



An Roinn Caiteachais Phoiblí Bonneagair
Athchóiriúcháin Seirbhíse Poiblí agus Dígtiúcháin
Department of Public Expenditure Infrastructure
Public Service Reform and Digitalisation

How Open Source Helps Us Build to Share

Tony Shannon
Head of Digital Services
Office of Government Chief Information Officer



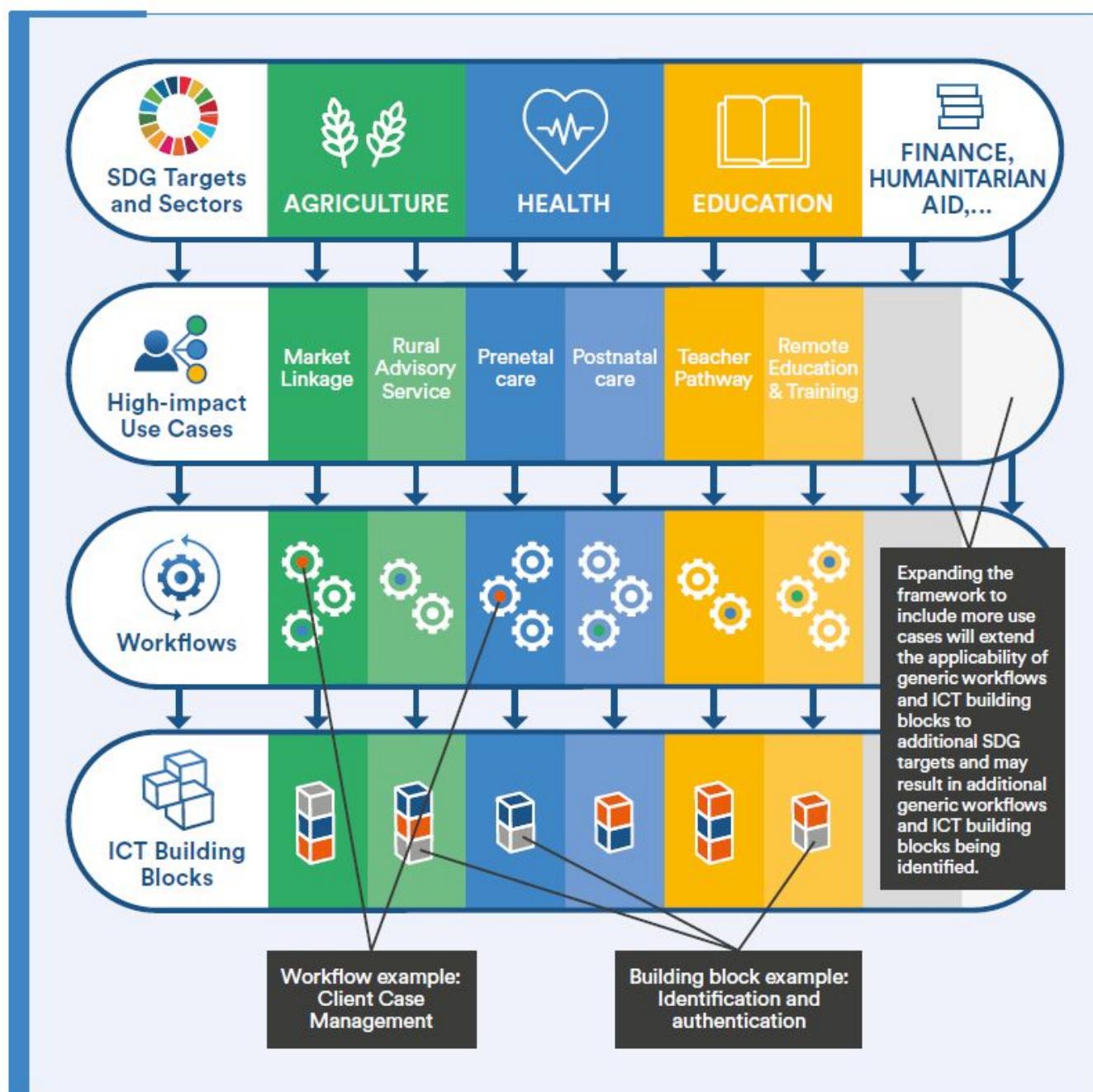


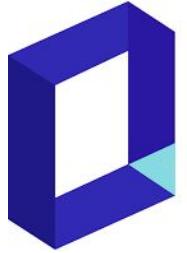
SDG Digital Investment Framework

A Whole-of-Government Approach to Investing in Digital Technologies to Achieve the SDGs



