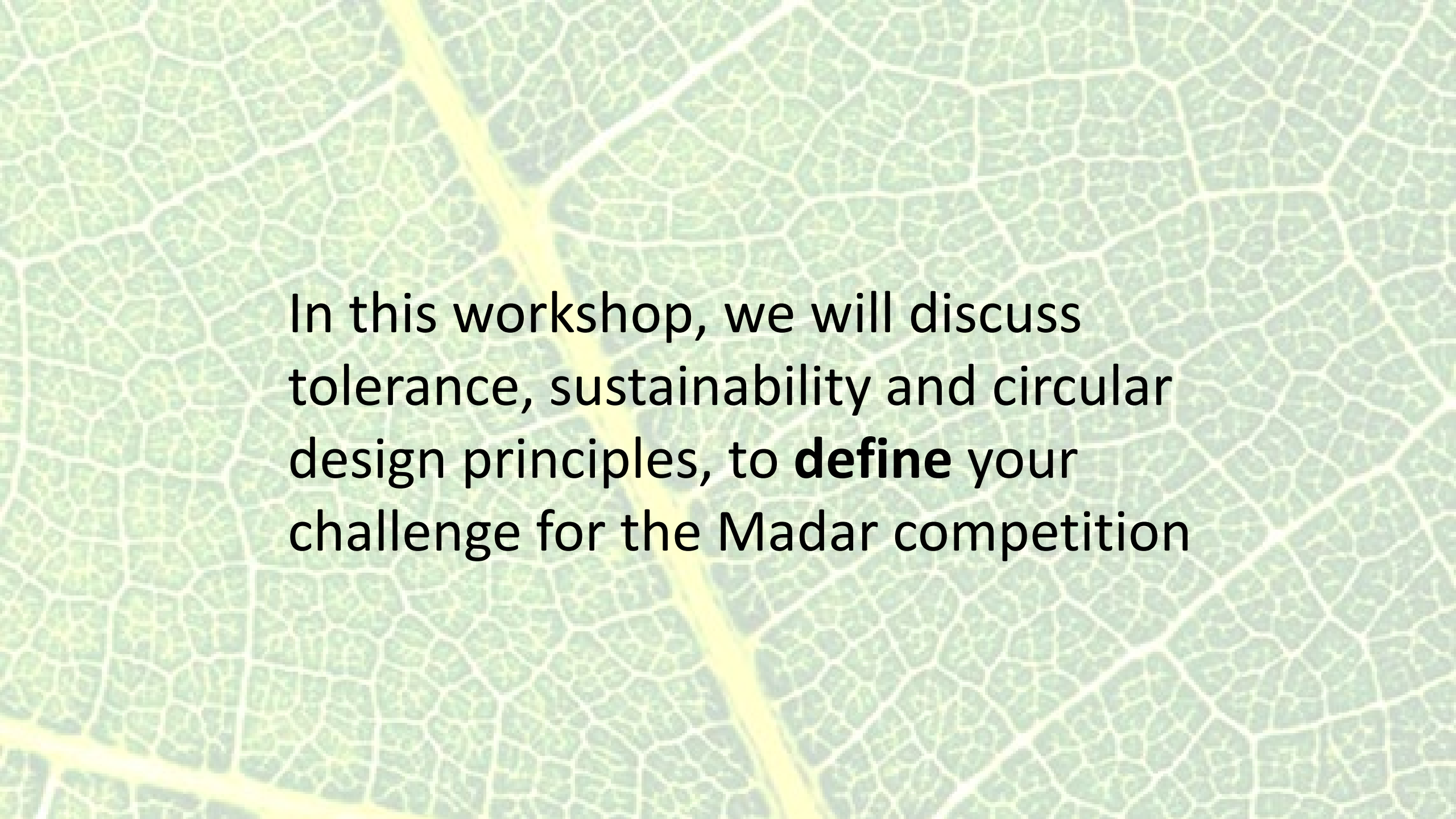# Tolerance, Sustainability & Circularity

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Rochester Institute of Technology RIT - Dubai

R·I·T
Dubai

In this workshop, we will discuss tolerance, sustainability and circular design principles, to **define** your challenge for the Madar competition

Your challenge!

Identify challenges around you, which can be improved, and start proposing opportunities to develop your projects!

Our Aim today!

Define your project!

Recap: What is Tolerance?

Tolerance

Willingness to [respect and] accept feelings, habits, or beliefs that are different from your own.
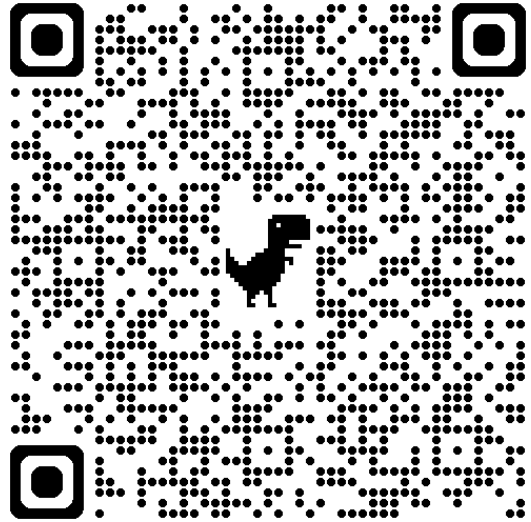
Source: Encyclopedia Britannica.

