

REGIONAL BACKGROUND ANALYSIS

PP6 STYRIA

Contribution to Interreg Europe Project SUBTRACT

Author:

Dr. Ingrid Winter

Office of the Regional Government of Styria

Directorate 14 Water Management, Resources and Sustainability

Department Waste and Resource Management

ingrid.winter@stmk.gv.at

www.abfallwirtschaft.steiermark.at

30.04.2020

TABLE OF CONTENTS

Regional Overview	3
Geographical Coverage and Population	3
Waste Management.....	4
Legislation and Responsibilities	4
Municipal Waste Collection	6
Municipal Waste Streams and Treatment	6
Reuse Activities – Historical Outline	8
Public Perception of Reuse	12
Circular Economy Stakeholders	12
Examples for Circular Economy Stakeholders in Styria	12
Example: Private Styrian Waste Management Industry	12
Example: Green Tech Cluster Styria	13
Other Stakeholders	13
Stakeholders in the Reuse Sector.....	13
Stakeholders involved in the SUBTRACT Project	13
Styrian Reuse Map	13
Relevant Topics	14
Conclusions	14

REGIONAL OVERVIEW

GEOGRAPHICAL COVERAGE AND POPULATION

Steiermark/Styria is the second largest of the nine federal states of Austria. It is located in the southeast of Austria and borders Slovenia. It covers an area of 16,401 km² with approximately 1.2 Mio. inhabitants. The northern and western parts of Styria are located in the Alps, whereas the south and southeastern parts are lowland and hill land respectively. The agglomeration of its capital Graz with about 400,000 inhabitants is located in a basin right at the rim of the Alps.



Figure 1: The Austrian federal state Steiermark / Styria. (Source: Wikipedia; originator: TUBS Licence:https://en.wikipedia.org/wiki/GNU_Free_Documentation_License)



Figure 2: Left: the highest mountain of Styria, Dachstein (2.995 m); middle: city center of Graz; Right: hill land with idyllic vineyards in the south (photos: I. Winter)

WASTE MANAGEMENT

LEGISLATION AND RESPONSIBILITIES

With the amendment of the Waste Management Act 2002 (AWG 2002) in 2010, the then new five-tier waste hierarchy according to the Waste Framework Directive 2008/98/EC (i.e. (prevention - preparation for re-use - material recovery - thermal or other recovery - disposal) was legally anchored in Austria. The 2010 amendment to AWG 2002 also includes the obligation to establish a nationwide waste prevention programme. The Austrian Waste Prevention Programme 2011, which was updated in 2017, contains "re-use" as one of five fields of action.

Since 2016, reuse of C&D waste components has been obligatory under certain conditions in accordance with the Recycling Building Materials Ordinance. According to the Waste Treatment Obligations Ordinance (2017), WEEE, which are destined for reuse, must be collected, stored and transported in such way that the subsequent preparation for reuse is not made difficult or impossible. According to the end-of-life vehicles ordinance, manufacturers and importeurs shall reuse reusable components of end-of-life vehicles as far as possible.

Almost everyone, who is collecting or treating waste in Austria, has to strike a waste balance each year (see AWG 2002 and Waste Balance Sheet Ordinance). However, calculation of reuse- and recycling rates from these data does usually not yet distinguish between reuse and recycling.

In Austria, the management of non-hazardous municipal waste is the responsibility of the provinces. The Styrian Waste Management Act 2004 (StAWG 2004) also includes the five-step waste hierarchy accordingly. Even before the implementation of the Waste Framework Directive 2008 into Austrian law, the new waste hierarchy was included as the essential principle of waste management in the Styrian Waste Management Plan 2010 (decision of the Styrian regional government of May 2010). Key objectives for the increased implementation of re-use were planned in this sense and implemented in the following years (details see below under "Reuse Activities – Historical Outline").

According to the premises of StAWG 2004, the municipalities are responsible for municipal waste collection, whereas the waste associations (16 waste associations each comprising of several municipalities plus the city of Graz, which performs the function of the association itself) are responsible for municipal waste treatment.

According to § 8 AWG 2002, a Federal Waste Management Plan shall be prepared or updated at regular intervals. Since 2011, it contains also the national waste prevention programme. The Regional Waste Management Plan Styria is prepared/updated in accordance with § 5 StAWG 2004. The Styrian waste management associations have to prepare or update the waste management plans for their respective operation area, based on the current Regional Waste Management Plan Styria.

