

Stewardship of Chemicals and Hazardous Substances



**Product
Stewardship
Centre of
Excellence**

Webinar, 8 Sep 2022

www.stewardshipexcellence.com.au



Product Stewardship Centre of Excellence



@stewardshipAU

Today's speakers



Rachel Burgess
*Chemicals Management
Branch, Department of
Climate Change, Energy, the
Environment and Water*



Sophi MacMillan
*Australian Resilient Flooring
Association*



David Baggs
*Global GreenTag
International*



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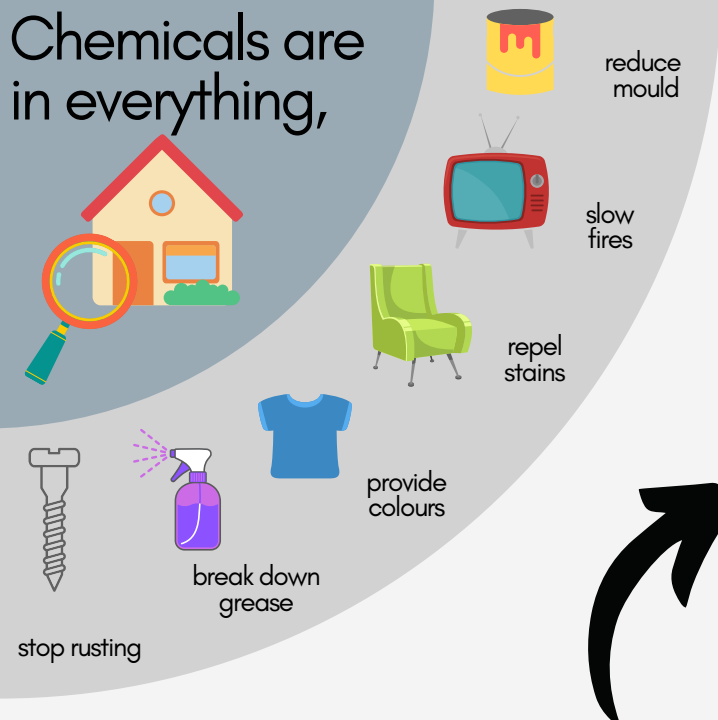


Sophi MacMillan
*Australian Resilient Flooring
Association*

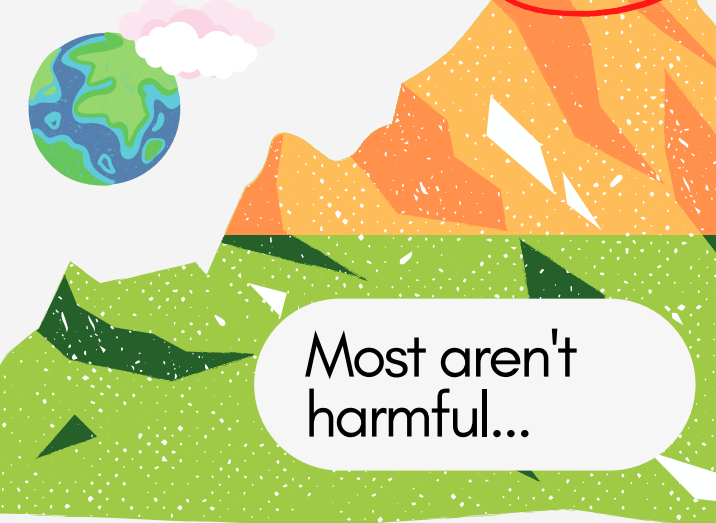


David Baggs
*Global GreenTag
International*

Chemicals are
in everything,



and found
everywhere.

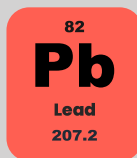


But some are harmful if they
aren't managed
properly.



For example, lead
in house paints

Before 1970, paints
containing high levels of
lead were used in many
Australian houses.



Lead in paint can be
dangerous if paint dust,
flakes or fumes are
swallowed or inhaled.

Lead is stored in bones
and teeth, and may
damage liver, kidneys
and brain function.



To prevent harm...

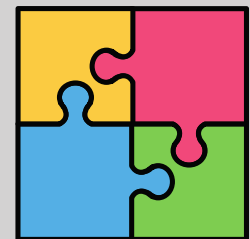


Good chemicals
management can
prevent harm to the
environment and humans.

The solution
involves shared
responsibility
between...



Community
Industry
Scientists
Government



DCCEEW
Chemicals Management Branch

IChEMS
Industrial Chemicals
Environmental
Management Standard



IChEMS 101

Strengthening
chemicals
management laws



Implemented by
all jurisdictions



Aligns with
international
standards



Easier for industry to
choose less harmful
chemicals



Protecting our
land, air and
water



The **industrial chemicals roadmap** sets out how Australia is delivering the new IChEMS framework.



