



# Pop-Machina

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# Framework conditions in Greece

## T2.4 Interim Report

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## Abstract

CommonLawgic drafted a White Paper on the Greek framework conditions of circular collaborative production, related to the Pop Machina H2020 project deliverable D.2.4. It consists an interim report and introductory guide to the Greek legal framework, identifying possible drivers and barriers that may impact the pop Machina activities of the pilot cities Piraeus and Thessaloniki. Pop-Machina project addresses existing socio-economic policy measures in five countries that foster or hamper the local circular economy. The overall structure and logic of this report ensures that the vision of pilot cities complies with existing or forthcoming European, national and municipal policy requirements. Feedback from pilot cities oriented the critical regulatory and literature review of this study, submitted May 2020 and last updated October 2020. This report identifies the horizontally applicable Greek rules that govern the collaborative production in physical and digital makerspaces. This analysis addresses legislative, governance and taxation, labour, contract, business law and other policy issues that affect the maker communities, in a constantly changing landscape. This legal framework toolbox may support the Greek value chains, comply with general governance and taxation requirements. Further, this is an informative guide for potential makers of Pop Machina pilot cities during the municipal engagement activities and workshops.

This Supportive report is mainly for consortium use, as a supplement and in relation to Deliverable D2.4, for Work Package WP 2 of the Pop-Machina project.

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## Introduction

In Greece, the central, regional and local administrations cooperate effectively with each other within a system of multi-level governance. However, the Ministry of Environment & Energy (MoEE) is responsible for producing a global environmental policy, preparing plans and programmes and monitoring them. The Ministries are also in charge of transposing EU environmental Directives into national law. At the decentralised level, the regional and municipal authorities have specific environmental competences for their geographical areas. Regional and municipal authorities assure the practical application of various environmental measures, such as water quality, waste management and impact assessments. At the central level, an environmental inspectorate has been operating since 2004.<sup>1</sup> Since 2010, all Ministries, administrations and public authorities (municipalities are included) must upload every administrative act — large or small, including appointment decisions, awards of grants, transfers of personnel, decisions on state subsidies to citizens, etc., on the <https://www.diavgeia.gov.gr/> website, through the 'Diavgeia' ('Clarity') transparency program.<sup>2</sup>

## 1. European and Greek National Action Plan on Circular Economy

EU adopted a *New Action Plan on Circular Economy*<sup>3</sup> (March 11th, 2020) as a main block to the *New Green Deal*<sup>4</sup> (11.12.2019) and created informative<sup>5</sup> implementation channels.<sup>6</sup> The new EU Circular Economy Action suggests measures to

- a) make sustainable products the norm in the EU;
- b) empower consumers and public buyers;
- c) focus on circularity in sectors such as electronics and ICT; batteries and vehicles; packaging; plastics; textiles; construction and buildings; food; water and nutrients;
- d) limit the amount of waste;
- e) make circularity work for people, regions and cities; and
- f) lead global efforts on the circular economy.

Greece's Governmental Economic Policy Council respectively, endorsed a *National Action Plan on Circular Economy*<sup>7</sup> (2018-2019) with 35 actions to set Greece on a path towards the long-term adoption of circular economy principles. **Greece's economic strategy plans to "Green" the economy in a way that creates jobs, especially for women and youth, supports long-term equitable and inclusive growth**, based on resource efficiency and industrial symbiosis, promotes SMEs' innovation with the clustering of businesses<sup>8</sup> and investment in new technologies and strengthens the 'social economy' potential.<sup>9</sup> The long-term (2030) goals of the Greek National Action Plan on Circular Economy in summary focus on

- a) preventing waste and improving recycling;
- b) supporting circular entrepreneurship by promoting "industrial symbiosis", business clusters

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<sup>1</sup> EU Environmental Implementation Review 2019 Country Report - GREECE SWD(2019) 138 final p. 29, See <[https://ec.europa.eu/environment/eir/pdf/report\\_el\\_en.pdf](https://ec.europa.eu/environment/eir/pdf/report_el_en.pdf)> [accessed 25/5/2020].

<sup>2</sup> Idem, p. 30.

<sup>3</sup> See <[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_420](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_420)> [accessed 25/5/2020].

<sup>4</sup> See <[https://ec.europa.eu/info/sites/info/files/european-green-deal-communication\\_en.pdf](https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf)> [accessed 25/5/2020].

<sup>5</sup> See <[https://ec.europa.eu/environment/circular-economy/index\\_en.htm](https://ec.europa.eu/environment/circular-economy/index_en.htm)> [accessed 25/5/2020].

<sup>6</sup> See <[https://ec.europa.eu/environment/circular-economy/first\\_circular\\_economy\\_action\\_plan.html](https://ec.europa.eu/environment/circular-economy/first_circular_economy_action_plan.html)> [accessed 25/5/2020].

<sup>7</sup> See <[https://circulareconomy.europa.eu/platform/sites/default/files/national\\_circular\\_economy\\_strategy.pdf](https://circulareconomy.europa.eu/platform/sites/default/files/national_circular_economy_strategy.pdf)> [accessed 5/5/2020].

<sup>8</sup> See <[https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=31126\\_>\\_](https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=31126_>_)> [accessed 25/5/2020].

<sup>9</sup> See <<https://circulareconomy.europa.eu/platform/en/main-language/greek>> [accessed 25/5/2020].

- c) , circular consumption patterns of reusing, restoring and repairing more than buying new products, e.g., electrical and electronic devices;
- d) enhancing multi-stakeholder partnerships across industry, academia, and civil society;
- e) monitoring progress towards a circular economic model through SMART (specific, measurable, achievable, relevant and time-bound) indicators. In this respect, a permanent Inter-Ministerial Committee focuses on the Priority actions set since 2018, that include:
  1. lifting barriers to a circular economy through **10+regulatory and legislative interventions**, e.g. integrating circular economy criteria in the Environmental Impact Assessment and Strategic Impact Assessment requirements for sites and projects, environmental permitting processes and new legal definitions for wastes, by-products and re-use materials after first use intended for reuse, declassification of waste and quality standards for secondary raw materials
  2. **providing funds** to implement the interventions and fund demonstration projects
  3. further **enhancing knowledge**, understanding, education, awareness and communication
  4. **improving governance structures** by setting up an inter-ministerial Executive Secretariat for the Circular Economy to oversee the implementation and related Observatory to monitor progress.

### 1.1. Governmental Supervisory mechanisms

During the Covid-19 pandemic, grassroots makers self-organised and shared open-innovation designs on, e.g., face-shields, to satisfy urgent medical needs. The government unconditionally applauded the bottom-up emergency response, since there was no time for legal permission or way to supervise on quality, safety, comfort, durability and copyright standards, during the lockdown. Distributed design platforms helped makers to turn their homes with personal 3-D printers into physical unlicensed makerspaces. In practice, the licencing requirements to legally operate a makerspace or a business enterprise are considerable and can become severe barriers to the development of the makers' movement.

In Greece, the supervisory governance on the Circular Economy in Greece is done centrally at a national level by the elected government bodies. It is coordinated by an Inter-Ministerial Committee led by the Ministry of Environment and Energy (MoEE), with the participation of the Ministries of Development and Investment, Finance, Interior Affairs, Rural Development and Food, Infrastructure and Transport, Shipping and Island Policy, Digital Governance and Tourism. The Inter-Ministerial Committee for the Circular Economy operates in parallel with a National Council for the Circular Economy which, with the participation of productive bodies, plan private and public sector policies to transform the Greek economy to circular standards, scheduled for mid-2020. The National Council and Inter-Ministerial Committee monitor the achievement of goals and strategy in all areas of the Greek economy, schedule the Roadmap for the Circular Economy, with a horizon set for July 2020, through an Operational Plan, taking into account the proposals of all the General Secretariats of the participating Ministries. The General Secretariat for Research and Technology that formulates the National Strategy for Smart Specialization in the new Programming Period 2021-2027 will align it with the Roadmap for the Circular Economy. As further announced<sup>10</sup> by Chr. Dimas, Vice-Minister of Growth and Investments, "a digital platform under the name 'Elevate Greece' will operate soon, mapping and supporting the innovation ecosystem of startups, and as a gateway to extroversion. For the first time in Greece, a tax incentive for Business Angels and the hyper-tripling of the R&D expenditure ratio for companies investing in R&D is advancing. A positive development

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<sup>10</sup> Read more at Taxheaven: <https://www.taxheaven.gr/news/49107/eoniko-mhtrwo-neofywn-epixeirhsewn-mesw-ths-plattformas-elevate-greece-me-stoxo-th-xartografhsh-kai-yposthrixh-twn-neofywn-epixeirhsewn> [published and accessed 28.5.2020]

of the broader innovation ecosystem is the connection of the research of the academic institutions and Investment Funds with entrepreneurship, either through licensing of copyrights of patents or through the creation of spin-offs; modern Centers of Technology Transfer will play an essential role in the future".

## 1.2. Legal Barriers to collaborative incentivisation systems

In March 2020, the Commission adopted an EU industrial strategy<sup>11</sup> to address the twin challenges to boost the potential of the digital transformation, which is a key enabler for reaching the Green Deal objectives.<sup>12</sup>

POP-Machina project aligns with the context of the European definition *COM (2016) 356* "European agenda on the collaborative economy",<sup>13</sup> since collaborative economy users are engaged in circular activities through makerspaces and digital social collaboration platforms, aiming to expand their ideas into businesses. This model creates triangular relations among the following actors:

- product providers, namely individuals or companies that dispose items no longer useful for their activities, but not damaged, and items that can no longer circulate in the economy, considered as waste by EU legislation,
- product users, namely individuals/companies interested in the above products and
- collaborative platforms that link these actors as intermediaries.

Pop Machina plans to create and incentivise a community of blockchain users, into the exchange of ERC20 Ethers (utility tokens in the Ethereum network) through a digital marketplace platform. Greek municipal experts undertake to engage makers in digital collaborative production.

Trainers of makers should be upskilled and re-skilled to understand the tokenisation and gamification aspect of such digital collaboration, to engage platform users (labour and service providers, designers and producers) that some consist vulnerable groups. There are several legal barriers to surpass, since Greek municipalities cannot, as said, reduce municipal duties without state approval; either are there national tax incentives for the sale, purchase or donation of used products or secondary raw materials. Moreover, if hourly work hours are traded, exchanged and compensated with nominal (fiat) value tokens, then it may be considered evasion or avoidance of social security dues to the real economy. Taxation and social security authorities cannot intervene in the transactions and values exchanged among the Pop Machina circular community, since it is a parallel economy built for pilot purposes. As long as the Pop tokens are a testbed of virtual currency among circular users, not involving fiat currency or cryptocurrency, then there are no further regulatory concerns. However, at the final stage of WP8 policy discussion, the results of the pilot project should address the real economy needs and propose possible solutions.

## 1.3. Governance of the Collaborative Economy

The regulation on collaborative governance structures, digital platforms and blockchain in Greece is at its infancy, in a continually emerging regulatory landscape. There is a regulatory framework in force for trade platforms, like AirBnB and Uber, but not for online trade platforms or for Ethereum

<sup>11</sup> See <[https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_20\\_418](https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_418)> [accessed 25/5/2020].

<sup>12</sup> European Green New Deal, see <[https://ec.europa.eu/info/sites/info/files/european-green-deal-communication\\_en.pdf](https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf)>, p. 7. COM (2019) 640 final 11.12.2019 [accessed 25/5/2020].

<sup>13</sup> COM(2016) 356 see <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52016DC0356&from=EN>> [accessed 11/2/2020] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS [accessed 25/5/2020].

transactions.<sup>14</sup> Gaming and tokenisation are not yet engaged in the market of used items or the upcycling of products.<sup>15</sup> It should be noted that transactions of online platforms may be taxed after January 2021 (most probably at around 3%), when the Common Consolidated Digital Sales Tax (CCDST) is agreed and in force at an OECD, EU or national level; regulatory progress is expected (more at D.2.4.). As regards the real payments of digital transactions, these are processed online and directed to the seller's bank account, or paid through credit card or PayPal<sup>16</sup> (a payment community of 225 million users), even by bitcoins. However, it is doubtful if, currently in practice, the prescribed sales tax is included or added in digital sales services effected through online platforms<sup>17</sup>, like ebay.com, etsy.com, pouliseto.gr, poshmark.com, Facebook marketplace, etc. To be noted that some of those marketplace platforms withhold, as a commission, a percentage of 5-20% on the sale's price, while there are additional money transfer costs, e.g. for transfers from PayPal to the user's bank account.

#### 1.4. Blockchain tokenisation

Greece has no pertinent regulation regarding blockchain tokens. The Bank of Greece has issued an announcement advising caution to consumers concerning the use of bitcoins and other cryptocurrencies<sup>18</sup>, making, mainly, reference to the European Supervisory Authorities (ESAs) "pan-EU warning to consumers regarding the risks of buying Virtual Currencies (VCs)"<sup>19</sup>. Such warnings relate, however, to virtual currencies is high risk and unregulated investment, savings or retirement planning products. The respective payment (in the form of virtual currencies or cryptocurrencies) and investment tokens (meant to raise capital and/or to provide ownership and dividend rights of some kind), should, however, be distinguished from the so-called utility tokens, about which the Bank of Greece, like the ESA, does not seem to express caution.

