Can Doughnut Economics Fill Amsterdam's Dietary Needs? A Critical Examination of The City's New Circular and Climate Strategy

Marta Moretti

Thesis submitted for assessment with a view to obtaining the degree of Master of Arts in Transnational Governance of the European University Institute

Florence, 13 May 2022.

European University Institute
School of Transnational Governance

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Ai miei genitori,
che mi hanno trasmesso la loro insaziabile curiosità verso il mondo sin da bambina, andando
oltre il possibile affinché potessi studiare. Siete i miei pilastri e la mia forza.

A Nonna Valeria, a Nonna Vela,
la cui saggezza popolare, sapendo a malapena leggere e scrivere, mi ha lasciato la
convinzione che perseveranza e resistenza sono la chiave di qualsiasi obiettivo.
A 'ddo rrivi chianti lu zippu.

ABSTRACT

The thesis explores Amsterdam's engagement with Doughnut Economics as a conceptual tool with policy implications to become an ecologically safe and socially just city. The Doughnut wishes to harmonize humanity's well-being with Earth's planetary resources. Accordingly, this research asks: "to what extent and under what conditions can Doughnut Economics be a tool for *transformative action* within the city of Amsterdam?" This dissertation examines *what players* gather to form *coalitions* to advocate for the Doughnut implementation. Advocacy Coalition Framework (ACF) and systems thinking provide the theoretical frameworks, and a qualitative methodology supports the primary data collection. The interview findings suggest that there is a fruitful ACF in the city thanks to *fluid* and *diffused actors' alignments*. From its theoretical base, the Doughnut becomes a tool with policy application through the actors' capacity to *align*, create *learning processes* and bring *policy change* forward in the city.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF ABBREVIATIONS

ACF	Advocacy Coalition Framework
ADC	Amsterdam Donut Coalition
CE	Circular Economy
CO2	Carbon Dioxide
CSO	Civil Society Organization
CTO	Chief Technology Office (department of the Municipality of Amsterdam)
DEAL	Doughnut Economics Action Lab
GDP	Gross Domestic Product
GHG	Greenhouse Gas Emissions
GPC	Global Protocol Community Scale GHG
IIASA	Institute for Applied Systems Analysis
IO	International Organization
IPCC	Intergovernmental Panel on Climate Change
OPSI	Observatory for Public Sector Innovation
STiP	Systems Thinking in Practice
TA	Thematic Analysis
TCI	Thriving City Initiative
UASA	University of Applied Science of Amsterdam
WMTC	Women Make the City (Project of the Amsterdam Donut Coalition)

Chapter I - Doughnut Economics: A Compass for Human Prosperity, A New Diet for Amsterdam?

"Diet" comes from the ancient Greek word δίαιτα (*diaita*), hinting at the holistic concept of *way of living, conduct*, rather than the mainstream understanding of "food regime". Within the context of urban climate governance, cities are progressively changing their *conduct* to become climate adaptive. More than 55% of the world population live in cities today: they account for more than 60% of global energy use and for approximately 70% of green-house-gas (GHG) emissions.[1] By 2050, almost 70% of the world population is projected to live in urban areas.[2] Cities are among the main drivers of climate change, but they can also be part of the solution. Therefore, local climate action is necessary to make city behaviors compatible with a climate adaptive *diet.* Amsterdam is the first city in the world wishing to become completely sustainable by 2050 by engaging with the eco-social model of Doughnut Economics. With a play on words, here the term *diet* means *behavior*, rather than *food regime*: it is used to describe Amsterdam's attempt to embrace a climate adaptive *conduct* with the Doughnut. This research examines what the city of Amsterdam has been doing to live by its eco-social alternative *diet,* respectful of planetary and social boundaries.

1.1 City Level Focus: Amsterdam, Contribution & Structure

With no precedents, the Municipality of Amsterdam is trying to incorporate the Doughnut in its *diet,* using it as a tool for transformative action for its eco-social targets. Since March 2020, the city developed reports such as the *Amsterdam Climate Neutral Roadmap 2050,*[3] setting up the long-term path to cut its CO2 emissions, integrating mitigation and adaptation strategies.[4] Particularly relevant for this thesis are three reports: the *New Circular Strategy 2020-2025,*[5] the *Amsterdam City Doughnut*[6] and the *Amsterdam Monitor,*[7] which will be examined in Chapter III.

This research evaluates how Doughnut Economics becomes a deliverable system with policy implications in the city. The research question of the puzzle is: "to what extent and under what conditions can Doughnut Economics be used as a tool for transformative action within the city of Amsterdam?" The objective is to be a *synthesis dissertation*, as two concepts are examined in relation

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[1] C40, "The future of urban consumption in a 1.5°C world."
[2] UN, "68% of the world population."
[3] City of Amsterdam, *Climate Neutral Roadmap.*
[4] European Environment Agency (EEA), "Adaptation and Mitigation."
[5] Circle Economy and City of Amsterdam, *Circular Strategy.*
[6] Doughnut Economics Action Lab et al., *The Amsterdam City Doughnut.*
[7] City of Amsterdam, *Circular Monitor.*

to one another: *how* is the Doughnut Economics model made applicable and *what* actors are implementing it. The city players will be grouped into a Trans-governmental and a Transnational private regime. The original contribution to the broader research will be the application of Advocacy Coalition Framework (ACF) to the Dutch context of Amsterdam, differently from its mainstream use, for which it has mostly been related to the US and the UK. The research argues that the Doughnut becomes a tool with policy implications thanks to an underlying ACF present in the city, which promotes Doughnut inspired projects through a diffused *alignment* of actors.

The thesis proceeds in the following order. Chapter I introduces the research design, case study and explains the context and relevance of Doughnut Economics. Chapter II dives into the literature review, theoretical frameworks, and methodological approaches to the city. ACF favors the understanding of how actors *align* to turn their Doughnut beliefs into a deliverable policy scheme, while systems thinking favors the deconstruction of the Doughnut from a *holistic* perspective. An explanation of qualitative methodology follows, with information on the interviews process and their interpretations through Thematic Analysis (TA). Chapter III analyzes three policy reports, essential to contextualize Amsterdam's strategy to become a climate adaptive city with the Doughnut. Chapter IV interprets the interviews through TA, and the primary data corroborates the presence of an ACF in Amsterdam advocating for the Doughnut as a tool for *transformative action*. Chapter V sews together the main arguments, considering recommendations about how to incorporate tools like the Doughnut within policymaking, before concluding with the study generalizability and future avenues of research.

1.2 Doughnut Economics: Context and Relevance

Before moving forward, it is necessary to explain the core of the Doughnut: what is it and why Amsterdam is engaging with it. Theorized by the economist Kate Raworth in *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*,[8] the Doughnut presents a *social foundation* (with minimum social standards) and an *ecological ceiling* (with planetary boundaries). As a compass for human prosperity across the 21st century,[9] the diagram portrays two concentric circles: the inner is the social foundation, the outer the ecological ceiling.

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[8] Raworth, *Doughnut Economics.*
[9] Raworth, *Doughnut Economics*, 44.

Figure 1: *The Doughnut of Social and Planetary Boundaries.* [10]
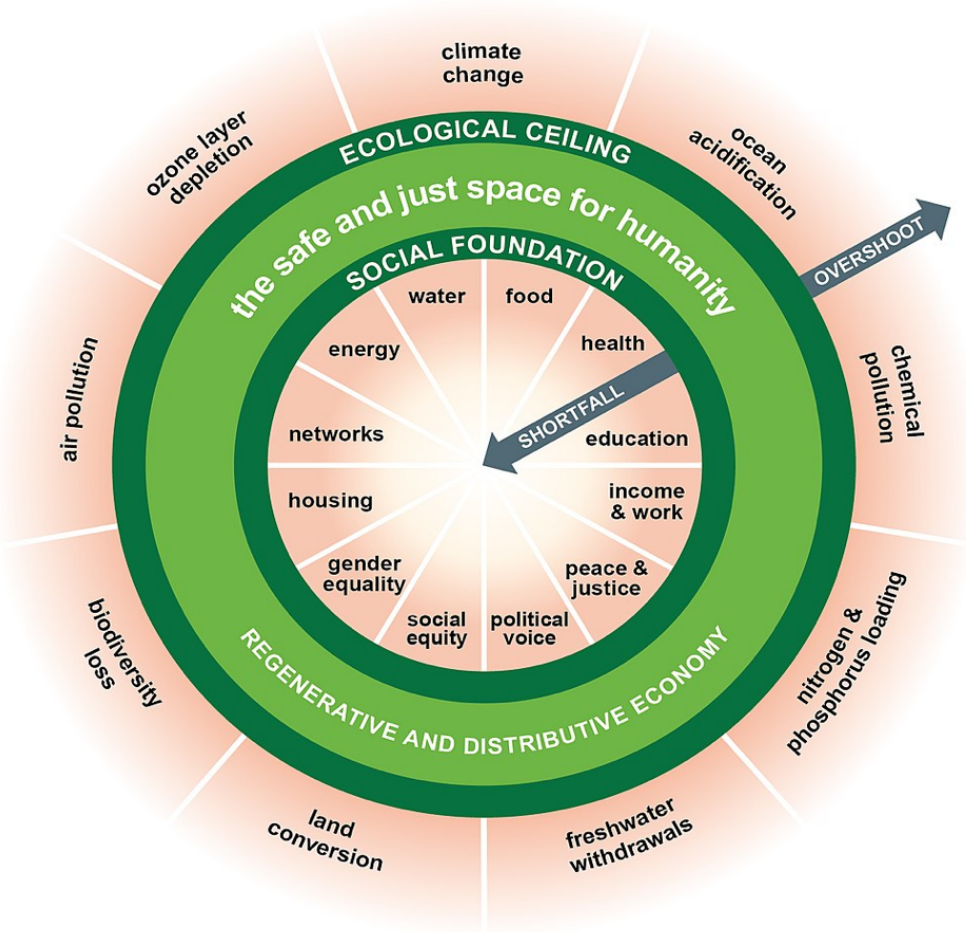
The inner circle sets out twelve basic needs of social life that none should be lacking, and they are all included in the UN 2030 Agenda for Sustainable Development Goals.[11] Drawing from humanistic ideals, the socio-economic needs were officially recognized in 1948 by international human rights law as necessary *rights* to conduct a life with dignity. At the same time, they present limitations: not only they can be seen as quasi-utopian targets, but they are non-binding principles,[12] both meaning that countries cannot be penalized for their missed implementation and that they depend on states' unstable will.

