

# Addressing new consumer product safety risks in a fast-evolving and global marketplace

## ISSUES NOTE

This provides background information for discussion at the OECD Consumer Policy Ministerial Meeting.

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## KEY POINTS

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Unsafe products can have devastating health and financial consequences for consumers and give rise to major costs to economies. Existing product safety regimes help mitigate those effects but may need to evolve to address a changing landscape brought by both the digital and green transitions. Addressing evolving risks, while considering impacts on different consumer groups – for example defined by gender or age – will ensure regulations remain effective and bolster consumer trust and uptake of innovative and more sustainable products.

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While technological advancements in products and e-commerce trends can support product safety, they also pose new risks. 87% of banned or recalled products inspected in an international sweep of e-commerce websites were found to be available for purchase, often from suppliers in other jurisdictions and via online marketplaces. Products incorporating artificial intelligence (AI), Internet of Things (IoT) and virtual reality may have significant implications for product safety, liability and certification, and create new forms of harm, such as adverse neurological or mental health outcomes.

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Product safety regimes also need to be ready to support the green transition. This entails gaining a better understanding of the benefits and risks associated with expanding second-hand markets, increased use of recycled materials, more refurbished products in circulation, and more repair opportunities. Collaboration among governments, business and civil society is essential to prioritise safe and sustainable “by design” principles, and establish robust standards, assessment and certification schemes to ensure safety throughout the product lifecycle.

## STRONG PRODUCT SAFETY REGIMES SAVE LIVES AND PREVENT HARM

Unsafe products can have devastating consequences for consumers, resulting in death and injury, and cause significant economic harm. In the European Union, for example, the preventable detriment suffered by consumers and society due to accidents caused by unsafe products was estimated at USD 15.5 billion per year, with consumers wasting a further USD 25.6 billion per year when such products were not refundable.<sup>1</sup>

Strong product safety regulatory practices safeguard consumers, give confidence and certainty to businesses and consumers, and foster fair competition. For over forty years, the OECD has supported governments in strengthening product safety regulatory regimes, underpinned today by the 2020 OECD *Recommendation on Consumer Product Safety*.<sup>2</sup> Yet, amidst the digital and green transitions, ongoing vigilance and proactive measures are vital to continue to mitigate risks from unsafe products.

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<sup>1</sup> EUR converted into 2023 USD. Source: (2021), *Study to support the preparation of an evaluation of the General Product Safety Directive as well as of an impact assessment on its potential revision*, <https://commission.europa.eu/system/files/2021-07/gpsd-final-report-part2-ia.pdf>

<sup>2</sup> OECD, *Recommendation of the Council on Consumer Product Safety*, OECD/LEGAL/0459.

# THE COST OF UNSAFE PRODUCTS



## Unsafe products can have devastating consequences for individuals, families and communities.

- One specific model of a portable baby crib was associated with approximately 100 baby deaths in the United States.<sup>3</sup>
- Unsafe consumer products were estimated to cause 780 deaths and more than 52 000 injuries each year in Australia.<sup>4</sup>



## Consumer harm is not only physical but can also involve damage to property, medical treatment costs, and earnings losses.

- The costs in the United States from medical expenses, earnings losses, as well as pain and suffering due to table saw injuries amounted to about USD 4 billion in 2021.<sup>5</sup>
- Nearly 4 000 accidental dwelling fires in England were caused by faulty leads and appliances and consumer goods in 2019-20.<sup>6</sup>



## On top of this come recall costs for businesses and the value loss for consumers who cannot refund unsafe products.

- The average value of claims received by product recall insurers following an electronics/IT product recall is USD 1.5 million. As not all losses are insurable, total recall costs can be much higher.<sup>7</sup>
- The annual lost value of unsafe products in the European Union was estimated to be USD 25.6 billion (baseline: 2019).<sup>8</sup>

**Total deaths, injuries and costs caused by unsafe products in OECD countries annually can be extrapolated based on existing estimates from Australia, the European Union and the United States. The approximation suggests:<sup>9</sup>**



close to  
**30 000**  
deaths



over  
**5 million**  
injuries



close to  
**USD 220 billion**  
of costs

including healthcare costs and costs relating to premature death and quality-of-life losses, but excluding costs relating to property damage, productivity losses, and the lost value of unsafe products for both businesses and consumers

<sup>3</sup> US CPSC (2023), Fisher-Price Reannounces Recall of 4.7 Million Rock 'n Play Sleepers, United States Consumer Product Safety Commission, <https://www.cpsc.gov/Recalls/2023/Fisher-Price-Reannounces-Recall-of-4-7-Million-Rock-n-Play-Sleepers-At-Least-Eight-Deaths-Occurred-After-Recall>.

