UNICEF Innocenti – Global Office of Research and Foresight

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CASE STUDY

Impact and Risk Assessments

Case study overview

Type of innovation in data governance: Impact and risk assessments

Key innovator(s) in focus:

- UNICEF Toolbox on Child Rights Impact Assessments in Relation to the Digital Environment (D-CRIA Toolbox)
- European Union (EU) AI Act and Fundamental Rights Impact Assessments (FRIAs)
- Republic of Korea Privacy Impact Assessments (PIAs)

Problem the innovation is trying to solve: Lack of guidance on how to systematically anticipate risks connected to data processing, and how to mitigate them before any actual harm occurs to children.

About the innovation in data governance: Impact and risk assessments provide a framework to guide companies through a process of identifying, understanding and mitigating risks to children.

Countries or regions of operation: European Union (EU), Republic of Korea, Global

Time period: 2018–date

Problem the innovation in data governance is trying to solve

Risk assessments ... enable a proactive evaluation of risks associated with data processing, allowing for the implementation of mitigation measures

Despite the growing number of data protection regulations around the world that apply to children, these laws are typically technology neutral and they apply to a broad range of services and technologies. As a result, they are not able to fully and directly address the complex, context-specific challenges posed by different data processing scenarios. Furthermore, although regulators' audits and fines can strongly incentivize compliance, such measures often occur only *after* a data breach has been reported and harm has already taken place.

Impact or risk assessments (collectively referred to as risk assessments) help address this gap in two key ways. First, they enable a proactive evaluation of risks associated with data processing, allowing for the implementation of mitigation measures and the prevention of harm before deployment. Second, they offer a detailed and structured framework for reviewing specific technologies and addressing various risk factors related to the processing of children's data. While many companies may be more familiar with risk assessments such as ISO 31000, which focuses on risks to the business, the emphasis here is instead on risks to children. The examples below examine risk assessments related to children's data processing through the perspective of international children's rights law, the Charter of Fundamental Rights of the EU and the Republic of Korea's privacy law.

Global: UNICEF Toolbox on Child Rights Impact Assessments in Relation to the Digital Environment (D-CRIA Toolbox)

UNICEF has developed guidance on Assessing Child Rights Impacts in Relation to the Digital Environment (implementing the D-CRIA Toolbox). The D-CRIA Toolbox was developed together with Business for Social Responsibility (BSR).

Origins and implementation

Under the United Nations Guiding Principles on Business and Human Rights (UNGPs) and the Children's Rights and Business Principles (CRBPs), companies have a responsibility to identify, assess and address relevant human rights risks, including risks to children's rights both online and offline, through robust human rights due diligence. This includes risks related to data processing.

Stakeholder consultations carried out by BSR as part of the UNICEF D-CRIA Toolbox project revealed that technology companies tend to prioritize child safety over other rights, leaving various gaps when it comes to other child rights and potential impacts. The lack of clarity and guidance on this topic combined with various new regulatory requirements for digital businesses results in these businesses prioritizing compliance measures over Child Rights Impact Assessments (CRIAs).

Companies can use the D-CRIA Toolbox to meet their responsibilities under the UNGPs and the CRBPs with regard to children. The process supports companies to both identify and mitigate risks (including risks that go beyond safety) in relation to their digital business activities, as well as to meet their compliance obligations (including under regulations pertaining to the processing of children's data). UNICEF's D-CRIA Toolbox includes guidance on what CRIAs are and why they are important; an Excel-based D-CRIA Tool for prioritizing impacts; and practical guidance on stakeholder engagement with children. The aim of the D-CRIA Toolbox is to promote the adoption of CRIAs by companies, by clarifying why and how they should conduct such assessments. The full D-CRIA Toolbox is expected in 2025.