FIGURE 2. Example architectural map using the SDG Digital Investment Framework





Digital
Public
Goods
Alliance



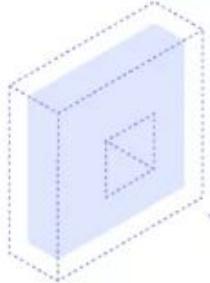
Digital Public Infrastructure

Solutions and systems that enable essential, society-wide functions and services

DPGS AND BUILDING BLOCKS CAN BE
IMPLEMENTED AS PART OF A COUNTRY'S DPI

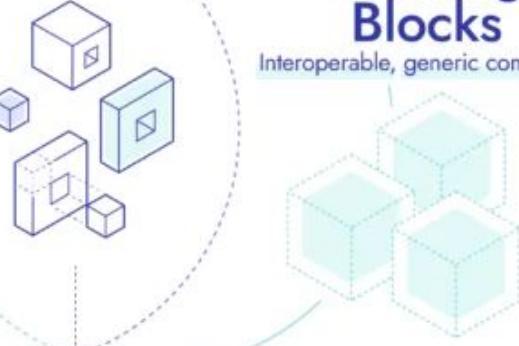
Digital Public Goods

Open license, SDG relevant



Building Blocks

Interoperable, generic component



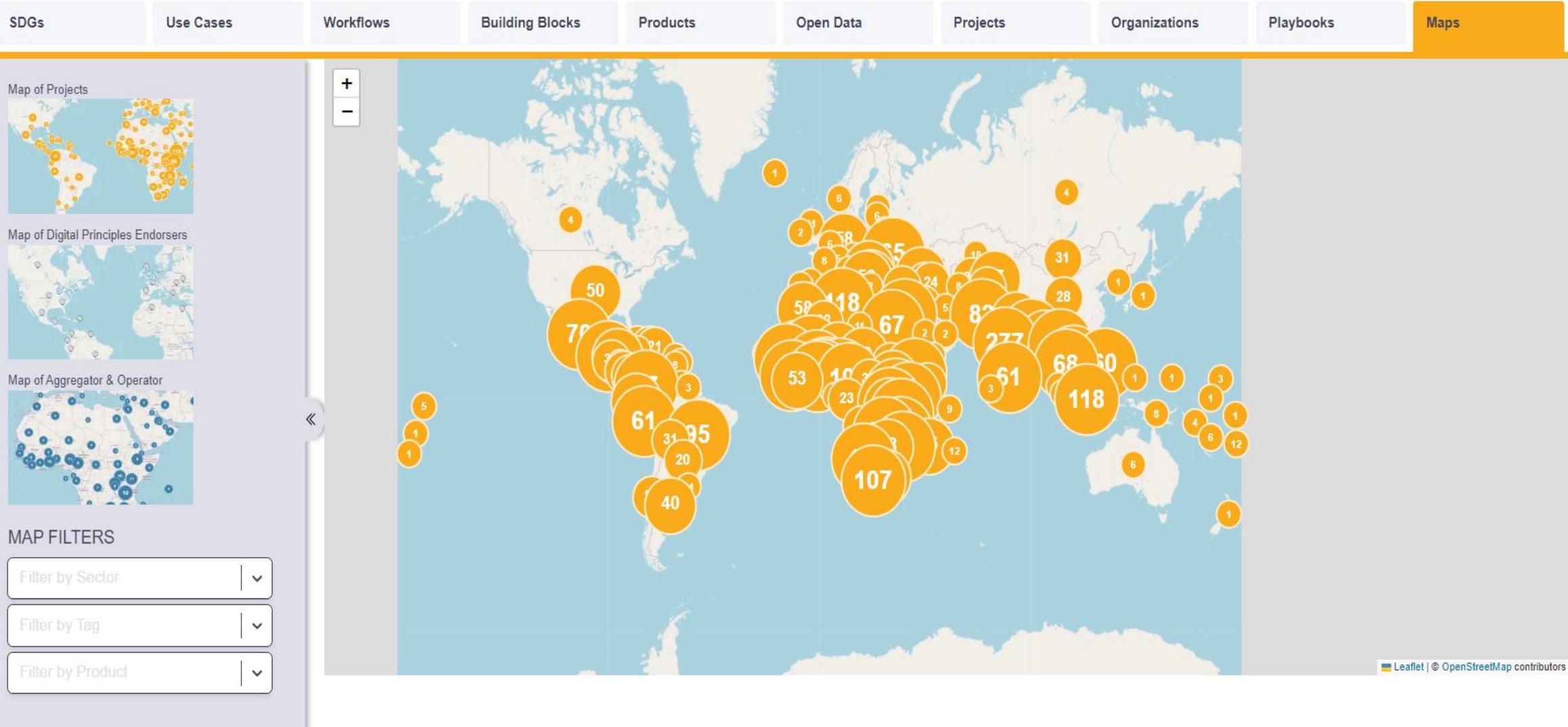
Interoperable open source solutions that are relevant to
the SDGs and have generic components may be both
Building Blocks and Digital Public Goods



GovStack

Digital Investment Framework 

[Launch Recommendations Wizard](#)



Components in the Commons

Digital Impact Alliance
Catalog of Digital Solutions

Digital Investment Framework 

Resources  About  Sign Up or Log In Help  Select Language 

Launch Recommendations Wizard

SDGs Use Cases Workflows **Building Blocks** Products Open Data Projects Organizations Playbooks Maps

Building Blocks 23 



| | | | |
|---|---|--|---|
| BETA Analytics and business intelligence  Workflows  Products OpenLMIS | BETA Artificial intelligence  Workflows   ... Products Afinidata Bothub Rasa TensorFlow ... | BETA Client case management  Workflows    ... Products CommCare Primero Avni OpenLMIS ... | BETA Collaboration management  Workflows  Products N/A |
| BETA Consent management  | BETA Content management  | BETA Data collection  | Digital registries  |

digital impact alliance

Towards 2030: Decade of Digital & Green





Better Public Services

A transformation strategy to deliver for the public and build trust



Prepared by the Department of Public Expenditure, NDP Delivery and Reform
gov.ie

Digital and Innovation at Scale



The Public Service will work together to

- Tackle big societal issues and drive societal change
- Achieve a seamless user experience and inclusive service delivery
- Provide a dynamic and agile workplace

A Public Service that:

- Builds trust in public institutions
 - Focuses on outcomes
 - Delivers climate action and sustainability



Life Events

Life events refer to significant experiences or changes in an individual's life that can have a profound impact on their circumstances and/or well-being. These events often necessitate interactions with multiple services or agencies



Owning &
Driving a Car



Renting, Buying,
Moving House



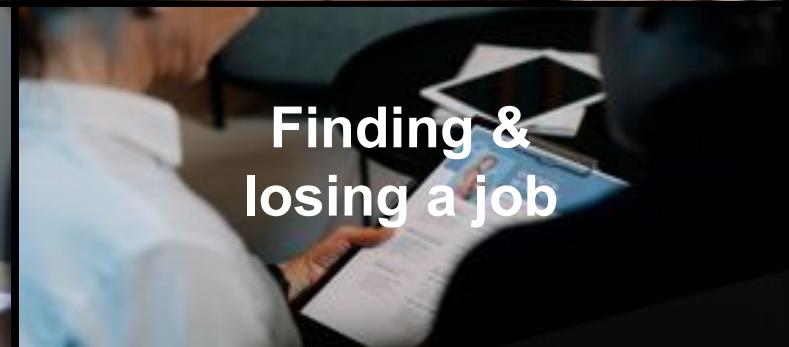
Having a baby &
early childhood



Moving to
Ireland



Setting up a
Business



Finding &
losing a job



Marriage/
Divorce



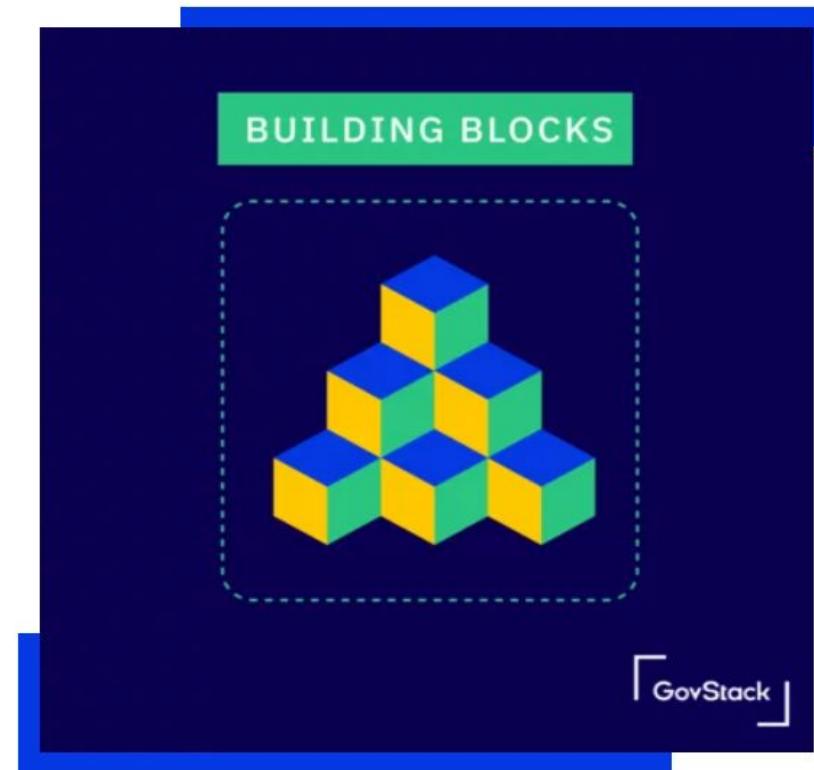
End
of life

What are Building Blocks?

Building blocks are enterprise-ready, reusable software components that provide key functionality facilitating generic workflows across multiple sectors.

