



Virtuous Circles in Portugal

Summary Report

2-3 May 2019 - Tivoli Congress Centre, Lisbon

Opening Session (Citizens' Dialogue on Circular Economy)

The Dialogue took place between the audience of about 100¹ and (on stage):

- European Commission Vice President Katainen,
- Portuguese Minister for the Environment and Energy Transition João Pedro Matos Fernandes, and
- Lisbon City Mayor Fernando Medina (Lisbon will be European Green Capital 2020).

The panellists all emphasized the future importance of Circular Economy approaches and sustainable economic practices in every step of the production chain, engaging companies, citizens, national and local Governments around the common goal of ensuring a better environmental practices.

In his opening statement, the Vice-President Katainen revealed that “Europe is leading circular economy at the moment, China is second best and the USA is far behind”, a victory for the EU’s ability to transform behaviours at a continental level. And more is in store for the future: “By 2030, every single piece of plastic placed in our market must be reusable or recyclable. The best thing about this is that the rest of the world will follow us. When Europeans sets standards, the others will follow us.”

The Vice-President also mentioned that there are two megatrends that are reshaping the world we live in, namely AI and Circular Economy. He also illustrated with the example of Philips moving away from selling light bulbs to selling light at a service, new circular economic models.

VP Katainen also talked about the positive effects that plastic reduction has on oil imports in Europe: the less plastic used, the less oil the EU needs to produce that plastic.

“The amount of oil imported to the EU will drop dramatically. Once we start recycling plastics repeatedly, we don’t need to import so much oil and the money will stay in Europe. Can you imagine that today, we are so dumb that 95% of the economic value of plastic we consume is wasted. It is either incinerated or dropped into landfills. It doesn’t make any sense economically, even less environmentally. We want to stop this. Once we promote circular economy for plastic, we become wealthier”.

¹ plus 260 people online via streaming, 28 via Facebook and 74 via Twitter



The Portuguese Minister for the Environment, João Pedro Matos Fernandes, took the opportunity to showcase Portugal's strong policies for environmental sustainability and the strong national commitments to improve circular economy, especially when it comes to the reduction of carbon emissions and the use of disposable plastic.

In response to a question from the audience, Matos Fernandes explained that he believes disposable products, regardless of material, should be pushed out of the world economy and we should aim to produce products that last longer, are easier to fix and don't create a huge strain to recycle: "We can't put products out on our economy if we don't know where we will put them after they are used".

Mayor Fernando Medina shared his view on the role of big cities in the steady transformation of today's linear economy into a circular economy and talked about Lisbon's strategic intention to drive individual vehicles away from the city centre and replace them with public transportation and other alternatives like bicycles and electric scooters. Mayor Medina noted that young people today don't want to own a car and have to park it, their concern is more about the quality of public transport and clean air. There was strong emphasis on product design and new business models, with Volvo cited for its commitment to move away from sales/ownership based models to selling their products as a service.

Along with Matos Fernandes, Medina defended the so-called "service economy" or "experience economy", which promotes the idea that citizens should reduce the number of objects they buy, replacing them with third-party services, for example: instead using washing services instead of buying a washing machine at home; or using transportation services instead of buying a car.

Mayor Medina also noted that green public procurement is not easy, and procurement remains largely price driven, with legal challenges to attempts to move towards circular preferences. He finished by questioning the adequacy of GDP as a measure of wellbeing.

Questions from the audience included:

- When do you reach the point where you say that you won't go on a vacation or won't do something because that will have a tremendous impact on the environment?
- How can tax policy promote circular economy when only 0,05% of Portuguese tax revenue comes from environmental taxes?
- The European Union imposed a 2021 limit on getting rid of single-use plastic, but Portugal committed to meet that goal in mid-2020 and the city of Lisbon committed to doing it in early 2020. Why were those decisions made?
- How do we encourage personal responsibility and empowerment so that individuals feel that their actions are important in promoting a sustainable future?



