

# Andrea Grandi Software Developer Government Digital Service @andreagrandi

# What we learnt open sourcing the UK government

# Credit where credit is due...

Thanks Anna Shipman!



@annashipman

## GOV.UK Story

Public services all in one place

Search this site

Already claiming DLA and

your circumstances

want to report a change in

your circumstances - find out

Disability Living Allowance -

Go 🕽

Home | Contacts | Do it online | Newsroom | Video

#### Browse by subject

- Crime and justice
- Education and learning
- Employment
- Environment and greener living
- Government, citizens and rights
- Health and well-being
- Home and community
- ▼ Money, tax and benefits
- Benefits and financial support
- Disability
- Motoring
- Pensions and retirement planning
- Travel and transport

### Browse by people

- Young people
- Britons living abroad
- Caring for someone

#### Money, tax and benefits

### **Disability Living Allowance**



Disability Living Allowance (DLA) is a tax-free benefit for disabled children and adults to help with extra costs you may have because you're disabled. Find out more about Disability Living Allowance, including how much you can get.

more

### Who can get Disability Living Allowance?

You may get Disability Living Allowance if:

- you have a physical or mental disability, or both
- your disability is severe enough for you to need help caring for yourself or you have walking difficulties, or both
- · you are under 65 when you claim

You can get Disability Living Allowance whether or not you work.

It isn't usually affected by any savings or income you may have.

If you're aged 65 or over, you may be able to get Attendance Allowance.

- Disability Living Allowance eligibility
- Attendance Allowance

Tuesday, 2 October 2012

### Circumstances changed?

 Disability Benefits Helpline

#### Simpler, Clearer, Faster



From 17 October, GOV.UK will be the best place to find government services and information

▶ Try it now 🗗

#### Do it online

- Apply for Attendance Allowance
- Apply for Carer's Allowance (form DS700)
- Apply for Disability Living Allowance
- Apply for Housing
   Benefit or Council Tax
   Benefit (form HCTR1)

Investigating a bug costed additional money

Fixing the bug costed even more money (and releases were done every 6 months)

Only a small bug? Not worth being fixed!



### Welcome to GOV.UK

The best place to find government services and information **Simpler, clearer, faster** 

Search GOV.UK

Q

Popular on GOV.UK

Find a job

Renew vehicle tax

Log in to student finance

**Book your theory test** 

Personal tax account

### **Benefits**

Includes eligibility, appeals, tax credits and Universal Credit

### Births, deaths, marriages and care

Parenting, civil partnerships, divorce and Lasting Power of Attorney

### **Business and self-employed**

Tools and guidance for businesses

### Childcare and parenting

Includes giving birth, fostering, adopting, benefits for children, childcare and schools

### Citizenship and living in the UK

Voting, community participation, life in the UK, international projects

### Disabled people

Includes carers, your rights, benefits and the Equality Act

### **Driving and transport**

Includes vehicle tax, MOT and driving licences

### **Education and learning**

Includes student loans, admissions and apprenticeships

### **Employing people**

Includes pay, contracts and hiring

### **Environment and countryside**

Includes flooding, recycling and wildlife

### Money and tax

Includes debt and Self Assessment

### Passports, travel and living abroad

Includes renewing passports and travel advice by country

### Visas and immigration

Visas, asylum and sponsorship

### Working, jobs and pensions

Includes holidays and finding a job

# How did we get to this point?



Martha Lane Fox



14th October 2010

Dear Francis Maude,

#### DIRECTGOV 2010 AND BEYOND: REVOLUTION NOT EVOLUTION

You asked me to oversee a strategic review of Directgov and to report to you by the end of September. I have undertaken this review in the context of my wider remit as UK Digital Champion which includes offering advice on "how efficiencies can best be realised through the online delivery of public services." This means that I have not reviewed Directgov in isolation but as part of how the government can use the Internet both to communicate and interact better with citizens and to deliver significant efficiency savings from channel shift. This letter sets out my findings and key recommendations.

https://www.gov.uk/government/publications/directgov-2010-and-beyon d-revolution-not-evolution-a-report-by-martha-lane-fox

## In 2011 Government Digital Service was created

Change the way UK government works

Help delivering a digital transformation in other departments

# Child benefit tax calculator

Home > Childcare and parenting > Financial help if you have children

### Child Benefit tax calculator

Use this tool to work out:

- · how much Child Benefit you receive in a tax year
- the High Income Child Benefit tax charge you or your partner may have to pay



### Before you start

You may be affected by the tax charge if your income is over £50,000.

