



Welcome to the #SPorgWebinar

Bridging early warning and social protection: how can we improve their interoperability?



SPIAC-B

Working Group on Linking Humanitarian
(Cash) Assistance and Social Protection



About the series

This is the second session of the Pressure Test, a practitioner series co-produced by the SPIAC-B Working Group and socialprotection.org. Each installment brings a substantive piece of analytical work — a mapping, a set of operational guidance, a case study — into direct contact with practitioners who are living the complexity it tries to describe. The analytical work is the entry point and participants are invited to push back on it, challenge simplifications, and say where it holds and where it fails. The premise is to provide a space where serious analytical work gets tested against operational reality, by people who know both.



and to start our session ...

The entry point for this session is a gap that keeps resurfacing in HA-SP practice: **how can early warning systems be leveraged for timely humanitarian as well as social protection assistance to the poor and vulnerable?**

A flood forecast, a drought index, or a displacement signal rarely triggers a response on its own — the systems sit in separate institutions, separate legal regimes, separate communication channels and separate data infrastructures, so every shock still depends on ad hoc coordination to connect warning to social protection action.

So how can early warning systems exchange data with HA-SP systems in a secure, standardized, and interoperable way?



Session Essentials



This session is being recorded and along with this presentation it will be available on socialprotection.org and sent to all registrants after the session.



Use the chat box to present yourself, make comments or share useful links.



Zoom AI generate **automatic Captions**, to see it click in the CC - Closed Captions - button.



Share your questions with the speakers through the Q&A box!
Or wait for the Q&A segment to raise your hand and speak.

Please state your name/organisation, and if your question is directed to a specific speaker.

Today with us



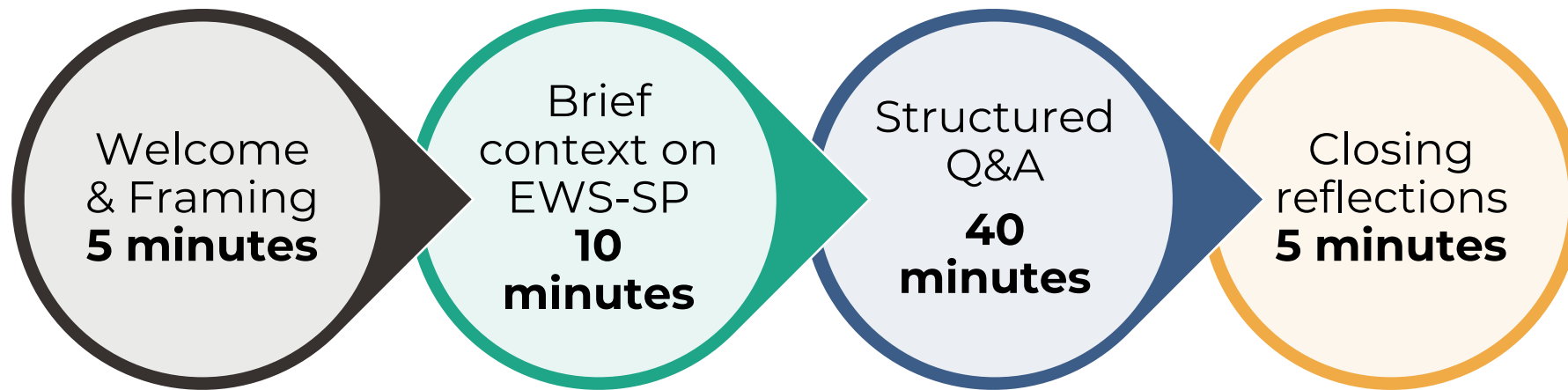
[Learn more](#) 

Presenter

Anita Mittal

Component Lead - DCI, GIZ /
Digital Convergence Initiative

Session Flow



Today with us

Comments by



Veronika Wodsak

Social Protection Policy
Specialist, ILO/ Digital
Convergence Initiative

[Learn more](#) 



Valentina Barca

Independent
Consultant

[Learn more](#) 



Digital
Convergence
USP 2030

Linking Early Warning Systems with Social Protection Systems



Co-funded by:



Coordinated by:





Make assistance interoperable before the next crisis

When the next shock hits, will your systems be ready to work with national systems?

Humanitarian, other anticipatory action actors and governments increasingly serve the same people. Often through disconnected digital systems. We provide the common standards and guidance to make these (and other) systems work together. In a secure and responsible manner.

