Challenges

<1> Problem: Financing Digital Gov

<2> Solution - Infrastructure Thinking

<3> Challenge - Policy

Institute for Innovation and Public Purpose

UCL

CO

CO-DEVELOP

David Eaves
Associate Professor of Digital Government
Institute for Innovation and Public Purpose
University College London

@daeaves

Slides by David Eaves

<1> Global Challenge - Financing Digital Government

Who led the digital transformation of your organization?

A) CEO

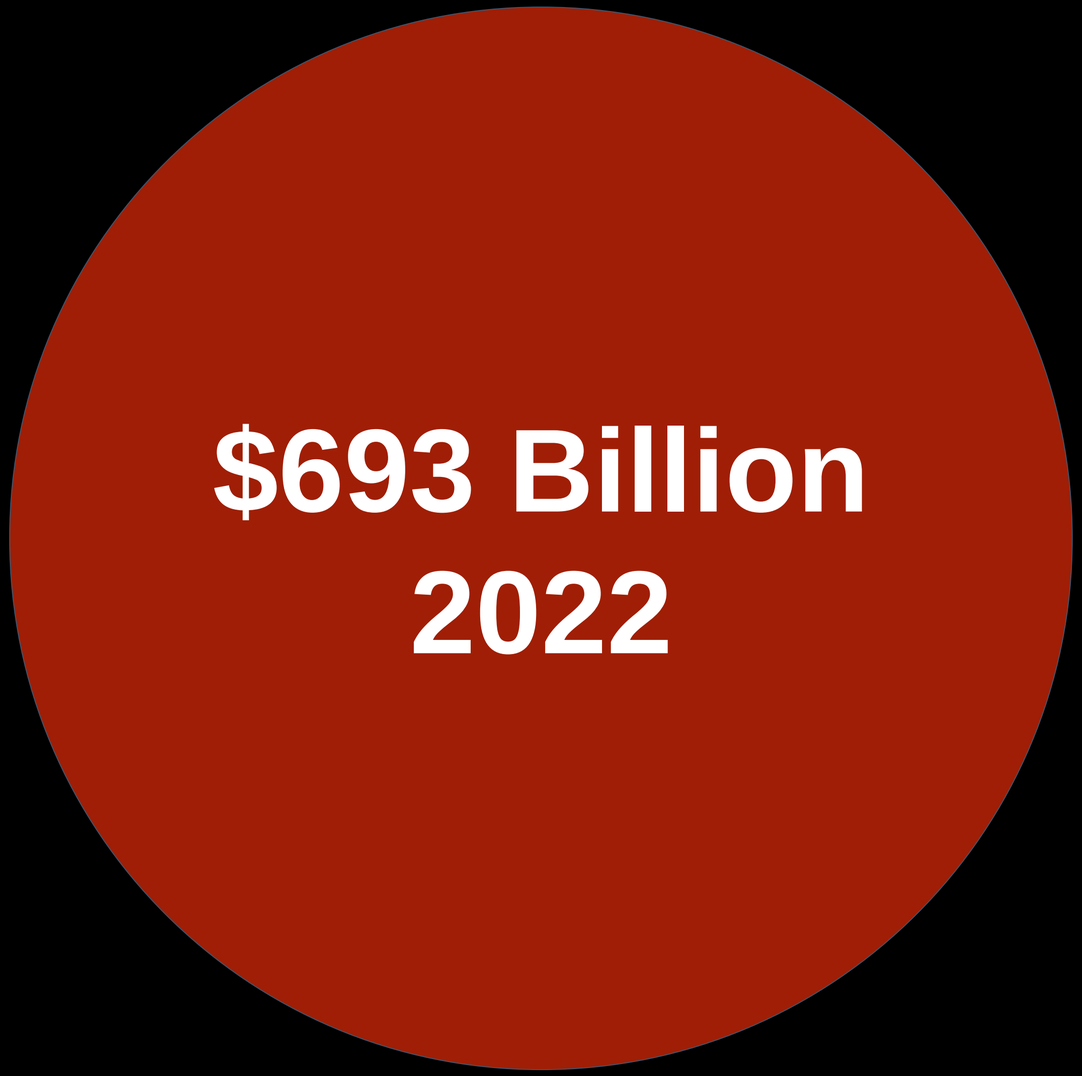
B) CTO

C) COVID-19

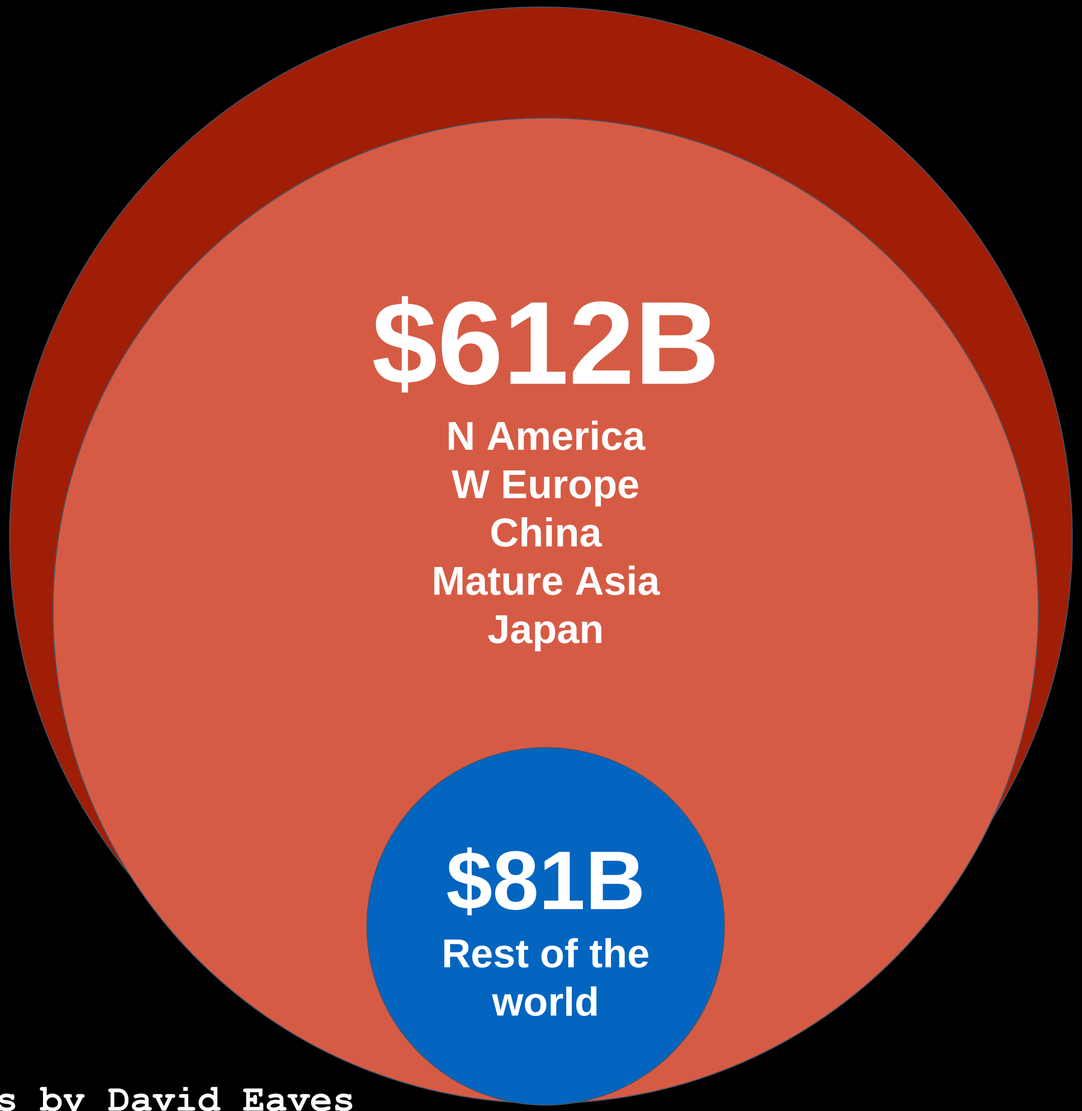
The problem:

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



Global Government IT Spend (Total Dollars)



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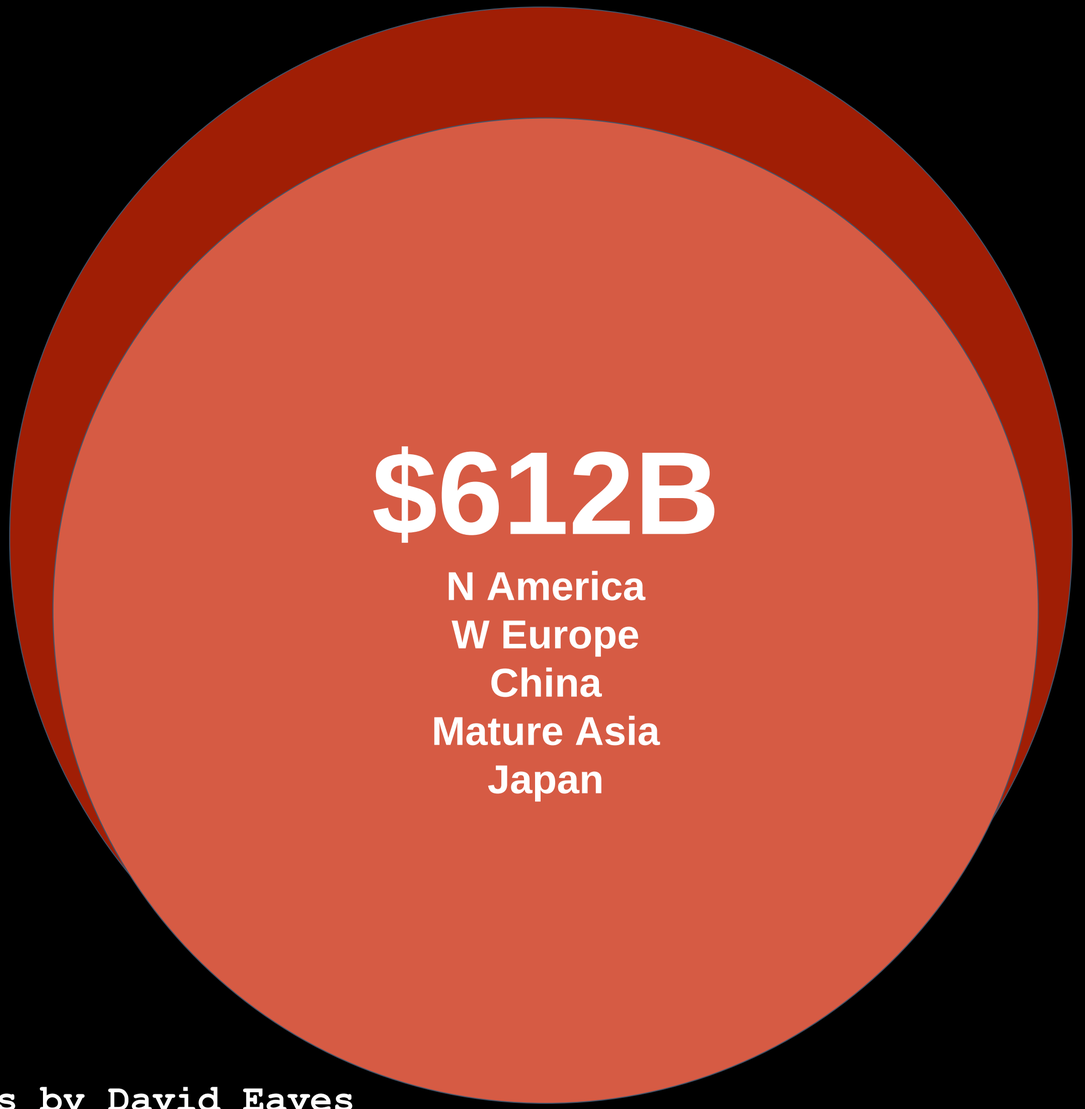
Global Government IT Spend (Total Dollars)

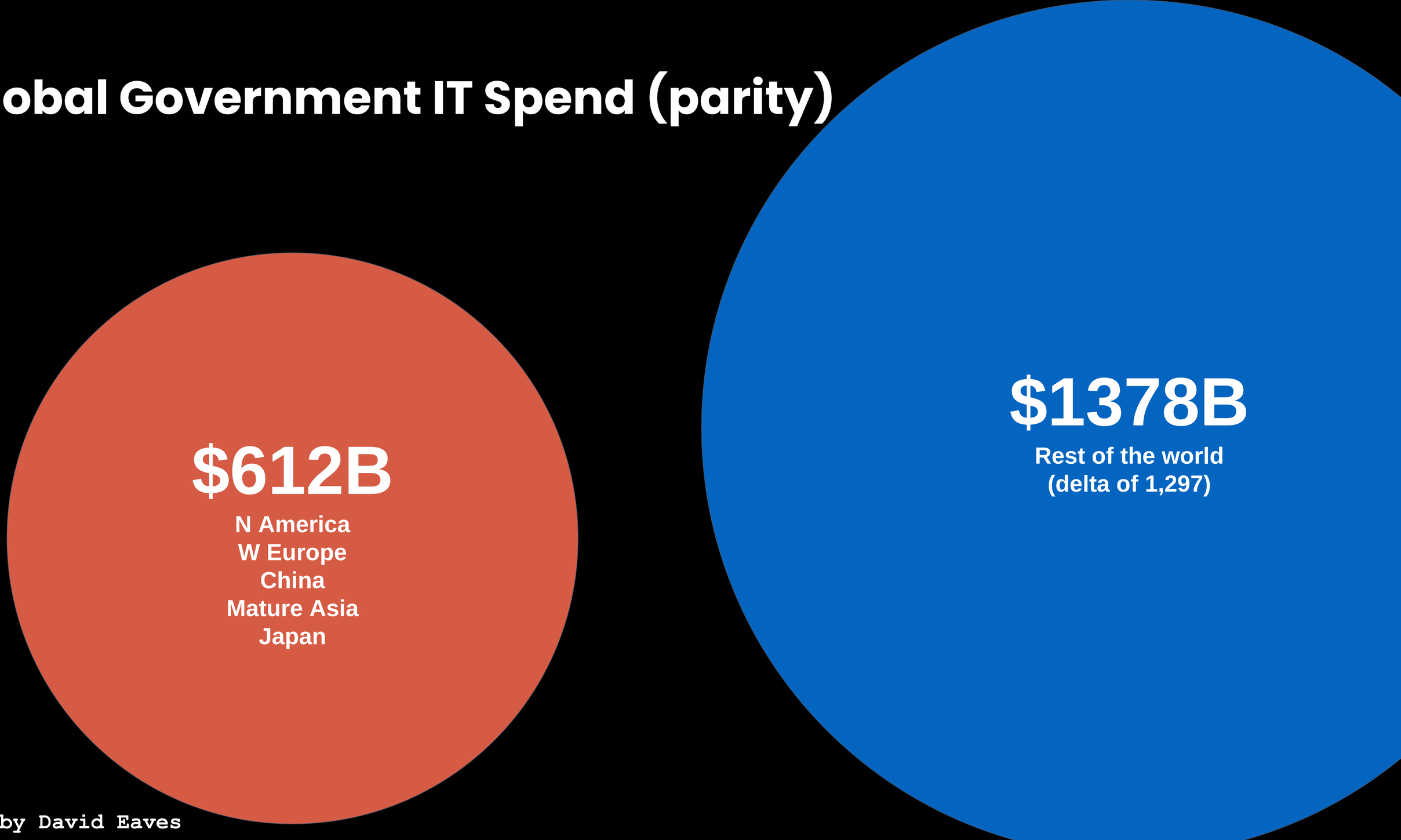


Slides by David Eaves

Global Government IT Spend (per capita)

Slides by David Eaves

Global Government IT Spend (parity)



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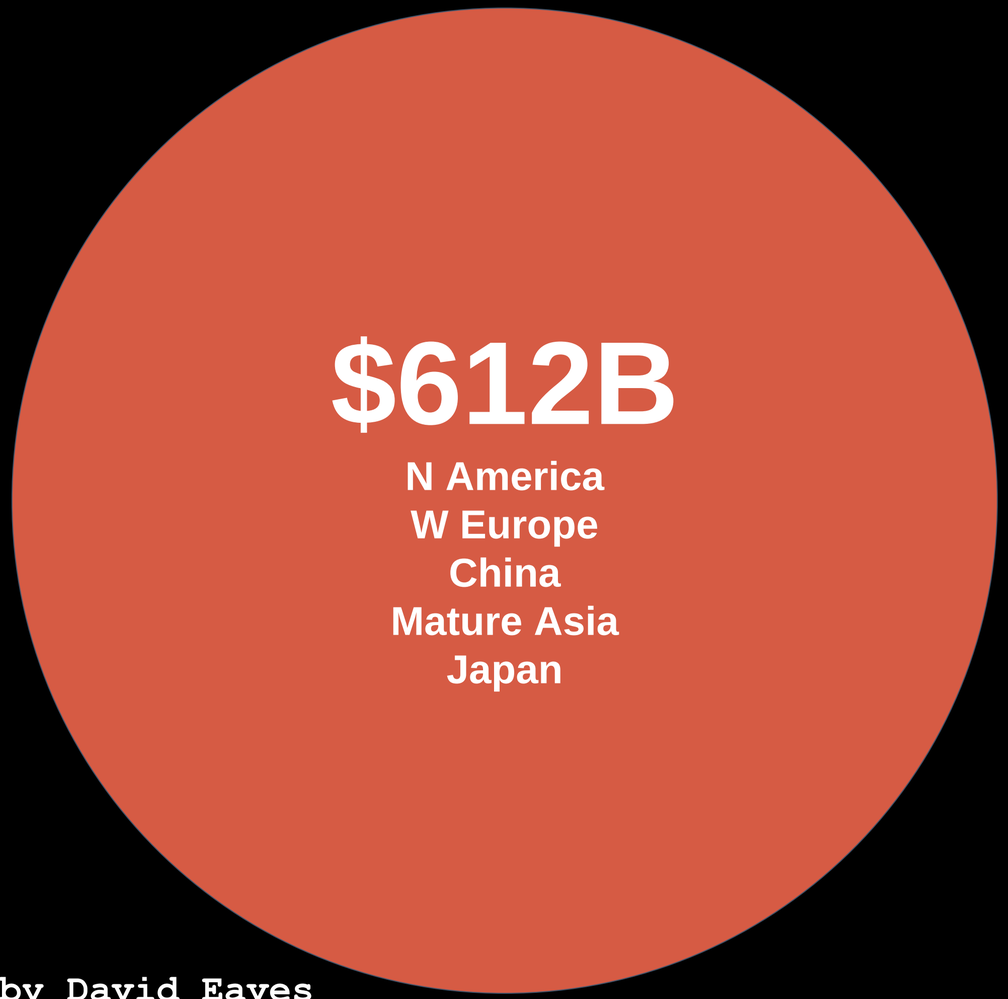
Global Government IT Spend (parity)



$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

Slides by David Eaves

<2> National -
(New) Infrastructure Thinking

First -
(Old) Infrastructure Thinking

Highways leverage a form of platform thinking.

