

# CRIS2018

## An experience of Brazilian educational graduate platform

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MINISTÉRIO DA  
EDUCAÇÃO



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# CAPES

- Brazilian Federal Agency for Support and Evaluation of Graduate Education;
- Under responsibility of Ministry of Education;
- Responsible for periodical evaluation of graduate programs.



# CAPES' periodical evaluation

- It is Brazilian evaluation of graduate programs;
- 7-point scale;
- Every 4 years;
- Financing of the graduate programs with scholarships and research aids is based on grades.

# Brazilian Program for Graduate Studies (PNPG)

- It was officialy organized at the end of 1960s, formalizing existing initiatives on universities and research centers (Guimarães & Humann, 1989);
  - Acceleration of the formation of human resources for teaching and research;
  - Contribution to technological development by meeting the needs of public and private sectors.
- Brazilian graduation has improved in training of university professors, integration of research, evaluation system, etc.

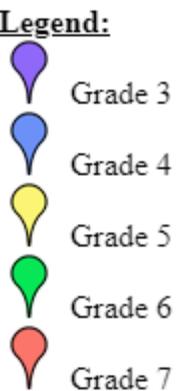
# > 500 HEIs



Institutional Programs = 4.074



Multinstitutional Programs = 101



<https://goo.gl/hphpP3>

# Overall numbers

Table 1. Evolution of number of graduate degrees in Brazil between evaluations

Degrees	2013-2016	% Growth
Master	187.971	59
Doctoral	72.454	94
Professional Master	32.513	193
Total	292.938	76

Table 2. Evolution of graduate scientific production in Brazil between evaluations

Publications	2013-2016	% Growth
Articles	846.981	89
Books	303.457	80
Technical	1.601.780	82
Total	2.752.218	84

1st challenge: develop a **NEW** evaluation system

- Usability
- Integration
- Transparency



- Comparison
- Big data processing

Join several systems (~15) in one to  
improve evaluation process .

# Goal



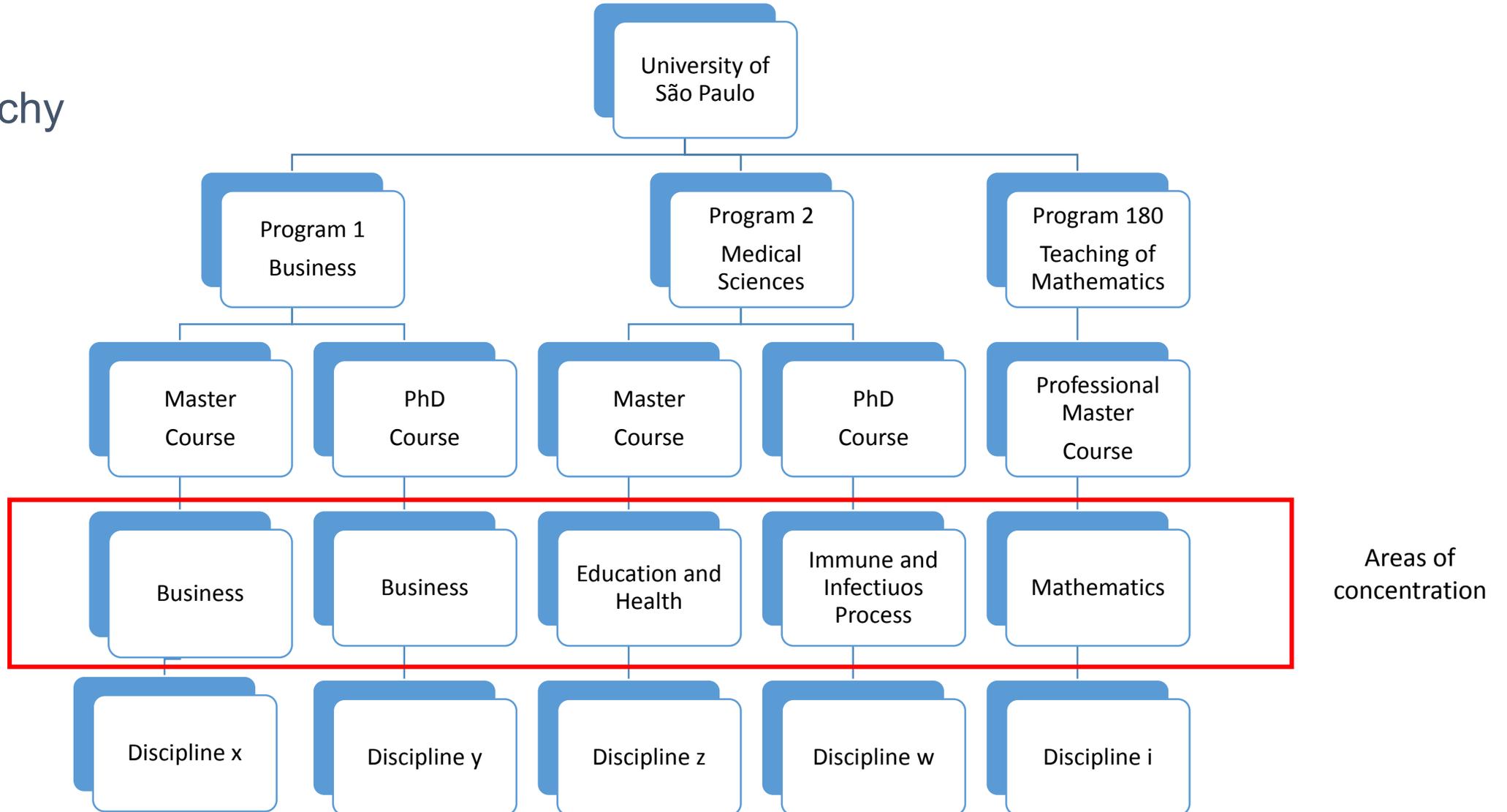
- **Present the current stage of Sucupira platform system, which was developed to solve these issues. Also, to introduce planning of new improvements to become a CRIS system.**

