

Thesis Labs
Leiden-Delft-Erasmus Universities



The Future of Repair

2025 - 2026



Universiteit
Leiden

 **TU**Delft


ERASMUS UNIVERSITY ROTTERDAM

Choose your own Adventure

How this Lab works

In this Lab, you work on the main challenge brought in by a large consortium of companies, organisations and municipalities. There are two ways to dive in:

1. **Pick a case: apply for one of the concrete thesis assignments** submitted by one of the organisations. These are real questions from practice, and you'll shape them into a thesis that fits your study programme, together with the organization and your university supervisor.
 - a. You can pick a case within one of three perspectives:
 - i. Businesses
 - ii. [Local and regional governmental institutions and public enterprises](#)
 - iii. [Educational institutes and NGOs](#)
2. **Create your own angle and 'explore the bigger picture':** you can come up with your own thesis research, with questions related to one (or more) of the Lab themes. We'll help you connect with the network of participating organizations so you can gather insights, data or do interviews.

Either way, you'll be working on something that matters—with input from professionals, and space for your own ideas. Ready to get started?

Overview Cases

BUSINESS CASES

- Repair of e-bikes: Skills. Suppliers. Business processes
- Low-cost consumer products more repairable
- Avoided CO₂ emissions for an international webshop
- How can electronics retailers transition toward circular business models by 2030?
- Logistics for repair
- Making second-hand parts attractive and reliable
- Increasing the quality of repair by improving diagnostics
- Collaboration and marketing strategies for online repair platforms

GOVERNMENTAL INSTITUTIONS AND PUBLIC ENTERPRISES CASES

- Verkoop in de kringloopwinkel (NL)
- Vraag en aanbod van afgedankte elektrische en elektronische apparaten (AEEA) optimaal verbinden (NL)
- Hoe kan de gemeente Rotterdam reparatie van elektrische en elektronische producten in de gemeente stimuleren? (NL)
- Repair for municipalities in rural areas
- Repair as part of a Remake Hub in Schiedam
- De rol van de lokale overheid (NL)
- A new life for 'waste' for the municipality of Geldrop-Mierlo
- Hoe maken we reparatie aantrekkelijk? (NL)
- More repair in the Circular Craft Centre
- Area development for repair
- Behavioral change for more repair

EDUCATIONAL INSTITUTES AND NGOs

- Education for Repair
- ReLab: collecting images & citizen science
- Just labor transitions in the Rijnmond regio
- Drempels wegnemen met wetgeving (NL)
- Influencing strategies and the Repair Monitor
- Lokale / regionale reparatie communities (NL)
- Een circulair Rotterdam Inclusief (NL)

Interested in joining this Lab?

Get in touch with or submit your application online

Ide_thesislabs@cml.leidenuniv.nl

Caseholders



provincie
Zuid-Holland

Provincie Noord-Brabant

Main Challenge

How can
businesses,
governments,
educational
institutions,
NGOs, and
consumers
stimulate repair?

BUSINESSES

Different companies have brought in similar challenges. Will you help them?

Create your own angle and explore ‘the bigger picture’. Come up with your own thesis research related to (one of) the questions below and use one or more companies as your case study.

OR: pick a case: apply for one of the concrete assignments/questions submitted.

Exploring ‘the bigger picture’ involve questions like:

- How can repair be placed at the core of your business strategy?
- How can repair become part of a future-proof business model? What value chain collaborations offer the best opportunities?
- How can repair activities be scaled up sustainably and industrialized?
- How can a marketing strategy reinforce repair — and vice versa?
- How can companies analyze or assess the value of repair?
- Where, for which product groups, can repair contribute the most to reducing environmental impact?
- What does repair proof design looks like?
- Create your own question(s)!

Concrete case studies can be provided by: Decathlon, Action, FixPart, Techniek Nederland, Post NL, QC Centre, The Rent Company, Borstelbeheer, Mragain.

