Cirkulär ekonomi: Mycket snack och lite verkstad?

Uppsala:2030, 8 mars 2024
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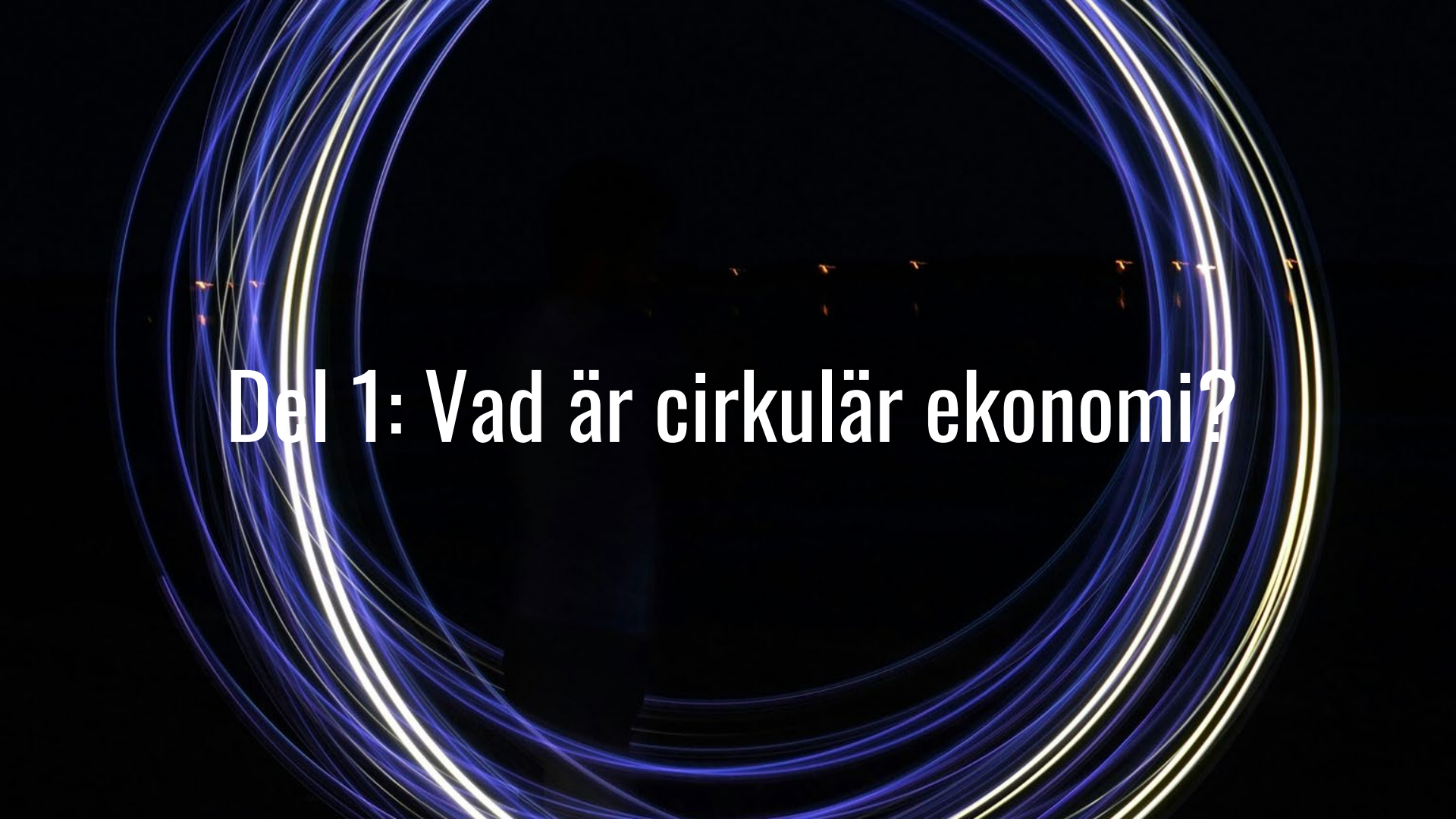
Om Per Fors

- Disputerade 2019 med avhandlingen *Problematizing Sustainable ICT.*
- Biträdande universitetslektor i Industriell ekonomi på avd. för Industriell Teknik, UU.
- Forskar om bl.a *återbruk*, *delning* och *reparation*, främst av IT-produkter.
- Undervisar om bl.a *hållbarhetsledning CSR* och *hållbar omställning*.