Source: https://www.tolerance.gov.ae/uaetolerance

Tolerance in UAE

A living embodiment of the teachings of true Islam

01

02 Living in peace with others, and respecting their beliefs and cultures

03 Developing knowledge and positive openness in all human beings

04 How to deal with conflicts, as well as spreading love and peace

05

An essential tool for achieving a comprehensive and sustainable development

Let's create a free
fig-jam student account,
to interact online.

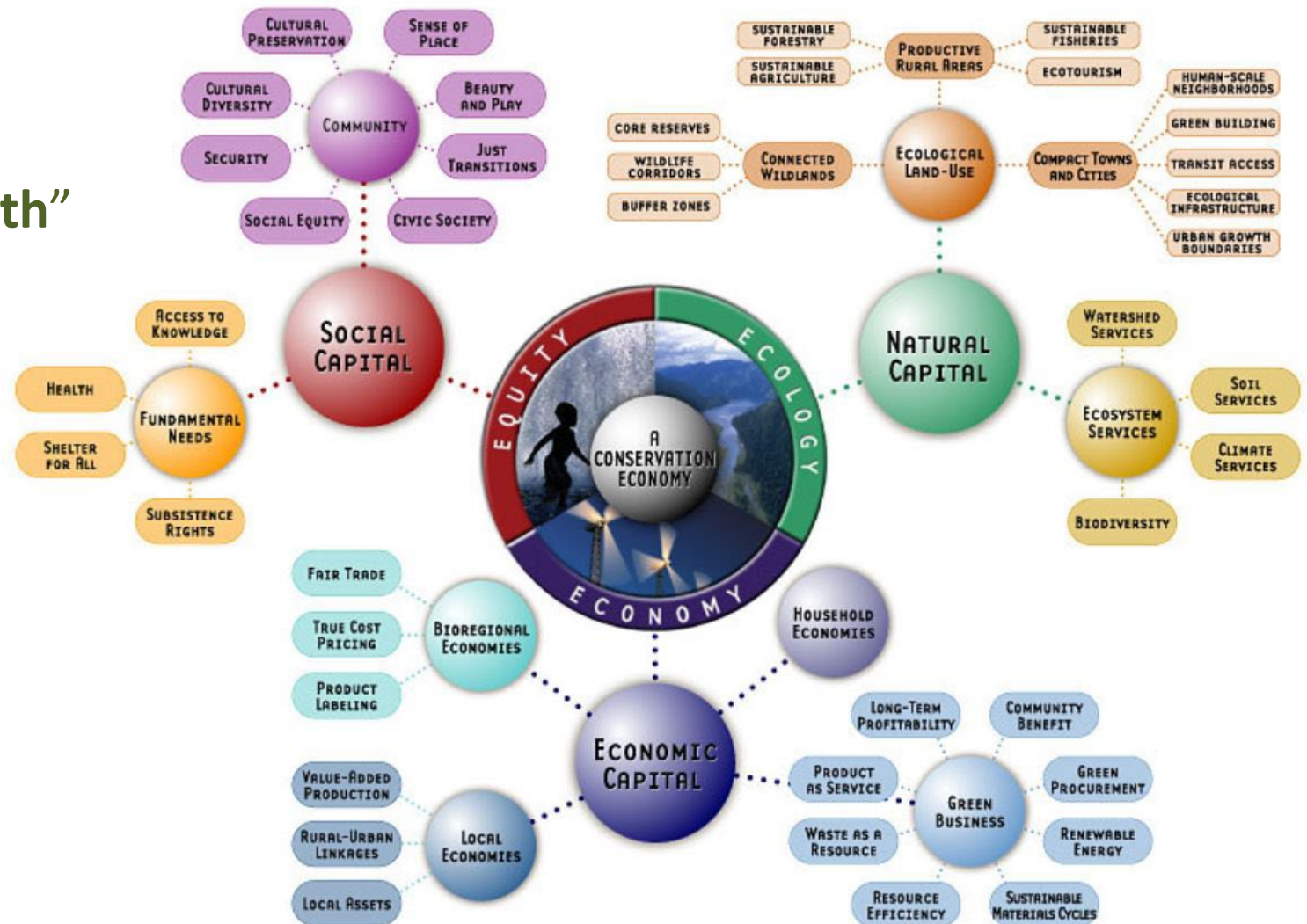# Recap
Sustainability & Circularity

Sustain + ability

"**The ability to sustain life in Earth**"

Described as the 3 pillars:

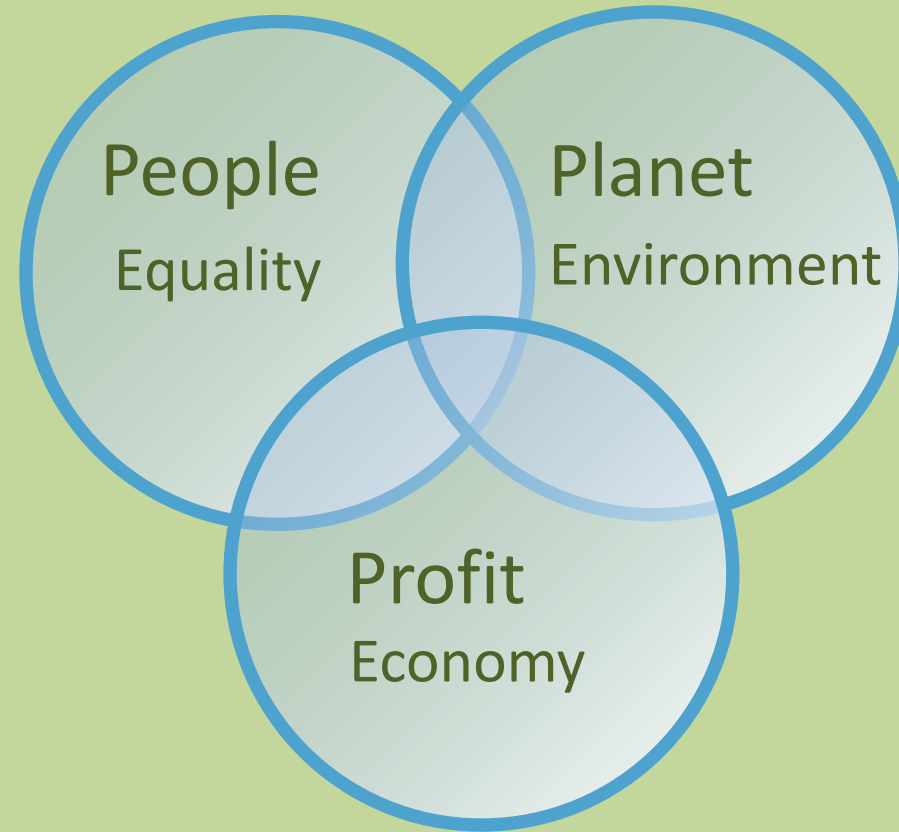3 E's : Equity, Ecology, Economy

3 P's : People, Planet, Profit.

http://www.conservationeconomy.net/pattern_map/noflash/index.html

What is Sustainability?
Sustain + Ability

People
Equality

Planet
Environment

Profit
Economy

Circularity – Design for a Circular Economy

An economy that is restorative and regenerative by design.

In a circular economy economic activity builds and rebuilds overall system health. The concept recognises the importance of the economy needing to work effectively at all scales – for big and small businesses, for organisations and individuals, globally and locally.

**It is based on three principles:**

- **Design out waste and pollution**
- **Keep products and materials in use**
- **Regenerate natural systems**

The circular economy vision and approach gives endless possibilities to create a thriving economy.

REGENERATE NATURAL SYSTEMS

WE ARE **SHIFTING** TO A SYSTEM WHERE WE

DESIGN OUT WASTE AND POLLUTION

KEEP PRODUCTS AND MATERIALS IN USE

Why circular and cyclic?

