

Amsterdam and the Doughnut

An empirical investigation of the Doughnut Economy model in Amsterdam



Governing Ecological Transitions in European Cities (GETEC)
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Introduction

Recent decades have seen an expanding role for urban centers in international and national conversations about the climate crisis. Approaches to climate policy target cities as places of both consumption and innovation, in light of their position as nodes in expanding chains of goods, people, and ideas that flow between the modern world's globalized metropolises. At the same time, scholars and decision-makers increasingly challenge long-dominant logics of constant growth and short-term gains for the role these paradigms have played in generating the current crisis of global climate change and biodiversity loss. Recognizing the outsize impact of cities on this crisis, recent policy trends focus more and more on the city as a ripe area for climate regulation; thus, climate solutions.

This phenomenon has led some to suggest placing limits on growth and minimizing dependence on global value chains so as to lower cities' carbon and ecological footprints. These ideas correspond with expanding calls for localization of economies and homegrown "grassroots" movements at the urban level, which grew from local organizing and social activist organizations, particularly during times of financial downturn. Various scholars have proposed and espoused such theories, under titles such as "degrowth," "post-growth," or "steady-state economics." Although initially rogue, such frameworks have begun to be incorporated into the climate strategies of some cities. This includes the city of Amsterdam, which recently adopted the "Doughnut Model" as a central framework for the future development of the city.

The Doughnut Model was originally developed by Oxford economist Kate Raworth. First introduced in her 2012 paper "A Safe and Just Space for Humanity," she fully details the concept in her 2017 book *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*. The fundamental idea underpinning this concept is to combine an ecological resource ceiling represented by the planetary limits, necessary to avoid resource depletion and further deterioration of our environment, with a social floor based on the necessary needs that must be ensured for a population to live decently. Between these two limits a population can thrive, with social needs sufficiently met while not exceeding ecological limits.

In February 2023, members of Sciences Po Urban School's Master in Governing Ecological Transition of European Cities (GETEC) completed a working trip to Amsterdam, to see the doughnut model in action, assess its impact on the city, and draw ideas for future adaptations. The GETEC master's program is designed to examine the difficult and multilevel problem of governance of European Cities in the age of climate crisis. Through a range of coursework and professional opportunities, students are acquainted with the theoretical background and technical practices of urban climate governance.

GETEC members who completed the trip were initially exposed to Amsterdam's unique urban policy landscape through a Fall 2022 course titled "Urban Ecological Transitions in Historical Perspective" taught by Professor Giacomo Parrinello. This course covered the former "amphibious culture" of adaptation to regular flooding that built Amsterdam's famous canals, and the 17th century energy transition from renewables to exploitation of peat (a primitive fossil fuel) which allowed for the Dutch Golden Age. Studying this early ecological transition to fossil fuels provided a pretext for Amsterdam's current attempts to limit their ecological footprint, including with the doughnut model. In the Spring 2023 "Ecology and Politics" course by Professor Pierre Charbonnier, students explored the differences between the various degrowth models and participated in debate about their feasibility. Other coursework informs the various themes encountered during the visit, allowing GETEC members to engage critically with the doughnut model and Amsterdam's application thereof.

Amsterdam is a global pioneer in introducing the doughnut model into city policy and aiming to implement the doughnut at all levels of the urban system. This effort emanates from the municipality's environmental team and filters down all the way to individual citizens and grassroots organizations. After its introduction into Amsterdam environmental strategy in 2020 by Amsterdam's then Deputy Mayor Marieke van Doornink, the doughnut model has been appropriated, advanced, and – arguably – contorted by various actors in and around the city. Indeed, we see the doughnut model crop up not only in policy at the municipality, but also in the communications and work of local private companies, civic and non-government organizations, academics, and elected officials.

This great diversity of actors, all engaged with the doughnut model in one way or another, provided a rich terrain for us to study the meaning of the doughnut model and the ways in which it is perceived and applied in a tangible way. In the following sections, we explore the variation in understanding, contextualization, and commitment to the doughnut model among the numerous actors. These include a permaculture community gardener who was very enthusiastic about the doughnut model itself but discussed reservations about the municipality's interpretation of it; civil servants in the Amsterdam government who expressed varying levels of commitment about the model, including reservations about its potential for transforming the city; and an industrial executive who confused the doughnut model with its similarly shaped but very ideologically different 'circular economy' model.

Indeed, the widespread presence of the circular economy model in Amsterdam, the Netherlands, and Europe more broadly also adds a unique dimension to the study of the doughnut model in Amsterdam. Given the shared shape and similar motivations behind the two models, they are often confounded or perceived as interrelated by professionals and amateurs alike. The circular model seeks to replace the linear economic model of production, consumption, and waste with a more circular system, in which components previously considered waste are revalorized and re-used in production. This model has

been popularized in the past decade as industries and governments acknowledge both the depletion of raw materials and the need to turn to more environmentally sustainable production methods. In the Netherlands specifically, circularity has become a key sustainability target, with the national government aiming for 100% circularity by 2050.

The circular economy model and its implementation in Amsterdam specifically have already been the subject of research by a handful of academics. Scholar Federico Savini, who did this study, has researched the genesis and implementation of the circular economy in Amsterdam. He argues that Amsterdam's current implementation of the circular economy model remains a system of accumulation, since emphasis is placed on supply side reuse of materials rather than on reducing the high levels of household and industrial consumption. Without a shift to focus on reducing consumption and promoting sobriety, he argues, the circular economy model cannot meaningfully enable the meeting of climate targets and sustainability goals.

Jacqueline M. Cramer, similarly, has studied the intricacies of the implementation of the circular economy in Amsterdam through an analysis of how market actors and transition brokers navigate the regime change to circularity. She highlights the importance of collective efforts and aligned interests in the implementation of the circular model, but underscores that significant challenges remain in scaling-up implementation. This literature demonstrates the challenge of shifting an entire urban economy to a new consumption model, as well as the uncertain sustainability implications of such ambitious models.

Nonetheless, the implementation of the circular economy remains significantly more straightforward than that of its doughnut cousin. Indeed, the circularity of an economy can be quantitatively measured through material flow accounting, meaning that targets can be set, and progress tracked. The doughnut model, on the other hand, does not include clear indicators or targets, even qualitatively, and is further complicated by the inclusion of not only environmental but also social ambitions. As such, we sought to study the case of Amsterdam to investigate how (and even whether) the doughnut economy model can be implemented at the urban level and to what extent the doughnut economy can serve as a meaningful model for urban policy.

Beside the critical environmental component of the doughnut model, another element is the interrelation between those planetary boundaries and other social issues. Though the question of justice within environmental transitions remains present when studying urban sustainability, our master program provided us few occasions to study it explicitly; even fewer to actually glimpse what a comprehensive and concrete just transition could look like. Those interrogations are even more relevant as political debate rises on the potential of ecological transition policies to exacerbate existing inequalities, particularly in France. The “fin du monde ou fin du mois?” opposition was bluntly revealed by the yellow vest movement opposing the carbon tax. Translated from French “End of the world or end of the month,” this expression is commonly used in French political discourse to compare

economic challenges and hardships to the imperative and the costs related to addressing the climate crisis. This debate raises questions such as: why would individuals accept and choose a policy that would worsen their current condition (and even survival) for the sake of saving the planet for the coming generations? And what is the right pace for policy making then? Environmental policies that are seen as too radical may trigger negative social impacts, inciting blockage and slowing progress, and could in fact be inherently unjust. Yet, “slow” environmental policies do not match the urgency currently required by climate action.

Within this paradox, Kate Raworth’s model opens an alternative route. The model acknowledges that through diverse mechanisms, poverty and environmental stress can both exacerbate each other, as can the policies tackling them. In her original 2012 paper on the doughnut model, “A safe and just space for humanity,” Raworth claims that “policies can promote both poverty eradication and sustainability”¹ in her inclusive and sustainable doughnut. Applied in the Amsterdam municipality and mainstreamed in all policy departments, the doughnut might then present an opportunity to match the social and environmental component that a just transition requires, for the current and future generations.

However, if this just transformation is to happen, the economic implications are deep and unavoidable, if not central. Questioning the ability of the doughnut model to transform our democracies, Olivia Lazard’s centers the doughnut on those economic considerations.

“In Raworth’s words, the doughnut represents a “compass for progress,” underpinned by nine principles—two of which may well redefine the future relationship between politics and economics. The first is that economics should be redistributive and regenerative by design, matching the indicators of the upper ceiling and lower social ring of the doughnut. The second is that economists, politicians, and policymakers alike should be agnostic about economic growth and pursue multidimensional indicators of performance beyond gross domestic production.”²

This redistributive economic vision is central to the doughnut model, which seeks to give policymakers the tools, framework, and language to rethink the role of economic growth in their respective domains. But what does this mean on the ground, in a city like in Amsterdam? To what extent is the implementation of the doughnut model changing the understanding of growth in the city? Are policy makers growth agnostic? What does a renewed understanding of growth change in urban policy?

¹ Raworth, K. (2012). A safe and just space for humanity: can we live within the doughnut? *Oxfam Discussion Paper*.

²Lazard, O. (2022, February 15). Can Cities Use the Doughnut Model to Hack Liberal Democracy? *Carnegie Europe*.

Thus, a guiding objective of the field trip in Amsterdam was to investigate how the doughnut model advances or contributes to the conversation on the role of growth in cities. In this report, we seek to address this inquiry in three parts. First, we will expand on the long-standing role of the circular economy in the city of Amsterdam and its recent shift towards the doughnut model. In the second part, we will study the contrasted approaches that local actors adopt when appropriating and implementing the doughnut model. In the third part, the doughnut model will be contextualized in the wider discourse on growth, green growth and degrowth in the urban arena.

The visits and discussions we had with local actors are the empirical basis of this report. Each part of the report begins by the summaries of the visits particularly relevant for the analyzed thematic.

PART 1: From the circular economy to the doughnut model in Amsterdam

The first day of the field trip, Wednesday, February 22nd, 2023, was structured around the successive visits of three organizations: The Amsterdam Municipality, consulting firm Circle Economy, and Towards Nature Permaculture Landscaping. The presentations and conversations we had allowed us to situate and define in depth the origin and unfolding of the model, which is presented in the subsequent article: “From circular to the doughnut”.

1.1. Amsterdam Municipality

Visit summary

Date: Wednesday, February 22nd, 2023

Time: 8:30am - 12am

Speakers: Kees Stants, Line Vestergaard, Elsbeth Visser, Froukje Anne Karsten



Our first visit of the trip was in the offices of the Municipality of Amsterdam with employees from the Sustainable Development team. We were welcomed by Froukje Anne Karsten, Circular Economy Policy Advisor and Kees Stants and Elsbeth Visser, of the Municipality and Line Vestergaard, a PhD candidate in anthropology researching Doughnut Economics in Amsterdam. The sustainability department - made up of two hundred people - is organized in three offices dealing respectively with sustainable energy, green and health city and circular economy.