The *ecological ceiling* has nine parts, identified in 2009 by an international panel of earth scientists led by Johan Rockström and Will Steffen, composing critical planetary processes regulating

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[10] Kate Raworth, *The Doughnut of Social and Planetary Boundaries*, in *Doughnut Economics*, 44.
[11] UN, "The 17 Development Goals."
[12] UN, "Sustainable Development Agenda."

Earth's ability to keep its Holocene conditions. It is known as *Holocene* the geological era referring to the last 11,700 years of Earth's history. [13] Humanity's degrading activity towards the environment mainly started from 1950 onward, an era also known as the *Great Acceleration*, for the global population increased by nearly three times and the real-world GDP by seven times.[14]

Figure 2: *The Doughnut of Social and Planetary Boundaries*. [15]
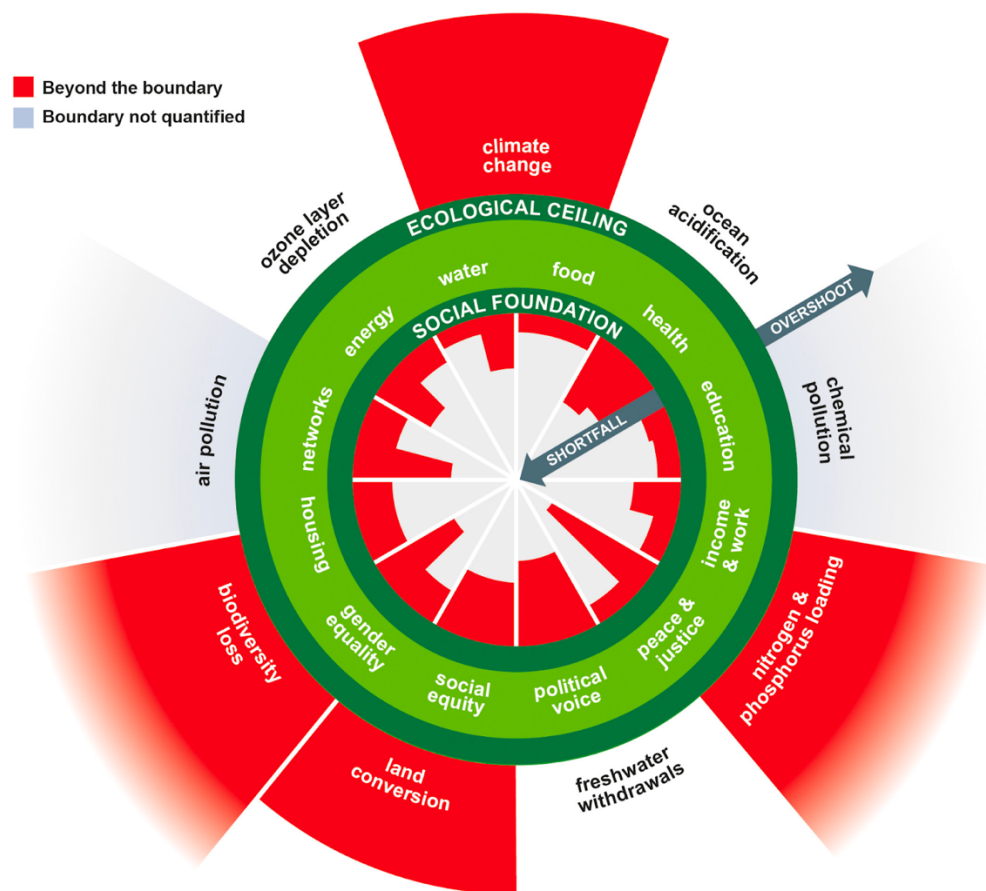
Our planet's living system has been altered by the intensifications of human industrial activity. Will Steffen, expert of earth's living systems, maintains that "in just a single lifetime humanity has become a *planetary-scale geological force.*"[16] Humans' destructive activity created a new planetary era: the *Anthropocene,* which replaced the Holocene. [17] In 2000, Scientists Paul Crutzen and Eugene

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[13] Encyclopædia Britannica, "Holocene."
[14] Raworth, *Doughnut Economics*, 46.
[15] Kate Raworth, *The Doughnut of Social and Planetary Boundaries*, in *Doughnut Economics*, 51.
[16] Raworth, *Doughnut Economics*, 46.
[17] Steffen et al., "The Anthropocene", 739-61.

Stoermer coined the term *Anthropocene* to designate a new geological era where human interference is so great to alter Earth's dynamics.[18] The red parts of Figure 2 show the degree of *overshooting* of planetary resources and the *shortfall* of the most basic social needs across the globe.

Figure 1 shows the ideal goal where humanity could enjoy the only ecologically safe and socially just space, the green doughnut shaped part. Figure 2 shows instead humanity's status, while also showing the categories *beyond the boundary* (in red) and *boundary not quantified* (in grey). The label *boundary not quantified* raises the question as *to how, and by what criteria*, overshoot and shortfall are measured. This begs the legitimate question of *who measures* and *how*? Where is the widely accepted data? This relates to a grey area within climate governance, that of data collection and *accuracy*, a problem which also the Doughnut faces.

Another key graph to understand Doughnut Economics is the *Embedded Economy,* inspired by his first theorizer Karl Polanyi (1886-1964) in his *The Great Transformation: The Political and Economic Origins of Our Time*. Where mainstream economics treats the economy as an *isolated* system, ecological economics treats the relationships between economy, society, and the environment as *embedded*. Neoclassical economics sees the environment as a pool of economic "resources" and "externalities" to be factored in models,[19] while ecological economics as *complementary* to human existence. Drawing on ecological economics, Raworth's graph presents this structure: outside, the *living world*, powered by solar energy; inside lies *society* and, *within* that, the economy, where the household, market, state, and commons play an *equally* fundamental role for human needs.[20] Not only should the economy be socially and ecologically *embedded*, but it should stop being market-dominated.

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[18] The *International Working Group on the Anthropocene* identified four areas of human disruption: 1) erosion and sediment transport; 2) changes in the atmosphere's chemical composition; 3) environmental conditions created by global warming and ocean acidification; 4) degradation of the biosphere both at sea and land
 (Working Group Anthropocene, "Quaternary Statigraphy.")
[19] Joanna, "Anthropocene Economics", 355-74.
[20] Raworth, *Doughnut Economics*, 71.

Figure 3: *The Embedded Economy.* [21]
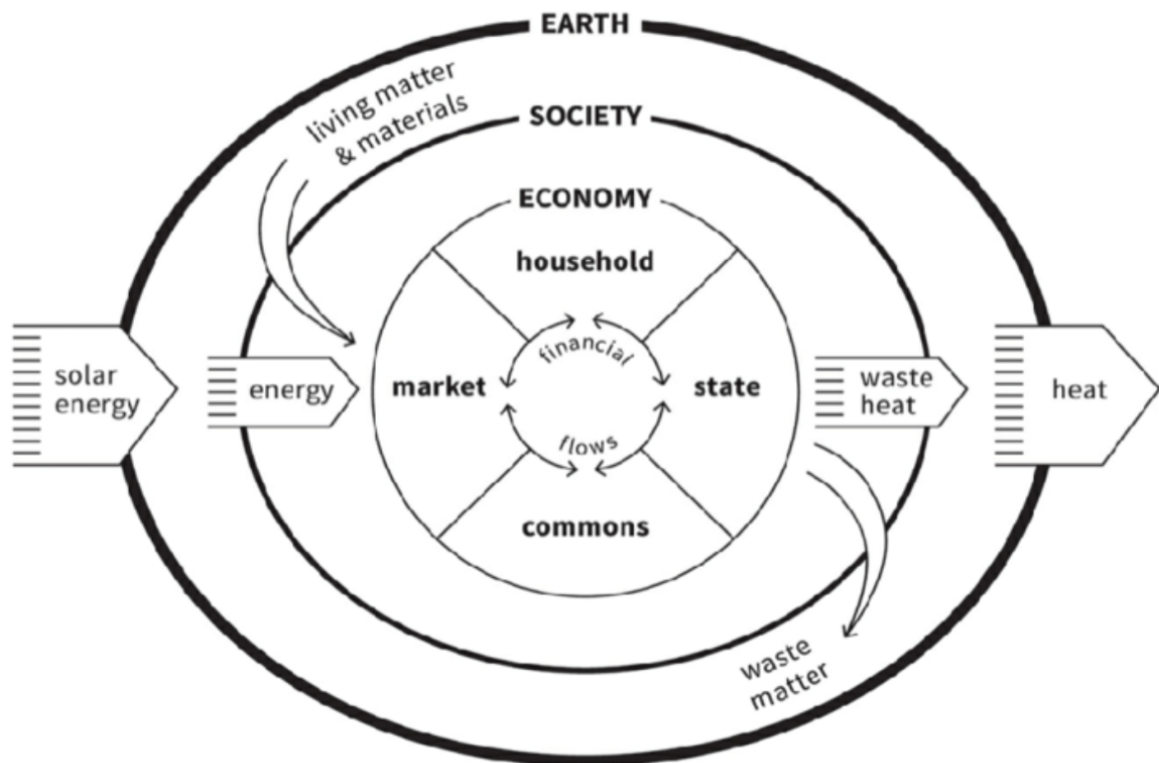
If the only safe and just space for humanity is within the two concentric circles of the Doughnut, *how* can we get there? To reach this goal, Raworth suggests discarding last century's economic thinking, instead proposing *seven new approaches* to rethink the economic system (Figure 4). These are: changing the goal, from the GDP to the *holistic Doughnut model*; replacing the self-contained market with an *embedded economy*; replacing the individualistic model with the *collective and societal aspects* of human nature; leaving mechanical equilibrium behind, and welcome *dynamic complexity*; moving away from a growth-addicted economy, towards one that is *distributive and regenerative* by design, and *agnostic* about GDP growth.

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[21] Kate Raworth, *The Embedded Economy*, in *Doughnut Economics*, 71.

