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КРЪГОВАТА ИКОНОМИКА – ПРЕДИЗВИКАТЕЛСТВО ЗА ОРИЕНТИРАНИТЕ КЪМ РАЗВИТИЕ КОМПАНИИ

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CIRCULAR ECONOMY - A CHALLENGE FOR DEVELOPMENT-ORIENTED COMPANIES

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Abstract

Creating great products is any company's goal, but those that think long-term about their value, working in a way that doesn't harm consumers and the environment. The circular economy infuses manufacturer's material streams with recycled goods. It is the mechanism that will allow companies to achieve this goal. There are still massive barriers to implementing the circular economy and it will require pulling a companies full value, getting into full circularity, finding and optimizing the pipeline of circular opportunities, using the technology, policy and investment from the consumer goods sector. Circular economy is designed to transform waste, residues and obsolete products, into valuable products and services, thus social wellbeing is improved, as well as a resilient environment is achieved. The challenge for development-oriented companies is how to turn sustainable initiatives into economically viable and competitive projects. The core is to shift the conventional equation, of producing economic benefits and then make them sustainable. This implies an innovation breakthrough of the organizational mind set of linear organizations and regions to a circular and systemic approach. So, sustainable economic growth has to be disruptive, systemic, circular and shared.

Keywords: *circular economy, development-oriented companies, economic growth, circularity, environment*

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INTRODUCTION

In the past period, companies and consumers have largely adhered to a linear model of value creation that begins with extraction and concludes with end-of-life disposal. Resources are acquired, processed using energy and labor, and sold as goods-with the expectation that customers will discard those goods and buy more. Contemporary trends, however, have exposed the wastefulness of such take-make-dispose systems. The same trends have also made it practical to conserve assets and materials so maximum value can be derived from them. Consider that resource prices have become more volatile and are expected to rise over the long term, as consumer demand increases and easy-to-access, high-grade stocks of key commodities dwindle.

People and companies are increasingly willing to pay as needed to use durable goods, rather than to buy them outright. With digital technologies and novel designs, items can be tracked and maintained efficiently, which makes it easier to extend their useful lives. And governments are imposing new restrictions on pollution and waste that apply along entire product life cycles. These developments mean that it is increasingly advantageous to redeploy resources over and over, often for the same or comparable purposes. This is the organizing principle of circular economies, and the benefits that come from following it can be substantial.

The benefits are just as significant for less-developed economies. The effective ways of encouraging the conversion of waste materials into valuable inputs include aggregating waste flows into large volumes that businesses can work with and establishing incentives to lessen waste creation. Similar possibilities inform the thinking about the global plastics economy, which produces high performance materials for a wide assortment of applications but relies heavily on nonrenewable feed stocks and consigns too much plastic to the trash.

Industry-wide standards for packaging formats and materials, for example, could make it economical to recycle more plastic by reducing its variety and increasing the volume of each plastic type. It isn’t easy to create products that are lasting, simple to reuse or recycle, and profitable. But when design teams get together with other company departments and use design thinking, they can conjure up resource-efficient ways of delighting customers.

The business-model innovation, based on circular principles, helps companies get ahead. The companies which follow these pioneers in the transition from circular-economy theory to practice, they are certain to encounter obstacles. This is natural: breaking out of old models and letting go of time-tested approaches is challenging. But the lessons of the circular economy are accumulating- and they show that the gains from making the transition outweigh the effort and the risk.

The circular economy is characterized as an economy that is regenerative in terms of design, in order to keep as much as possible the value of products, parts and materials (Ellen MacArthur Foundation, 2013). Three major principles govern the circular economy:

- ✓ Preserve and enhance natural capital by controlling finite stocks and balancing the flow of renewable resources;
- ✓ Optimize resource yields by circulating products, components, and materials in use at the highest possible levels at all times;
- ✓ More effective system by eliminating negative externalities.

The circular economy offers an opportunity to increase the productivity of resources, decrease dependence on them (as well as waste), and raise employment and growth. The circular system would improve competitiveness and unleash innovation. European companies are already capturing most of the economically attractive opportunities to recycle, remanufacture, and reuse. The resource productivity remains hugely underexploited as a source of wealth, competitiveness, and renewal.