Fed Highways

Slides by David Eaves

Shipping

Mack trucks

Fed Highways

Slides by David Eaves

Errands

Shipping

Commuting

Leisure

Smart

Mack trucks

Ford

Lotus

Fed Highways

Slides by David Eaves

Errands

Shipping

Commuting

Leisure

Smart

Mack trucks

Ford

Lotus

State Highway

Fed Highways

Local Roads

Slides by David Eaves

Activities

Errands

Shipping

Commuting

Leisure

Application Layer

Smart

Mack trucks

Ford

Lotus

Regulatory Layer

Highway Act

CAFE

AASHTO

...

Network Layer

State Highway

Fed Highways

Local Roads

Slides by David Eaves

High Variability

Stable Interfaces

Low Variability (Core)

High Variability

Errands

Shipping

Commuting

Leisure

Smart

Mack trucks

Ford

Lotus

Stable Interfaces

Highway Act

CAFE

AASHTO

...

Low Variability (Core)

State Highway

Fed Highways

Local Roads

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What Government looks like today, *digitally*.

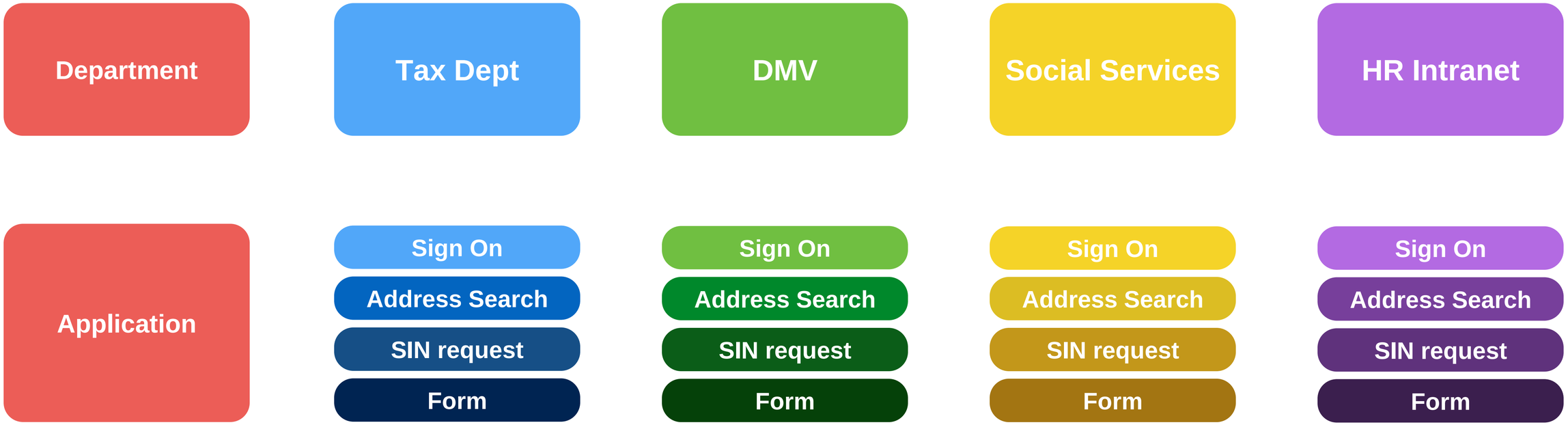
Department

Application

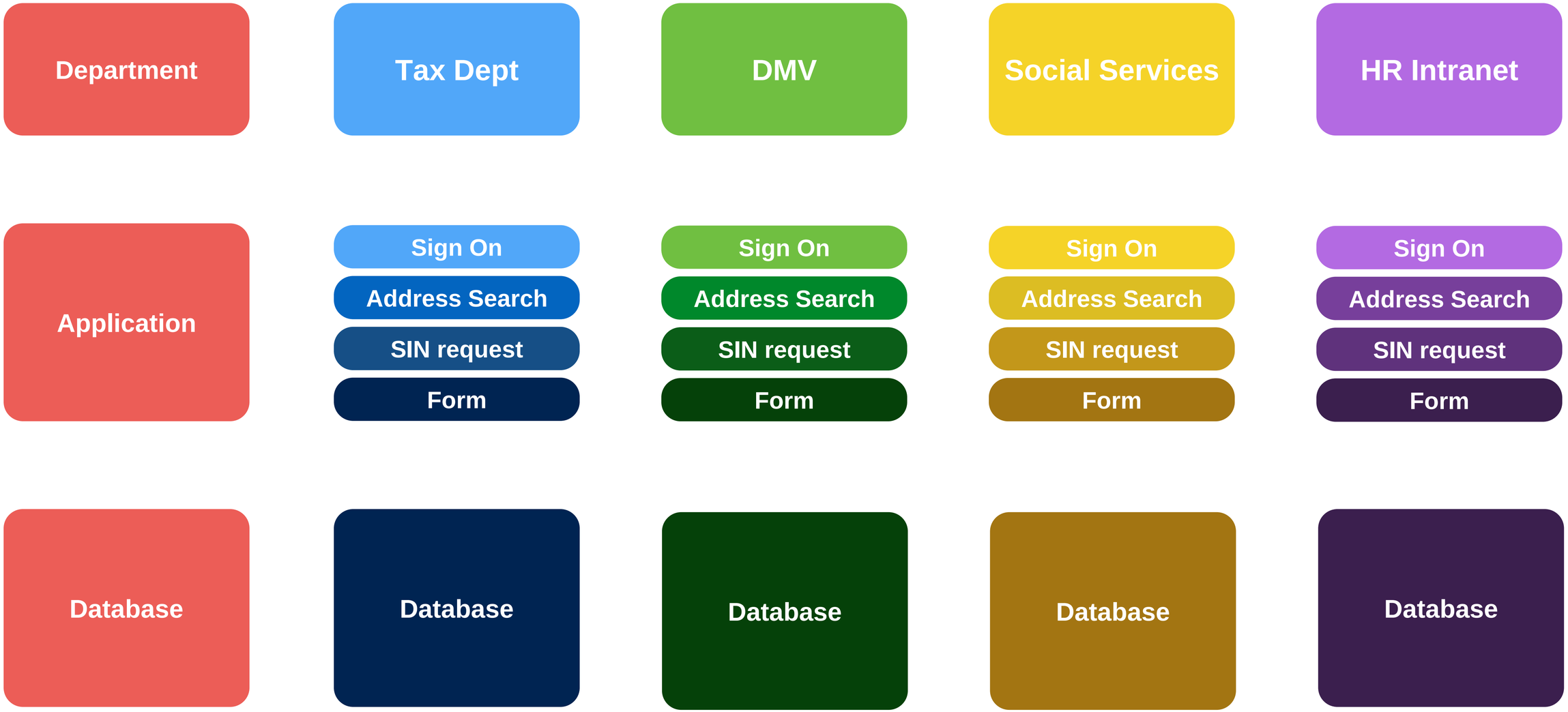
Database

Slides by David Eaves

Slides by David Eaves

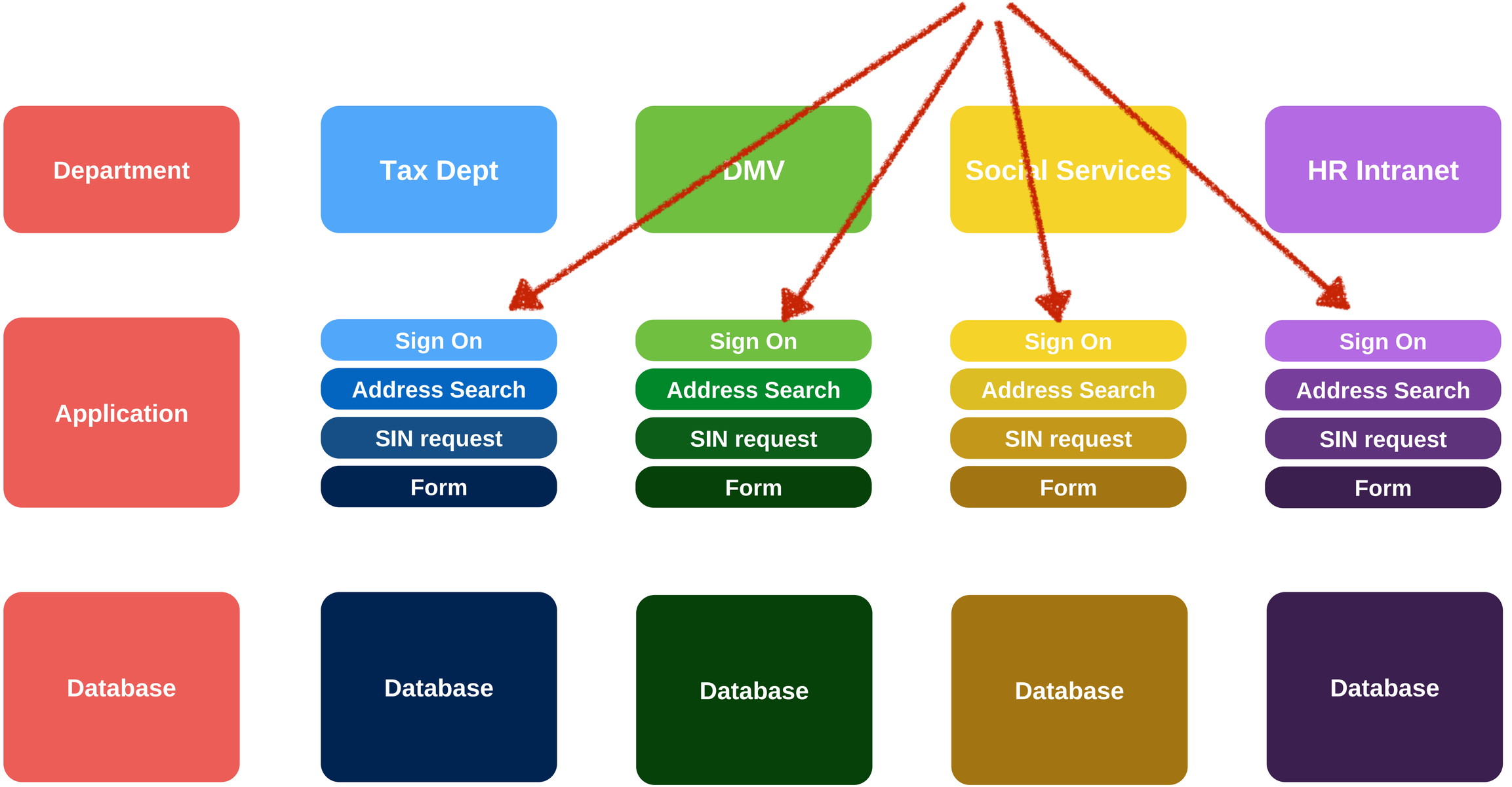


Slides by David Eaves



Slides by David Eaves

Duplication, Few standards, etc…



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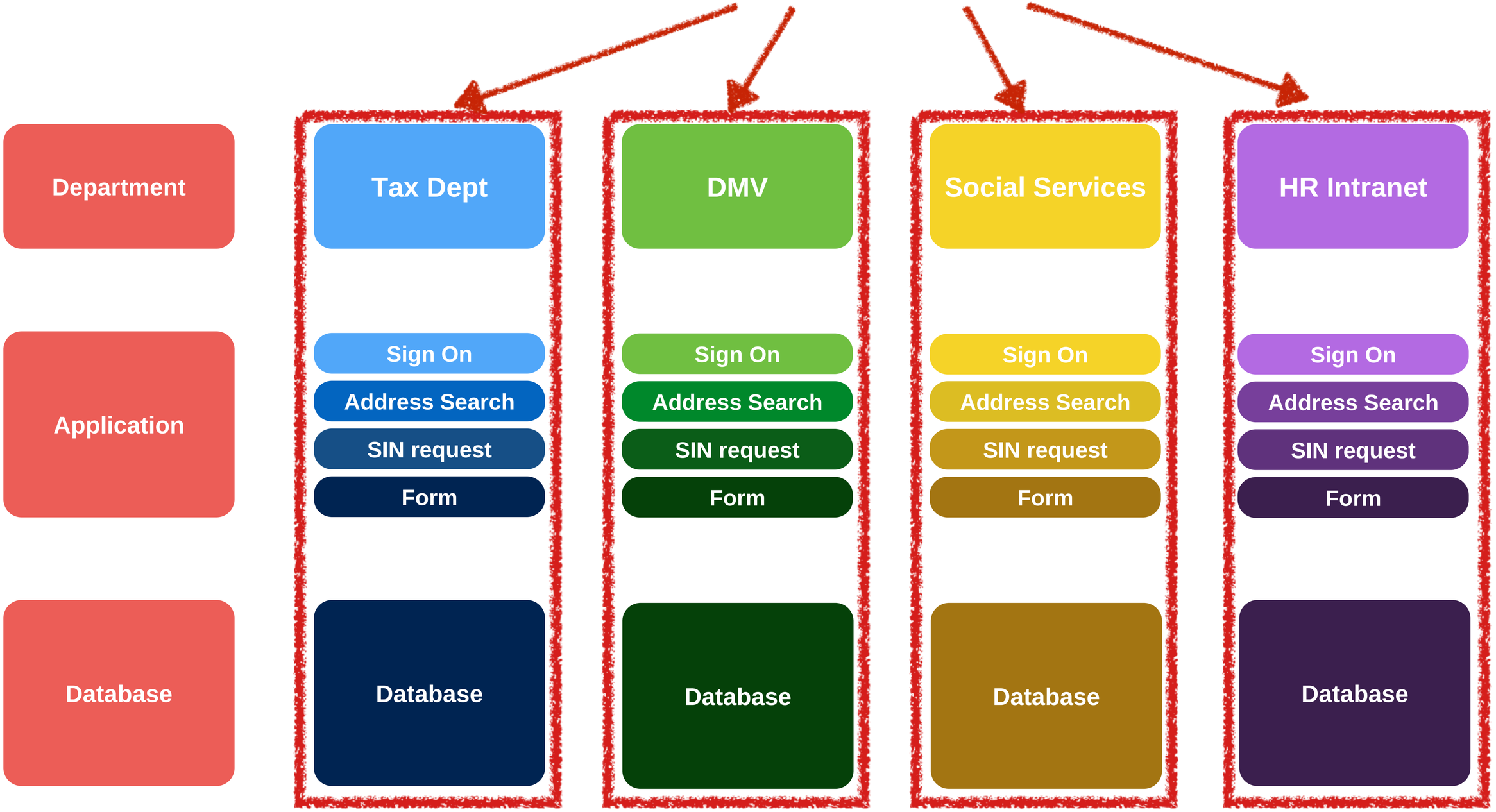
Vertical accountabilities



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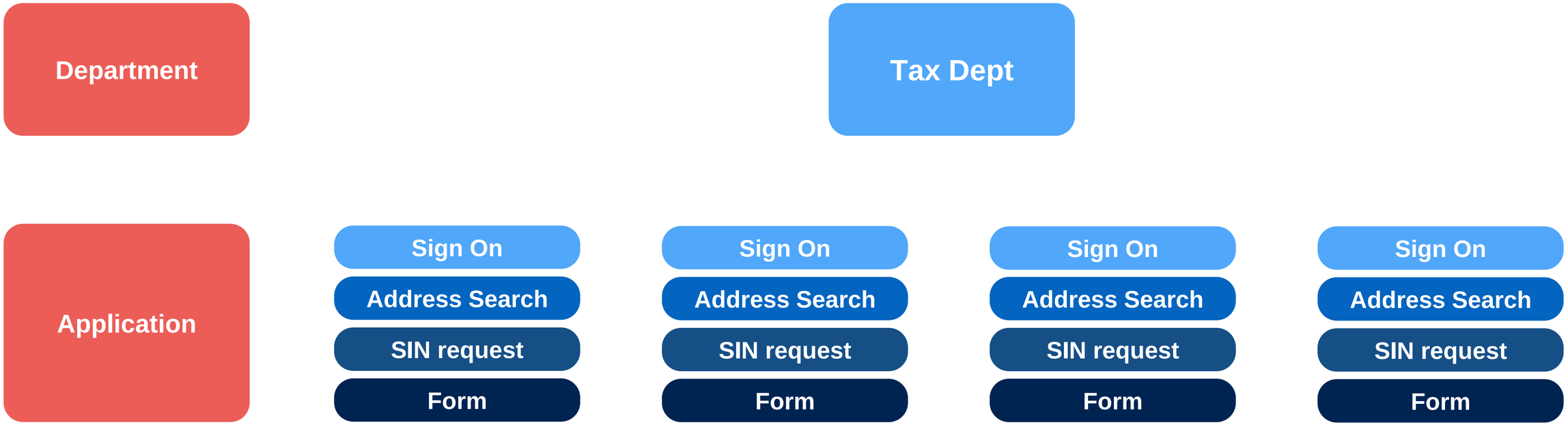
Actually…

Slides by David Eaves



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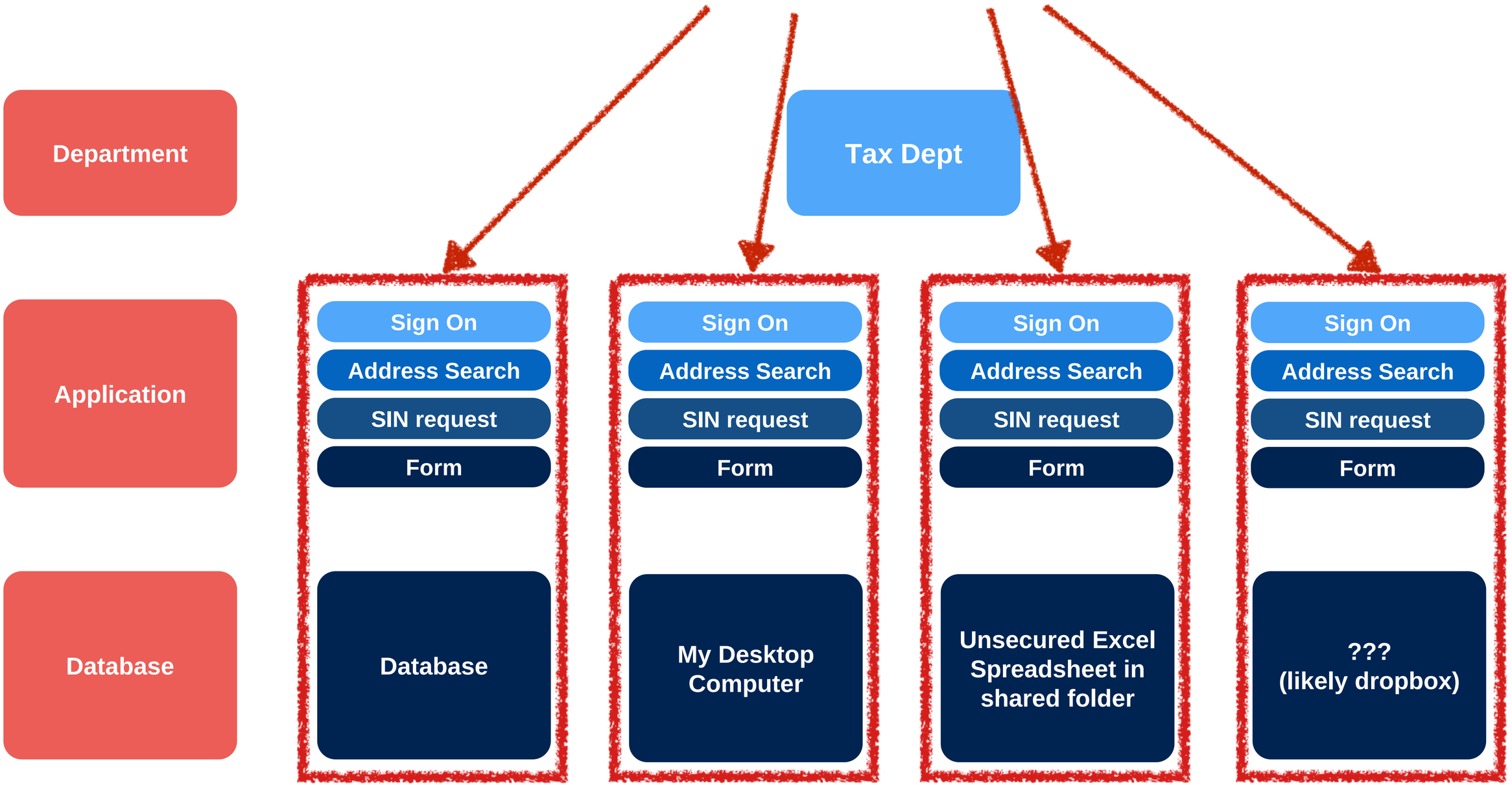
Duplication



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What does an infrastructure view of government look like?

