Keith Ridgeway

Chief Executive Officer

Incredible Husk International

Climate and sustainability legislation:

Is your business ready?

About me

IIRSM Member

40 years a risk, health, safety quality and professional

Environmentalist and sustainability expert

Eco-friendly business entrepreneur and multiple award winner

CEO of Incredible Husk and Co designer and inventor of BAMS Ai

ISO9001 Quality, ISO14001 Environmental, ISO45001 Health & Safety ISO22301 Business Continuity, ISO27001 Information Security, ISO29001 Oil & Gas , ISO39001 Road Traffic Safety, ISO50001 Energy Management, ISO55001 Asset Management, ITAF 16949 Automotive

About Incredible Husk

Green World Award Winners
Green World Ambassadors

We are an R&D organisation dedicated to the development of natural bio-degradable and zero carbon footprint fibre-based material, made from agri-waste. Our objective is to replace unsustainable materials including plastics, bioplastics, wood, cardboard and stone.

Our mission:

to support legislators, brands, manufacturers and consumers to switch to sustainable options, helping to decarbonise industries and slow down climate change

Achievements to date

- Green World Awards
  - Environmental Development
  - Environmental Sustainability
- Appointed Green World Ambassadors.
- Designed and developed the end to end (earth to earth) production process.
- HQ plus R&D, IP, manufacturing facilities established in UK, Malaysia, Singapore, Hong Kong (China).
- Developed a range of concept products.
- Tested and certified.
- Working with sector collaboration partners to develop new products and manufacturing processes.
- Confirmed R&D partnerships with academia.

GREEN WORLD AWARDS
WINNER 2020

Environmental Development
Environmental Sustainability

Official Green World Ambassadors

What I plan to cover today

- How governments are responding to the climate challenge
- Climate taxes: when they will start to take effect
- What your organisation can do to prepare
- The support and funding available

Why we need change

- UN targets – Delay means death (IPCC report)
- The impact of non sustainable materials on the planet and global populations:
  - Deforestation and mining
  - Carbon emissions and methane
  - Damage to our ecosystems
  - Effects on people's health
  - Plastic and Other Pollution

How governments across the world are responding

New Environmental Legislation
Greenwashing regulations
Border carbon taxes
Plastic taxes
Banning of single use plastics
Product labelling

UK Environmental Act 2021

What is the UK Environment Act 2021, and why do we need it?

The Environment Act, is the UK's new framework for environmental protection.

Once the UK left the EU, rules on nature protection, water quality, clean air and other environmental protections that originally came from Brussels were at risk.

This Act seeks to fill the gap and come in line with the EU Green Deal, that the UK signed up to back 2018.

What does the Environment Act cover?

- The Environment Act allows the UK to enshrine better environmental protection into law.

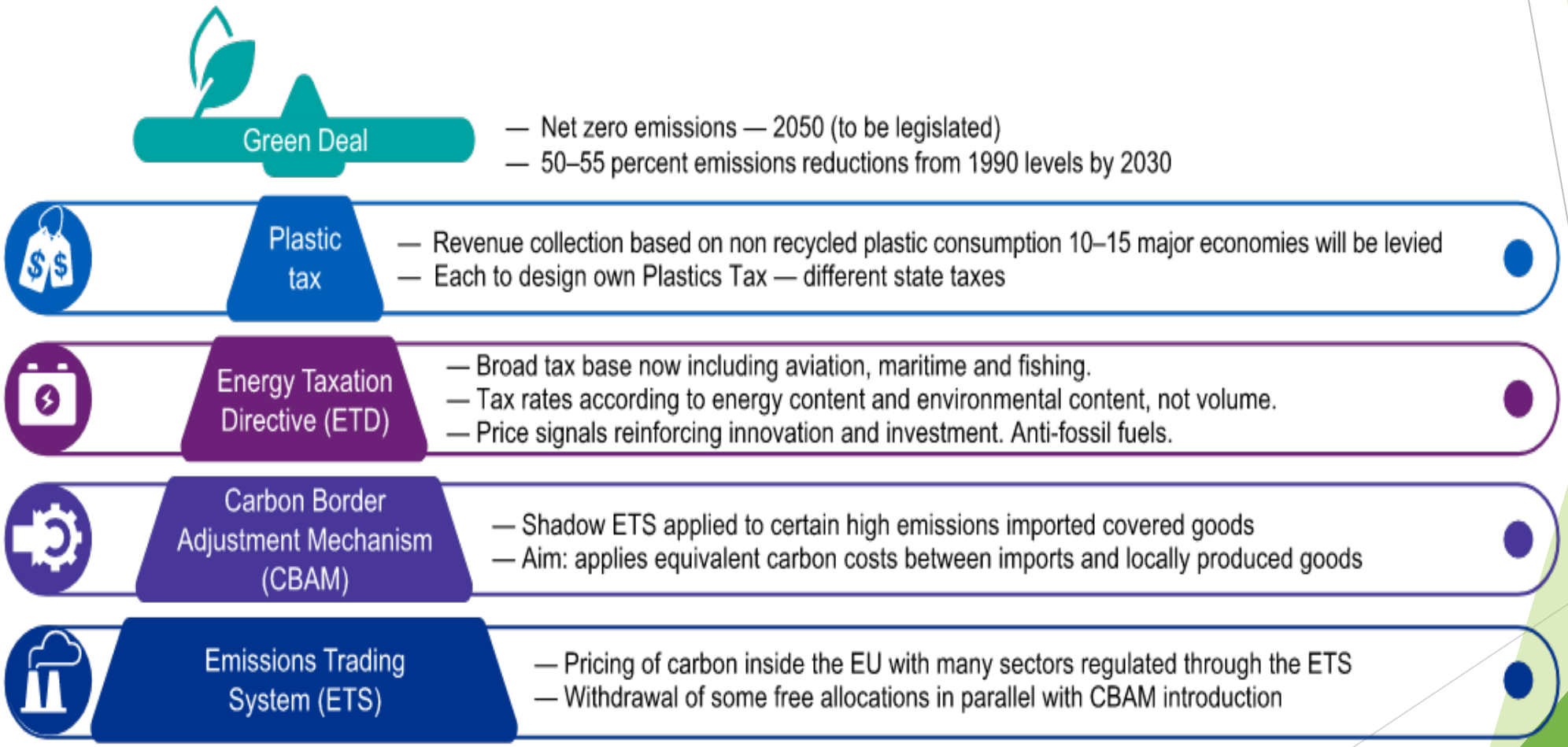
- It provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction and stop the practice of Greenwashing – this is covered in schedule 12 of the act (The producer pays)