# Methods

- This technical paper used some qualitative methods such as documentary analysis of guides and internal reports related to Sucupira platform.
- Sucupira platform is an online platform developed in Java programming language (version 7), running over a container JBOSS 6.1 EAP. There are 8 machines in the infrastructure park controlled by two internal balancers.
- Among other technologies, it uses EJB 3, JSF 2 and Hibernate for communication with Oracle Database 11g, that saves data having two balancing instances.
- Data extraction and analyses were made with SAS Enterprise Guide 7.1.

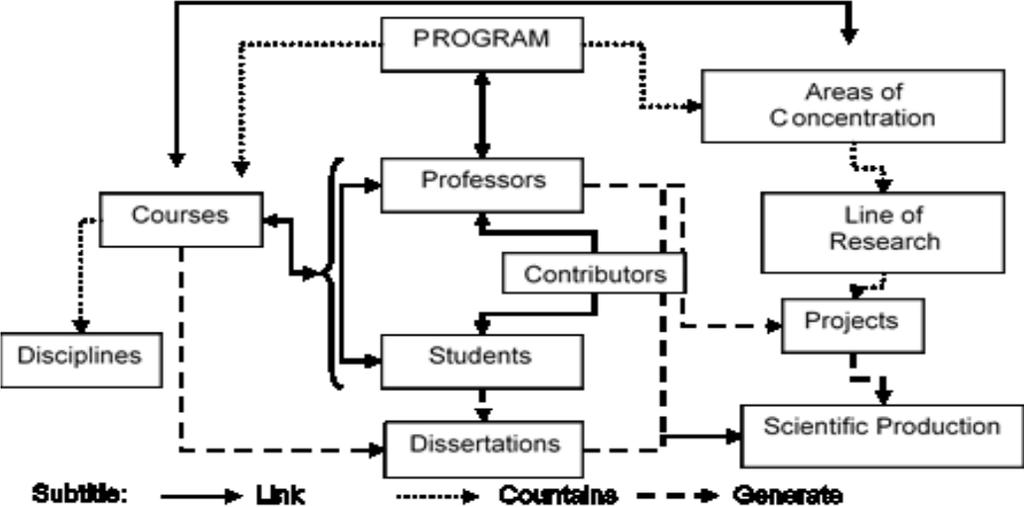
# Phase 1 – Implementation (2013-2016)

