SEMINAR SERIES

The Emerging New Economy: Causes and Consequences of Web 3.0

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HAI Stanford University Human-Centered Artificial Intelligence

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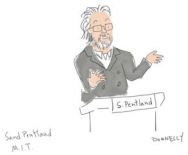

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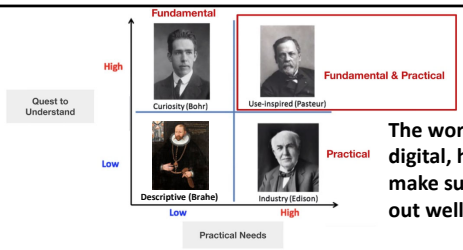


The world is becoming digital, how can we make sure this turns out well for everyone?

Swiss Trust Chain (SwissPost, SwissCom)
Akoya (Fidelity Investments+18 US banks)
N. Italy, Cote d'Ivoire, Sengal, S. Australia, US
GDPR, SDGs, EU Presidency, OECD, Club de Madrid

Science, Policy and Silos

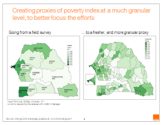
Optimize capital → AI as labor substitute

Optimize capital and labor → AI as labor complement

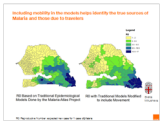
Generalize idea: ESG Planning Tool

Sustainable Development Goals Metrics
vs ESG metrics…unlocking $ Trillions of investment?

poverty, inequality



public health



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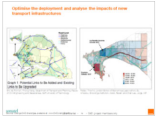

SDG optimized infrastructure investment

UN Data Revolutionaries

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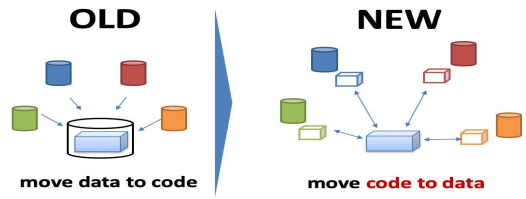
But:

No one is going to give you their data.

What are we to do?

Share anonymous insights not data: OPAL: Open Algorithms, federated data



Examples: Akoya, Eurostat

3/5 of US Bank Accounts, ½ of US Credit Cards

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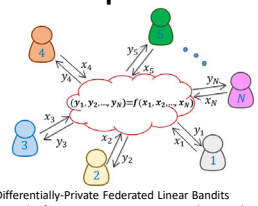
private federated learning



Differentially-Private Federated Linear Bandits *Neural Information Processing Systems* (**NeurIPS**), 2020 (**spotlight**)

Kernel Methods for Cooperative Multi-Agent Contextual Bandits *International Conference on Machine Learning* (**ICML**), 2020

Importance: Privacy, including proprietary data and national security data

Example: Akoya.com

And: it is much more secure!

And: it is much cheaper!

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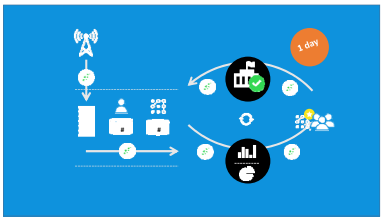
dramatically changes privacy, localization, ownership

"This makes is possible to use and maintain data without holding it"

Lawrence Lessig (Harvard Law School Berkman Center) in WSJ

Also: full, continuous auditability



this is how you control AI

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ease of auditing improves fairness, bias, and accuracy

Colombia

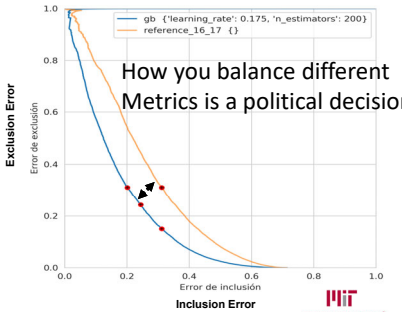
Noriega, Bakker, Pentland

Results:

- **21%** less exclusion error
- **21%** less inclusion error
- at constant budget

=> 920k excluded poor now included

PROSPERIA



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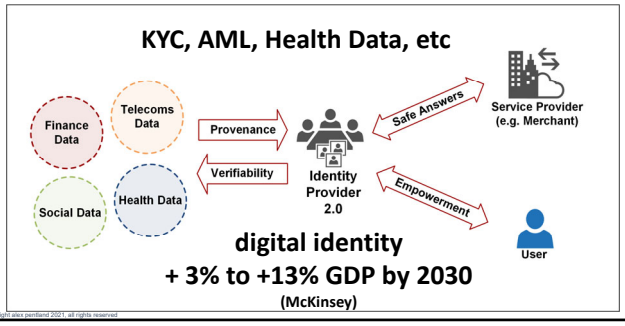
distributed, ownership platforms are familiar



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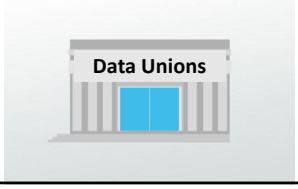
How do we avoid centralization/big brother?

Tie data *control* to community fiduciaries

Community Banks 1870's
Rural electrification 1930's

EU 2021 data regulations
California Privacy Law



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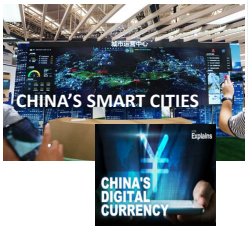
Web 3.0:
General purpose, "smart contract" Transaction Platforms

For Trade, Logistics, Asset Management, Tax And Payments



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Smart Contracts permit Digital LLCs or DAOs: greater efficiency, security, less corruption

So:

- **Multiple competing national Web 3.0 platforms**
- **Different legal frameworks**
- **Platform is extension of national power**

He who has the data has the initiative - Xi

WORLD LEADERSHIP ALLIANCE

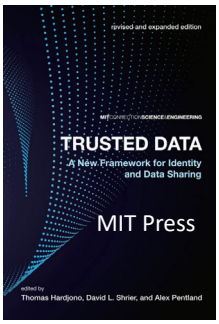
67% of world leaders thought governance was most Important issue resulting from world's digital transformation

And the US/EU champion is

- Meta? Etherium?
- SWIFT? CBDCs? Stablecoins?
- Maersk/IBM, Walmart?
- Switzerland?

further discussion: Davos, MIT, Battery meeting

see http://imaginationinaction.xyz



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