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WORKSHOP AGREEMENT

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English version

Age appropriate digital services framework

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European foreword

This CEN-CENELEC Workshop Agreement (CWA 18016:2023) has been developed in accordance with the CEN-CENELEC Guide 29 "CEN/CENELEC Workshop Agreements – A rapid prototyping to standardization" and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2. It was approved by a Workshop of representatives of interested parties on 2023-04-17, the constitution of which was supported by CEN/CENELEC following the public call for participation made on 2022-03-28. However, this CEN/CENELEC Workshop Agreement does not necessarily include all relevant stakeholders.

The final text of this CEN-CENELEC Workshop Agreement was provided to CEN-CENELEC for publication on 2023-06-28.

This CEN-CENELEC Workshop Agreement was approved by the following organizations,

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Introduction

This CWA is based on IEEE Std 2089™-2021, IEEE Standard for an Age Appropriate Digital Services Framework Based on the 5Rights Principles for Children. Used under license from The Institute of Electrical and Electronics Engineers, Incorporated.

Purpose

This specification provides a set of processes for digital services when end users are children, and, by doing so, aids in the tailoring of the services that are provided so that they are age appropriate. This is essential to creating a digital environment that supports, by design and delivery, children's safety, privacy, autonomy, agency, and health, specifically providing a set of guidelines and best practices and thereby offering a level of validation for service design decisions.

Use of the specification

The specification describes the set of processes by which engineers and technologists can consider children's rights and well-being throughout the stages of concept exploration and development. It provides implementable processes to help align innovation management to make processes, system design approaches, and software engineering methods age appropriate and, in doing so, reduce risk and, wherever possible, amplify the benefits of the digital world for end users under the age of 18.

The specification reflects the rights of children under the United Nations Convention on the Rights of the Child, further elaborated in the UNCRC General comment No. 25 (2021) as regards the digital environment. Many digital systems impact children in intended or unintended ways and, therefore, should take them into account. All organizations for which that is the case are encouraged to use this specification to help make that engagement age appropriate. This specification can be used to create services that build the digital world that reflects the full range of the rights of the child, including services that are safe and age appropriate.

Before using this specification, it is necessary to consider that your product or service is likely to be accessed by children or engage with children either directly, indirectly, or deliberately in the course of their operations. Data analytics, independent research, research about similar services and products, or research from surveys and research with children may help identify if and how your products, services, or systems engage with children and/or their data. In each case, if children use your services and/or if you collect children's data, this specification aims to help organizations create services that benefit children. This specification is based on the foundation that the 'best interests' (see Clause 3) of the child are placed in primary focus during the design of digital services.

To reach this goal, this specification supports organizations in identifying how their products and services impact children and how to verify that engagement is age appropriate. It is applicable within any life cycle model or set of methods for systems and software engineering and/or new or modified product or service development including brokering children's data. If organizations have running systems that cause risks to children, then the processes in this specification can be used for reiteration of analysis and redress.

Process overview

The goal of this specification is to enable organizations to design and deliver systems with the rights and well-being of children in mind. Age appropriateness includes a variety of values that support children. For example, values such as dignity, fairness, autonomy, sustainability, accountability and inclusivity. Age appropriateness also includes a variety of children's rights such as privacy, access to information, freedom of expression, participation, play, health and protection from sexual and economic exploitation. These values and rights are realized by this specification. This specification also supports values or attributes in systems typically considered in system engineering, such as functionality, efficiency, and effectiveness. An overview of the key processes in this specification is depicted in Figure 1.

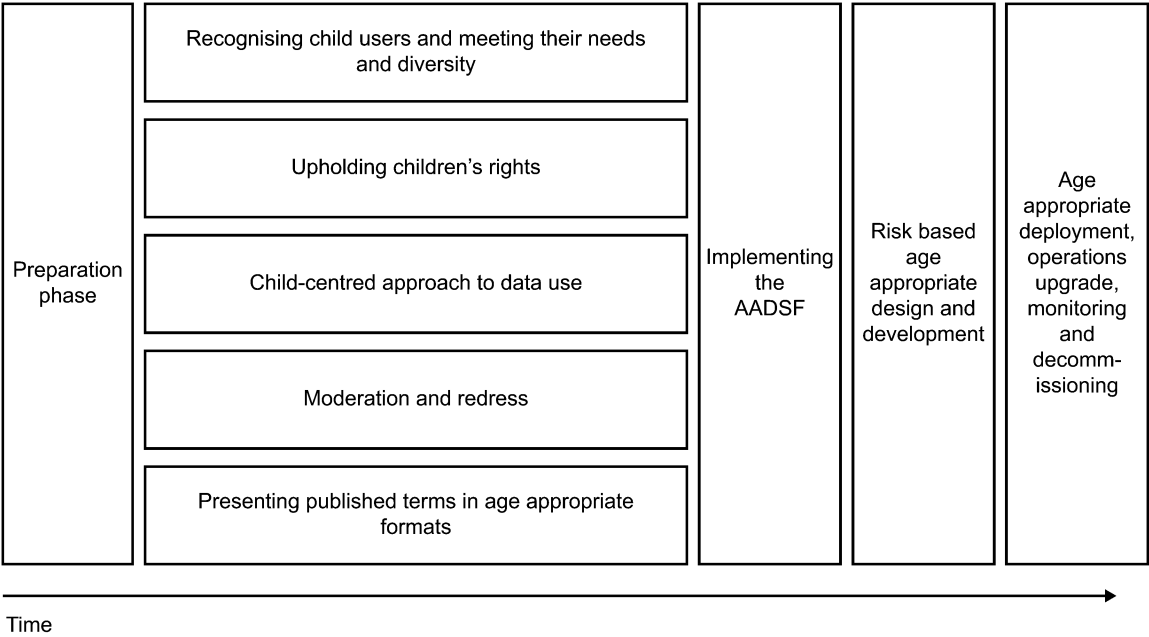| Preparation phase | Recognising child users and meeting their needs and diversity | Implementing the AADSF | Risk based age appropriate design and development | Age appropriate deployment, operations upgrade, monitoring and decomm-issioning |
	Upholding children's rights			
	Child-centred approach to data use			
	Moderation and redress			
	Presenting published terms in age appropriate formats			

Time →

Figure 1 —Relationship of processes and stages in IEEE Std 2089-2021

1 Scope

This specification establishes a set of processes for developing age appropriate digital services for situations where users are children. The specification has the following features:

a)   Recognition that the user may be a child

b)   Consideration for the evolving capacities of the child

c)   Upholds the rights of children

d)   Offers terms appropriate to children

e)   Presents information in an age appropriate way

f)   Offers a level of validation for service design decisions

This specification provides a specific impact rating system and evaluation criteria and explains how vendors, and public institutions used by children such as in the education, health, social welfare, and criminal justice sectors can meet the criteria.

This specification sets normative requirements for published terms, design, and delivery that can uphold children's rights and promote their well-being.

Data privacy and security are complex and highly regulated areas of law, particularly as related to children and young people. The relevant legal definitions and requirements are rapidly evolving, and may vary at the local, state, national, and regional level. It is also important to have regard for national and regional human rights laws which also apply to children, such as the European Convention on Human Rights and the EU Charter of Fundamental Rights applying the child's best interests as a primary consideration in all matters that affect them. No specification can provide unconditional consistency with all such laws and regulations. Users of this specification are responsible for referring to and observing all applicable legal and regulatory requirements, and should refer questions of compliance to competent legal counsel with expertise in the relevant jurisdiction.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO Guide 73:2009, Risk management—Vocabulary. [1]

ISO 9000:2005, Quality management systems—Fundamentals and vocabulary.

ISO 9000:2015, Quality management systems—Fundamentals and vocabulary.

ISO/IEC 25010:2011, Systems and software engineering—Systems and software Quality Requirements and Evaluation (SQuaRE)—System and software quality models. [2,3]

ISO/IEC/IEEE 15288:2015, Systems and software engineering—System life cycle processes. [4]

ISO/IEC/IEEE 15289:2011, Systems and software engineering—Content of life-cycle information products (documentation).

ISO/IEC/IEEE 29148:2018, Systems and software engineering—Life cycle processes—Requirements engineering.

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1 ISO publications are available from the ISO Central Secretariat (https://www.iso.org/). ISO publications are also available in the United States from the American National Standards Institute (https://www.ansi.org/).
2 ISO/IEC publications are available from the ISO Central Secretariat (https://www.iso.org/). ISO/IEC publications are available in the United States from the American National Standards Institute (https://www.ansi.org/).
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ISO/IEC/IEEE 42010:2011, Systems and software engineering—Architecture description.

UNCRC General Comment No. 14, Para.4, General Comment No. 5, Para. 12 CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12).[5]

United Nations Convention on the Rights of the Child (UNCRC), 1989.[6]

UN Committee on the Rights of the Child General Comment No.25 (2021) on Children's Rights in Relation to the Digital Environment.[7]

Universal Declaration of Human Rights (General Assembly resolution 217 A), United Nations General Assembly, 10 December, 1948.[8]

U.S. Code 230—Protection for private blocking and screening of offensive material, US Communications and Decency Act, 1996.

In addition to the normative references listed above, consideration needs to be given to meeting the relevant national and regional legislation and industry standards, in the jurisdictions(s) in which the service or product will be offered, but there are instances where the law does not go far enough and so this specification sets the baseline to prioritize the rights of children and may go beyond the requirements of the law. See also Annex E for examples of regulations at the time of publication of the specification.

3   Terms, definitions, acronyms and abbreviations

3.1   Terms and definitions

For the purposes of this document, the following terms and definitions apply. The *IEEE Standards Dictionary Online* should be consulted for terms not defined in this clause. [9]

3.1.1
Acquirer
A stakeholder that acquires or produces a product or service from a supplier.

NOTE—Other terms commonly used for an acquirer are buyer, customer, owner, purchaser, or internal/organizational sponsor.[10]

3.1.2
Acquisition
The process of obtaining a product, service, or system.

3.1.3
Activity
A set of cohesive and purposeful tasks for a process.

3.1.4
Age appropriate
Products and services, terms and conditions and policies, that are (1) suitable for children in general taking into account their rights and well-being, including rights specific to children such as the right to play, and (2) suitable for children given their specific age or stage of development, pursuant to the evolving capacities of children as referred to in Article 5 UNCRC.

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5 Available at: https://www2.ohchr.org/English/bodies/crc/docs/GC/CRC_C_GC_14_ENG.pdf.
6 See https://www.ohchr.org/en/professionalinterest/pages/crc.aspx.
7 Available at: https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=CRC%2fC%2fGC%2f25&Lang=en.
8 Available at: https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_217(III).pdf.
9IEEE Standards Dictionary Online is available at: http://dictionary.ieee.org. An IEEE Account is required for access to the dictionary, and one can be created at no charge on the dictionary sign-in page.
10 Notes in text, tables, and figures of a specification are given for information only and do not contain requirements needed to implement this specification.

3.1.5
Age appropriate register
An information repository created for clarity, unambiguity and traceability reasons for your product or service that contains data and insights gained in child impact exploration, prioritization, and traceability into product/service requirements.

3.1.6
Age assurance
An umbrella term for both age verification and age estimation solutions. The word "assurance" refers to the varying levels of certainty that different solutions offer in establishing an age or age range.

