Researcher identifiers: National approaches to ORCID and ISNI implementation

Workshop held 22nd and 23rd June 2015
Report dated July 2015
“Research identifiers: National approaches to ORCID and ISNI implementation”

This workshop and report was initiated by Knowledge Exchange knowledge-exchange.info

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Introduction and background

Knowledge Exchange is a collaboration between five national organisations, DFG – the German research Foundation, Jisc – the UK’s champion for digital technologies in education and research, DEFF – Denmark’s Electronic Research Library, SURF – the ICT organisation for Dutch higher education and research and CSC – the IT Centre for Science in Finland. These five key national bodies within Europe are working together to support the use and development of ICT infrastructure for higher education and research. Although the organisations are very different in the size and scope of their work, each has a national responsibility and influence on national policy, operates at the cutting edge level of IT development and can mobilise resources that can make a difference. Knowledge Exchange (KE) activities have had positive outcomes allowing partner organisations and their national policy makers to be better informed, share expertise and resources and push forward the necessary technologies to allow us to realise our shared agendas in developing and improving education and research.

Knowledge exchange has a long standing interest in persistent object and person identifiers. In March 2012, a Digital Author Identifiers Summit was held in London which brought together various national and international organisations working in the field to support efforts of consensus on an international scale. The summit was a small but key piece in the international jigsaw enabling subsequent widespread adoption of ORCID and ISNI and voicing various communities’ concerns that close cooperation between the two was highly desirable.

Three years later, some of the world’s largest research funders, institutions and publishers have integrated ORCID identifiers into their systems and workflows. As of June 2015, ORCID has issued 1.4 million identifiers; ISNI holds public records of over 8 million individuals of which 2.25 million are researchers. At the same time, ISNI and ORCID have taken steps to define system interoperability and have developed an ISNI to ORCID search and link tool. Currently, ORCID uses Ringgold/ISNI organisation identifiers for its affiliation module.

More and more countries are making collected efforts to provide ORCID identifiers for their researchers and encouraging implementation of ORCID iDs into the national and local research information infrastructure.

In June 2015, KE brought together representatives from its five member countries for a Knowledge Exchange Workshop on National approaches to ORCID and ISNI implementation. The aim of the workshop was to share national perspectives on ORCID and ISNI, including the challenges, solutions and lessons learned with regards to implementation of ORCID and ISNI on a national scale. Issues discussed included legal and regulatory challenges, authentication and integration and also outstanding issues of functionality, interoperability, policy and sustainability.

This report gives an account of the meeting and presents some outstanding challenges, some possible solutions and begins to take stock and look ahead; what lessons have we learned that should we take into account when moving on to organisational and other identifiers?
Snapshot progress report from ORCID

In June 2015, over 1.4 million researchers are registered with an ORCID iD. The majority of these (around 63%) have been created as result of a referral from a member organisation.

ORCID iDs by creation method

A small number, around 7%, have been batch registered by organisations and around 30% have been registered by individual researchers on their own initiative (shown below as “Direct via ORCID.org”). ORCID has over 280 member organisations and “integrations in every region and sector of the international research community”. 
Apart from the five national members of KE on which we report in more detail later in this document, recent international adoption includes:

» a national ORCID consortium in Italy, 70 Universities and four research centres will join as a result, with more to follow. By the end of 2016 at least 80% of Italian researchers (including PhD students and post-docs) will possess an ORCID iD linked to their publications back to 2006

» The Swedish Research Council has made the use of an ORCID iD mandatory in their application system PRISMA, a new version of which is to be released in Spring 2016

» In Australia a number of national bodies representing universities, research administrators, libraries and research data services have released a "Joint Statement of Principle" endorsing national adoption of ORCID

» In Spain, in a "bottom-up" approach, four large library consortia are adopting ORCID

» In Austria, links have been created between ORCID and the FWF grant management system

» Norway is exploring integration with national CRIS

» Portugal has issued a nationwide call for researchers to register with ORCID and PT-CRIS is using ORCID as a hub to connect information

In March 2015, ORCID received a $3 million grant to “ensure that our identifier infrastructure is sustainable and widely used now and in the future – for the good of all research”. In addition to a surge in membership staff, development and communication, the sustainability effort will also include an overhaul of governance - ensuring that the new member community can participate fully in ORCID’s future.

