Challenges

1. Problem: Financing Digital Gov
2. Solution - Infrastructure Thinking
3. Challenge - Policy
David Eaves
Associate Professor of Digital Government
Institute for Innovation and Public Purpose
University College London
@daeaves
<1> Global Challenge - Financing Digital Government
Who led the digital transformation of your organization?

A) CEO
B) CTO
C) COVID-19
The problem:

Current models of funding digital government cannot and will not scale. We need a new “infrastructure” approach to funding digital to drive development.
Global Government IT Spend

$693 Billion

2022
Global Government IT Spend (Total Dollars)

- $612B
  - N America
  - W Europe
  - China
  - Mature Asia
  - Japan

- $81B
  - Rest of the world

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Global Government IT Spend (Total Dollars)

$612B
- N America
- W Europe
- China
- Mature Asia
- Japan

$81B
- Rest of the world

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Global Government IT Spend (per capita)

$252
2.43 Billion People

$14
5.47 Billion People
Global Government IT Spend (parity)

- $612B
  - N America
  - W Europe
  - China
  - Mature Asia
  - Japan

- $1378B
  - Rest of the world (delta of 1,297)

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Global Government IT Spend (parity)

$612B
- N America
- W Europe
- China
- Mature Asia
- Japan

$1378B
- Rest of the world (delta of 1,297)

Delta of $1,297B

Total Official Development Assistance from all OECD countries (2021): 178.9 billion
7x increase needed

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<2> National - (New) Infrastructure Thinking
First - (Old) Infrastructure Thinking
Highways leverage a form of platform thinking.
Errands

Shipping

Commuting

Leisure

Smart

Mack trucks

Ford

Lotus

Fed Highways

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Errands
Shipping
Commuting
Leisure

Smart
Mack trucks
Ford
Lotus

State Highway
Fed Highways
Local Roads

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High Variability

Stable Interfaces

Low Variability (Core)
High Variability

Stable Interfaces

Low Variability (Core)

- Errands
- Shipping
- Commuting
- Leisure
- Smart
- Mack trucks
- Ford
- Lotus
- Highway Act
- CAFE
- AASHTO
- ...
What Government looks like today, digitally.
Department

Tax Dept

DMV

Social Services

HR Intranet

Application

Sign On

Address Search

SIN request

Form

Sign On

Address Search

SIN request

Form

Sign On

Address Search

SIN request

Form

Sign On

Address Search

SIN request

Form

Sign On

Address Search

SIN request

Form

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Slides by David Eaves
Vertical accountabilities

- Department
  - Tax Dept
    - Sign On
    - Address Search
    - SIN request
    - Form
  - DMV
    - Sign On
    - Address Search
    - SIN request
    - Form
  - Social Services
    - Sign On
    - Address Search
    - SIN request
    - Form
  - HR Intranet
    - Sign On
    - Address Search
    - SIN request
    - Form
- Application
- Database
Actually...
Department

Application

Sign On
Address Search
SIN request
Form

Tax Dept

Sign On
Address Search
SIN request
Form

Sign On
Address Search
SIN request
Form

Sign On
Address Search
SIN request
Form

Sign On
Address Search
SIN request
Form

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What does an infrastructure view of government look like?
Silo

Slides by David Eaves
Silo Infrastructure

Slides by David Eaves

Image by Richard Pope
Services

Get a passport
Pay Taxes
Find a Job
Hire a Temporary Worker
Apply for Employer Insurance
Apply for a Student Loan
Authentication

AADHAAR

SingPass

Image by Richard Pope

Slides by David Eaves
Authentication

AADHAAR  SingPass  [Logo]

Payments

pix  Powered by Banco Central  UPI

Unified Payments Interface

Image by Richard Pope

Slides by David Eaves
Authentication

AADHAAR

SingPass

Data Exchange

pix powered by Banco Central

UPI

Payments

Data Exchange

DigiLocker

X-ROAD

Image by Richard Pope

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Data (Registries)

