SUMMARY

REACENCE

The Innovation Agenda for Sustainable Use of Resources

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The RE:Agenda describes the innovation area of sustainable use of resources, which aims to support solutions that contribute to the efficient use of the earth's resources within the planetary boundaries. Each year, humanity consumes resources equivalent to 1.7 planets. Resource extraction and processing account for nearly 50 per cent of global carbon dioxide emissions and almost 90 per cent of biodiversity loss. Sustainable use of resources is therefore essential if we are to achieve our national environmental and climate objectives and the sustainable global development goals in the 2030 Agenda.

One way to achieve sustainable resource use is by ensuring an optimal lifespan of a material, product or function. In most cases, this entails preserving value over an extended period of time through long or multiple life cycles, maximised utilisation rate and resource efficient use of materials. In some cases, it can mean short and fast life cycles. This will create sustainable, competitive industries and a society that is attractive to live in.

2030 – SWEDEN IS A ROLE MODEL FOR CIRCULAR AND SUSTAINABLE USE OF RESOURCES

- Products are designed for optimal life and efficient use.
- 2. There is a well-functioning market for secondary materials, and platforms for sharing, recycling and reuse.
- 3. Repairing things is the new normal again.
- 4. We succeed in minimising waste.
- **5.** Knowledge and solutions from research and innovation reach politicians and producers through close collaboration.
- National data is available indicating how we succeeded in transitioning to a more sustainable use of resources, with key figures for the economy, environment and social impacts (all planetary and social boundaries).
- **7.** We have instruments that work well, providing true circularity and sustainability.
- Swedish companies are more competitive, having shifted from product sales to functional sales.



- **9.** Circular activities and operations in Sweden attract global investment and generate returns.
- Sweden cooperates to a greater extent with Nordic countries, the EU and the world, and material flows and systems are coordinated to manage them.
- Circular economy challenges attract talents, entrepreneurs and capital – it's cool to go circular and contribute to the transition.
- **12.** We have created more jobs and new business opportunities.
- **13.** It has become easy to live in a circular way and be a part of nature.

Seven priorities for achieving the agenda's objectives

- Make sustainable resource
 use a national priority with coordinated efforts
- 2 Effective policy and legislation
- 3 Collaboration and impact within the EU and globally
- 4 Relevant performance metrics and follow-up

- Relevant level of knowledge
 the right knowledge in the right place
- Make sustainable resource
- 6 use a natural, integral part of society
- Business competitiveness industry and capital investment

THREE FOCUS AREAS FOR RESEARCH AND INNOVATION



Sweden should prioritise and focus on research and innovation efforts in the following key areas:



SUSTAINABLE PRODUCTS, SERVICES AND USE

- Digitalisation as a tool for achieving circular material flows
- Circular business systems, including business models, marketplaces, production, reverse logistics, value chains, sharing economy and industrial symbiosis
- Product and service design
- More efficient use of existing buildings and infrastructure, including maintenance, restauration and preservation of buildings and infrastructure that are functionally intact
- Renewable, sustainable materials, including new bio-based materials, biomimetic materials and materials produced from secondary raw materials or greenhouse gases



SUSTAINABLE CLOSED LOOPS

• Regenerative solutions and systems, which make greater use

With support from





of biomimetics and include biodiversity as a key factor

 Circulatory systems for higher recycling rates and quality of recycled (secondary) materials



- Create a common goal for what the sustainable society of the future looks like
- Ensure a clear picture of resource use and material flows in society
- Identify the biggest problems and challenges for resource use within planetary boundaries and reduce waste in value chains
- Understand which drivers can change behaviours, both in how we create sustainable businesses and how we use products and services
- Identify obstacles to the transition, and from that develop and evaluate measures to minimise or remove the obstacles

FORMAS

Strategic

innovation

programmes

• Analyse and leverage positive cases from developments outside Sweden

- Develop and apply metrics for sustainable resource use (including impact on all aspects of sustainability) that can measure/ compare individual solutions and overall progress
- Ensure relevant national strategies, roadmaps and follow-up for a circular transition
- Develop circular procurement and organisational forms
- Understand the needs and possible ways to finance the transition
- Risk models and key figures for investments in sustainability and the circular economy, as well as investment risk in terms of material shortages

We need research-based innovation that focuses on addressing needs, not just solving problems, so we can make sure we are driving development in the right direction. Achieving a transition requires behavioural changes and more sustainable solutions that need to offer a better alternative – for people and for the planet.

→ www.resource-sip.se