Figure 4: *Seven Ways to Think like a 21ˢᵗ Century Economist.* [22]

A critical examination of the *quasi-utopian* model of Doughnut Economics necessitates a consideration of what its *limitations* are, who *criticized it and why,* and *who accepts it and why*. The main limitations can be grouped into three main arguments. First, Doughnut Economics is a revolutionary model, requiring the entire system to abandon the current way of production. As desirable as it may be, this would still be very difficult. Second, as this Time's article argues, [23] both right-wing conservatives contested the Doughnut for its unproven capacity to lift millions out of poverty, that capitalism has done. Also, left-wing progressives condemned the model for its vague and *a-political* stance. Third, experts working on distribution inequality, such as Branko Milanovic,[24] blamed it for portraying a quasi-Christendom, contesting it for being a too Western, white, and anthropocentric critique of the status quo.[25] Bitter critiques, extraordinary praises: this is the paradox of Doughnut Economics, and therefore Amsterdam's endeavor to engage with it is worth exploring.

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[23] Nugent, "Amsterdam Is Embracing a New Economic Theory."
[24] Mathew, "Doughnut Economics."
[25] Oxfamapps, "Is Doughnut Economics Too Western?"

Chapter II - Literature Review, Theoretical Frameworks & Methodological Approaches to the City of Amsterdam

This chapter looks at the core theories upon which the research builds. It analyses Advocacy Coalition Framework and systems thinking, then the scholarship on city diplomacy and social circular economy. The section ends with the analysis of the qualitative methodology used for the primary data collection.

2.1 ACF: Coalitions in the Doughnut

To grasp how different players engage with the Amsterdam Doughnut, the thesis deploys *Advocacy Coalition Framework* to track the actors' *coalitions, policy learning and change* towards Doughnut-inspired projects; *systems thinking* to examine how actors use the Doughnut as a holistic of indicator to govern the city within the *biosphere*, through a *cooperative* governance. The main theoretical base of this research is *Advocacy Coalition Framework* (ACF). Developed in the 1980s by Paul Sabatier and Hank Jenkins-Smith, ACF describes policy processes as cycles, to explain situations such as the formation of coalitions, the propensity for learning, and the features of policy change over time.[26] ACF addresses three key issues: *advocacy coalitions*, *learning* and *policy change*. First, *advocacy coalitions* are actor aggregations sharing ideas, creating policy change via cooperation. Second, *learning* refers to how coalitions change their actions and/or core values after certain experiences. [27] Third, *policy change* refers to the adjustments occurring within the policymaking process. [28]

ACF can operate on three levels of analysis: 1) *a macro level*, for which most of the policy making occurs among specialists of a subsystem; 2) an individual *micro level*; 3) a *meso-level*, where actors within a subsystem come together in *advocacy coalitions.*[29] The *meso-level analysis* will be particularly relevant for this research, as it favors the analysis of how the *trans-governmental* and *transnational private regimes* create coalitions, advocating for the implementation of Doughnut-inspired ideas.

ACF allows for the evaluation of how different actors align to turn their beliefs into policy, creating coalitions with those sharing the same values.[30] The information gathered from the interviews,

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[26] IPPA, "The Advocacy Coalition Framework."
[27] IPPA, "The Advocacy Coalition Framework."
[28] IPPA, "The Advocacy Coalition Framework."
[29] Sabatier and Weible, "The Advocacy Coalition Framework," 192.
[30] Cairney, *The Advocacy Coalition Framework.*

which will be discussed in Chapter IV, reveals how different players in Amsterdam (from universities, research centers, civil society organizations (CSO), start-ups, corporate institutions, and the Municipality itself) create coalitions to advocate for the implementation of the Doughnut. This is evidence of a permeating ACF across the city. At the same time, the city's engagement with the Doughnut is a complex issue, for its multidimensional nature, whose success is yet to be tested. Since ACF was conceived to deal with complicated problems, it suits the analysis of the Doughnut for it implies goal conflicts, disputes and a *variety of actors involved*. [31] Also, ACF has mostly been used for the analysis of *Anglo-Saxon countries* (mostly US and UK), since its first focus was US energy and environmental policy. With time, the policy areas broadened, and so did the outreach of the theory. Therefore, one of the *original contributions* of this research is the application of ACF to the European context of Amsterdam.

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[31] Sabatier and Weible, "The Advocacy Coalition Framework,"189.

Figure 5: *1998 Diagram of the Advocacy Coalition Framework.* [32]
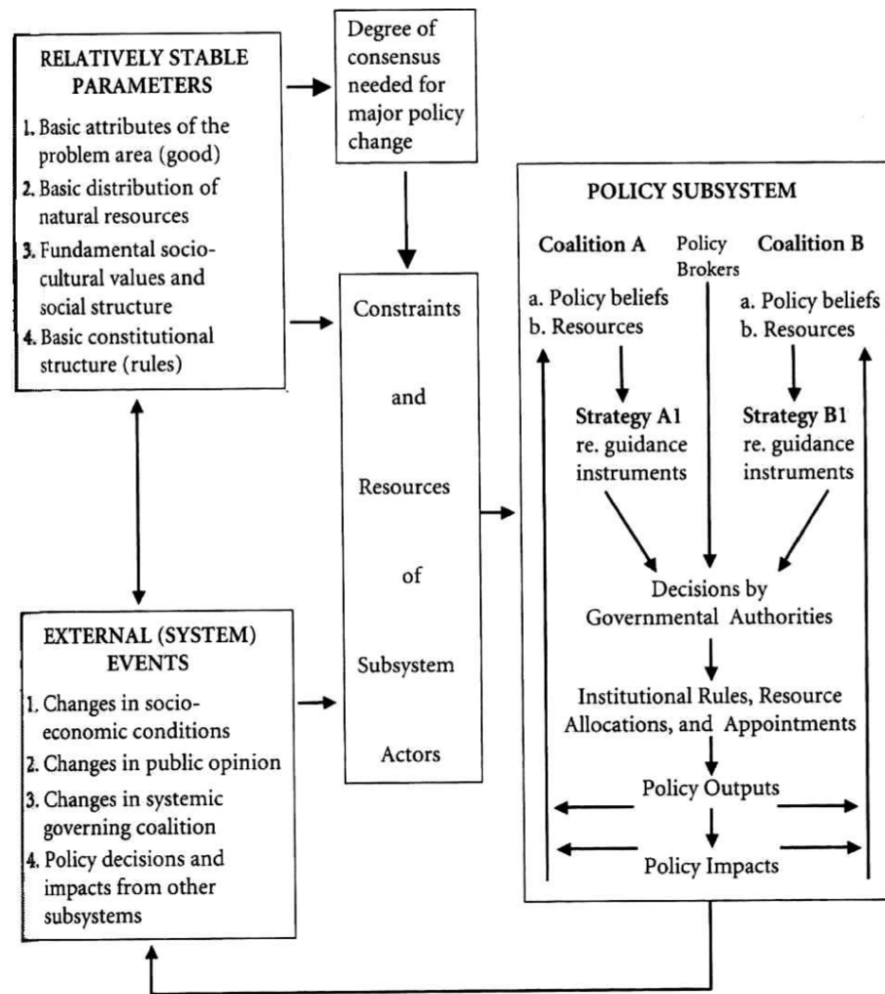
FIGURE 7.1   1998 Diagram of the Advocacy Coalition Framework

As per *advocacy coalitions,* ACF holds that stakeholders' beliefs are embedded within informal networks, which greatly influence policy making.[33] At the same time, ACF also assumes that policy participants work to turn their beliefs into policies before their opponents can do so. To envision any prospect of success, policy participants must seek *allies, share resources, and implement complementary strategies*. This is precisely what happens in Amsterdam, for actors *align* in formal and informal networks, where they share resources to improve their capacity through coalitions. It is the case of public-private partnerships between the Municipality and corporate institutions, start-ups, CSO and research centers. This dynamic confirms the presence of an ACF in Amsterdam, as multiple players come together to promote the Doughnut system of beliefs. The thesis also looks at systems

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[32] Sabatier and Weible, *Diagram of the ACF*, in "The Advocacy Coalition Framework," 189, Fig.7.1.
[33] Sabatier and Weible, "The Advocacy Coalition Framework,"196.

thinking to better map the actors within Amsterdam, and to evaluate their degree of engagement with the Doughnut.

2.2 Systems Thinking

ACF and systems thinking are complementary frameworks as they favor the analysis of how the Doughnut becomes an implementable policy tool. This is possible thanks to *actors' coalitions* that enhance a *learning process* (ACF) around a pioneering governance, initiating Amsterdam's eco-social roadmap by considering all the factors of its *system* (systems thinking). Systems thinking is relevant for this research as the Municipality of Amsterdam adopts it as a key tool to reach its circular targets. Systems thinking is used in the *Circular Monitor,*[34] to track what flows in and flows out the city, looking at Amsterdam as a *metabolism,* as *one system*. Also in the *Circular Strategy,* [35] the Municipality lists systems thinking as a key *lever* of circularity. For this report, the Municipality replaced the standards economic indicators with the holistic concept of the Doughnut. This choice was made to have a more *thorough* and comprehensive picture of the city's status, hence, to grasp all the *elements of a system*. To understand a system, it is necessary to grasp all the living *forces:* people, social norms, beliefs, trends, institutions, policies, laws, natural resources, and their *interaction*.

In "Systems Analysis in Politics and its Crisis",[36] Easton argues: "If there is a single characteristic distinguishing system thinking, it lies in the way it approaches the analysis of *complex wholes*."[37] In *A Systems Analysis of Political Life*, [38] he claims that a political system can be regarded as limited and made of *fluid* and dynamic systems of decision making. In 1991, Barry Richmond wrote: "as *interdependency* increases, we must learn to learn in a new way. We need a *System Esperanto*."[39] There are connections between systems thinking and ACF in the way Amsterdam engages with Doughnut Economics. The two frameworks come together to better explain Amsterdam's *collaborative governance* and coalitions. In public policy, there are other cases of association of ACF and collaborative governance.[40] Here, systems thinking is used to make the Doughnut implementable at the city level, via a vibrant network of actors' coalitions, under the ACF umbrella.

Systems thinking is problematic to define because of its complex scope, while also being difficult to apply to the political realm, for its primary adoption in science. Some authors questioned

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[34] City of Amsterdam, *Circular Monitor.*
[35] Circle Economy and City of Amsterdam, *Circular Strategy.*
[36] Easton, "Review of Systems Analysis*," 22.*
[37] Easton, *"Review of Systems Analysis," 22.*
[38] Easton, *A Systems Analysis of Political Life.*
[39] Richmond, "Systems Thinking," 3.
[40] Koebele, *Integrating collaborative governance theory with ACF.*

the innovative approach of the theory and its implementation. Is systems thinking innovative, when already other scholars from the late 1950s, such as Lindblom, questioned the *non-linearity* of policy processes, arguing in favor of an *incremental* approach? [41] Many authors seemed skeptical about the concrete implementation of the theory, such as Holmes and Noel,[42] for the lack of systems-*action* and abundance of systems-*thinking,* lamenting the shortage of pragmatism.