Agenda

- Del ett:
  - Vad är cirkulär ekonomi – *Varför så mycket snack?*[1]
  - Några goda exempel på cirkulära initiativ och affärsmodeller.
- Del två:
  - Cirkulär ekonomi i praktiken – *Varför så lite verkstad?*
  - Vägen till en verklighetsförankrad cirkulär ekonomi
  - Frågor, kommentarer och diskussioner

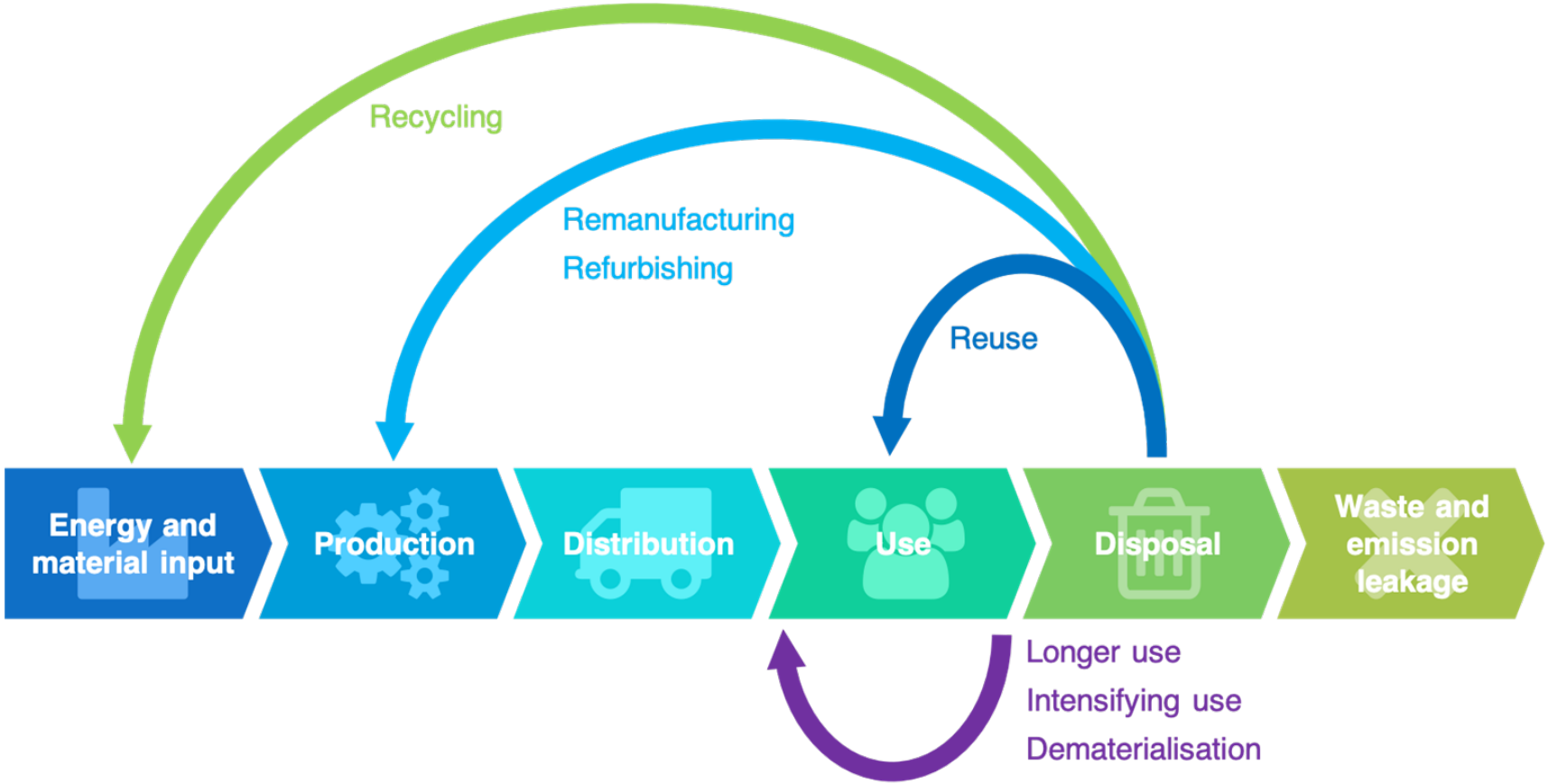

Del 1: Vad är cirkulär ekonomi?

Bakgrund

- Spaceship Earth[2]
- I = P*A*T[3, 4]
- Tillväxtens gränser[5]
- Hållbar utveckling[6]
- Cirkulär ekonomi[1, 7]

