

Applying Doughnut Economics Stateside: A Model for Philadelphia

Doughnut economics as a new global compass for addressing climate change

Introducing the Doughnut

Doughnut economics was conceived by English economist Kate Raworth as an alternative economic model to capitalism that strives to balance the needs and prosperity of humanity and the planet. Raworth first published the Doughnut in a [2012 Oxfam discussion paper](#).

The model has two concentric rings:¹

- A **social foundation** outlined to meet humanity's essential needs, based on the UN [Sustainable Development Goals](#) (SDGs)
- An **ecological ceiling** based on the [nine planetary boundaries](#) defined by Steffen et al. (2015), dimensions like biodiversity loss and air pollution that represent the ways that overproduction adversely affects the Earth's capacity to sustain life.

This proposed model aims to provide "humanity's compass in the 21st century" toward regenerative and distributive economies² by building upon ecological, feminist, institutional, behavioral, complexity, and other schools of economic thought.³

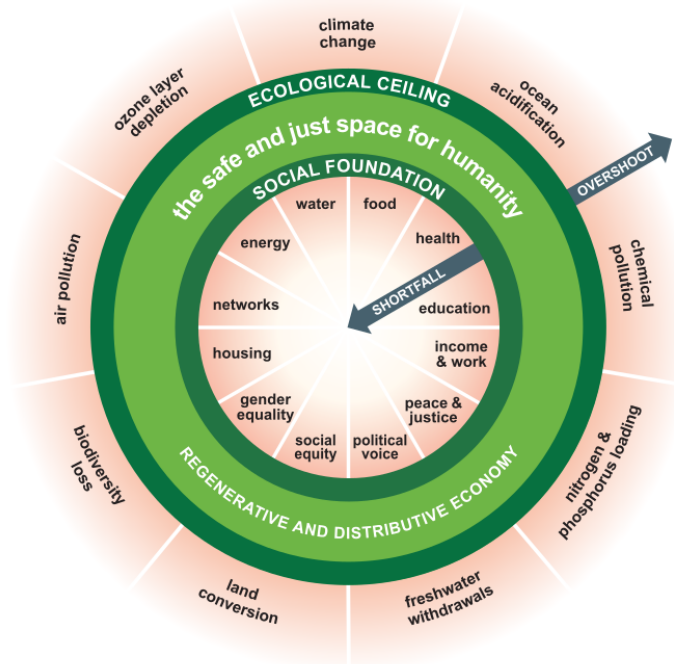


Figure 1. The Doughnut of social and planetary boundaries. Source: Doughnut Economics Action Lab

Applying the Doughnut

The Doughnut is a tool that can be used to identify where work is needed to reach climate, social, and economic justice. Figure 2 shows the global Doughnut – or what the Doughnut Economics Action Lab (DEAL) refers to as our “global selfie.” Where the diagram is red, we have either overshoot the ecological ceiling or fallen short in meeting the basic needs of all humans.

Doughnut economics is a global model, but DEAL also works to apply the concept at the community, business, organization, and city levels. To do this, they focus on reframing economic ways of thinking to disrupt pro-profit

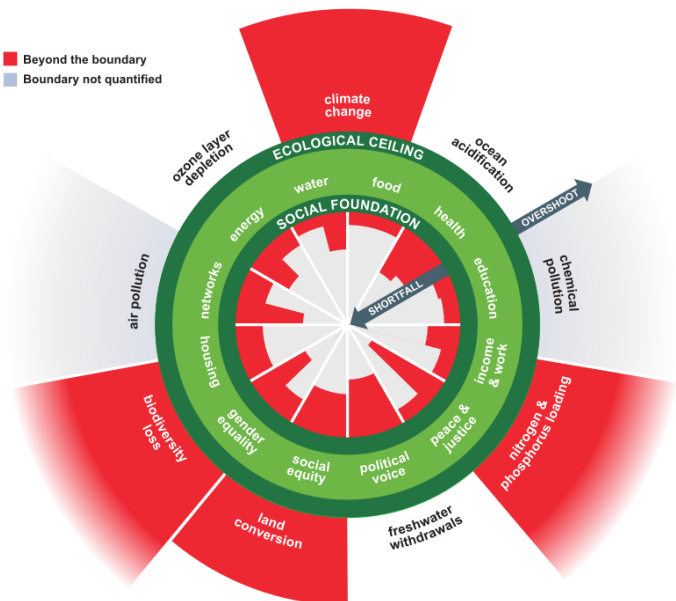


Figure 2. Quantifying the Doughnut: the current state. Source: Doughnut Economics Action Lab.