<sup>4</sup> The Australian Government Treasury (2019), Consultation Regulation Impact Statement - Improving the effectiveness of the Consumer Product Safety System, <https://treasury.gov.au/consultation/improving-effectiveness-consumer-product-safety-system>.

<sup>5</sup> Commission Briefing Package: Federal Register Notice - Safety Standard Addressing Blade-Contact Injuries on Table Saws SNPR | CPSC.gov (accessed 15 August 2024).

<sup>6</sup> United Kingdom Government Home Office (2023), Economic and Social Cost of Fire, <https://www.gov.uk/government/publications/economic-and-social-cost-of-fire/economic-and-social-cost-of-fire#costs-as-a-consequence-of-fire>.

<sup>7</sup> Euro values converted into 2023 USD. Estimate covers non-harmonised products only, i.e. products that are not subject to common EU rules but to national regulations (e.g. furniture, textiles, medicines, food supplements). Source: AGCS (2017), Product Recall – Managing the Impact of the New Risk Landscape, Allianz Global Corporate & Speciality, <https://commercial.allianz.com/news-and-insights/reports/product-recall.html> (accessed on 28 August 2024).

<sup>8</sup> Euro values converted into 2023 USD. Source: European Commission (2021), Study to support the preparation of an evaluation of the General Product Safety Directive as well as of an impact assessment on its potential revision, <https://commission.europa.eu/system/files/2021-07/gpsd-final-report-part2-ia.pdf>.

<sup>9</sup> The approximation relies on estimates of the total deaths, injuries and resulting costs (in 2023 USD) of unsafe products from Australia, the European Union and the United States. For each existing estimate, one per jurisdiction and per type of cost (death, injury, and cost), per capita values have been extrapolated to the OECD 2022 population level. Of the three resulting estimates per type of cost (one for each jurisdiction), the median is presented. As a result, the approximation relies on the EU methodology for the total number of injuries, the US methodology for the total number of deaths, and the Australian methodology for total costs. Note that significant methodological differences exist between the approaches of different jurisdictions, rendering more detailed comparisons difficult.

