Danish Digitization

The F2 Project
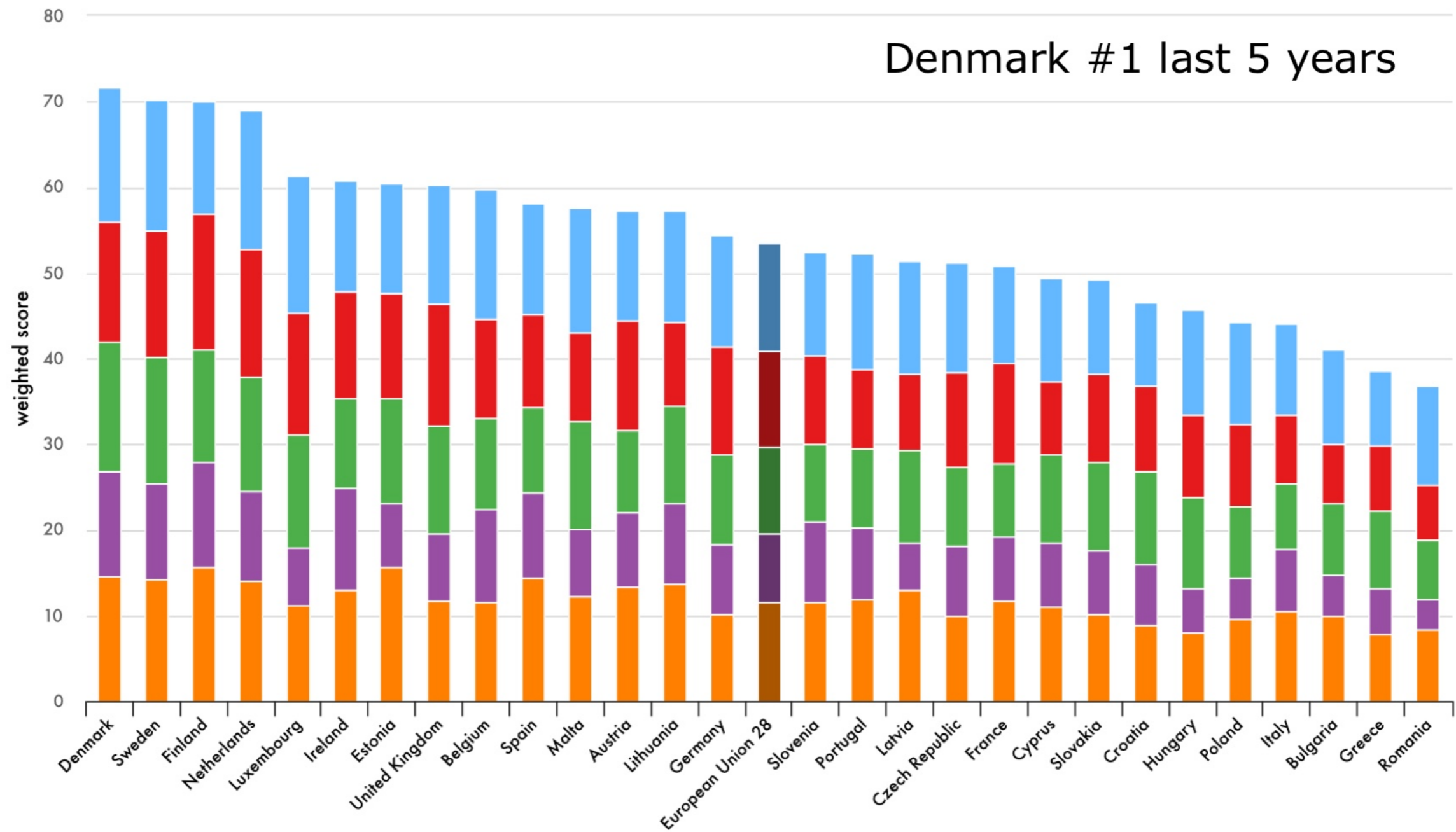
May 2019
CEO Per Tejs Knudsen

Contact: Tine Havkrog Brandenborg
thb@cbrain.com

cBRAIN

The F2 Project - Danish proposal

- Standards
- Public-Private Partnership
- Historic roots: first national digitization initiative 1996

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The European Digital and Society Index (DESI) 2018

Denmark #1 last 5 years

UN E-Government Survey 2018

E–Government Development Index - Top 10 Countries	
Country	*Index*
Denmark	0.9150
Australia	0.9053
Republic of Korea	0.9010
United Kingdom	0.8999

