

# The European Services Sector and the Green Transition

## KEY FINDINGS

The aim of this briefing is to answer the following question: How can the services sector contribute to the green transition, specifically in the digital area and taking into account the environmental footprint of the sector as well as its potential to replace environmentally harmful practices?

In order for the services industry to contribute to the green economy, a holistic approach towards regulation and policy development for the sector is needed. Agreement on a definition of green services is vital for regulation to be effective. Updating the Services Directive should be considered, especially with regards to clarifying the scope and expanding the services included. Coordination and evaluation of related legislation is vital. It should facilitate the conceptualisation and measurement of encapsulated green services in relation to manufacturing and incorporate defined green services and encourage these within the European Green Deal. This calls for developing a common definition and standardisation, which will facilitate the measurement and policy-making for green services.

Growth through service activities in urban and peripheral regions is possible with technological advancement. Services can have a profound impact on sustainable economic growth and on reducing the environmental footprint in general in the Internal Market (IM) of the European Union (EU), due to more efficient processes.

Focusing on the services sector within the European Green Deal and within the Circular Economy Action Plan is needed to create a stronger economic and positive environmental impact. Connecting these parts with a viable strategy for digitalisation is necessary, taking advantage of the possibilities that exist through digitalisation, Internet of Things (IoT) and Artificial Intelligence (AI). It also enables value-creation through dematerialisation of consumption and use of virtual mobility, in a transformed market for services. This could increase overall productivity, while reducing harmful environmental practices and CO<sub>2</sub> emissions.

## Overview of the services sector

The services sector is today the largest part of the economy in the mature economies of the world. In most OECD (Organisation for Economic Cooperation and Development) economies, the contribution to GDP (Gross Domestic Product) and employment generated by the services sector is around 65-85 percent (OECD, 2020a, b). Within the EU, these figures demonstrate the future importance of this part of the economy. The Internal Market (IM) for goods has proven to be a great success in terms of increasing intra-market trade and creating a broader supply. This has put pressure on both the public and private sector to innovate and raise productivity. With a similar approach of the cost for non-Europe, the Services Directive was adopted in 2006



and had to be transposed by all EU countries by 2009 (EUR-lex, 2020). The discussions within Member States leading up to its adoption show the practical and political challenges that such a proposal generated. However, the benefits of establishing an integrated market for services are of great value.

Studies on the result of the establishment of the Services Directive and its implementation have shown that there is still a way to go before the IM for services could reach its full potential (EU HLG, 2014; EU COM, 2015a, 2018a). This is particularly the case for advanced services, new forms of platform-based services and services with a large digital content. Recent overviews of the growth of the largest companies in the world by capitalisation also suggest that the EU is losing out to companies in the United States and Asia (Economist, 2019). Several of these companies are to be found within the services sector and with a strong technological competitive advantage such as Google, Facebook, Apple, Amazon and Microsoft. Their customer reach covers both business-to-consumer and business-to-business services. In the EU, the functioning of the IM is a way of building stronger competition, promoting innovation and increasing productivity (EU HLG, 2014).

In relation to structural changes of the economy, the call for a wider development of a sustainable or green economy has been on the increase during the last decades. What began with the Brundtland (1987) report on sustainable economic development has evolved into calls for policy implementation and pressure on the private sector to work with sustainability in a broader sense, or what is also referred to as the green economy and the European Green Deal (UNEP, 2011; EU COM 2019). With the goals of the Paris Agreement establishing a cap on CO<sub>2</sub> emissions with the aim to limit the global temperature increase to below 2°C, the political commitment has become even stronger (UN, 2015a, b). That has in turn accelerated the strategy development for reaching a carbon neutral economy within the EU by 2050 (EU COM, 2019). Plans to reduce emissions and stop global warming in parallel to sustaining economic development and building stronger labour markets and social cohesion across the EU will need a broader policy toolbox than has been acknowledged up until now.

The services sector was not explicitly seen as vital for achieving a sustainable or green economy from the start, even if service activities have always existed alongside or combined with manufacturing. This missing point of view was evident in later evaluations of the functioning of the Services Directive (EU COM, 2015b). With the continuously increasing role of services in society, the argument for considering services as a vital part of the broader movement towards the green economy is clear (Jones et al., 2016). The combination of public and private service activities can facilitate and speed up the transition towards a green economy.

The concepts of green economy or green growth has also attracted criticism (e.g. Gibbs, 2020) for being too focused on traditional growth. Issues such as dematerialisation of markets and consumption would be an alternative way to secure the goals of the Paris Agreement. It is not only within the mature and advanced economies that services will be an important contributor to jobs and growth for the future. The services sector has also grown rapidly in the context of emerging market economies (e.g. ADB, 2012; EU COM, 2018b). Within the globalised economy, the geographical interconnectedness of industries is important to consider since the EU is the second largest trading block in the world. Most likely, political commitments, regulations and policy developments that target the EU's IM for services could impact translation of activities into other economic geographies around the world.

