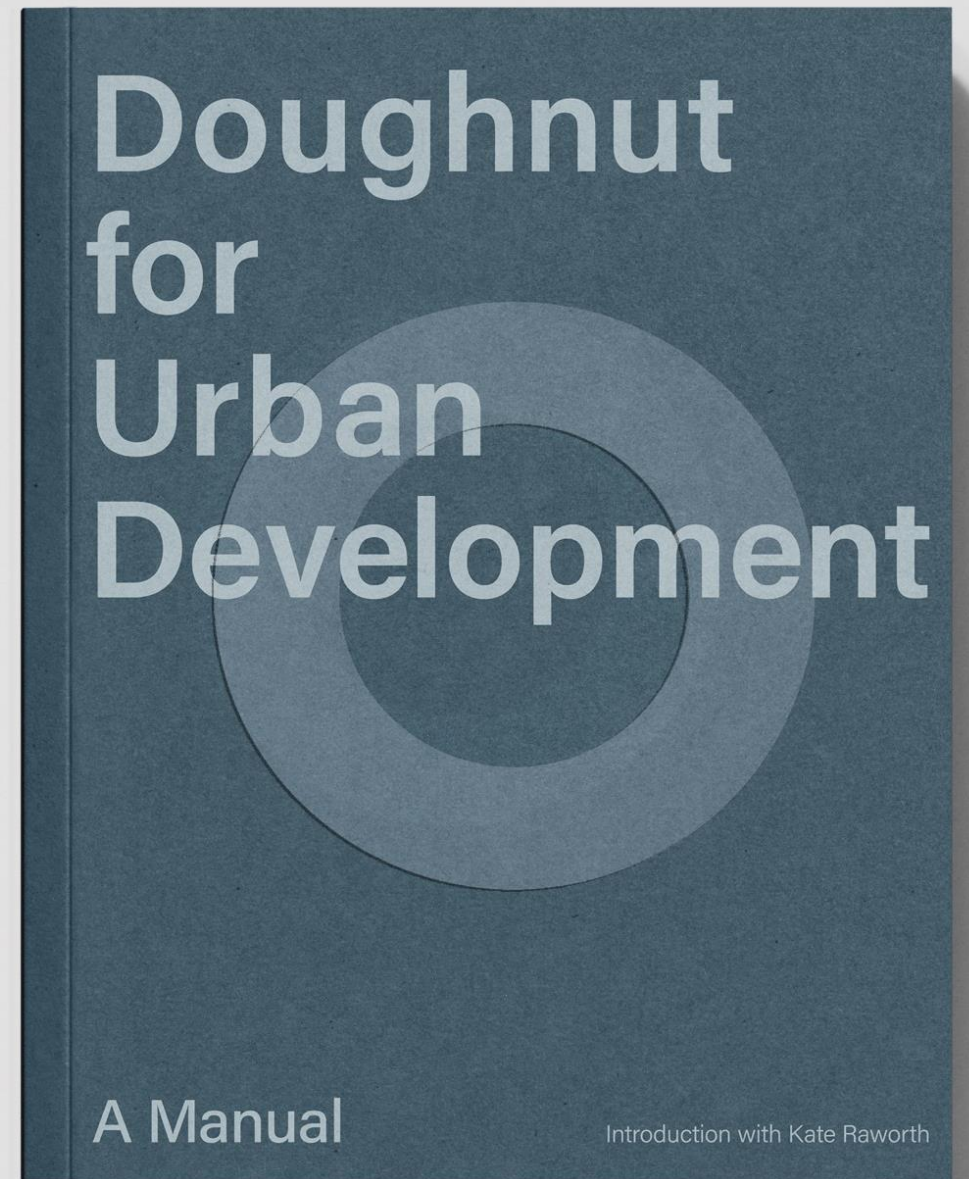


Doughnut for Urban Development - TOOLKIT







Introductory slide deck for participants

Created by EFFEKT with support from Realdania



Quick overview:

Toolkit designed in a workshop format for developers to implement the core principles of the Doughnut in Urban Development

	Objective From Concept to Action
	For whom Developers and other building actors
	Expertise Prep needed is reading the book
	Scope Holistic - nothing is off the table
	Duration and variations Min 4h, recommended 6h, can be divided into 2 days
	In person and/or online In person and/or online

Parts

- 1. Part 1 - Introduction
- 2. Part 2 - Diving Deeper
- 3. Part 3 - Application

Materials:

- A. The Doughnut for Urban Development Manual
- B. Discussion Cards
- C. Concept to Action Matrix and Unrolling the Doughnut into four lenses Matrix
- D. How to guide for workshop facilitators
- E. Social & Ecological Impact Wheels
- F. Impact Areas Sheets
- G. C-Level Letter
- H. Letter to Practitioners



Important: Prior to beginning, please read the "How-to Guide" designed for workshop facilitators

About this toolkit:

A toolkit designed for developers and other actors in the building industry to implement the Doughnut's core principles in Urban Development. It is designed in a workshop format that goes from concept to action, helping organizations to create building projects within social and planetary boundaries. The toolkit can be used in an organizational level (strategy) or/and in the building- project level.

The Doughnut approach emphasizes taking responsibility for Urban Development's impact within a European context, moving away from exploiting distant regions. To embrace regenerative and redistributive design, we must redefine the purpose of Urban Development, requiring a profound paradigm shift. Incremental change is no longer viable; we have the frameworks, tools, and strategies to steer development toward regenerative and equitable goals. The time for action is now!

The toolkit is open-source and free to access and customised. It evolves continually based on feedback and learning, so we welcome contributions from everyone to further enhance its development. Please share and contribute to its continuous improvement!

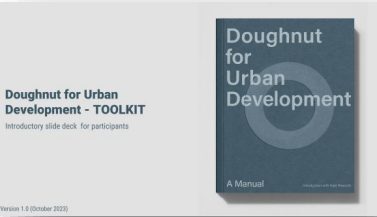
Workshop Structure:

A three parts workshop, in person or online, to go from concept to action.

Part 1

INTRODUCTION

Brief introduction to the Doughnut for Urban Development main concepts.

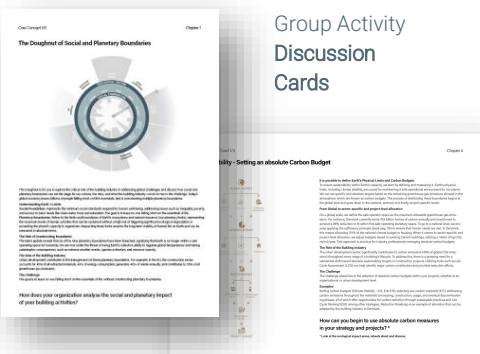


Power point Presentation Introductory slide deck for participants

Part 2

DIVING DEEPER

Delve deeper into the key takeaways presented in the discussion cards and reflect how they align with your strategy and projects.

