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Tool 5.3 Circular Value Capture Tool



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Circular Solutions for Furniture
A Horizon Europe Initiative

Tool 5.3 – Circular Value Capture Tool

Phase 5 – Design & Development

Circular Business Model Impact Dashboard						
A - CIRCULAR REVENUE & PROFITABILITY AT A GLANCE (Year 5 = 2029)						
Total Circular Revenue Y5	% of Linear Revenue Y5	Highest EBITDA Margin — Resell	Combined Circular EBITDA Y5	Total Circular Investment Y1		
€1,312,810	10.2%	80%	€565,910	€421,500		
Sum of all 4 circular modules by Year 5	Circular revenue as share of declining linear baseline	Max EBITDA margin among all three circular models at Year 5	Total EBITDA across all circular modules	Total Y1 capex across all circular modules combined		
B - CIRCULARITY PERFORMANCE INDICATORS (End-state targets vs. baseline)						
Indicator	Baseline (Linear)	Y5 Circular (Combined)	Change	Signal	Source / Notes	
Products collected / refurbished per year	0	2,200	+ -2,200	●	Products entering certified resell (Grade A) or remanufacture (Grade B) inputs on Resell and Remanufacture model sheets (row 17, Year 5)	
Repair interventions per year	0	5,500	+ -5,500	●	Paid repair interventions delivered per year under Module A, PaaS Maintenance model sheet (row 17, Year 5)	
Products under PaaS contract	0	4,000	+ -4,000	●	Active products under PaaS subscription contract at year-end model sheet (row 17, Year 5)	
Estimated product lifespan extension (years)	7.0 yrs	10.0 yrs	+ +3 yrs	●	Baseline = current product lifespan from Current_Linear sheet. Reflects additional productive life enabled by repair and maintenance interventions.	
Revenue from circular services (% of total)	0%	9.3%	+ -9.3 pp	○	Circular services revenue as a share of combined total (linear model sheets). Target threshold: >15% = strong signal.	
Estimated new client accounts reached via circular channels	0	110	+ -110	●	Estimated unique new client accounts reached via circular channels (Y5 volumes) + average order size (cell C37). Represents market potential.	
Blended EBITDA margin — circular portfolio	31%	43%	+ +12.3 pp	●	Blended EBITDA margin across all four circular modules compared to linear baseline. Higher circular blended margin indicates that circular models are more profitable.	
< > ... 3. Remanufacture 4. FaaS_Subscription Value Case Summary Circular Impact Dashboard + : ◀ ▶						

Objective of the Tool

The Circular Value Capture Tool helps organisations evaluate and compare the financial performance of circular business models against their current linear baseline. It translates circular strategies — repair, resale, remanufacturing, and product-as-a-service — into five-year financial projections, and provides a structured framework to assess economic viability, feasibility, and strategic readiness before committing to large-scale implementation.

The tool is designed to be accessible to users without a financial background, while remaining rigorous enough to support investment decisions and stakeholder presentations. It combines quantitative modelling with qualitative feasibility scoring to give organisations a complete picture of the circular value case.

What the Tool Is

The Circular Value Capture Tool is an Excel-based financial modelling and assessment tool. It is structured as a set of interconnected worksheets, each dedicated to a distinct business model scenario. Users input product, cost, and volume data on individual model sheets, and the tool automatically aggregates results into a comparative summary and an impact dashboard.

The tool contains seven worksheets:

- Introduction – tool overview, instructions, and colour-coding legend.
- Current Linear Baseline – financial model of the existing transactional business model.
- Module A: Repair & Maintenance – revenue model for a paid repair service.
- Module B-A: Resell – revenue model for certified pre-owned resale.
- Module B-B: Remanufacture – revenue model for refurbishment and resale.
- Module C: Product-as-a-Service (PaaS) – subscription-based service model.
- Value Case Summary – consolidated comparison across all models with scenario analysis and charts.
- Circular Impact Dashboard – sustainability manager view showing circularity KPIs, model readiness scorecard, and strategic reading.