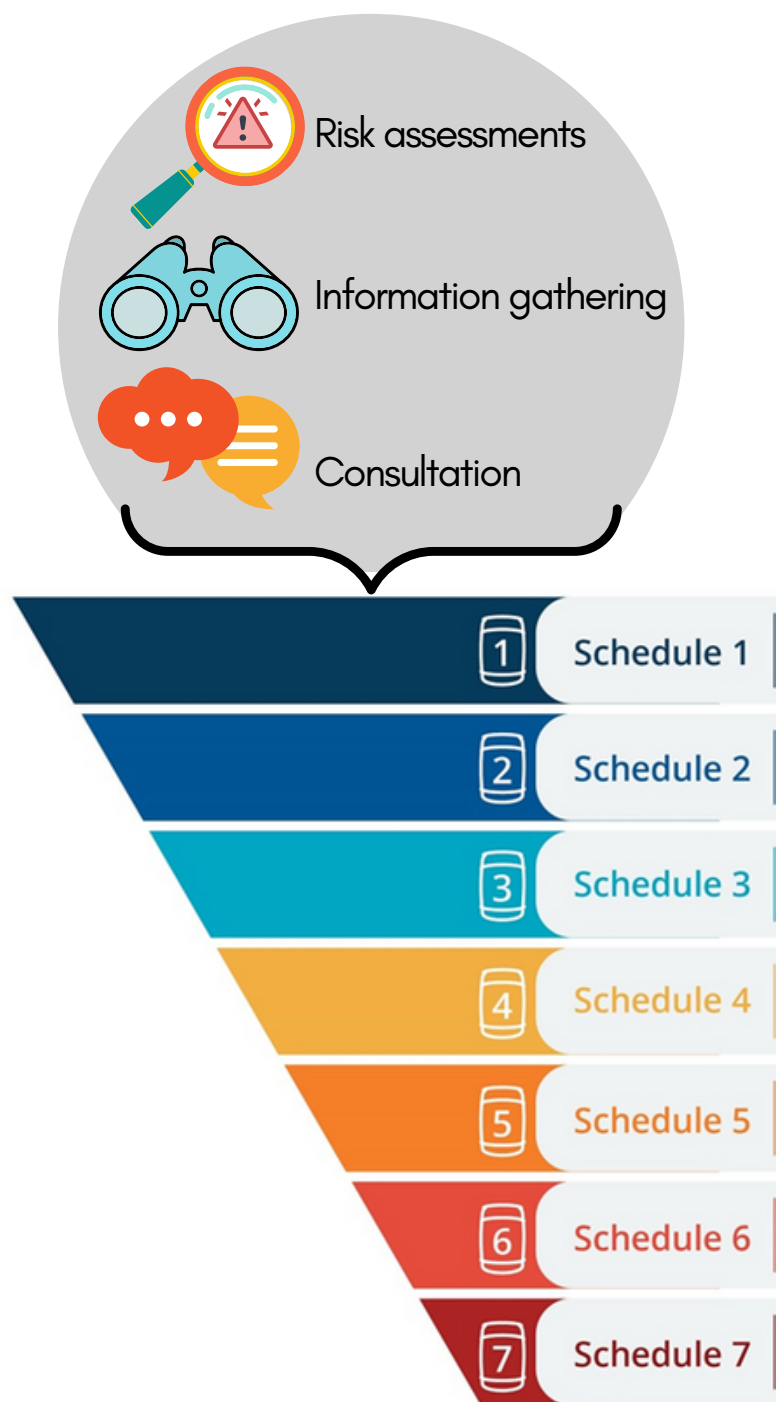
IChEMS scheduling of chemicals will provide information on their level of concern



The **IChEMS Register** will be a record of chemical scheduling decisions

Public consultation and **publicly accessible information**



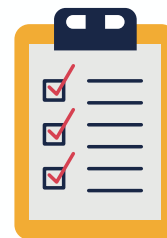


Current priorities

2022



Chemicals of concern that have existing Australian Government risk assessments.



Industrial chemicals listed under the **Stockholm Convention** but not yet ratified by Australia.

2023



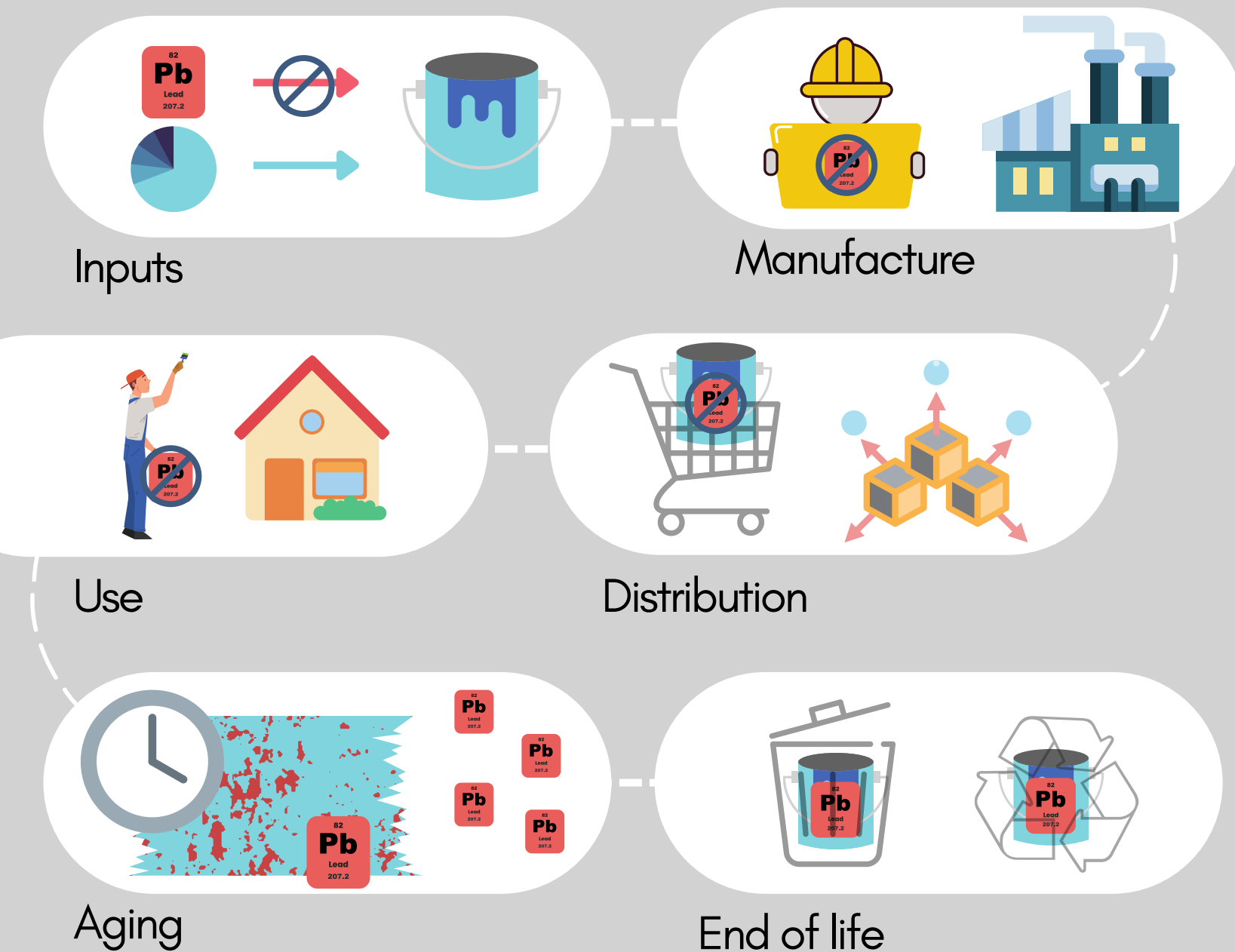
Aligning with existing or emerging Rotterdam, Stockholm and Minamata obligations.