Virtuous Circles Stakeholder Conference

The event was opened by Portuguese Minister for the Environment and Energy Transition **João Pedro Matos Fernandes** who stated that circular policies have to be implemented via the ecosystem of economies and societies. He drew links with Portugal's national roadmap for carbon reduction, which is reinforced by the Portuguese circular economy strategy. He noted that critical raw materials "will be the oil of the future", becoming the feedstock for growth and with Europe highly dependent on external sources.

He described the progress of the Portuguese circular economy strategy since adoption in 2017, with a strong focus on food waste, eco-innovation and research.

Guidelines are set out to economic activities particularly in those areas that are intensive in resource use, and to tourism which is important in the Portuguese context. Progress is already made in reducing single use plastics in tourism and in public administration.

Different approaches are needed in different regions, therefore regional strategies have been prepared. There are 180 examples of projects uploaded in the dedicated circular economy portal; many working with European partners, such as in the Netherlands and Finland. 100 SMEs were supported in 2017 & 2018 with €6.4m. €3m is available for this year.

The opening plenary then heard **Peter Jones** of EUNOMIA, who argued that the waste hierarchy is coherent with the circular economy and necessary to it. He called on Portugal to get ready for the EPR requirements they are approaching fast as a legal requirement. He emphasized the potential of social enterprises in avoiding waste, and the potential of higher recycled content in reducing emissions of GHG. Citing the example of Wales he explained how the recycling rate continued to climb after they got to 40%. He advocated the use of spare capacity in other countries for incineration rather than investment in it at home. He predicted that the next 20 years would see a move away from waste management towards resource management, and that means designing out waste.

David Fitzsimons of the European Remanufacturing Council identified big opportunities for Portugal to dovetail its industrial and circular economy policies. Remanufacturing is worth €30bn in Europe, it is a major contributor to reducing GHG emissions. It is already happening in aircraft and trains, in shipping, in servers,

Patrick Dorvil of the European Investment Bank explained the EIBs advisory and (direct and intermediary) lending roles for environment, innovation and SMEs. They presented the EIB Circular Economy Guide, which defines 15 generic circularity categories. EIB helps bridge financing gaps and catalyse investments in CE through EFSI/InnovFin and other risk sharing instruments. It advises on CE project scoping/structuring/financing to improve their bankability and builds awareness and promotes networking to support CE projects



Jean Tilly, also of EIB, complemented this with an explanation of how the 140 staff of JASPERS are providing advice and assistance on major and non-major projects in strategic sectors such as circular economy, sustainable waste management, energy and resource efficiency. The geographical scope now encompasses Portugal, where the programme can support pilot projects and project schemes, provide upstream support for sector strategies and plans, horizontal support to facilitate project preparation and approval, and capacity building through a Networking and Competence Centre.

The afternoon Plenary included an exchange between the coordinators of the European Green Capitals of Oslo (2019) and Lisbon (2020). Comparisons were made between the challenges for both cities.

Sofia Cordeiro explained that Lisbon will have a stronger theme of water management because of drought issues compared to Oslo. **Anita Lindahl Trosdahl** responded that in the future Oslo will also increasingly be confronted with water management issues and can learn from Lisbon. She noted that waste per capita in Oslo is now less than 300Kg p.p./p.a. and gave an overview of the many individual initiatives organised around the Green Capital by various stakeholders aimed at improving waste management and increasing circularity. She reminded the audience that cities are big procurers of buildings and there is a lot of circular potential there.

Nuno Bento, of the Regional Coordination Committee for Lisbon presented regional strategies for circular economy based on strong economic analysis, such as for material flows. He considered the potential for the wine industry, chemicals industry and construction in relation to improved resource efficiency. He gave clear indications of which actions would result in the biggest impacts on carbon emissions, explaining that the use of light steel framed buildings would be a better route to low carbon than multiple other pathways.

Workshops were held on:

- a. “Business as Unusual – Circular Potential for Small Businesses”
- b. “Getting the Economics Right – Effective Waste management”
- c. “Circular Discussion Pitches”
- d. “Separate Collection, Biowaste and Nutrient Cycling”

a. “Business as Unusual – Circular Potential for Small Businesses”

The first session highlighted that the circular economy has potential to keep some more traditional industries in Portugal (such as textiles, footwear, heavy metals and leather)



competitive. It also has possibilities to engage and empower local citizens, bringing jobs and opportunities.