- The Act also established a new environmental watchdog, **the Office for Environmental Protection (OEP),** which will hold the Government and other public bodies to account and ensure that environmental laws are complied with.

EU Green Deal

EU GREEN DEAL

Figure 1: Tax Measures (and other interventions) in the EU Green Deal



Source: KPMG 2021

Greenwashing

www.incredible-husk.com

What Is Greenwashing?

Greenwashing is an unethical practice by which an organisation conveys a false impression or providing misleading information, to deceive consumers into believing that an Organisation's Goods and Services are environmentally friendly.

Competition & Markets Authority (CMA)

The CMA is the UK's competition regulator responsible for promoting effective competition for the benefit of consumers. The CMA also has responsibility for enforcing consumer protecting legislation.

On 20 September 2021, the CMA published its Green Claims Code to help businesses ensure their environmental claims are green, whilst reducing the risk of misleading the public

The CMA warned businesses they had until 31st December 2021 to make sure their environmental claims comply with the law otherwise they will take action.

The Advertising Standards Authority (ASA) will also be taking action.

Green Claims Code

The Green Claims Code, ensure that any environmental claims on goods and services do not mislead customers and can be substantiated. The rules are simple:

- Claims must be truthful and accurate.
- Claims must be clear and unambiguous.
- Claims must not omit or hide important relevant information.
- Comparisons must be fair and meaningful.
- Claims must consider the **full life cycle** of the product or service.
- Claims must be substantiated

The new code aims to put an end to greenwashing by outlining these six key principles businesses must follow when making environmental claims. If they don't, they will face legal action.
https://youtu.be/R9FwP_o9EuQ

Border Carbon Taxes

NEW Border Carbon TAXES

- The first EU Boarder Carbon Tax is planned to come into force 2023.
- The uniform call rate is set at € 0,80 per kilogram.
- EU Emissions Trading Scheme, which was set up in 2005 as a market instrument to reduce carbon output, the CO2 price has been very low.
- In 2016 it was just €3 per ton.
- In 2021, the price per ton of CO2 rose to €69 per ton within the EU, It will increase year on year

.

How will the Border Carbon TAXES be charged

There are four options currently being considered:

- **Customs duty**: Tax will be applied to imports by selected sectors at the EU border.
- **Excise**: Tax will be applied at the point of consumption for products in relevant sectors.
- **Shadow ETS**: A secondary market established exclusively for imports and matches the EU ETS, but credits are not interchangeable.
- **ETS obligation**: Importers must purchase EU ETS allowances to cover their emissions.

Carbon Footprint

Why calculate your organisational carbon footprint?

Calculating your organisational carbon footprint is the first step towards reducing it.

It also means you can report the figure or gain independent certification for marketing or corporate responsibility purposes, or to meet the requirements of climate change legislation.

Reporting your footprint accurately is critical - otherwise it could be classed as greenwashing

Contacting the Carbon Trust is a good place to start

There are three different types of carbon footprints

Organisational Carbon Footprint
measures the GHG emissions from all the activities across the organisation, including energy used in buildings, industrial processes and company vehicles.

Product Carbon Footprint:
Measures the GHG emissions over the whole life cycle of a product (goods or services), from the extraction of raw materials and manufacturing right through to its use and final re-use, recycling or disposal

Supply Chain Carbon Footprint:
Measures the carbon impacts of the raw materials and services that are purchased by an organisation in order to deliver its service(s) and/or product(s).

Calculating your organisational Carbon Footprint LCA

- It is critical your Organisation Good & Services LCA (Life Cycle Analysis) is calculated using an approved UN LCA calculator
- Contacting the Carbon Trust is again a good place to start
- My LCA calculator choice is “One Click”

What does a Product (Services and Goods) LCA Measure?

