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CIRCULAR ECONOMY

IN ISRAEL

FLANDERS INVESTMENT & TRADE MARKET SURVEY

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CIRCULAR ECONOMY IN ISRAEL
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1. THE BOTTOM LINE

A lot is still unknown regarding future global trends in circular economy in general and in Israel in particular. Since this is a relatively new concept, it is anyone's guess as to which trends will catch on, at what pace and when.

Still, it can be safely assumed that there are several sectors in which circular economy will have the most significant impact in Israel and therefore the highest potential. These include [waste](#), [packaging](#), [food](#), [e-waste](#), [transport](#) and [buildings & construction](#). The combination of growing needs and the very fact that most of these sectors are not yet developed, represents a potential that can be exploited by relevant companies.

2. PURPOSE OF THIS PAPER

This overview is aimed at shedding light on the current situation in Israel regarding circular economy, with emphasis on sectors where potential for Flemish companies might exist. This paper however will not detail each and every aspect of the sectors in question, as the scope of the paper does not allow it.

The paper then is meant to be an introduction to the issue at hand, underlining those elements that interested parties should inquire further about.

3. BACKGROUND INFORMATION

It is important, for the purpose of this paper, to distinguish between the terms 'recycling' and 'circular economy'. 'Recycling' means that materials can be used again, but that reuse can be for almost anything, from making using old plastics into the same product to processing them into other plastic products, or burning them. On the other hand, products that are circular by nature are designed to be reused for the production of similar applications. Incineration and low-quality applications are no options.

Still, the two concepts are closely related and it is important to discuss recycling when referring to circular economy. It also stands to reason that at least partially, business relations with players in the former might lead to business opportunities in the latter.

The global circular economy model has been increasingly gaining traction around the world and for good reason. According to a McKinsey article (June 2017), circular economy could boost Europe's resource productivity by 3% by 2030, reduce costs of € 600 billion annually and € 1.8 trillion more in other economic benefits.



In the meanwhile, Israel is ranked 44 on [the list](#) of World's most sustainable countries and beside some positive signs or activities, most notably as far as water recycling is concerned¹, the country's performance is far from impressive. There are several reasons why it is lagging and in need of circular economy solutions. Chief among them is national resources scarcity, which results, among other things, in Israel's poor [ecological footprint](#).

Because of necessity then, as well as a result of growing awareness of the advantages of circular economy, Israel is attempting to foster change on the national level with policies and plans. Same awareness can be detected in the commercial sector as well, as private and public companies are showing a growing interest in, and in some cases implementing of, circular economy models.

At the same time, it is difficult to say with certainty if Israel, its government and business sector, are moving ahead at a meaningful pace; whether we witness a long-term trend. There are enough contradicting examples², which make prediction here next to impossible.

However, the prospects are good that circular economy will catch on in Israel, not only because of the above-mentioned needs, but also because various players and stakeholders in Israel have embarked on this trend at a very early stage.

¹ 95% of sewer water is recycled; some 31% of irrigation water originates from wastewater treated at more than 150 plants. Treated brackish water is used for both agricultural and non-agricultural needs.

² For years Israeli officials and policymakers made it clear that sustainable and green energy sources are of importance and have set target accordingly. Developments in this field have been slow, or partial or no existent. On the other hand, Israel has become the number 1 country in the world, far above all the rest, in reusing and recycling water.



4. CURRENT SITUATION

4.1 WASTE

Israel is still struggling with some major issues that need to be solved if a circular-based economy is to be successful. Two of the main issues are separation of waste at the source and treating waste. The amendment to the Clean-up Law was intended to bring Israel into recycling 50% of the waste generated by 2020. As it turned out, 10 years after its launch in 2005, the ambitious move turned out to be a serious failure. Although new waste management practices were established, public campaigns and education systems were aired, fines were imposed on public sector pollutants and private sector investments were raised, the rate of waste recycling has stayed almost the same. In fact, from the beginning of the previous decade to 2017, only 20% of the weight of all household waste has been recycled. Figures released at the end of 2016 show that 5.4 million tons of waste per year are generated in Israel; an average of about 1.7 kg per inhabitant per day. Nearly 4.5 million tons of garbage of various kinds go to landfill, more than 80%.