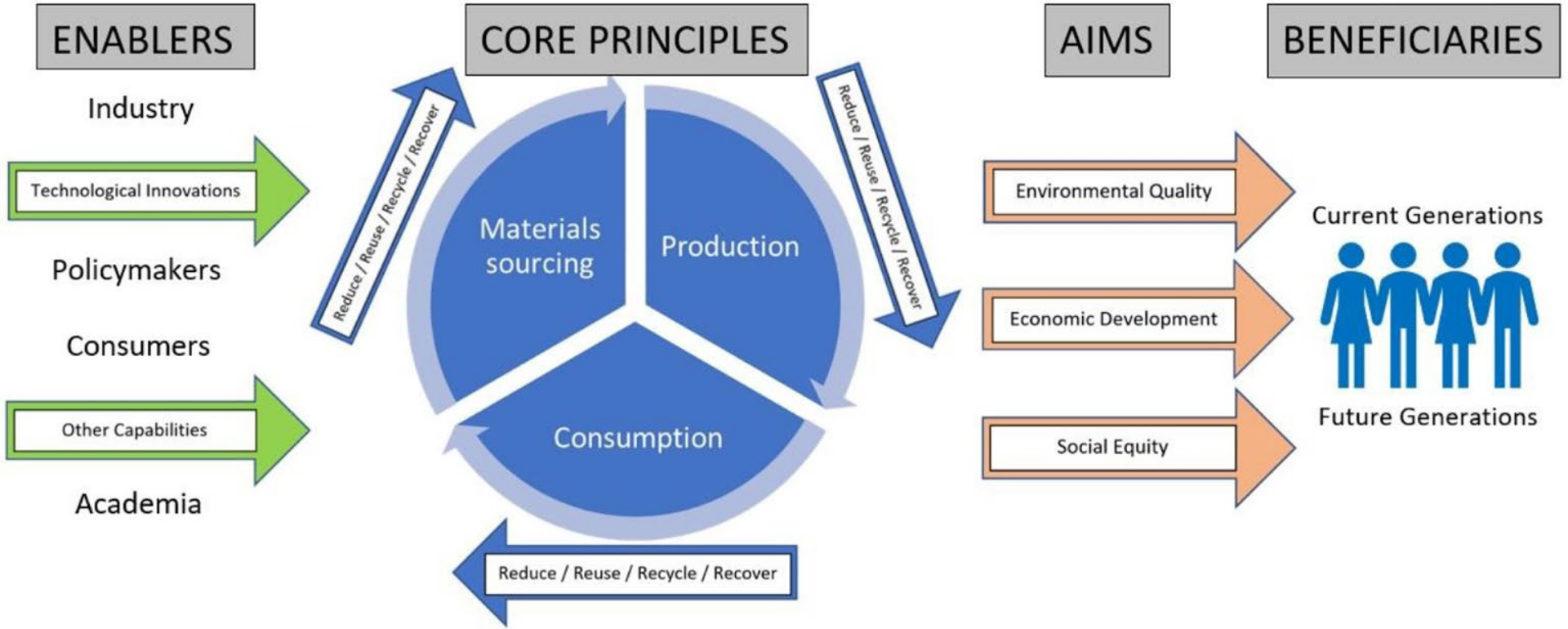
Introduktion till cirkulär ekonomi

“[A] regenerative system in which ***resource input*** *and* ***waste, emission, and energy leakage*** *are* ***minimized*** *by slowing, closing, and narrowing material and energy loops thanks to long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling”*[1]

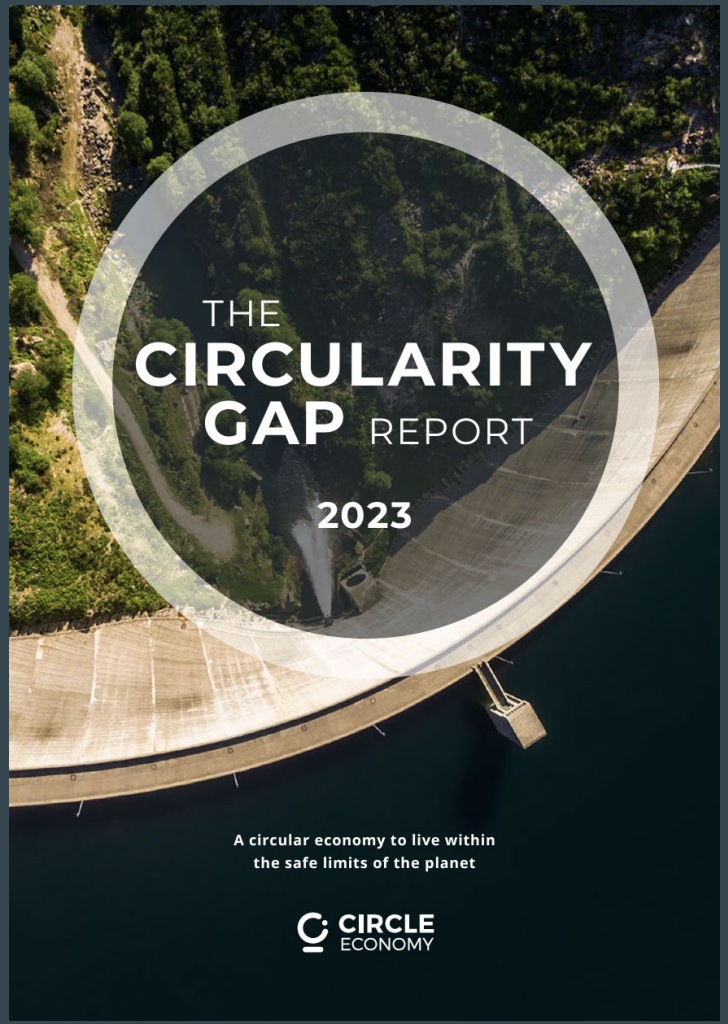

Recycling
Remanufacturing
Refurbishing
Reuse
Energy and material input
Production
Distribution
Use
Disposal
Waste and emission leakage
Longer use
Intensifying use
Dematerialisation

Några centrala begrepp

- *Take-Make-Waste* eller *Take-Make-Dispose*
- *Resurseffektivitet* och *livscykelanalys* (LCA).
- *Frikoppling* (decoupling) av naturresursanvändning och miljöpåverkan.
- 3-7R, bl.a *refuse*, *reduce*, *reuse*, *repurpose*, *recycle*, *repair*, etc.
- *Extraherings*vs *regenererings*
- *Avfallshierarkin.*



Kirchherr et al., 2023



The Circle Economys “delade vision” för företag och policy

- **Reducera (Reduce):** Reducera användandet av jungfruliga material och avmaterialisera (dematerialize) ekonomin.
- **Regenerera (Regenerate):** Fokusera på regenerativa materialkällor.
- **Omfördela (Redistribute):** Arbeta för omfördelning av makt, pengar och naturresurser.

