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Desirable Characteristics of PID Infrastructure

Developing a US National PID Strategy

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ORFG PID Strategy Working Group. (2024). Developing a US National PID Strategy. Zenodo. https://doi.org/10.5281/zenodo.10811008

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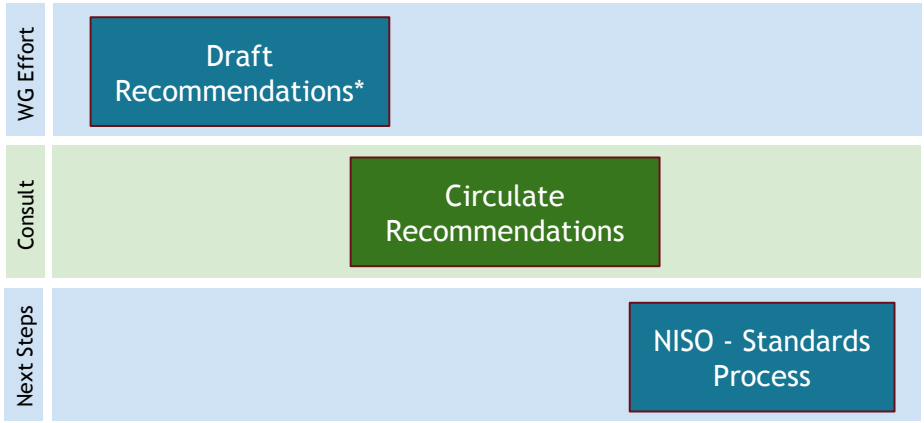

In June of 2022, the Open Research Funders Group (ORFG) collaboration with Higher Education Leadership Initiative for Open Scholarship (HELIOS Open) launched a public effort to improve research output tracking.

In June 2023, ORFG convened four workstreams, including a workstream focused on a US national strategy on PIDs and metadata (concept note)

Utilizing framework created by the RDA National PID Strategies Interest Group

Process: Community Calls, Working Group Meetings, Stakeholder Consultations, and Writing Sessions.

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Proposed Components of a National PID Strategy

Embracing PIDs Across Stakeholders: Encouraging widespread adoption of PIDs by all stakeholders in the research ecosystem, including funding organizations, research institutions, publishers, and researchers

Desirable Characteristics of PIDs: Highlighting the need for PIDs to be open, persistent, resolvable, and interoperable to ensure their effectiveness and reliability

Strategic Recommendations: Outlining specific strategies for enhancing PID infrastructure, such as supporting core PID services, transitioning beyond legacy systems, and promoting centralized PID management

Investment and Support: Recommending areas for additional investment

Measuring Success: Suggesting an approach to assess the impact of a National PID strategy through adoption rates, interoperability, and the advancement of research integrity and efficiency

Barriers to Reality: Benefits of Embracing PIDs

Key Stakeholder Groups

Funder: Facilitates tracking of research outputs and impact, enhancing accountability and informed decision-making
Researcher: Provides a unique scholarly identity, ensuring proper attribution and recognition of work, aiding in career development and collaboration opportunities
Publisher: Ensures long-term discoverability and accessibility of publications, supporting citation tracking and impact analysis
Research Institution: Enhances research management and administration, improves data preservation, and facilitates compliance with funding mandates
PID Infrastructure Provider: Promotes system efficiency and interoperability, contributing to a robust and sustainable research ecosystem

Barriers to Reality: Benefits of Embracing PIDs

Key Benefits

- **Reduction of Administrative Burden**: Streamlines processes like grant applications, manuscript submissions, and reporting
- **Cost Savings and Scalability**: Provides significant efficiency gains, reducing manual data management efforts
- **Improved Research Assessment**: Enables effective tracking of research outputs and outcomes, supporting evidence-based evaluation of research impact
- **Research Integrity**: Enhances transparency and accountability in research, fostering trust and credibility within the scholarly community

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Desirable Characteristics of PIDs

https://upstream.force11.org/desirable-characteristics-for-persistent-identifiers/

Stability and Persistence: consistent over time, ensuring long-term access to digital objects

Global Uniqueness: uniquely identify an object, eliminate ambiguity & ensure precise referencing

Resolvability: easily resolvable to the object they reference, through a URL, enabling access to the object and its metadata

Open Availability of Metadata: PID metadata should be openly accessible

Community Governance: PID systems should involve community input and consensus

Documentation: documentation of PID policies, practices, & technical specifications