## Services sector characteristics

The concept of the services sector requires a closer look in order to generate adequate policy and regulatory frameworks. Table 1 presents the most common characteristics of services that can apply to both business-to-consumer and business-to-business services. Table 2 shows what makes services green and how they can limit the environmental footprint and harmful environmental practices. The absence of a common conceptualisation of green services for policy development (Jones et al., 2016) is one of the main challenges for the long-term promotion and incorporation of these services at EU level such as in the Services Directive, the European Green Deal and the recently presented Circular Economy Action Plan (EU COM, 2020a).

The services sector consists of a vast number of different sub-industries with rather diverse demand structures, forms of supply mode, size and localisation. The overall categorisation into consumer services and business services helps to guide further analysis. Companies are often active within both these domains, such as services in banking and finance, IT, law, insurance, logistics or equipment lease. Within business services, you will also find business services with a various degree of knowledge content or sub-sector regulatory schemes, often found at the high-end value-added knowledge-intensive business services.

Table 1: Service characteristics and their implications

Characteristics	Implications
Intangible	Difficult to test the service.
Co-production	Integration of client and provider.
Simultaneous production and consumption	Often at the same location or provided using ICT.
Difficult to measure through statistics	Blur of interconnected sectors, complex policy accuracy.
Technology driven	All sectors reliant on solid infrastructure. Importance of data protection.
Impact of regulation and non-tariff barriers	Regulated part of the economy, bordering welfare and societal functions. Hinders cross-border trade.
Urban concentration	Agglomeration of clients and skilled labour. Uneven economic development.
Intermediaries	Cross-industry knowledge transfer.
Complexity of value and price	Perceived value in relation to profit margin. Relation driven functions.

Source: Authors's elaboration from literature

Services such as advanced consulting, finance and back-office IT functions were early to take advantage of technological advancement and deregulation on the global market and could be seen as frontrunners in service economy globalisation, and therefore became part of the structural transformation referred to as the second global shift (Bryson, 2007). However, a large share of services is regionally localised in metropolitan areas with limited reach on the global market (Wernerheim & Sharpe, 2003; Doloreux & Shearmur, 2012). A large part of service providers are also quite small in number of employees (EU HLG, 2014).

These structural characteristics therefore pose challenges to policy in order to find measures that cut across horizontally. This was one of the main considerations of the High Level Group on Business Services, with the aim of analysing the functioning of the IM after the implementation of the Services Directive (EU HLG, 2014).

Table 2: What makes services "green"?

Characteristics	Implications
Contribution to others	Services enhances other companies process or productivity to be green.
Sustainable operations	The business model is green and sustainable.
Servitisation	Input to industrial processes involving (goods) to become green.

Source: Authors's elaboration from literature

With the advancement of technology and the value-added being generated from service activities within the traditional industry, there has been an interconnectedness and blur of manufacturing and services. This development is referred to as the *servitisation of industry*, or the *product-service-system*, where new modes of supply and business model transformations are established (Raddats et al., 2019). With the rise of new

services and technologies, the possibility to enhance the solution provided in combination with a product has increased. The result is a limited environmental footprint in relation to the entire product life cycle. The analysis requires a process-based perspective on the corporate level in order to utilise additional service content at different stages of production. Whereas the potential benefits from an environmental perspective are evident, inertia could exist through perception of higher costs. Quantifiable benefits throughout the client-provider relationship must be visible. This makes the pricing strategy an imperative for the implementation of servitisation or the product-service-system (Bramklev & Ström, 2011). Hence, many companies that we consider “manufacturing companies” see themselves as “solution providers”. Customers are buying a solution that might include both hardware and software. The interconnectedness between goods and services and the complexity that exists in categorising different parts of the services sector translates into difficulties of statistical measurement.

This has implications for policy development at different geographical levels. It impacts the possibility to track and measure the underlying value that is being traded cross-border. Work on enhancing this measurement in the so-called mode-5 of international trade is discussed within the global trading schemes (Antimiani & Cernat, 2017). Important tools in moving forward towards achieving a sustainable or green growth include data collection and industry classification systems catching the magnitude of structural change, digitalisation and new types of companies entering the market.

On the basis of the literature, a definition of green services would need to include a connection to the EU Sustainable Development Goals (SDGs) (where the contribution of the service can connect to one or several goals), the value-added, the sustainable business model, the measurement of productivity increase and a clear connection to the product-life cycle perspective. The outcome should secure a measurable industrial efficiency increase, and/or a reduction of harmful environmental practices and a decrease of CO<sub>2</sub> emissions. These aspects would cover both service providers and complex structures involving servitisation or product service systems.

## The greening of the services economy in relation to the EU strategy

In relation to the six European Commission priorities for the 2019-2024 period (EU COM, 2019), there are in particular three that will have a bearing on the development of services as part of the green economy. Services in turn will be a decisive factor for achieving these goals. The priorities that stand out are the following: *A European Green Deal*, *An economy that works for people*, and *A Europe fit for the digital age*.