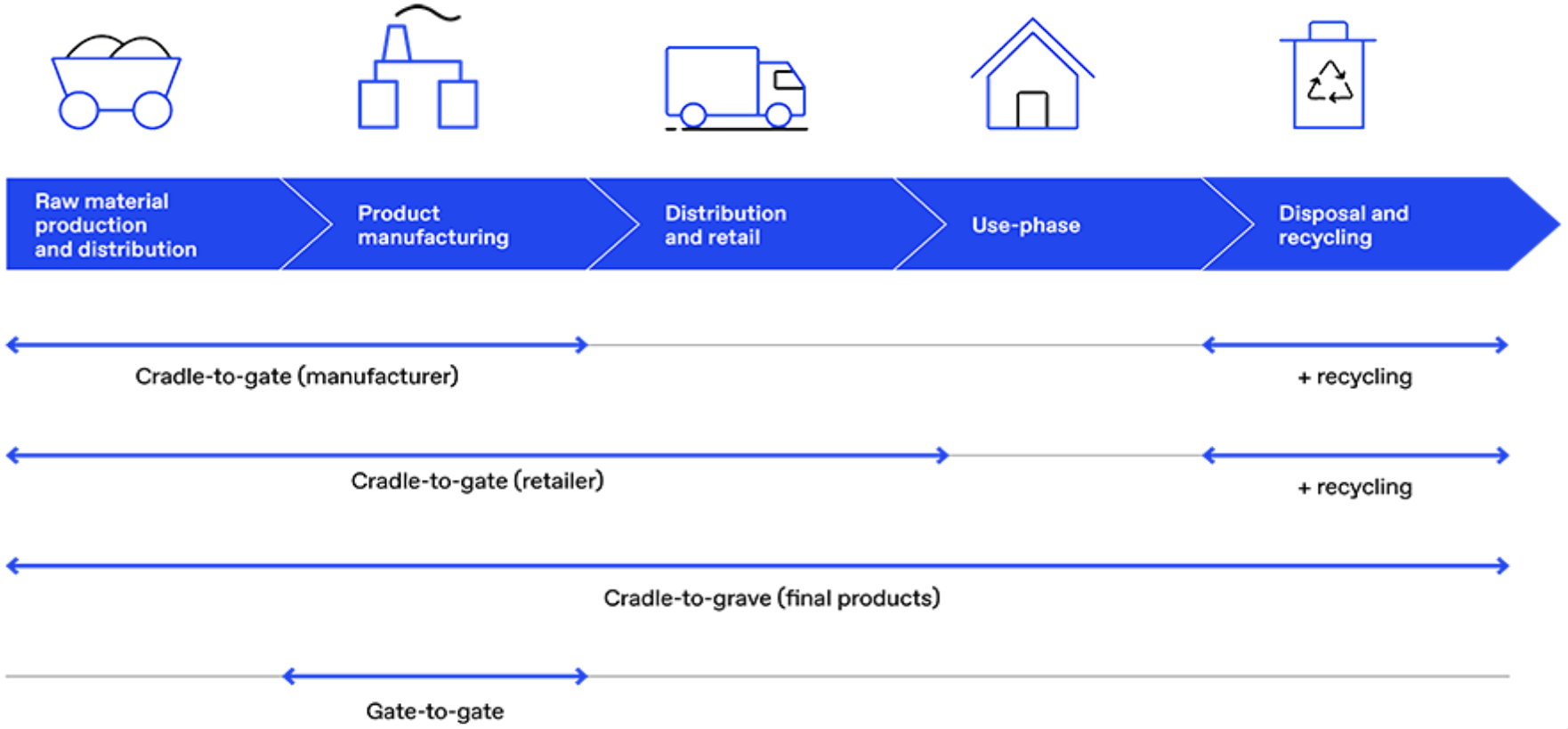
Life cycle product carbon footprint measures the total greenhouse gas emissions generated by Services and Goods, from extraction of raw-materials, to end-of-life. It is measured in carbon dioxide equivalents (CO2e).

Services and Goods footprints should be associated with a scope or boundary, the most common being:

Cradle-to-gate: mostly used for business-to-business (B2B) products. This measures the total greenhouse gas emissions from the extraction of raw materials through to product manufacture up to the factory gate.

Cradle-to-grave: mostly used for business-to-consumer (B2C) products. This measures the total greenhouse gas emissions from the extraction of raw materials through to the product's manufacture, distribution, use and eventual disposal.

Product LCA Carbon Footprint



Independent Life Cycle Carbon Footprint Certification

- The Carbon Trust Standard is the world's leading independent certification of an organisation's impact on the environment by verifying action on energy use and associated greenhouse gas (CO2e) emissions, water use and waste output.

- The Carbon Trust Standard recognises organisations that take a best practice approach to measuring and managing their environmental impacts, achieving real reductions in these year-on-year.

- The standard provides a framework for organisation's to enhance their operational sustainability, improve efficiency and resource management at the same time as cutting costs.

Carbon Trust certified Carbon Footprint label

- This label shows that the carbon footprint for this product has been certified by the Carbon Trust. The details of the certification are shown in the right-hand panel.

Plastic and Taxes

www.incredible-husk.com

Plastic and Bio-Plastic takes a long time to degrade & leaches toxins

- Standard plastics are not compostable — in fact, they can sometimes take between 450 to 1,000 years to decompose on landfill.
- When they are left to degrade, there is concern over harmful chemicals leaching out into the environment.
- Plastics leach toxins into the food or drink they contain, which then make their way into our bodies.