Linkages between EWS and SP-Systems



EARLY WARNING SYSTEMS

DATA HELD



Hazard information
(e.g., forecasts, alerts, risk levels)



Expected impact
(locations, populations at risk)



Historical & real-time observations



Geospatial data & models

INTEROPERABILITY WITH

Weather services

Hydrological services

Geospatial platforms

Other EWS

EWS -> SP: Alert & Impact Information

- Send structured early warnings with alert details and expected impact areas
- Provide impact based estimates
- Enable social protection systems to prepare and trigger anticipatory actions
- Support targeting and pre-positioning of resources

Shared Benefits

Timely preparedness



Act before the impact occurs

Targeted support



Reach the right people at the right time

Efficient resource use



Optimize planning and allocation

Better coordination



Strengthen collaboration across systems

Evidence-based decisions



Use data for smarter action

SP -> EWS: Share Aggregated Information

- Share aggregated privacy preserving data on exposure and vulnerabilities
- Provide situational updates from the ground
- Improve impact modelling calibration and risk assessment
- Strengthen early warning accuracy and relevance



SOCIAL PROTECTION SYSTEMS

DATA HELD



Household socioeconomic data



Self-reported disability & vulnerability



Programme enrolment & benefits



Cross-programme benefit data



Payment & delivery records

INTEROPERABILITY WITH

CRVS

Tax

Employment

Health + more

→ ENABLING FACTORS

Data quality & standards

Common identifiers & geospatial alignment

Privacy & data protection

Interoperability standards & APIs

Governance & data sharing agreements

Capacity & technical infrastructure

Legal & policy frameworks

Benefits of data flowing between Early Warning Systems and SP systems

- **Better Targeting:** By combining hazard information from the Early Warning System with aggregated vulnerability data from the Social Protection system, governments can identify who is most at risk, where they are located, and what support they are likely to need, enabling more targeted and equitable interventions.
- **Faster Anticipatory Action:** Structured alerts shared through interoperable standards allow Social Protection systems to activate predefined response mechanisms before a disaster occurs, such as emergency cash transfers, temporary benefit expansion, or early outreach to vulnerable households.
- **Evidence Based Planning and Resource Allocation:** Integrating forecast information with aggregated socioeconomic indicators enables decision-makers to estimate the scale of impacts, forecast resource requirements, prioritize affected areas, and allocate funding, personnel, and supplies more efficiently.



About the Initiative

The **Digital Convergence Initiative (DCI)**, launched in Sept 2021, is a joint effort by USP2030 to support the **digital transformation of social protection systems**.

Coordinating partners with funding support from EU in addition to BMZ

Co-funded by



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Expanding Community with other Stakeholders

International Organizations

DPGs

Country
Representatives

Private Sector

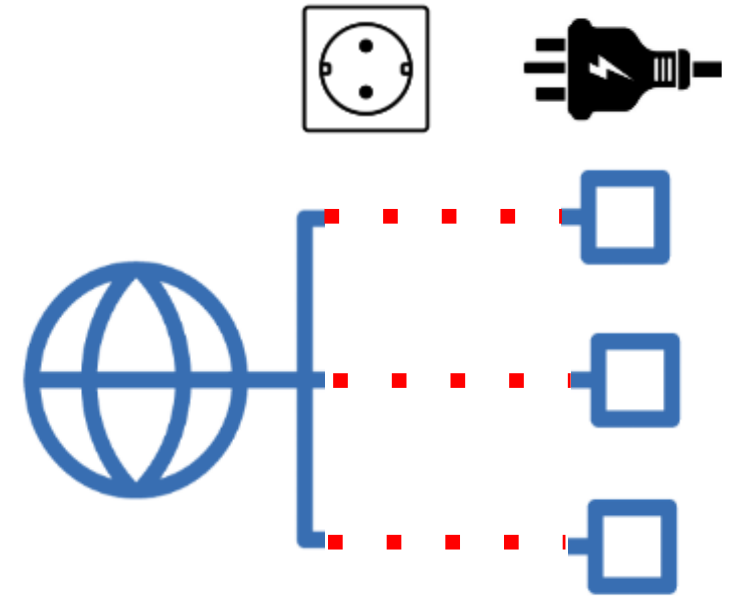
Similar Other Initiatives

External Experts

The Challenge: Systems not Communicating

Without interoperability, digitalization only brings limited benefits.

Today, different institutions follow different processes, data formats and protocols, often leading to fragmented systems which are not fully interoperable.



Digital
Convergence
USP2030

Our Approach



Open and collaborative **digital knowledge base** on digital social protection

Knowledge products:

- ✓ Case studies and reports
- ✓ Guides and toolkits
- ✓ Learning briefs

Events:

- ✓ Webinars
- ✓ In-person workshops and conferences



Global effort to harmonize **technical standards for interoperability**

- ✓ Transparent, multi-stakeholder, consensus-building processes to **develop standards**
- ✓ Open **digital repository** of technical standards
- ✓ Engagement with solutions providers and practitioners to **promote adoption**



Digital transformation and interoperability **country support**

- ✓ Direct **implementation** in twenty one selected countries
- ✓ The **Helpdesk** as a technical support facility for expanded outreach to countries to guide on Digital Transformation