Chemicals of emerging concern.
Lower concern chemicals.
Groups of chemicals.



The journey of lead in paint after the 1970s



Chemical choices
have ongoing
impact

Lead can still be found in...



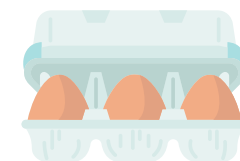
Soils and
backyards

Older
homes



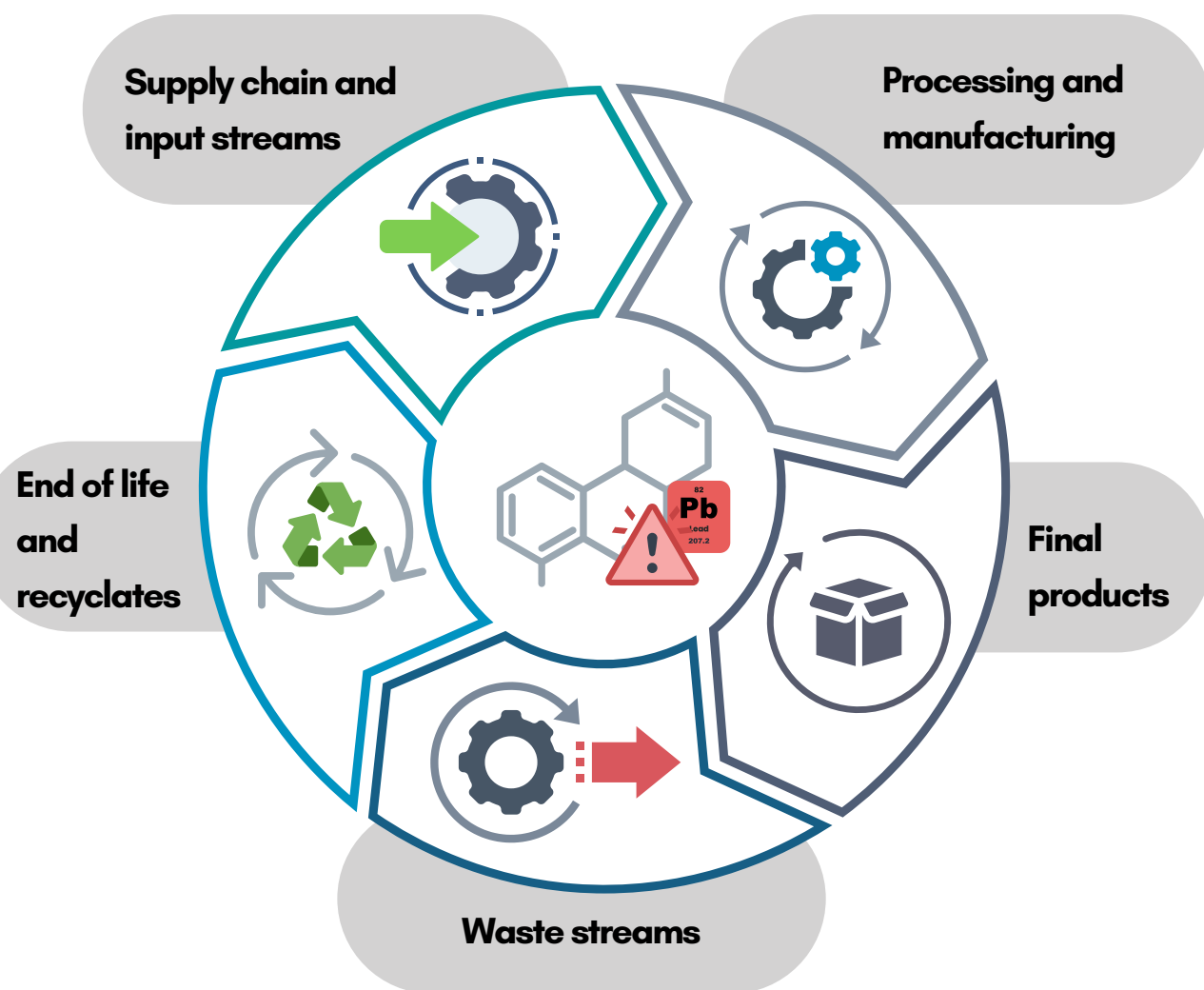
Recycled
material

Backyard
chicken eggs





Chemical exposure and hazard can differ across a product life cycle



Product Stewardship supports IChEMS through...



Supply chain responsibility and accountability



Redistributing the costs of end of life management



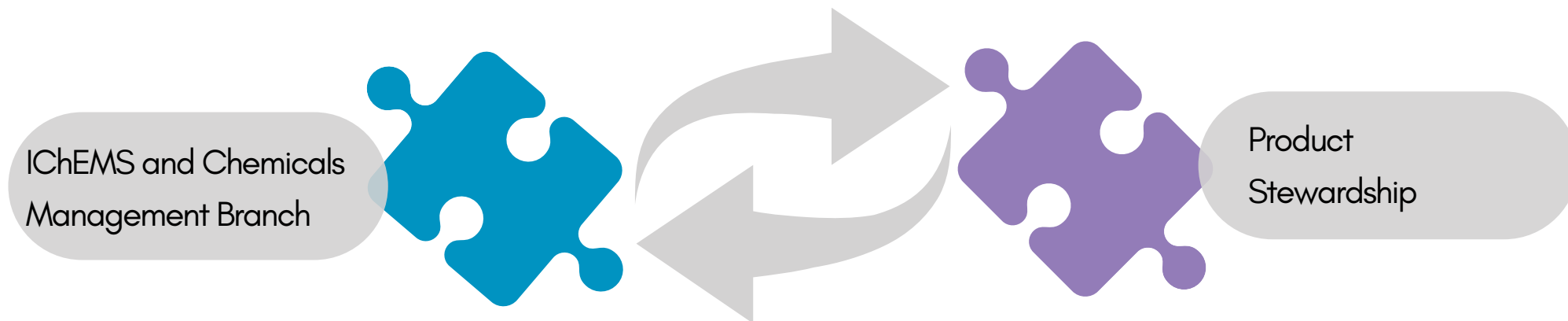
Reducing environmental impacts along the supply chain



Reducing the use of chemicals of concern



IChEMS supports Product Stewardship...