According the UN Intergovernmental Panel on Climate Change
Plastic production and disposal resulted in 850 million tons of greenhouse gas emissions in 2019 and will be up to 2.8 billion tons by 2050 if we do nothing to prevent it

Plastic Can harm wildlife

Scientists recently found that 100% of animals washed up on British shores had plastic in their stomachs.

Every year, plastic kills 1 million sea birds and 100,000 sea mammals, turtles and fish.

Plastic pollution is devastating to wildlife because it doesn't simply disappear. It breaks down into small pieces which can be easily ingested. Plastic is toxic and can kill wildlife or make them more susceptible to disease.

Animals can become trapped and injured by plastic and it disrupts habitats, making it hard for some species to live and breed naturally, leading to depletions in populations.

www.keepbritaintidy.org/get-involved/support-our-campaigns/plastic-challenge/impact-wildlife

Plastic Can harm Humans

The Plastic Health Summit took place on October 21st, 2021, in Amsterdam.

The focus was on environmental health and human health and the linked between plastic pollution

Plastics affect our health via three pathways:

- We eat, drink and breathe microplastics every day. These small plastic particles may harm our health once they have entered our bodies.
- Plastic products contain chemical additives such has PAH's. A number of these chemicals have been associated with serious health problems such as cancers, infertility and neurodevelopment disorders like ADHD and autism.
- When plastics and microplastics end up in the environment, they attract micro-organisms, such as harmful bacteria (pathogens). If microplastics containing these pathogens enter our body, they may increase the risk of infection.

Plastic Found in Human Body

11 out of 13 patients who underwent surgery, had polypropylene and PET plastic found inside their body organs.

Microplastic pollution has been discovered lodged deep in the lungs of living people for the first time. The particles were found in almost all the samples analysed.

The scientists said microplastic pollution was now ubiquitous across the planet, making human exposure unavoidable and meaning “there is an increasing concern regarding the hazards” to health.

European Commission Single Use Plastics (SUP) Directive

European Commission Single Use Plastics (SUP) Directive, which the UK signed up to, came into force July 2019.

Targeted the 10 most single-use polluting plastic products found on UK and Europe's beaches and in UK and Europe's seas.

The Aim of the Directive:

- To reduce the 10 most common single use plastic items.
- Introduces a collection systems to recycle 90% of all single use plastic items by 2029.
- Extend the manufactures and sellers liability schemes for those who create the waste and pollution. This is cover in schedule 12 (producer pays principles) of the UK Environmental Act 2021
- The directive to facilite the introduction of a circular economic model by 2030.

What are the 10 Single Use Plastics (SUP)

- Cotton bud sticks
- Cutlery, plates, straws and stirrers,
- Balloons and sticks for balloons
- Food Containers
- Cup for beverages
- Beverage containers
- Cigarette butts
- Platsic bags
- Packets and Wrappers
- Wet Wipes and Sanitary items

What will the plastic tax cost?

Article 2 states “the application of a uniform call rate to be applied to the weight of plastic packaging waste generated in each Member State that is not recycled” among categories of own resources to generate revenue. As envisaged by the Decision, the uniform call rate shall be EUR 0,80 per kilogram.

UK Plastic Packaging Tax

1st April 2022 the UK Government implement a tax of £200 per metric tonne on all plastic packaging components that do not contain at least 30% recycled material.

The tax will apply to all plastic packaging manufactured or imported and placed on the UK market, alongside transport or tertiary packaging used in the export of goods.

How much does plastic contribute to climate change?

According to researchers from the Intergovernmental Panel on Climate Change, plastic production and disposal resulted in **850 million tons of greenhouse gas emissions in 2019** and may be responsible for up to 2.8 billion tons by 2050

How your organisation can prepare

How your organisation can prepare

Step 1. Life Cycle Cradle to Grave Process Map.

