

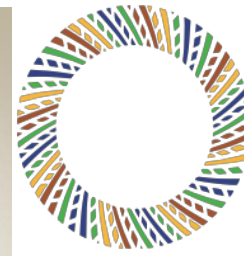
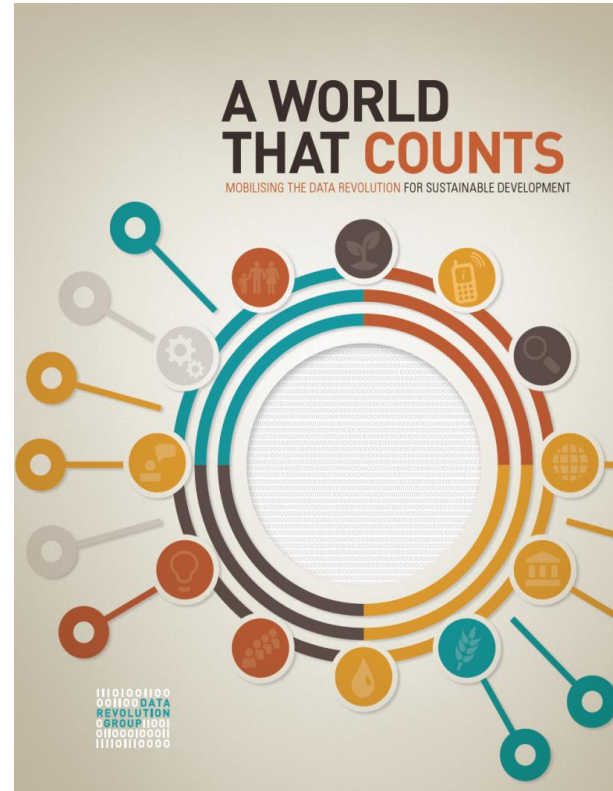


bring the code to the data

Open Algorithms (OPAL) Project

The Law, Politics and Ethics of Cell Phone Data Analytics

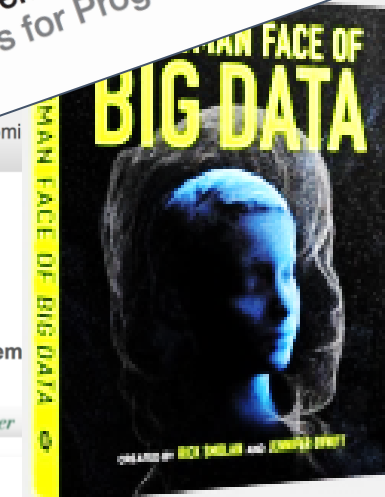
April 2015



GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT DATA

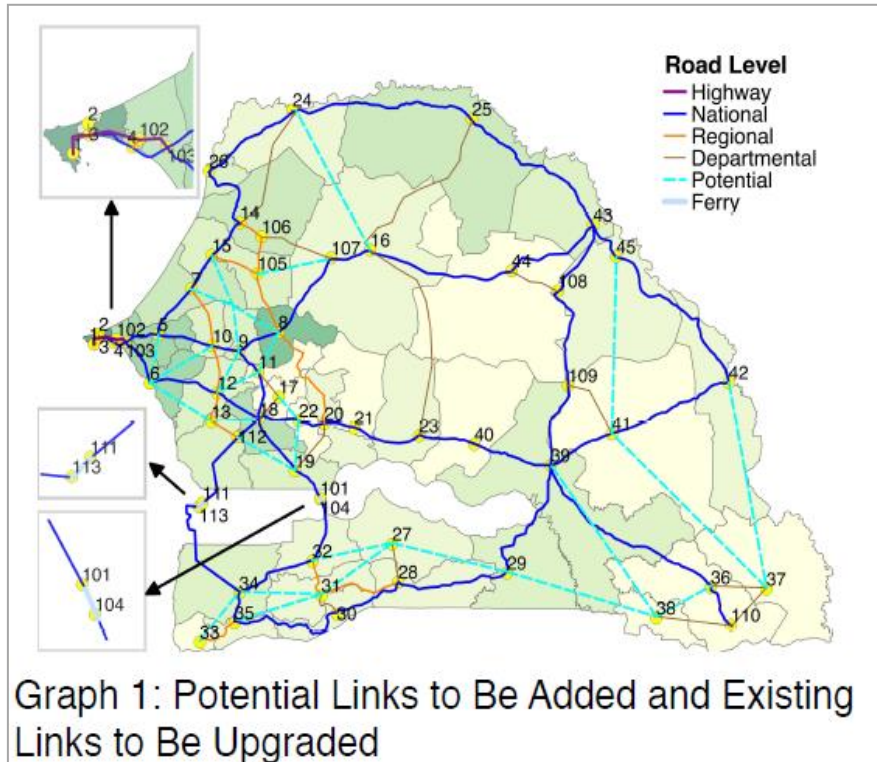


The Economist World politics Business & Economy
Ebola and big data
Waiting on hold
Mobile-phone records would help combat the Ebola epidemic but it has proved hard
Oct 25th 2014 | From the print edition