Your partner is responsible for paying the tax charge if their income is more than £50,000 and higher than yours.

You'll need the dates Child Benefit started and, if applicable, <u>Child Benefit stopped</u>.

### Related content

High Income Child Benefit Tax Charge

Claim Child Benefit

Child Benefit rates

Self Assessment tax returns

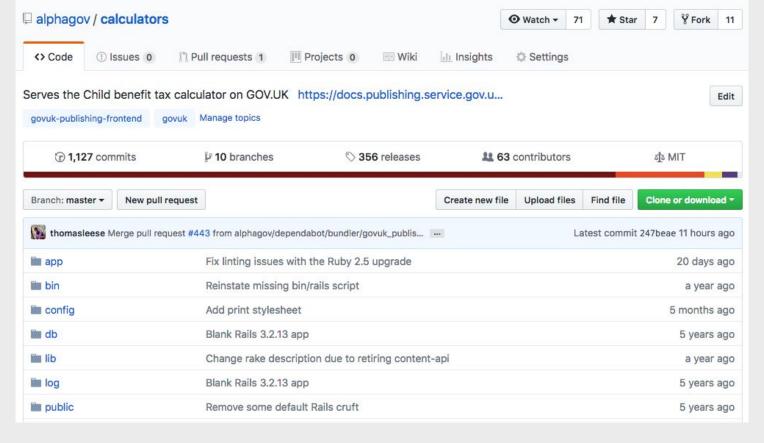
Explore the topic

**Child Benefit** 

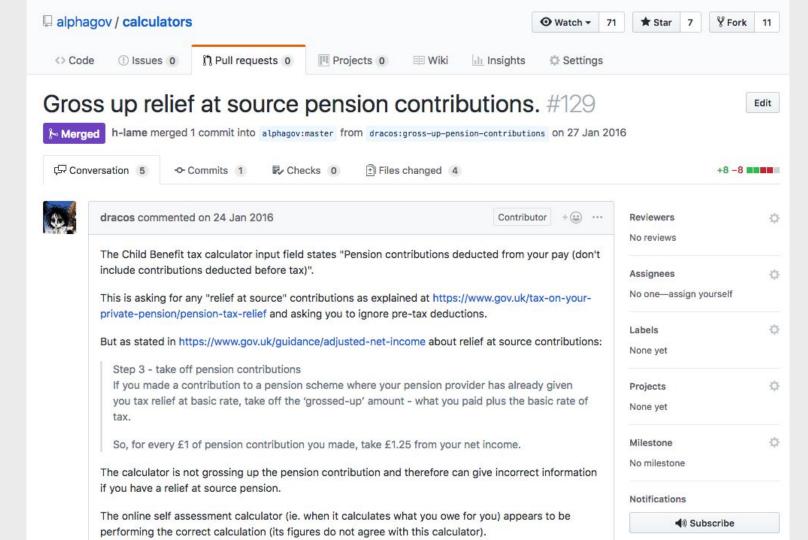
**Child Benefit** 

Financial help if you have children

## Someone found a bug



## https://github.com/alphagov/calculators



# Custom license plate



# WASHINGTON 11 TE 131290 2018 FVERGREEN STATE

Driver & Vehicle Licensing

### Application to transfer **or** retain a vehicle registration number

V317

For more information go to www.direct.gov.uk/numbertransfer

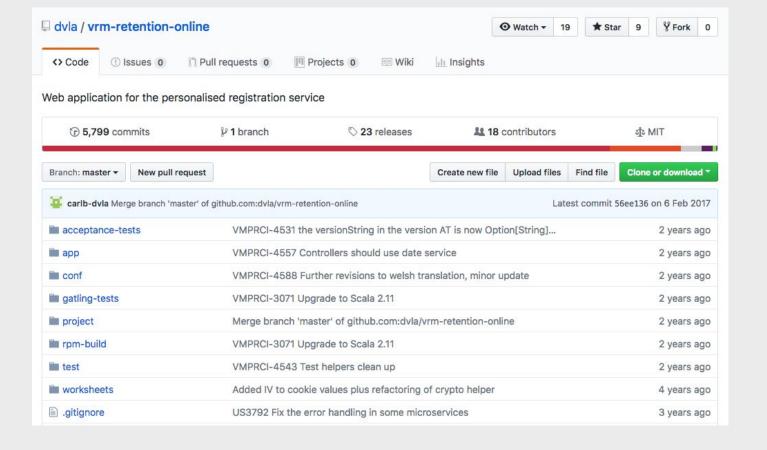
You must read the attached Guidance notes before you fill in t If you download this form you must submit both application pa			
1 What are you applying for? Put x in the box that app	olies. See guidance note A.		
☐ To transfer the vehicle registration number directly to another☐ ☐ To retain (keep the use of) the vehicle registration number on The fee to retain is shown in section 4.			
2 Details of the vehicle that the registration number is being transferred or retained from	3 Details of the vehicle the vehicle registration number is being transferred to		
Vehicle registration number:	Vehicle registration number:		
Make: Model:	Make: Model:		
VIN/Chassis No: (You can find this on the vehicle or the V5C)	VIN/Chassis No: (You can find this on the vehicle or the V50		
Tax disc serial number (taken from the top of your tax disc):	Tax disc serial number (taken from the top of your tax disc):		
Date the tax disc runs out: DDIMM YIY	Date the tax disc runs out: DD MM YY		
Registered keeper's details	Registered keeper's details		
Title or company name:	Title or company name:		
Full name;	Full name:		
Full Address:	Full Address:		
Postcode:	Postcode:		
Your phone number: (In case we need to get in touch with you.)	Your phone number: (in case we need to get in touch with you.)		
