

Unlocking entrepreneurial potential in Vocational Education

VetUP!

VETup! TOOLKIT



ERASMUS KA210-VET - 2025-1-ES01-KA210-VET-000353194



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0. Document introduction

The project **VETup!** has been founded by the ERASMUS+ Program and pursues two main objectives to innovate in Vocational Education and Training (VET) and adapt it to the demands of today's labour market:

1. Develop the **VETup! toolkit**, which will provide innovative and accessible teaching resources so that educators can effectively deliver entrepreneurial skills training. It will be adaptable to different VET sectors and specializations and aligned with emerging labour market trends, enabling students to acquire transversal skills for their professional success.
2. Create and publish **European Guidelines for Entrepreneurship Training in VET**, which will provide a clear framework for integrating entrepreneurship into VET curricula across Europe. These guidelines will be widely disseminated for use by educational institutions, educators, and other stakeholders, facilitating their implementation.

These objectives are directly related to the Programme priorities, being:

- Innovation in VET: VETup! will foster a pedagogical shift towards more dynamic and participatory approaches
- Adaptation to the labour market: by training students to develop entrepreneurial skills and an innovative mindset, the project responds to the needs of a constantly evolving labour market, preparing students not only to create new businesses, but also to add value to existing organizations.

The first project activity plays a crucial role in achieving the objectives of the VETup! project, which are aimed at fostering an entrepreneurial mindset in both vocational education (VET) students and teachers. This activity provides the necessary resources and training to integrate entrepreneurship into VET in a sustainable and effective way.

The very first project result is the **VETup! toolkit**, which will allow teachers to access resources specifically designed to foster creativity, innovation, and entrepreneurial skills in VET students. Through the use of templates, practical exercises, and teaching materials included in the toolkit, a more dynamic and practice-oriented learning environment will be created, aligned with the demands of today's labour market.

This document is intended to be a facilitator's guide for developing sustainable Business minds [the **Green VET entrepreneurship handbook**] to support school teachers in better exploiting the potential of the tools created by the project (as per the Annexes).



THE GREEN VET ENTREPRENEURSHIP HANDBOOK

A facilitator's guide for developing sustainable Business minds

1. Introduction: entrepreneurship & Business Planning in VET

In the context of vocational education, entrepreneurship is more than just starting a company; it is about developing a mindset that identifies opportunities and solves problems creatively.

1. **Entrepreneurship as a competence:** it involves the capacity to act upon opportunities and ideas to transform them into value for others.
2. **Re-imagining the Business Plan:** for 16–18-year-old VET students, traditional business plans can feel overly academic. A modern approach focuses on experiential learning and project-based work that mirrors real-world industry standards.
3. **The goal of planning:** effective planning helps students analyze future scenarios, identify risks, and understand the functional areas of a business-like production and marketing.

1.1 Entrepreneurship as a competence

To truly "exploit" the concept of ***Entrepreneurship as a Competence*****, we must move away from the idea that entrepreneurship is just a job title. In a VET context, it is a set of skills that makes a student "future-proof," whether they start their own green business or work as an innovative employee in an existing one.

According to the ***EntreComp*** framework, this competence is broken down into three key areas that we can integrate into our toolkit:



1. Ideas & opportunities (*the "Visionary" phase*)

This is the ability to spot where a "green" solution is needed.

4. Spotting opportunities: students learn to identify social, cultural, or environmental problems in their specific trade (e.g., "*Why is so much clean wood wasted in our carpentry shop?*").
5. Creativity: developing several different ways to solve that problem, moving beyond the first obvious idea.
6. Valuing ideas: assessing which of these ideas actually provides the most "green value" to the community or the planet.

2. Resources (*the "Mobilizer" phase*)

Once they have an idea, they need the tools to make it real.

7. Self-awareness & self-efficacy: building the confidence to say, "I have the technical skills to fix this".
8. Financial & economic literacy: understanding how to sustain the idea financially without compromising the green mission.
9. Mobilizing others: learning how to inspire classmates, teachers, or local partners to join their sustainable project.

3. Into action (*the "Doer" phase*)

This is where the VET student's "hands-on" nature really shines.

10. Taking the initiative: not waiting for instructions, but starting the "Green Audit" or the prototype phase independently.
11. Planning & management: using the Green Business Model Canvas to set milestones and track progress.
12. Learning through experience: understanding that if a green prototype fails, the "failure" is just a data point for a better second version.