CASES

1) Repair of e-bikes: Skills. Suppliers. Business processes

Organisation: Decathlon

Assignment/question: Which specific skills, suppliers, and business processes are essential for the efficient and safe repair of all e-bike brands? How do these contribute to a profitable business model and to maximizing customer value and NPS in a circular context?

2) Case: Low-cost consumer products more repairable

Organisation: Action

Case/question: general question: How can low-cost consumer products be made more repairable—economically, practically and sustainably? Questions to solve this challenge could be: A) How could cheap products (<2,5 or 10 euros) be made more repairable? B) How can we create a sustainable business model in repairing products? C) How can we measure lifetime expectancy for large quantities of products and quantify improvements? D) Which combinations of product category × price model × repair-location model maximize repair completion rate and unit economics (margin per repair) across our market? E) How could we make a modular and repairable ecosystems (of power tools) for Action (Private Label)? F) How do we enable customer safe DIY repair (e.g. cable replacements or a thermostat replacement)? G) How could we create furniture/Deco items within our ever changing assortment that are still repairable/ modular/ circular?

3) Case: Avoided CO₂ emissions for an international webshop**Organisation:** FixPart

Case/question: FixPart is an international webshop for spare parts for household appliances, with more than 1.5 million parts shipped to consumers across Europe in 2024. Develop a robust and transparent methodology to determine the avoided CO₂ emissions per part sold or successful repair facilitated by FixPart. The method should be scientifically sound and at the same time practically applicable for communication purposes. (FixPart intends to display this information on its website for each product.)

4) Case: How can electronics retailers transition toward circular business models by 2030?**Organisation:** Techniek Nederland (with the LLE coalitie)

Assignment/question: explore future-proof, circular business models for electronics retail in 2030, thus aligning sustainability goals with the business goals of the retailers. The student(s) will identify opportunities for retailers to align with legislative trends, consumer needs, and circular economy principles. (It is possible further focus the assignment on maintenance & repair or refurbished products.)

5) Case: Logistics for repair**Organisation:** Post NL

Assignment/question: How can a logistics system for repair (the transport of defective products, the return of repaired goods, and the distribution of parts) be organized in such a way that it is scalable, sustainable, and economically feasible?

6) Case: Making second-hand parts attractive and reliable**Organisation:** QC Centre

Assignment/question: The QC Centre supplies smartphone parts with accompanying test reports and Product IP documentation. Nevertheless, repair companies and consumers often fall back on 100% original (and more expensive) parts. Which factors or guarantees could help make high-quality alternative parts more attractive and reliable? For instance, are there specific quality criteria, transparency requirements, or feedback mechanisms?

7) Case: Increasing the quality of repair by improving diagnostics**Organisation:** The Rent Company

The Rent Company notices that laptops sometimes come back for repair multiple times. This leads to higher costs, more transport, extra parts, and therefore a larger environmental footprint. How can the Rent Company improve diagnostics and (final) inspections so that a laptop is repaired properly the first time? Increasing the quality of repairs will increase chances for repair and lower environmental footprint.

8) Case: Collaboration and marketing strategies for online repair platforms**Organisation:** MrAgain

Assignment/question: MrAgain is a Dutch comparison and accelerator platform for repair services and aims to make repair appealing and accessible for consumers, while significantly increasing the number of affiliated repairers. Which innovative collaboration and marketing strategies can online repair platforms employ to consistently encourage consumers to choose repair over replacement, and to substantially grow the number of repair professionals? How can these strategies effectively be scaled within the regional context of South Holland? This case could also be related to the 'bigger picture' question about online platforms for ngo's (see below).

KNOWLEDGE PARTNERS



LOCAL AND REGIONAL GOVERNMENTAL INSTITUTIONS AND PUBLIC ENTERPRISES

Different local and regional governmental institutions have brought in similar challenges.

Will you help them?

Create your own angle and explore 'the bigger picture'. Come up with your own thesis research related to (one of) the questions below and use one or more organisations as your case study.

OR: pick a case: apply for one of the concrete assignments/questions submitted.