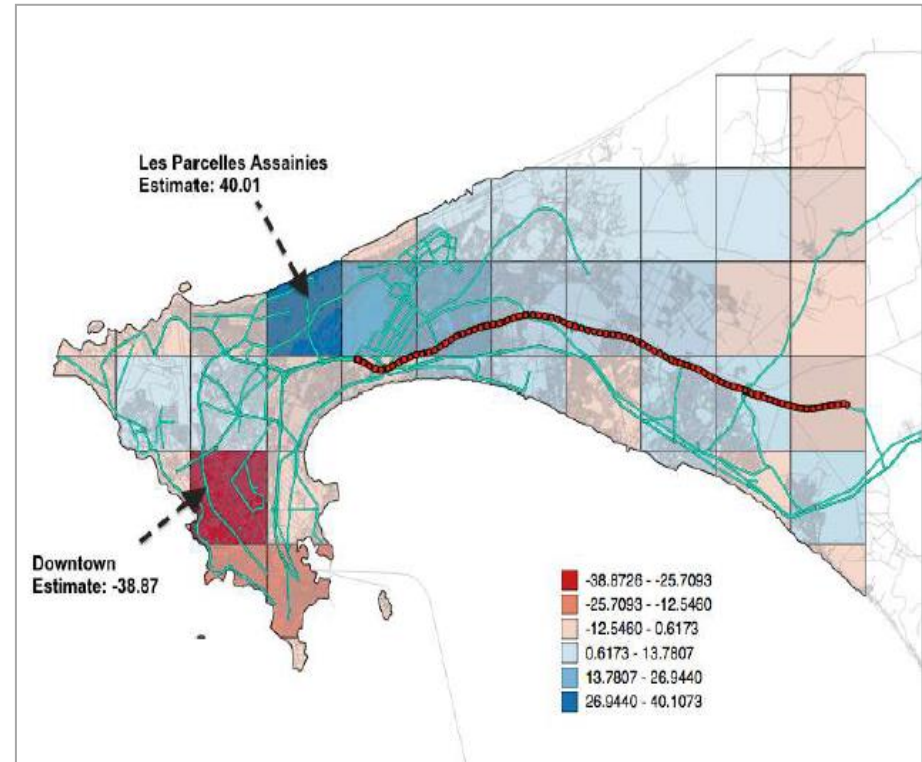
# Mobility

## Optimizing a road network



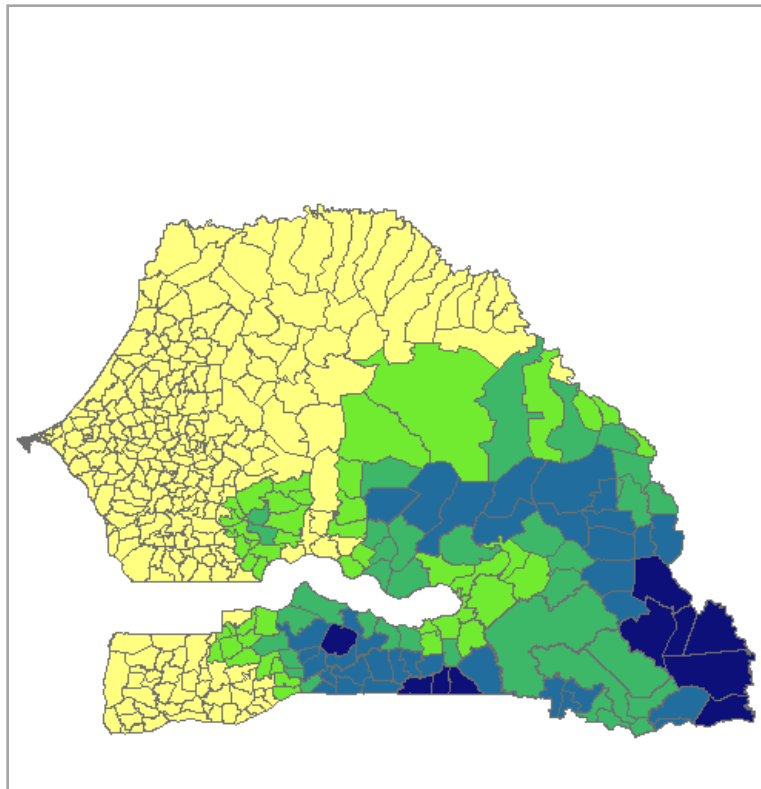
Erik de Romph, Yihong Wang, Department of Transport and Planning, Faculty of Civil Engineering and Geosciences, Delft University of Technology