For a 16–18-year-old, framing entrepreneurship as a **competence** removes the "fear of business". It tells them: "*Even if you don't open a shop, these skills—creativity, resourcefulness, and initiative—will make you the most valuable person in the room*".



1.2 Re-imagining the Business Plan

For VET students aged 16–18, a 40-page traditional business plan is often a barrier to learning rather than a bridge to action. **Re-imagining the business plan** means moving away from a static document and toward a dynamic, visual, and practical roadmap that matches the "hands-on" nature of vocational training.

In a VET classroom, the business plan should be treated as a living prototype. Instead of writing about a business, students **build** the logic of it using the Business Model Canvas.

1. Visual over verbal

13. The shift: replace long chapters on "Market Analysis" with a visual *Business Model Canvas* poster.
14. The VET application: students use sticky notes to map out their ideas, allowing them to move parts around as they learn more about their trade's sustainable materials or costs.
15. Why it works: it allows for "quick failure" and rapid iteration, which is essential for students who are used to physical trial-and-error in workshops.

2. Evidence-based planning (*the "Snapshot"*)

16. The shift: instead of "predicting" the future, students must provide *evidence* for their green claims.
17. The VET application: if a student in a construction VET program claims they will use "eco-friendly insulation," their "plan" must include a photo of the material, a spec sheet, or a quote from a sustainable supplier.
18. Why it works: it anchors entrepreneurship in their actual technical trade, making the business side feel as "real" as the physical work.

3. The "Pitch" as the Executive Summary

19. The shift: the "Executive Summary" is no longer the first page of a report; it is a *3-minute pitch*.
20. The VET application: students must be able to explain their green value proposition clearly to a "customer" or "investor" (their classmates).
21. Why it works: it develops communication and persuasion skills—two core parts of the entrepreneurship competence.



When a student says, "I don't know how to write a business plan," the response should be: "*You aren't writing a book; you are designing a system. Show me how the pieces fit together on your canvas*".

1.3 The goal of planning

The concept **Goal of Planning** in a green VET context moves away from "guessing" the future and toward *risk management* and *scenario thinking*. For students entering trades that are rapidly changing due to climate regulations and new technologies, the ability to anticipate these shifts is a critical professional skill.

Instead of assuming the business will run perfectly, students are taught to ask "What if?". This helps them build a resilient business model that can survive environmental or economic changes.

1. Analyzing future scenarios

Students should explore how external factors might impact their sustainable business.

22. The "green policy" scenario: what if the government bans the specific plastic your business uses next year?.
23. The "resource scarcity" scenario: what if the price of your recycled material doubles?.
24. The VET application: a student in a plumbing VET program might plan for a future where traditional boilers are phased out, pivoting their model to focus entirely on heat pumps or solar thermal energy.

2. Risk management for sustainability

Risk in a green business isn't just financial; it's also about *reputational and environmental risk*.

25. Identifying risks: students learn to identify where their "green claims" might be vulnerable (e.g., a supplier failing an ethical audit).
26. Mitigation Strategies: in their plan, they must include a "Plan B" for their most critical green resources.
27. Why it works: it shifts the mindset from "Everything will work" to "I am prepared for anything," which is the hallmark of a professional entrepreneur.

3. Functional planning (*connecting the dots*)



Planning helps students see how different parts of the business depend on each other.

28. The operational view: if the "Key Activity" is recycling, the "Key Partner" must be a reliable waste collection service.
29. The financial view: if the "Value Proposition" is high-quality, long-lasting products, the "Revenue Stream" must reflect that higher upfront cost.

Explain to students that *a plan is not a fixed path, but a compass*. The goal isn't to be "right" about the future, but to have considered enough scenarios so they can react quickly when the world changes.

2. The green Business Model Canvas: a guide

The Business Model Canvas provides a simple way to clarify important aspects of the enterprise to be developed. It is usually used as part of a toolbox for start-ups that combine the following three techniques:

- *Lean Start Up methodology*, developed by Eric Ries¹, which was inspired by the lean and agile approaches to software and technology development, applied to the problem of eliminating 'waste' in start-up development. In this case, 'waste' refers to waste of time and money spent on ideas that no one is interested in, or 'solutions looking for a problem'
- *Customer Development methodology* developed by Steve Blank², which emphasizes that a start-up is not a small version of a big company, but an organisation whose purpose is to identify a 'product-market fit' which it can find by quickly cycling through product-market hypotheses until the founders discover and validate a viable market concept. It is characterized by the use of concepts such as 'pivots' and 'MVPs' or Minimal Viable Products.
- *The Business Model Canvas* or BMC developed by Alexander Osterwalder³ which provides a strategic management template that can be used for developing new business models and documenting existing ones.