When to Use the Tool

The Circular Value Capture Tool is particularly useful when organisations are:

- Evaluating the financial viability of one or more circular business models
- Preparing a business case for circular transition investment
- Comparing the profitability of circular options against an existing linear model
- Conducting a feasibility assessment before launching a circular pilot
- Communicating circular strategy to management, investors, or sustainability stakeholders

How to Use the Tool

The tool is designed to be used in sequence, starting from the Introduction sheet and working through each model sheet before reviewing the consolidated outputs. Each step below corresponds to a distinct activity within the tool.

1. Step 1 – Read the Introduction sheet.

Open the Introduction sheet first. It explains the tool structure, the colour-coding system, and the five business models covered. Familiarise yourself with the sheet layout before entering any data.

2. Step 2 – Complete the Current Linear Baseline sheet.

Enter your product's current financial data: number of units sold per year, average selling price, and cost breakdown (materials, labour, logistics, overhead). This establishes the financial baseline against which all circular models are compared. The sheet will automatically calculate annual revenue, operating costs, EBITDA, and cumulative cash flow for Years 1–5. If your company currently offers any repair or service revenue, include it in the designated rows.

3. Step 3 – Complete the model sheet(s) relevant to your strategy.

Each circular model has its own dedicated sheet. You do not need to complete all four — only fill in the models you are actively considering. For each model, enter the volume inputs (units or jobs in Year 1 and Year 5), pricing, cost per unit or job, and Year 1 investment. The tool linearly interpolates volumes for Years 2–4 automatically. Yellow-highlighted cells are user inputs; all other calculated cells should not be edited.

4. Step 4 – Complete the Feasibility Assessment section on each model sheet.

Below the financial projections on each model sheet, there is a qualitative feasibility section. Enter the requested indicators (e.g. share of repairable products, customer willingness to subscribe, product yield rate). These inputs feed the composite Feasibility Score (0–100) and determine the scenario multipliers used in the Scenario Analysis block. The higher the score, the narrower the scenario range and the more confident the projections.

5. Step 5 – Review the Scenario Analysis block on each model sheet.

Each model sheet contains a Scenario Analysis block showing Pessimistic, Base, and Optimistic projections for revenue, EBITDA, net cash flow, and cumulative cash flow across Years 1–5. The scenario range is driven by the Feasibility Score: a high score (65+) produces a tight range ($\pm 25\%$), while a low score (< 40) produces a wide range ($\pm 45\text{--}55\%$). This allows users to understand the uncertainty range around the base projection. Costs are held constant across scenarios — only revenue is adjusted.

6. Step 6 – Review the Value Case Summary sheet.

The Value Case Summary sheet automatically pulls results from all model sheets and presents a side-by-side comparison. It contains four sections: (1) a Year 5 Snapshot table comparing all models on key financial metrics; (2) a Cumulative Net Cash Flow table showing cash trajectory across all five years; (3) chart data tables feeding the four visualisation charts; and (4) a Scenario Comparison table showing Pessimistic, Base, and Optimistic results for

each model at Year 5. No manual input is needed on this sheet — all cells are auto-populated.

7. Step 7 – Review the Circular Impact Dashboard.

The Circular Impact Dashboard translates the financial results into sustainability metrics and a strategic reading. It requires three user inputs (cells C36–C38): estimated lifespan extension from circular loops, average products per client order, and average product weight. All other cells are formula-driven. The dashboard is structured for a sustainability manager or executive audience and should be used to communicate results rather than for data entry.

Expected Output

Completing the tool produces:

- A five-year financial projection for each circular model (revenue, cost, EBITDA, cash flow, breakeven)
- A composite feasibility score per model, with signal traffic light (High / Medium / Low)
- Three-scenario financial ranges (Pessimistic, Base, Optimistic) driven by feasibility inputs
- A consolidated Year 5 Snapshot comparing all models on key financial metrics
- Cumulative cash flow trajectories for all models across the five-year horizon
- A Circular Impact Dashboard with circularity KPIs, model readiness scorecard, and formula-driven strategic narrative
- Four chart visualisations: stacked circular revenue growth, EBITDA margin trend, Year 5 grouped comparison, and EBITDA trajectory

Sheet-by-Sheet Guide

Current Linear Baseline

Establishes the financial reference point for all circular model comparisons.