BUILD

Build countries live within planetary boundaries, but still need to build an economic system that satisfies their society's basic needs.They are home to 46% of the global population. They currently transgress few planetary boundaries, if any at all, but struggle to meet their basic needs, such as education and healthcare, and therefore score low on Human Development Index (HDI) indicators. Their economies are dominated by agriculture and forestry, and they are building basic infrastructure. **The *Build* profile is most relevant to countries in Sub-Saharan Africa, South Asian countries and some small island states. The larger countries by population to which the profile may apply are India, Bangladesh, Ethiopia, Nigeria, Pakistan and the Philippines.**

GROW

Largely middle-income, *Grow* countries need to continue growing in a way that satisfies their societal needs, but within planetary boundaries. They are home to 37% of the world's population, and are industrialising rapidly and building infrastructure to lift their populations out of poverty and accommodate a growing middle class. They are global manufacturing hubs and the world's biggest agricultural producers. They use 51% of materials and generate 41% of emissions. **The *Grow* profile is most relevant to countries in Latin America and Northern Africa, as well as those with an economy in transition in Eastern Europe, the Caucasus and Central Asia, plus larger Southeast Asian countries. The largest countries in this group are China, Indonesia, Brazil, Mexico, Vietnam, Myanmar and Egypt.**

SHIFT

Higher-income *Shift* countries need to shift away from over-consuming the planet's materials in servicing their relatively affluent and comfortable lifestyles (although inequalities within *Shift* countries are rife). They are home to a minority of the world's population but consume 31% of materials and generate 43% of emissions. Per capita, Shift countries are the largest consumers across all material groups; their extraction of fossil fuels is relatively high, as is their participation in global trade. So, despite high HDI scores and comfortable lifestyles, these countries have a way to go to limit their consumption in line with our planet's boundaries. **The *Shift* profile fits best with the higher-income countries in the Global North, in the Gulf, Australia and Oceania. The larger ones include the US, Japan, Canada, Argentina and Member States of the European Union.**

Vad säger policy?

Vision:
Ett samhälle där resurser används effektivt i giftfria cirkulära flöden och ersätter jungfruliga material.

Övergripande mål:
Omställningen till en cirkulär ekonomi ska bidra till att nå miljö- och klimatmålen, samt de globala mål i Agenda 2030.

Regeringens (2020) strategi: Cirkulär ekonomi – strategi för omställningen i Sverige

GENERAL PUBLICATIONS | 22 March 2023

Proposal for a Directive on common rules promoting the repair of goods

English (275.28 KB - HTML) Download

Europakommissionens (2023) direktiv: a Directive on common rules promoting the repair of goods.

Handlingsplanen för den cirkulära ekonomin

I mars 2020 lade kommissionen fram en handlingsplan för den cirkulära ekonomin med över trettio åtgärdspunkter om

- säkerställande av utvecklingen av hållbara produkter och cirkularitet i produktionsprocesser
- mer konsumentmakt
- inriktning på nyckelsektorer
- minskat avfall

EU-kommissionens handlingsplan (2020): För ett renare och mer konkurrenskraftigt Europa.

Exempel på cirkulär ekonomi: Dryckesförpackningar

Fossilfritt Sverige

Förordning (SFS 2022:1274)