Every government organization believes they are special

No... Bureaucracy

Max Weber

Digital Bureaucracy

Model

Digital Bureaucracy

Method

Specific Organization

Standard software

Multiple Implementations
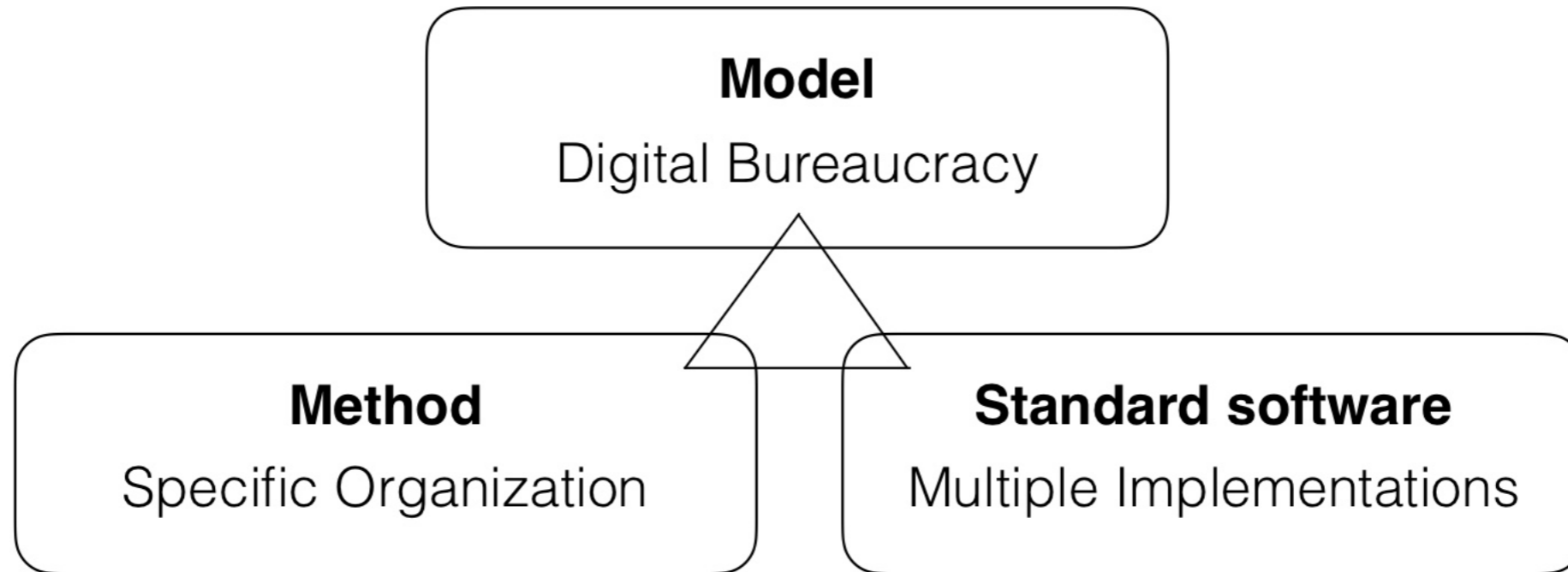
100% Standard - Built for government

F2 Users

Ministries

Prime Ministers Office

Ministry of Children and Social Affairs

Ministry of Economy Affairs and interior

Ministry of Employment

Ministry of Energy, Utilities and Climate

Ministry of Environment and Food

Ministry of Finance

Ministry of Foreign Affairs

Ministry of Foreigners and Immigration

Ministry of Taxation

Ministry of Transport, Building & Housing

State of Greenland

Cities and Municipalities

Gentofte Municipality

Copenhagen City

Rudersdal Municipality

Agencies and Institutions

Agency of Digitization

Agency for Government IT

Agency for Labour & Recruitment

Agency for Modernisation

Agency of Railroads

Agency of Tax

Danish Business Authority

Danish Energy Agency

Danish Evaluation Institute

Danish Meteorological Institute

High Commisioner of Faroe Island

High Commisioner of Greenland

IT University

National Board of Social Services

Roskilde University

The State Administration

Vestforsyning Water & Heating

F2 Users

Ministries

Prime Ministers Office

Min┌───┐
Min│ • 13 of 19 Ministerial departments   │
Min│ • 50+ Government Organizations   │t
Min└───┘
Min┌───┐
Min│ • Liverpool City (UK)   │
Min│ • Bristol University (UK)   │
Min│ • Deutsche Rentenversicherung (Berlin): Accessibility/"Mitarbeiterrat" │
Min│ • F2 Cloud Emirates   │
└───┘

Ministry of Taxation

Ministry of Transport, Building & Housing

State of Greenland

Cities and Municipalities

Gentofte Municipality

Copenhagen City

Rudersdal Municipality

Agencies and Institutions

Agency of Digitization

Danish Meteorological Institute

High Commisioner of Faroe Island

High Commisioner of Greenland
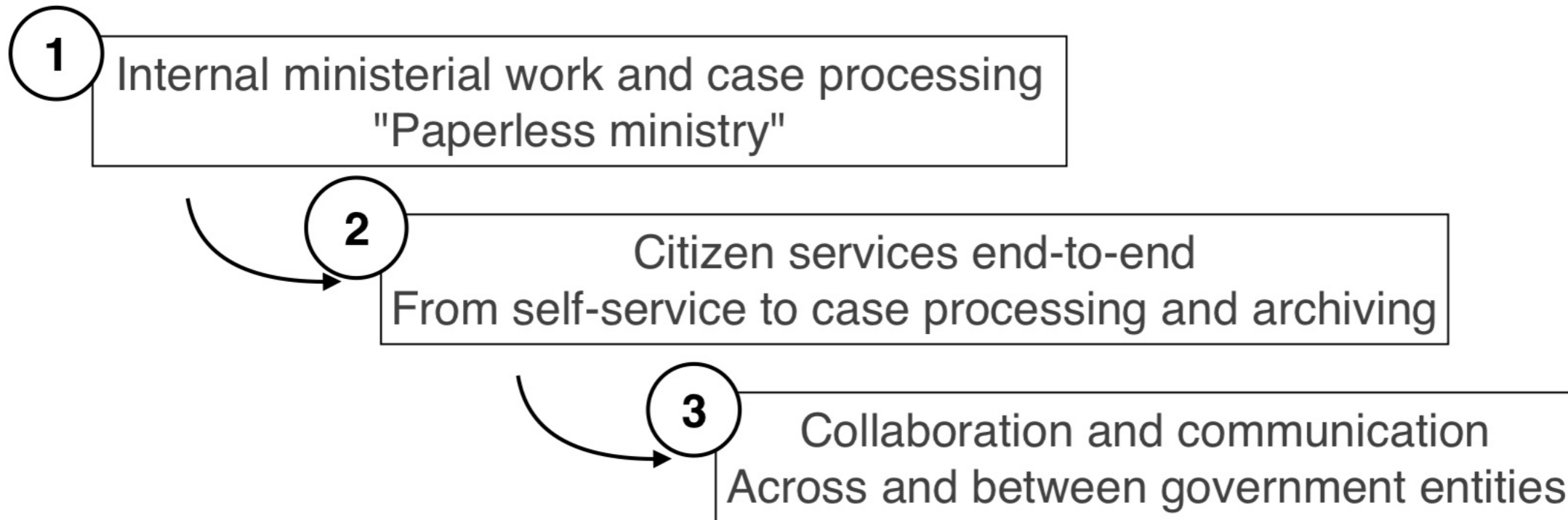
IT University