According to an article in the economic daily Calcalist (April 2019), about 5 million tons of construction waste are produced per year, but only about half are reach regulated facilities. The payment model in the industry encourages waste carriers, some of whom seem to belong to criminal organizations, to dump garbage in open spaces and nature sites and cause significant environmental and economic damage.

As far as hazardous waste is concerned, the Israeli [ministry for the Protection of the Environment](#) claimed (2017) that about 40% is recycled.

Dealing with waste at the source and treating waste are crucial issues that must be challenged. They are of importance in their own right but are also an important element that needs to be addressed on the way to a circular economy implementation. Since many of the attempts so far have failed, novel and advanced solutions are now sought. This can be relevant on the municipal as well as on the national levels.

4.2 PACKAGING

The Packaging Waste Law's recycling targets have remained constant since 2015 and representatives of the ministry of the Environment have already said on several occasions over the past year that they are considering raising recycling targets. According to the Head of the Department of Natural Resources and Environmental Management at the University of Haifa, the law failed to create an incentive for manufacturers to reduce the amount of plastic entering the market. This was due to lack of inexpensive substitutes for packaging production and poor enforcement by the Ministry of Environmental.³

³ [Article](#), Israel Has A Severe Plastic Problem, But Real Change Is Possible



Indeed, a report by [Tamir*](#), the only organization in Israel that deals with packaging recycling, refers to a scenario in which recycling targets for plastic waste will be raised, following similar processes taking place in Europe.

Today, the recycling target for waste plastic packaging is 22.5%, but in Europe the target for 2025 is 50%.

*Packaging waste recycling targets (EU-Israel comparison)***

	Israel	EU
Year	2015	2025
General waste	60%	65%
Plastic	22.5%	50%
Wood	15%	25%
Metals	50%	70%
Aluminum	-	50%
Glass	60%	70%
Paper/ cardboard	60%	75%

Source: InfoSpot (March 2019)

* Translated by Google Translate

** There are no real targets in Israel

The [below mentioned](#) company, UBQ Materials, is an example of the attempts to change this situation.

Packaging waste in general and plastic packaging in particular are a major issue that have not been solved as yet, despite numerous efforts. The need for a cost-effective solution is highly needed. Relevant technologies will probably encounter much interest in Israel.

4.3 FOOD

According to the [2018 Food Waste and Rescue Report](#) produced by Leket Israel and BDO, the volume of food loss in Israel is estimated at about € 5.07 billion, which is about 35% of the volume of food production in Israel. Put differently, there is a loss of *salvageable* food worth around € 1.8 billion. This waste comes at a cost: It contributes about 11% to food prices and the loss of food harms the economy's productivity as a result of lost production and labor inputs.

Even if only part of the food being thrown away in Israel would have been converted into other resources, raw materials, etc., it could have presented a major benefit. This represents therefore an interesting opportunity for companies having the relevant technology.

By Neta Nissim, ZAVIT, March 06, 2019.



4.4 E-WASTE

The amount of electronic equipment and batteries waste is estimated at 165,000 tons per year in Israel. An electronic equipment manufacturer or importer will be required, as of 2021, to deal with up to 50% of the total weight of electronic equipment sold per year.

The manufacturer or importer of batteries will have to deal with 25% to 35% of the batteries (percentage variations are due to the type of battery in question) based on the weight of batteries sold per year. Currently two companies are allowed to deal with this type of waste (license granted till 2024): [M.A.I](#) and [Ecommunity](#).

As of 2021, only 50% of e-waste is planned to be treated. Considering some precedents, it is not farfetched to assume that this target might not be reached. Either way, the need to find a cost-effective solution is pressing.

4.5 TRANSPORT

Despite achievements by Israeli companies developing sustainable transport solutions (see for instance companies involved in [Smart Mobility Summit 2019](#), 28-29 October 2019) and some tentative government plans (see [The Israel Alternative Fuels Initiative](#)), there are currently hardly any tangible results in achieving goals in this domain⁴. However, the needs for relevant solutions is undoubtedly pressing and are expected to be more acute already in the near future.