Silo

Slides by David Eaves

Silo

Infrastructure

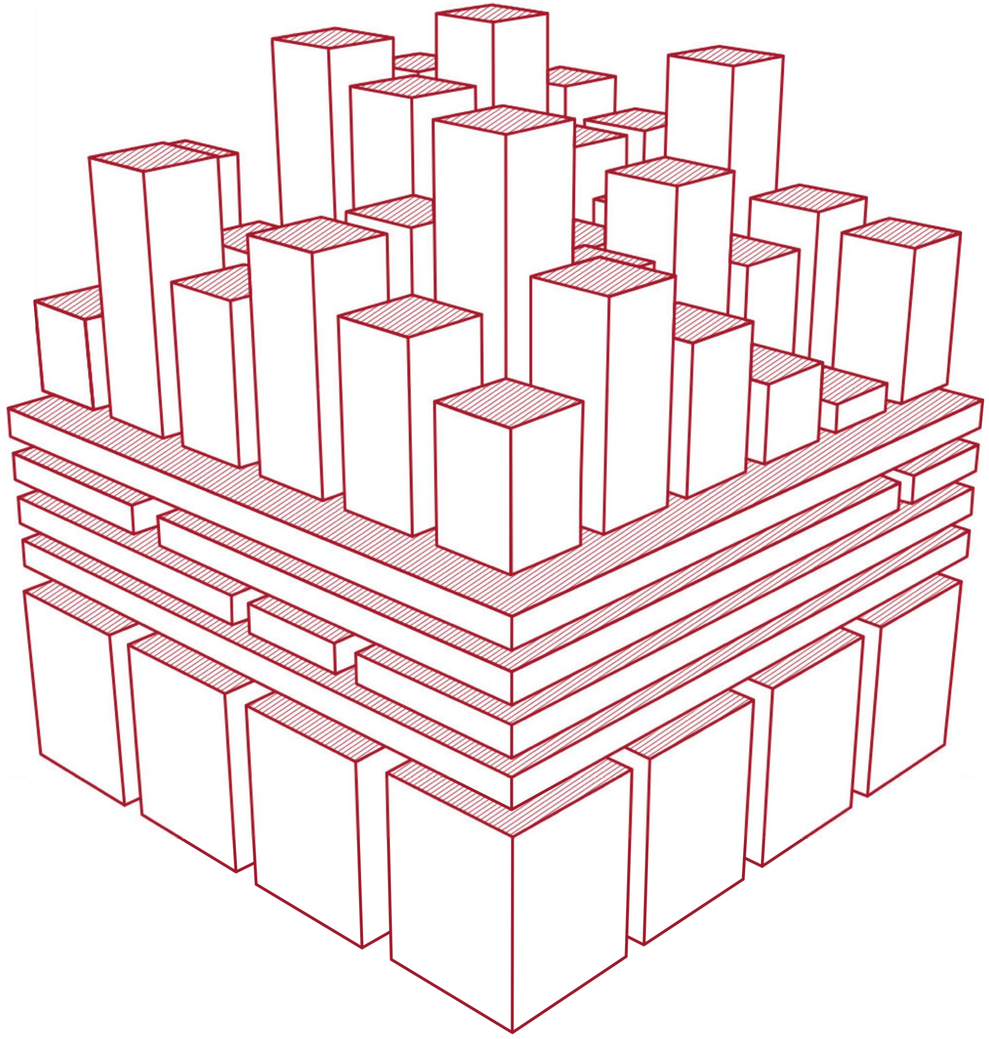

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Image by Richard Pope

Services

Components

Data

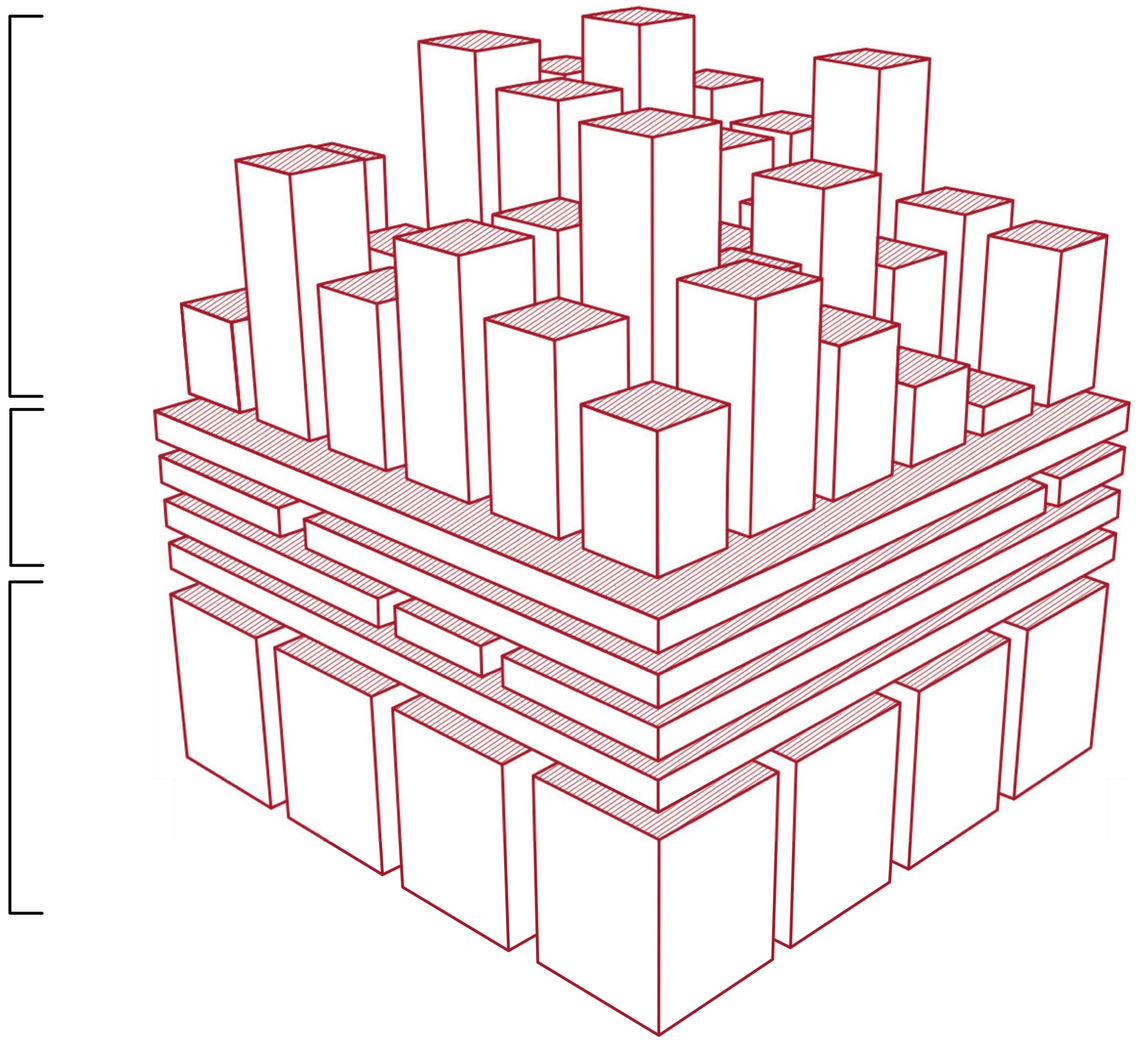

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Image by Richard Pope

Services

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

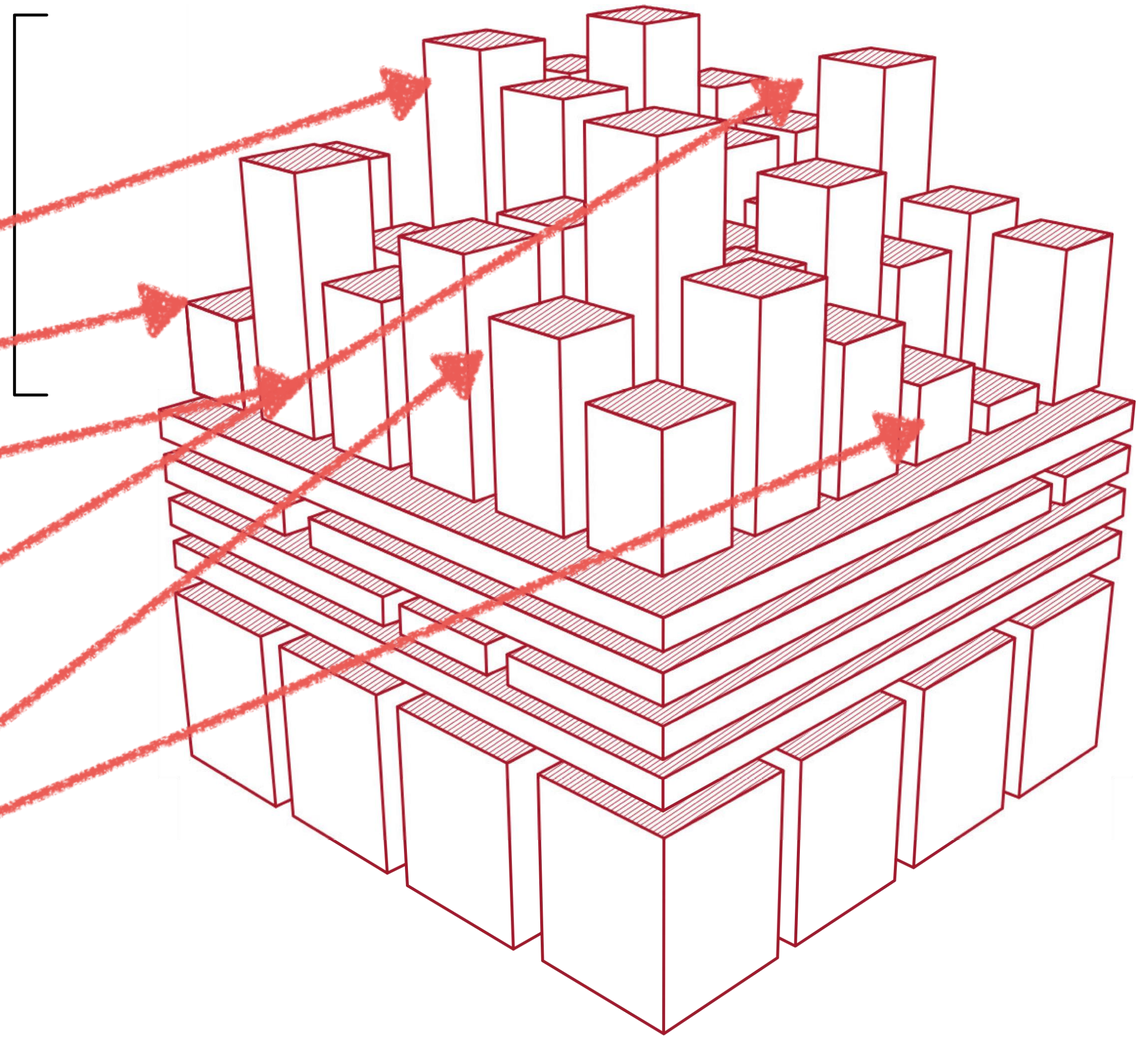

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Image by Richard Pope

Authentication

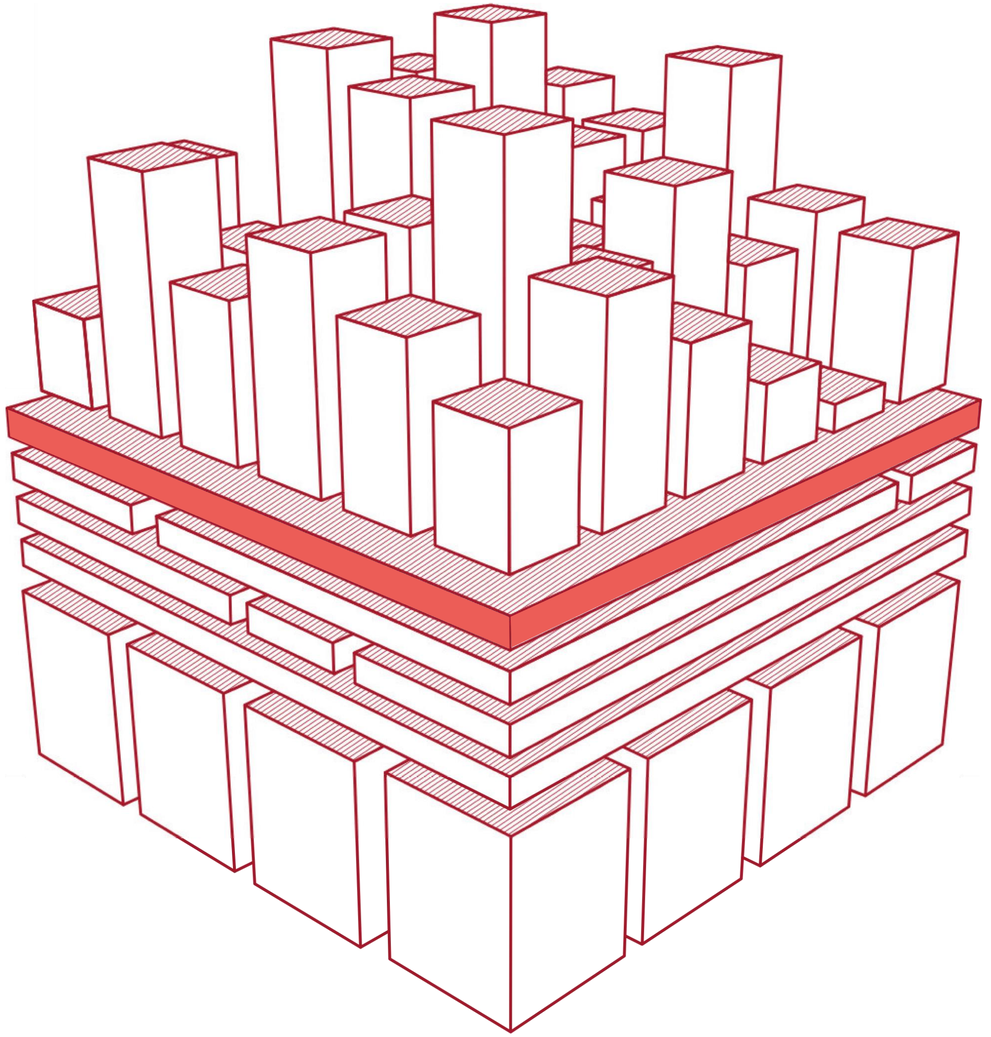

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Image by Richard Pope

Authentication

AADHAAR

SingPass

Payments

pix powered by Banco Central

UPI UNIFIED PAYMENTS INTERFACE

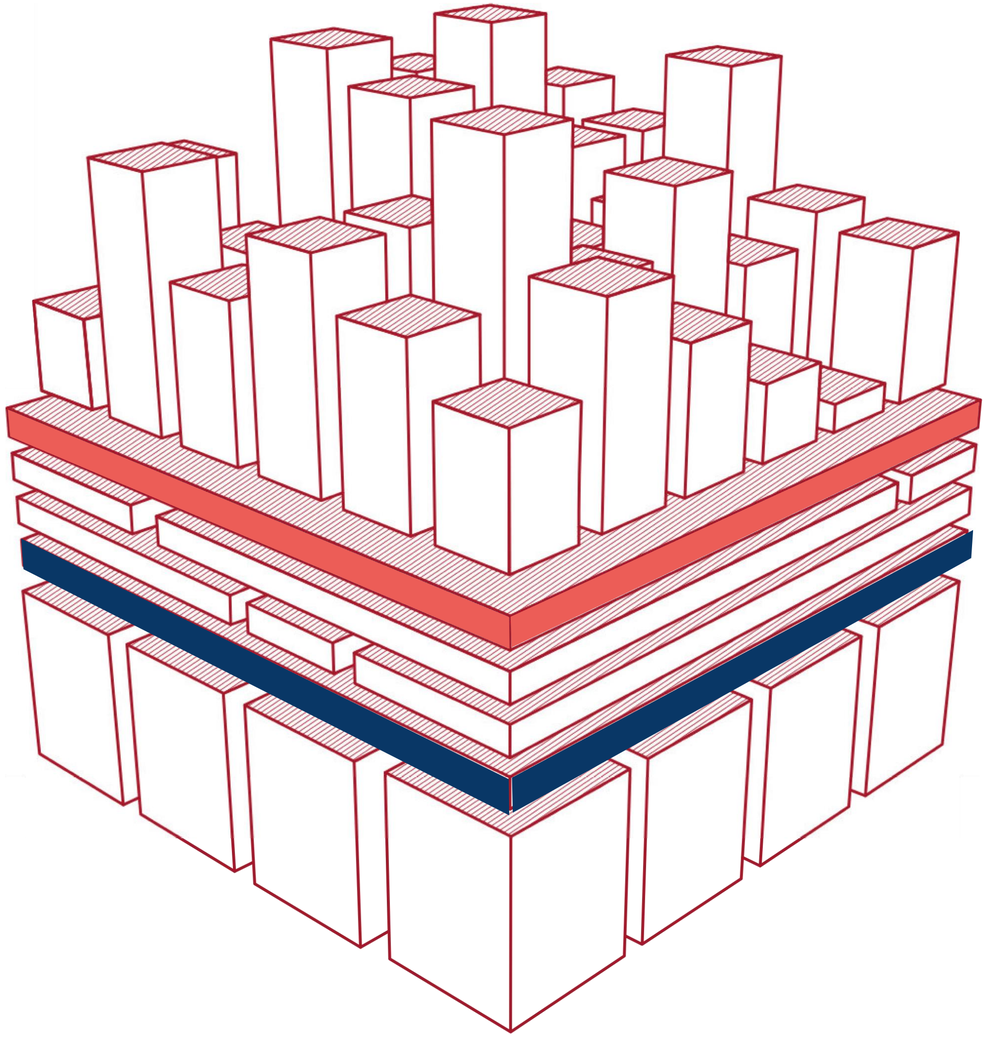

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Image by Richard Pope