BUSINESS PLANNING OF THE CIRCULAR ECONOMY

A circular economy is a regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing energy and material loops (Geissdoerfer et al., 2017). This is in contrast to a linear economy which is a 'take, make, dispose' model of production (Ellenmacarthurfoundation, 2018). Business planning for a circular economy is vital for the future, where manufacturers, retailers, businesses of all kinds, consumers and the waste and recycling industry work together to ensure that products and materials are made and used efficiently and then wherever possible reused or recycled for future use.

This concept is now beginning to gain momentum, and many traditional business models are being reviewed and aligned with the more innovative approaches to design, manufacturing and service provision espoused by the circular economy. There are potentially huge cost savings to be made by businesses, pushing up their productivity. Of course, planning system has a key role to play in making this transition.

The nature of the circular economy will evolve over time as it continues to mature. In the longer term, flexibility to adapt to new business models, new ways of thinking and meeting the demands of an increasingly environmentally conscious customer base will all take on greater significance. The planning system needs to adapt to these changes too and enable the industry to position itself to optimally manage material flows and source sustainable end markets for materials produced by the wider economy.

The days of viewing waste as a problem solved only by landfill disposal are long gone and instead the industry is focused on returning as much of society's waste back into the economy as recycled and secondary raw materials. Circular economy is a concept in which the value of resources are maximized by ensuring materials remain circulating within the economy for as long as possible. In fact it is a concept which is now beginning to gain political traction, and with a package of measures expected to be shortly adopted by the European Commission. However, an often overlooked aspect is the pivotal role of the planning system in helping realize circular economy objectives.

Progress towards a circular economy in which waste is recovered and used as a resource - not only relies upon a planning system capable of delivering new waste management facilities in time and in the right location, but one which affords the industry with the flexibility to adapt to changing and evolving business environments.

In practice this should allow for greater diversification of the waste industry, where recycling and waste recovery is promoted through the planning system and with polices and strategies designed to enable the movement of materials to areas where they can cost effectively input into the manufacturing process.

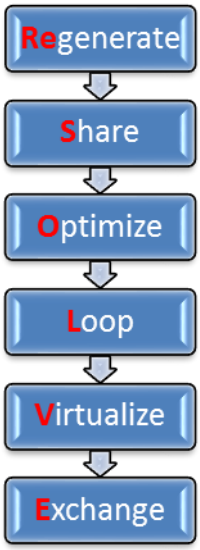
Such an approach needs to be flexible enough to allow the movement of waste materials across local administrative boundaries. In brief, the planning system should enable the companies to deliver a network of integrated waste

management facilities in which collected waste may be bulked or recycled in one location or residues treated or disposed of elsewhere.

SIX ACTIONS OF THE ReSOLVE FRAMEWORK

Building a circular economy requires complex efforts at the local, national, regional, and global levels. To transition from the current trajectory to a circular one, European economies and companies must undertake six actions of the **ReSOLVE framework: Re**generate, **S**hare, **O**ptimize, **L**oop, **V**irtualize, **E**xchange (McKinsey, 2018).

Figure 1. ReSOLVE framework



Regenerate - Shift to renewable energy and materials; reclaim, retain, and regenerate the health of ecosystems; and return recovered biological resources to the biosphere. For building a strong foundation for the circular economy requires coordinated action. Shifting to a circular economic model will affect all sectors and policy domains.

Share - Maximize utilization of products through peer-to-peer sharing of privately owned products or public sharing of pools of products; reuse them

throughout their technical life spans; and prolong those life spans through maintenance, repair, and design for durability. Examples include car- and home-sharing business models.

Optimize - Improve the performance and efficiency of products; remove waste from their supply chains; and leverage big data, automation, and remote sensing. None of these actions requires changing products or technologies.

Loop - Keep components and materials in closed loops and prioritize the inner ones. For finite materials, this means remanufacturing products or components and (as a last resort) recycling materials, as Michelin, Rolls-Royce, and Renault are doing. For renewable materials, it involves anaerobic digestion and the extraction of biochemicals from organic waste.

Virtualize - Deliver utility virtually-books or music, online shopping, fleets of autonomous vehicles, and virtual offices.

Exchange - Replace old materials with advanced renewable ones; apply new technologies, such as 3-D printing and electric engines.

