RDA SECRETARY GENERAL PUBLISHES DATA RESILIENCE STATEMENT

*In March 2026, Hilary Hanahoe, Secretary General of the Research Data Alliance (RDA) and CEO of the RDA Foundation, was invited to speak at the **AGU Earth, Space and Environmental Sciences Global Data Resilience Convening**, held in Berlin, Germany. The first-of-its-kind gathering brought together a diverse cross-section of experts and leaders from international research institutions, think tanks, universities, and governmental and non-governmental organisations to strategise long-term measures for building a more resilient and robust global data enterprise.*

In her address, Hanahoe argued that data resilience is not primarily a storage or technical challenge — it is a coordination challenge. Drawing on the analogy of an electrical grid, she made the case that what is needed now is not new infrastructure, but the deliberate alignment of what already exists: shared standards, governance frameworks, and the institutional will to act at scale. She called on the assembled leaders — policymakers, funders, infrastructure builders, and data scientists — to act as a "Data Resilience Orchestra": each exceptional in their own right, but capable of something far greater when playing together.

Hanahoe's statement, delivered on 23 March 2026, is now published in full below. It is offered as a contribution to the broader conversation about the future of global knowledge infrastructure — and as a call to action for the institutions and leaders who must now choose whether to build for the world we have, or the world we are trying to create.

AGU Media Communication

DATA RESILIENCE

Hilary Hanahoe, Secretary General, Research Data Alliance

23 March 2026

Are we building global knowledge infrastructure for the world we have, or for the world we are trying to create?

Hilary Hanahoe, RDA Secretary General

Because right now, in 2026, we are at an inflection point. Not in the loose, overused sense of that word, but in the precise sense that the decisions made in the next few years will determine the architecture of our global knowledge infrastructure for the next twenty, the next fifty, even the next one hundred.

The evidence is accumulating. Extreme weather events,

biodiversity collapse, ocean chemistry shifts, land system change. The signals are coming faster than our capacity to interpret them.

Think of it like trying to read a book while someone is tearing out the pages. The scientists studying coral bleaching in the Indo-Pacific, the hydrologists tracking glacial retreat in the Hindu Kush, the ecologists mapping deforestation in the Congo Basin. They are generating irreplaceable evidence. But much of it exists in formats that cannot talk to each other, on servers that depend on the next grant cycle, in institutions that have not yet been asked to think of themselves as custodians of a shared inheritance.

We are not just at risk of losing data. We are at risk of losing the ability to ask — and answer — the questions that future generations will most need and want answered.

And yet the data we need to understand those signals — earth and environmental data gathered at enormous cost, often in remote and irreplaceable conditions — is fragmented, siloed, and in many cases at risk of being lost altogether.

At the same time, communities across the world — indigenous peoples, researchers in low- and middle-income countries, institutions operating across disciplinary and national boundaries — are asserting, rightly, that data governance must reflect their realities, their rights, and their knowledge systems. This is not a complication. It is a necessary correction. And it is a great opportunity if we are willing to build infrastructure that is genuinely inclusive.

So this is the moment we are in. An inflection point, in every sense.

Brewster Kahle, the digital preservation champion who co-founded the Internet Archive, has argued that universal access to all knowledge is both possible and necessary. I believe he is right. But universal access rests on a prior condition: the knowledge has to still exist. And it has to exist in a form that someone, anywhere, in any context, can actually find, interpret, and use.

Right now, we have a structural problem. Despite all our efforts, data management systems are not always designed with this in mind. International efforts are proliferating — with genuine commitment and genuine expertise — but they are not yet talking to each other in the ways they need to. Communities are working on indigenous data sovereignty from multiple directions. Initiatives like WorldFAIR and WorldFAIR+ are developing frameworks for cross-domain interoperability (also known as CDIF). Regional infrastructures are maturing. And yet the connective tissue is still missing.

The philosopher of science Sabina Leonelli has observed that data does not speak for itself. It requires context, curation, and continuity to remain meaningful. A dataset without governance is not knowledge — it is noise dressed in the clothes of evidence. And noise, at scale, can mislead as powerfully as silence.

Data resilience is not a storage problem. It is not a technical problem, in the first instance. It is a coordination problem and coordination problems, at global scale, require three things to be solved simultaneously.