Authentication

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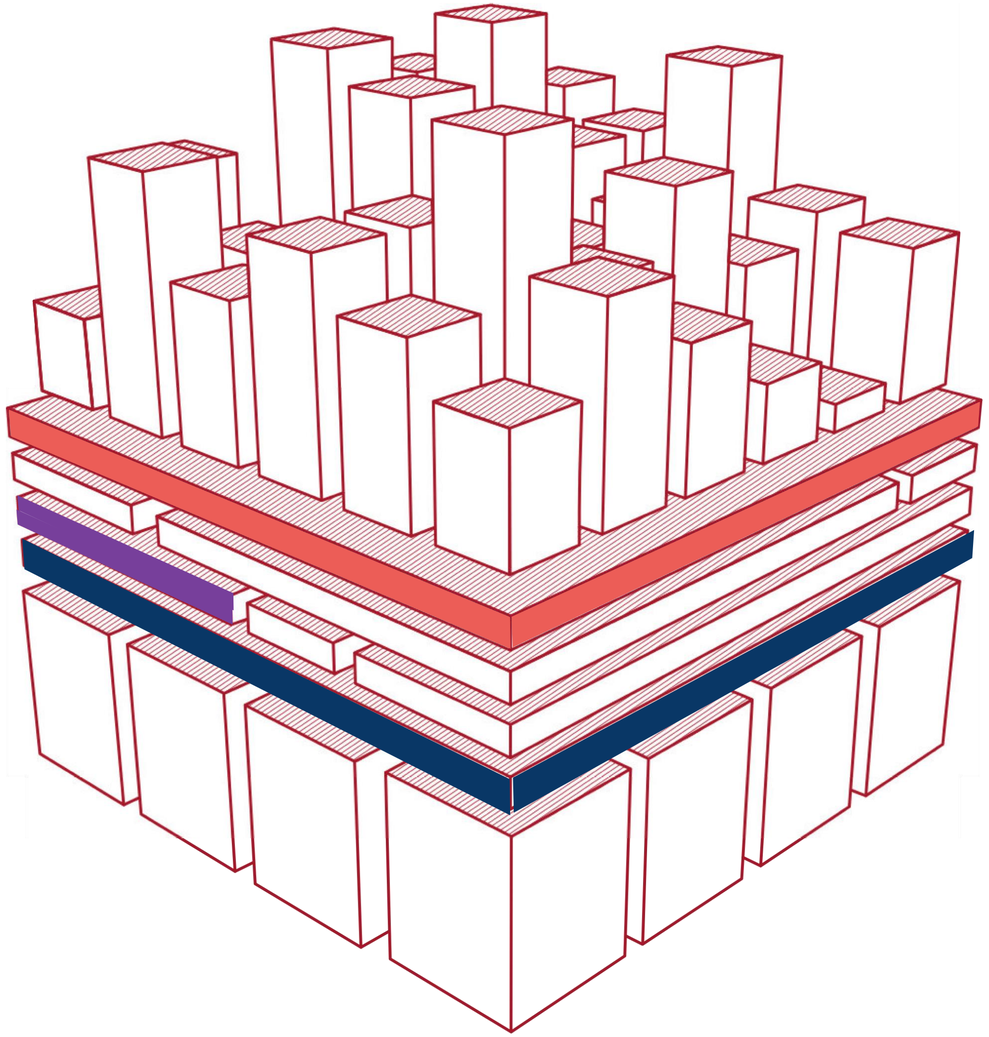
UPI UNIFIED PAYMENTS INTERFACE

Data Exchange

DigiLocker Your documents anytime, anywhere

X-ROAD®



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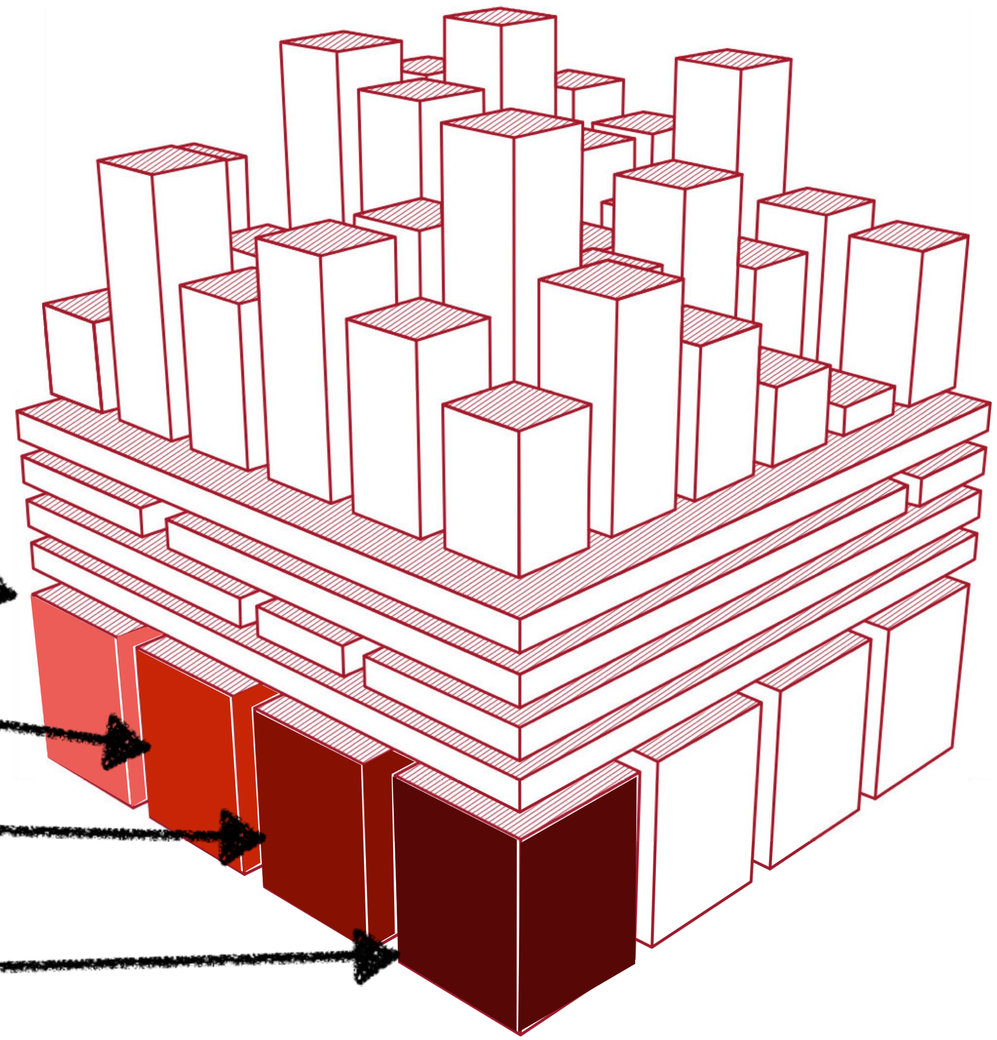
Data (Registries)

Unique Identifier

Vehicle Registry

GIS Data

Healthcare Records



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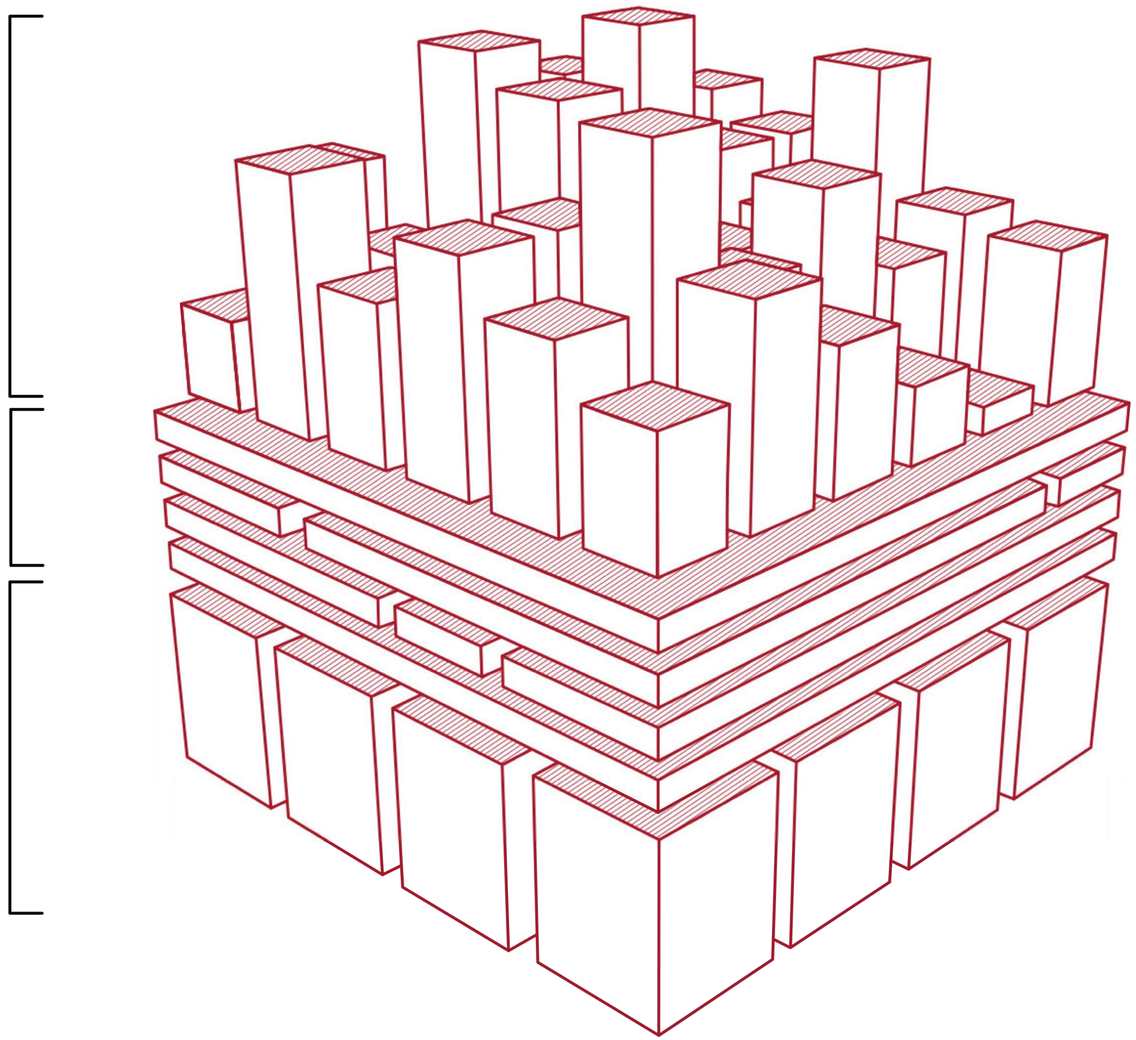
Services

Components

Data



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High Variability

Stable Interfaces

Low Variability (Core)

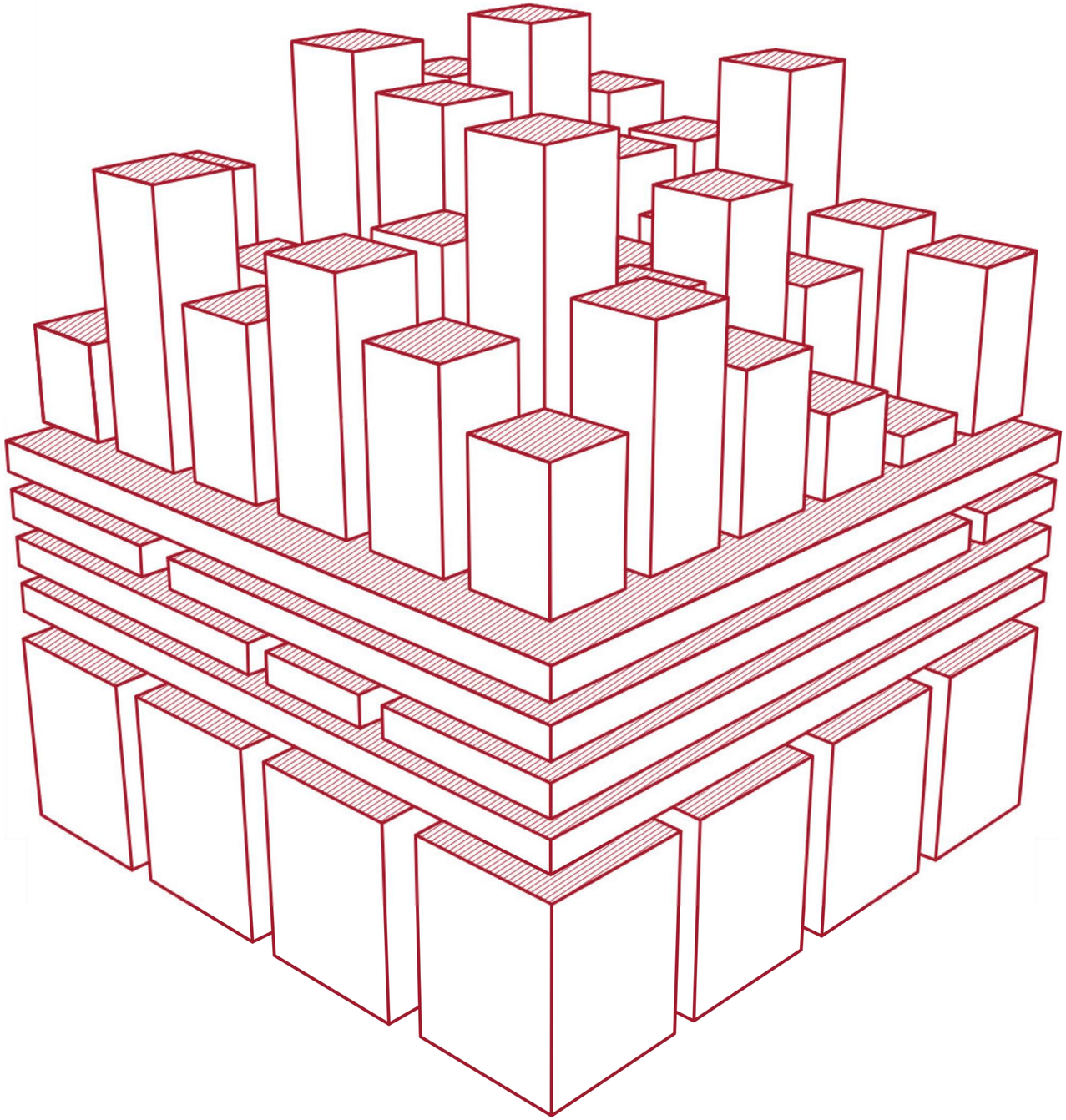

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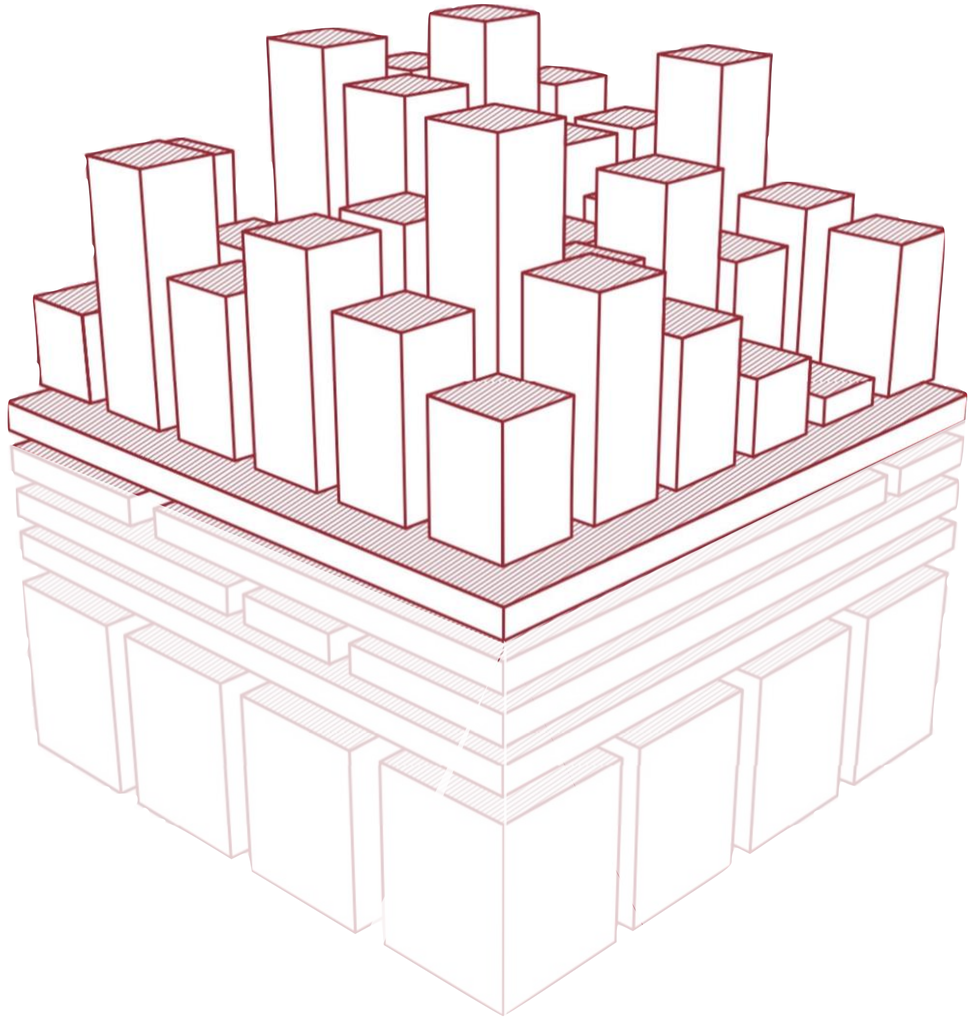
Image by Richard Pope