## Analysing the impact of a new highway

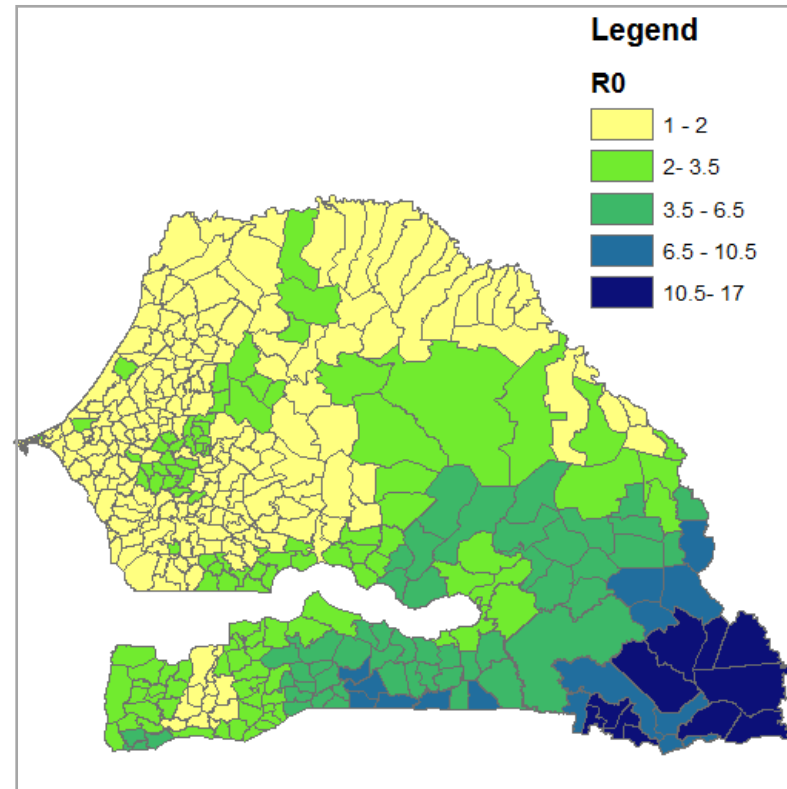


Fetzer, Thiemo, London School of Economics (Lead Author), Sy, Amadou, Brookings Institution, Arezki, Rabah and Chan-Lau, Jorge, IMF