National Board of Social Services

Roskilde University
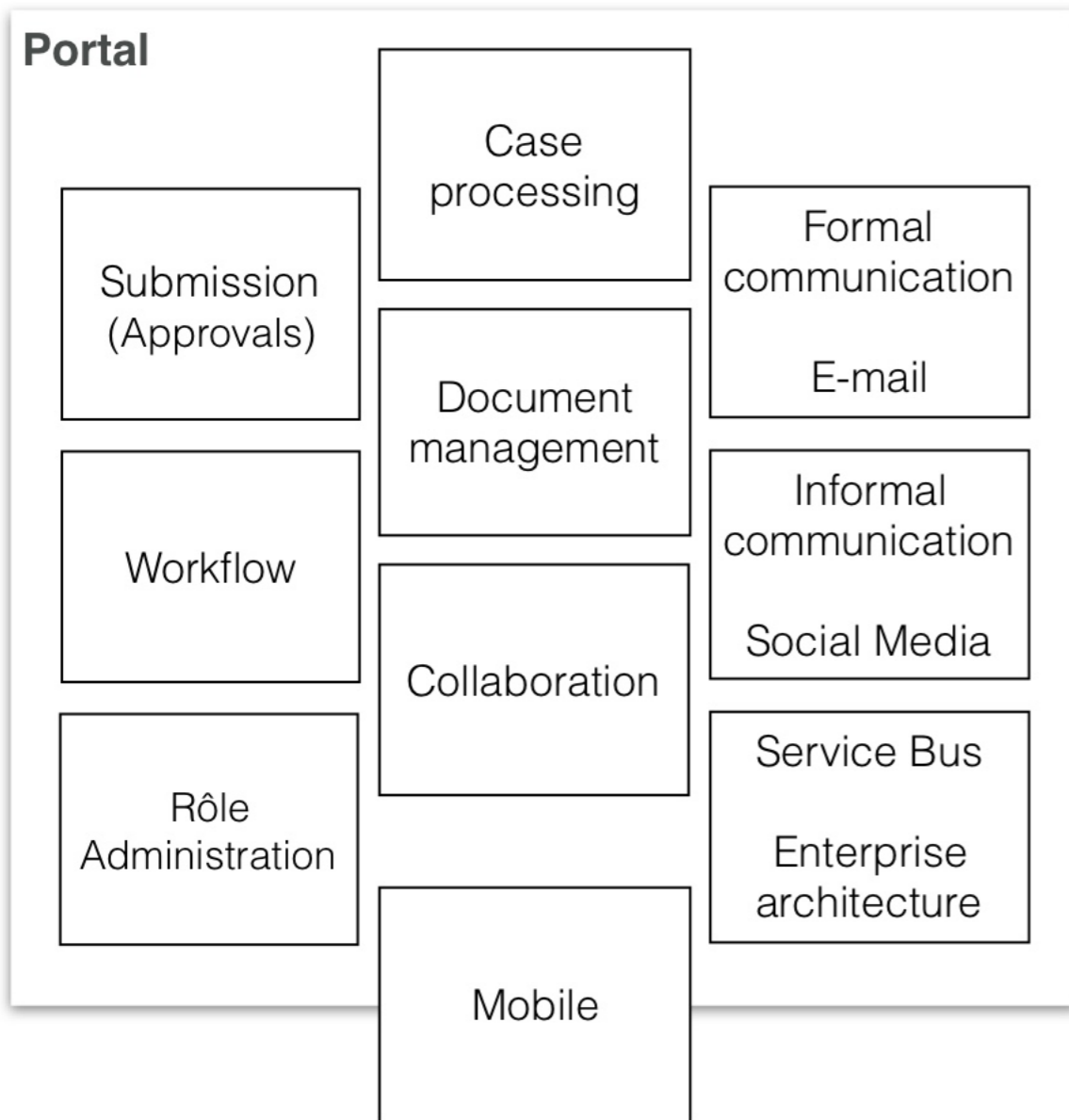
The State Administration

Vestforsyning Water & Heating

Digital Bureaucracy model applied

1 Internal ministerial work and case processing
"Paperless ministry"

2 Citizen services end-to-end
From self-service to case processing and archiving

3 Collaboration and communication
Across and between government entities

cBRAIN

Island-of-computing -> Integration

Best-of-breed / Apps

Portal

Submission (Approvals)	Case processing	Formal communication
Workflow	Document management	E-mail
Rôle Administration	Collaboration	Informal communication
	Mobile	Social Media
		Service Bus
		Enterprise architecture