3.1.7
Age estimation
A process that establishes a user is likely to be of a certain age, fall within an age range, or is over or under a certain age. Age estimation methods include automated analysis of behavioural and environmental data, comparing the way a user interacts with a device with other users of the same age, and metrics derived from motion analysis or by testing their capacity or knowledge.

3.1.8
Age verification
A system that relies on hard (physical) identifiers and/or verified sources of identification that provide a high degree of certainty in determining the age of a user. It can establish the identity of a user but can also be used to establish age only.

3.1.9
Agreement
Mutual acknowledgment of terms and conditions under which a working relationship is conducted, for example, a contract or memorandum of agreement.

3.1.10
Architecture
See ISO/IEC/IEEE 42010:2011.[11]

3.1.11
Audit
See ISO/IEC/IEEE15288:2015.

NOTE—The scope includes professional and industry codes of practice.

3.1.12
Balancing
Where one right comes into conflict with another, they should be balanced so that the "best interests" of the child is paramount.

3.1.13
Best interest
See: Article 3 UNCRC; UNCRC General Comment No. 14 (2013), Para. 4; General Comment No. 25 (2021) para. 12.

3.1.14
Benefit
A positive outcome that is voluntarily or involuntarily created by an act, system, or process.

NOTE—Benefits correspond to one or more underlying desired values, and may also enable one or more children's rights.

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11 Information on references can be found in Clause 2.

3.1.15
Child
For the purposes of digital services provided within the context of this specification, a child means every human being below the age of 18.

3.1.16
Child-centred design
A design approach that upholds children's rights and promotes their well-being in service design and governance, ensuring the best interests of the child is a primary consideration in the design process.

3.1.17
Children's rights
A framework of legal obligations covering civil, political, economic, social, and cultural rights afforded to every child.

NOTE—Documented in the United Nations Convention on the Rights of the Child.

3.1.18
Concept of operations
A verbal and/or graphic statement, in broad outline, of an organization's assumptions or intent in regard to an operation or series of operations.

3.1.19
Concern
See ISO/IEC/IEEE 42010:2011.

3.1.20
Consent
Any freely given, specific, informed, and unambiguous indication of the child's wishes by which they (or the holder of parental responsibility over the child), by a statement or by a clear affirmative action, signifies agreement to the processing of their personal data.

3.1.21
Context of use
Intended operational environment for a system.

NOTE 1—The environment determines the setting and circumstances of all influences upon a system, including not only other systems but also people, settings, social, and ecological factors, etc.

NOTE 2—Context of use can be captured using a Context of Use Description (See ISO/IEC 25063.3 [B2]).

3.1.22
Control
The ability to determine the nature, sequence and/or consequences of technical and operational settings, behaviour, specific events and/or experiences.

NOTE—Control includes cognitive control; that is being informed about activities; decisional control: having choices over actions; and behavioural control; receiving feedback from actions.

3.1.23
Design
(verb and noun) See ISO/IEC/IEEE 15288:2015.

3.1.24
Environment
See ISO/IEC/IEEE 42010:2011.

NOTE—Also applies to products and services.

3.1.25
Ethical
Supporting the realization of positive values or the reduction of negative values.

NOTE—In this definition, a system can be ethical or unethical in the sense that it bears value dispositions to cater to positive value creation or negative value prohibition.

3.1.26
Evolving capacity
As children acquire enhanced competencies, there is a greater capacity to take responsibility for decisions affecting their lives.

3.1.27
Fair terms
A concept that the terms of use for a product or service do not put the consumer at a disadvantage.

3.1.28
Functional requirements
A statement that identifies what results a product or process shall produce.

3.1.29
Harm
Any content or activity that is likely to have a detrimental impact on the physical, mental and moral well-being or development of children.

3.1.30
Hazard
A condition with a potential for causing harm.

3.1.31
Health
A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

NOTE—As defined by the Constitution of the World Health Organisation

3.1.32
Human Rights
See Universal Declaration of Human Rights, United Nations General Assembly, 10 December 1948 (General Assembly resolution 217 A).

— International Convention on the Elimination of All Forms of Racial Discrimination (1965);

— International Covenant on Civil and Political Rights (1966); International Covenant on Economic, Social and Cultural Rights (1966);

— Convention on the Elimination of All Forms of Discrimination against Women (1979);

— Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (1984);

— Convention on the Rights of the Child (1989);

— International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (1990);

— International Convention for the Protection of All Persons from Enforced Disappearance (2006);

— Convention on the Rights of Persons with Disabilities (2006). [https://www.ohchr.org/en/core-international-human-rights-instruments-and-their-monitoring-bodies]

3.1.33
Information item
See ISO/IEC/IEEE 15289:2011.

3.1.34
Life cycle
Evolution of a system, product, service, project, or other human-made entity from conception through retirement.

3.1.35
Life cycle model
A framework of processes and activities concerned with the life cycle that may be organized into stages, which also acts as a common reference for communication and understanding.

3.1.36
Non-functional requirement
A requirement that describes not what the system will do but how the system will do it.

3.1.37
Operational concept
See ISO/IEC/IEEE 15288:2015.

NOTE 1—The concept of operations is produced at an early conceptual stage in describe system functions and relationships from a user's point of view. The operational concept details how the system will be operated in production.

NOTE 2—The operational concept should include all major product, service, or system elements and/or system components, boundaries, and directly adjunct elements beyond boundaries, internal, and external input elements (i.e., databases and/or applications serving the system that may be outside of the product or service's boundaries) and output elements (i.e., databases and/or applications serving the system that may be outside of the product or service's boundaries).

NOTE 3—The operational concept should preferably be visualized.

3.1.38
Operator
An individual or organization that performs the operations of a product, service, or system.

NOTE 1—The role of operator and the role of user can be vested, simultaneously or sequentially, in the same individual or organization.

NOTE 2—An individual operator combined with knowledge, skills and procedures can be considered as an element of the service or system.

NOTE 3—An operator may perform operations on a product or service that is operated, or of a product or service that is operated, depending on whether or not operating instructions are placed within the product or service's boundary.

3.1.39
Opportunity
A condition or state with a potential to lead to a benefit or gain for the upholding of children's rights and promotion of their well-being.

3.1.40
Organization
A group of people and facilities with an arrangement of responsibilities, authorities and relationships, for example, corporations, firms, enterprises, institutions, charities, a sole trader, associations, or parts or combinations thereof.

NOTE—An identified part of an organization (even as small as a single individual) or an identified group of organizations can be regarded as an organization if it has responsibilities, authorities, and relationships. A body of persons organized for some specific purpose, such as a club, union, corporation, or society, is an organization.

3.1.41
Parent
The legal guardian of a child.

NOTE—For the purposes of this specification, "parent" can mean parents, legal or state appointed guardians, or, in certain limited circumstances, another adult in a position of authority, such as an educator, consistent with all applicable laws and regulations for the relevant jurisdiction.

3.1.42
Persona
An archetypal user of a product, service, or system.

NOTE 1—Personas represent the needs of a larger group in terms of their goals, expectations, and personal characteristics. They help to guide decisions about system design and design targets.

NOTE 2—The term "persona" stems from the field of usability design where personas are typically described in a storytelling exercise. Project teams put themselves in the shoes of their potential stakeholders. They bring personas to life by giving them names, personalities, and photos.

3.1.43
Problem
A difficulty, uncertainty, or otherwise realized and undesirable event, set of events, condition, or situation that requires investigation and corrective action.

3.1.44
Process
See ISO 9000:2005.

3.1.45
Product
The result of a process.

NOTE—There are four agreed generic product categories: hardware (e.g., engine mechanical part), software (e.g., computer program), services (e.g., transport), and processed materials (e.g., lubricant). Hardware and processed materials are generally tangible products, while software or services are generally intangible.

3.1.46
Program
Related projects, subprograms and program activities managed in a coordinated way to obtain benefits not available from managing them individually.

3.1.47
Project
An endeavour with defined start and finish criteria undertaken to create a product or service in accordance with specified resources and requirements.

3.1.48
Published terms
Any document that sets out rules or basis upon which a child and an organization engage with each other, including but not limited to community standards, terms and conditions, and a privacy notice.

3.1.49
Quality assurance
See ISO 9000:2015.

3.1.50
Quality management
See ISO 9000:2005.

3.1.51
Requirement
See ISO/IEC/IEEE 29148:2018.

3.1.52
Resource
An asset that is utilized or consumed during the execution of a process.

NOTE 1—Includes diverse entities, such as funding, personnel, facilities, capital equipment, tools, and utilities, such as power, water, fuel, and communication infrastructures.

NOTE 2—Resources include those that are reusable, renewable, or consumable.

3.1.53
Reward
A positive outcome arising from an opportunity.

NOTE 1—Similar but opposite to the concept of risk, reward is characterized by the likelihood of attaining some beneficial outcome and the magnitude of the gain.

NOTE 2—Reward is expressed in terms of combination of the likelihood and extent of a benefit being realized.

3.1.54
Risk
See ISO Guide 73:2009.

NOTE 1—An effect is a deviation from the expected—positive or negative. A positive effect is also known as an opportunity.

NOTE 2—Objectives can have different aspects (such as financial, health and safety, and environmental goals) and can apply at different levels (such as strategic, organization-wide, project, product, and process).

NOTE 3—Risk is often characterized by reference to potential harmful events and consequences, or a combination of these.

NOTE 4—Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence.

NOTE 5—Uncertainty is the state, even partial, of deficiency of information related to understanding or knowledge of an event, its consequence, or likelihood.

NOTE 6—Risks to children in the digital environment can be classified by means of the OECD risk typology covering Content, Contact, Conduct and consumer risks, including contract risks as well as cross-cutting risks, including privacy risks, advanced technology risks, risks to health and well-being.[12]

3.1.55
Risk treatment
The process, procedures, methodologies, and means that provide a basis for and facilitate the reduction or elimination of an intolerable risk.

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[12] Livingstone, S., & Stoilova, M. (2021). The 4Cs: Classifying Online Risk to Children. (CO:RE Short Report Series on Key Topics). Hamburg: Leibniz-Institut für Medienforschung | Hans-Bredow-Institut (HBI); CO:RE - Children Online: Research and Evidence. https://doi.org/10.21241/ssoar.71817; Children in the digital environment, Revised typology of risks, OECD Digital Economy Papers, January 2021, No. 302

3.1.56
Service
The performance of activities, work, or duties. This includes freemium services.

NOTE 1—A service is self-contained, coherent, discrete, and can be composed of other services.

NOTE 2—A service is generally an intangible product.

3.1.57
Stage
A period within the life cycle of an entity that relates to the state of its description or realization.

NOTE 1—Sages relate to major progress and achievement milestones of the entity through its life cycle.

NOTE 2—Stages often overlap.

3.1.58
Supplier
An organization or an individual that enters into an agreement with the acquirer for the supply of a product or service.

NOTE 1—Other terms commonly used for supplier are contractor, producer, seller, or vendor.

NOTE 2—The acquirer and the supplier sometimes are part of the same organization.

3.1.59
System
A combination of interacting elements organized to achieve one or more stated purposes.

NOTE—A construct or collection of different elements that together produce results not obtainable by the elements alone. The elements, or parts, can include people, hardware, software, facilities, policies, processes and documents; that is, all things required to produce systems-level results.