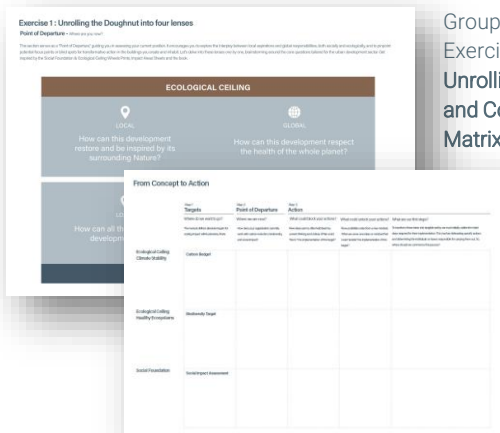


Group Activity Discussion Cards

Part 3

APPLICATION

Develop strategies to operate within social and planetary boundaries. Establish the targets, identify potential blockers and enablers, and outline initial steps to translate these innovative ideas into actionable initiatives.



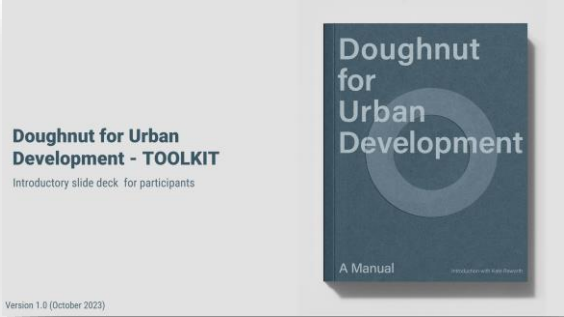
Group Activity Exercise 1 and 2 Unrolling the Doughnut and Concept to Action Matrix

Toolkit Doughnut for Urban Development

Materials:



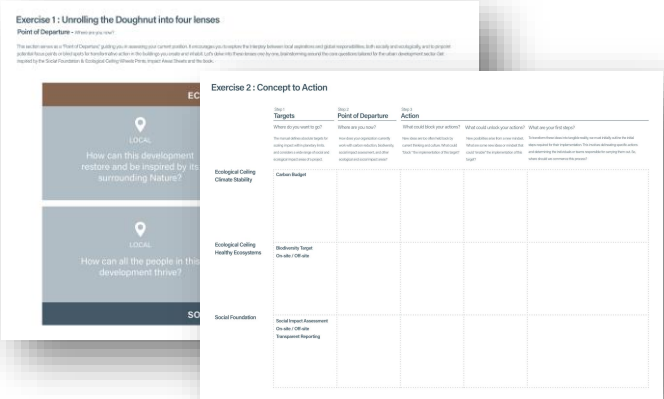
How to guide for facilitators



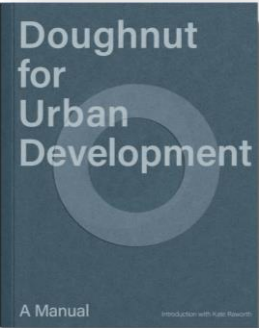
Introductory slide deck for participants



Discussion Cards



Unrolling the Doughnut and Concept to Action Matrix



A Manual



Impact Areas Sheets



Social & Ecological Impact Wheels



C-Level Letter

Letter to Practitioners

Part 1.

PRESENTATION SLIDES

Part 1.

Introduction

Getting started

What

Brief introduction to the Doughnut for Urban Development and key take aways.

How

PowerPoint presentation: Listen to the presentation and take notes for yourself on the main takeaways.

Materials

Introductory slide deck for participants

Toolkit Doughnut for Urban Development

Doughnut for Urban Development:



An open-source set of materials



Doughnut for Urban Development / Manual

The Doughnut for Urban Development Manual is available for free, by digital download in both Danish and English. Please share it with relevant stakeholders in your professional network.



Doughnut for Urban Development / Appendix

The Doughnut for Urban Development Appendix is available for free, by digital download in both Danish and English. The Appendix includes deep dives into the content described throughout this book. This is where you can find the 'Off-Site Biodiversity Tool'.



Doughnut for Urban Development / Database

Doughnut for Urban Development Database is the detailed frameworks and references behind the impact areas described in the social foundation and ecological ceiling. You can download for free and adjust as you build your own library of impact indicators.



Doughnut for Urban Development / Toolkit

Doughnut for Urban Development Toolkit follows the 'Doughnut Unrolled' methodology and can be used to facilitate workshops with relevant stakeholders in your next urban development project.

Co-creating team



Doughnut Economics



Introduction
6



Kate Raworth,
Co-founder and Conceptual Lead, DEAL

Kate provides conceptual leadership on Doughnut Economics, within the team and in the emerging community of practitioners and presents DEAL's ideas and work internationally. She is an economist and the author of the international best-seller Doughnut Economics: seven ways to think like a 21st century economist which has been translated into 20 languages. Over the past 25 years she has worked with Oxfam, UNDP, and in the Ministry of Trade and Industry of Zanzibar. She currently teaches at Oxford University and Amsterdam University of Applied Sciences.

An introduction with Kate Raworth

Why Doughnut Economics

Kasper: Hi Kate. Being an architect and a developer myself, I see Doughnut Economics as the best way to give a balanced answer to the original Brundtland Commission (1987) definition of economic, social, and environmental sustainability.

What made you conceive the vision of the Doughnut?

Kate: When I studied economics at university back in the 1990s I was deeply frustrated that the implicit goal was economic growth, endlessly – no matter how rich a nation already was – and I refused to accept that the destruction of the living world should be framed as 'an environmental externality'.

Many years later, in 2009, when I first encountered the nine planetary boundaries framework, created by Johan Rockström, Will Steffen and many others, it sent a bolt of adrenaline right through me: here were Earth-system scientists defining an ecological limit to human economic activity; a circular boundary beyond which we collectively should not go. I saw it as the beginning of a new economics, one rooted in respecting and protecting the life-supporting systems of planet Earth.

At the time I was working at Oxfam, where we focused on advocating for people's rights worldwide – such as sufficient food, healthcare, education, living wages, decent work, political voice, and personal security. This made me think: if there is an outer limit beyond which humanity's collective resource use should not go, so too there is an inner limit of human rights, below which no one should fall. So just as there is an ecological ceiling there is a social foundation. I drew a set of social boundaries within the planetary boundaries and in the process turned the circle into a doughnut. The image rapidly gained traction when

it was first published in 2012, demonstrating the power of pictures to reshape world views, and also revealing many people's strong desire to recognize and engage with the interconnectedness of the world's social and ecological challenges.

Kasper: My journey of how to define and practice sustainability in urban development started with the 'Cradle to Cradle' philosophy and the regenerative approach of "doing more good" rather than "doing less bad".

Then came the introduction of Circular Economy that focuses on creating man-made ecosystems and business models that could support and scale solutions for a world without waste.

Now we introduce the Doughnut Economics for Urban Development as a sector-focused manual with frameworks for how to address the ecological ceiling, social foundation, and business design.

Would you agree that Doughnut Economics is a continuation of the above-mentioned thinking, and what do you think it offers additionally?

Kate: The Doughnut aims to provide a compass for the 21st century, but what kind of mindset would enable us to get there?

That's the question I sought to answer in writing Doughnut Economics, and I read widely across disciplines to do so. The book *Cradle to Cradle* by Michael Braungart and Bill McDonough was one of those memorable 'a ha!' moments for me, including its focus on going beyond being '100% less bad' to 'doing good'. In addition, Janine Benyus' work on biomimicry, Herman Daly's foundations of ecological economics, and Dana Meadows' approach to thinking in systems were also huge influences on me.