# Disease Modeling



R0 Based on Traditional Epidemiological Models Done by the Malaria Atlas Project



R0 with Traditional Models Modified to include Movement



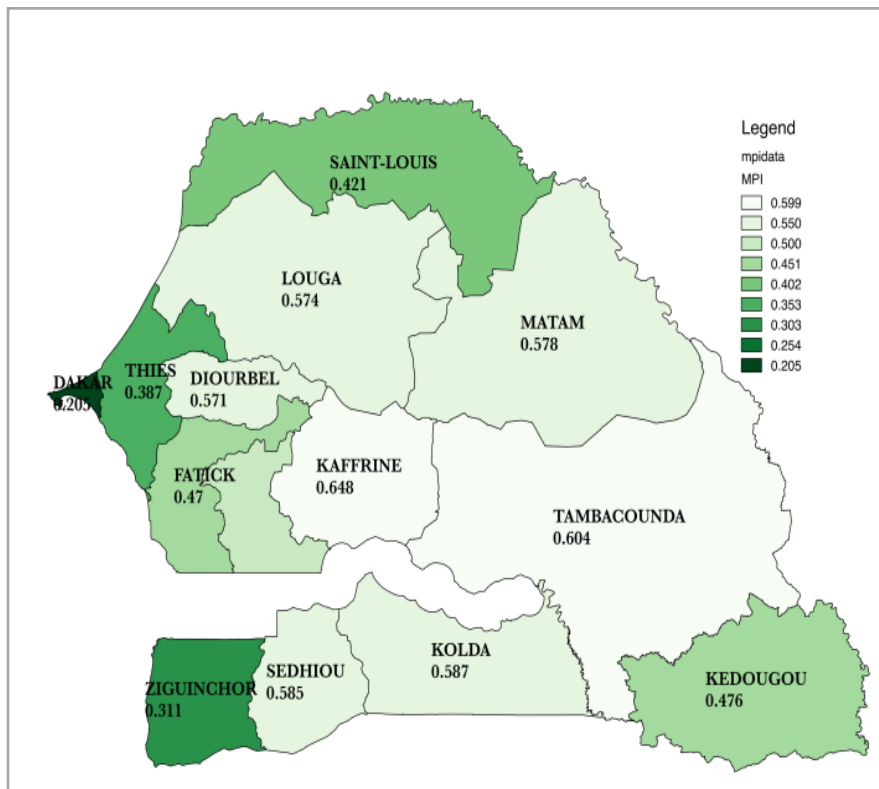
Sveta  
Milusheva

R0: Reproductive Number: expected new case for 1 case of Malaria

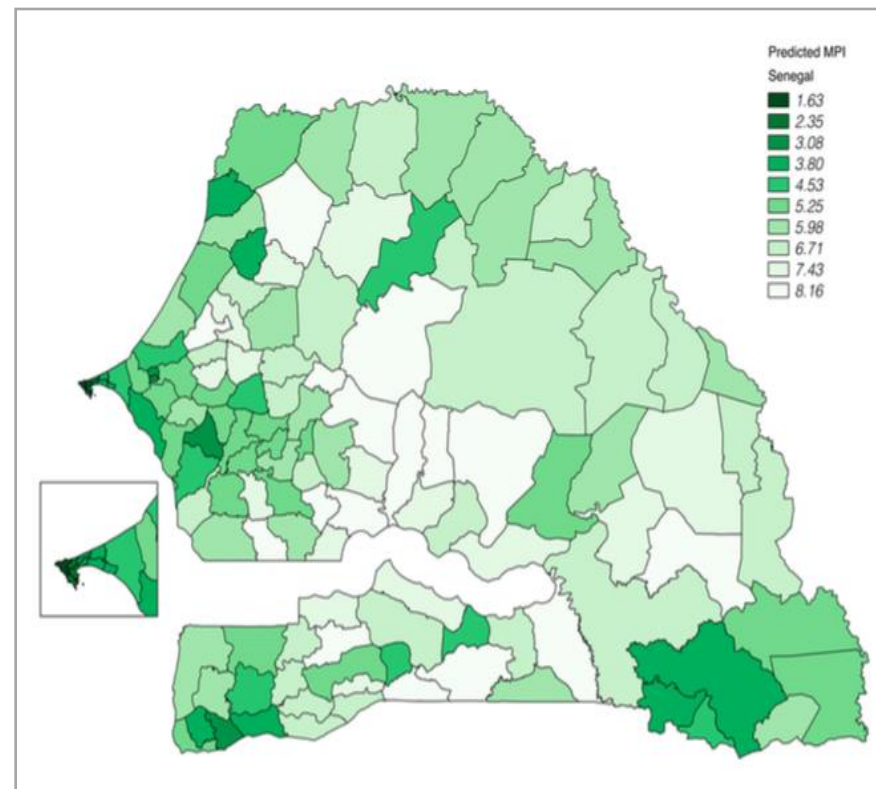


# Proxies of poverty index

Going from a field survey



...to a fresher, and more granular proxy

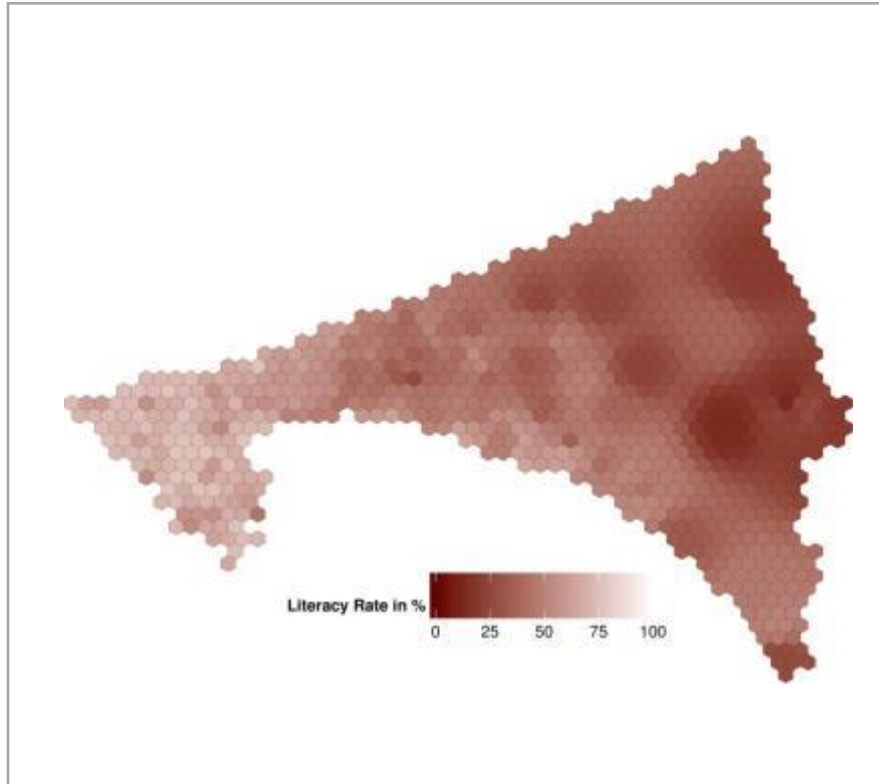


Neeti Pokhriyal, Buffalo University, NY  
currently deepening the analysis with ANSD in Senegal.