• Hierarchy



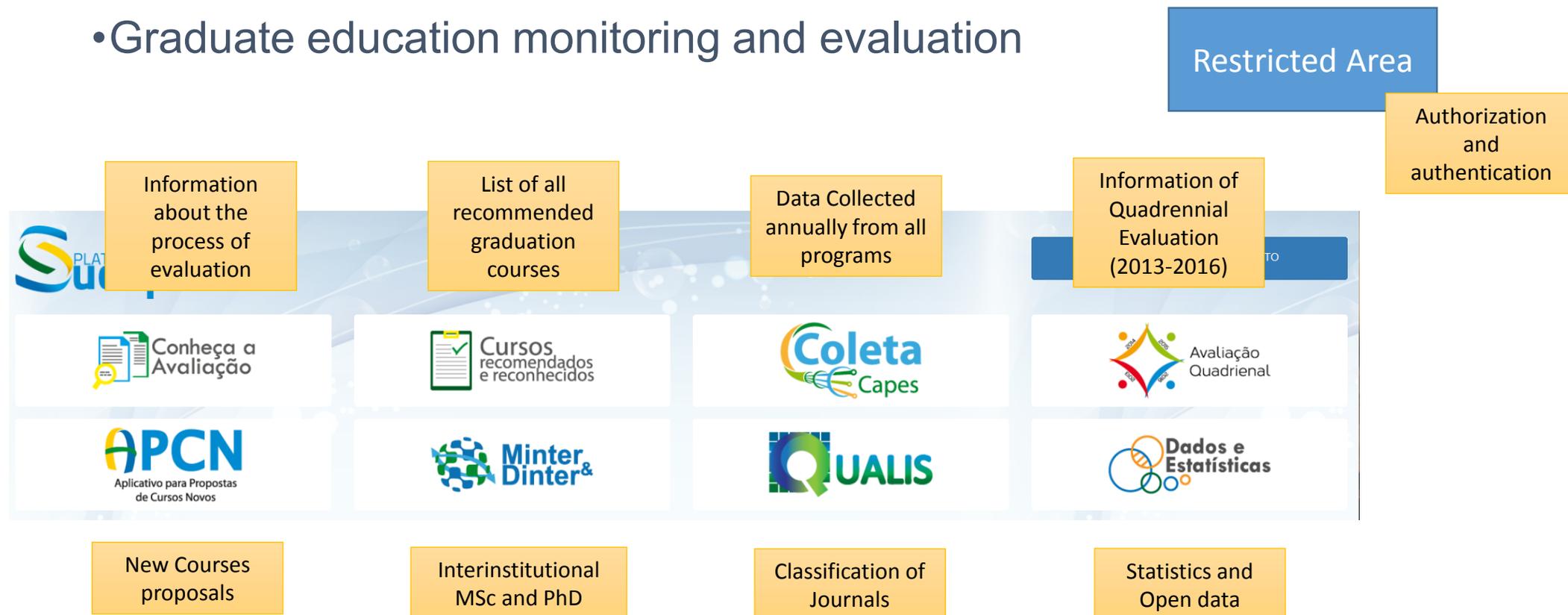
# Phase 1 – Implementation (2013-2016)