Purpose

This sheet models the financial performance of your existing, transactional business model across a five-year horizon. It does not assume any circular activity. It forms the denominator for all relative comparisons in the Value Case Summary and Dashboard.

Structure

The sheet is divided into four blocks:

- **Current product sales (rows 16–22):**
Volume and pricing inputs for the main product line. Enter units sold per year and average selling price.
- **Current operating costs (rows 24–35):**
Cost breakdown by category — materials, direct labour, logistics, overhead allocation, warranty/returns, and other operating costs. Enter per-unit costs; the sheet multiplies by volume automatically.
- **Current investment (rows 38–41):**
Any planned capital investment in the current model (equipment, digital systems). Leave at zero if no investment is planned.
- **Non-financial context (rows 43–48):**
Qualitative baseline indicators including product lifespan, current repair rate, return/take-back rate, residual value captured, and circular maturity score. These contextualise the circular opportunity.

Key outputs (rows 5–11)

The calculated block at the top of the sheet auto-populates once inputs are entered:

- Row 5: Total annual revenue (units × price + service revenue)
- Row 6: Total operating cost
- Row 7: EBITDA (revenue minus operating cost)
- Row 8: Annual investment
- Row 9: Net cash flow (EBITDA minus investment)
- Row 10: Cumulative net cash flow
- Row 11: Breakeven year

Module A – Repair & Maintenance

Models a paid repair service delivered to products already in use at client sites.

Purpose

This sheet quantifies the financial potential of offering a structured repair and maintenance service. Revenue is generated per repair job or maintenance visit, without requiring product ownership or take-back infrastructure. It is typically the lowest-investment circular entry point.

Key inputs

- Number of repair jobs per year (Year 1 and Year 5 targets)
- Average revenue per job (€) — covering labour and parts charge to the customer
- Average labour cost per job and spare parts cost per job
- Off-site repair rate (% of jobs handled remotely vs. at client site)
- Transport cost per job
- Annual staff cost (FTE technicians) — enter as a lump sum in row 38
- Year 1 setup investment (tools, booking system, training)

Feasibility inputs (rows 46–48)

- Share of products that are realistically repairable (%)
- Customer willingness to use a paid repair service (%)
- Average repair time per job (hours)

The feasibility score weights repairability 40%, customer willingness 40%, and repair time efficiency 20%.

Important note

Staff costs are entered as a total annual lump sum (row 38), not as a per-job rate. Stage this cost to reflect realistic hiring timelines — do not enter the full FTE cost in Year 1 if staff will only be hired at scale.

Module B-A – Resell (Certified Pre-Owned)

Models revenue from collecting, grading, and reselling products in good cosmetic condition.

Purpose

This sheet models a certified pre-owned resale channel. Products are collected from clients, assessed as Grade A (cosmetic wear only, mechanism intact), cleaned, and resold at a discount through a B2B circular marketplace or direct channel. This model typically offers the highest EBITDA margin of the four circular modules because manufacturing costs are zero.

Key inputs

- Number of products resold per year (Year 1 and Year 5 targets)
- Resale price per unit (€) — typically 50–60% of new price for Grade A
- Reverse logistics cost per unit (collection and transport)
- Grading and administration cost per unit
- Storage cost per unit
- Channel / marketplace fee per unit
- Year 1 investment (marketplace onboarding, inspection area setup, marketing)

Feasibility inputs (rows 40–42)

- Share of collected products qualifying for direct resale (%) — typically 25–35%
- Average days to sell on the chosen channel
- Estimated number of resale cycles over the product lifespan

Module B-B – Remanufacture

Models revenue from refurbishing products requiring mechanism repair or material replacement.