¹ Doughnut Economics Action Lab. [“About Doughnut Economics.”](#) 2022.

² Raworth, Kate. [“A Doughnut for the Anthropocene: Humanity’s Compass in the 21st Century.”](#) *The Lancet Planetary Health* 1, no. 2 (May 2017): e48–49.

³ Doughnut Economics Action Lab. “About Doughnut Economics,” 2022.

and GDP growth narratives, harnessing design tools to help organizations become more regenerative and distributive, and organizing workshops to spur implementation.⁴

As the world contends with the rising threat of climate change and its disproportionate effect on vulnerable communities, recovers from the inequitable health and economic burdens imposed by COVID-19, and recognizes the role capitalism plays in these issues, organizations and societies have looked for answers at the intersections of climate, economic, and social justices. The Doughnut has emerged as one such option; while it is unknown exactly how many communities are using it as an organizing and planning tool, the DEAL has individual members across the world.

Cities embrace the Doughnut

Scaling the Doughnut to the city

Will the Doughnut work as an alternative economic framework for cities seeking to address climate justice by tackling capitalism? The [Thriving Cities Initiative](#) (TCI) is trying to answer that question. TCI is a collaboration between C40, Circle Economy, and DEAL, funded by the KR Foundation. In the first three focus cities - Amsterdam, Philadelphia, and Portland - the collaboration is attempting to scale Doughnut Economics to the city. The first step in their framework is the development of a City Portrait shown in Figure 3.⁵ Each city is meant to select its own dimensions under each of the four lenses, assign targets, and choose indicators for monitoring. Once targets are selected, a present state analysis is conducted so that the city understands its starting point. This entire process can take place via community workshops and/or directly with city officials and is meant to reflect the individual city's context.

The Amsterdam City Doughnut

In April 2020, Amsterdam published [The Amsterdam City Doughnut](#), the first and so far, the only of the three cities to do so, following workshops in seven city neighborhoods and data collection, research, and analysis by city officials. Launched at the height of the pandemic, Amsterdam's Doughnut offered a framework for COVID-19 and climate crisis recovery with equity and regeneration at its core. The Amsterdam Doughnut identifies priority city dimensions and sets targets for each identified dimension. For example, under the "healthy" component of the Local Social lens shown in Figure 4, health, housing, water, and food emerged as priority city dimensions. The Doughnut then analyzes how Amsterdam is doing on each dimension: for health, while the city strives for "all citizens to have an equal chance of living a healthy life," the city snapshot reports that "40% of citizens are overweight and almost half have a moderate-to-high risk of depression or anxiety."⁶ This approach was replicated for each dimension; across all, Amsterdam strives to be a "thriving, regenerative and

Figure 3 The four lenses of the City Portrait

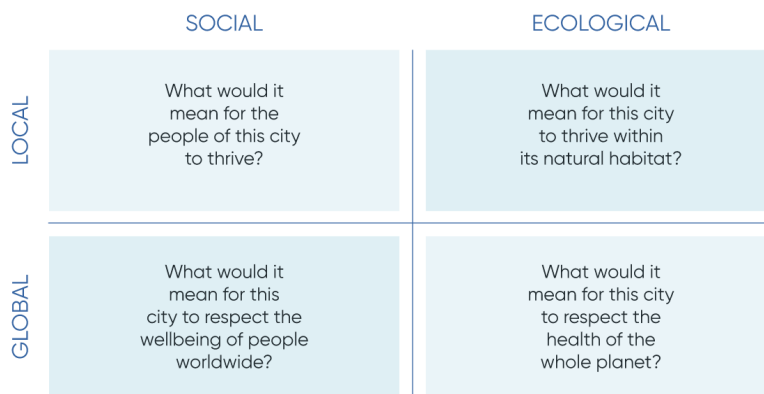


Figure 3. The four lenses of the City Portrait. Source: The Thriving Cities Initiative.

⁴ *ibid.*

⁵ Doughnut Economics Action Lab, Biomimicry 3.8, C40 Cities, Circle Economy, and KR Foundation. "[Creating City Portraits: A Methodological Guide from The Thriving Cities Initiative](#)." The Thriving Cities Initiative, n.d..