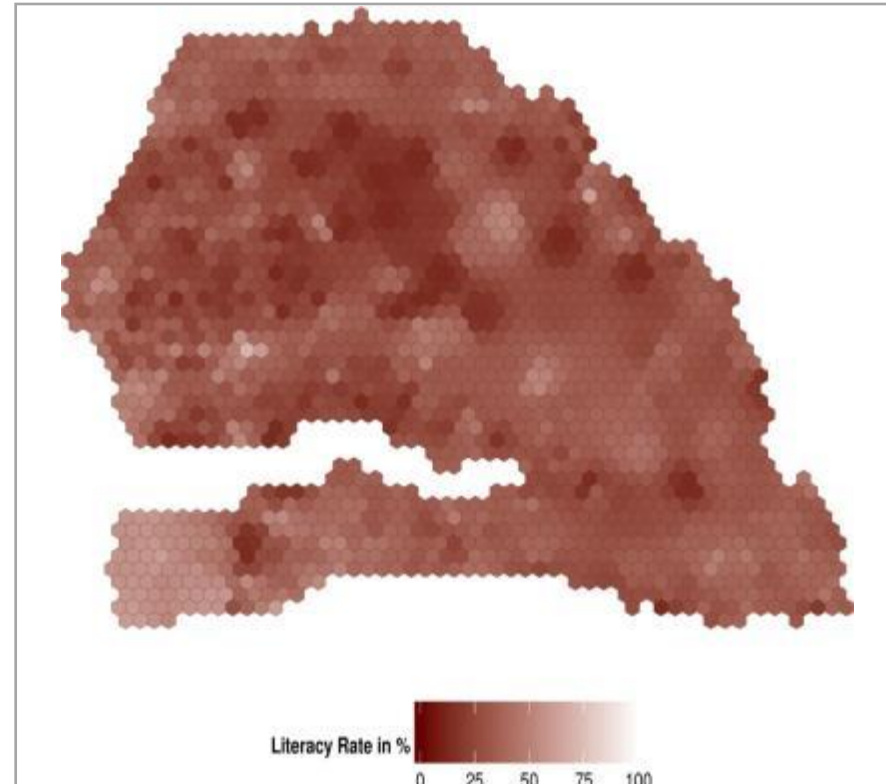


# Proxies for Literacy rate

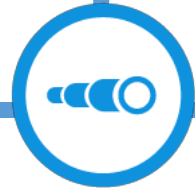
Dakar Literacy rate proxy



National Literacy rate proxy



Till Zbiranski, Fabina Bruckschein Univ Berlin  
for ANSD in Senegal.



TODAY



2012 - 2015

Optimise the deployment and analyse the impacts of new transport infrastructures

Graph 1: Potential Links to Be Added and Existing Links to Be Upgraded!

Optimise the deployment of the electric grid, to reduce its cost and improve the quality of service

Using Mobile Phone Data for Electrification Planning

Level of electrification

Level	Color
0%	Yellow
0% - 20%	Orange
20% - 40%	Red
40% - 70%	Dark Red
70% - 90%	Black
90%	Dark Blue

Fig. 1: Comparison of mobile activity and electricity consumption

Fig. 2: Electrification recommendations

Creating proxies of poverty index level, to better focus the efforts

Going from a field survey ... to a free

Including mobility in the models help Malaria and those due to travelers

R0 Based on Traditional Epidemiological Models Done by the Malaria Atlas Project

R0 with Traditional Models Modified to include Movement

R0: Reproductive Number: expected new cases for 1 case of malaria



**bring the code to the data**

OPAL platform **unlocks** the potential of private data for **public good** in a privacy-conscious, scalable, socially and economically sustainable manner.