Ana Silva of TINTEXT explained their experience in developing textiles from innovative waste streams, with 11 chemical engineers working on its R&D as part of 120 person business. They are substituting synthetic dyes with plant based ones. She noted that “fashion is changing” with many new feedstocks and new technologies, and changing consumer preferences.

Teresa Jorge, of the Comissão de Coordenação e Desenvolvimento Regional do Centro explained how regions can apply smart specialisation in circular ways in order to bring on stream structural funding for circular projects. This requires identification of the challenges in value chains and definition of project criteria to develop circular approaches. Ms. Jorge also signalled the potential of green deals for circular procurement, circular auditing services and mapping of economic metabolism on a regional basis in order to promote regional eco-systems in support of SMEs.

Jaine Braga of the Confederation of Portuguese Industry noted that companies have no choice but to adapt to circular futures. Re-use can bring big savings in transport costs and materials imports. He called for collaborative business giving the example of leather treatment which has long been a difficult sector. Being sustainable can be costly; he therefore called for companies to cooperate to get scale benefits, giving the example of 60 tanneries in the Acrena region which are also working to improve urban waste water by reducing chromium, sludge and organic matter. Dealing with the varied by-products and waste from industry requires integrated systems: “there can be no virtuous circles with broken circles”

José Melo Bandeira, of Smart Waste Portugal stated that “there is no economy without waste” but where waste does arise, as Macron said “if we don’t have much in the way of resources, waste can be the mines of the future”. He noted however that smaller companies are exposed to much higher risks in the circular economy.

Jay Navarro, of the City of The Hague & Just Common People emphasized the importance of citizens empowerment through circular initiatives with several examples from the Netherlands. He stated that not all sharing schemes are in the public or environmental good, with many of the better-known ones guilty of “share-washing”; funnelling profits out of communities and out of Europe. He called for an “Urban Circular Collaborative Economy”. This could be based on the rich data available at city level. It is important to speak language that people understand, so expecting people to be motivated by the circular economy itself will get nowhere.

João Wengorovius Meneses, Secretary General of the Business Council for Sustainable Development (BCSD) Portugal argued that circular economy is principally a local



phenomenon and drew attention to specific cases where companies are having a beneficial societal and environmental impact.

b. “Getting the Economics Right – Effective Waste management”

In a first section on “Extended Producer Responsibility” (EPR)

Dr Ana Isabel Trigo de Morais of Sociedade Ponto Verde announced that “Not to understand the economics of waste is a waste of economics”. She explained how Sociedade Ponto Verde works with 8000 clients and 33 municipalities to achieve higher rates of recycling in glass, paper, plastics and metals. This year it has started implementing eco-modulation for PET and glass. Most important to effective EPS schemes is “transparency, transparency, transparency!” Through Ponto Verde LAB they are now promoting innovation at the product conception stage reduce waste generation and promote design for recycling

Joachim Quoden, General Director EXPRA put this in the wider European context identifying the main opportunities and citing best practices. He explained the importance of clear national rules in order to avoid disputes and conflicts of interest. Good enforcement reduces free riding and ensures a level playing field for producer responsibility organisations. PRO schemes and municipalities must be transparent in their finance and operations to ensure credibility of the schemes. The schemes should be run in the public (and environmental) interest.

In a second section devoted to “Regional perspectives on waste management”

Maria José Nunes, of the Regional Development Coordination Commission for the Algarve Region (CCDR-Algarve) set out the challenges for the region.

Josep Maria Tost i Borràs of the Agencia de Residus de Catalunya then explained how the Catalan region has steadily decreased landfill and developed recycling and other activities using positive and negative incentives in a “carrot and stick” approach.

c. “Circular Discussion Pitches”

The “Pitches” showcased innovative local businesses experimenting with new ideas. All too often they came up against the challenge of convincing people to change habits and buy their products and services. Those trying to develop products based on renewable or waste-based alternatives to plastic often found that the cheapness of virgin plastics made their products relatively expensive and had problems to compete.