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

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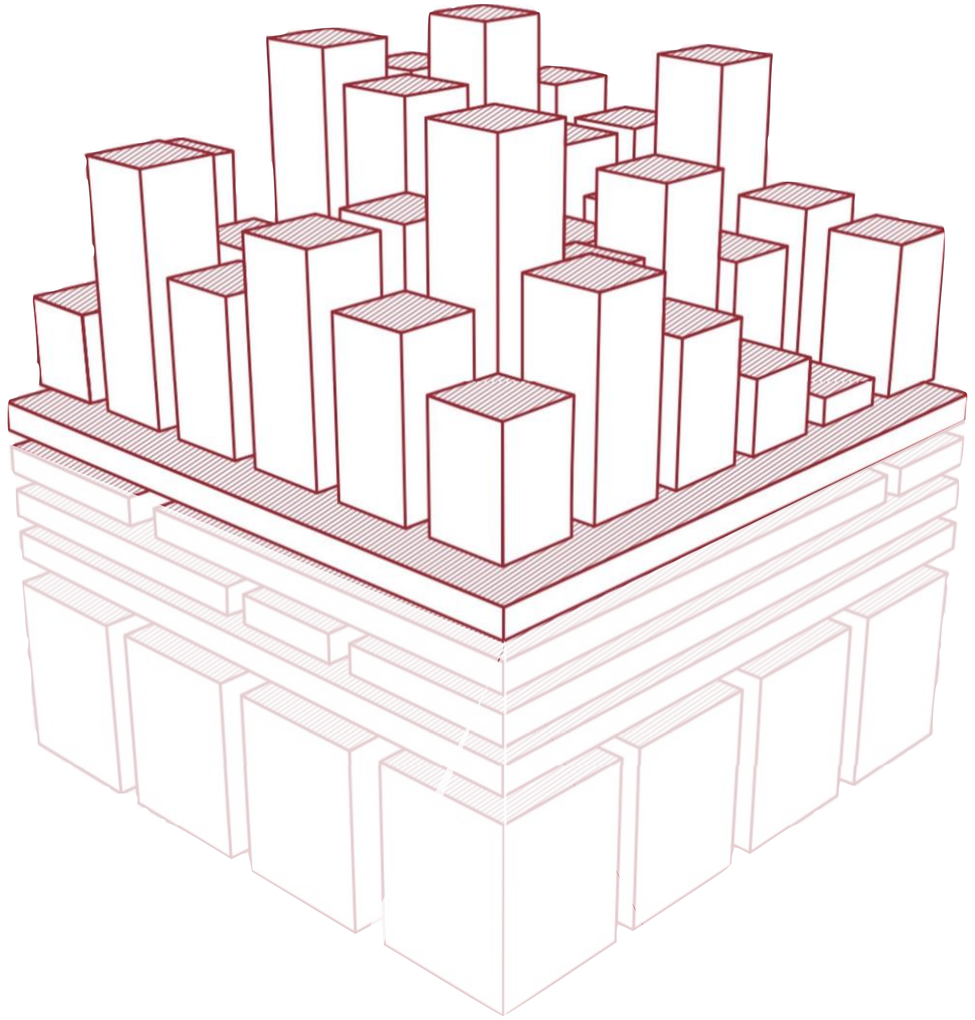

GOV.UK

GDS

Slides by David Eaves

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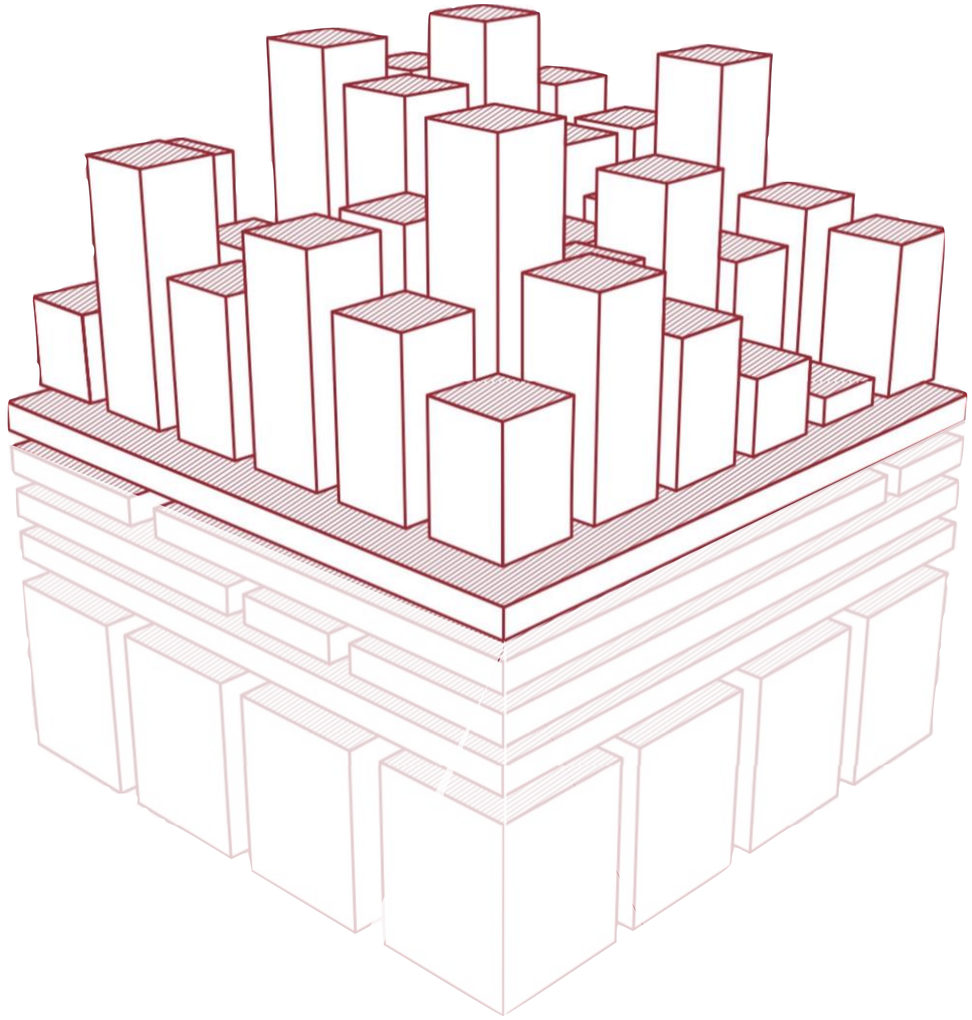

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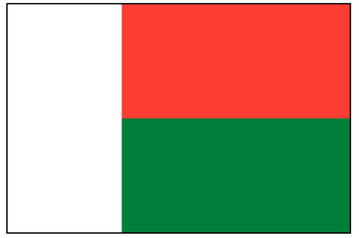

Madagascar

Slides by David Eaves

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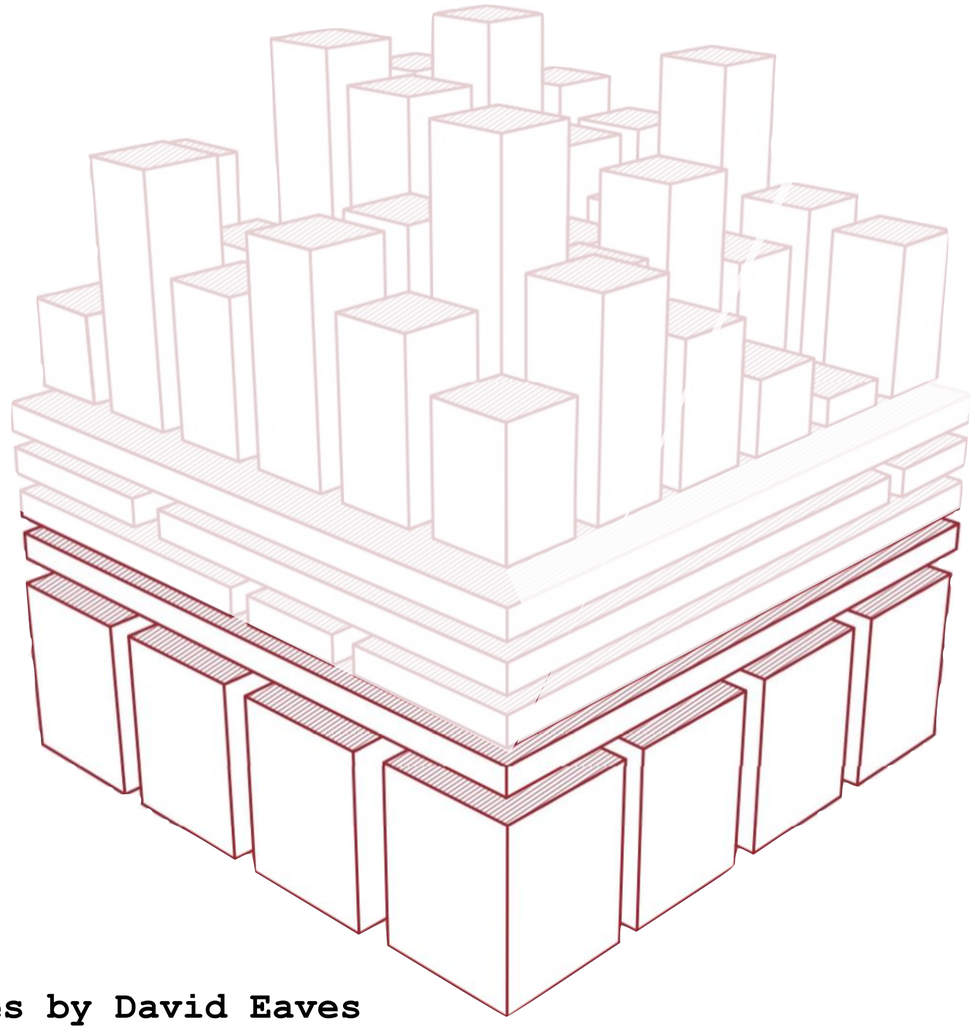
Come in Low



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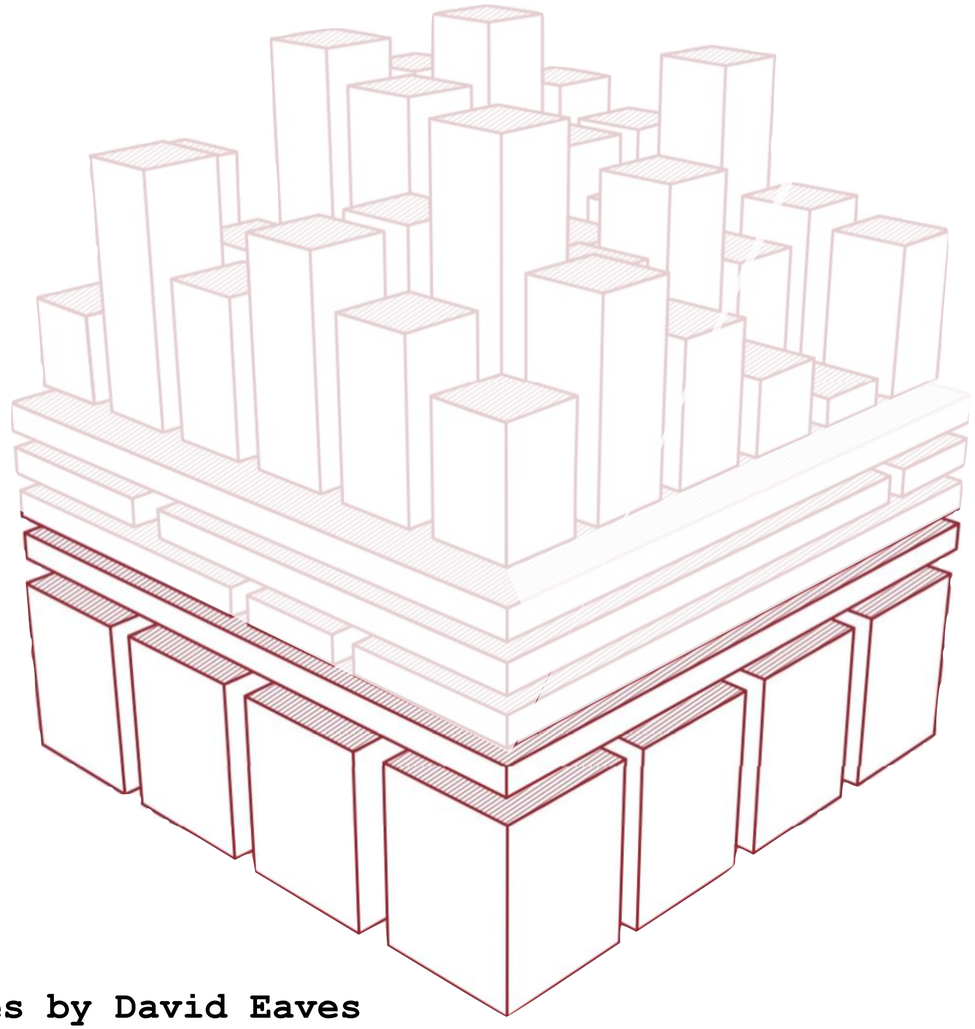