With a broad approach to services and how they are connected to the wider economy, through the horizontal level, there are a number of ways in which they can contribute to the green economy and be an important part of the future sustainable growth of the EU's IM. The Circular Economy Action Plan (EU COM 2020a) will be vital in enhancing carbon reduction processes and increasing the efficient use of input material, through sustainable services and product-service-systems. Despite the potential contribution of services in terms of green growth and the creation of jobs across the EU, the Services Directive had limited focus on these aspects at the outset of the discussion. Alignment of the Services Directive with the overall aims of the European Green Deal is key.

Along the line of the classification of services discussed above, these service activities are to be found within service providers that already have a clearly developed business model for facilitating green economic development. This includes companies that could provide services that directly or indirectly impact the development of green growth or manufacturing companies that could utilise products to become a solution provider to clients. This transformative process facilitates a limited environmental footprint. Due to the large share of companies that operate within the consumer market, more environmentally-aware consumers would help to transform the market, as would new forms of service companies with new business models.

Services that have the potential to drive the development for green growth need to be analysed from the perspective of value-added and how they can contribute to upgrading functions, processes or products.

One of the most evident reasons of the importance of business services is their ability to build innovation capacity with clients and increase productivity across sectors. They work as intermediaries that can facilitate knowledge transfers across industries. These aspects make business services especially valuable in the efforts towards a greener economy. Advanced business services provided through specialised consulting companies or large industrial solution providers could also increase overall growth and employment in the economy (EU HLG, 2014). Consumer services on the other hand can help to create value with a limited environmental footprint, with new forms of delivery modes and consumption patterns (Maciejewski et al, 2014).

## Moving the IM for green services forward

The contribution of services to the green economy can be essential throughout the value-chain. Services can facilitate a green perspective throughout the life cycle of a product. The generated value can also be created through specific locations where labour, finance, markets, demand, policy intervention and regulation are found. The question of location also relates to the issue of uneven spatial development. Balanced growth in both urban regions and more peripheral regions will be needed in order to connect to the priority of *an economy that works for people*.

The connection between the functioning of the IM for services through the complete implementation of the Services Directive requires a holistic perspective of sustainability in the green economy (where services are seen as an integrated part of creating a long-term positive social impact). In this regard, standards can play a role for creating a level-playing field among services across geographies. Standards have proven to be an important tool for the IM and the work within the European Committee for Standardisation (CEN) and other schemes on services in general can be a framework for pushing standardisation among green services (CEN, 2020). This would also benefit the competitive landscape through utilising public procurement.

In the wake of the debate to implement the Paris Agreement, initiatives to strengthen the Circular Economy have been a way to curb the future environmental footprint (EU COM, 2015c; EU COM, 2020a). A recent key-instrument is the Circular Economy Action Plan (EU COM, 2020a) published by the European Commission in March 2020. The Circular Economy offers a new and more holistic approach to parts of the economy where waste management, the re-use of products and a life cycle perspective is vital (Schultz et al., 2019). The services sector has proven to be a key part of this industrial development. First, it enables the development of new business models in collaboration with traditional industry, focusing on all parts of the product life cycle, such as design, market development, etc. This is also conducted in line with policy initiatives at regional and local level. Second, the development of new business models within traditional manufacturing industries facilitates a move towards increased servitisation and dematerialisation of consumption.

Hence, re-use and value-upgrading of existing products for other related purposes become important in driving the Circular Economy (EU COM, 2020a). This is where services and digitalisation can be of assistance. The development of new business models also shows signs of being a tool (to some degree) for bridging the gap of an uneven economic development, where clusters of traditional manufacturing industries in less densely populated areas can find ways to strengthen and develop competitive advantages.

There are already good examples of how striving for a Circular Economy at EU level has already translated into regional and local projects. One such example is in the region of West Sweden, where the administrative region has tried to work on the operational level through the implementation of Circular Economy EU policy initiatives with local private and public stakeholders. In this context, policy makers have pushed the agenda for services in the green transition through collaboration, local procurement and directed finance. Work has been done in the textile, furniture and engineering industries to upgrade the service value content, but also to use these initiatives to facilitate regional economic resilience. Here, a broader discussion on the future of the Circular Economy (Hermelin and Ström, 2019) was facilitated by a combination of:

- local entrepreneurship and local finance;
- hands-on policy development in both the areas of environment and industry;
- connection with specific service providers with high digitalisation profiles;
- connection to larger multinational companies in textile, furniture and engineering; and
- work on value through dematerialisation.