Förordning (SFS 2022:1274) om producentansvar för förpackningar

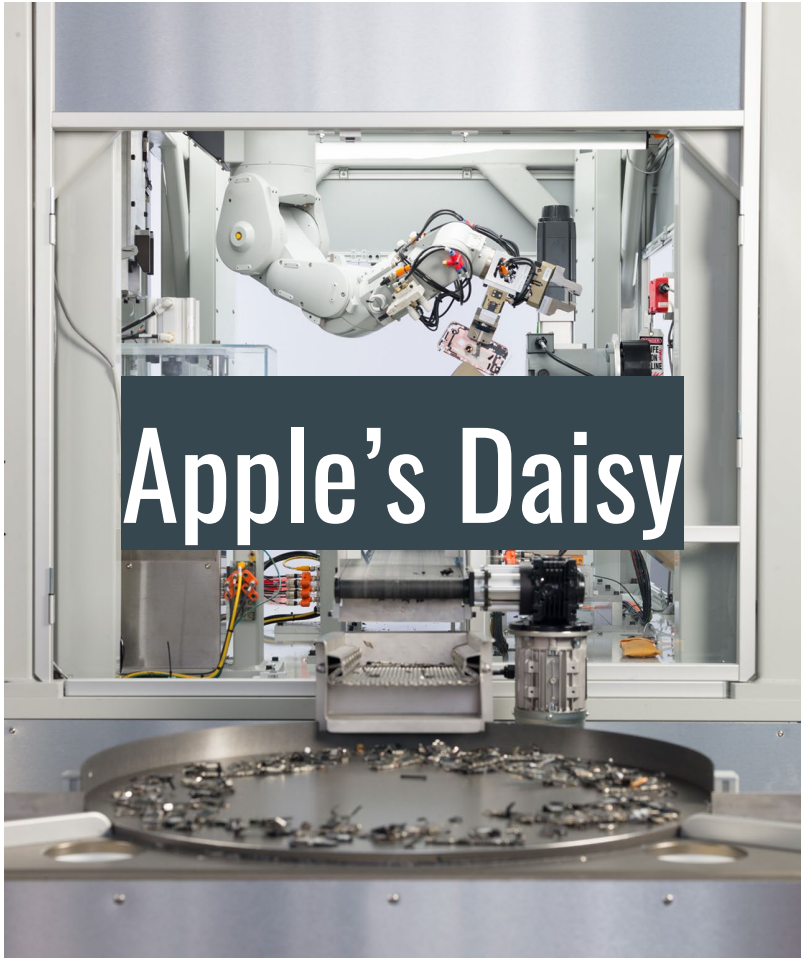
Naturvårdsverket

Livsmedelshandlarna
Svensk Dagligvaruhandel
Sveriges Bryggerier

PANTAMERA

HÅLL SVERIGE RENT®

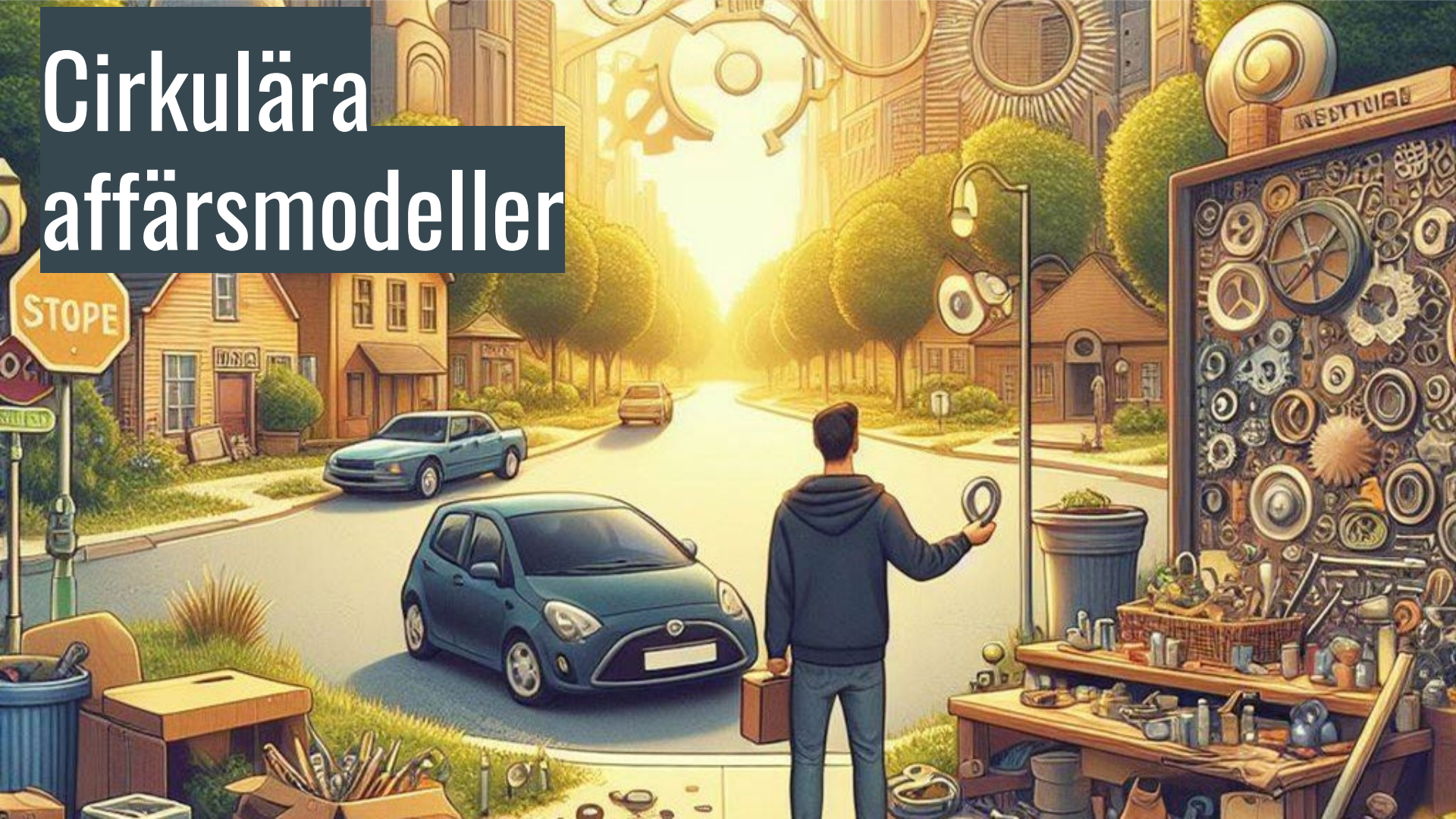
Städa Sverige



Apple’s Daisy

Fairphone

Cirkulära affärsmodeller



Transformativa affärsmodeller för hållbar omställning