Utility tokens have less resemblance to payment and investment instruments, to the extent, they only enable access to a specific product or service on a particular, blockchain-based platform. They are mainly used within an incentive scheme,<sup>20</sup> e.g., for the supply of material on a blockchain platform or for the exchange of products or services on that platform. Therefore, unless either general legislation on all blockchain tokens, or specific legislation regarding utility tokens, is introduced, the latter should be subject only to the general contract and tax law in Greece. In this respect, the general provisions of the Greek Civil Code on the sale of goods or the provisions of services should be applicable, whereby numerous legal issues could arise, even e.g., when utility tokens are treated as an exchanged good<sup>21</sup> and not as means of payment. Utility tokens resemble, in this respect, to coupons and vouchers, which, however, benefit from greater legislative certainty. On the other hand, Greek legislation introduced since 2015, tax and social security contributions on the employer, in case he/she issues to his/her employees, benefits in kind, gift cheques exceeding 300 Euros in total<sup>22</sup> or vouchers for food exceeding 6€ per day. This approach should be considered as indicative of the

<sup>14</sup> Greece makers market, see <<https://www.pouliseto.gr/about/>, <https://www.in2life.gr/indulgence/buy/article/507926/pov-mporo-na-povlhso-palia-epipla.html>>, <<https://www.douleutaras.gr/bsdir/ksylourgoi/episkeui-sudirisi-epiplon/>> <https://www.makthes.gr/thessaloniki-apistevtes-patentes-gia-episkevi-palaion-ilektronikon-syskevov-280449> [both accessed 25/5/2020].

<sup>15</sup> Would you like to sell used items? (23.4.2016), see <<https://www.inewsgr.com/96/theleis-na-pouliseis-i-na-agoraseis-meta-cheirismena-epipla-vivlia-roucha-vivlia-gyalia-kai-pasis-fyseos-chrisima-antikeimena-afra-einai-ta-simeia-stin-athina.htm>> [accessed 25/5/2020].

<sup>16</sup> See <<https://www.paypal.com/gi/smarthelp/article/what-are-the-fees-for-paypal-accounts-faq690>> [accessed 25/5/2020].

<sup>17</sup> Athens Voice (2015) How could you sell your old clothes?, see <[https://look.athensvoice.gr/look/333743\\_5-e-shops-gia-na-pouliseis-ta-palia-sov-rovha](https://look.athensvoice.gr/look/333743_5-e-shops-gia-na-pouliseis-ta-palia-sov-rovha)> [accessed 25/5/2020].

<sup>18</sup> Greece has no pertinent regulating regarding blockchain tokens. The Bank of Greece has issued a statement urging caution to the consumers about the use of bitcoins and other cryptocurrencies [accessed 25/5/2020].

<sup>19</sup> See <<https://eba.europa.eu/esas-warn-consumers-of-risks-in-buying-virtual-currencies>> [accessed 25/5/2020].

<sup>20</sup> See Smart contracts and the law, p. 22 et seq, in Legal and Regulatory Framework of Blockchains and Smart Contracts, a thematic report prepared by the European Union Blockchain Observatory and Forum, available at < <https://www.eublockchainforum.eu/reports> > [accessed 25/5/2020].

<sup>21</sup> See: article 573 of the Greek Civil Code.

<sup>22</sup> Greek Income Tax Code (Law 4172/2013, hereinafter the "ITC") article 13.

regulator's understanding that coupons in Greece are generally treated as a means of payment. In fact, employer coupons were subjected to tax and social security contributions, due to the economic crisis that Greece suffered; a significant raise in tax burdens across every economic activity was introduced, so employee-benefits were restricted.

A marketing challenge of tokenisation is how to keep a lawful balance when boosting users' circular brand engagement through digital gamification. Invoking gaming instincts can be considered as an unfair competition practice since gamified systems are based on behavioural control. Gamification is legitimate and generally applies elements of gaming (competitive rules and reward), aiming to motivate engagement and loyalty; for example, miles to frequent flyers or discount coupons from supermarkets. There are a few successful examples of rewarding recycling schemes in Greece in private business schemes, like cyclefi.com (a rewarding system of recyclables from partnered sponsors through a QR identity code). This Greek tokenisation collaborative platform, named Cyclefi<sup>23</sup>, allows users to recycle, filling with recyclables, special -orange-coloured- bags (produced and sold by a known brand), and get rewarded with discounts at companies that participate to the cyclefi community. Finally, it has to be examined whether the use of Ethers in tokenisation and gamification among the circular community users, will be legally limited into the Greek boundaries; then unfair competition practices are governed by Greek jurisdiction and Law. Smart contracts have to comply with pre-fixed governance rules, pre-set fairly and transparently for all blockchain users.

## 2. Governance

### 2.1. Governance measures towards a circular Economy

According to Vas. Liogkas,<sup>24</sup> expert advisor to the Minister of MoEE, the Greek Inter-Ministerial Commission operates intensively, with the help of subcommittees and thematic groups and has decided that the way ahead should include;

- Green and Circular Public Procurements;
- the update of legislative regulations on waste management (composting standards, Green Points, C & D, recycling Law, Circular Economy package);
- revision of National Waste Management Plan and Regional Waste Management Plans;
- financial tools to support separate collection, recycling and biowaste treatment;
- implementation of the new pricing policy – PAYT for the Municipalities;
- Circular Economy Forum platform initiatives;
- drafting of a Circular City Guide;
- implementation of the infrastructure provided in the thirteen Regional Waste Management Plans;
- extension and improvement of the cost-effectiveness, monitoring and transparency of existing Extended Producer Responsibility (EPR) schemes and the elimination of free-riding;
- the introduction of End-of-Waste criteria;
- the Eco-design.

With the measures set out in the National Circular Economy Action Plan, Greece aims to achieve the following:

- realise a radical reduction of the per capita produced waste
- increase reuse and recycling of garbage, with a separate collection of recyclable waste and bio-waste, to reach 50% of total municipal solid waste generated from a 25% where it stands today
- achieve a 74% recovery and less than 30% disposal of total municipal solid waste produced from the current 82% disposal

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<sup>23</sup> See <<https://www.cyclefi.com/>> [accessed 25/5/2020].

<sup>24</sup> Presentation by Vas. Liogkas, MoEE (Brussels, 2019) Greek National and Operational Plan 2018-2019, National Commission on Circular Economy, see <<https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=31126>> [accessed 25/5/2020].

- create around 15,900 new jobs and the increase of the annual turnover of the waste management related businesses.

According to Mrs Gryllia, expert advisor to MoEE, priority for the national circular economy planning would be plastics, food, construction and demolition materials.

Greece, adopted *Law 4496/2017 on Packaging Recycling<sup>25</sup> and aligned existing waste legislation with the European circular economy principles*. For plastics, Greece endorsed the application of the European Directives EC 2019/904 and 2015/7202019/904, implemented in July 2019, setting as a goal for 2021 to abolish seven categories of single-use plastic products, namely straws, stirrers, cutlery, plates, biodegradable plastics, food and beverage containers from expanded polystyrene (EPS), plastic supports, which support balloons, and balloons used for industrial or other professional applications. The abolition of the above will be done only under the condition that similar products will be developed at affordable prices for the final consumer and with a significantly improved environmental footprint. **Effective measures managed to reduce the consumption by 70% of single-use plastic bags** introducing merchant responsibility and set fees for consumers.

The Greek municipalities are responsible for the collection, transport and storage of waste, done by locally-owned services or with the help of one of the 500 licensed firms. Since 2018, the municipalities are allowed to manage the recyclable material and to generate revenue by themselves. Although the separation of glass, paper, plastics, and aluminium is obligatory, this new intake will reduce the costs of the community and partly relieve the citizens from PAYT charges.<sup>26</sup>

Separate collection incentives to Municipalities and citizens are set by new waste management bodies. *Law 4658/7.5.2020* specified with *article 87*, that from May 7<sup>th</sup>, 2020 and onwards the Municipalities have to report their waste quantities at the electronic registry of waste that functions at the online platform of the Ministry of Environment & Energy (MoEE) at <https://wrm.ypeka.gr/>; it was realised with the support of the Federation of Recycling and Energy Recovery Greek Industries and Enterprises (SEPAN).<sup>27</sup> Notably, SEPAN could be a potential stakeholder interested in the Pop Machina goals in order to build synergies with providers of secondary raw materials.

Due to Covid-19 pandemic, the use of plastics for many single-use purposes has flourished. Therefore, there is a business growth potential for Pop Machina prosumers and of synergies with plastics manufacturers, in case they opt to focus on the upcycling of plastics waste. However, the existing framework on Extended Producer's Responsibility (EPR) and Producers' Responsibility Schemes (PRS), limit the growth of the circular collaborative economy, as further analysed below at 2.3.

## 2.2. Collaborative makerspaces & licencing requirements

Physical collaboration can operate in licenced makerspaces among users that share expert knowledge, tools and workspace. The makers' movement may seek unused buildings, keeping in mind that ownership laws and the Greek Constitution do not allow illegal expropriation in Greece. Moreover, there are requirements for the operating and construction planning permits of a new lease and use of a building, including fire-protection legislation. Licencing became further demanding with the new environmental Greek *Law 4685/7.5.2020, art. 56-70*, that endorsed *Directive (EU) 2018/844* on the energy performance of buildings, stipulating stricter energy efficiency standards and an environmental assessment permit. Greece adopted a long-term renovation strategy and measures, to ensure that the energy performance of installed, replaced or upgraded technical building systems (such as for space heating, air-conditioning or water heating), is documented, by way of building certification and compliance review system, undertaken by independent engineers. Notably, the legislative framework for the municipal "Green Points" (separate collection of 4 streams of packaging, green waste and others) was clarified at the recent *Law 4658/7.5.2020 article 88*, on the Environment, that specified

<sup>25</sup> Law 4496/2017 on Packaging Recycling see <<https://global-recycling.info/archives/2146> > [accessed 25/5/2020]

<sup>26</sup> Ibid <https://global-recycling.info/archives/2146> [accessed 25/5/2020].

<sup>27</sup> See <<https://sepan.gr/index.php/en/>> accessed 22.5.2020

that storage space of up to 30 square meters does not need a construction planning licence<sup>28</sup> It would be advisable that Pop Machina pilot makerspaces in Greece obtain a licence of waste management, specifying whether they can store or process waste as secondary raw material and also register at the Electronic Registry of Waste; that way they could increase their marketing and branding power and build synergies with interested parties (issuing certificates to companies as receivers of waste or as CSR partners).

In case, a makerspace or an individual decides to work with waste treatment activities; they need a permit for both facilities and activities before any waste treatment is carried out. All studies, information and technical data concerning waste treatment, should be submitted to environmental authorities as a part of the "environmental impact assessment study". The facilities and companies working on the treatment of waste of lesser environmental impacts have to fulfil the specific terms and conditions incorporated in the operation license. The relevant procedure consists of an environmental impact assessment study (AEΠO in Greek) supplied by the competent Authority: either the Ministry of the Environment or the «Decentralised Administrative Authority». The environmental impact assessment study should at least contain waste codes, according to the waste list (Commission Decision 2014/955 / EU), quantity, treatment method (recovery or disposal), categories R or D, a short overview of the facility, management and operation of the site concerned, precautionary and safety measures, additional ad hoc measures, substantial changes to the production facility must be subject to prior authorisation under the Law.

### 2.3 Extended Producer's Responsibility (EPR) - Producers' Responsibility Schemes (PRS)

The creation of Alternative Management Systems (EPR Schemes) is based on the principle of Extended Producer Responsibility, either providing financial incentives to encourage producers to design more environmentally friendly products, or rendering producers responsible for the cost of product management at the end of their life cycle (when i.e. those products become waste). Greece has an institutional framework of alternative management with a range of waste streams<sup>29</sup> and clear quantitative targets for recycling and recovery based on European legislation; packaging and packaging waste (Law 2939/2001), and on Presidential Decrees (PD) or Joint Ministerial Decisions (JMD), that contain terms and conditions of the following 22 operating Systems (April 2014)<sup>30</sup>:

- End of Lifecycle Vehicles - ELV (PD 116/2004).
- Waste Electrical and Electronic Equipment - WEEE (JMD 23615/651/E103/2014)
- Waste Lubrication Oils - WLO (PD 82/2004).
- Waste batteries and accumulators - (JMD 41624/2057/E103/2010).
- Used vehicle tires (PD 109/2004).
- Construction Demolition and Excavation Wastes - (JMD 36259/1757/E103/2010).

The Greek government takes measures to enforce Extended Producer Responsibility (EPR) schemes for targeted waste streams as well as the separate collection and sorting infrastructure, and deposit refund systems. Audits and inspections will intensify to detect free-riders in the EPR system. Alternative Waste Management have to include other streams (printed paper, furniture) according to the "polluter's pay" principle.<sup>31</sup> All producers (manufacturers, traders, importers) are obliged to either organise or participate in Alternative Management Systems.

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<sup>28</sup> See <<https://www.e-nomothesia.gr/kat-periballon/nomos-4685-2020-phek-92a-7-5-2020.html>> [accessed 25/5/2020].

<sup>29</sup> See <<https://www.eoan.gr/en/content/7/epr-schemes>> [accessed 25/5/2020].

<sup>30</sup> Idem.

<sup>31</sup> See <[https://ec.europa.eu/environment/waste/framework/pdf/GR%20Roadmap\\_FINAL.pdf](https://ec.europa.eu/environment/waste/framework/pdf/GR%20Roadmap_FINAL.pdf)> [accessed 25/5/2020].

Individual or collective Systems are approved, monitored, and controlled by the Hellenic Recycling Agency (HRA)<sup>32</sup> that constitutes a nonprofit private entity, with full administrative and financial autonomy, supervised by the [Ministry of Environment, Energy \(MoEE\)](#)<sup>33</sup>. Its main objective is the design and implementation of policy for alternative management (recycling) of packaging and other products. HRA's objectives and responsibilities are defined by Law 2939/2001, as amended and in force by the laws 3854/2010 and 4042/2012. The Board of Directors of HRA comprises representatives from the public and private sector, elected representatives of municipalities, of professional associations and environmental organisations. Presidential Decree No. 99/2008 outlines its establishment, structure and function. HRA is responsible for setting up and operate a National Producers' Registry (NPR) for every stream included in the Alternative Waste Management. Participation in the NPR is compulsory for all producers, which are subject to liability to organise or participate in EPR schemes, according to their activities. Following participation in NPR, each producer is attributed to a unique Producer Registration Number.<sup>34</sup> NPR aims at

1. the collection and evaluation of data concerning quantities and categories of products put in the Greek market,
2. providing such information with other member states' national registries and
3. stakeholders (publicity).

