

EXECUTIVE SUMMARY

DIGITAL PRODUCT PASSPORTS FOR SMARTPHONES

RESULTS FROM A
CONSUMER-CENTRED PILOT STUDY
IN GERMANY

RESEARCH APPROACH

 **1,000**
CONSUMERS

from Germany participated in an online panel survey testing a DPP prototype for smartphones; respondents watched a narrated video walkthrough of one of five life-cycle use cases:



PURCHASE.



REPAIR.



**UPGRADE AND DATA
SECURITY.**



RESALE AND



**END-OF-LIFE
DISPOSAL.**



CONTEXT

The European Union is preparing mandatory digital product passports (DPPs) as part of its circular economy and sustainable product policies. Other regional and global initiatives are working on digital product information systems (DPIS). Smartphones are our testing case to pilot consumer-centred approaches – an area that has been overlooked in research and practice.

TRUST DRIVES IMPACT

WHEN INFORMATION IS CLEAR, USEFUL, AND RELEVANT TO REAL-LIFE DECISIONS, CONSUMERS ARE WILLING TO ENGAGE WITH DPPS. BETWEEN 53% AND 70% OF RESPONDENTS SAID THE DPP INFLUENCED THEIR DECISION-MAKING ACROSS THE FIVE TESTED USE CASES.

BARRIERS TO DPP UPTAKE

- 1. Information overload:**
Some users are overwhelmed by raw data without interpretation.
- 2. Technical jargon:**
Unfamiliar terminology can create barriers to comprehension.
- 3. Competing heuristics:**
Reliance on reviews, brand reputation and recommendations from peers.
- 4. Established routines:**
Experienced self-repairers may not engage with the DPP's guidance.
- 5. Privacy concerns:**
Consumers only use DPP return functions if they are guaranteed data protection.
- 6. Limited added value:**
Some consumers feel that they already knew the information.

OUR CONSUMER ARCHETYPES

-  **52.3%** **Sustainability-oriented advocates:**
strong pro-DPP attitudes.
-  **34.2%** **Moderately involved pragmatists:**
DPP valued primarily as an informational tool;
-  **13.5%** **Low-sustainability, lukewarm users:**
less engaged but still rating perceived value.

WHAT CONSUMERS VALUE

- 1. Repair transparency**
Cost estimates and certified spare parts lower perceived repair risk.
- 2. Lifetime planning**
Software support duration influences model choice and upgrade timing.
- 3. Resale and fair pricing**
Verified battery health and repair history justify price premiums for used devices.
- 4. Integrated access**
Consumers prefer a single app over fragmented individual DPPs.

RECOMMENDATIONS FOR TARGET GROUPS



FOR DPP DESIGNERS & DEVELOPERS

Embed behavioural prompts to support repair, resale, and certified recycling.

Ensure interoperability via QR codes and public web portals.

Design for accessibility per standard requirements for digital products with multilingual and fallback options (e.g. EN 301 549).



FOR MANUFACTURERS & RETAILERS

Integrate DPP into point-of-sale, after-sales, and repair workflows.

Prioritise key indicators per use case: repairability, residual value, material composition.

Reframe DPP as value creation: builds purchase confidence and brand differentiation.



FOR POLICY-MAKERS & STANDARDISATION BODIES

Align DPP with right-to-repair, EPR, and collection targets.

Define governance roles for data quality and independent verification.

Design iterative frameworks from pilots; coordinate with ISO to avoid fragmentation.

CONTACT

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WHAT CONSUMERS VALUE

Consumers see DPPs as useful and easy to understand, especially for:

REPAIR

RESALE

RECYCLE

Consumers value information that is:

VERIFIED

STANDARDISED

COMPARABLE

ACTIONABLE

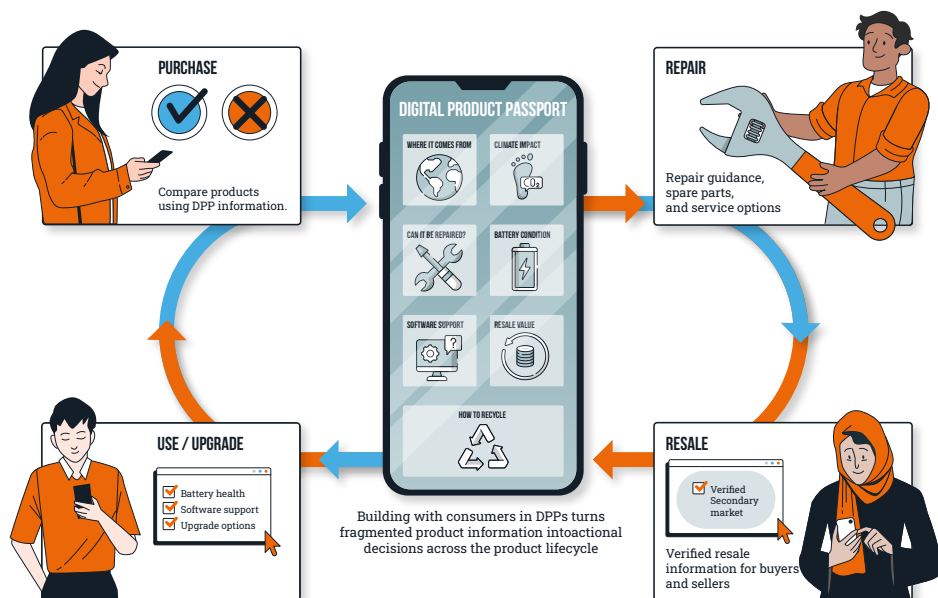


Figure 1: Digital Product Passports – Making Circularity Work for Consumers. Source: Consumers International / adelphi, 2026.

RECOMMENDATIONS FOR ACTION

The study identifies four overarching design principles and targeted recommendations for designers, manufacturers, and policy-makers.

▶ DECISION-CENTRED DESIGN

Structure DPPs around purchasing, repairing, reselling, and recycling decisions – not internal data schemas.

▶ CREDIBLE GOVERNANCE

Clear responsibilities for data provision, transparent sources, and independent third-party verification.

▶ LAYERED INFORMATION ARCHITECTURE

Simple, comparable overview indicators at first glance, with optional access to detailed data on demand.

▶ LIFECYCLE INTEGRATION

Information remains accessible beyond the point of sale – for owners, repair providers, and recyclers.

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