**A Learning Agenda for the Data Champions Collaborative:**

**Federal Recommendations, Actions, and Opportunities**

*October 2024*

Since its inception the Data Champions Collaborative (DCC) has been convening federal partners across the education and workforce spectrum to establish [a shared vision](https://dataqualitycampaign.org/resource/a-vision-to-transform-state-data-systems/) of the role data and improved statewide longitudinal data systems should play in improving decisionmaking for policymakers, economic mobility for communities, and most importantly, educational and workforce outcomes for individuals. Through those convenings, DCC members have developed a set of federal recommendations that align with this shared vision that data systems must be more accessible and usable to policymakers, the public, and individuals while they also protect private information.

DQC also has facilitated connections with state partners to help our federal partners understand the challenges and opportunities present in accomplishing this goal. For example, DQC and a small set of interested DCC members worked with the Department of Labor (DOL) to map out a set of listening sessions on workforce data that offered an opportunity to state workforce and data leaders to share their specific challenges related to workforce data. The number one issue, according to DOL, to come out of those sessions was data sharing and the need for greater clarity and guidance around what data may be shared and under what guidelines and circumstances.

By connecting its federal recommendations with specific actions and opportunities that could lead to the implementation of those recommendations in a manner that recognizes existing barriers and challenges states are facing, the DCC has developed an action-oriented learning agenda to guide its efforts for the coming years. This learning agenda will help DQC and the DCC members better understand state successes and challenges in implementing the use cases identified in our shared vision and ensure DCC partner education and advocacy efforts are grounded in evidence.

That learning agenda is presented below as a set of federal recommendations and then a corresponding set of priority actions and opportunities to implement the recommendations. Both the recommendations and the actions and opportunities were developed collaboratively by DCC partners.

## **Funding: Increase Funding Available for SLDS Modernization and Capacity Building**

**Clarify and increase the funding available for SLDS modernization and capacity building**. State and local leaders need clarity on the availability of federal funds to support data modernization efforts and how those funds may be used. Increasing the federal funding available for these efforts could incentivize states to undertake much-needed improvements in their data systems, making data more accessible and useful to individuals, the public, and policymakers. Further, providing clear guidance and technical assistance on how existing funds may be used, braided, and blended to support SLDS modernization would enable states to tap into current resources as well as new ones to support their modernization efforts.

Possible funding strategies include:

* Increase the appropriations levels for the current Department of Education (ED) Statewide Longitudinal Data Systems (SLDS) Grant Program and the Department of Labor (DOL) Workforce Data Quality Initiative Grant Program (WDQI), and expand eligible state-level grantees and uses of funds. The levels should be $100,000,000 for the SLDS grant program and $40,000,000 for WDQI, minimum.
* DOL, the Office of Management and Budget, and partner agencies (e.g., Education and Commerce) should issue joint guidance clarifying states’ ability to use existing [federal funds](https://dataqualitycampaign.org/resource/federal-funding-for-eddata/) for data system priorities (both emergency relief funds and funding in other programs that can be blended and braided).
* Consider other funding sources, such as a state data block grant as recommended by the Advisory Committee on Data for Evidence Building or a data pilot similar to the Temporary Assistance for Needy Families (TANF) Data Innovation Pilot.
* Fully fund the National Secure Data Service (NSDS) to create a safe, practical, and necessary way to facilitate data access for researchers, practitioners and policymakers both inside and outside government for evidence-building activities.

**Priority funding actions and opportunities:**

* Increase FY26 appropriation level for the SLDS Grant Program and the Workforce Data Quality Initiative (WDQI).
* Tap expertise and voices in states with SLDS grants and best practices/exemplars, particularly in states whose federal representatives sit on House or Senate Appropriations Committees, to grow connections between SLDSs, local partners, and Congressional delegations.
* Continue to urge SLDS competition redesign and adequate funding as well as alignment between SLDS and WDQI programs.