Impact and benefits for children

The D-CRIA Toolbox has the potential to significantly advance child rights in the digital environment by helping companies identify, assess and address the specific rights and vulnerabilities of children. In the context of data governance, the D-CRIA Toolbox can be used alongside a Data Protection Impact Assessment (DPIA) to ensure that risks related to data processing are considered from the perspective of child rights, since the Toolbox provides a comprehensive framework that encourages consideration of the full spectrum of child rights. As companies conduct CRIAs and share insights through voluntary and/or mandatory reporting, this could also facilitate compliance with international child rights standards by companies across jurisdictions.

European Union AI Act and Fundamental Rights Impact Assessments (FRIAs)

The EU Artificial Intelligence Act (EU AI Act) introduces an obligation for deployers of certain 'high-risk AI systems', such as those used in public services, to carry out a Fundamental Rights Impact Assessment (FRIA) (Article 27). While the impact of AI extends beyond data-related risks, all AI systems are fundamentally underpinned by data processing, making FRIAs highly relevant to the governance of children's data.

Origins and implementation

The FRIA requirement within the EU AI Act stems from the recognition that deployers are uniquely positioned to understand the specific context in which a high-risk AI system will be used. This enables them to identify and mitigate key risks that developers may not have been able to foresee, especially those affecting vulnerable groups, such as children. The EU AI Act specifically references children's rights under the EU Charter of Fundamental Rights, as well as the United Nations Convention on the Rights of the Child and General Comment No. 25 (Recital 48) – all of which should be considered in the FRIA process.

FRIAs are mandatory for deployers of high-risk AI systems if those deployers are public bodies or private entities providing public services, or if they are involved in credit scoring. This reflects the State's role as a primary duty bearer and acknowledges that public services, such as social services, health care, justice and education, remain government responsibilities, even when delivered by private companies. These public services – and the AI systems used to deliver them – often have a greater societal impact, particularly on children, than optional commercial AI systems. High-risk AI systems include those used in education and those impacting access to and enjoyment of essential public services and benefits, all of which are likely to have direct or indirect impacts on children's rights. Companies that fail to comply with the FRIA requirements can be fined.

Under the EU AI Act, FRIAs must:

- Describe the AI system, including details of the context in which the high-risk AI system will be deployed, its intended purpose, the period of use, and the categories of people or groups likely to be affected by its use, such as children
- Identify potential harms and risks to those impacted, such as children
- Outline preventative and mitigation measures, such as human oversight and safeguards.

If a technology company has already carried out a DPIA, then the FRIA is intended to complement, rather than duplicate, that assessment.

To support consistent implementation, especially by small and medium-sized enterprises (SMEs) with limited resources or expertise, the EU AI Act mandates the EU AI Office to release the FRIA template and automated tool, which are also intended to streamline the process.

Impact and benefits for children

The EU AI Act entered into force in 2024, with most provisions set to apply from the beginning of August 2026. When fully implemented, the Act's requirement for FRIAs has great potential to directly benefit children and other vulnerable groups by requiring public service deployers to assess the impact of AI systems on fundamental rights and to implement risk mitigation measures before deployment. Once the FRIA has been completed, deployers will be required to notify their relevant market surveillance authority of its results, which ensures that this exercise will be subject to scrutiny.

Republic of Korea: Privacy Impact Assessments

Privacy Impact Assessments (PIAs) are tools designed to evaluate data processing activities within a specific technology and identify potential risks. In some jurisdictions, such as the EU, they are referred to as DPIAs.

Origins and implementation

Under Article 33 of the Republic of Korea's Personal Information Protection Act (PIPA), as amended in 2020, PIAs are mandatory for public bodies in specific situations, such as the processing of sensitive personal data (e.g. medical data, education data) and for large-scale processing. While only mandatory for public institutions, PIAs have also become common practice in the private sector. In relation to children, PIPA should be read alongside the 2022 Guidelines for Protection of Personal Information for Children and Adolescents (Children's Guidelines), issued by the Republic of Korea's privacy regulator, the Personal Information Protection Commission (PIPC). These guidelines offer additional safeguards specific to the processing of children's personal data.

