PD MANAGEMENT CONSULTING LIMITED

# Trusted Data Observatory (TDO)
# Phase 1 – Report


Author

**Pádraig Dalton**, PD Management Consulting Limited
Consultant and former Director General of the Central Statistics Office of Ireland


Commissioned by the

Swiss Federal Department of Foreign Affairs
Federal Statistical Office of Switzerland and
The PARIS21 Foundation Data For Change


Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Home Affairs FDHA
**Swiss Federal Statistical Office FSO**

Federal Department of Foreign Affairs FDFA
**Swiss Agency for Development and Cooperation SDC**

February 2026

# Table of Contents

## Executive Summary

The overall focus of the TDO project is on the development of an international metadata platform based on standardised, open, machine readable and AI enabled metadata to support Discoverability, and by extension Comparability, Accessibility and re-use of trusted data sources, for machines as well as persons.

The TDO will only support the discovery of "trusted" data sources and in the initial phases of the project the TDO will focus on the data holdings of National Statistical Offices (NSO's) and International Statistical Organisation or International Organisations with dedicated statistical divisions (IO's). As the TDO evolves over time the inclusion of a broader suite of trusted data sources can be explored and incorporated.

The core elements of Phase 1 included:

- Stakeholder mapping and engagement
- Establishment of an appropriate governance structure for the TDO project
- Development of a risk register for the TDO project
- Final Phase 1 report to support subsequent phases

Details of the various elements of Phase 1 are set out in the main body of the report. The engagement with stakeholders has been extremely rich and insightful and is playing an important role in shaping the future of the project. Some of the key learnings from Phase 1 of the project are summarised below:

**1)** Without exception the engagements with stakeholders have been extremely positive with every organisation met supportive of the TDO and willing to support the project in whatever way they can. This is a positive position for the project to be in at this point, but of course the project is moving into a new phase shortly, and what has brought the project to this point, may not be what is needed to bring the project forward beyond this point

**2)** The TDO initiative needs to have a very clear and influential strategic basis. This needs to be explored perhaps in the context of the International Geneva policy, or the UN 80 strategy work that will be brought to the 81st General Assembly in autumn 2026

**3)** Institutionalisation: This is an important next step for the project. Ownership and leadership needs to be invested in an organisation, ideally a globally focussed organisation. That leadership must be visible, committed and trusted.

**4)** Incentives to engage partners including LLM developers need to be considered

**5)** Trade-off: In terms of engaging the developers of LLM's, do they need to adapt to our environment, or do we need to adapt to theirs? The reality is that for the TDO to work, there will need to be movement on both sides (LLM developers prioritising the TDO as a point of entry to trusted data, and the TDO embracing MCP, GEO etc). The Public Good and Civic Society perspective needs to be a central consideration for all parties in terms of their engagement

**6)** We also need to be clear on the value the TDO brings. Responses to the stakeholder questionnaire were extremely insightful in this regard:

- Observatory would make trusted data (official statistics) more visible, discoverable, and used internationally ensuring that national data remain relevant in global discussions and decision-making. By increasing visibility of trusted data through harmonised metadata standards, it strengthens confidence in trusted data sources and supports evidence-based policymaking and research. It creates a central hub to find trusted data and provides an opportunity to meet the FAIR data principles
- Combating Misinformation – By highlighting authoritative data sources and metadata, TDO helps counteract the spread of misinformation and disinformation
- The development of a Global "MVM-standard" would be very useful as it can be easily adopted by trusted data compilers
- TDO provides a mechanism to reach agreement and convergence on the way forward with important strategic questions. A collaborative and cross-sectoral approach in pooling expertise from different organizations helps strengthen data governance and ensure diverse perspectives on standards, ethics, and methodologies. The initiative encourages cooperation between trusted data compilers, AI developers and data redistributors – an important step in ensuring that statistical standards are understood and applied beyond the traditional statistical community
- TDO would strengthen data governance and coherence across the community of trusted data compilers, by promoting harmonized metadata standards, improving coordination between data producers, and supporting modernization and transparency in how data are documented and shared
- Swiss neutrality is a valued asset and hosting the TDO in Switzerland is a positive approach and recognises the central importance of Data Sovereignty. At the same time global governance of the TDO is essential

- Maximising the value and benefits of metadata is a significant benefit. By creating the TDO and "linking" what could be described as "metadata silo's", the benefits of metadata beyond understanding data can be realised, to include data visibility and discoverability
- TDO could create a structured dialogue between private sector AI companies and the trusted data compiler community and help the official community "speak with one voice". An initiative that provides trusted data in a standard way for the whole community should be attractive for large tech companies to integrate with
- By consolidating metadata from multiple trusted sources, the TDO could reduce duplication of effort in data discovery and validation
- The platform's emphasis on machine-readable, open AI enabled standardized metadata could further enhance AI-assisted data integration and modelling
- Enhanced Transparency and Data Provenance – by documenting the origin, ownership, and access conditions of datasets, TDO strengthens trust in data and helps users assess its credibility
- Respect for Data Ownership and Access Protocols in the design of the TDO builds trust across all communities
- Global Collaboration and Capacity Building – TDO fosters international cooperation and could support countries with limited metadata infrastructure through shared standards and technical guidance
- The opportunity to replicate the TDO at national level as the TDO Open Source Software (OSS) code will be available for use in line with Digital Public Good principle

**7)** Governance is an important issue and is linked to the "institutionalisation" issue highlighted above. A clear focus on what the criteria to be used to identify trusted data sources are, and who makes the decisions is needed. The decision makers on this issue themselves need to be "trusted and respected" and should include people from a diverse range of backgrounds such as:

**a.** NSI's/IO's
**b.** Researchers
**c.** NGO's
**d.** Civil Society
**e.** Private sector (need to reflect carefully on this piece)

This group will need to be supported by domain experts.

