Digital Identity Scotland
Summary

- Programme Overview
- OIX Report and Reflections
- Phased Approach
- Business Case
- What Now?
Programme Overview
Programme Aim

To develop a common public sector approach to online identity assurance, as part of digital public services. A solution that;

| Is a **common approach** to online identity assurance and authentication for access to public services, that supports the landscape and direction for **digital public services delivery** | Is designed with and for **members of the public** (service users) and that stakeholders can support. |
| Works: is **safe, secure, effective, proportionate, easy to use, and accessible**; and forms part of public sector digital services | Can **evolve and flex** with changes that occur in the future (future proofed), e.g. changing in response to new technologies |
| Where members of the public can be confident that their **privacy** is being protected | Brings **value for money and efficiencies** in the delivery of digital public services |
A National Priority

Digital identity is one of the public commitments for Digital and Data within the Programme for Government 2018-19;

“Digital Strategy for Scotland 2017 contains the commitment to; Work with stakeholders, privacy interests groups and members of the public to develop a robust, secure and trustworthy mechanism by which an individual member of the public can demonstrate their identity online.”
Scottish Approach to Service Design

*Digital identity Scotland* adopts the *Scottish Approach to Service Design*:

“Committed to designing, collaboratively, inclusively and empathetically. 
Users are at the heart of what we do and we work alongside other areas of the public sector in order to meet user needs more effectively.”

The programme is focussed on embedding the Scottish Approach to Service Design by putting users at the heart of what we design.

We have two members of our multidisciplinary team, from the Office of the Chief Designer, leading on user research Service Design.
Advisory Groups

The programme also has a clear directive from ministers to work with stakeholders, privacy interests and members of the public to develop a robust, secure and trustworthy mechanism by which an individual can demonstrate their identity; To support this we have set up:

• **Expert Group** is made up of individuals across the UK who have technical, privacy, rights and legal expertise including from public services, academic and industry experts and invited individuals with sectoral knowledge and skills. **This has the remit to provide expert advice to inform the design, direction and prioritisation of the work;**

• **National Stakeholder Group** includes service providers, public bodies, local government, privacy interests, third sector, citizen interests, and professional interest groups. Meetings are publically advertised, and those who wish to can attend and participate. **This has the remit to inform the design, direction and prioritisation of the work programme from a stakeholder perspective.**
Getting it right for citizens

*Working with stakeholders, privacy interests groups and members of the public*

<table>
<thead>
<tr>
<th>National Stakeholder Group</th>
<th>Communications and Engagement</th>
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<tbody>
<tr>
<td>• Membership includes:</td>
<td>• Proactively publish Board and other programme papers</td>
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<tr>
<td>o Public service representatives</td>
<td>• Regularly publish blogs, Tweets and articles</td>
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<tr>
<td>o Privacy groups</td>
<td>• The team regularly engages directly with citizen representatives, such as privacy groups</td>
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<tr>
<td>o Interested citizens</td>
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<tr>
<td>• Meets every 4 months (approx.)</td>
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<tr>
<td>• Advertised on Eventbrite and is open to all</td>
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Supported by Ministers

Mike Russell, Cabinet Secretary for Government Business and Constitutional Relations, launch of the Open Government in Scotland Action Plan 18-20, 31 Jan/19:

"We are proactively publishing more information than ever before, and taking an open approach in our policy-making, particularly with the Digital Identity Scotland team... ...Why do I use that example? Because it's a key example of making sure the digital age serves the needs of a modern democracy."
## Getting it right for service providers

<table>
<thead>
<tr>
<th><strong>Service Provider Workshop</strong></th>
<th><strong>Getting out and about</strong></th>
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| • The team has brought service providers from across Scotland together with the aim of understanding their thoughts on digital identity and their needs for a future identity solution.  
  • The half-day workshop explored current verification practices, ongoing digital transformation programmes and the participants hopes and fears for the programme. | • The team have also had more in-depth conversations with individual service providers to:  
  o better understand how their services are delivered  
  o gain insights into how this programme can address and improve the way in which they provide identity services.  
  • This has enabled us to test assumptions and is helping us design a solution that meets both service provider and citizen needs |
OIX Report and Reflections
### Stream 1 Proof of Concept

A technical work stream to demonstrate that a defined sub-set of the overall required functionality can be implemented.

This POC stream utilised a combination of methods and technologies provided by participant organisations.

### Stream 2 Standards

A second, analytical, stream assessed the steps that are required to deliver an interoperable and standardised digital identity service for Scotland.

After ‘alpha’ has concluded, the programme will move into a procurement phase to appoint a digital partner working towards the first live services.
Stream 1 - Who did what?