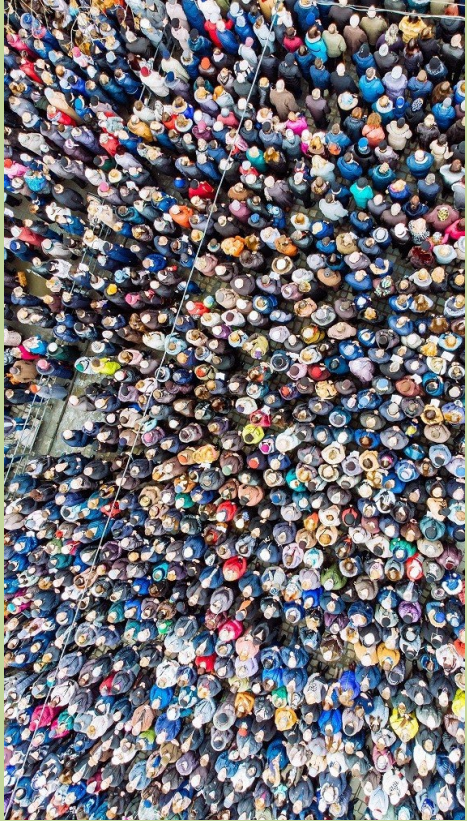
Cradle to Cradle®
Basis of a circular economy
Source: EPEA GmbH 2010
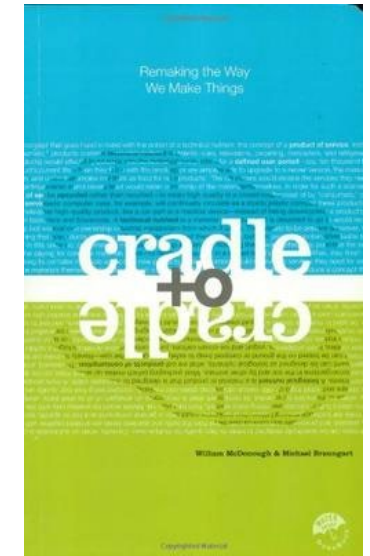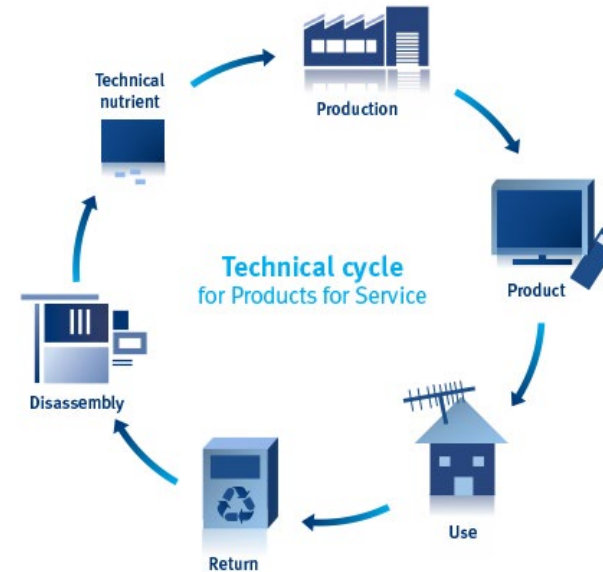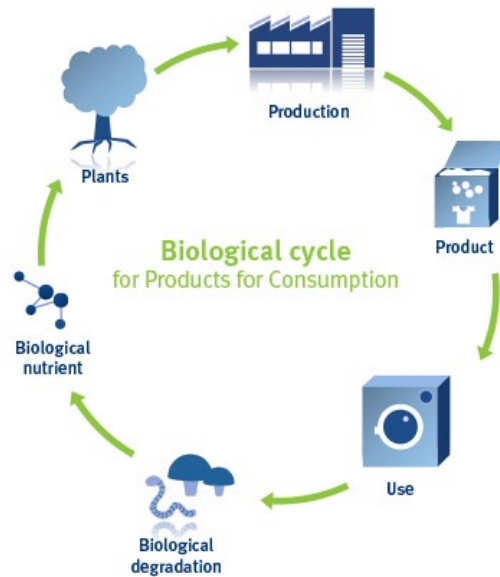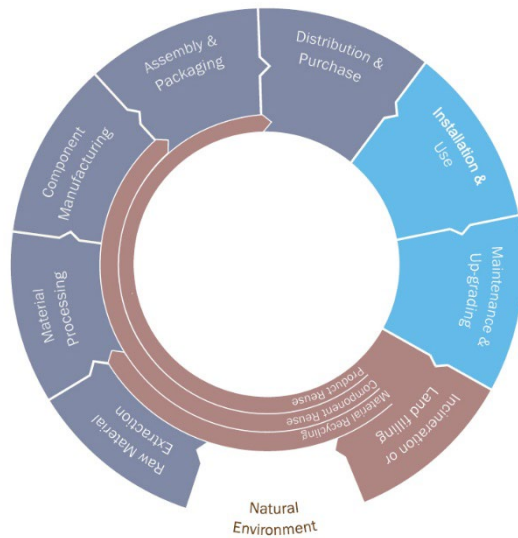
Biomimicry, Industrial Ecology, Cradle to Cradle and Life Cycle Thinking are all tools which imitate cycles and systems in nature.

Sustainable Challenges: water, food, wellbeing

Challenges: water, food,wellbeing

Tolerance,Sustainability &
Biomimicry

Water

Food

Wellbeing

Tolerance & Sustainability - WATER
Too much?