Step 2. MIFA

Step 3. SIPCO Supply Chain Analysis

Step 4. SWOT & PESTLE

Step 5. Asset Information Risk and Impact Assessment

Step 6. Carry out Carbon Footprint LCA

Step 7. Change Management - Consider potential areas for change

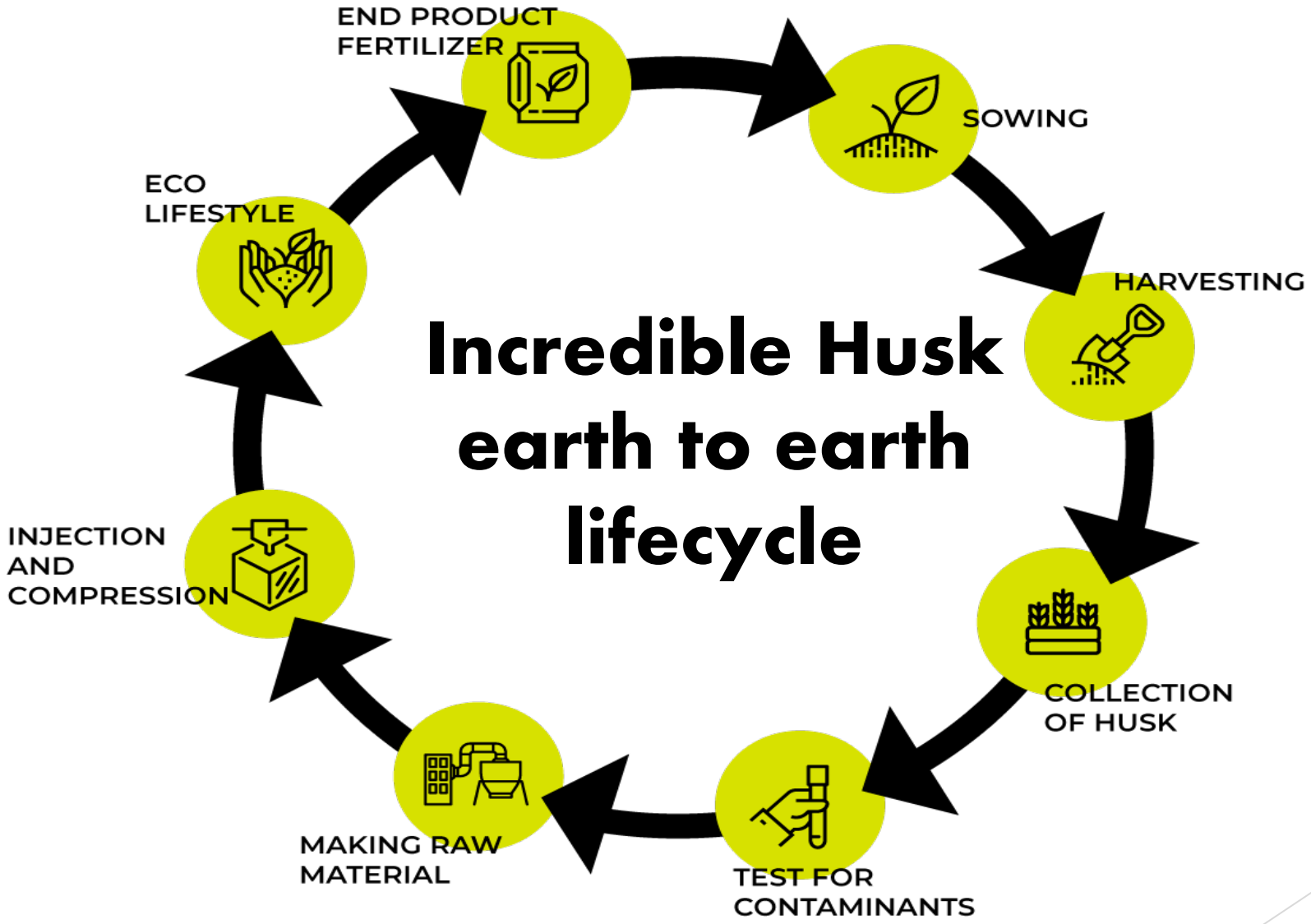
- Labelling
- Communications & Marketing messages
- Education
- Upskilling workforces

Step 8. Carbon Footprint Certification

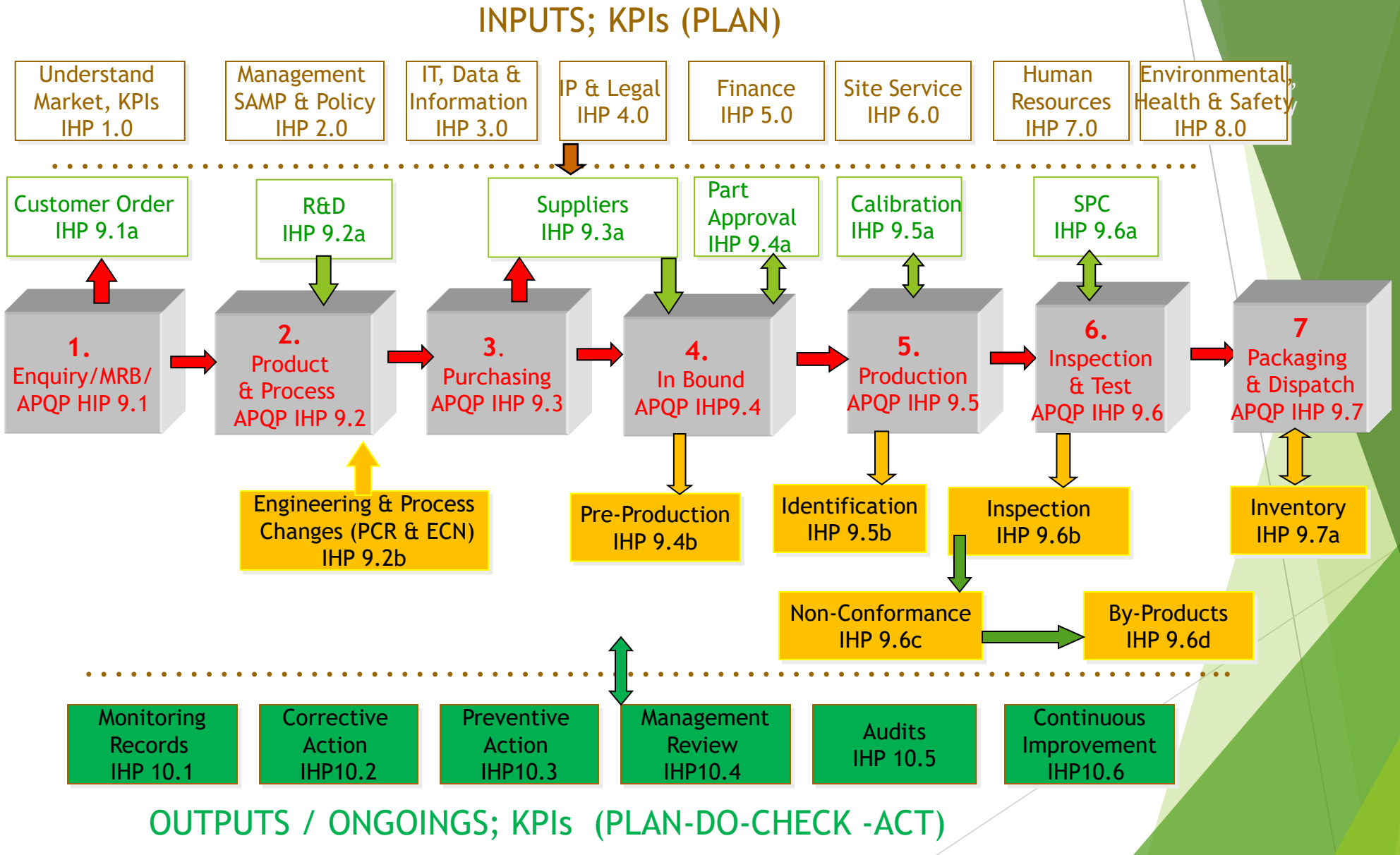
* Embark on an R&D program to carry out the above and find climate friendly solutions to your organisation's manufacturing processes