You must include the following documents for the vehicle in section 2	You must include the following documents for the vehicle in section 3		
<ul> <li>The Registration Certificate (VSC) or New keeper's details (VSC/2) for the vehicle with an 'Application for a vehicle registration certificate' (V62).</li> <li>Note: If any details on the VSC have changed, please fill in the</li> </ul>	<ul> <li>The Registration Certificate (V5C) or New keeper's details (V5C/2) for the vehicle with an 'Application for a vehicle registration certificate' (V62), or 'Application for a first tax disc and registration of a new motor vehicle' (V5S) (if it is an urregistered vehicle).</li> </ul>		
changes section on the V5C.	Note: If any details on the V5C have changed, please fill in the		
<ul> <li>An MoT or Goods Vehicle Test (GVT) certificate (if appropriate).</li> <li>The appropriate fee for the transfer or retention.</li> </ul>	<ul> <li>changes section on the V5C.</li> <li>An MoT or Goods Vehicle Test (GVT) certificate (if appropriate)</li> </ul>		
If you need to tax your vehicle you also need to include:  An 'Application for a tax disc' (V10) or an 'Application to tax a Heavy Goods Vehicle (HGV)' (V85).	<ul> <li>The appropriate fee for the transfer or retention.</li> <li>If you need to tax your vehicle you also need to include:</li> <li>An 'Application for a tax disc' (V10) or an 'Application to tax a Heavy Goods Vehicle (HGW)' (W56).</li> </ul>		
A certificate of insurance or cover note.     The appropriate fee for the tax disc.	A certificate of insurance or over note.     The appropriate fee for the tax disc.		
Declaration	Declaration		
declare that I am, or I am about to become, the registered keeper of this vehicle, the details on the enclosed forms are correct, and I have read and understood the attached Guidance notes.	I declare that I am, or I am about to become, the registered keepe of this vehicle, the details on the enclosed forms are correct, and I have read and understood the attached Guidance notes.		
Signature:	Signature:		
Date: f you are signing for a partnership, limited company or other	Date: If you are signing for a partnership, limited company or other		