3.1.60
System characteristic
Attributes or distinguishing features pertaining to a system.

3.1.61
System element
A member of a set of elements that constitute a system. For example, hardware, software, data, humans, processes (e.g., processes for providing service to users), procedures (e.g., operator instructions), facilities, materials, and naturally occurring entities or any combination.

NOTE—A system element is a discrete part of a system that can be implemented to fulfil specified requirements.

3.1.62
Task
A required, recommended, or permissible action, intended to contribute to the achievement of one or more outcomes of a process.

3.1.63
Trade-off
A decision-making action that selects from various requirements and alternative solutions on the basis of net benefit to the stakeholders.

3.1.64
Top management
A person or group of people who direct and control the organization at the highest level.

NOTE—Top management can be the owner of an organization, majority shareholders, senior manager in the organization, or members of the governing board.

3.1.65
Unfair terms
Terms that do not meet the definition of "fair terms." *See also:* **fair terms**.

3.1.66
User
See ISO/IEC 25010:2011.

NOTE—The role of user and the role of operator are sometimes vested, simultaneously or sequentially, in the same individual or organization.

3.1.67
Validation
See ISO 9000:2015.

NOTE—A system is able to accomplish its intended use, goals and objectives (i.e., meet stakeholder requirements) in the intended operational environment. The right system was built.

3.1.68
Value
Something desirable that influences the selection from available modes, means and ends of action. Examples of positive values include love, privacy, security, transparency, accountability, generosity, dignity, courage, and fairness. Examples of negative values include bias, ambiguity, absence of privacy, selfishness, and greediness.

3.1.69
Value lead
The person assigned to coordinate and conduct related to value elicitation and prioritization and traceability of values through the requirements and design artifacts.

3.1.70
Verification
See ISO 9000:2005.

3.1.71
Well-being
Children's well-being promotes emotional regulation, self-actualisation, empowerment, creativity, safety & security, diversity equality & inclusion, and the child's feelings of competence.

3.2   Acronyms and abbreviations

AADSF	Age Appropriate Digital Service Framework
AAR	Age Appropriate Register
CCCM	Change Control and Configuration Management
CSEA	child sexual exploitation and abuse
UNCRC	United Nations Convention on the Rights of the Child

4   Conformance

The processes in this specification allow an organization to construct a life cycle and/or design and develop methodologies appropriate to make its product and services age appropriate.

This specification can be used in one or more of the following modes:

— *By an organization:* to help establish appropriate processes. These processes can be supported by an infrastructure of policies, methods, procedures, techniques, tools, and trained personnel to support the organization to perform and manage its projects and systems through each of their life cycle stages. In this mode this specification is used to assess if the organization is conducive to age appropriate outcomes.

— *By a project team:* to help select, structure, and employ the elements necessary to provide age appropriate products and services. In this mode, this specification is used to determine the project's requirements and assess if the project's outcome is age appropriate for an end user that is a child.

— *By an acquirer and a supplier:* to help develop an agreement concerning processes and activities that are age appropriate. Via the agreement, the processes and activities in this specification are selected, negotiated, agreed to, and performed. In this mode this specification is used for guidance in developing an age appropriate agreement.

— *By process assessors:* to serve as a process reference model for use in the performance of process assessments that may be used to support organizational process improvement for digital services and products that engage with children.

There is only one criterion for claiming full conformance: full conformance to both outcomes and tasks. Full conformance to outcomes and tasks is achieved by demonstrating that all of the outcomes and the required activities and tasks in Clause 7 through Clause 15 have been achieved. The inputs and outputs shown in Clause 7 through Clause 15 are not requirements except as specifically required in the activities and tasks. The inputs and outputs are demonstrable predictors of the outcome in each process.

5 Key concepts and application

5.1 General application

This specification is usable by organizations that engage in system and software engineering and product and service design and development. This includes in particular:

— Organizations providing services and products that engage with children or are likely to be accessed by or engage with children, either directly, indirectly, deliberately, or in the course of their operations

— Organizations building a new generic or application-specific product, service, or system from scratch that may engage with children or are likely to be accessed by or engage with children either directly, indirectly, deliberately, or in the course of their operations

— Organizations implementing a major revision on an existing product, service, or system that may engage with children or are likely to be accessed by or engage with children either directly, indirectly, deliberately, or in the course of their operations

— Organizations planning the acquisition of a tailored product, service, or system that may engage with children or are likely to be accessed by or engage with children either directly, indirectly, deliberately, or in the course of their operations

— Research organizations (including universities) that build a new product, service, or system from scratch or adapt an existing entity in the course of their research activities that may engage with children or are likely to be accessed by or engage with children either directly, indirectly, deliberately, or in the course of their operations

5.2 Specified context of use

Many organizations engage with children intentionally, others engage with children in the course of their general activities. Some impact on children without engaging directly with them, and some engage unintentionally. In each case the organization has a responsibility to that child to provide an age appropriate service. Designing or reconfiguring a product or service to be age appropriate means you take steps necessary to offer a product or

service that is designed with child users in mind taking into account the age range of your audience and the needs of children at different ages and stages of development. Clause 7 sets out the methodology of interrogating the service from the point of view of the established rights of children promotes their well-being and provides any organization a starting point from which to adapt its service to be age appropriate.

Systems support values relevant to a context of use. For example, with different contexts (school, game, home, public body) come different considerations and impacts. This specification assumes that systems can apply their methodologies and child-centred values to take specific actions that are relevant across different use contexts.

In addition to this, consideration needs to be given to verify relevant national and regional legislation and industry standards in the jurisdiction(s) in which the service or the product will be offered are met, including the following:

— Data protection law, including regulations that protect children's data specifically

— Human rights legislation including civic, political, economic, and social rights

— Consumer legislation

— Equality legislation

— Children's acts or other legislation that covers treatment of children (for example, education, health, justice)

— Health and safety legislation

— Such legislation and regulations that protect children and promote their rights in any jurisdiction

5.3   The organization

This specification is intended to be used in systems and software engineering and digital services organizations of all types and sizes, whether they apply a hierarchical or a relatively flat organizational model. It is also usable by components of an organization, such as a product development team or a corporate division, although conformance to the specification will likely require participation across organizations in an integrated value/supply chain. It is intended for local, regional, national, or international use with various cultural values and governance systems. In applying this specification, one person can assume many roles, and one role can be held by numerous individuals or subgroups within the organization. There are no requirements for independence of roles in this specification, but the duties associated with all roles shall be fulfilled.

Design and service provision decisions that impact children are not the sole responsibility of top management, although top management has an undeniable role in setting expectations for organizational values and priorities and establishing control of performance and final outcomes. This specification requires the informed judgment of systems and software engineers while making design decisions about a system under development and may not be left solely to management. Both engineers and others in the organization, including those with responsibility for compliance, can benefit from learning and regularly applying specific processes and methods to make age appropriate choices throughout the life cycle. Just as engineering analyses, decisions, and risk assessments have always involved balancing and trade-offs of priorities and values, in this context, engineers participate as the organization balancing and finding solutions for competing interests (e.g., risks/harms). Although involvement with internal or external experts (e.g, in child rights or child development) may improve outcomes and efficiency, it is not required to engage an expert to conform with the specification.

5.4   Stakeholders

There may be a wide range of stakeholders involved in the products and services that impact children. Internal stakeholders include the many roles required to commission, develop, build, and market products and services. Primary stakeholders include, for example, a child, groups of children, parents, educators—and often adults. There may be third parties that have specific interests, for example, an owner or developer of an app will have an interest and be affected by an app store's policies and practices, a regulator, a trade association to whom the system owner is accountable, or a data broker or agent that may impact the child in ways that are both visible and unseen. Additionally, there are those who interfere or exploit digital systems, such as hackers,

scammers, predators. These groups of stakeholders often have an asymmetric influence on the design of the product. An asymmetric influence means having more power to assert your interests and views. Typically, those connected with the proprietary ownership of the technology are the most influential and the end user may only have the power to reject or accept the product or service in its entirety. In the case of systems that impact a user without their knowledge, for example by obtaining their data from a third party, they may have no influence at all. This power imbalance is particularly acute when the end user is a child. This specification offers a set of processes that engage stakeholders with each other to develop a product or service that upholds the rights of children and promotes their well-being. The person(s) or company building the product or service can, by following this specification, identify the risks and benefits of their system to children and take steps to mitigate risks, amplify benefits, and keep both under review. This set of processes does not seek to undermine engineering realities, nor does it offer an aspirational or perfect world for children, rather it offers actions that, if followed, will make your product or service conscious of and suitable for the children you engage with. They describe a set of minimum requirements without prejudice to the implementation of higher standards based on (international or regional) best practice. It is anticipated that smaller or newer companies will seek to adopt or purchase age appropriate systems built by others. In that instance they should adopt certified products or products that come from trusted sources.

5.4.1 Children as users

Along with these internal stakeholders and the customer, the class of stakeholders that is intrinsic to age appropriate design is the users, in this instance, a child. Users frequently are categorized by the levels or types of system access and permissions they need to perform various tasks, or have services provided to them. These include the hands-on system operators (often agents of the customer) as well as those who benefit from or are harmed by use of the system, both through direct transactions using the system and through its impact on the environment and their culture. The word "users" here also includes those whose personal data is held in a system, whether they have access to that data or are aware of that data or not. In the case of children, there cannot be a presumption that they are able to assess the risk or benefits of use of any system nor that providing "more information" is a suitable response to offering an age appropriate service, informing them of their rights, or trying to meet their needs. Nor can it be assumed that all children have a parent or adult in loco parentis who is engaged, literate, skilled or able to act on their behalf. The purpose of the specification is to provide children with services and products that consider the vulnerabilities associated with their age and are age appropriate by default. Not all children are the same, and children of different ages, contexts, ethnicity, capacity, and socioeconomic groups may require different levels of support or consideration. By capacity, we mean primarily but not exclusively the cognitive ability to comprehend materials plus the ability to be able to read materials. Designers need to take particular care that the system design and algorithms do not unjustifiably favour or select users in certain geographic areas, of certain biometric or demographic characteristics, or based on unvalidated reports and unfairly target or exclude other classes of users.

5.4.2 Who can threaten the best interest of the child?

Certain actors may have interests that oppose the system or may interfere with its use. These include competitors, cybersecurity hackers, or opponents of the organization, system owner, or customer. There is also a significant group of producers and consumers of child sexual abuse material who may seek to access the service for illegal purposes.

5.4.3 Who can or must support the best interest of the child?

Other external stakeholders can offer divergent perspectives. Government regulators and external advocacy groups, whose expertise, cultural norms, and values may differ from the system owner, can expose a clash in values or demand a higher bar of safety or benefit for children. These conflicting and often oppositional values may even constrain and/or aid the decisions of the system owners that are a direct threat to the needs, rights, and values of children. To counteract any threats to children, the organization may consider the use of the third-party assessors, and independent verification and validation contractors. These are other types of stakeholders who can point out flaws or unstated assumptions that have influenced or skewed the organization's ethical choices against the needs, rights, and values of children. This specification helps to identify how internal and external stakeholders, users, opponents, and independent authorities can be treated differently when age appropriateness and risks are evaluated. Information about potential system characteristics and performance and the balance of values and stakeholder interests are rarely shared openly with all stakeholders. Therefore,

it is one of the goals of this specification to present a set of processes that helps organizations to better address competing stakeholder interests and values.