To achieve...



Supply chain
transparency and
consumer right to
know



Innovation using
safe and
sustainable by
design approaches



Safer
chemical
substitution



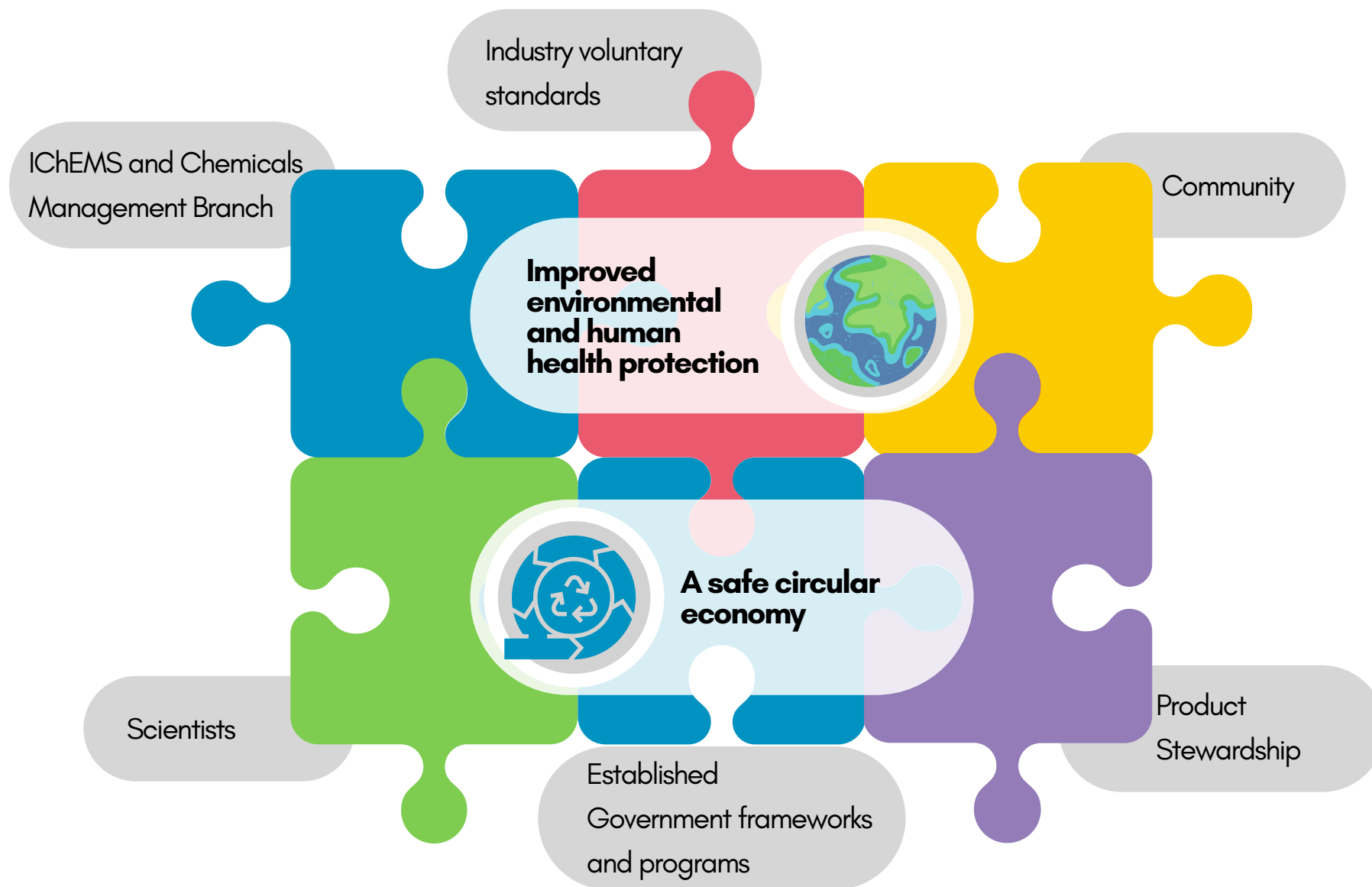
Safe management
of chemical risk
during use