The Registry for Producers of Electrical and Electronic Equipment (EEE), for batteries and accumulators, used tyres and end of life vehicles has been established and operates.<sup>35</sup> According to the Ministry of Environment<sup>36</sup>, there are plans to promote the reverse engineering and Extended Producer's Responsibility specifically in electronic devices.

### 3. Legal Issues of upcycling (remanufacturing, repairing, reusing, sharing)

Upcycling, in the sense of remanufacturing, repairing, reusing and sharing is not advanced in Greece. Citizens confuse those terms with recycling processes, although they concern the prevention of waste. In practice, very few makers use secondary raw materials in the production of goods. Used items made of copper and lately of plastic bottles are mostly upcycled. The makers' movement in Greece could benefit from the background knowledge, network and stock in fabrics, from existing charity organisations and the orthodox church<sup>37</sup> that regularly collect and distribute food, used clothes, and other in-kind contributions.

Moreover, stock of secondary raw materials may exist at the abovementioned PRS systems that already have the public tender to collect, sort and process specific quantities of waste. Moreover, some private businesses are active in upcycling, namely Recycom.com (that collects used clothes, shoes and fabric),<sup>38</sup> and Rewarding Recycling centres<sup>39</sup> (for cans of aluminium, plastic and glass, giving one Euro for every 33 items). Piraeus Municipality has assigned the local waste management of clothes, plastics and aluminium cans, to both businesses. Wasted used items (cartons, metals and mainly copper) are also collected by itinerant Roma, immigrants and social enterprises of vulnerable

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32 See <<https://www.eoan.gr/en/content/1/the-h-r-a>> [accessed 25/5/2020].

33 See <<http://www.vpeka.gr/el-gr/>> [accessed 25/5/2020].

34 See <<https://www.eoan.gr/en/content/17/national-producers-registry>> [accessed 25/5/2020].

35 See <<https://www.eoan.gr/en/content/17/national-producers-registry>> [accessed 25/5/2020].

36 Interview of Artemis Gryllia, Expert Advisor to the MoEE (22.5.2020).

37 Xtypos.gr (15.4.2016) War between municipalities and church on the clothes recycling. See <<https://www.xtypos.gr/%CE%BA%CE%BF%CE%B9%CE%BD%CF%89%CE%BD%CE%AF%CE%B1/sta-maxairia-ekklisia-kai-dimos-qia-tin-anakyklosi-royxon/>> [accessed 18/5/2020].

38 Recycom SA collects clothes and shoes from municipalities, see <<http://www.recycom.gr/cms/company-profile/>> [accessed 25/5/2020].

39 See <<https://www.antapodotiki.gr/en/rewarding-recycling-centers>> [accessed 25/5/2020].

groups,<sup>40</sup> who sometimes illegally empty the blue bins, managed by HERRCo (as explained at section 7 below).

Further, according to the MoEE,<sup>41</sup> "it is rather difficult for the local circular makers to compete with giant multinational manufacturers, in the context of the open markets. However, a legislative framework on taxation, financial grants through structural funds and establishment of a supportive environment such as the increase of awareness and reducing the administrative burden could enable the local circular makers versus big manufacturers. Local makers have already penetrated to some parts of the markets, such as the repairing of electronic devices".

### 3.1. Secondary Material Flows, Critical Raw Materials and Conflict Minerals

This section will be completed when Thessaloniki and Piraeus specify what secondary material flows (raw materials and products) they plan to focus on. Regarding the 3TG (Tin, Tantalum, Tungsten and Gold) conflict materials, Greece will abide and endorse the respective Conflict Minerals EU Regulation on January 1<sup>st</sup>, 2021,<sup>42</sup> since it will come into full force across the EU as a new national law. The responsible sourcing regulation will apply directly to 1,000 EU importers and indirectly affect around 500 smelters and refiners of tin, tantalum, tungsten and gold, based inside the EU or not. Importers should apply 'due diligence' whether the sourced raw materials are mined in conflict areas, through forced labour or are financing illegal practices. European regulations govern the Critical Raw Materials (CRM) issues in Greece.<sup>43</sup> The Circular Economy Action Plan considers landfills and urban mining as a source for recovering critical raw materials and contains action on sharing of best practice for the recovery of CRMs from landfills and urban mining.<sup>44</sup> Extraction of critical raw materials from secondary sourced material (e.g. Indium, gallium and tantalum from smartphones) meets the objectives of POP-MACHINA. It offers, at the same time business opportunities to recycle a high-end value product. The processing of secondary raw materials for the extraction of precious metals requires pyro-metallurgical plants. There is also the option to offer services, such as the collection of these raw materials, dismantling or pre-treatment activities, such as removal of cobalt-containing lithium-ion batteries before sending them to recycling plants.<sup>45</sup> Given that Greece plans to return to industry manufacturing for growth, it would be crucial in the long-term to gain valuable know-how in makerspaces on ways to process those materials. Interestingly, Greece has large unmined CRM deposits of Rare Earth Elements (RE203), Magnesite (MgCO<sub>3</sub>), Wolfram (WO<sub>3</sub>), Cobalt, Antimony and Scandium.

### 3.2. Synergies with Manufacturers as industrial symbiosis

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<sup>40</sup> Aravossis K. et al (2014) Roma and people with disabilities in Social Enterprises for contemporary WEEE management: Framework of a Hellenic study on related organisational issues. Researchgate <https://www.researchgate.net/publication/260691092> [accessed 21/5/2020].

<sup>41</sup> Interview insights of Artemis Gryllia, Expert Advisor to the General Secretary of the Ministry of Environment (22.5.2020).

<sup>42</sup> See <<https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/>> [accessed 27.5.2020]

<sup>43</sup> EC Study on the review of the list of Critical Raw Materials - Criticality Assessments (2017), see <<http://hytechcycling.eu/wp-content/uploads/Study-on-the-review-of-the-list-of-Critical-Raw-Materials.pdf>> [accessed 27.5.2020]

<sup>44</sup> EU Report on Raw Materials and the Circular Economy. page 33, see <[http://publications.europa.eu/resource/cellar/d1be1b43-e18f-11e8-b690-01aa75ed71a1.0001.01/DOC\\_1](http://publications.europa.eu/resource/cellar/d1be1b43-e18f-11e8-b690-01aa75ed71a1.0001.01/DOC_1)> [accessed 27.5.2020]

<sup>45</sup> See <<https://www.oeko.de/oekodoc/1375/2012-010-en.pdf>> [accessed 27.5.2020]

On synergies and clustering, there is the *Strategic Investments and Growth Law 4399/2016*<sup>46</sup> in force. Moreover, *Law 3982/2011 on Industrial Parks*<sup>47</sup> has undergone a lot of amendments<sup>48</sup>, since its inception in 1965. There were only a few cases of identified industrial symbioses near Piraeus, i.e. only five among 74 enterprises in the Industrial Park of Schistos<sup>49</sup> and four (that could become 16) at the industrial park of Aspropyrgos exchanging copper scrap (data 2009). According to the Ministry of Economy, Directorate of Industrial Location, there were also only two cases of mud exchange among 569 businesses located around Thessaloniki (data 2008) (Marinos-Koutris & Mourtsiadis, 2013).<sup>50</sup> This implies that there is very reluctant growth of the industrial symbiosis concept and a lack of synergistic culture in Greece. Pop Machina pilot project will not need large amounts of secondary raw materials, however support from local (at 20 km distance) manufacturers would be helpful to the makers' needs. A positive driver of change is the new regulatory tax regime enforced from January 1<sup>st</sup>, 2020 of the corporate social responsibility actions that can legally equal to tax deductions for manufacturers. Most of the Greek-based manufacturers of large installations, under the Industrial Emissions Directive, implement industrial symbiosis at a large scale and the best available techniques. Also, other manufacturers implement industrial symbiosis in the context of market principles. However, MoEE<sup>51</sup> are planning to boost industrial symbiosis in the framework of the national circular economy action plan, by boosting the development of secondary materials markets. Finally, the makers' movement could explore the possibility to cooperate, in order to upscale their circular production with technology innovation clusters. The concept of collaborative innovation clusters is promoted since 2007, supported by the Greek government<sup>52</sup>, with Corallia's main example<sup>53</sup>. Innovative clusters for Greece are "groups of independent enterprises/businesses operating in a particular sector and geographic area focusing on innovation through strong interactions, common use of resources and sharing knowledge and expertise in order to effectively contribute to technology transfer, networking and dissemination of information among businesses/members of the cluster". However, clusters eligible for state funding<sup>54</sup> are knowledge-based, including research/academic organisations and undertake high added-value innovative activities with strongly extrovert global market orientation (on space as *si-clusters*, on Gaming and Creative applications, as *gi-clusters* and on micro-electronics, as *mi-clusters*).<sup>55</sup> European or national structural funding to innovation collaborative clusters (at a regional level), is managed through national banks, according to the calls.<sup>56</sup>

#### 4. Taxation challenges

Financial incentives and taxation are efficient ways to meet environmental policy objectives therefore the circular economy action plan encourages their use.<sup>57</sup> In Greece, environmental taxes have been increasingly used to influence the behaviour of economic operators, whether producers or

<sup>46</sup> See <<https://www.ependyseis.gr/anaptyxiakos/nomothesia.htm>> [accessed 25/5/2020]. [accessed\_25/5/2020].

<sup>47</sup> Ministry of Growth and Investments. Industrial Parks, see <<https://www.gqb.gr/el/node/301>> accessed 16.5.2020 [accessed 25/5/2020].

<sup>48</sup> Amended by recent Laws 4610/2019, 4613/2019 & 4635/2019.

<sup>49</sup> Marinos-Kouris D. & Mourtsiadis A. (2013) Industrial symbiosis in Greece: A study of spatial allocation patterns. *Fresenius Environmental Bulletin* V. 22. No 7b pp. 2174 – 81 [accessed 25/5/2020].

<sup>50</sup> Idem.

<sup>51</sup> Interview insights of Artemis Gryllia, Expert Advisor to the General Secretary of Ministry of Environment (22.5.2020).

<sup>52</sup> Hellenic Technology Clusters Initiative, (HTCI-Corallia) under the auspices of the General Secretariat of R&D of Ministry of Development See <<http://www.clusterpolisees3.eu/ClusterpoliSEEPortal/protected/2189/0/def/ref/DOC2187/>> [last accessed 25.5.2020]

<sup>53</sup> See <[https://ec.europa.eu/regional\\_policy/en/projects/best-practices/greece/1904](https://ec.europa.eu/regional_policy/en/projects/best-practices/greece/1904)> [accessed 27.5.2020]

<sup>54</sup> See <<https://www.sofokleousin.gr/tis-58-efthasan-oi-protaseis-gia-tous-synergatikus-sximatismous-k>> [accessed 29.5.2020]

<sup>55</sup> See Corallia's website <<https://www.corallia.org/en/clusters/gi-cluster.htm>> [accessed 27.5.2020]

<sup>56</sup> See Bank of Piraeus ESPA 2019 <<https://www.360funding.gr/anazitisi-programmatos/programmata-espas/synergatikoishimatismoigiatin-proothisi-tis-kainotomias-stin-topik>> [accessed 27.5.2020]

<sup>57</sup> EU Environmental Implementation Review 2019 Country Report - GREECE SWD(2019) 138 final p. 22, See <[https://ec.europa.eu/environment/eir/pdf/report\\_el\\_en.pdf](https://ec.europa.eu/environment/eir/pdf/report_el_en.pdf)> [accessed\_25/5/2020].

consumers. These taxes also generate revenue that can potentially be used by the government to increase its expenditure on environmental protection or efficient management of natural resources. Environmental taxation is a financial measure leading to a gradual internalisation of the environmental externalities. It is imposed in certain areas of productive activity, to induce the producers and the consumers to specific environmentally friendly choices. It is challenging though, that the municipalities can not act independently offer discounts or credits to their citizens (there are some exemptions for vulnerable groups) unless authorised by the state (e.g., there were discounts approved, due to the COVID-19 lockdown for owners of restaurants). Moreover, in Greece, the tax authorities are entitled to request from administrators of sharing digital economy platforms any information or evidence that taxpayers are transacting through such platforms as sellers. In case of non-compliance, the tax authorities may request from the relevant Internet Service Providers (ISP) to restrict access to the respective platforms, imposing penalties to ISP, to the platforms' administrators, to the taxpayer or other person or entity involved<sup>58</sup>.

#### 4.1 Tax incentives

In Greece, environmental taxes have been increasingly used to influence the behaviour of economic operators, whether producers or consumers. These taxes also generate revenue that can potentially be used by the government to increase its expenditure on environmental protection or efficient management of natural resources. Environmental taxation is a financial measure leading to a gradual internalisation of the environmental externalities. It is imposed in some regions of productive activity, to induce the producers and the consumers to specific environmentally friendly choices. A significant amount of revenues from environmental taxation in Greece come from the energy field. According to Law 2127/1993<sup>59</sup> and Law 3336/2005<sup>60</sup>, an excise duty (EFK) is implemented in energy products. Also, revenues from environmental taxation in Greece come from the transportation field, where a vehicle registration tax and a vehicle duty are implemented. Furthermore, according to Law 4042/2012<sup>61</sup>, as amended by Law 4609/2019, the Solid Waste Management Bodies and the local authorities are required (since 01.01.2019) to pay an environmental tax for each ton of waste produced within their territory. Last but not least, Greek government-enforced Law 4496/2017<sup>62</sup>, by which an environmental tax on plastic carrying bags, aims to limit their use and as a consequence to mitigate the damage caused by plastics. The national circular economy strategy,<sup>63</sup> among others, provides for circular tax incentives. Specifically, the tax incentives include the removal of tax barriers (VAT) in recyclables, reduction of taxation on repair services, shifting labour taxes to raw material taxes, financial circular incentives to enterprises, such as tax relief measures, subsidies, facilitation and reduction of licensing charges and incentives for credit foundations financing circular projects (including industrial symbiosis). It is also provided for that the state should inform, guide and encourage enterprises to introduce circular changes to their benefit. According to the national circular economy strategy, it is important to focus on overall support and promotion of new entrepreneurial models of environmental innovation, to develop new products, technologies and organisational models. Of particular significance is the creation of new markets and areas of interest, in selling

58 See <<https://home.kpmg/gr/en/home/insights/2019/12/recent-amendments-in-greek-tax-legislation.html>> [accessed 25/5/2020].