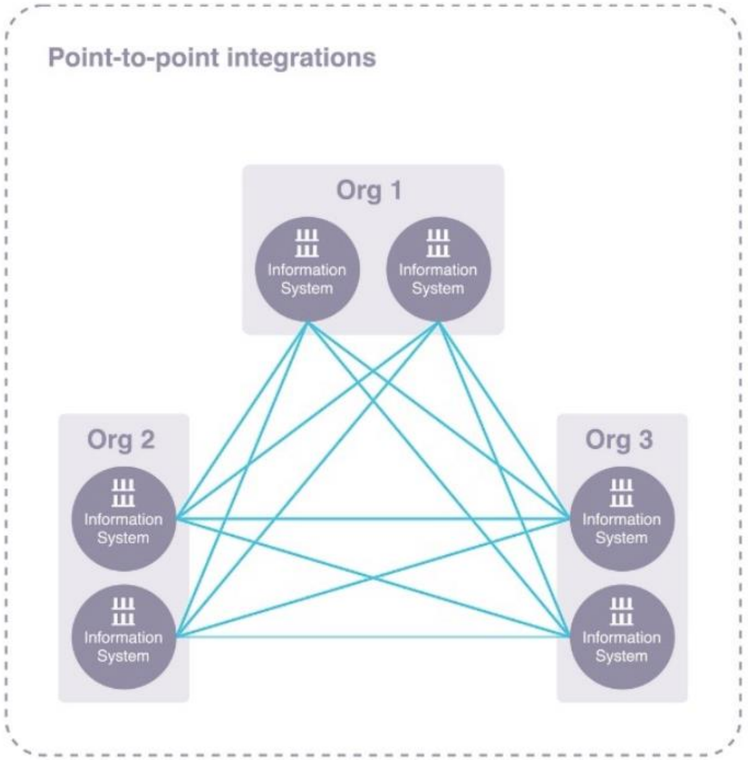
e-Estonia.com
The Digital Society

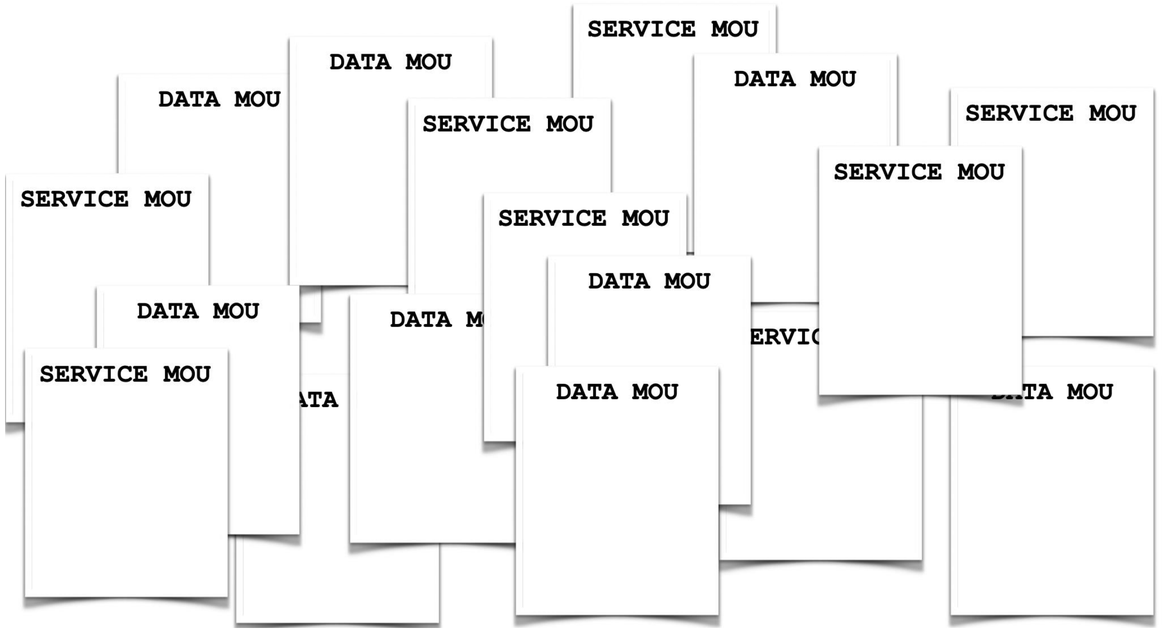
X-ROAD®

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves

Come in Low





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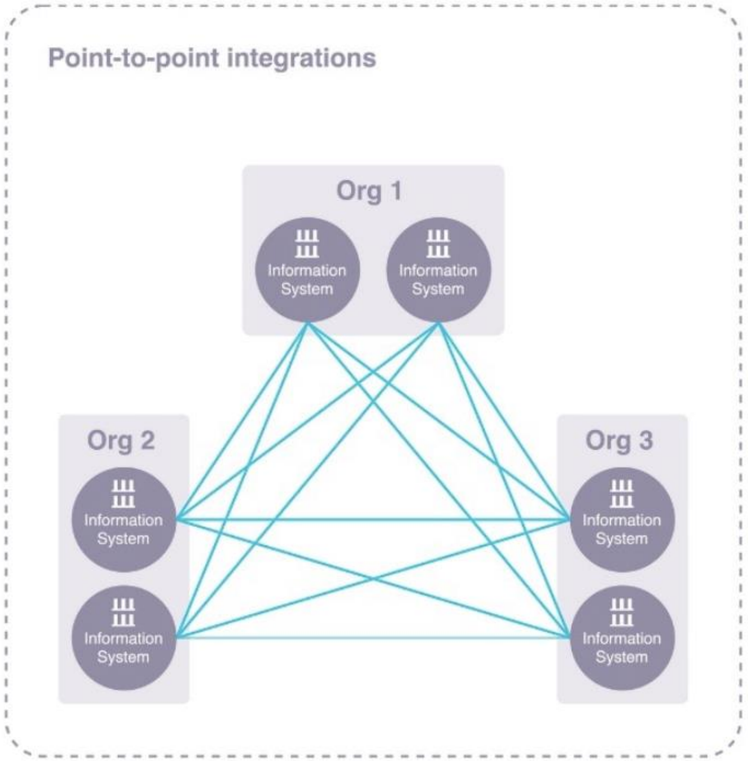
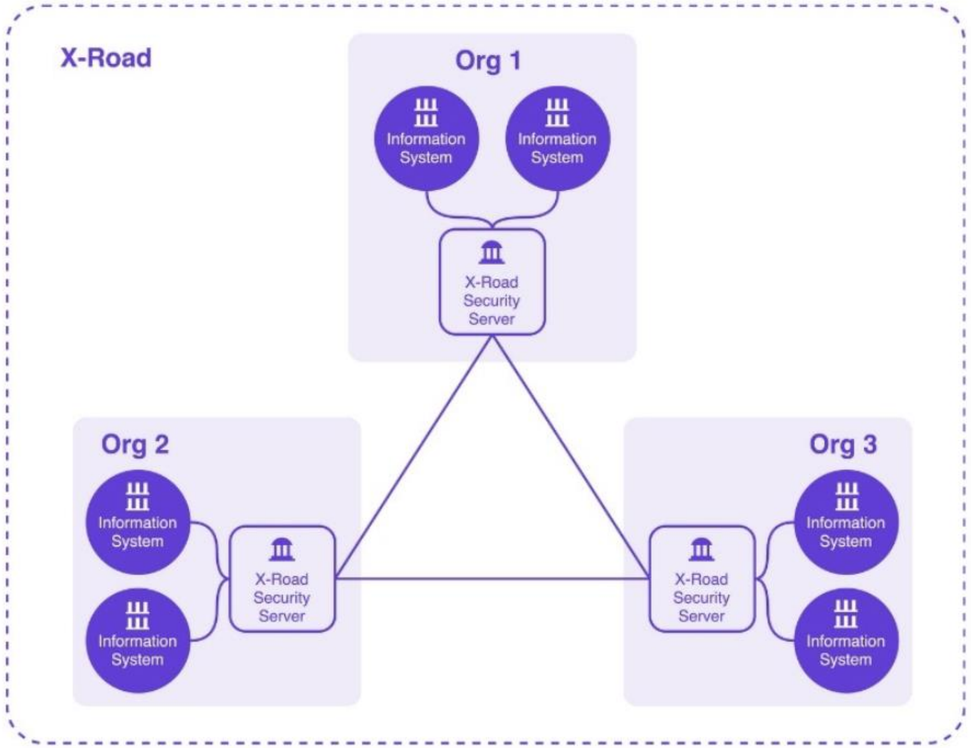
Come in Low

X-ROAD VS POINT-TO-POINT





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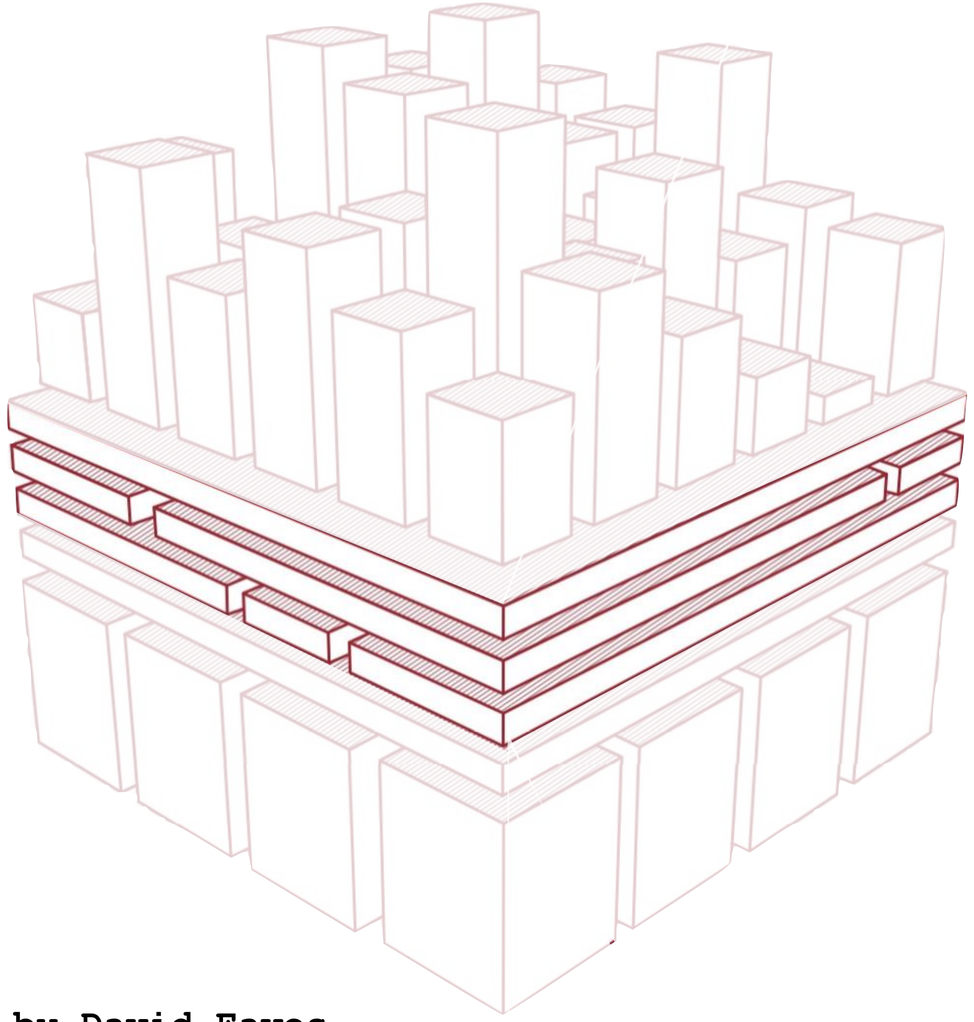
Components First



Slides by David Eaves

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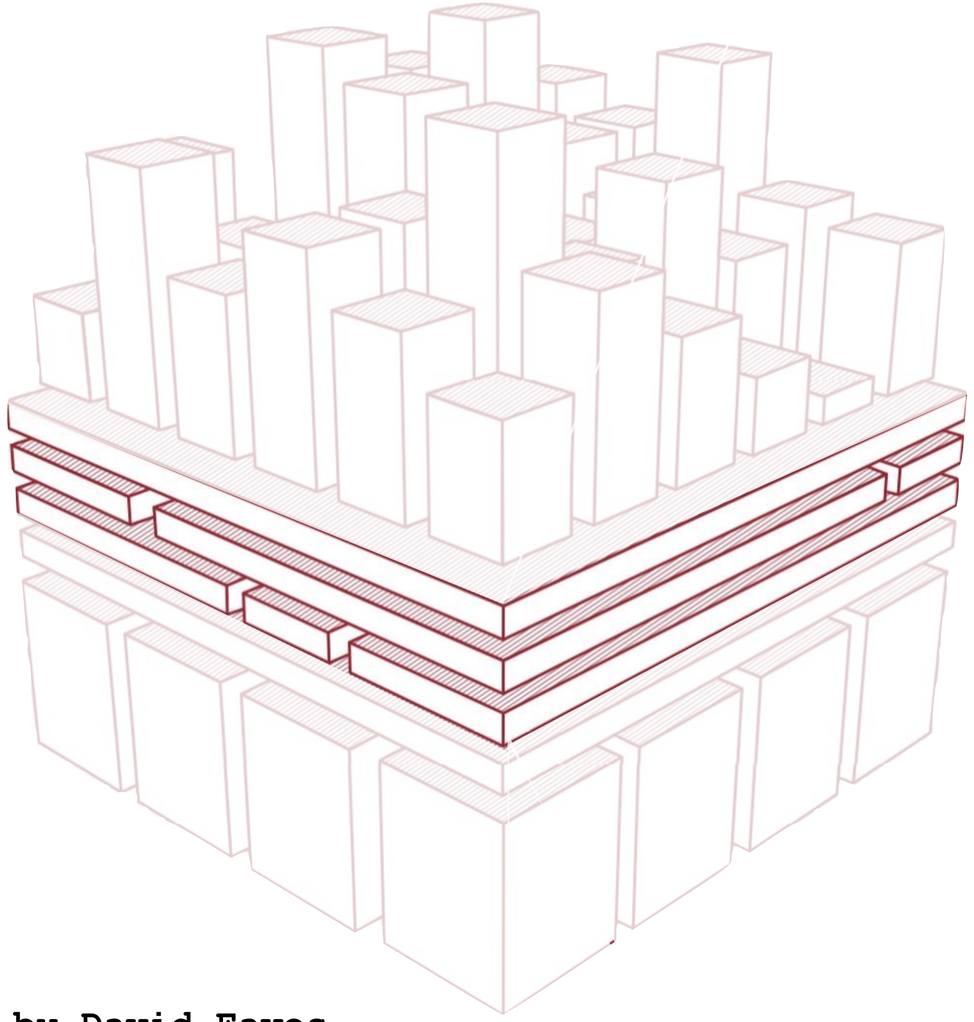
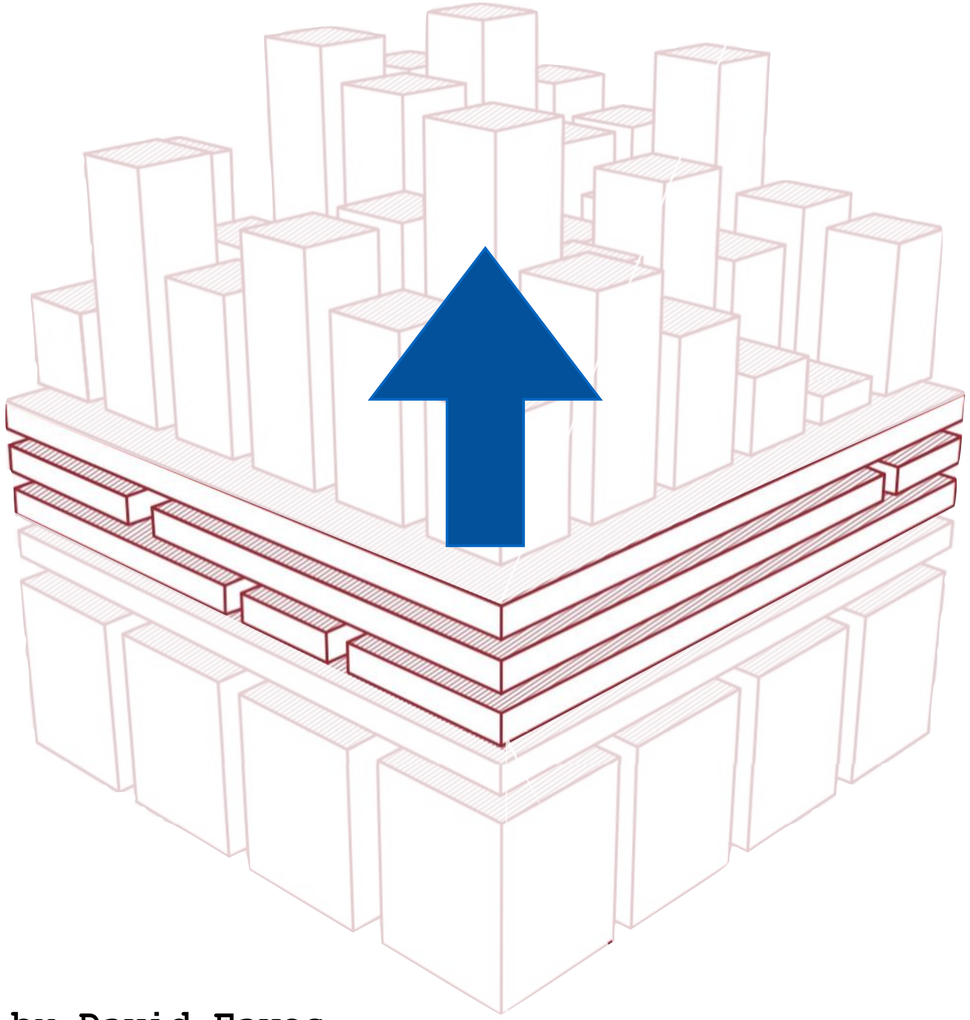


IndiaStack

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves

Components First



Improve government and private sector services by making it simpler

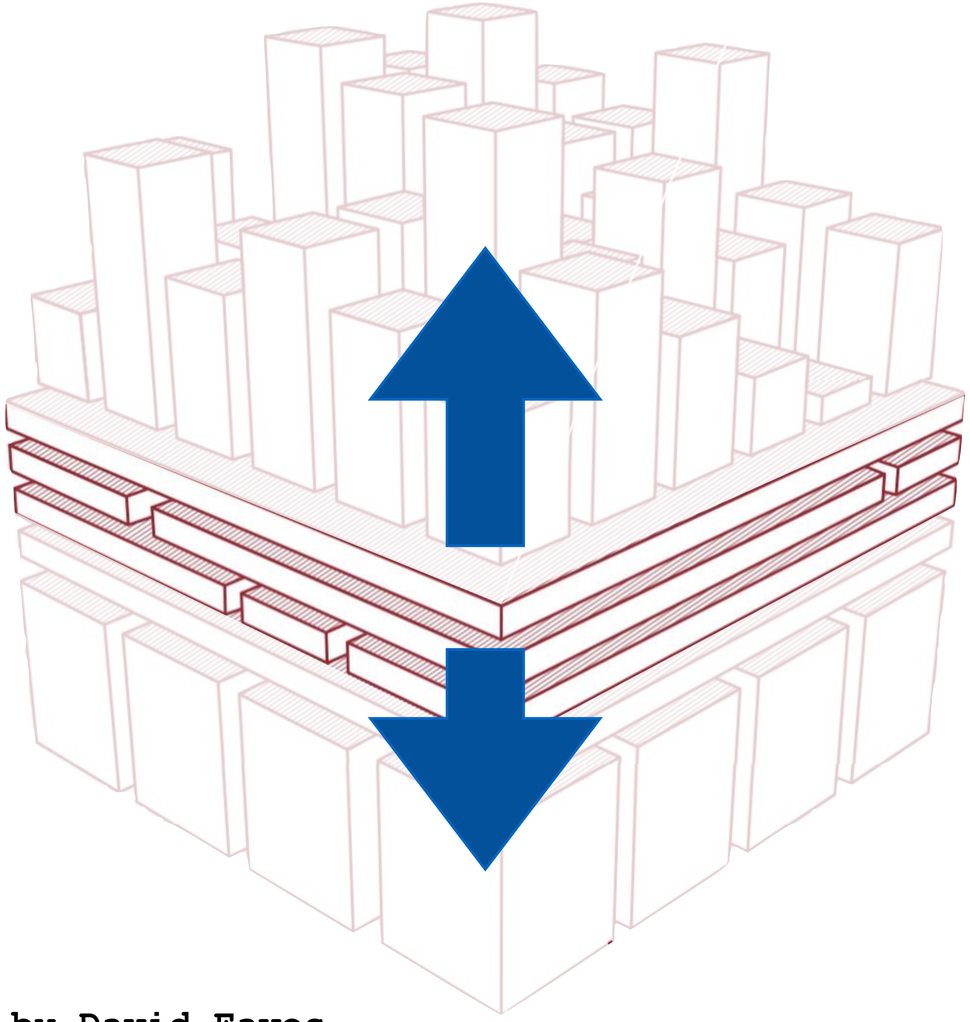
IndiaStack

Improve government and private sector services by making it simpler

Slides by David Eaves

Courtesy of Richard Pope, Ben McGuire & David Eaves

Components First



Improve government and private sector services by making it simpler

IndiaStack

Using Unique IDs to organise government data

Slides by David Eaves

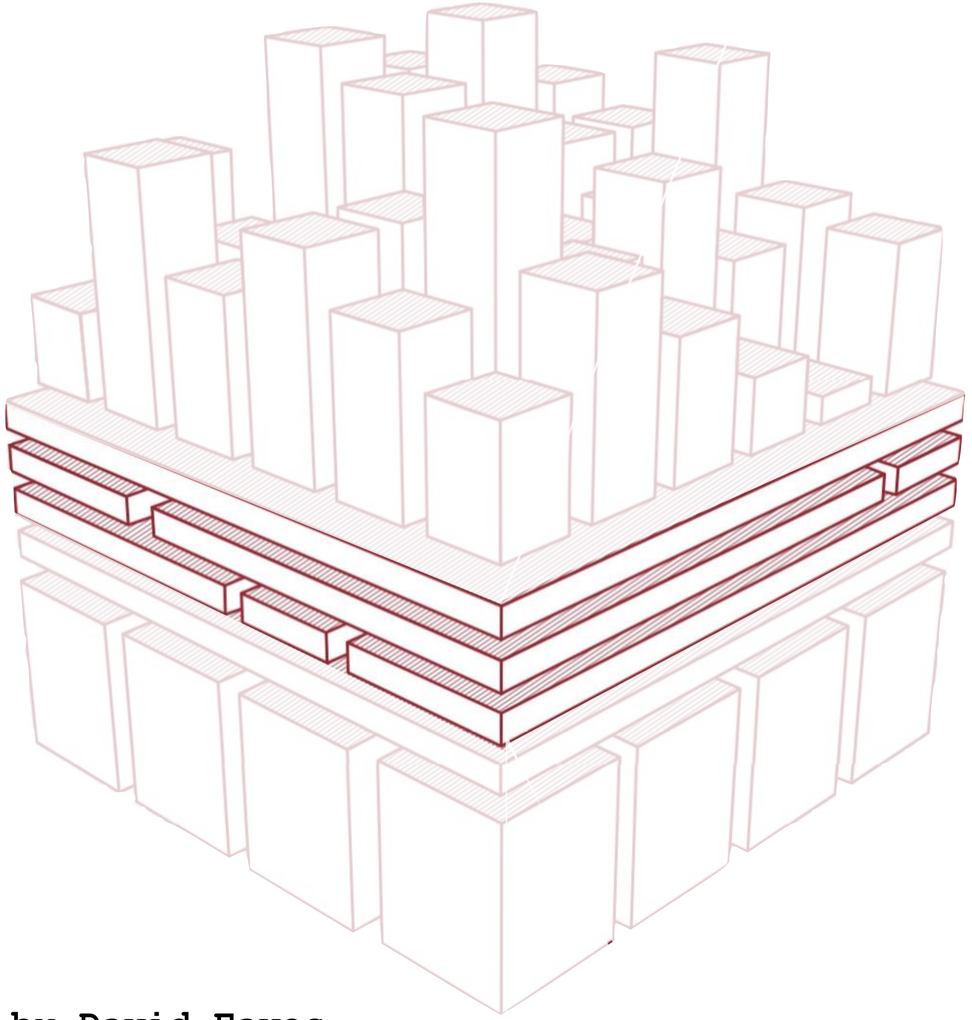
Courtesy of Richard Pope, Ben McGuire & David Eaves

<3> Policy and Technology Challenge

The tech will be easy.