More on this (in Swedish) at: [http://bit.ly/1NUkMs9](http://bit.ly/1NUkMs9)

[1]
ISNI is a bridge identifier - linking multiple identifiers for the same personal identity. ISNI covers multiple domains - including cultural and performance and identifies organisations as well as long-dead and fictional people.

Research is a major domain within ISNI. ISNIs are created in a centralised manner, usually requiring confirmation from multiple sources and usually using public information but sometimes also using private or proprietary data sources. They are not "claimable" by individuals except in the case of ORCID iDs. Most ISNI work is in batch mode with large batches of imported data. Sources for and users of ISNI include libraries, music and text rights organisations, archives and museums, trade sources, research and professional organisations, funding and grant bodies, learned societies, publishers and article, citation and theses databases. ISNI International Agency employs no direct staff. Instead the founding members provide the staffing resource for the management, administration and assignment processes. The ISNI-IA (International Agency), is a not for profit, ISO endorsed organisation, incorporated in the UK. ISNI's Board members represent 60,000 libraries, 466 national libraries, 229 music rights management organisations, 89 text rights management organisations and 52 performer rights management organisations. ISNI is a growing database with a focus on quality management and linking data.

ISNI's database is not yet three years old but includes authoritative data for 18 million persons and organisations of which over 8 million have assigned ISNIs with 15.4 million links established. 99 independent sources contribute to the database. 10% of the database represents researchers and 1.8 million links have been generated among the sources for these researchers. There are three major types of links.

- links to the sources which confirm and disambiguate the identity
- links between identities (could link to another person or to an organisation)
- links to related resources / works with which the identity is associated

Links to an identity's related resources are established for the purposes of disambiguation, i.e. "this is the John Smith who wrote this work". ISNI does not strive to include an exhaustive list of links for all works with which an identity is associated.
Following recommendations from the Jisc/CASRAI working group, ISNI is working with University College London to test data quality and interoperability on both sides. Other research projects are underway with:

» the OCLC Research Task Force on Representing Organisations in ISNI

» ISSN

» Movielabs and EIDR (Entertainment Identifier Registry)

» Linked Content Coalition / UK Data Copyright Hub project on scalable rights assertion

» Harvard University – loading files of economists and movie makers

» DAI Netherlands and Royal Library

ISNI and ORCID play complementary roles. ISNI enables researchers to find their public identity and even to correct it via the “yellow box” (see opposite). ISNI creates links among its sources who are able to re-distribute to sub sources.

Information is only passed from ORCID to ISNI if it has been made public by the author; information is only added or amended on ORCID (by ISNI or any other body) if the author has given specific permission.

ORCID is mainly self-registering. ISNI is creating records for researchers by collation from public information sources - this method suits some organisations like La Trobe University.

The “Yellow box”

Please help us improve this record

If you have any supplemental information about the identity listed here, please click in this box to go to the contribution form.

Thank you in advance!

[1] 8 See http://tinyurl.com/ow620eo for an example of this, a search reveals that the same person is both a scientist and playwright and shows links to an organisation and the sources from which this information has come. 9 http://repository.jisc.ac.uk/id/eprint/5853 10 http://bit.ly/1MNIxU4
Snapshot updates from KE partner countries

**Finland**

Following CSC’s preliminary study on researcher identification (2013) which concluded that, of the person identification systems available, ORCID provided the best opportunities for use on a national level, a study was commissioned by the Ministry of Education and Culture and conducted by CSC with a multi-sectoral steering group. The report published in April 2015 and recommends:

- A national ORCID coordinator should be appointed to promote and support the introduction of ORCID.
- ORCID should be promoted by integrating the scheme into a variety of services and processes - See diagram below.
- Researchers should create their own ORCID IDs; organisations are not recommended to create ORCID IDs on behalf of their researchers or to make the use of ORCID IDs mandatory – this is mainly because of concerns about privacy legislation, in particular the Finnish Personal Data Act.
- A “National Connect Service” should be set up to link ORCID IDs to research organisations. This would be a big advantage for institutions without a CRIS as it would enable their researchers to link their ORCIDs to home organisations.
- Investigating further whether there is a demand for a national deal on ORCID group membership.