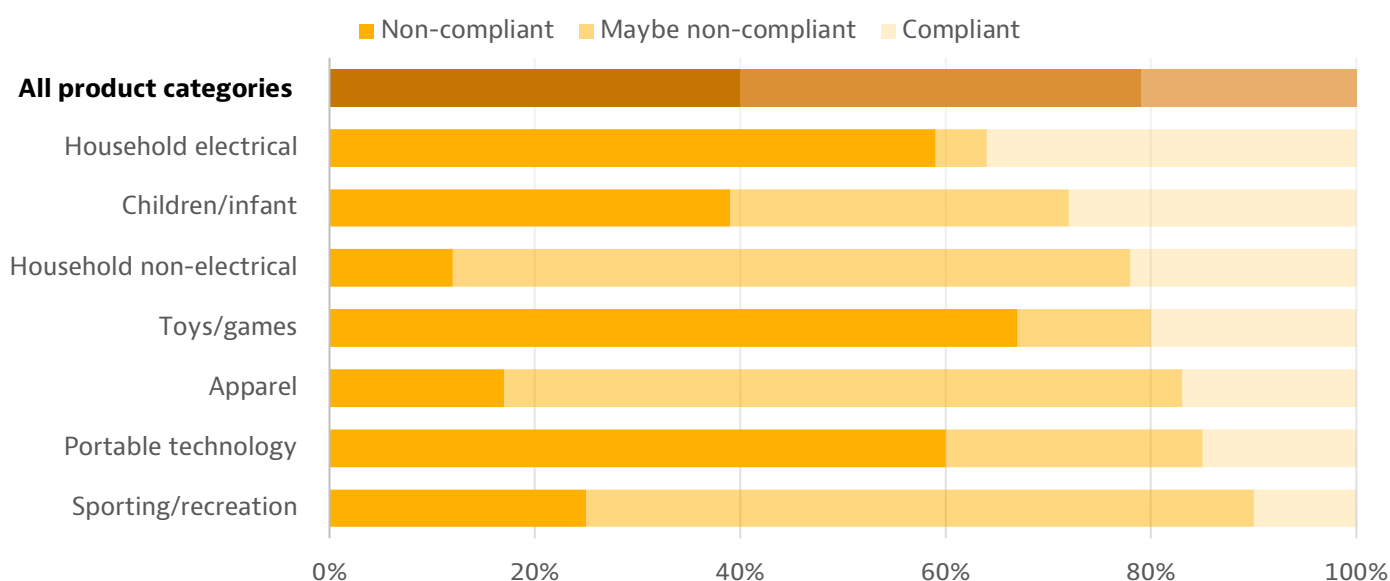
# DIGITAL MARKETS ARE TRANSFORMING THE PRODUCT SAFETY LANDSCAPE

Consumers transact in increasingly complex, globalised and digital markets. While this offers benefits, consumers need to be protected from harm in both online and offline environments. With the continuous shift to online shopping, many consumers now buy directly from sellers in other countries, including from some that have little regard for product safety. This poses new market surveillance and enforcement challenges for product safety authorities.

A recent sweep (co-ordinated screening) of e-commerce websites in 21 OECD countries and partner economies found that 87% of the banned or recalled products inspected were available for sale online.<sup>10</sup>

Across the products inspected, only 21% met product safety standards and laws in respect of bans and recalls, mandatory or voluntary product safety standards, and safety labelling. Digital business models such as online marketplaces, combined with global supply chains, have enabled delivery to consumers of unsafe products, without sufficient accountability throughout the supply chain. While there is evidence that some online marketplaces are committed to safety,<sup>11</sup> others are falling behind in removing illegal product listings in a timely manner.<sup>12</sup>

Figure 1. **Rates of compliance with product safety standards and laws, 2021**



Note: Based on a review of 4 299 products appearing on e-commerce websites in 21 OECD countries. Average rates of non-compliance by product category of products inspected (i) as being available for sale despite being banned or recalled; (ii) having inadequate safety labelling; and (iii) not meeting voluntary or mandatory product safety standards. Where reviewers were not able to clearly determine product compliance from an online inspection alone (e.g. because only partial labelling was displayed), the product was marked as potentially non-compliant.

Source: OECD (2023), "Online product safety sweep report", OECD Digital Economy Papers, No. 354, OECD Publishing, Paris, <https://doi.org/10.1787/c1faa51e-en>.

<sup>10</sup> OECD (2023), "Online product safety sweep report", OECD Digital Economy Papers, No. 354, OECD Publishing, Paris, <https://doi.org/10.1787/9d8cc586-en>.

<sup>11</sup> OECD (2022), "The role of online marketplaces in protecting and empowering consumers: Country and business survey findings", OECD Digital Economy Papers, No 329, OECD Publishing, Paris, <https://doi.org/10.1787/9d8cc586-en>.

<sup>12</sup> US CPSC (2023), Remarks of Chair Alex Hoehn-Saric at International Consumer Product Health and Safety Organization (ICPHSO) 2023 International Symposium (03 November 2023), United States Consumer Product Safety Commission, <https://www.cpsc.gov/About-CPSC/Chairman/Alexander-Hoehn-Saric/Speech/Remarks-of-Chair-Alex-Hoehn-Saric-at-International-Consumer-Product-Health-and-Safety-Organization-ICPHSO-2023-International-Symposium>.





To stem the trade of unsafe products, online marketplaces have an important role to play. As noted in OECD's guidance on product safety pledges,<sup>13</sup> this includes exploring ways to ensure banned and recalled products are not available on their sites and implementing measures to facilitate seller compliance with relevant product safety laws.

There are opportunities for businesses to make use of digital technologies, such as AI, to scan for unsafe product listings, match offered products against the OECD's GlobalRecalls portal<sup>14</sup>, and notify consumers about recalls in a personalised and timely manner, as outlined in OECD's guidance on effective product recalls.<sup>15</sup>

## TECHNOLOGICAL ADVANCEMENTS IN DIGITAL PRODUCTS PRESENT OPPORTUNITIES AND RISKS

Products incorporating digital technologies, such as AI and virtual reality, can bring greater enjoyment, efficiency, convenience and connection. They may also improve product safety, for example, by detecting safety issues early and applying fixes remotely. However, there are also risks. Some products, like smart devices or robots that can adapt over time through machine learning, may present unexpected hazards long after being placed on the market. Technological changes to products that are not fully within the understanding of the manufacturer can test the boundaries of existing regulation on product liability and certification. Additionally, new forms of harm may arise, including of a psychological, mental or neurological nature. Examples include adverse impacts on cognitive ability and memory loss from virtual reality devices,<sup>16</sup> with some of these effects highlighted as a potential risk for children.<sup>17</sup>

Understanding and preparing for these new risks and harms will help to inform relevant updates of

regulatory frameworks and support consumer trust and uptake of new technologies, fostering innovation and economic growth. The varying nature of health risks may also suggest benefits of greater co-operation with the health policy area.