Characteristics:

- Reusable software components



Life Events: Building Blocks Approach



Births

Owning & Driving a
Vehicle

Housing

Employment /
Unemployment

Deaths

Digital Wallet & Information Mediator

Payment Service and Messaging

Data Collection and Case Management System

AI and Analytic Tools

UI Design System and Content Management System

Professional Services (Data Protection / Legislation / Communications etc.)

Policy &
Analysis

Design &
Content

Applications &
Architecture

Assurance

Operations

Service Provider



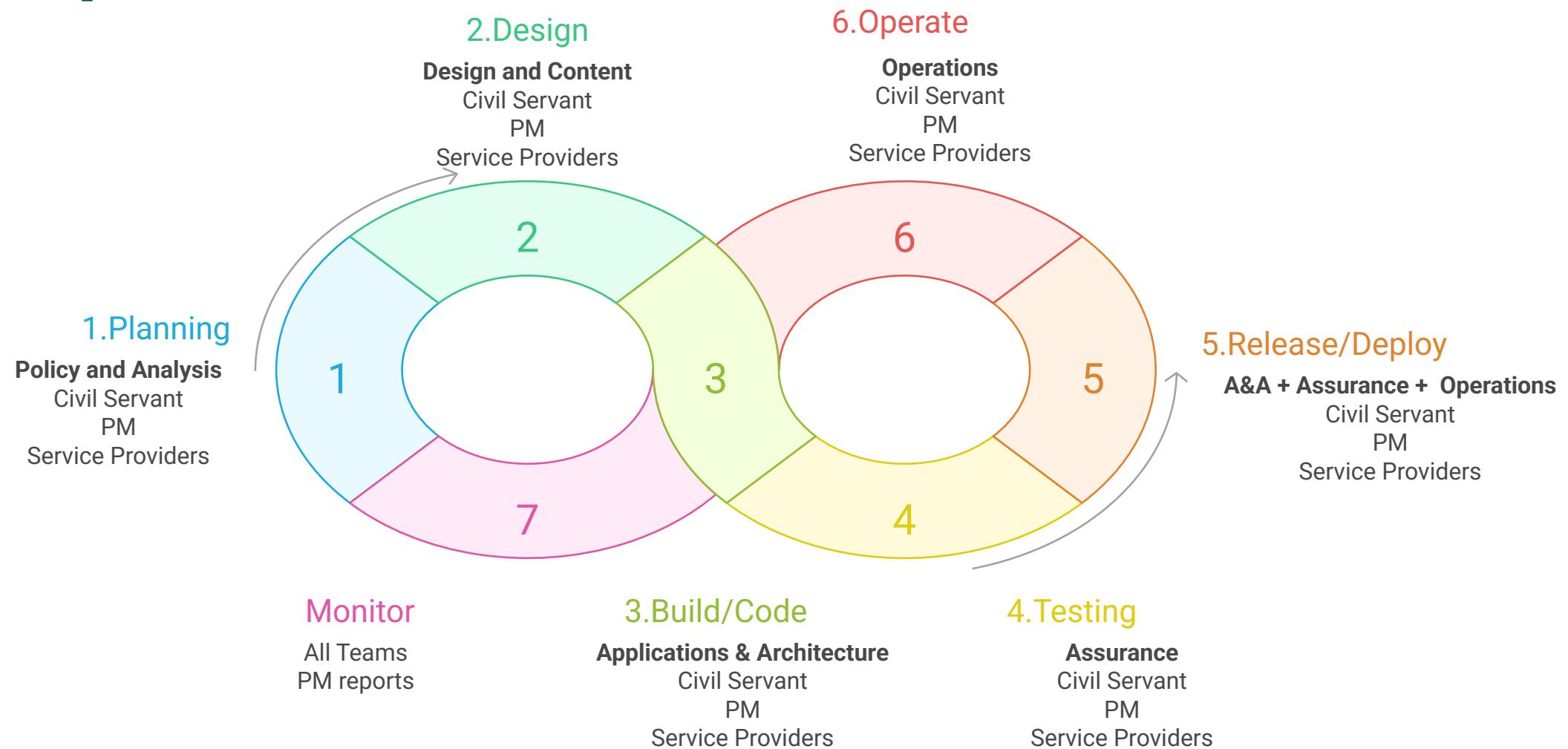
Service Provider-



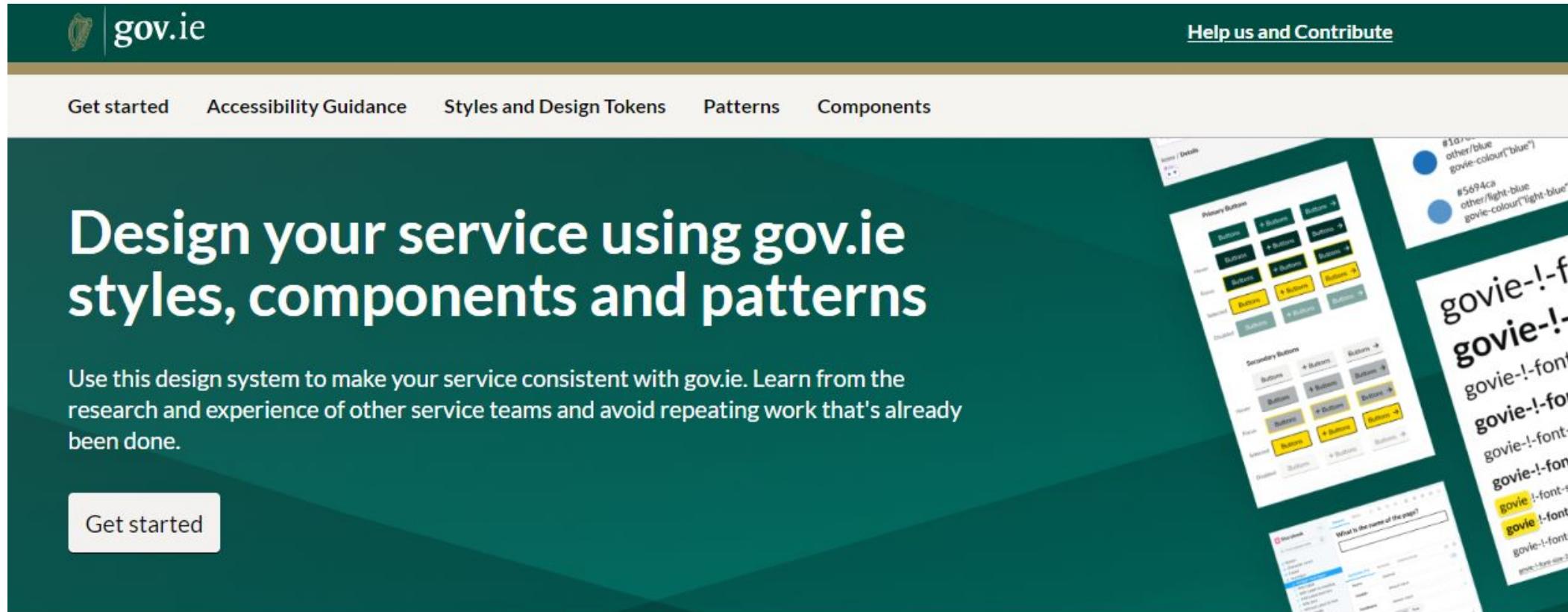
Service Provider -



DevOps Model



Design: Design System



The screenshot shows the homepage of the gov.ie Design System. At the top left is the gov.ie logo with a small green harp icon. At the top right is a button labeled "Help us and Contribute". Below the header is a navigation bar with links: "Get started", "Accessibility Guidance", "Styles and Design Tokens", "Patterns", and "Components". The main content area features a large white banner with the text "Design your service using gov.ie styles, components and patterns" in bold black font. Below this, a smaller text block reads: "Use this design system to make your service consistent with gov.ie. Learn from the research and experience of other service teams and avoid repeating work that's already been done." At the bottom left of the banner is a white button with the text "Get started". To the right of the banner, there are three overlapping images: a grid of button variations labeled "Primary Buttons" and "Secondary Buttons"; a color palette with hex codes for blue (#1071a7, #5694ca); and a snippet of code for a font style ("govie-!-font").