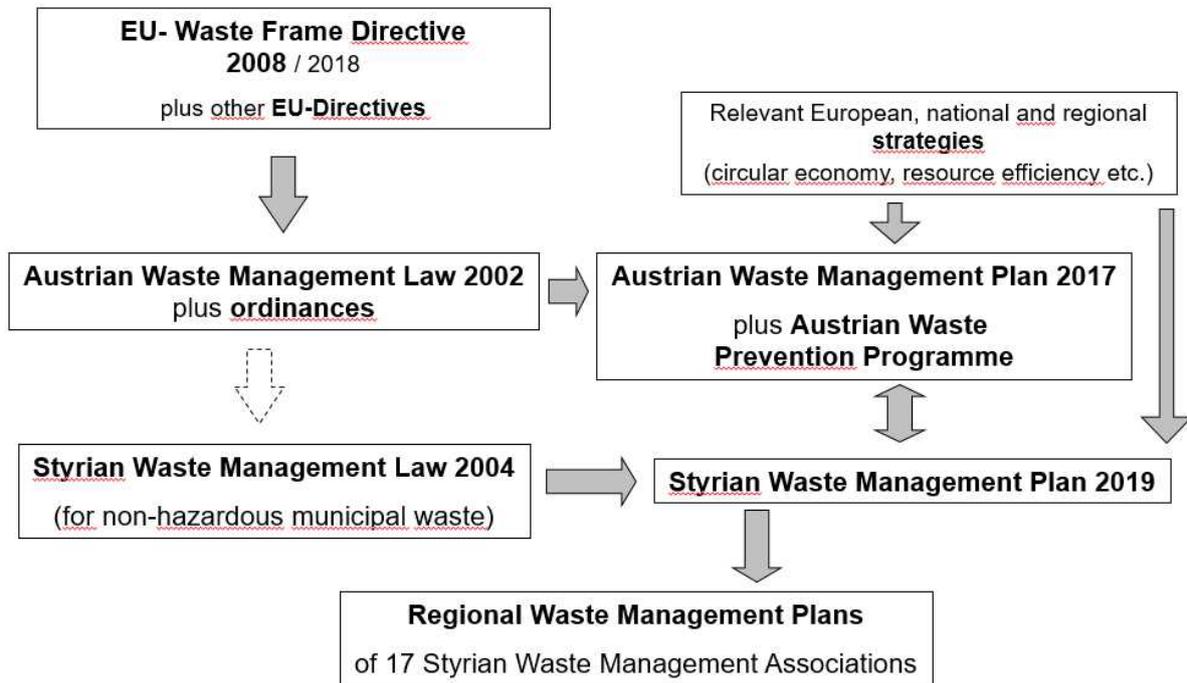


Figure 3: Scheme of legal framework and planning instruments for waste management

For further details see: Styrian Waste Management Plan 2019

(https://www.abfallwirtschaft.steiermark.at/cms/dokumente/10177492_136114083/c1d2cdf8/LAWP2019-20200125_WEB_SRGB.pdf).



Figure 4: Regional Waste Management Plan Styria 2019

MUNICIPAL WASTE COLLECTION

The total amount of waste collected in Styria in 2016 was 6.9 Mio. t. The largest share of the total volume is from the fractions excavated soil and construction and demolition waste. The share of municipally collected waste is 8 % of the total waste amount.

The total amount of municipal waste was 558,838 t in 2017, which equals to 451.4 kg/person.yr. Separately collected waste fractions are depicted in Table 1.

Table 1: Municipal waste fraction collected in the year 2017 (source: Landes-Abfallwirtschaftsplan Steiermark 2019)

waste fraction	tons	kg/person
residual waste	155 818	125,9
bulky waste	41 487	33,5
street sweepings	2 617	2,1
organic waste	113 119	91,4
batteries	911	0,7
WEEE	14 616	11,8
hazardous waste	1 730	1,4
waste paper (incl. packagings)	98 853	79,8
glass packagings	36 152	29,2
metal packagings	5 269	4,3
metal scrap	14 707	11,9
used textiles	4 558	3,7
leightweight packagings	28 725	23,2
wood waste	36 526	29,5
other recyclable waste	3 750	3,0
Total	558 838	451,4

MUNICIPAL WASTE STREAMS AND TREATMENT

Waste streams, collected amount, treatments and climate effect of waste treatments are described in detail in the Styrian Waste Management Plan 2019

(https://www.abfallwirtschaft.steiermark.at/cms/dokumente/10177492_136114083/c1d2cdf8/LAWP2019-20200125_WEB_SRGB.pdf).