Monitoring and Reporting: monitor functionality of PIDs and to report any issues

Ease of Assignment and Metadata Curation: Assigning PIDs and curating associated metadata should be straightforward and user-friendly

Interoperability: facilitate seamless exchange and integration of data

Upstream
upstream.force11.org

Proposed Recommendations for PID Infrastructure

- **Unified Approach Across Stakeholders**: Encourage a coherent and consistent adoption of PIDs among stakeholders, including govt agencies, academic institutions, and publishers
- **Compliance with Public Access Policies:** Align PID strategies with public access policies at both the govt & institutions to ensure transparency and accessibility of research outputs
- **Evaluation of PID Infrastructures**: Develop a consistent method for evaluating desirable characteristics of PID infrastructure to meet community needs & adhere to best practices
- **Adoption of Standardized PIDs**: Promote the use of widely recognized and standardized PIDs for different research entities to enhance interoperability and data exchange
- **Support for Core PID Services:** Encourage participation in & support for foundational PID services, recognizing the roles of users, champions, supporters, and adopters in the PID ecosystem

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Proposed Recommendations for PID Infrastructure

- **Transition from Legacy Systems**: Move beyond legacy and non-interoperable identifier systems to adopt PIDs that ensure long-term accessibility & discoverability of research
- **Centralized PID Management**: Advocate for centralized approaches to managing PIDs to streamline processes, improve efficiency, and foster collaboration
- **Investment in Emerging Needs**: Identify and invest in emerging areas requiring PID support
- **Measure and Evaluate Success**: Establish metrics and methods for assessing the impact of PID strategies on research management, collaboration, and open scholarship goals

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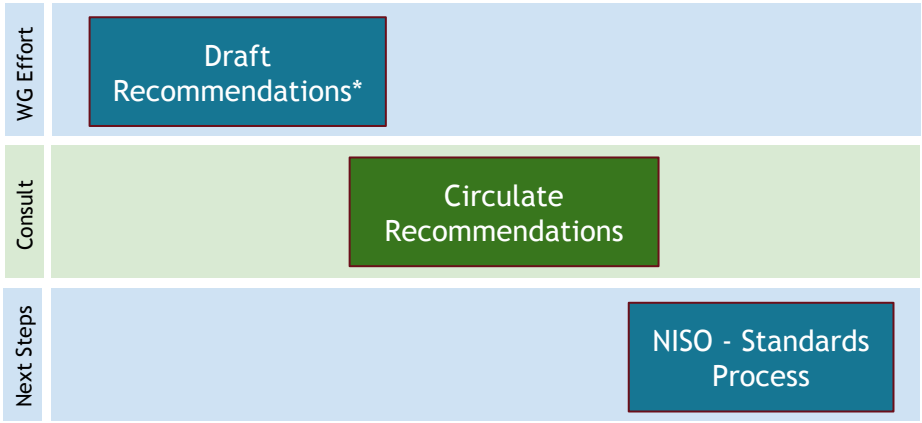
Moving Away from Legacy Identifiers

- **Limitations of Legacy Systems:** Lack granularity, interoperability, and long-term persistence, which can hinder the efficient management and discovery of research outputs. While Modern PID Systems offer more detailed, interoperable, and persistent identifiers, facilitating better data management and access
- **Need for Transition:** To improve the sustainability and accessibility of research outputs
- **Challenges in Transitioning:** Such as the need for technological updates, changes in workflows, and ensuring stakeholder buy-in
- **Strategies for Effective Transition:** Such as phased implementation, stakeholder engagement, training, and support for affected users
- **Call to Action:** Encourage stakeholders to actively participate in the transition towards modern PID systems, highlighting the collective benefits for the research ecosystem

Next Steps for our Work

Purpose: Define desirable characteristics for PID systems and develop recommendations for a formal US National PID Strategy



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Resources

Developing a US National PID Strategy: https://doi.org/10.5281/zenodo.10811008

Desirable Characteristics of Persistent Identifiers: https://upstream.force11.org/desirable-characteristics-for-persistent-identifiers/

A Roadmap for Developing a US National PID Strategy: https://scholarlykitchen.sspnet.org/2024/03/21/a-roadmap-for-developing-a-us-national-pid-strategy/

Community discussion at PID Forum: https://pidforum.org/t/developing-a-us-national-pid-strategy-report

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Question

Through the lens of these characteristics and what defines good PID infrastructure, do you see a distinction between legacy identifiers and current best practice? Do you have a better understanding of what PID communities should be aiming for?