Introduction
7

Doughnut of Social & Planetary boundaries

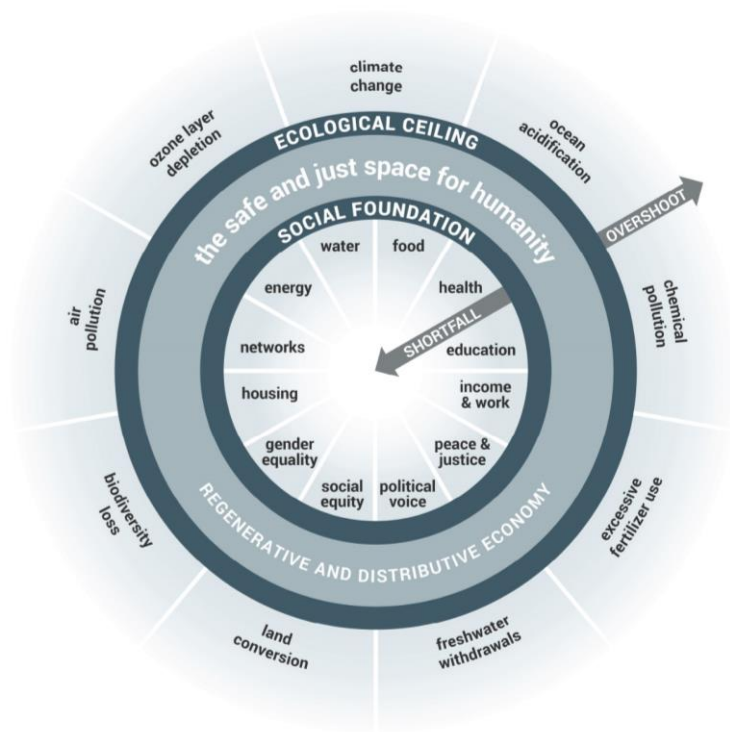


Figure 1: The Doughnut of social and planetary boundaries (Raworth, 2017).

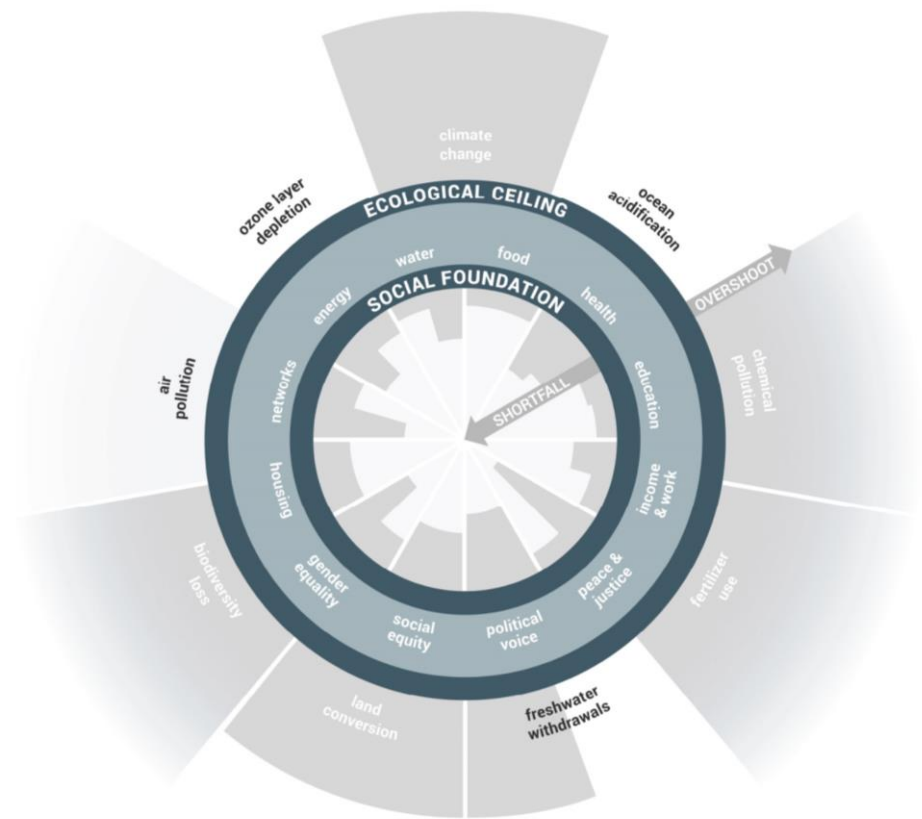


Figure 1: The Doughnut of social and planetary boundaries (Raworth, 2017)

Doughnut principles of practice



**Embrace the
21st century goal**

Aim to meet the needs of all people within the means of the planet. Seek to align your organisation's purpose, networks, governance, ownership, and finance with this goal.



See the big picture

Recognize the potential roles of the household, the commons, the market, and the state – and their many synergies – in transforming economies. Ensure that finance serves the work rather than drives it.



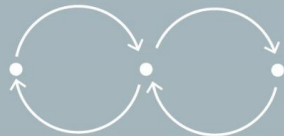
Nurture human nature

Promote diversity, participation, collaboration, and reciprocity. Strengthen community networks and work with a spirit of high trust. Care for the wellbeing of the team.



Aim to thrive rather than grow

Don't let growth become a goal in itself. Know when to let the work spread out via others rather than scale up in size.



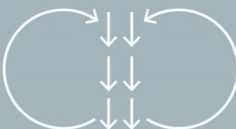
Think in systems

Experiment, learn, adapt, evolve, and aim for continuous improvement. Be alert to dynamic effects, feedback loops and tipping points.



Be distributive

Work in the spirit of open design and share the value created with all who co-created it. Be aware of power and seek to redistribute it to improve equity amongst stakeholders.



Be regenerative

Aim to work with and within the cycles of the living world. Be a sharer, repairer, regenerator, steward. Reduce travel, minimize flights, be climate and energy smart.



Be strategic in practice

Go where the energy is - but always ask whose voice is left out. Balance openness with integrity, so that the work spreads without capture. Share back learning and innovation to unleash the power of peer-to-peer inspiration.

Figure 3: The Doughnut principles of practice: Embrace the 21st century goal, See the big picture, think in systems, be distributive, nurture human nature, aim to thrive rather than grow, be regenerative, and be strategic in practice.

Doughnut for Urban Development



Figure 4: The Doughnut for Urban Development.

Distributive & Regenerative Principles



Figure 5: The Doughnut's distributive and regenerative design principles – where we move away from divisive system that drives wealth and opportunity to the hands of the few, towards distributive systems so that value and opportunity are shared more equitably with all who co-create it. At the same time we must move from degenerative, linear processes of “Take, make, use, lose” towards circular, regenerative processes of slow resource use where living systems are regenerated and repaired.

