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The Input from the Federation of Finnish Technology Industries

The Finnish technology industry is the most influential trailblazer in Finland with 50% of total Finnish exports and 75% of Finnish private sector R&D investment. The Federation of Finnish Technology Industries has more than 1,600 member companies, covering almost 90% of the entire Finnish technology industry. It comprises five sub-sectors: Electronics and Electrotechnical Industry, Mechanical Engineering, Metals Industry, Consulting Engineering, and Information Technology. 91% of our member companies are SMEs.

Circular economy stakeholder questionnaire input:

Circular economy offers opportunities for our innovative industry sectors

For our industry, the efficient use of resources (including energy) has been one of the most important actions for a long time. Both energy and material efficiency have been implemented in the companies on a voluntary basis with voluntary schemes. These actions positively affect material sourcing, production (including waste streams in the production phase), the product and its use as well as the end-of-life phase. Most products produced by our industry are capital goods and technical building systems, and they last for up to 40 years. Circular economy with the right incentives can turn our industry more competitive on the global market.

General messages:

- Create a framework to make existing resource efficient products and technologies relevant in our market. Public procurement should be used to promote innovations and green technology. Place more emphasis on the consumption phase, by carrying out analysis to identify areas of potential and the ways to improve use patterns and enhancement of innovative consumer behaviour.
- Provide coherent integrated product policy objectives and sufficient flexibility for manufacturers to implement them, taking into account the already existing EU legislation. Any added measures need to be carefully considered and be product specific in order to be fit for purpose.
- Reassess waste legislation into mode of resource recovery legislation: reassess waste hierarchy to respect new products (fuels, product gas) and industrial co-generated products, expand criteria on by-products to prevent them from becoming waste, and facilitate exchange among industries and use in infrastructure building. Create a real commitment for strong enforcement of the EU's waste legislation and avoid leakage of valuable waste fractions outside Europe to strengthen the EU's secondary raw material market, also recognition of permanent and biomaterials in sustainable use of resources. Create quality standards for (waste) material flows and end of waste criteria to promote market-driven development of secondary materials.
- Create a balanced approach between restrictive and permissive regulation in substances. A well-functioning circular economy can only work efficiently by using a risk-based approach instead of completely categorised regulation where only non-toxic substances are allowed. There is a need to define possible non-risky reusing or recovery for materials containing small quantities risky substances, for example circulated metals including Pb or Cu.

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- Strive for a common knowledge and harmonised base on circular economy at both EU and international level. Create methodology (and supportive indicators) for life cycle thinking to reflect product lifecycles and take into account the definition of sustainability as its large meaning. Hence, sustainability is not only material circulation, but also products' durability, security, fitting consumers' needs, and also economic approach like cost efficiency in production and consumption. Social responsibility is also related closely the meaning of sustainability.
- Resource efficiency and circular economy are diverse tasks. Therefore, the performance cannot be measured by one single indicator. Indicators and setting targets need to be done in sectors and value chains, and respecting local circumstances, describing transforming development to direction targeted.

3. Production phase (including product design)

3.1 Important measures to promote circular economy

It is important to distinguish between consumer products and capital goods. The support for voluntary initiatives and self-regulation for B2B products should be supported. The key issue is to not establish any horizontal measures on product design, because one size does not fit all kinds of products. The best way forward is a **case by case approach** with measurable and enforceable requirements. The development of product groups' specific standards should take into account the generic eco-design requirements in Annex I of the Ecodesign directive. Many product groups are already heavily regulated. Any added measures need to be carefully considered and very product-specific in order to be fit for purpose.

It's also important to encourage the consumption of "green products". This can be done by motivating, educating, and stimulating the purchase of products by the end-users and the private consumers.

3.2 Importance of product features

Investment products have a very long lifetime from ten to forty years, and they are often one-off productions tailor-made to fit the customer's requirements and usually part of contracts of maintenance and repair.

For B2B products, the availability of spare parts (repair as produce) and the possibility to recover "used" parts in repair and maintenance are of importance. There is a need for harmonisation among all environmental product legislation (e.g. Reach, RoHS, Ecodesign and WEEE) to enable the repair of products. The "repair as produced principle" of RoHS must also be applied under REAC to ensure the availability of spare parts. It is to be taken into consideration that one product/component can be "the spare part" for another product. The possibility to upgrade and use modular subassemblies to modernise machinery as well as remanufacturing of parts and components should be encouraged (not regulated). These kind of actions will give the products a longer life and also make them more effective during their further use.