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![Diagram of ORCID integration into various services and processes.](image-url)
**Denmark**

DEFF conducted a pilot project in 2013 to gauge the interest in a national implementation of ORCID. This examined the technical, organisational and economic options and provided a basis for a project application for a national ORCID implementation pilot project with three partner institutions. All three universities gave support to ORCID adoption, preferring a researcher opt-in strategy for ownership and trust reasons. ORCID is now included in the National Open Access Strategy and the National Research Data Strategy and the Danish Council for Independent Research recommends, and the Novo Nordisk foundation requires, an ORCID iD in funding applications. Work has been done with Pure to allow claiming of an ORCID iD through the Pure interface and further integration is expected in 2016. In the long run it may be preferable to include ORCID iDs in university identity management systems so that these can feed Current Research Information Systems (CRISes) and many other systems.

Currently DEFF is sponsoring a national ORCID implementation project with project partners including seven out of the eight Danish universities, a consortium of all Danish university colleges and a consortium of research institutions under the Ministry of Culture. The ambitious goal is 80% ORCID adoption for these partners by summer of 2016 (with a prize for the winning institution). Localised materials promoting and explaining ORCID have been created to win support from individuals and stakeholder organisations (see opposite). These include posters, manuals, videos, user guides and materials on Pure integration. A web site, toolkit and helpdesk are available for end users and also to support local organisations needing support and guidance for local implementations. Nine parallel implementation projects are underway in a range of organisational and technology settings with “a variety of communicative approaches – from advocacy to decree”.

**Poster templates**

If you need to print posters, please contact the VBN Editorial Office at vbn@aub.aau.dk. We will be happy to assist you with high resolution files.
Looking forward to the future, Denmark is very keen to see:

» more national and international funders using and requiring ORCID iDs

» better ORCID implementations in Web of Science and Scopus

» better integration with CRISes, particularly Pure

» ORCID obtaining a critical mass so our researchers will start to experience the promised benefits

» national and international databases and ID systems including ORCID iDs

» a full metadata round trip

Germany

German libraries use the Integrated Authority File (GND) for author identification. Through VIAF, the GND is linked to other name authority files (including ISNI and ORCID). This allows merging of publication lists and connecting publications with the correct author. Forschungszentrum Jülich GmbH (FZJ) is a member of the Helmholtz Association of German Research Centres and is one of the largest interdisciplinary research centres in Europe. FZJ has an ORCID Membership and authors are registered by request. The FZJ publications database, JuSER, allows authors to report existing ORCID iDs and stores them in the authority record of the author. The intention is that authors will have to submit their publications only once, using JuSER as the master record, and allow automated synchronization with ORCID, each author will be registered and the existing or new ORCID iD stored in the JuSER authority record; metadata on existing and new publications will be pushed from JuSER to ORCID. This is all likely to require automated ORCID registration for authors using JuSER, and new authors will be automatically registered with ORCID on their first JuSER submission.

Like the ORCID.dk project in Denmark, there is a proposal for an ORCID.de project in Germany involving 16 leading research and academic institutions, including the Deutsche Nationalbibliothek (German National Library). This project hopes to coordinate ORCID-related activities, organise events, provide German-language material and help with implementation. ORCID is being integrated into institutional repositories to allow users to claim their content and push those claims into the ORCID Registry. The project also intends to seek legal expertise for a German perspective on privacy issues around author identifiers, with a focus on ORCID.