5.5 Stages and processes

This specification allows any organization, systems developer, or digital services provider to achieve the requirements in this specification by means of their own set of standard system development processes, methods and practices. This specification has distinct processes which can be applied to systems and software engineering and which relate to the general processes in ISO/IEC/IEEE 15288:2015 and ISO/IEC/IEEE 12207:2017 (see Annex C).

This specification is intended to be suitable for use by organizations and software projects using iterative approaches and methods as well as in those using other formal engineering approaches.

The activities and tasks in this specification are not sufficient by themselves to produce a product or service. They are intended to be an integral part of an organization's comprehensive approach to managing the development of a product or service.

This specification does not prescribe a sequence of processes within the life cycle model. However, many of the activities and tasks logically apply outputs from other tasks, so there is an inherent sequence of activities that can be applied iteratively. The sequence of the processes is determined by project objectives and by selection of the life cycle model. But to conform to the specification all processes shall be undertaken and achieved.

6 Key roles in Engineering project teams for age appropriate design

6.1 General

There are many roles required to successfully complete the tasks and activities outlined in this specification. The roles and their associated competencies that shall be fulfilled are documented in 6.2. These roles may be assigned to one or many people so long as the workload, competencies, and accountabilities are all met. There is no requirement for a separate team member for each role.

6.2 Role descriptions

6.2.1 Top Management Champion

The Top Management Champion sets strategic policy and enables work as a leader in the organization, e.g., part of the executive board, Chief Executive Officer, Chief Technology Officer, Chief Information Officer, Chief Operating Officer, Chief Experience/Design Officer, or someone who is responsible for the unit or area in which the system is developed. In the case of a Very Small Entity, the role of the Top-Management Champion may be filled by the entity's owner.

The responsibilities of the Top Management Champion include the following:

a)   Establish corporate commitment to age appropriate products or services

b)   Help project teams to uphold age appropriate priorities

c)   Resolve conflicts in strategies and age appropriate priorities

d)   Uphold these priorities throughout the system's life cycle

e)   Direct communications with leaders of customer, deploying, or acquiring organizations regarding age appropriate outcomes and technical decisions made in system design

f)   Receive and direct responses to concerns and information from project team members or stakeholders about project decisions

g)   Communicate with the board, shareholders, customers, and team both regularly and when needed

h)   Support a culture of age appropriate priorities from hiring values to core business model

6.2.2   System Expert

The System Expert contributes understanding of existing systems, potential capabilities for new systems, and the context for operation of the product or service (the installed base of legacy systems and technologies with which the new system is to be interoperable), e.g., a systems engineer, software engineer, hardware engineer, requirements engineer, business analyst, or systems architect.

The responsibilities of the System Expert include the following:

a)   Listen to stakeholders and team members to understand concerns and potential solutions rather than jumping to a readily available technical solution

b)   Develop system/software requirements that enable age appropriate design

c)   Evaluate alternatives and trade-offs for suitability to the context of operation and the organization's long-term strategy while maintaining the commitment to age appropriate design and the best interests of the child

d)   Optimize technical solutions to support age appropriate values among a range of system requirements

6.2.3   Age Appropriate Lead

The Age Appropriate Lead focuses on the identification, analysis, and prioritization of age appropriate outcomes and their incorporation in the system/service design. The Age Appropriate Lead contributes subject matter expertise and facilitative skills, bridging gaps between engineering, management, and age appropriate outcomes in a constructive way. The Age Appropriate Lead also leads the identification, analysis, and mitigation of risks to age appropriate outcomes for an organization or project.

The responsibilities of the Age Appropriate Lead include the following:

a)   Organize, analyse, communicate, and record age appropriate concepts, concerns, activities, and decisions in a project

b)   Include other stakeholders in an inclusive and timely fashion

c)   Facilitate discussions and age appropriate-related activities to accompany a project in its design efforts

d)   Build benefits to children and organization through practices like participatory design

e)   Apply age appropriate risk evaluation and assessment methodologies for design and development stages

f)   Establish and sustain activities to manage different age appropriate risks and priorities throughout the life cycle

g)   Manage the formation, updating, and integrity of the Age Appropriate Register (AAR) (see Annex B)

6.2.4   Child Rights Advocate

The Child Rights Advocate represents future direct and indirect child users of the system, working with functionally oriented members of the design team.

The responsibilities of the Child Rights Advocate include the following:

a)   Apply a child's rights perspective to products or services with the aim of embedding age appropriate values and resolving conflicts in the best interests of children

b)   Represent stakeholder groups, including children, that cannot be directly involved in project team meetings

6.2.5 Senior Product Manager

The Senior Product Manager in an organization directs the development, supply, or sustainment of one product or a portfolio or products at some part of the product life cycle.

The responsibilities of the Senior Product Manager include the following:

a) Lead the vision and application of age appropriate development principles for service and product design

b) Direct the implementation of age appropriate decisions within engineering, user experience design, marketing and outreach, policy compliance, and/or customer support teams

6.2.6 Moderator

The Moderator brings sufficient knowledge of the technical domain and relevant context to moderate discussions with stakeholders, including children.

The responsibilities of the Moderator include the following:

a) Elicit information, viewpoints, and recommendations from all stakeholders, including children

b) Encourage fair and equitable consideration of different views without allowing individuals to dominate the discussion

c) Mediate between different viewpoints and help participants reach thoroughly strategic, practical, and valuable outcomes for children

d) Articulate the full range of views to superiors including but not limited to the Senior Product Manager and the Age Appropriate Lead

6.2.7 Transparency Manager

The Transparency Manager leads the communication of technical options, decisions, and system functions to stakeholders in a way that is understandable to them.

The responsibilities of the Transparency Manager include the following:

a) Record decisions in a consistent and as easily retrievable form, including those who are accountable for the decisions

b) Track and report related decisions in keeping with the principle of transparency

c) Verify that considerations about transparency are made at regular intervals and crucial milestones

d) Consider releasing the Exploration of Context for Children, as created in Clause 7.

6.3 Team competency

It is prudent to select for team roles on the basis of competence. In this context, competence is the ability to perform a task correctly, knowledgably, efficiently, and consistently to a high quality under varying conditions to the satisfaction of the end client. Competency may also be attributed to a group or a team when a task is performed by more than one person in view of the multidisciplinary nature, complexity, or the scale. A suitably competent person or team requires requisite qualities and capabilities, as follows:

a) Technical domain knowledge: empirical, academic, or a blend of both

b) The experience of application (knowing what works) in different contexts and the requisite skills

c) Drive and motivation to achieve the goals and strive for improvement or excellence

d)   Sharing appropriate behaviours, such as teamwork, leadership, and compliance with professional codes

e)   The ability to adapt to changing circumstances and demands by creating new knowhow

f)   The ability to perform requisite tasks efficiently and reduce waste of physical and virtual resources

g)   The ability to understand the needs of stakeholders and deliver high quality service

h)   A commitment to creating an age appropriate product or service

The above capabilities are fundamental to a person or group of people (a team) being competent in achieving the desired outcomes consistently and efficiently, satisfying or exceeding expectations for providing an age appropriate services or products.

7   Preparation phase

7.1   Purpose

The purpose of this process is to undertake an initial overview of your service or product and identify the potential and or known impacts. It is the first step of this specification.

7.2   Outcomes

When you have successfully implemented the Preparation phase, you shall be able to show the following:

a)   Design features and data processing activities in your product or service that have an impact on children's rights and well-being, both those manifest by normal operation as well as those that are as a result of misuse and malicious intent are identified

b)   A comprehensive and holistic AAR is created (See Annex B)

c)   All hazards, opportunities, and requirements for age appropriate design and operation of the product or service are identified

d)   The steps necessary to embed children's rights, needs and well-being in the product of service are clarified

e)   The risks associated with a product or service may be available via the initial AAR

f)   The benefits the products or service may bring to children's rights, and well-being

7.3   Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures with respect to the child rights impact assessment as follows:

a)   Undertake an initial impact assessment of how your product or service upholds children's rights, and promotes their well-being

   1) Organize your team and appoint role holders and verify that they act in good faith and in the best interests of the child

   2) Plan for and identify key stakeholders to participate in the impact assessment through the following means:

      i)   Forming a representative panel of stakeholders or independent stakeholder advocates with sufficient expertise to represent all parties

      ii)   Creating mechanisms by which a diverse range of children[13] can be consulted directly or with the help of a third party. This may be through participation on your stakeholders' panel or through other means. This could be interviews, focus groups, surveys, or formal participatory and codesign processes, among others

      iii) Creating mechanisms by which a diverse range of parents can be consulted directly or with the help of a third party. This may be through participation on your stakeholders' panel or through other means. This could be interviews, focus groups, surveys, or formal participatory and codesign processes, among others

3) Identify and record all impact on children's rights and well-being and address all the known sources of common hazards or opportunities in addition to identifying further sources of hazards that may be unique to the product or service, verifying that they include the following:

      i)   All functional, non-functional, and operational aspects and scenarios that potentially impact children, with due regard for the evolving capacities of the child, differences between children in terms of age and capacity, and also intersectional vulnerabilities such as gender, ethnicity, and disability

      ii)   Both intentional impacts and unintentional impacts on children's rights and well-being

      iii) Normal and misuse/abuse cases

      iv) Accounting for all risks to children, according to the OECD risk typology, including content, contract, conduct, consumer risks as well as the cross-cutting risks (privacy risks, advanced technology risks and risks to health and well-being)

          NOTE: consumer risks also include contract risks

      v)   Accounting for any legislation or protections that pertain to your jurisdiction, including fair terms, data protection law, and human rights law

      vi) Accounting for children's rights under the UNCRC, including specifically the UN General Comment 25 on children's rights in relation to the digital environment

      vii) Accounting for risks arising from your data processing

      viii) Accounting for risks that arise from design features deployed in combination with other features, which in isolation are not judged problematic

      ix) Accounting for risks that develop over time as well as those that present immediate risk of harm

4) Consult and verify the outcomes with your stakeholders' panel or stakeholders' advocates, including children and parents

5) Verify that children's views are reflected through additional means where necessary, which may involve your diverse range of mechanisms and diverse consultation mechanisms (as required by 7.3.a.1.ii)

6) Document all impacts on children as agreed by your team and stakeholders and children

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[13] Diversity according to UN-CRC Art. 2: Article 2 (1) States Parties shall respect and ensure the rights set forth in the present Convention to each child within their jurisdiction without discrimination of any kind, irrespective of the child's or his or her parent's or legal guardian's race, color, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.

7) Identify and note all legal, regulatory, and best practice requirements for the product or service that need to be implemented

b) Establish an AAR

1) Adopt or define an appropriate information structure and platform for an AAR (see Annex B)

2) Record all hazards, opportunities, associated preliminary mitigation or fostering measures, as well as legal and best practice requirements

c) Consider publishing the findings of your Preparation phase and AAR

NOTE—These activities can benefit from close cooperation with stakeholders and the guidance of the age appropriate value lead.