Exploring 'the bigger picture' involve questions like:

- How can we strengthen repair efforts at the local level?
- How can repair contribute to social goals (what is the value of repair)?
- How can repair successfully and profitably be part of projects for people with a distance to the labor market?
- How can we stimulate use of Repair Cafes and attract new groups of people?
- Where, in which product groups can repair contribute the most to reducing environmental impact?
- Create your own question(s)!

Concrete case studies can be provided by: gemeente Delft, gemeente Leiden, gemeente Waddinxveen, gemeente Hillegom, Lisse, Teylingen, gemeente Rotterdam, Rotterdam Inclusief, Repaircafe Uden, Werkorganisatie BUCH, Meerlanden. Dunea.

CASES

9) Case: Verkoop in de kringloopwinkel (NL)

Organisation: Branchevereniging Kringloop Nederland

Assignment/question: Wat zijn de grootste praktische drempels of overwegingen voor klanten om een gerepareerd product te kopen, en hoe kunnen kringlooporganisaties die wegnemen? Wat zijn psychologische barrières voor klanten om een gerepareerd product te kopen, en hoe kunnen kringlooporganisaties die wegnemen? Zijn er strategieën die daaraan bijdragen zoals prijs, presentatie of storytelling?

10) Case: Vraag en aanbod van afgedankte elektrische en elektronische apparaten (AEEA) optimaal verbinden (Dutch)

Organisation: Meerlanden

Assignment/question: Hoe verbinden we het aanbod van afgedankte elektrische en elektronische apparaten (AEEA) aan de vraag van circulaire ondernemers voor reparatie, om zo bij te dragen aan de inzamel- en hergebruikdoelstellingen? Deelvragen als: Welke AEEA-stromen bieden huishoudens aan en via welke kanalen? Welke factoren beïnvloeden het gedrag van inwoners bij het inleveren? Welke typen AEEA zijn het meest gewild bij circulaire ondernemers voor reparatie? Hoe functioneert de huidige inzamelstructuur van Meerlanden en waar liggen kansen voor uitbreiding? Welke logistieke en organisatorische knelpunten bestaan er? Welke bestaande initiatieven zijn succesvol? Welke samenwerkingsvormen kunnen Meerlanden aangaan om ketenvernieuwing voor reparatie te stimuleren?

11) Case: Hoe kan de gemeente Rotterdam reparatie van elektrische en elektronische producten in de gemeente stimuleren? (NL)

Organisation: Gemeente Rotterdam

Assignment/question: Hoe kan de gemeente Rotterdam de reparatie van elektrische en elektronische producten in Rotterdam stimuleren en wat is de economische potentie hiervan? Vragen als: Welke verschillende productcategorieën zijn er in de gemeente en hoe verschillen ze van elkaar? Welke bedrijven werken in Rotterdam (en omstreken) aan reparatie en voor welke uitdagingen staan deze bedrijven? Waar liggen de kansen en wat kan de gemeente doen? Wat is de economische potentie van meer reparatie voor Rotterdam?

12) Case: Repair for municipalities in rural areas

Organisation: Werkorganisatie BUCH

Assignment/question: How can municipalities in rural areas (without cities nearby, without high population density) encourage repair?

13) Case: Repair as part of a Remake Hub in Schiedam

Organisation: Municipality of Schiedam

Assignment/question: Are you giving the Remake Hub in Schiedam a boost? With its mechatronics cluster, the Mechatronics Innovation Campus Schiedam (MICS), and the maritime cluster, Schiedam has a strong foundation in the manufacturing industry. Critical materials such as copper, rare earths (magnets), high-grade alloys, and electronics (PCBs, chips, silver) are part of the production process. Repair offers strong opportunities to extend the lifespan of products. Raw materials and critical materials can thus remain functional for longer. With your research, you will contribute to the strategy for developing the Remake Hub. How can Schiedam participate in such a hub? Which provisions, facilities, and forms of collaboration does Schiedam already have—or should it develop—to make participation practically and economically attractive for entrepreneurs? For which product groups (such as motors, pumps, PCBs, industrial tools, ship components, and offshore wind turbine components) does repair hold the greatest potential? Which factors make the region and the hub attractive to entrepreneurs?