Service Layer
- Identification
- Authentication
- Attributes

Abstraction Layer
- Discovery
- Identifiers
- Routing
- Translation

Identity Provider
- Identifiers
- Authentication
- Attributes
- Storage

Identity Provider
- Identifiers
- Authentication
- Attributes
- Storage

Source
- Other Sources

Relying Party

Relying Party

Relying Party

Relying Party as a Source
- RP Data

Social Security

North Lanarkshire

Post Office

Sitekit

API

Digital Scotland
Digital Identity Scotland
PoC Complexity

Digital Scotland
Digital Identity Scotland
An Agile approach

The whole team has successfully transitioned to a flat structure, skills based approach, where talent and resources are shared across professions and working groups.

This practice aims to reduce silos, stop bottlenecks, ease working pressures on individuals, develop new skillsets and to flexibly meet the needs of the Alpha stage.
Agile approach v.s Relying on goodwill

*aka immovable object meets irresistible force*
PoC Lessons Learned

• Relying on goodwill has led to resource constraints from all participants and this has slowed progress (considerably)
• The OIDC protocol is broadly suitable for our needs
• (As is usually the case) just because two solutions support the OIDC protocol does not mean they will communicate “out of the box” however
• The integration challenges encountered so far have been relatively easily overcome
• Microsoft has a specific implementation of the OIDC protocol
• The findings of PoC suggest that the high level architecture and design of the DIS Service is appropriate to meet the programme’s objectives.
Stream 2: Standards & Interoperability Analysis

There are 5 parts (or Work Packages)

1. Baseline Identity Standards
2. Extended Identity Standards
3. Waivers
4. Standards for Attribute Assertion
5. Commercial Models
Workstream 3

User Research
Research questions: Online journey

• The scenario used for the online journey involved applying for a social security benefit and being required to get an LOA0 at the beginning of this journey, followed by an LOA2 at the end. This journey was selected as it is expected to be an early use case for Digital Identity Scotland.

• Different prototypes, content and visuals were used in each round to help understand key aspects of the journey for citizens. The research focus for each round is shown below.

• **Round 1 - overall journey:** Understand the user experience of being directed to an external IDP to verify identity online
  – At the start of a Social Security application setting up an account with an external IDP (LOA0)
  – using that account uplifting it to LOA2 at the end of an application.

• **Round 2 - consent:** How and where to ask for consent in the user journey

• **Round 3 – questions about picking an IDP:** Understand citizen’s reactions and concerns to being asked to choose an IDP

• **Round 4 – user journey of picking an IDP:** Understand how the content and design of the user journey can help support citizen’s understanding of having to choose an IDP (based on findings from Round 3)
Research questions: In person journey

- The last two rounds of user research looked at the in person verification journey.

- **Round 5 - Contextual research for in-person identify verification.** Discussing in person verification with staff and citizens at a First Stop Shop in North Lanarkshire

- **Round 6 - Map the in person process:** Understand the mental model for citizens for moving from an online application to in person verification.
Choice of IDPs

During the Alpha research we looked at citizen’s reactions to choosing an IDP generally, but also at how different types of IDP impacted how they made that choice. This included:

• Scottish Government IDP (myaccount)
• Known private IDPs (Post Office, Experian)
• Unknown private IDPs (Digidentity)
• Financial service IDP (Barclays, “Scottish” bank, Paypal)
• Social media (Facebook, Google)
Reasons for choosing an IDP

When participants were considering which identity provider to choose their reasoning was based on effort, familiarity and trust. These were broadly

• **Existing account/relationship:**
• Who do I already have an account with?

• **Connection to the wider process:**
• Who is related to what I am doing (applying for a public service)?

• **Brand awareness**
• Who do I know?

• **Brand perception**
• Who do I trust?
Reflections

Identity is hard
Reflections

There are different domains in which it’s hard:

privacy commercials
legal promoting citizen adoption
promoting RP adoption
future-proofing the platform
Reflections

If you look at any one domain in isolation, you can see a solution.
“Why don’t you just use Verify?”
Here’s Why…

Report by the Comptroller and Auditor General

Cabinet Office

Investigation into Verify

5 March 2019

5025 Session 2017–19 5 March 2019

House of Commons
Committee of Public Accounts

Accessing public services through the Government’s Verify digital system

Ninety-Fifth Report of Session 2017–19

Report, together with formal minutes relating to the report

Ordered by the House of Commons to be printed 1 May 2019
Reflections

But domains are interdependent to some degree, so you really need to consider implications across all when making decisions – don’t look at each in isolation.
Reflections

Think of trying to land four (or five) hyperactive children simultaneously on the below, and keep it perfectly balanced without anyone falling off…
Phased Approach
Phased Approach
What does moving to this look like

Baseline Today
Nothing from SG
Existing ld assurance from myaccount / Verify main providers

SS cDLA Tactical Solution
OIDC-compliant single ldP
MVP is SS cDLA needs:
• Step-up authentication,
• LoA standards geared to SS,
• low-volume pricing
• Tactical F2F / Vouching
Minimal support capability

SS ++ Less-Tactical Solution
OIDC-compliant middleware layer fronting two or more ldPs
MVP is common SS needs, targeted at next convenient benefit delivered (PIP?):
• Step-up authentication,
• LoA standards geared to SS,
• med-volume pricing
• Improved vouching / F2F
• Fraud Management
Improved support capability
Introduction of myaccount for non-LA use-cases?