7.4 Inputs

The following resources constitute a suitable, but neither exhaustive nor normative, suite of the process inputs:

a) A product or service that engages with children directly, indirectly, or unintentionally

b) A clear understanding of what the service/product does and how it operates (concept of operation) in order to shape the terms of the offer

c) A route or mechanisms by which you are able to test your terms with children directly or with the help of a third party

d) Sufficient resources and developer time to mitigate any risks or violations identified by the child impact assessment, including those needed for moderation, redress, and expert advice

e) Organizational commitment to age appropriate service and upholding published terms at a strategic leadership level and throughout the organization

7.5 Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a) An AAR

b) An agreed holistic child-rights based process by which to evaluate, assess, mitigate, manage, and test changes in relation to risks presented to children, as well as benefits and opportunities to promote children's rights and their well-being

c) A process through which changes are user tested with a diverse audience of children and iterated to incorporate their views and needs

d) Published terms that include clear understanding of residual impacts and risks to children

e) An organizational Age Appropriate Policy Statement

8 Recognizing child users and meeting their needs and diversity

8.1 Purpose

The purpose of this process is to prepare the product or service for child users, and to recognize them when they engage with the product or service, so that the product or service is able to meet needs arising from their age, level of development or circumstance.

8.2   Outcomes

When you have successfully implemented the Recognizing Child Users and Meeting their Needs and Diversity process, you shall be able to show the following:

a)   Where relevant, privacy preserving age assurance mechanisms proportionate to the risk and nature of your product or service

b)   A set of steps to identify children to offer them an age appropriate service or, alternatively, a product or service that is appropriate for all users, including children

c)   Published terms that are responsive to the evolving capacity and inclusive of all children and young people

8.3   Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable laws, regulations, organization policies and procedures with respect to the recognition of children.

a)   Consider child age/capacity, which consists of the following tasks:

1) Consider the nature of your service and the appropriate age assurance tools/approach required to establish the age/capacity of users, including age verification, age estimation, and third party confirmation as appropriate, in conformity with established standards and official guidance. Any age assurance systems should meet the following minimum standards:

   i)   Protect the privacy of users in accordance with applicable laws, including data protection laws and obligations and human rights laws, in particular only process the data strictly necessary for the given purpose of age assurance

   ii)   Be proportionate to the risks arising from the product or service and to the purpose of the age assurance system.

   iii)   Offer functionality appropriate to the capacity and age of a child who might use the service

   iv)   Be secure and prevent unauthorised disclosure or security breaches, and not use data processed for the purposes of the age assurance system for any other purpose

   v)   Provide appropriate mechanisms and remedies for users to challenge or change decisions if their age is wrongly identified

   vi)   Be accessible and inclusive to users, particularly also to users with protected characteristics

   vii)   Not unduly restrict access of children to services to which they should reasonably have access, for example, news, health and education services

   viii) Provide sufficient and meaningful information for a user to understand its operation, in a format and language that they can be reasonably expected to understand, including if they are a child

   ix)   Be effective in assuring the minimum age or age range of a user as legally required

   x)   Not rely solely on information provided by the user when age verification is legally required or the context raises risks for children

2) Implement appropriate age assurance measures where necessary.

3) If your service or a particular part or feature thereof should - for legal/regulatory reasons or in accordance with contractual terms and conditions – not be made available to children under a given age, then take

steps to comply with the law or applicable terms and conditions by adequately preventing access or making the relevant service or feature unavailable to children under that age.

b) Offer a service appropriate to the age of the user designed to uphold their rights and promote their well-being, which consists of the following tasks:

1) Reduce and address harmful content as follows:

   i) Reduce automated recommendation of material that may be harmful for children's development

   ii) Prevent products and services from recommending poor quality information

2) Reduce and address harmful contact as follows

   i) Implement high privacy by default settings

3) Reduce and address harmful conduct as follows:

   i) Uphold community rules.

   ii) Offer a high bar of moderation.

   iii) Offer swift and easy access to expert advice.

   iv) Offer swift and easy access to redress (see 11.3.b)).

   v) Protect from design features that extend use, particularly at night.

   vi) Encourage time off.

4) Reduce and address harmful consumer risks as follows

   i) Require and obtain valid, informed, and meaningful consent that is transparent about the risks associated with the nature and features of product or service. Valid and meaningful consent shall be obtained from children and, where necessary, parents or a responsible adult, consistent with all applicable laws and regulations.

   ii) Avoid exploitative persuasive design features such as dark patterns as well as gambling-style features.

   iii) Ensure verified parental permission is obtained if required by applicable laws and regulations

5) Offer a high bar of data protection and only process children's personal data if it's in their best interest.

6) Prevent and address harm which results from any combination of risks according to the OECD risk typology, including content, contact, conduct, consumer risks as well as the cross cutting risks (privacy risks, advanced technology risks and risks to health and well-being).

c) Verify inclusivity, which consists of the following tasks:

1) Offer content in local languages, including moderation and redress.

2) Consider the needs of vulnerable groups and protect specific group's gender, race, ethnicity, sexuality or disability.

3) Consider the needs of children who may not have active parents or caretakers.

d) Verify accessibility, which consists of the following tasks:

   1) Verify that your product or service meets the latest accessibility requirements such as Web Accessibility Directive (WAD), European Accessibility Act (EAA) and standards such as EN 301 549 Accessibility requirements for ICT products and services and are compliant with the version 2.1 of the [W3C's Web Content Accessibility Guidelines](#) at level AA.[14]

   2) Accommodate children with special educational needs, diverse physical traits and abilities, non-visible disabilities and neurodiversities.

   3) Consider the affordability of your product or service.

e) Record all obstacles, unfair terms, hazards, opportunities, and identified requirements to recognizing children in the AAR.

NOTE—these activities can benefit from close cooperation with stakeholders and the guidance of the value lead.

8.4   Inputs

The following resources constitute a suitable, but neither exhaustive nor normative suite of the process inputs:

a) A product or service for which published terms are necessary

8.5   Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a) Product or service that is child-centred by design and responsive to the unique developmental capacities of diverse children, upholding children's rights and promoting their well-being

b) Published terms that can respond to the age and capacity of its users

c) Updated AAR with all child related hazards, opportunities and identified requirements

9   Upholding children's rights

9.1   Purpose

The purpose of this process is to verify that the design and published terms for the product or service embody children's rights and promote their well-being

NOTE—Children's rights have been established and codified for over 30 years; they outline the privileges and protections that a child enjoys in all environments—including the digital environment. Codified in the United Nations Convention on the Rights of the Child (UNCRC), children are afforded widely understood set of interconnected protections, privileges and supports. UN General Comment 25 on Children's Rights in Relation to the Digital Environment sets out how the UNCRC applies to the digital environment.

9.2   Outcomes

When you have successfully implemented the Upholding Children's Rights process, you shall be able to show the following:

a) Children's rights are realized in the product or service

b) Published terms that incorporate and realize children's rights

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[14] More specific country resources for special needs and inclusion can be found at https://www.european-agency.org/country-information

9.3   Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures with respect to the age appropriate presentation of published terms.

a) Consider your product and service in relation to children's rights as set out in the UN General Comment 25 on Children's Rights in Relation to the Digital Environment. In the case of conflicts between rights, the best interests of the child shall be paramount.

b) Consider relevant domestic legislation that offers protection and provision for children in the jurisdiction where your product or service will engage with children either directly, indirectly, deliberately, or in the course of their operations. However, children in all jurisdictions in which the company operates should be given an equally high standard in respecting all of their rights, even where compliance with national laws does not strictly require this. See Annex E for some examples of relevant domestic legislation.

c) Verify that your product or service reflects any industry codes or norms that offer protection and provision for children.

d) Where in doubt about standards, local, or national law, verify that your product or services reflect the best interests of the child and refer to competent legal counsel with expertise in the relevant jurisdiction.

e) Incorporate the views and wishes of children in your product or service on an ongoing basis.

f) Reflect the rights and views of children in your published terms.

g) Record all obstacles, unfair terms, hazards, opportunities, and identified requirements to upholding children's rights in the AAR.

   NOTE—these activities can benefit from close co-operation with stakeholders and the guidance of the value lead.

9.4   Inputs

The following resources constitute a suitable but neither exhaustive nor normative suite of the process inputs:

a) A product or service that engages with children directly, indirectly or unintentionally

b) Relevant legislation that references children's rights in the jurisdictions in which your product or service operates (see Annex E for examples)

c) Relevant industry codes and agreements

d) UN Committee on the Rights of the Child General Comment No.25 (2021) on Children's Rights in Relation to the Digital Environment

e) 'The Case for Better Governance of Children's Data: A Manifesto', UNICEF 2021

9.5   Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables, specifically:

a) A product or service that upholds children's rights, reflects relevant legislation, industry codes, and children's views

b) Record all child-related hazards, opportunities, and identified requirements for implementing the AADSF in the AAR

10 Child-centred approach to data use

10.1 Purpose

The purpose of this process is to verify that best practice data protection regimes are used in relation to child users.

NOTE—Aspects of design that maximize data extraction are very often not in the best interests of children.

10.2 Outcomes

When you have successfully implemented the Child-centred approach to data use process, you shall be able to show the following:

a)   The product or service does not employ exploitative commercial practices such as dark patterns, deceptive nudging and targeted advertising to children.

b)   The product or service does not employ profiling or use of children's personal data that is not in their best interest.

c)   The product or service can provide a high level of data protection to children.

d)   The corporate culture recognizes children's rights and their well-being, and prioritizes the best interests of the child over commercial considerations.

10.3 Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures.

a)   Eliminate behavioural nudging for commercial purposes, as follows:

1) Turn off persuasive features that push engagement by default.

2) Turn off features that lessen privacy by default.

3) Turn off features that have been identified as risky or dangerous and make them unavailable to children.

4) Verify that automated processes optimized for commercial purposes do not infringe on children's rights or undermine their needs.

b)   Ensure a high level of data protection for children, as follows:

1) Ensure that all children are offered the highest available standards of data protection, in line with GC 25 and international best practice for data protection, consistently over all jurisdictions where the service is operated, even where national laws do not strictly require this.

2) Only collect and retain online the minimum amount of personal data you need to provide the elements of your product or service in which a child is actively and knowingly engaged, in line with principles of data minimization.

3) Where children's data is shared with parents or responsible adults, accompany it with age appropriate information that helps explain what data or activities are being shared.

4) Do not disclose, sell, share, or make available children's data unless you can demonstrate a compelling reason to do so, prioritizing the best interests of the child over commercial interests.

5) Protect children's personal data from uses that recommend content or behaviours detrimental to their rights and well-being.

7) Provide freemium services free for children; do not exchange them for data.

8) Verify that data is only processed for purposes for which a lawful ground exists. If the lawful ground for processing personal data is consent, make sure it is legally valid, informed and meaningful. Children can only give consent if they have reached the age of digital consent pursuant to the applicable law; in all other cases a parent must give legally valid, informed and meaningful consent. Consent must be as easy to withdraw as it was to give. When children reach the age of digital consent, ask them for consent if it was initially given by a parent.

9) Do not profile children for targeted advertising or other commercial purposes.

10) Children (or parents or responsible adults where relevant) shall be able to retract, correct, and delete children's data, consistent with applicable laws and regulations. These options shall be provided in a way that is accessible and transparent. This includes creating a right to be forgotten.