**8)** Sustainability: There is a hope that in time, as the value of the TDO becomes apparent, that in-kind funding can and will contribute to the sustainability of the TDO. This is a reasonable assumption and expectation when combined with dedicated and sustained funding from a relatively small number of funders. The costs of sustaining the TDO will not/should not be prohibitive

**9)** Visible leadership: This is linked to the key role of institutionalisation. Visible leadership by a recognised trusted organisation is essential for the future of the TDO

**10)** Alignment: It is important to align/leverage other AI related initiatives including the UNECE HLG-MOS AI Ready Dissemination work programmes and highlight the linkages

**11)** Momentum: It is important to reflect on the momentum and factor that into the decision making regarding the next steps and in particular the timing of the next steps. One option is to wait for the HLG-MOS work to be completed, then build the beta version of the TDO after that for the PoC exercise. The other option is to develop an MVP for the PoC and acknowledge the need to embed the HLG-MOS findings into the TDO once the HLG-MOS work is completed

**12)** The opportunity of co-development engineering focussed projects where specialists from across a number of organisations come together to undertake some technical work is worth exploring

The remaining activities up to the end of March centres around the technical metadata work and the design of the Proof of Concept exercise. A first draft of the technical business specification for the TDO will also be developed. So far 14 organisations have expressed a willingness to participate in the Proof of Concept and 16 are willing to participate in the Metadata technical sub-group. It is also worth noting that despite the fact that we are still very much in the early stages of the project, 11 organisations have outlined that they are willing to make in-kind contributions to the project.

There is clearly a strong impetus to move forward, while taking cognisance of the key learnings outlined above.

# 1 Introduction

This report follows on from the previous work undertaken in 2024 relating to the delivery of a "Feasibility study for an international metadata platform – the Trusted Data Observatory". That report set out the challenge facing trusted data compilers in supporting the discovery of their trusted data in an AI enabled world.

Despite the fact that the Official Data and Statistics community already compiles high-quality trusted data with associated metadata, simple searches using a standard search tool, or indeed AI supported search tools, often provide plausible, yet inaccurate results. In this context there is a requirement to reflect on how we make our trusted data sources more visible and discoverable. A paper prepared by the World Bank and presented at the 56th UNSC in March 2025 entitled "Fostering AI-Readiness and Responsible Redistribution of Official Statistics" sets out the challenges very clearly.

It is important to note that trusted data compliers have high-quality metadata residing within their environments, but it is not always visible to traditional or indeed AI enabled search engines. The metadata standards in use are not tailored to the new AI enabled search/discovery environment and this is a fundamental challenge compilers of trusted data face. Without the use of harmonized metadata standards optimised for information discovery on the internet, even high-quality data can remain hidden from AI systems, reducing its discoverability and usability.

The overall focus is on the development of an international metadata platform, the *"Trusted Data Observatory"* (TDO)[1], based on standardised, open, machine readable (AI enabled) metadata to support Discoverability, Comparability, Accessibility and re-use of trusted data sources, for machines as well as persons.

The TDO will only support the discovery of "trusted" data sources and in the initial phases of the project the TDO will focus on the data holdings of National Statistical Offices (NSO's) and International Statistical Organisation or International Organisations with dedicated statistical divisions (IO's). As the TDO evolves over time the inclusion of a broader suite of trusted data sources can be explored and incorporated.

This project is designed to support the push back against misinformation and disinformation by making trusted data (facts) far more visible and discoverable and is grounded in the desire to fortify the global data infrastructure which underpins democratic and civil society. It will not solve the problem of misinformation or disinformation unfortunately, but what it can do is support the process of putting trusted facts and figures in the hands of those seeking robust information (e.g. policy makers, NGO's, the media, civil society) thus providing a mechanism to challenge those trying to undermine democracy and civil society by spreading falsehoods, either inadvertently or purposely.

1 See Trusted Data Observatory

The core elements of Phase 1 included:

- Stakeholder mapping and engagement
- Establishment of an appropriate governance structure for the TDO project
- Development of a risk register for the TDO project
- Final Phase 1 report to support subsequent phases

# 2 Stakeholder mapping and engagement

## 2.1 Kick-off phase

Stakeholder engagement by definition is an ongoing activity for any project that is designed to deliver a service to a defined user community. The kick-off phase in October/November 2025 provided some useful opportunities to engage on a face-to-face basis with key stakeholders. The event on the periphery of the celebration of the 20th anniversary of the European Statistics System Code of Practice was particularly beneficial as it brough key data compiler's together in one place.