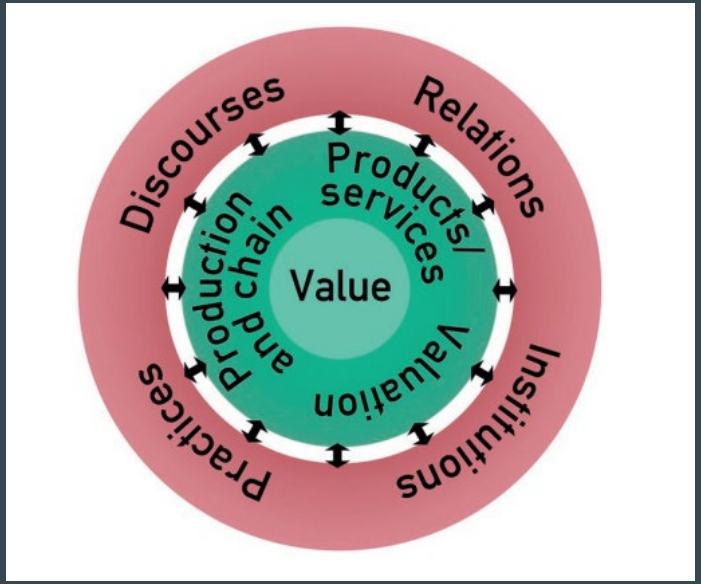
Två dimensioner[8]**:**
Konventionell <–> Hållbar
Optimering <–> Omställning.

Sustainability orientation

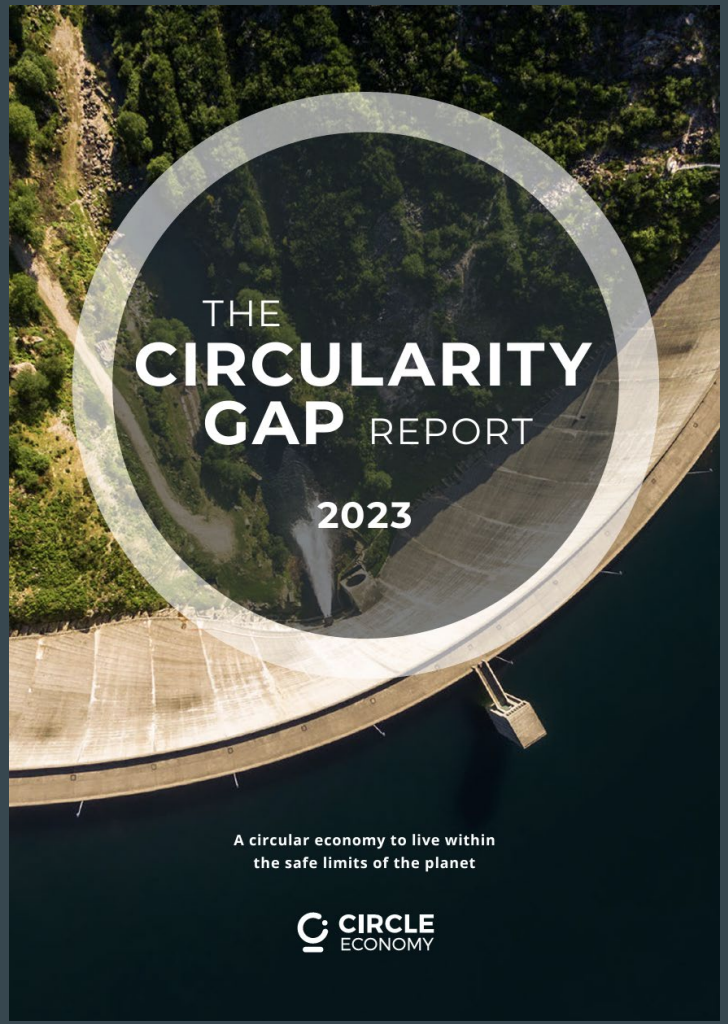
Green core: Value
Green inner circle: Production and chain, Products/Services, Valuation

Transitions orientation

Red outer circle: Discourses, Relations, Institutions, Practices[9]