What's new

gov.ie

News Departments Services Languages ▾

Climate Action Plan 2024

Housing for All

Migration and Ireland

Enter search term

Ireland

Ireland in the world ▾ Embassies Passports and travel ▾ This is Ireland ▾ English ▾

Your credentials

- Get a Personal Public Service Account
- How to get a Public Service Account
- Birth, death, marriage and civil partnership registration

Working support

- Additional Needs Payment

This is Ireland

Make 2024 the year you discover Ireland's open community – where you can live, learn, create and innovate at the heart of Europe.

Welcome to Ireland.ie

The official international website of the Irish Government.

15 Rialtas na hÉireann |

Build to Share

Citizens Information

Categories ▾ What's New My Situation ▾ Find a Centre ▾ Volunteering Facebook

Most Popular

- Public holidays
- Additional Needs Payment
- State Pension (Contributory)
- Grants for a home energy upgrade
- Carer's Allowance

Search citizensinformation.ie...

Information on Your Rights & Entitlements from the Citizens Information Board

Health

COVID-19, Health system, Medical cards and GP visit cards, Health services, GP and hospital services, Dental, aural a...

Social Welfare

Irish social welfare system, Claiming a social welfare payment, Social insurance (PRSI), Social assistance payments, M...

Employment

Types of employment, Self-employment, Starting work and changing job, Training and looking for work, Starting work, ...

Money and Tax

Tax, Income tax, Income tax credits and reliefs, Tax credits and reliefs for people with disabilities, Capital taxes, Housin...

Moving Country

Irish citizenship, Asylum seekers and refugees, The asylum process in Ireland, Services for asylum seekers in Ireland, ...

Returning to Ireland

Planning your journey home, Returning to Ireland in a crisis, Residency and citizenship, Finding somewhere to live, ...



FormsIE : Data Collection



◀ Apply for the Vacant Property...
SAVED AT 2:34 PM, 28 APR 2023

CREATE SETTINGS RESULTS
SAVED AT 2:34 PM, 28 APR 2023 Share

FIELDS

BASIC

- Page
- H Heading
- T Paragraph
- Image
- Page break

Fields

- Short answer
- Long answer

?

Apply for the Vacant Property Refurbishment Grant

gov.ie ALPHA

Personal details

1. Your name

Logic

Please test your form thoroughly to ensure the logic works as expected.

ALLOWED FIELDS

Radio Number Decimal Dropdown

IF 3. Are you a registered pup breeder

IS equal to yes

+ Add condition

THEN Show field(s)

SHOW 4. Breeder ID X

Cancel Save changes

IF 3. Are you a registered pup breeder

IS EQUAL TO no

THEN SHOW 5. Breeder Email

Payments: Collect & Manage



Ríaltas na hÉireann
Government of Ireland

Gaelige

Logout →

Payments

beta This is a new service - your [feedback](#) will help us to improve it.



Secure, 1-click checkout with
[Link](#)

Card number

1234 1234 1234 1234

Expiry date

Security code

MM / YY

CVC

Country

Ireland

Optional

Save your info for secure 1-click
checkout with Link

Email

085 012 3456

gov.ie PROTOTYPE

[Payments](#)

[Payment requests](#)

[Providers](#)

Add Stripe payment provider

Name
Give a name to this payment provider to help you recognize it

Live Publishable Key
Lorem ipsum dolor sit amet consectetur. Id aenean magna habitasse ut erat. Pharetra nulla tincidunt.

Live Secret Key
Lorem ipsum dolor sit amet consectetur. Id aenean magna habitasse ut erat. Pharetra nulla tincidunt.

[Confirm](#)

Messaging: Notifications – eMail/ SMS



Ríaltais na hÉireann
Government of Ireland

OGCIO - Messaging

Hi, John Doe (Logout) Gaeilge

Menu ≡

beta This is a new service - your [feedback](#) will help us to improve it.

John Doe

Message Event Log

Recipient - Peter Parker

Here is a link to your TV License document

Dear Peter
Please see attached link to your new TV License.
Regards
Department of the Environment, Climate and Communications - TV License Unit

Send a message

Message templates

Providers

Event log

| Status | Date | Time | Action |
|------------|------------|----------|--------|
| Opened | 2025-01-15 | 16:34:44 | |
| Delivered | 2025-01-15 | 16:08:29 | |
| Failed | 2025-01-15 | 16:08:29 | |
| Delivering | 2025-01-15 | 16:08:29 | |
| Scheduled | 2025-01-15 | 16:08:27 | |
| Created | 2025-01-15 | 16:08:27 | |

< Back

eCase: Case Management



eCase

DASHBOARD HELP

[← Back](#)

Birth Certificate

Birth Certificate MVP project

[Create Case ▾](#)

Open cases 8 All cases Completed cases My cases

Search by Title or Reference ID

[Export to spreadsheet](#)

| RefId | Child's First Name | Child's Last Name | Child's Gender | Child's Date of Birth | Owner | Status |
|------------|--------------------|-------------------|----------------|-----------------------|---------------|-----------------------|
| BC 0026-22 | Anna | Murphy | Female | 04 May 2022 | HSE | Open |
| BC 0024-22 | Paula | O'Hanlon | Female | 01 Jun 2022 | HSE | Open |
| BC 0022-22 | Mary | Dunne | Female | 07 Jun 2022 | Conall O'Kane | Assigned |
| BC 0019-22 | Mary | Murphy | Female | 21 Jun 2022 | HSE | Open |
| BC 0016-22 | Eamonn | Sullivan | Male | 01 Jan 2018 | HSE | Open |
| BC 0015-22 | Eddie | Keane | Male | 01 Aug 2019 | Conall O'Kane | Certificate generated |

Life Events & Digital Wallet Development



≡ | gov.ie My Life Events

Search Life Events MM 5

Maria Murphy
PPSN: TUV1599432

Driving

- 🕒 Events [Renew your driving licence](#) Expires on 19th March - Apply now
- 👤 About me [Replace a lost or stolen licence](#) A line of text to support this statement
- 👶 Birth [Driving licence categories](#) A line of text to support this statement
- ✚ Health
- 🚗 Driving
- ⌚ Un/Employment
- 🏢 Starting a business
- 🏠 Housing
- ⚰️ Death