⁶ Doughnut Economics Action Lab, Circle Economy, C40 Cities, and Biomimicry 3.8. "[The Amsterdam City Doughnut: A Tool for Transformative Action](#)," March 2020..

inclusive city for all citizens, while respecting the planetary boundaries” – a vision well-aligned with Doughnut ethos.

Support for the Doughnut in Amsterdam is robust. The Amsterdam Doughnut Coalition, formed in December 2019, is a network of over 30 organizations (community groups, businesses, academia, local government, etc.) utilizing Doughnut Economics in their organizations.⁷ The City is investing resources in Doughnut Economics through the Circular Amsterdam Roadmap 2020-25, which identifies three value chains in focus for climate response in alignment with the Doughnut.⁸ The Doughnut has also been utilized by neighborhood and social groups in Amsterdam as a design tool to frame their organizational strategy.⁹

The promise of the Doughnut

Amsterdam's early successes with the Doughnut are encouraging, but the silence from Portland and Philadelphia's Doughnut initiatives poses an interesting question: *How can we critically evaluate the Doughnut's early success in Amsterdam and consider its potential application in a U.S. context?*



Amsterdam and the Doughnut: a match made in heaven

Overview of Amsterdam

Amsterdam is the capital of the Netherlands, a wealthy country in northern Europe. 2.5M¹⁰ people live in the Amsterdam metro, with

1.1M¹¹ in the city proper, but its population density is relatively low compared to other European cities at 12K people per square mile. Amsterdam is one of the more racially diverse cities in Europe. Citizens of non-western origin make up 35% of the total population and 50% of children. Education is the locus of racial segregation in the city: people of color are overrepresented in lower levels of education, and segregation is a significant problem.¹² People who are not ancestrally Dutch also tend to live in regions with lower household income. Figure 5 shows income and non-western nationality distribution of the population across the city.

⁷ C40 Cities Climate Leadership Group. “[Amsterdam's City Doughnut as a Tool for Meeting Circular Ambitions Following COVID-19](#).” C40 Knowledge Hub (blog), May 2020..

⁸ City of Amsterdam. “[Policy: Circular Economy: Amsterdam Circular Strategy 2020-2025](#),” n.d. .

⁹ C40 Cities Climate Leadership Group. May 2020.

¹⁰ Metropool RegioAmsterdam, “[About MRA](#).”

¹¹ World Population Review, [Amsterdam Population 2022](#)

¹² Tracy Brown Hamilton, “[Solving the Problem of Amsterdam's 'Black' and 'White' Schools](#).” June 2015. *The Atlantic*, 2015.

Climate risk in Amsterdam

The Netherlands faces significant climate risk from flooding and heat stress.

Flooding: Amsterdam is known for its canals and other waterways, and 55% of the Netherlands's land mass is at risk of submersion in future flooding events. Flooding in the city is concentrated from a few sources: the ocean, the river, and water systems. While outlying neighborhoods like Watergraafsmeer, which tend to be lower-income, are disproportionately vulnerable to flooding, this risk affects the whole city.

Heat stress: Like many other European cities, heat is a rising risk in Amsterdam. In a series of heatwaves in summer of 2019, nearly 3,000 people died from heat stress, a 15% increase above baseline.¹³ From 1920 to 2020, the total number of days above 25 degrees Celsius has more than doubled from 13 to 30, while the summer of 2020 ranked sixth hottest since 1901.¹⁴ Taken together, longer and hotter heatwaves and increasing concentrations of heat in the city pose a significant risk to the health of Amsterdammers, particularly elderly and low-income people who are especially vulnerable or lack access to cooling centers.

Climate is a significant, highly visible issue in Amsterdam against a backdrop of other social issues; the Doughnut model is appealing in part because it offers a way to address both simultaneously.

Governance structure

Amsterdam's city council has representatives from 12 parties. The Mayor and three of the remaining eight municipal executives are members of the Green Party, which won 20% of the vote in 2018 and experienced the largest increase in total number of seats on council. Labour, Democrats 66, and the Socialist parties hold the remaining five seats.

This council was elected with high rates of voter turnout: 46.6% of Amsterdam residents voted in the last election. This reflects in part the importance of the city council positions: city government routinely coordinates with the national government on planning initiatives like the nationwide circular economy strategy.