Their presentation began with an interactive introduction on the topic of sustainability in Amsterdam. They explained to us that their commitment to be more active on the topic of sustainability was partially motivated by a recent petition signed by city council workers to denounce the inaction of the municipal government in the face of climate change. That event led the city to increase its climate ambitions. In 2020, the city adopted a roadmap to reach climate neutrality by 2050, following extensive dialogue with hundreds of stakeholders in the city. So far, they do not think they will reach their ambition of reducing by 55% their carbon emissions by 2030, it will most likely be by around 42%.

Relative to the circular economy, they face an important cooperation dilemma: they need new players and organizations to get on board for it to actually be effective. As for their circularity targets, they want to have 50% of circular procurements by 2025. Amsterdam faces a multiplicity of challenges in going forward with its transition, such as a lack of resources, stacking spatial claims, electricity grid congestion, and the insufficiency of legal tools. The process is nonetheless moving forward, as demonstrated by the example of a group of hotels that decided to get in a network to improve their circularity. Froukje Anne then presented a bit more in depth how this partnership between the hotels and the city was built and governed.

Lastly, we attended a presentation by Line Kwartborg Vestergaard, about the implementation of the "Doughnut Economy" in the municipality of Amsterdam. On the one hand, there are civil-led initiatives blooming all over the city and many cities in the world are interested in what is happening in Amsterdam to reproduce it. On the other hand, the model does not necessarily speak to everyone, and it seems that most Amsterdam residents still don't know the model. The plus side of the doughnut according to Vestergaard is that it creates a narrative and helps to bring up a conversation about the social aspects of the circular economy. On the downside, it is a lot for one city to handle, especially given that there isn't a specific budget for implementing the doughnut. Vestergaard also feels that it constrains policies to be squeezed into the doughnut framework.

This conversation was followed by workshops prompting the students to reflect collectively on the implications and challenges of implementing the doughnut and circularity in public policy.

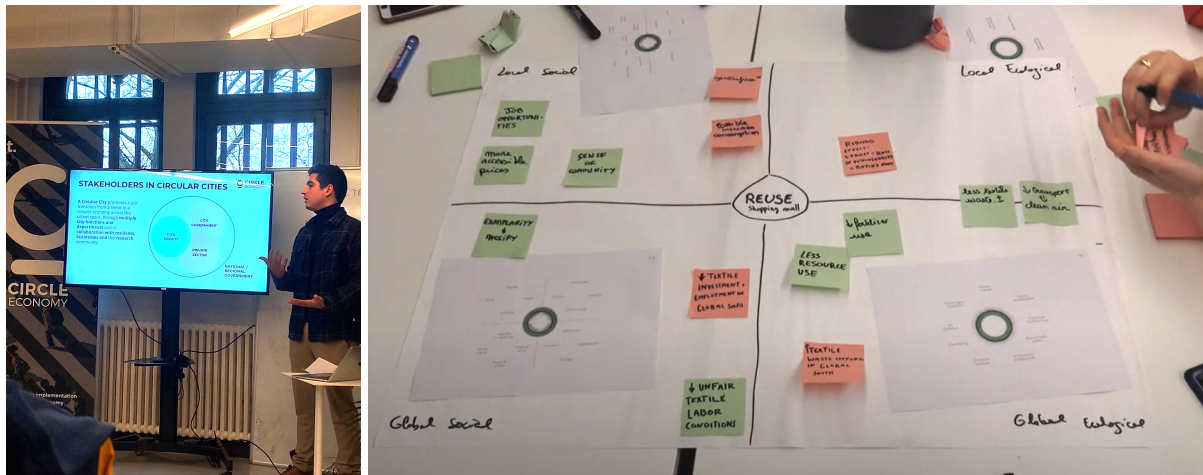
1.2. Circle Economy

Visit summary

Date: Wednesday, February 22nd, 2023

Time: 3pm - 5pm

Speaker: Pau Ruiz, Jordi Pascual, Claudia Alessio



For the second visit of our first day, we visited consulting firm Circle Economy, which describes itself as a "global impact organization" and was founded in 2011. They have a vision to contribute to a prosperous economic system that ensures the planet, and all people can thrive. Their mission is to deliver practical and scalable circular economy solutions to empower decision-makers from the public and private sectors.

Circle Economy covers different topics such as the built environment, finance, textiles, digital, food, and more. They combine research, data, and digital tools to provide solutions and share knowledge through reports and capacity-building workshops. In the context of the doughnut model implementation in Amsterdam, Circle Economy was instrumental in elaborating key policy documents. In collaboration with the City of Amsterdam, Circle Economy produced the "Circular Amsterdam Roadmap 2020-25" in 2019, a major policy document to implement the doughnut model through the selection of seventeen circular directions for the city.

During our visit, the presentation focused on the linear challenge and circular solution in cities, specifically applying the doughnut economy concept to Amsterdam. The challenge lies in the traditional linear economy model that has negative consequences for the environment, such as emissions and the depletion of natural resources. Circle Economy advocates for a circular economy, where resources are maintained at their highest utility and value for as long as possible through recycling, refurbishing, reusing, and avoiding incineration.

Circle Economy's circularity gap report highlighted the global economic system's flaws and how it exceeds planetary boundaries. They emphasized the role of cities, which

generate a significant amount of waste, energy consumption, greenhouse gas emissions, and resource usage. Cities are also hotspots of innovation and generate a large portion of the global GDP. The aim is to close material loops and minimize resource extraction in cities. In addition, Circle Economy emphasized the importance of stakeholders, including civil society, city governments, the private sector, and national/regional governments. They believe that a transition to a circular economy cannot happen without acknowledging and involving these stakeholders. The focus is on mapping and identifying the main role of each stakeholder and bringing them on board.

Thus, the connection between the circular economy and the doughnut model is necessary to fill this gap. The doughnut model takes into account the limits of the planet and the impact of cities on the wellbeing of people worldwide and the health of the planet. Developing a city portrait helps policymakers identify strategic fields and work with different municipalities.

The challenges faced in implementing circular economy practices in Amsterdam include limited accessibility of knowledge and technical issues, vague legislation, governance issues due to multiple stakeholders with varying interests, the need for capacity building, and working in silos. Technical capacity and upscaling of technology, financial and market barriers, linear thinking, and not accounting for social and environmental externalities were also discussed.

Overall, the visit to Circle Economy provided valuable insights into their mission, methods, and the challenges faced in implementing a circular and doughnut economy in cities like Amsterdam.

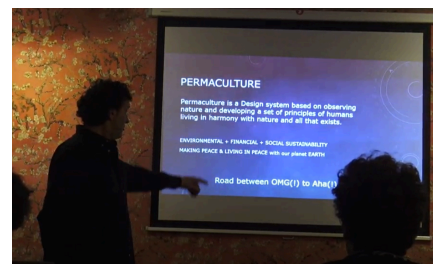
1.3. Towards Nature Permaculture Landscaping

Visit summary

Date: Wednesday, February 22nd, 2023

Time: 5pm - 7pm

Speakers: Tayfun Yalcin and Dora Mester



The last visit of the 22nd of February was with Towards Nature Permaculture Landscaping, an Amsterdam-based company that does permaculture design, consultancy and landscaping. The company sees itself as one of the concrete applications of Amsterdam's Doughnut strategy, transforming the built environment in a more sustainable and resource-friendly way, while offering more livable spaces to the city's residents. They use permaculture ethics, principles and techniques to create naturally friendly, edible and productive environments. Their projects are varied, ranging from schoolyards to private gardens and to community gardens.

One of their projects is the community garden SET & Buurt in the district of IJburg in Amsterdam. Two persons were there to present it: Tayfun, the permaculture designer paid by the city, and Jamila, a social gardener who is employed by an NGO and a long-term devotee of the project. They designed the community garden together more than 2 years ago. The buildings surrounding the garden are mostly social housing for immigrants and students. There are common areas, but also plots that can be rented for 25 euros for a season, with diminished rates for people in need. The garden provides a gathering place and fosters integration and a sense of community for the inhabitants of the neighborhood.

This project was made possible thanks to a grant system provided by the city which allows the purchase of garden equipment and partial funding to hire a person in charge of the garden. Nevertheless, the initiators of the project note the dependence this system creates in which they are obligated to reapply every year. They point to the fragility of this garden, which could be at risk of destruction in 8 years' time due to the construction of a shopping center. According to them, "Gardening is political" and community gardens represent much more than just gardening: "they symbolize cooperation and living together. It's about harmony between people and nature." The plants connect people in the neighborhood, where over 25 nationalities are represented. They learn the names of plants in different languages, and the gardening activity brings them together.

1.4. From circular to the doughnut

Article n°1

Encountering the local actors on that first day of the fieldwork sparked reflections and questions, one of the most salient being: is Amsterdam implementing the doughnut model, or rather pushing a circular economy strategy? To lift any misunderstanding, a dive in the history of the concept and their implementation in Amsterdam is necessary. Indeed, in addition to existing long before the doughnut model, the circular economy concept was also implemented in Amsterdam, a few years before the doughnut model. After having presented the history of the circular economy, and elaborated on its differences with the doughnut, the present article points at the successive implementation of both models in the municipality.

The circular economy and the doughnut model: different contexts and concepts

The concept of the circular economy has been around since the early 1900s, but it gained renewed attention in the 1960s and 1970s as concerns about environmental sustainability and resource depletion grew.

Indeed, the concept of circularity can be re-traced through the works of thinkers such as Lavoisier's law of conservation of mass, who concluded that matter cannot be created nor destroyed, only transformed.³ This idea laid the foundation for the circular economy principle of "waste equals food," where waste from one process can be used as a resource for another process, creating a closed-loop system. Yet, the specific concept of circular economy was first introduced by economist Kenneth Boulding in 1966, who popularized the term "spaceship earth" and advocated for an economy that mimics nature's circular systems, recognizing the limited nature of resources on our planet.⁴

The modern circular economy model as we know it today was developed and popularized by the Ellen MacArthur Foundation in the early 2000s.⁵ This model is a derivative of the broader "Cradle-to-Cradle" design approach, which promotes creating products that are inherently sustainable and can be fully reused, recycled, or biodegraded at the end of their useful life⁶. Indeed, products are designed with the intention of becoming resources for future products at the end of their lifecycle. The circular economy builds upon this to insist that products and materials be kept in use for as long as possible and then recycled or repurposed to create new products. Both models share the goal of creating a more sustainable and regenerative economy that addresses the negative impact of traditional linear models of production and consumption.

³Donovan, A. (1996). Antoine Lavoisier: Science, administration and revolution. Cambridge University Press, 5.

⁴Boulding, K. E. (1966). The economics of knowledge and the knowledge of economics. *The American Economic Review*, 56(1/2), 1-13. (n.d.).

⁵ MacArthur, E. (2013). Towards the circular economy. *Journal of Industrial Ecology*, 2(1), 23-44.

⁶ Braungart, M., & McDonough, W. (2009). *Cradle to cradle*. Random House.

The circular economy is applied in a variety of contexts, including manufacturing, consumer goods, and construction. Companies around Europe are implementing circular strategies such as designing products for disassembly and reuse, using renewable energy sources, and implementing closed-loop supply chains. Cities are also adopting circular economy principles, focusing on reducing waste and increasing resource efficiency in their urban environments, as they are centers of consumption and waste generation. Urban spaces have the potential to be centers of innovation and experimentation, where circular economy principles can be applied to address a range of environmental and social challenges. Cities are also home to many of the world's largest businesses, making them key players in the transition to a more circular economy.