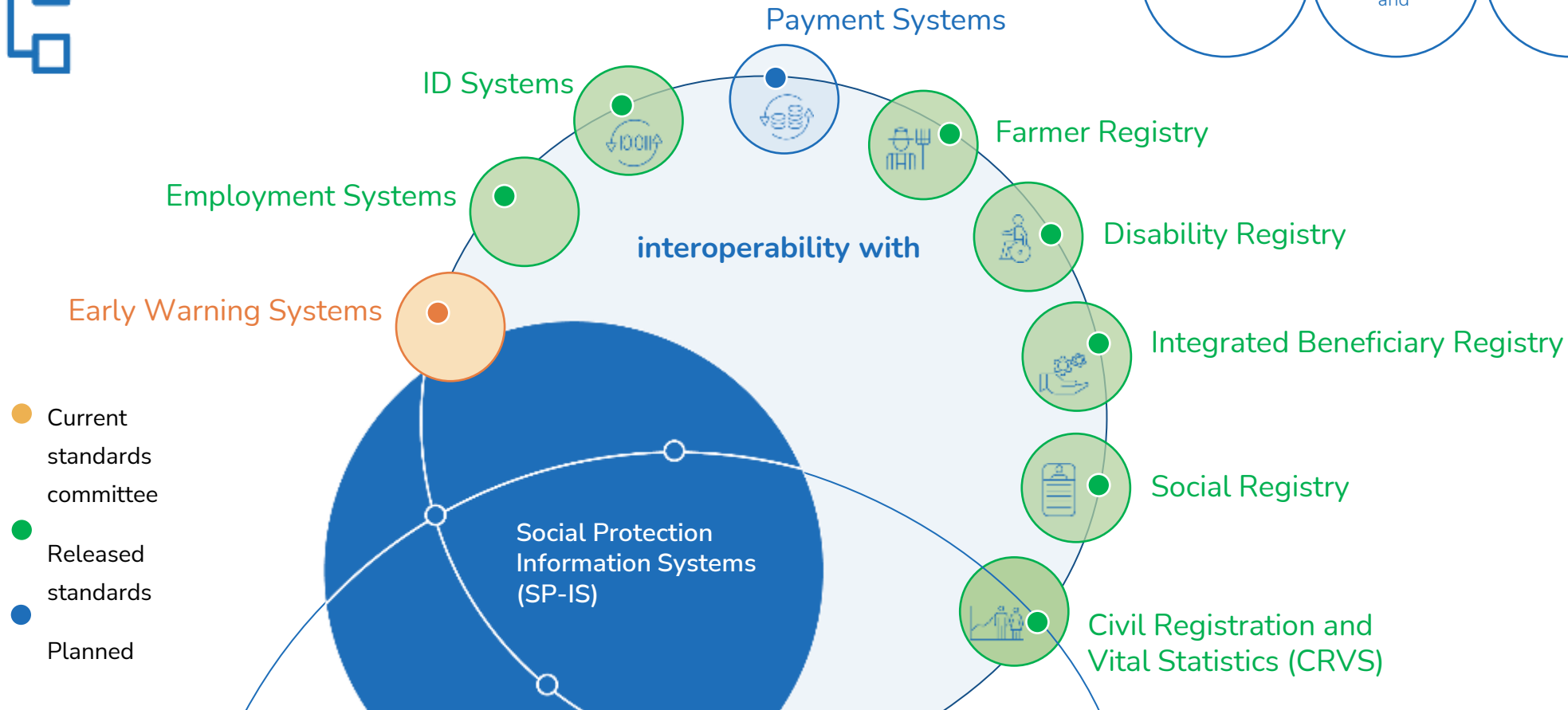
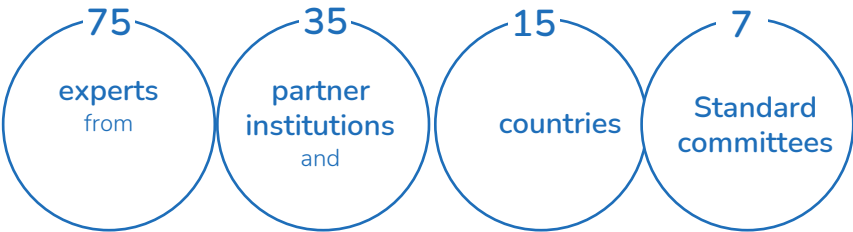
Strengthening institutional and human **capacity**

- ✓ Structured **peer learning** opportunities through cross-country exchanges
- ✓ Modular, adaptable and practice-oriented **training programs**, designed for country-specific contexts

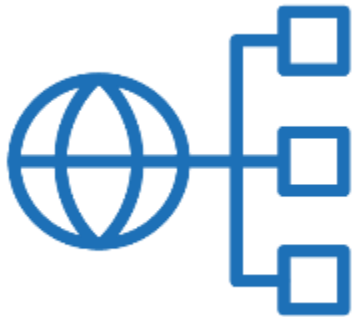




Standards Interfaces



Early Warning Systems Interface Standards



Digital
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USP2030

Standards Committee Early Warning Systems and Social Protection (SP) systems - 21 experts from 17 different organizations