Economic justice-centered doughnut

The city's four main policy priorities are: City in Balance, Traffic and Transport, Green Space, and Sustainability and Energy. A "City in Balance" refers to many topic areas, one of which is "Equal

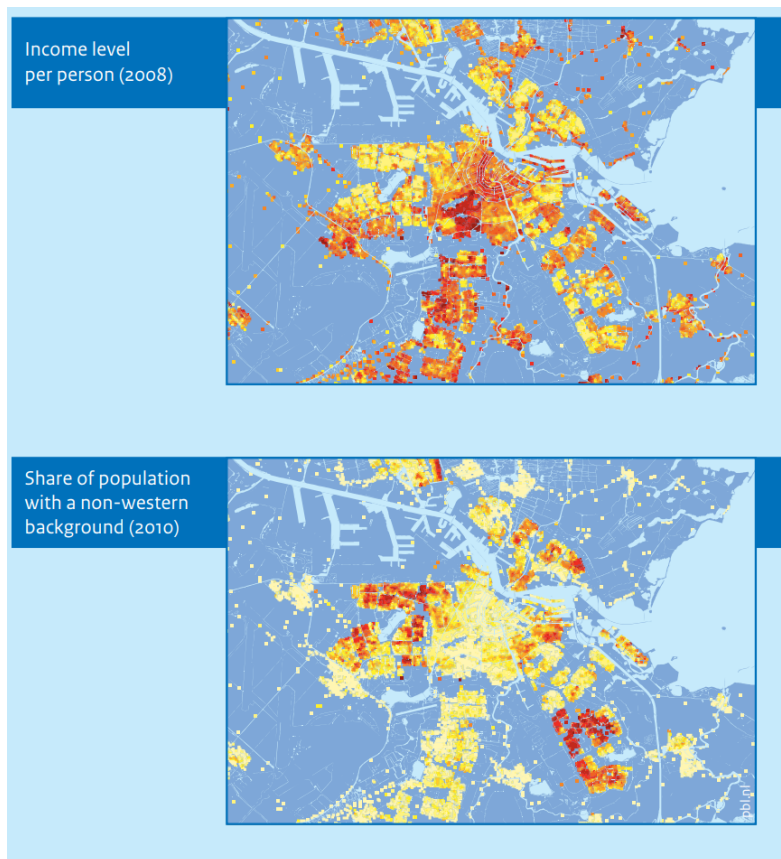


Figure 5. Amsterdam Income Distribution; Netherlands Environmental Assessment Agency

¹³ ["Heatwave caused nearly 400 more deaths in Netherlands: stats agency."](#) August 2019.

¹⁴ ["100 years of Dutch summers: the clock is ticking on climate change."](#) Amsterdam Institute for Advanced Metropolitan Solutions, September 2020

Opportunities”. This largely hinges on urban employment rates and removing financial constraints for lower-income households.¹⁵ The Doughnut Model is reflective of these topics of focus, largely because the city’s main objective is achieving fairness with regard to socioeconomic status.¹⁶ While Amsterdam’s Doughnut does address skin color, nationality, and ethnicity, race is largely relegated to the general consideration of “equality in diversity.”¹⁷ The Doughnut reports that 16% of residents in lower-income neighborhoods feel they lack control over their lives, which is 5% higher than the national average. The Doughnut contributes to Amsterdam’s social equity goals by focusing on financial security, including attracting more jobs and supporting education.

Moving to America: Doughnuts in Philadelphia

Doughnut Economics fits well with Dutch politics and priorities: broad-based support for cutting consumption engendered buy-in to the Doughnut’s foundational framework, and the city’s attention to socioeconomic justice aligns naturally with the Doughnut’s focus on right-sizing consumption and meeting basic needs.

Whether American cities will embrace Doughnut Economics is less clear. Portland and Philadelphia have committed to producing their own and a DEAL blog claims that all Thriving Cities Initiative sites have held their initial Doughnut workshops, but only Amsterdam has published one.¹⁸ Taking Philadelphia as a test case, we want to critically examine the Doughnut’s suitability to US context given the differing social, economic, and political fabric of city life.