Purpose

This sheet covers products graded B — those with mechanism faults or fabric/material wear requiring active refurbishment before resale. The process involves disassembly, repair, new material input (e.g. fabric, components), quality testing, and certified resale at a lower price point than Grade A.

Key inputs

- Number of products remanufactured per year (Year 1 and Year 5 targets)
- Remanufactured product selling price (€) — typically 35–45% of new price
- Reverse logistics cost per unit
- Disassembly labour cost per unit
- Refurbishment labour cost per unit
- New material cost per unit (fabric, components, consumables)
- Quality testing and grading cost per unit
- Selling / channel cost per unit
- Material savings benefit per unit (scrap value or parts recovered for repair pool) — enter as a negative cost
- Year 1 investment (refurbishment equipment, DPP system, reverse logistics setup)

Feasibility inputs (rows 45–47)

- Grade B yield — share of collected products requiring remanufacture (%)
- Condition variability score (1–5) — higher variability increases processing risk
- Customer acceptance of remanufactured products (%)

Module C – Product-as-a-Service (PaaS)

Models a subscription model where the company retains product ownership and charges a monthly fee.

Purpose

This sheet models a servitisation model in which the company retains ownership of products and charges clients a recurring monthly fee per unit. At the end of the subscription contract, products are collected and either redeployed to a new client or enter the Module B refurbishment flow. This model creates strong long-term asset value but requires significant upfront capital to purchase the fleet.

Key inputs

- Products under subscription in Year 1 and Year 5 (cumulative fleet size)
- New products entering the subscription per year (row 21) — drives asset purchase investment
- Monthly subscription fee per product (€)
- Annual service cost per product — maintenance, insurance, administration
- End-of-contract collection cost per product (amortised over contract duration)
- Redeployment cost per product (refurbishment when reassigned to a new client)
- Residual value recovered per retired product (€) — enter in row 37
- Year 1 investment — asset purchase is the main driver; also includes platform, logistics setup, DPP system

Feasibility inputs (rows 50–55)

- Minimum contract duration (months)
- Fleet utilisation rate (%)
- Customer willingness to commit to end-of-contract return (%) — key adoption barrier
- Operational readiness score (1–5) — current capability to manage a subscription fleet
- Partner dependency risk (1–5) — supplier concentration or single-source exposure
- Number of products redeployed per year (row 55) — enter separately from new subscriptions

Important note on capital

PaaS is structurally capital-intensive because the company buys and owns the product fleet. Year 1 investment is dominated by asset purchase (new units × COGS). The model typically produces negative cumulative cash flow for 5+ years, which is expected: the payback horizon is 10–15 years across multiple lifecycle loops. Do not judge this model on a 5-year cash flow basis alone — use the EBITDA margin and redeployment economics as the primary viability indicators.

Value Case Summary

Consolidated five-year comparison across all models. No manual input required.

Purpose

This sheet aggregates results from all model sheets into a single comparative view. It is read-only for all financial cells — all values are live-referenced from the individual model sheets. Any changes to model sheet inputs are reflected here automatically.

Sections

- Year 5 Snapshot (rows 41–48):
One row per model showing Revenue, Operating Cost, EBITDA, Investment, Net Cash Flow, and Cumulative Cash Flow at Year 5, plus the Breakeven year. A summary row shows the combined total across all four circular modules.
- Cumulative Net Cash Flow (rows 51–57):
Annual cumulative cash flow for each model across all five years. This table feeds the cumulative CF line chart.

- Chart data tables (rows 61–86):
Supporting tables for the four charts. These are formula-driven and should not be edited.
- Scenario Comparison (rows 130+):
Side-by-side Pessimistic / Base / Optimistic values for Revenue, EBITDA, Cumulative CF, and Breakeven at Year 5 for each model. Scenario ranges are driven by the feasibility score calculated on each model sheet.