Despite the critiques, systems thinking provides methodologies to deal with complex policy developments.[43] This complexity implies the need to handle multiple *actors* simultaneously, and the fact that "decisions on even *apparently isolated* issues can have repercussions for the programs and policies of other departments." [44] *Wicked problem* is a term used to describe the difficulty of handling various actors at the same time, along with the attempt to understand the general repercussions of a single issue. Amsterdam's Doughnut qualifies as a *wicked problem* because the city attempts to involve multiple actors simultaneously and to target its eco-social challenges, by venturing in the uncharted waters of the Doughnut.

In *The Hidden Power of Systems Thinking*, Ison and Straw [45] argue that systems thinking is well suited to face 21st century environmental challenges. Academia and international organizations (IOs) like the OECD [46] use it to advocate for a more transparent and inclusive governance. The OECD calls a governance inspired by Systems Thinking in Practice (STiP) one that redefines its relationships with CSO - which becomes an active partner, allowing citizens to contribute to the policy agenda. [47] Yet, it is more common for civil society and governments to not cooperate, meaning that the STiP model is an anomaly worth investigating. For example, Amsterdam's Municipality can be regarded as STiP driven when it engages with CSO such as the Amsterdam Donut Coalition (ADC), [48] a grassroot citizens' led movement promoting Doughnut inspired projects. The alignment between the ADC and the Municipality proves the presence of an ACF permeating the city.

Among the OECD's Observatory for Public Sector Innovation (OPSI)[49] recommendations,[50] there is the encouragement of *cross-government networks*, investment in *human capacity*, and

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[41] Hayes, "Incrementalism."
[42] Holmes and Noel, "Time to Shift from Systems Thinking to Systems Action".
[43] Freeman, Yearworth and Cherreault, "Review of Literature on Systems Thinking for Policy Making*," 7.
[44] Freeman, Yearworth and Cherreault, "Review of Literature on Systems Thinking for Policy Making*," 7.
[45] Ison and Straw, *The Hidden Power of Systems Thinking.*
[46] OECD, "Systemic thinking for Policymaking."
[47] Ison and Straw, *The Hidden Power of Systems Thinking,* 140.
[48] Donut Coalitie, "Amsterdam Donut Coalition."
[49] OECD, "Observatory for Public Sector Innovation."
[50] OECD, "Systems Approaches to Public Sector Challenges."

empowerment of citizens to build dialogue.[51] Many interviewees mentioned the *Amsterdam-approach*, a form of collaborative governance whereby the Municipality actively engages with six multiple actors (research centers, academia, startups, corporate institutions, the commons, CSO). Hence, Amsterdam's Municipality can be considered STiP driven, proving the presence of an ACF advocating for the implementation of the Doughnut.

Figure 6: *Tridimensional Governance Diamond.*[52]
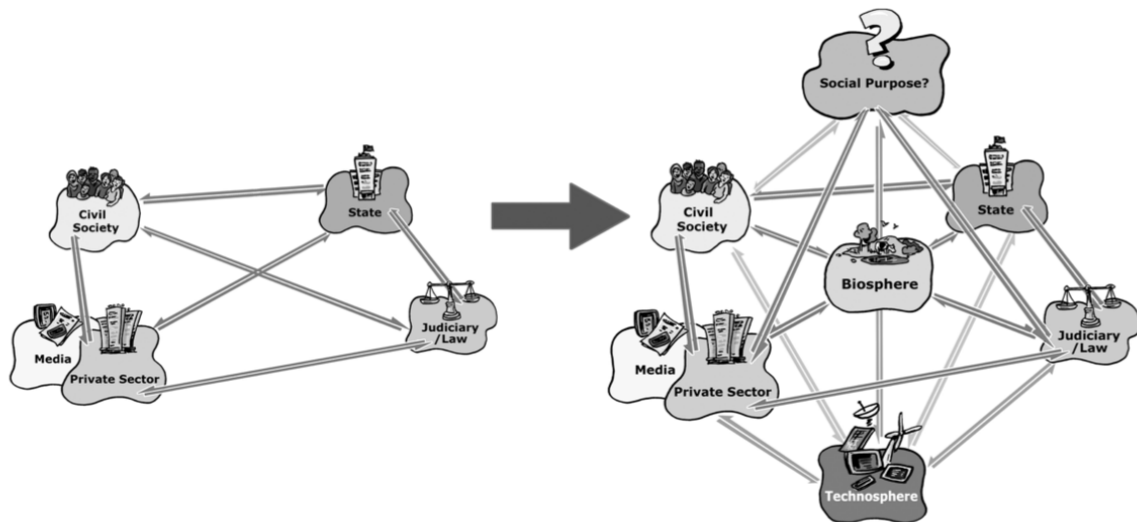
To Ison and Straw, governments should stop perceiving the environment as an *externality* and treat it as a governable domain, to reach a *governance of the biosphere*. As in Raworth's *embedded economy,* with the biosphere at the center of the diamond, there are new ways for governing humans *in* harmony with the environment.[53]

2.3 City Diplomacy & Social Circular Economy

ACF and systems thinking corroborated the presence of a vibrant ACF in Amsterdam, which promotes the Doughnut as a tool for transformative action. The city also wishes to be a source for inspiration for other realities, and works to consolidate the model within its boundary, to offer a replicable model. Amsterdam's Doughnut thus becomes an instrument of soft power for the city. Cities' prominent role comes from the fact that *global scale* challenges, such as climate change, have

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[51] Ison and Straw, *The Hidden Power of Systems Thinking,* 140.
[52] Ison and Straw, *Tridimensional Governance Diamond*, in *The Hidden Power of Systems Thinking,* 140, Fig. 7.1.
[53] Ison and Straw, *Tridimensional Governance Diamond*, in *The Hidden Power of Systems Thinking,* 140, Fig. 7.1.

local scale repercussions. [54] Cities get involved in *network-based* arrangements because of the growing interconnectedness of global challenges, where local contexts are *fora* of action. [55]

It is necessary to go beyond the traditional definition of diplomacy to grasp the new *soft power* cities are deploying. There is a vast body of literature suggesting that cities are reshaping the diplomatic landscape. [56] There are many elements within our case study echoing the diplomatic-soft power of cities. Firstly, city diplomacy is necessary for Amsterdam to tackle complex and wicked problems, such as transforming an entire city into being 100% climate neutral by 2050. Second, Amsterdam deploys its diplomatic soft power when its actors' coalitions promote its *label* of a Doughnut-City-To-Be. As the first to use the Doughnut as a conceptual tool with policy implications, Amsterdam becomes a diplomat standing as a *policy transfer innovator*.

In "City Leaders Go Abroad: A Survey of City Diplomacy in 47 Cities," Kosovac et al. reiterate cities' limited capabilities before global challenges. They argue that city networks should "develop systemic capacities for global engagement," [57] adding cities should shift the capacity away from the *individual* to the *organizational level*. [58] Yet, this effort endows cities with two benefits: i) having *checks and balances* in organizations and a democratic diplomacy; ii) with "*organizational learning*", city capabilities cannot depend on individuals - as the knowledge is *internalized*. [59] Considering ACF, one could argue that the *learning process* is easier at the city level as knowledge internalization is more likely. This happens in Amsterdam, since the Municipality embraced the Doughnut as a holistic tool with policy implications, and this suggests a fruitful learning process at the local level.

In "City Diplomacy: The EU's Hidden Capacity to Act,"[60] Parkes describes EU city diplomacy via three vectors (or 'Ps'), i.e., cities as *players, places* and as *percolators*. Cities are *players* and *places* of diplomacy for their administrative *decentralized* features, allowing them to make *diffusion* arguments. Their unique local reality is an asset for a bottom-up approach to neighborhoods' reality. Cities can act as *percolators* and *vectors of policy transfer* for they are "*antennae*, picking up social and political signals abroad." [61] Parkes's contribution reiterates that cities can be active players in solving complex challenges, but they cannot provide a solution on their own.

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[54] Kosovac et al., "City Leaders Go Abroad", 127.
[55] Kosovac et al., "City Leaders Go Abroad", 127.
[56] Sevin, "Bright Future for City Diplomacy", 2018.
[57] Kosovac et al., "City Leaders Go Abroad", 140.
[58] Kosovac et al., "City Leaders Go Abroad", 139.
[59] Kosovac et al., "City Leaders Go Abroad", 121.
[60] Parkes, "City Diplomacy."
[61] Parkes, "City Diplomacy," 3.

Incorporating the core ideas of Circular Economy (CE), the Doughnut presents strong social foundations, along with the *embedded economy*. Differently from *linear* economy, CE attempts to distinguish economic growth from the over-exploitation of finite planetary resources. [62] Many scholars criticized CE for its (almost exclusive) focus [63] on resources and environmental efficiency above the *social dimension*. Some, such as Korhonen et al., [64] emphasized *increased employment* and *participative democratic decisions* as key ingredients to be factored in. [65] Others criticized the absence of social basic needs and ambitions, such as the SDGs of the UN 2030 Agenda. [66] However, since 2015, there has been a growing interest in the societal aspect of CE.[67] Raworth published *Doughnut Economics* in 2017, theorizing the eco-social intertwining of the environment, economics, and society. However, even within more comprehensive expressions of CE, such as the Doughnut, there is no clear guidance on how to bridge the societal gap.

2.4 Methodology

This section will explain the methodology used to gather primary data. Through a *qualitative* methodology, this research examines the case study of Amsterdam's engagement with Doughnut Economics. The research question to be answered is: "to what extent and under what conditions can Doughnut Economics be used as a tool for transformative action within the city of Amsterdam?"