Overview of Philadelphia

Philadelphia is the sixth-most populous city in the US and one of the oldest urban centers in the nation. It became a major industrial center in the 19th and 20th centuries, and continues today as a cultural, education, and economic hub of the Northeast. Major commercial sectors of Philadelphia include financial services, health care, biotechnology, information technology, trade and transportation, manufacturing, oil refining, food processing, and tourism. According to the most recent US census 40.1% of the city population is African American, 34.2% is White, and 15.7% is Hispanic or Latinx, and 7.5% is Asian.¹⁹ Philadelphia’s city government uses the “strong mayor” form of mayor–council form of municipal government in which executive authority is vested in the mayor.²⁰

Racial wealth inequality

The wealth inequality gap in Philadelphia is one of the largest in the nation. Households in Philadelphia’s top five percent earn an average of \$319,400 in income which is over eight times that of the city’s median household earnings (\$39,800).²¹ This inequality disproportionately affects people of color (see Figure 6).²²

For example, in 2019 Black households in Philadelphia made up 40% of the population but 56% of all households earning less than \$10,000 a year. Latinx households earn the least among the city’s racial and ethnic groups, receiving only

Figure 6. Income Distribution of Households by Race for Philadelphia (2019).

¹⁵ City of Amsterdam, “[Implementation plan: Equal opportunities](#).” 2019.

¹⁶ [Coalition agreement \(download\) - City of Amsterdam](#)

¹⁷ “[The Amsterdam City Doughnut](#): A Tool for transformative change.” DEAL et al, 2020.

¹⁸ Kate Raworth. “[Introducing the Amsterdam City Doughnut](#).” *Exploring Doughnut Economics* (blog), April 8, 2020. .

¹⁹ “[Philadelphia city, Philadelphia county, Pennsylvania](#).” *US Census*. Accessed 15 April 2022.

²⁰ [Philadelphia Home Rule Charter](#), 1951.

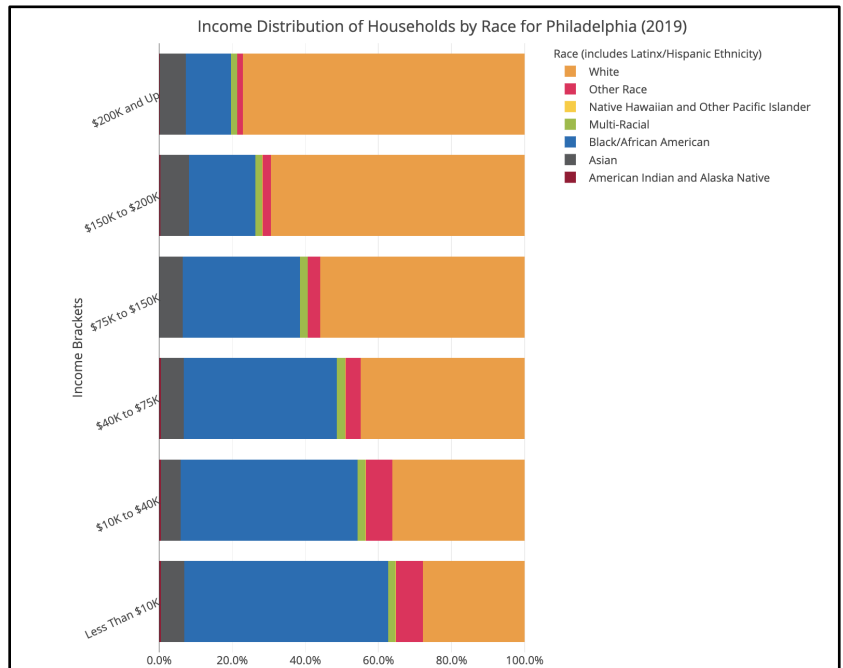
²¹ Cineas, Fabiola. “[Philly Has the Country’s Third Worst Income Gap, Study Finds](#).” *Philadelphia*. October 2018.

²² “[Income Inequality among Philadelphia’s Workforce: An Update](#).” Shields, Mike; Gavrykh, Diana; Strohmets, Andrew; and Liu, Zijing. *Economy League*. August 2020.

\$0.57 for every white male dollar earned.²³ Applying the Doughnut model - which does not meaningfully include racial justice in the center or explicitly acknowledge racial wealth inequality as a consequence of excessive production in the status quo - is challenging in the context of these racially-centered disparities.