Charts

- Chart 1: Cumulative Net Cash Flow trajectory — one line per model, Years 1–5
- Chart 2: Annual Revenue by model — line chart showing revenue ramp
- Chart 3: Year 5 Revenue / Cost / EBITDA — clustered bar chart
- Chart 4: EBITDA trend by model — line chart showing margin evolution

Circular Impact Dashboard

Sustainability and executive view. Three user inputs required; all other cells auto-populate.

Purpose

The dashboard translates financial model outputs into sustainability KPIs, a model readiness scorecard, and a strategic narrative. It is designed for a sustainability manager or executive audience and should be used for communication rather than data entry.

User inputs required (rows 35–38)

- Cell C36: Estimated lifespan extension from circular loops (years) — default 3
- Cell C37: Average products per client order (units) — used to estimate new client accounts
- Cell C38: Average product weight (kg) — used for the CO₂ avoidance estimate

Sections

- Section A – Headline KPIs:
Five large-number cards: total circular revenue at Year 5, circular revenue as % of linear, best EBITDA margin among active models (auto-identified), combined circular EBITDA, and total Year 1 investment. All formula-driven.
- Section B – Circularity Performance Indicators:
Ten indicators comparing baseline (linear) to Year 5 circular performance, each with a computed change and a traffic-light signal. Indicators include products collected, repair interventions, PaaS fleet size, lifespan extension, circular revenue share, new client accounts, blended EBITDA margin, FaaS customer acceptance, repair feasibility score, and estimated CO₂ avoided.
- Section C – Model Readiness Scorecard:
One row per circular model showing feasibility score, EBITDA margin at Year 5, breakeven year, scenario range (Pessimistic to Optimistic), auto-generated key risk flags, and a formula-driven recommendation (Lead / Build / Pilot / Validate first).
- Section D – Strategic Reading:

Four narrative cards with formula-driven sentence templates: overall circular vs. linear margin comparison; identification of the highest-margin model; PaaS long-game assessment; and a fixed regulatory/competitive framing applicable to any furniture company.

Key Terms and KPI Definitions

The following terms are used throughout the tool. Users without a financial background should read this section before completing the model sheets.

Financial KPIs

Term	Definition
Revenue	The total income generated by a business model in a given year. Calculated as: volume (units or jobs) × average price per unit or job. Does not account for any costs.
Operating Cost	The total costs directly associated with delivering the product or service, including materials, labour, logistics, and overhead. Does not include one-off capital investments.
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortisation. In this tool, it is calculated as Revenue minus Operating Cost. EBITDA measures the operational profitability of a model before accounting for capital investments. A positive EBITDA means the activity generates more income than it costs to run.
EBITDA Margin	EBITDA expressed as a percentage of Revenue ($\text{EBITDA} \div \text{Revenue}$). Allows comparison of profitability across models of different sizes. A higher margin indicates a more efficient model. Example: an EBITDA margin of 40% means 40 cents of every euro of revenue is retained as operating profit.
Investment (CAPEX)	Capital expenditure — one-off costs incurred to set up or expand a model. In this tool, investment is entered for Year 1 (setup) and may include asset purchases (PaaS fleet), equipment, software, logistics infrastructure, or training. Investment is subtracted from EBITDA to calculate Net Cash Flow.
Net Cash Flow	EBITDA minus Investment in a given year. Represents the actual cash generated or consumed by the model each year. A negative value means the model consumed more cash than it generated (common in Year 1 due to setup investment).
Cumulative Cash Flow	The running total of all Net Cash Flow from Year 1 onward. Shows when the model transitions from net cash consumption to net cash generation. Cumulative Cash Flow at Year 5 is the key comparable metric across models.
Breakeven	The year in which Cumulative Cash Flow first becomes zero or positive. This is when total income from the model has recovered all costs and investments to date. A model that does not break even within 5 years shows “>5 years”. Note: a model with a breakeven

Term	Definition
	beyond 5 years is not necessarily non-viable — it may have a longer but more substantial payback (typical for PaaS).
COGS	Cost of Goods Sold. The total cost to manufacture or procure one unit of the product, including materials, direct labour, and production overhead. In the PaaS sheet, COGS is used to calculate the cost of the product fleet that the company purchases and owns.

