

Webinar of 2026-09-10

Webinar 'Anthropometric and strength data of children for use in standardization'

1	What is the age range that this TR will cover?	The age range covered by the TR is up to 15 years.
2	When was CEN/TR 17698 issued? Was it made available to national bodies?	CEN/TR 17698 was published in 2021, i.e. date of availability was in 2021. CEN members are however not obliged to adopt it so the publication date can vary from NSB to NSB.
3	Was CEN/TR 13387 parts 1-5 considered?	CEN/TR 13387:2004 was addressed in the first phase which comprised a comprehensive analysis of stakeholder needs (see also CEN/CLC webinar Anthropometric and strength data of children for use in standardization). The newer versions of CEN/TR 13387 (with various parts) came out after the first project phase. They were therefore not specifically addressed in the project. However, the body dimensions relevant for this document are properly taken into account in the data delivered in CEN/TR 18296-1:2026 and CEN/TS 18296-2:2026, respectively.
4	What about Latin America, Asia, and so on where the measures may be different?	It was an EU/EFTA funded project focussed on Europe and, consequently, the data were measured in Europe only. Of course, children in Latin America or Asia have different measures. Especially if the complete (adult) population is smaller compared to the Europeans and it depends also if there are more obese than the European population or more slim. However, as part of the project a significant protocol has been developed which could be used to replicate the project in e.g. Latin America and Asia.
5	For the strength data, there is a gap between 3 and 7 years. What do you suggest to apply for childcare articles standardization (age up to 48 months)?	This question can only be answered on a case-by-case basis depending on the actual application situation, e.g. data from the older or younger age group could be applied whichever is more suitable.

6	What about the assessment of facial dimensions in children? It seems there is a gap in this area.	A number of head/face dimensions were taken for each group, prioritised on data obtained in project phase 1. The anthropometric survey performed in phase 2 included 22 head/face dimensions that are reported in CEN/TR 18296-1:2026.
7	Are additional data collections planned to further validate the results? In some cases, fewer than 20 observations are available. Could you comment on how this affects the interpretation and robustness of the findings?	There are no immediate plans to do further validation but CEN/TC 122/WG 1 would obviously be very interested in data collected by others to support this. The sample size estimation was done according to the EN ISO 15535. In order to check the impact of the sample size in the percentile estimation a simulation was done using a database of Dutch children.
8	Are there any plans to expand this work internationally? Also if so, how will harmonisation occur	There are no plans to do so but CEN/TC 122/WG 1 would obviously have a great interest in such activity. Any harmonisation would probably be carried out through ISO.
9	Please confirm, was the youngest child 3 months?	Yes, 3 months was the minimum age.
10	Were children of Asian extraction included? Some have very different girth measurements	The requirement for participation is residence in the country, so Asian children were included.
11	How did you combine Netherlands and Spain into single values ? How can you consider that theses values are representative of European dimensions ?	It is not feasible to measure children in every European country. Therefore, two geographically and anthropometrically distinct populations were included: Spain and the Netherlands, providing coverage of Southern and Northern Europe and a broad anthropometric range with ergonomic relevance. Both countries were measured using exactly the same protocol and with same sample sizes, so the individual data were pooled with equal contribution from both populations.
12	Could you state whether you included children with disabilities?	Children with disabilities were not included since this was outside the scope of the project.
13	Are the anthropometric measurements purely scalar values between landmarks, or does it include the full scan surface? Will these surfaces become available for public use? Is it	Yes, they are values between anatomical landmarks. Sorry, we have full set of scan data. We are exploring ways in which this could be made

	possible to assess how different measurements are correlated such that you can extract a complete set of realistic body proportions, or are they presented as single measurements?	available in the future. Our work on Adult Anthropometric data is placing more emphasis on the morphological approach.
14	Were correlations between measurements in a subject preserved in the databases? So not just percentiles, but also "at age X an Index 2 width of Y correlates with certain values to middle phalanx length Z"? etc.?	The individual measurements of all children are in the database; thus correlations can be extracted. The current TR and TS are traditional percentile tables. Current and future projects at CEN are also investigating whether and how the richness of the data can be further disseminated beyond traditional tables.
15	At what point (%) does a deviation become significant and warrant reconsideration within the framework of existing standardization requirements?	Use of percentile dimensions should be based on the risk assessment for safety standards and limiting factors and intended users for design of products
16	Regarding use of these data points for application in safety standards- Is there a recommended safety tolerance provided for each data set (based on the experience when making the measurements) or will this be a statistical calculation and decision for the relevant standardization committee?	No, we don't have a recommended safety tolerance because of the variety and diversity of design tasks.
17	The 'relaxed sitting posture' is not a posture you should strive for as a designer! We need not only to have knowledge about difference in application of data to various situations, but also knowledge about designing for the right situation. What is healthy, and what can affect health negatively? As a designer, know the effects of your design and try to prevent unhealthy situations. Do not encourage unhealthy situations by design !!! (this is what often happens nowadays, especially with baby products ...)	As documented, the study was conducted in accordance with methodological standards, particularly regarding body posture during the measurement process. The guidelines provide guidance on adjustments to body measurements during use.
18	Basic ergonomics are very important and should be included in every course of Industrial Design education ...	Agreed. They should also be included in the majority of Engineering course as well. However, we seem to be heading in the opposite direction.