V317-0313

# Old paper form (£105 cost)

## The new service costs £80

(logbook)



### https://github.com/dvla/vrm-retention-online

# Need to visit someone in prison?

# 39%

# More likely to reoffend if not visited



Prisoner Name

Prisoner Number

### Convicted Visiting Order

Prisoner Location

VO TYPE	Reference Number	
VO		
PVO	Confirmation Number	
Enhanced		
Listener	Taile 1 Telli	
Special	VO Sent	
Insider		

Visitors: Adult (Maximum 3)		Visitors: Children (Un	Visitors: Children (Under 18 Years)	
Mr/Mrs/Miss	DoB :	Name	DoB	
Relationship		Relationship	Age	
Address	**	Address		
Mr/Mrs/Miss	DoB 1	Name	DoB	
Relationship		Relationship	Age	
Address	*			
Mr/Mrs/Miss	DoB	Name	DoB	
Relationship		Relationship	Age	
Address		Address		

Upon receipt of the attached, please book a visit (Maximum 3 seats per visit).

The Booking Office is open on 01603 438563 (see reverse for booking times)

Bookings will not be accepted more than 7 days in advance or within 24 hours prior to the visit.

No entry without a booking or correct identification. The booking clerk will require the above reference number.

This Visiting Order is valid for 28 days only.

Use this service to book a social visit to a prisoner in England or Wales.

You need the:

- prisoner number
- · prisoner's date of birth
- · dates of birth for all visitors coming with you

The prisoner must add you to their visitor list before you can book a visit.

You'll get an email confirming your visit. It takes 1 to 3 days.



Staying in touch with someone in prison

Send money to someone in prison

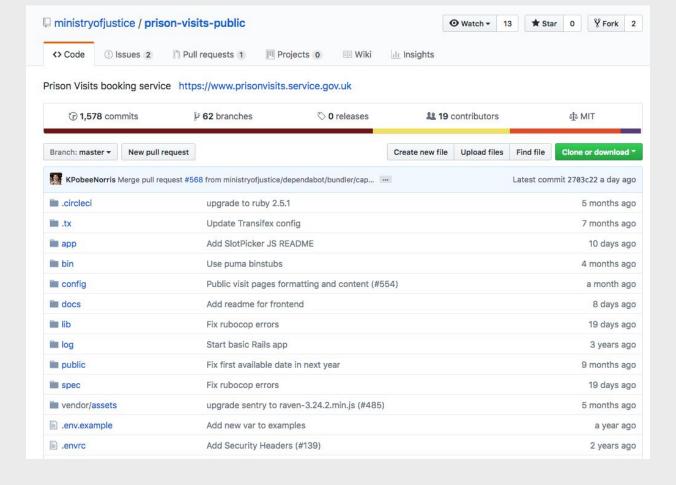
Find a prisoner

Find a prison

Explore the topic

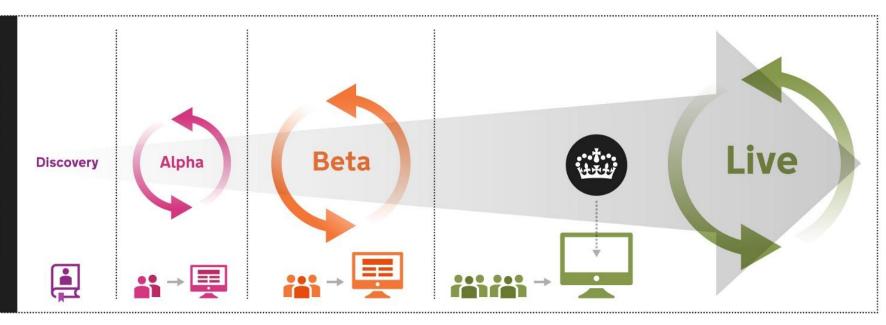
**Prisons and probation** 

## https://www.gov.uk/prison-visits



https://github.com/ministryofjustice/prison-visits-public

## Our process





BETA Complete our quick 5-question survey to help us improve our content.