## **Guidance and Other Administrative Actions: Incentivize, Support, and Direct SLDS to Orient Toward Access**

**Reform the SLDS grant program.** To meet the evolving needs and expectations of states, districts, schools, workforce boards, and the public, the [SLDS grant program](https://dataqualitycampaign.org/wp-content/uploads/2023/12/DCC-support-letter-AREA.pdf) must evolve to include **ALL** of the following critical elements:

* **Expand the eligible applicant pool for SLDS grants** beyond state education agencies by including the Governor’s office, a state agency, data governance body, other public sector organization, or a multi-state consortium. The grant program must have a specific focus on statewide data governance structures.
* **Move the grant program’s focus** **beyond K–12 education to P–20W data and data systems,** aligning more closely with the direction in which states are moving and enabling funds to support this important infrastructure build-out.
* **Embrace linked, open, and interoperable data standards.** Ensure that the data students, workers, and employers need is made publicly available through the use of linked, open, and open-source data formats and schema, such as the credential transparency description language. This includes data about publicly funded education, training, occupational credentials, competencies, providers, and programs. Additionally, ensure data interoperability across all federal workforce data collections and related reporting to generate high-quality, structured data that can empower stakeholders and reduce existing reporting obligations as technological innovations continue to move forward.
* **Ensure states have the flexibility to address their greatest data needs**, while also signaling priorities that all states might benefit from (e.g., improving data integration; updating source systems; providing secure data access through dashboards and individualized tools; supporting staff capacity to manage, use, and protect data; and promoting cross-agency data governance).

**Expand privacy technical assistance and support.** States consistently cite the confusing patchwork of privacy laws and policies as a barrier to making progress linking data across sectors in support of access goals. Evolving state and local privacy needs overwhelm current federal technical assistance capacity—like the Privacy Technical Assistance Center (PTAC)—such that states struggle to find sufficient support and technical assistance to address their privacy concerns. The federal government should strengthen data privacy support for states in the following ways:

* Direct ED, DOL, Commerce to provide guidance and technical assistance on integrated data systems and student and worker privacy. This guidance should build on and expand the guidance issued by PTAC in January 2017 (PTAC-IB-4);
* Highlight resources and tools that simplify and standardize contract processes, such as the Higher Education Community Vendor Assessment Toolkit (HECVAT);
* Clarify the privacy requirements across core federal early childhood funding streams, including Head Start, Child Care and Development Fund (CCDF), and the Maternal Infant and Early Childhood Home Visiting Program (MIECHV); and
* Formally authorize and strengthen PTAC in a manner that ensures sufficient autonomy, flexibility, and funding to address the most pressing privacy and cybersecurity needs of the field and that ensures part of PTAC’s mission is to disseminate information highlighting best practices for protecting privacy while enabling data use.

**Provide guidance on and support for linking and accessing data.** States receive conflicting guidance about linking data across agencies and sectors as well as their ability to include certain types of federal data within their SLDSs. Federal law rarely prohibits states from integrating data across education and workforce sectors, and often, the use of federal data is allowable. These misconceptions could easily be cleared up through administrative action. Such action would provide states clarity or direct approval, enabling them to feel confident about taking next steps to evolve their data systems. The following collaborative actions could provide states with increased clarity:

* Provide [guidance on how state agencies and institutions](https://sheeoed.medium.com/sheeo-policy-brief-data-use-implications-of-the-fafsa-simplification-act-and-future-act-07cc8c32d71d) of higher education can use Federal Tax Information (FTI) from the student financial aid process for research, analysis, planning, evaluation, and projections to administer financial aid programs more effectively and to assist students in persisting and completing postsecondary education. Guidance [should specify](https://sheeoed.medium.com/sheeo-policy-brief-data-use-implications-of-the-fafsa-simplification-act-and-future-act-07cc8c32d71d) how FTI data collected on the simplified FAFSA can be used and shared by state agencies and institutions.
* Influence the Department of Health and Human Services/Administration for Children and Families (ACF) to issue guidance/technical assistance to ensure that states and providers possess the infrastructure necessary to collect, report, and act on the data required of them under the new [Child Care and Development Fund rule](https://www.acf.hhs.gov/sites/default/files/documents/occ/Overview_of_2024_CCDF_Final_Rule.pdf).
  + This guidance could include promoting state- and local-level sharing of Head Start data and creating a standardized agreement template to facilitate that sharing.
* Support state data systems in obtaining access to federal data that is relevant to education and workforce through initiatives such as the National Secure Data Service, such as:
  + Wage and employment records (e.g., unemployment insurance, census records, other applicable sources);
  + Postsecondary enrollment data across state lines;
  + Military enlistment information;
  + Free Application for Federal Student Aid (FAFSA), including FTI data elements; and
  + Other state administrative data, including public benefits data.

