October 19, 2020

Division of the Secretariat
Consumer Product Safety Commission
Room 820
4330 East West Highway
Bethesda, MD 20814

Re: Agency Information Collection Activities; Proposed Collection; Comment Request; Child Strength Study (*Docket No. CPSC–2020–0021)*

Dear Sir/Madam:

IKEA of Sweden, Range & Supply ("IKEA Range & Supply") appreciates the opportunity to provide comments on the Consumer Product Safety Commission's proposed child strength study (Docket No. CPSC–2020–0021). IKEA Range & Supply is responsible for designing and supplying the global IKEA range. The IKEA business is operated through a franchise system with over 400 stores in over 50 markets. That means many companies with different owners work under the IKEA trademark. All work towards the shared IKEA vision - to create a better everyday life for the many people - which guides every decision.

For IKEA, children are the most important people in the world and their safety is always a top priority. We aim to have a world-class level of knowledge about children, their development and needs to support our product development process. While we are constantly gathering data from customers, exchanging knowledge with experts on children, testing our products and participating in global standards committees, we depend upon the data sets and research conducted by consumer authorities to supplement our own learnings.

We eagerly welcome the proposed child strength study by the CPSC. To take full advantage of this rare opportunity, we strongly encourage the CPSC to include a wide range of anthropometric and physical abilities in the data collection. Docket No. CPSC–2020–0021 references the important work of Snyder et al., 1975, 1977 and Owings et al. 1975, 1977. In addition, the UK Childata Handbook of Child Measurements and Capabilities (Norris, Wilson, 1995), like Snyder and Owings, is highly relevant for global companies due to the comprehensive set of measurement areas. The UK study gathered data from 187 measurements of children's characteristics and abilities for children from birth to 18 years old from the UK, US (including Snyder et al 1975 and 1977), The Netherlands, Germany, Australia and many other countries. As a multinational company, a data set that recognizes this breadth of measurements from children in various countries is particularly valuable in the development of a global product range. We encourage the CPSC to work with other consumer authorities to update and compile this data across borders.

Appendix 1 tables the measurement areas used for the UK Childata Handbook and the IKEA recommended prioritization. From our perspective, any future child strength study should take into account a broad range of measurements to best understand the

capabilities of children and the impact of these capabilities on the widest possible range of products. This approach will provide the CPSC, as well as manufacturers, with the best analysis to understand the risks in foreseeable product use with exploration strategies used by children and ways to minimize those risks.

Please let us know if we may provide any additional information or clarification.

Sincerely,

Kelly Swaine
Director of Regulatory Affairs
Public Affairs
IKEA of Sweden, Range & Supply

Dr. Barbara Schäfer
Range Engineering Leader
Range & Product Development
IKEA of Sweden, Range & Supply

Appendix 1: Recommend prioritization for measurements in study (bold = priority)