Service manual > Digital Service Standard

### **Digital Service Standard**

The Digital Service Standard is a set of 18 criteria to help government create and run good digital services.

All public facing transactional services must meet the standard. It's used by departments and the Government Digital Service to check whether a service is good enough for public use.

#### Understand user needs

Understand user needs. Research to develop a deep knowledge of who the service users are and what that means for the design of the service.

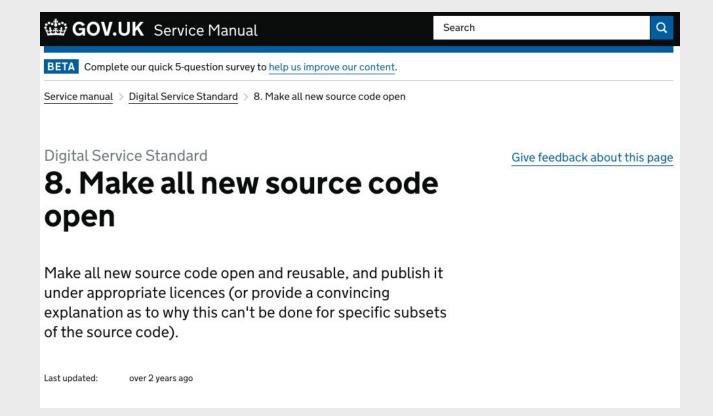
Read more about point 1

#### **Get notifications**

When any points in the Digital Service Standard are updated

email

### Our service assessment



## Code needs to be open to pass the assessment

# Why we code in the open?

## Code can be reused

# Transparency

Giving back to the open source community

Show everyone what you are working on

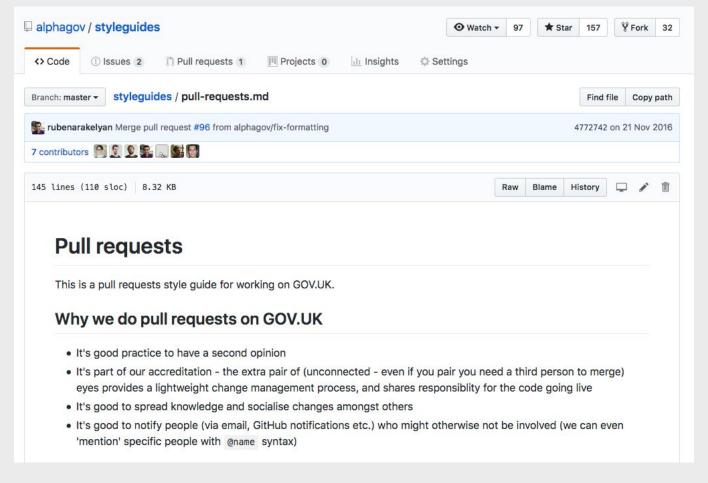
# Downsides when coding in the open

People can be nervous showing their code to the public

Sometimes external people have questioned choices without having the full context

To make this easier we do a lot of pairing and we have guidelines to make a pull request





# https://gds-way.cloudapps.digital

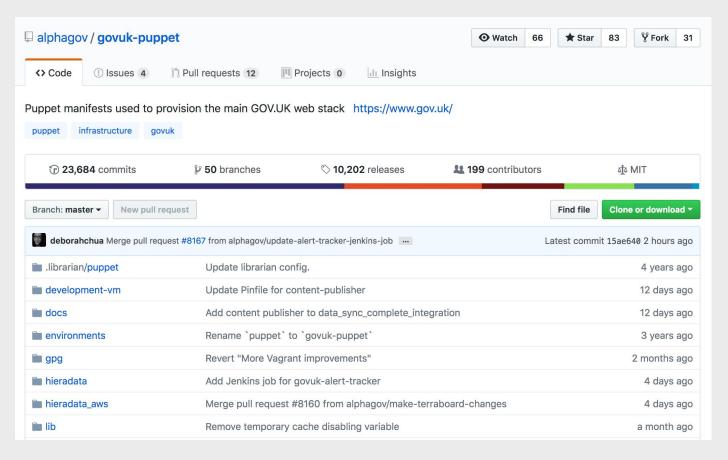
Coding in the open without revealing your secrets

12 factors app: don't store your secrets in the source code

What if I leak them accidentally?