**Scale best practices and address barriers**. States rely on the federal government to step in to address priorities or challenges that states cannot tackle on their own. In addition to the actions described in this section, this support includes promoting best practices, addressing systemic barriers, providing states with cover to take action, and breaking down silos. Existing federal efforts can be expanded and enhanced through the following actions:

* Invest in more efforts like ED’s State Support Team, which provides important support to states through technical assistance, resources, and convenings. Expanding this approach should include a mechanism to ensure that agencies coordinate with each other to support states including through identifying grant programs that can be implemented in a joint, cross-agency manner
* Convene states to highlight early childhood data-systems-related lessons learned, identify best practices and exemplars, and develop peer guidance that can be shared across states
* Charge the federal chief data officers network with helping their counterparts in states by:
  + Identifying barriers to state data system modernization efforts that the federal government can ease;
  + Recommending ways that the levels of government could better coordinate their data collection, reporting, access, and use efforts; and
  + Creating best practices resources and other tools for states.
* Create a Special Assistant to the President for Education and Workforce Data and Privacy position within the Domestic Policy Council. This person’s charge should be to convene an inter-agency task force to develop aligned policy directives that can drive guidance, technical assistance, and support to state governments on how their SLDS can appropriately access, share, use, and protect key education and workforce data necessary to support policymakers as well as individuals navigating the journey through education and the workforce. The task force should also consider whether the implementation support and technical assistance that derives from these policy directives is best carried out by the General Services Administration (GSA) or an independent, non-governmental entity with cross-sector data and privacy expertise.

**Reform the current public workforce data system** to ensure that everyone—including workers, employers, governors, workforce development boards, and other policymakers—has access to quality data that is transparent, accurate, actionable, and secure. [Reform should include](https://dataqualitycampaign.org/wp-content/uploads/2023/10/Workforce-Data-Reforms.pdf) the following critical elements:

* **Publish revised regulations or guidance on sharing wage data**. Building on ED and DOL’s existing [joint guidance](https://studentprivacy.ed.gov/resources/joint-guidance-data-matching-facilitate-wioa-performance-reporting-and-evaluation) on sharing wage data for Workforce Innovation and Opportunity Act (WIOA) reporting purposes, the ability of wage and workforce data to be used for linkages, including cross-state and multi-state initiatives, must be clarified and could be [modeled on ED guidance regarding integrated data systems and student privacy](https://studentprivacy.ed.gov/resources/integrated-data-systems-and-student-privacy). The lack of clarity on this issue has been a real barrier to linking workforce data (e.g., UI wage, Perkins, and WIOA data) in SLDSs despite such linkages being allowable under federal law. We were excited to see DOL’s recent [Request for Information](https://www.federalregister.gov/documents/2023/07/25/2023-15631/federal-state-unemployment-compensation-uc-program-confidentiality-and-disclosure-of-state-uc) on the unemployment compensation confidentiality regulations, which we hope will result in action to revise the existing regulations and the [2016 joint guidance](https://studentprivacy.ed.gov/sites/default/files/resource_document/file/JOINT%20GUIDANCE%20ON%20DATA%20MATCHING%20TO%20FACILITATE%20WIOA%20PERFORMANCE%20REPORTING%20AND%20EVALUATION.pdf). Such a revision would provide greater clarity to states seeking to use earnings data together with programmatic data for program improvement, evidence building, and transparency.
* **Support and incentivize cross-state and multi-state collaborative efforts.** There is a critical need to remove state border siloes, both in data systems with state-driven governance and in the cross-agency/cross-state data analytics community, for capacity building. Federal agencies should increase support for and encourage participation in cross-state data linkages, shared problem solving, and collaborative efforts to develop common solutions. Doing so would build on progress funded by SLDS and WDQI grants, and the Multi-State Data Collaborative supported by the National Association of State Workforce Agencies, Coleridge Initiative, and State Higher Education Executive Officers Association. Federal agencies should also provide line-item funding for training for the public sector analytics field, similar to the recent DOL Employment and Training Administration-sponsored Applied Data Analytics training for state agencies.
* **Partner with state and other federal agencies and stakeholders (including providers and other intermediaries) to implement new methods of secure, privacy-protecting data linkages leveraging national labor markets data**. This strategy could include an exchange or clearinghouse approach that minimizes sharing of personally identifiable information (PII) and could involve incentivizing private partners to contribute data as well. Accompanying this strategy should be the exploration of a national privacy center that can share innovative approaches to data privacy and security, demystify existing privacy requirements, and help stakeholders navigate specific privacy questions.
* **Support the pilot expansion of wage records**. DOL and other agencies (e.g., ED, Commerce) should [support efforts](https://dataqualitycampaign.org/wp-content/uploads/2023/10/Workforce-Data-Reforms.pdf) to incorporate standardized information available from wage records, such as job titles, full-time/part-time status, job-required skills, and job codes, through data standards such as JEDx.

