Open government data platforms and third party innovation in Latin America
Evidence from Buenos Aires, Mexico City and Montevideo

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Joint work with Ben Eaton
Motivation (I)

Open Gov Data Platforms: growing importance in the global South/Latin America

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Motivation (I)

Latin America leads the developing world

OD as a vehicle for innovation

Struggle to make the ecosystem grow and generate broader impacts
Platform innovation literature: in order to generate value, platforms need to nurture an ecosystem of third party developers.

Fundamental feature of platforms are network effects: platforms become more valuable as more users use them (i.e. Parker and Van Alstyne 2005).

Theoretical concept of boundary resources from Information Systems research (Ghazawneh & Henfridsson 2013; Eaton et al 2015).

Open data as platforms understudied (i.e. Danneels et al 2017).
Platform Boundary Resources

“The software tools and regulations that serve as the interface for the arm’s length relationship between the platform owner and the application developer” (Ghazawneh & Henfridsson 2013)

**Resourcing:** The process by which the scope and diversity of a platform is enhanced

**Securing:** The process by which the control of a platform and its related services is increased

Theoretical foundation in boundary object theory (Star & Griesemer 1989) and innovation networks (Chesbrough et al. 2006)

Application to date in functional platforms (e.g. iOS)

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Platform Boundary Resources

Resourcing ("Tools")
- Software Artefacts, e.g.
  - Interfaces (APIs etc)
  - Software Development Kits
  - Etc

Securing ("Rules")
- Contractual Artefacts, e.g.
  - Licensing Conditions
  - Terms of use

Platform

Boundary Resources

Third Party Applications

Third Party Innovators/Developers

Platform Owner

Resourcing

Designs

Securing
Platform Boundary Resources

Example: SiriKit

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Research question

How are boundary resources developed in order to cultivate an installed base of third party innovators for open government data platforms?
Research context and design

We study the development and evolution of boundary resources in three open government data platforms in Buenos Aires, Mexico City and Montevideo

- Exploratory, cross case comparative study (2012-2014)
- Theoretical sampling/information selection
- Government teams or hybrid teams directly financed by the government

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## Findings (in progress)

<table>
<thead>
<tr>
<th>Contextual factors</th>
<th>Buenos Aires</th>
<th>Mexico City</th>
<th>Montevideo</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>3M (13,5M) inhabitants</td>
<td>8,9M (20M) inhabitants; half population under 29 years.</td>
<td>1,3M (1,95M) inhabitants.</td>
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<td></td>
<td>Team of digital government innovators, linked to international networks of OD since early days.</td>
<td>Creation of innovation Lab in 2012; joint-venture government and NGO with entrepreneurial direction.</td>
<td>Home to strong programs in technology education.</td>
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<td>Solid policy foundation from the begging (Open Gov Decree 2012).</td>
<td>Weak policy foundations in early days; two parallel open data platforms.</td>
<td>First to hold an open data platform (2010); solid policy foundations and IT team in open data and free software.</td>
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<td>Established network of civic tech entrepreneurs.</td>
<td>Disperse network of civic entrepreneurs.</td>
<td>A strong civic tech org leading civic tech movement</td>
</tr>
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Findings (in progress, example)

Resourcing (“Tools”)
Data artefacts
- From 40 to 166 datasets
- 8 formats
- Codebooks developed
- Search tool

Software artefacts
- 3 APIs claimed (in reality, software interfaces)
- 22 active apps by 2015

Social Artefacts
- 4 BA Hackathons
- BA Apps contest (2012 & 2013)
- IoT contest (2014/2015)
- Gov Camp

Securing (“Rules”)
Contractual Artefacts
- Terms of use and licensing conditions of datasets released with platform updates (2012 onwards)
- Adoption of Creative Commons license for all content (2013)

Legislation/Policy
- Open Gov Decree (156/2012) establishes OD platform
- Decree 478/2013: open data by default
- Open data plan released 2014

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Summary preliminary findings

The three cases demonstrate governments choose very different paths to build their open data platforms.

We find a correlation between the cases that put more efforts into resourcing and securing (tools and rules/boundary resources) the platform with the maturity they have reached.
Expected contributions and policy implications

**Empirical:** A type of digital platform innovation that has not been investigated before

**Theoretical:** Dynamics of boundary resource development in the context of a public good rather than profit motivation

**Policy:** offer insights into the development of policy to facilitate the cultivation of an installed base of innovators, developers and re-users, and hence grow the value of OD platforms
Thank you!

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Appendix. Research design

Data Multiple sources of evidence
• 24 interviews with open data leaders
• Participant observation government teams in Buenos Aires and Mexico City and specialised conferences
• Extensive review of documents, blogs, social media outlets and previous studies (Scrolini 2014; Fumega 2014; Belbis 2014)
• Available data from the open data platforms

Analysis
Within and cross case (Eisenhardt and Graebner 2007)
We examine the process of boundary resource development and evolution across the cases, develop a view of overarching patterns across the cases, and compare them with existing literature