Services in the green economy are an opportunity that could develop new un-tapped value from existing products and new services, and therefore could become an important part a greener growth in general. Technological development and change in customer demand structures have helped to transform markets. Actors offering platforms cover one or several parts of the service economy both for consumers and businesses. The new platform economy has seen a tremendous growth in other parts of the world, where industrial incumbents have been challenged or where markets have been disrupted. Competition that did not previously exist among sub-sectors of the economy is today apparent. With cloud-based platforms, software companies can today compete head-on with traditional manufacturing companies through the production of data generated in vast numbers of processes. Within the consumer-oriented platform-based services, the activities are also seen as part of the sharing economy (Felländer et al., 2015). The sharing economy can also be seen as services in the green economy and, through new processes, can limit the environmental footprint. On the one hand, utilisation of accommodation, various means of transport, tools etc. brings new value into the economy. On the other hand, this development creates challenges as companies require income, something that only sharing activities are not necessarily generating. All in all, the development of new platforms raises the issue of finding regulation and policy initiatives that facilitate a sustainable growth in relation to job opportunities, labour standards, taxing possibilities, and sharing of data (Wentrup et al., 2019). History shows that economic structural changes call for new policy tools, since many of these service sectors (with a potentially high impact for reducing environmental footprints) did not exist in 2006 when the Services Directive was established. Recent rulings of the Court of Justice of the European Union, show that in particular these platform-based services are complex to regulate and that they end up in the borderlines of different regulatory frameworks. For example, according the judgement in case C-434/15, Uber is a transport service rather than a service covered in the Services Directive (CJEU, 2017). Similar complexity has been shown in the case of Airbnb where the service fell under the E-Commerce Directive through the judgement in Case C-390/18 (CJEU, 2019). This borderline situation shows that national regulation could in the future hold back the potential of new green services that utilise technology and business models in different ways, but lack a clear regulatory framework.

For the growth of the green economy, Internet of Things (IoT), Artificial Intelligence (AI) and data protection and connectivity become essential, through better use of resources. Within services connected to the greening of the economy, these dimensions are key in building competitive advantages, forming new business models, and facilitating cross-border transactions of services irrespective of intra or external EU trade and investment. IoT enables a connectivity that was almost unthinkable ten years ago (Xiangxuan, 2017). Now, companies are struggling with how to utilise the abundance of data and what are the proprietary aspects of data being generated through client interaction. The use of data will increase industrial efficiency/productivity and hence will reduce environmental footprints. AI is related in the sense that it enables vast data sets to be meaningful.

IoT and AI are now having an impact on both consumer and business services alike, in relation to business model development and sustainability. This development offers great potential for increased efficiency in industrial production. Apart from the traditional manufacturing industry, the possibility to use information technology through the concept of Building Information Modeling (BIM) in the construction industry would enhance the effectiveness and sustainable production of new more environmentally friendly and more efficient construction projects (EU HLG, 2014). It is also a part of the service economy that offers the possibility to facilitate green growth and a life cycle perspective (EU COM, 2020a). This connects to the promotion of smart cities where private sector actors offer technical or engineering services, in combination with information technology in order to reduce the future environmental footprint (Haarstad, 2016). The

broader concept of smart cities also encapsulates new forms of consumer services such as transportation or logistics, or other forms of platform-based services. Smart cities also comprise business services in advanced consulting and legal services, and the integration of manufacturing companies as solution providers for cities in the future. The development within the construction and infrastructure industry and the development of smart cities requires an update of how services for the green economy are positioned within the Services Directive and how standards will be adopted for reducing the environmental footprint.

With the increase of digitalisation, benefits from dematerialisation of consumption and virtual mobility will be evident through moving the economy in a greener and more efficient direction (Maciejewski et al. 2014). Dematerialisation of consumption will enhance efficiency within the economy when the market does not need physical distribution to the same degree. Instead, value is transferred through digital channels. Virtual mobility will help to converge reality and digital content through augmented reality, where consumption will be conducted through new channels and in new formats. All in all, these new technologies can reduce the environmental footprint.

In a similar vein, new forms of leisure and cultural consumption connected to the increased usage of information technology would also reduce the environmental footprint. This is connected to the usage of mobility solutions, better usage (or re-use) of electronic platforms for digital consumption and increased consumption of dematerialised services (ADEME, 2014).

Apart from being important parts of the green economy, the areas presented above are all in different ways connected to the digital strategy of the EU, under the strategic priority entitled *A Europe fit for the digital age*. On the basis of the horizontally diverse setting that exists around most services, the strategy connects not only to areas of investment, market regulation and innovative capacity, but will more importantly also have a bearing on new forms of digital services deployment and use within society (OECD, 2019).

## Services and the green economy – policy recommendations

Based on this overview of the services sector and the functioning of the IM, it is possible to develop a set of policy recommendations. On the basis of nine problem areas, a suggested solution is provided for each. As is the case in several other sectors, the services sector is going to be part of the necessary developments for achieving the Paris Agreement goals and pushing green and inclusive growth within the EU.

