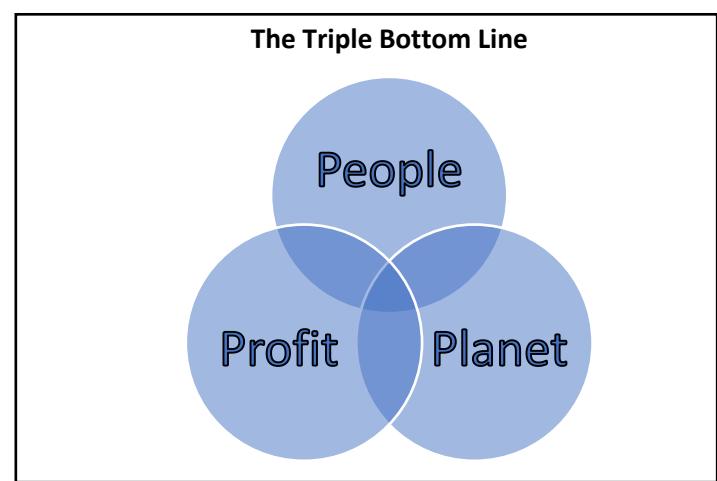
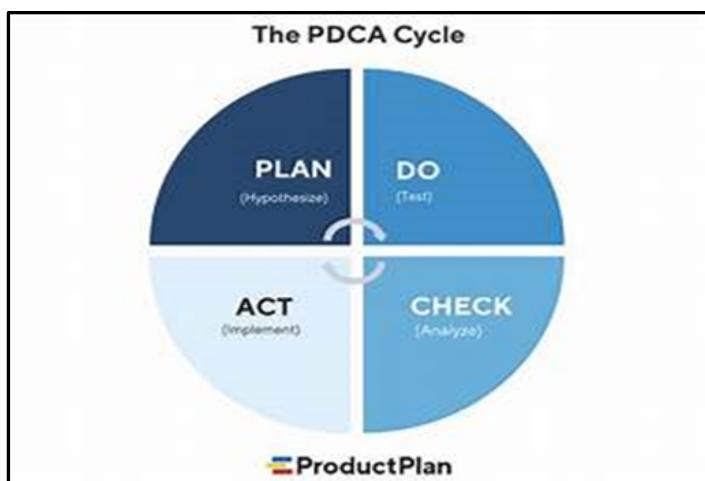


CMEIG SUSTAINABILITY TEMPLATE

A QUICK GUIDE TO HOW TO MAKE AN ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) DIFFERENCE



A suggested process to use the Plan Do Check Act (PDCA) cycle to achieve triple bottom line outcomes.



Step 1 – Have a Goal

No matter how small or big your company is, it is critical that ESG goals are aligned with the business's strategic objectives.

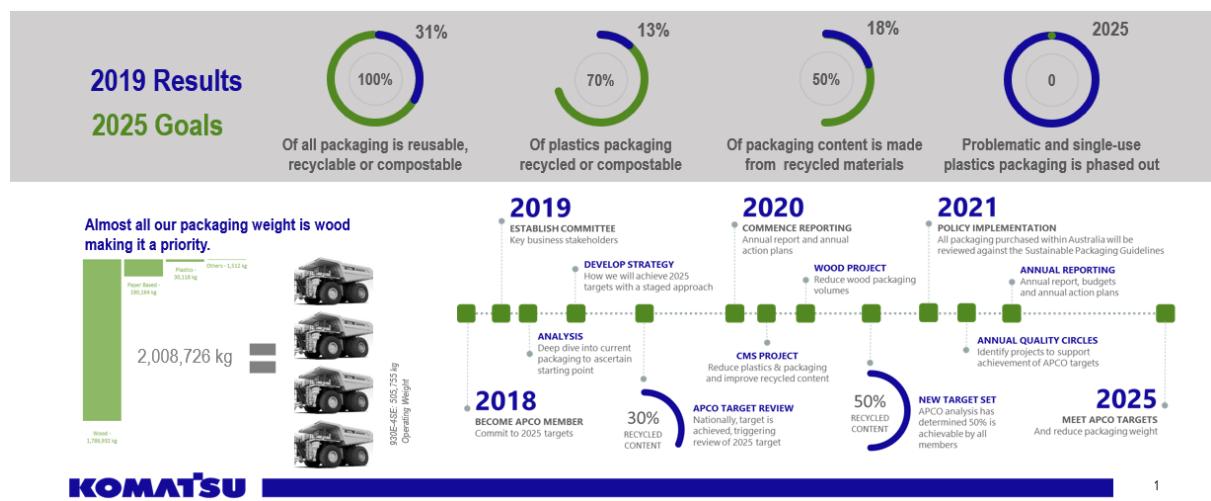
Those who write down their goal are 20% more likely to achieve them than those who don't
– *Dominican University of California Study*