Consumerism in Philadelphia

Like many US cities Philadelphia's economy relies on capitalism, globalized industry, and heavy consumption. Efforts to restrict consumption are often met with heavy backlash. For example, an initiative in 2016 by health advocates and city officials to impose a soft drink tax stirred widespread controversy that continues in 2022.²⁴ Anti-tax lobbyists and affected firms spent millions combating the measure, and five years later efforts are still underway to appeal the decision.²⁵ Such forceful defense of unregulated consumption poses a stark difference to Amsterdam's relative openness for reducing consumption and applying the standard Doughnut model.²⁶



Philadelphia's supply chains and global integration

Like many major US cities Philadelphia's commerce is both nationally and internationally integrated. A significant portion of its food supply chain, for example, consists of both national and international sources. The share of broader US sources is projected to sharply increase by 2035, making the city more reliant on external commercial factors beyond its culture.²⁷ Such economic aspects differ from Amsterdam's context in which regional coordination and support appear to be more widely available.

A Doughnut for Philadelphia

The future of Philadelphia's doughnut economics - and the model more generally - is uncertain. The city signed onto the Thriving Cities Initiative in 2019, but it's unclear what progress has been made: an online search yields no evidence of community meetings or civic engagement on the Doughnut, and as of yet, the initiative has not announced when the city will release its portrait.

This uncertainty is perhaps representative of the Doughnut's future in other cities, too. As the theoretical model grows in popularity without reaching scale in implementation, critics are beginning to wonder if it is destined to be yet another framework for climate action that ultimately neglects the hardest part of the work, implementation.²⁸ Others see its popularity as an alarm bell: its palatability to capitalists (i.e., progressive CEOs) has engendered skepticism among leaders approaching climate solutions from the left. Finally, some

²³ Ibid.

²⁴ Prentice, Chris. "[Soda lobby, others sue to block Philadelphia's soda tax.](#)" *Reuters*. September 2016.

²⁵ Moselle, Aaron. "[Philly Councilmember David Oh introduces bill to repeal city's sugary beverage tax.](#)" *PBS* January 2022

²⁶ [Amsterdam Circular 2020-2025 Strategy](#), p.14.

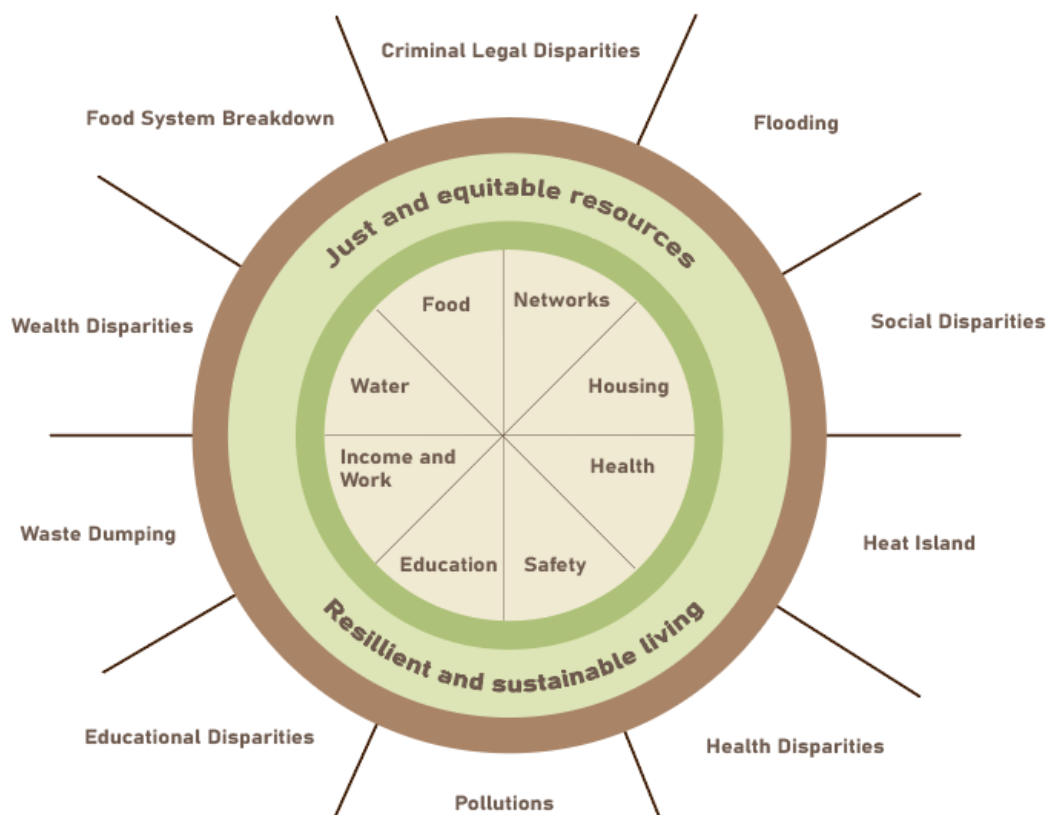
²⁷ Delaware Valley Regional Planning Commission, "[Greater Philadelphia Food System Study](#)." January 2010.