**Privacy**



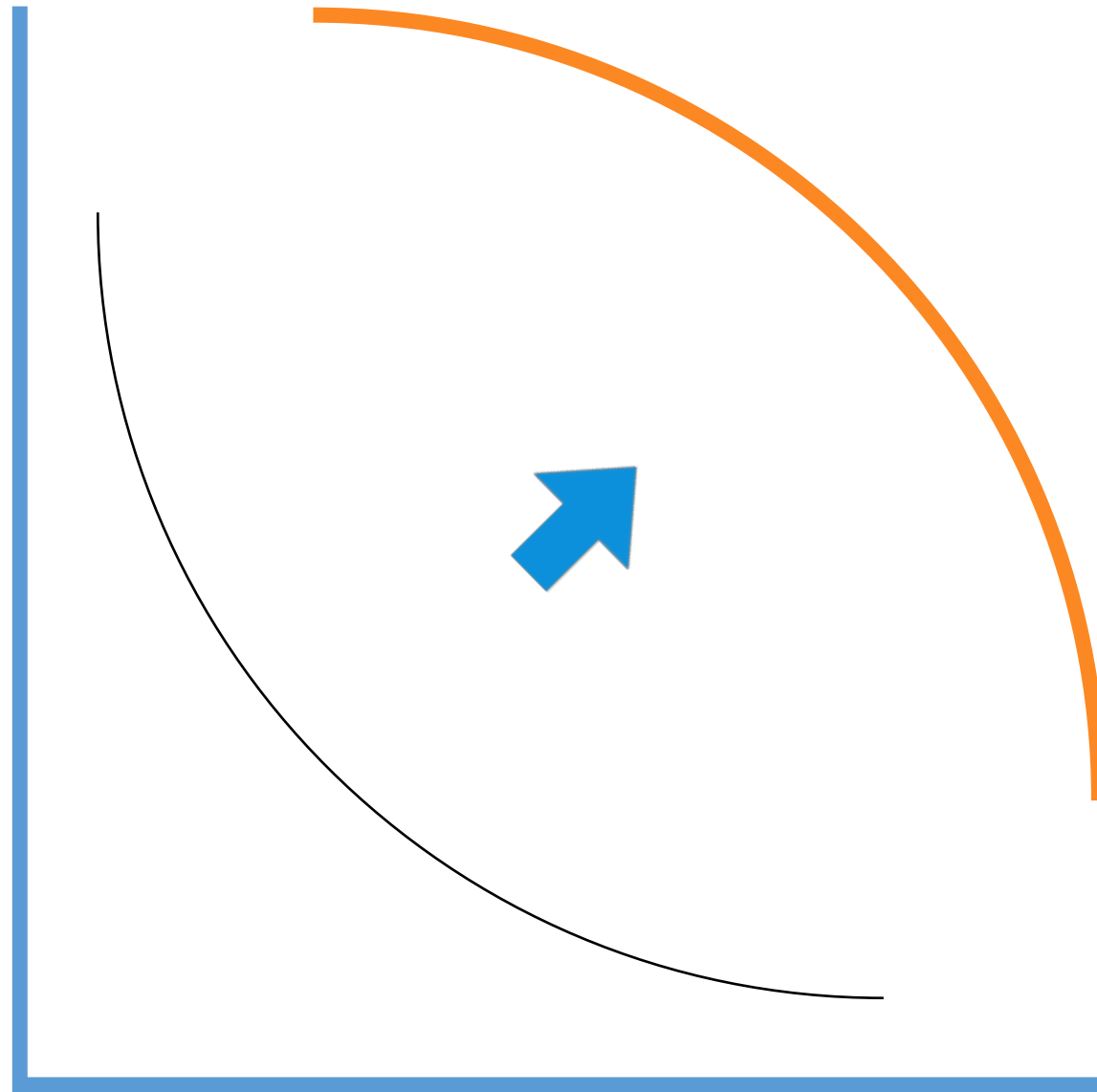
**Individuals**



**Society**



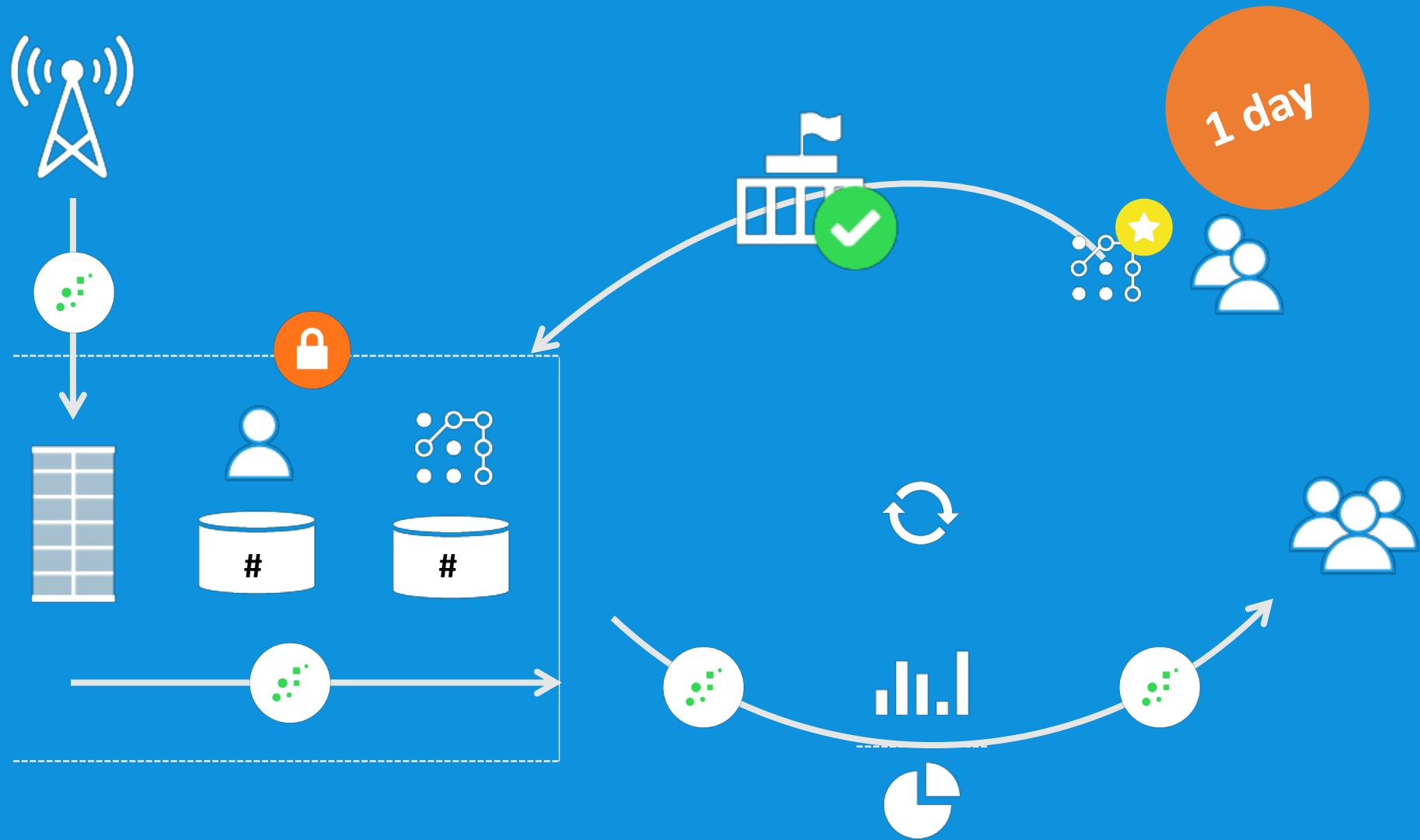
**Commercial  
(Data donor)**



**Utility**



Today



Tomorrow with OPAL

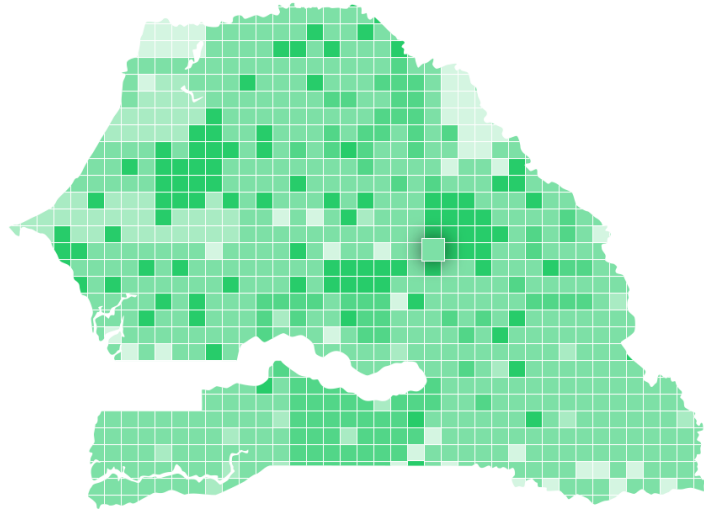
## OPAL'S ANSWER

Subtitle - shorttfo about data type

- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
- Aenean convallis tortor vitae purus suscipit, nec lobortis urna