Tolerance & Sustainability - WATER
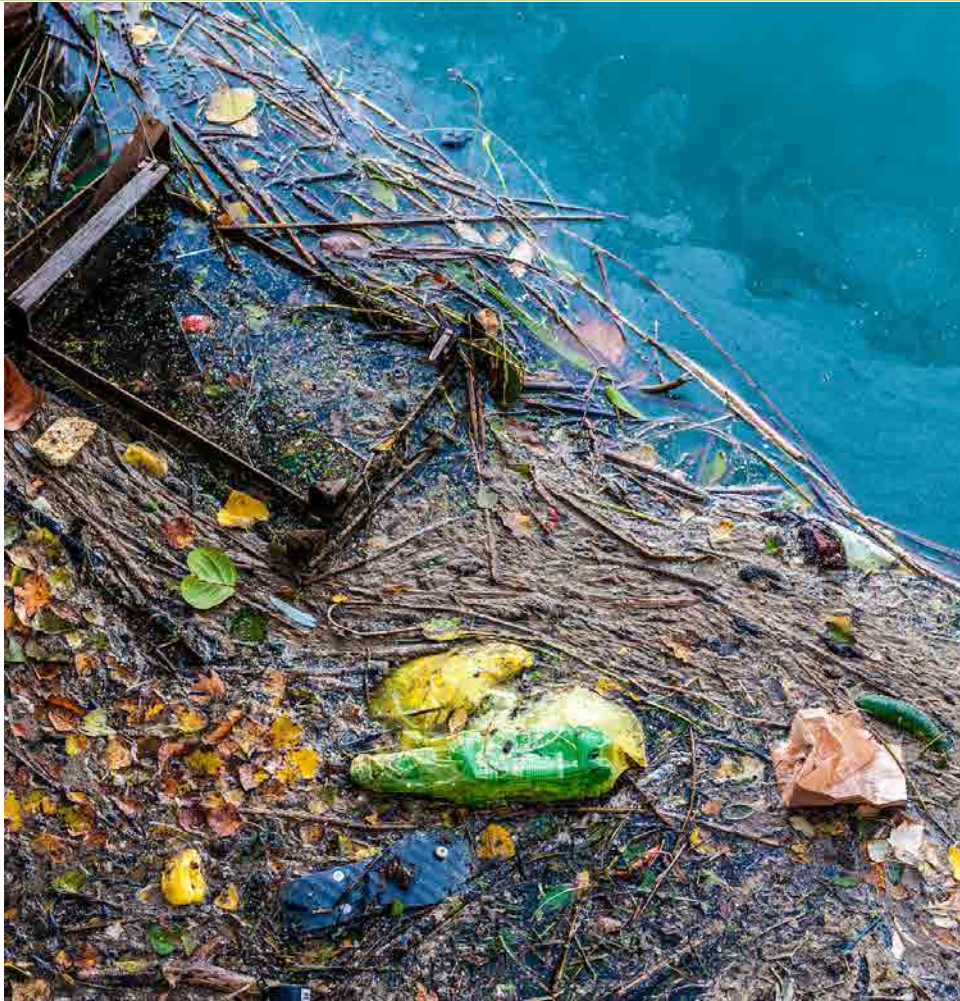
Too little?

2 billion people live in countries experiencing high water stress. (UN 2019)

Tolerance & Sustainability - WATER
Dirty or polluted?

Some 1.8 billion people worldwide drink water that is contaminated with feces.

Tolerance & Sustainability - FOOD

Too little?

Overall, an estimated 3.1 billion people worldwide do not have access to a healthy diet

Tolerance & Sustainability - FOOD
Too much?

Tolerance & Sustainability - FOOD

Rotten? Contaminated?

Food security?

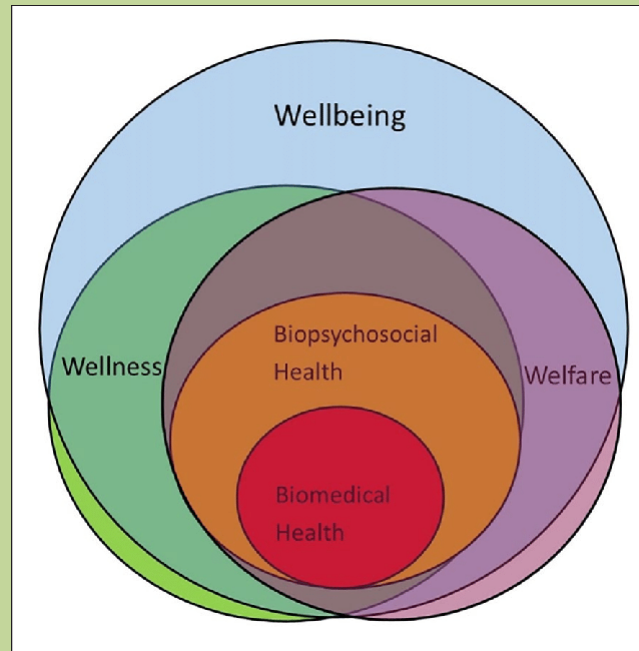Transportation?

Preservation?

Nutrition?

Contamination?

Poisoning?

Tolerance & Sustainability - WELLBEING

'Wellbeing is a state of positive feelings and meeting full potential in the world. It can be measured subjectively and objectively, using a salutogenic approach'.

Source: Simons G, Baldwin DS. A critical review of the definition of 'wellbeing' for doctors and their patients in a post Covid-19 era. Int J Soc Psychiatry. 2021 Dec;67(8):984-991. doi: 10.1177/00207640211032259. Epub 2021 Jul 9. PMID: 34240644; PMCID: PMC8592098.

Tolerance & Sustainability - WELLBEING

Wellbeing and Health?

Wellbeing comprises eight mutually co-dependent dimensions.

Source: Colorado State University – Pueblo: https://www.csupueblo.edu/health-education-and-prevention/dimension-of-well-being.html

Tolerance & Sustainability - WELLBEING
Discussion: Which SDG's address wellbeing challenges?

Tolerance & Sustainability - WELLBEING
Discussion: Which SDG's address wellbeing challenges?

Inspiration in Nature for Sustainability & Circularity

understanding nature, biology and ecology can help us to design & innovate, in a sustainable and circular way !

Let's use nature as model, measure and mentor, to inspire solutions for a better, sustainable, circular economy !