Safe management
of chemical risk
at end of life



Working towards common goals



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ARFA

AUSTRALIAN RESILIENT FLOORING ASSOCIATION

RESILOOP



ARFA

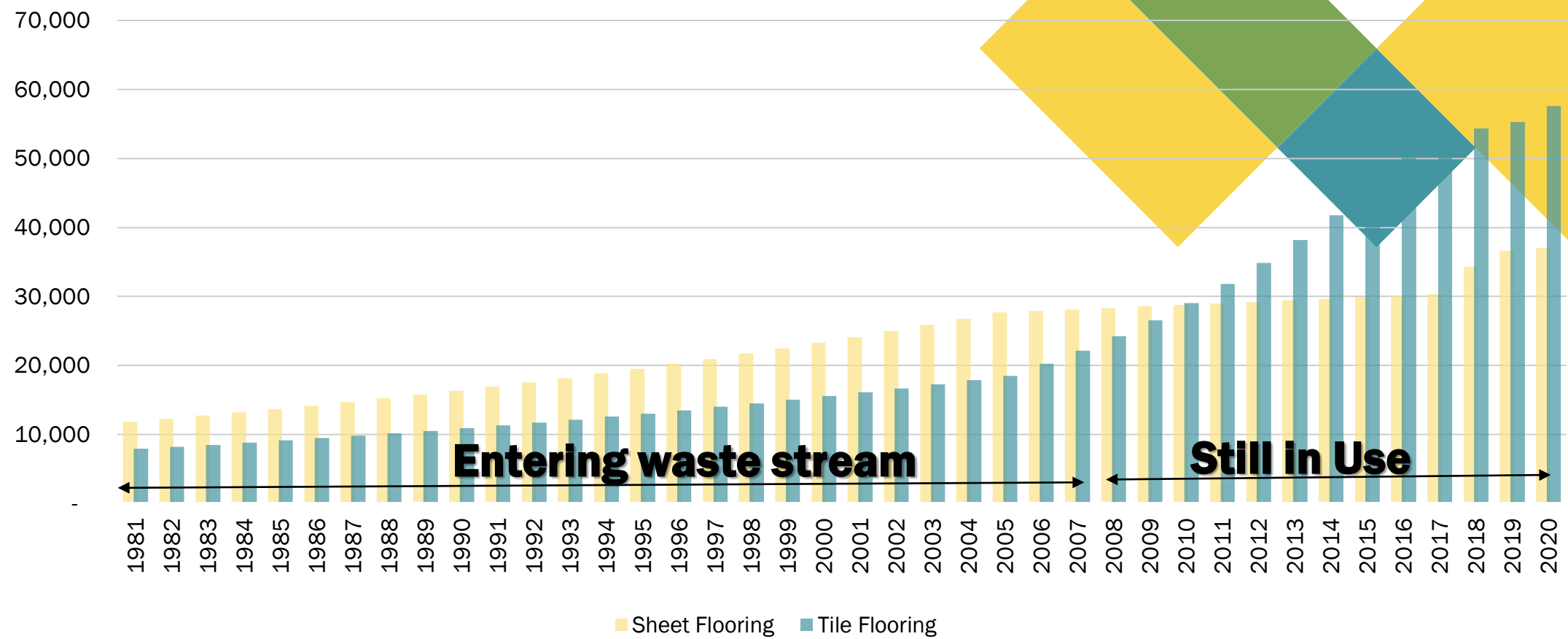
AUSTRALIAN RESILIENT FLOORING ASSOCIATION



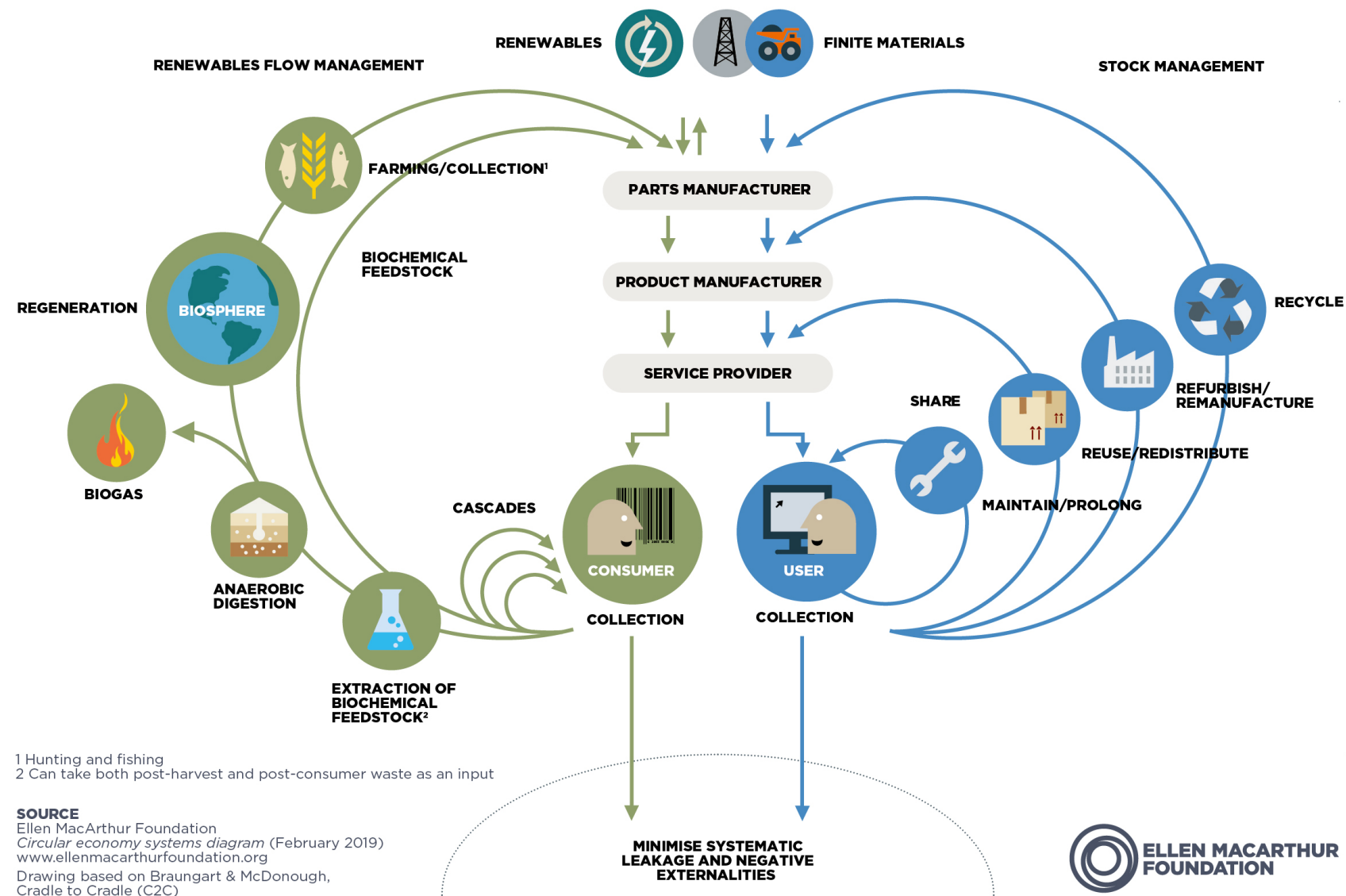
ARFA

AUSTRALIAN RESILIENT FLOORING ASSOCIATION

AUS Vinyl Flooring Consumption tpa



Product Stewardship & Circular Economy



Strategies to support a Circular Economy

- IChEMS
- Waste management risk assessments
- Thresholds for recyclate – decreasing over time
- Workable timelines for transition
- Encapsulation to protect health & environment
- R&D

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SUPPORTING YOUR LEAP INTO THE FUTURE...