59 Law 2127/1993 "Harmonisation with European law of the tax regime of petroleum products, alcohol and alcoholic beverages and manufactured tobacco and other provisions".

60 "Harmonisation of the Greek Legislation with Directive 2003/96/EC of the Council of 27<sup>th</sup> October 2003 on excise duty on certain sources of energy and other provisions".

61 Law 4042/2012 "Criminal protection of the environment – Harmonisation with Directive 2008/99/EC – Framework for the production and management of waste – Harmonisation with Directive 2008/98/EC – Regulating the Ministry of the Environment, Energy and Climate Change".

62 Law 4496/2017 "Amendment of Law 2939/2001 on the alternative management of packaging and other products, Adaption to Directive 2015/720/EU, Regulation relating to the Hellenic Recycling Organisation and other provisions".

63 See <<https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=31126>> [accessed 25/5/2020].

products based on cheaper raw materials and developing entrepreneurial models based on leasing/hiring, sharing, repairing, upgrading and recycling. The abovementioned measures are taken in conjunction with the implementation of pilot actions to provide evidence of implementation practices, integrating the participation and connection of SMEs in relevant initiatives<sup>64</sup> and value chains.<sup>65</sup> Currently, according to the Greek Code of Accounting Books and Records, art. 12, paragraph 5 and art. 30 par. b, individuals that create new products or services for limited number of sale transactions, at a small scale and small quantities (e.g., for a neighbourhood bazaar or local secondary market), have to issue an invoice adding 3.6% stamp duty, but not the national sales Value Added Tax (VAT) that is regularly imposed to traders- i.e., VAT 24% or 13% for Greece. The same obligation for stamp duty of 3,6% applies for the municipalities, according to the Greek Code of Accounting Books and Records, art. 30 sec. a. It would be positive for Pop Machina to propose an environmentally friendly tax of 3,6% for circular products and services.

## 4.2. Green Public Procurement

Green Public Procurement is a strategic tool for affecting economic activity in the direction of Green Growth. By the process of Green Public Procurement (GPP), the state obtains its supplies of products or services by utilising ecological criteria at the stage of the proclamation of the tender, as well as the evaluation of the offer to tender<sup>66</sup>. Regarding that, a significant amount of the products and services, obtained by States, include, among others, the supply of electronic and electrical equipment, IT devices, textiles, food, energy, paper, furniture, transport and cleaning supplies, whose produce, use and withdrawal have an adverse environmental impact, the adoption of Green Public Procurement procedure may provide the necessary incentives, to significantly reduce these adverse effects. In Greece Law 4342/2015 (which amended Law 3855/2010) is in force and regulates the issues relating to Green Public Procurement<sup>67</sup>. Also, Law 4412/2016<sup>68</sup> sets out provisions for the contracting authorities, to encourage them to prefer more ecological and environmentally friendly products. In particular, art. 18 of Law 4412/2016 provide for, among others, that the protection of the environment and sustainable development should be taken into account in the stage of awarding of a public contract. Also, it is foreseen that where the contracting authorities intend to proceed to the purchase of projects, goods and services by setting specific environmental, social or other characteristics, they may require a specific signal as evidence that the projects, goods or services comply with the required characteristics (art. 55). Furthermore, according to the same Law, the ecological characteristics of a product should be taken into consideration while implementing and evaluating the criterion of the most economically advantageous offer (art. 86). However, certain obstacles in the adoption of Green Public Procurement have occurred, mainly from the lack of knowledge on the inclusion of appropriate environmental standards and criteria and, consequently, on the way of evaluating the offer to tender, according to ecological criteria (Paraskeva, Anyfantaki, 2018)<sup>69</sup>. Also, an always remaining problem is the complexity of the related legislation, as well as the limited budget available to public bodies for the purchase of "green" products. According to EU Public Procurement for a circular economy, a new environmental law lately voted by the Greek Parliament clarified the applicable Law 4342/2015 on Green Public Procurement.<sup>70</sup> There are barriers in tenders for plastics and exclusion of regenerated lubricants (Liogkas, 2019). A European

64 See < <https://thesafiablog.com/2020/03/19/circulareconomytheeuropeanactionandthegreek/> > [accessed 25/5/2020].

65 Hellenic Republic, Ministry of Environment & Energy, "National Circular Economy Strategy", December 2018: See < [https://circulareconomy.europa.eu/platform/sites/default/files/national\\_circular\\_economy\\_strategy.pdf](https://circulareconomy.europa.eu/platform/sites/default/files/national_circular_economy_strategy.pdf) > [accessed 25/5/2020].

66 Green Public Procurement, see: < <http://www.ypeka.gr/> > [accessed 25/5/2020].

67 Law 4342/2015 "Pension regulations, Incorporation into Greek legislation of Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and [...] and other provisions".

68 Law 4412/2016 "Public Procurement of Projects, Supplies and Services (adaptation to Directives 2014/24/EU and 2014/25/EU)".

69 E.A.A.D.I.SI. "Regulatory framework for the implementation of Greek public Procurement", 2018

70 See < <https://www.lawspot.gr/nomikes-plerofories/nomothesia/n-4342-2015/arthro-24-nomos-4342-2015-prasines-dimosies-svmvaseis> > [accessed 25/5/2020].

Parliament study shows that Greece's GPP action plan has been insufficiently implemented<sup>71</sup>. Nevertheless, some initiatives are taking place at local level. Amaroussion was the first municipality in Greece registered under the EMAS scheme in 2006 and under ISO 14001:2004 in 2010. It also received the National EMAS Award (2009) for applying green criteria in its purchasing practices. Public procurement criteria were amended by the said municipality to purchase goods and services that are environmentally friendly<sup>72</sup>. Amendments are made based on the results of regular market research carried out to identify "green" products available on the Greek market; information is then used to develop technical specifications.<sup>73</sup>

### 4.3. National requirements for crowdfunding platforms

In Greece, a specific legislative framework for crowdfunding platforms has been established by the Law 4351/2015, allowing to collect funds through online campaigns up to the sum of 500.000 euros per year. Regarding blockchain tokenisation, Directive 2014/91/EU on crowdfunding transposed in a Greek regulation on crowdfunding platforms (Law 4416/2016), but neither a culture for crowd investing, nor a relevant capital market exists.

There are proposals for establishing regulations on fair digital taxation at EU level, but currently – and until the end of 2020- Greek legislation anticipates the global solution decided at OECD level. All proposals are in the direction of mitigating the risk of fragmentation of the single market elevated by the emergence of unilateral national measures.<sup>74</sup> Nevertheless, some countries have already issued local measures on digital taxation. In case, Greece attempted to adopt a legal framework regulating the digital taxation issue, the criteria for this form of taxation should be clarified. In particular, the legal framework around the method of online charges should be clear and transparent. Then, the issues of what to tax and which technique and criteria to follow have to be addressed.

### 4.4. Taxation of CSR actions

Corporate Social Responsibility (CSR) expenses in the tax years starting from 1.1.2020 onwards. According to the amendment of circumstance A' of article 22 of the Code of Tax Income, a precondition for the realisation of the expenses in the interest of the company or during its everyday commercial transactions, in order to deduct them from its gross income, is fulfilled in case of implementation of actions as accepted with the interpretive app. POL. 1113/2015. According to the new interpretation of paragraph of circumstance C of article 22 of the Greek Code of Books and Records, the expenses for corporate social responsibility actions are deducted, under the condition that the company shows accounting profit gains during the time of their realisation, a precondition not required for State CSR actions.

## 5. Company legal Framework

In Greece, an entrepreneur can start a business company either as a freelancer or collectively with other partners. The main types of companies provided by Greek laws are the Public and Private

71 In the Communication 'Public procurement for a better environment' (COM (2008) 400) the Commission recommended the creation of a process for setting common clear, verifiable, justifiable and ambitious environmental GPP criteria for products and services, based at a life-cycle approach and scientific evidence base. European Parliament, Green Public Procurement and the Action Plan for the Circular Economy, 2017, pp. 79-80.

72 EU Environmental Implementation Review 2019 Country Report - GREECE SWD(2019) 138 final see <[https://ec.europa.eu/environment/eir/pdf/report\\_el\\_en.pdf](https://ec.europa.eu/environment/eir/pdf/report_el_en.pdf)> [accessed 25/5/2020].

73 European Commission, Collection of Good Practices on GPP, 2012- 2017.

74 European Parliament, "Digital Taxation – State of play and way forward".

Limited Companies, General Partnerships and Limited Partnerships, Cooperatives and Social Enterprises. The main characteristics of each type of company are described below. Also, the benefits of establishing a social enterprise are highlighted.

### 5.1. Limited companies

There are two types of limited companies: The Société Anonyme (SA) is a capital company that enjoys legal status, being solely liable for corporate debts, with its own property, while its capital is divided into shares. Each SA is considered commercial, even if its operational purpose is not commercial.<sup>75</sup> Same applies for a Private Company (PC), but its capital is determined by the partners without restriction, even with zero contributions in cash. This form of company can also be a single-member company<sup>76</sup>. Corporate shares have a nominal value of at least one (1) euro<sup>77</sup>. The Limited Liability Company is solely responsible for its own property for the company's obligations, so corporate participants cannot be represented by shares<sup>78</sup>. This form of company can also be a Single Member Limited Liability Company. Its capital is determined by the partners without restriction. It is formed either in cash or by in-kind contributions. In-kind contributions are allowed only if the contributed item is an asset that is subject to monetisation. Corporate shares have a nominal value of at least one Euro. The nominal value is equal for all corporate shares. In case of increase or decrease of the share capital, the abovementioned amounts are increased or decreased accordingly<sup>79</sup>.

### 5.2. Partnerships

General Partnership is a company that enjoys legal status and pursues a commercial purpose. For the debts of this form of a company, all partners are unlimited and fully liable<sup>80</sup>. All partners have the right and obligation to manage the company. Each partner has the power to represent the company. No agreement to limit or exclude the liability of the partners applies to third parties<sup>81</sup>. Limited Partnership is a company that enjoys the legal status and pursues a commercial purpose. For its debts, at least one of the partners is liable to a limited extent (limited partner), and at least one another partner is unlimited liable (general partner)<sup>82</sup>. The limited partner does not participate in the management of the corporate affairs, nor in the decision making. Also, the limited partner does not have the power to represent the company<sup>83</sup>.

### 5.3. Cooperatives

Under the Law 1667/1986, as amended by Law 4605/2019,<sup>84</sup> a Cooperative<sup>85</sup> is a willful association of persons for financial purposes. Its major purpose is the cooperation of its members for the economic, social, cultural development of its members and for the improvement of their quality of

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75 Greek Law no 4548/2018 "Reform of the law of public limited companies", Art. 1.

76 Greek Law no 4072/2012 "Licensing/Companies/IKE establishment/Trademark/Investments/Taxation/Education etc.", Art. 43

77 idem, Art. 75

78 Greek Law no 3190/1955 "On Private Limited Liability Companies", Art. 1.

79 Greek Law 4541/2018 "Amendment of Law 3190/1955 on Private Limited Liability Companies and other provisions", Art. 1.

80 Greek Law 4072/2012 "Licensing/Companies/IKE establishment/Trademark/Investments/Taxation/Education etc.", Art. 249.

81 Ibid. Art. 254, 257,258.

82 Greek Law 4072/2012 "Licensing/Companies/IKE establishment/Trademark/Investments/Taxation/Education etc.", Art. 271.

83 Idem Art. 274, 278.

84 Amended Law on Cooperatives see <<https://www.e-nomothesia.gr/kat-emporeio/nomos-4605-2019-phek-52a-1-4-2019.html>> [accessed 21/5/2020].

85 Law 1667/86 on Cooperatives see <<https://www.e-nomothesia.gr/kat-somateia-sundikalistikes-eleutheries/n-1667-1986.html>> [accessed 21/5/2020].

life in general within a joint venture. The statute of association should be signed by 15 members that have equal rights of one vote each.

#### 5.4. Social Enterprises

Social and solidarity economy is defined in Greek Law 4430/2016, as "the sum of economic activities which are based on an alternative form of organisation of the relations of production, distribution, consumption and re-investment, founded on the principles of democracy, equality, solidarity, cooperation along with the respect towards man and the environment"<sup>86</sup>. In this context several social economy actors are established, aiming–included but not limited to–social integration, local development, sustainable development and prevention of social inequalities. The social economy actors are the Social Cooperative Enterprises, Social Cooperative Enterprises with limited liability, Workers' Cooperatives, as well as any other no single-member legal entity, provided that it has acquired legal personality, such as agricultural cooperatives of Law 4384/2016, civil cooperatives of Law 1667/1986, Civil Companies of articles 741 et seq. of the Greek Civil Code, since they meet certain conditions. As regards the Social Cooperative Enterprises (Koin.S.Ep.), they are the civil cooperatives regulated by law 1667/1986 and have as a statutory purpose the collective and social benefit. They are also commercial by Law<sup>87</sup>. They are divided into the following categories, depending on their purpose:

- Social Cooperative Enterprises for the Integration of Vulnerable Groups
- Social Cooperative Enterprises for the Integration of Special Groups
- Social Cooperative Enterprises of Limited Liability, which are automatically regarded as Social Cooperative Enterprises for the Integration, are regulated by law 2716/1999<sup>88</sup>. According to the provisions of this Law Social Cooperative Enterprises of Limited Liability aim to the social, economic and professional integration of people suffering from severe psychosocial problems. They are private legal entities which members are limited liable. They also enjoy a commercial status, and they could have any economic activity.
- Social Cooperative Enterprises of Collective and Social Benefit, which develop sustainable development activities or provide social services of general interest

The statute of the Social Cooperative Enterprise should be signed by at least five members or at least seven members in case of a Social Cooperative Enterprise for Integration. For the company's obligations, the Social Cooperative Enterprise is solely liable. The members of the Social Cooperative Enterprise maybe its employees, getting paid for the job provided and enjoying a dependent employment relationship, as well as all the rights and obligations arising from labour and insurance legislation<sup>89</sup>. The profits of the Social Cooperative Enterprise are not distributed to its members unless they are its employees. A great percentage of the profits is allocated to the creation of new jobs, as well as the expansion of its productive activity in general. In determining the profit of a Social Cooperative Enterprise, up to 35% of pre-tax profits are not included as long as this is paid to its employees. The remaining profit is taxed at 29%<sup>90</sup>.