PIAs can play a critical role in ensuring that public sector institutions in the Republic of Korea adopt a 'do no harm approach' to the processing of children's data. They must be conducted at the design and analysis stage of a product or service, before the personal information system is established, to anticipate and mitigate potential harms, rather than relying solely on punitive measures (e.g. fines) after the fact. PIAs enable technology deployers to either re-evaluate the use of new technology based on identified risks to society and vulnerable groups, such as children, or deploy the technology with robust safeguards and risk mitigation strategies in place. As such, PIAs are a cornerstone of the risk-based approach that technology-neutral regulation demands.

The Children's Guidelines urge every controller that processes children's data to embed these principles when conducting a PIA or similar risk assessment. They contain recommendations for best practices that serve as risk mitigation measures specifically aimed at protecting children's data. Although not legally binding, the Children's Guidelines are expressly referenced in PIPC's PIA Enforcement Rule and the 2024 PIA Checklist update. As a result, public sector PIAs – and many voluntary corporate PIAs – now include a dedicated section on children's data.

Private companies in the Republic of Korea are increasingly incentivized to carry out PIAs on a voluntary basis. This trend is driven by three main factors. First, companies seeking Personal information & Information Security Management System (ISMS-P) certification (the Republic of Korea's voluntary information-security and privacy scheme) must demonstrate that they have conducted a risk assessment of their personal data flows. Second, and up to 30 per cent reduction in administrative fines was introduced for controllers who complete a PIA in advance. Third, under a proposed 2025 PIPA amendment, controllers reusing personal data for AI training beyond its original purpose would be required to conduct a risk assessment and publish key findings in their privacy policy. These developments have effectively made PIAs a standard practice among large digital service providers, particularly those pursuing ISMS-P certification or facing AI-related scrutiny. However, SMEs still rarely conduct PIAs unless required by a government tender or regulatory mandate.

Impact and benefits for children

Although PIAs in the Republic of Korea did not initially include child-specific sections, this has changed since the Children's Guidelines were published. Their application to technologies that may impact children has undoubtedly helped organizations identify risks related to data collection, sharing, tracking, profiling and more. With the introduction of new rules requiring a dedicated PIA section on children's data, this evolution is expected to have an even greater impact by institutionalizing child risk assessments.

Lessons learned

Some of the common experiences and lessons learned about risk assessments include:

Assessing data-related risks early on can minimize harm to children and prevent punitive actions later: Conducting risk assessments early in the design phase helps minimize potential harm to children and reduces the likelihood of future regulatory action. This proactive approach stands in contrast to the 'move fast and break things' mindset, enabling design and engineering teams to prevent foreseeable harm from the outset.

Risk assessments can often be carried out in-house, thereby reducing costs: Risk assessments promoted by regulators often include a very specific methodology to follow, making them easier to implement internally and therefore with minimal added costs. Even where technology companies lack child rights expertise, tools like the UNICEF D-CRIA Toolbox can help fill this gap by providing a step-by-step framework to child rights assessments. However, this should not discourage companies lacking in-house expertise from hiring external experts, or seeking the credibility offered by an independent assessment.

Conducting risk assessments early in the design phase helps minimize potential harm to children

Incentivization for tech companies: Identifying and mitigating risks early on can help companies minimize the risk of punitive fines, accusations of negligence, or negative media coverage. Risk assessments can serve as evidence of compliance and, where shared or published, can sometimes enhance investor or customer confidence by showcasing leadership in responsible data practices. Nonetheless, as in the example of the Republic of Korea, SMEs are unlikely to carry out risk assessments unless legally required.

