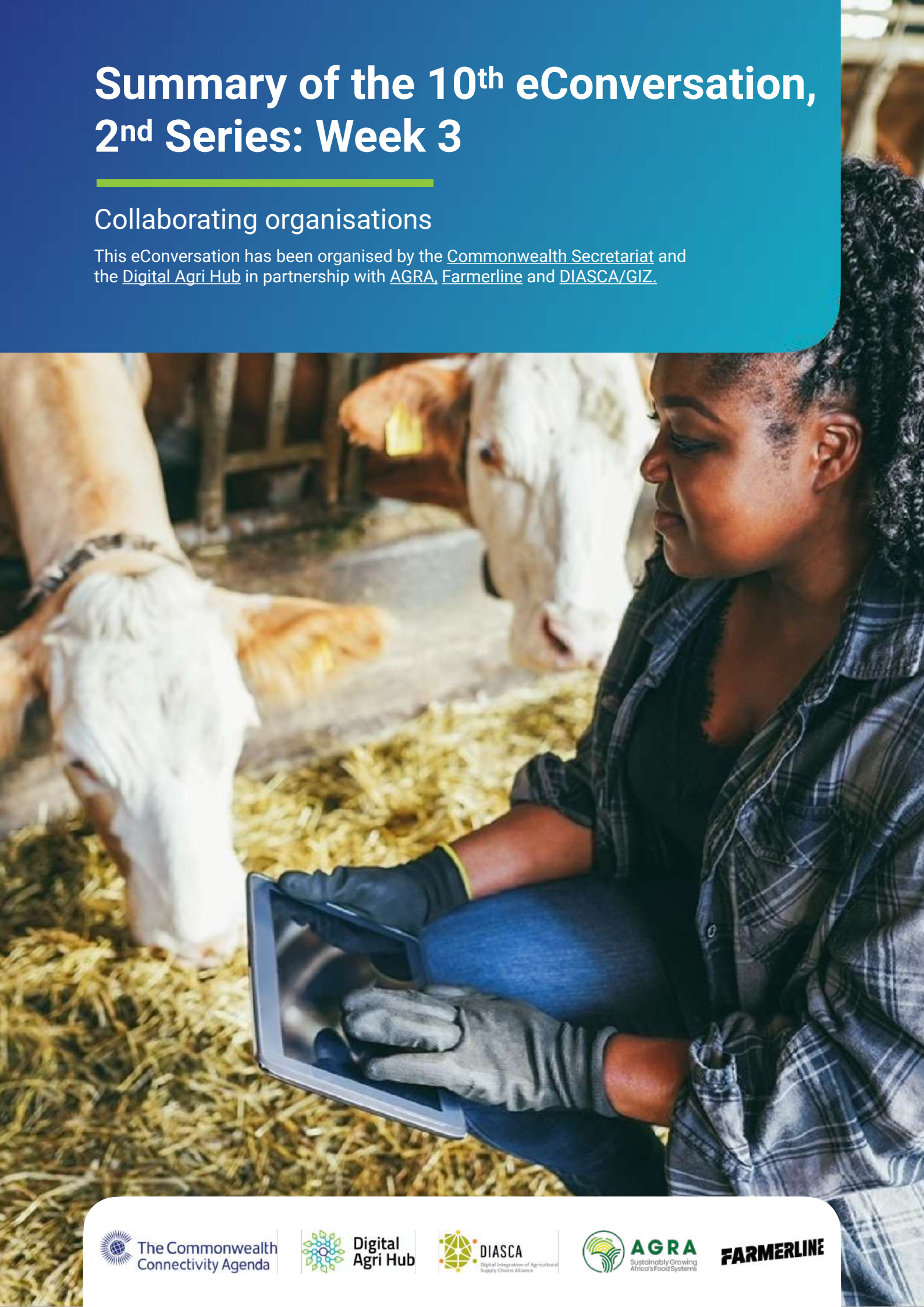
Summary of the 10th eConversation, 2nd Series: Week 3

Collaborating organisations

This eConversation has been organised by the Commonwealth Secretariat and the Digital Agri Hub in partnership with AGRA, Farmerline and DIASCA/GIZ.



The Commonwealth Connectivity Agenda | Digital Agri Hub | DIASCA Digital Integration of Agricultural Supply Chains Alliance | AGRA Sustainably Growing Africa's Food Systems | FARMERLINE

eConversation framework

Data has become the fuel for economic growth for many economies today and the data economy is likely going to determine the next world order, much like the role that the oil industry has played in creating economic power players in the past. Data is also the rail on which digitalisation runs and the bedrock for emerging digital technologies such as artificial intelligence (AI), machine learning, blockchains and internet of things that are enabling availability and access to information.