It's important to recover quickly (rotate passwords, deploy quickly, use a CI/CD)

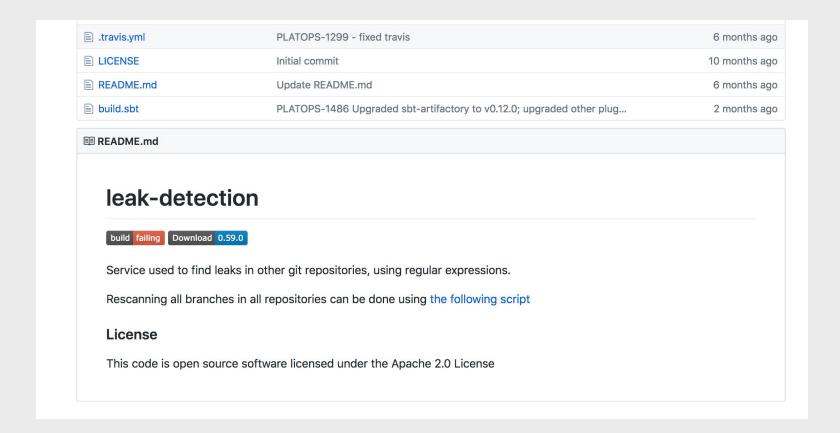
You can store the configuration in GitHub



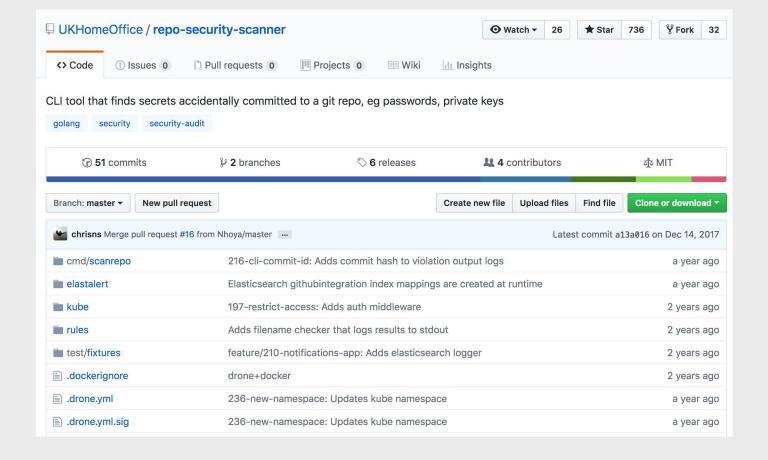
https://github.com/alphagov/govuk-puppet

You can even store credentials, tokens in GitHub: as long as you **encrypt** them!

# Security tools can be coded in the open



## https://github.com/hmrc/leak-detection



https://github.com/UKHomeOffice/repo-security-scanner

Our work is too sensitive, we can't do any open source!



**GCHQ** 

• UK

http://www.gchq.gov.uk

Repositories 39

People 37

Projects 0

#### Pinned repositories

#### Gaffer

A large-scale entity and relation database supporting aggregation of properties

● Java ★ 1.4k ¥ 304

stroom

Stroom is a highly scalable data storage, processing and analysis platform.

JavaScript ★ 87 ¥ 17

CyberChef

The Cyber Swiss Army Knife - a web app for encryption, encoding, compression and data analysis

JavaScript ★ 3.8k ¥ 543

Search repositories...

Type: All ▼

Language: All ▼

## National Crime Agency

National Crime Agency. Leading the UK's fight to cut serious and organised crime.