Distributive & Regenerative Principles

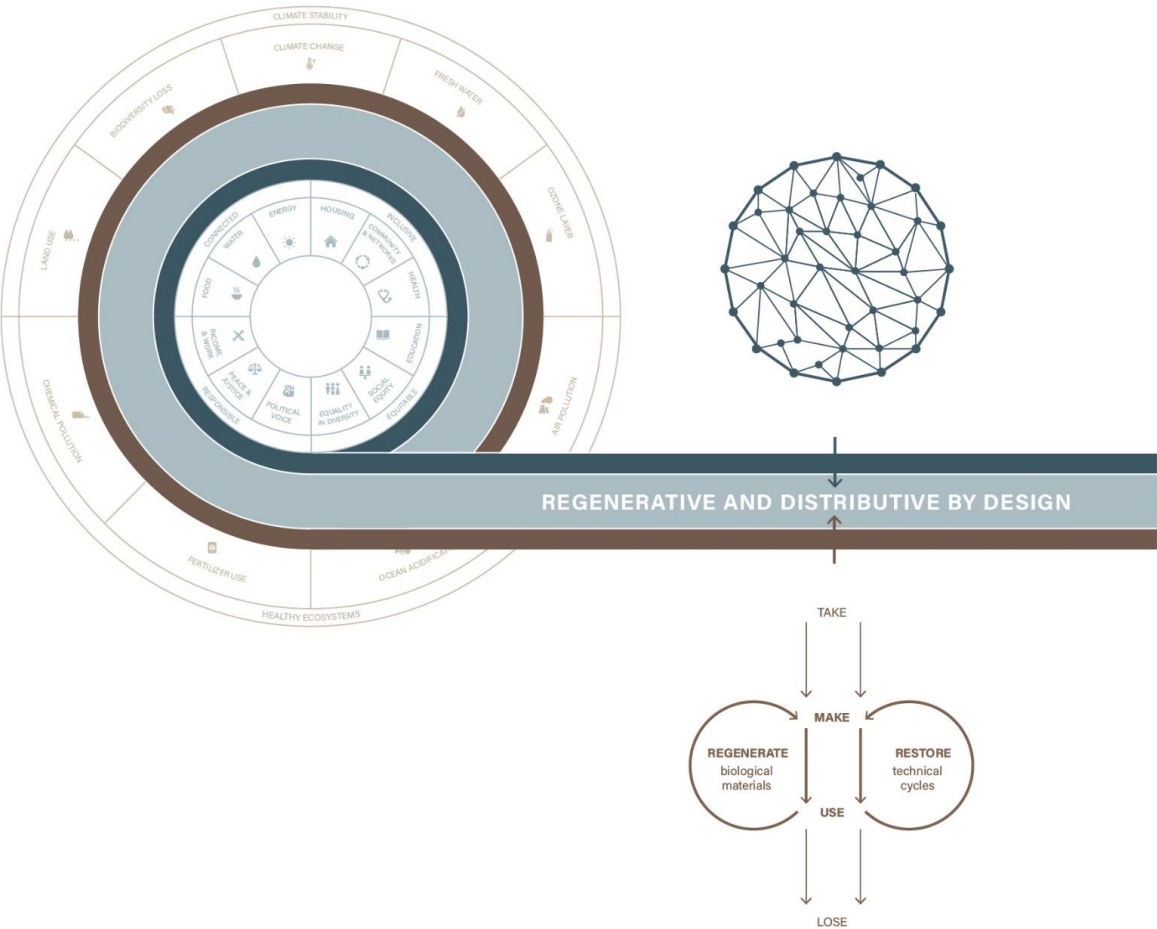


Figure 6: Unrolling the Doughnut to ask: "How can this development bring humanity into the Doughnut through regenerative and distributive principles?" The regenerative design principle shares a relationship with the ecological ceiling, and the distributive design principle shares a relationship with the social foundation.

Unrolling the Doughnut: local aspirations, global responsibilities



Figure 7: Unrolling the Doughnut into four lenses: local-social, local-ecological, global-ecological, and global-social.

Local aspirations, global responsibility

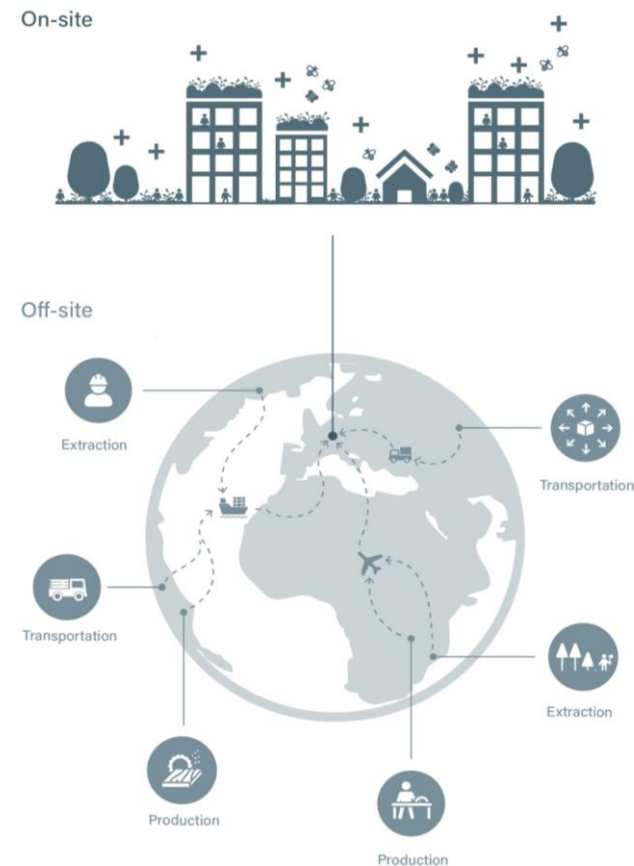


Figure 8: Framing urban development through the local lens (on-site) and global lens (off-site) requires developers to expand the scope of project considerations and face the social and ecological impacts of building construction on faraway places – so that urban development in a European context is not done at the expense of those living across the global supply-chain.



Figure 29: In business-as-usual scenarios biodiversity is considered an on-site (local) issue, but if we're to truly apply Doughnut principles in urban development we must apply a life-cycle perspective which includes the quantification of off-site (global) biodiversity impacts that happen across the supply chain. We can measure biodiversity on-site (locally) with the 'Biodiversity Net Gain' method and biodiversity impact off-site (globally) can be done using the 'Off-site Biodiversity Tool'.