What is Biomimicry?
Innovation Inspired by Nature
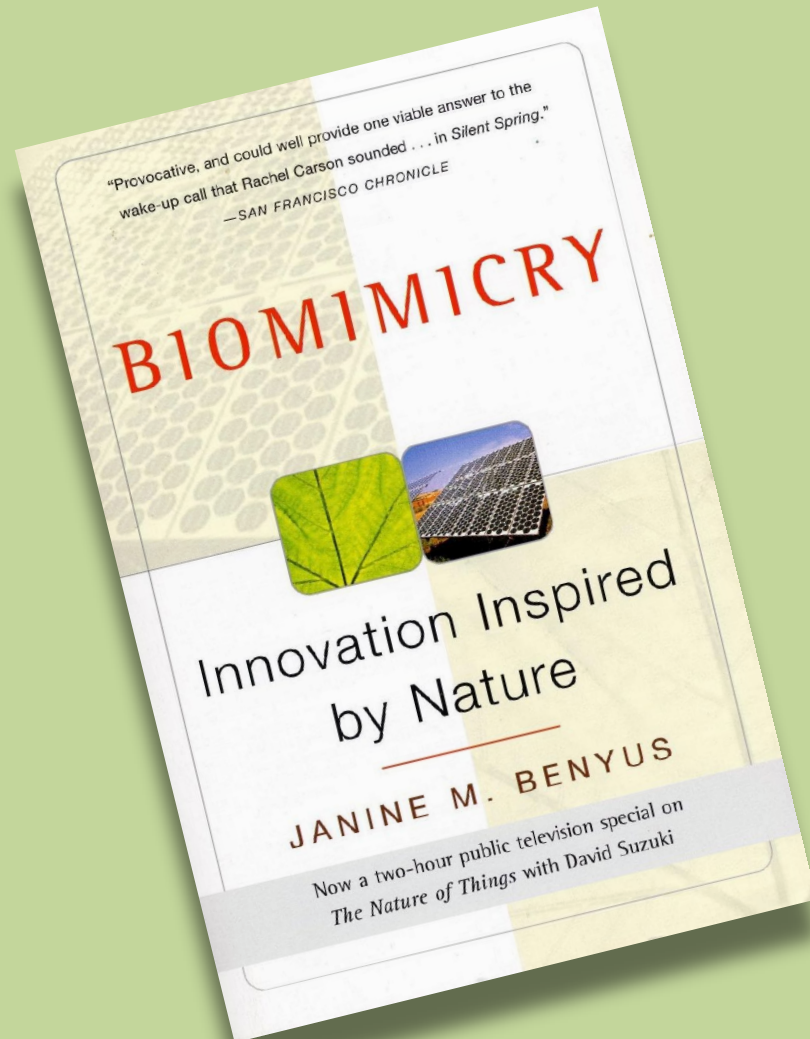
from the Greek *bios*, life & *mimesis*, imitation. Janine Benyus, 1997.

Tolerance, Nature and Sustainability

Biomimicry design spiral process

Following a design process can be extremely helpful when setting out to solve a design challenge. The Biomimicry Design Spiral provides a succinct description of the essential elements of a design process that uses nature as a guide for creating solutions.