United Kingdom http://www.nationalcrimeagency.gov.uk/



Search repositories... Language: All ▼ Type: All ▼

#### remedi-infrastructure

Setup and deployment code for setting up a REMEDI machine translation cluster

∆ Apache-2.0 Shell Updated 2 hours ago

Apache-2.0 قائع

### remedi4j

Remedi4J provides a Java library for interacting with the REMEDI machine translation platform

Updated 3 hours ago

Top languages

People

Java Shell

Report abuse

0>

This organization has no public members. You must be a member to see who's a part of this organization.

Are you sure it's not an excuse?

We still can't code in the open unannounced policy, product...) Code like you were coding in the open

Keep following the same best practices

Your repository will be ready to be opened once the product or policy is announced

# Who is using our code?



Kia ora. Govt.nz is your guide to finding and using government services.



#### **Immigration and visas**

Visitor, work and student visas, customs, border security

#### Passports, citizenship and identity

Birth certificates, citizenship, passports, changing name or gender

#### **Leaving NZ**

Moving to Australia, working overseas, emergency help

#### Work

Public holidays, minimum wage, annual and

#### Tax, benefits and finance

IRD numbers, benefits, superannuation,

#### **Education**

School holidays, school zones, student

קבלת קהל  $\Box$ מדיניות ונהלים פרסומים חדשות מידע משפטי משרדים ורשויות שירותים ומידע

כל האתר

חפשו שירות או מידע...



#### אזרחות, תעודות ודרכונים

תעודת זהות, דרכונים, אזרחות, תעודות, אשרות

בנייה, דיור ומקרקעין

בנייה ורכישת דירה, רישום מקרקעין,

רישוי בענף הבנייה



#### אכיפה, חוק וממשל

חוקים, תקנות, בתי משפט, הרשות



#### אנרגיה, סביבה וחקלאות

ניצול וחיסכון באנרגיה, זיהום סביבתי, הדברה, בעלי חיים, חקלאות

חינוך והשכלה

מעונות יום, חינוך יסודי ועל יסודי,

חינוך מיוחד, קורסים מקצועיים,

השכלה גבוהה, מלגות



המחוקקת, הרשות השופטת, שלטון מקומי



#### בריאות ורווחה

ביטוח בריאות ממלכתי, קופות חולים, זכויות חולים ומטופלים, ניצולי שואה, קידום בריאות



אנשים עם מוגבלות

צרכים מיוחדים, אישורים, הטבות,

נגישות, תו נכה

#### מסים ותשלומים

תשלומי מסים ואגרות, דיווח לרשויות, קרנות פנסיה, קופות גמל



ביטחון וחירום

רישוי כלי ירייה, כיבוי והצלה, משטרה,

צבא, מגן דוד אדום, מצבי חירום

#### משפחה ומצב אישי

לידה, הורים יחידניים, קצבאות ילדים, מזונות, ידועים בציבור, פטירה, שארים





#### Digital Marketplace (beta)

Sign up

Log in

Opportunities

Seller Catalogue

Insights

Support

Contact

1025
Total opportunities

View 11 open opportunities

74% Awarded to SMEs

Search seller catalogue

\$257m

See who's winning work

#### **Using the Marketplace**

What you can buy

Deliver a project or outcome

Hire a specialist

Support

Request a buyer demo

Buyer guide

#### More panels and arrangements

**Panels** 

Hardware 🔀

Software 🔀

**Volume sourcing** 

Microsoft 🔀

SAP and Concur 🔀

# Coding in the open vs open source

We can't commit to support all the code we release as open source

We try to give back as much as we can (fixing bugs, contributing upstream)

It's less "expensive" to contribute upstream than forking and working on your own version

### Our code is released under MIT License

## Community

You can't just push your code to GitHub and hope people will find it

Don't solve the same problem twice

Collaborate, split the effort (and save money!)

We promote and organise cross government meetups

## What can we do next?

Improve documentation and reusability of our code

## Engage more with existing open source communities

Support the open source projects we use most

# How can you get involved?

You can use our code

#### Give us feedback

You can work for Government Digital Service: we are hiring!

### Questions?

If I can't answer right now, please send an email to media@digital.cabinet-office.gov.uk



#### Thanks!

Andrea Grandi @andreagrandi