**1. Defining green services:** More work is needed in defining and promoting the services component within the recent Circular Economy Action Plan (EU COM, 2020a). The Circular Economy is far from only waste, re-use, and the reduction of harmful physical processes: it is more importantly about enhanced product-service-systems, economic value-added, and regional and social cohesion. Services therefore must be seen from a multi-layered and holistic perspective.

Solution: In order for services to be the vehicle driving forward the green transition and limiting the environmental footprint of services and industry alike, there needs to be a common understanding of what green services are. Agreeing on a definition of green services (including servitisation and product-service-systems and platform-based services), establishing measurable impacts and certification among industry are key to increasing economic growth and reducing environmental footprints. The EU should initiate work on a common definition of these services to be able to integrate them in policy and legislation on all levels. This is essential for data collection and measurement. The work is particularly important for the update of the Services Directive and the recently published Circular Economy Action Plan. The model of the High Level Group on Business Services can act as a framework bringing stakeholders together. With a definition of green services it will be possible to more clearly show their potential as part of the Services Directive and facilitate procurement and cross-border trade of these services.

**2. Evaluation of the functioning of the IM for services:** In addition, a long-term perspective needs to be developed, since change in public and private sectors takes time. This is necessary for it to have a positive impact not only in relation to environmental aspects, but also to secure a cohesive economic development that brings together the potential of urban and peripheral regions. This means that services can contribute to the transition towards the green economy in at least three ways. First, services with different knowledge content can facilitate the greening of client operations. Second, new types of services can be green and thus create both value and employment. Third, servitisation in industry alters industrial processes, products and business models towards becoming more green. The overall evaluation of the functioning of the IM for services and the implementation of the Services Directive still appears to show areas for improvement.

Solution: Reviewing the Services Directive (in terms of scope and content) and expanding the services included, including platform-based service providers, through a definition of green services, capturing more of encapsulated services in manufacturing, and promoting green services to be used more widely. Measureable positive environmental impact should be a priority over national regulation. Coordination and evaluation of related legislation on topics such as e-commerce, transport, finance, and the posting of workers (to mention only a few) will also be vital to facilitate a green transition on par with technological development.

**3. Competitive companies and internationalisation:** Without a well-functioning IM for services, it will be difficult to establish strong and competitive companies that have the capacity to provide services across the EU, but also take advantage of their possibility to service clients on the global market. To bear fruit, internationalisation needs to be complemented with a two-pronged strategy where policy support and financing possibilities in domestic markets also are complemented by joint attempts to support service SMEs within the green economy moving into the global market (EU HLG, 2014). Since the capabilities of many EU companies are high in areas of environmentally friendly production, the wider market could also benefit if these services are implemented in emerging markets. The introduction of a Circular Economy approach in trade relations should enhance the reduction of environmentally harmful processes in the value-chain. However, a greener and more circular economy within the EU must not lead to a situation where environmentally harmful processes are outsourced in value-chains on the global market (Völker et al., 2020).

Solution: Direct funding and export credit schemes is a way of building viable green transition in Europe. More competitive and bold companies ready for the international market would also help. On the basis of an agreed common definition of green services, the European Green Deal should explicitly be able to provide direct funding to services that facilitate a measurable reduction of the environmental footprint in both the areas of business-to-consumer services and business-to-business services. This should apply both within the IM but also in relation to World Trade Organisation (WTO) rules as suggested in the Circular Economy Action Plan.

**4. Practical dimension of operating intra-market service businesses:** Progress has been made on Points of Single Contacts (PSCs) and the recognition of employment qualifications, such as the European Professional Card, but more needs to be done to promote effective services for the green economy. Prior studies (EU HLG, 2014) have reported that particularly service companies within business services are either a limited number of large multinational companies or, like the vast majority, SMEs. For these SMEs to grow and build competitive advantages and increase productivity, they need to expand their home market. Taking green service solutions abroad should be easy, and regulatory frameworks should be simple to operate within. Complex tax regulation in relation to days spent in host markets for individual employees could also be a hurdle for either sending staff abroad or setting up legal entities abroad. This is particularly important for SMEs as they might not have this kind of expertise in-house. Since these problems are recurring in several evaluations of the functioning of the service IM, they unfortunately hold back innovation, productivity and environmental footprint reduction.

**Solution:** Increasing the administrative support from the home market when entering the wider IM can be enhanced. Points of Single Contacts (PSCs) could also support domestic firms crossing borders. To facilitate green services within the IM, PSCs can be given a mandate to enhance information and ease of doing business for these services as part of the European Green Deal. Additionally, particularly SMEs need to have benchmarking cases. Complex topics include tax, labour legislation, liability and insurance.

**5. Network structures combining policy initiatives:** Studies show that network structures combining policy initiatives, public and private actors are essential for creating a much needed platform for the green economy (Hermelin & Rämö, 2017). If the business environment is perceived to be complex, it is less likely that stakeholder networks will form on the basis of company strategy (Rueda-Manzanares et al., 2008).