Therefore, in the following only an overview of the Styrian waste management is given. The total amount of municipal waste was 558,838 t in 2017, which equals to 451.4 kg/person.yr. Separately collected waste fractions are shown in Table 1. An overview on waste amounts (in tons) and treatments is given in Figure 5. Based on these figures and a detailed analysis of the exact material flows, a reuse and recycling rate of 61 % was calculated.

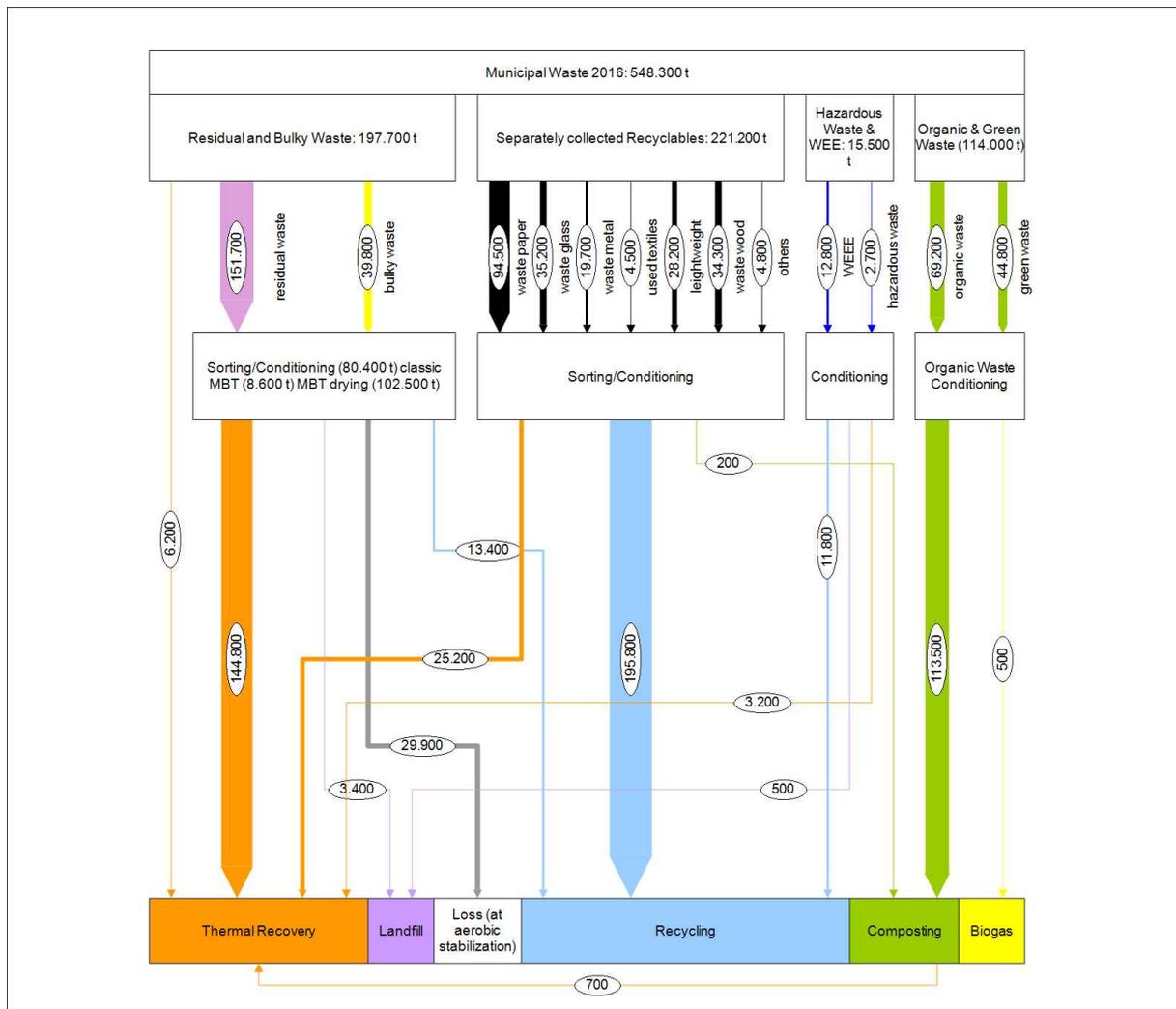


Figure 5: Municipal waste streams in Styria 2016 in tons (Source: Landes-Abfallwirtschaftsplan Steiermark 2019 and references therein)

The reuse and recycling rate was calculated according to EU-regulations. So far, the quote calculation has generally not distinguished between reuse and recycling. Therefore, only limited numbers are available for reuse. For example, the Federal Waste Management Plan 2017 reports on 1,800 t reused electric and electronic devices in 2015, an increase of 85 % compared to 2009 (Federal Ministry for Sustainability and Tourism (Ed): Federal Waste Management Plan 2017. Part 1, Wien, 2017).