Taken together, it is common to refer to all of these as the lean start-up approach. The BMC is a constantly evolving artefact of the process of start-up development. Effectively, one might update the start-up BMC with every new business hypothesis and pivot employed in the process of discovering a viable product market fit.

Although the lean start up approach emerged and was initially developed for VC oriented start-ups in Silicon Valley, the basic concepts are easily adapted for use with business units in big companies, in public administration, social entrepreneurship ventures, NGOs and philanthropic activities. It is by now a standard tool used all over the world in organisational design. Although it is best known for, and applied to, the case of entrepreneurial start-ups, it is routinely used to support the design or re-design of mature commercial enterprises, social enterprises, for-profit and not-for-profit organizations, business units of large corporations and functional units in public administration. In each case the basic principles and ideas are the same, although the language may change slightly. The idea and its variants are well known to anyone who works in innovation, and a short overview is provided by Wikipedia⁴.

The **Green Business Model Canvas (G-BMC)** is a thus strategic framework that helps students visualize how a company works while integrating environmental and social impact.

¹ <https://www.investopedia.com/terms/l/lean-startup.asp>

² https://en.wikipedia.org/wiki/Steve_Blank

³ https://en.wikipedia.org/wiki/Alexander_Osterwalder

⁴ https://en.wikipedia.org/wiki/Business_model_canvas



The standard 9 components (the "How"):

1. **Value propositions:** the unique problem being solved for the customer.
2. **Customer segments:** the specific groups of people the business aims to serve.
3. **Channels:** how the product or message reaches the customer.
4. **Customer relationships:** the type of bond built with the audience.
5. **Key activities:** the most important tasks required to run the model.
6. **Key resources:** the human, technical, and physical assets needed.
7. **Key partners:** the network of suppliers or community collaborators.
8. **Cost structure:** the financial investments and operational expenses.
9. **Revenue streams:** how the business earns money from its value.

The 2 sustainable additions (the "Impact"):

- **Eco-social benefits:** positive impacts like carbon reduction, job creation for disadvantaged groups, or waste diversion.
- **Eco-social costs:** transparency about environmental footprints, such as energy usage or potential pollution.

3. Facilitating the practical exercises

We need to move from "assigning tasks" to "coaching transitions." Since VET students are often more comfortable with technical execution than abstract business theory, the facilitator's role is to bridge that gap through structured "Interventions".

Exercise A: the Green Audit (*individual*)

30. The goal: move students from being "passive consumers" to "critical evaluators" of sustainability.
31. Facilitator "deep-dive" suggestions:
 - **The "receipt research" technique**: have students bring in a physical receipt or product package. Instead of just looking at the box, they must find the company's "Sustainability Report" or "Impact Page" online.
 - **Intervention – the "so what?" question**: if a student says "the box is made of cardboard," ask: "So what? Is it FSC-certified? Is the ink soy-based? Can your local recycling center actually process it?" This forces them into the *Resource Resilience* mindset.

Exercise B: the circular pivot (*group*)

32. The goal: practice "Ideation" by forcing a radical change in a business model.
33. Facilitator "deep-dive" suggestions:
 - **The "resource swap" game**: give each group 5 "Resource Cards" (e.g., Plastic, Grid Electricity, Fresh Water). Halfway through the exercise, "confiscate" one card. They must immediately pivot their Canvas to find a sustainable alternative.
 - **Intervention – the "waste-to-wealth" walk**: walk to each group's table. Point to their "Cost Structure" and ask: "Which of these costs is actually a waste of material? How can we turn that cost into a 'Value Proposition' for someone else?" (e.g., turning sawdust into fuel pellets).

Exercise C: the supply chain shark tank (*facilitated*)

34. The goal: develop "mobilizing others" and "communication" competencies.
35. Facilitator "deep-dive" suggestions:
 - **The "triple bottom line" scorecard**: don't just judge on who has the "best" idea. Use a scorecard where students earn points for *Environmental integrity*, *Social Justice*, and *Financial Logic*.



- ***Intervention – the "devil's advocate" role:*** as the facilitator, play the "Skeptical Customer." Ask: *"You say your product is 'Green,' but your Key Partner is 5,000 miles away. How do you justify the shipping emissions?"* This forces them to defend their Eco-Social Costs.