Agriculture is increasingly data-driven and considering the huge potential of agricultural data for countries, multiple stakeholder groups – farmers, governments, non-governmental organisations (NGOs), agribusinesses, donors, foundations, investors, researchers, digital platform operators, international organisations and technology firms – are each investing in data collection, curation, processing, storage and sharing in a typical national agricultural data ecosystem.

However, these data systems are often fragmented and built in silos without interoperability. Data remains duplicated across government agencies, research institutes, and private actors, making it difficult to build a full picture of food production, markets, and natural resources at national level. In times of crisis—whether drought, pest outbreaks, or global price shocks—this lack of integration slows down responses and weakens evidence-based policymaking. Without a structured and coordinated approach to data management, the agricultural sector risks operating in the dark. The result is operational inefficiencies, increased costs, revenue losses, and reduced trade and investment both within and between countries.

The consequences extend to sustainability and innovation. Poorly managed data means missed opportunities for climate adaptation, inefficient use of land and water, and limited progress toward national and global sustainability goals. Researchers, startups, and agribusinesses struggle to innovate without open, interoperable datasets. In short, the absence of a country-level framework that brings together all the key agricultural data—collected by governments, research institutions, private companies, and even farmers themselves—into a coordinated, standardised, and accessible system is more than a technical shortfall—it is a strategic vulnerability that undermines resilience, competitiveness, and equity across the entire food system.

Through the Commonwealth Connectivity Agenda for Trade and Investment (CCA) programme, the Commonwealth Secretariat launched the **National Agricultural Data Infrastructure (NAgDI)** initiative in September 2023. The vision of NAgDI is to strengthen and harmonise existing individual data systems at country level through an interoperable national data infrastructure, enabling interconnected infrastructure at regional and global levels, thereby creating a superhighway for secure data exchange within and between countries, and across regions for macro-level decision-making. NAgDI is not a Digital Public Infrastructure (DPI), but an approach to delivering DPIs for agricultural data management at country level. NAgDI is likened to any national public infrastructure such as transport, telecommunication, energy, etc. NAgDI has been conceptualised to cover four components, namely (i) systems and technologies, (ii) principles and policies, (iii) marketing and business, and (iv) governance and administration.

If carried out well, a functional NAgDI can become a cornerstone of agricultural transformation. It would lay the foundation for independent data verification, giving investors the confidence to support Micro-, Small and Medium-sized Enterprises (MSMEs) and start-ups, while also improving access to finance and fostering innovation. By bringing together multiple data sources, it would enable more accurate, reliable, and evidence-based policymaking—ensuring governments are equipped to respond quickly and effectively to challenges in the food system.

NAgDI would also empower countries to navigate well-intended but disruptive external regulations, such as the European Union Deforestation Regulation (EUDR), by

facilitating access to credible and verifiable data. At the same time, it would strengthen national sovereignty in the digital domain, ensuring governments retain control over their agricultural data. Most importantly, it would prepare countries to fully harness the power of Artificial Intelligence and other emerging digital technologies, all of which depend on large volumes of accurate, trusted data.

Looking beyond national borders, interoperable NAgDIs across regions would create a secure "data superhighway" for exchange within and between countries. This would unlock new opportunities for macro-level decision-making, while serving as a catalyst for deeper intra-regional trade and investment. In this way, NAgDI is more than infrastructure—it is the backbone of a smarter, more connected, and more resilient agricultural future.

About the events

The Commonwealth Secretariat developed a **Policy Guide for NAgDI** in support of intra-Commonwealth trade and investment. However, the policy extends beyond the Commonwealth. Prior to and alongside the launch of the Guide, the Commonwealth Secretariat and Digital Agri Hub, in partnership with AGRA, Farmerline, and DIASCA/GIZ, hosted this eConversation which consisted of a series of events including e-discussions and webinars unfolding over a period of four weeks. The initiative provided a two-way dialogue to assist the Secretariat in establishing the business case for private sector investment in NAgDI for interested countries, as well as raised awareness of the opportunities that were and would be available. The flow of events mobilised the audience around the initiative and engaged the parties during the launch of the Guide and its rollout activities.

The activities combined online and in-person events to bring together stakeholders from the Commonwealth and beyond – public sector, international organisations, development partners, private sector investors, and others interested in developing markets on the subject.