Some important messages from the Kick-off/early stages of Phase 1 included:

- Reflecting on the fact that the issue of Data Discovery is complex, particularly when you start looking at the possible solutions. Communicating clearly is key and the language we use matters. Ensuring a common understanding of the problem and coalescing around a solution is undoubtedly a challenge. Clarity and transparency are important
- Elevating the role of metadata within the community of trusted data compilers needs work. Data compilers focus historically has been on the data, but now in an AI enabled world, metadata must receive, at a minimum, the same level of attention
- Experts don't always agree! Identifying an AI enabled metadata standard is an important next step in tandem with the identification of the metadata components that will constitute the Minimum Viable Metadata set. Agreeing on the MVM and AI enabled metadata standard may be a challenge
- While focussing on trusted data compilers in the early phase(s) of the project is important, it is equally important not to forget the broader community of stakeholders – the users and Big Tech
- Identifying the appropriate motivation to engage Big Tech will be challenging. The community of data compilers will need to come together with one (more powerful and influential) voice to maximise the potential to engage these important partners
- Strong and committed leadership of the project is a critical success factor

## 2.2 Stakeholder engagement

The compilers of trusted data are a key stakeholder group in the current phases of the project. Building their understanding and interest in the TDO is a critical step and will require ongoing attention. Much of the initial work is centred around some of the more technical data related issues (metadata) and in that context the compilers are a key group at this point. That being said it is also important to consider the potential user community and Big Tech, and in that context the Geneva Data Community and the Geneva Chamber of Commerce event have been useful

A stakeholder mapping exercise was conducted to underpin key Phase 1 activities, and a copy of this report can be found in Appendix 1.

Our overall strategy from a stakeholder perspective involved:

- Developing key messaging around the TDO including the Vision, the burning platform (the Why), the longer-term strategy for the TDO and the value-add
- Identifying the suite of key stakeholders
- Identification of possible use cases for the TDO
- Providing clarity on the project plan
- Developing a stakeholder map
- Direct engagement with stakeholders (face-to-face, virtual, web and email communication)
- Undertaking a stakeholder survey focussing on data compilers, users and Big Tech organisations
- Identification of possible champions for the TDO and engaging directly with them

The engagement work continues and there is a clear recognition of the need to ensure that the project addresses the risk of being seen as an Official Statistics project. This evolution will commence in the latter part of phase 2 where governance structures and engagement plans will evolve to involve a broader community beyond compilers of trusted data. Emphasising the fact that the community of trusted data compilers goes way beyond the Official Statistics Community is also an import message for all users to hear.

## 2.3 Stakeholder survey and summary of findings

This section provides a brief summary of the feedback received from National Statistical Offices (NSOs),and International Statistical Organisations and International Organisations with a dedicated statistical division (IOs) stakeholders on the proposed Trusted Data Observatory. The questionnaire used to support this analysis can be found in Appendix 2.

The responses, 40 received in total, were extremely rich and provided valuable feedback on the proposed project. Some of the issues raised arose out of perhaps a lack of clarity in communicating the TDO and what it entails, and in that context alone the exercise was very useful. A Frequently Asked Questions (FAQ) document has been developed to address some of these communications issues and is attached as to this report (see Appendix 3) to support the development of a shared understanding of the TDO. The FAQ will remain a live document as new issues and questions arise. Indeed for those looking to gain a greater insight into the TDO, the FAQ is perhaps a useful place to start.

As outlined above the feedback provided was very rich and some of the key messages are summarised here:

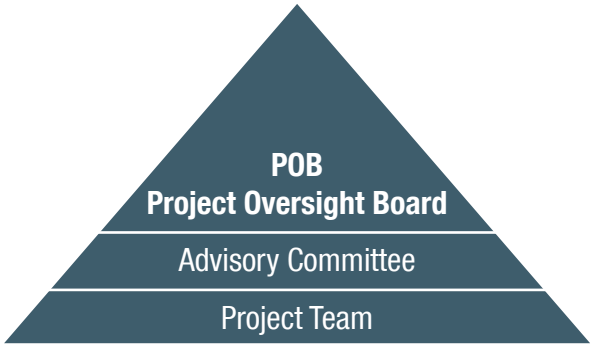
- There was a lot of positive feedback in relation to the vision and objectives underpinning the TDO. There is a clear recognition of the need to address the issue of Data Discovery in the context of an increasingly AI enabled world
- The need to align the TDO project with the broader suite of AI readiness projects was highlighted by many. The risk of duplication and the resultant need to split scarce resources across multiple initiatives was seen as a key issue to avoid. In particular the need for a multilateral approach was emphasised and the positioning of the TDO within this broader environment was seen as an important next step
- Similar to the point above, “Institutional Anchoring” was an issue that emerged from responses. It was emphasised that the TDO should be embedded within a recognized international statistical framework or hosted by a multilateral organization with a mandate in data governance. It was argued this would provide legitimacy, continuity, and alignment with global standards
- The metadata domain is complex. It was noted that standardising classifications across organisations/countries can be extremely difficult and could stall the TDO initiative. The number of internationally agreed standards in use across the community of trusted data compilers is considerable. Many respondent’s recognised the ambitious nature of the project and in general there was a broad welcome for the Minimum Viable Metadata (MVM) set, as long as it did not result in the development of yet another metadata standard and did not require a significant amount of resources for compiler’s to engage with and prepare the MVM. Fourteen respondent’s expressed a willingness to participate in the metadata technical sub-group that will work on the identification of the MVM set, and the identification of the existing metadata standard to be used for the MVM
- The long-term governance and sustainability of the project was an issue highlighted by pretty much all respondents. Where will the funding for the TDO come from, can it really rely on in-kind contributions, who will decide what a “trusted” data source is etc. are just a couple of examples of the issues raised