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Rialtas na hÉireann
Government of Ireland

9:41 Signal strength icons

gov.ie 👤 Account

Welcome, Maria Murphy

PPSN: 1234567T | DOB: 25-10-1980

Your credentials

- 💡 myID VIEW
- RSA Drivers licence VIEW
Expiry date: 19/3/2024 [Renew](#)
- 👶 Birth certificate VIEW
- 🇪🇺 European health insurance card VIEW
Expiry date: 12/12/2024



Digital Wallet: Credentials & Verification



Valid

RSA
An tSeirbhís Stáit Éireannach Ar Shóisialla
Road Safety Authority

Driving Licence



Details

First Name(s): Mary
Last Name(s): Murphy
Date of birth: 12 December 1994
Place of birth: Ireland

Driving Licence details

4a: 10-05-12
4b: 09-05-22
4c: RSA
4d: 234567
5: MURPH0523789H65SD 17
8: 55 GERRARD STREET, CORK
9: A, B, BE, C1, C1E, D1, D1E, f, k, k,
l, n, p

Valid



Details

First Name(s): Mary
Last Name(s): Murphy
Date of birth: 12 December 1994
Age: 23
Place of birth: Ireland
Address: 55 GERRARD
STREET, CORK

Valid



Is aged at least 18

Criteria:

Minimum age: 18

Information Mediator & APIs



Karavan v.0.01

Designer Design YAML

cameleer

Copy Save

Multicast

Routes the same message to multiple paths either sequentially or in parallel.

Executor Service Ref

On Prepare Ref

Parallel Aggregate

Parallel Processing

Share Unit Of Work

Stop On Aggregate Exception

Stop On Exception

Strategy Method Allow Null

Strategy Method Name

Strategy Ref

Streaming

Timeout

```
apiVersion: camel.apache.org/v1alpha1
kind: KameletBinding
metadata:
  name: events-to-s3
spec:
  source:
    ref:
      apiVersion: messaging.knative.dev/v1
      kind: Channel
      name: messages
      # Or a Strimzi "KafkaTopic", if you prefer
  sink:
    ref:
      kind: Kamelet
      apiVersion: camel.apache.org/v1alpha1
      name: aws-s3-streaming-upload-sink
    properties:
      bucketNameOrArn: "my-bucket"
      accessKey: "<your-key>"
      # ...
```

Analytics & Business Intelligence



Life Events : AI: Search & Chat

A screenshot of the gov.ie website. At the top, there's a navigation bar with links for News, Departments, Services, Languages, and a search icon. Below the navigation is a large teal banner with the text "Search for services or information". A search bar with the placeholder "Enter search term" and a magnifying glass icon is positioned below the banner. To the right of the search bar are links for "Storm Response", "Budget 2025", "Housing for All", "Migration and Ireland", and "Where Your Money". Further down the page, there are two columns of service links: "Your credentials" (Get a Personal Public Service (PPS) Number, How to get a Public Services Card (PSC), Birth, death, marriage and other certificates) and "Welfare supports" (Illness Benefit, State Pension (Contributory), Free Travel Scheme). Below these are "Working supports" (Additional Needs Payment, Jobseeker's Allowance) and "Becoming a parent" (Child Benefit, Maternity Benefit). On the right side of the page, there's a pop-up window titled "Welcome to gov.ie chat" with a message from an AI bot: "Hi there, how can I help you today?". The bot has three suggestions: "Get a PPS Number", "Maternity Benefit", and "Renew your passport". There's also a text input field for "Type your message here" and a blue button with a white "P" for "Post".

gov.ie

News Departments Services Languages

Search for services or information

Enter search term

Storm Response

Budget 2025

Housing for All

Migration and Ireland

Where Your Money

gov.ie

Your credentials

- Get a Personal Public Service (PPS) Number
- How to get a Public Services Card (PSC)
- Birth, death, marriage and other certificates

Working supports

- Additional Needs Payment
- Jobseeker's Allowance

Welfare supports

- Illness Benefit
- State Pension (Contributory)
- Free Travel Scheme

Becoming a parent

- Child Benefit
- Maternity Benefit

Welcome to gov.ie chat

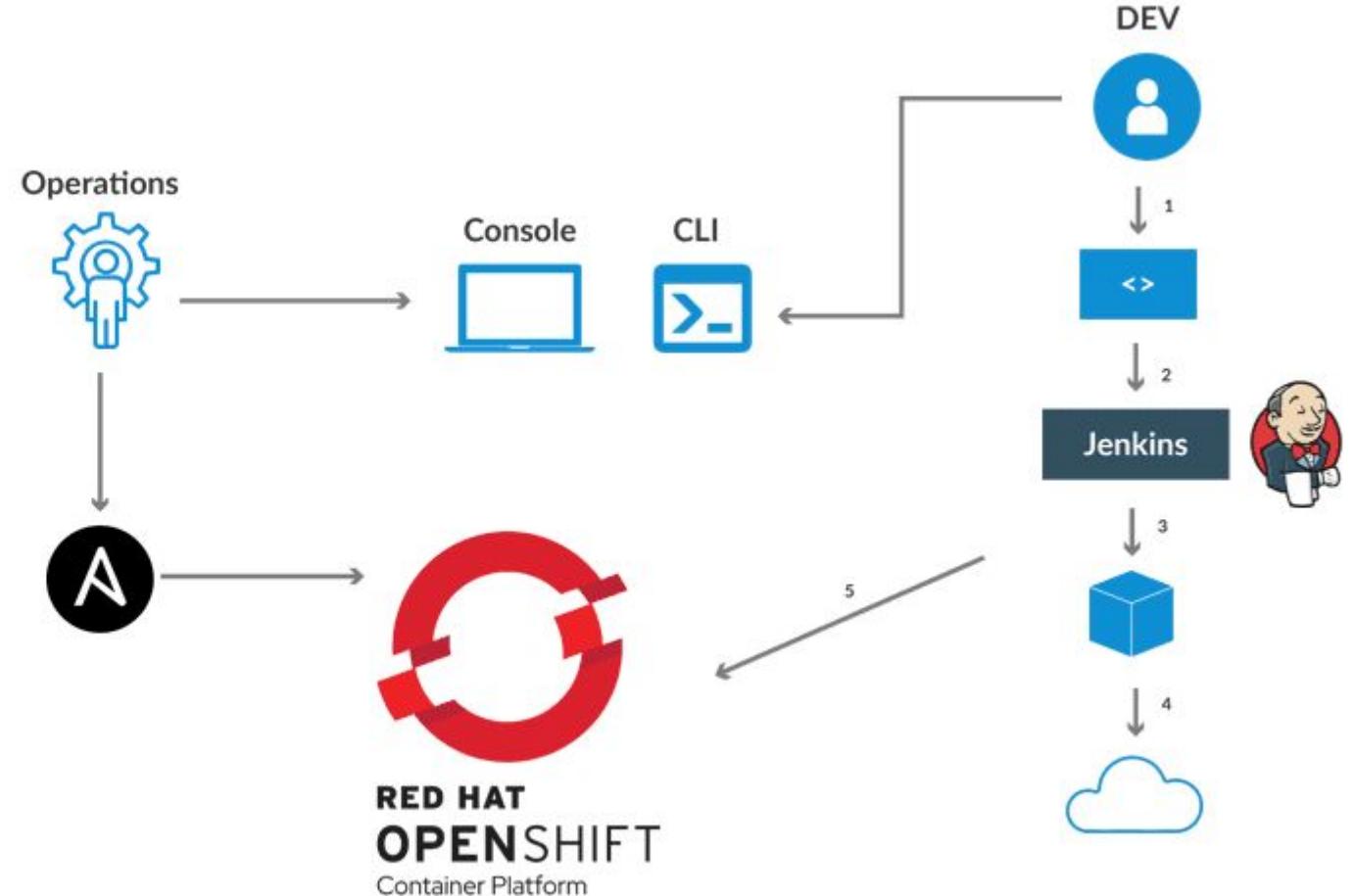
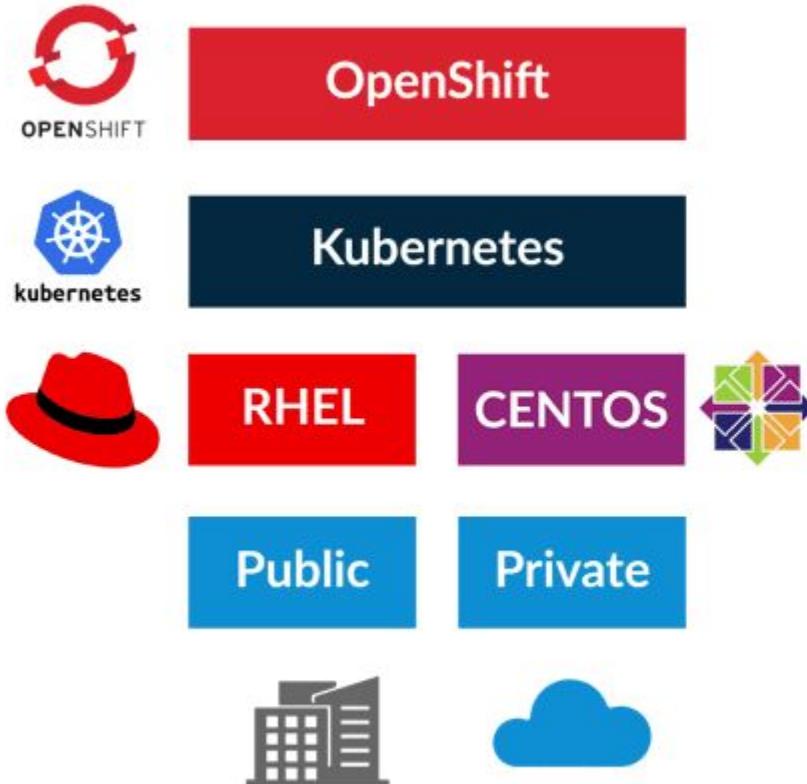
Hi there, how can I help you today?