Advanced Facilitation Tactics for VET

To keep 16–18-year-olds engaged, use these industry-focused strategies:

1. The "trade-specific" lens: always tie the exercise back to their specific VET trade. A catering student should pivot a restaurant; an automotive student should pivot a garage.
2. Peer-to-peer "audits": instead of you grading the work, have Group A use the *Validation checklist* to audit Group B. This builds "Valuing Ideas" as a competence.
3. The "pivot poster": have students use two different colored sticky notes on their Canvas: *Yellow* for the "Traditional" business parts and *Green* for the "Sustainable" improvements. This makes the "Green Pivot" visually undeniable.

4. Teaching hints & suggestions for VET (16–18)

Teaching students in this age group requires a shift from "lecturing" to "facilitating".

- **Focus on experiential learning:** VET students respond best to "learning by doing". Use role-playing, simulations, and real-world work situations rather than purely theoretical tasks.
- **Use emotionally descriptive language:** avoid dry jargon. Using terms like "*dreamer*" (vision/creativity) or "*warrior*" (action/goals) can make business concepts more relatable.
- **Build local partnerships:** connect students with local entrepreneurs and business sectors. This makes the lessons feel authentic and shows them the professional context of their studies.
- **Encourage peer feedback:** Use peer-review sessions where groups "audit" each other's canvases using the **Validation Checklist**.

The focus must remain on the unique developmental stage of 16–18-year-olds and the specific "hands-on" culture of VET environments. At this age, students are transitioning from being directed learners to independent professionals, requiring a move from "teacher-led" to "mentor-supported" instruction.

Here are deep-dive strategies to master this facilitation role:

1. Strengthening experiential learning (*the "show, don't tell" rule*)

VET students thrive when they can apply abstract concepts to physical or digital prototypes.

- **The prototype challenge:** instead of just filling out a canvas, ask students to create a "low-fidelity" prototype of their green service or product (e.g., using cardboard, digital mock-ups, or a landing page).
- **The industry simulation:** structure the classroom like a professional design studio or a green tech startup rather than a traditional lecture hall.
- **Action-oriented feedback:** provide feedback in real-time while they are working on their models, similar to how a master craftsman would guide an apprentice in a workshop.

2. Mastering the "mentor" language

The way you speak about business can either engage or alienate a 17-year-old vocational student.

- **Avoid corporate jargon:** replace "Executive summary" with "The hook" and "Revenue streams" with "How we keep the lights on".
- **Use the "Identity" approach:** frame the project around their future professional identity. Instead of saying "write a plan," say "As a sustainable plumber, how will you convince your clients to switch to solar?".
- **Promote emotional resilience:** acknowledge that "pivoting" (changing an idea) is a sign of intelligence, not failure.

3. Building Local & Professional Bridges

Connecting the classroom to the local economy provides the "social proof" that green entrepreneurship is a viable career path.

- **The Guest mentor program:** invite a local green entrepreneur or a sustainability officer from a local industry to review the students' **Green Business Model Canvases**.
- **Real-world context:** use local environmental issues (e.g., a local river pollution problem or a municipal waste initiative) as the "problem" for their value propositions.
- **Work-based learning integration:** if students are currently in apprenticeships, encourage them to apply the **Green Audit** to their actual workplace.

4. The Assessment Rubric for Teachers

Evaluating entrepreneurship as a "competence" requires a different set of metrics than a standard exam.

Evaluation Criteria	What to Look For	The Green Indicator
Critical Thinking	Does the student question "standard" practices?	Identified a "Green-washing" red flag.
Adaptability	How did they respond to a "Wildcard" risk?	Successfully "pivoted" the Canvas.
Communication	Can they explain the value clearly?	Used data to prove an eco-benefit.
Collaboration	Did the team use everyone's trade skills?	Integrated technical VET skills into the plan.

The "Facilitator's checklist" for success



Before ending a session, ask yourself:

- Did I speak for more than 15 minutes, or did the students spend most of the time "doing"?
- Did every group identify at least one **Eco-Social Benefit** that isn't just about profit?
- Did I challenge a student to find a "Green Fix" for a traditional trade problem?



5. ANNEXES

- i. Green Business Model Canvas: the roadmap
- ii. Practical exercises: the training ground
- iii. Resource cheat sheet: the research library



Title of the idea / project

Name of the proposer

City / region

1. VALUE PROPOSITIONS

The "Eco-Benefit"

Traditional: what product/service are you selling?