#### 5.5. Social Entrepreneurship & Employment in the Circular Economy

The Social Cooperative Enterprises of Limited Liability (Koin.S.Ep - Κοιν.Σ.Ε.Π.), according to the provisions of the aforementioned Law, seek to create stable and decent jobs<sup>91</sup> while its members may

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<sup>86</sup> Greek Law 4430/2016 "Social and solidarity economy and development of its institutions and other provisions", Art. 2, par. 1.

<sup>87</sup> Ibid, Art. 14, paragraph 1.

<sup>88</sup> Greek Law 2716/1999 "Modernisation of mental health services and other provisions", Art. 12.

<sup>89</sup> Greek Law no 4430/2016 "Social and solidarity economy and development of its institutions and other provisions", Art. 17, par. 8.

<sup>90</sup> See < <https://www.taxheaven.gr/circulars/25006>>(accessed 28.05.2020)

<sup>91</sup> Explanatory memorandum of Law 4430/2016, p. 13.

enjoy a dependent employment relationship; they are getting paid for the work provided and have all the rights and obligations arising from labor and insurance legislation. Special care is provided for the employment of vulnerable and special groups. That's why it is provided for the Social Cooperative Enterprises for the Integration of Vulnerable Groups that at least the 30% and 50% respectively of their members and employees should belong to these groups. The very recent National Reform Program of 2020 sets as an objective that by year 2021 the social entrepreneurship should be developed and the jobs and employment in the field of social entrepreneurship should be increased<sup>92</sup>. Indeed, the beneficiary legislative provisions for these types of companies allow to a particularly wide field of the population, such as the categories mentioned above or even the pensioners, to work in them. Noteworthy, especially for the vulnerable groups working in a Social Cooperative Enterprise is the fact that they continue to receive the benefits already gaining, such as a welfare allowance or reintegration benefits or any form of hospitalisation or provision, at the same time as their remuneration from the Koin.S.Ep (Κοιν.Σ.Ε.Π.)<sup>93</sup>.

Furthermore, it should be mentioned that the conditions of the social economy contribute to the promotion of the utilisation of renewable energy sources. As it turns out by the example of Germany, a considerable number of local social enterprises can be established, aiming at the utilisation of wind and solar photovoltaic power, as well as recycling and product processing. The local support of these companies for wind turbines, solar panels and power grids are crucial, once the investment returns to the local population through the cooperative social enterprises<sup>94</sup>. According to the MoEE<sup>95</sup>, "there is no central fast-track helpdesk for a maker to obtain a license to operate a makerspace or a social enterprise; there are the usual administrative procedures".

Finally, Social Cooperative Enterprises (Κοιν.Σ.Ε.Π.) can be included in entrepreneurship support programs, in the programs of the Labor Employment Organization (OAED) for the support of work and all kinds of active employment policies in general. Also, these Enterprises might benefit from state aid when developing investment plans on certain economic fields. In the –very recent- fourth proclamation of "General Entrepreneurship" aid scheme of the Development Law 4399/2016 there are specific special aid provisions for the Social Cooperative Enterprises.<sup>96</sup>

## 5.6. Company taxation issues.

It is worth to mention that some changes in the corporate tax regime have taken place since 01.01.2020, which can push an entrepreneur to choose a specific type of company. When occurring profits, are less than 40.000 euros the incorporation of an individual company or a General Partnership seems the best choice since the income tax is recently calculated according to the new tax scale, which provides a rate of 9% for the first 10,000 euros, 22% for the next 10,000 euros and rates of 28% and 36% for the next and subsequent 10,000 euro. Noteworthy is that the insurance contributions are disconnected from the declared profits. Also, for profits more than 40.000 – 50.000 euros an optimal choice is the incorporation of a General Partnership or a Limited Partnership. That's because for these types of companies the tax rate has been reduced from 29% to 24% and the benefit will be seen with the issuance of the 2020 settlement, as the reduction concerns the profits of 2019. For profits above 50.000 euro the incorporation of a Société Anonyme (SA) or a Limited Liability Company or a Private Company (PC) is almost a one-way solution. Especially for the Private Company the tax rate is reduced to 24%. There is also an additional benefit from the recent reduction of the tax rate on dividends from 10% to 5%<sup>97</sup>.

<sup>92</sup> See [https://ec.europa.eu/info/sites/info/files/2020-european-semester-national-reform-programme-greece\\_el.pdf](https://ec.europa.eu/info/sites/info/files/2020-european-semester-national-reform-programme-greece_el.pdf) (accessed 28.05.2020)

<sup>93</sup> See <<https://www.startyouup.gr/el/a/50-koinwnikh-synetairistikh-epixeirish-koinsep>> (accessed 28.05.2020)

<sup>94</sup> Katichoritis Stergios, "Social Entrepreneurship in Greece and Europe 2020", Greek Institute of Economics of Education and Lifelong Learning, Research and Innovation, Minutes of the first pan-Hellenic conference with international participation "Greece-Europe 2020, Education, Lifelong Learning, Research, Innovation and the Economy", July 2016.

<sup>95</sup> Interview insights of Artemis Gryllia, Expert Advisor to the General Secretary of the Ministry of Environment (22.5.2020).

<sup>96</sup> See <https://koinsep.org/προκήρυξη-καθεστώς-ενισχύσεων-νέ/> (accessed 28.05.2020)

<sup>97</sup> See <https://www.eurotax.gr/νέα/τελικά-va-επιλέξω-ικε-ή-μήπως-όχι-τι-με-συμφέρει-από-01-01-2020> [accessed 4.6.2020]

## 6. National Occupational Safety & Health (OSH) requirements

### 6.1 National Framework requirements for OSH

Historically, the first legislative text in Greece, regulating the occupational safety and health, was adopted in 1911 on Workers' Health and Safety and Working Hours (Greek Law No. 3934, 1911) followed by the Presidential Decree (PD) No. 14 of 1934 on Workers' Health and Safety in Industries, Manufactures, Workshops.<sup>98</sup> Since then, Greece has adopted a wide range of national legislative texts and aligned with the European Framework on Health and safety. To overcome the complexity of the legislation, Greece has adopted Law No. 3850/2010 *ratifying the Code of Laws on Occupational Safety and Health*<sup>99</sup>. This legal document covers a wide variety of OSH issues such as the responsibilities of employers and employees for the protection of the health and safety in all dimensions of their work, classification of enterprises in three risk tiers (A: high, B: medium and C: low), health monitoring, establishment and function of Health and Safety Committee at an enterprise level (election procedure, role and number of representatives, etc.), qualifications and obligations of the safety engineer and the occupational physician, written risk assessment for the protection of workers from physical, chemical and biological agents, fire, etc., training of the employees, building requirements etc. The obligation to control aspects related to the job and its location, as well as issues relating to facilities and machinery or tools, in ways that ensure the protection of the health of the employee lays with the employer also according to Article 662 of the Civil Code.

Conventional roles for the clarification of the responsibilities for health and safety within a corporation include the employer which is "*any natural or legal person who has an employment relationship with the employee and is responsible for the company and/or the establishment*" and the employee who is defined as "*any person employed by an employer with any employment relationship, including trainees and apprentices, except domestic service staff*". However, POP-MACHINA encourages the formation of non-conventional employment forms such as collaborative production of the circular economy using digital platforms. Participants in the project will possibly be self-employed individuals who will cooperate in the same working space. For cases where many entities share the same workplace, employers (e.g. each self-employed person) must work together on OSH issues and organise their activities to protect employees from occupational hazards. According to article 42 paragraph 1, "*The employer is obliged to ensure the health and safety of employees in all aspects of the work and to take measures to ensure the health and safety of third parties*".

Obligations of the employers under the context of Law 3850/2010 include taking all necessary measures for the protection of the health and safety of the employees. The employer is obliged to assess the dangers to the health of employees, during the selection of work equipment, chemical and biological factors or products, during the physical arrangement of the workplace and the manufacturing process. The employer is also obliged to inform the employees of the occupational hazards of their work. The Law also requires the employer to ensure the safe operation of the means and facilities. Employers should also encourage and facilitate employees' and their representatives' training and learning on the risks relevant to their workplace.

Employers are required to assess the risks to the health and safety of the employee. The employer shall take into account all of these factors when assigning duties to an employee. Given that in collaborative working schemes a maker may be 'employer' and 'employee' at the same time, it is important to comply with the OSH Risk Assessment Study (Μελέτη Εκτίμησης Επαγγελματικού Κινδύνου) of the working space. It is important to make sure that only workers who have provided appropriate training reach areas of severe and specific risk. For this reason, it is crucial to organise

<sup>98</sup> See <<https://osha.europa.eu/mt/publications/country-report-greece-worker-participation-management-occupational-safety-and-health>>

<sup>99</sup> See <[http://www.eiinvae.gr/sites/default/files/2019-07/84a\\_10.1275640659265.pdf](http://www.eiinvae.gr/sites/default/files/2019-07/84a_10.1275640659265.pdf)>

frequent training sessions, based on the results of the written OSH risk assessment. The last issue to be addressed is the legal obligation of the employer to take measures relating to safety, health and hygiene during work in any way not to involve any economic liability for the employees. Funds for the free allocation of appropriate means for the protection of OSH should be secured.

On a national level, the competent Authority for all issues concerning OSH the Ministry of Labor and Social Affairs. The General Directorate of Labor Relations, Health and Safety at work and inclusion is the principal OSH administration agency responsible for OSH legislation, policy, administration, information management, training and research and the Labor Inspection Body (SEPE) that is responsible for the inspection and application of the Law on OSH either on social matters (work times, wages, social security, etc.) or on safety and health at work issues.

Another critical institution for OSH issues is the "Hellenic National Institute of Health and Safety in the workplace" (ELINYAE) which was established by the Social Partners<sup>100</sup> in 1990 in accordance with Article 5 of the National General Collective Agreement of the same year. The objectives of ELINYAE include:

- Tracking, recording, processing, analysis and research of dangerous hazards or conditions in the workplace;
- To provide expertise on issues of Health and Safety of the employees whenever this is requested by either the employees or the employers;
- To contribute to the research and treatment of issues that arise by the interaction between the workplace and the wider environment;
- To monitor international developments and experiences.

Therefore, its contribution to circular actions in makerspaces in the context of POP-MACHINA may be crucial since they may offer training to individuals for OSH risk assessment.

## 6.2. OHS requirements applicable to vulnerable groups of workers

Provided that Pop Machina aims to facilitate the inclusion of vulnerable people in makerspaces and equal accessibility to digital platforms, the following Greek legislation should be considered:

- the Article 11 paragraph 1 of the Presidential Decree - PD 176/1997 as amended by Article 2 paragraph 4 of PD 41/2003 for pregnant workers, workers after childbirth or lactation should be provided with a new working position which ensures that their exposure to hazards determined by the regulation is avoided.
- Article 7 of Law 4251/2014<sup>101</sup> for migrant workers that work with a work permit fall under the provisions of Article 3 of Law 3850/2010.
- Article 10 of the Law No. 3304/2005<sup>102</sup> and all the existing accessibility standards<sup>103</sup> provisions that ensure the equal treatment of people with disabilities in the workplace.
- Article 54 of Law 3850/2010, workers that are under 16 years of age are entitled to 12 consecutive hours of rest. Daily work cannot exceed 6 hours and 30 on a weekly basis.
- Article 1 of Law 2639/1998<sup>104</sup> for employees that work from home (teleworking), which are assumed to be covered by the same regulations that apply for the rest of the employees of the company.
- Article 2 of Law 3850/2010 for self-employed persons.

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100 Greek National Confederation of Labour (GSEE-employees), the Hellenic Federation of Enterprises (SEV-employers), the Hellenic Confederation of Professionals, Craftsmen and Merchants (GSEVEE-employers) and the National Confederation of Hellenic Commerce (ESEE-employers)

101 See <<http://www.elinyae.gr/index.php/ethniki-nomothesia/n-42512014-fek-80a-142014>>

102 See <<https://www.vpapk.gr/uploads/files/2538.pdf>>

103 See <[http://skf.uoc.gr/files/4/122/odigos\\_tou\\_politi\\_me\\_anapiria.pdf](http://skf.uoc.gr/files/4/122/odigos_tou_politi_me_anapiria.pdf)>

104 See <<http://www.elinyae.gr/index.php/ethniki-nomothesia/n-26391998-fek-205a-291998>>

In Greece, there is no regulation over the ease of access to a digital workspace or e-commerce for vulnerable groups; however, of interest to Pop Machina are the following national laws:

- *Law 4067/2012* New Urban Planning Regulations (article 26) requires that all new buildings must comply with the Design Guidelines for the Autonomous Movement and Living of People with Disabilities (Disability Office, Ministry of Environment 1986- 1990) which cover in great technical detail specifications for horizontal and vertical access, accessible indoor and outdoor facilities. Buildings dating before 2012 which host public sector services, local authority services, open spaces for culture, sports, leisure and entertainment, temporary accommodation, education, health and social welfare, justice services as well as banks, industry, trade and offices are required to ensure accessibility according to standards by 2020 (Article 26 par. 4).<sup>105</sup>

- *Ministerial Decision 1301/B/12-4-2012* Provision of e-government services.<sup>106</sup> The websites and the electronic services provided to vulnerable groups by the public sector must comply with the Web Content Accessibility Guidelines (WCAG), version 2.0, at least to the AA level. Accessibility must be considered as regards access to services, use and provision of public documents through the use of ICT. These guidelines must also be met in procurement processes for public sector websites. According to MoEE, there is no planning to boost the circular economy by targeting specific vulnerable groups.