The governance will be hard.

Technology

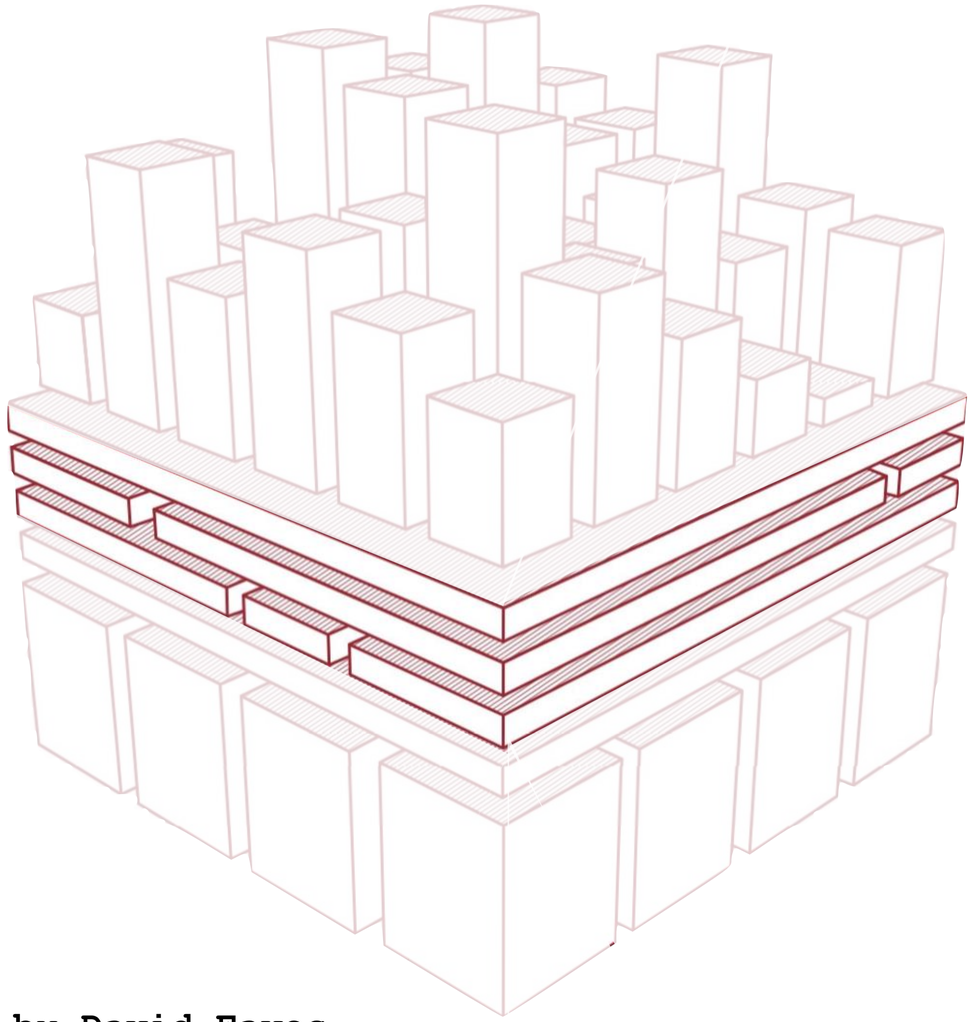


Policy

Who owns operations of shared services?

Slides by David Eaves

Technology



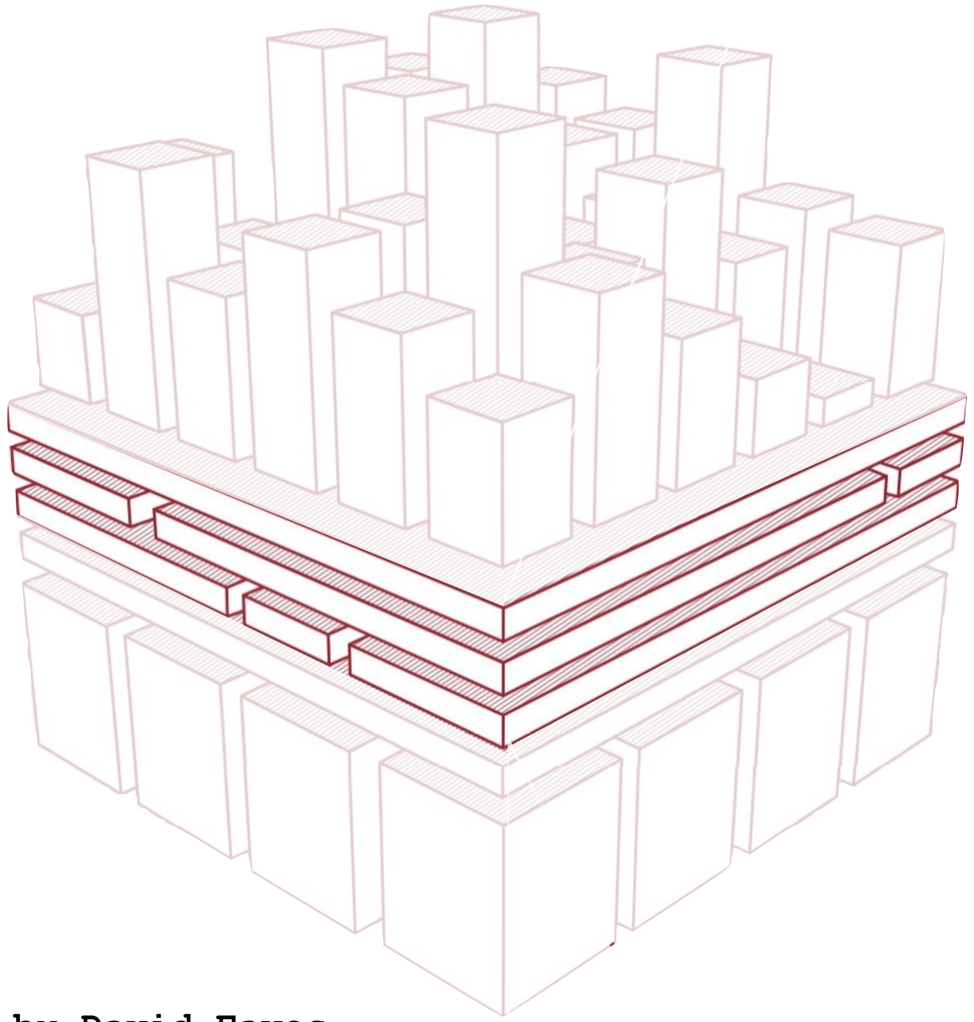
Policy

Who owns operations of shared services?

Who enforces compliance and standards?

Slides by David Eaves

Technology



Policy

Who owns operations of shared services?

Who enforces compliance and standards?

Supporting Privacy/Security Legislation?

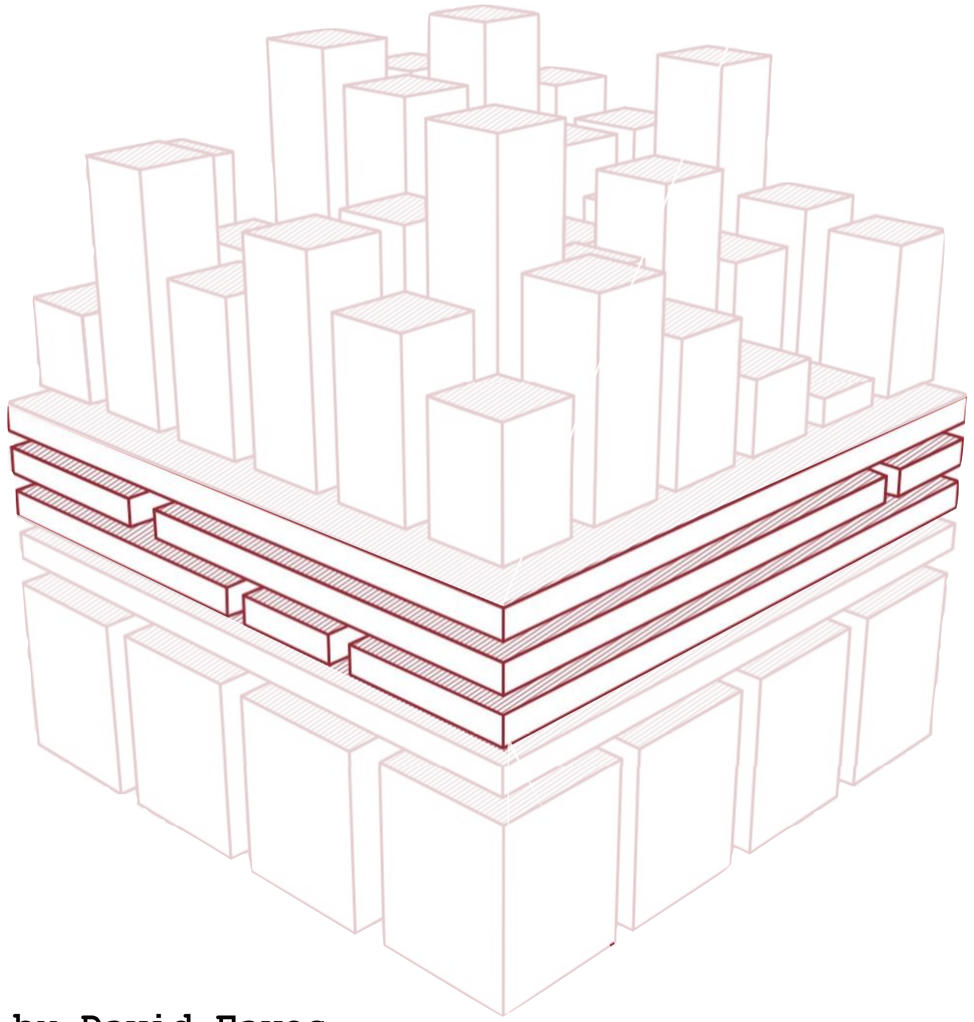
Who is accountable for security/cyber?

Who is accountable for privacy?

Who is accountable for privacy?

Slides by David Eaves

Technology



Policy

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?

Is their sufficient connectivity to ensure public access

Who manages remediation?

Slides by David Eaves

Governance

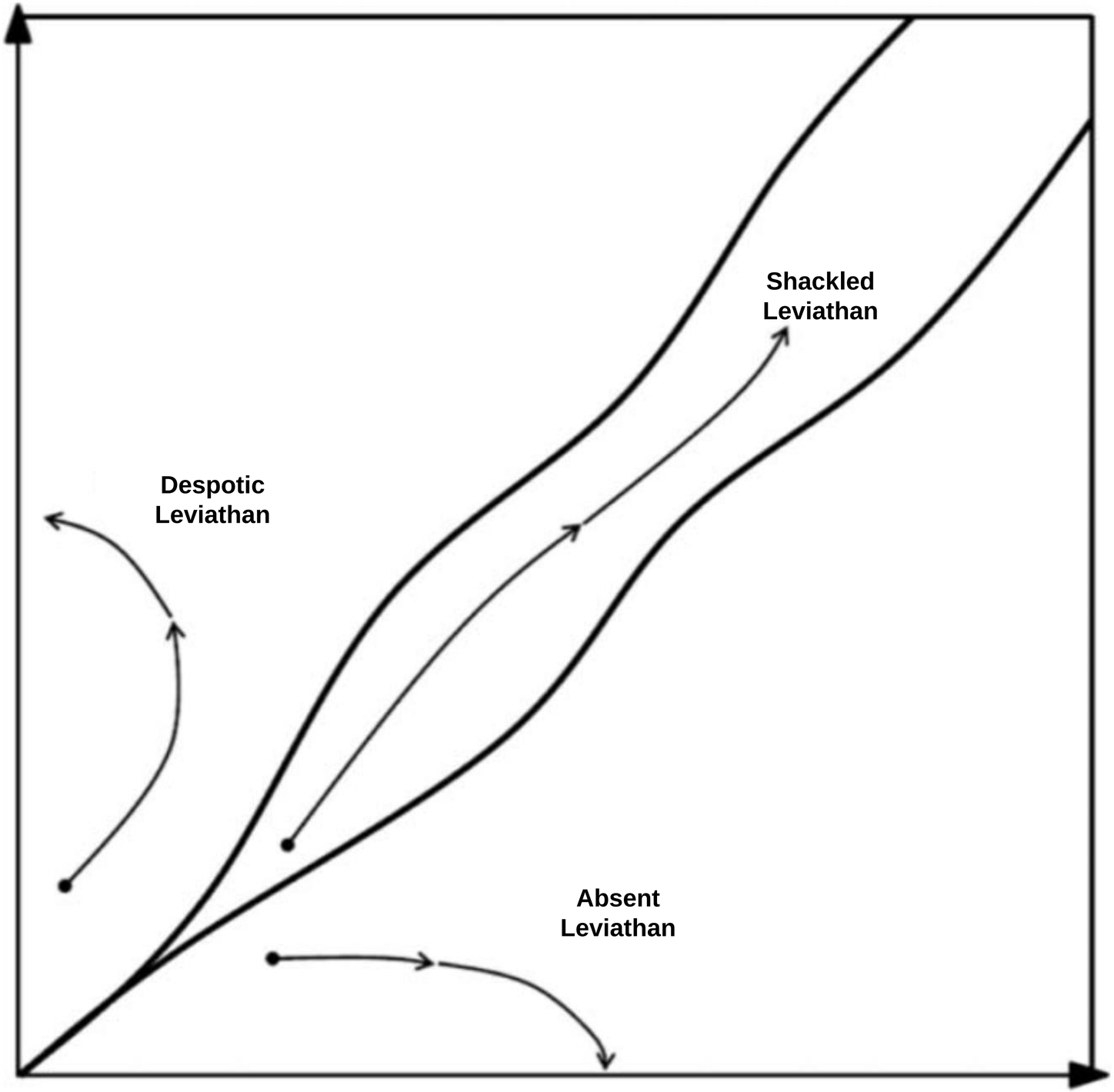
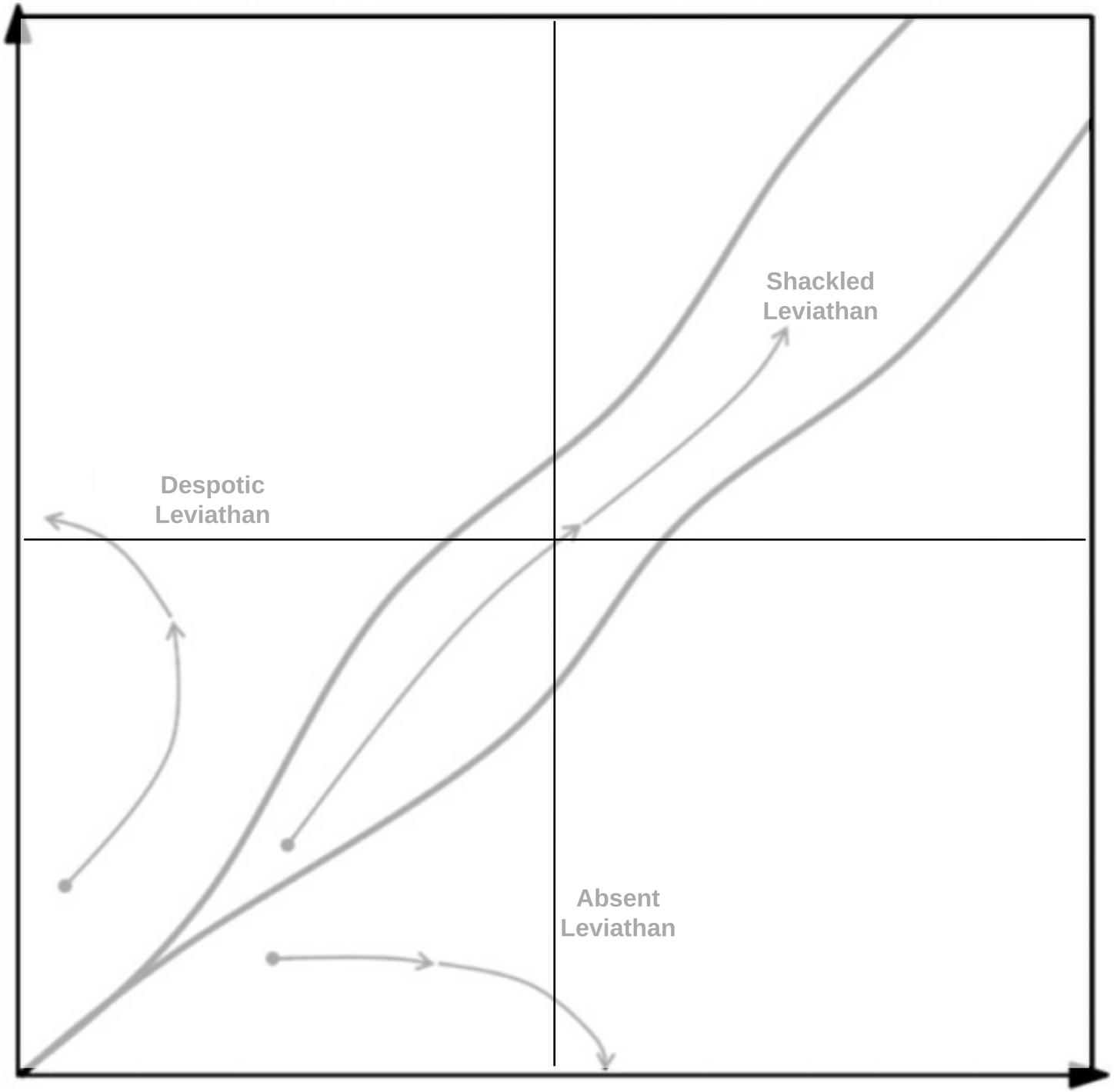