Week 3 Summary of the eConversation (Webinar & e-Discussion)

A

Summary of the Webinar — Week 3

On 17 October, the Webinar titled *"From Silos to Systems: What are some of the use cases of DPI in agriculture?"* focussed on different cases of data exchange technologies and platforms within the agricultural sector. Experts deliberated on the relationship between the foundational DPIs and sector DPIs being implemented by countries and explored alignment of their implementation with the four components of NAgDI. Speakers included **Marvin Nii Adom Armah,** Farmerline Ltd, **Tuntufye Laura Ntaukira,** UNDP, **Jeremi Joslin,** OpenSPP, **Michel Mouchiroud,** OpenSPP, and **Gregorio Canto,** Ministry of Agriculture, Food Security and Enterprise, Belize.

Some Statistics on the Webinars

Date	Title	Registered individuals	Attendees %	Female	Recording
17/10/25	From Silos to Systems: What are some of the use cases of DPI in agriculture?	120	53%	24%	YouTube

Date	Title	Attendees' age group					
		18-24	25-34	35-44	45-54	55-64	65+
17/10/25	From Silos to Systems: What are some of the use cases of DPI in agriculture?	2%	18%	33%	35%	8%	4%

B

Summary of the e-Discussion on D4Ag – Week 3

Q3 What are some of the emerging common areas of interests that can be taken forward as we collaborate to roll out NAgDI in our countries?

Introduction and Framing

The week's discussion was launched by **Ben Addom,** who thanked participants for their engagement and recapped the previous week's focus on in-country implementation of DPI. He introduced NAgDI, developed by the Commonwealth Secretariat, as a holistic approach to agricultural data exchange. NAgDI is built on four pillars: Policies and Principles, Technologies and Systems, Governance and Administration, and Marketing and Business Models. The distinction between 'User data' and 'Content data' was also highlighted. Ben encouraged participants to reflect on practical experiences with DPI layers (e.g., National ID, Farmer ID, Field ID, Standards, Bilateral Data Exchanges) and to identify emerging common interests for collaboration

Learning from Other Sectors and Resources

Krishan Bheenick pointed out that DPI has gained traction in the social protection sector, with many lessons applicable to agriculture. He shared resources on interoperability and the concept of "stacks" in DPI, emphasizing the value of understanding both horizontal (technological) and vertical (functional) layers. Krishan invited others to consider how these stack concepts apply to agricultural DPI

Country Experiences and Technology Platforms

Ville Sirviö introduced X-Road, an open-source data exchange layer implemented in 27 countries, with growing adoption in Africa and Latin America. He provided links to resources and maps showing X-Road's global reach. Krishan shared examples from Benin (French) and Tanzania (English), demonstrating the regulatory and technological coordination needed for DPI implementation. These cases underscored that non-technological interventions (e.g., regulation, coordination) are as important as technical solutions

Key Challenges and Tools

Michel Mouchiroud highlighted the DPI Explorer, which documents DPI use in agriculture (e.g., India, Kenya, Rwanda), and the DPI MAP for global DPI adoption. He also mentioned interoperability standards for social protection and farmer registries. Krishan referenced a presentation on OpenSPP in Sri Lanka, which demonstrated how DPI can trace fertilizer use and support modular, standards-based registries managed by farmer organizations. This raised questions about the ease with which other countries could replicate such systems and the potential for federations of farmer organizations to prepare for national integration

The Role of Registries and Modularity

Michel argued that even without full DPI rails (Digital ID, Data Exchange, Payments), a well-designed Farmer Registry can serve as a foundational building block. Such registries address data fragmentation, enable interoperability, and support inclusion by verifying eligibility and targeting support. OpenSPP's modularity allows countries to adopt only the needed components, promoting adaptability and avoiding vendor lock-in. Michel also asked about private sector incentives to participate in or leverage such registries

Critical Reflections and Concerns

Charles Dhewa raised concerns about the rationale for large-scale registries, questioning whether the investment matches the needs and whether centralization could lead to inefficiencies, privacy risks, and loss of local resilience. He argued that local knowledge silos can be more resilient and that digital tools should empower communities rather than centralize control. Charles also doubted the private sector's interest in public-good data, except for companies seeking captive audiences

Ben Addom responded that NAgDI's goal is not centralization but harmonisation and interoperability among existing registries, reducing redundant data collection and enabling systems to "talk to each other." The "From Silos to Systems" theme is about connecting silos, not eliminating them, to enable better macro-level decision-making while maintaining sovereignty over local data

Governance, Ownership, and Trust

Gram Disha Trust and others raised questions about the governance, ownership, and transparency of DPI and NAgDI, especially regarding global versus local control, conflict of interest, and data sovereignty. They referenced concerns in India about big tech involvement in agricultural data and called for transparency and community control. The conversation also touched on open-source principles (e.g., copyleft, reciprocity) as potential models for governance