Improved onboarding for public sector RPs
Improved capability
• Vouching app
• Matching adapter?
• Full ITSM capability

General Availability - Generic Hub + Multiple ldPs solution with Attributes
Improved onboarding for public sector RPs
Improved capability
• Vouching app
• Matching adapter?
• Full ITSM capability

Long-Term - Self Sovereign / Decentralised Identity + Attributes

*Current working assumption, pending Legal Advice, is that the Improvement Service are prohibited from offering Social Security the myaccount service as an Identity Provider, due to the provisions of the LEARS Act and use of NHSCR data
What is our current focus
- Phased Approach - Perceived Advantages

• Supports Social Security needs
• Simplifies (initial) DIS Business Case, Governance and Approvals
• Substantially reduces DIS risk and financial commitment
• Mitigates current gaps in detailed functional and non-functional requirements
• Retains Intellectual Property and Control
• Allows standards and interfaces to be developed and proven incrementally
• Supports limited initial scope whilst enabling wider (and potentially changing) scope and objectives to be met over time
• Utilises an iterative (Agile) approach whilst facilitating good governance practice and controls.
Business Case
The Strategic Case identifies significant benefits:

- saving time and effort for users
- saving time and cost for staff engaged in manual ID, verification and authentication activities
- catalysing wider back-office efficiency
- reducing ID fraud
- avoiding the cost of multiple services building alternative systems
- helping to maximise citizen entitlements to services and Benefits
Economic Case

The Economic Case set out how options were identified and appraised - through to cost/benefit examinations of shortlisted solutions.
Economic Case

Shortlist options were examined vs weighted technical, strategic, cost & delivery criteria

<table>
<thead>
<tr>
<th></th>
<th>OPTION 1 Do Nothing</th>
<th>OPTION 2 Private Sector IDPs via GOV.UK Verify scheme</th>
<th>OPTION 3 Private Sector IDPs direct via SG integration layer</th>
<th>OPTION 4 Private Sector IDPs plus public sector IDP direct via SG integration layer</th>
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</thead>
<tbody>
<tr>
<td>Technical performance</td>
<td>15%</td>
<td>0</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Strategic Fit</td>
<td>20%</td>
<td>0</td>
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<td>3</td>
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<tr>
<td>Potential VFM</td>
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<td>0</td>
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<td>4</td>
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<tr>
<td>Potential Affordability</td>
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<td>4</td>
<td>3</td>
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<tr>
<td>Supplier Capacity &amp; Capability</td>
<td>15%</td>
<td>0</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Potential Achievability</td>
<td>20%</td>
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<tr>
<td><strong>RATING</strong></td>
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<td><strong>2.25</strong></td>
<td><strong>2.65</strong></td>
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What now?
What now?

- Oversight and governance
- Standards and rules
- Certification and assurance
- Commercial framework
- Verify hub (Broker)
- IDP
- IDP
- IDP

Digital Scotland
Digital Identity Scotland
What now?
What now?

- Oversight and governance
- Standards and rules
- Certification and assurance
- Broker
- Broker
- IDP
- IDP
- IDP
- ATP
- ATP
- ATP

GDS
## Economic Case

### Scores for 4 OBC options (revised)

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Criteria</th>
<th>Do nothing</th>
<th>Verify</th>
<th>New Framework</th>
<th>Private Sec IDPs direct</th>
<th>Private &amp; Public Sec IDPs direct</th>
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<tbody>
<tr>
<td>0.15</td>
<td>Technical Performance</td>
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<tr>
<td>0.15</td>
<td>Supplier Capacity and Capability</td>
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<tr>
<td>0.20</td>
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Total Scores:
- Do nothing: 2.25
- Verify: 2.75
- New Framework: 2.65
- Private Sec IDPs direct: 3.1
Where next?

IT'S THE TRUST

ECONOMY

PLANET

STUPID!

1992

2019

Digital Scotland

Digital Identity Scotland
More Information…. 

@DigitalIDSscots & @MikeCrockart

blogs.gov.scot/digital/

www.linkedin.com/in/mike-crockart-scotgov
Thank you

Want to find out more? Talk to us!

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- blogs.gov.scot/digital