REUSE ACTIVITIES – HISTORICAL OUTLINE

Reuse has a long tradition in Styria. Long before the five-tier waste hierarchy was introduced, with preparation for reuse in second place, Styria paid great attention to the topics of repair and reuse in the context of waste prevention.

In 1995 a subsidy scheme for reusable (washable) diapers was introduced. The purchase of one package is currently funded by the regional government of Styria with € 40,-, co-funding by the waste association or the municipality is a prerequisite. Per child a total amount of 1,000 kg of waste can be prevented by using reusable diapers only.

(For further information see: <https://www.abfallwirtschaft.steiermark.at/cms/beitrag/10023264/46597/>).



Figure 6: Guide for subsidy of reusable diapers

Already in 2000, the Office of the Regional Government of Styria has published the brochure “Trendsetter in the Eco-Market. A Repair and Service Manual of Styria”, comprising the following chapters: sustainable consumption, repair instead of new purchase, renting – use instead of owning, exchange instead of paying, refill instead of throwing away, used instead of new, shopping with short distances, sustainable transport. These chapters are still considered state of the art. The appendix contains a list of Styrian repair and service companies – this part has been updated by the online repair guide in 2012. For further information see: <https://www.abfallwirtschaft.steiermark.at/cms/beitrag/10113652/72834488/>.



Figure 7: Repair and Service Manual, 2000

In 2001 the funding scheme “G’scheit Feiern” for zero waste festivals was introduced. Since then regional festivals which comply with the very strict funding specifications (only reusable dishes, cutlery, packaging, and tablecloths shall be used, only regional food products shall be offered, products from organic farming increase the funding amount, sustainable transport to the festival shall be promoted) can be funded by the regional government of Styria. Currently, one of the most famous “G’scheit Feiern” festivals is the annual “Diagonale – Festival of Austrian Film” in Graz with >30,000 festival-goers. For further information on “G’scheit Feiern” see: www.gscheitfeiern.at.



Figure 8: Reuse at the „Diagonale – Festival of Austrian Film” (Photo left: Diagonale/Miriam Raneburger; Photo right: Diagonale/Sebastian Reiser)

A new start to the improved anchoring of reuse was made 2010 on the basis of the Styrian Waste Management Plan 2010 and with the aim of improving implementation of the then new five-tier waste hierarchy.

In 2010 the Region of Styria commissioned a feasibility study for reuse. Consequently, a business plan for reuse shops throughout Styria was drafted, and a re-use network was founded in 2011. In the following years, a number of reuse-projects were carried out; the most important ones are:

2011 Returnable bottles for Styrian wine. Styria is a renowned wine region. Most winemakers use a specially designed win bottle with the Styrian heraldic animal. This makes this bottle easily distinguishable from others. Although it is not a deposit bottle, it is possible to return it for refilling. Since 2011 it is not only possible to return the bottle to the respective winegrowers, but also to a large number of return points, including more than 100 retail stores of the Spar company. For further information see: www.steiermarkflasche.at.



Figure 9: Return machine for returnable bottles promoting the refillable Styrian Wine Bottle (Photo: Land Steiermark).

2012 Return furniture Styria. The aim of this one-year pilot project was to increase the amount of furniture collected for re-use. In addition to the Region of Styria and socio-

economic enterprises for repair and reuse, seven large furniture stores in Styria were involved, where customers could return their used furniture. For further information see: <https://www.abfallwirtschaft.steiermark.at/cms/beitrag/11643363/134988588/>.