Ben clarified that NAgDI is not a DPI but a delivery approach for DPI, emphasizing a holistic, process-focused model that includes technology, policy, governance, and business strategies. He provided definitions of DPI from various organizations and explained that NAgDI's "I" (infrastructure) is broader and more holistic than traditional DPI

Synthesis and Next Steps

Krishan summarized that the week's discussion revealed both mistrust of centralization and an appreciation for modular, community-empowering approaches. He suggested that local mastery of data should precede larger-scale sharing and that platforms like OpenSPP could be tailored for local use before considering aggregation. The Commonwealth Secretariat's Policy Guide (with 64 activity clusters) was proposed as a framework for further discussion. The week closed with an invitation for more sharing of local experiences and collaborative model-building

Key Takeaways

- NAgDI is positioned as a holistic, process-focused approach to delivering DPI in agriculture, emphasising interoperability and harmonization rather than centralisation.
- Registries (e.g., Farmer Registries) are seen as foundational, but their design should prioritize modularity, inclusion, and local empowerment.
- Concerns about centralisation, data sovereignty, and private sector motives were prominent, with calls for transparency, community control, and open-source governance models.
- Practical experiences from various countries (e.g., Benin, Tanzania, Sri Lanka) highlighted the importance of regulatory, technological, and community coordination.
- The conversation remains open, with a focus on learning from diverse local experiences and building collaborative frameworks for agricultural data infrastructure.

C

Week 3 e-Discussion Podcast (AI-generated)

Audio alternative: Listen to the "NotebookLM AI-generated Deep Dive" podcast based on Week 3 of the e-Discussion (around 15 minutes): (https://youtu.be/uJo0s3AZFlk?si=6lkQ-LYjAgb7hqm9)

D

Resources Week 3

List of URLs referenced during Week 3 of the e-Discussion on D4Ag

- Digital Convergence Initiative – Data exchange platforms for interoperability: country approaches: https://spdci.org/events/dialogue-series-session-20/
- DPI Handbook (Research and Information System for Developing Countries): https://pn.ispirt.in/wp-content/uploads/2025/08/DPI-Handbook.pdf
- A Digital Public Infrastructure Approach for the Agriculture Sector (Vital Wave, OpenAgriNet, World Bank, Gates Foundation, Co-Develop): https://vitalwave.com/wp-content/uploads/2025/09/DPI-Approach-for-Agriculture-Sector_Final_.pdf
- YouTube – Minister for ICT in Tunisia, Dr Nizar Ben Neji, on Data Sharing and Interoperability: https://youtu.be/NtlzND0lCCM?t=265
  (Benin case: https://youtu.be/NtlzND0lCCM?t=1152)
  (Tanzania case: https://youtu.be/NtlzND0lCCM?t=3647)
- X-Road global information: https://x-road.global
  (Map of countries: https://x-road.global/xroad-world-map)
- DPI Explorer – Agriculture sector: https://www.dpiexplorer.org/explore?sectors=Agriculture
- DPI MAP (UCL IIPP): https://dpimap.org/
- Digital Convergence Initiative – Interoperability standards for farmer registry: https://spdci.org/news/dci-releases-interoperability-standards-farmer-registry/
- YouTube – OpenSPP implementation in Sri Lanka (ID4Africa Conference): https://youtu.be/OM43S1_lmRM?t=3820
- India Public Food Procurement and Supply program: https://www.pib.gov.in/PressReleasePage.aspx?PRID=2179514#:~:text=NFSA%20legally%20entitles%20up%20to,receive%20adequate%20food%20and%20nutrition.
- Joint letter to the Agriculture Minister (India, National Agristack): https://internetfreedom.in/joint-letter-to-the-agriculture-minister/
- FSF and GPL (copyleft): https://sfconservancy.org/news/2014/nov/07/copyleft-org/#:~:text=Its%20primary%20project%20is%20currently,studies%20of%20copyleft%20compliance%20situations.
- FSF enforcement principles: https://www.fsf.org/licensing/enforcement-principles
- FSF v Cisco (2008): https://www.scl.org/1420-fsf-v-cisco/#:~:text=The%20complaint%20asserts%20that%20Cisco,GNU%20Binutils%2C%20and%20GNU%20Debugger.
- Big Tech's market dominance (CBLTRGNUL): https://www.cbltrgnul.in/post/big-tech-s-market-dominance-challenges-and-interventions#:~:text=12%5D,data%20exploitation%2C%20and%20unfair%20competition.
- Open Network for Digital Commerce (ONDC): https://ondc.org/
  (Open data: https://opendata.ondc.org/)
  (Network participants: https://ondc.org/network-participants/)

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