- The incentives required to get both data compilers and in particular data redistributors (big tech companies) to engage constructively with the project was seen as a key area of work. Many emphasised the potential benefit of the multilateral approach and having the trusted data community speak with one authoritative voice
- Some issues raised in the feedback, went beyond the intended scope of the TDO. From a data perspective the issues raised are extremely relevant and include topics such as quality, definitional differences, variations in code lists used for variables etc. However, it should be noted that the trusted data community has been grappling with many of these issues for years and many different initiatives, including legislative change, have been employed to address these challenges, yet many remain. If we attempt to use the TDO project to resolve not just data discovery issues but the broader suite of underlying data issues, then the TDO project will not succeed. The value that can be attributed to the TDO project is very much aligned to the value put on "data discovery", which is the primary focus of the project

The questionnaire asked respondents to indicate their willingness to participate in the Proof of Concept and the Metadata technical sub-group. The reaction was very positive with 14 organisations willing to participate in the PoC and 16 organisations willing to be part of the Metadata technical sub-group. Organisations were also asked to indicate their willingness to provide in-kind support to the development of the TDO, and despite the fact that the project is still very much in the early stages, 11 organisations indicated a willingness to provide in-kind support.

## 3 Governance structure for the TDO project

The governance structure for the TDO project is illustrated in the graphic below:




The Project Oversight Board is the decision making body for the project. The Advisory Committee is comprised of experts from within the field of data and statistics and in essence their role is to challenge the vision, strategy, implementation plans and objectives for the project, and advise the Project Oversight Board and the Project Team on the key challenges and tasks they identify as relevant to the project. The Project Team, reports to the POB, and is responsible for the day-to-day running of the TDO project.

It is clear that the governance structure, or perhaps membership of the various layers of governance need to evolve as the project progresses. The decision making layer in particular will need to be broadened to reflect the global ambitions of the TDO.

## 4 Risk Register for the TDO project

A risk register has been developed for the TDO project and is available in excel, and has been provided separately. The register identifies the risks concerned, an assessment of the likelihood of the risk materialising, the impact on the project if the risk materialises and mitigation measures that can be undertaken to minimise or eliminate the impact on the project.

- The risks identified were as follows:
- Getting buy-in from key stakeholders (NSI's, IO's)
- Lack of Engagement from Data Compilers
- Standardisation and harmonisation of metadata
- Loss of Leadership / Being Overtaken by Other Initiatives
- Engaging big technology companies to develop their AI algorithms and LLM's to use the TDO
- Current political and geo-political environment
- Creating an active user base
- Sustainability and governance of the TDO
- Inadequate funding to complete the project
- Technological Dependence on External Providers
- Low Usability / Poor Adoption

## 5 Conclusions from Phase 1 and next steps

The Executive Summary sets out the main conclusions from Phase 1. The remaining activities within the current programme of work includes:

- Convening a technical metadata group to agree on the Minimum Viable Metadata set and the appropriate pre-existing internationally agreed AI enabled metadata to be used by the TDO
- Commence work of the design of the Proof of Concept, including identification of participating organisations
- Start the process of developing a business focussed technical specification for the TDO
- Commence engagement with potential "hosting" organisations for the TDO in Geneva
- Continue to engage with Big Tech organisations to understand their perspectives on data discovery in an AI enabled world and understand and address those implications for the TDO
- Explore opportunities for the "institutionalisation" of the TDO project within a global organisation
- Continue to communicate with all stakeholders to motivate engagement and build understanding of the value of the TDO

A lot of progress has been made and stakeholders are very positive about the vision and objectives of the TDO. Of course challenges remain and new challenges will emerge as we move into the next phase of the project which will still involve an important leadership, communications and engagement component, but will also involve an engineering component with the establishment of a physical hosting environment in Geneva (or hopefully alignment with an existing hosting environment) and the development of the platform itself.

End

# Appendix 1
# TDO Stakeholder mapping exercise

## 1 Introduction

The TDO is primarily concerned with addressing the issue of Data Discovery in an AI enabled world. It is a platform based on standardised, open, machine readable (AI enabled) metadata to support Discoverability, Comparability, Accessibility and re-use of trusted data sources, for machines as well as persons. The proposed observatory is a metadata platform as distinct from a data platform. There will be no data on the platform which remains within the data compilers' environment and control.

The TDO project is a collaboration between the PARIS21 Foundation, the Swiss Federal Department of Foreign Affairs, and the Federal Statistical Office (FSO) of Switzerland on a project focussed on enhancing the visibility, discovery and re-use of trusted data.

A critical phase in this project is stakeholder engagement, and this appendix sets out a "stakeholder map" for the project. The key issues covered in this map include:

- Identification of who the stakeholders are (individuals, groups, or organizations).
- Understanding their interests, influence, and impact on the project.
- Consideration of a communication and engagement strategy that fits each stakeholder's needs.

**The key Stakeholders**

The ultimate audience for the TDO is broad and includes:

- Trusted data compilers
- Government's
- Policy makers
- Non-governmental organisations
- Business Community
- Civil Society – the Public
- The media/data journalists
- Research community
- Academics

The user community also includes those involved in supporting others to find trusted data through lexical and semantic AI-enabled search engines.

