## Methodology

The ISA Programme commissioned a study on the current practices for the management and governance of URIs in the Member States. The study was carried out in January 2013 and surveyed 15 cases, where URI management and persistence were subject to a policy (as opposed to merely ad-hoc design). The 15 cases included three EU Institutions (including Eurostat and the Publications Office), six EU Member States (Estonia, Finland, Greece, Italy, Sweden and the UK), two standardisation organisations (W3C and DCMI) and four other initiatives (Data.gov, Europeana, Wikipedia and the Australian National Data Service).

## Links

http://semic.eu

https://joinup.ec.europa.eu/node/53858

## An action supported by ISA

This activity is supported by the European Commission's ISA programme. ISA stands for interoperability solutions for European Public administrations.

## Why ISA?

Administrative procedures have a reputation for being lengthy, time-consuming and costly. Electronic collaboration between Public administrations can make these procedures quicker, simpler and cheaper for all parties concerned, in particular when transactions need to be done cross-border and/or cross-sector. ISA supports such electronic collaboration. Through its more than 40 actions it provides tools, services and frameworks for the Modernisation of Public administrations in Europe, across e-borders and sectors.

## More on the programme:

http://ec.europa.eu/isa/

Contact ISA:

isa@ec.europa.eu

European Commission

**Good practices for**

# persistent (URIs)

**Uniform Resource Identifiers**

ISA programme
Interoperability Solutions
for European Public Administrations

ISA

# 5 Dos and 5 Don'ts for building your URIs with persistence

## Business need

Flexible data integration, within or across organisations, is the main value proposition of Linked Data.
In order to facilitate data integration and enable the interconnection of previously disparate data, data providers must have a policy for Uniform Resource Identifiers (URIs).

A policy for URIs should lay down the expected service levels of the Linked Data service, with long-term persistence being one of the most important service guarantees. The use of URIs as common identifiers for identical concepts in disparate datasets is a prerequisite for unlocking the positive network effects of Linked Data.

In this direction, European Institutions and national Governments should make their URI policy explicit (comprising a set of practices for URI governance and management), so that data reusers can rely on Linked Data services with confidence, and other data providers can link to these URIs or reuse them for identical concepts.

## 10 rules for persistent URIs

The survey concludes by summarising the available information as 5 Dos and 5 Don'ts for designing URIs with persistence. These are summarised in the figure below.

### 10 rules for persistent URIs

**Dos:**

**Follow the pattern**
e.g. http://{domain}/{type}/{concept}/{reference}

**Re-use existing identifiers**
e.g. http://education.data.gov.uk/id/school/123456
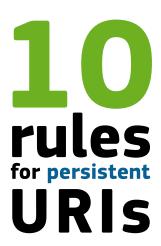
**Link multiple representations**
e.g. http://data.example.org/doc/foo/bar.html
e.g. http://data.example.org/doc/foo/bar.rdf

**Implement 303 redirects for real-world objects**
e.g. http://www.example.com/id/alice_brown

**Use a dedicated service**
i.e. independent of the data originator

**Don'ts:**

**Avoid stating ownership**
e.g. http://education.data.gov.uk/ministryofeducation/id/school/123456

**Avoid version numbers**
e.g. http://education.data.gov.uk/doc/school/v01/123456

**Avoid using auto-increment**
e.g. http://education.data.gov.uk/id/school/123456
e.g. http://education.data.gov.uk/id/school/123457

**Avoid query strings**
e.g. http://education.data.gov.uk/doc/school?id=123456

**Avoid file extensions**
http://education.data.gov.uk/doc/schools/123456.csv