ORCID, CrossRef and DataCite have been working together to improve the connections between their Persistent Identifiers. E.g. when a publishers sends article metadata to CrossRef to mint a DOI for that article, CrossRef will scan that metadata for ORCID iDs. DataCite will do the same when minting DOIs for research datasets. If an ORCID iD is found, then CrossRef and DataCite can push that metadata to the author’s ORCID record, enabling close to real time updating of a researcher’s publication list. As more publishers are collecting ORCID iDs during manuscripts submission, this will mean that researchers will not have to update their records manually, and will improve the flow of publications information to systems that access the ORCID registry. ORCID is working on similar workflows for affiliations (including the ability to update affiliation date) and funding. [12]
The Netherlands
Since 2005, there has been collaborative work in a National working group consisting of leading libraries, research organisations and SURF on a Digital Author Identifier (DAI). DAI was created during the national repositories’ Innovation Programme (DARE program wikipedia.org/wiki/Darenet) and are assigned based on presence in the National Author Thesaurus. There are currently around 73,000 DAI records and these are visible in Narcis.nl (narcis.nl), the national Open Access gateway. More recently, recognising that DAI is a national approach while research is an international endeavour, a hybrid approach has been proposed where ISNIs and ORCID iDs are represented in the research information infrastructure. ISNI is seen as the preferred iD system for Dutch library collections by the DAI working group and the Royal Library is a national ISNI registration agency in the Netherlands. A joint effort by OCLC/Royal Library is underway to translate all DAI to ISNIs and to eventually replace all DAI. The working group is also pushing forward ISNI integration in CRISes (and Narcis). ORCID is seen as the preferred ID system for research output; a pilot programme is planned, which if successful could be followed by a national roll out. Three major use cases have been outlined:

- **ORCID and Open Access** - on submission of a manuscript (to publisher journals) a link will be created to existing ORCID iDs or a prompt to an unregistered author to register a new ORCID. These ORCID iDs will then be included in the article metadata.

- **CRIS integration** - the objectives of this pilot are to import existing ORCID iDs or register new ones for unregistered authors, to integrate this into the CRIS registration workflow, to map and link ORCID iDs to DAI and ISNIs and to integrate ORCID iDs into the CRIS data structure using CERIF.

- **Federated identity** - the existing authentication system, SURFconext has seen explosive growth in the last year. SURFconext mediates authentication between institution, identity holder and service provider providing single sign-on functionality for multiple service providers and offering collaborative features, such as team spaces and conferencing tools. The pilot aims to build on ongoing work with ORCID to include ORCID as a service that uses the federated identity credentials and possibly to integrate ORCID as an attribute in SURFconext and potentially use this in other environments such as CRISes.

SURF would like to clarify two particular concerns:

- While recognising that author claim and self-registration is a desirable approach, will it generate adoption on the scale and in the time required for many of the current initiatives to succeed; especially since in the Netherlands researchers have already undergone a similar process when the DAI was introduced? Are there success stories out there to inspire researchers to claim their ORCID iDs? On the other hand, if an automated solution is used, how do we address potential legal and ethical concerns about researcher consent?

- ... and related to that, is the data or analysis available to convince institutions to embrace ORCID?
The UK

The context for research management in the UK is complex. Of the 160 universities, around 125 have institutional repositories and around 60 are using (mainly CERIF compliant) CRISes. Some are moving from the IR to the CRIS, some the other way and some use both with a variety of success in linking the two. The funding landscape is also complex with a dual national funding system for research, no shared reporting infrastructure and many research funding organisations, government and non-government, giving rise to multiple funder systems with which researchers and institutions must interact.

In 2012 the key organisations came together to form a Researcher Identifier Task Group which issued a number of reports and then validated its conclusions in a consultation with the community. A study on use cases for ORCID and possible implementation plans was followed by the creation of the ORCID Implementation Group and a pilot programme with the aim of streamlining the ORCID implementation process at universities and investigating the possibility of UK consortium membership. Eight University based pilot projects were run between May 2014 and January 2015. The pilot findings included:

- cross organisation teams worked well
- early buy-in from senior management and early involvement of HR & legal services are important
- encourage on-demand creation of ORCID iDs, not bulk creation
- technical issues were not a significant hurdle (generally integration with internal systems and processes was achieved)
- unexpectedly, convincing researchers was harder than convincing senior managers
- implementing ORCID took an average of 290 hours of staff time, at total cost of about £12,500 (one-off cost including one year of consortium membership – will be cheaper with national consortium)

Those universities consulted expect to see measurable efficiency improvements, especially in internal data quality, streamlining of publications management and enhanced reporting to funders approximately two years from implementation, with benefits increasing steadily over the following three to four years. They expect that ORCID will enable a wide of range of improvements to the scholarly communications ecosystem - these have not been given a financial value but many stakeholders saw these as more important than the administrative savings and efficiencies.