Hierarchy of Earth's systems

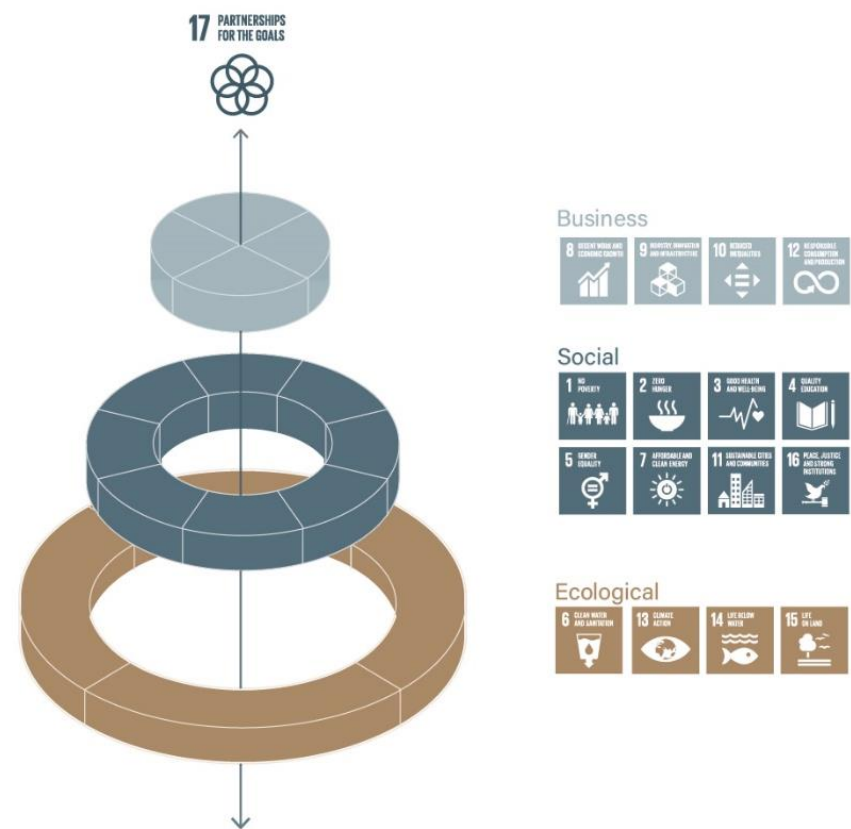


Figure 10: The SDG Wedding Cake was first presented by Stockholm Resilience Institute in 2016 to illustrate how economies and societies should be seen as embedded parts of the biosphere, while underlining the interconnectedness of the SDGs. Without a stable climate and healthy ecosystems, socio-economic goals cannot be achieved, as such we must redesign society (of which the economy is a part) through systems change.

The Social Foundation for Urban Development

02

Social Foundation



Figure 9: Highlighting the social foundation of the Doughnut for Urban Development

Toolkit Doughnut for Urban Development

The social foundation of the Doughnut for Urban Development

The social foundation of the Doughnut for Urban Development details 24 local and 24 global impact areas across the Doughnut's original 12 dimensions. Alongside the impact areas, we have mapped and listed impact methodologies and tools, and built a Doughnut for Urban Development: A Database, which we hope will enable the network to advance its social impact strategies and make it easier to put value on and track social impact performance.

In some areas such as Health, the list of tools, indicators and benchmarks found in existing work is long and impossible to fully capture. In other areas such as Food or Political Voice, existing work is limited, and we have

been challenged when developing the framework. The impact areas fall under the 12 dimensions of the Doughnut resulting in two local and two global impact areas per each dimension.

In the following pages we unroll the Ecological ceiling, to define the impact areas, and give an example of the type of indicator you can use to measure the impact areas. We use building cases to give an example of how you can apply impact areas in practice. None of these cases satisfy each and every one of the 48 impact areas, but all provide tangible evidence of how you can begin integrating Doughnut principles in your next project.

Social Foundation
56

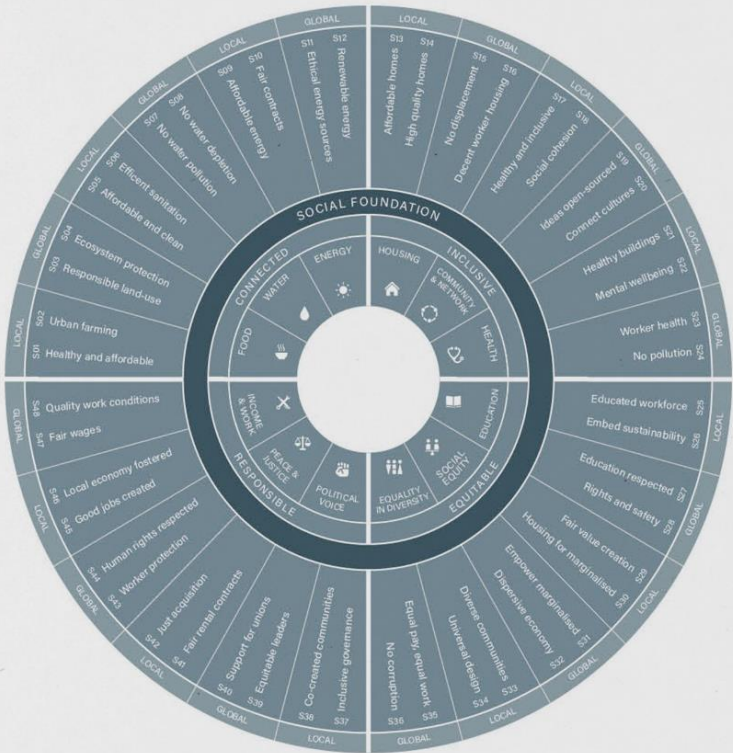
LOCAL / GLOBAL
In order to apply Doughnut principles we must oscillate between designing for social impact locally and social impact globally.

IMPACT AREAS
The 48 impact areas are a direct extension of the 12 dimensions. Each dimension has 2 local and 2 global impact areas.

SOCIAL FOUNDATION
The 12 dimension and 4 categories, together make up the social foundation of the Doughnut for Urban Development.

CATEGORIES
The 12 social dimensions are grouped into 4 categories: connected, inclusive, equitable, and responsible.

DIMENSIONS
The 12 social dimensions derive for the socio-economic SDGs.



Social Foundation
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Figure 13: Local and global impacts areas in the social foundation of the Doughnut for Urban Development

Toolkit Doughnut for Urban Development

SOCIAL FOUNDATION CONNECTED / LOCAL & GLOBAL

Connected development

Recognising the interconnectedness of urban development and their ecosystems, we must consider areas such as water, food, and energy from a holistic standpoint. By ensuring sustainable access to clean water sources, promoting local and resilient food systems, and transitioning to renewable energy sources, urban development, not only enhance the well-being of their residents but also contribute to the health of the planet. This interconnected approach between local and global aspirations strengthens the bonds between, ecosystems, and the broader global community. The impact areas and example indicators presented here are some of the strategies that can be used to create connected developments.



Case Study: Hammarby Sjöstad

Impact Categories: S06, S12

Hammarby Sjöstad exemplifies the concept of "connected" urban development, with a particular focus on specific impact areas. The project prioritises water conservation by striving to halve residents' water consumption through integrated solutions, including wastewater treatment and management of natural water sources. This aligns with the indicator "S06 - Efficient Sanitation". Moreover, the project emphasises energy efficiency and incorporates solar panels, aligning with the indicator "S12 - Renewable Energy". Overall, Hammarby Sjöstad demonstrates a comprehensive approach to sustainable development by addressing key aspects of water conservation and renewable energy.



City: Stockholm. Developer: City of Stockholm. Masterplan: Stockholm City Planning Bureau Architect: Year: 2004 - 2016. Size: 150 ha



FOOD

Local

S01: Healthy and Affordable.
Developments should be near to and/or provide healthy and affordable supermarkets and other necessary shops for the local community, working to mitigate food deserts and nutrient deficiencies in urban areas.

Indicator
Number of healthy and affordable supermarkets and shops within a 10 minute walk

S02: Urban Farming
Local communities should have access to participating in communal urban farming and/or access to purchasing affordable, locally grown produce. Such resources should be distributed in an equitable and just way.

Indicator
% of project area allocated urban farming initiatives or local produce

Global

S03: Responsible land-use
Land-use issues involving food production are monitored transparently and avoided. For example, the production of food should not displace or limit access to quality food options within supply chain communities or pollute local environments.

Indicator
Number of land-use issues identified and resolved

S04: Ecosystem Protection
Adverse impacts of food production on ecosystems are monitored transparently through adequate risk assessments throughout the supply chain. Adverse impacts on are monitored and eliminated.