11) Avoid dark patterns and manipulative design.

c) Create a corporate culture that realizes children's rights, as follows:

i) Carry out a child rights impact assessment in line with UN Guiding Principles on Business and Human Rights.

ii) Commit and publish a shareholder commitment to realise children's rights and promote their well-being.

iii) Publish a commitment to meet the spirit as well as the letter of relevant regulations and legislation.

d) Create a zero tolerance culture for child sexual exploitation and abuse (CSEA):

i) Implement systems that focus on reducing CSEA and the creation, upload, and sharing of child sexual abuse materials (CSAM).

ii) Put in place systems that allow for detection, reporting, and takedown of CSEA.

e) Record all obstacles, unfair terms, hazards, opportunities, and identified requirements to adopt a child-centred approach to data use in the AAR.

NOTE—These activities can benefit from close co-operation with stakeholders and the guidance of the value lead.

10.4 Inputs

The following resources constitute a suitable but neither exhaustive nor normative suite of the process inputs:

a) Corporate policies and processes

b) Shareholders' views

10.5 Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a) Products and services that are free from behavioural nudges for commercial purposes or that are not in the best interests of the child

b) Published corporate values that protect and promote children's rights

c)   Technical systems that are focused on the reduction, uploading, and sharing of CSEA

d)   Technical systems that detect, report, and take down CSEA

e)   Record all child related hazards, opportunities, and identified requirements in the AAR

11 Moderation and redress

11.1 Purpose

The specification thus far has defined a set of processes that shall create "fair terms" that meet the reasonable expectations of children (and parents). The purpose of this moderation and redress process is to verify that fair published terms are met and legal obligations to children are upheld. This process proactively addresses the reasonable expectations of children and parents/responsible adults to require adequate moderation and redress in order to deliver these fair terms.

11.2 Outcomes

When you have successfully implemented the moderation and redress process, you shall be able to show the following:

a)   The product or service shall uphold fair terms to children

b)   The product or service shall uphold all published terms

c)   The product or service shall be in the best interests of children

11.3 Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures with respect to the age appropriate presentation of published standards process.

a)   Terms shall not form an illegal or unfair contract between a product or service and a child

b)   Moderation: Offer oversight of the impacts on children, those that they see and those that they may not be aware of, by use of the following:

   1)   Trained human moderators

   2)   Automated systems that are highly privacy protecting, and that do not produce discriminatory outcomes or other outcomes that violate child rights

   3)   Investment in moderation that is proportionate to the size, risk and activities associated with your product or service

   4)   Where relevant, undertake regular evaluation of your moderation systems

c)   Redress, as follows:

   1)   Provide prominent, accessible, and easy to use tools to help children and parents seek redress

   2)   Provide children and parents access to expert advice and support where needed

   3)   Have clear penalties applied fairly and consistently

   4)   Offer opportunities to appeal decisions and escalate unresolved appeals to expert third parties or regulators

     5)   Reasonable response times

     6)   Provide children and parents with the following:

          i)   Opportunity to correct digital profile/footprint

          ii)   Termination rights (user)

          iii)   Right to deletion of personal data (right to be forgotten)

d)   Clarity and unambiguity around upholding your published terms, as follows:

     1)   Inform children of action taken in the redress process

     2)   Seek and obtain valid, informed, and meaningful consent as required for upgrades and amendments to service

     3)   Publish your corporate policies

     4)   Regularly evaluate and report matters that appear in your AAR

d)   Enforce only fair terms as follows:

     1)   Do not enforce any terms that are unfair nor do not meet the requirements of this specification

     2)   Where terms are found to be unfair, note them in the AAR and create a "blacklist" so that these terms are not used nor reintroduced at a later point

e)   Record all obstacles, unfair terms, hazards, opportunities, and identified requirements to moderation and redress the AAR

NOTE—These activities can benefit from close co-operation with stakeholders and the guidance of the value lead.

11.4 Inputs

The following resources constitute a suitable, but neither exhaustive nor normative suite of the process inputs:

a)   Industry codes

b)   Corporate policies

c)   Relevant regulation and legislation, see Annex E for examples

d)   UNCRC, including General Comment #25

e)   AAR

11.5 Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a)   Published terms that offer fair terms

b)   Revised corporate policies that commit to fair terms for children

c)   Age appropriate services or products for children

d)   Updated AAR with all child related hazards, opportunities and identified requirements

12 Presenting published terms in age appropriate formats

12.1 Purpose

The purpose of this process is to verify that published terms are presented in an age appropriate manner and are accessible to all children and their parents. Simplifying the content of terms and conditions is only one requirement of age appropriate presentation, and published terms shall be presented in forms, at times, and in ways that children engage with them. The content of the published terms shall also be age appropriate.

12.2 Outcomes

When you have successfully implemented the Age Appropriate Presentation of Published Terms process, you shall be able to show the following:

a) Published terms can be understood by children of the age or age ranges that are using the service. These terms shall then also be easily understood by parents and caretakers

b) Published terms are presented in formats that children can understand and relate to

c) All interactions are geared to ongoing, meaningful engagement at regular intervals and at crucial moments, including every instance where consent is sought or required

d) Published terms are suitable for children from diverse settings and diverse contexts

e) Published terms are accessible to children with a wide range of abilities

f) Published terms are a true reflection of the service

g) Published terms offered to children render an age appropriate service

h) Published terms are presented in languages the children in the respective geographical area are able to understand

12.3 Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures with respect to the age appropriate presentation of published terms.

a) Verifying accessible information. This activity consists of the following tasks:

1) Verify that published terms use accessible language, as follows:

   i) Establish language and concepts are age appropriate to the age or age range of user, as follows:

      i) Use language assessment tools.

      ii) Engage in user testing with a diverse range of children of different age ranges.

      iii) Engage professional communicators where possible.

   ii) Make key terms easy to find, using bold text or graphics and icons if needed.

   iii) Make redress and reporting information prominent and accessible, to help children and parents exercise their rights and report concerns.

   iv) Make information available in bite size pieces.

   v) Make terms searchable.

vi) Ask permissions at times that are proven to encourage engagement with key information.

2) Provide multiple formats, as follows:

i) Consult with children on most appropriate formats, including but not limited to, cartoons, video, audio, pictures, subtitles—including those written, presented or co-created with children.

ii) Provide more than one format for children of different age ranges and diverse contexts.

iii) Provide formats that are accessible to children of all needs by default.

3) Test draft published terms as follows:

i) With diverse group of children of different age ranges

ii) In diverse scenarios

iii) In all formats

iv) Iterate terms and retest to verify that they now meet and continue to meet children's views and needs

4) Address diverse audiences as follows:

i) Consider the age, gender, ethnicity of children.

ii) Consider the context: urban, rural, geography, language.

iii) Consider the circumstances, for example, sharing devices, cost of connectivity, children without adult guidance.

5) Verify that simplification of language or use of multiple formats does not confuse, change or hide the meaning of terms.

b) Unbundling consent to the terms, as follows:

1) Unbundle consent to allow a child to access only the part of the service they wish.

2) Verify that "unbundled" consent is easy to understand and access.

3) Do not use tick box or unread consent where the end user is a child.

c) Timing of consent, as follows:

1) Use the timing to obtain meaningful, valid consent. Do not drive ill informed consent, for example getting a child to agree to terms as they register that will not result in their valid informed consent.

2) Embed strategies to capture valid, informed, and meaningful consent at multiple or significant times in the user journey.

3) Obtain meaningful, active, and valid consent again where published terms are updated or revised.

d) Recognizing children's evolving capacities, where children are unable to provide legally valid consent for themselves, a risk-based approach to seeking consent from parents or responsible adult shall be adopted. This is likely to be legally required for certain features of your product or service, such as contracting and payment features. Children shall not be asked to agree to terms to which they cannot validly and meaningfully consent, or that they cannot conceptually understand. Where parental or responsible adult

consent is required by law, that consent should be meaningful and valid, and steps taken to verify that the parent or responsible adult or other legally authorized person is who they say they are. Parental or responsible adult consent should not be used to lessen protections for children nor silence children's views or voice.

e)   Design for children's best interests. Published terms shall not "nudge" in ways that are detrimental to children. For example, privacy settings should be set to high by default. It should not be left to children or parents to find and select the high-privacy settings.

f)   Record all obstacles, unfair terms, hazards, opportunities, and identified requirements to publishing terms in age appropriate formats in the AAR.

NOTE—These activities can benefit from close cooperation with stakeholders and the guidance of the value lead.

12.4 Inputs

The following resources constitute a suitable but neither exhaustive nor normative suite of the process inputs:

a)   A product or service that engages with children directly, indirectly, or unintentionally

b)   A clear understanding of what the service/product does and how it operates, in order to shape the terms of the offer

c)   A route or mechanisms, by which terms can be tested with children and parents, directly or with the help of a third party

d)   Access to language age/capacity testing, translation (into local languages) or creative skills necessary to the production of age appropriate terms

12.5 Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a)   One or more formats of published terms with prominent key terms and age appropriate language that accurately reflects the service

b)   One or more formats for published terms that is compliant with children's rights, fair terms and relevant regulation, and voluntary standards

c)   One or more formats of published terms reflecting diverse settings and incorporating the views of a diverse audience of children

f)   Updated AAR with all child related obstacles unfair terms, hazards, opportunities and identified requirements related to the age appropriate presentation of published terms

13 Implementing the Age Appropriate Digital Service Framework (AADSF), including across your supply chain

13.1 Inputs

The following resources constitute a suitable, but neither exhaustive nor normative suite of the process inputs:

a)   The AADSF specification text

b)   Comprehensive documentation about who are the suppliers across the supply chain

c)   Tools to conduct/review suppliers (e.g., how are they reviewing them to demonstrate due diligence)

d)   Suppliers' compliance register

e)   Resources and/or staff to enforce AADSF

f)   A list of staff and roles, in order to identify training needs

13.2 Purpose

The purpose of this process is to verify that the AADSF that this specification creates is implemented in your organization, and across your supply chain. It shall verify that the protections afforded by Section 230 of the US Communications and Decency Act 1996 (and reflected in similar legislation around the globe) does not prevent you offering an age appropriate service to children.

13.3 Outcomes

When you have successfully implemented the AADSF process, you shall be able to show the following:

a)   The AADSF specification is explicitly adopted and implemented.

b)   The supply chain in use by a digital service or product is reviewed and also verified as offering age appropriate digital services.

c)   Employees with roles in design, governance, and procurement are identified and training in child compliant design is implemented.

d)   Protections and privileges of childhood and children's rights are understood and routinely applied in design and business decisions throughout the development of services and products as a corporate norm.

13.4 Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures with respect to the AADSF process.

a)   Use suppliers and contractors that uphold the AADSF and have mitigated risks and seek to enhance opportunities identified by the AAR.

b)   Provide staff training on implementing the AADSF.

c)   Demonstrate corporate and management buy-in to providing age appropriate digital services.

d)   Record all obstacles, unfair terms, hazards, opportunities and identified requirements to implementing the AADSF.

NOTE—These activities can benefit from close co-operation with stakeholders and the guidance of the value lead.

13.5 Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a)   A supply chain that offers age appropriate terms to child users and prioritizes the best interests of the child

b)   Staff training materials and staff training register

c)   Updated AAR with all child related hazards, opportunities and identified requirements

14 Risk based age appropriate design and development

14.1 Purpose

The purpose of this process is to evaluate the child-related product/service hazards, opportunities, and requirements identified during the child rights impact assessment process and noted in the AAR, and to specify and implement technical and operational mitigations for the unacceptable levels of risk while embedding and fostering children rights and relevant regulations in the product or service. It is worth noting that the processes described in up until this section have required the knowledge and leadership of the Child Rights Advocate and Age Appropriate Lead. This process is a process of "handover," where the obstacles, unfair terms, hazards, opportunities, and requirements noted in previous processes are passed over to the technical leads to assess and address.