The Doughnut Model, on the other hand, sets a broader model for society and governance. It aims to satisfy the needs of each member of society while avoiding negative spillovers on the environment. It is composed of two concentric rings: “a social foundation, to ensure that no one is left falling short on life’s essentials, and an ecological ceiling, to ensure that humanity does not collectively overshoot the planetary boundaries that protect Earth’s life-supporting systems.”⁷.

The main goal of the doughnut model is to redirect attention from a GDP-driven economy to one that foregrounds social and environmental goals. Its concentric circles conceptualize an optimal and just space for humanity in the development of a regenerative and distributive economy. The space outside the outer ring is used to visualize the overshoots of the ecological ceiling in domains such as biodiversity loss, pollution, or climate change, while the inner space is used to visualize the shortfall in provision of social services and needs (such as education, justice, housing, water, gender equity). On a more theoretical level, the Doughnut model is one way to advocate for a more responsible economic system than capitalism, one that calls for a shift in focus from growth to wellbeing, from overconsumption to regeneration and responsible consumption and production having the environment in mind.

Amsterdam: moving from circularity to the doughnut.

The circular economy was implemented prior to the doughnut model in Amsterdam. A policy document from the municipality traces back the engagement of the city into circularity from 2015 with the “The Sustainable Amsterdam Agenda.”⁸ At least two programs were started as an outcome in 2017 : Amsterdam Circular: Learning by Doing and the complementary Circular Innovation program.⁹ This beginning of the circular economy in the Dutch capital is also concordant with the will put forward by the

⁷About Doughnut Economics. (n.d.). Doughnut Economics Action Lab. Retrieved November 7, 2023, from <https://doughnuteconomics.org/about-doughnut-economics>.

⁸ Circle Economy, & City of Amsterdam. (2020). Amsterdam Circular 2020-2025 Strategy.

⁹ ibid

government of the Netherlands to foster circular economy interventions.¹⁰ While no mention of the doughnut can be found in the documents from the initial period, the terms “doughnut” and “circular” became to be used interchangeably a few years later. In the Amsterdam Circular 2020-2025 Strategy, one finds phrases such as: “In a circular economy – also known as a circular or doughnut economy – we make better use of what is already there,” and “The circular economy is sometimes presented as a doughnut.”¹¹ At this point, the doughnut had become part of Amsterdam strategy. How?

The Dutch capital of Amsterdam was one of the first cities to base part of its economic strategy on the doughnut economic model. In 2020, under the leadership of Marieke van Doorninck, a member of the Dutch Green Party, who served as Head of the Urban Development and Sustainability department from 2018 to 2022, the city embraced this model as its strategy to recover from the impacts caused by the Covid-19 pandemic, including the socioeconomic damages caused by the ensuing lockdowns. The city needed to embrace and integrate a sustainable and inclusive strategy to frame its post-pandemic urban development. The city collaborated with Raworth in order to implement the doughnut into its urban development strategy.

The doughnut model was selected as the ambition of the local administration in order to improve living standards in the city and encourage a swift recovery. However, a paradigm shift in the city’s development strategy was needed in order to divorce from the previous system, focused on growth and development – which caused unaffordable housing prices and increased environmental pollution – and move towards a post-growth oriented strategy that takes minimum social needs and the environmental limits to development into account. Thus, the doughnut economic model, which aims to find a balance between the two aforementioned limits with its “social foundation” and its “environmental ceiling,” was selected.

Despite facing significant challenges, Marieke van Doorninck introduced the model in Amsterdam within her department in the local administration. Using various communication campaigns, the city reached inhabitants, prompting them to start their own local projects that are framed according to this novel post-growth paradigm. One challenge was to use non-quantifiable metrics (as opposed to economic growth measured in GDP, for example) to measure the implementation of the doughnut in Amsterdam. Here, Kate Raworth proposed a city selfie hashtag on social media which citizens could use to identify through pictures the successful implementation of the doughnut and observe how it improved living quality.

Successes and limitations of the doughnut model

¹⁰Savini, F. (2019). The economy that runs on waste: accumulation in the circular city. *Journal of Environmental Policy & Planning*, 21(6), 675–691. <https://doi.org/10.1080/1523908x.2019.1670048>

¹¹ Circle Economy, & City of Amsterdam. (2020). *Amsterdam Circular 2020-2025 Strategy*. Page 10.

One major success was the collaboration with local businesses and civil society. By broadening implementation beyond a top-down approach and encouraging bottom-up development, citizens and local businesses from different backgrounds initiated local projects framed according to the principles of the doughnut economic model. Furthermore, crucial local actors such as the Port of Amsterdam have begun to take the doughnut model into account. During our visit to the port authority, James Hallworth explained that they plan to phase out fossil fuels in the coming decade and aim to reduce their importance as a global port, focusing on regional and European shipping lanes instead. Although it must be mentioned that, in a later discussion with us, Marieke van Doorninck expressed that their goal might be overambitious, and their action so far lacks commitment in this regard. Nevertheless, these developments are signs that the model is now used to inform city-wide strategies and developments in support of this overarching idea: providing a good quality of life for Amsterdam's inhabitants without putting additional pressure on the planet. Following Amsterdam's lead, other cities across the world have begun to include the doughnut economic model in their urban development strategies, creating a global network of urban knowledge exchange on the topic. It is significant that even after van Doorninck left the municipality of Amsterdam, the new leadership decided to keep the doughnut as an important reference, although they also phased out much of their doughnut related communication campaigns.

Nevertheless, the doughnut economic model was present in much of the communication of Amsterdam's economic development in the past years. The key lay in communicating to the population of Amsterdam, as well as to citizens and local decision-makers worldwide, that an alternative framework for local economic development that addresses social and environmental challenges is possible. Still, the extent to which municipal departments (other than urban development and sustainability) adopted the doughnut model as their principal strategy remains questionable, notably the economic department. One cannot say if Amsterdam successfully adopted the doughnut as a holistic strategy, introducing it as a streamlined mantra across departments. Furthermore, it is also to be noted that the doughnut model neglects to comment directly on growth, and it is disputed to what extent the doughnut economic model is a paradigmatic shift in economic thinking. Indeed, growth-oriented development that takes some social and environmental standards into account may already be compatible with the doughnut, making it no different than any other model on sustainable development.

Still, as Marieke van Doorninck herself stressed, the implementation of the doughnut should not be measured in quantifiable terms, but rather by the creation of the discussion around it, the controversies that were raised, as well as the communication campaigns influencing citizens, civil society and local businesses. These central aspects strengthened engagement in the local debate on climate change and sustainability, illustrating that an alternative, brighter vision of the future may be possible, and that urban sustainable development can successfully be implemented.

PART 2: The contrasted appropriations and impacts of the doughnut model

The second day of the field trip, Thursday, February 23rd, 2023, was structured around the successive visits of three organizations: The AEB Waste treatment plant, the Port Authorities, and Centerinno. This series of encounters stimulated a collective reflection that are presented in two articles following the visit summaries: “Actors appropriation of the model” and “Impact of the model.”

2.1. AEB Waste Treatment Plant

Visit summary

Date: Thursday, February 23rd, 2023

Time: 9am - 12am

Speakers: Coen Buitink and Caroline de Cristofaro



We started the second day of our trip in Amsterdam with a visit and presentation of the facility dealing with Amsterdam’s waste, the Waste Energy Company, Afval Energie Bedrijf (AEB). We went to Amsterdam Westpoort, in the Northwest of Amsterdam. We arrived in front of two large chimneys emitting continuous smoke, next to a large pile of waste debris. Marketing manager Coen Buitink presented the facility, after which we got a tour. Our visit took place in a particular context. Firstly, municipal garbage collectors had been on strike for a week to obtain better income. Secondly, some machines were out of use and part of the plant was not open to visit for safety reasons. Finally, the municipality had decided to privatize AEB two years ago. The operating process of the plant was too costly for the municipality.

Visiting this facility was an opportunity to understand how a key factor in the circular economy plan considers and implements the doughnut model. Indeed, the waste treatment process is critical to this change in economic model, which could prompt reconsideration of waste as a resource for future material or energy instead of being completely erased and seen as worthless. AEB Amsterdam's business model relies on three markets: waste processing from municipal and commercial waste, thermal processing with the production of energy and steam, and the sale of raw products to recycling companies. AEB Amsterdam is therefore at the heart of a network of actors: municipality, beneficiary companies, recycling companies and energy distributors.

AEB collects garbage mainly from the Amsterdam metropolitan area on a daily basis. The garbage is collected from households and commercial activities and brought to the plant using 500 trucks a day. Then the garbage is separated according to its composition (plastic, metals...). Raw materials are sold to recycling companies (90% of the plastics are recycled) while the remaining part is burnt into the factory within the four active ovens. The incineration process allows the plant to produce electricity: the steam produced by the incineration activates a turbine. 40 000 houses in Northern Amsterdam receive electricity from this process. As a result, AEB is contributing to the doughnut economy by reintegrating some of its outputs into the local economy. However, it is still a growth-oriented organization: AEB is highly dependent on an economy that produces enough waste for its activity to be economically profitable. This growth-oriented focus stands to increase following privatization.

2.2 Port Authorities

Visit summary

Date: Thursday, February 23rd, 2023

Time: 1pm- 3pm

Speaker: James Hallworth



James Hallworth (Commercial Manager Circular & Renewable Industry at the Port of Amsterdam) presented the work of the Port Authority of Amsterdam, where he has worked for 15 years, as well as the newly created Prodock, as it relates to our doughnut economy perspective. The Port of Amsterdam is one of the largest seaports in Europe,

located in Amsterdam, Netherlands. The Port Authority of Amsterdam was established in 1994 and is the governing body responsible for the management and operation of the port. This involves maintaining the port infrastructure, regulating shipping traffic, and promoting the port's economic development.

The port serves as a major hub for the transportation of goods and commodities, including oil, coal, grain, and chemicals. In addition to its shipping operations, the Port Authority of Amsterdam is also committed to sustainable and environmentally responsible practices. It has implemented initiatives to reduce air and water pollution, promote renewable energy, and support circular economy practices. To further this goal, the Port Authority set up an innovation hub for start-ups in 2016, entitled Prodock. Its initial goal was to stimulate innovative enterprises, but it has since then specialized in start-ups focusing on the circular economy. The space provides a range of services, including co-working space, mentorship, networking opportunities, and access to funding and investment.

Our discussion with James Hallworth focused primarily on efforts to develop a circular economy within the port area. In short, the Port Authority of Amsterdam aims to create an industrial ecosystem based on reusing materials and valorizing waste. By leveraging their status as a landowner, the authority has begun attempting to ensure that the uses of the land they lease facilitate the establishment of circular activities. The port's landlord status grants them the ability to influence and enforce sustainability measures through contract agreements. Broadly, the port's transition towards circularity involves integrating industrial processes, attracting new (circular) companies, and neglecting to renew the contracts of old ones who fail to adapt to the port's vision. Priority-wise, their focus has shifted away from tonnage towards "creating value," emphasizing regional rather than global port development and reducing dependency on certain materials. The interview also highlighted the port's engagement in sustainability, social responsibility, and collaboration with various stakeholders.

