

# HACKATHON

# 2021 GETTING READY TO

## CHANGE THE WORLD



"Limiting global warming to 1.5°C would require rapid, far-reaching and unprecedented changes in all aspects of society" - IPCC

*"In Sub-Saharan Africa every second person has no access to electricity - a problem that 800M people face globally (2021)" - Worldbank*



# VISION



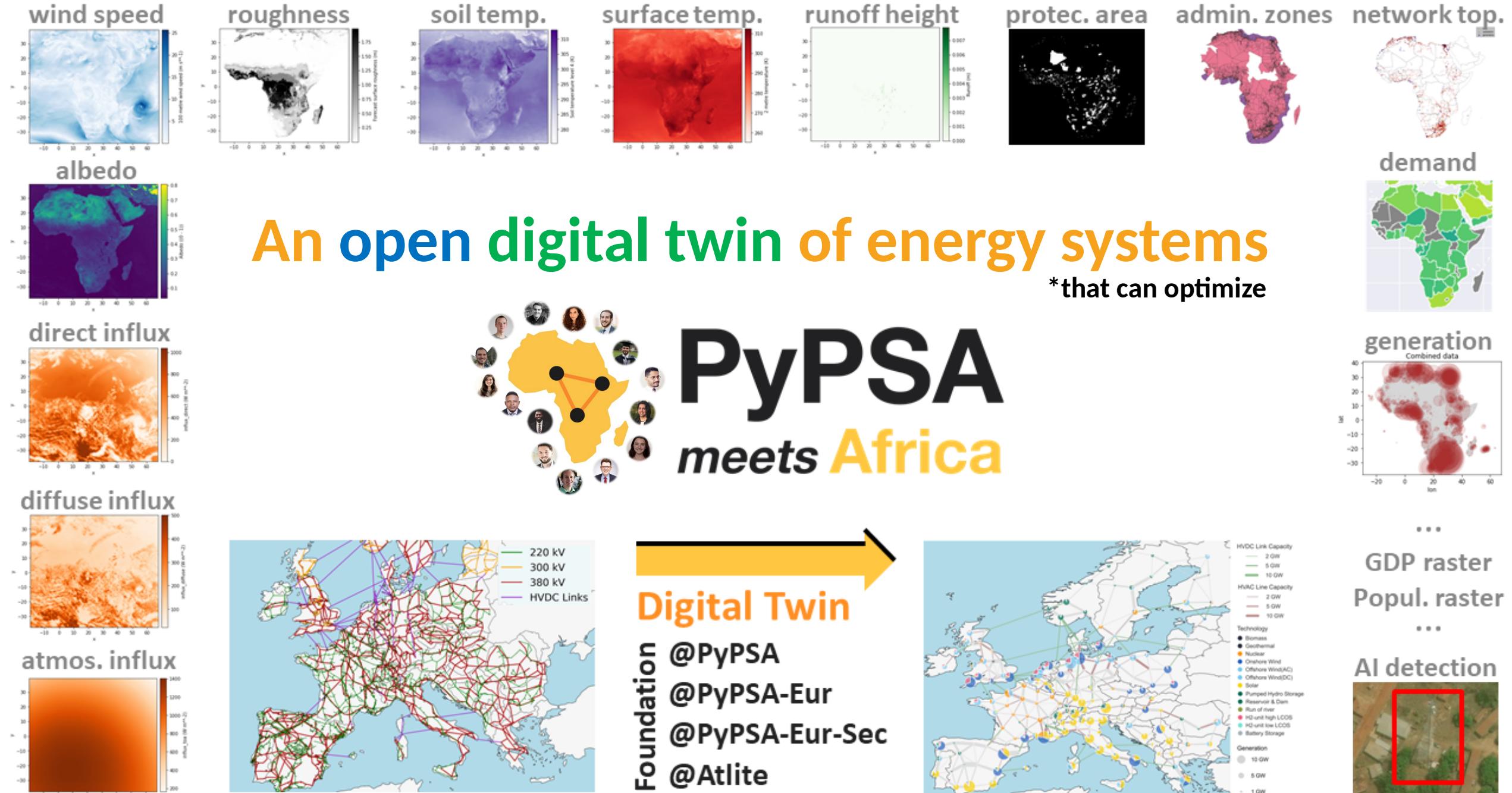
Create useful alternatives  
to closed-source energy  
system model for industry  
and research

