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extending service life

LIFESAVING – ASSESSING ENVIRONMENTAL IMPLICATION OF SERVICE LIFE EXTENSION OF MOBILE DEVICES FROM MULTIPLE PERSPECTIVES

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Impact of Mobile Internet-Enables Devices (MIEDs) is relevant and growing

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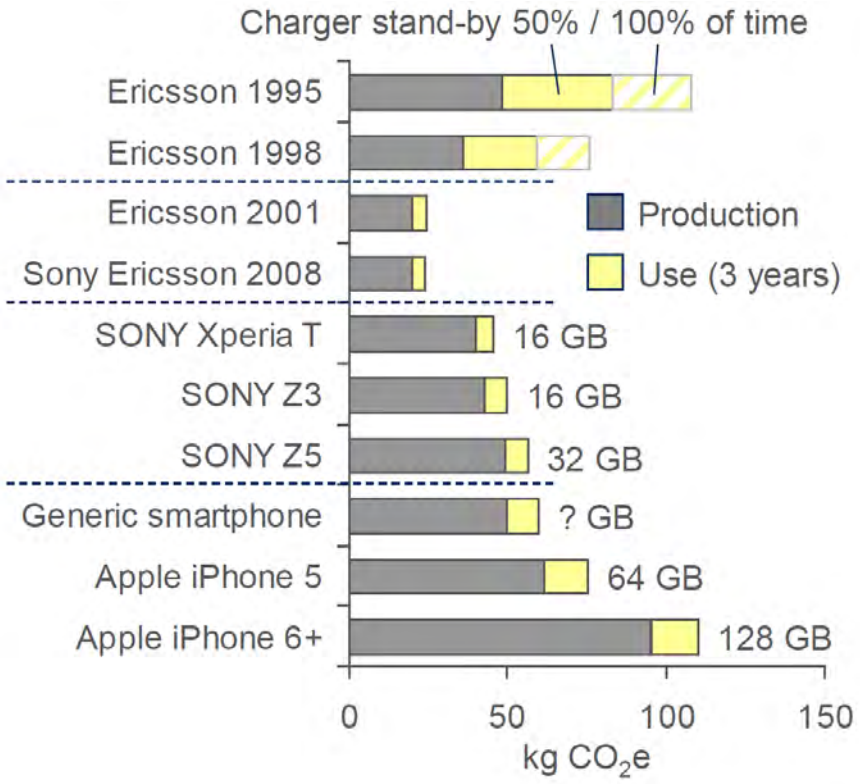

Source: Ercan, M., Malmodin, J., Bergmark, P., Kimfalk, E., & Nilsson, E. (2016, August). Life cycle assessment of a smartphone. In *ICT for Sustainability 2016*. Atlantis Press.

Source: colourbox.de

Lifetime extension can reduce environmental impacts of MIEDs

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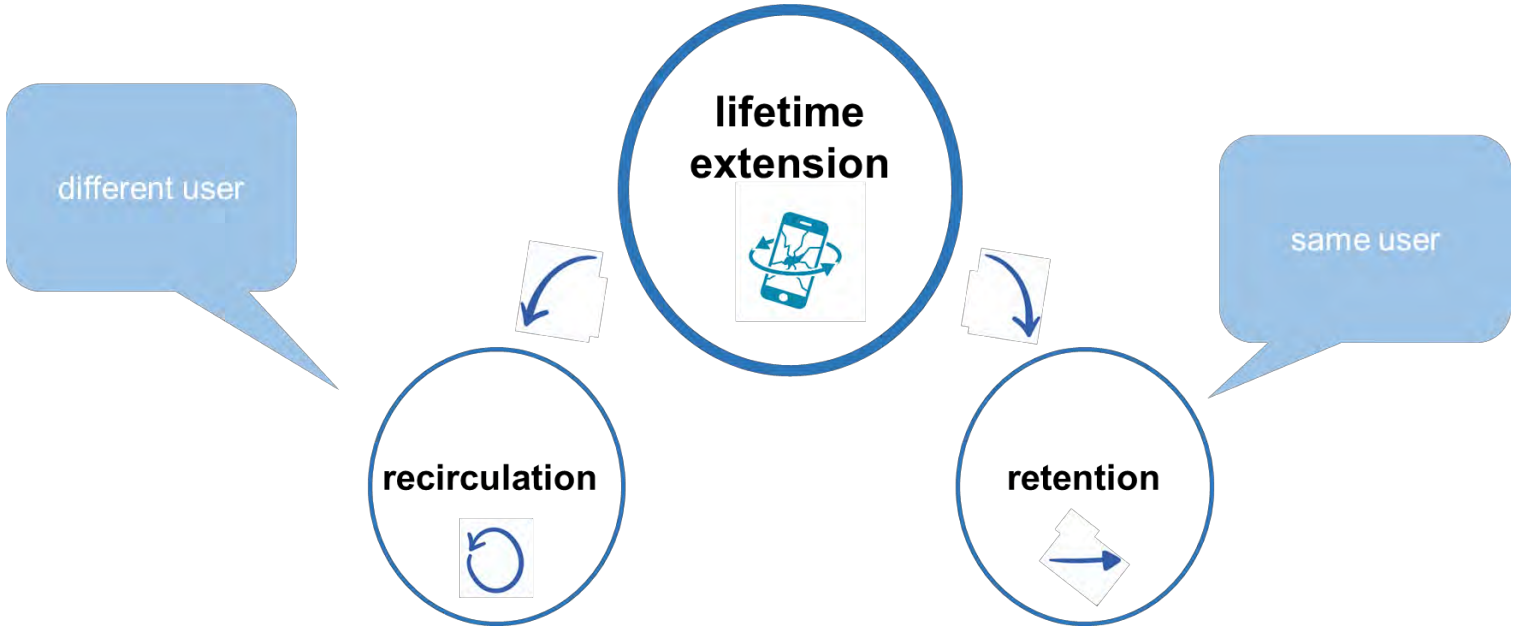