The researcher conducted twelve interviews and attended an event organized by the Amsterdam Institute for Advanced Metropolitan Solution (AMS Institute),[68] valid as a form of participant observation, while collecting data made available by some interviewees.[69] The interviewees are different players, selected for their diverse inputs to the research. Among those, there are *private* actors (the housing corporation Ymere [70] and the start-up Metabolic), [71] *research institutions and universities* (respectively DEAL, Circle-Economy,[72] and the Amsterdam University of Applied Sciences), *governmental players* (officers working at the Municipality), *members of CSO* (Amsterdam Donut Coalition, ADC). Given the different nature of the players and the diverse function they fulfil within

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[62] Stahel, *The Circular Economy: A User's Guide.*
[63] Geissdoerfer et al., "The Circular Economy – A new sustainability paradigm?"
[64] Korhonen, et al., "Circular Economy: The Concept and its Limitations."
[65] Padilla-Rivera et al., "Addressing the Social Aspects of a Circular Economy," 2.
[66] Borrello et al., "Three Propositions to Unify Circular Economy Research: A Review."
[67] Padilla-Rivera et al., "Addressing the Social Aspects of a Circular Economy," 3.
[68] The researcher attended the workshop "The Virtual Co-design Session for the Monitor of Circular Economy," organized by a cooperation between AMS and the City of Amsterdam.
[69] Such as a PPT Presentation developed by the author of the Doughnut Economics, Kate Raworth, in cooperation with the Circular Innovation Strategist of the municipality of Amsterdam (Arjan Hassing).
[70] "Ymere."
[71] "Metabolic."
[72] "Circle Economy."

the research design, *semi-structured* interviews were conducted. Refer to *Annex I Interviews*, page 46, for the full interview questions.

Common themes and narratives will be looked after in the interview transcripts. Among the various approaches used, this research organizes the thematic analysis around six steps: *familiarization* with the text, *coding, generating themes, reviewing themes, defining, and naming themes,* and ultimately *writing up.* This six-steps approach was originally used within psychology studies by Virginia Braun and Victoria Clarke, [73] and it then became widely common in qualitative research within social sciences.

The primary data collected from the interviews will be evaluated through a *qualitative thematic analysis*. Thematic Analysis (TA) is defined as:

"a method for systematically identifying, organizing, and offering insight into, *patterns* of meaning (themes) across a dataset. By focusing on meaning *across* a dataset, TA allows the researcher to see and make sense of collective or *shared meanings* and experiences." [74]

TA allows for the identification of common topics and narratives, while making sense of those commonalities. It serves the scope of this dissertation for it helps the interpretation of how each actor talks, thinks, and acts around the Doughnut narrative in Amsterdam. Most importantly, TA's accessibility and flexibility allows for the scrutiny of how the various actors in the city come together to form an ACF, highlighting the collective meanings and shared experiences around the Doughnut implementation.

Among the key methodology limitations, there is that of the subjectivity of the data collected, which makes it non generalizable and specific to Amsterdam only. Also, public and private actors are not equally present in the dataset, and this is due to the researcher's outreach ability and to people's availability in scheduling interviews. This *sample bias* is a limitation of the thesis, since the *limited number* of interviewees and the *type of actors* interviewed make the study not generalizable. At the same time, the current Covid-19 pandemic did not allow for in-person interviews, hence all the meetings were conducted online.

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[73] Braun and Clarke, "Using Thematic Analysis."
[74] Braun and Clarke, "Using Thematic Analysis," 2.

Chapter III - The Roadmap Towards an Ecologically Safe & Socially Just Amsterdam

This chapter presents the three reports describing Amsterdam's vision to become a circular and climate neutral city. The overview of the roadmap strategy is also essential to contextualize the interview findings of Chapter IV.

Firstly, the *Amsterdam Circular Strategy 2020-2025* sets up building blocks to become "a thriving, regenerative and inclusive city for all citizens, while respecting the planetary boundaries." [75] A collaboration between the Municipality, the research center Circle Economy[76] and Kate Raworth, the report paves the way for the Doughnut's eco-social base in the city. Circle-Economy is a non-profit research organization, Amsterdam-based, working on the circular transition. As a circular city, Amsterdam plans on cutting 50% of its primary resources by 2030, becoming fully circular by 2050. As climate-neutral, the city wishes to keep global warming close to 1.5°C, in line with the 2015 Paris Agreement,[77] cutting 55% of CO2 emissions by 2030. By 2050, the city emissions should fall by 95%, compared to 1990 levels. For this purpose, Amsterdam selected three value-chains (*construction, biomass* and *food,* and *consumer goods*), chosen for their economic significance and environmental impact. *Construction* was selected for it sums up to 40% of the city waste; *food* because ⅓ of it goes to waste, and *consumer goods* as they are the greatest waste from households. In the report, systems thinking is listed as one of the key *levers of circularity*, both for its holistic approach and for it requires the *alignment* of diverse stakeholders in the city.[78] This is a further proof of how complementary systems thinking and ACF in the city. The Municipality *aligned* with Circle-Economy and with the theorizer of the Doughnut herself, Kate Raworth, to advance Amsterdam's eco-social diet. This is strong evidence of an ACF in the city, since also the writing of the report has been a site of *shared learning* for *actors' coalitions.*

Second, *The Amsterdam City Doughnut* develops the city's eco-social strategy using the Doughnut as a tool for transformative action. Also in this case, the report relates to ACF for the actors' coalitions involved in the writing process, and to systems thinking for its *methodology* - as the Doughnut becomes an *indicator* of analysis for the entire city *system*. From an ACF perspective, it is

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[75] Circle Economy and City of Amsterdam, *Circular Strategy*, 7.
[76] "Circle Economy."
[77] UN, "The Paris Agreement."
[78] Circle Economy and City of Amsterdam, *Circular Strategy*, 10.

interesting to detect *how*, *when* and *where* policy learning has taken place. The writing of the report has been a *learning* occasion, as four organizations wrote it together. This is a clear symptom of an ACF in the city. The four actors are: Circle-Economy, DEAL (Doughnut Economics Action Lab), C40 Cities[79] and Biomimicry 3.8. [80] DEAL is a Research Centre founded by Kate Raworth, which develops tools for implementing the Doughnut. Despite the name, C40 Cities is a network of nearly 100 mayors and cities to fight climate change. Biomimicry 3.8 is a consultancy offering nature-based solutions. In addition, these organizations launched events and workshops with more than 50 stakeholders in the city, to develop the report. These gatherings and *coalitions* express Amsterdam's propensity to *align* its actors according to ACF, by creating a space for discussion to enhance a *shared* learning process around the Doughnut.

Part of Thriving City Initiative (TCI), [81] the report wishes to develop a common framework of transformative eco-social action for three pilot cities (Amsterdam, Philadelphia, and Portland). The core question is: "how can Amsterdam be a home to thriving people, in a thriving place, while respecting the wellbeing of all people, and the health of the whole planet?"[82] To deconstruct the complex challenge, four lenses are presented: a social and ecological *local reality*, coupled with a social and ecological *global reality*. The interdependence between the *social* and *ecological,* and the *local* and *global spheres,* confirms the use of systems thinking for the methodology, since the city's whole system is put in relation to its global eco-social impact.

[79]   C40 Knowledge Community, "Amsterdam's City Doughnut."
[80]   "Biomimicry 3.8."
[81]   "C40 Knowledge Community."
[82]   Doughnut Economics Action Lab et al., *The Amsterdam City Doughnut,* 2.

Figure 7: *Four Lenses of Analysis.* [83]

Third, the *Amsterdam Circular Monitor* tracks the city's circular progress. For its development, the Municipality adopted systems thinking to analyze the city as a metabolism, as a *whole* system, tracking what material flows in and out of its boundary. There are five main sections:[84] *input* indicators (for the incoming materials); *throughput* indicators (for the materials use and their predicted CO2 emissions reduction); indicators for *waste collection* by public authorities (measuring the public authority's performance)*;* indicators for the *waste treatment processes* of regional industries; indicators for the *social foundation* (for the *general welfare of society*, i.e., housing, income, health, and wealth inequality). All these five indicators witness the use of *systems thinking* for the *thorough* methodology of the report. Tracking materials' flows, as if the city was a living metabolism, is an *innovative approach* to circularity. Most importantly, Amsterdam looks at its climate neutral targets not only through economic indicators, but through the Doughnut. The model's innovative and overarching feature allows for the inclusion of *social welfare* indicators, such as housing, income, health, and wealth inequality. This pioneering approach to circularity and climate neutrality is possible through the adoption of systems thinking.

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[83] Doughnut Economics Action Lab et al., *Four Lenses of Analysis*, in *The Amsterdam City Doughnut,* 5.
[84] City of Amsterdam, *Circular Monitor*, 13.