Resource: https://toolbox.biomimicry.org/methods/process/
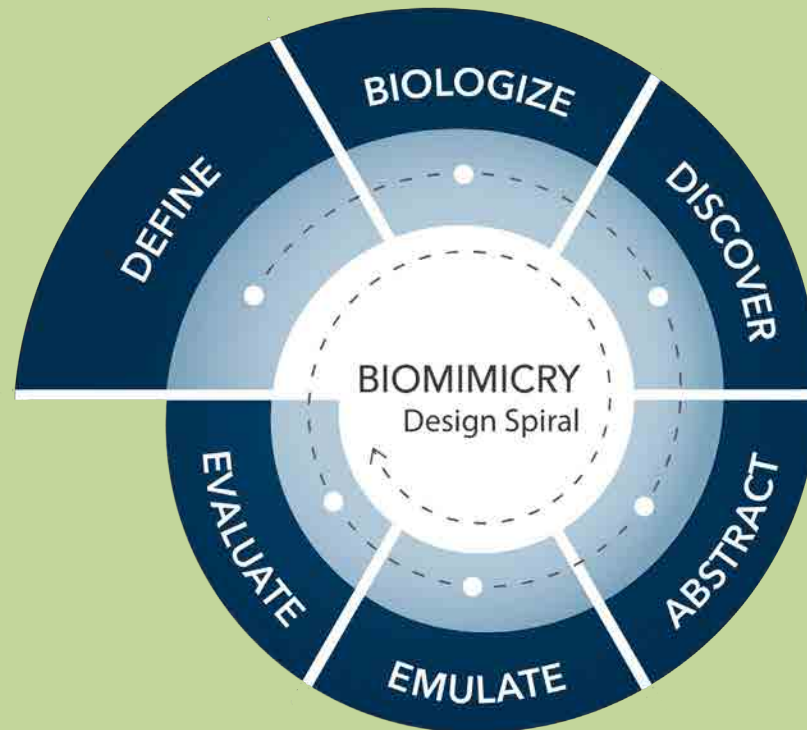
Tolerance, Nature and Sustainability
Biomimicry design spiral process: Step 1: Define
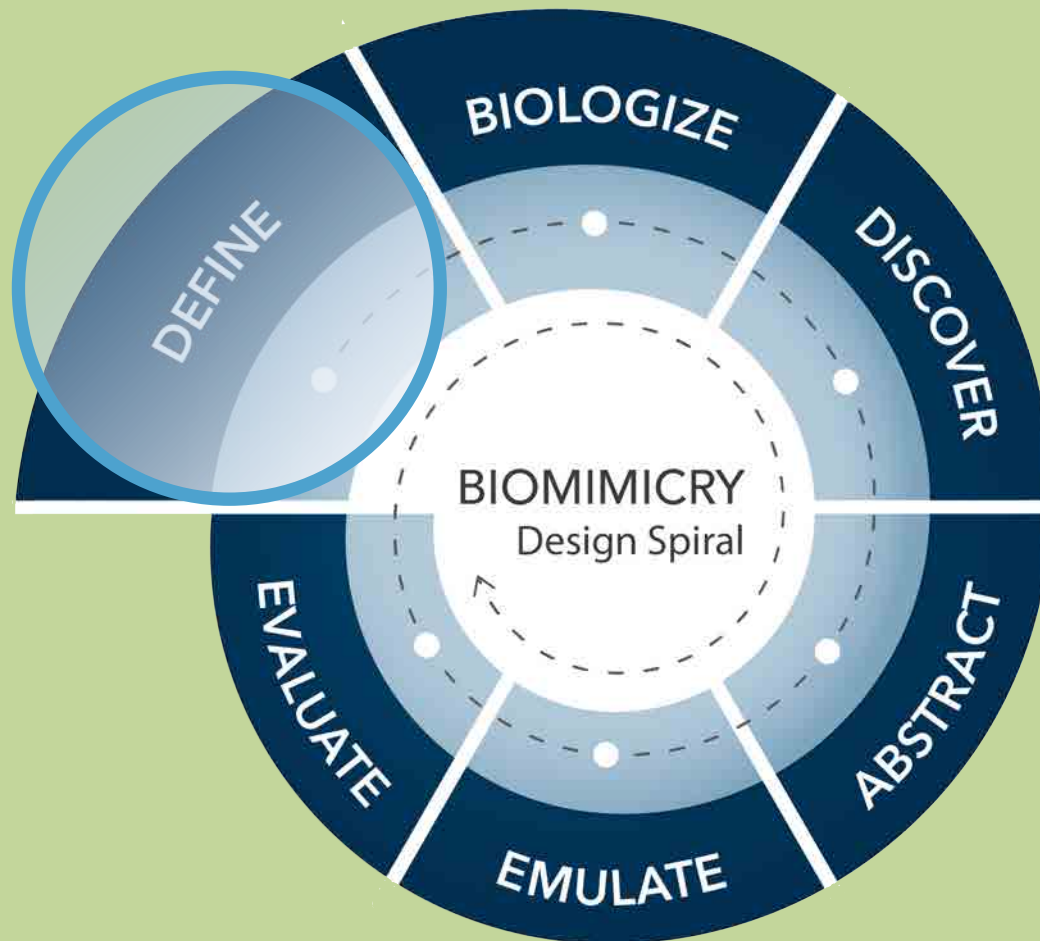
Clearly articulate the impact you want your design to have in the world and the criteria and constraints that will determine success.

Resource: https://toolbox.biomimicry.org/methods/process/

Tolerance, Nature and Sustainability

Biomimicry design spiral process: Step 1: Define
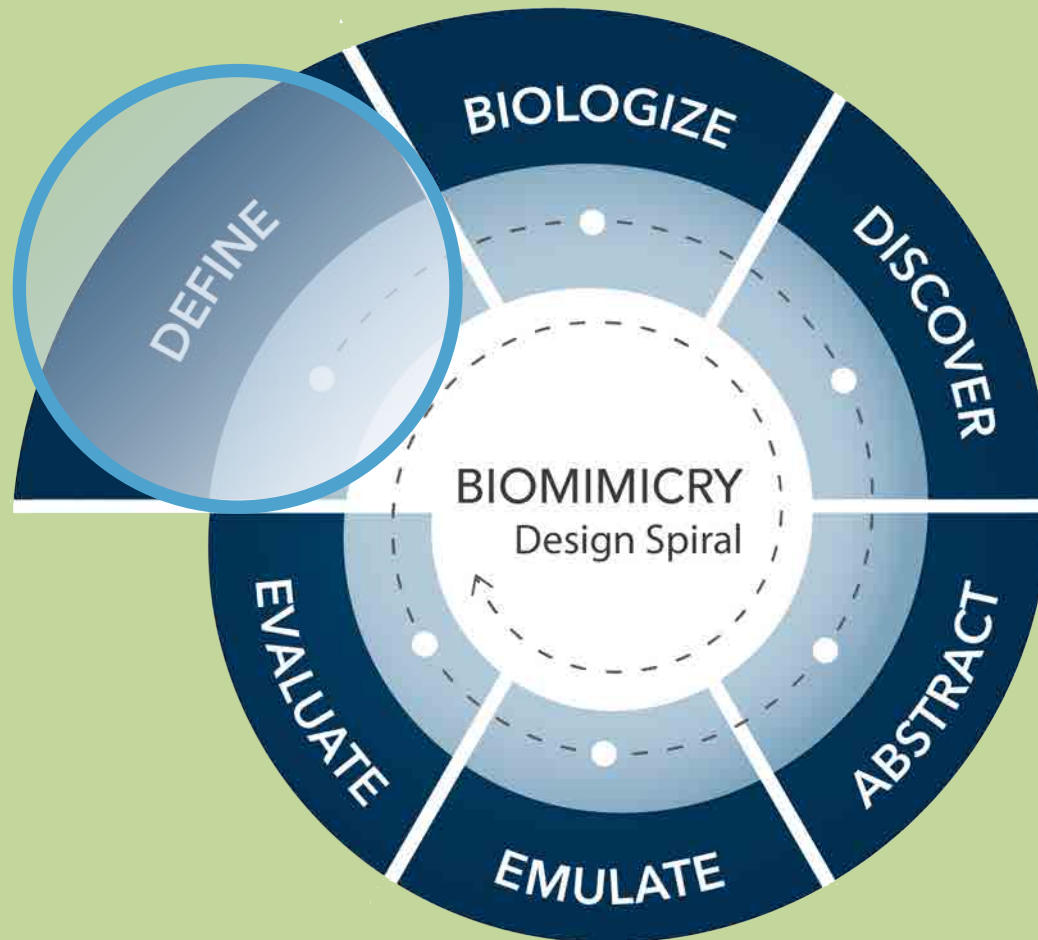
State the challenge as a question.
Make sure you are considering context.
Take a systems view and look for potential leverage points.