This was followed by a UK ORCID consortium membership consultation in April and May 2015. In late June 2015 a national consortium agreement for ORCID was announced. This agreement:

- launched a consortium membership model with tiered pricing
- provides additional community and technical support
- will further investigate how we can integrate ORCID in our national services
Jisc has also been working with CASRAI on organisation IDs. Use cases\textsuperscript{19} and a report\textsuperscript{20} were commissioned by the working group which concluded that an “ISNI+” solution was desirable:

“… while one single candidate would not fulfil all the [necessary] criteria, it would be useful to separate the infrastructure element (the provision and maintenance of the orgID itself) and the service element (the services offered both to registrants and to end users of the services). The most desirable vision for the future would be for ISNI to emerge as a strong, sustainable and internationally well supported baseline or in their own words “bridging” ID with a few commercial players, and perhaps some non-commercial ones such as the BL and HEFCE, acting as registration agencies and holding crosswalks or equivalence tables to their own IDs.”

To support this vision, the working group recommended further national policy direction recommending the value and importance of identifiers such as the metrics tide report\textsuperscript{21} which sees person and organisation IDs as vital to reliable metrics.
Challenges

1. Speed of adoption, achievement of critical mass

ORCID adoption is progressing well, with the number of registered researchers, member organisations, and technical integrations all rising quickly from a standing start. As one might expect with a new infrastructure element though, there are issues reported both with individual researchers recognising the importance of IDs and with organisations adopting, implementing and prioritising them. Several attendees reported problems with Web of Science (WoS) and Scopus: the interfaces allowing use of ORCID iDs within Scopus and WoS can be tricky and there can be 14 days delay with WOS synchronising data with ORCID. This can be very confusing for researchers. Similar problems are reported with PURE. It is generally felt that while many publishers, database and CRIS suppliers have paid lip service to adopting ORCID that generally ORCID is low on the development priority list. Some speakers expressed the view that publishers are convinced of value of ORCID but in some cases it takes time to change manuscript submission systems. Similarly, in research councils, ORCID integration creates challenges for old systems. The recent UK report notes that the “actual time and cost associated with ORCID implementation will depend on the project scope and level of integration required, particularly the number of internal systems in which an ORCID iD is to be recorded and the number of interfaces required between these internal systems and with the ORCID API”. So while the estimated £125k cost for implementing ORCID in an institution applies to the type of implementation undertaken by the pilot HEIs, others, including some research funding organisations, have expressed concern about the costs to complex organisations with multiple, chained legacy systems. This is to be expected with implementing any such change.

Amongst researchers themselves, there seems to be a shared recognition of the problems of incorrect assignment of research outputs and the ambiguous nature of names etc. but – depending on the use case – it can be difficult to articulate the immediate practical benefit of registration to individual researchers (e.g. as part of create and add within PURE) and also - why they should link their ORCID (e.g. to an institutional profile or PURE). It was suggested that institutions might offer some form of simplification or efficiencies to encourage authors. At the same time, the likely advantages to individuals could be highlighted by case studies created by ORCID working with subject communities.

2. Metrics

In the early days of development, it has been useful to highlight the number of ORCIDs and ISNIs claimed/registered, but we need to look for more meaningful metrics for the future. In particular, we should look at:

- the amount of links and data/publications attached to an iD
- the number of URLs including links to ORCID iDs
- the number of ORCID iDs that have been enhanced by researchers with links back to institutional systems
- the % of publishers' new publications which have included or claimed an ORCID

When looking at metrics from the point of view of personal and institutional performance, we must be careful not to give the impression that their primary purpose is monitoring, otherwise we run into problems including those mentioned below.

3. Big brother

As well as concerns with metrics mentioned above, there are concerns with the use of ORCID as a key for authorising access to other systems. It was also noted that in Finland, the ORCID initiative is unpopular with some researchers as it is coming from the Ministry - researchers feel it's another requirement imposed on them by the government. This was also a frequent concern raised during UK consultations. The point of researchers claiming their own ORCID iDs is
that it is essentially a bottom-up movement to make researchers’ lives easier. If it is taken over by institutions and their different priorities then it may be perceived as just another burden imposed on researchers.