Get a PPS Number Maternity Benefit Renew your passport

Type your message here

P

Architecture: Vendor Neutral: InfraStructure





Gov As A Platform



Content Management

Identity Management

User Dashboard/Life Events Portal

Information Mediator & APIs

Data Collection

Payments: Collect & Manage

Messaging: Notifications – eMail/ SMS

Digital Wallet: Credentials & Verification

Life Events & Digital Wallet Development



An Roinn Caiteachais Phoiblí Bonneagair
Athchóiriúcháin Seirbhise Poiblí agus Digitálacháin
Department of Public Expenditure Infrastructure
Public Service Reform and Digitalisation

Digital Public Services Plan 2030



Digital Public Services Plan 2030

Table 4: Lead Department or PSB for each of 17 Priority Life Events.

| Life Event | Lead Department/Public Service Body |
|---|--|
|  Birth of a Child | Department of Social Protection |
|  Transition to Further/Higer Education | Department of Further and Higher Education, Research, Innovation and Science |
|  Accessing Social Housing | Local Government Management Agency |
|  Owning/Driving a Vehicle | Department of Transport |
|  Developing a Life Altering Condition or illness | Health Service Executive |
|  Starting School | Department of Education and Youth |
|  Retire | Department of Social Protection |
|  Becoming a Carer | Health Service Executive |
|  Supporting the bereaved | Department of Social Protection |
|  Become Employed/Unemployed | Department of Social Protection |
|  Marriage/Marriage dissolution | Health Service Executive |
|  Adopt a child | The Adoption Authority of Ireland |
|  Starting a business | Department of Enterprise, Tourism and Employment |
|  Becoming an Adult | Revenue |
|  Accessing Justice/Starting a small claims procedure | The Courts Service |
|  Adverse Weather Event | Department of Housing, Local Government and Heritage |
|  Finding and Maintaining a Home | Department of Housing, Local Government and Heritage |



PHASE 1



Birth of a child



Supporting the bereaved



Transition to Further/
Higher Education



Accessing Social
Housing

Content Management

The screenshot shows a 'Having a baby' page from the gov.ie website. It includes sections for 'Before birth' (with a link to 'Having a baby') and 'Immediately after birth' (with a link to 'Register the birth'). There is also a note about registering the birth with the HSE.

Identity Management

The screenshot shows a 'MyGov' login screen with fields for email address and password, and a 'Log in with Microsoft' button. To the right, there is a diagram titled 'Single sign-on' illustrating the process where a user logs in once and gains access to multiple applications (App 1, App 2, App 3).

User Dashboard/Life Events Portal

The screenshot shows the 'My Dashboard' section of the Life Events Portal. It features a 'New messages' area with a note from the HSE, a 'Recently submitted journeys' section, and a 'Welcome to Your Dashboard' message.

5

Information Mediator & APIs

The screenshot shows the 'Kamel' interface for managing APIs. It displays a flowchart of API interactions and several code snippets in XML and JSON formats.

Data Collection

The screenshot shows the 'Civil Registration Services' section of the portal. It includes a 'Order a certificate' form for birth certificates, with fields for name, date of birth, and address.

8

Payments: Collect & Manage

The screenshot shows the 'Payments' section of the portal. It includes a 'Add Stripe payment provider' form and a table showing payment details for a transaction.

9

Messaging: Notifications – eMail/ SMS

The screenshot shows the 'gov.ie - 2000 - Messaging' interface. It displays a 'Message Event Log' table with columns for ID, Recipient, Status, and Action.

Digital Wallet: Credentials & Verification

The screenshot shows the 'Digital Wallet' section of the portal. It displays a 'Driving Licence' and a 'Passport' with validation status 'Valid'. Below, it shows a 'Details' table for a driver's license.

Life Events & Digital Wallet Development

The screenshot shows the 'My Life Events' dashboard. It lists various life events such as 'Driving', 'Marriage', 'Birth', 'Death', 'Employment', 'Family', 'Housing', and 'Health'. Each event has a brief description and a 'View' or 'Edit' button.

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OGCIO (PER)

Code repositories of projects built by Office of the Government Chief Information Officer team.

[Follow](#) 23 followers Ireland <https://www.ogcio.gov.ie>[README.md](#)

Office of the Government Chief Information Officer

Home of OGCIO projects source code.