F2 Integrated Production Platform

Knowledge workers desktop

Web, Mobile & Tablets

All data in one place

Production system built for government

• Privacy by design

• General Data Protection Regulation (GDPR)

Data-centric and process-driven

Citizens
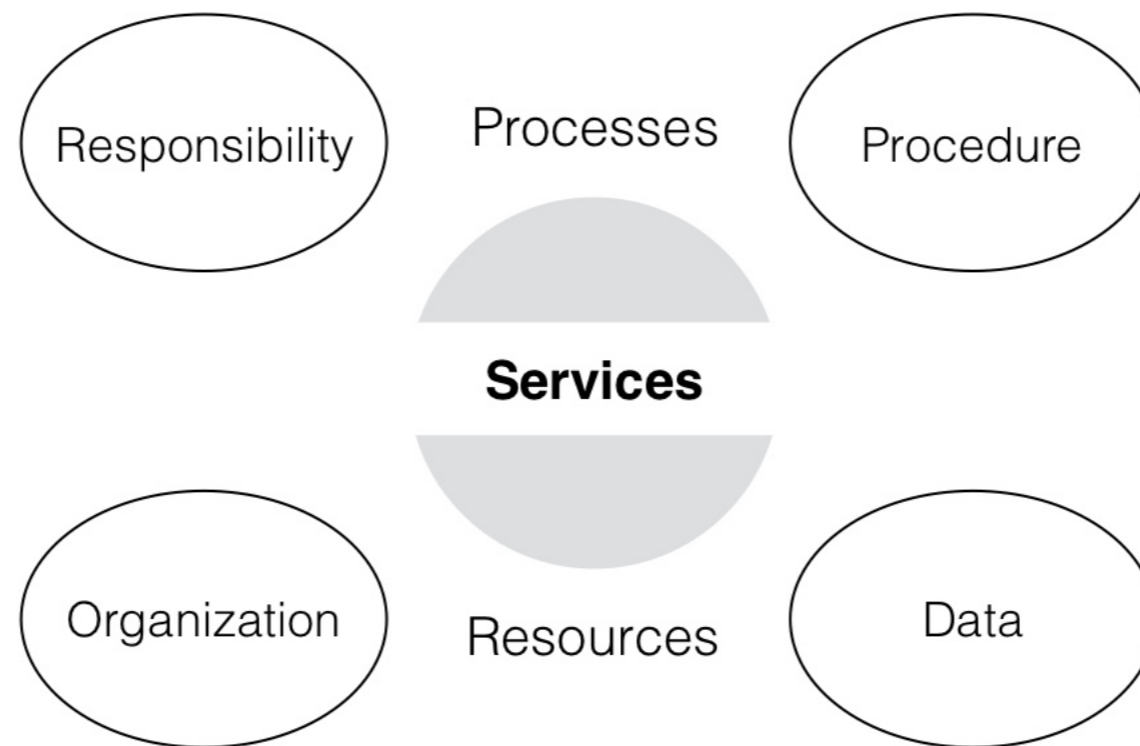
Employees

Process Library: services ——— **Proces description**
 · XML & Script

F2 Digital bureaucracy platform ——— **All-of-box, fully integrated**
 · Case processing
 · Rules
 · Formal and
   informal communication
 · Collaboration
 · Knowledge sharing
 · Contact & Relations
   Management
 · Records and
   document management
 · Government workflows
   - approvals and requests
 · Meetings

All data
in one place — Keys
Processes
Transactions (cases)

↕ API

Systems

Citizens, Employees, Buildings, Utilities... - IOT

National Architecture

F2

Channels

E-Box	Citizen DK	Company DK	Ministry site

Production motor

Process Library: services

F2 Digital bureaucracy platform

All data
in one place

— Keys
Processes
Transactions (cases)