Indicator
% suppliers screened for significant biodiversity impacts



WATER

Local

S05: Affordable and clean
Access to clean and affordable water is a human right and should be guaranteed to the community.

Indicator
% of community with access to affordable & clean water

S06: Efficient sanitation
All sanitation installations are sustainable and efficient, such as "flow flow" sinks and toilets. Waste handling is managed in a sustainable way in which nutrient rich waters are preserved and processed on-site.

Indicator
% of sustainable & efficient sanitation installations

Global

S07: No water pollution
Water pollution risks, related to the extraction of virgin resources and production of materials are monitored transparently and eliminated throughout the supply chain, including end-of-life scenarios. The creation of materials in faraway places should not leave local water supply polluted.

Indicator
% of suppliers implementation water management practices to avoid pollution in supply chain

S08: No water depletion
Water depletion risks, e.g. from virgin material extraction and production of materials are monitored transparently and eliminated throughout the supply chain, including end-of-life scenarios. The creation of materials in faraway places should not leave the local water supply depleted.

Indicator
% of water used that is returned to the environment sustainably



ENERGY

Local

S09: Affordable energy
Local communities should have access to affordable and renewable energy. Urban development should divert from fossil fuels, where alternative energy infrastructure is in place.

Indicator
% of community with access to affordable & renewable energy

S10: Fair contracts
Prepayment practices for energy should be transparent and fair to ensure consumer protection, informed decision making around energy usage and expenditure, avoidance of hidden costs, and promote financial inclusion by providing equitable energy services.

Indicator
Transparent and fair pre-payment practices

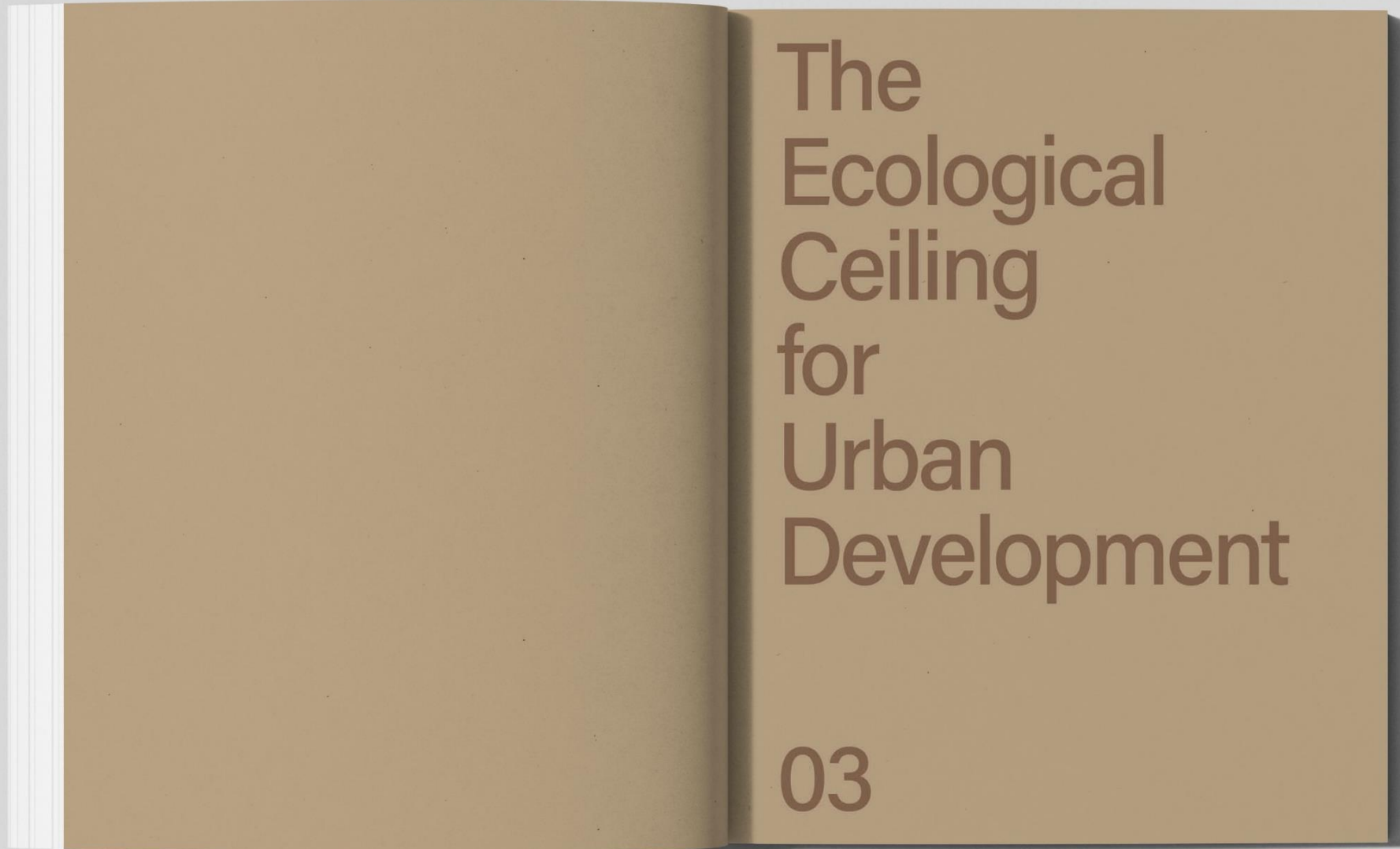
Global

S11: Ethical energy sources
Energy sourcing for building operations and supply chain activities should be ethical and monitored transparently, contributing to sustainable development, climate change mitigation, reduce reliance on fossil fuels, while protecting the environment.

Indicator
% of energy from ethical sources

S12: Renewable energy
Where possible, supply chain activities should support the renewable energy transition. As such, building materials should be sourced from producers who's energy is supplied by renewable energy sources.

Indicator
% of renewable energy use in supply chain activities



Ecological Ceiling



Figure 13: Highlighting the ecological ceiling of the Doughnut for Urban Development

Toolkit Doughnut for Urban Development

The ecological ceiling of the Doughnut for Urban Development.

The ecological ceiling of the Doughnut for Urban Development details 24 local and 24 global impact areas across the two core Earth systems of climate stability and healthy ecosystems. Alongside the impact areas we have mapped and listed impact methodologies and tool, and built a Doughnut for Urban Development: A Database, which we hope will enable actors to create buildings with a more holistic and informed vision.

In some areas such as "E05 - Energy Efficiency" the list of tools, indicators and benchmarks found in existing work is long and impossible to fully capture. In other areas such as "E33 - Support biodiverse soil," existing work is limited and we have been challenged when developing the framework. This may be due to the newness of including

biodiversity in the scope of building design. The impact areas fall under the categories of climate stability and healthy ecosystems, each subdivided by local and global impact areas.

In the following pages we unroll the Ecological ceiling, to define the impact areas, and we give an example of the type of indicator you can use to measure this impact areas. We use building cases to give an example of how you can apply the design principles detailed in these impact areas. None of these cases hit each and every one of the 48 impact areas, but all provide tangible evidence of how you can begin integrating Doughnut principles in your next project.