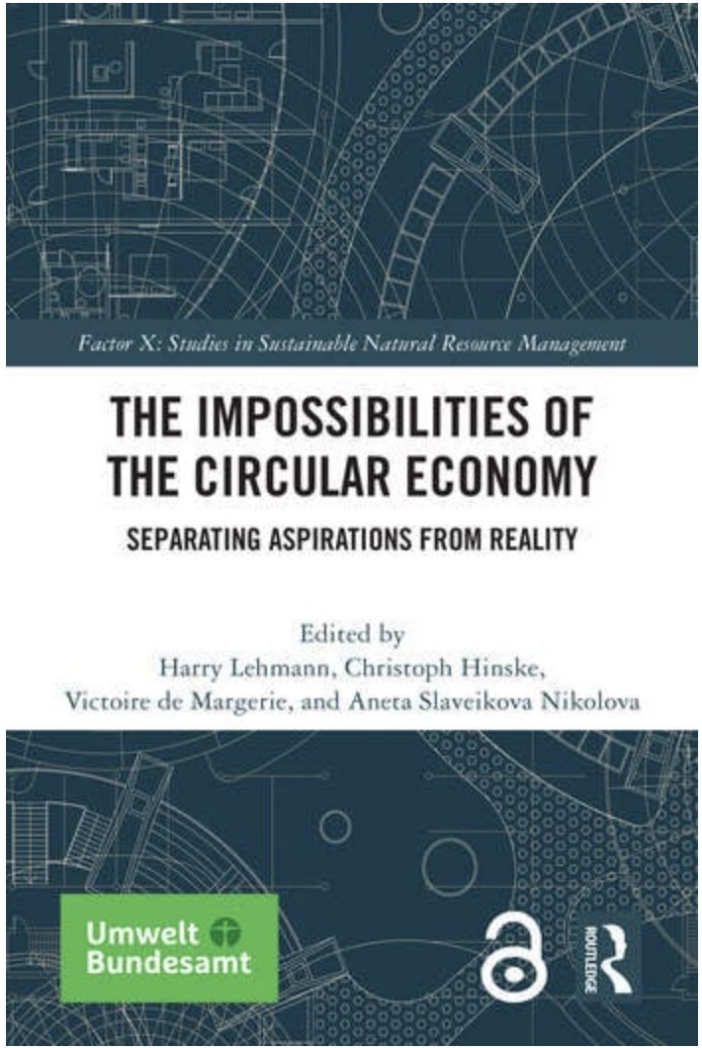
Del 2: Cirkulär ekonomi i praktiken: Mycket snack och lite verkstad?

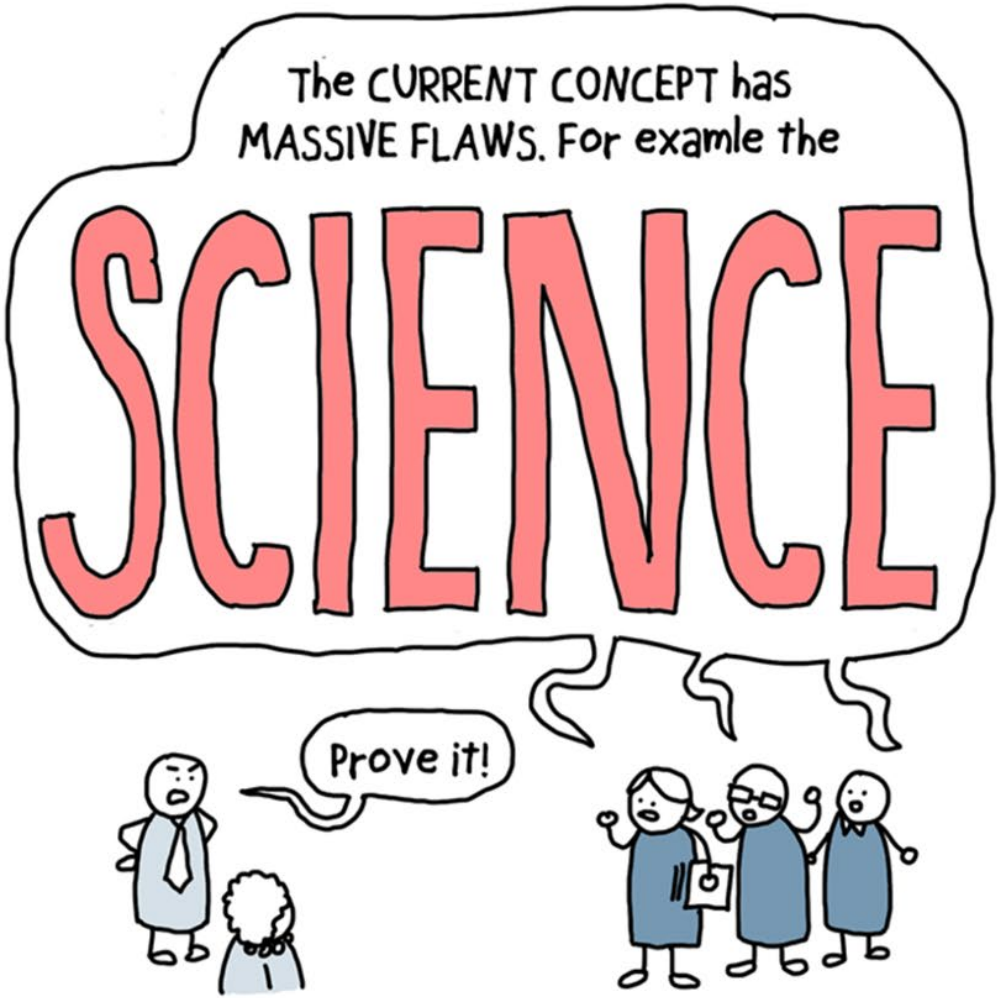


The global economy is now only 7.2% circular; and it's getting worse year on year—driven by rising material extraction and use. The global economy increasingly relies on materials from virgin sources. In the six years of the *Circularity Gap Report*, the global economy extracted and used more than in the entire 20th century[1]—improving people's living standards, but at the same time breaking through the safe environmental limits of the planet. The first edition of our *Report* in 2018 was the first ever to measure global circularity, finding it was 9.1%. It dropped to 8.6% in 2020 and has now fallen to 7.2%. Comparing these figures can be difficult,[2] however, we can assert that circularity goes down as the general rate of global material extraction rises. This is coupled with the fact that more and more materials are going into stocks such as roads, homes and durable goods, thus leaving fewer materials to cycle back into the economy. A circular economy focused on cycling alone cannot keep up with virgin material use rising to unprecedented heights—we cannot recycle our way out of this one.