↕ API

National base services/registers and Legacy

Digital Bureaucracy: Process Modeling

Case flow / Production control

Checklist / SOP

Dashboard

Case flow ——————— Case type ——————— Checklist

State

Flow

Step ——— List

Activities

Navigation

Phases

Tasks

Script

Templates

Variance

Responsible

Artificial
Intelligence

Case group

Mission data

Case

Sub case

Employee

Record

Team

Unit

Access

Authority

Tables

Document

Log

Organization

Data / Compliance
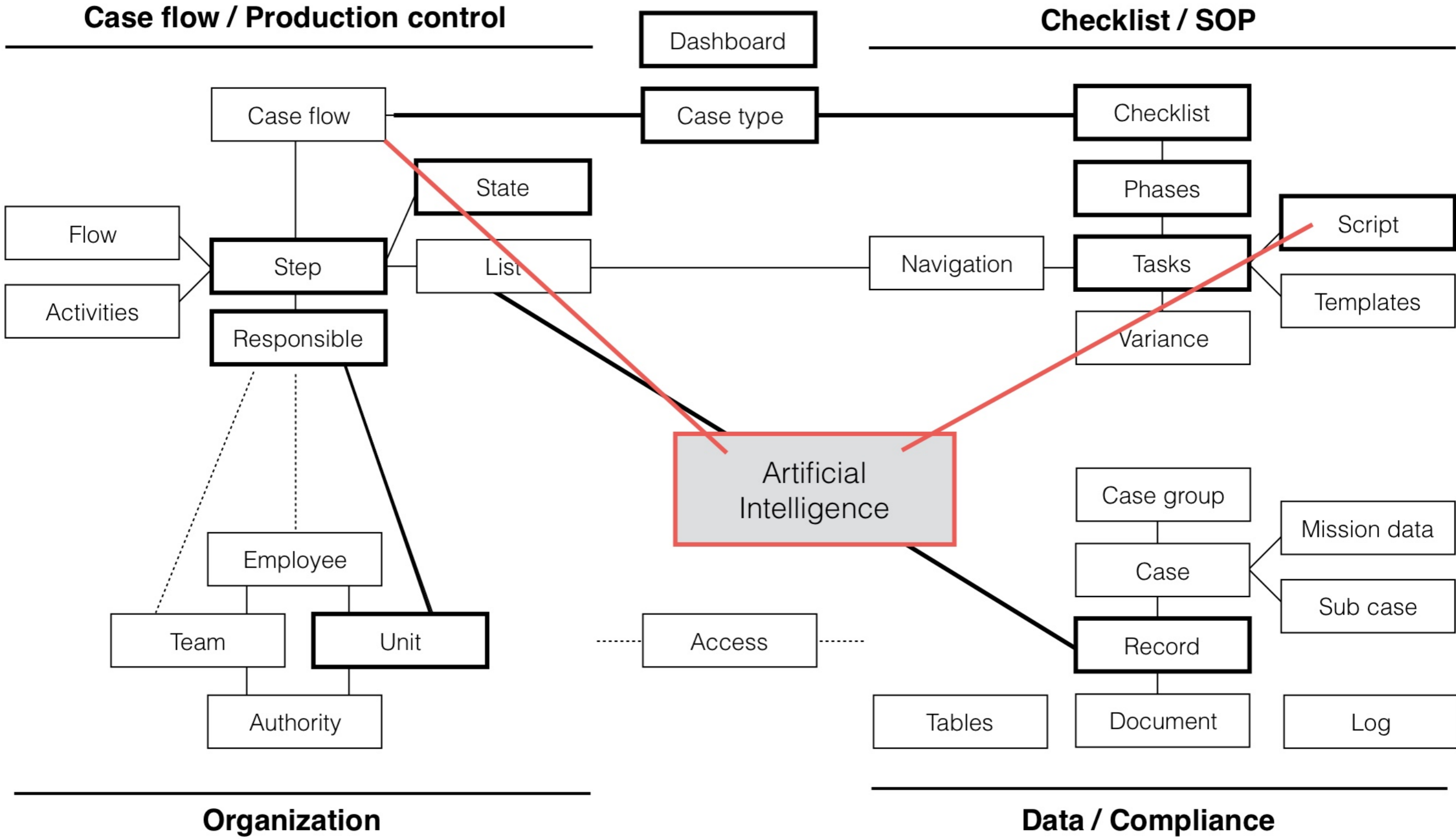
Case Flow Example: Applying for Danish Citizenship

Best Practice Model: Digital Bureaucracy
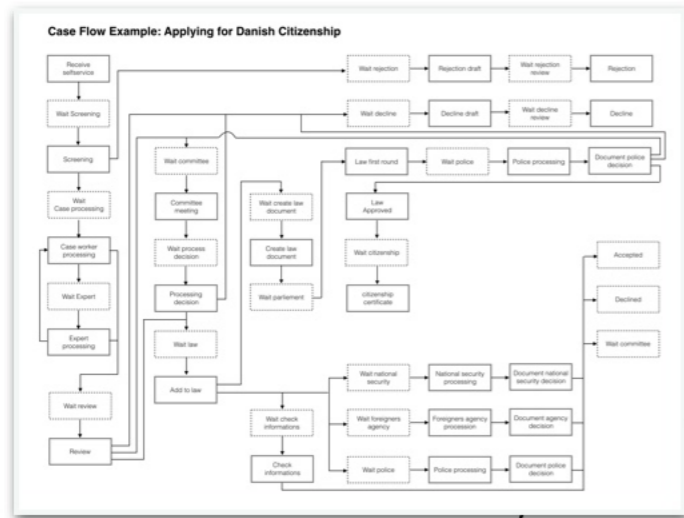
Case Flow Example: Applying for Danish Citizenship