Challenges discussed include the need for a level playing field for circular production, external environmental costs not factored into materials pricing, and the importance of legislative action and market facilitation. The port's long-term vision also includes integrating housing into the port area to support the workforce.

2.3. Centrinno

Visit summary

Date: Thursday, February 23rd, 2023

Time: 3:30pm - 6pm

Speaker: Thieu Custers



Centrinno is a research project focused on industrial historical sites undergoing transformation. It is funded by the EU Horizon 2020 research and innovation project. We met with Centrinno in Amsterdam Noord, where Thieu Custers presented the group's work and future vision. The initiative aims to develop a new bottom-up narrative that highlights the relevance of small-scale making and individual makers in urban contexts, while coupling them with sustainable and social objectives shared by the Amsterdam city administration.

Centrinno aims to be a social platform of communication, encounter, and brainstorming for local communities to then be able to organize empowering events and lobby the municipal administration with proposals about sustainable making or on the importance of makers in the city's urban fabric. In addition, Centrinno coordinates informal educational courses in the fields of making and circularity. One of the ways in which Centrinno aims to have an impact on the local communities is through the development of a "maker map" that displays the evolution of makers and their spaces over time. This serves not only as an information and sensibilization tool but also as a lobbying instrument to start from when discussing with public authorities.

Centrinno's initiatives, while both socially and environmentally motivated, do not engage directly with the circular economy model, nor the doughnut economy model. Nonetheless, we can identify traces of each of these models in Centrinno's activities and objectives. Circularity, for example, is represented in some initiatives which seek to promote the reuse of material among makers and to reduce the amount of waste generated by maker projects. The aspect of the doughnut economy represented through Centrinno's work, on the other hand, relates much more to the *social foundation* component of the doughnut model. Much of the initiative's advocacy is geared toward reducing gentrification of Amsterdam Noord and other historically industrial neighborhoods to avoid the geographic and economic displacement of makers, thus seeking to assure a social foundation for these maker communities.

In conclusion, Centrinno connects people in communities through making, promotes makerspaces as inclusive areas where to learn, share ideas, and exhibit the products of local making practices. The future objectives of the project are connected to the

development of a business model which seeks to avoid makers' displacement, to promote city initiatives tailored to makers' needs and to highlight the heritage, cultural, and economic importance of making for Amsterdam's neighborhoods. Although the organization does not explicitly subscribe to either the doughnut or circular models, we can nonetheless observe principles of each throughout their activities.

2.4. Grafting the doughnut onto circularity? Ambivalences in the actors' appropriation of the doughnut model

Article n°2

A circular economic policy has been implemented into the Amsterdam local policy since 2015. Five years later, in 2020, the doughnut policy was grafted onto the circular economy policy already in place. The two models have co-existed since then, in sometimes quite ambivalent ways. Actors by actor, the following article seeks to understand the approach that local actors adopted to appropriate this new doughnut layer and to integrate it within existing circular strategies.

Policy and institutional actors: Amsterdam Municipality, AMS and the Circular Lab

Amsterdam Municipality: impact of the model

In April 2020, Amsterdam unveiled its Amsterdam Circular 2020-2025 strategy, a five-year plan modeled on the principles of Doughnut Economics, designed by Kate Raworth. The plan aims to tailor the Doughnut model to the city of Amsterdam. This scaled-down model presents the strategy for achieving the city's goal of 100% circularity and climate neutrality by 2050, along with an ambitious medium-term objective of reducing primary resource use by 50% by 2030. The circular economy plan concentrates on three primary value chains and 'ambitions for action' including food and organic waste, consumer goods, and the built environment.

Numerous projects led by civil society flourished in the city, particularly those related to climate adaptation and biodiversity. However, the city quickly encountered obstacles and challenges, including a lack of skilled staff and financial resources, congested electricity grids and inadequate legislation.

Additionally, Amsterdam previously did not directly collaborate with the national level and instead established a city network in the Netherlands to communicate with the Dutch government. While this network strategy showed potential, various challenges arose due to the cities' limited authority and differing climate aspirations, leading to complications in cooperation. Thus, the political question arises of whether the city of Amsterdam is truly assisting other cities or merely setting an example. The effort to implement circularity was also complicated by the departure of Marieke van Doornick from the post of Alderman in spring 2022, which was suggested to have been motivated by political discontent with her approach.

Line Kwartborg Vestergaard, a PhD researcher, provided insight into how the Doughnut Economy is perceived by city residents. While the model has generated considerable international attention and fostered a shared language on circular economy and its social elements, it is important to note that the model is not universally applicable, and

without proper explanation, it may prove challenging for Amsterdam residents to grasp. It also lacks the necessary political and economic support to be considered concrete. As a result, it remains vague and challenging for a single city to address due to its lack of adaptation to the local scale. Said Verstergaard: "For me the Doughnut has helped me to be more confident when speaking about social aspects of the circular economy – that it is about people, justice and about what happens in the city. Not just materials."

To summarize, Amsterdam appears highly motivated to undertake an equitable and environmentally friendly transformation. While the doughnut model presents a compelling blueprint for achieving this goal, present efforts serve primarily to provide language and project a positive green image of the city. This is due to the lack of adequate funding for its implementation; as of our visit in spring 2023, there was no explicit budget allocation for implementing the doughnut.

The Amsterdam Institute for Advanced Metropolitan Solutions: the doughnut economy model, a useful vision?

The Amsterdam Institute for Advanced Metropolitan Solutions is a center of research, analysis, design and engineering of solutions for the future of cities. At the intersection between science and urban challenges, the institute works in close collaboration with the City of Amsterdam. GETEC students completed a visit to the institute on the third day of the field trip.

According to Dr Joppe van Diel, Program Developer Circularity in Urban Regions at the AMS Institute, the doughnut model is useful in the sense that it provides clear boundaries in terms of social and environmental impacts of the economy. Furthermore, compared to the circular economy, the doughnut economy adds a social dimension, particularly in the inclusion and equality of citizens. The AMS Institute collaborates with local actors and residents to co-create solutions for all Amsterdammers. For them, the Doughnut economy model implies rethinking the value chain, including the social and environmental dimensions of value creation, as well as work on updating design processes to facilitate product repair. Van Diel and his colleagues expressed that although Amsterdam does not currently operate within the doughnut's boundaries, the inclusion of the model in the city's political strategy was still a positive step towards a more socially and environmentally oriented local economy.

Implementation of the doughnut and circular models: a running process but not yet a reality in Amsterdam

At AMS, most solutions and research focus predominantly on the circular economy model while also integrating principles of the doughnut economy. In order to include the doughnut model to a larger extent in the Amsterdam economy, a radical step forward is necessary.

This step would imply both costs and benefits for the various actors. It is necessary to find out the obstacles and barriers that prevent its implementation and the potential negative impacts that it would bring to ensure a fair transition to this model. In the case of Amsterdam, the doughnut model provides a powerful imaginary but is still not a reality.

Implementing the doughnut and circular economy models is still a work in process, and the city is not on track to meet the high Dutch government's objectives of being 100% circularity by 2050. For example, many companies are thinking about how to take it into account and often have an employee or team dedicated to the circular dimension; still, in the absence of concrete institutional support, these efforts fall flat. As a consequence, Amsterdam needs to advance in the two models at the same time and with targets that are currently, in 2023, beyond the city's capacity to put the theory of the models into practice. Indeed, it is still difficult to imagine a city and country fully circular as none have yet succeeded in implementing full circularity at a large scale.

Thus, a work to rethink and think how to build a circular and doughnut Amsterdam is in process notably through the AMS which works hand in hand with the municipality, citizens, businesses and all the relevant stakeholders to imagine the implementation in reality of a just and sustainable transition of the economy using the doughnut and circular models. However, the process will be long to fully apply the two models in the city of Amsterdam.

Circle Economy: consulting firms at the service of municipalities (or the other way around?)

Circle Economy is a consulting firm based in Amsterdam. Founded in 2011, they specialize in the circular economy, championing the vision of an economic system that ensures the prosperity of the planet as well as the people who live on it. They have worked with over 120 companies, 23 nationalities and 51 cities including Amsterdam, Prague, The Hague, and Toronto. Here we look at the collaborations with the cities and the benefits for each.

What is the benefit?

The first question to ask is what kind of services consulting firms can provide to municipalities. They break down their field of expertise and assistance to cities into four components: prioritization, visualization, collaboration, and implementation of actions. Prioritization is based on data analysis to identify the city's priorities, i.e. the places where public policies can have the greatest impact. Regarding visualization, they explain complex quantitative data through analysis and accessible visuals. They also identify potential partners for collaboration on circular economy policy, including corporations and ngos. Finally, they also help municipalities move from theory to practice with impactful policies. In short, they position themselves as facilitators and partners to decision makers at city hall.

From conception to action: a well-proven strategy

In this role of facilitator, Circle Economy has developed a precise method to collaborate with municipalities. Circle Economy's support is developed in five steps. First, a general analysis to identify the profile and priorities of the city, followed by an analysis of the material flows. This identifies key intervention points in the city's sectors, helping to better understand the patterns of resource use in their city and to recognize their role in the shift from linear to circular use. After this issue identification step, Circle Economy proposes a strategy to the city on the most effective interventions via the study of more than 3000 real cases, accounting for the local context and various stakeholders. This proposed strategy is tested to ensure that the best option is selected. After the strategy, Circle Economy provides a step-by-step roadmap with which the city council can move forward. Finally, they bring their expertise to local businesses to help them accelerate their transition to a circular economy.

Circle Economy and the doughnut model

Circle Economy has been a collaborator of the Amsterdam Municipality for several years, long predating the introduction of the doughnut economy model. For example, Circular Economy co-produced the city's 2018 *Amsterdam Circular* policy document, which set out evaluation and action perspectives, as well as the more recent Amsterdam Circular 2020-2025 Strategy. These sleek reports demonstrate the consultancy's ability to employ clean, detailed, and polished graphics and data visualizations to communicate and promote the city's ambitions.

Prior to the introduction of the doughnut model by then-Deputy Mayor Marieke van Doorninck, Circle Economy had focused exclusively on circularity, as demonstrated in early reports. However, once van Doorninck set the doughnut as a key policy priority, the consultancy worked to graft doughnut model ambitions and policies onto their existing work for the municipality. The resulting report, the *Amsterdam City Doughnut*, reflects the same polished design as the consultancy's previous reports.

In collaboration with the municipality, the consultancy developed a four-point plan for the implementation of the doughnut model in Amsterdam, combining social and economic action through both global and local dimensions. Although the report includes policy ambitions and stakeholder mappings, it remains quite broad and theoretical, thus functioning more as a communications tool than a policy roadmap enabling direct action, targets, and evaluation.

A juicy business model?

Circle Economy's business model is mainly based on providing consulting and coaching services. Circle Economy also organizes workshops, training and events to raise awareness and educate stakeholders on the principles and practices of the circular economy. Financial statements are not publicly available, neither in dedicated reports nor in the organization's annual impact report. It should be noted that as an impact organization, Circle Economy can also benefit from grants, specific project funding or

partnerships with other organizations to support their circular economy initiatives and research. They therefore receive donations from various foundations including the Goldschmeding Foundation or the Personio Foundation. Although their website lacks financial transparency, it indicates in job offers that "*Salary and benefits are competitive within the not-for-profit sector*".