Co-Chairs



Joe Zaarour
WFP



Athanase
Akumuntu
Rwanda



Alex Jager
World Bank



Anna
Zhamakochyan
SJI



Bhaskar Mishra
UNICEF



Giancarlo Pini
WFP



Jully Ouma
ICPAC



Lilit Chitchyan
Independent
Expert



Luigi Spagnolo
EC-JRC

Facilitators



Anita Mittal
GIZ



Aisha Merhebi
GIZ



Luis Tejerina
IADB



Marcie Roth
WID



Maria Macasil
CREWS



Max Bermudez
Costa Rica



Menno Bot
Raydant International



Mulder Mkutumula
Malawi



Saurav Bhattarai
openIMIS

Standards Drafting



Jeremi Joslin
OpenSPP



Ricardo
Bahamonde
Independent Expert



Ritu Bahradwaj
IIED



Rose Osindealabaster
Independent Expert



Samuel Nyansiri
Kenya



Steine Parat
SPRiGlobal

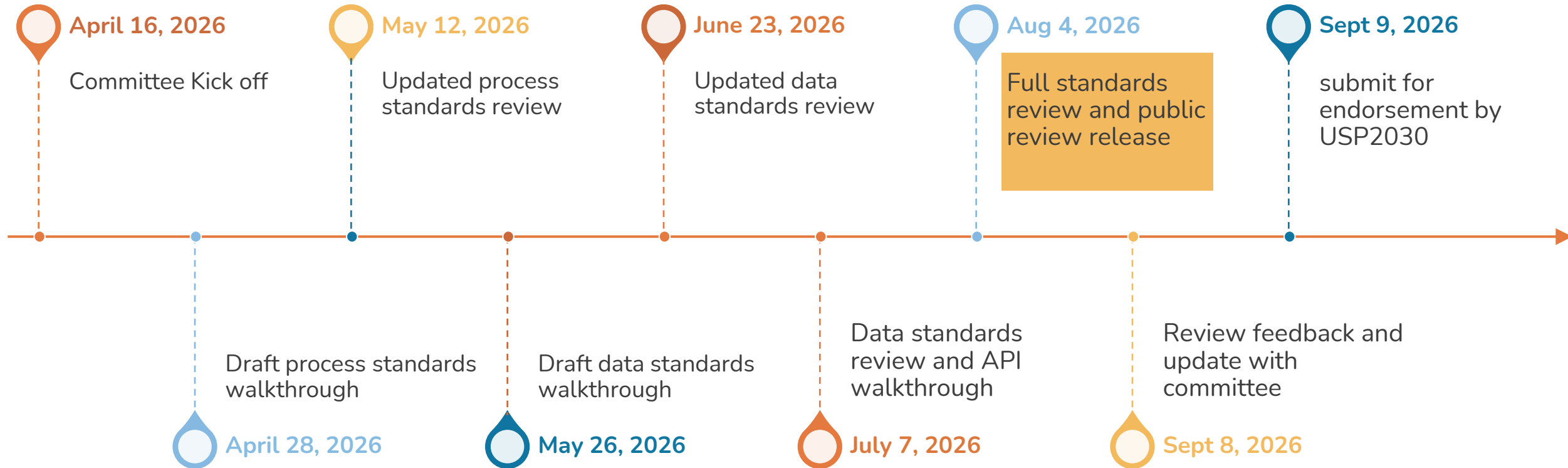


Thomas Byrnes
Independent Expert



Tony Mwaniki
SCIDA III

DCI Standards EWS and SP-Systems : What is done so far





Standards components

EU CAMSS Assessment

- DCI standards compliant with the European Interoperability Framework (EIF)

Three Main Parts

Processes & Workflows

Data Standards

API Standards

Description

Use cases defining key workflows for interoperability between SP-Systems and other government systems

Specify the data elements exchanged: Data objects, attributes, and code directories

Specifications outlining the methods and protocols that the systems can use to exchange data

Standard documentation

Broader audience



GitBook

<https://standards.spdci.org>

Technical experts

<https://github.com/spdci>

Existing Global standards leveraged where available

- **OGC API Features + CAP Alert** → Deliver standardized hazard, geographic, and impact information from EWS to Social Protection.
- **SDMX** → Share aggregated vulnerability, demographic, and beneficiary statistics from Social Protection back to EWS to strengthen impact analysis and preparedness planning.



Learn more and connect

The DCI is an open, transparent and virtual community which welcomes contributions from diverse stakeholders.