CERTIFYING THE
WORLD'S BEST
SUSTAINABLE PRODUCTS

AS SEEN ON




**GLOBAL
GREEN TAG®**
INTERNATIONAL

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Ecolabelling's Role in Reducing Product Toxicity

WELL™ BUILDING STANDARD
& GREEN STAR® RECOGNISED
LEED® COMPLIANT

YOUR 'ONE STOP' PRODUCT CERTIFICATION - GLOBALLY

What is an Ecolabel?

An independent assessment and ultimate certification of a product's health and environmental characteristics in accordance with a standard, often including its entire life cycle and usually represented by a Graphic Mark signifying approval.

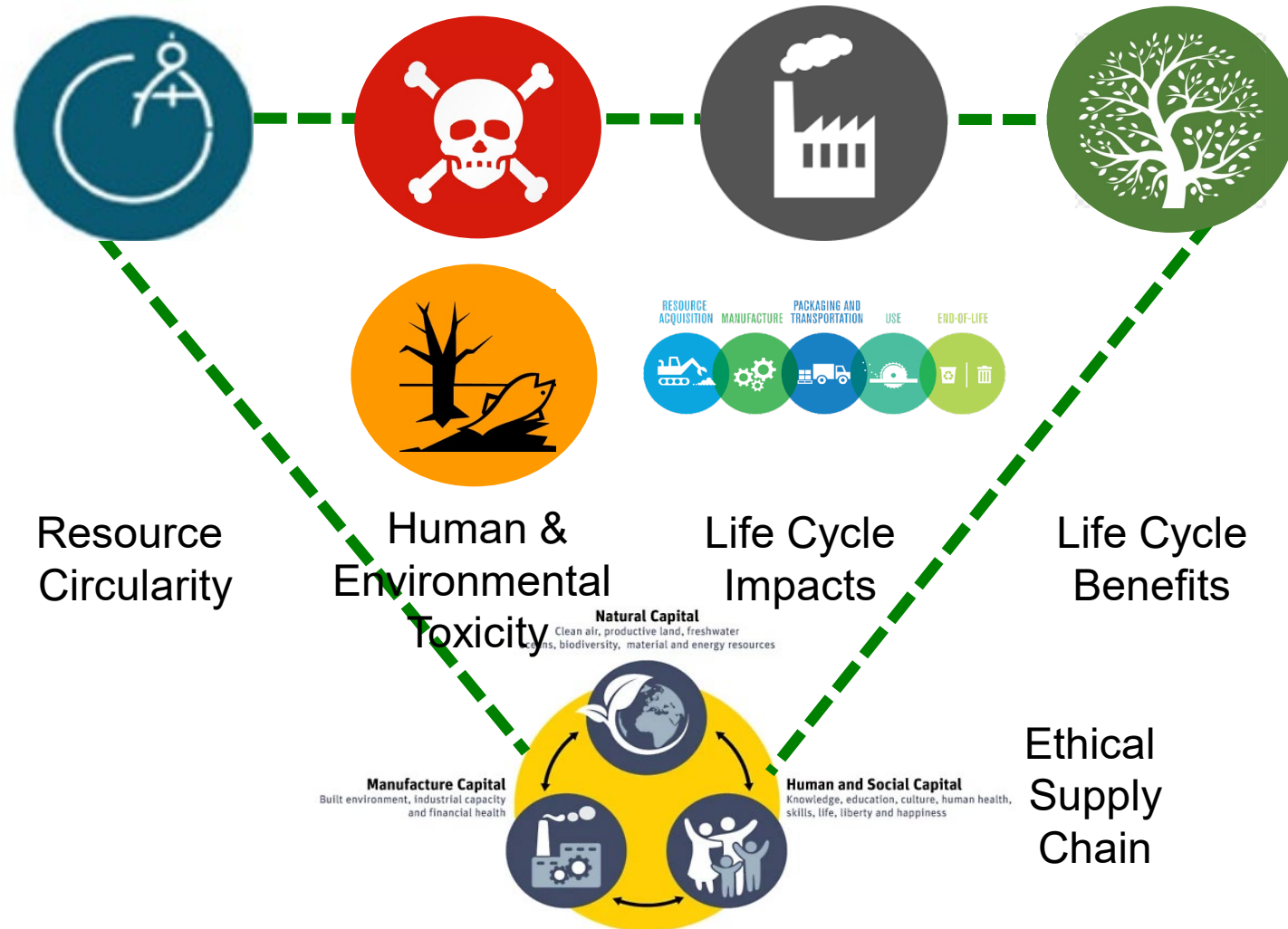
The 'Type 1' Ecolabel Standards are ISO 14024 & ISEAL

Trusted Confidants – Fearless Investigators

Ecolabels are the trusted intermediary
between manufacturers and markets-
reviewing & assessing confidential information
and secret ‘herbs and spices’ recipes,
and reporting via **Graphic Marks** and Transparency Reports
that still protect commercial IP.