Green lens: how does this solve an environmental or social problem? What is the specific "green" value (e.g., carbon reduction, zero-waste, circularity)?

CHARACTERISTICS [Newness / Performance / Customization / "Getting the Job Done" / Design / Brand/Status / Price / Cost Reduction / Risk Reduction / Accessibility / Convenience/Usability]

Value
Propositions





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2. CUSTOMER SEGMENTS

Customer
Segments



The Conscious Consumer

Focus: who cares about this specific sustainable impact?

Prompts: is it local residents, specific industries looking to go green, or youth activists?

Mass Market / Niche Market / Segmented / Diversified / Multi-sided Platform

3. CUSTOMER RELATIONSHIPS

Customer
Relationships



Transparency & Education

Focus: building trust with eco-conscious consumers.

Prompts: how do we communicate our impact? Can we encourage customers to recycle the product after use?

EXAMPLES [Personal assistance / Dedicated Personal Assistance / Self-Service / Automated Services / Communities / Co-creation]



4. KEY PARTNERS

The Ecosystem

Focus: collaborating for impact.

Prompts: local suppliers to reduce transport emissions, NGOs, or recycling centers.

Optimization and economy / Reduction of risk and uncertainty / Acquisition of particular resources and activities

Key
Partnerships



5. KEY ACTIVITIES

Sustainable Operations

Focus: how can the production or delivery process be "lean and green"?

Prompts: can we use renewable energy? How do we minimize waste during production?

Production / Problem Solving / Platform/Network

Key
Activities





6. KEY RESOURCES

Circular Inputs

Focus: what materials are needed?

Prompts: are materials recycled, biodegradable, or ethically sourced? What "human capital" (green skills) do we need?

TYPES OF RESOURCES [Physical / Intellectual (brand patents, copyrights, data) / Human / Financial]

Key
Resources



7. CHANNELS

Low-Impact Delivery

Focus: getting the product to the user sustainably.

Prompts: eco-friendly packaging, electric delivery vehicles, or digital-first services

CHANNEL PHASES: 1. Awareness - How do we raise awareness about our company's products and services? / 2. Evaluation - How do we help customers evaluate our organization's Value Proposition? / 3. Purchase - How do we allow customers to purchase specific products and services? / 4. Delivery - How do we deliver a Value Proposition to customers? / 5. After sales - How do we provide post-purchase customer support?



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8. COST STRUCTURE

Cost Structure



What are the most important costs inherent in our business model?

Which Key Resources are most expensive?

Which Key Activities are most expensive?

IS YOUR BUSINESS MORE: Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing) / Value Driven (focused on value creation, premium value proposition)

SAMPLE CHARACTERISTICS: Fixed Costs (salaries, rents, utilities) / Variable costs / Economies of scale / Economies of scope

9. REVENUE STREAMS

Revenue Streams



For what value are our customers really willing to pay?

For what do they currently pay?

How are they currently paying?

How would they prefer to pay?

How much does each Revenue Stream contribute to overall revenues?

TYPES: Asset sale / Usage fee / Subscription Fees / Lending/Renting/Leasing / Licensing / Brokerage fees / Advertising

FIXED PRICING: List Price / Product feature dependent / Customer segment dependent / Volume dependent

DYNAMIC PRICING: Negotiation (bargaining) / Yield Management / Real-time-Market



The "Green Light" Checklist

Check off each item to ensure your business model isn't just a business, but a **sustainable** one.

Planet (*environmental impact*)