For more information, or to get involved:

- ü visit our [website](#)
- ü email us at contact@spdci.org
- ü or check us out on [LinkedIn](#), [Gitbook](#), and [Github](#)

DCI receives funding from the European Commission and the German Federal Ministry for Economic Cooperation and Development (BMZ). The Secretariat of DCI is jointly hosted by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Expertise France, the Foundation for the Internationalization of Public Administrations (FIAP), the International Labour Organization (ILO) and the World Bank.

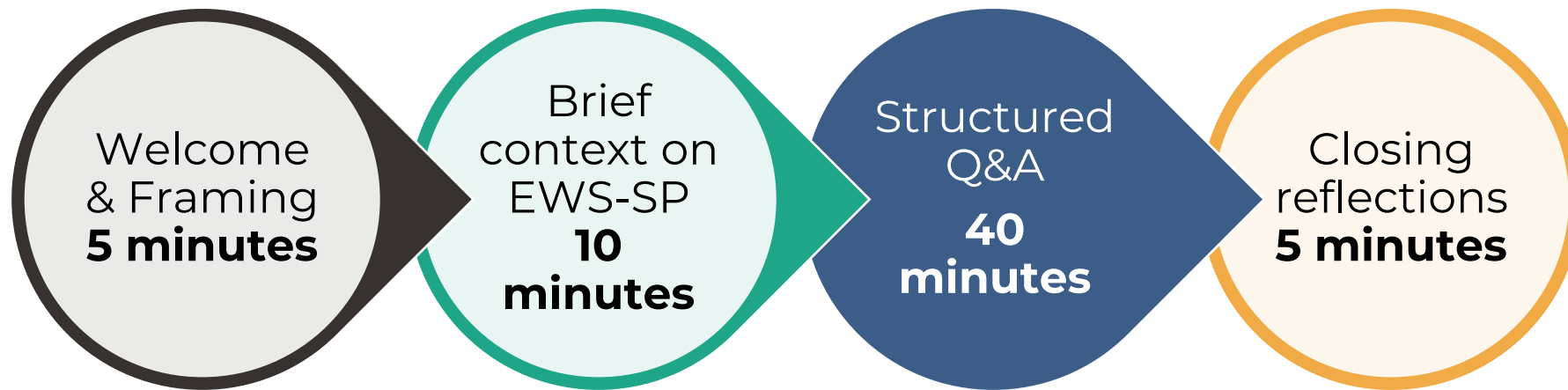
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Value proposition

1

What is the value proposition of Early Warning Systems for humanitarian actors, national social protection systems and affected populations?

From warning to action

2

In what other ways (besides those presented in process standards) do we think interoperability with early warning systems can improve performance of social protection systems/humanitarian systems (and vice versa) and what are the potential outcomes for beneficiaries?

Humanitarian interoperability with SP-systems

3

Which other areas of a humanitarian response cycle could benefit from interoperability? (between humanitarian organisations and with government systems).

The potential benefits of increased interoperability or data sharing

(Fragmented) Humanitarian Registries

(WFP's SCOPE, UNICEF's HOPE, UNHC's proGres, etc)

Key data points that may be included and useful (usually for beneficiaries only as data on potential beneficiaries often not retained)

- Identity data and/or biometrics (if collected)
- Household member data (sometimes collected in aggregate, not roster form)
- Vulnerability characteristics/status (with data collected depending on targeting approach which varies widely – often food insecurity, disability, pregnant and lactating women, children, etc)
- Nature and amount of benefits/services provided

+ **interoperability rarely**

Usefulness will broadly depend on each registry's:

Data sharing subject to data protection safeguards

USEFUL FOR:

- **Planning and prioritisation of humanitarian activities** to fill coverage gaps (avoiding duplication) or complement adequacy
- **Fast registration and eligibility determination of populations in need** (if the right data is included & before needs are further assessed and targeting refined)
- **Supporting programme design and implementation** (e.g. piggybacking on existing capacities, payment provider agreements, etc)

✓ Enhancing cohesion and coordination, avoiding gaps or duplications while enabling programme sequencing & layering, enhancing outcomes

✓ Reducing (recurrent) data collection costs – value for money
✓ Reducing administrative burden on people and chances of being left behind

✓ Improving data accuracy (via cross-checking and authentication)
✓ Improving cross-sectoral M&E and overall accountability

✓ Sustainability – supporting national systems building rather than reinforcing parallel systems

✓ System wide flexibility, mitigating dependency on any one organization and enabling flexibility amongst UN, NGOs and other humanitarian actors

✓ **Vulnerability-informed planning and prioritisation** of social sector activities

✓ **Informing registration and eligibility determination** for social assistance and social insurance schemes (e.g. facilitation of the coverage of populations often invisible to traditional national systems such as refugees and displaced persons)

Data sharing subject to data protection safeguards

Governance, legal framing, financing

Coverage & inclusiveness

Relevance

Currency

Accessibility & interoperability

Country's Social Registry

Key data points that may be included and useful:

- In depth socio-economic classification for all registered households (not necessarily beneficiaries)
- Categorical correlates of vulnerability, including full and in-depth household roster

+ if **Integrated Beneficiary Registry**: receipt of other state benefits (including contributory), operational data

+ **interoperability** often established with other Ministries/registries including ID, civil registration, disability, tax or employment sys

+ mutual recognition and trust

DRAFT,
not for
further
sharing
as final!