14.2 Outcomes

When you have successfully implemented the Risk-Based Age Appropriate Design and Development process, you shall be able to show the following:

a) Activities that impact children are appropriately addressed in the product or service design, ensuring child-centred design and operation

b) All functional and operational aspects and scenarios impacting on children noted in an AAR are evaluated and suitably addressed through risk assessment

c) Children's rights and developmental needs are given priority in the product or service design

d) A baselined product, service, or system is defined and placed under Change Control and Configuration Management (CCCM)

e) Published terms articulating remaining risks to children are published by default.

14.3 Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures with respect to the risk-based and opportunity-based age appropriate design:

a) Review the AAR for areas of functional and operational impact on children as follows:

1) Plan for age appropriate design activities

2) Verify that both intentional and unintentional impacts are addressed in the design

b) Identify criteria for risk tolerability of hazards, opportunities, and requirements in each context of use. This enables you to assess the tolerability level for each risk and establish the necessity for further risk mitigation

c) Assess risks and rewards arising from the identified hazards and opportunities as follows:

1) Assess the risks of each hazard using the evaluated level and the tolerability criteria.

2) Assess the benefits (rewards) arising from opportunities and note the commitment to foster and enhance these in the AAR.

3) Rank the importance of each risk, reward, or requirement.

NOTE—The importance may be derived from the desirability and significance for safety and/or realization of children's rights and promotion of their well-being, or it may be related to the financial damage if the risk or requirement is unmitigated/untreated.

4) Decide how to address each risk or potential reward/benefit of your product or service that you are able to by prioritizing which risks or potential benefits need addressing soonest and recording these decisions about prioritization in the AAR.

NOTE 1—Figure 2 depicts an illustrative matrix that can assist with the prioritization of the treatment options for risk/reward and requirements.

NOTE 2—All risks, rewards and requirements prioritized for "Treatment" shall undergo review and identification of technical or procedural measures whereas those classed as "Accept/Own" shall be monitored and reassessed at appropriate intervals.

5) Identify how to address the prioritized risks/rewards in a way that mitigates/fosters these to an acceptable level. This could be achieved through functional, procedural, or operational measures.

6) Implement mechanisms to keep children out of the parts of your product or service that are not appropriate for them, ensuring that you document the reasoning for excluding children rather than allowing them access with protection mechanisms in place.

7) Verify that the measures you have implemented to address risks/rewards are acceptable to stakeholders, including children.

8) Record the outcomes of this risk/reward assessment and how you addressed them in your AAR.
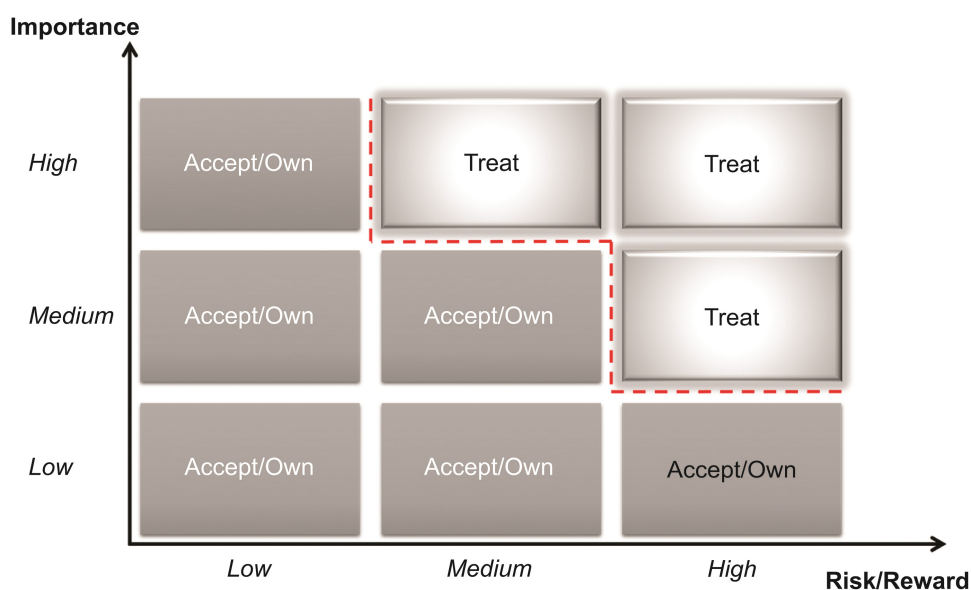
Figure 2 —Illustrative analysis and preliminary risk/reward prioritization matrix

d) Develop technical and operational mitigations as follows:

1) Evaluate the design and operational options that optimize solutions with stakeholders, including children.

2) Implement any regulatory requirements, measures needed to mitigate identified risks, and measures needed to foster/enhance benefits into the design of your service or product.

NOTE—Risk mitigation and opportunity fostering solutions can be technical, operational, procedural, or a combination thereof.

3) Record the outcomes of these risk-based and opportunity-based design decisions in the AAR.

e) Verify Age Appropriate Design as follows:

    1) Test the developed design and the Concept of Operations with a group that fully represents stakeholders, including children.

    2) Note all the observations and recommendations including additional design modifications in the AAR.

    3) Implement the identified design and operational improvements arising from stakeholder trials.

    4) Define a CCCM process for the product, service, or system.

    5) Define the initial baseline of Age Appropriate Design for your product or service (i.e., where you are starting from) based on the measures you have undertaken so far to make your product or service age appropriate.

    6) Draft the Case for Age Appropriate Conformity (see Annex A for a suggested template).

14.4 Inputs

The following resources constitute a suitable, but neither exhaustive nor normative suite of the process inputs:

a) AAR

14.5 Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a) A completed and documented age appropriate design and operational concept for the product, service, or system of interest

b) An updated AAR with the risk and reward treatments adopted and the requirements implemented

c) The outlined Case for Age Appropriate Conformity (see Annex A)

15 Age appropriate deployment, operation, upgrade, monitoring, and decommissioning

15.1 Purpose

The purpose of this process is that the product or service is operated, maintained, upgraded, monitored, and decommissioned in accordance with its age appropriate requirements. It allows the project teams to assess the effectiveness of any steps you have taken to address identified hazards and opportunities and to strategize for further improvements of your risk management processes, policies, and practices.

15.2 Outcomes

When you have successfully implemented the Age Appropriate Deployment, Operation, Upgrade, Monitoring and Decommissioning process, you shall be able to show the following:

a) Appropriate monitoring that the deployment, operation, maintenance, and upgrades of the product or service are age appropriate

b) Any child-related issues observed are noted in the AAR and addressed

c) Where necessary, preparations for standard and risk assessment are repeated for newly identified obstacles, unfair terms, hazards, and opportunities

d) Disposal and decommissioning are performed in line with age appropriate requirements and guidelines

15.3 Activities and tasks

The project shall implement the following activities and tasks in accordance with applicable organization policies and procedures with respect to the age appropriate design:

a) Monitor the product or service deployment, operation, maintenance and upgrades with a view to age appropriate requirements. This activity consists of the following tasks:

  1) Evaluate whether the product or service has been deployed consistent with the requirements in the AAR and define a baseline and record in the AAR.

  2) At regular intervals, determine whether the product or service is operated, maintained and upgraded in accordance with age appropriate requirements in the AAR.

  NOTE—The organization should specify the intervals of revisiting the system in co-operation with stakeholders.

b) At regular intervals, collect field data and stakeholder feedback and analyse the product or service with a view to the following criteria:

  1) The age appropriate risk treatment options implemented retain their effectiveness in the contexts of application.

  2) New and emerging aspects of risk that may impact on children are recognized and addressed in the subsequent redesign or adaptation of the product or service before re-deployment.

  3) In the event of inadequacy of risk treatment options, consult stakeholders and either strengthen these or identify new treatment options to maintain the protection demand for each age appropriate requirement in the product or service.

c) Properly dispose of the product or service. This activity consists of the following task: verify that no children's rights, data, or privacy aspects are undermined when disposing of or taking the system out of service, consistent with applicable laws and regulations.

  d) Record lessons learnt in the AAR.

  NOTE—If feasible within corporate practice, make lessons learnt available for other organizations.

NOTE—The monitoring is particularly relevant to data driven services and systems and those with emergent behaviours due to machine learning or adaptative behaviour.

15.4 Inputs

The following resources constitute a suitable but neither exhaustive nor normative suite of the process inputs:

a) A functional system designed incorporating age appropriate requirements.

b) A product or service concept of operation.

c) Intended and potential context(s) of system use.

d) An AAR for product or service.

15.5 Outputs

The following work products constitute a suitable but non-exhaustive suite of the process deliverables:

a)   Refined concept of operation

b)   Updated AAR for the product or service life cycle maintenance by the relevant duty holders

c)   Updated Case for Age Appropriate Conformity

Annex A
(normative)

Case for Age Appropriate Conformity

This specification provides advisory and normative requirements for age appropriate aligned design, development, operation and decommissioning activities. It is highly desirable, however, that the effort, resources, and time spent, as well as evidence and outcomes attained in the course of implementing the requirements and the spirit of this specification, are recorded, consolidated, structured, and presented in an adequate, consistent, and coherent narrative: a Case for Age Appropriate Conformity. The case for age appropriate product/service conformity is a project memory and an auditable repository. Similar to a safety case, the Case for Age Appropriate Conformity is intended to provide a structured account of the ethical and technical activities undertaken in the course of pursuing an ethically aligned age appropriate design for the product or service. The Case for Age Appropriate Conformity is a key contribution toward the organizational memory and maturity in ethically aligned design, and a foundational information product for subsequent assessments and potential certification.

The structure, contents, and arguments pertinent to a final claim for an ethically aligned age appropriate product, service, or system of interest should be developed in an evolutionary manner throughout the life of a system. The Case for Age Appropriate Conformity encourages the process outputs, evidence, and outcomes to be recorded at each stage of the ethically aligned age appropriate design, development, and operation to provide a process or project repository and memory as well as a structured argument for the age appropriateness of the product, service, or system. It constitutes indispensable inputs into any subsequent age appropriate assessment for the product or service and the organization.