4. Legal issues

The processing of personal data is regulated by data protection legislation in the UK and other European countries. Data protection was a key consideration for the UK pilot projects in the design of their ORCID models and it did not prove to be a major obstacle. Probably the most frequently raised challenge during the workshop was data protection and privacy legislation nationally and internationally. There were concerns that, with impending EU Privacy Regulations coming into force, the “ground is moving under our feet”.

In data protection legislation, transparency and fairness are key concepts. Processing data without consent where it is unnecessary will contravene data protection legislation. Where it is not clear exactly that “free” consent is in place it is a matter of balancing the risk of non-compliance with the benefits of the processing being carried out on the individual’s personal data. In the UK, where processing is considered “fair” – i.e. of clear benefit to the user – or the data is already public, then uploading data to ORCID, although involving some risk, is considered acceptable\textsuperscript{24}. Data processing by a HEI (including upload to ORCID) which could be considered to have a negative effect on a researcher is likely to be considered unfair.

Part of any institution’s duty of care is to:

- avoid negligence by, for example, causing injury to individual researchers by damaging their reputation or exposing them to professional defamation
- provide security for individuals by avoiding disclosure of private, confidential or sensitive information
- provide security of data by protecting as far as possible against hacking.

As most large institutions are experienced data controllers with in-house expertise this issue is no different from many they face. So they should be in a good position to assess risk and, where they deem it necessary, to ensure compliance. For others, especially relatively small institutions, it may be a problem to access or keep in-house this type of expertise on a complex matter.

Processing data outside the EEA

Processing data outside the EEA has been raised as a concern and requires particular consideration. This is relevant where institutions would choose to bulk register their researchers by uploading personal data records to ORCID where that data is processed for example in the United States. This is one of the reasons why there is a trend away from institutional creation of ORCID identifiers. It is now ORCID standard policy that for this use case universities should use a Create-on-Demand (http://members.orcid.org/create-records) workflow which involves facilitating record creation and providing linking tools to local systems. The Create-on-Demand process allows users to create a new ORCID record any time and to grant institutional systems access to read from or write to their record via the ORCID API as part of the process. Thus the intention is that where a record is created using the Create-on-Demand workflow no personal data will be transferred outside the EEA without the individual specifically consenting to the processing with full knowledge of how the data will be processed.

\textsuperscript{22} export from PURE to ORCID record, which should be available at beginning of next year, should alleviate this.

\textsuperscript{23} See http://bit.ly/1EoVjav for different implementation options.

\textsuperscript{24} There are differing views on whether this will be changed by the proposed European Privacy Regulation.
Although data being processed in the United States, for example, might raise political concerns for some individuals and organisations, from a UK legal point of view the geographical location of personal data isn’t the crucial issue – accountability is. The law requires that there is an adequate level of protection for the rights of data subjects when transferred outside the EEA, including the United States. One way the data controller can comply is by carry out their own assessment of the adequacy of the level of protection associated with a particular transfer. Although it should be noted that because they are a non-profit organisation, ORCID cannot be certified by Safe Harbor\textsuperscript{25}, ORCID’s commitment to apply the principle of Safe Harbor\textsuperscript{25}/TRUST-e\textsuperscript{27} seal is evidence that can be used to assess the adequacy of the level of protection for the rights of data subjects when their data is transferred outside the EEA.

Different requirements will apply in some countries like the Netherlands, for example, where there is a national legal framework (http://bit.ly/1VIE08R) in place which states that service providers must have Safe Harbor Certification if they process personal data and are in a country outside the EEA or which does not apply an appropriate level of data protection. TRUST-e seal is not specified as an acceptable alternative by the Dutch legislation. In Finland, according to the Personal Data Act, personal data may nevertheless be transferred in two cases: a) if the data subject has unambiguously consented to the transfer (however, this approach is not recommended as consent given in the context of employment is considered legally dubious) or b) if the data subject has given an assignment for the transfer, or this is necessary in order to perform a contract to which the data subject is a party or in order to take steps at the request of the data subject before entering into a contract. Again this case is considered as carrying a legal risk as some experts maintain that issuing researchers with ORCID iDs is not “necessary” for the execution of researchers’ employment contracts\textsuperscript{28}.