Feasibility and Scenario Terms

Term	Definition
Feasibility Score	A composite score from 0 to 100 calculated on each model sheet from qualitative inputs such as product reparability, customer acceptance, and operational readiness. It expresses the likelihood that the base-case financial projections are achievable under current market and operational conditions. Score ≥ 65 = High; 40–64 = Medium; <40 = Low.
Feasibility Signal	A traffic-light indicator derived from the Feasibility Score:  High — projections are likely achievable;  Medium — projections require market validation;  Low — projections are aspirational and carry high uncertainty.
Pessimistic Scenario	A downside revenue projection calculated by multiplying base-case revenue by a pessimistic multiplier (e.g. $\times 0.60$ for a medium feasibility score). Operating costs are held at the base level, so margin compression is larger than the revenue reduction. Represents a realistic downside under adverse market conditions.
Base Case	The financial projection based directly on the user's volume and price inputs. Represents the most likely outcome if assumptions hold. This is the primary output of each model sheet.
Optimistic Scenario	An upside revenue projection using an optimistic multiplier (e.g. $\times 1.40$ for medium feasibility). Reflects potential upside if market uptake exceeds expectations. Costs remain constant, so margins improve disproportionately with revenue.
Scenario Range	The span between the Pessimistic and Optimistic Cumulative Cash Flow values at Year 5. A wide range indicates high uncertainty (low feasibility score); a narrow range indicates more predictable outcomes (high feasibility score).
Volume Ramp	The tool linearly interpolates volumes between the Year 1 input and the Year 5 target. This means growth is assumed to be smooth and evenly distributed. If your expected growth is front- or back-loaded, adjust the Year 1 and Year 5 figures accordingly.

Term	Definition
Assumption (purple italic)	Any cell highlighted in light purple with italic text represents a value that was not directly available from confirmed data and was instead estimated based on industry benchmarks or analogous cases. These cells should be reviewed and replaced with company-specific data where possible.

Circular Economy Terms

Term	Definition
Circular Business Model	A business model designed to retain the value of products, components, and materials for as long as possible. Instead of the linear “make–use–dispose” model, circular models extend product life through repair, reuse, refurbishment, and service loops.
Repair & Maintenance	A service model in which the company offers paid interventions to fix or service products already in use at client sites. Generates revenue per job without requiring product ownership or take-back.
Resell / Certified Pre-Owned	A model in which used products are collected, graded, cleaned, and resold at a discount. Grade A products require no refurbishment — only cosmetic cleaning and quality certification.
Remanufacture	A process in which used products are fully disassembled, repaired, and rebuilt to a defined standard using new or reused components. Grade B products requiring mechanism repair or material replacement undergo remanufacturing before resale.
Product-as-a-Service (PaaS)	A subscription model in which the company retains ownership of the product and charges the client a periodic fee for access and use. The company is responsible for maintenance, and the product is collected and redeployed or refurbished at the end of the contract.
Residual Value	The value retained in a product or asset at the end of its first use cycle. In the PaaS model, residual value is captured when a product is recovered and either redeployed (full value) or refurbished and resold (partial value minus refurbishment cost).
Reverse Logistics	The process of collecting, sorting, and transporting products from end-users back to the manufacturer or a processing facility. A prerequisite for any circular model involving physical product recovery.
Digital Product Passport (DPP)	A digital record containing product-level data including materials, components, repair history, and lifecycle status. Enables traceability across the circular value chain and supports grading, redeployment decisions, and regulatory compliance.

Term	Definition
Lifecycle Loop	One full cycle of use, recovery, and reuse of a product. PaaS models require multiple lifecycle loops to become financially viable — the longer the contract and the more redeployments, the higher the return per asset.
Grade A / Grade B / Grade C	A grading classification for returned products. Grade A: cosmetic wear only, suitable for direct resale after cleaning. Grade B: mechanism or material defects, requires remanufacturing before resale. Grade C: beyond economic repair, directed to material recovery (recycling, disassembly for parts).



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