**Priority guidance and administrative actions and opportunities:**

* Increase access to federal data sources such as Statistical Query Service/IRS, Census, and FAFSA data, and improve workforce/occupation codes for data.
* Work with DOL to issue guidance clarifying the ability of SLDSs, and other state agencies, to incorporate and use unemployment insurance (UI)/wage data and to encourage data improvements for co-enrollment and coordination with other federally supported workforce development programs.
* Urge guidance from FSA and statutory fixes to clarify use of FSA/FTI data by institutions of higher education and SLDS to support student access and completion, research, and continuous improvement.

## **Legislative and Regulatory Fixes: Address Federal Barriers to Empower Data Use by State and Local Data Systems**

**Reauthorize the Education Sciences Reform Act (ESRA).** The [Advancing Research in Education Act (AREA)](https://dataqualitycampaign.org/wp-content/uploads/2023/12/DCC-support-letter-AREA.pdf), a bipartisan ESRA reauthorization bill, passed the Senate HELP Committee in the 118th Congress. Among other things, the bill [reformed the SLDS grant program](https://dataqualitycampaign.org/wp-content/uploads/2024/07/Summary_SLDS-Provisions-in-the-AREA-Act.docx.pdf) by broadening its focus from K-12 to P-20W data, expanding eligibility to include governor’s offices, state agencies, data governance bodies, and other public sector organizations or multi-state consortiums, and augmenting its uses of funds to include privacy, data integration, and infrastructure. These bipartisan improvements, which would better align the SLDS grant program with state data systems’ current fiscal and other support needs, should be revisited during the 119th Congress.

**Strengthen FERPA by codifying the 2008 and 2011 regulations.** This change would build state and local capacity to protect student privacy, [align FERPA’s provisions](https://dataqualitycampaign.org/wp-content/uploads/2023/05/FERPA-Recommendations_-April-2023.pdf) with other federal privacy laws, and improve transparency.

**Codify the Workforce Data Quality Initiative (WDQI).** This [change](https://dataqualitycampaign.org/wp-content/uploads/2023/10/Workforce-Data-Reforms.pdf) would enable states to develop tools and resources that can strengthen program quality, expand state capacity to produce and evaluate evidence for decisionmaking, meet performance reporting requirements, protect privacy, and improve transparency.

**Pass the College Transparency Act (CTA).** CTA would improve postsecondary education data, particularly information on outcomes by facilitating the creation of a student unit record system. It would also support students and families in making more informed decisions regarding postsecondary education. Congress should also ensure that the next iteration of the Higher Education Act requires institutions to publish actionable information about the costs, quality, outcomes, and value of their postsecondary programs.

**Institute initial improvements to WIOA data reporting regarding eligible training providers.** This includes publicly reporting on longer-term (fourth-quarter) earnings data and demographic data that is already collected, as well as revisiting suppression practices to increase the proportion of programs with available data (e.g., rolling up over multiple years) on [TrainingProviderResults.gov](https://www.trainingproviderresults.gov/#!/).

**Improve wage record access.** Ensure state workforce system access to the National Directory of New Hires (NDNH) for fiscal and management accountability purposes, including allowing the governor to designate an agency such as an SLDS to facilitate data matching, validation, and security. Such a change would enhance access to employment outcomes data while simultaneously ensuring the privacy of the data is maintained.

**Priority legislative and technical actions and opportunities:**

* Engage on ESRA and WIOA to reform and expand the SLDS grant program and codify the WDQI grant program, both with appropriate levels of resources.
* Advocate for the reauthorization of HEA, and TANF, emphasizing the importance of improving data quality and data systems to provide usable and current information. Highlight the important and necessary relationship between SLDS systems and federal data (e.g., College Scorecard).