# MISSION

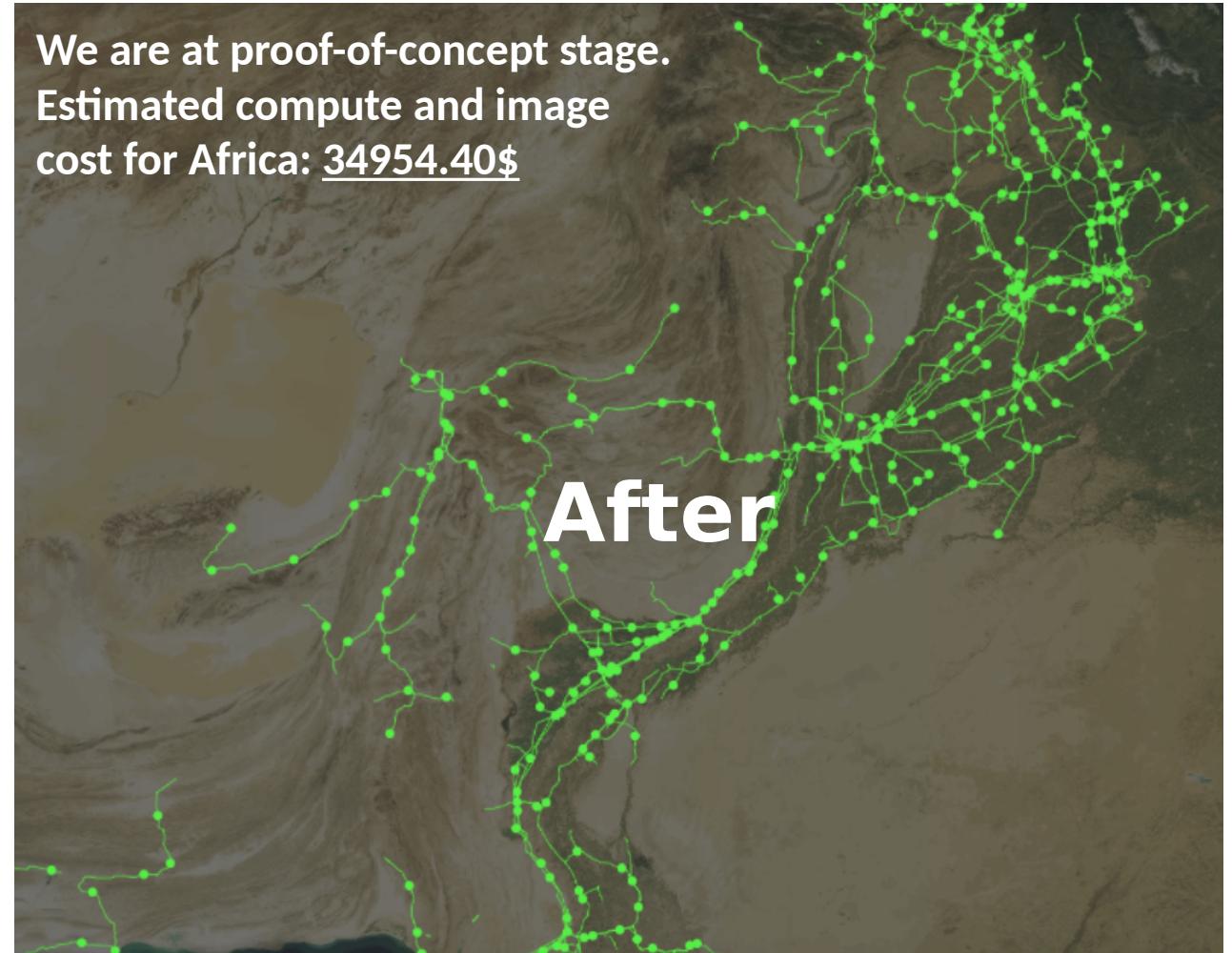
**#PyPSA-AFRICA2021**

**#PyPSA-EARTH2022**

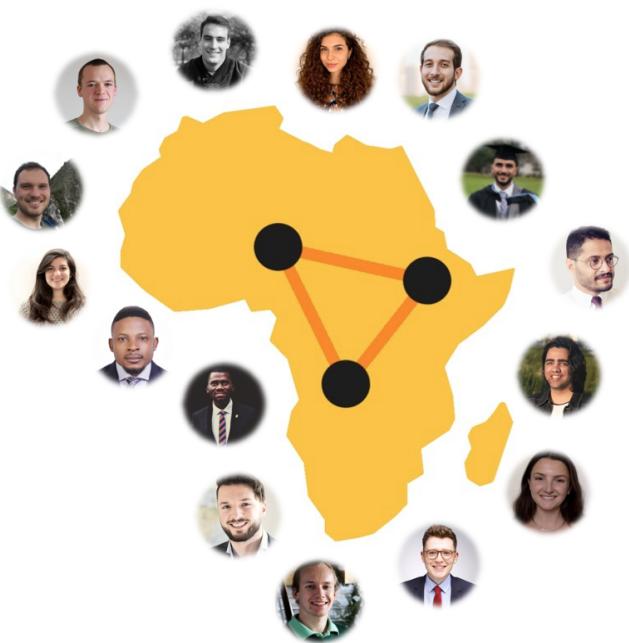
**#???2023**



# Recent Work 2017: Cooperation between World Bank and Development Seed



<https://devseed.com/ml-grid-docs/results/mapping-output-and-speed/>



# PyPSA

## *meets Africa*

SOLVER

PROBLEM  
FORMULATOR

DATA  
WORKFLOW

DATA  
CREATION

UX

UI

@LINOPY

@SMS++

@PIPS-IPM++

@PYPSA

[@PYPSA-AFRICA](#)

@PYPSA-EUR

@PYPSA-EUR-SEC

@ATLITE

@ALL

@PYAM

@?