Figure 10: Advertising poster for the pilot project project "Return Furniture Styria"

2012 Online Guide for Repair Shops. An online guide has been set up in order to make it easier for the general public to find qualified repair shops. The technical development of the online-platform was carried out in close cooperation with the Waste Association Tirol Mitte. Subsequently, other federal states have joined this online guide, which is currently used in seven out of the nine Austrian federal states. The use of the online platform is free of charge for both the repair shops offering their services and the general public seeking repair services. It is divided into 12 categories and a number of subcategories. For Styria, the total number of presented repair services currently sums up to ca. 1,900. All registered shops are depicted in an online map and can be searched via this map. For further information see: www.reparaturfuehrer.at/Steiermark.

reparaturfuehrer.at

Reparieren statt Wegwerfen: Die clevere Reparatur-Suche in **Steiermark**



Figure 11: Online portal of the repair guide Styria

2014 Reuse-Box. The Reuse-Box is a cardboard box for the pre-collection of reusable goods in households. The filled box can be handed in at Carla reuse-shops (i.e. Carriats donation markets) in Graz and at the waste collection centre of the city of Graz (on "Reuse Fridays", which were also introduced in 2014). For further information see: www.re-use.at.



Figure 12: Re-Use Box for reuseable household goods

2015 Resource Park concept. The concept for the further development of the old and (mostly) rather small waste collection centres into larger “resource parks” (high waste sorting depth, customer-friendly opening hours, professional equipment etc.) also includes the requirement that a reuse shop or at least a reuse collection corner (in cooperation with a nearby reuse shop) is operated at the resource park. Currently reuse-shops are operated at three Styrian “resource parks”. Furthermore, reuse corners for the collection of reusable goods have been established at eight waste collection centres. For further information see: www.abfallwirtschaft.steiermark.at/ressourcenparks.



Figure 13: Construction panel for the new „resource park“ in Leibnitz (source: AWV Leibnitz)

2018 Interreg Europe Project CONDЕРЕFF. This project aims at implementation of circular economy in the construction and demolition industry. With the Styrian online construction and demolition waste guide, Styria has created a comprehensive work comprising legal and technical requirements for practical application already in 2012. Within this project, this online guide will be extended by the subject area of reuse in the building sector soon. For further information see: www.interregeurope.eu/condereff.

2019: Repair Funding. During the five-months project “Reparaturprämie Steiermark”, repairs of household electric and electronic appliances were subsidized with 50 % of the repair costs (but max. € 100 per household and year). During this project >1.300 grant applications were received. The number of registered repair shops for such appliances at the online guide for repair shops (see above) doubled.



Figure 14: Logo for the repair funding „Reparaturprämie 2019“

2019/20: Guide “Reuse of Products. Guide to determining the end of waste when preparing for reuse” (Ed. Österreichisches Ökologie-Institut, 2020; commissioned by Federal Ministry for Sustainability and Tourism; Burgenland Waste Association; Offices of the Regional Governments of Kärnten, Salzburg, Steiermark Tirol and Vorarlberg; City of Vienna; and Vorarlberg Environmental Association). This guide provides checklists for the end of waste for various product groups, e.g. electric/electronic devices (including household appliances, photo cameras, display devices, and tools), furniture, and sports equipment. For further information see: <https://www.abfallwirtschaft.steiermark.at/cms/beitrag/12768899/72834488/>.



Figure 15: Guide to determining the end of waste when preparing for reuse

PUBLIC PERCEPTION OF REUSE

Due to the longstanding and consequent public relations and education activities, there is a high awareness of the importance of reuse among the Styrian population. This becomes visible in numerous private initiatives (e.g. comp-shops, book exchange shelves in public spaces) as well as in the numerous companies, which are active in the reuse sector. Furthermore, the new reuse-shops located at waste collection centres generated much interest right away.

However, the project stakeholders articulated the need for a joint public image in order to further boost the reuse sector. This could be achieved through joint activities, such as a common online-platform, a periodoc magazine or even street fairs. Individual campaigns in the past have shown that street festivals in particular are very popular with the population.

CIRCULAR ECONOMY STAKEHOLDERS

Due to the fact that waste management and circular economy is well established in Austria, there is a huge number of stakeholders from public administration, politics, private economy, NGOs, the general public and other organisations and associations.

EXAMPLES FOR CIRCULAR ECONOMY STAKEHOLDERS IN STYRIA

EXAMPLE: PRIVATE STYRIAN WASTE MANAGEMENT INDUSTRY

Since the beginnings of Styrian waste management, the private Styrian waste management industry has established itself as a necessary and reliable partner of the public administration and many municipalities in the management of waste management tasks.

In 2016 the private Styrian waste management sector comprised a total of 130 companies with an annual turnover of approx. 582 million €. It creates 2,900 jobs in Styria and makes annual investments of approx. € 56 million (Performance and Structure Survey 2016 Statistik Austria; see also Styrian Waste Management Plan 2019).