**Solution:** Incentives and clear institutional frameworks are important to build long-term trust in the market. Green services will not only need a solid institutional framework in relation to their own strategy and company development, but even more importantly, their potential clients need to see the long-term benefit in economic and social terms if they are to be ready to invest. Incentive structures in the form of financial schemes that will push the overall green economy are essential. Studies on SMEs in relation to the green economy show that equity finance seems to be the most promising tool within the EU (Demirel & Danisman, 2019). Since many service companies with a green business model are to be found in this category, it is likely that this would be feasible financing.

**6. Standards and green services:** A key part of the IM has been standards. This can be a viable tool for promoting services and the green economy. Standards facilitate that scarce public and private resources are utilised in the most productive way. Coordinated work based on the political strategy formed with the European institutions will be an essential tool for green services. There is currently an excellent opportunity to use the Circular Economy Action Plan (EU COM, 2020a) as a platform for the work on green or sustainable services standards and certifications. Since the services sector is highly diverse, it is necessary to find common horizontal aspects of standardisation for green services. This can also be connected to incentive programs directed towards green service providers, but also to projects that would benefit from value-creation and job growth within the Circular Economy. Standardisation can be favourable to the economy as an institutional tool for securing better processes and for setting ambitious levels of environmental standards, securing environmental impact for both services and manufacturing alike. One such example is the ISO certification, where green services have played a role in its implementation throughout industrial processes (e.g. Rusten, 2016). Evaluations of standardisation within services show the potential benefits across industries and Member States such as quality, ability to export, meeting legislative requirements and customer satisfaction (Stroyan and Brown, 2012; EU HLG, 2014). It is clear that standardisation within services across the IM has not been as successful as for goods. Studies show the shortcomings such as high diversity among standards within Member States based on the vast number of different sub-service sectors, national and sector specific standards, lack of knowledge of the process, limited engagement of stakeholders to promote standardisation, need to work closely with consumer bodies and public authorities to promote standards (Stroyan and Brown, 2012; EU HLG, 2014). Hence, the work within the CEN Strategic Advisory Board on Services facilitates the services sector growth and reduces friction in trade and competition.

**Solution:** Pan European certification in respective industries can bring stakeholders to agree on how green service content should be measured. The EU should drive the work on a standard for green services, that would verify quality and effectiveness at both the provider and consumer level. A concrete operational suggestion is to initiate a Technical Committee and Working Group on Green Services within CEN, which could connect or be part of CEN/TC 447. The Working Group should strive to find horizontal standards that could also facilitate the development of new metrics and key performance indicators (KPIs) for systemic change and future impacts in the reduction of environmental footprints. At EU level, standards should also be used in order to secure a high level of

environmental protection for citizens, thus reducing the need for national standards. It enables the industries across the IM to agree on environmental benefits, raising productivity and making initiated pricing strategy possible.

**7. Public procurement and green services:** The area of public procurement is also an important tool for driving economic growth and development. The IM brings new possibilities for green service providers to offer their services across larger markets. Standards in relation to what is defined as green services in combination with clear procurement requirements (EU COM, 2020a, b) should be able to speed up the green economy. It should also be a tool for delivering on the new European Green Deal, where services can help in transitioning and building economic resilience in regions with limited regional competitive advantage. Public policy that fosters development within the Circular Economy in combination with private actors can create positive outcomes. Governments can utilise quality and environmental standards in public procurement, but can also use procurement regulation in publicly owned companies to push for green services and social sustainability (SR, 2020). Informed and educated consumers and service providers are important to facilitate green procurement.

Solution: In order to achieve the Paris Agreement and meet the objectives of the European Green Deal, public procurement is an effective tool. The EU should make better use of the existing schemes for promoting green public procurement and public procurement for a circular economy, whilst putting more stress on services. Increased awareness among Member States must be a key priority. The environment perspective must be on par with other criteria in public procurement. Quality, sustainability and innovation for the green economy should be used for securing outcome-based procurement rather than priced-based. This will enable green services to be a part of the procurement process from tender to end-of-life management, reducing the overall environmental footprint in the value-chain as suggested in the Circular Economy Action Plan. Government-owned companies should also be part of this strategy and an EU-wide policy should be implemented.

**8. Digitalisation and green services:** Digitalisation can act as an important way forward, where additional value will be generated in new (or altered) and more effective industrial value-chains. Service companies within both business-to-consumer and business-to-business services can drive this development. Again, regulation will be of great importance. It cuts across diverse sectors, including platform-based services (using bikes, car-sharing, platform-based taxi services, accommodation, and other forms of sharing-economy functions). Several of these potentially green services did not exist when the Services Directive was developed. Hence updates are needed to meet a level-playing field across the EU as can be seen from rulings of the CJEU.

Solution: For society to benefit, and for companies to innovate in the long-term, policies need to be developed in a way that creates flexible markets. They should take into account the flow of people and capital, as well as considering how economic and social cohesion is built by smart city planning, regional economic development, and infrastructure. The combination of digital policies and a move towards a greener economy can help to overcome the tension of uneven economic regional growth.