### 6.3 Trainers key role and responsibilities for OSH

As mentioned in Section 6.1 above, according to the current legislative requirements an "employer" should assess the risks to the health and safety of the employee in the workplace taking into account the activities and make sure that only workers who have been trained on the management of occupational risks will undertake any activities. In makerspaces, an individual may be at the same time "employer" and "employee" depending on the collaboration scheme they are involved in. Furthermore, the mixture of individuals may also vary from time to time in a collaborative workplace. In order to ensure that all individuals are able to identify a hazard present in their workplace and understand the relevant preventive measures, it is important to organise training for OSH on a regular basis according to the results of the written OSH risk assessment.

Taking into consideration the Article 49 paragraph 1 of Law 3850/2010 "*every employee is obliged to apply all OSH rules for his safety and health, and of others, to the extent of his/ her capabilities*". Under this light, the obligation to take reasonable steps to protect the safety and health of others lays with the supervisors, the senior officers (e.g. manager) of a makerspace. For this reason, the competent person of each makerspace should be first trained for OSH management by a dedicated institution and then undertake to transfer this knowledge to all the other individuals.

## 6. National Framework on product recycling labelling

Recently Greece decided to adopt the voluntary European Ecolabel scheme.<sup>107</sup> Related to recycling, there was only a product labelling sign (a green Dot, as in the figure) that citizens could identify on most of the products. A consumer may easily perceive the product as recyclable, but in reality, the Dot testifies only the membership contribution to a PRS nonprofit business, Hellenic Recovery Recycling Corporation SA (HERRCo).<sup>108</sup> HERRCo has a fifteen years tender of public interest, to serve recycling at a national scale. The



<sup>105</sup> Academic Network of European Disability experts (ANED) – January 2013 VT/2007/005 see <<https://ec.europa.eu/social/main.jsp?catId=1202>>

<sup>106</sup> See <<http://www.nomotelia.gr/photos/File/vap-989-12.htm>>

<sup>107</sup> See <http://www.ecolabelindex.com/ecolabel/eu-ecolabel> [accessed 15/11/2020]

<sup>108</sup> See <<https://www.herrco.gr/?lang=en>> [accessed 22/5/2020].

company's share capital is owned by 35% from the Central Union of Municipalities, represented by three members in the nine-membered Board of Directors, and the rest of the capital is owned by 19 private companies.<sup>109</sup> Based on Law 2939/2001, HERRCo will serve this Collective Alternative Management System-Recycling (CAMS Recycling) tender, consecutively from 2001 till 2034. It manages and owns the blue recycling bins (for most recyclables), the blue Bells for glass and other alternative systems, in 243 municipalities, serving 20.000 businesses and neighbourhood needs of the country. Affiliated members and shareholders can be any producer (named a blue bin filler or importer) that puts products in the Greek market; by joining this national PRS system, they self-satisfy their recycling obligation for their packaging material at the country of consumption (so imported goods pay such contribution in Greece). Members are licenced to use the Dot,<sup>110</sup> provided they sign the packaging Declaration and pay annual fees (which are tax-deductible). As expressed in HERRCo's website:

"For the equitable treatment of operators and protection of competition, a single pricing system is adopted for the services provided by HE.R.R.Co in the context of the services System. What is more, the determination of the amount of contribution must correspond to the criteria set forth by the Law, while the prices of the financial contribution are to be approved by the competent bodies of the state. For these reasons, the readjustment of contributions cannot become the subject of a bilateral negotiation between HE.R.R.Co and each operator." In general, HERRCo consists of an interesting example of successful cooperation of the business community with the municipalities. However, the long-term perspective of the circular collaborative economy is not mentioned on the company's website.

### 7.1. Product Certification / Trademarks/ Patent/ Labeling requirements

Pop Machina makers may, in the long-term, aim to create certified circular products and services, labelled with a QR, sharing patents, designs and know-how among community users through online collaborative platforms. The use of internet and blockchain can facilitate the tracking of a circular product's origin. i.e. from secondary raw material. In case, such products need certification, according to the Greek Law,<sup>111</sup> a maker has to file for a trademark at the Directorate of Commercial and Industrial Property in the General Secretariat of Commerce and Consumer Protection of the Ministry of Economy and Development. Letters of consent from other trademark owners in the process of trademark acceptance and registration have a binding effect. They can be submitted at any time during the registration procedure and at any point of the examination of a mark. IP Right holders may also issue a disclaimer and limit the designated initially products or services at any time.

Very recently, a new Greek law on trademarks has entered into force<sup>112</sup>, incorporating Directive (EU) 2015/2436 on the approximation of the laws of Member States relating to trademarks<sup>113</sup>. The new Law repeals the previous Law 4072/2012 (articles 121-182) and attempts to align the national trademarks law with the EU trademark system provided by Regulation 2017/1001<sup>114</sup>. Article 13 par. 1 of new Law 4970/2020 incorporates Article 15 par. 1 of Directive (EU) 2015/2436 on the

109 Some of HERRCO shareholders are TETRA PAK Hellas, Coca Cola, Friesland, Nestle, PEPSICO, Athenian Brewery, etc. see <https://www.herrco.gr/the-corporation/?lang=en> [accessed 25/5/2020].

110 See <https://www.herrco.gr/fillers-and-importers/?lang=en#1482397228751-70a87e51-00ea3682-e186> [accessed 25/5/2020]. [accessed 25/5/2020].

111 More at the Greek Law Digest see <http://www.greeklawdigest.gr/topics/industrial-a-intellectual-property-rights/item/65-trademark> [accessed 25/5/2020].

112 See law 4970/2020, Greek Government Gazette A 71/20.3.202020.

113 See DIRECTIVE (EU) 2015/2436 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2015 to approximate the laws of the Member States relating to trademarks, OJ L 336/1, 23.12.2015.

114 See REGULATION (EU) 2017/1001 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 June 2017 on the European Union trademark, OJ L 154/1, 16.6.2017.

exhaustion of the rights conferred by a trademark, stating that "A trademark shall not entitle the proprietor to prohibit its use about goods which have been put on the market in the Union under that trademark by the proprietor or with the proprietor's consent." In the following paragraph, however, the respective Articles clarify that "paragraph 1 shall not apply where there exist legitimate reasons for the proprietor to oppose further commercialisation of the goods, especially where the condition of the goods is changed or impaired after they have been put on the market."

According to this provision, it is not entirely clear whether products bearing the initial trademark can be used without restriction for upcycling and reuse if they are meant for resale. To the extent, namely, a branded product is used by a consumer, even if on a second-hand or upcycled basis, the right of the trademark owner should be considered exhausted. More significant difficulties are anticipated when a product is sold, e.g. on an online or collaborative platform for reuse as a different product, and to the extent, that its trademark is obvious or traceable. Notably, law 4679/2020 incorporates the provision of Directive (EU) 2015/2436 regarding the certification marks,<sup>115</sup> into its Articles 57-63, enabling any natural or legal person to apply for a certification mark, provided that such person does not carry on a business involving the supply of goods or services of the kind certified. What is more, the new Law incorporates Articles 29-36 of Directive (EU) 2015/2436 on collective marks, enabling the "associations of manufacturers, producers, suppliers of services or traders, which, under the terms of the law governing them, have the capacity in their name to have rights and obligations, to make contracts or accomplish other legal acts, and to sue and be sued, as well as legal persons governed by public law" to apply for collective marks.<sup>116</sup>

The provisions regarding the certification and collective marks can be of particular importance to the circular economy, providing for the qualitative recognition of raw-materials and the recycled, upcycled or otherwise reused products, with a positive effect on their respective marketability and value.

As regards Patents, law 1733/1987<sup>117</sup> on the transfer of know-how, inventions and technological innovation is the main applicable legislation in Greece. The competent Authority for the respective patents, designs, utility models and relevant IP rights is the Industrial Property Organization (Organismos Viomichanikis Idioktisias, OBI), seated in Athens. Patent litigation is rare in Greece. Nevertheless, patent infringement complaints could be an anticipated problem for circular economy and maker-space participants, who reuse or repurpose patent-protected products, spare-parts or compartments, either for an extension of the intended use or entirely new use, intended for further sale. Finally, Greece has extensive legislation on labelling requirements for various products, which vary greatly between sectors. The respective safety and origin legislation must be adhered to, and no exemption seems to be in place for circular economy product output.

## 7.2. Unfair competition

Greek Law 146/1914 on unfair competition practices provides for a wide spectrum of what could be considered as standard unfair practices provisions. Article 1 of the Law constitutes its general, all-encompassing provision, prohibiting any competition practice, which is considered unfair. What is unfair, is specified by the respective jurisprudence and includes, indicatively, exploitation of a person's reputation, unlicensed use of the trademark of a competitor, imitating products of a competitor, purposely impeding the business of a competitor, etc. Article 3 of the Law also prohibits fraudulent advertising practices. In contrast, other provisions prohibit the spreading of negative facts about a competitor which are not demonstrably true or which the competition knows they are untrue (Articles 11 and 12), the infringement of trade-secrets (Articles 16-18), etc.

For circular economy participants, the main concern regarding unfair competition would relate to a perceived as unlicensed use of the trademark of a product which is repurposed after the end of its

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<sup>115</sup> See Article 28 of Directive (EU) 2015/2436.

<sup>116</sup> See Article 64 of law 4970/2020, Greek Government Gazette A 71/20.3.202020.

<sup>117</sup> Greek Government Gazette A 171/22.4.1987

initial lifespan. This issue is closely related to the abovementioned consideration on brands, and the question of whether products bearing an initial trademark can be used for upcycling and reuse even if they are meant for resale, following the exhaustion of the initial trademark holder's right.

Unfair "business to consumer" practices may be considered infringement of IP rights, know-how and trade secrets (at the repairing, remanufacturing process) governed by the Unfair Competition Law 146/1914 sec. 16-18, and the transposed Directive 2016/943 that provide for civil claims for damages and criminal sanctions, as well as the cessation and abstention in the future from such practices. It should be considered that Greek Law 4605 A' 52/01.04.2019<sup>118</sup> harmonised Directive EC 2016/943, on the protection of know-how and business information that has not been disclosed (trade secrecy) from illegal acquisition, use and disclosure (EEL 157/15.6.2016). Administration sanctions are also probable, since Law 3377/2005, as amended by Law 4155/2013, provides the seizure and destruction of unlawful imitation merchandise.<sup>119</sup> The Ministry of Development and Investment submitted a Draft law on "Trade development, control, research and innovation" to be voted until the end of June 2020, providing for a new national agency, named "Interstate Market Control Unit (ΔΙ.Μ.Ε.Α.)" to control illegal trade.<sup>120</sup> The implementation processes are under public consultation till June 15<sup>th</sup>, 2020, providing at art 21 for stricter fines. According to art.1 "Illegal trade or by-trade or 'grey economy trade' means any production process or movement in the market by any physical or electronic means, of any kind of goods, products and services, which are in violation of the provisions of Law 4308/2014 (A '251) and are deprived of legal documents or markings, are available without the required permission to grant intellectual property rights or in breach intellectual property rights or provisions of EU customs law and the National Customs Code (Law 2960/2001, A' 265)".

Therefore, in the future, 3D printing and digital sharing of undisclosed know-how could be considered a violation and infringement of trade secrets, so makers cautiously avoid unlawful acquisition, use and open access sharing of designs, and aim to reproduce their products with variations in imitation.

## Conclusions - The way ahead <sup>121</sup>

Greece has harmonised its legislation to the most recent targets of the Waste Framework Directive and has drafted a national waste strategy plan with CE principles. The integrated waste management ranking of Greece is very low compared to the rest of EU27, in terms of the circular economy, waste recovery - recycling and final disposal to landfills.<sup>122</sup> Municipalities recycle only 15% of municipal solid waste, and 80% ends up at landfills or illegal dumping sites. Therefore, the most critical issue for Greece is to create the right mechanism for reducing the municipal duties, by auditing the waste management performance among the 323 municipalities at a national level. Pop-M as a digital platform could contribute to registering part of the associated activities. Primary drivers for the circular economy can be the Green Public Procurement, the enforced inspection of the EPR system and communicative campaigns. Main barriers are the lack of knowledge of entrepreneurs and citizens, lack of financial incentives and reduced support to entrepreneurship. The Greek government<sup>123</sup> put

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<sup>118</sup> See <[https://www.kodiko.gr/nomologia/document\\_navigation/509475/nomos-4605-2019](https://www.kodiko.gr/nomologia/document_navigation/509475/nomos-4605-2019)> [accessed 18/5/2020].

<sup>119</sup> More details at Greek Law Digest see <<http://www.greeklawdigest.gr/topics/competition-antitrust/item/206-unfair-competition>> [accessed 27.5.2020]

<sup>120</sup> See <<http://www.opengov.gr/vpoian/?p=11125>> [accessed 2.6.2020]

<sup>121</sup> Vasilis Liogkas, Expert Advisor to the Minister of Environment and Energy (Brussels, 2019) see <[https://ec.europa.eu/transparency/regexpert/index.cfm?do=group\\_Detail.groupMeetingDoc&docid=31126](https://ec.europa.eu/transparency/regexpert/index.cfm?do=group_Detail.groupMeetingDoc&docid=31126)> [accessed 25/5/2020].