Ecological Ceiling
90

LOCAL / GLOBAL
In order to apply Doughnut principles we must oscillate between designing for social impact locally and social impact globally

IMPACT AREAS
The 48 impact areas are organised by 12 climate stability local and 12 climate stability global, and 12 healthy ecosystems local and 12 healthy ecosystems global.

CATEGORIES
The ecological ceiling is organised by two categories: on top climate stability and on the bottom healthy ecosystems.

PLANETARY BOUNDARIES
The original 9 planetary boundaries are included in the ecological ceiling but do not relate directly to specific impact areas.

ECOLOGICAL CEILING
The 2 categories and 48 ecological impact areas make up the ecological ceiling of the Doughnut for Urban Development.



Ecological Ceiling
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Figure 20: Local and global impact areas in the ecological ceiling of the Doughnut for Urban Development

Toolkit Doughnut for Urban Development

ECOLOGICAL CEILING CLIMATE STABILITY / LOCAL

Climate Stability Local

In the realm of urban development, achieving climate stability at the local level involves implementing various strategies on-site. This entails making well-informed procurement decisions, employing effective management practices, and incorporating thoughtful design choices that prioritise climate stability. Additionally, developing sustainable infrastructure and optimising operational energy design are essential components in ensuring climate stability throughout urban project's lifetime. By integrating these measures into urban development projects, can make significant contributions to mitigating impacts and fostering a resilient and sustainable future.



Case Study: The Swan Impact Areas: E01, E02, E09

The Swan exemplifies responsible urban development with a strong focus on local climate stability. It embraces climate stability through the use of sustainable materials, circular design principles, waste management, and non-toxic materials. The project demonstrates a forward-thinking approach and aligns with indicators such as "E01 - Non-toxic materials" and "E09 - Circular design" by up-cycling old materials and giving them new value. Its reliance on recycled materials also enables the principles of "E01 - Non-toxic materials" and "E06 - Limit new construction". By adopting these strategies, The Swan effectively reduces waste, carbon emissions, and positively contributes to the local ecosystem.



City: Gladstone, Developer: Gladstone Municipality, Architect: Lendager
Year: 2022, Size: 1436 m²

LOCAL

<p>E01: Non-toxic materials Use non-toxic, non-harmful building materials to ensure the long-term health and safety of laborers, tenants and natural environment. Specify low-VOC and low off-gassing materials and when possible specify certified materials, such as cradle to cradle and the Swan label.</p> <p>Indicator % of low-VOC & certified materials</p>	<p>E05: Energy efficiency Reduce energy consumption in operation through design for passive heating and cooling, specify energy efficient, motion-sensored systems, and energy-saving appliances. Design an active building envelope for heat retention and energy exchange. Use smart systems to identify areas of inefficiency with real-time data.</p> <p>Indicator Real-time energy measurement during operations</p>	<p>E09: Circular design Design circular buildings to promote the preservation of material, structural, thermal, environmental, and aesthetic value. Design with a digital twin and material passports to maintain material knowledge and accurately document lifespan.</p> <p>Indicator Ratio of projects with digital twins & material passports</p>
<p>E02: Waste management Specify products that are manufactured efficiently using additive design principles. Minimise on-site construction waste by designing with standard dimensions. Design a circular construction site to ensure material reuse.</p> <p>Indicator Amount of waste leaving site during construction</p>	<p>E06: Limit new construction Limit new construction. Reduce dependency on virgin materials and minimise carbon emissions by utilising the existing building stock as a material bank. Maintain, preserve and re-use culturally significant and environmentally valuable buildings, elements and materials.</p> <p>Indicator Quantity of reused and preserved materials from existing buildings</p>	<p>E10: Reversible connections Preserve material resources by designing for disassembly using reversible connections, circular building elements, and when possible, product service systems. When specifying technical (non-biogenic) elements use durable, high quality materials to ensure long lifespans.</p> <p>Indicator % of building elements designed for disassembly and durability</p>
<p>E03: Sustainable mobility Develop on building sites that are well connected to public transportation to promote sustainable mobility practices such as walking, cycling, use of public transportation and ride-share options.</p> <p>Indicator Proximity to public transportation and alternative modes</p>	<p>E07: Optimised structure Optimise structural dimensions and design to reduce material usage. Avoid over dimensioning and structural redundancy. Design the structure to have a long life, and loose fit.</p> <p>Indicator Reduction in materials achieved through optimized design</p>	<p>E11: Low-carbon construction Promote circular and low-carbon construction sites by designing high quality waste handling practices and low-carbon machinery, and low-carbon construction techniques.</p> <p>Indicator Quantity of circular and low-carbon practices implemented on construction sites</p>
<p>E04: Renewable energy Connect to renewable energy infrastructure for construction and the buildings operational phase to reduce dependency on fossil fuels. Where it makes sense from an LCA perspective, integrate energy production on-site.</p> <p>Indicator % of renewable energy and on-site production</p>	<p>E08: Flexible design Optimise building design for flexible use of space to reduce the need for new construction and allow for functional changes in use over time - in both short periods (daily, weekly) through shared spaces and double programming and longer periods where the buildings typology can change.</p> <p>Indicator Rate of building design flexibility for adaptable space</p>	<p>E12: Durable design Design for durability, easy maintenance, and accessible repair to reduce the need for material exchange. Use appropriate and specific levels of material durability for the given function. For example, a high trafficked entrance will need a more durable material than a living space.</p> <p>Indicator Documentation rate of building projects with material durability and repair instructions</p>

Summary of key takeaways

DISTRIBUTIVE & REGENERATIVE BY DESIGN

We must move away from a divisive system that drives wealth and opportunity to the hands of the few, towards distributive systems so that value and opportunity are shared more equitably with all who co-create it. At the same time, we must move from degenerative, linear processes of "take, make, use, lose" towards circular, regenerative processes of slow resource use where living systems are regenerated and repaired.

LOCAL ASPIRATION AND GLOBAL RESPONSIBILITY

Development assessments often focus solely on on-site aspects during design and construction. To enhance our understanding of urban development, we should also consider local and global perspectives, addressing the broader social and ecological impacts that extend from material extraction to a building's entire lifecycle and beyond.

CLIMATE STABILITY & HEALTHY ECOSYSTEMS

Without climate stability and healthy ecosystems, we cannot meet social or economic goals. We must set absolute targets for the Ecological ceiling - carbon budgets (Climate Stability) and Healthy Ecosystems - biodiversity targets. If these two targets are set at an organizational level or within a singular urban development, it is possible to safeguard against further planetary degradation, while ensuring operations are within planetary limits. Working with these absolute targets allows organizations to move away from "doing less bad" and work towards "doing more good."

Part 2 and Part 3

Group Activities

Part 2.

Diving Deeper



TOTAL: 3h

Individual: 5 min/card

Group: 15 min/card

What

Dive deeper into the main concepts of the book proposed in the “*discussion cards*” and reflect on how it affects your strategy and projects.

How

Step 1 - Individual Activity: Take 5 min to read the 1st card.

Step 2 - Group Activity: Discuss the main findings with your peers, and try to answer the proposed question

* Start by using first the “Core concepts discussion cards” followed by the “Action discussion cards”.