The following list of contents is recommended for the Case for Age Appropriate Conformity for a given product or service that also serves as a checklist that can be satisfied by the organization's content mapping, templates, and information models. This outline is not intended to address all possible contents or to mandate the title of the information item, nor the order or titles of the sections in documents presenting some or all of the contents of the Case for Age Appropriate Conformity.

a)   Introduction

   1) Societal context

   2) Key drivers

b)   System of Interest, Scope, and Boundaries

   1) Purpose

   2) Context: Scope, Boundary, and Interfaces

      i)   Direct and indirect stakeholders

      ii) Data flows

      iii) Processes

   3) Initial Concepts of Operation

   4) Other supporting or dependent systems

c)   Setting the Age Appropriate Context Outcomes

    1) Realistic scenario description

        i) Envisaged market share assumption (as outlined in the business plan)

        ii) Assumed place(s) of service usage

        iii) Assumed geographic location(s) of service offering

        iv) Assumed primary user interface(s)

    2) Preliminary harms and benefits

    3) Key stakeholders involved in consultation

    4) Consultation

    5) AAR

        i) List of areas of impact on children

        ii) Child related hazards and opportunities

        iii) Value narrative (e.g., scenario or use case illustrating the effect of the value)

d) Enterprise Age Appropriate Strategy

    1) Enterprise Age Appropriate Policy Statement (see Annex D)

    2) Enterprise Age Appropriate aligned processes

e) System Level Age Appropriate Requirements

    1) Age Appropriate Values impacted by the product or service

f) Ethical Age Appropriate Risk Assessment and Management Outcomes

    1) Age Appropriate scenarios of Risk evaluation and tolerability criteria

    2) Age Appropriate opportunities sustained or promoted

    3) Risk mitigation and control options for Age Appropriate scenarios of Risk

    4) Derivation of Age Appropriate functional and non-functional requirements

    5) Balancing of Age Appropriate requirements against other system requirements

g) Age Appropriate functional and non-functional Requirements traced in the System Design

h) Claims for the Age Appropriate product or service and Conclusions

i) Principal resources and references

Annex B
(informative)

Illustrative AAR

This specification advocates the adoption or development of an AAR as a repository of all relevant aspects of a product or service inclusive of all beneficial and detrimental aspects that may impact on children at different stages of development. The AAR is the "medium" that is used to document, communicate, and "handover" between the Child Rights Advocate and Age Appropriate Lead, who steer Processes 7 through 13, and the technical leads, who steer Process 15. An illustrative list of information items for AAR is given in Table B.1.

Table B.1 — Example of AAR information structure

Age appropriate information	Explanation	Comments
Unique reference	A unique identifier for each record in the AAR	
Date	Date for information entry	
System of interest	The name or title of the product, service, or system under consideration	
Aim and purpose	The key purpose of the product or service as a product, service, or system	
Aspect	The particular and referenced aspect of the concept of operation of the product or service under consideration	Can be a technical, functional, or operational aspect
Context	The context of application under consideration	The environment and specific setting for the application
Impact on children	Whether the aspect and context have any relevance and impact on children	
Hazard or opportunity	The type of impact, undesirable/threat, or desirable	
Scale of impact	The estimated scale of impact as hazard or opportunity	This can be qualitative or quantitative
Potential mitigation options	The likely acceptable protection and mitigation solutions	Typically a range of risk controls
Potential fostering options	The likely opportunity fostering and enhancement solutions	These are additional positive actions to enhance the benefit from good features
Risk tolerability criteria	The criteria for acceptability or tolerability of risk factors	These can be qualitative or quantitative

Age appropriate information	Explanation	Comments
Selected design solution	The specific options chosen for technical or operational modifications of the product or service	
Verification observations	Outcome of checks for correctness and applicability of the risk and reward options and impact	Verification is a local check for relevance and correctness
Validation observations	The outcome of trials of the risk control and reward fostering options with stakeholders and children	Validation is a whole service/product level of fitness for an age appropriate purpose
Deployment observations	Any relevant issues and observations from putting the product or service into use	
Regulation/law	The requirements arising from specified regulations and laws	Requirements to be noted in the AAR
Code of practice	The requirements arising from specified adopted international or national codes of practice for child protection	Requirements to be noted in the AAR
Age appropriate duty holder	The name of the person responsible for the record and risks	Could be the Age Appropriate Lead risk manager
NOTE—These can be implemented in any IT platform or tool that the project finds appropriate.		

Annex C
(informative)

Frameworks for Age Appropriate Design

A number of frameworks for age appropriate design are referenced here to set the context for this specification.

a) Australian Institute of Family Studies - Online Safety resource sheet

https://aifs.gov.au/cfca/publications/online-safety

b) Child Protection Online – OECD

https://www.oecd-ilibrary.org/sites/796ac574-en/index.html?itemId=/content/component/796ac574-en

c) Child Rights Impact Assessment

https://fra.europa.eu/en/publication/2015/mapping-child-protection-systems-eu/impact-assessment#:~:text=Child%20rights%20impact%20assessment%20is,development%20of%20policies%20and%20laws.

d) Child Safety Online

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/487973/ukccis_guide-final__3_.pdf

e) Children's Right impact assessment tool

https://www.unicef.org/csr/css/Children_s_Rights_in_Impact_Assessments_Web_161213.pdf and https://fra.europa.eu/en/publication/2015/mapping-child-protection-systems-eu/impact-

f) Education for a Connected World – 2020 Edition

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l) UK Council for Internet Safety

Annex D
(informative)

Illustrative Age Appropriate Enterprise Policy Statement

The ….(group name)…. values young people and children as being a vital part of the stakeholder community within the context of the (product or service) and desires to see them grow, mature, and be challenged in a healthy and safe digital world.

Purposes

The purpose of ….(group name)…. children and young people's program is to offer the children a safe and welcoming environment with fun activities where the children can grow and learn. Whether this be through (groups name) activities or through other independent groups working in partnership with ….(group name)….

Aims

— To provide services and activities for children and young people to help them develop from childhood into adulthood and to provide support for them.

— To enable the children to express themselves.

— To assist the children in integrating into the community.

— To help children/young people appreciate the diversity of their cultures.

• What is age appropriate child protection?

• Organization (whether group or name) or a partner group/organization)

• Age Appropriate Child Protection Representative

• Training

• What you should do

• What you should not do

This policy was adopted by the ….(group name)…. on _____

Signed on behalf of the Management Committee by:

Signature_____

Name_____

The policy has been reviewed by the Management Committee on: Date_____

Annex E
(informative)

Examples of regulations

E.1 Data protection regulations in Europe, including regulations and guidelines that focus on the protection of children's personal data specifically

— General Data Protection Regulation Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (GDPR)

— Directive on privacy and electronic communications, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (ePrivacy Directive)

— Temporary derogation from the ePrivacy Directive, Regulation (EU) 2021/1232 on a temporary derogation from certain provisions of Directive 2002/58/EC as regards the use of technologies by number-independent interpersonal communications service providers for the processing of personal and other data for the purpose of combatting child sexual abuse online

— Proposal for a Regulation concerning the respect for private life and the protection of personal data in electronic communications and repealing Directive 2002/58/EC (COM(2017)10 final)

— Council of Europe Recommendation CM/Rec(2018)7 on Guidelines to respect, protect and fulfil the rights of the child in the digital environment

— Swedish Guidance on Children's Rights Online, 2020 (Sweden)

— Age Appropriate Design Code, 2020 (UK)

— Fundamentals for a Child Oriented Approach to Data Protection, 2020 (Ireland)

— CNIL Recommendations for Protecting Children Online, 2021 (France)

— Dutch Code for Children's Rights, 2021 (Netherlands)

— The UK ICO Children's Code UX Design Guidance, 2022 (UK)

E.2 Digital services law

— Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act)

— Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union (NIST Directive)

— Digital Education Action Plan 2021-2027 Resetting education and training for the digital age (COM/2020/624 final)

— Proposal for a Regulation laying down harmonised rules on Artificial Intelligence and amending certain Union legislative acts (COM/2021/206 final) (Artificial Intelligence Act)

— Proposal for a Regulation as regards establishing a framework for a European Digital Identity (COM/2021/281 final)

E.3 Media Law and Regulation

— Directive Directive (EU) 2010/13 concerning the provision of audiovisual media services as amended by Directive 2018/1808 (Audiovisual Media Services, AVMSD)

— EU Code of Practice on Disinformation

— Code of conduct on countering illegal hate speech online

— Code of Practice on Disinformation

E.4 Consumer legislation

— Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, amended by Directive (EU) 2019/2161 of 27 November 2019 on better enforcement and modernisation of Union consumer protection rules

— Commission notice — Guidance on the interpretation and application of Council Directive 93/13/EEC on unfair terms in consumer contracts

— Directive 2005/29/EC concerning unfair business-to-consumer commercial practices in the internal market (Unfair Commercial Practices Directive/UCPD)

— Guidance on the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market

— Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, amended by Directive (EU) 2019/2161 of 27 November 2019 on better enforcement and modernisation of Union consumer protection rules

— Commission notice Guidance on the interpretation and application of Directive 2011/83/EU of the European Parliament and of the Council on consumer rights

— Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services

— New Consumer Agenda Strengthening consumer resilience for sustainable recovery (COM/2020/696 final)

E.5 Children's Rights or Human Rights legislation that applies to safety, well-being and treatment of children

— European Convention on Human Rights, 1950

— The new European strategy for a better internet for kids (BIK+) (2022)

— UN Convention on rights of the child 1989

— General comment No. 14 (2013) on the right of the child to have his or her best interests taken as a primary consideration (art. 3, para. 1)

— General comment No. 13 (2011) on Article 19: The right of the child to the freedom from all forms of violence

— General Comment No. 16 (2013) on State obligations regarding the impact of business on children's rights

— General comment No. 17 (2013) on the right of the child to rest, leisure, play, recreational activities, cultural life and the arts (art. 31)

— General comment No. 25 (2021) on children's rights in relation to the digital environment

— Council of Europe Guidelines to respect, protect and fulfil the rights of the child in the digital environment (Recommendation CM/Rec (2018)7 of the Committee of Ministers

— Charter of Fundamental Rights of the European Union (2012) (Article 24)

— Engaging, Connecting and Empowering young people: a new EU Youth Strategy (COM/2018/269 final)

— Communication on the EU strategy on the rights of the child (COM/2021/142 final)

— The European Child Guarantee (2021)

— Communication establishing European Pillar of Social Rights (COM/2017/0250 final) and European Pillar of Social Rights Action Plan (COM/2021/102 final)

— European Declaration on Digital rights and principles for the Digital Decade (COM/2022/27 final)

— Council Of Europe Strategy For The Rights Of The Child (2022-2027)

— Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims

E.6 Equality legislation

— Communication on the EU Strategy on Combating Antisemitism and Fostering Jewish Life (2021- 2030) (COM/2021/615 final)

— Strategy for the Rights of Persons with Disabilities 2021-2030 (COM/2021/101 final)

— Union of Equality: LGBTIQ Equality Strategy 2020-2025 (COM(2020) 698 final)

E.7 Health and Safety legislation

— Directive 2001/95/on general product safety

— Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys (Toy Safety Directive)

E.8 Criminal law, regulations and policy

— Council of Europe Convention on Cybercrime (2001) (Cybercrime Convention)

— Council of Europe Convention on Protection of Children against Sexual Exploitation and Sexual Abuse (Lanzarote Convention)

— Framework Decision on combating racism and xenophobia, Council Framework Decision 2008/913/JHA of 28 November 2008 on combating certain forms and expressions of racism and xenophobia by means of criminal law

— Directive 2011/93/EU on combating the sexual abuse and sexual exploitation of children and child pornography (CSA Directive/Child Sexual Abuse Directive)

— EU Code of conduct on countering illegal hate speech online

— Combatting child sexual abuse, EU strategy for a more effective fight against child sexual abuse (COM/2020/607 final)

— EU strategy for a more effective fight against child sexual abuse (COM/2020/607 final)

— Proposal for a Directive combatting violence against women and domestic violence (COM/2022/105 final)

— Proposal for a Regulation Of The European Parliament And Of The Council laying down rules to prevent and combat child sexual abuse (COM(2022) 209 final)

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