ceará and Pernambuco: experimental assessment of a sample of students with the use of other resources of the digital assessment platform.



## Goals for 2018

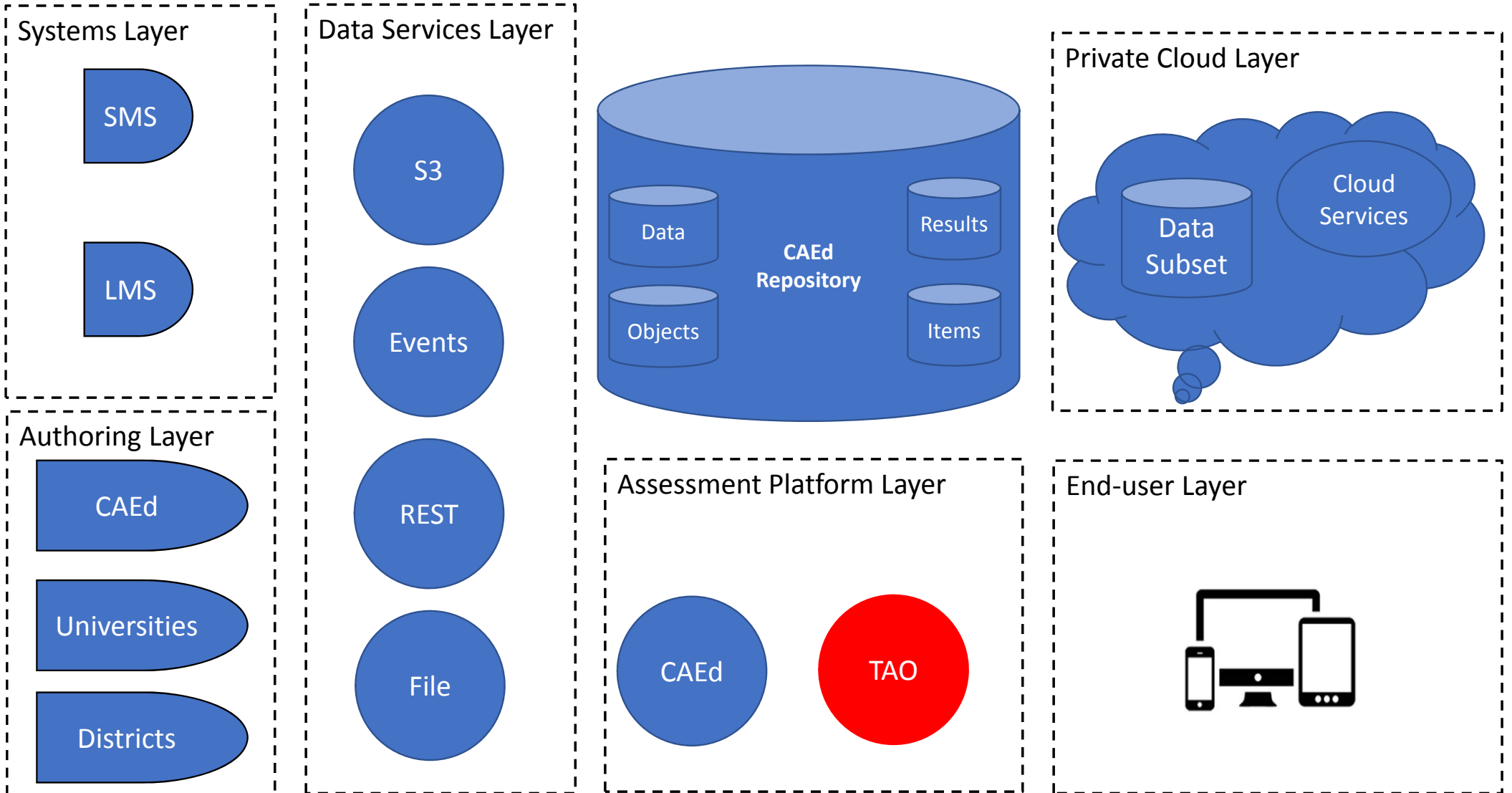
2. Adaptation of a selected part of CAEd's item bank (50.000 multiple choice items) to the TAO platform standards (QTI)
3. Experimental production of computer based items with the new resources of the TAO platform by the CAEd team.
4. Item development with innovative resources developed in a collaborative way with universities participating in CAEd's research programs.



3

# A brief presentation of CAEd Digital Architecture







## Volumetry

- SMS -> School Management Systems. Installed at more than 200 cities in Brazil. Provide all functionalities to management school and interoperating with Brazil census system.
- LMS -> Learning Management Systems (Moodle). It will be used by at least 200.000 students in 2018.
- Students Assessed -> Over then 6 millions students with about to 10 millions tests.
- Item Bank -> About 50.000 items.
- Cloud Transactions -> About 10 millions per day



***Thank You***