## **AI: Help New Agency and Congressional Staff Understand the Role the Federal Government Can Play in Guiding and Regulating the Use of AI in Conjunction with State Data Systems**

**Ensure a solid foundation of high-quality data and privacy for AI use.** State governments contemplating using AI[[1]](#footnote-1) in conjunction with their data systems should first ensure they are following data policy best practices. That includes ensuring they have established cross-agency data governance, including a statute codifying authority, roles, and responsibilities, and maintaining a data system housed within an independent agency. States must also possess laws, policies, and mechanisms to protect individual privacy, develop formal policies around AI use, ensure transparency, and train staff on the varied aspects of using AI in a safe and ethical manner. Federal actions to support this solid foundation include promoting the ethical use of AI tools, addressing AI’s privacy implications, supporting state capacity, and investing in learning and development.

**Promote the ethical use of AI tools.**

* Federal agencies should provide **guidance and best practices that address the ethical and safe use of AI** including how to:
  + Identify and address algorithmic bias, including the disproportionate impact of bias on historically vulnerable students (such guidance should, at a minimum align with existing civil rights laws and regulations);
  + Ensure appropriate human oversight when using AI in conjunction with individuals’ education and workforce data, particularly when connected to an SLDS;
  + Determine whether AI use is appropriate for the situation, including guidance on how to conduct audits for when and whether data should be used with an AI tool;
  + Continuously monitor the functionality, efficacy, and impartiality of AI models and whether AI remains a suitable tool; and
  + Communicate about the equity and bias implications of AI with individuals in an ongoing and responsive manner.
* Federal laws and grant programs should **require and prioritize transparency around AI use in federal laws and grant programs.**
* Laws and grant programs should require state leaders to publicly disclose the use of AI, including what data was involved and how the AI was used, on relevant websites, reports, and tools designed for the public.
* Laws and grant programs should require state and local leaders to publicly disclose when AI is used, including what data was involved, for decisionmaking that impacts individuals’ education and employment opportunities, particularly those of vulnerable populations.
* **Emphasize open-source, Creative Commons licensed structured data formats**. Open-source data is generally of higher quality and more transparent than data in other formats, mitigating some bias and accessibility concerns. Federal leaders should require recipients of federal funds to make data available in structured, open, and interoperable formats.

**Address AI’s privacy implications.**

* Federal actors should **establish clear guardrails to govern state use of AI**, including, for example, prohibiting state actors from uploading PII into open, generative AI tools.
* Federal leaders should **provide guidance about how existing privacy laws address AI-specific issues.** For example, the US Department of Education (ED) should provide clear, unambiguous guidance about when and how uses of individual data within AI tools can be compliant with the Family Educational Rights and Privacy Act (FERPA) and other federal privacy laws applicable to students. This step includes clarifying:
* FERPA’s application to different types and uses of data, including linked P–20W data, synthetic data, vendor uses of data, and more; and
  + How, if, and when FERPA’s consent provisions should extend to the use of PII in AI tools, including by disseminating best practices and templates to help state leaders design consent policies for AI’s use.
* Federal actors should **disseminate best practices related to AI vendor contracting policies**, including:
  + Templates and model language that state and local leaders can use for procurement processes, such as memorandums of understanding (MOUs) that satisfy federal privacy requirements; and
  + Recommended language state actors can use to govern the ownership and control of data or intellectual property when using AI or third-party vendors, especially as it impacts individuals’ education and employment opportunities.

**Support state capacity.**Federal resources and expertise are important in building and retaining state capacity to adequately adapt to and implement new AI technologies. Federal actors can support states in a myriad of ways, including the following:

* Congress should **expand ED's Privacy and Technical Assistance Center's** mandate and funding to focus on providing AI-specific privacy, security, and legal technical assistance. This expansion would provide invaluable guidance to entities at all levels by helping them implement AI responsibly and securely.
  + Explore the viability of building federal expertise and technical assistance services into other existing structures, such as the Regional Education Laboratories (RELs) and Comprehensive Centers.
* Federal actors should **provide funding and support to state agencies to support staff capacity to manage, use, and protect data while using AI.**, Resources and support should focus both on how to attract and retain personnel as well as how to build a shared understanding of innovation, technology, privacy and ethics issues. Funding may be provided directly or through clarifying the ability of state actors to blend and braid existing grant dollars, such as ESEA Title I, II, and IV.