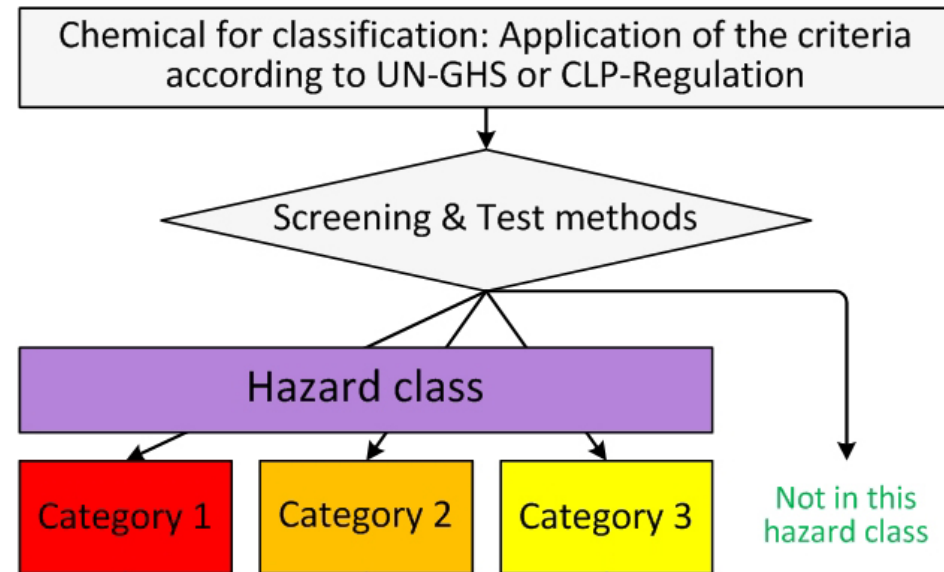


A successful CE needs metrics for all key concerns



Toxicity

All Ecolabels
eliminate some
toxic ingredients
as part of their
Standards





safe work australia

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Adoption of GHS Revision 7 under the model WHS laws

GHS v7 cut off values

- Hazard Class cut-off values

Hazard class	Generic cut-off values to be taken into account
Acute Toxicity:	
— Category 1-3	0,1 %
— Category 4	1 %
Skin corrosion/Irritation	1 % ⁽¹⁾
Serious damage to eyes/eye irritation	1 % ⁽²⁾
Hazardous to Aquatic Environment	
— Acute Category 1	0,1 % ⁽³⁾
— Chronic Category 1	0,1 % ⁽³⁾
— Chronic Category 2-4	1 %

⁽¹⁾ Or < 1 % where relevant, see 3.2.3.3.1.
⁽²⁾ Or < 1 % where relevant, see 3.3.3.3.1.
⁽³⁾ Or < 0,1 % where relevant, see 4.1.3.1.

Introducing Global GreenTag^{Cert}TM

One of, if not the, most independently certified ecolabel programs globally:

- **ACCC approved Certification Mark** also NZ, USA, Canada & Sth Africa
- **ISO 14024** Type 1 Ecolabel
 - **DNV Verified**
- **ISO 9001** Quality Management
 - **DNV Certified**
- **ISO 17065** Conformity Assessment Body
 - **DNV Verified**



www.globalgreentag.africa



www.globalgreentag.cn



www.globalgreentag.us



www.globalgreentag.com

Global GreenTag: Enabling Full Transparency

100% Declaration level:

down to 0.01%

or 100ppm

GHS based assessment criteria

Transparency and Improvement

Banned Ingredients:

- **Persistent Organic Pollutants (POPs) - Stockholm Convention;**
- **Annex III Rotterdam Convention (Highly Hazardous Industrial Chemicals);**
- **GHS Substances of Very High Concern (SVHCs)** incl. Candidate list;
- Ozone producing substances (incl. refrigerants with ODP>0 and GWP>10);
- Ionizing radiation producing substances;
- Further Lists contained in Supplementary Standards,
- High Level Endocrine Disruptors

Paint: Banned Ingredients

- All heavy metals including **lead**;
- ‘Forever Chemicals’ by category:
 - PFASs – all Perfluorinated compounds;
 - APEOs (surfactants)
- Formaldehyde;
- Phthalates
- Triclosan

GHS and GreenTag Toxicity Category Comparisons

GreenTag Categories	Cat 0 Banned	Cat. 1	Cat. 2	Category 3	
Exposure route	Category 1	Category 2	Category 3	Category 4	Category 5
Oral (mg/kg bodyweight) <i>see: Note (a)</i>	5	50	300	2000	See detailed criteria in Note (f)
Dermal (mg/kg bodyweight) <i>see: Note (a)</i>	50	200	1000	2000	
Gases (ppmV) <i>see: Note (a)</i> <i>Note (b)</i>	100	500	2500	20000	
Vapours (mg/l) <i>see: Note (a)</i> <i>Note (b)</i> <i>Note (c)</i> <i>Note (d)</i>	0.5	2.0	10	20	
Dusts and Mists (mg/l) <i>see: Note (a)</i> <i>Note (b)</i> <i>Note (e)</i>	0.05	0.5	1.0	5	

Note: Gases concentration are expressed in parts per million per volume (ppmV).

Acute toxicity hazard and acute toxicity estimate (ATE) Values defining the respective categories

Note (f) Summary: Category 5 chemicals are relatively low acute toxicity hazard risk- there are expected to have oral or dermal LD50 in the 2000-5000mg/kg bodyweight and equivalent dose for inhalation.

Source: UN Globally Harmonised System of Classification and Labelling of Chemicals

http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html

Cautionary Assessment Process Assessment

Step 1- Preliminary Ingredient Hazard Analysis

ESCAP category	Hazardous substance R Phrase levels (and proportion required to trigger preliminary categorization)				
	Level 0 Very High Risk -Immediate exclusion	Level 1 High risk	Level 2 Medium - Low risk	Level 3 Low to no risk or safety concern	Grey Chemicals (Unknown)
Declaration limit for homogenous materials & components*	≥0.01%	≥0.01%	N/A	N/A	≥0.01%
Issue of Concern	Always	≥0.1% <0.5%	≥1% <5%	No action required.	ALL
Red Light Comment		≥0.5% <1.0%	≥5% <10%		N/A
Red Light Exclusion		≥1.0%	≥10%		N/A
					N/A

Risk analysis

Step 3 – Identify Risk Probability & Severity

Determine the probability and severity of risk using table 2.2

Table 2.2 – Hazardous substance risk categorisation review and action required.