<sup>122</sup> IOBE Policy report. Greece 2020. Factsheet on Green Policies. Retrieved at [http://iobe.gr/EC\\_Conference2020/Factsheet\\_Green%20Policies\\_Greece%20July%202020.pdf](http://iobe.gr/EC_Conference2020/Factsheet_Green%20Policies_Greece%20July%202020.pdf) [last accessed 15/10/2020].

<sup>123</sup> Hellenic Ministry of Environment and Energy. See <https://www.circular-economy.gr/%20:%20http://www.vpeka.gr/%3E> [last accessed 15/10/2020].

as its key cross-sectoral priority the implementation of circular economy objectives,<sup>124</sup> by extending up to 2025, the National Strategy and Action Plan for the Circular Economy,<sup>125</sup> accelerating action and results through concrete performance indicators.

Ambitious incentives also include a proposal on VAT exemption, and recent decrees so that CSR expenses to be deducted by 130%, and R&D investments to be deducted by 200% from the taxable annual income (if profitable). Greece incorporated requirements of recycling in construction wastes in new permits and other EU funded programmes such as 'Saving at Home (Exoikonomw kat'oikon)' lately adopted. Main obstacles in both pilot cities (Piraeus and Thessaloniki) are the density of the population and the lack of engagement of the society, so awareness campaigns are needed. There is a significant loss of materials from illegal bugging out the recycling bins purposed for metals, e-waste and carton papers. The extensive shadow economy makes the logistics of treating these materials, quite risky and unpredictable as to the expected quantities. There is an e-waste platform in Greece for information on the output but not on the input of raw materials for producers. There is no platform for the exploitation of secondary raw materials nor a framework setting standard criteria to promote CE. At a national and regional level, the number of personnel involved in environmental and waste management audits and the number of performed audits cannot be characterised as satisfactory. A new piece of law is expected, during 2020, to bridge this crucial gap by authorising registered scientists and engineers from the private sector to perform the necessary audits on behalf of the Greek state. Moreover, lately was launched a national online startup register, named 'Elevate Greece', for new companies characterised by eligibility criteria such as innovation and scalability, seeking talents and financing. Both these initiatives could boost the sustainable performance of the Greek ecosystem and provide a stable ground for achieving the quantitative EU targets of the circular economy.

Based on the MoEE insights,<sup>126</sup> main drivers for the circular collaborative economy in Greece are the Green Public procurement, the enforced inspection of the EPR system, the financial granting through the construction funds, the legislative framework and communicative campaigns. Main barriers are the lack of knowledge of entrepreneurs and citizens, lack of incentives and reduced support to entrepreneurship. The Greek government<sup>127</sup> put as its key cross-sectoral priority the implementation of circular economy objectives in practice,<sup>128</sup> updated its National Strategy and Action Plan for the Circular Economy, originally endorsed in April 2018 and now extended up to 2025<sup>129</sup>, by accelerating action at three levels:

1. Setting criteria for green and circular public procurement, incentives for secondary raw material markets and industry, as well as designing, repairing and reuse of products, aiming to "close the loop" of product lifecycles and to promote secondary use of by-products and waste in new production processes as primary raw materials, also applying in practice the "hierarchy approach" in waste management and with specific measures and targets for Plastics (single-use plastics, fishing gears, etc.) and food waste;
2. promoting industrial symbiosis and clustering of businesses for supporting circular entrepreneurship, environmental industry, digital transformation; and

124 UN SDG Partnerships Platform (2020) Greece's commitment to green growth through circular economy. Retrieved at <https://sustainabledevelopment.un.org/partnership/?p=33843> and accessed 15/10/2020.

125 Idem.

126 Interview insights of Artemis Gryllia, Expert Advisor to the General Secretary of the Ministry of Environment (22.5.2020).

127 Hellenic Ministry of Environment and Energy see <<https://www.circular-economy.gr/>; <http://www.ypeka.gr/>> [accessed 25/5/2020].

128 UN SDG Partnerships Platform (2020) Greece's commitment to green growth through circular economy. Retrieved at <<https://sustainabledevelopment.un.org/partnership/?p=33843>> [accessed 21/5/2020].

129 Idem <https://sustainabledevelopment.un.org/partnership/?p=33843> [accessed 25/5/2020].

3. stimulating employment through the sharing or collaborative economy and small-scale entrepreneurship. Expected impact: The above cross-cutting targets address the strong interlinkages between SDGs 12, 9, 7, 13, 15, 7 further accelerated, coupled by the vital education- awareness-raising component (SDG 17) enhancing partnerships, synergies and communication between the various involved actors in prevention of waste management,<sup>130</sup> giving emphasis on monitoring progress and results through concrete performance indicators.

The framework conditions of the circular collaborative production require multi-disciplinary expertise for the challenges faced continuously by the municipal experts involved in the Pop Machina project. This report currently addressed most of the issues revised and updated until October 2020, according to the Pop Machina H2020 project needs.

Tax credits for Corporate Social Responsibility (CSR) actions and Research and Development (R&D) investments in technological innovation are ways to decrease the cost of investment in R&D and stimulate the advancement of CCP. Lately, in Greece, R&D corporate expenses can be deducted from expenses by 200% and taxable income by 100% (it applies in Greece from 29.7.2020 and on).<sup>131</sup> The EU aims to harmonise rules on R&D incentives defining which expenses qualify for the deduction; the European Law Institute elaborates such standards<sup>132</sup> under the project name 'For a European approach to R&D expenses qualifying for the common tax base Super Deduction, following the Common Consolidated Corporate Tax Base (CCCTB) rules.

Moreover, donations in kind or monetary values are other sectors of tax benefit interest<sup>133</sup> for makers, as a source of secondary raw materials and potential income. As the Pop-Machina project progresses, best practices evolved from the interviews with national experts, and the other reports elaborated by support partners, cited in D2.4.

To conclude, the authors suggested in detail at D2.4 (Pavlopoulou, 2020, Deliverable D2.4 Pop Machina) user-friendly national or municipal tax-incentives that can advance CCP & waste management, as follows:

- Circular Public Procurement under specific standards and penalties to non-circular practices;
- Lower Value-added Tax (VAT) on the use of upcycled materials or services;
- R&D expenses (including staff and equipment) to remain deductible from corporate taxable income in the year they incurred (in Greece by 200% since 29.7.20);<sup>134</sup>
- Angel investors contributing equity to duly registered start-ups to deduct an amount equal to 50% of the gross amount of their contribution from their taxable income (applies in Greece);<sup>135</sup>
- Depreciation of investments in 3-5 years, if not longer, with a percentage added on corporate capital;
- Reduced staff cost (with a state subsidy on social security) of new R&D personnel;
- Incentives for Private, Public Partnerships (PPPs) and Joint Ventures;
- Incentives on Extended Producer's Responsibility (EPR), eco-design, reverse engineering/reverse logistics;

130 See <[https://ec.europa.eu/environment/waste/framework/pdf/GR%20Roadmap\\_FINAL.pdf](https://ec.europa.eu/environment/waste/framework/pdf/GR%20Roadmap_FINAL.pdf)> [accessed 25/5/2020].

131 Greek Law 4712/2020 Article 22A as amended on 29.7.2020 on R&D expenses [https://www.ev.com/en\\_gr/tax/tax-alerts/amendments-in-the-taxation-of-legal-entities](https://www.ev.com/en_gr/tax/tax-alerts/amendments-in-the-taxation-of-legal-entities) [accessed on 15.10.20]

132 **European Law Institute (ELI) project on Tax.** Georges Cavalier ((2017-October 2020) <https://www.europeanlawinstitute.eu/projects-publications/current-projects-feasibility-studies-and-other-activities/> [last accessed on 27.10.20]

133 **EY Greek law on tax** [https://www.ev.com/en\\_gr/tax/tax-alerts/amendments-in-individuals-taxation](https://www.ev.com/en_gr/tax/tax-alerts/amendments-in-individuals-taxation)

134 Greek Law 4712/2020 Article 22A as amended on 29.7.2020 on R&D expenses.

135 Greek Law 4197/2013 Article 22 as amended on 29.7.2020 by Law 4712/2020 Article 70A over capital equity to start-ups.

- State subsidies on social insurance for employment from vulnerable groups;
- CSR corporate contributions of industrial symbiosis from manufacturers to circular makers to be tax-deductible from their annual tax; (in Greece by 130%);<sup>136</sup>
- Donations to municipalities, communities, non-profit organisations of social purpose<sup>137</sup> or social enterprises to be excluded from VAT (as generally applied during COVID 19) or be subject to donation tax of 0,5% if they exceed the tax-free limit of 1000 euro (as applicable in Greece);
- The loan interest for circular social enterprises to be an exempted cost;
- The value derived from Pop-Machina tokens (if monetised after an applied circular collaborative transaction), to be deductible from taxable income;
- Exemption of social enterprises from annual Operating Tax;
- Environmental risk, liability & accident insurance for makers from vulnerable groups;
- Allowance for circular social enterprises to operate even at a loss-making for five years, with no penalty on their license to operate;
- Unused tax credits to be carried forward up to 15 years;

<sup>136</sup> Greek Law 4197/2013 Article 22 on CSR expenses <https://www.taxheaven.gr/law/4172/2013> [last accessed on 27.10.20]

<sup>137</sup>European Foundation Centre. (2016) Transnational Giving Europe Greece. <https://www.transnationalgiving.eu/wp-content/uploads/2017/09/TGE-EFC-CountryProfile-Greece-2016.pdf> [Retrieved and last accessed 27.10.2020].

# appendix: Legal framework of waste management in Greece

The regulatory framework of wastes in Greece is a large puzzle of legislation that is based on European Union Directives. The main driver is the Waste Framework Directive 2008/98/EC which has been transposed to Greek legislation with Law 4042/2012 (Government Gazette no 24/A/13-2-2012) on Waste Management. Throughout the decade a significant number of Community Directives and Decisions regulating specific problems on wastes have been adopted at a national level as presented below:

## **1. GENERAL FRAMEWORK**

- Law 4685/2020 (Government Gazette 92/ A/ 7.5.2020) Modernization of environmental legislation, incorporation into Greek legislation of Directives 2018/844 and 2019/692 of the European Parliament and of the Council and other provisions
- Law 4042/2012 (Government Gazette 24 / A / 13.2.2012) "Criminal Environmental Protection - Harmonization with Directive 2008/99 / EC - Waste generation and management framework - Harmonization with Directive 2008/98 / EC - Regulation of the Ministry of Environment, Energy and Climate Change "transposing into national law the Framework Directive 2008/98 / EU on waste
- Law 4014/11 (Government Gazette 209 / A / 21.9.11) "Environmental licensing of projects and activities, arbitrary regulation in relation to the creation of an environmental balance and other provisions within the competence of the Ministry of Environment" as amended and in force (Article 12)
- European List of Waste (LoW), according to 2014/955 / EU: Commission Decision of 18 December 2014 amending Decision 2000/532 / EC on the list of waste pursuant to Directive 2008/98 / EC of the European Parliament and of the Council Text with EEA relevance
- Joint Ministerial Decision 114218/1997 (Government Gazette 1016 B) "Preparation of a framework of Specifications and general solid waste management programs"
- Ministerial Decision 56366/4351/2014, (Government Gazette 3339 / B / 12.12.2014) "Determination of requirements (specifications) for treatment works in the context of mechanical - biological treatment of mixed municipal waste and determination of characteristics of the produced materials according to their uses, according to subsection b of paragraph 1 of article 38 of Law 4042/2012 (24 / A)
- Joint Ministerial Decision 50910/2727/2003 (Government Gazette 1909 B) "Measures and Conditions for Solid Waste Management. National and Regional Management Planning ", as amended and in force.

- Joint Ministerial Decision 22912/1117/2005 (Government Gazette 759 B) "Measures and conditions for the prevention and reduction of environmental pollution from the incineration of waste" modified by Ministerial Decision 36060/1155 / E.103 / 2013, (Government Gazette 1450 / B / 14.6.2013) provisions of Directive 2010/75 / EU "On Industrial Emissions (Integrated Pollution Prevention and Control)" of the European Parliament and of the Council of 24 November 2010

- Joint Ministerial Decision 13588/725/2006: Measures, conditions and restrictions for the management of hazardous waste in compliance with the provisions of Directive 91/689 / EEC "on hazardous waste" of the Council of 12 December 1991. Replacement of sub-no. 19396 / 1546/1997 Joint Ministerial Decision "Measures and conditions for the management of hazardous waste (Government Gazette B'604 / 28-3-2006)" modified by:

- o Ministerial Decision 62952/5384/2016, (Government Gazette 4326/B/30.12.2016) Approval of a national plan for the management of hazardous waste (ESDEA), in accordance with article 31 of law 4342/2015 »

- o Ministerial Decision 146163/2012 (Government Gazette 1537 / B / 8.5.2012) "Measures and conditions for waste management of health units"

- o Ministerial Decision 8668/2007, (Government Gazette 187 / B / 2.3.2007) "Approval of the National Hazardous Waste Planning (ESDEA), according to article 5 (par. A) of the joint ministerial decision no. 13588/725" Measures, conditions and restrictions for the management of hazardous waste, etc. " (383 / B) and in accordance with the provisions of Article 7 (par. 1) of Council Directive No. 91/156 / EC of 18 March 1991. Amendment of Joint Ministerial Decision No. 13588/725/2006 "Measures, conditions and restrictions for the management of hazardous waste, etc. " (383 / B) and joint ministerial decision No. 24944/1159/2006 "Approval of General Technical Specifications for the management of hazardous waste etc." (791 / B)"

- Joint Ministerial Decision 24944/1159/2006: Approval of General Technical Specifications for the management of hazardous waste according to article 5 (par. B) of the joint ministerial decision no. 13588/725 "Measures, conditions and restrictions for the management of hazardous waste, etc." (BD383) and in compliance with the provisions of Article 7 (par. 1) of Council Directive 91/156 / EC of 18 March 1991 "and of the" National Hazardous Waste Management Plan", provided for in Article 5 of the same JMC (Government Gazette B'791 / 30-6-2006)