 [View as: Member ▾](#)

You are viewing the README and pinned repositories as a member of the OGCIO (PER) organization.

You can [pin repositories](#) visible only to members of the organization.

[Get started with tasks](#) that most successful organizations complete.

Repositories

 Find a repository... Type ▾ Language ▾ Sort ▾ New[formsSG-4IE](#)  TypeScript  0  0  0  4 Updated 26 minutes ago

OS Capabilities from allisonrandal.com



CUSTOMERS FROM OPEN SOURCE.

FEATURED POST

20 JANUARY 2023

Hardware Security Principles

25 NOVEMBER 2017

Capabilities for Open Source Innovation:
Background

22 JULY 2015

The Future of Open Source

7 NOVEMBER 2013

Relativity, skepticism, and virtual worlds

Level 1: The lowest degree of engagement is often called Inner Source. A company at this level has taken some ideas from open source, but isn't consuming external code or sharing code externally, they are just collaborating internally a little more like an open source project.

Level 2: The next step up is to use open source, but purely as a consumer, bringing in external code.

Level 3: Companies at this level deliver open source to customers, either straight up, combined with other open source software, or combined with proprietary software.

Level 4: Companies at this level lead an open source project that they created. They release their code as open source, but they don't really have an active external community.

Level 5: Companies at this level participate in external projects by contributing code, sponsoring, or supporting the project in other ways, but the relationship is somewhat one-directional or distant. Their participation isn't highly active, but they still benefit from contributing patches and other support, and getting back the source code.

Level 6: The highest degree of effective open source participation is companies who participate as co-leaders. These companies don't just throw patches over the wall at the open source project, but take the time to actively share their needs with the open source project, to actively advocate for the directions that they think the project needs to go, and contribute developer time to the project. That doesn't mean they control the project, in fact, there's a great deal of value in having many perspectives contributing ideas and together negotiating the direction of the project, for the benefit of everyone involved. At this level, you find companies participating as equals with individual open source developers and respecting them for their technical expertise and role in the project. There's some nuance here, in terms of how to be effective as a co-leader in an open source project, but the biggest thing to understand is that companies who take that step forward are more effective and get more value out of open source projects.



interoperable
europe

Policy Solutions Support Centre Governance Academy Sign in

Get started



EU Open Source Solutions Catalogue

Solutions created by and for European Public Services

Welcome [Search](#) About

ADVANCED FILTER

[Clear filters](#)

SOURCE CATALOGUES

- Avoinkoodi.fi (1) 
- Awesome CodeGouvFr (18) 
- Code Europa EU (27) 

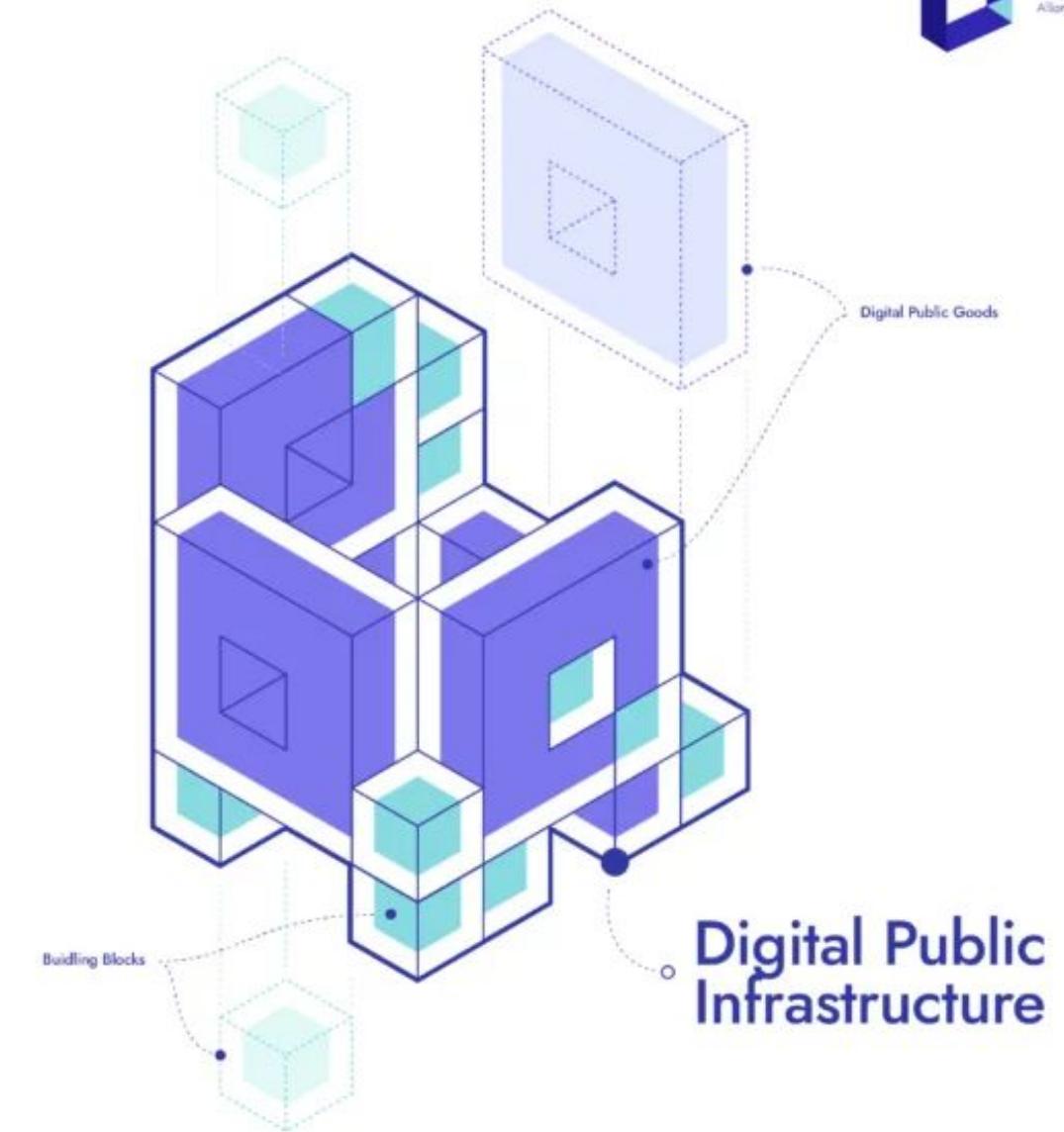
SEARCH RESULTS (938)