Unique Identifier

Vehicle Registry

GIS Data

Healthcare Records
Services
Components
Data
High Variability

Stable Interfaces

Low Variability (Core)
Digital public infrastructure (DPI) are society-wide, digital capabilities that are essential to participation in society and markets as a citizen, entrepreneur, and consumer in a digital era. Because it is essential, public institutions should guarantee that DPI is inclusive, foundational, interoperable, publicly accountable.
DPI can be a powerful driver for transformation
Come in High

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves
Come in High

Courtesy of Richard Pope, Ben McGuire & David Eaves

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves
Come in High

Madagascar

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves
Come in Low

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves
Come in Low
Come in Low

X-ROAD VS POINT-TO-POINT

Slides by David Eaves
Components First

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves
Components First

Courtesy of Richard Pope, Ben McGuire & David Eaves
Components First

Improve government and private sector services by making it simpler

IndiaStack

Improve government and private sector services by making it simpler

Courtesy of Richard Pope, Ben McGuire & David Eaves
Components First

Improve government and private sector services by making it simpler

Using Unique IDs to organise government data

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves
<3> Policy and Technology Challenge
The tech will be easy. The **governance** will be hard.
Technology

Who owns operations of shared services?

Policy

Slides by David Eaves
Technology

Who owns operations of shared services?

Who enforces compliance and standards?

Policy

Slides by David Eaves
Technology

Who owns operations of shared services?

Who enforces compliance and standards?

Supporting Privacy/Security Legislation?

Who is accountable for security/cyber?

Who is accountable for privacy?

Who is accountable for privacy?

Policy

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Technology

- Who owns operations of shared services?
- Who enforces compliance and standards?
- Supporting Privacy/Security Legislation?
- Who is accountable for security/cyber?
- Who is accountable for privacy?
- Is there sufficient connectivity to ensure public access?
- Who manages remediation?

Policy

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Governance
Image the Narrow Corridor by Daron Acemoglu and James A. Robinson
Despotic Leviathan

Shackled Leviathan

Absent Leviathan

Image the Narrow Corridor by Daron Acemoglu and James A. Robinson
<table>
<thead>
<tr>
<th>The Surveillance State</th>
<th>Inclusive and Safe Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services may be efficient, but new capabilities do not emerge from society.</td>
<td>DPI create new public goods and support individual empowerment. Services are efficient and new capabilities emerge that require new governance models.</td>
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<th>Failure to Launch</th>
<th>Extractive</th>
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<td>A lack of trust in all players prevents the benefits of digital technologies being accrued by any actors.</td>
<td>The increased capabilities of digital technologies are controlled by and largely benefit the private sector.</td>
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The Surveillance State

You can read more on this idea and concept here. [https://ash.harvard.edu/narrow-corridor-and-future-digital-government](https://ash.harvard.edu/narrow-corridor-and-future-digital-government)

Inclusive and Safe Governance

DPI create new public goods and support individual empowerment. Services are efficient and new capabilities emerge that require new governance models.

The increased capabilities of digital technologies are controlled by and largely benefit the private sector.

A lack of trust in all players prevents the benefits of digital technologies being accrued by society.

You can read more on this idea and concept here. [https://ash.harvard.edu/narrow-corridor-and-future-digital-government](https://ash.harvard.edu/narrow-corridor-and-future-digital-government)

Or here:

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Coalition Building
Ministries

Public servants

IT Teams

Politicians

Civil Society

Window for DPI

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We need Hug

The Lawyers
The Politicians
Civil Society
IT Dept

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In Summary

There isn’t enough Money
Need New forms of Governance
DPI capabilities are inevitable
Coalition Building
David Eaves

@daeaves
david@codevelop.fund
d.eaves@ucl.ac.uk

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Some additional Thoughts

What is Digital Public Infrastructure

Government as a Platform: How Policy Makers Should Think about the Foundations of Digital Public Infrastructure

Funding Digital Government Initiatives

The Digital Systems Every Country Needs to Succeed in the 21st Century
Come in Low

Slides by David Eaves

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Come in Low

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