Below is an example of Komatsu Australia's goal to have more sustainable packaging solutions. This ties directly to the company's strategic directive of achieving Zero Harm to people and our planet.

Social Procurement – Achieving zero harm

In 2018, Komatsu became a Brand Owner signatory to the Australian Packaging Covenant Organisation (APCO). This organisation is a co-regulatory non-profit organisation partnering with the Australian Government and industry to reduce the environmental impact of packaging in Australian communities by 2025.

We place significant value on caring for our environment as an active contributor to a circular economy and will work with our people, suppliers, partners and customers, implementing the Sustainable Packaging Guidelines.



Step 2 – Think PDCA (Plan, Do, Check, Act)

You don't need a team of analysts to achieve great results in this area. Just think PDCA!

Plan –

When considering where to start you should consider the magnitude of change that you want to achieve. For example, Hitachi uses the following Tiered Approach:

Tier 1. Base Level

Behavioural changes in the context of business as usual

Tier 2. Continuous Improvement

Operational changes requiring processes, finance and/or resource

Tier 3. Breakthrough Project

Requiring significant human capital resource and time

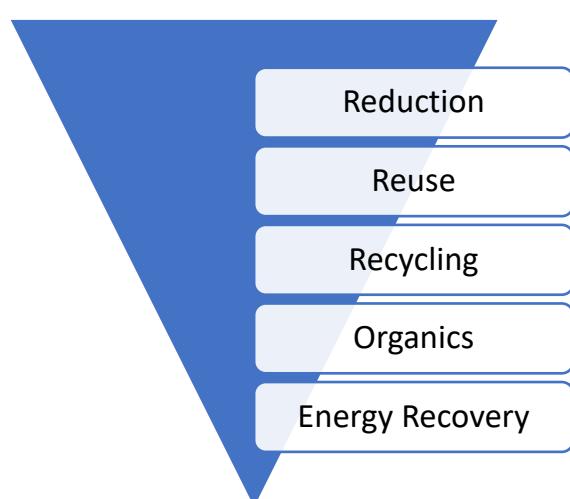
Tiers can be set as relevant to the size of the business, and initiatives aligned according to the business type

1	Waste - separation / stations General, paper, comingle
2	Wood, metal, batteries, hazardous waste, palecon oil container reuse
3	Procurement – standardised selection of paper, packaging, consumables
1	Paper waste compactor
2	Retrofit of energy efficient appliances Air conditioning
2	Retrofit of LED lighting, installation of skylights
2	Energy audit – to identify consumption for future planning
2	Water harvesting tanks
3	Oil separation installation
3	Solar power
3	Water recycling
3	Carbon offset – vehicles, energy consumption, largest CO2 producing element
3	Remanufacturing of components

It is suggested to look for the quick wins you can see around your business. The world is your oyster but here are a few suggestions to consider:

- Is there investment needed in new or existing plant or equipment? Can you install more efficient equipment to reduce your CO2 footprint?
- Are there changes to be made to your supply chain to use less fuel? Can you modify the transportation schedules or maybe partner with companies in your supply chain to align ESG activities e.g. shift to electric / hybrid vehicles.
- If you want to improve your packaging, then you should consider the following:

The Recovery Triangle – Principles for Sustainable Packaging



Reduction – What changes to design and/or process can be made to reduce waste? *Ie. Removal of excess bubble wrap.*