However in the context of the TDO project at this point, which is very much at the conceptualisation and early development phase, the key stakeholders include:

- National Statistical Offices (trusted data compilers)
- International Statistical Organisations or International Organisations with a dedicated statistical Division (e.g. World Bank, WHO, IMF, OECD, ILO, UNSD, UNECE). These organisations are both trusted data compilers and data users
- The funders of the TDO project (i.e. philanthropic foundations and the Swiss Federal Department of Foreign Affairs)
- Federal Statistical Office of Switzerland – project initiator and project team members
- PARIS21 Foundation – project team members
- Geneva Data Community
- The Project Team
- The Project Board

## 2 Stakeholder Interests, Influence and Impact

The interests, influence and impact of the various stakeholders is summarised in the table below using a combination of project management tools.

The table provides an outline of each stakeholders Power, Influence and RACI status in relation to the project.

The Power–Interest Grid, also known as Mendelow's Matrix, is a stakeholder analysis tool used in project management and change management. Its purpose is to help decide how to engage different stakeholders based on:

- Power: their ability to influence the project
- Interest: how much they care about or are affected by the project

A RACI status is also included for the current phases of the project hat have been funded (phases 1 and 2). Normally a RACI status would be assigned at individual task level and in that context a stakeholder would only ever be one of Responsible, Accountable, Consulted or Informed. However in this context a RACI status has been provided to give a sense of the role each stakeholder group has in the project and some stakeholders are classified as being both Consulted and Informed.

| Stakeholder | Involvement | Power | Interest | RACI Status |
|---|---|---|---|---|
| National Statistical Offices (trusted data compilers) | Trusted data compiler | High | High | Consulted & informed |
| International Statistical Organisations or International Organisations with a dedicated statistical Division (e.g. World Bank, WHO, IMF, OECD, ILO, UNSD, UNECE | Trusted data compiler and user | High | High | Consulted & informed |
| The funders of the TDO project | Funder | High | Medium / High | Consulted & informed |
| Federal Statistical Office of Switzerland | Project initiator and compiler | High | High | Consulted & informed |
| PARIS21 Foundation | Data User | Medium | High | Consulted & informed |
| Geneva Data Community | Data User | Low | High | Consulted & informed |
| Big Technology Companies | Data distributor | High | Medium | Consulted & informed |
| Project Team | Project team | High | High | Consulted & informed |
| Prject Board | Project Board | High | High | Consulted & informed |

The table above provides a summary of the relative positioning of each of the stakeholders in the TDO project.

## Trusted Data Compilers

Essentially for phases 1 and 2 of the project this cohort includes National Statistical Offices (NSOs) and International Statistical Organisations or International Organisations with a dedicated statistical Division (IOs).

Trusted Data compilers "raison d'etre" is the compilation of high-quality, robust and trusted data to support evidence informed decision making and ensure our citizens have the opportunity to work and live in a society informed by trusted data rather than misinformation and disinformation. It is clear that Data Discovery in an AI enabled world is a key challenge for this stakeholder group.

This is the key group at this stage, as without their involvement the Trusted Data Observatory project can't continue. It is their metadata that will reside on the TDO and provide the roadmap to the relevant trusted data resources.

Ensuring this group understand the rationale for and benefits of the TDO is absolutely essential. Positioning the TDO alongside other developments that are ongoing is also an important task to ensure an understanding that the TDO is supplementing rather than duplicating other activities. In this context embedding the TDO within the suite of other initiatives around Data Discovery and AI readiness of Official Statistics is an important step for the success of the project.

## Data Users

The users at this point in the project represent the decision maker group of users. The user community in reality is a very diverse group but the set of users engaging with the project at this stage are those users that recognise the challenges of discovering trusted data especially by LLMs.

Their motivation is primarily altruistic and they recognise the real dangers of misinformation and disinformation.

As we move into the Proof of Concept the user cohort will provide a user perspective of the TDO and help assess the effectiveness of the TDO in addressing their needs.

## The Funders

The current Funders of this project include the Swiss Federal Department of Foreign Affairs and two philanthropic foundations. Their motivation is as outlined for the user group above. They are particularly concerned regarding the role of misinformation and disinformation and how it can undermine civic and democratic societies.

This stakeholder group are kept informed on the progress of the project.

**Data redistributor – Big Technology**

We live in a world saturated with data, where users (and LLMs) do not have the necessary information or indicators to distinguish robust, trusted data, evidence and insight, from poor quality data. In addition the change in user behaviour, in how users find and consume data and information, has evolved with a focus on using AI-enabled search tools where many people want answers quickly, without having to do, or having the time to do, the necessary detailed research (or due diligence) that is often required to identify appropriate sources.

The Big Technology stakeholder group represent the AI community and govern the LLM AI tools that are increasingly being used by users to get answers to their questions. Engaging with this stakeholder group to explore with them how they can support the core objective of the discovery of trusted data and information is an essential part of the project. Understanding their motivations and willingness to support the project is a key task. This is a particularly challenging element of the project but engaging them in a positive way is crucial for the success of the project. Finding common ground and a common interest is at the heart of the task.

**Project Board and Team**

The day-to-day running of the project rests with the Project Team, which includes a project consultant. The Federal Statistics Office of Switzerland is the key player alongside the consultant and the team member from the PARIS21 Foundation. The Board and Team represent both data compilers and users and so their interests are fully aligned with those set out above for these two stakeholder groups.

## 3 Resistance and conflict

Broadly speaking the various stakeholder groups are positively disposed towards the concept of the TDO, and acutely aware of the need to tackle the issues of AI readiness and data discovery in that context.

