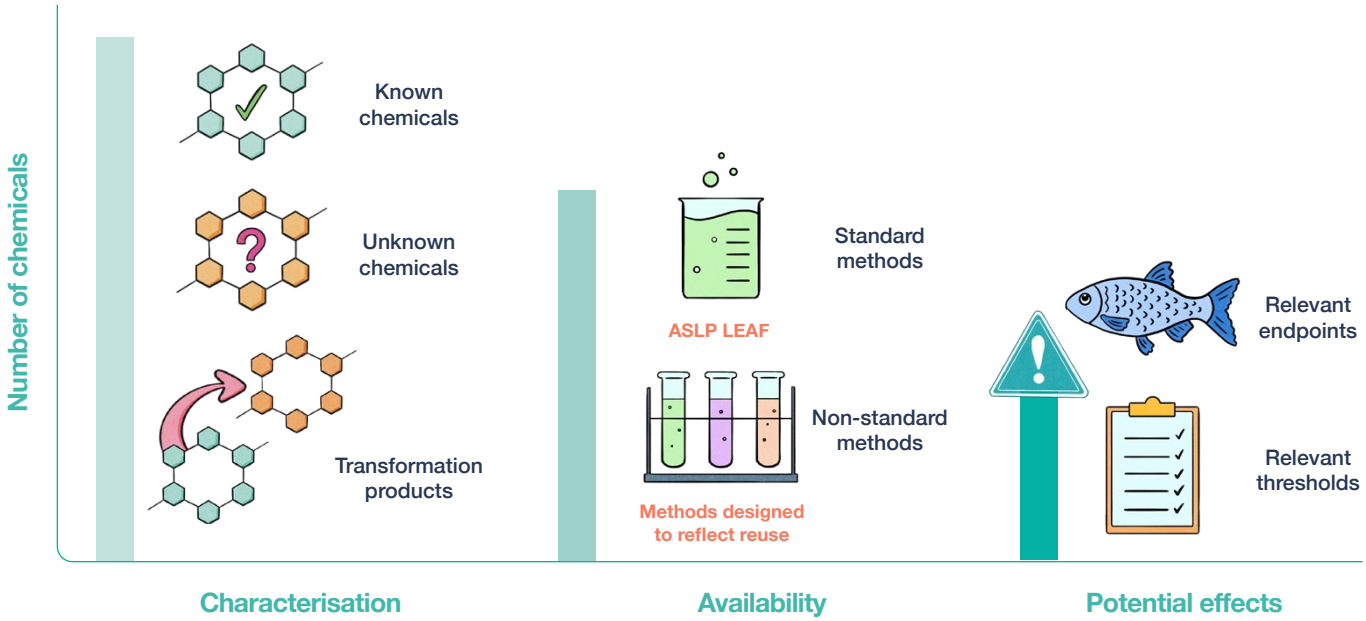
Building capacity to address gaps in chemical risk assessments

Version 1

Identifying analytical laboratories that can partner to deliver high quality data and information related to chemical detection and assessment of availability and effects will be critical to the management of Australia's chemical economy.



While chemicals may be detected when analysing waste materials, the nature of chemical behaviour means that only a small proportion of detected chemicals will likely be released into the environment. An even smaller proportion will affect ecosystems and biodiversity. We don't have enough data or information on the chemicals of interest within materials proposed to be reused.

International research suggests that tyre wear particles (made of microplastics, dust, and chemicals of concern) released during regular tyre use are adversely affecting ecosystems and biodiversity in the USA and Canada.

Efforts to characterise and assess risks associated with tyre chemicals are increasing. However, limited studies relate to the fate and risks of these chemicals within end-of-life tyre rubber crumb and products in environments and contexts relevant to the circular economy. Relevant data and information related to Australian reuse scenarios, our environment and biodiversity are not available.

We are developing new methods and assessment frameworks to assess the availability and effects of chemicals associated with complex waste materials and products with recycled content under conditions and in environments relevant to how the materials will be reused.

These methods and frameworks are grounded in the environmental conditions and endpoints relevant to material reuse, which is crucial in allowing safe waste reuse and avoiding unintentional consequences related to chemical release and exposure.

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