Transparency and accountability: The UNGPs call for a high level of transparency in CRIAs and urge companies to monitor their efforts to mitigate identified risks to children, although complete CRIAs often contain sensitive information that is not suitable for publication. Risk assessments mandated by regulation often involve regulatory oversight but do not necessarily require public disclosure. Encouraging private companies to publish their full risk assessments could enhance oversight by civil society and the public, and potentially help build public trust in business practices.

Global applicability and replicability: CRIAs have global relevance due to the universal applicability of international children's rights law, whereas PIAs and FRIAs may need to be adapted to different jurisdictions. Many countries in the Global South already require PIAs, but these could be strengthened by integrating a requirement to consider broader impacts on children's rights. Some multinational companies, such as Verizon and Millicom, have carried out CRIAs related to the deployment of their technology products in the Global South. A key challenge for SMEs, where risk assessments are not mandatory, will be choosing from the wide array of available risk assessment frameworks.

Conclusion

Risk assessments are designed to be carried out before the introduction of new technologies or the application of existing technologies in new contexts. This proactive approach helps prevent harm to children by addressing risks early. The routine use of risk assessments can drive a culture change within the technology sector towards greater awareness and early mitigation of risks to children, including those related to data processing.

Ideally, companies undertaking a PIA or a FRIA would integrate CRIA components into these risk assessments. This would help ensure that child rights are considered at every stage, allowing CRIAs to complement data protection efforts, and enabling the consolidation of risk assessments and compliance processes.

About this case study

This case study is part of the UNICEF Innocenti – Global Office of Research and Foresight Data Governance for Children project, which aims to work with policymakers, industry, civil society and children to inform better data governance for children. This case study was written by Emma Day and Laura Berton, under the guidance of Jasmina Byrne, and was reviewed by Melanie Penagos. We are grateful to the following individuals for their invaluable contributions and comments: Hannah Darnton and Orissa Erwin-Rose, BSR; Kyoungsic Min, Verasafe; and Luca Bertuzzi, in his personal capacity. This project is made possible by funding and support from the Ministry for Foreign Affairs of Finland. We are grateful for their continued partnership and commitment to child rights.

In 2021, UNICEF published the Manifesto on the Case for Better Governance of Children's Data, which contains recommendations and principles for governments and industry to create laws, policies and practices regarding child-centred data. One of the Manifesto's key recommendations was for stakeholders to initiate more policy innovations in data governance for children. This case study forms part of a collection of case studies detailing examples of such policy innovations for children in a diverse range of contexts. The approaches taken, lessons learned and insights gathered will be one contribution to the global effort towards better data governance for children. View all the case studies on the UNICEF website.

About us

UNICEF works in the world's toughest places to reach the most disadvantaged children and adolescents and to protect the rights of every child, everywhere. Across 190 countries and territories, we do whatever it takes to help children survive, thrive and fulfil their potential, from early childhood through adolescence.

And we never give up.

UNICEF Innocenti – Global Office of Research and Foresight tackles the current and emerging questions of greatest importance for children. It drives change through research and foresight on a wide range of child rights issues, sparking global discourse and actively engaging young people in its work.

UNICEF Innocenti equips thought leaders and decision-makers with the evidence they need to build a better, safer world for children. The office undertakes research on unresolved and emerging issues, using primary and secondary data that represent the voices of children and families themselves. It uses foresight to set the agenda for children, including horizon scanning, trends analysis and scenario development.

The office produces a diverse and dynamic library of high-level reports, analyses and policy papers, and provides a platform for debate and advocacy on a wide range of child rights issues.

UNICEF Innocenti provides, for every child, answers to their most pressing concerns.

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Via degli Alfani, 58

50121, Florence, Italy

Tel: (+39) 055 20 330

Email: innocenti@unicef.org

Social media: @UNICEFInnocenti on Facebook, Instagram, LinkedIn and YouTube

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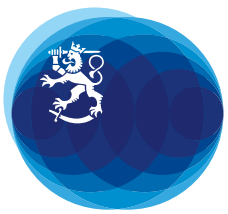

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