- Schemes and standards
- Hierarchy
- Interoperability

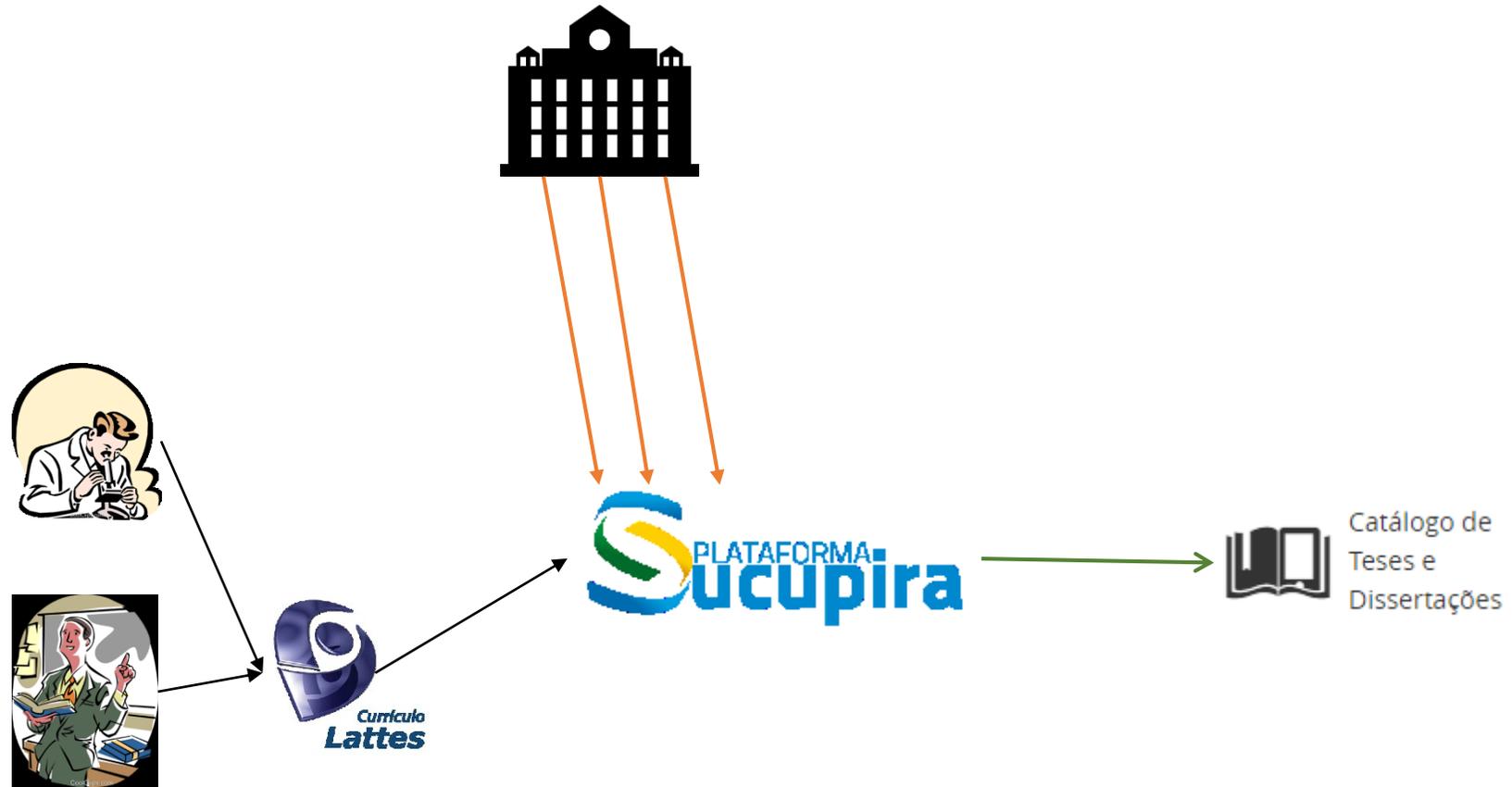


# Sucupira Platform

- Graduate education monitoring and evaluation

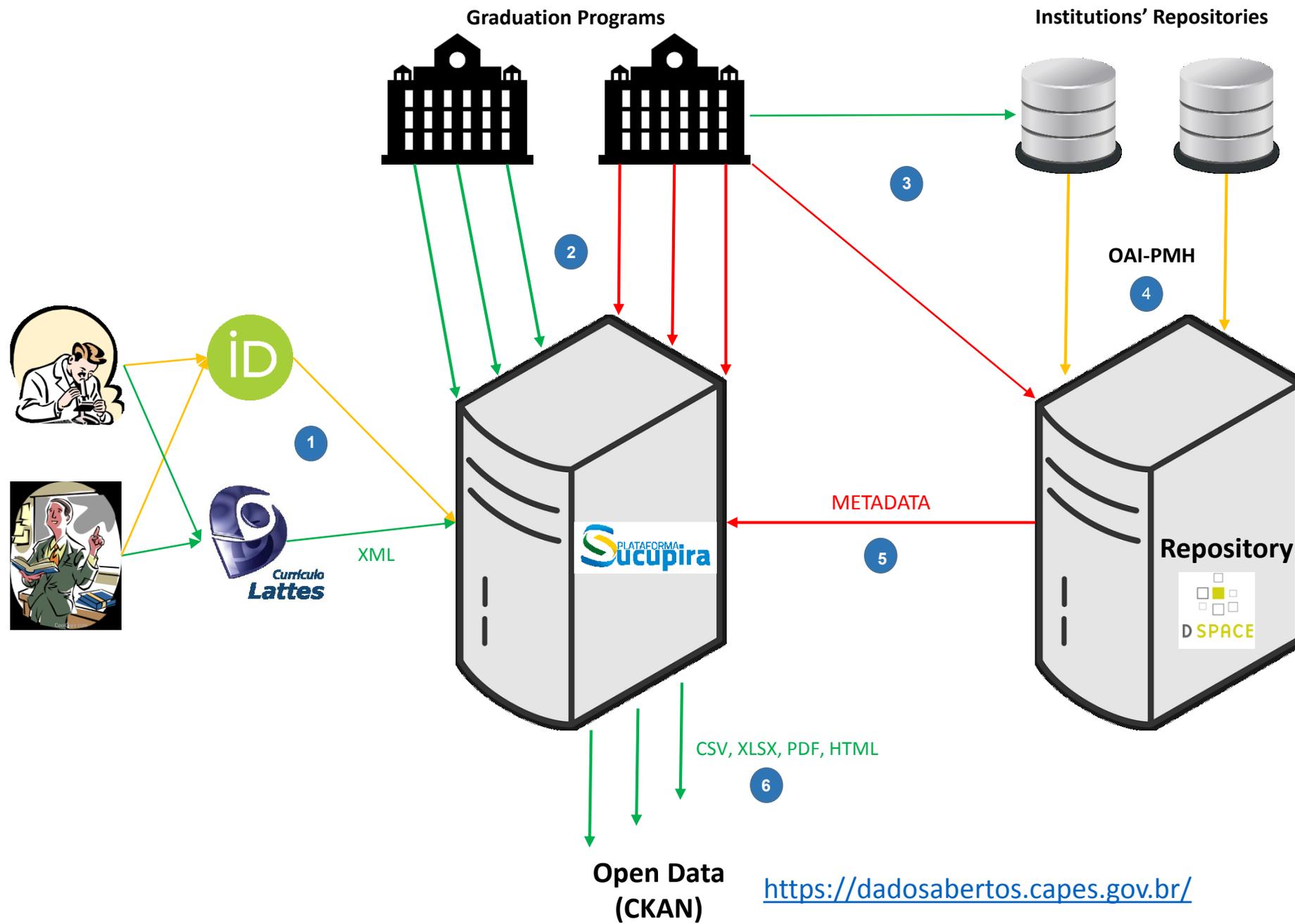


Graduation Programs



## Phase 2 – CRIS Model (2017-2020)

- Enlarge Sucupira's model to become a CRIS system;
- A CRIS is intended to ensure a single and accurate source of research information for effective planning, monitoring, reporting and communication (Bevan & Harrington, 2011);
- Good data management is not a goal in itself, but leading to: knowledge discovery, innovation, integration and reuse by the community (Wilkinson et al., 2016).



# Conclusion

- In summary, it is possible to separate two stages of Sucupira's development: first from 2013 to 2016 and second from 2017 onwards, both coinciding with four-early evaluation period. First phase was completed successfully, incorporating business models of several other systems and presenting new challenges, such as expansion of interoperability and management of big data.
- In current phase 2, apart from new model, it will be necessary to adapt CERIF theoretical model to consider graduation programs as an unit. Also, there are some Brazilian scientific projects that don't receive external funding, so coding will have to consider these cases.
- In doing so, the current effort to evolve/adapt Sucupira's model as a CRIS system will provide public view and transparency of data as an accountability of Brazilian public investments and a better way to help finding a course for graduation studies and/or improving research.

[www.sucupira.capes.gov.br](http://www.sucupira.capes.gov.br)

Thank you!

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