Checklist

Phases

Tasks

Script

Steps

Responsibility

Processes

Procedure

Services

Units

Roles

Dashboard

Organization

Resources

Data

Lists

Tables

Case

Record

Document

Best Practice Based Implementation
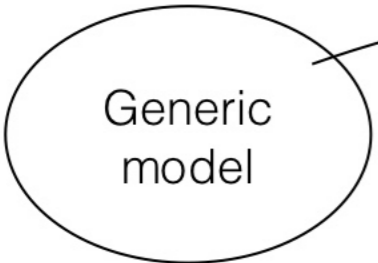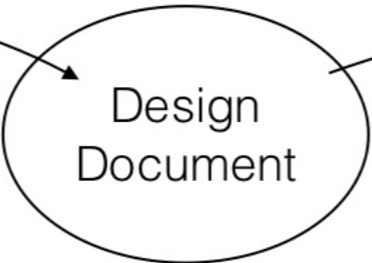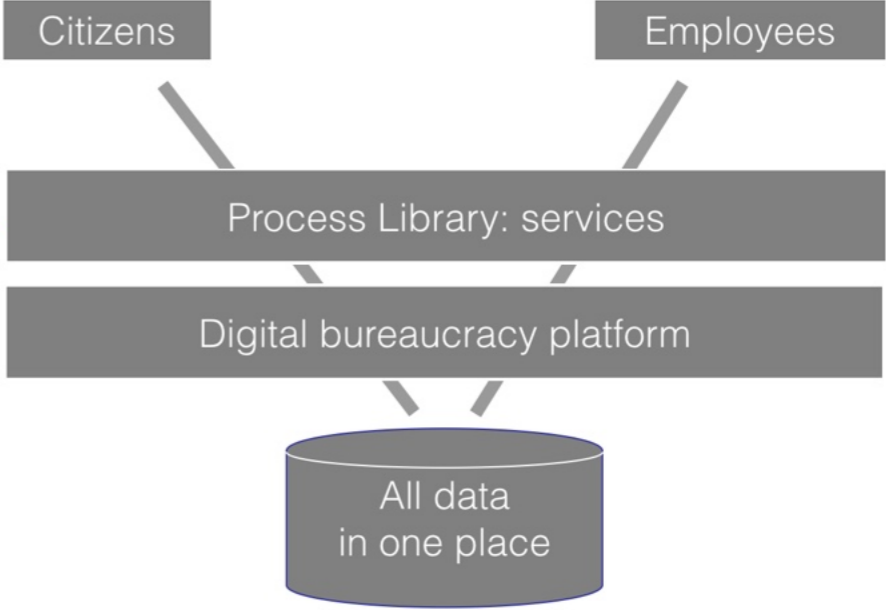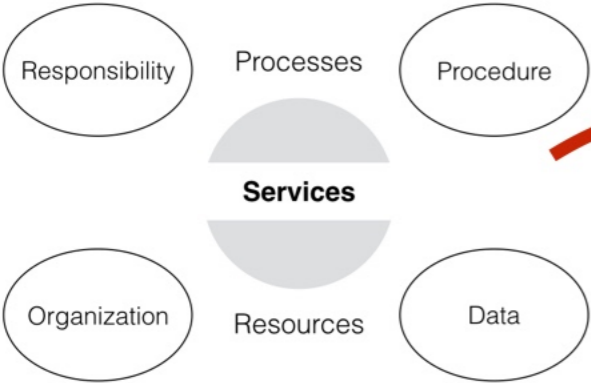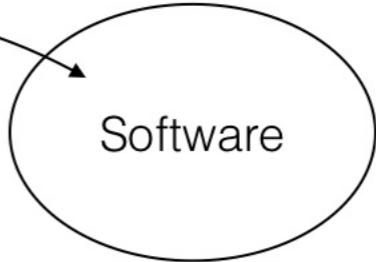
Digital Bureaucracy Projects, examples

2011: National Digitization Award
- Ministry of Energy & Ministry of Transportation
- Ministries reuse model and software. 6 Weeks

2015: Ministry of Foreign Affairs
- 2.500 Users: Copenhagen and 100 Locations across the world

2016: Agency of Taxation
- Fraud Management: Return of Dividends - AI

2017: Ministry of Finance
- Enterprise solution: Department and 4 Agencies. 6 Months

2017: Copenhagen City
- International Housing: Registration and support of foreigners

2017: National Digitization Award - State Administration
- Danish State Administration: "Helping families through hard times"
- While delivering significant and measurable effects