Kritiken mot cirkulär ekonomi som begrepp och teori

- **Begreppsmässig förvirring**[10].
- **"Win–win"-policier** och **konfliktfria** lösningar[11, 12].
- Verklig cirkularitet som **lyx**, annars för att bygga legitimitet i en övrigt linjär verksamhet[13].
  - **Sidoaktivitet**, sällan som **kärnverksamhet**[14].
- Trots det "revolutionära" språket om radikal förändring finns **få konkreta förslag** på hur sådan radikal förändring ska ske i praktiken[15].



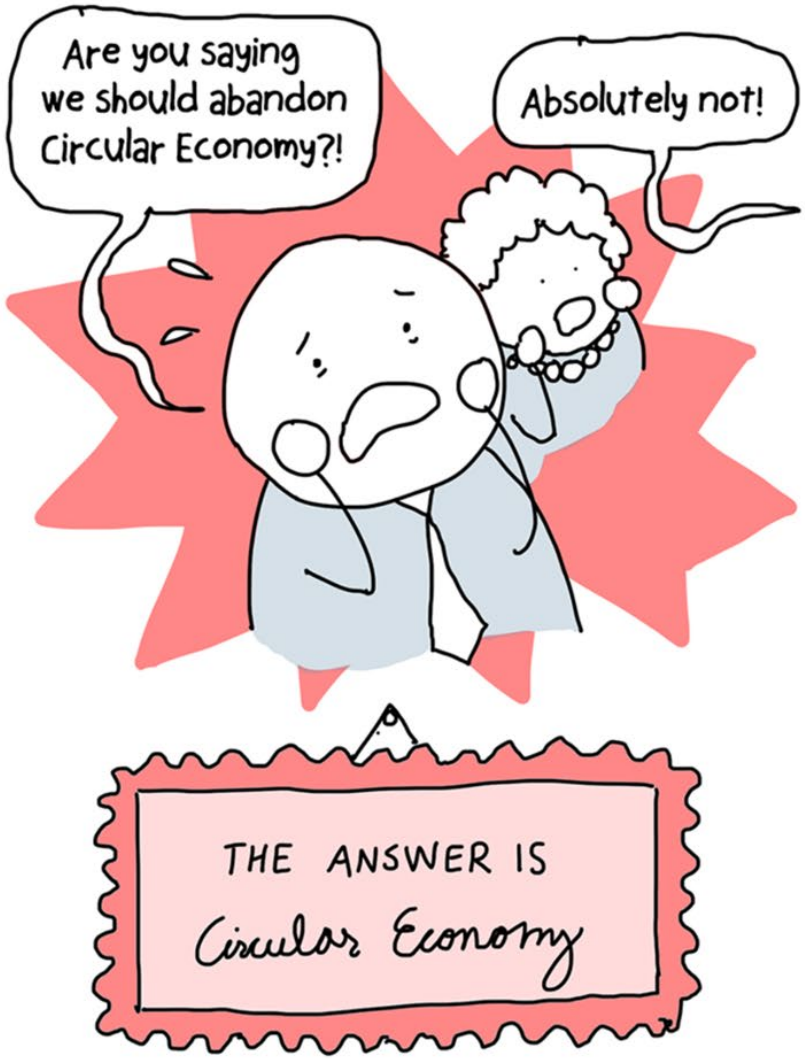


Lehmann et al., 2022

Är en cirkulär ekonomi omöjlig?

*“It appears that ‘circular economy’ **is more popular because of the big promises** it makes than **of the results it can reasonably produce**”*[16].

- Termodynamiska begränsningar[17].
- Energibehovet och tillgång till förnybar energi.
- Logistiken[18].
- Antagandet att ekonomisk tillväxt kan frikopplas från resursanvändning[19].
- Avsaknad av kritik av ekonomins storlek snarare än form



Lehmann et al., 2022

Vägen till en verklighetsförankrad cirkulär ekonomi

- Konceptuellt samförstånd kring **definitioner**, **planer**, **genomförande** och **utvärderingsmetoder**.
  - Men visst utrymme för olika förståelser kan vara fruktsamt[20].
- Utökad trans- och multidisciplinär forskning för att stödja policy och praktisk implementering.
- Problematisera **civilsamhällets (passiva) roll**[21].
- En **blygsam**, **konkret**, **inkluderande**, **transparent** cirkulär ekonomi[22].
- Hållbar omställning och en uppdragsdriven (mission-oriented) ekonomi[23].

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