An urban ecosystem of circular consulting firms

Circle Economy is not the only consulting firm specializing in the circular economy in Amsterdam. It shares this with Metabolic. The two firms have collaborated on various projects such as on the Ganbatte Project, an online platform providing key data insights and proven solutions on the circular economy for cities. Circle Economy indeed explains that it prefers collaboration to competition in discussing their partnership with Metabolic. Both organizations seem to be thriving. By all appearances, the two leaders of circular consulting are expanding the market and bringing each other knowledge and opportunities.

To conclude, the deployment of the doughnut model in the city of Amsterdam was an important piece of work for the consulting firm Circle Economy that accompanied the formation of Amsterdam's strategy. They were able to use the model as a working tool, but they do not systematically use it in their actions in other cities around the world. Nonetheless, they highlight that the social aspect is always important and considered in their recommendations.

Businesses: AEB Waste treatment plant, the port authorities and Centerrino

"I am all in as long as they understand that is has to happen at an industrial scale" (Port Authority representative)

The waste treatment by AEB and the organization of the Port of Amsterdam as a waste valorization platform are two examples of industrial applications of the circular economy model. These two case studies raise questions about the relevance of the circular economy in terms of sustainability and social objectives.

The valorization of waste by the Port of Amsterdam and the AEB waste treatment plant

Since 2016, the Port Authority of Amsterdam has been working to transform the port area into an ecosystem of businesses committed to the circular economy. The goal is to optimize energy flows and convert waste generated by port activities into resources. Today, one-third of the terminal has been converted into a "circular terminal," enabling waste reduction and value creation. Designed for circularity, both the physical space and logistical support of the area facilitate the implementation of circular activities on an industrial scale. Ports also provide the necessary environmental space for industrial processes, including input and output of odorous and harmful substances.

To achieve these resource optimization and waste valorization objectives, the Port of Amsterdam utilizes a contractual land leverage. The port leases its lands to companies wishing to build a plant within the port area under certain conditions. Resident companies are bound by environmental and social goals and the port authority has control over working conditions, wages, the origin of raw materials, and more. The port also employs incentive measures to reduce environmental externalities produced by industrial activities. For example, the port finances steam infrastructure and ties the taxation level of companies to the volume of steam produced. The port also aims to ensure the achievement of environmental and social objectives by reviewing land lease contracts annually, which can last between twenty and fifty years.

AEB, the waste treatment plant in Amsterdam, collects the equivalent of 500 trucks of municipal and commercial waste daily within the metropolitan area. The waste is sorted, pre-processed, and then transformed into raw materials or incinerated to generate both energy and heat for urban heating networks.

The incineration process produces electricity that supplies power to 40,000 households in the northern part of Amsterdam and provides the plant with the energy needed for its operation. Thus, AEB contributes to the doughnut economy by reintegrating some of its products into the local economy.

“Keep the economy going but in a circular manner” (Port Authority representative)

Circularity is becoming the new norm of the economy, bridging the gap between transformation and business as usual.

The transformation of the Port of Amsterdam into an industrial ecosystem based on material reuse sets a new horizon for ports. While their role in the economy used to be on a global scale, measured by the volume of materials transported, representative James Hallworth (Commercial Manager Circular & Renewable Industry at the Port of Amsterdam) emphasized their new role as more regional and focused on value creation. The competition at the global level is being replaced by cooperation within a regional ecosystem.

The Port of Amsterdam encourages us to think of the doughnut from the perspective of an ecosystem of engaged businesses where value is shared and created through reuse, energy efficiency, and local economies of scale. Circularity is becoming the new norm in the economy, much like Fordism once was. Economic value is no longer found solely in productivity but in the ability to generate value through an efficient and ecosystemic industrial process.

The AEB waste treatment plant, especially now that it is being privatized, is an organization oriented towards economic growth. This is the paradox of the key waste valorization sector, whose economic model relies on a sustainable production of waste. A significant portion of AEB's profits comes from electricity generation (a little over 50% of its operations), which requires a reasonable volume of waste for incineration.

The outlook for the evolution of these industrial waste valorization models:

The example of the Port of Amsterdam is not isolated; ports are becoming sought-after locations for the implementation of industrial ecology. While the Port of Amsterdam has specific advantages (national and international prominence, land ownership) that allow it to influence and control economic activities within its boundaries, ports can find other ways to attract businesses. As platforms for the circulation and transformation of materials and energy flows, ports can contribute to optimizing resource utilization in densely cooperative economic networks. Designed and replicated with this perspective in mind, ports can serve as examples of self-sufficient industrial zones, drivers of local economic development, and catalysts for the implementation of sustainable policies on a regional scale.

Waste sorting and treatment often occur centrally and involve a complex and hazardous industrial process. Large-scale waste valorization (energy and raw material production) requires significant investment in heavy infrastructure and high-performance technologies with high maintenance costs. This industrial waste sorting and treatment process carries risks for workers and society. For instance, the AEB plant had to halt 70% of its operations when a major incident disrupted the operation of furnaces that had not received the required maintenance due to lack of investment.

Furthermore, the recycling of raw materials is not a thriving business and requires public subsidies to balance the costs. Once privatized, AEB will be required to continue the process of sorting for recycling, but one can only imagine a business model more oriented towards incineration and electricity production. One of the major limitations to the scalability of AEB's waste treatment model is the risk of exceeding environmental limits governed by the doughnut model. Indeed, their business model does not encourage a transition to a less consumption-oriented economy. It relies on the constant input of waste to function; consumption and its associated rubbish are needed for this system to be upheld.

The Centrinno initiative or how to promote the circular economy at the community and artisanal level.

Contrary to the two previous industrial approaches, the Centrinno initiative, funded by the European Union, adopts a community-based and bottom-up vision of the role of industry in the city. The initiative aims to promote small-scale manufacturing by individual artisans. The challenge is to bring craftsmanship back to urban areas in the face of land scarcity, recognizing that manufacturers are being displaced in favor of housing and office developments. The relocation of manufacturers to the city is accompanied by a focus on their environmental and social practices, with the Centrinno initiative explicitly aligning itself with the doughnut coalition.

Centrinno initiative presents various economic and social co-benefits:

The economic objective remains central to the initiative because the goal is to encourage the establishment of manufacturers in the city and stimulate the local economy through urban artisanal production. Centrinno employs two key strategies to achieve this objective. The first is the development of a social platform for communication, networking, and idea-sharing among local communities, allowing newcomers and established manufacturers to create a collaborative network to support each other and showcase locally made products. The second strategy involves lobbying government authorities to propose sustainable manufacturing initiatives and emphasize the importance of creators in the urban fabric. The challenge now is to develop a viable economic model that allows artisanal businesses to thrive in the city.

The Centrinno initiative also offers various social co-benefits. On one hand, it enables local communities to assert their right to the city by challenging urban planning and development operations. The northern part of Amsterdam was once the heartland of artists and artisans, but rising land prices forced them to leave. Centrinno's social platform also promotes popular education aimed at transforming the urban economic and social fabric by offering informal courses on craftsmanship and circularity principles. Finally, Centrinno promotes social diversity by providing free manufacturing spaces and working closely with local communities.

Which role for public authorities in bottom-up initiatives?

The role of public authorities is crucial in generating the desired economic and social benefits of the initiative. Similar to the Port of Amsterdam Authority, which uses land leverage to regulate economic activity in its area, the municipality must use its authority to make room for creators. The challenge is to empower manufacturing communities while preserving the bottom-up spirit of the initiative. Striking the right balance between institutionalization, formalization, flexibility, and innovation is essential. Indeed, the institutionalization and economic modeling of the project should not lead to new exclusions and environmental externalities.

Marieke Van Doorninck's vision and its confrontation with Amsterdam's reality

The partial adoption of the doughnut model by the economic actors in Amsterdam was not necessarily matched by the city's political actors, who interpreted the model differently.

Marieke van Doorninck was instrumental in bringing the concept of the doughnut economy to the Dutch capital as former deputy mayor and former chair of the Committee for Urban Development and Sustainability of the City of Amsterdam. She met personally with the creator of the doughnut model, Kate Raworth, and discussed with her the possibility of using Amsterdam as a pilot project to illustrate the applicability of the model. These direct meetings with Raworth allowed van Doorninck to gain a comprehensive understanding of the model and conceptualize how it could be implemented in her city. She ultimately agreed to adopt the doughnut model in

Amsterdam on the condition that it be adopted in its entirety and that Amsterdam “go all the way,” an ambition she linked to systemic change.

For van Doorninck, the vision of the Amsterdam doughnut model clearly consists of three dimensions: economic, environmental, and social. Within the economic dimension, van Doorninck highlighted the ambition to detach the city’s economy from the long-dominant imperative of economic growth. She argues that rather than focusing on growth, the city should seek economic prosperity which supports policies to promote Amsterdam as an environmentally and socially just city. The environmental aspect of the model, similarly, relates to a moderation of consumption and a systemic prioritization of environmentally friendly modes of production and consumption. Finally, the social aspect seeks to assure a social foundation and inclusion for all city residents. In our discussion with van Doorninck, she highlighted that determination to prioritize the social dimension of the doughnut model originates from her previous experiences working with disadvantaged populations and witnessing their social and economic exclusion.

Van Doorninck repeatedly insisted on the full adoption of all components of the model and rejected piecemeal implementation of aspects which could be easily integrated into existing policies. This adherence to the full adoption of the model is reflected in van Doorninck’s efforts to ensure that the doughnut model was understood by civil servants and executives through the organization of several workshops. Despite these efforts, it became clear in our exchanges that van Doorninck’s colleagues did not necessarily understand or agree with this vision, resulting in several implementation challenges.

Van Doorninck also sought to promote her vision through citizen awareness, by providing resources for bottom-up projects that enable citizens to realize the doughnut model themselves and bring about change from the bottom up. For example, the Donut Coalition aims to empower citizens and develop innovative and social ideas, especially in marginalized neighborhoods.

Yet, the implementation of the model in Amsterdam has faced several challenges in the actors’ appropriation. Although the bottom-up initiatives resulted in a handful of successful citizen-led projects, they have not brought about comprehensive system change. Additionally, the mainstreaming of the doughnut model among the civil servants has been slow and complex. The tight web of national and international economic and regulatory institutions added a layer of struggle for the doughnut’s translation into practice. Despite some advances, the full implementation of the doughnut model as envisioned by van Doorninck was not realized.

Conclusion

These three examples illustrate the interpretation and adoption of the doughnut model in Amsterdam by major actors in Amsterdam. The Port Authority and the waste treatment plant only partially align with the model and use it more as a tool for visibility for the port

or legitimacy for the waste treatment plant. They embrace the circular economy approach inherent in the doughnut model to generate economic value from waste. The major limitation of the circularity argument to justify industrial economic activities is the risk of business as usual, with companies relying on a continuous production of waste.