Sort by: [Most Recent](#) ▾

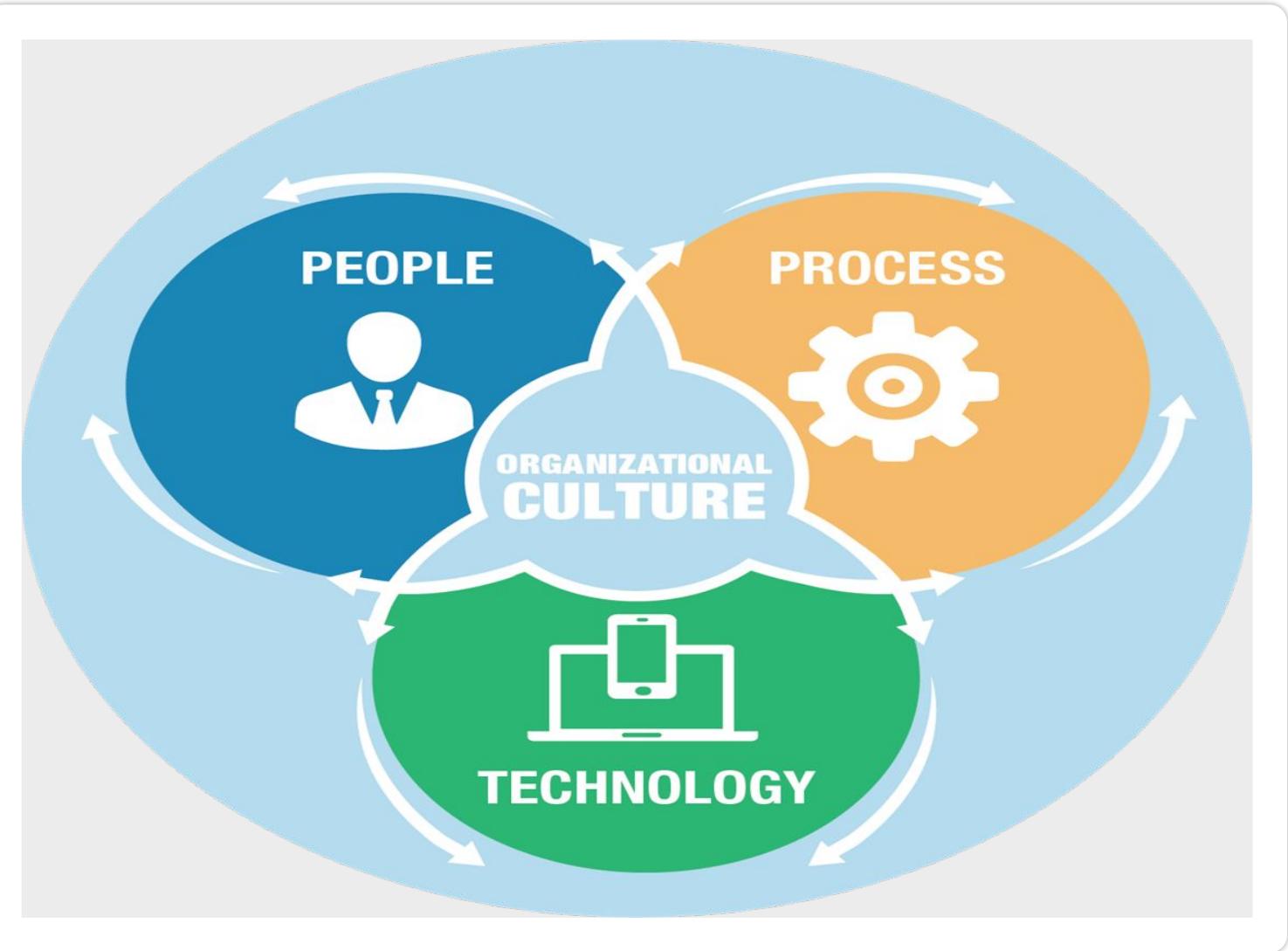
[BundID Keycloak Adapter MHKBD NRW](#)



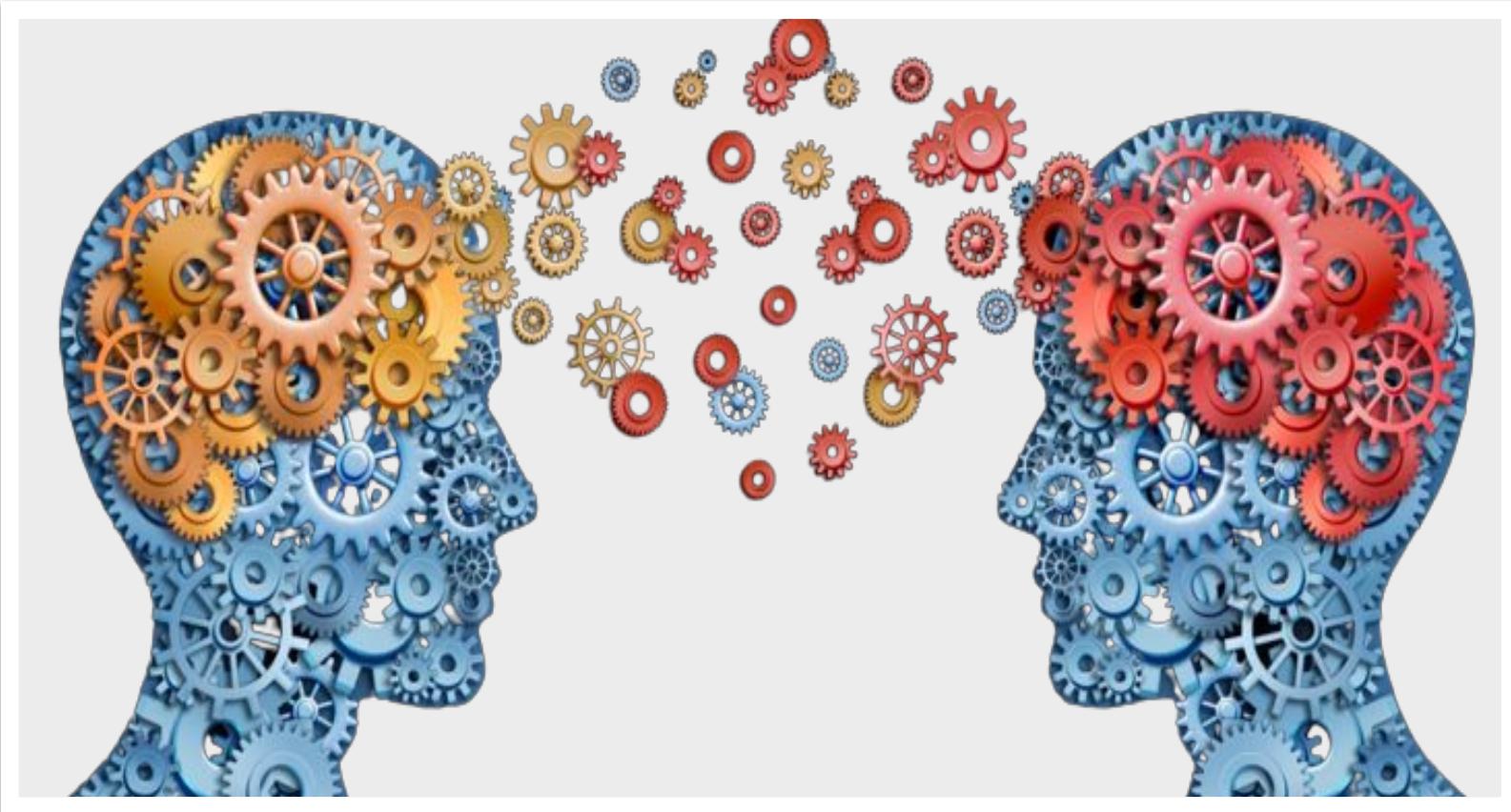
Digital
Public
Goods
Alliance



Challenges



Opportunity





Ríaltas na hÉireann

Government of Ireland







Thank You