Incredible Husk - BAMS

Incredible Husk Gradle to Grave - Life Cycle Process Map



Incredible Husk BAMS



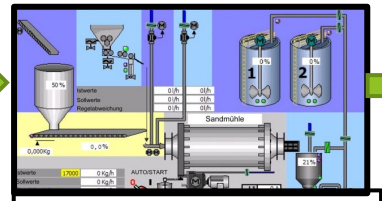
IHIG BAMS MIFA – PURE

Soil Management

Husk Collection

Transportation

Raw Material Storage



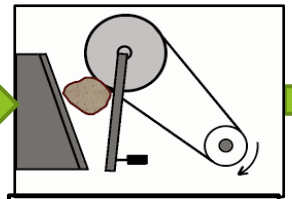
Green Box Recipe Mixer

Pellet Storage

Transportation

Storage & Hopper Injection loader

Organic Fertiliser



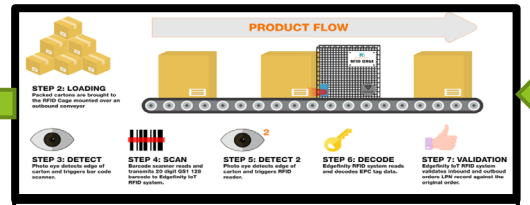
Product Crushing

Transportation

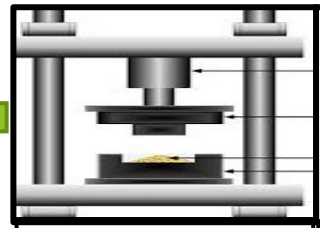
Collection & Recycle

Product Tableware

Transportation



Packaging and Logistic



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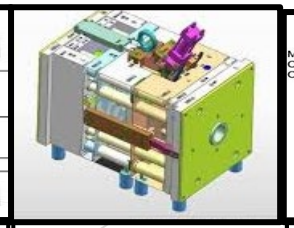
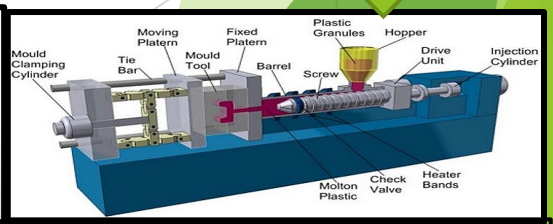
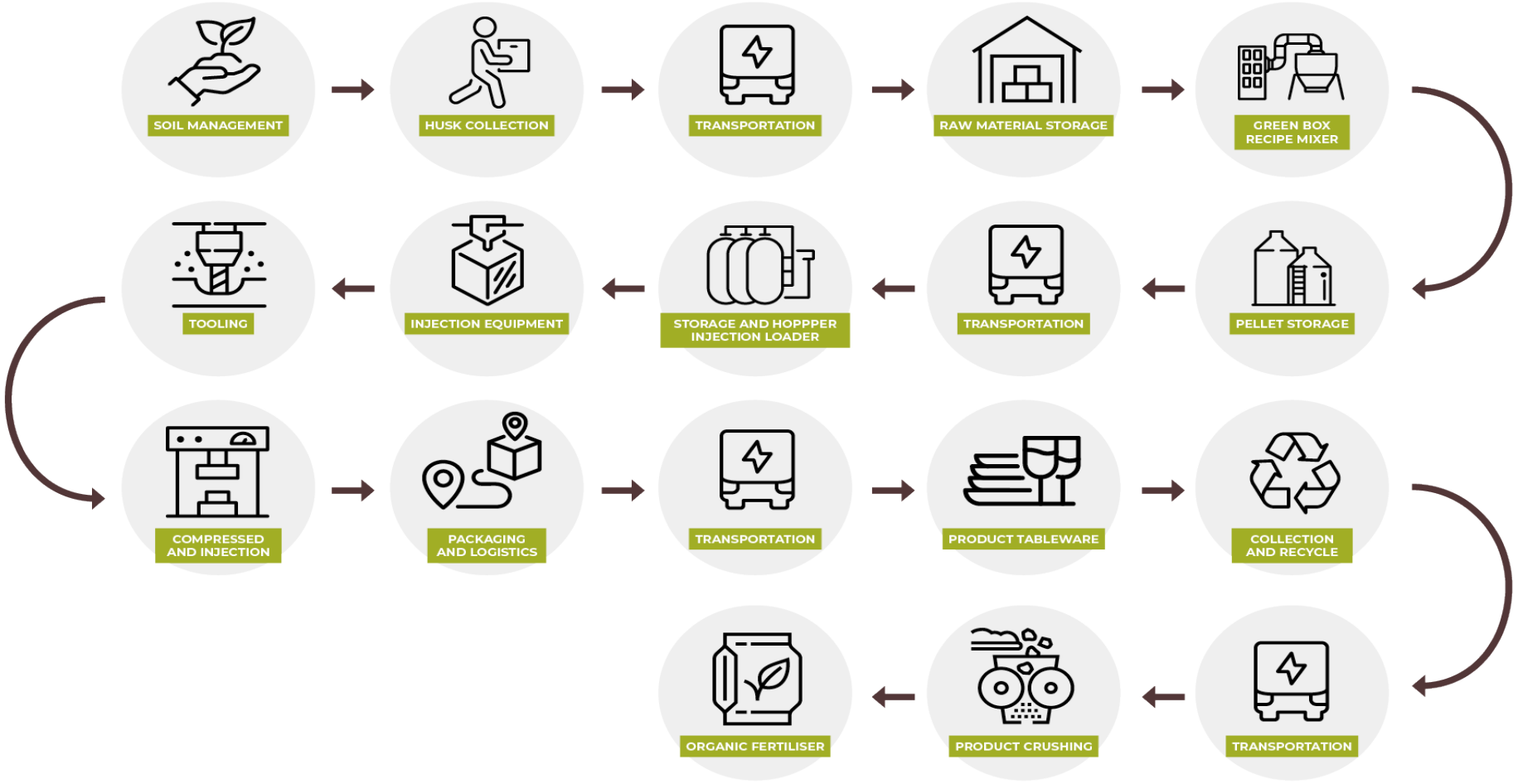