**9. The role of services and the EU Sustainable Development Goals (SDGs):** For the future advancement of green services to have a lasting economic and social effect on the EU, the SDGs should act as a guiding framework. They can act as a framework for developing targets or policies in relation to specific goals for industry or the public sector. SDGs also enable public entities (such as universities) to better position their work in education and research for the future. When students enter the labour market with a better understanding of how policies and business models impact sustainability, the future contribution for reducing the environmental footprint could be greater.

Solution: Using the SDGs in the work of assessing the role of services in the green economy can be a viable way to connect their development to the enhancement of the IM for services.

## References

- **ADB. (2012)** Outlook 2012 Update: Services and Asia's Future Growth, Manila: ADB.
- **ADEME. (2014)** Alléger l'empreinte environnementale de la consommation des Français en 2030, available at [https://www.ademe.fr/sites/default/files/assets/documents/alleger-empreinte-environnement-2030\\_rapport.pdf](https://www.ademe.fr/sites/default/files/assets/documents/alleger-empreinte-environnement-2030_rapport.pdf), assessed 23/03/2020.
- **Antimiani, A. & Cernat, L. (2017)** Liberalizing global trade in mode5 services: how much is it worth? DG Trade, Chief Economist Note, Iss. 4, July, EU COM.
- **Bramklev, C. & Ström, P. (2011)**. A conceptualization of the product/service interface: Case of the packaging industry in Japan. *Journal of Service Science Research* 3, article number: 21.
- **Brundtland, G. (1987)** Report of the World Commission on Environment and Development: Our Common Future. United Nations General Assembly document A/42/427.
- **Bryson, J. R. (2007)** The 'second' global shift: The offshoring or global sourcing of corporate services and the rise of distanced emotional labour. *Geografiska Annaler: Series B, Human Geography*, volume 89, pp. 31-43.
- **CEN. (2020)** SERVICES TCs, <https://www.cen.eu/work/areas/services/Pages/default.aspx>, assessed 02/03/2020.
- **CJEU. (2017)** Judgment in Case C-434/15, PRESS RELEASE No136/17, Luxembourg, 20 December 2017.
- **CJEU. (2019)** Judgement in Case C-390/18, PRESS RELEASE No162/19, Luxembourg, 19 December 2019.
- **Demirel, P., & Danisman, G. O. (2019)** Eco-innovation and firm growth in the circular economy: Evidence from EU small-and medium-sized enterprises. *Business Strategy and the Environment*, volume 28, issue 8, pp.1608-1618.
- **Doloreux, D., & Shearmur, R. (2012)** Collaboration, information and the geography of innovation in knowledge intensive business services. *Journal of economic geography*, volume 12, issue 1, pp. 79-105.
- **Economist. (2019)** The Single Market, an unconscious uncoupling, 14 September.
- **EU COM. (2015a)** Results of stakeholders analysis Barriers to providing services: stakeholder exercise, Ref. Ares (2015)5111780 - 16/11/2015.
- **EU COM. (2015b)** Upgrading the Single Market: more opportunities for people and business. COM(2015) 550 final.
- **EU COM. (2015c)** Closing the loop - An EU action plan for the Circular Economy, COM(2015) 614 final.
- **EU COM. (2018a)** Study to monitor the business and regulatory environment affecting the collaborative economy in the EU. Final Report, DG Grow, March 2018.
- **EU COM. (2018b)** The inclusive green economy in EU development cooperation. An innovative approach at the intersection of the EU's Planet, People and Prosperity objectives, DG DEVCO, September 2018.
- **EU COM. (2019)** Political guidelines for the next European Commission 2019-2024 (assessed 02/03/2020): [https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf).
- **EU COM. (2020a)** Circular Economy Action Plan (assessed 12/03/2020): <https://ec.europa.eu/environment/circular-economy/>
- **EU COM. (2020b)** Green Public Procurement (assessed 10/03/2020): [https://ec.europa.eu/environment/gpp/index\\_en.htm](https://ec.europa.eu/environment/gpp/index_en.htm).
- **EU HLG. (2014)** High-level group on business services. Final Report. April.
- **EUR-Lex. (2020)** Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market (assessed 02/03/2020): <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32006L0123>.
- **Felländer, A., Ingram, C., & Teigland, R. (2015)** Sharing economy. In *Embracing Change with Caution*. Näringspolitiskt Forum Rapport (No. 11).
- **Gibbs, D. (2020)** Green Economy, *International Encyclopedia of Human Geography*, 2nd edition, Volume 6, <https://doi.org/10.1016/B978-0-08-102295-5.10792-9>.
- **Haarstad, H. (2016)** Who is driving the 'Smart City' agenda? Assessing smartness as a governance strategy for cities in Europe, in Jones, A., Ström, P., Hermelin, B. and Rusten, G. (eds) (2016) *Services and the Green Economy*, Basingstoke Hampshire: Palgrave Macmillan.
- **Hermelin, B. and Rämö, H. (2017)** Intermediary activities and agendas of regional cleantech networks in Sweden. *Environment and Planning C: Government and Policy*, volume 35, issue 1, pp. 130-146.
- **Hermelin, B. & Ström, P. (2019)** Regional networks for circular networks – drivers for spatial industrial transformation, dematerialization and production-service systems, *Green Economies Network, Workshop*, Örebro.
- **Jones, A., Ström, P., Hermelin, B. and Rusten, G. (eds) (2016)** *Services and the Green Economy*, Basingstoke Hampshire: Palgrave Macmillan.
- **Maciejewski, M., Fischer, N. I. C., & Roginska, Y. (2014)** Streaming and online access to content and services, European Parliament, Policy Department for Economic, Scientific and Quality of Life Policies, p. 23-24 (assessed 23/03/2020):