The large majority of Styrian municipalities fulfil their obligation to establish a public waste disposal system by commissioning authorised private waste disposal companies to carry out these tasks. Similarly, the waste management associations make use of authorised private waste management companies to varying degrees to perform the tasks in the field of municipal waste treatment.

EXAMPLE: GREEN TECH CLUSTER STYRIA

Green Tech Cluster Styria GmbH is a private-public partnership and is owned by the Styrian Business Development Corporation (SFG), the Region of Styria (Directorate 14 – Department Waste and Resource Management), the City of Graz (Department for Economic and Tourism Development), ANDRITZ AG, Binder+Co AG, e² engineering GmbH, SFL technologies GmbH and KWB Kraft und Wärme aus Biomasse GmbH. Their task is the further development of Styria's environmental technology strength and the setting of impulses for further growth in added value, in particular through sustainable innovation in technology areas green energy and green resources.

More than 200 companies are partner of the Green Tech Cluster network. Amongst these there are numerous technology leaders in the waste management sector. The annual turnover of these companies in environmental technology amounts to 4.9 billion € with approx. 22,300 pure environmental technology employees. In total, the companies in the environmental technology sector are growing significantly faster than the world markets and have tripled their turnover and doubled their employment in 10 years.

OTHER STAKEHOLDERS

The numerous partners of the Office of the Styrian Regional Government in waste management and circular economy are described in the Styrian Waste Management Plan 2019.

STAKEHOLDERS IN THE REUSE SECTOR

STAKEHOLDERS INVOLVED IN THE SUBTRACT PROJECT

The following institutions have expressed their interest in the subtract project so far:

- Federal Ministry Republic of Austria for Climate Action, Environment, Energy, Mobility, Innovation and Technology, Section 5 Waste Management, Chemical Policy and Environmental Technology
- Styrian Chamber of Commerce, section waste and resource management
- Green Tech Cluster Styria GmbH
- University of Graz, Institute of Systems Sciences, Innovation and Sustainability Research
- FH JOANNEUM University of Applied Sciences, Information Design
- ARGE Abfallvermeidung (Association for Waste Prevention)
- CARLA (donation shops of Caritas Steiermark)
- pro mente Steiermark GmbH
- Compuritas GmbH
- Dachverband Repanet (Umbrella Association Re-Use & Repair Network Austria)
- Styrian Waste Management Associations
- City of Graz, Department Waste Management Controlling
- Verein "Nachhaltig in Graz" (Association "Sustainable in Graz")

STYRIAN REUSE MAP

In the context of SUBTRACT, the former reuse-network in Styria shall be reactivated. Whereas ten years ago a handful of enterprises formed the core of the re-use scene in Styria, initial research has already revealed more than 80 shops that are fully or partially active in the reuse sector. Our first approach is to bring these enterprises together on a map ("re-use map Styria"). This map should form the basis to subsequently reactivate the Styrian reuse-network.



Figure 16: Styrian Reuse Map (schematic preliminary sketch!)

RELEVANT TOPICS

A regional stakeholder workshop was held on 28th February 2020 in Graz in order to discuss the background and emergent issues of the regional reuse sector. The following three topics crystallized as particularly relevant:

- Application of waste law in reuse practice - desire for comprehensive information on required permits, end of waste criteria etc.
- New business models and innovation for reuse and circular economy
- Marketing strategies for reuse

The detailed results of this workshop are documented and will form the basis for the further roadmaps.

CONCLUSIONS

The reuse landscape in Styria is extremely diverse. Stakeholders come from public administration, private sector, socio-economical enterprises, non-profit organizations, voluntary associations, and educational institutions. There is currently a lack of detailed data evaluation for reuse. Instead, reuse and recycling are often considered together due to the obligatory EU-reuse-and-recycling-quotas. Future data collection and data analysis should, therefore, be more specific. The various waste/product groups under consideration (distinction especially between reuse, preparation for reuse, second hand) must be clearly defined for a sound interpretation of these data.

Big potentials for reuse are seen in C&D, automotive sector, packaging, WEEE, furniture, sporting goods and textiles. The reactivation of the reuse-network Styria and its expansion can contribute the required drive. The three most relevant topics (waste law, innovation, and marketing - see above) need to be further highlighted within this network. It is expected that an online platform can provide great support for that network.