Figure 8: The City's Emission. [85]
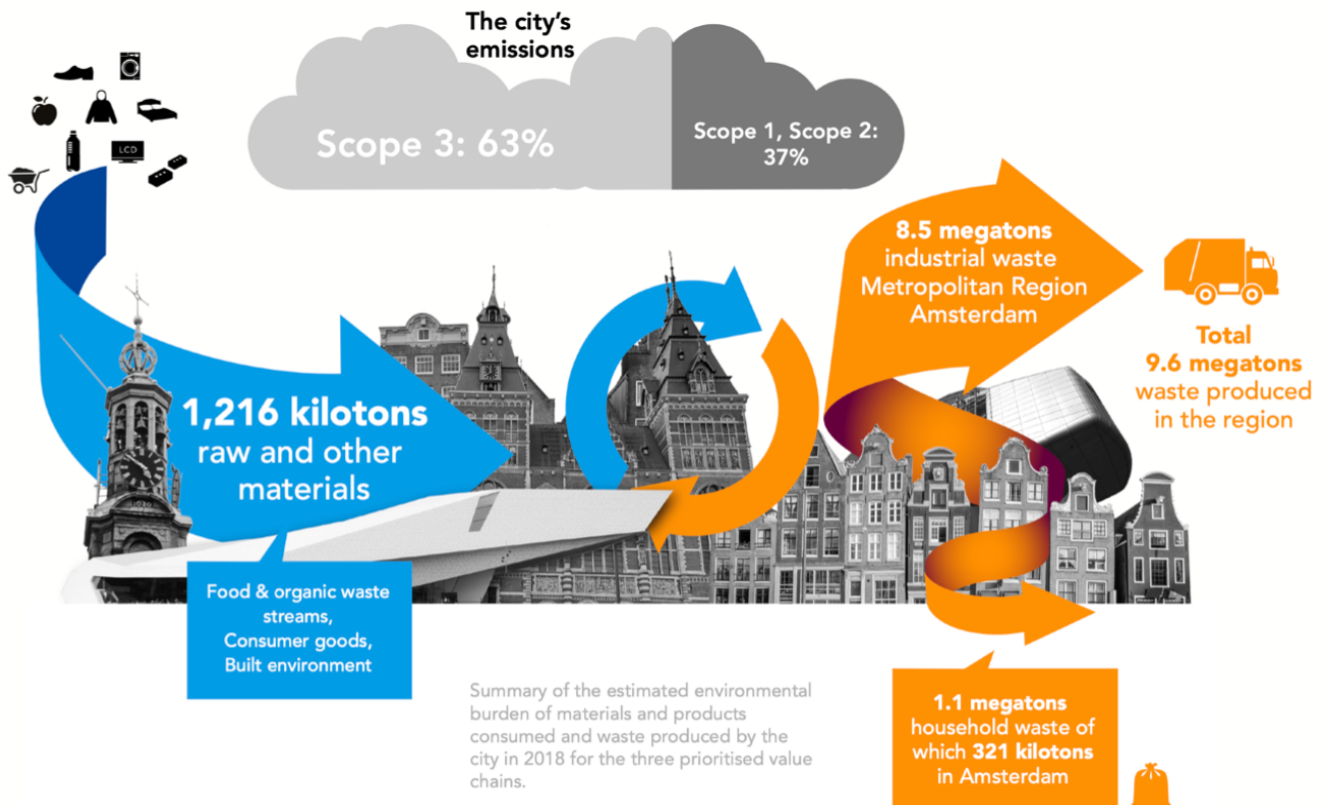
Like other cities, Amsterdam developed sector-based greenhouse gases (GHG) computation using the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC).[86] Consistent with the Intergovernmental Panel on Climate Change (IPCC),[87] the GPC helps cities track their GHG inventories through *three scopes* of CO2 emissions. Scope 1 emissions refer to direct combustion emissions within the city; Scope 2 refers to grid-supplied electricity and waste emissions; Scope 3 refers to GHG emissions consumed *within the city* but produced *outside* (Figure 8). [88] The GPC is a mainstream tool, yet the Amsterdam's *Monitor* is worth examining for its *experimental* incorporation of indicators measuring the *general welfare of society*. In this way, the city's ecological and social spheres become *embedded*, and this is a pioneering approach. This witnesses how Amsterdam's Municipality *internalized* the Doughnut eco-social values, promoted by the diffused

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[85] City of Amsterdam, *The City's Emissions*, in *Circular Monitor*, 6, Fig.1.
[86] C40 Knowledge, "The Global Protocol."
[87] IPPC, "IPCC."
[88] C40 Knowledge, "Consumption-based GHG emissions of C40 cities."

ACF network in the city. Figure 9 visually shows how this chapter's three reports create the overarching umbrella of the *Amsterdam Doughnut and Circular Strategy*.

Figure 9: *Overview of Strategy Elements.* [89]

This chapter contextualized Amsterdam's vision to become a circular and climate neutral city by looking at three policy reports: The *Circular Strategy*, *City Doughnut*, and the *Monitor*. This analysis was indispensable to show the reports' complementarity, and to have a clear overview of the *Amsterdam Doughnut and Circular Strategy*. The reports were also essential to prove Amsterdam's Municipality *internalization* of the Doughnut indicators, along with the adoption of systems thinking for the methodology. *Internalization* is the result of a learning process, hence a symptom of the city ACF. This background is pivotal to grasp the interviews' findings of Chapter IV.

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[89] Hassing, *Overview of Strategy Elements*, in *Journey of the Doughnut and Circular Strategy*, 4.

Chapter IV: Fluid Coalitions Building Amsterdam's Eco-Social Diet

This chapter will discuss the primary data according to different thematic subsections that emerged from the interviews. This facilitates the objective of the chapter, i.e., showing how each interview confirms the existence of a vibrant and fruitful ACF in the city, thanks to fluid and diffused actors' *coalitions.*

4.1 Coalitions, Shared Values & Social Foundations

A characteristic of ACF is that actors seek *allies* and *share resources* to achieve a successful implementation of their beliefs. The interviews showed that almost every respondent partners with or knows directly at least one of the others, thanks to a network bridging different organizations. This familiarity and proximity of actors is a further sign of an ACF in the city. It is the case of the start-up Metabolic, which, using systems thinking, partnered with the Municipality to facilitate Amsterdam's circular transition. Metabolic mainly worked with one of the Municipality's Office, the Chief Technology Office (CTO),[90] in charge of making *innovation* happen. Amsterdam's Municipality has a constellation of departments, whose priorities often differ: "the Municipality's approach to urban governance is quite *lax* because there are *different* departments and getting all of them on the same pages is difficult."[91] In parallel, Metabolic also interacts with a "*consortium* of different players,"[92] such as other private companies, universities and CSO. This proves the presence of an ACF in the city, as start-ups like Metabolic *share resources* and *build coalitions* with the Municipality and other actors to advocate for a circular transition inspired by systems thinking.

City's coalitions build a fruitful ACF to promote a shared system of beliefs. It is also the case of the social housing corporation Ymere, which has been working with the Municipality through the share of data and information:

"*Cooperation* between *public-private* organizations is becoming more and more important, so if you are able to *share* the same ambitions and you really know what to work on, then this could be the beginning of a *systemic* change." [93]

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[90] Amsterdam Smart City, "Chief Technology Office."
[91] Metabolic's Cities Program Leader, personal communication, 17th December 2021.
[92] Metabolic's Cities Program Leader, personal communication, 17th December 2021.
[93] Verhagen, A., personal communication, 8th February 2022.

As Sabatier argued, policy participants seek allies, share resources, and implement *complementary strategies* to successfully advance their beliefs.[94] This is what happens between the Municipality and Ymere, which share complementary tasks benefiting the city:

"All we can do is to make good and inclusive public spaces, good houses, and apartment buildings, that is our focus. Then, there is the Municipality: they can do a little bit more, because they are *responsible* for the schools, parks etc."[95]

This confirms a permeating ACF in Amsterdam, where different actors *come together* to share tasks, resources, and responsibilities to advocate for a more ecologically safe and socially just city, in line with the Doughnut foundations. Accordingly, before being climate adaptative, housing should be a human right, as in the Doughnut's inner circle. As stated by Anneke Verhagen, Concept Developer at Ymere:

"We found it very important as a social housing company to use these *societal values* to create a *just city*, and so not only look at the *financial benefits* but also really make a neighborhood that *is just right*." [96]

Quotes like this corroborate the idea of a *shared set of values* in the city, where a housing corporation like Ymere partners with the Municipality to find inclusive solutions to *housing* challenges. In this light, it is worth noticing that many interviewees know each other personally, proof of an extensive ACF. For example, Anneke Verhagen was introduced to the Doughnut model by the Municipality, while working in the Southeastern area, one of the city's most difficult neighborhood. Also, she agreed to be interviewed for this research upon solicitation of the Project Leader of Women Make the City (WMTC). [97] The two knew each other personally because they had worked together on the Just City Index of the Harvard Graduate School of Design. [98]

The CSO Amsterdam Donut Coalition (ADC) plays a pivotal role within the ACF in Amsterdam. The Project Leader of WMTC joined the ADC to advocate for a gender inclusive city, wishing to bring an intersectional feminist perspective, so it embraced the Doughnut for its *social foundations*:

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[94] Sabatier and Weible, "The Advocacy Coalition Framework," 196.
[95] Verhagen, A., personal communication, 8th February 2022.
[96] Verhagen, A., personal communication, 8th February 2022.
[97] Amsterdam Donut Coalition, "Women Make the City."
[98] "Design for the Just City."

"We are trying to make the *urban development* process more *inclusive* with our methods. In this way, we have our local initiative, and we are also part of the Amsterdam Donut Coalition, because we believe that we *contribute* and realize the *Doughnut social foundations.*" [99]

This suggests that ACF alignments have more legitimate *learning processes* when multiple actors gather. Within an ACF, *allies* facilitate the course of *learning* and *policy change*, hence they are desirable. The fact that WMTC joined the ADC is a sign of a fruitful ACF in the city, where actors wish to maximize, through coalitions, their impact around the *inclusive social foundations* of the Doughnut.

4.2 Theorization and Practice, Amsterdam Approach

Research centers and academia are also key players within the city ACF architecture. As Professor of Economics at the University of Applied Sciences of Amsterdam (UASA), Floor Timmerman developed a 30 ECTS Minor called *Working in And on Doughnut Economics*. She has also been involved in the Centre for Economic Transformation (CET), a research hub on Doughnut Economics, which appointed Raworth *Professor of Practice*. Floor Timmerman said: "the Doughnut is a great model, but it is *very conceptual*," therefore the university tries to understand how to *concretely* implement it. Timmerman also argues that universities can facilitate *experimental* learning when innovative concepts like the Doughnut are involved. The CET receives funding from the Municipality and partners with other actors, such as DEAL. The *alignment* of resources and beliefs among the Municipality, UASA and DEAL, validates the argument of a strong ACF in Amsterdam advocating for the Doughnut values.

Evidence of a fruitful ACF is also the *internalization* of the Doughnut within the city institutions and organizations. *Internalization* is an indicator of a great ACF, since it shows how successful coalitions' *learning* has been. When talking about actors' engagement within the ACF, the Strategic Advisor for Transformative Innovation at the Amsterdam Donut Coalition (ADC) says:

"We address it from the so-called the *Amsterdam approach*. We always engage with *six stakeholder groups:* research centers and education, the commons, communities and CSO, corporate organizations, start-ups and small medium enterprises, and governments." [100]

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[99]   WMTC Project Leader., personal communication, 1st February 2022.
[100] Strategic Advisor for Transformative Innovation at the ADC, personal communication, 21st January 2022.

This observation supports the presence of a diffused network of actors aligning in *coalitions* to create an ACF in the city. Enlarging coalitions and widening an ACF requires time, and this is part of the *learning process* around the Doughnut:

"You can find those people in all the groups we just mentioned: among all the stakeholders, there is that 1%, and then you build a *network,* and you find out how you can *empower* that 1% to become *bigger.* There will always be opposing people, of course, and we do encounter them to some extent, but *it is not* where we focus our energy." [101]

As Kosovac et al. argued about *organizational learning*,[102] city skills and capabilities are more likely to be *internalized* by a larger majority, because of a city's decentralized and democratic structure. Here lies the synthesis between ACF and city diplomacy: the latter favors the analysis of a city's organizational capacity and learning, which relates to ACF's coalitions' *learning process* around Doughnut-inspired ideas.