Lifetime extention requires a thorough understanding of consumer behaviour…

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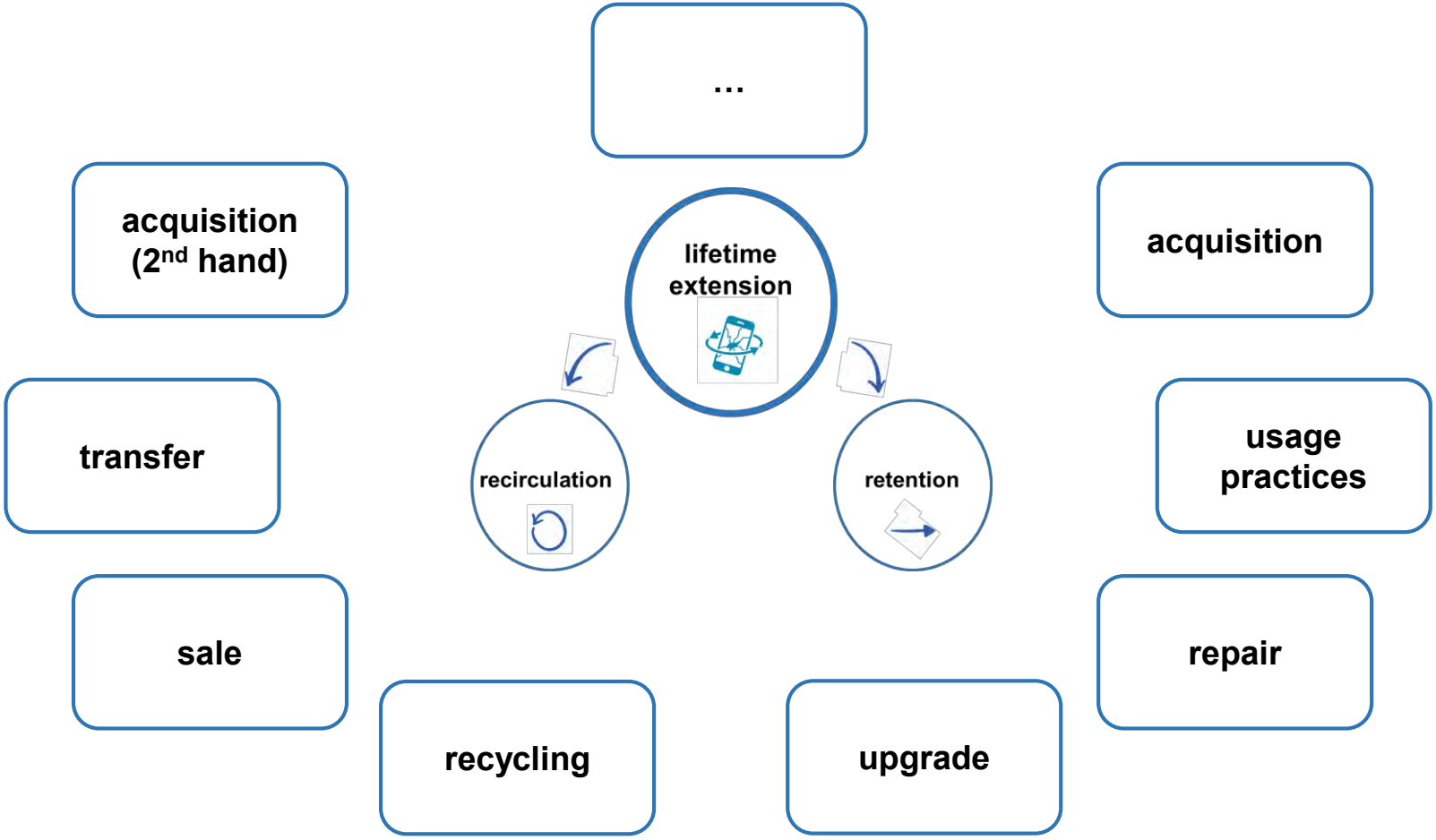