For instance, the international metrics, that measure different aspects of sustainable transport, support this assertion. According to the [Reut Group](#), when examining accessibility variables, Israel is in a rather poor position:

Ranking of infrastructure efficiency	
10	Belgium
29	Israel

Ranking of railroad quality	
6	Belgium
36	Israel

Use of railroad (km per capita)	
Belgium	802
Israel	Less than 600

These examples are just the tip of the iceberg and other components, be it in the infrastructure, vehicles, fuels or disposing of used cars, are forming a significant problem in Israel.

Most of the parameters around transport in Israel represent a very problematic situation with grimmer prospects in the near future. Any circular economy technology or solution that would alleviate one or more of these problems, represent a huge potential for the company that would introduce them to the market.

⁴ For examples of circular economy in transportation, [see here](#).

5. CURRENT IMPLEMENTATION OF CIRCULAR ECONOMY

The following showcase current (attempts of) implementation of circular economy in Israel. In addition, these examples might represent possible business opportunities.

5.1 GOVERNMENT SECTOR

In the last few years the Israeli government has looked for ways to implement circular economy policies. The subject matter has been promoted and budgets for various projects were allocated. Thus, for instance, information and brochures aiming at the business sector were published, emphasizing the importance and benefits of “becoming circular”. Probably the most substantial plan was announced by the Israeli government in June 2019. According to the announcement, the Industries Administration in the Ministry of Economy and Industry leads a national program for circular economy in industry in collaboration with some major players (including the [Ministry of the Environment](#), [the Manufacturers Association](#), [the Israeli Green Building Council](#), [the Heschel Center for Sustainability](#) and [the Innovation Authority](#)). The program aims to drive the industry toward more efficient use of resources and the treatment of environmental problems, by means of new technologies. The plan calls for “turning the environmental requirements into an opportunity rather than a burden on the industry”.

Yet another initiative, categorized as [industrial symbiosis](#)⁵, was launched in March 2019. Four companies, each focuses on another geographical region, share a budget of about € 1.25 million for conducting a pilot. Three months later, each of the four operators, put in place an advanced information system that would help connecting waste producers and potential consumers. Some of the systems are a local version of a project that operates successfully overseas, and some are innovative Israeli development. In addition, the operators mapped over 1,500 potential customers and recruited about a 100. From the information gathered, many potential symbiosis instances have been identified, which is expected to save landfill and generate new revenues. During the pilot, a first transaction was reported between a polystyrene-waste manufacturer (which until then had sent the waste to a landfill) and an energy-producing plant. The deal saves about 4.5 tons of landfill every year.

Back in 2018, the Israeli government introduced the [National Resource Efficiency and Environmental Innovation Program](#), aiming at encouraging companies to implement circular model applications. The program called for an annual investment of about € 756 million in environmental-promoting projects, of which € 143 million would be invested directly in the circular economy. An additional € 15 million would finance assistance to those working on environmental innovation and resource efficiency in industry.

Additional projects include supporting pilot programs and facilities, where relevant new technologies can be tested for use in the industrial landscape; substantial R&D support that will be granted through governmental grants; and international cooperation through a series of conferences and programs.

⁵ See definition [here](#).



5.3 OTHER INITIATIVES

- [Heschel Sustainability Center](#) is an NGO that provides support and relevant tools through education programs and advisory for companies that are looking to become circular. Through its activity and network Heschel can be an ally when trying to enter the Israeli market. Heschel is currently developing a plan in collaboration with the Israeli ministry of Economy in order to implement the circular model into the industrial sector.
- [SwitchMed](#) is a European Union program that focuses on the Mediterranean region by implementing ideas that have been used in European circular economy initiatives. See an example of this activity [here](#).
- [R2PI](#) is an organization whose main goal is to assist in the transition from the linear to the circular economy. Towards achieving this goal, they have created an international network, including in Israel. One example of this collaboration has been with academic and other institutions regarding a [water economy model](#) case.
- The [Afeka Institute of Circular Engineering and Economy](#) has been active in this domain for some years now and has been an important player in spreading the concept. The institute functions as a data center as well as a platform for the development of relevant technological engineering and business solutions. The institute will launch the first academic course on circular engineering next semester, targeted at engineers and entrepreneurs.
- [Hiriya](#) is a center that includes facilities for treating different kinds of municipal garbage. Among other things, [energy is generated](#) by using waste as a source.