**The OECD, building on previous research on product safety in the IoT,<sup>18</sup> is examining the impact on consumers' health (including mental health) and safety of products incorporating digital technologies, including AI, IoT and virtual reality.<sup>19</sup>**

It is investigating to what extent current product safety risk assessment models and regimes are equipped to identify and manage new safety risks. Given the potentially significant impacts on health and safety, along with the opportunities from new technologies, ensuring that the regulatory framework is fit for purpose is key.

<sup>13</sup> OECD (2021), *Working Party on Consumer Product Safety Communiqué on Product Safety Pledges*, OECD, Publishing, Paris, <https://web.archive.oecd.org/2021-06-15/592309-communicue-product-safety-pledges.pdf>.

<sup>14</sup> <https://globalrecalls.oecd.org/>

<sup>15</sup> OECD (2022), "Policy guidance on consumer product safety pledges", *OECD Digital Economy Papers*, No. 325, OECD Publishing, Paris, <https://doi.org/10.1787/055a8a15-en>.

<sup>16</sup> Dresch-Langley, B. (2020), "Artificial intelligence, connected products, virtual reality: potential impacts on consumer safety in terms of their physical and psychological ability or well-being" *arXiv*, <https://doi.org/10.48550/arXiv.2002.06086>.

<sup>17</sup> Bailey, J. and Bailenson, J. (2017), "Chapter 9: Immersive virtual reality and the developing child", in *Cognitive Development in Digital Contexts*, pp. 181-200, Elsevier, doi:10.1016/b978-0-12-809481-5.00009-2.

<sup>18</sup> OECD (2018), "Consumer product safety in the Internet of Things", *OECD Digital Economy Papers*, No. 267, OECD Publishing, Paris, <https://doi.org/10.1787/7c45fa66-en>.

<sup>19</sup> OECD (forthcoming), *The impact of products incorporating digital technology on consumer product safety*.

## CONSUMER PRODUCT SAFETY IN THE GREEN TRANSITION

As products become more durable, repairable, reusable and recyclable, they can pose new product safety challenges.<sup>20</sup> Information about the safety of products when reused, remanufactured, refurbished, made from recycled content or disposed of is not equally available to consumers and businesses. Consumers may not know, for example, if a pre-owned or shared product has been recalled or software updates maintained. Accordingly, ensuring the safety of products throughout their lifetime with clear supply chain accountability is important. With secondary owner and sharing economy markets growing in size and prominence, some authorities have worked with online marketplaces to extend product safety pledges to second-hand products, including when sold directly by consumers. Some jurisdictions have responded by extending product safety business obligations to second-hand, repaired or reconditioned products under certain conditions, and being active in the development, dissemination and review of safety standards to support business in the green transition.<sup>19</sup> Business has an important role to play, working alongside product safety regulators, by ensuring product safety and sustainability by

design and through the establishment of testing, assessment and certification schemes.

Certain products prominent in the green transition pose higher safety risks. Lithium-ion batteries – used in a range of everyday consumer products, such as smartphones, toys, electric vehicles, micro-mobility and energy storage products – are causing fatalities, injuries and property damage around the world.

**The launch at the OECD Consumer Policy Ministerial of the 2024 Awareness campaign on the safe and responsible use of lithium-ion batteries<sup>21</sup>, to be implemented over the ensuing months, is in this regard an important step forward, to be followed by further campaigns on hazardous products in the green and digital transitions.**

More broadly, product safety regulators and governments will need to ensure that product safety policy frameworks are sufficiently agile to respond quickly to the new challenges of the green transition.

## QUESTIONS FOR DISCUSSION

- 1** How is your jurisdiction addressing the product safety risks posed by digital technologies? How is it addressing the online availability of unsafe products, holding relevant actors to account?
- 2** What key product safety challenges do you see emerging from the circular economy and what can be done to increase consumer confidence in the safety of recycled, repaired, used, refurbished, or remanufactured products?
- 3** How can the OECD and other stakeholders best support jurisdictions in their endeavour to improve product safety in the digital and green transition?

<sup>20</sup> OECD (forthcoming), "Protecting and empowering consumers in the green transition", *OECD Digital Economy Papers*, OECD Publishing, Paris.

<sup>21</sup> <https://oe.cd/batterysafety>



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