Tooling



Injection Equipment

Incredible Husk BAMS Ai PMS Asset Information



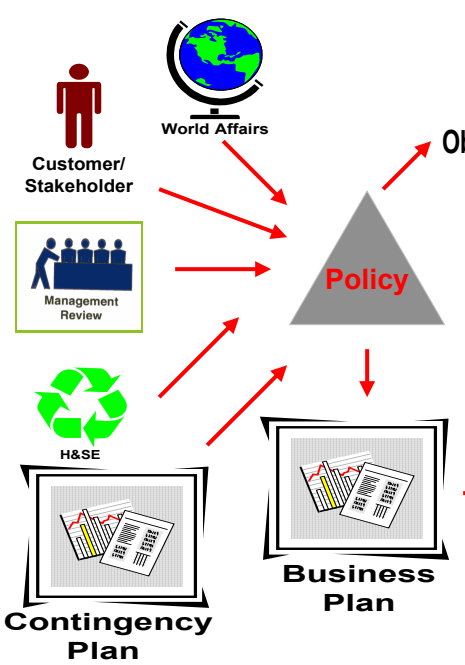
BAMS
Top Management Ensure

Management Commitment is by:
Communicating importance of meeting customer & regulatory requirement, and the monitoring of all processes to assure effectiveness and efficiency

Objectives and Targets are:
BAMS Established which is based on, and to deploy the policy, measurable and which is included into a Business Plan.

Data, Information & Communication:
BAMS is controls both the internal organisation, interested and external parties.