1) Static anthropometry

Whole body	Head & Neck	Torso	Arms	Legs
• **Weight** • **Stature** • **Body length, crown to sole (supine)** • **Sitting height** • **Sitting height, crown to rump (supine)** • **Centre of gravity (standing)** • **Centre of gravity (sitting)**	• **Head breath** • **Head length** • **Head circumference** • **Head height** • **Ear to ear (bitragion) breadth** • **Mouth breadth** • **Mouth opening (between incisors)** • Face breadth, bizygomatic (cheekbones) • Face breadth (frontal brow ridges) • Jaw breadth • Face height • Fage height (bridge of nose to chin) • Eye height (from floor) • Eye height (seated) • Eye separation (interpupillary distance) • Nose length • Neck breadth • Neck circumference	• **Chest height at armpit** • **Chest breadth at armpit** • **Chest breadth at nipples** • **Chest depth** • **Chest circumference at armpit** • **Chest circumference at nipples** • **Hip breadth (maximum in infants)** • **Hip breadth at trochanter** • **Hip breadth (maximum when seated)** • **Hip depth** • **Hip circumference** • Shoulder height (from floor) • Shoulder height (supine) • Shoulder height (seated) • Shoulder breadth (bideltoid) • Shoulder breadth (biacromial) • Waist breadth (in infants) • Waist circumference (maximum in infants) • Waist circumference (natural) • Waist circumference at navel • Waist height at navel • Waist breadth • Abdominal depth • Hip height at trochanter • Buttock height at maximum depth • Buttock height at gluteal furrow	• **Arm length to fingertip** • **Arm length to grip** • **Wrist breadth** • **Wrist depth** • **Wrist circumference** • **Hand length** • **Hand length (to thumb crotch)** • **Hand breadth at palm** • **Hand breadth at thumb** • **Hand depth** • **Hand circumference at palm** • **Hand clearance (minimum aperture)** • **Maximum grip diameter (between thumb and index finger)** • **Grip length (middle finger to thumb)** • **Fist breadth** • **Fist depth** • **Fist circumference** • **Thumb length** • **Thumb breadth at distal joint** • **Thumb diameter (minimum aperture)** • **Index finger length** • **Index finger breadth at distal joint** • **Index finger breadth at middle joint** • **Index finger diameter (minimum aperture)** • Palm length • Knuckle height (from floor) • Upper arm length (shoulder to elbow) • Upper arm depth • Upper arm circumference • Upper arm circumference at armpit • Elbow height • Elbow height (supine) • Elbow height (seated) • Elbow breadth • Lower arm length (elbow to fingertip) • Lower arm length (elbow to grip) • Lower arm breadth • Lower arm circumference • Fingertip height (from floor) • Middle finger length • Middle finger length (distal joint to tip)	• **Thigh breadth (maximum when seated)** • **Thigh depth (clearance when seated)** • **Upper thigh depth (standing)** • **Mid-thigh depth (supine in infant)** • **Upper thigh circumference** • **Mid-thigh circumference (supine in infants)** • **Ankle height** • **Ankle breadth** • **Ankle circumference** • **Foot height** • **Foot length** • **Foot breadth** • Leg length, buttock to sole (seated) • Leg length, buttock to sole (supine) • Upper leg length, buttock to knee (seated) • Upper leg length, buttock to popliteal (seated) • Upper leg length, buttock to popliteal (supine) • Knee height (seated) • Popliteal height (seated) • Knee breadth (seated) • Knee circumference • Lower leg length, knee to sole (supine) • Lower leg length, popliteal to sole (supine) • Calf height (at maximum circumference) • Calf depth • Calf circumference • Heal breadth

Postal address
IKEA of Sweden
Box 702
S-343 81 ÄLMHULT
SWEDEN

Org. No
556074-7551

Telephone
+46(0)476 - 810 00

Telefax
+46(0)476 – 827 17

			• Middle finger length (middle joint to distal joint) • Middle finger length (knuckle to middle joint, hand clenched) • Middle finger breadth at distal joint • Middle finger breadth at middle joint • Middle finger depth at distal joint • Middle finger depth at middle joint • Middle finger diameter (minimum aperture) • Third finger length • Third finger breadth at distal joint • Third finger breadth at middle joint • Little finger length • Little finger depth at distal joint • Little finger depth at middle joint • Little finger diameter	

2) Functional anthropometry

Reach	Span	Step
• **Overhead reach to grip (standing)** • **Overhead reach to grip (seated)** • **Overhead reach to fingertip (on tiptoes)** • **Overhead reach to fingertip (jumping)** • **Forward reach to grip (standing)** • **Forward reach to grip (seated)** • **Forward reach to grip (stretching and sitting in a chair)** • **Forward reach (stretching and seated, legs outstretched)** • **Sideways reach to grip (standing)**	• Span • Elbow span	• **Step height**

3) Physical abilities

Strength	Movement	Specific performance
• **Pushing forwards** • **Pushing downwards** • **Pushing sideways** • **Pulling** • **Lifting** • **Hanging by the arms** • **Hitting force** • **Wrist twisting strength** • **Opening strength** • **Grip / Squeeze strength** • **Pinch strength** • **Pinch force (tops of fingers)** • **Pinch force (lateral)** • **Shear force** • **Pushing forwards with feet** • **Biting** • **Lip strength**	• Running endurance • Maximum running distance • Maximum running speed • Jumping forwards • Jumping sideways • Jumping upwards • Jumping over a barrier • Swimming • Walking across a ladder • Walking sideways • Hopping (on one foot) • Static balance (on a narrow beam) • Dynamic balance (on a narrow beam)	• Height at which windows can be opened • Climbing fences • Volume of a swallow • Throwing distances

4) Psychological abilities

Perceptual	Cognitive
• Reaction time to visual stimuli • Reaction time to auditory stimuli • Reaction time to visual & auditory stimuli	• Understanding colour • Understanding safety symbols • Attention span

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