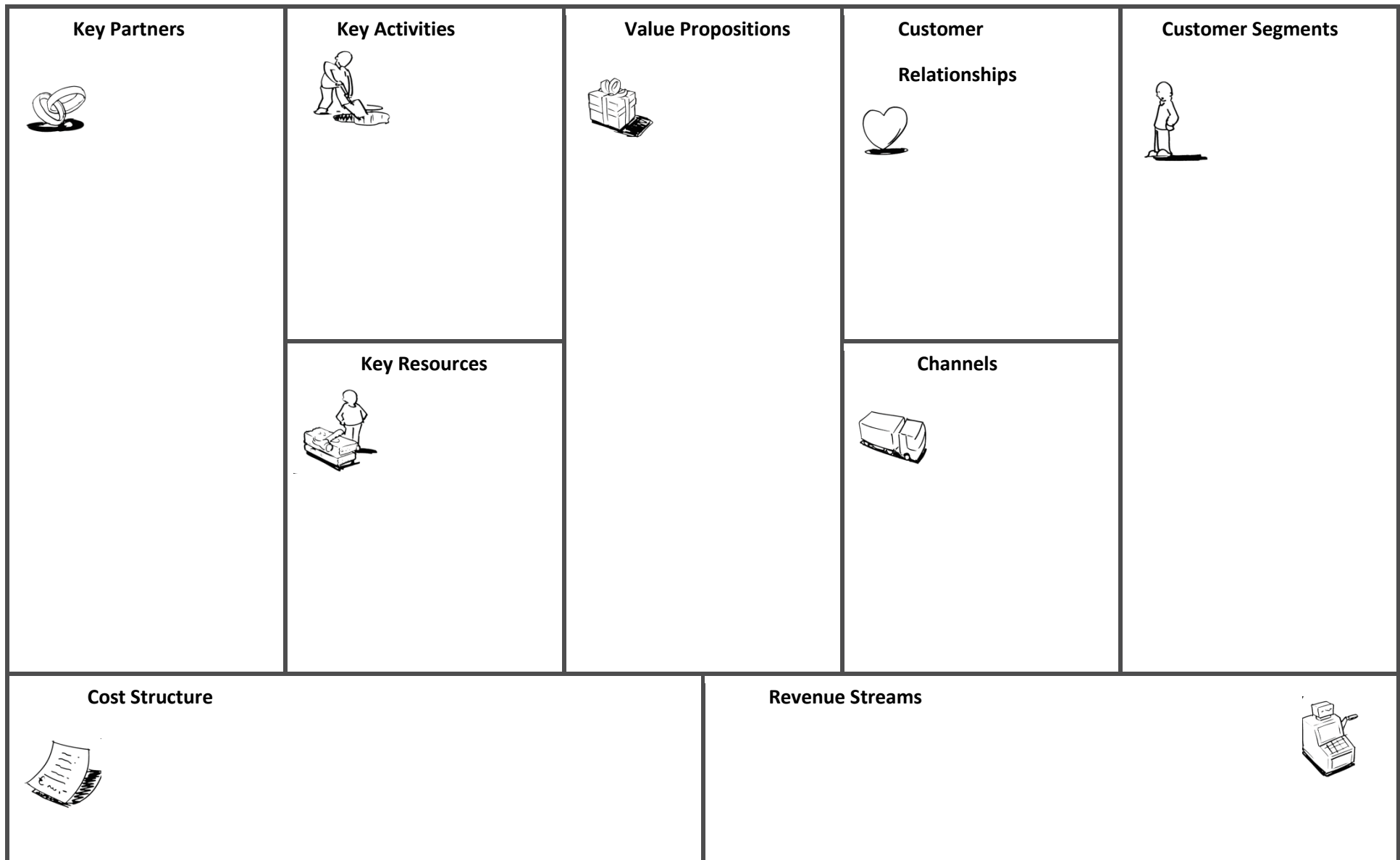
- ☐ **Resource efficiency:** does the model use recycled, upcycled, or renewable materials?
- ☐ **Waste reduction:** is there a plan to eliminate "single-use" items or reduce packaging?
- ☐ **Energy & carbon:** have we looked for ways to lower energy use or transport emissions?
- ☐ **End-of-life:** do we know what happens to the product when the customer is done with it? (Can it be repaired, composted, or recycled?)

People (*social impact*)

- ☐ **Ethical sourcing:** are our partners and suppliers treated fairly and paid a living wage?
- ☐ **Community benefit:** does this business help our local neighbourhood or solve a social problem?
- ☐ **Inclusion:** is the product/service accessible to a diverse range of people?

Profit (*economic viability*)

- ☐ **Fair pricing:** does the price cover the cost of being "green" while staying competitive?
- ☐ **Durability:** is the product built to last (selling quality) rather than built to break (selling quantity)?
- ☐ **Transparency:** can we prove our green claims to customers so they trust us?



PRACTICAL EXERCISES IN CLASS

Individual exercise: "The green audit"

Objective: to develop critical thinking and the ability to spot "green-washing" in the real world.

Task: students choose one physical product they own or use daily (e.g., a smartphone, a pair of sneakers, or a snack)

Action:

1. Research the product's packaging and brand website
2. Use the Green Checklist to audit the product.
3. Identify one "Red Flag" (where the product is not sustainable) and propose one "Green Fix."

Output: A short 2-minute "Elevator Pitch" to the class explaining how they would re-design that specific product to be truly sustainable.

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Group exercise: "The circular pivot"

Objective: to practice adapting traditional business models into sustainable ones using teamwork and the Green Canvas.