- Tincidunt mauris in justo non eros interdum vehicula a a nunc.
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Short explanation

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- Color scale legend



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Jan Feb Mar **Apr** May jun Jul Aug Sept Oct Nov Dec 2013

Download

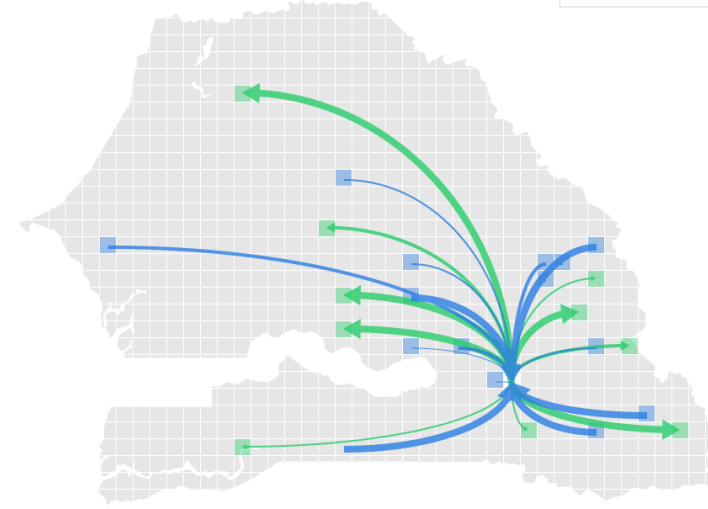
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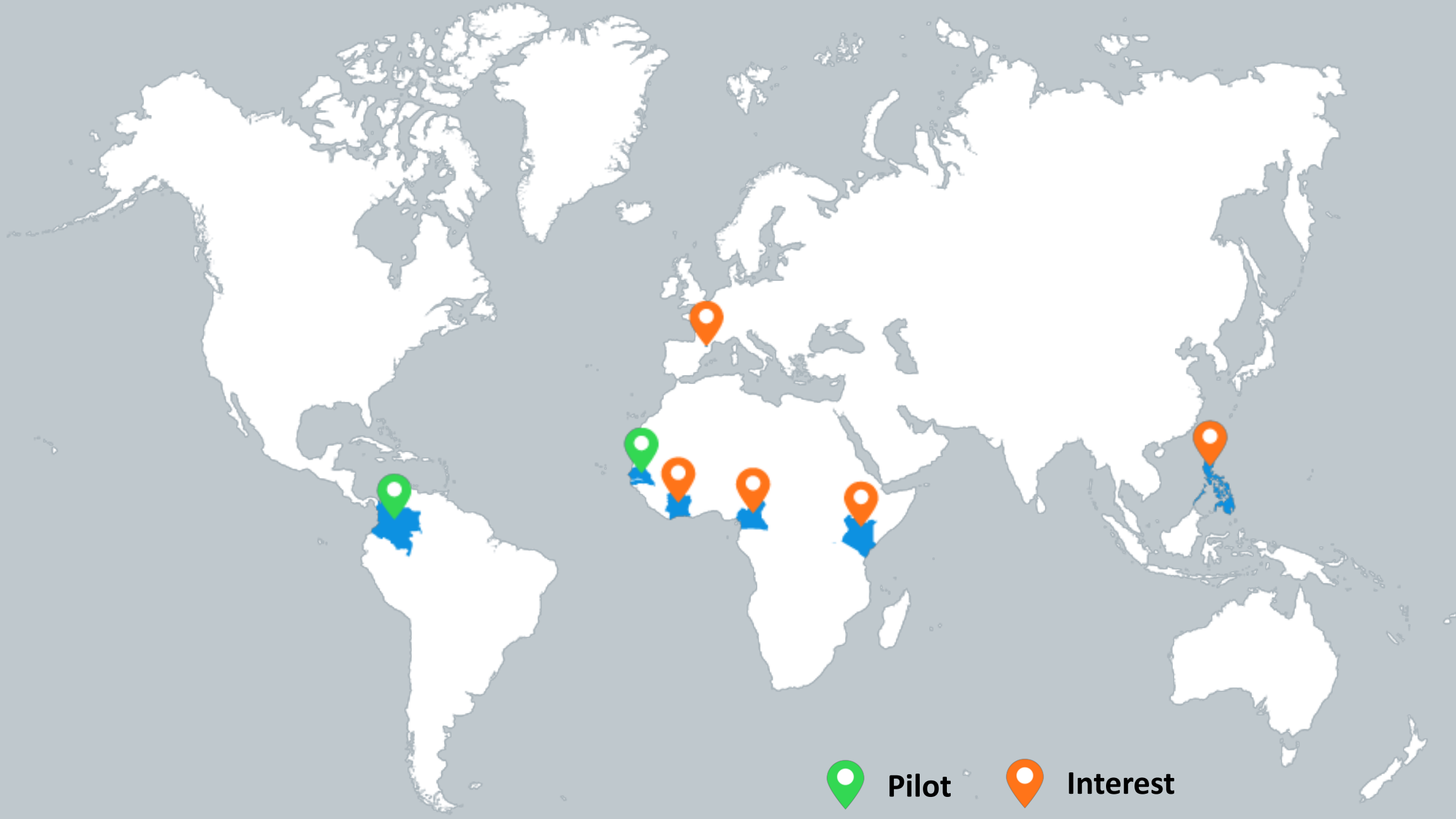
15 biggest flux