Zoning into the risks and barriers..

Key challenges

4

What are the main challenges and risks of data sharing and system interoperability in humanitarian and fragile context (political, legal, organizational etc)?

Addressing barriers

5

Looking at these challenges/risks which approaches can address, mitigate these?

Country lessons

6

What real life examples of interoperability between early warning and national social protection systems are available? What do they teach us?

Data governance

7

Whose consent and whose data governance rules apply when a humanitarian-run system (early warning or any other assistance system) talk to a government-owned social protection system?



Thank you for joining!

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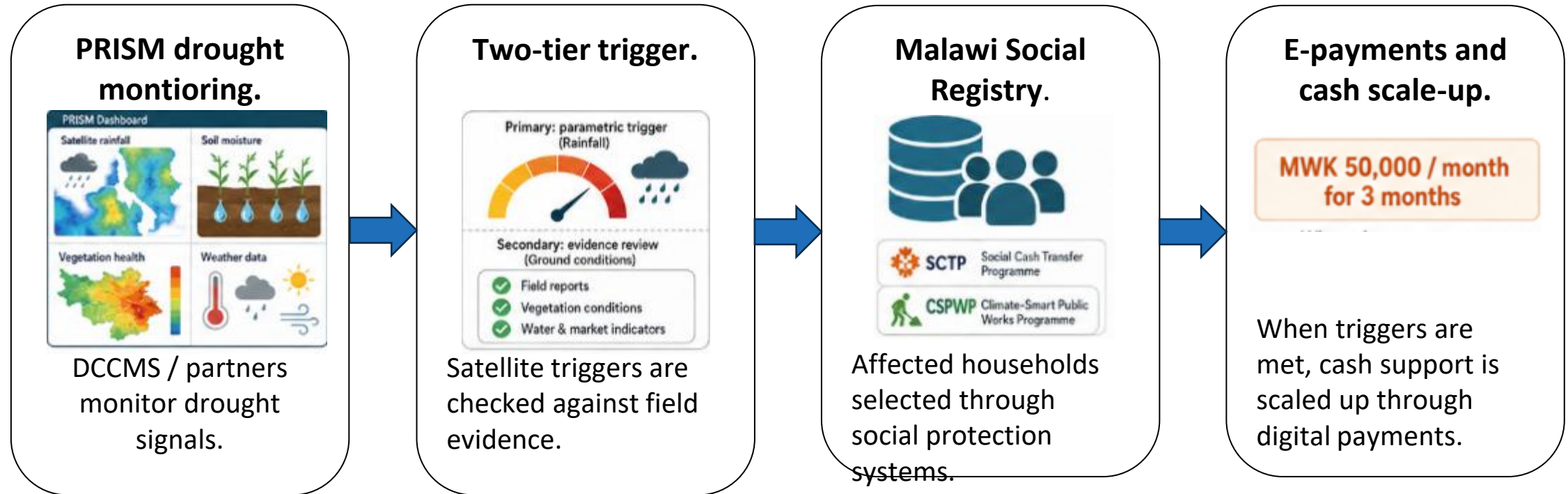
click or scan the QR code to become a
member of socialprotection.org



**Make sure to answer our survey, available when you
leave the session, and join us for the next webinars!**



From early warning to early action: Malawi's drought-triggered cash scale-up



248,000 households reached
~ **600,000** people protected during the 2024 El Niño scale-up
Approvals within 2 weeks