Setup: divide the class into groups of 3–4. Assign each group a traditional, high-waste VET-related business "scenario" (e.g., a fast-food burger van, a traditional hair salon, or an auto-repair shop).

The Challenge:

1. **Map the old model:** briefly fill out a traditional Business Model Canvas for the business.
2. **The pivot:** using the **Green Business Model Canvas**, they must transform the business into a sustainable one.
 - *Example:* the burger van becomes a "Zero-waste plant-based mobile kitchen" using local seasonal sourcing.
3. **The "waste to wealth" workshop:** groups must identify at least one "waste stream" from their business (e.g., hair clippings, used motor oil, or food scraps) and invent a way to turn it into a **Key Resource** or a new revenue stream.

Output: a completed Green Canvas poster and a "Sustainability score" calculated using the checklist.

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Teacher-facilitated activity: "the supply chain shark tank"

Objective: to understand the complexity of "Key Partners" and "Social Impact."

The activity: the teacher acts as a "Sustainable supplier" with limited resources (*represented by tokens or cards*).

Action:

1. Student groups must "bid" for the teacher's partnership by explaining why their business model is the most ethical and eco-friendly.
2. The teacher asks tough questions based on the Red Flags (e.g., "*You say your packaging is biodegradable, but where does the energy come from to produce it?*").
3. Students must negotiate and adapt their Canvas in real-time to win the partnership.

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Suggested Exercise Timeline

Time	Activity	Format
20 min	The Green Audit	Individual Research
45 min	The Circular Pivot	Group Canvas Design
25 min	Shark Tank Presentations	Facilitated Discussion



To make **Exercise B: The Circular Pivot** as effective as possible for VET students, these **Scenario Cards** are designed to be "trade-aligned." Each card presents a traditional, high-waste business that the students must "pivot" into a sustainable model using their Green Business Model Canvas.

VET Trade Scenario Cards

Instructions for Students: Look at your assigned "Traditional Business." Your goal is to keep the business profitable while solving the environmental "Red Flags" listed on the card.

Scenario 1: The "Fast & Fried" Catering Truck

- **The Business:** A popular mobile food truck selling burgers and fries at local festivals.
- **The Traditional Model:** Uses single-use plastic cutlery, deep-frys everything in palm oil, and sources cheap meat from industrial farms.
- **The Red Flags:** High food waste (scraps), massive plastic waste, and high carbon footprint from the generator and supply chain.
- **The Challenge:** Pivot to a **Zero-Waste Organic Kitchen**. How will you handle the oil? What happens to the leftovers?

Scenario 2: "Style & Spray" Hair Salon

- **The Business:** A busy neighborhood salon offering cuts, coloring, and styling.
- **The Traditional Model:** Uses chemical-heavy dyes, high water consumption for washing, and goes through hundreds of aluminum foil sheets daily.
- **The Red Flags:** Toxic chemical runoff in the water, high energy use for dryers, and non-recyclable hair and foil waste.
- **The Challenge:** Pivot to an **Eco-Boutique Salon**. Can hair clippings be repurposed? How do you reduce water heat-energy?

Scenario 3: "Build-It-Quick" Construction Co.

- **The Business:** A small contracting firm that builds residential extensions and sheds.
- **The Traditional Model:** Relies on "take-make-waste" materials like standard concrete and treated timber. Leftover materials are simply thrown into a skip.
- **The Red Flags:** Massive material waste (demolition and offcuts), high-embodied carbon in concrete, and toxic wood treatments.
- **The Challenge:** Pivot to a **Circular Construction Hub**. How can you use "Urban Mining" (reclaiming materials)? Can you offer "Repair services" instead of just new builds?



Scenario 4: "Classic Chrome" Auto-Repair Shop

- **The Business:** A local garage specializing in oil changes and engine repairs for older cars.
- **The Traditional Model:** High consumption of new oils, lead-acid batteries, and replacement parts that come in heavy plastic packaging.
- **The Red Flags:** Hazardous waste (oil/coolant), high turnover of "disposable" parts, and reliance on fossil-fuel vehicles.
- **The Challenge:** Pivot to a **Green Mobility Center**. How do you handle hazardous fluids safely? Could you pivot to electric vehicle (EV) conversions or e-bike repairs?

Facilitator's "Wildcards" (The Scenario Twists)

Halfway through the group work, the teacher can drop one of these "Wildcards" on a group to test their planning and risk-management skills.