14) Case: de rol van de lokale overheid (NL)

Organisatie: Gemeente Waddinxveen

Case/vraag: Hoe kan de gemeente Waddinxveen haar inwoners (en bedrijven) motiveren om kapotte gebruiksartikelen te repareren (in plaats van nieuw aan te schaffen)? Wat is hierbij de rol van de gemeente? Welke faciliteiten zijn nodig?

15) Case: A new life for 'waste' for the municipality of Geldrop-Mierlo

Organisation: Gemeente Geldrop-Mierlo / Cure Afvalbeheer

Assignment/question: How can repaired products compete with 'fast goods' for the people of Geldrop-Mierlo when it comes to availability, convenience, freshness, and so on?

16) Case: Hoe maken we reparatie aantrekkelijk? (NL)

Organisatie: Gemeente Hillegom, Lisse, Teylingen

Case/vraag: Hoe zorgen we dat repareren niet wordt gezien als 'ouderwets' of 'voor wie geen nieuw kan kopen', maar juist als iets stoers, duurzaam en waardevols?

17) Case: More repair in the Circular Craft Centre

Organisatie: Municipality of Leiden

Assignment/question: How can the Circular Craft Centre (CA) in the municipality/region of Leiden stimulate repair activities within the CA? Questions include: On which material streams should it focus for repair? What repair initiatives already exist for these streams, and who is carrying them out? What knowledge and skills are required to perform repair, and how much physical space is needed?

18) Case: The Right to Repair for Consumers

Organisation: Province of Noord Brabant

Assignment/question: How can existing legislation on the right to repair be better utilised by society? The law stipulates that consumers are entitled to a properly functioning product for the lifespan that can reasonably be expected of that product. In practice, however, consumers and businesses in the Netherlands often think (and act) as if there is a statutory two-year warranty period for all products. What is needed to ensure that the right to repair is effectively realised? (Consider aspects such as communication, enforcement, legal assistance, more concrete legislation, or other measures).

19) Case: Area development for repair

Organisation: Provincie Zuid-Holland

Assignment/question: How can area development stimulate repair? Questions such as: How can the construction of new buildings (or neighborhoods) take into account an infrastructure for repair? How can we promote space for repair in the shopping street? What does an effective repair infrastructure look like at different scales for a product (to be determined)?

20) Case: Behavioral change for more repair

Organisation: Provincie Zuid-Holland

Assignment/question: Which types of social norm interventions are most effective in increasing people's intention — and subsequently their actual behavior — to have broken items repaired? Questions such as: Which types of social norm messages influence repair intention? To what extent does the effectiveness of these messages differ across target groups? Does exposure to social norm interventions lead to actual repair behavior? The research may yield practical recommendations for municipalities, Repair Cafés, and communication campaigns, such as 'The Netherlands Repairs.' The Province of South Holland is interested in qualitative research, a behavioral experiment, and an impact assessment of the intervention, in collaboration with an organization or municipality where the research can be carried out.

KNOWLEDGE PARTNERS



de **BUCH**



Provincie Noord-Brabant

Branchevereniging
**Kringloop
Nederland**



Leiden



Geldrop-Mierlo

EDUCATIONAL INSTITUTES AND NGOS

Different educational institutions and NGOs have brought in similar challenges. Will you help them?

Create your own angle and explore 'the bigger picture'. Come up with your own thesis research related to (one of) the questions below and use one or more organisations as your case study.

OR: pick a case: apply for one of the concrete assignments/questions submitted.

Exploring the bigger picture involve questions like:

- How do you create a 'repair mindset' for students (or children)? How can educational institutions embed repair into their education?
- How do we make the profession attractive?
- How can businesses and educational institutions collaborate to educate people for repair?
- How can online platforms, social media and apps inform, educate, influence, and contribute to more repair, from awareness to activation?
- How can ngo's that focus on circularity and repair in specific, show and tell more powerfully about the impact on the repair of specific products on the planet?
- Create your own question(s)!