BAMS
Motivated and Empowered



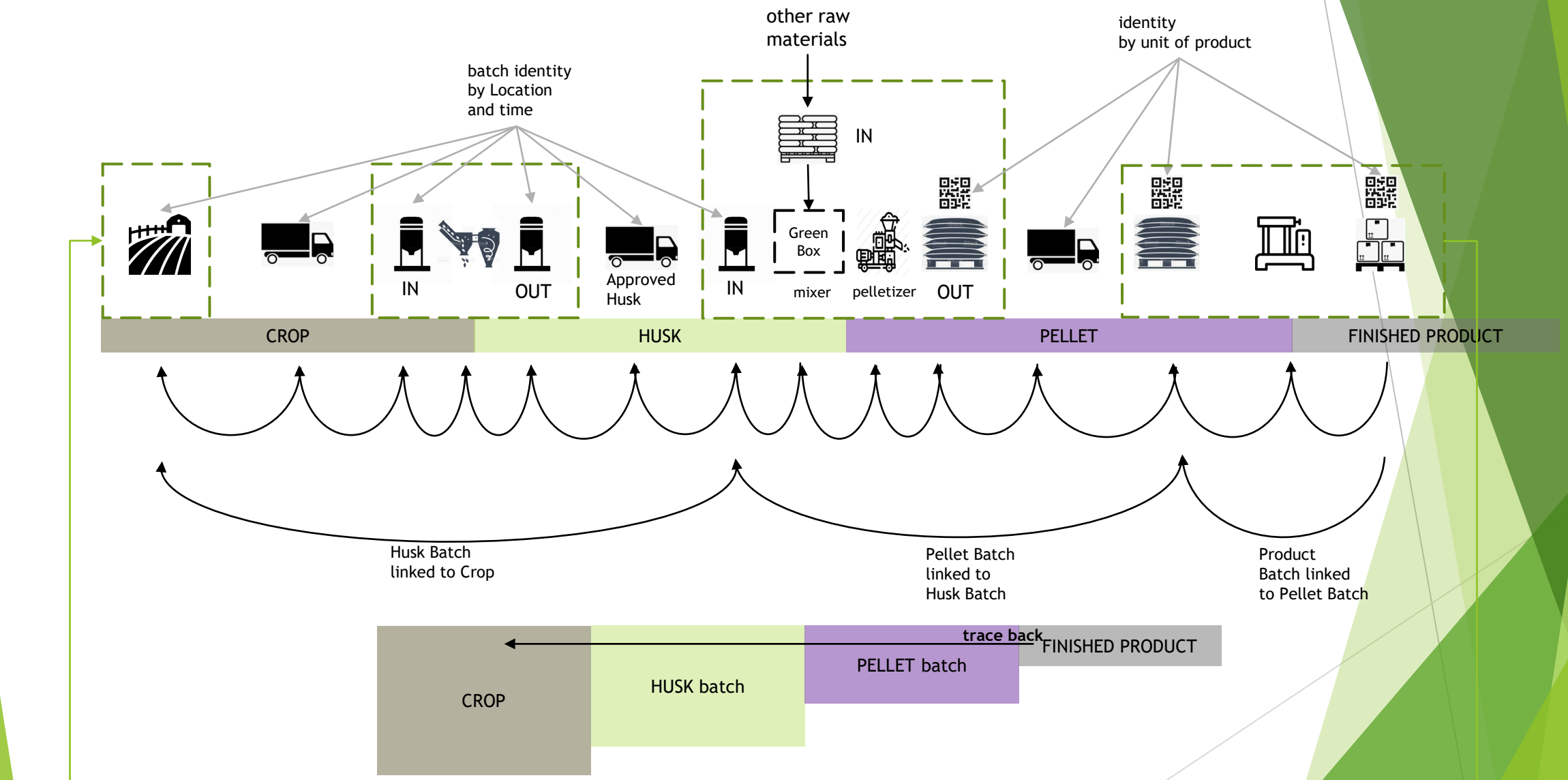
In Putts

OUTPUTS ONGOINGS

Management identify & provide Resources needed to:
Implement & maintain BAMS, improve its effectiveness, enhance

Management Board:-
BAMS is developed top management reports on performance & improvement, ensures promotion of awareness of customer requirements

BAMS AI TRACEABILITY AND ASSURANCE



Incredible Husk USP
Communications & Marketing messages

IHIG ECO Material Comparison Chart								
Material	Zero Carbon	Natural Waste	Natural Biodegradable	Recyclable	Renewable Source	Compostable	End of Life Fertiliser	Contain PAH's
IHIG ECO	YES	YES	YES	YES	YES	YES	YES	NO
PLA - Bio Plastic	NO	NO	YES	YES	YES	YES	NO	NO
PET - Bio Plastic	NO	NO	NO	YES	NO	NO	NO	YES
Plastic	NO	NO	NO	YES	NO	NO	NO	YES
Wood	NO	NO	YES	YES	YES	NO	NO	NO
Paper	NO	NO	YES	YES	YES	YES	NO	NO
Cardboard	NO	NO	YES	YES	YES	YES	NO	NO
Meatal	NO	NO	NO	YES	NO	NO	NO	NO
Glass	NO	NO	NO	YES	NO	NO	NO	NO

Incredible Husk USP
Communications & Marketing messages

- Completes lifecycle as organic fertiliser*
- Biodegrades under natural conditions in 90 days*
- No compromise on quality or performance
- EU compliance for food contact
- No toxic chemicals, PAHs or PLAs
- Carbon negative lifecycle
- Dishwasher and oven safe
- Agricultural by-product = sustainable
- Adapts to product specifications and elongation
- Antibacterial
- No synthetic polymers, rubber resin or chemical treatment

*When crushed or broken – no high carbon industrial processing required

Support is available for innovation

R&D grants
Small business loans (NatWest)
Criteria
Process
….

AZETS

R&D Tax Credits

April 2022

The R&D Team

Stuart Bentley

Stuart is a Tax Director in the Central Region. He specialises in assisting clients across all industries with their Research & Development ("R&D"), Patent Box and other Creative Sector tax relief claims.

Stuart has a Degree in Materials Science and Technology and a Doctorate in Manufacturing Engineering, so has a firm grasp of Research principles to deliver robust reports that set out to HMRC, in a compliance focussed manner, how the qualifying criteria have been met.

Jay Mistry

Jay Mistry is an experienced engineer with a specialism in R&D tax relief claims. He has a demonstrated history of working in the automotive and engineering industry. He is skilled in delivery of technical projects in the engineering industry,

He has specialised in materials cost reduction engineering working alongside suppliers to increase efficiencies and decrease cost of production of parts through redesign, material selection and process enhancement.

Qualifying Activity

What does that look like?

R&D for tax purposes takes place when a project seeks to achieve an advance in science or technology

New Product Development

Appreciable Enhancements

Developing cost/process efficiencies

Qualifying Costs

Contact Us

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