4.3 Concrete Examples: The Doughnut Applied in Reality

This subsection presents three grassroot projects which read as examples of how the Doughnut plays out *concretely*. Reflow Textile Lab, Amsterdam City Rights and ECODAM are three projects within the ADC proving the *application* of Doughnut, stretching it from its theoretical base.

4.3.1 Circular Textile Industry

Some interviews revealed the *alignment* between multiple levels of governance, particularly between the local and the EU. This cross-sectoral interaction was mentioned by two Project Leaders at the ADC: Annette Kouwenhoven, responsible for the Amsterdam City Rights, and Roosmarie Ruigrok, responsible for the Reflow Textile Lab.[103] The latter is an EU funded project in six European cities, whose goal is to make the textile industry circular, by reducing its waste and CO_2 emissions. Reflow project suggests two considerations: i) ACF *learning process* to bring policy change forward can be more *effective* when multiple levels of governance align; ii) the importance of Parke's definition of cities as "antennae," and the warning on their limited capabilities. This explains why the interaction with the EU level of governance brings additional resources to Amsterdam. Beyond being a member of the ADC, Ruigrok also works as a Policy Officer in the Waste & Material Department at the Municipality of Amsterdam, making her an expert of both organizations. This proves how the city

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[101] Strategic Advisor for Transformative Innovation at the ADC, personal communication, 21st January 2022.
[102] Kosovac et al., "City Leaders Go Abroad."
[103] "Reflow."

ACF is characterized by a fluid network, where people are often members of more than one organization, facilitating their alignment.

4.3.2 Social Inclusion for Migrants

The Amsterdam City Rights[104] project also lies within the EU framework of the City Rights United initiative,[105] advocating for regular documentation for undocumented migrants. Amsterdam cannot fully be within the Doughnut, if many migrants are left without documents and are recognized as regular citizens.[106] Participation, awareness, and *social inclusion* are key towards the engagement with the Doughnut. Annette Kouwenhoven, Project Leader at Amsterdam City Rights, said that Kate Raworth herself was so interested in the project that she pushed for its involvement in the ADC. Just like it happened to the WMTC initiative, also Amsterdam City Rights was at first an independent movement, which only after joined the ADC. This happened because of the shared beliefs system, typical of ACF. "You can develop all kinds of economic models, but if you don't include people that are not registered, then it can never be *inclusive*."[107] Kouwenhoven has also been working with the Municipality to develop a *City ID* as an identifying document for everyone - advocating for healthcare, education, work, and housing. This interview shows a concrete application of the inner social foundation of the Doughnut, essential within the *systems beliefs* of the city ACF.

4.3.3 The Doughnut as a Space

Within the ADC, designers and architects have also been involved. It is the case of Boaz Bar-Adon, architect and Project Leader of ECODAM,[108] a public space where children can experiment and learn what circular economy means. "This is really not about making *profit* or *growth but* having a place that gives more than it gets."[109] Boaz Bar-Adon stressed the importance of *educating* children: as the next generation, it is key to teach them the pillars of a circular eco-social alternative, inspired by the Doughnut. This target echoes the *learning process* of an ACF, a fundamental step to bring policy change forward. WMTC, Amsterdam City Rights and ECODAM are three key projects for the ADC, given their attempt to *concretely* implement the Doughnut' *social foundations,* essential values of the city ACF. These three projects share a *pragmatic* approach to the Doughnut, so they witness a fruitful learning process at the ACF level.

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[104] Amsterdam Donut Coalition, "City Rights."
[105] Borrelli, "City Rights United."
[106] Kouwenhoven, A., personal communication, 24th January 2022.
[107] Kouwenhoven, A., personal communication, 24th January 2022.
[108] Amsterdam Donut Coalition, "Ecodam."
[109] Bar-Adon, B., personal communication, 3rd February 2022.

4.4 Communication Tool, Doughnut Strategy & Wicked Problems

Another recurring theme across the interviewees is that of the Doughnut as a communication tool. Ilektra Kouloumpi, Senior City Manager at Circle Economy, curated the writing of the report *Circular Strategy 2020-2025*. She emphasized the difficulty of bringing actors together and *aligning* their interests within the Municipality. "It is true that as a narrative, the Doughnut is very powerful,"[110] yet she recognizes the difficulty of *institutionalizing* it as a concept across diverse departments.

"One thing is that the Vice Mayor says '*we want to become a Doughnut city*', another is that the departments which design different strategies (economic, health, education strategy etc.) *all align into that.* This is already a very big obstacle: to see this complete *acceptance* and understanding of *what alignment really means.*"[111]

This comment reveals the actors' attempt to extend their ACF to other departments, an often-difficult task.

"People really understand the Doughnut and it can create very interesting conversations on the table; but one thing is to bring it on the table, on the workshops, and another thing is to really make it *institutional* and make it *part of the government* of the city, where all people understand it and want to live *with it*, to operate *within*."[112]

These observations show how difficult it can be to expand *coalitions* within an ACF, especially because innovative ideas like the Doughnut may create backlash across departments. Despite some opposition, much progress has been made about the internalization and institutionalization of the Doughnut in some offices of the local government. When talking about *The Amsterdam City Doughnut*, Kouloumpi claimed that the Municipality changed its monitoring tools, to integrate the *four lenses* of the Doughnut:

"They moved from assessing the progress of the city based on *economic* indicators only, to a much more *holistic set and dashboard of indicators*, incorporating all the different *four lenses* of the *City Doughnut*."[113]

This quotation witnesses the degree of *internalization* and *institutionalization* of the Doughnut within the Municipality, since the *four lenses* of the *City Doughnut* (Figure 7) became official indicators to

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[110] Kouloumpi, I., personal communication, 7th December 2021.
[111] Kouloumpi, I., personal communication, 7th December 2021.
[112] Kouloumpi, I., personal communication, 7th December 2021.
[113] Kouloumpi, I., personal communication, 7th December 2021.

assess the city's progress. Such internalization suggests a successful *learning process* within the city's ACF. Kouloumpi defines a "thorough and holistic approach" the adoption of the Doughnut indicators in the three reports setting up the city strategy. This *thorough and holistic approach* derives from the Municipality's adoption of systems thinking as an analytical tool. Here lies the correlation between ACF and systems thinking: the adoption of the *Doughnut* as an analytical tool for the policy reports mirrors the Municipality's will to consider Amsterdam as a metabolism, through systems thinking.

Andrew Fanning, Research and Methodology Expert at DEAL, works towards an innovative methodology for Doughnut Economics within the Thriving City Initiative (TCI). He knows directly Ilektra Kouloumpi, given the close interaction between DEAL and Circle Economy. Fanning emphasized how holistic the Doughnut is as a framework and how strong it is as a communication tool. Fanning defines it as "such an *inspiring* force for change,"[114] maintaining how the model can help organizations, policymakers, and entrepreneurs to work towards *regenerative and distributive* economies. Amsterdam can act as a pioneering city, for its favorable conditions, and be a source of "peer to peer inspiration" for other cities.[115] Differently from the two other TCI cities Philadelphia and Portland, Fanning argues that Amsterdam is *uniquely positioned*. This is because the Municipality itself *internalized* the Doughnut, taking *ownership* of this methodology and publishing the results with the *Amsterdam City Doughnut* report.

This degree of *internalization* is a sign of the ACF permeating the city, which also wishes to export its model to other cities. This reiterates Parke's definition of cities as *vectors of policy transfer*:[116] due to their decentralized features, urban realities can make strong *diffusion arguments*. Amsterdam's attempt to inspire other ambitious cities results from the diffused ACF within the city.

The Circular Innovation Strategist at the CTO at the Municipality,[117] Arjan Hassing, worked with Kate Raworth to deliver a presentation to high level representatives of larger Canadian cities that were interested in the journey of the Amsterdam's Doughnut (this presentation was kindly shared for this research).[118] Responsible for developing the circular Monitor and for the Amsterdam Doughnut Strategy, Hassing personally knows Raworth and the ADC's founding members. This is significant: the contacts with Raworth and the whole ADC are a symptom of an ACF in the city, made of familiar relationships of actors knowing each other directly.

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[114] Fanning, A., personal communication, 3rd December 2021.
[115] Fanning, A., personal communication, 3rd December 2021.
[116] Parkes, "City Diplomacy."
[117] Amsterdam Smart City, "Chief Technology Office."
[118] Hassing and Raworth, *Journey of the Doughnut and Circular Strategy.*

When talking about the actors' architecture in the city, Hassing described the network as *scattered*, fluid and *collaborative*:

"What we do at the CTO Team is to help *entrepreneurs,* knowledge institutes, fundraisers. We have a *broad network of frontrunners* we work with. We link them with internal departments, or procurement departments. In this way, we help them grow, scale, and *stimulate public-private cooperation*."[119]

Just like the Strategic Advisor of the ADC, also Hassing used the *Amsterdam approach* as a term to describe actors' alignments in the city. The fact that members of different organizations use the same terms to describe the city coalitions suggests the existence of a shared *taxonomy,* part of the *common* learning process of the city ACF. In addition, Hassing revealed that the reports about Amsterdam's circular strategy were developed by over *twenty internal departments* of the Municipality. Offices that never worked together before started cooperating: this unusual *alignment* of departments further advances the idea of an existing ACF, promoting Doughnut inspired ideas. In this light, the CTO Team tried to maximize the *learning process* about the Doughnut values by involving more departments, looking for more *allies,* to increase resources and capacity.

"I think it is very good that the Amsterdam Donut Coalition is here, because it is such a big *public movement*. At the same time, there are also concerns about whether people in the neighborhoods *always* and *everywhere* realize that we are a Doughnut City, and whether they feel part of it. These are critical questions we get, and these are also reasonable questions. I think it is true, but it is also very important to note that *we do not claim to be a Doughnut city*: we have taken the Doughnut model and it is our desire to become *more of a Doughnut city.* But we are not there yet, and it is not because we embrace it that we instantly become a Doughnut city."[120]

This is interesting as it shows that the *internalization* and *institutionalization* of the Doughnut require time and a progressive transition. The path towards becoming a Doughnut city is still long, but progress has been made, thanks to the efforts of ambitious actors such as the CTO, which has been experimenting ways to make the Doughnut an applicable policy tool. For this purpose, the Municipality's CTO cooperated with many actors, such as DEAL, the ADC, and research centers like the Amsterdam Institute for Advanced Metropolitan Solutions (AMS): [121] these *coalitions* validate the presence of a vibrant ACF within the city.