The features listed above are important, but they cannot be optimised simultaneously, and they can even be contradictory. These kind of measures depend completely on the type of the product and there is no simple solution on the matter. The proposed features cannot be measured nor enforced, and therefore, they are not suitable to be regulated.

The key issue is life cycle thinking where environmental benefits across the products' entire life cycle can be maximised simultaneously with health and safety as well as the products' other characteristics. A lot has already been done by the industry, where there are also the best competences and possibilities to influence these matters.

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It should also be noted that the ultimate goal in circular economy is to utilise resources sustainably with minimal environmental effects and to maximise the added value of the complete value network. The aim should be to promote the smart use of resources, and therefore, it might be more valuable to take a look at certain valuable material flows or networks instead of products.

3.3 Importance of economy principles

It is very important to respect technology neutrality when applying circular economy principles. On the impact on EU imports and exports, it needs to be ensured that there are no additional obstacles to EU export and no un-due facilitation to low-quality export, either. The price and affordability of consumer goods are the most important features that affect the purchase decision. It's important to include principles that encourage circular economy into green public procurement criteria, such as the content of recycled material, the recyclability of the product, etc.

3.4 Product categories

Ecodesign already includes a lot of the above mentioned product groups, and resource-efficient measures are already covered by the directive and its methodology. There needs to be a continuity and predictability of policies and regulations in order for the industry to be able to innovate and invest in new products and services. No horizontal measures should be recommended because of the fact that one size does not fit all (see 3.1).

From the point of view of circular economy, there is a need for a holistic approach and therefore, we don't see the benefit of choosing any specific product groups.

3.5 Solutions in production processes

It is very important to address regulatory obstacles in the EU legislation (such as REACH, RoHS, WEEE, Ecodesign) and to improve the interfaces between chemicals and waste legislation. So far, we have not found any major regulatory gaps. However, recognising product gas in the IED-directive is one of them, see chapter 6.2.

The availability of reliable data is important, but there needs to be careful consideration on what kind of data is necessary and how to collect it, how reliable it is and what it can be used for. Otherwise, this might only create an administrative burden for all partners involved in the process. It's also important to support development of digital solutions and to identify and promote the exchange of best practices among all sectors.

3.6 Actions for sustainable production and sourcing

Because raw material as well as product flows are global, sustainable production and sourcing of raw materials as well as recycling should be viewed from a global perspective instead of limiting it to Europe, a single country or a region.

3.7 Other comments on the production phase

Encouragement of industrial symbioses is needed. It can be done by projects in the study and piloting stages and encouraging co-operation between stakeholders in the focused areas.

4. Consumption phase

4.1 Important measures to promote circular economy

It is not clear if this section is targeted for all kinds of uses of products. Existing environmental product legislation does not distinguish between products for consumers, public use or business use. For example, the expected lifetime and availability of spare parts is very important for B2B products and is often a condition in the purchase contracts. When launching financial intensives on national level,

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there is a need of reliable facts and harmonised definitions on what is meant by "resource efficient" products.

New business models should be encouraged for B2C as well as B2B products. Raising public awareness and participation through training, education, and information initiatives is important.

4.2 Priority products

There should be no prioritisation of product groups: the focus should be on market orientation and business possibilities.

4.3 Other comments on the consumption phase

Consumer behaviour has a major impact on the effects of circular economy, especially on consumer products, e.g. choice of purchase vs. price, environmental impact, how the product is used, choices in the end of the use phase, disposal. Public awareness, but also public procurement, plays an important role here. In order to get consumers to consume sustainably, we need to create a methodology to find out about their reasons for their consumption choices. In addition, the best practices for sustainable consumption need to be shared in Europe.

5. Market for secondary raw materials

5.1 Main obstacles to markets for secondary raw materials

The main obstacles to the development of markets for secondary raw materials are the definition of waste. Non-risk materials/side flows should be seen as a resource and legislation should prevent them from becoming waste. The material flows should be able standardised for recovery; more end-of-waste criteria are needed. The existing national criteria would be useful at European level. Therefore, awareness of best practises is needed.