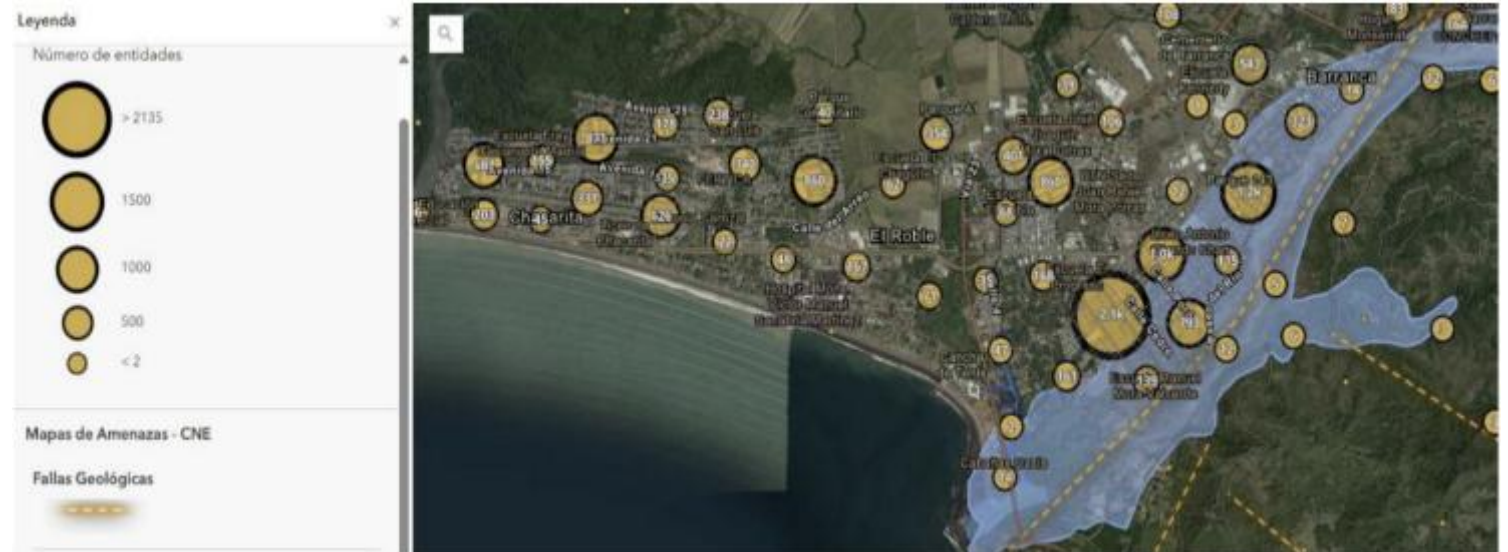
Malawi's Social Support for Resilient Livelihoods Project links early warning, pre-arranged financing, and social protection delivery. Forecast-based triggers can activate vertical and horizontal expansion of cash support before drought impacts deepen



From vulnerability mapping to early action: Costa Rica's integrated social protection approach

The GeoSinirube initiative aims to strengthen the responsiveness of the adaptive social protection system through a precise geospatial technology tool.

By mapping exactly where vulnerable families are, the system enables comprehensive, tailored solutions and facilitates targeted disaster response.



GeoSinirube 2.0 combines multidimensional poverty, demographic, employment, and social protection data, enabling detailed vulnerability analysis and more targeted, evidence-based interventions.

The Solution: Interoperability Standards

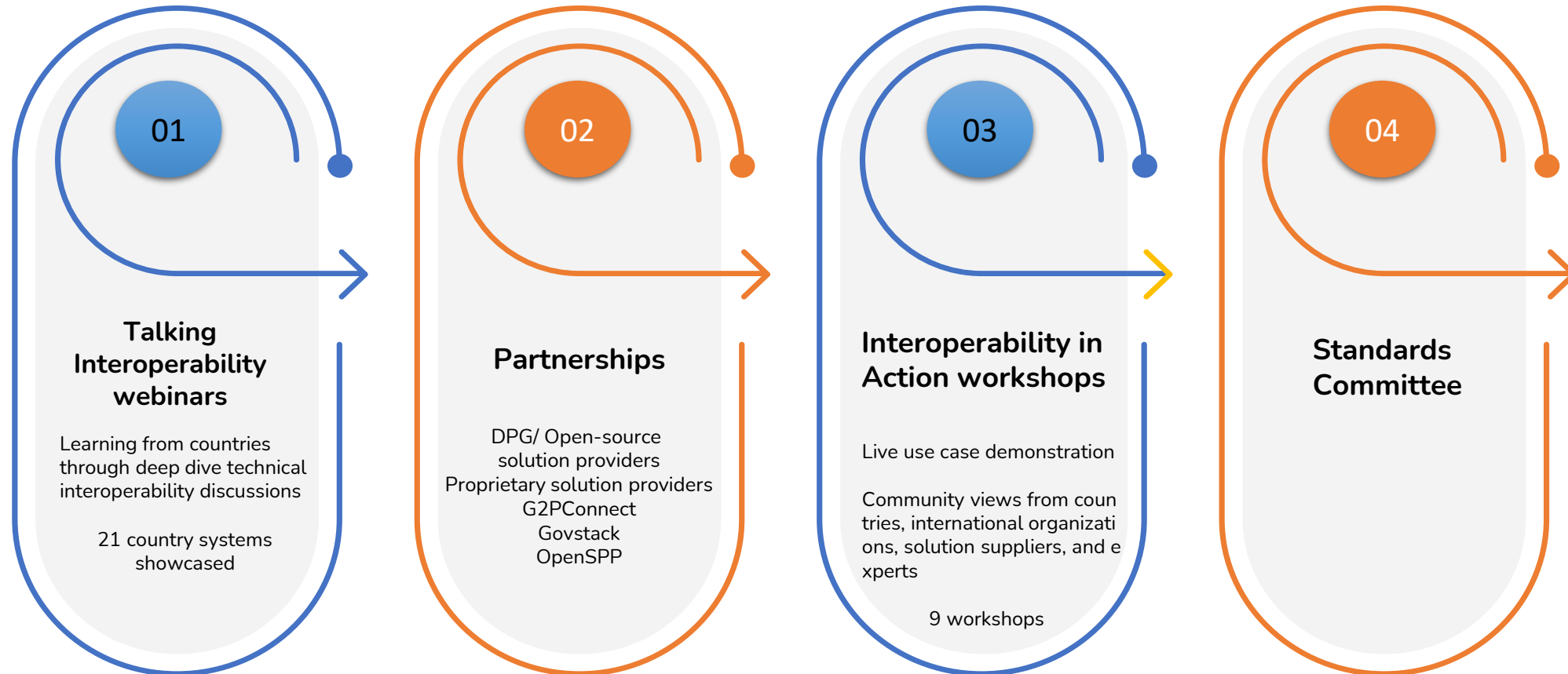
The Digital Convergence Initiative (DCI) develops **standards for interoperability** through a collaborative, multi-stakeholder process.