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2013

Download



 **Pilot**     **Interest**



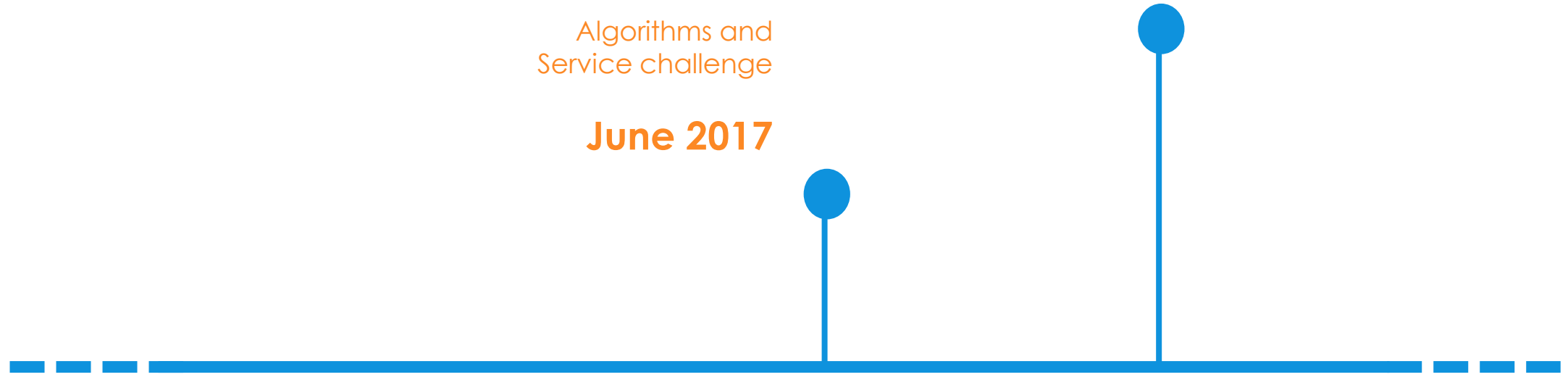
# MVP 2

Dec 2017

# MVP 1

Algorithms and  
Service challenge

June 2017



2016 : Conception

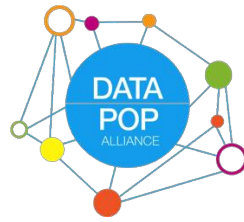
2017 : Development

2018 : Launch

# OPAL Senegal is about to get started...

- Sonatel confirmed its decision to launch D4D/OPAL as a service
- AfD and World Bank funding is in progress, requiring Ministry expression of interest
- Just starting to identify local actors to involve in Senegal,
  - Local key actors for User Needs and platform Design
  - Local Project Manager (looking for candidates )
  - Local Advisory Board (First discussion to be held next month)
  - Local developers interested to develop Data services (grass roots up to mid-size SME)
  - Local Institutions and business interested to become end-users (Expression of interest)
  - aiming at a 1st workshop early Nov
- Preliminary Results and 1st Prototype being tested in Labs
  - Orange Labs, Telefonica, MIT-Imperial,...

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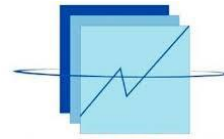
GLOBAL PARTNERSHIP  
FOR SUSTAINABLE DEVELOPMENT DATA



THE WORLD BANK  
IBRD • IDA | WORLD BANK GROUP



Microsoft



ANSD  
Agence Nationale de  
la Statistique et de la Démographie



# Thank you

opalproject.org | #OPALproject