### ***Shipment of waste***

- Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste

### ***Landfills***

- Joint Ministerial Decision 29407/3508/2002 (Government Gazette 1572 B) "Measures and conditions for the landfill of waste" modified by Ministerial Decision 28745/895 / E103 / 2013, (Government Gazette 1104 / B / 2.5.2013) "Modification of the special criteria for storage of metallic mercury that is considered waste"

- Joint Ministerial Decision 4641/232/2006 (Government Gazette 168 B) “Determination of technical specifications of small landfills on islands and isolated settlements in the application of article 3 (par.4) in combination with article 20 (Par.I) of no.29407 / 3508/2002 JMD »

### ***Waste legislation – PCBS***

- Joint Ministerial Decision 7589/731/2000 (Government Gazette B 514) For the determination of measures and conditions for the management of polychlorinated biphenyls and polychlorinated triphenyls
- Ministerial Decision 18083 / 1098E.103 / 2003 (Government Gazette 606 / B` 15.5.2003) Plans for disposal / disinfection of devices containing PCB. General guidelines for the collection and subsequent disposal of equipment and waste with PCB, according to article 7 of JMD 7589/731/00 (514 / B)

## ***2. RECYCLING - ALTERNATIVE WASTE MANAGEMENT SYSTEMS***

- Joint Ministerial Decision 112145/2004 (Government Gazette 1916 B / 24.12.2004) "Separate indication of the financial contribution on the sales invoices at all stages of the sale of vehicle tires, batteries and accumulators, electrical and electronic equipment, vehicles, lubricants oils, other than invoices addressed to end-user buyers – tradesmen
- Joint Ministerial Decision 9303/454 / E103 / 2009 (Government Gazette 408 / B 5.3.2009) Determination of the amount of reciprocal fees from individual or collective systems of alternative management of packages / other products for the issuance of certificate of alternative management (“PED”) according to article 9 (par. 3.b) of Law 2939/2001 (A 179) , article 6 (par. 3.b) of P.D. 109/2004 (A 75), article 7 (par. 3.b) of P.D. 82/2004 (A 64), article 6 (par. 3.b) of P.D. 16/2004 (A 81), article 9 (par. 3.b) of P.D. 115/2004 (A 80), article 8 (par. 3.b) of P.D. 117/2004 (A 82)
- Ministerial Decision 116570/2009 (Government Gazette 769 /B 28.4.2009) Regulation on the procedure for the renewal of the approvals of individual or collective alternative management systems for packaging and other products
- Ministerial Decision 118019/2009 (Government Gazette 634 / B` 6.4.2009) Renewal of the approval of the collective system of alternative packaging management "S.S.E.D. - Recycling »

### ***Packaging and packaging waste***

- Law 2939/2001 (Government Gazette 179 / A / 06.08.2001) "Packaging and alternative management of packaging of other products - Establishment of a National Organization for Alternative Management of packaging and other products (EOEDSAP) and other provisions", as amended by:
- Law 3854/10 (Government Gazette 94 / A / 23.06.2010) “Amendment of the legislation for the alternative management of packaging and other products and the National Organization

for Alternative Management of Packaging and Other Products (E.O.E.D.S.A.P.) and other provisions "and Law 4042/2012

- Law 4496/2017 (Government Gazette 170 / A / 8.11.2017) Amendment of Law 2939/2001 for the alternative management of packaging and other products, adaptation to Directive 2015/720 / EU, regulation of issues of the Hellenic Recycling Organization and other provisions

- Joint Ministerial Decision 104826/2004 (Government Gazette 849 B / 9.6.2004) "Determination of reciprocal fees from an individual or collective systems of alternative management of packaging / other products (as defined in article 2, par. 4, of Law 2939/2001) in the application of articles 7 (par. B1, par. a3 and par. B2, par. a5) and article 17 of Law 2939/2001 "Packaging and alternative management of packaging and other products, etc." (A'179) »

- Joint Ministerial Decision 9268/469/07 (Government Gazette 286 B) "Modification of the quantitative targets for the recovery and recycling of packaging waste in accordance with article 10 (par. A1, last paragraph 29 of Law 2939/2001 (AD 179), as well as other provisions of this law, in accordance with the provisions of Directive 2004/12 / EC "amending Directive 94/62 / EC on packaging and packaging waste "of the Council of 11 February 2004" modified by Ministerial Decision 54461/1779 / E.103 / 2013, (Government Gazette 2500 / B / 4.10.2013) "Replacement of Annex I of article 4 of the joint ministerial decision no. 9268/469/2007 (286 / B), in accordance with the provisions of Directive 2013/2/EU "amending Annex I to Directive 94/62/EC of the European Parliament and of the Council on packaging and packaging waste" of the European Commission of 7 February 2013 "

### ***Batteries and accumulators***

- Joint Ministerial Decision 41624.2057.E103 / 2010 (Government Gazette 1625B / 11-10-2010). Measures, conditions and program for alternative management of used batteries and accumulators

- Ministerial Decision 39200/2015, (Government Gazette 2057/B/18.9.2015) "Amendment of the joint ministerial decision no. 41624/2057/2010 (B'1625), in accordance with the provisions of Directive 2013/56/EU" amending Directive 2006/66 / EC of the European Parliament and of the Council on batteries and accumulators and the disposal of batteries and accumulators containing cadmium-containing portable batteries and accumulators for cordless power tools and elements - buttons with low mercury content and repealing Commission Decision 2009/603/EC", of the European Parliament and of the Council of 20 November 2013 and other relevant provisions"

### ***Construction waste***

- Joint Ministerial Decision 36259/1757 / E103 / 2010 (Government Gazette 1312B / 24-08-2010). Measures, conditions and program for the alternative management of waste from excavations, constructions and demolition ("AEKK") modified by:

- o Law 4030/2011, (Government Gazette 249 / A / 25.11.2011) "New way of issuing building permits, construction control and other provisions"

Relevant document:

- o No. D17a / 50/2 / FN 444.1 / 27.3.2013 "Management of excess excavation materials coming from public works - Clarifications on the requirements of Joint Ministerial Decision 36259/1757 / E103 / 2010 (Government Gazette 1312 / B)"
- o No. 4834 / 25.1.2013 "Management of excess material excavations from public works - Clarifications on the requirements of Joint Ministerial Decision 36259/1757 / E103 / 2010 (Government Gazette 1312 / B)"

### ***Waste Lubricating Oils***

- Presidential Decree 82/2004 (Government Gazette A64/2.3.04) "Replacement of 98012/2001 / Joint Ministerial Decision " Determination of measures and conditions for the management of waste oils "(B '40)." "Measures, conditions and program for the alternative management of Waste Lubricating Oils"

### ***Waste Electrical and Electronic Equipment***

- Presidential Decree 117/2004 (Government Gazette 82 / A` 5.3.2004) Measures, conditions and program for the alternative management of waste electrical and electronic equipment, in accordance with the provisions of Directives 2002/95 "on limiting the use of certain hazardous substances in electrical and electronic equipment" and 2002/96 "on with the waste of electrical and electronic equipment». The title of P.D. 117/2004 is replaced by article 19 of P.D. 114/2013 (Government Gazette 147 / A / 17.6.2013) as follows: Measures, conditions and program for the alternative management of waste electrical and electronic equipment, in accordance with the provisions of Directive 2002/96 / EC on waste electrical and electronic equipment of the Council of 27 January 2003 "
- Ministerial Decision 23615/651 / E.103 / 2014, (Government Gazette 1184 / B / 9.5.2014) "Determination of rules, terms and conditions for the alternative management of waste electrical and electronic equipment (WEEE), in accordance with the provisions of Directive 2012 / 19 / EC "On waste electrical and electronic equipment (WEEE)", of the European Parliament and of the Council of 4 July 2012 and other provisions "(repealed in so far as it contains compliance with Directive 2002/96 / EC)
- Presidential Decree 114/2013, (Government Gazette 147 / A / 17.6.2013) "On the restriction of the use of certain dangerous substances in electrical and electronic equipment in compliance with Directive 2011/65 / EU of the European Parliament and of the Council"
- Ministerial Decision 133480/2011, (Government Gazette 2711 / B / 15.11.2011) "Amendment of Annex IB of PD 117/2004"
- Presidential Decree 15/2006, (Government Gazette 12 / A / 3.2.2006) "Amendment of Presidential Decree 117/2004 (82 / A), in accordance with the provisions of Directive 2003/108" amending Directive 2002/96 on waste electrical and electronic equipment (WEEE) "of the Council of 8 December 2003

### ***Sludge***

- Joint Ministerial Decision 5673/400/1997 (Government Gazette 192B / 14-3-1997) entitled "Measures and Conditions for the treatment of Urban Wastewater" in alignment

Directive 91/271/EEC "on the treatment and disposal of urban wastewater", as amended by Directive 98/15/EU.

### ***End-of-life vehicles and tyres***

- Presidential Decree 109/2004 (Government Gazette A 75/5.3.04) "Measures and conditions for the alternative management end-of-life vehicle tyres. Program for their alternative management"
- Presidential Decree 116/2004 (Government Gazette A 81/5.3.04) "Measures, conditions and program for the alternative management of end-of-life vehicles, their used spare parts and deactivated catalytic converters in accordance with the provisions of Directive 2000 / 53 / EC "on end-of-life vehicles" of the Council of 18 September 2000 "

### ***Other waste***

- Joint Ministerial Decision 8243/1113/1991 (Government Gazette 138/B`8.3.1991) Establishment of measures and methods for the prevention and reduction of environmental pollution by asbestos emissions

## **3. COMPETENT AUTHORITIES OF MANAGEMENT OF SOLID WASTES**

The Greek Ministry of the Environment & Energy ([www.ypeka.gr](http://www.ypeka.gr)) is accountable for policy development, national planning, technical subjects, permitting and funding of large-scale waste treatment and disposal facilities. It is the responsibility of the Waste Management Authorities to manage transfer stations, process and waste disposal. Decentralized administrative authorities (so-called Apokentromeni Dioikisi) are responsible for environmental these matters and permits. Regional Authorities (Perifereia) are the competent authorities in the field of industrial permits and health and safety regulations. The collection, transport and storage of mixed municipal waste are the responsibility of the municipalities.

The issues of solid waste management bodies are regulated in particular by the following provisions:

- Joint Ministerial Decision 50910/2727/2003 (Government Gazette 1909 B) "Measures and Conditions for the Solid Waste Management.National and Regional Management Planning", as amended and in force.
- Law 3536/2007 (Government Gazette A 42 / 23.2.2007). Special arrangements for immigration policy issues and other issues within the competence of the Ministry of Interior, Public Administration and Decentralization (Article 30)
- Law 3852/2010 (Government Gazette A '87 / 7.6.2010). New Architecture of Local Government and Decentralized Administration - Kallikratis Program.
- Law 3854/2010 (Government Gazette AD 94 / 23.06.2010). Amendment of the legislation on the alternative management of packaging and other products and the National Alternative Organization Management of Packaging and Other Products (E.O.E.Δ.Σ.ΑΠ.) and other provisions.

- Law 3979/2011 (Government Gazette A 138 16.6.2011). For e-government and other provisions (Article 42).

- Law 4071/2012 (Government Gazette AD 85 / 11.04.2012). Arrangements for local development, self - government and the decentralized administration Incorporation of Directive 2009/50 / EC.

#### ***4. WASTE PREVENTIVE POLICY - LEGISLATION***

##### ***Green Public Procurement in Greece***

- Law 3855/2010 (Government Gazette A 98/23.06.2010). Measures to improve energy efficiency in end-use, energy services and other provisions Article 18 Green Public Procurement

## About Pop-Machina

Pop-Machina aims to demonstrate the power and potential of the maker movement and collaborative production for the EU circular economy. We draw from a number of cut-edge technologies (factory-of-the-future, blockchain) and disciplines (urban planning, architecture) to provide the support necessary to overcome scaling issues; a typical drawback of collaborative production; to find the areas more in need of our intervention and to reconfigure unused spaces. We put forth an elaborate community engagement program to network, incentivise and stimulate through maker faires and events existing and new maker communities in all our municipalities. We build upon the current informal curriculum for maker skills development by nurturing the social side, and we put educators and makers together to exchange ideas on the training modalities. A particular focus on the skill development of women and vulnerable groups will aim to empower these (underrepresented) segments to partake actively in collaborative production. In every pilot area, we will demonstrate business-oriented collaborative production of feasible and sustainable concepts from secondary raw material or other sustainable inputs, based on the needs and preferences of the local stakeholders. A thorough impact assessment framework with increased scope (e.g. social) will be co-designed with stakeholders after short basic assessment training and will be used in the assessment of our pilot work. Based on the findings, we will kick-start a series of policy events to discuss openly – without pushing our results – the tax and legal barriers that hamper collaborative production.

## Partners

**HIVA - Research Institute for Work and Society Behavioral Engineering Research Group, KU Leuven (BE) - coordinator**

**City of Leuven (BE)**

**CREVIS (BE)**

**Municipality of Thessaloniki (GR)**

**Municipality of Piraeus (GR)**

**Q-PLAN INTERNATIONAL (GR)**

**University of Macedonia (GR)**

**Ayuntamiento de Santander (ES)**

**Universidad de Cantabria (ES)**

**Gemeente Venlo, KanDoen (NL)**

**TU Delft (NL)**

**Istanbul Metropolitan University (TR)**

**İSTAÇ AŞ (TR)**

**Planet Turkey (TR)**

**Koç University (TR)**

**Municipality of Kaunas (LT)**

**ISM University of Management and Economics (LT)**

**University of Cambridge (UK)**

**CERTH (GR)**

**White Research (ES)**

**CommonLawgic (GR)**

**INTRASOFT International (LU)**

**Institute for Advanced Architecture of Catalonia (IAAC) (ES)**