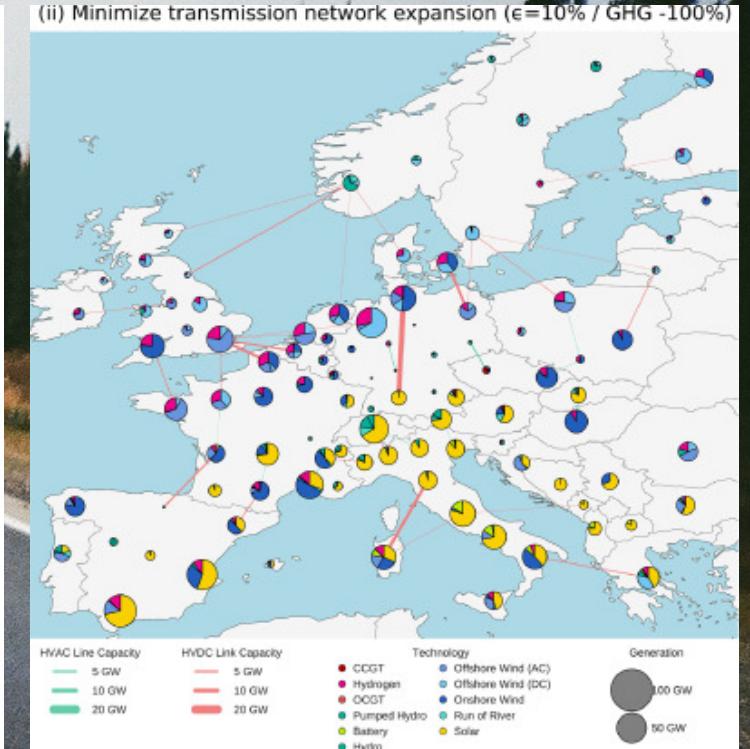
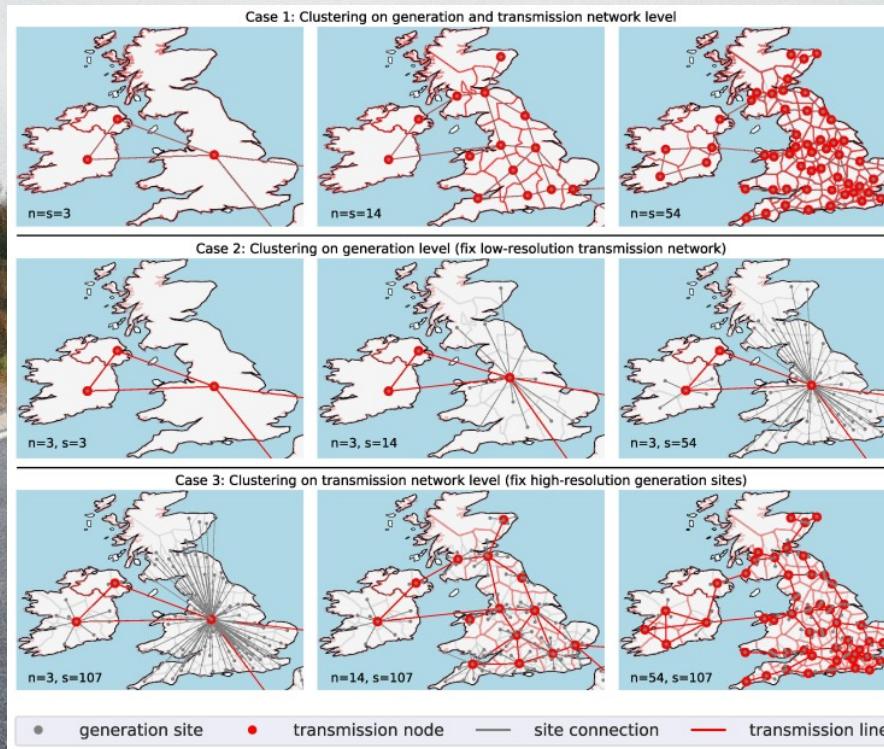
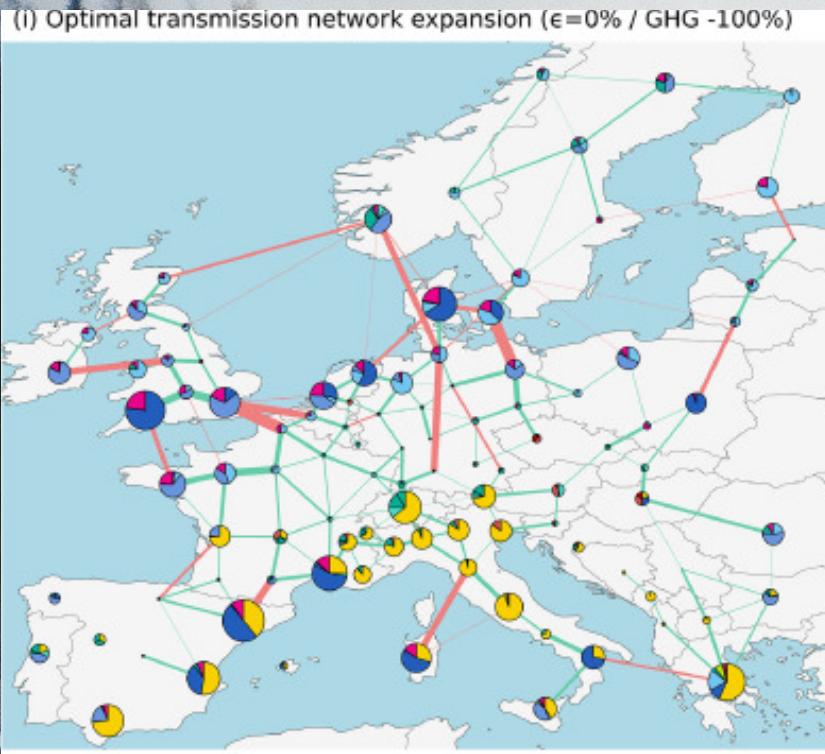
# AGENDA

- 1. PyPSA-Earth Mission**
2. Architecture on GitHub
3. Requirements of PyPSA-Africa
4. Installation routine and brief applied analysis
5. GitHub exercise
6. Workflow and debugging exercise
7. Dev-experience
8. Final remarks

# AGENDA

1. PyPSA-Earth Mission
2. Architecture on GitHub
3. Requirements of PyPSA-Africa
4. Installation routine and brief applied analysis
5. GitHub exercise
6. Workflow and debugging exercise
7. Dev-experience
- 8. Final remarks**

# PERFORM SOME PLANNING STUDIES



## INFLUENCE DECISION MAKING - CASA INDIA

A satellite photograph of a coastal desert landscape. The coastline is visible on the left, meeting a vast, brown, arid land area with numerous dry riverbeds and small settlements. In the foreground, a white satellite with solar panels is positioned horizontally, appearing to float above the Earth's surface.

We can recognize everything  
from sky using satellites\*

\*if the resolution is right

# Open Source Ladder

"up and down the ladder" by Robert Couse-Baker is licensed under  
[CC BY 2.0](#)



# HACKATHON

# 2021 GETTING READY TO

## CHANGE THE WORLD