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[119] Hassing, personal communication, 1st February 2022.
[120] Hassing, personal communication, 1st February 2022.
[121] AMS, "Reinventing the City."

The AMS, a key university partner of the CTO, organized a "Virtual Co-Design Session" chaired by the Senior R&D and Innovation Specialist at the Municipality of Amsterdam. During the session, which was about tools to foster circular economy in the city, the Doughnut emerged as a powerful instrument to inspire other cities, to enhance the *learning* of circular strategies. Despite being an effective communication tool, the Doughnut can still be difficult to interpret. This is what Marlies Veld, Energy and Climate Specialist at the CTO Team, said when talking about the Doughnut as a *wicked problem*:

"You have projects or initiatives that really start from this Doughnut perspective, but there are also many projects that do not. How *can and should we define* a Doughnut project? When do you frame something as a *Doughnut initiative* and when is it *only* helping the energy transition?"[122]

Because of its complexity as a model, it is difficult to implement the Doughnut as a policy tool. The Municipality adopted systems thinking considering the Doughnut as a wicked problem, to grasp the systemic repercussions of "apparently isolated issues."[123] Yet, because of its overarching and ambitious goal, the way to transform the Doughnut into a concrete tool with policy application remains an unchartered path.

This chapter showed how the interviews corroborate the argument that there is a fruitful ACF advocating for the Doughnut implementation in the city. The subsection *Actors' Coalitions, Shared Values and Social Foundations* demonstrated what actors *align*, the *reasons why* (sharing of resources and impact maximization) and what *system of beliefs* they advocate for. Subsections *Theorization and Practice, Amsterdam Approach and Concrete Examples* validated the main argument explaining how actors' alignments result in a learning process around the Doughnut, and how this leads, in turn, to the concrete application of the Doughnut into three grassroots projects. Lastly, subsections *Communication Tool, Doughnut Strategy and Wicked Problems* corroborate the argument for which the Doughnut is a powerful instrument to raise awareness, showing the degree of internalization of its principles by the Municipality, while also confirming the difficulty of its implementation.

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[122] Veld, M., personal communication, 20th January 2022.
[123] Freeman, Yearworth and Cherreault, "Review of Literature on Systems Thinking for Policy Making," 7.

Chapter V: Lessons from Amsterdam, the *Doughnut-City-To-Be*: Where to Next?

The objective of this research has been to examine Amsterdam's endeavour to adopt a climate-adaptive *dietary regime* engaging with Doughnut Economics. Chapter I introduced the concept and explained the necessity of climate action at the urban level, through the prominent role of cities. Chapter II displayed the theoretical frameworks, where ACF favoured the analysis of how actors *align, create learning processes, and bring policy change* forward. Systems thinking facilitated the understanding of a *fluid, diffused and cooperative* governance, to tackle *wicked problems* such as the Doughnut. City diplomacy served as the magnifying glass to grasp Amsterdam's capacity as "*antenna*" and "*policy percolator*" via its decentralised power. Chapter III examined the three key policy reports setting up the circular and climate neutral strategy of the city. Chapter IV discussed and interpreted the interviews, which corroborated the argument that there is a strong ACF in Amsterdam, advocating for the implementation of the Doughnut.

The initial assumption was to understand Amsterdam's engagement with the Doughnut by grouping the players into a Trans-governmental and Transnational Private Regime. Yet, as shown in Chapter IV, actors align *fluidly* in partnerships, beyond a public/private dichotomy. This is because the ACF happens through a *collaborative* governance where diverse actors align. Here lies the synthesis with ACF and *Systems Thinking in Practice (STiP)* driven governance: not only is the ACF learning process facilitated by the city's decentralized and democratic structure, but the Municipality seems more prone to experiment a new *collaborative governance*. As shown in Chapter III and IV, the *Amsterdam Approach* is made of six different players: SMEs/Start-ups, Communities, Commons, Corporates, Governments and Academia. With a STiP driven governance, Amsterdam attempts to govern the biosphere and the commons, loyal to the social inner circle of the Doughnut.

The research asked: "to what extent and under what conditions can Doughnut Economics be used as a tool for transformative action in the city of Amsterdam?" The primary data indicate that a successful engagement with the Doughnut depends on how resilient and widespread the ACF in the city is. So, the quality of the ACF rests on the players' ability to *align*, enhance *learning process* and bring *policy change* forward. Much progress has been made to bring Amsterdam closer to a Doughnut city, and this has been possible thanks to a lively ACF of actors' coalitions. This vibrant ACF *initiated* Amsterdam's journey to become a climate adaptive city with Doughnut Economics, but this is a gradual transition requiring further work. No city in the world is a Doughnut City *yet*,[124] so Amsterdam has been successful in paving the way for its journey towards its eco-social *diet*. To reach the

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[124] Fanning, A., personal communication, 3rd December 2021.

ecologically safe and socially just space within the Doughnut, a gradual transition is necessary. It would also be unfair to expect Amsterdam to perform perfectly in such uncharted waters,[124] given the *global* scale of climate change. As Parkes argued,[125] cities can be active actors tackling climate change, but they cannot provide a solution *on their own*. Climate change presents a global and transnational magnitude before which cities only have *limited* capacity. Cities can adjust their *diet* by becoming climate adaptive, but conclusive changes only happen when higher levels of governance are involved (national and EU level).

There is a growing awareness that *transnational policy responses* are necessary to tackle our century's interconnected challenges. As a complex concept, drafting recommendations about the Doughnut's implementation as a policy tool is difficult, yet lessons can be drawn from the Amsterdam's case. Amsterdam's efforts to incorporate the Doughnut in its *diet* has been possible thanks to a fluid ACF in the city, through an experimental and STiP driven governance. The guidelines of IOs such as the OECD and its OPSI, [126] along with the International Institute for Applied Systems Analysis (IIASA),[127] are worth mentioning. To promote cross-sectoral policy responses, OPSI and IIASA recommend *systems thinking* as it allows to take "proper account of the crucial linkages between issues *generally treated separately* within different specializations and institutional *silos.*"[128] As shown in Chapter III, this explains Amsterdam's Municipality efforts to adopt the Doughnut as a more holistic dashboard of indicators, going beyond the silos of knowledge via *systems thinking.*

Some key *systems thinking inspired policies* proposed by OPSI imply collaboration on inclusive growth and well-being; tailor-made policies for the climate, ecosystems, energy; linkages between finance, investments, and climate change; long-term strategies for employment, a fair approach to water, food and trade. Governments should experiment a new cooperation with multiple stakeholders, starting from CSO. To the OECD, good *systems thinking inspired policies* include the government's ability to *redefine and co-create* policies *with and for* their citizens. Amsterdam's Municipality has been doing this by working with its citizens through CSOs such as the ADC. Also, OPSI recommends governments to invest in human capacity, cross-government networks, and *systems analysis*. Another source of advice about how to incorporate the Doughnut within the policy domain is DEAL, providing nuts and bolts to work *within* the model from different actors' perspectives.

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[125] Parkes, "City Diplomacy."
[126] OECD, "Observatory of Public Sector Innovation."
[127] "IIASA."
[128] OECD, "Systems Approaches to Public Sector Challenges."

Such recommendations are relevant to develop STiP capability to tackle the wicked problems of our century. In its own way, Amsterdam attempts to reshape its governance system, engaging in *cross-sectoral* alignments, by using systems thinking through Doughnut Economics. Amsterdam's engagement with the Doughnut has been an *experimental* learning process, where many actors align to promote their shared system of beliefs, evidence of the rooted ACF in the city:

"We want to use this new model to develop *a new way of thinking*, to *inspire* people and *experiment* how to make this practical. We also work together with Kate Raworth, especially in this period of strategy development. We organized a lot of workshops in the city, with our own department but also with other partners, to see how we can make the Doughnut *concrete on all levels*. We are just going to continue this way, *experimenting* and *learning*."[129]

Comments like this manifest the interdependence between systems thinking and ACF. As shown in Chapter II, the two explain the city's *collaborative governance* and coalitions. Systems thinking is used to make the Doughnut applicable at the city level, via actors' coalitions under the ACF umbrella. Amsterdam's polycentric governance enhances a learning process towards Raworth's eco-social model, to *re-think* the current economic system from a cutting-edge angle. The 21st century challenges are *nonlinear* and complex, so they should be addressed by *nonlinear* and *systemic* tools such as the Doughnut.

5.1 Reflection on this Research

Regarding the study generalizability, the primary data collected is only valid for Amsterdam. However, Amsterdam's attempt to become a Doughnut city can be a source of inspiration for other local realities. This already happens in the Thriving City Initiative: Portland and Philadelphia in the USA are also working to become climate adaptive and socially just cities. *Peer-to-peer inspiration* is a fundamental factor in the equation: city networks such as C40 are catalyst fora for discussion and action. Yet, each city is a reality on its own, with its weaknesses and strengths: the way Amsterdam engages with Doughnut Economics is specific to its capacity and resources. Other cities may be inspired, and they will tackle wicked problems with their own ways.

Regarding future avenues of research, the thesis' limited scope did not allow for a more accurate analysis on how city-level *collaborative* governance can be empowered and connected with the national, supranational (EU) and international (UN) stage. It would be interesting to explore how

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[129] Hassing, personal communication, 1st February 2022.

to make cities more *resilient,* providing them with more resources. Urban contexts are endowed with inherent advantages (decentralized power, bottom-up approach, and networks) to tackle our century's transnational challenges. As an emerging field of research, it would be worth further investigating how higher levels of governance can foster cities' *local* capacity before *global* challenges.[130]

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[130] Kosovac et. al., "City Leaders Go Abroad."

ANNEX - INTERVIEWS

The researcher developed four standardized questions that were asked to each interviewee:

1) Could you please outline your professional background and current position and the manner or degree to which you are engaged, or not, in contemporary city debates related to the "Doughnut Economy"?

2) What are the main projects that you/your organization are involved in regarding the city debates related to the Doughnut concept and the Circular Strategy of the city?

3) What types of actors are you engaging/cooperating/partnering with?

4) Have you encountered opposing/resisting actors so far? What have been the main challenges?

These were then followed by semi-structured and more subjective questions for each of the interviewees. To comply with ethical standards, interview consent forms were distributed to each interviewee. Therefore, the research only mentions by name those respondents who gave their explicit consent to be named, while the others are kept anonymous.

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