Materials

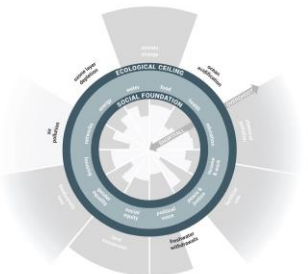
Discussion cards

Discussion cards:

Core Concept Discussion Card 1/6

Chapter 1

The Doughnut of Social and Planetary Boundaries



Understanding the Doughnut

The Doughnut is for you to explore the critical role of the building industry in addressing global challenges and discuss how social and planetary boundaries can set the stage for our actions, the risks, and what the building industry can do to rise to the challenge. Today's global economy leaves billions of people falling short on life's essentials, and is overshooting multiple planetary boundaries.

Planetary Boundaries: Refers to the limits and boundaries of Earth's ecosystems and natural resources (our planetary limits), representing the maximum levels of human activities that can be sustained without a high risk of triggering significant ecological degradation or exceeding the planet's capacity to regenerate. Respecting these limits ensures the long-term viability of human life on Earth and can be measured in absolute terms.

Social Foundation: represents the minimum social standards required for human well-being, addressing issues such as inequality, poverty, and access to basic needs like clean water, food, and education. The goal is to leave no one falling short on the essentials of life.

The Risk of Overshooting Boundaries

The latest update reveals that six of the nine planetary boundaries have been breached, signifying that Earth is no longer within a safe operating space for humanity. We are now under the threat of losing Earth's collective ability to regulate global temperatures and risking catastrophic consequences, such as extreme weather events, species extinction, and resource scarcity.

The Role of the Building Industry

Urban development contributes to the transgression of these planetary boundaries. For example, in the EU, the construction sector accounts for 40% of all extracted materials, 40% of energy consumption, generates 40% of waste annually, and contributes to 33% of all greenhouse gas emissions. From a social perspective, construction sector continues to see poor working conditions, significant safety issues and outright human rights abuses, including modern day slavery.

The Challenge

The goal is to leave no one falling short on the essentials of life, without overshooting planetary boundaries.

Examples

The Paris Agreement 1.5°C scenario, where the primary goal is to limit the increase in global average temperature well below 2 degrees Celsius.


How does you and your organization analyse the social and planetary impact of your building activities?

Core Concepts Discussion Cards

Action Discussion Card 1/3

Chapter 4

Climate Stability - Setting an absolute Carbon Budget



It is possible to define Earth's Physical Limits and Carbon Budgets

To ensure sustainability within Earth's capacity, we start by defining and measuring it. Earth's physical limits, including climate stability, are crucial for maintaining a safe operational environment for our planet. We can set specific and absolute targets based on the remaining greenhouse gas emissions allowed in the atmosphere, which are known as carbon budgets. The process of distributing these boundaries begins at the global level and goes down to the national, sectoral, and finally, project-specific levels.

From Global to sector-specific and project-level allocation

On a global scale, we define the safe operating space as the maximum allowable greenhouse gas emissions. For instance, Denmark currently emits 47.9 billion tonnes of carbon annually and would need to achieve a 96% reduction to fit within this safe operating planetary space. To go to a national level, we propose applying the sufficiency principle (book pag. 116) to ensure that human needs are met. In Denmark, this means allocating 15.1% of the national climate budget to housing. When it comes to sector-specific and project-level allocation, we adjust budgets based on existing Danish buildings, utilizing a metric of kg CO2 eq/m2/year. This approach is practical for industry professionals managing absolute carbon budgets.

The Role of the Building Industry

The urban development sector significantly contributes to carbon emissions (40% of global CO2 emissions) throughout every stage of a building's lifecycle. To address this, there is a pressing need for a substantial shift toward absolute sustainability targets in construction projects. Utilizing tools such as Life Cycle Assessment (LCA) can help identify major carbon contributors and prioritize reduction efforts.

The Challenge

The challenge ahead lies in the adoption of absolute carbon budgets within your projects, whether at an organizational or urban development level.

Examples

Setting carbon budgets (Climate Stability - E13, E14, E15), selecting low-carbon materials (E17), addressing carbon emissions throughout the materials' processing, construction, usage, and eventual decommissioning phases, all of which offer opportunities for carbon reduction through sustainable practices and Life Cycle thinking (E20), among other strategies. Reduction Roadmap is an example of allocation that can be adopted by the building industry in Denmark.

How can you begin to use absolute carbon measures in your strategy and projects? *

* Look at the ecological impact areas, wheels sheet and discuss.

Action Discussion Cards

Part 3. (Exercise 1 and 2)

Application



TOTAL: 2h
Individual: 20 min
Group: 1.5h

What

Develop strategies to operate within social and planetary boundaries. Part 3 has two exercises that will help you to map and identify your blind spots, establish new targets, identify potential blockers and enablers, and outline initial steps to translate these innovative ideas into actionable initiatives.

How

Exercise 1 – Unrolling the Doughnut into four lenses:

Delve into where you are now, regarding local aspirations of a project or organization within your global responsibilities, mapping the blind spots for transformative action. Brainstorm in groups around the core questions tailored for the urban development sector and fill out the Unrolling matrix.

Exercise 2 - Concept to Action:

Engage in a discussion with your peers and fill out the Concept to Action matrix.

Materials

Unrolling the Doughnut and Concept to Action Matrix, Social & Ecological Impact Wheels, Impact Areas Sheets, Discussion Cards and the Manual as inspiration.

Exercise 1 - Unrolling the Doughnut into four lenses:

Exercise 1 : Unrolling the Doughnut into four lenses

Point of Departure - Where are you now?

This section serves as a "Point of Departure," guiding you in assessing your current position. It encourages you to explore the interplay between local aspirations and global responsibilities, both socially and ecologically, and to pinpoint potential focus points or blind spots for transformative action in the buildings you create and inhabit. The four lenses exercise addresses both social and ecological issues, while combining the local aspirations of a project or organization with its global responsibilities. Let's delve into these lenses one by one, brainstorming around the core questions tailored for the urban development sector. Get inspired by the Social Foundation & Ecological Ceiling Wheels Prints, Impact Areas Sheets and the book.



Exercise 2 - Concept to Action:

Exercise 2 : Concept to Action

	<div>Step 1</div> <div>Targets</div>	<div>Step 2</div> <div>Point of Departure</div>	<div>Step 3</div> <div>Action</div>		
	Where do you want to go?	Where are you now?	What could block your actions?	What could unlock your actions?	What are your first steps?
	<div>The manual defines absolute targets for scaling impact within planetary limits, and considers a wide range of social and ecological impact areas of a project.</div>	<div>How does your organization currently work with carbon reduction, biodiversity, social impact assessment, and other ecological and social impact areas?</div>	<div>New ideas are too often held back by current thinking and culture. What could "block" the implementation of this target?</div>	<div>New possibilities arise from a new mindset. What are some new ideas or mindset that could "enable" the implementation of this target?</div>	<div>To transform these ideas into tangible reality, we must initially outline the initial steps required for their implementation. This involves delineating specific actions and determining the individuals or teams responsible for carrying them out. So, where should we commence this process?</div>
Ecological Ceiling Climate Stability	Carbon Budget		<div>This matrix should be filled out with notes by workshop participants...</div>		
Ecological Ceiling Healthy Ecosystems	Biodiversity Target On-site / Off-site				
Social Foundation	Social Impact Assessment On-site / Off-site Transparent Reporting				

Toolkit Doughnut for Urban Development

Thank you 😊