19	Where there maybe body variations due to health issues, e.g. affect of body variation due to injury, birth "defects" etc.	This is indeed preferential towards inclusivity. We did not exclude children with e.g. growth defects, back issues, etc. Nevertheless, for a complete coverage of defects and pathologies one would need multiple additional studies.
20	Since you have full scan data and associated landmarks for each subject, I would consider some version of PCA model of the surface in combination with a statistical model such that complete and realistic surfaces could be predicted given a set of predictors. Have a look at the work by UMTRI (https://youthshape.us/) which have done similar work for US children. There are plenty of sources within the automotive industry that have developed statistical shape models for adult anatomical structures to be used with Finite Element Human Body Models for automotive safety assessments. A similar approach for your child data from European children would be very valuable!	CEN/TC 122/WG 1 is aware of these activities and open for further exchange. PCA statistical shape models are a promising way to disseminate 3D body shape variation, while maintaining privacy. (E.g. DINED Mannequin uses it)
21	Are there recommendations for addressing the gender data gap in standardization?	In terms of gender inclusiveness and children, I think we are in a reasonable place. The EU has prioritised gender inclusiveness in standards and has looked at deficiencies in CEN Standards. We have looked at the needs of anthropometric standards for adults in this regard but have not yet published the report. Additionally, we have reported male and female percentiles also separately, which makes it possible to identify which anthropometric and strength dimensions are most susceptible to sex bias.
22	Compared to previous data, what are the main changes in the children's morphology, such as increases in height, weight, etc.?	The team is working on scientific publications and comparison with historic data will be part of that.
23	Thanks for filling the gap on information for children, this is really a big step forward. In the Personal Protective Equipment, we have been under pressure from the European Commission and some authorities to define	The statistical tables are not intended to translate directly into categories such as "small", "medium" or "large" for PPE.

	some products (i.e. hearing protection or respiratory protection) as fit for defined children age or generally speaking, size. I think it is very easy to understand to the experts, that it is not possible to declare a face as "small", "medium" or "large". We are speaking of 3-dimensional shapes that are strictly related to the how the protection is going to function. How to go from here?	They provide the anthropometric reference of the child population: the range of dimensions, their variability and how they change with age Changes in body measurements, particularly in the area of soft tissues, depend heavily on the human-machine interaction in each individual case; consequently, they cannot be standardised. The only solution here is to carry out specialised, product-specific measurements.
24	Can we still use the UK DTI anthropometric data compendium from 2002 to fill in gaps? That used data from US and other countries.	Neither of our reports are mandatory, and therefore the answer is yes.
25	Anthropometric data can only improve the development, health and wellbeing of children if the designers know about development, health and wellbeing of children. Unfortunately, design students often do not learn about this in their courses! There are not many books about this topic, either. The best books are in Dutch: 'Productergonomie'. With special reference to ergonomics of consumer products.	Noted.
26	Do similar documents exist also for adults?	You might be interest in our webinar 'Webinar 'Towards a New European Anthropometric Database for User-Driven and Inclusive Standards' of 6 October 2026 (at 9h30). You can register here: Webinar 'Towards a New European Anthropometric Database for User-Driven and Inclusive Standards' - CEN-CENELEC
27	In the webinar it was observed that 9 year old children can be a wide range of height. In my experience, people expect the tallest to behave in a more grown-up way. it's very complicated for children.	Yes, that is a problem, as the tempo of height increase not always covered with the cognitive development.
28	Although this was a CEN project with CEN deliverables, the anthropometric data of children are not only relevant for use by CEN Technical Committees (TC) and for children's products, but also for CENELEC and other	Even though the deliverables resulting from the project are CEN deliverables (TR & TS) they are indeed equally relevant for CLC committees (and electronic products, respectively). This CEN-

	consumer products children interact with (e.g. electrical household appliances).	CENELEC webinar therefore addresses the whole European standardization community.
29	Sweden has very comprehensive data on length and weight from the Swedish Child Health Center (BVC) did you consider integrating this type of data to make it more representative for all of Europe?	The answer is yes. We see this as the way forward, allied with data analytic methods and AI
30	Hello, do these anthropometric and strength data, as well as the findings of this study, indicate an evolutionary trend compared with the values reported in the scientific literature?	There have been ergonomically significant changes in the high percentile ranges for width, depth, circumference and weight measurements. However, this study was not specifically designed to assess the trends referred to. To compare these results with previous studies, it is important to ensure that the populations, measurement definitions and measurement methods are consistent or sufficiently similar. Otherwise, observed differences may reflect methodological differences rather than real changes in the population.
31	Will those findings be implemented in product standards, such as children furniture, test equipment etc.?	It is up to the respective standardization committees to review their standards and take into account the new data. Several committees have already been informed about the forthcoming data and intend to revise some of the dimensions as appropriate.
32	Recently obesity in children has been discussed in the media. does the survey include this?	Obese children were not excluded from the survey.
33	I would like this group to make the European Commission aware that Anthropometric is not as simple as they imagine. Many thanks	Agreed. There are many challenges in collection and application of anthropometric data. Within the project, we took care to harmonise the data collection between the countries with extensive and clear measurement protocols. Additionally, to support the correct application of anthropometric data, we have included a system of guidelines in the TS. CEN/TC 122/WG 1 is aware that the Commission needs to be convinced that the political and

		economic targets in the field of applied anthropometrics and ergonomics can only be reached on the base of actualized data bases.
34	Can experts of CEN or CLC TCs drafting requirements/standards based on anthropometric data of children get a free copy of or access to CEN/TR 18296-1:2026 and CEN/TS 18296-2:2026?	Experts need to contact their National Standardization Body or National Committee. CEN Community - List of members CENELEC Community - List of members