2.5. Impact of the model

Article n°3

In order to fit in between the “social foundation” and the “environmental ceiling” described previously, the doughnut economy model implies large changes in the way the economy and society is settled. Meeting some actors involved in Amsterdam to put in practice the doughnut economy model and visiting places described earlier, we continue our assessment of the impact of the doughnut model in Amsterdam. Even though we would need more time and meetings to fully understand the impacts, we still grasped some preliminary assessment of them.

What impacts did the doughnut economy model have on the city of Amsterdam?

Impacts at the local level

The doughnut economy model has had tangible impacts at the level of the Amsterdam municipality. First of all, we have witnessed the great influence the model has gained since its creation. This influence is tangible on both the local and international levels. On the local level, first, the creation of the Donut Coalition is noteworthy. The Amsterdam Doughnut Coalition is a bottom-up movement composed of approximately 300 local businesses, experts and 40 nonprofit organizations that share one goal: making sure the city of Amsterdam becomes a doughnut-city, where both people and nature can thrive. This grassroots coalition unites many organizations on the ground who have been working with the Doughnut and different projects. This is an inspiring example where a self-organized network dedicated to driving change collaboratively with the city, region, and the Economic Board forms a coalition. Together, they are taking the lead in envisioning and cultivating a prosperous city within the doughnut model.

Marieke van Doorninck also defends the idea that the doughnut coalition is a great tool to implement the doughnut within the city, its bottom-up approach allowing it to be educative for the citizens. For instance, the implementation of social projects by citizens is supervised by members of the Doughnut coalition who add green components within each project. The idea is then to create a chain reaction, where inhabitants communicate about the projects taking place in their neighborhoods to others, thus implementing the idea to create “doughnut deals” in other places. This is guided by a vision that, ideally, citizens will learn to self-initiate the doughnut deals, leaving it to the city to regulate and oversee.

When talking about local impacts, we can return to the example of the Port Authority. When we visited the Port Authorities, James Hallworth exposed the fact that the Prodock¹² initiative, started in 2016 indeed had been going on way before the doughnut economy model started to be implemented by the municipality (date of implementation). This element is completely coherent with Amsterdam's political context, as the local circular strategy preceded the doughnut's strategy by five years. Thus, we could draw the conclusion that the doughnut model did not impact the circularity of the Port's economy. It was already engaged in this path fostered by the municipality since 2015. However, the doughnut was a way to make the port visible for the city as a resource, while until then it was seen as a mere liability. It put the port on the map, so to speak, and facilitated giving a voice to the port in the city.

Finally, the doughnut model, thanks to its influence and publicity, had the local impact to further the development of a circular economy strategy by the municipality, with a comprehensive understanding of what it was able to do and clear objectives of what to attain.

Impacts at the international level

On the international level as well, the doughnut model has gained significant attention and influence. While its impact is still evolving, it has stimulated discussions and inspired actions in various domains. For instance, it has gained traction in urban planning and development. Several cities worldwide, including Brussels and Amsterdam, have adopted or explored the application of the Doughnut model to guide their urban policies and create more sustainable and inclusive cities.

Moreover, the Doughnut model has stimulated academic and research interest across disciplines such as economics, sustainability, and development studies. Scholars and researchers have further developed and critiqued the model, contributing to its refinement and expanding its understanding and potential applications.

Despite tangible effects, a limited translation of the model to reality

Even though we could see some impacts of the implementation of the doughnut economic model in the city of Amsterdam, we discovered many limitations.

First of all, Pau Ruiz from the consulting firm Circle Economy mentioned some obstacles to implement the circular model, such as difficulties producing solutions due to a lack of skills and competencies from some actors working in the involved areas. This is also due to the broader context of the city of Amsterdam in which many existing legislations represent obstacles to circular economy fundamental principles. Indeed, cities' competencies and actions are directly linked to the national, even supranational regulations, limiting their actions. The municipality yet decided to broaden their impact,

¹² Prodock is an innovation hub for start-ups. Its initial goal was to stimulate innovative enterprises, but it has since then specialized in start-ups focusing on the circular economy.

by reconnecting with the Port Authorities by including in its doughnut strategy. However, this may not have had that much of an impact for the Port Authorities as they were already involved in a circular path before the doughnut model, as discussed above. From what we were able to discern, the doughnut strategy did little to change the Port's ambition.

Furthermore, implementing a doughnut economic model means constructing a long-term vision, which in today's short-term vision economic model causes some problems. Indeed, for many actors the short-term profits are still more valuable, maintaining them in a linear economy and this change of mentality regarding the temporality of actions has not been easy. For example, although the Permaculture Plant is a great project in line with social and environmental concerns, it was revealed during our visit that the new building housing migrants and students is only temporary and is set to be dismantled in 8 years, making us consider the true long-term impact of such solutions.

In this same concern, the AEB - Waste Treatment Company is quite interesting. It is a key entity regarding a circular economy as it deals with waste, a concept that the city wants to see as a "resource" and not merely as something we should get rid of. First, when asked how they integrate the doughnut model in their facility, the marketing manager whom we met employed language more aligned with the circular economic model. It appears that AEB has not included the doughnut in their strategy and may not even be aware of it. The company business model is also quite questionable. Indeed, they rely on waste to sustain the facility's operations, which seems contrary to the goal of the city of Amsterdam to reduce waste and be 100% circular by 2050. This poses the question of how such a facility could continue to function with less waste to collect. When asked, AEB answered that they will import more waste from other European countries, raising some questions of the ecological aspect of this model. An additional concern is a paradoxical decision recently taken by the city: privatizing the company. This facility was first owned by the municipality and 9 years ago was transformed into a public owned company - AEB. Later, when the city asked for positive ecological branding, the company realized this was not possible while sustaining revenues. Following an industrial incident, the city thus decided to sell the company to a private Chinese investment company. Adding on this privatization, the facility did not seem able to describe how they integrate social matters in their strategy. It seems that implementing the doughnut economy didn't concern this key actor, which raises questions on how they will serve to attain the city's goal.

Our field visits allow us to identify a major flaw to the doughnut model's implementation in Amsterdam: it appears to have remained mainly an institutional framework, rather than an actual practical model actors stick to on the field. At this point, it seems quite limited to a certain circle of actors and not yet mainstreamed. Several reasons explain this limitation. To begin with, our municipality visit revealed that the talk about the doughnut has stayed largely constrained to the sustainability department. It has remained part of the Amsterdam Sustainability Strategy, and failed to reach the

Economy department for example, or even the Social Affairs department, which is a shame for a model that claims to offer a new social and economic model for the city that would be carried out in a sustainable way.

Marieke van Doorninck, former Deputy Mayor of Amsterdam, has especially expressed her regret regarding this limitation in the institutional sphere. She explained that if she had to do anything differently regarding the way the doughnut model was spread and implemented, she would go around every department to explain the model more clearly. We can only assume that to mainstream the idea to every department would have had a much greater impact on the city of Amsterdam. The result of this limitation of the model to a smaller group of actors is that, as our hosts from the municipality of Amsterdam put it themselves, the average Amsterdam inhabitant does not know anything about the model. This shows that the model to an extent failed to really act as a global vision for people of Amsterdam to follow in their daily life and professional activity. That is where the biggest paradox and perhaps biggest failure of the model appears.

On the one hand, according to Van Doorninck and other actors from the Municipality, the doughnut was never meant to really be a practical model to apply on the field as it is, but rather an ideal vision, horizon, or diagram for everyone from the expert to the ecology rookie to be able to picture what is at stake when building a sustainable model for the city, bearing in mind sustainability and social values. The doughnut model came when the city already started to implement a circular economy model. Thus, by this line of thinking, the doughnut was a way to give further support to the circular economy plan of the city. On the other hand, however, the model's limited reach shows that this goal has for now and to an extent, failed. The model itself is criticized for its lack of clarity, including the choice of a doughnut as a visual representation. As a result, if it is neither a true, practical economic model to be grasped by all of the city's department, nor an easy-to-grasp vision for a sustainable transition in order to get many people on board, it is fair to wonder the extent to which the model actually achieves the revolution people from all around the world have come to Amsterdam to witness.

A nuanced vision of the doughnut economy's impacts: links with the circular economy model and role of the municipality

However, perhaps one reason for finding limits to the doughnut economy model is that it has been embedded in the circular economy concept, and by distinguishing between both, we find the number of 'pure' doughnut projects to be more restricted.

This dichotomy was highlighted throughout our visits as many actors seemed familiar with the circular economy and used it as a primary characteristic of their initiatives, before including the doughnut in their narrative. For example, in the port of Amsterdam, James Hallworth mentioned that he sought to embrace the circular economy by leasing land strategically; and that although it was not his main purpose, the doughnut promoted by the municipality allowed the harbor to be put on the policy map again. Therefore, he

discovered doughnut principles as the city realized the potential of the port and made it a priority. Hallworth remains enthusiastic as long as the city policies keep on including industrial sites.

Nonetheless, it is important to note that, by the word of the Amsterdam Municipality, the doughnut is most of all a way to start thinking about the issues it accentuates- in this case, adding the social stakes to urban sustainability. Indeed, as Marieke van Doorninck explained, if you leave aside the social dimension, you end up with an eco-elite, who constitute the only group able to invest in viable changes. As such, we have seen those certain initiatives, while not outwardly embracing the doughnut economic model, have followed its principles and have had positive social impacts, making them fit the doughnut in the end. At Towards Nature, the permaculture garden was implemented as a result of an overall reflection on environmental, financial and social sustainability. Its social impact is threefold: by introducing gardening to more precarious inhabitants, Tayfun Yalcin provides new skills and activities for the population to enjoy while developing the neighborhood's ecosystem. Moreover, as the garden becomes a meeting spot for gardeners, this leads to newly formed bonds and a developing community in the neighborhood, growing resilience. Lastly, as the building provided by the city is set to be destroyed after 8 years, showing the value of the garden for nature and the inhabitants will enable the project to stay in place and for the current lenders not to be expelled.

At the visit of the AMS institute, Aukje van Bezeij presented her solar panel cooperative, which aimed at countering energy poverty through the production of renewable solar energy. Thus, through common investment from members and support from the municipality, participants get access to cheap clean electricity. This can be seen as an example of a project integrating a doughnut framework. A last example could be the port of Amsterdam which fits the social criteria of the doughnut by checking regularly on the firms leasing land in the harbor. Indeed, the port is leveraging the access to its land to firm on the basis of their environmental and social sustainability. That way, it manages to turn a country-wide issue of a limited supply of land into a strength to ask companies to do better. Although one limitation could be that the port leases for 20, 30 or 50 years (meaning that some companies implemented do not fit the criteria anymore but are legally in their right), the port ensures to keep the contracts as short as possible to keep its action ambitious. Thus, we can see that while the doughnut gets confused with the circular economy model, it gets embraced by bottom-up initiatives who focus on the social component of their sustainable project out of conviction; being then supported by the municipality providing a framework and institutional support.

In order to fit their vision, the authorities pushed doughnut-related initiatives into the circular framework. Initiatives considered to fit the doughnut model, even if considered more as circular by the actors involved, are supported by the municipality and included in its doughnut strategy, as the city is also trying to promote this model internationally, showing that it works and how it could be exported.