Think of the electrical grid. No single power station can keep a continent lit. What makes the grid work is not the generating capacity at any one point: it is the interconnection. The **standards** that allow current from different sources to be combined. The **governance** agreements that determine who bears responsibility when something fails. The shared **commitment** to keep the lights on, regardless of who owns which station.

Research data infrastructure is no different. And just as with the grid, the most dangerous failure mode is not a dramatic collapse. It is the slow, quiet degradation. Data that becomes inaccessible, standards that diverge, communities that give up on interoperability because the coordination cost is too high. Resilience is not a feature you add at the end. It is a property of the whole system, or it is nothing.

The three things we must solve simultaneously are:

First: **data interoperability** — common standards and frameworks that allow data from different sources, disciplines, and systems to be understood and used together. Without this, we build increasingly elaborate silos.

Second: **infrastructure collaboration** — the willingness of institutions, platforms, communities and national initiatives to act as parts of a commons rather than as competitors. The answer is not another new platform. It is the hard, unglamorous work of connecting what already exists.

And third: **governance compatibility** — frameworks that can accommodate indigenous data sovereignty, LMIC perspectives, cross-domain complexity, and evolving community norms, without flattening them into a single model designed elsewhere.

These three are not sequential. They are simultaneous. Pull on any one thread without the others and the system will not hold.

The good news is that the infrastructure exists. The communities of practice exist. The frameworks — the FAIR principles, the CARE principles, the TRUST principles, the Global Open Research Commons, CDIF, the indigenous data governance guidelines, and many more besides — these are not hypothetical. They are live, and they are ready to be connected.

What this moment asks of us is not invention. It is synchronisation. Not a new shiny thing — but the deliberate, strategic act of aligning what we have built, finding the common grammar between initiatives, and making a shared commitment to global coordination that does not depend on any single funder, any single institution, or any single political moment to survive.

There is something fitting about having this conversation in Berlin. This is a city that knows what happens when walls are built between people, between communities, between systems of knowledge and governance. And it knows what becomes possible when those walls come down. Not just the relief, but the revelation. The sudden discovery that what was on the other side was not a threat, but a resource. Not an obstacle, but a collaborator.

The walls we are talking about today are less visible. They are walls of incompatible standards, of siloed funding, of governance frameworks that were never designed to speak to each other. But they are just as real. And they are just as worth dismantling.

Eight years ago, almost to the day, in this very same city, I opened the Research Data Alliance global community plenary meeting and I likened the community to musicians — individuals with amazing skills, knowledge and experience. Individuals who when they play their solo it is a gift. But put them together in an ensemble, in an orchestra, and you have some of the most beautiful and powerful music in the world.

Like them, each of you here in this room, online, or even those who are unable to attend this week, are each a veritable musician in your own right. You have all made your own music, played your own concerts, and are now here to be part of a new orchestra — a coalition of the willing. The Data Resilience Orchestra

You are here because you lead organisations, shape policy, direct investment, build and maintain infrastructures, run repositories, or work as data scientists and data experts. The technical community is doing its part — the working groups, the standards, the frameworks. What we urgently need is the political and institutional will and drive to act at scale.

So, to my mind, we need three things:

First: a shared commitment to leverage existing initiatives rather than duplicate them. Coordination is the hardest thing to fund, and the most important. When we duplicate effort, we are not just wasting resources. We are sending a signal to the next generation of data scientists and infrastructure builders that this community cannot get out of its own way. We can do better.

Second: a recognition that governance compatibility is as important as technical interoperability. Data sovereignty in all its forms is not a barrier to a global infrastructure. It is a condition of its legitimacy. An infrastructure that excludes the communities whose knowledge it claims to hold is not a infrastructure or a commons. It is a collection. The distinction matters enormously.

Third: an honest conversation about sustainability. Not every initiative will survive. Not every platform should. The question is which elements are so foundational that they require long-term, stable, coordinated investment? How do we ensure that that investment does not evaporate with the next budget cycle?

The Internet Archive has survived for thirty years on a combination of vision, stubbornness, and the refusal to treat long-term preservation as someone else's problem. We need that same stubbornness, at institutional scale, and backed by coordinated political will.

The inflection point is now.

The research community is ready. The infrastructure is ready. The question — the only remaining question — is whether the institutions and leaders in rooms like this one are ready to act with the intention this moment demands.

So I ask you again: Are we building global knowledge infrastructure for the world we have, or for the world we are trying to create?