Any organisation concerned about data protection and the bulk-create process, is encouraged to use the Create-on-Demand process. In this workflow, the record is not created until the researcher clicks on a button in a user interface or email.
5. Explaining the intended role of ORCID
While it is helpful to demonstrate the interoperability of ORCID with institutional and other systems, it can be a challenge to explain that the intention of ORCID is not to be a primary identifier in institutional systems such as personnel and finance. Similarly, while demonstrating and promoting interoperability with authentication systems, it is important to note that ORCID was not designed and is not intended to be used as a generic authentication solution. ORCID has to protect and focus on its primary purpose of providing a global person identifier, rather than providing ad hoc authentication solutions. We cannot stop ORCID being used by others for their own purposes and we should be aware that whatever we discuss or recommend, people will use and are already using ORCID for authentication. However it needs to be clear that organisations seeking authentication solutions should use one designed for the purpose. This is particularly relevant outside of academic institutions (e.g. publishers, funders) where there is no agreed upon single sign-on (SSO). ORCID is already working with existing SSO system providers where they wish to include ORCID iDs as an attribute and will seek to work productively with other authentication services. If the flexibility and interoperability of ORCID can be demonstrated without giving a false impression of its intended scope, this will go a long way to reassure those with security concerns.

6. Quality issues and making the most of both ISNI and ORCID
With continuing collaboration and increasing interoperability between ISNI and ORCID, it is important to communicate clearly the balance between:

- the quality of publication/output/results information in ISNI where multiple sources other than the author have contributed to creating the resources
- the immediacy, currency and ownership created by the claim and self-registration model of ORCID

It is important that the present and future user community benefits from both author input and independently verified input.
Possible solutions and future directions

1. Legal, data and privacy issues
KE will stay in touch with ORCID to help KE respond to EU data and privacy proposals and to brief stakeholders. A possible project has been suggested to build a "straw man" of possible legal agreements between consortia and ORCID. It seems highly likely that an increasing number of funders, some institutions and other organisations will require the use of ORCID iDs. Different jurisdictions have differing legal requirements to be managed, and, with the upcoming changes in European legislation, compliance will need to be continually reviewed. It is recommended that institutions should focus on and demonstrate a very clear risk management approach and carry out their own assessment of the adequacy of the levels of protection associated with processing personal data using ORCID. The fact that ORCID has transparent structures and clear information on its website about who its senior officers are will help in terms of evidencing DP compliance.

2. The THOR project
Will build on work done in ODIN. While ODIN proved the concept of linking identifiers between people and datasets across machine, discipline & cultural boundaries, THOR will take this work & make it sustainable, concrete reality. It intends to implement and integrate services around ORCID and DataCite and "Make things useful & usable". A key aim is to build on the work of ODIN and improve ISNI-ORCID interoperability making the underlying code maintainable and enterprise quality.

THOR is very keen to hear from the community and will conduct extensive publicity, and community building exercises, including outreach workshops, bootcamps etc.

3. Promotion and awareness raising
KE might consider encouraging joint work on liaison with vendors (e.g. CRIS suppliers) and publishers. KE member organisations can also play a role in promoting use of ORCID/ISNI to service providers noting that this reflects the interests of and is supported by many national user bodies. Person iDs have a wide variety of uses, not only for corresponding authors. Any promotional work should be supplemented with examples of good practice and well defined use cases. Researcher involvement is crucial – starting with clicking on an email and going from there. It should be possible to provide examples of good practice amongst peers. i.e. point a researcher at a researcher, point an institution at a similar institution and the same for countries – this report has national snapshot summaries which can be the basis for such reusable stories.