One way for the city to promote the doughnut is by encouraging bottom-up initiatives and then supporting it, as Marieke van Doorninck, who said during our meeting: “I do believe that change happens also through smaller initiatives.” The solar panels and the donut deal are good examples of this approach. A good way to induce a change in mentality is to go more local. For example, the Doughnut Coalition¹³ gives agency to people by showing they can follow the doughnut by themselves, and not be an expert in everything to get started, with a focus on conducting “doughnut deals”¹⁴ in poorer neighborhoods. Ultimately, the most revolutionary ideas get their ground from the bottom up, with people feeling empowered and keeping accountable to their government.

In regard to what we learned during the trip, we can conclude that the impacts of the Doughnut Model in Amsterdam are varied and not as clear as what we expected. In the end, it is difficult to assert that the doughnut is at the heart of the changes happening in the city in terms of ecological and energetical transition. Circular economy projects seem well integrated at the local level, as the municipality has been pushing for the prior to the doughnut implementation. Developing the doughnut economy model and embracing it at a larger scale allows to push for an increasing number of initiatives that are both circular and doughnut.

To conclude, the doughnut model has had an impact on the city of Amsterdam, notably in the way it has brought a diversity of actors who didn’t usually collaborate together in the pursuit of a common goal, and in the way it has also triggered conversations about how to take circular economy mechanisms to a new level through the inclusion of matters of social concerns especially. However, it did not bring about the revolution we sometimes hear about when addressing the doughnut; it was still tricky to engage local economic or political stakeholders - in the process, and the implementation process displayed a number of flaws. Most importantly, it appeared that several measures, some of which were preexisting the Doughnut plan *per se*, were labeled under this large “doughnut” package without truly addressing all aspects of the doughnut, including, crucially, social issues.

¹³Amsterdam Donut Coalition. (n.d.). Retrieved November 7, 2023, from <https://doughnuteconomics.org/groups-and-networks/1>.

¹⁴Donut Deals. (2020, April 1). <https://amsterdamdonutcoalitie.nl/project/6821/donut-deals>

PART 3: Thinking growth in the doughnut model

The last day of the research trip, Friday, February 24th, was structured around two visits: the AMS institute and a meeting with Marieke Van Doorninck. Those conversations supported by all the encounters made throughout developed our reflection on the relationship between growth and the model, presented in the last article following the visit recaps: “The (useful?) ambiguities of the doughnut model regarding growth.”

3.1 AMS Institute

Visit summary

Date: Friday, February 24th, 2023

Time: 9am - 12am

Speakers: Joppe van Diel, Jasmin Heidary and Aukje van Bezeij



The Amsterdam Institute for Advanced Metropolitan Solutions (AMS) helps analyze, design and engineer solutions for the future of cities with three key pillars: education, research and valorization. Their ambition is to find new solutions by connecting science to societal challenges. The institute was founded by three universities: MIT, the Wageningen university, and the Delft university. Their research revolves around six urban challenges: smart urban mobility, urban energy, climate resilient cities, circularity in Urban Regions, Metropolitan Food Systems, Responsible Urban Digitization. They work in close collaboration with the City of Amsterdam and aim to make a direct impact on the most pressing challenges of Amsterdam and the Randsdad. They are located in three different places in Amsterdam in order to collaborate with local actors and residents to co-create solutions and be able to benefit from what they called a living lab.

Dr Joppe van Diel is a Program Developer Circularity in Urban Regions at the AMS Institute. He studied various disciplines such as physics, philosophy and history of

science with a PhD about the history of resource management. His role is to work together with public organizations, business partners and scientific researchers to build and apply knowledge and innovation in order to develop a sustainable urban region in Amsterdam. He is helping in the creation of initiatives and long-term projects addressing challenges that cities and citizens may face in the transition from a linear to a circular economy. During the trip, he presented to us the work of the AMS and the national context of circular economy with its variety of definitions and the process of the national government becoming more radical in its vision of circular economy. He highlighted the numerous reasons to implement a circular economy: the scarcity of resources, the necessity to reduce emissions, climate change and the need to be less reliant on other countries. However, he also emphasized the difficulty in progressing towards a circular society even though some steps are made. He explained that for now it is still difficult to imagine how the Netherlands will be circular by 2050 since no country has ever done it. According to him, the doughnut economy model aims at rethinking the value chain and adds social relevance to the work on sustainable economy.

Jasmin Heidary is researcher at TU DELFT and research fellow at AMS since January 2023. She studied political sciences and history of Arts and has a master's degree in sustainable development with specialization in governance. She talked about a research project they are currently working on. According to her, research is a way to scale projects up and improve processes. By doing research, they can deduce policy recommendations. Indeed, they were asked by the municipality to produce research on how the municipality can stimulate the reuse of solar panels. The first deliverables consisted of an overview of the current situation and policy recommendations (desktop research and expert consultations). Then, AMS will analyze what did not work in the previous attempts (literature review, interviews and action research). During our visit, they were at the stage of desktop research and were preparing guiding questions for their interviews and expert consultations.

Lastly, Aukje van Bezeij presented her work at Zuiderlicht: an energy cooperative that equips roof owners with solar panels or allows others without suitable roofs to invest in solar panels nearby. This project contributes to the generation of local and sustainable energy. Above all, this energy is also affordable and aligned with circular economy initiatives due to its reliance on the use of recycled solar panels.

3.2. Former Deputy Mayor, Marieke Van Doorninck

Visit summary

Date: Friday, February 24th, 2023

Time: 1pm-3pm

Speakers: Marieke van Doorninck



At the very end of the trip, we had the opportunity to collectively interview Marieke van Doorninck, who is the former Alderman for Sustainability and Urban Development for the City of Amsterdam. She was the one to bring the doughnut on the urban agenda. During her time in office, she worked in collaboration with Kate Raworth and Circle Economy to implement this model in Amsterdam, at times where it was still in the realm of theory.

We began by discussing the strategies of actors who embrace the Doughnut model and the pitfalls to avoid when implementing such visions. The links between the Doughnut model and the circular economy were explored, as well as the ways to achieve systemic and profound change, in contrast with greenwashing business-as-usual scenarios, such as the plans of electric vehicles deployment, according to van Doorninck. We then went on to examine the indicators implied by the Doughnut model, which are challenging the hegemony of GDP. She also highlighted the importance of social issues when talking about this model.

Her experience of the implementation of the Doughnut model in Amsterdam is insightful regarding the obstacles that arise while doing so, including legal barriers. Communication about the fundamental principles of the model, and bottom-up approaches, as well as the technical aspects of things, are key elements of success. She also insisted that change is incremental.

Marieke van Doorninck, who prefers to talk about post-growth than de-growth, believes that if other cities dare using their political imagination, they too can start working on the Doughnut model. They have powerful tools such as planning, and multiple leverages, such as using the tax system, exploiting the high labor intensity of the circular economy, increasing producers' responsibility, making cars as guests of the city, or developing neighborhood currencies. She also affirms that the Doughnut model should be implemented horizontally across cities' departments, to best achieve systemic change.

3.3. The (useful?) ambiguities of the doughnut model regarding growth

Article n°4

The doughnut model is ambiguous on the question of growth, incorporating both degrowth tendencies and green growth tendencies. This ambiguity is useful in a way but also carries disadvantages.

Degrowth tendencies of the model

Despite not explicitly invoking degrowth, the doughnut model – and its real-life implementation in the city of Amsterdam – encapsulate some of its key elements.

To begin with, the model emphasizes the need for sustainable resource use and ecological balance. By focusing on meeting human needs within planetary boundaries, the doughnut model directly promotes a more sustainable and equitable economic system. Finally, by envisioning an outer boundary, the model recognizes that infinite growth is neither possible nor desirable. All these elements are key principles of the degrowth philosophy.

Degrowth is also present in the Dutch implementation of the doughnut model in Amsterdam. During our field trip, we could experience that through different forms. First, this degrowth perspective manifests itself at the institutional level. Although the effect is heterogeneous, some institutions in the city seem to be shifting towards degrowth. This is particularly the case for the Port of Amsterdam. During our conversation with James Hallworth, he mentioned that, while constant increase of tonnage to earn more revenue used to be the main driver of the port's activity, the port is shifting its model towards "value, not tons". James Hallworth explained that the port plans to limit the entry of carbon-intensive materials, such as oil and coal, in the future. Whether this will actually be possible – and when – remains unanswered but such ambitions are quite unprecedented. As mentioned previously, the port also uses its influence as a landowner to enforce sustainability measures through contract agreements. Through these leverages, the port thus can have a strong influence in shifting the Amsterdam version of the doughnut model towards degrowth.

Apart from the institutional level, degrowth was also perceptible at smaller scales. For instance, we had the opportunity to visit the SET community center, which provides housing for 180 refugees and Dutch students, with a community garden for social engagement. The creation of the garden is citizen-led, with financial support from the municipality. Although implementation of the doughnut model was not explicitly evoked in the city's support for the project, this experiment nevertheless fits into the model's ambitions: meeting social and human needs, which works towards achievement of the doughnut's inner circle, while minimizing environmental impact through a strict adherence

to permaculture methods, designed by permaculturist Tayfun Yalcin. By providing public space to grow vegetables and encouraging food sourcing from local areas, this initiative is also a clear manifestation of degrowth. Even beyond the traditional economic sense of degrowth, by encouraging people to take the time to care for each other and to care for nature, the community garden project incorporates degrowth principles. As Dora Mester, the initiator of the garden, told us, “Gardening is political”.

Therefore, although it is rarely explicitly mentioned – perhaps because of continued controversy behind it, degrowth does find some expressions in the doughnut model and in Amsterdam. Whether these expressions are a direct consequence of the model or preempted it remains to be discussed. Nevertheless, the doughnut model does not entirely eliminate growth.

Green growth tendencies of the model

Green growth is a concept that emerged in the 2000s as a response to the ecological crisis. It proposes that economic growth and environmental sustainability can be reconciled through technological innovation and market-based solutions. The doughnut model, although diversifying the key indicators which the city uses to assess its progress, does not completely shift away from a green growth perspective. As a matter of fact, the doughnut in Amsterdam seems to require growth to be implemented.

In Amsterdam, some of the main actors of the doughnut economy remain highly dependent on economic growth. A striking example of this orientation is to be found in the work philosophy of *Circle Economy*, the consulting firm that helped the municipality of Amsterdam to implement the doughnut model. From their presentation we could understand that their objective was to contribute to a prosperous economic system that ensures ecological and social thriving. Therefore, their interpretation of the doughnut model is not incongruent with growth. Indeed, growth is understood as a useful and even necessary tool to make and keep the economy circular. Similar visions were concretely observed in interactions with other actors working to implement the doughnut in their activity.

For instance, the AEB waste treatment plant is operated by a public company that has a growth-oriented strategy. The circular waste management model they operate to produce energy is actually dependent on a growing intake of waste to treat. The negative environmental externalities the incineration process produces show that avoiding reaching ecological boundaries is not AEB’s priority. Circular waste management here appears to us more like an economic opportunity to generate growth than an action aimed at preserving ecological and social local equilibria. As a result, circular waste management stands in a capitalistic orientation. AEB is turning circular waste into a resource that could replace imported and extracted ones. Such a system valorizes waste

as capital and fosters “eco-accumulation” (Savini, 2018¹⁵). This process relies on the building of a waste processing and recovery market to transform an open economy dependent on extraction to a closed and circular economy based on the accumulation of waste. Under this examination, the doughnut model may not shift away from the growth imperative but could merely alter the goods that are valorized. A circular economy based on waste accumulation cannot produce consumption reduction processes as it needs waste consumption to thrive. AEB’s model stands right in this ambiguity.