… in its context

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…

warranty

secondary markets

technological innovation

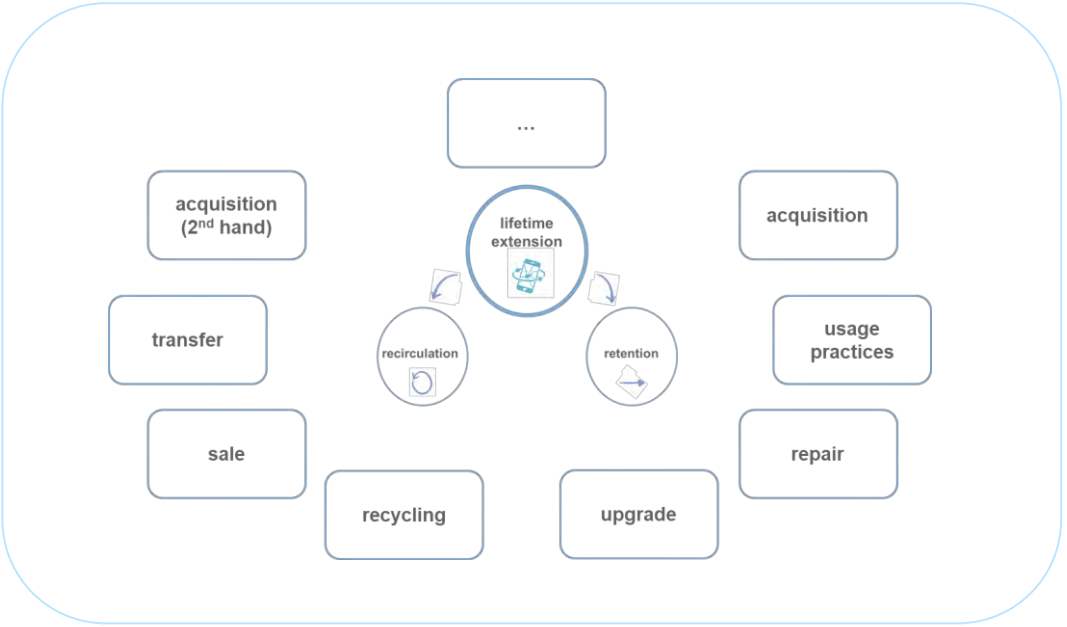
cost of devices

software development

installment plans

social norms

marketing



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Our project in a nutshell

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Project Phases

Q2 2022

3. Evaluation of a selected measure in a field experiment with our partners

2. Identification of innovative measures/strategies to promote lifetime extension

1. System analysis from complementary perspectives (consumers, businesses, environmental impacts)

We are here

Assmptions

- Lifetime extension reduces environmental impacts of MIEDS
- Consumer decisions are key determinants of MIED lifetimes
- Consumer decisions take place in a complex socioeconomic context

Project team and partners

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ZHAW Institute of Innovation und Entrepreneurship Dr. Yann Blumer	ZHAW Institute of Natural Resource Sciences Dr. Linda Miesler	ZHAW IUNR FG Ökobilanzierung Mathias Stucki	ZHAW Institute of Applies Psychology Gregor Waller	UZH Informatics and Sustainability Research Prof. Dr. Lorenz Hilty
• Market and actor analysis • Knowledge Integration	• Behevioural intervention design and evaluation	• Life Cycle Assessment	• Consumer behaviour	• Rebound effects
Revendo, Swisscom, WWF, Swiss Consumer Protection Bureau,…				

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Challenges from a LCA perspective

- Up-to-date life cycle inventory (LCI) for modular modelling of MIED components

- Recirculation and retention specific inventories

- Evaluation of direct and indirect environmental effects - including rebound effects

Thank you!

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