[https://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/492435/IPOL-IMCO\\_ET\(2014\)492435\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/492435/IPOL-IMCO_ET(2014)492435_EN.pdf).

- **OECD. (2019)** The OECD going digital summit a summary. Paris, France 11-12 March 2019, available at: <https://www.oecd.org/going-digital/summit/going-digital-summit-summary.pdf>.
- **OECD. (2020a)** Value added by activity, <https://data.oecd.org/natincome/value-added-by-activity.htm>, Assessed 02/03/2020.
- **OECD. (2020b)** Employment by sector, <https://stats.oecd.org/index.aspx?queryid=54755>, Assessed 02/03/2020.
- **Raddats, C., Kowalkowski, C., Benedettini, O., Burton, J., & Gebauer, H. (2019)** Servitization: A contemporary thematic review of four major research streams. *Industrial Marketing Management*, available at: <https://doi.org/10.1016/j.indmarman.2019.03.015>
- **Rueda-Manzanares, A., Aragón-Correa, J. A., & Sharma, S. (2008)** The influence of stakeholders on the environmental strategy of service firms: The moderating effects of complexity, uncertainty and munificence. *British Journal of management*, volume 19, issue 2, pp.185-203.
- **Rusten, G. (2016)** The Structure, Strategy, and Geography of Green Certification Services, in Jones, A., Ström, P., Hermelin, B. and Rusten, G. (eds) (2016) *Services and the Green Economy*, Basingstoke: Palgrave Macmillan.
- **Schulz, C., Hjaltadóttir, R. E., & Hild, P. (2019)** Practising circles: Studying institutional change and circular economy practices. *Journal of Cleaner Production*, volume 237, 117749.
- **SR. (2020)** Statliga bolag ska ställa högre krav vid upphandlingar, available at: <https://sverigesradio.se/sida/artikel.aspx?programid=83&artikel=7418236>. Assessed 02/03/2020.
- **Stroyan, J., & Brown, N. (2012)** Study on the implementation of service standards and their impact on service providers and users, Technopolis group, Brighton, UK.
- **UN. (2015a)** <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.
- **UN. (2015b)** Transforming our world: The 2030 Agenda for Sustainable Development, 2015.
- **UNEP. (2011)** Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication
- **Völker, T., Kovacic, Z., & Strand, R. (2020)** Indicator development as a site of collective imagination? The case of European Commission policies on the circular economy. *Culture and Organization*, 26(2), 103-120.
- **Wentrup, R., Nakamura, H. R., & Ström, P. (2019)** Uberization in Paris—the issue of trust between a digital platform and digital workers. *Critical Perspectives on International Business*, volume 15, issue 1, pp. 20-41.
- **Wernerheim, C. M., & Sharpe, C. (2003)** High Order Producer Services in Metropolitan Canada: How Footloose Are They?. *Regional Studies*, volume 37, issue 5, pp. 469-490.
- **Xiangxuan, X. (2017)** The Internet of Things: Projects-Places-Policies. University of Gothenburg.

**Disclaimer and copyright.** The opinions expressed in this document are the sole responsibility of the authors and do not necessarily represent the official position of the European Parliament. Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy. © European Union, 2020.

IP/A/IMCO/2020-03; Manuscript completed: April 2020; Date of publication: April 2020  
 Administrators responsible: Christina RATCLIFF and Mariusz MACIEJEWSKI; Editorial assistant: Roberto BIANCHINI  
 Contact: [Poldep-Economy-Science@ep.europa.eu](mailto:Poldep-Economy-Science@ep.europa.eu)  
 This document is available on the internet at: [www.europarl.europa.eu/supporting-analyses](http://www.europarl.europa.eu/supporting-analyses)

Print ISBN 978-92-846-6448-1 | doi:10.2861/573954 | QA-02-20-173-EN-C  
 PDF ISBN 978-92-846-6447-4 | doi:10.2861/741017 | QA-02-20-173-EN-N