Danish State Administration
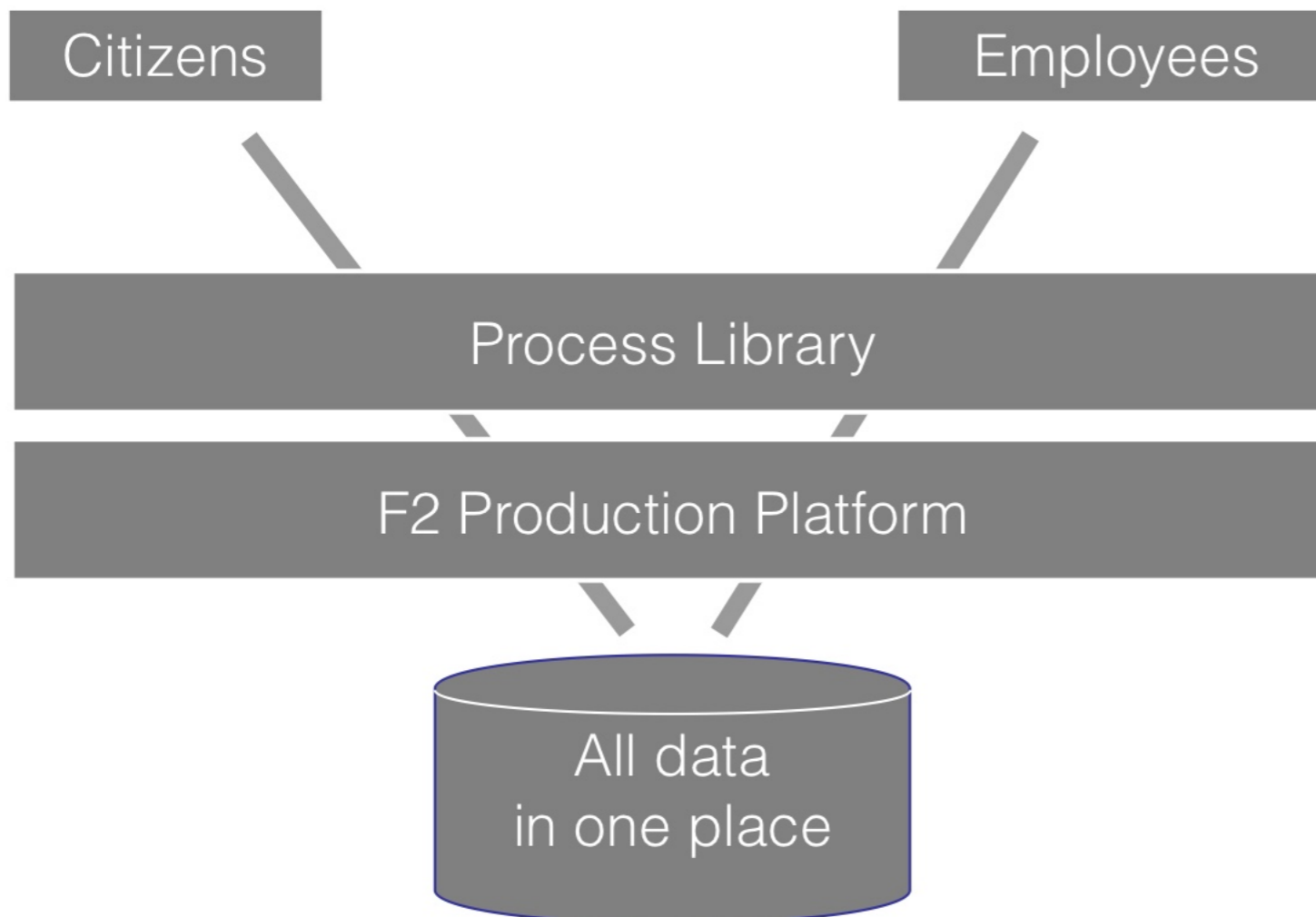
1+ Million citizens
- Family law
- EU
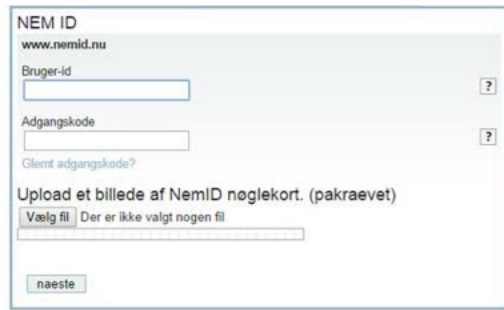- Guardianship
- Contributions
- Inspection

Production
- 200,000 decisions per year
- 500,000 letters in
- 600,000 letters out
- 350,000 phone calls
- 100,000 visitors/meetings

Measurable effects and savings
- 30% total cost reduction over 3 year period
- Process example: Divorce 23 Million -> 10 million a year
- Work place survey: 62% -> 91%
- Citizen Services: Award
- Artificial Intelligence

Citizens

Employees

Process Library

F2 Production Platform

All data in one place

Danish Digitization Award 2017

Danish State Administration: Citizen services

NEM ID
www.nemid.nu

Bruger-id

Adgangskode

Glemt adgangskode?

Upload et billede af NemID nøglekort. (pakraevet)

Vælg fil Der er ikke valgt nogen fil
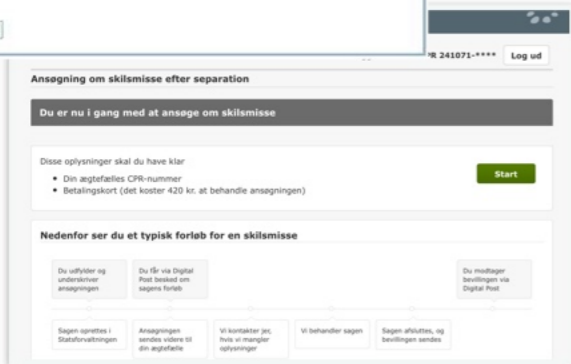
naeste

Digital signature

National citizen register

Payment

Secure electronic communication

Decision and documents

CPR

QuickPay

Digital Post
fra det offentlige

Gå på borger.dk

SKILSMISSEBEVILLING

PR 241071-****   Log ud

Ansøgning om skilsmisse efter separation

Du er nu i gang med at ansøge om skilsmisse

Disse oplysninger skal du have klar

- Din ægtefælles CPR-nummer
- Betalingskort (det koster 420 kr. at behandle ansøgningen)   **Start**

Nedenfor ser du et typisk forløb for en skilsmisse

| Du udfylder og underskriver ansøgningen | Du får via Digital Post besked om sagens forløb | | | Du modtager bevillingen via Digital Post |
| Sagen oprettes i Statsforvaltningen | Ansøgningen sendes videre til din ægtefælle | Vi kontakter jer, hvis vi mangler oplysninger | Vi behandler sagen | Sagen afsluttes, og bevillingen sendes |

Checklist

📄 **Blanketter**

📑 **Sagens oplysninger**

⚙ **Opsætning**

☑ **Behandlingsplan** 🔄
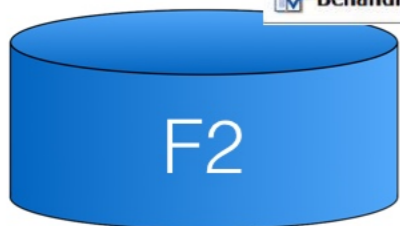
F2

| Du udfylder og underskriver ansøgningen	Du får via Digital Post besked om sagens forløb				Du modtager bevillingen via Digital Post
Sagen oprettes i Statsforvaltningen	Ansøgningen sendes videre til din ægtefælle	Vi kontakter jer, hvis vi mangler oplysninger	Vi behandler sagen	Sagen afsluttes, og bevillingen sendes	