In different ways, these actions all increase the utilization of physical assets, prolong their life spans, and shift the use of resources from finite to renewable ones. Moreover, each action reinforces and accelerates the performance of the others. Separately and together, they could have a profound impact, increasing cost competitiveness substantially. Most industries already have profitable opportunities in each area (exhibit). Not all of the technological advances will reduce costs; many might improve performance instead, and in some cases, the technology will need time to make a difference. But the analysis is persuasive: the circular economy carries a transformational potential that business-and society-would do well to take seriously.

THE OBJECTIVES OF CIRCULAR ECONOMY

- **Improving resilience**

The development of circular economy initiatives aims to strengthen the resilience of an area by limiting its dependence on inflows of resources. Looping area resource flows makes it possible to optimize the use of materials and energy to benefit the local economy.

- **Enhancing the attractiveness of an area**

The circular economy is a source of area innovation, both by reshaping local organization and governance and through the promotion of new sectors and activities that cannot be relocated.

- **Creating local jobs**

Many economic studies highlight the job creation potential of a transition to the circular economy. The move of traditional economic sectors towards the functional economy, the creation of industrial ecology platforms and the arrival of new sustainable economic players all tend to create non-relocatable local jobs.

The overlap between the sectors of re-employment and social economy also helps to promote the reintegration of people that had been excluded.

- **Creating social ties**

Information and communications technology has revolutionized the way to interact and consume. The new social practices of mutual assistance and co-construction highlighted on this platform (crowdfunding, fab-labs, donations platforms, etc.) are opportunities that must be seized by elected officials to bring citizens together around the socio-environmental issues of the area.

- **Achieving sustainable development**

The circular economy is a concrete and operational approach to the challenges of sustainable development centered on the efficiency of resource use. Introducing local distribution channels and promoting local industries generate significant environmental benefits such as a reduction in the amounts of hazardous and non-hazardous waste, lower greenhouse gas emissions, etc.).

CONCLUSION

The circular economy is an alternative to the old traditional take-make-use-dispose approach. It is based on the premise that materials are not wasted and instead returned to the economy as new products or energy. As waste is pushed up the waste hierarchy it creates greater resource efficiency and security by reducing the need to extract and import new raw materials. This in turn reduces the impact on the environment by avoided emissions from the otherwise energy intensive extraction of raw materials and from the disposal of materials in landfill.

In practice this means more efficient use of materials, creating greater value from customer supply chains and ensuring more material is reused, recycled, and with energy generated from any residual, non recyclable wastes. Progress towards the circular economy will likely push the waste management industry beyond its traditional spheres of operations, opening up new opportunities and requiring closer working with a host of new partners and engaging further 'upstream' in material supply chains than perhaps done so in the past. New technologies and new working practices will help break the traditional linear models of production and consumption, transforming the industry's role into that of a resource provider, manufacturing raw materials and products for the wider economy.

A more responsive planning system is essential, one which recognizes and supports further diversification, if the companies is to fully grasp the opportunities presented by the circular economy. The negative environmental impact of industrial activity is now being taken seriously. But the positive economic impact of the circular economy is a more appealing way for business to incentivize responsible use of resources.

REFERENCES

Ellen MacArthur Foundation (2013). Towards the circular economy: Economic and business rationale for an accelerated transition, *Journal of Industrial Ecology*.

Geissdoerfer, M., Savaget, P., Bocken, N., Hultink, E. J. (2017). The Circular Economy – A new sustainability paradigm? *Journal of Cleaner Production*.

Houten, V., F. (2014). The Circular Revolution, Project Syndicate, January 21, 2014 (http://www.project-syndicate.org/commentary/frans-v-houten-calls-for-a-shift-toward-a-new-economicmodel--based-on-the-use-of-goods-thatconsumers-do-not own#QudycVXfyHLLGMk5.99) Growth within: A circular economy vision for a competitive Europe, joint report by Ellen MacArthur Foundation, the McKinsey Center for Business and Environment, and SUN or the Foundation for Environmental Economics and Sustainability, elenmacarthurfoundation.org.

Kok, L., Wurpel, G. & Wolde, A. t. P. o. t. C. E. (2013). *Unleashing the Power of the Circular Economy*, Amsterdam: IMSA for Circle Economy

Liu, Y. & Bai, Y. (2014). An exploration of firms' awareness and behavior of developing circular economy. An empirical research in China. In Resources, Conservation and Recycling.

McKinsey (2018). A Circular Economy Vision for a Competitive Europe from McKinsey and the Ellen MacArthur Foundation.