²⁸ Teicher, "[Doughnut economics has a hole at its core.](#)" September 2021.

have noticed parallels to existing and past models in indigenous communities and climate activism circles: while Raworth cites these ideas, it's worth considering whether the doughnut economy appropriates some of the ideas at the core of indigenous peoples' approaches to resource management and a circular economy without explicitly centering their needs, or fails to learn from past iterations of similar circular-style models.

Acknowledging those critiques, what is the best-case scenario for Philadelphia's doughnut economy? We have reimagined one potential version of the doughnut model situated in Philadelphia's unique context of deep racial and economic injustice and the American hesitance to curb consumption.

In Philadelphia's status quo, increasing consumption has implications for racial justice, as well as the environment. At the same time, the city's deep, persistent challenge with systemic racism should warn strongly against leaving consideration of racial justice to individual implementers. The motivating ethos of the Doughnut framework also provides an argument for including racial equity among the effects of "overshooting" the livable ring: in the status quo, all kinds of racial inequality grow with wealth, both directly through the accumulation of wealth and indirectly through the hollowing out of low-income neighborhoods as wealth concentrates in wealthier, white communities around the city.



Even with this adapted version of the Doughnut, there are open questions.

- **Is it useful?**

Is a racial justice-centered doughnut what Philadelphia needs to make headway on climate response, or does their real challenge lie in implementation - and if the latter, is the Doughnut still useful?

- **Should we trust it?**

How does this model reconcile and include the tremendous amount of work already done by climate and racial justice advocates in Philadelphia; further, if this model garners the support of Philadelphia's economic elite, as it did in Amsterdam, should advocates trust it?

- **How can we make it better?**

Given that Philadelphia's Doughnut has been developed so far without much community input at all, what participatory mechanisms could the city government use to legitimize, improve, and implement the Doughnut and shift power back to the people who are most directly affected by the issues it seeks to solve? **In other words, how - if at all - can we democratize the Doughnut?**

APPENDIX

The Philadelphia Climate Action Playbook, published in January 2021 by the Philadelphia Office of Sustainability, outlines the city's climate action in three areas through 2050. It brings together plans from across city departments to create one comprehensive view of how the city will achieve its climate goals.

Climate Action Areas

This playbook comprises a portfolio of climate actions Philadelphia will pursue in 2020 and beyond. The playbook is divided into three areas:

1

Reducing our Contribution to Climate Change

Actions to reduce carbon pollution.*

2

Utilizing Nature as a Solution to Climate Pollution

Actions to remove carbon pollution from the atmosphere.

3

Adapting to a Changing Climate

Actions to prepare Philadelphia for a hotter, wetter future.

KEY

- ☒ FULL BENEFIT
- ☐ PARTIAL BENEFIT
- ☐ NO BENEFIT
- ☐ NOT ASSESSED

REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE				EQUITY			HEALTH			ENVIRONMENT			ECONOMY			GHG REDUCTION BY 2050 FROM 2006 BASELINE					
BUILDINGS AND INDUSTRY		SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
1		Citywide Clean Electricity Supply		Work towards a 100% clean electricity grid through local renewable energy purchasing and generation. Advocate at the State, Regional and Federal level for clean energy production and policies that open markets to clean energy. Explore renewable energy projects in key utilities and infrastructure such as PWD and PHL.	E0,005																n/a

Each chapter contains a matrix of climate actions. For each climate action, the lead and supporting partners are listed. An analysis of each action's equity, health, environmental, and economic impacts was conducted and the results are shown in the table.

Each chapter contains a matrix of climate actions. For each climate action, the lead and supporting partners are listed. An analysis of each action's equity, health, environmental, and economic impacts was conducted and the results are shown in the co-benefits matrix to demonstrate how climate actions support the priorities and address the challenges unique to Philadelphia. Below the matrix, further descriptions around co-benefits are included, as well as measurable goals and metrics and what plans they come from. We also outline state and federal actions that can help support or enable Philadelphia's climate action goals.



Refer to the "Key Documents" sections throughout for clickable links to relevant reports.