Image the Narrow Corridor by Daron Acemoglu and James A. Robinson



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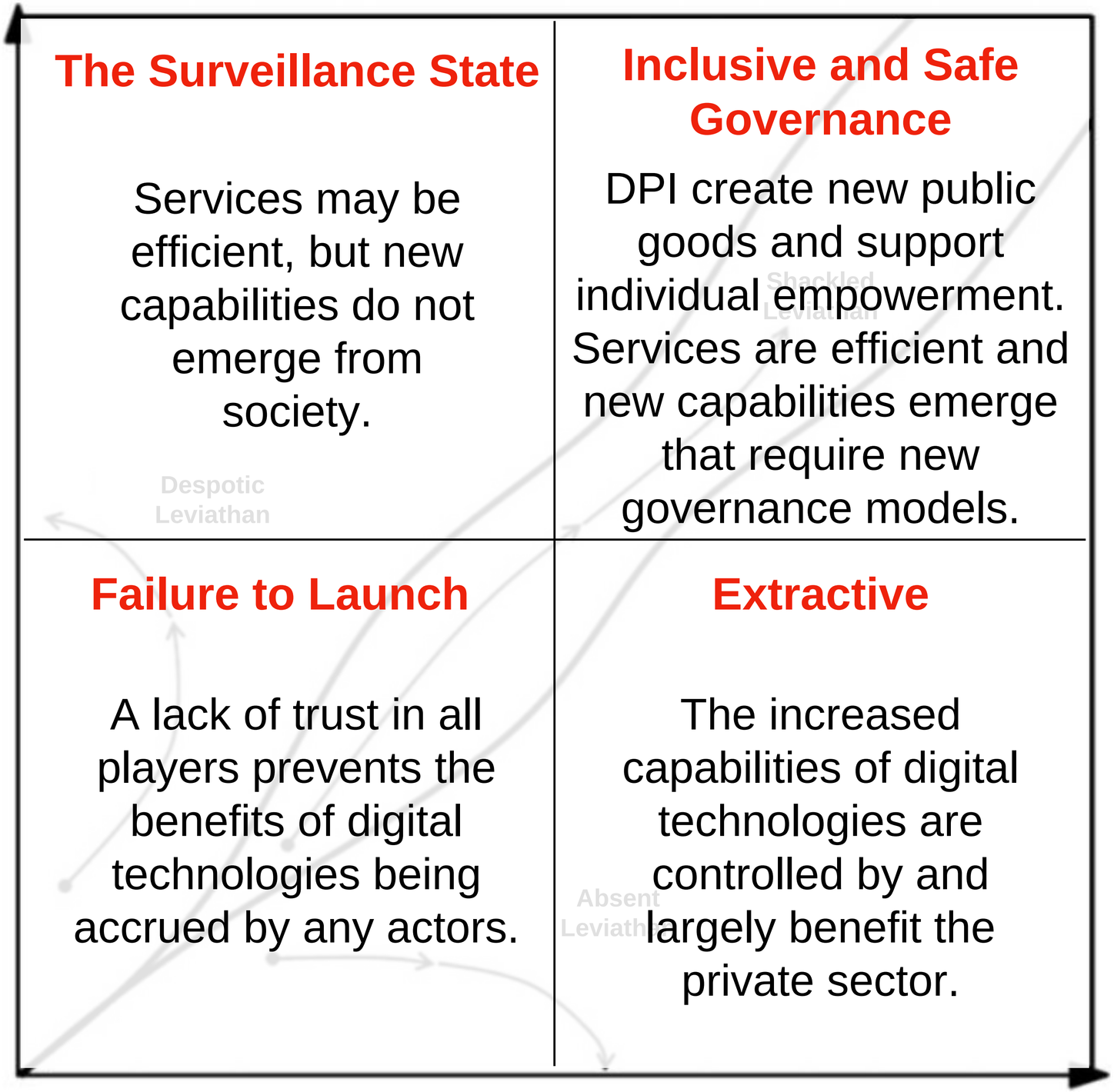


Slides by David Eaves

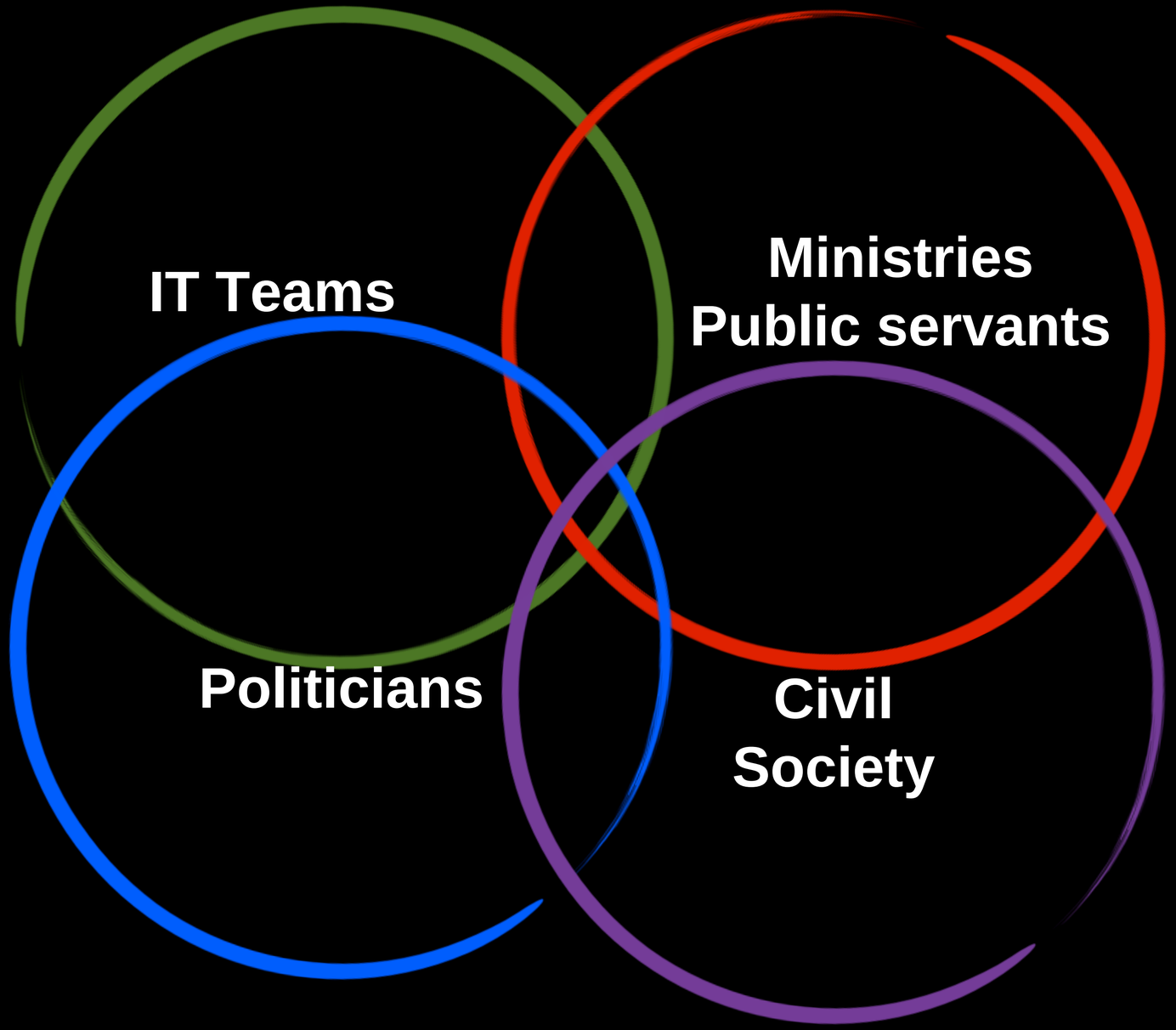
Image the Narrow Corridor by Daron Acemoglu and James A. Robinson

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

Or here:

Slides by David Eaves

Coalition Building



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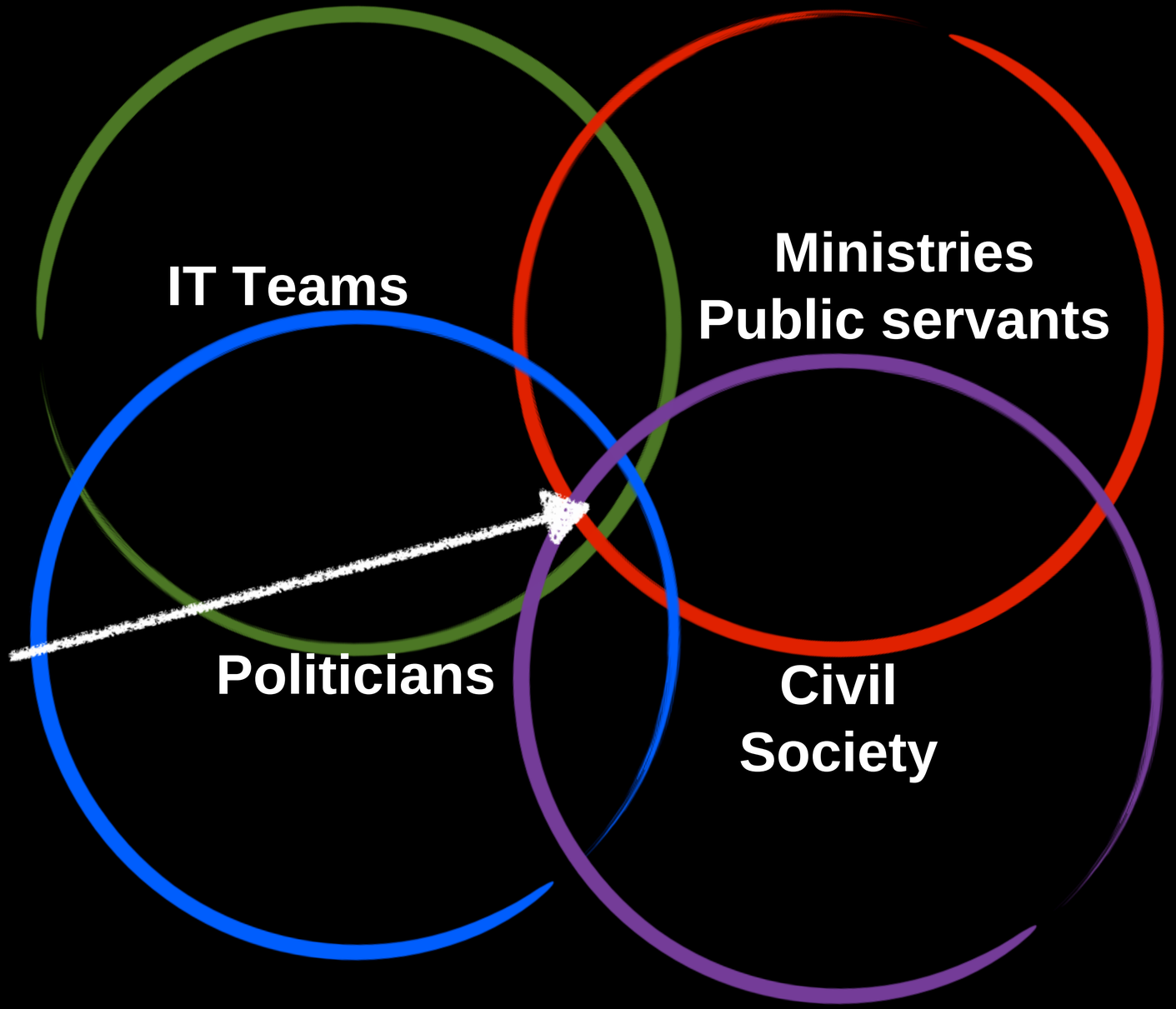

Window for DPI

Slides by David Eaves

We need Hug

The Lawyers
The Politicians
Civil Society
IT Dept

In Summary

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

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Institute for Innovation and Public Purpose

UCL

CO

CO-DEVELOP

David Eaves

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Slides by David Eaves

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

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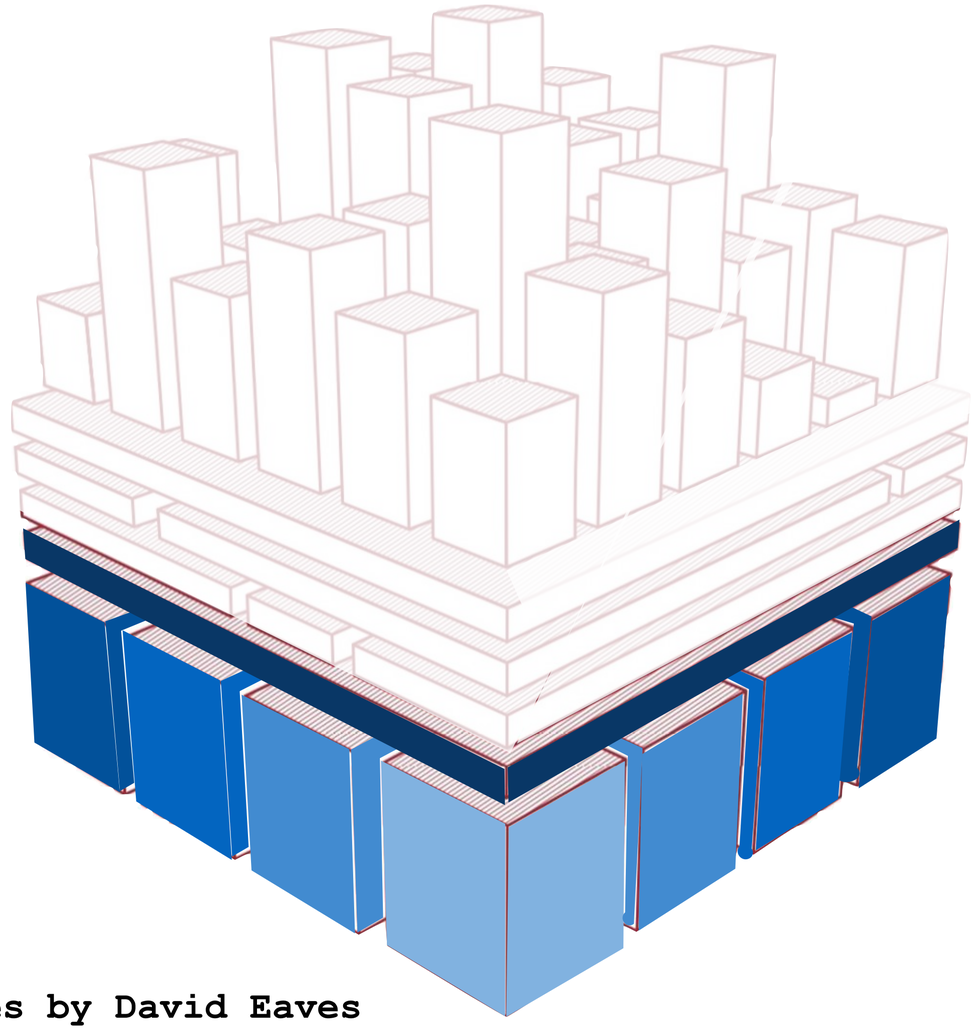
Come in Low



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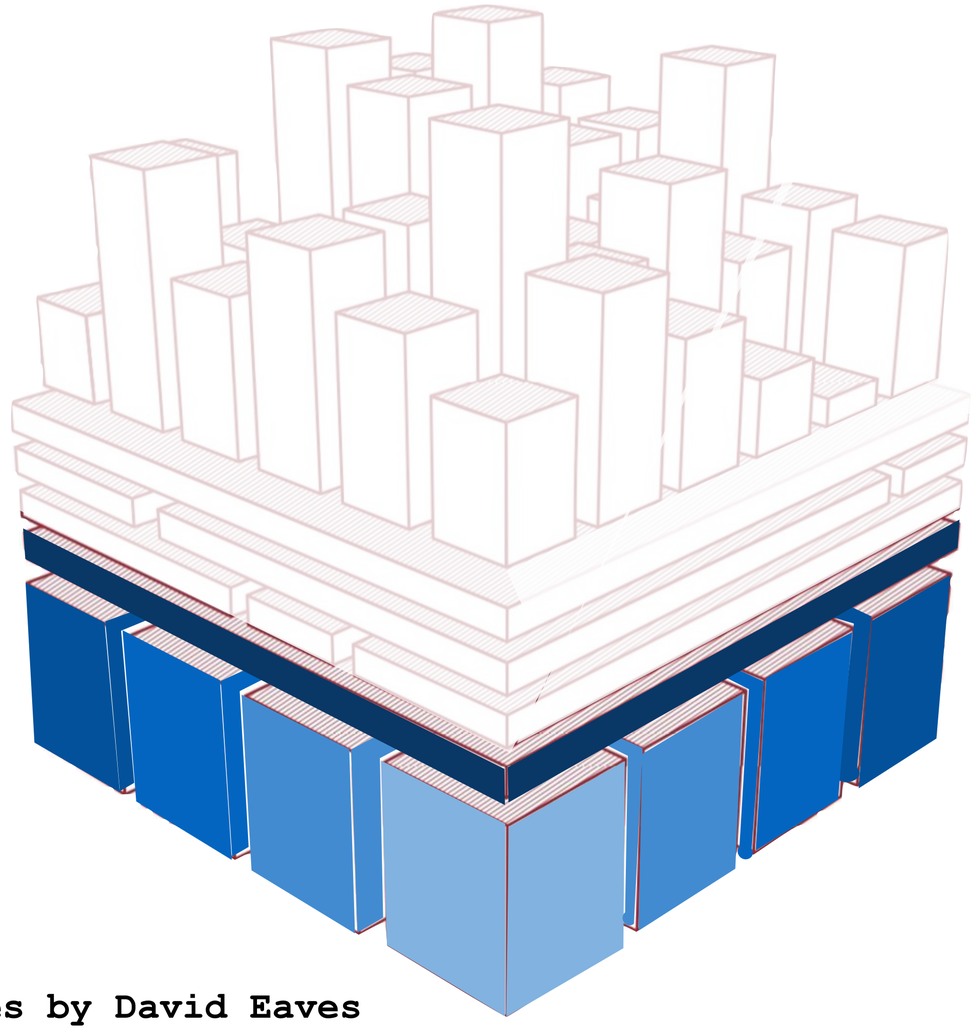

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