Dashboard

Aktionærsager pr. proces ▼

Hylder	Antal	Uge 1	Uge 2	Uge 3	Uge 4	Uge 5	Uge 6	Uge 7	Uge 8	Uge 9	Uge 10
Ny sag	0	0	0	0	0	0	0	0	0	0	0
Visitering	5358	540	587	692	509	354	479	117	333	168	1579
Sagsbehandling	1838	18	17	68	131	243	207	15	14	128	997
Kontrol	223	0	0	0	0	1	0	28	3	106	85
Klar til afgørelse	665	0	0	0	1	1	0	0	0	7	656
Klar til udbetaling	8	0	1	0	0	0	0	1	0	0	6
Sendt til TaskForce	2	1	0	0	0	0	0	0	0	0	1
Lukket	1	0	0	0	0	0	0	0	0	0	1
Ukendt	52	0	3	5	2	5	8	2	0	1	26

Agile implementation. Standard, built for government
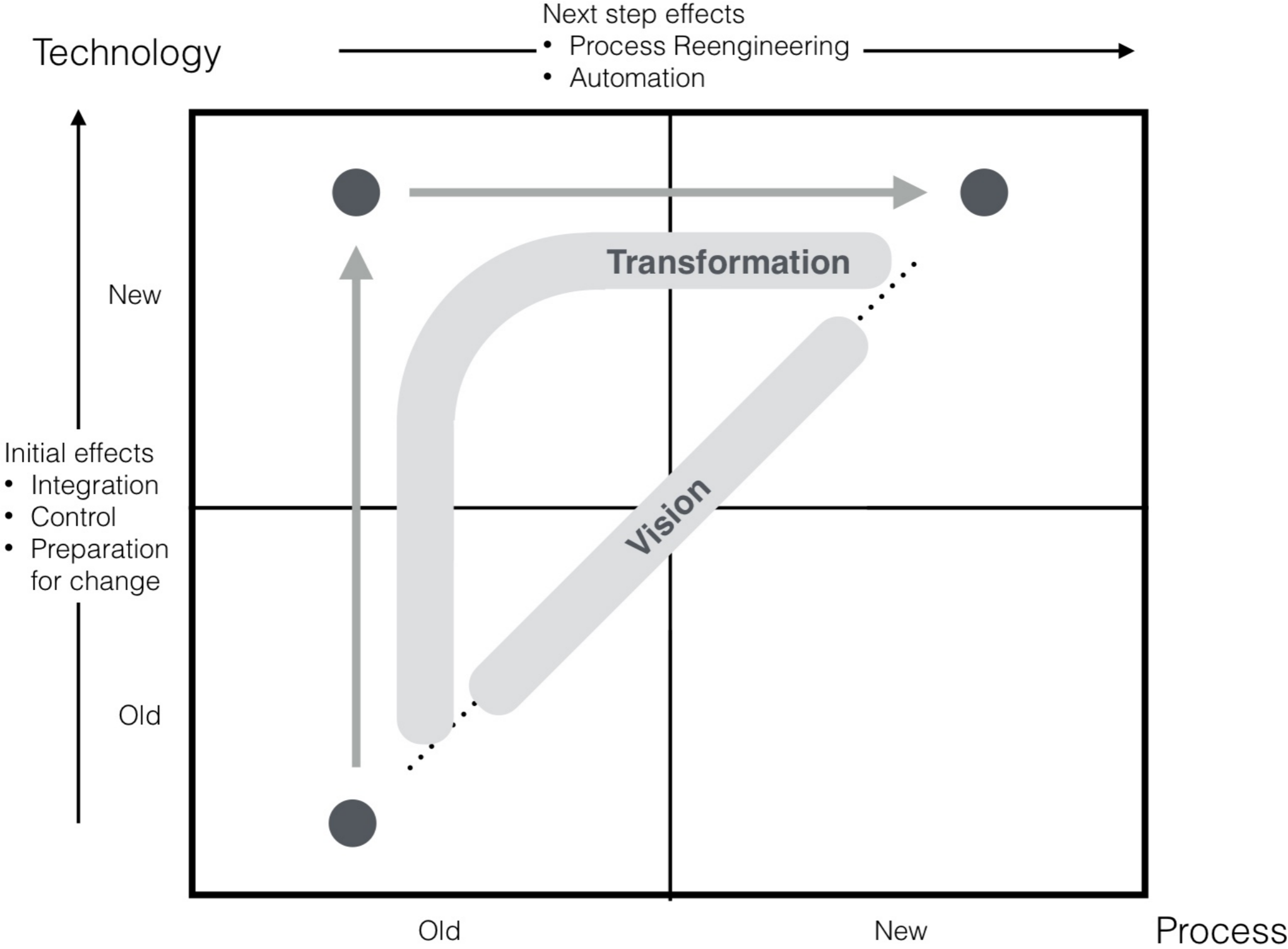
Digitization Portfolio

Identified projects

- Project A
- Project B
- Project C

Modeling   **Alfa Go/No**   **Live**

Best Practice Model
Digital Bureaucracy

Design

Production system

Generic model — Method Design Language → Design Document — Configuration Specification Language → Software

Responsibility
Processes
Procedure

Services

Organization
Resources
Data

Design

Citizens   Employees

Process Library: services

Digital bureaucracy platform

All data in one place