Small waste volumes and long transporting are a special obstacle in certain areas in the EU. As a consequence, the costs of secondary raw material are usually high compared to primary materials.

There is a need for a balanced approach between restrictive and permissive regulation in substances. A well-functioning circular economy can only work efficiently by using a risk-based approach instead of completely categorised regulation, where only non-toxic substances are allowed. There is a need to define possible non-risky reusing or recovery for materials containing small quantities risky substances, for example circulated metals including Pb or Cu.

5.2 Most relevant actions to take at EU level

Reassessment of waste legislation into mode of resource reuse legislation is needed. Waste hierarchy should be modernised to respect new products (fuels, product gas) and industrial co-generated products. Criteria on by-products should be expanded and activated in order to prevent useful materials from becoming waste. Using residual materials for example in infrastructure building or in exchange among industries needs to be facilitated by creating public demand or material exchange services without too restrictive regulation.

We need to have real commitment for strong enforcement of the EU's waste legislation and to avoid leakage of valuable waste fractions outside Europe to strengthen the EU's secondary raw material market. Recognition and circulation of permanent materials, like steel, need special attention in order to get collection to work better. New variety of biomaterials can improve the sustainability of using resources in many sectors.

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Categorisation of waste follows mainly those in chemical policy. If waste is wanted to be recovered as a material, there also needs to be better definitions and standardisations of waste categories for the further reutilisation of waste. On the other hand, local rock/waste materials should be handled by the base of local risk analysis. Even hazardous waste is not necessarily unusable if the quality methodology is applied in the reuse process.

For identification of main regulatory barriers in circular economy, we propose some case studies and pilot projects from certain waste material flows across different sectors. The projects could be led by the Commission, and the main purpose would be to gather concrete information on legislative obstacles. For example, forbidding the mixing of substances has become an obstacle in fertilisation legislation.

5.3 Improvement of secondary raw material markets

There should be a holistic approach to the circular economy, and the focus should not be on separate raw material streams.

Quality standards for secondary raw materials and waste should be developed, and they need to be compliant with REACH. End of waste criteria are needed to promote market-driven development of secondary materials. The existing national criteria should be implemented at European level and the best practises shared. Also public demand should be created by public procurement and infrastructure building. The planning of land use could help create demand for secondary products.

5.4 Other comments for secondary raw materials

When the waste volumes are low, recycling material doesn't work because of costly logistics. Sustainability should be based on optimisation instead of obligatory material circulation (target setting). In essence, the energy production might be a more reasonable form of recovery than transporting waste far away from its source point. A life-cycle way of thinking provides a reasonable methodology to make right choices in waste recovery.

When the volumes are low, limiting the storage of materials to the maximum of 3 years causes an obstacle for circular economy as well.

6. Sectoral measures

6.1 Priority sectors

Well-functioning collection of metals and other valuable materials for reuse. Promoting industrial symbiosis. Consumer awareness in sustainable consumption. Public procurement for innovation investment.

6.2 Needed measures

The use of gas after gasification of waste (pyrolysis) should not be seen as burning of waste, but as a use of new fuel when the gas is cleaned. There is a need for modification of the IED-directive to enable the use of new waste based fuels and new technologies developed for waste treatment. Also waste hierarchy should recognise new energy products like purified product gas as more valuable recovery than burning waste.

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7. Enabling factors for the circular economy, including innovation and investment

7.1 Enabling factors

Measures supporting better implementation and enforcement of existing legislation towards circular economy should be prioritised instead of developing new regulations. Uniform definitions and calculation methods enabling comparable statistics are a prerequisite for harmonised information base.

On the support for penetration of innovative projects, we support standards and public procurement for innovation, but not labelling nor third party certification.

Data collection is important for waste, but for products, it needs to be carefully considered, see comment in 3.5.

7.2 Other comments to promote circular economy

It is important to evaluate how new models match the existing policy framework and to prepare fair competition and level playing field for all actors.

Digitalisation should be connected to circular economy. Data supporting the optimum of repairing and maintenance as well as of material reuse and recovery should be in good shape.