That being said they are a number of areas of concern for some key stakeholders as follows:

**Data Compilers:**

- Have seen a variety of global initiatives previously that have failed or never been brought to completion and there is always a question regarding projects of this nature within this community
- Governance and sustainability of the TDO are certainly a topic of conversation
- Metadata is complex and the myriad of metadata standards is and always has been a concern, especially for c-suite executives in data compiler organisations
- Positioning within the broader suite of related yet different projects needs careful attention. Focussing on the value-add of the TDO is important
- Data compilers are always concerned about resources and are questioning the level of effort for them in engaging with the TDO

**Data Users**

- Governance and sustainability into the future is a concern
- Have expressed some element of scepticism regarding the extent to which the creators and owners of LLMs will engage with the TDO and support the overall objective
- Need more time to understand how the TDO works and can support them in their roles

It is perhaps too strong to label these issues as resistance but it probably reflects the type of questioning that one would expect to see in an ambitious, complex and global initiative of this nature. What this points to is the importance of ongoing communication and engagement with these key stakeholder groups.

A website for the TDO has been established and active engagement on LinkedIn is also envisaged to keep stakeholders informed. A number of international events have been arranged on the topic of AI readiness by a range of different bodies and the TDO is an active contributor at all of these events.

A very significant number of bi-lateral and multi-lateral virtual meetings have been held and will continue to be held with the various key stakeholder groups. Both proactive and reactive communication is required for this project and the teams member from the PARIS21 Foundation is leading on this element of the project.

# Appendix 2
# Stakeholder Questionnaire

# Appendix 2 – Stakeholder Questionnaire

**Q1) Name of Organization**:

**Q2) Location/Address:**

**Q3) Contact Details:**

***Name of contact person*:**

***Email address*:**

***Organisation website*:**

**Q4) Primary function of your Organisation**:

- National Statistical Office
- International Statistical Organisation (including International Organisation with dedicated data/statistical/research team)
- Public Administration including policy development and evaluation
- Non-Governmental Organisation
- Academia/Research
- Media
- Other (please specify): _____

**Q5) How familiar are you with the proposal for a Trusted Data Observatory?**:

- Very familiar
- Somewhat familiar
- Vaguely familiar
- Not familiar at all

**Q6) Based on what you have heard/read etc., what are your primary thoughts/vision in relation to the proposal for a Trusted Data Observatory?** Perhaps categorise by 1) What you agree with 2) What you disagree with and 3) What you think is missing

*If familiarity is limited please refer to www.trusteddataobservatory.org and circulated communication on the proposal for a TDO*

Agree With:

Disagree With:

Issues missing:

**Q7) What would you describe as the main benefits of the proposed TDO?**

**Q8) What risks do you foresee with the TDO project and how can they be mitigated in your opinion?**

**Q9a) Do you have a dedicated metadata repository currently in place in your organisation?**

- **Yes**
- **No**
- **Don't know**
- **Brief description (if Yes) _____**

**Q9b) If so, what metadata standards are currently in use?**

**Q10a) Have you any concerns regarding the proposal to create a Minimum Viable Metadata (MVM) set focussed on metadata elements to support visibility and discovery, and if so can you outline them here?**

**Q10b) How would you propose that these concerns be addressed?:**

**Q11) Thinking of the proposal for a Minimum Viable Metadata (MVM) set focussed on metadata elements to support visibility and discovery, what elements do you see as being essential for inclusion on the MVM, keeping in mind the intention to create a minimal set?**

**Q12) Can you set out your thoughts on the potential use cases identified for the TDO which include:**

**Primary use cases**

**Supporting Large Language Models (LLMs) with Verified Data -** to enable LLMs to answer factual questions using verified, up-to-date data sources

**Mapping Existing Data Sources -** To provide an overview of what data exists, in which domains, and from which sources.

**Monitoring Data Availability and Quality -** To indicate whether data sources remain accessible and whether their quality is maintained over time

**Secondary use cases**

**International Collaboration -** Multilateral organizations can use TDO to coordinate data efforts and harmonize standards

**Crisis Response -** Rapid identification of available data during emergencies

**Data Discovery for Policy Design -** Policymakers can identify gaps in data availability across regions or sectors

**Educational Use -** Teachers and students can explore real-world data sources for learning and projects

**1) What use cases do you agree with 2) What use cases do you disagree with and 3) What use cases do you think might missing**

Agree With:

Disagree With:

Use cases missing:

**Q13) Would you or your organisation be willing to participate in the technical group that will be established to identify the MVM and associated harmonised metadata standard?**

- **Yes**
- **No**
- **Don't know yet**

**Q14) The feasibility report from November 2024 outlined some initial thoughts on the functionality of the TDO, including:**

- ***API enabled extraction and receipt of harmonised and structured metadata***
- ***Provision of metadata that is machine readable and AI enabled supporting lexical and semantic search functionality***
- ***Once on platform the ability to refine searches by pre-defined filters (e.g. theme, data compiler type)***
- ***The ability to monitor usage of the platform***
- ***Feedback mechanism to support ongoing development and refinement***
- ***User friendly interface***
- ***Usage of AI tools on the platform to prepare reports on comparability of data holdings for a specified search (advanced – downstream iterations)***

**Reflecting on the above list, can you outline 1) What you agree with 2) What you disagree with and 3) What functionality you think is missing?**

Agree With:

Disagree With:

Issues missing:

**Q15) Phase 3 of the TDO project envisages a Proof of Concept (PoC) exercise. Would your organisation be willing to participate in the PoC?** *(Note: For data compilers/producers this would involve implementation of the MVM and associated standard and trialling the functionality of the TDO, including the automatic loading and extraction of the MVM)*

- **Yes**
- **No**
- **Don't know yet**

**Q16) The long-term governance of the TDO needs consideration. It will be a global metadata platform and in that context long-term governance structures will need to reflect that global dimension. Have you any thoughts on the future governance of the TDO and how it should be structured and supported?**

**Q17a) Are you willing to provide in-kind support during the development and implementation phases of the TDO project?**

- **Yes**
- **No**
- **Don't know yet**

**Q17b) If Yes, in what key areas do you think you can provide support. Please specify:**

**Q18) The long-term sustainability of the TDO needs consideration. Have you any thoughts on how the TDO can be sustained post the development and initial implementation of the TDO?**

**Q19) The focus of the project is on the discovery, visibility and by extension re-use of TRUSTED data sources. In the initial phases of the project the TDO will focus on the data holdings of National Statistical Offices (NSO's) and International Statistical Organisation or International Organisations with dedicated statistical divisions (IO's). Looking beyond NSI's and IO's, have you any thoughts on the criteria that could be used to identify other trusted data sources?**

**Q20) Looking at the metadata expertise available to you, do you see a capacity building requirement for your organisation moving forward?**

**Q21) Are there any additional elements that would encourage your or you organisation to engage with and participate in the TDO? Please feel free to include any comments or thoughts you may have.**

**Q22) Are you aware of any other initiatives similar to the TDO proposal, or any other initiatives that he TDO should be aligned with**

- **Yes (please specify): _____**
- **No**
- **Don't know**

**Many thanks for taking the time and effort to provide your input on the Trusted Data Observatory. All inputs will be reviewed and will inform the various phases of the TDO project.**

# Appendix 3 Frequently Asked Questions (FAQs) Document

**What is the rationale behind the Trusted Data Observatory?**

The TDO is primarily concerned with addressing the issue of Data Discovery in an AI enabled world. It is a platform based on standardised, open, machine readable (AI enabled) metadata to support Discoverability, Comparability, Accessibility and re-use of trusted data sources, for machines as well as persons. The proposed observatory is a metadata platform as distinct from a data platform. There will be no data on the platform which remains within the data compilers' environment and control.

**Is the key to Data Discovery not just about optimising our websites and improving our Data Platforms, ensuring our data is Open?**

In short, no. Despite the fact that trusted data compilers e.g. (NSOs and International Organisations) already compile high-quality trusted data, in many cases adhering to Linked Open Data standards, with associated metadata, on optimised web sites, simple searches using standard search tools, or indeed AI supported search tools (ChatGPT, Gemini, Copilot etc), often provide plausible, yet inaccurate results. These LLM's are not discovering our data even with all of this in place.

**So if the answer isn't the provision of better data platforms, optimised websites and the provision of Open Data, what is?**

Metadata is the key. LLM's are not good at engaging with numbers, but they can engage with metadata.

**If metadata is the answer, why are trusted data sources that already have high-quality well-structured metadata associated with those sources in place not being found/discovered as often as one would expect?**

Even where well-structured high-quality and comprehensive metadata is in place, it is not regularly open, visible or machine readable, and the international metadata standards used varies (e.g. Dublin Core, DDI, SDMX, DCAT).

**How does our approach to metadata need to change?**

Traditionally the focus of trusted data compiler's has been on the data, with the organising and structuring of the metadata seen as secondary in some way. Access to the metadata, has pretty much been facilitated by first of all accessing the data. Our paradigm has very much been Data to Metadata. In an AI enabled world, where our first task is to ensure our data is discovered (if it's not discovered it certainly won't be understood), that paradigm needs to be inverted to Metadata to Data.

**What additional value does the TDO provide if we all just focus on improving our metadata nationally within our own environments?**

Even if we could all agree on one metadata standard that is designed to support Data Discovery in an AI enabled world, experience tells us that decentralised implementation of internationally agreed standards often leads to slight or sometimes significant differences in implementation at national level. National specificities, cultural and perhaps institutional settings/environments can impact on implementation and in that context differences arise.

**What is the Minimum Viable Metadata (MVM) set?**

The Minimum Viable Metadata set, or indeed it could be referred to as the "Minimum Discovery Metadata set", is a subset of the detailed metadata holdings of trusted data compilers. The MVM refers to those metadata elements that support data discovery. It does not involve the creation of new metadata elements or components.

**Does the introduction of the MVM represent the minimum suite of metadata we need as trusted data compilers?**

No. As outlined above the MVM is a subset of the detailed metadata holdings of trusted data compilers. The existence of high-quality, well-structured, detailed metadata is a pre-requisite for all trusted data compilers.

**Will the introduction of the MVM mean the development of yet another metadata standard?**

No. The standard to be used will be one of the existing metadata standards that are considered to be AI enabled.

**Does the focus on the MVM set not represent a loss of information on key issues required to assess quality, methodology, support interpretation and interoperability?**

The objective of the TDO is primarily to support data discovery. The TDO only requires those metadata elements that support discovery, and components focussed on methodology for example do not support discovery, indeed it could be argued that it may complicate discovery. Once a data sources has been "discovered" through the TDO, the user will then be able to access the detailed metadata, including methodology focussed elements, at source via the link provided through the TDO.