ORCID needs to feature success stories, both from the institutional perspective and especially from the perspective of individual researchers (e.g. I corrected entries for myself).
on WoS or SCOPUS via ORCID or in a successful job application I was able to quote my ORCID record as the master source for my publications). Progress snapshots could be brought together to inspire and inform; this report will hopefully play a part in this but we also need much shorter high impact materials which prove critical mass by posing (and answering) the questions:

» Why is there such a buzz about researcher iDs?
» Why is this all happening in different countries at the same time?
» What are the drivers?

At the same time, this report could form the basis for a more concise report aimed at policy and decision makers.

It was suggested that this report and future ORCID/ISNI implementation discussions might be of interest to the current work on OA Policies and that it would be helpful for KE to organise a workshop where funders speak about the sustainability of services relevant for open access. ORCID and ISNI were mentioned as possible examples of such a service. KE responded that it is already planning workshop(s) with funders and HE to discuss the outcomes of a study on OA Policy Dependency. Science Europe have been asked to contribute and support these workshop(s). The focus will be on services that are particularly OA oriented (e.g. DOAJ, SherpaRomeo) and less on more generic services such as ORCID/ISNI, but KE will ensure that the issue of ORCID/ISNI use by funders will be raised during the workshop(s).

An easily accessible (on the website) list of funders using ORCID would be an essential background component for any roundtable funder discussions.

4. Incentives and expectations
From November 2009 when ORCID was launched, to November 2011 when the paper "Collective Action for the Open Researcher & Contributor ID (ORCID)" was published, to this workshop in June 2015, growth has been rapid. It is important that we recognise the immense progress made by ISNI and ORCID in a relatively short time and be realistic with our expectations around uptake - patience is needed. At the same time we have a short window of attention while ORCID has received substantial funding to underpin growth and sustainability. We must expect to see the results of this soon enough to avoid decision makers losing interest.

While some organisations are reluctant for a variety of reasons to mandate use of ORCID, there can still be clear incentives for individuals to use identifiers. The use case which was most often mentioned by researchers in the UK studies was saving time and duplication in grant applications and subsequent reporting to funders. This is still a promise which requires a critical mass, not only of researchers but funders. So funders need to demonstrate that using an ORCID will indeed save individuals time and effort albeit in the future. Using ORCID needs to be the ‘path of least resistance’. This is part of the business case for individual researchers.

Similarly for institutions and organisations we need to make a business case(s) showing how these IDs save money and time for institutions and nations. At the same time, we need to not lose focus on individual researchers - if the emphasis shifts to institutions then the perception of individual benefit may be lost and researchers may instead be suspicious of what is perceived as another corporate requirement.

It was suggested that a competition with a substantial prize might be held to find stories of ORCID use in real life ("living, growing ORCIDs" and "golden ORCIDs" were mentioned).
5. Possible future directions and other issues

» Highlight the benefits of a consortium – technical and organisational support and legal guidance can be provided and coordinated and experiences shared.

» Make it easier for authors to claim from legacy databases – ISNI is working with BL on a project to look at this. On the other hand, the opinion was also expressed that we will get great benefit by better using the data that we already have. “Rather than dredging up obscure data that some researchers would like to forget!”

» Make the ISNI database more useful to ORCID. Generate inter-relationship links to make the data available via ORCID. Currently the “guesses” presented to researchers of publications which might belong to them are often inaccurate and appear to be primitive. Is there a future for a predictability tool to improve this? Similarly where a publication has no ORCID attached can this tool make suggestions as to which ISNI or ORCID might be attached as authors/contributors?

» Organisation IDs are not yet widely used, but progress is being made towards a consensus on an open and easy solution\(^2\). The work on reaching such a consensus and promoting orgIDs is some years behind person IDs and presents significant different challenges (splits, mergers, name changes, resurrections, deprecations, frequent changes of management and organisational structures, ownership etc.) The vast majority of ISNIs are people not organisations, yet orgIDs will become increasingly important and will raise similar and different issues. It was suggested that organisational identifiers need an open system – yet commercial and proprietary services such as Ringgold are widely used and have an important role to play but can be a barrier when not used in other systems. KE partners were interested in the work Jisc had recently undertaken and the recent paper on orgIDs\(^2\) which recommended an “ISNI+” approach – this will be further discussed in KE to see if further joint work could be undertaken.

[32] http://repository.jisc.ac.uk/5853