- **The Carbon Tax:** "The government just announced a 20% tax on all non-recycled packaging. How does this change your **Cost Structure**?"
- **The Local Hero:** "A local community garden wants to partner with you. How can they become a **Key Partner** for your waste?"
- **The Tech Breakthrough:** "A new bio-degradable alternative to your main material just became available, but it's 10% more expensive. Do you switch?"

How to Use These Cards in Class

1. **Assign:** Give each group a card that matches (or challenges) their VET specialty.
2. **Audit:** Use the **Green Validation Checklist** to identify all the current problems with the traditional model.
3. **Pivot:** Fill out a **Green Business Model Canvas** that solves those problems while keeping the business profitable.
4. **Present:** Groups explain their "Green Fixes" to the class.

GREEN BUSINESS RESOURCE CHEAT SHEET

Green entrepreneurship reference sources & library

To keep engagement high, encourage **"Prototyping over Perfection."** VET students are often kinesthetic learners; instead of just writing on the canvas, encourage them to build "Low-Fidelity" versions of their green products using cardboard or digital 3D modeling tools to see if their sustainable design actually works.

These resources provide foundational knowledge and real-world examples that students can use to populate their **Green Business Model Canvas**.

There are several useful links to introduce the BMC, also in partners' language:

- <https://www.strategyzer.com/library/the-business-model-canvas>
- <https://www.canva.com/graphs/business-model-canvas/>
- IT - <https://www.beople.it/business-model-canvas>
- DE - <https://digitalneuordnung.de/blog/business-model-canvas-erklaerung>
- ES - <https://www.iebschool.com/hub/que-es-el-modelo-canvas-y-como-aplicarlo-a-tu-negocio-agile-scrum/>

1. Frameworks & knowledge bases

Use these to understand the "Why" and "How" of sustainable systems.

- **The Ellen MacArthur Foundation (circular economy):** the gold standard for learning how to design out waste. They offer excellent "Circular Design" guides.
- **UN Sustainable Development Goals (SDGs):** a universal language for impact. Students can pick 1–2 SDGs (like Goal 12: Responsible consumption and production) to anchor their business idea.
- **EU Science hub - GreenComp:** the European sustainability competence framework which identifies the specific skills students need for the green transition.

2. Inspiration & case studies

Need a real-world example? Search these databases for companies in your specific trade.

- **B Corp directory:** a searchable database of certified companies. Students can search by industry (e.g., "construction" or "fashion") to see how real businesses balance profit and purpose.
- **The Solar Impulse Foundation:** a library of 1,000+ clean and profitable solutions. This is perfect for VET students to find specific technologies (like eco-friendly bricks or water-saving nozzles) for their business ideas.



- **Natural Entrepreneurs (NatEnt):** a platform that combines STEM skills with biomimicry to help you create products that require less material and energy.
- **Sustainable futures (WWF):** use their "*Doughnut Economics*" and "*System Thinking*" units to understand how businesses can thrive without over-extracting resources.

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Guidelines for green creativity & innovation

How do you get a 17-year-old vocational student to think outside the box? Use these "Innovation Sparkers" to encourage creative problem-solving.

1. The "Waste is a design flaw" rule

Encourage students to view every piece of trash as a **missing ingredient**.

- *Exercise:* if your business produces sawdust, old tires, or food scraps, you aren't allowed to throw them away. Who would pay for that "waste"? How can it become a new product?

2. Biomimicry: "nature as the mentor"

Nature has been solving engineering problems for billions of years without creating pollution.

- *Exercise:* look at your business problem. How does nature solve it? (e.g., How does a forest handle waste? How does a leaf capture energy?). Use those patterns in your Business Model.

3. The "product-as-a-service" shift

Shift students from selling *objects* to selling *results*.

- *Exercise:* instead of selling a washing machine (which eventually becomes waste), could you sell "clean clothes" through a subscription? This encourages making products that last longer and are easier to repair.

4. Constraint-based innovation

Sometimes too much freedom kills creativity.

- *Exercise:* tell students: "You must build this business model, but you are **forbidden** from using any plastic or any fossil-fuel-based transport." These constraints force them to find innovative alternatives they wouldn't have considered otherwise.

Quick Tips for your Green Canvas

Material loop: can your "Key Resources" be biological (compostable) or technical (recyclable)?

Waste to wealth: can your "Eco-social costs" (waste) be turned into a new "Value proposition"?

Ethical chain: check if your "Key partners" provide fair pay and safe working conditions.