		Probability				
		Frequent	Likely	Occasional	Seldom	Unlikely
Severity	Catastrophe	Extremely High				
	Critical		High			
	Moderate		Medium			
	Negligible		Low			

Cautionary Comment

Determine Final Cautionary Assessment @ Ingredient Level

Table 3.2 - Cautionary Comment Application Determination – Product Stage

ESCAP Level as per Step 2	ACTION TO BE TAKEN			
	Likelihood of risk being realized			
	Extremely High	High	Medium	Low
Issue of Concern	Full 'Issue of Concern' required.	State 'Issue of Concern' and include details of how concern can be minimised	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.	No comment required.
Red Light Comment	Full 'Red Light Comment' required.	State 'Red Light Comment' and include details of how concern can be minimised.	State 'Issue of Concern' and include details of how concern can be minimised	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.
Red Light Exclusion	'Red Light Exclusion' required.	Full 'Red Light Comment' required.	Full 'Issue of Concern' required.	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.

GGTI PHD

GLOBAL GREEN TAG INTERNATIONAL PTY LTD



Weatherex Pty Ltd

Natural Flat Sheets and Weatherboards

Weatherex's Natural Flat Sheets and Weatherboards are exterior cladding products made from natural Australian hardwood timber from sustainably managed AFS/PE-FC-certified NSW state forests and EPA approved private native forestry. The products are formaldehyde-free with the added benefit of termite resistance as well as compliance with AS 3959 Bushfire Attack Level (BAL-19).

Products/Ranges: Weatherboards used as raw product
Product Stages Assessed: Manufacturing, in use and end of life
CSI Masterformat: 06 11 13 Engineered wood Products

Licensed Site/s: Raymond Terrace, NSW
Licence Number: WEA-001-v1-2016-PHD
Licence Date: 17th March 2017
Valid To: 12th February 2019
Standard: GGT International v4.0
Screening Date: 17th March 2017
PHD URL: https://www.globalgreentag.com/wp-content/uploads/2019/10/191016_WEA_Natural-FlatSheet-and-Weatherboard_v1.pdf

This PHD ceases currency when original GreenTag GreenRate/LCARate certification expires or is revoked. Please check www.globalgreentag.com for currency. [Note disclaimer over](#)

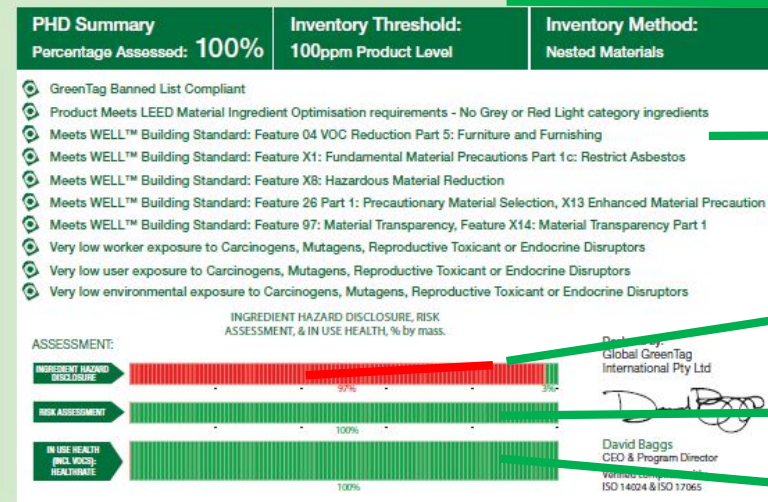


HealthRATE™ 'Healthiness in Use' TAG rating available for 'on product' use separate to PHD

Manufacturer Name and Product Name



Certified Factory, PHD Unique Identifier & Issuance Number, Publishing & Expiry Dates



100% Inventory to 100ppm Threshold min.

Summary findings and LEED/WELL relevancies, VOC Status, Other Certification

Ingredient Hazard Categorization by colour & percentage

Worker Health Risk Assessed Categorization by colour & percentage

'In Use Healthiness' Risk Assessed Categorization by colour & percentage

HealthRATE™ Mark Options



Ingredient Name	CAS Number OR Function	Proportion in finished product	GHS, IARC & Endocrine Category	Ingredient Assessment (Raw)	Whole Of Life Assessment	In Use Health Assessment	Comment
Hardwood Timber							
Eucalyptus	Structural Matrix	97%	Resp. Sens 1. Skin Sens 1. Carc 1B				Inhaled wood fibre can cause lung cancer under long term occupational exposure and during manufacture. An on-site inspection has demonstrated that occupational health and safety and environmental management systems are in place that mitigate any potential risks to an acceptable level. The manufacturer of the flat sheet and weatherboard operates under certified occupational health and safety and environmental management systems. In use, the product poses no health risks. Note: Sawing, cutting, sanding, grinding, etc. may generate sawdust. Wearing appropriate personal protective equipment is recommended to reduce risk during these operations. Recycled Content: None Nanomaterials: no
Wax							
Paraffin Wax	Binder	3%	None				None Recycled Content: Unknown Nanomaterials: no
<p>Comments:</p> <p>VOC emissions: Global GreenTag International Program Standard v1.0 Formaldehyde Content Supplementary Standard in accordance with requirements of the Australian Council of Australia and LEEDv4, as updated from time to time.</p> <p>VOC content: TVOC mg/m2/hr for product applied on site is < 0.5mg/m2/hr measured using Test method ASTM D5116 "Standard Guide for Small Scale Environmental Chamber Determination of Organic Emissions from Indoor Materials/Products. Sample tested in March 2015 at Foray Laboratories - NATA Accreditation 1231. Test approved by CETEC</p>							

Ingredient name

CAS number or Function

Ingredient Proportion or Concentration by % Content in descending order

Hazard Category- GHS, REACH,

Plain language description of risk assessment outcomes and reasons for upgrading (or downgrading) risk outcomes.
Nano Materials Content Status:
Recycled Content & Type Percentage /Status.

Inventory & Screening notes, VOC Content Test Results, Organization Issue &/or Expiry Dates (as available) & other General Comments as relevant.



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Questions & Answers

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