**Will the TDO address underlying data problems like definitional differences or use of different classifications for variables?**

It is not within the scope of the TDO project to address underlying data problems such as inconsistency in code lists used for certain variables like sex and marital status, definitional differences, data quality etc.. Of course these types of issues are problematic and certainly need to be addressed but those issues need to be addressed elsewhere. If we attempt to use the TDO to resolve not just data discovery issues but the broader suite of underlying data issues, then the TDO project will not succeed.

**We have limited resources, so how much work will be involved for NSO's to engage with the TDO?**

For those trusted data compilers that already have high-quality, well-structured, and detailed metadata, the effort will be minimal. The MVM is a subset of the existing metadata, so no additional work is required to develop the MVM, once the detailed metadata is in place. It is intended to automate the process of re-classifying the metadata standard to the selected AI enabled standard, should it be different, in the process of loading the metadata to the TDO.

**What does the "journey" to the TDO look like for a National Statistical Office?**

As always it depends on your starting point. As outlined above where high-quality, well-structured, and detailed metadata is already in place and available through a metadata catalogue then the work load will be minimal.

**Who decides what trusted data is?**

This is a key question and relates to the ultimate governance of the TDO. The observatory is designed to be global in nature and in that context, it makes sense that it is governed at a global level. The ambition for the platform has come from Switzerland but there is a clear recognition that ultimately the governance of this global observatory, even though it will be located in a global organisation based in Geneva, must be governed at the global level. It may be useful to reflect on the role the community of Chief Statisticians of NSO's from around the globe can play via the United Nations Statistical Commission (UNSC), and also the role the Chief Statisticians of International Organisations can play via the Committee for the Coordination of Statistical Activities (CCSA).

**What is the definition of trusted data?**

Initially, at least, the TDO will limit its scope to the data holdings of National Statistical Offices (NSO's) and the holdings of International Statistical Organisations or International Organisations with recognised statistical Divisions (IO's). Such organisations compile their statistical data within the framework of internationally agreed principles (e.g. UN FPOS, ES CoP), statistical standards and classifications.

It is important to acknowledge that there are trusted data sources beyond NSO's and IO's, and the inclusion of these sources is certainly something that will need to be explored as the TDO develops and evolves over time. Criteria will be developed in collaboration with stakeholders to identify trusted data compliers and their sources.

**What about Data Comparability? How can and will the TDO address this?**

Not directly, but indirectly. The focus of the TDO is supporting the discovery of existing trusted data sources "as they are". Data quality and comparability are perennial challenges and have and will continue to be a focus for trusted data compilers for many years to come. The TDO, by supporting discovery, will indirectly highlight quality and comparability issues and therefore in that context play a role in helping to highlight where these issues arise.

## How will the TDO address Data Security and Data Privacy concerns

Three considerations:

1) It is important to remember the TDO is a metadata platform and not a data platform. Metadata can on occasion incorporate sensitive information which requires a privacy and security lens. However the metadata to be included on the TDO focusses only on metadata designed to support discovery which in general will not contain any sensitive information

2) The focus of the TDO is supporting the discovery of trusted data that is already in the public domain – published in statistical reports, releases, press conferences, infographics, visualisations, aggregate data cubes etc.

3) Finally the TDO will not provide access to microdata. It is intended that the TDO will make users aware of the existence of microdata files and link to information that outlines to users the criteria and requirements for access to these microdata files, including if access is possible

## How will the TDO engage with existing national metadata catalogues

A push and pull approach will be used for loading the MVM set to the TDO. API's will automatically extract metadata from existing national metadata catalogues and automatically load this metadata to the TDO. It is intended that the functionality of the TDO will also include a metadata editor that will take metadata in whatever internationally agreed metadata standard is in use in the national metadata catalogue and convert it to the agreed MVM AI enabled metadata standard. Trusted data compilers will also be provided with the option to load their metadata to the TDO directly themselves.

Finally the code underpinning the TDO will be open source in nature and this will be available to all users, including trusted data compilers to replicate at a national level should they wish to do so.

## What does implementation of the TDO look like from a technical perspective?

At a high level, one could envisage an initial Trusted Data Observatory being built as a lightweight metadata discovery platform. For a Minimum Viable Product (MVP) or proof of concept, this could be done by partnering with a small number of trusted data producers at least one National Statistical Office and one International Organisation and pulling in links and core metadata from their existing catalogues. The initial technical scope could be kept tight by defining a simple, standards-aligned metadata profile (for example, a DCAT) that covers the key fields such as dataset description, producer, update frequency etc. This metadata could then be ingested through straightforward API calls, normalised, and stored in a central metadata database to allow indexing and basic validation. A simple search interface and API would make this catalogue accessible, with the Observatory acting primarily as a trusted pointer to authoritative data sources rather than trying to host the data itself.

Looking beyond the MVP, there is a clear opportunity to introduce semantic search, which really gets to the heart of what the Trusted Data Observatory is trying to solve helping people quickly find the right trusted data across institutions and borders. By building a semantic index over validated metadata and grounding everything strictly in what is actually provided by official catalogues and access endpoints the Observatory could support intent-based searching in a way that dramatically reduces the time users spend trying to locate the information they need. In addition, we could also bring in the Model Context Protocol (MCP) so that the Observatory becomes directly discoverable by AI systems and agents. This would allow AI tools to query and retrieve official metadata through a controlled, authoritative interface, improving machine-to-machine findability while keeping the Observatory firmly anchored as a standards-based, trusted discovery layer.