Concrete case studies can be provided by:

ROC Nijmegen, Leiden University, Erasmus Universiteit Rotterdam, Province of Noord-Brabant, The Rent Company (City Services), MaakNet, De Reparatie Balie, Repair Cafe International, stichting werkplaats/Kringloop zuid.

CASES

21) Case: Education for Repair

Organisation: ROC Nijmegen

Assignment/question: How can ROC Nijmegen get its students excited about repair, and create a repair mindset for them? How can the ROC educate students successfully for repair, and connect its Fix & Swap Café to its education?

22) Case: ReLab: collecting images & citizen science

Organisation: Leiden University (CML)

Assignment/question: Help addressing a key challenge in sustainability: the slow and fragmented identification of materials and circularity performance of products. In the ReLab CML is looking to collect images and data of products, components, materials, and circularity information to create a database of disassembled products that are currently on the market or that have reached their end of life. Students interested in lab work will focus on taking electrical and electronic products apart, taking images at different disassembly stages, and then performing analysis of the data. Students interested in the social and organizational aspects of ReLab may investigate citizen science strategies to crowdsourcing data for the circular economy.

23) Case: Just labor transitions in the Rijnmond regio

Organisation: Erasmus Universiteit Rotterdam

Assignment/question: The Kickstarter Grant project *Valuing 'repair' in just labor transitions in the Rijnmond region*, explores the question how repair can become a just and attractive profession in this region. How can we improve repair, financially, socially, technologically, and legally, and make it more just for people doing the repair work? The project developed a Fair Practice Framework to bring the perspective of the repair sector in. Interested students are challenged to test this Framework out. Building on the Framework, finding ways to operationalize it for the repair or the policy sector, enriching it, a lot is possible.

24) Case: drempels wegnemen met wetgeving

Organisation: De Reparatiebalie

Volgens de huidige wetgeving mag alleen iemand met een Cenelec certificering gebruikte onderdelen in een ander apparaat plaatsen voor reparatie. Hoe kunnen we de drempels om gebruikte onderdelen in andere apparaten te plaatsen - of bijvoorbeeld te verkopen - veilig verlagen, zodat onderdelen vaker en efficiënter kunnen worden hergebruikt? Wat mag al binnen de huidige wetgeving, wat niet, hoe kunnen we drempels veilig wegnemen?

25) Case: Influencing strategies and the Repair Monitor

Organisation: Repair Cafe International

Case/question: What strategies can Repair Café International strategically use to influence both policymakers and consumers, so that repairing becomes a natural part of consumption behavior – and especially: how can the Repair Monitor be used for this strategy?

26) Case: Lokale / regionale reparatie communities (NL)

Organisation: Repair Cafe Uden

Assignment/question: Repaircafés dragen niet alleen bij aan meer reparatie, ze bieden ook een unieke sociale en educatieve omgeving. Uden wil zich ontwikkelen tot een regionale Hub voor duurzame kennisdeling, vaardigheidsontwikkeling en community building. Hoe kan het Repair Café Uden zich verder ontwikkelen tot een dynamische, innovatieve hub die de lokale gemeenschap én de circulaire economie versterkt? Hoe kan een Repair Café een effectiever platform worden voor de overdracht van reparatiekennis? Welke activiteiten kunnen de betrokkenheid van de community versterken en de missie van het Repair Café ondersteunen? Wat vraagt het van de organisatorische inrichting?

27) Case: Een circulair Rotterdam Inclusief (NL)

Organisation: Rotterdam Inclusief

Assignment/question: Rotterdam Inclusief, onderdeel van de gemeente Rotterdam, helpt mensen met een ondersteuningsbehoefte om hun talenten in te zetten en zichzelf te ontwikkelen. Hoe kan Rotterdam Inclusief circulaire werkzaamheden organiseren en uitvoeren en hoe past reparatie hierin?

KNOWLEDGE PARTNERS



Universiteit
Leiden

De Reparatiebalie

ROC
Nijmegen

REPAIR CAFE

Weggooien? Mooi niet!

UDEN

Erasmus

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