**Invest in learning and development.** Federal actors must invest in AI research with a focus on effective SLDS development and use that includes elevating ethics, avoiding bias, promoting transparency, and ensuring the confidentiality of PII. As part of this research and development, federal actors can:

* **Create forums and incentives** formulti-jurisdictional sharing of best practices, ideas, codes, models, tools, privacy enhancing technologies, and training data; and
* **Establish a repository for national information-sharing about AI projects** so that state and local actors can collectively learn from the technology’s use in the field.

**Priority AI and privacy education actions and approaches:**

* Myth busting on privacy (e.g., FERPA, COPPA, PPRA).
* Meet with administration staff to connect the dots between their priorities and the need to modernize SLDS.
* Increase understanding of the data and R&D ecosystem at large, the role of Statewide Longitudinal Data Systems (SLDS), and the overlap between data, assessments, and research.

**APPENDIX**

**Additional Possible Actions and Opportunities**

## **Funding: Increase Funding Available for SLDS Modernization and Capacity Building**

* Offset FY24 SLDS funding rescission.
* Offset funding reductions to the PDG B-5 program and clarify that funds may be used specifically for data and data systems needs.
* Navigate ways to draft language requests that offset current funding constraints.
* Advocate for the creation of a state data block grant as recommended by the Advisory Committee on Data for Evidence Building (ACDEB).

## **Guidance and Other Administrative Actions: Incentivize, Support, and Direct SLDS to Orient Toward Access**

* Influence ED, DOL, Commerce, and OMB decisions on guidance, including the promotion of Uniform Grants Guidance, implementation of new OMB race/ethnicity guidance, and permissible (privacy law compliant) data use and sharing within integrated data systems.
  + Clarify which existing grant programs are applicable for data infrastructure, modernization, and capacity, building off OMB’s recently issued Uniform Grants Guidance and partner roadmaps and playbooks.
* Support Department of Defense working group on military enlistment data to ensure a protocol is developed by which states can access data on the enlistment and military career pathways of their graduates.
* Encourage guidance from ED, DOL, Commerce on whether and how existing privacy laws address AI-specific issues, including:
  + - Is data used in an AI model considered linked?
    - Is synthetic data identifiable?
    - What does consent look like and how can it be given?
    - Is data used to train AI models considered to be in the direct control of an agency, in particular an educational agency per FERPA?
    - How can a state or local agency protect privacy and ownership of data in a vendor contract?
* Encourage ACF to clarify privacy requirements or protections across core early childhood funding streams, including Head Start, CCDF, and MIECHV.
* Influence HHS/ACF to issue guidance / technical assistance to ensure that states and providers possess the infrastructure necessary to collect, report, and act on the data required of them under the new [Child Care and Development Fund](https://www.acf.hhs.gov/sites/default/files/documents/occ/Overview_of_2024_CCDF_Final_Rule.pdf) rule. This guidance could include promoting state- and local-level sharing of Head Start data and creating a standardized agreement template to facilitate that sharing.
* Influence guidance on accessing disaggregated data in various settings (assessment report card, students with disabilities, high school redesign, federal data collection, etc.).
* Improve offerings of technical assistance on existing funding utilization and how to align grants across multiple agencies. Provide clarity on the ability to do the latter as well as streamline applications for multiple grants within and across agencies.

## **Legislative and Regulatory Fixes: Address Federal Barriers to Empower Data Use by n State and Local Data Systems**

* Demonstrate broad support for legislative authorities and funding for data.

## **AI: Help New Agency and Congressional Staff Understand the Role the Federal Government Can Play in Guiding and Regulating the Use of AI in Conjunction with State Data Systems**

* Joint Administration and Congressional office visits and briefings (in-person or virtual), prioritizing new staff and Members on committees of jurisdiction and inventory past DCC accomplishments and use them as a component of this action.
* Address AI and the requisite need for high-quality data and data systems to underlie its use.
* Develop snapshots that tell best practices and exemplar stories across the P-20W spectrum, tools that convey DCC priorities, and toolkits for easily conducting educational meetings.

1. We use the term AI to encompass both artificial intelligence and other emerging technologies that may raise similar data use and ethical considerations. [↑](#footnote-ref-1)