Tolerance, Nature and Sustainability
Biomimicry design spiral process: Step 1: Define

Define the Challenge

When beginning a design challenge, it's important to define the challenge and make sure that you and your teammates share a common understanding of what it is you are aiming to achieve with your design. Use this worksheet to define your challenge and generate a design question.

Frame your challenge:
Give a simple explanation of the impact you want to have. (Hint: This is <u>not</u> what you want to make, but want you want to your design to achieve or do.)

Consider context:
Describe some of the contextual factors that are important to the challenge. (Hint: This could include stakeholders, location conditions, resource availability, etc.)

Design question:
Using the information above, phrase your challenge as a question:

Tolerance, Nature and Sustainability
Biomimicry design process: Step 1: Define

Tolerance, Nature and Sustainability
Biomimicry design spiral process: Step 1: Define

Sample design questions

A good design question is neither too broad nor too narrow. Consider these examples.

Too Broad	Just Right	Too Narrow
How might we end hunger?	How might we connect institutional food surpluses to those in need?	**How might we design an app to help food pantries get more donations?**
Hunger is a huge multifaceted problem and this statement doesn't target a specific area of intervention.	*This statement provides enough specificity while remaining open to a variety of possible solutions.*	*This statement presupposes too many details about the solution (an app) and doesn't leave enough room for innovation.*

Tolerance, Nature and Sustainability

Biomimicry design spiral process: Step 1: Define

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How might we _____ ?

Test the question:

Is it too broad? Your question should give a sense of the context in which you are designing as well as the impact you want to have and what/who it benefits. If it doesn't, it may be too broad.

Now you further refine your challenge using the worksheet.

Task for next session
Bring a well-defined challenge?

Download your worksheet, and in groups, create a one-minute video defining your challenge. Use the sheet as a guide.

Upload in youtube or vimeo, and place link in Figjam for next session

Define the Challenge

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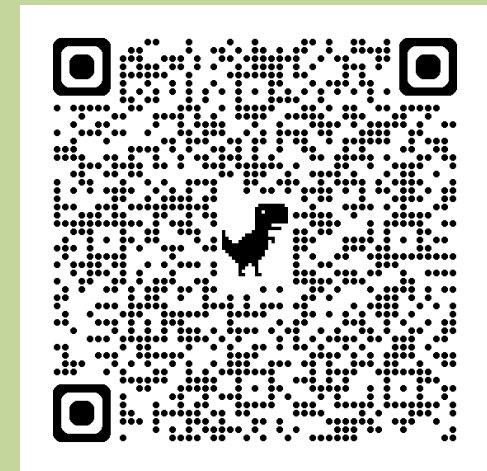Using the information above, phrase your challenge as a question:

_How might we _____?

Test the question:

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Is it too narrow? Your question should be somewhat open-ended to ensure you haven't jumped to conclusions about what you are designing. If your question is very specific, it may be too narrow.

Tolerance

Coexistence! Living in peace!
Is it only about People?

How about Tolerance (coexistence, living in peace) with all forms of life in our planet?

May the values of tolerance allow us to coexist, in peace, with all forms of life.

Resources

https://www.ellenmacarthurfoundation.org/our-work/activities/circular-economy-in-cities

https://www.circulardesignguide.com/methods

https://www.ellenmacarthurfoundation.org/circular-economy/concept/infographic

http://www.conservationeconomy.net/pattern_map/noflash/index.html

https://toolbox.biomimicry.org/methods/process/