Adriana Mano of **ZOURI footwear** provided a fine example of how a local business woman took on every challenge from using marine litter to vegan materials for her shoes designs. Got set up in business selling via internet but became aware that in making a better product the price was too high. In spite of all the challenges, she remains positive, but called for a reduction in VAT from 23% for her designs. She also noted that one of the main challenges was that municipalities were not geared or ready to work with a circular initiative. The core of the success of their project is that they work together with the local community, involving many local stakeholders from educational institutions and local entrepreneurs to the municipality and citizens.

For the circular economy consultancy “**3Drivers**” **Antonio Lorena** argued for resource efficiency programme aimed at SME’s and provided international evidence for this. “Competitiveness should not be about minimum wages, but about resource efficiency.” He encouraged three main solutions: flagship projects that illustrate the success and diversity of the CE; overcoming lack of motivation by piggy riding on other established approaches like energy efficiency audits; and implementing a resource efficiency programme. He also explained how Portugal scores above EU average on eco innovation.

Sara Albino showcased the small local “**Buinho Fab Lab**” in Alentejo, which is a mining area. In an innovative social and educational initiative the Lab takes waste plastic films to make art using basic 3D printing. They are transforming the community from consumers, to makers or creators with their SLOC methodology: small, local, open and connected.

Ana Ilhéu presented an Alqueva-based proposal being implemented by a public company to make activated carbon from waste plastics.

João Oliveira Miguel, explained how AdP Energias is using wastewater treatment sludges to make bricks. He explained that the main challenge is convincing architects to specify the new bricks.

Georges Dimeter presented the IPN Tech based incubator based at Coimbra University as “the Ronaldo of Incubators”, giving several examples of start ups including one that reuses text books www.bookinloop.pt. “Start ups are bold and not afraid, they look at challenges as opportunities.”

Filipa Saldanha, of Fundação Calouste Gulbenkian explained their support for startups as a business accelerator in the area of Blue Bio Value, Social Innovation, and CE in food systems Blue Bio value. The main challenge they perceive is the lack of metrics for circular economy.



d. “Separate Collection, Biowaste and Nutrient Cycling”

Patrick Hasenkamp of VKU Germany and President of Municipal Waste Europe stated that waste is only a problem if it is mixed. He explained the relative merits of various systems employed around Europe to get separate collection working. These can differ according to the type of waste: for example biowaste needs separate collection and investment in treatment, whereas packaging needs effective EPR rules. Bulky waste is best dealt with through collection points or by repair and re-use, whereas construction and demolition waste needs effective sorting at source and recycling. He emphasized the potential of biowaste in dealing with soil degradation. In general getting the right incentives in place is the secret; “it is not rocket science”. An easy and effective way to go is encouraging study tours to visit best practices in EU cities, using supported programmes such as TAIEX.

Mercês Ferreira, Director for Waste Affairs, Portuguese Environment Agency responded by recounting some of the specific aspects of the Portuguese context and the initiatives taken so far to develop waste management in the cities and regions. She emphasized the fact that MBT facilities are inefficient and experience poor material recovery due to the fact that there’s so much organic fraction inside residual waste, which makes end of pipe separation more difficult. Preliminary results of a recently finalized study on the viability of biowaste collection in different rural and urban context were presented.

Michele Giavini, of the Italian Composting and Biogas Association called for care in not over-investing in Mechanical and Biological Treatment systems, which can help, but will not achieve the results needed to meet EU waste targets; they could rather quite easily be converted into high quality composting plants. and benefit from EU cohesion funds . Effective biowaste separate collection and treatment is a major step towards meeting the targets and will become a target in itself in 2023. He showed many data about how separate collection of biowaste spread through municipalities starting from frontrunners in the late ‘90s and reaching now 40 million people even in complex contexts, converting composting and AD into a strong industrial sector.

Fernando Leite, Executive Director of Lipor, explained how the Porto Region has moved from waste management to materials metabolism in its approach. It has engaged citizens in separate collection through awareness raising and other activities such as composting schemes. 6 pilots of residential source separation of food waste have started in their municipalities, with quite good results.