These standards establish common rules for how systems communicate, using common processes, data, and APIs.

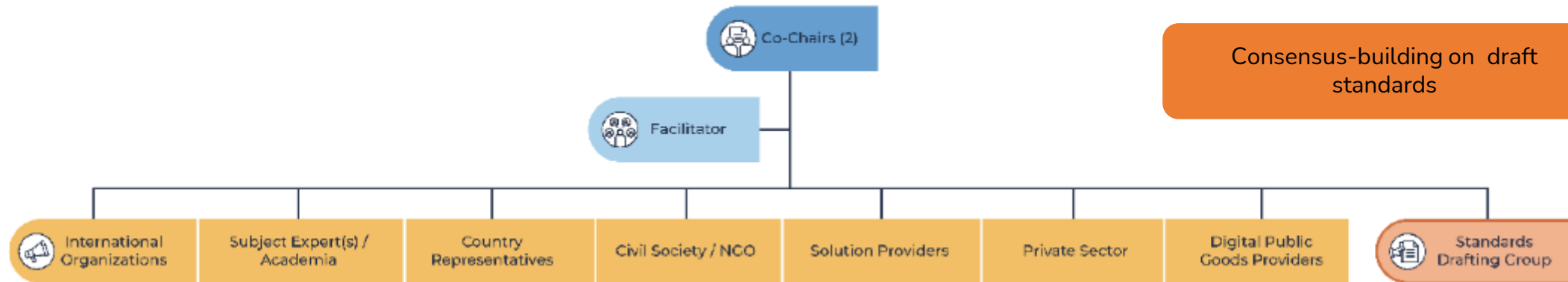
Open standards for seven interfaces have already been released and are ready to use.



Standards Development Approach



Standards Committee Structure



Role

Co-Chairs

- Preside over the standards committee meetings and lead the review process to of the draft standard
- Submit final draft to the DCI steering group

Facilitator

- Coordinate and facilitate meetings
- Manage documentation of feedback and action items from meetings

Standards Committee Members

- Review submitted standards and provide feedback
- Invite experts as coopted members / guests to the committee meetings.
- Work with Standards drafting group

Standards Drafting Group

- Prepare draft standards for review and endorsement
- Participate in meetings and incorporate feedback

Standards Development Process

1

Create a first draft of standards: **data collection and analysis, validation workshop, standards drafting**

Standards Drafting Group

2

Review and revise the draft version: **consensus building**

Standards Committee,
Public review, DCI Steering
Committee

3

Further review and approval: **endorsement**

USP2030

SDMX – Data Cube – JSON-stat

Feature	RDF Data Cube (W3C QB)	SDMX (SDMX-JSON 3.0)	JSON-Stat
Type of standard	Data model (semantic data standard)	Statistical data standard + API specification	Data format (lightweight cube JSON format)
Primary purpose	Semantic interoperability (Linked Data)	Official statistical exchange between institutions	Fast statistical data exchange for apps/dashboards
Data standard	✓ Yes (RDF vocabulary)	✓ Yes (full statistical standard)	⚠ Partial (informal cube model)
API standard	✗ Not native (requires SPARQL / custom APIs)	✓ Yes (SDMX REST / Web Services standard)	⚠ Not formal (usually custom REST APIs)
Interoperability strength	semantic web	global statistical systems	application-level only
Complexity	High	High	Low
Machine readability	High	High	Very high
Human readability	Medium	Medium	High
Enterprise adoption	Research, semantic web, gov integration	NSOs, IMF, World Bank, Eurostat	Web apps, analytics dashboards

Standards Committee Organizations for the Interoperability of Early Warning Systems and Social Protection Systems



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