Reuse - What changes to design and/or process can be made to move products from single use to multiple use or repurposed for another use. *Ie. Cloth Shopping bags*

Recycling – Can the product be recycled easily? Are there changes that can be made to enable easy recycling? *Ie. PET Plastics*

Organics – Can the product be made from materials that break down in sunlight or when buried? *Ie. Wax-free cardboard*

Energy Recovery – If none of the above can be achieved, can we recover and create a source of energy? *Ie. Wood chips for Biomass Power Plants.*

Other Things to consider:

1. Ensure your packaging is designed to minimise product loss.
Packaging is no good if your product arrives to the customer broken!
2. Try to eliminate hazardous materials
3. Use recycled & renewable content where possible.
4. Design for transport efficiency and customer accessibility.
5. If able, inform the customer on how to dispose of your packaging.

Do –

You have your idea. Its now time to test it!

Spend some time investigating and analysing what you think the results will be. This could be done via systems already in place in your business or even just thinking it through over a lunch.

Things to Consider:

1. What is in the market today? What will be available in the market in the future? Below is a simple activity that Komatsu undertook to reduce the use of single use plastics by replacing its packaging tape.



Kraft- (type of paper) Derives from the German word for strength

2. Compare alternatives

Material Type	Durable (Tensile strength)	Environmentally Friendly	Secure (Adhesion)	Cost Effective	Comments
	✗ 271 n-cm	VERY BAD (100+ years)	4.2 n-cm	21c/m	Fibreglass reinforcement with high yield strength for heavier items
	△ 293 n-cm	BAD (100 years)	7.1 n-cm	8c/m	Industry standard for 50+ years, cheap and convenient
	✗ 13.2 n-cm	OK (3-5 years)	3.7 n-cm	21c/m	Low temperature resistance, photo-degradable, sensitive to water
	○ 131 n-cm	VERY GOOD	7.5 n-cm	7c/m	Zero wastage. Natural adhesive. Tamper evident. Eco Standard

3. Undertake trials if necessary

A Kraft Tape system was implemented for trial, along with a Standard Operating Procedure. A comparative test was conducted to assess how well Kraft tape withstood Australian conditions ie: 30+ degree heat and rain. These inclement conditions must not compromise part security or transport requirements for our customers



Check –

Check that the results of your change benefit the ‘Triple Bottom Line’ for your business; People Profit and Planet. Spend the time to ensure the improvements you were expect can be realised.

Komatsu Tape Case Study

The Komatsu discovered that by moving from plastic based tape to Kraft tape and standardising packing methods they were able to achieve the following:

56% reduction in tape used.

78% reduction in plastics.

63% decrease in costs.

Better adhesion for increased protection of the product.

Act –

Once you have confirmed the results of the change, then take time to implement it across the business so that everyone understands the journey you have been on and how this relates to the business goals.

Communication, communication, communication! Spread the good news and enjoy the success! Also, please share your projects on the CMEIG site so that we can all benefit and make the world just that little bit better.

SUSTAINABILITY PROJECT TEMPLATE

Step 1 – Have a Goal (SMART- Specific, Measurable, Achievable, Realistic with a clear Timeframe)

No matter how small or big your company is, it is critical that ESG goals are aligned with the business's strategic objectives.

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– Dominican University of California Study

Goal:

Step 2 -Compare alternatives – consider a number of options relative to what present used.

Alternative Options /Criteria	Criteria 1	Criteria 2	Criteria 3	Criteria 4
Option 1				
Option 2				
Option 3				

Step 3 – Undertake trials if necessary.

Check that the results of your change benefit the 'Triple Bottom Line' for your business and include measurable results for:

	Projected Savings	Projected Environmental Impact	Projected Positive Social Impact
Description of the Preferred Solution			

Step 4 – Act (and Review)

Allocate 'Troops to Tasks' to ensure that project members understand their respective responsibilities, then make it happen.

Measure your actual results and communicate the outcomes widely to inspire more activity!

	Actual Savings	Actual Environmental Impact	Actual Social Impact
Description of the implemented Solution			