In his paper, degrowth scholar Federico Savini identifies the adaptation of the logistics sector as a key driver of the building of a circular economy based on waste accumulation. He argues that they are major tools to “rejuvenate” local markets. His analysis partially fits with the transformation the Port Authority of Amsterdam aims to achieve. The Port Authority aims at creating an industrial ecosystem based on reusing materials and valorizing waste. In such a process, local markets adapt themselves to a new model that shifts from unlimited extraction to unlimited reusing. Here again, a model of circular economy discursively compatible with the principles of the doughnut results in a green growth orientation.

Benefits of this ambiguity

Sharing with us her hands-on experience of implementing the doughnut at the city level in Amsterdam, former Alderman for Sustainability and Urban Development Marieke van Doorninck stated that “post-growth is a better word than degrowth”. This position relates to what she sees as the advantages of the model. Let us examine why.

To begin with, it is necessary to recall that for van Doorninck, bottom-up change is key. In her own words: “I do believe that revolutionary ideas can be implemented from top down, but real change happens when people start to do things”. Therefore, achieving sustainability requires transversal action, as well as to have a good communication and knowledge-sharing strategy. More precisely, what matters is making people aware of the *principles* of the doughnut, and not really of the *specificities* of the model. These principles could be summed up simply by saying ‘you can make something good for the *planet* and for *people*’.

This presents the difficult challenge of convincing varied groups of people who have very different ideas over what ‘good for the planet and for people’ means. Further than merely convincing them, how to make them act, together, towards a shared goal?

One of the main obstacles is thus the idea of growth. Indeed, when asked about the challenges faced by the model when she was implementing it, Marieke van Doorninck, clearly stated that the first obstacle was the idea of growth, which many consider

¹⁵Savini, F. (2019). The economy that runs on waste: accumulation in the circular city. *Journal of Environmental Policy & Planning*, 21(6), 675–691. <https://doi.org/10.1080/1523908x.2019.1670048>

essential. A key lesson of the work of Amsterdam with the doughnut model is the flexibility of the model regarding growth allowed the city of Amsterdam to overcome the hegemonic idea of growth and achieve change.

Van Doorninck explained that many consider degrowth as going back, reversing progress. Yet growth is also widely criticized within the doughnut model, whose ambiguous character allows it to encompass all concerns. Marieke van Doorninck explains it as such: growth is not a goal, but it can be good. In order to account for this, the doughnut model moves beyond growth as the sole means to assess the social, environmental and economic state of a city, adding the concepts of the social and planetary boundaries.

To conclude, similar to the simultaneous existence of two divergent states that readers might recognize from Schrödinger's cat paradox, the doughnut model allows for both degrowth (end to growth) and green growth (continuation of growth) to exist simultaneously. Indeed, by eluding the question, this model allows for proponents of degrowth and proponents of green growth to both understand the model as going in their direction. In other words, this paradoxical simultaneity allows for opposing ideas – degrowth and green growth – to form an alliance on this idea of the doughnut model. And this is the key advantage of this model, as Marieke van Doorninck has well understood when she was in office. It is best illustrated by the use of the word 'post-growth'.

It should be specified that the usefulness of this model is twofold in this regard. First, it eludes the abstract and general question of growth or degrowth: it allows, to some extent, for both to exist, depending on what is considered (some things should grow, some should not or should degrow). Second, and related to this first point, it is fundamentally different from a 'degrowth model' in that it explicitly calls for the growth of some elements, with regards to basic social necessities (i.e. 'the social floor' of the doughnut).

We have been able to see this powerful effect of the doughnut model during our visits in Amsterdam: actors who are very different – from a privately-owned waste company seeking a form of green growth to a permaculture de-growther – could come together under this all-encompassing idea of the doughnut.

Downsides of this ambiguity

Of course, if following the metaphor of Schrödinger's Cat to its conclusion, this state of superposition—the simultaneous coexistence of two mutually exclusive truths—is only tenable until the box (or the doughnut) is opened. In urban governance as in quantum mechanics, the act of measurement forces the nature of a phenomenon to be either/or the suspended ambiguity of a situation collapses once directly observed. Accordingly, as a final point, what we want to suggest is that our experiences in Amsterdam indicate that

this basic idea is equally true with regards to the doughnut's 'black boxing' of the growth question.

In other words, when trying to apply the doughnut as a more tangible policy framework (as opposed to a tool for facilitating inter-stakeholder conversation), maintaining such ambiguity on growth is not possible. Municipal decision making, at the end of the day, invariably requires concrete decisions on what should be shrunk and what should be expanded. This premise was well illustrated by an interactive exercise conducted during our meeting with the municipality of Amsterdam. The municipal representatives, who were members of the city's Sustainable Development team, posed dilemmatic questions like "is it necessary for Amsterdam to limit advertising to achieve its sustainability goals?" upon which we were asked to align ourselves on either side of the room according to our personal response. For each question, it became apparent that a legitimate case could be made for either strategy in helping the city realize the doughnut. An expansion of targeted advertising could be critical to shift residents to more sustainable behaviors and purchases—growth as necessary for the achievement of green goals. Simultaneously, certain among us argued that there is equally a need to escape from and stop incentivizing cycles of consumption—a degrowth argument. The doughnut, by remaining growth agnostic, provides only a vision of an end goal, but remains silent on the means by which such a vision could be achieved. While the doughnut presents itself as 'post-growth'—above the fray—when push comes to shove it becomes clear that the tension between growth and degrowth has not been eclipsed but reframed as a second-order question.

This deprioritization of questions of growth, on their own, is not necessarily a weakness. It indeed seems quite reasonable to suggest that expansion or contraction should be the sort of decision made on a case-by-case basis instead of dictated *a priori*. Nonetheless, this tendency reveals the weakness of the doughnut as a normative framework. If these sorts of questions—to grow or not to grow—must be answered regardless, the doughnut does not offer a clear enough model of urban sustainability to align decision-making. Existing ideological and political disputes continue to play out, simply in a more fragmented and peripheral fashion. Importantly, as the doughnut intentionally aims to refocus away from these growth-oriented disputes, it may be liable to offering a dangerous and illusory semblance of consensus and coherence that obscures the continued conflict at the core of ecological politics. The actors that the doughnut has (quite successfully) convened vary immensely in the political and economic power they possess. It is not hard to imagine how this supposed transcendence of the growth question may, in the right hands, offer a powerful tool for the legitimation of business-as-usual. Additionally, PhD researcher and Economic Anthropologist Line Kvartborg Vestergaard, highlighted the 'presentation economy' that had sprung up as a result of the doughnut. By placing its emphasis on inter-stakeholder conversation and facilitation, the doughnut may equally result in a metastasized cohort of consulting and communications professionals whose activity would appear to be premised on this continued black boxing of the growth question. In essence, given the need to

simultaneously attract resources from high-level institutional backers and attention from grassroots community groups, the doughnut model risks becoming an end unto itself.

Wrap Up

To conclude, throughout the course of our visit it became clear that the doughnut, in its declaration of a 'post-growth' vision of sustainability, harbors both degrowth and green growth tendencies. As discussed, this ambiguity is valuable regarding its ability to convene a diverse array of stakeholders but poses limits to the sorts of action that may arise from its use. The doughnut allows conversation to take place, but it does so by suspending abstract debate on a question that is nonetheless at the heart of the environmental dilemmas faced in European cities today. This, evidently, has its benefits and its drawbacks, the impacts of which remain as ambiguous as the place of growth itself within the doughnut model.

Conclusion

Field visits performed by members of the GETEC master's program in Amsterdam in February 2023 allow us to draw several conclusions about the implementation of the doughnut model in the Dutch capital. However, they also left us with as many questions as answers: manifestations and interpretations of the doughnut model varied widely among the actors we encountered, particularly concerning questions of economic growth.

Our findings call into question the capacity of the doughnut model to serve as a normative, self-standing economic model and as a guiding principle for policy makers. Rather, it seems to be invoked on a pick-and-choose basis, often with little to distinguish it from previously existing initiatives related to the circular economy model. Based on the reflections of Marieke van Doorninck, we can attribute this partially to a failure to truly globalize the doughnut model across all the departments of the municipality. In particular, the fact that the model was implemented without the allocation of particular budget items, or the mobilization of financial incentives was cited as a barrier to its material impact.

Ultimately, the doughnut model does prove powerful as a rallying point for conversation and advocacy around environmental and social linkages. Indeed, its introduction may have helped to inject further energy into existing initiatives based on the circular economy model, allowing them to claim continued relevance using the language of doughnut economics. We demonstrate that the model's ambiguity on the question of growth allows it to serve as a "big tent" philosophy, in which actors as disparate as industrial logistics hubs and grassroots maker spaces can speak a common language and articulate common goals. However, concrete policy decisions inevitably prompt clear choices on hard questions and compromises which pit environmental and social prosperity against one another, as well as against economic priorities. This process often results in the creation of winners and losers in the pursuit of a doughnut economy. Thus, the doughnut may be a helpful rhetorical tool, but it is far from a panacea for a just ecological transition.

Another question raised throughout our visits was applicability to other cities: how much of a role did Amsterdam's unique character play in the application of the doughnut model? Long a bastion of left-wing politics, we posited that Amsterdam may have been uniquely poised to adopt this alternative economic model. Van Doorninck, however, argued that while Amsterdam has had the most success, this model can be adapted anywhere with enough momentum. As she stated:

"What's most important to develop the doughnut elsewhere is political imagination. For that, we need more storytelling to think about another world. In fact, we don't use the doughnut to think if it is possible to base a

future on that, but to think about the system that we want, and start implementing it.”

Therefore, we also recognize the important role for Amsterdam as a pioneer of the doughnut model, demonstrating how a coalition of highly motivated individuals and organizations can lead to such change. On the other side of the same coin, Amsterdam both provides a case study for other cities to understand potential challenges and pitfalls of doughnut model implementation. Amsterdam can thus function as an instructive field guide to other cities interested in pursuing this shift.

These cities will be able to design their implementation around the challenges we and others have identified in Amsterdam, such as the importance of doughnut model buy-in across all municipal departments, clear communication and collaboration with private economic stakeholders, and consultative and participative solutions to engage the general public. While the Doughnut Economics Action Lab (DEAL) identifies Amsterdam as the most advanced case of doughnut economics implementation, particularly with regards to the size of the coalition and the extent of funding for the project, more than 25 other cities and regions are following this example and building local coalitions.¹⁶ This thus demonstrates the significant ongoing opportunity for Amsterdam’s coalition to play a leading role in expanding doughnut economics ambitions globally. Amsterdam, as the Dutch capital and a major European city can also use this position to advocate for concrete initiatives, funding, and policy for the implementation of the doughnut model elsewhere.

¹⁶ <https://doughnuteconomics.org/stories/93>

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