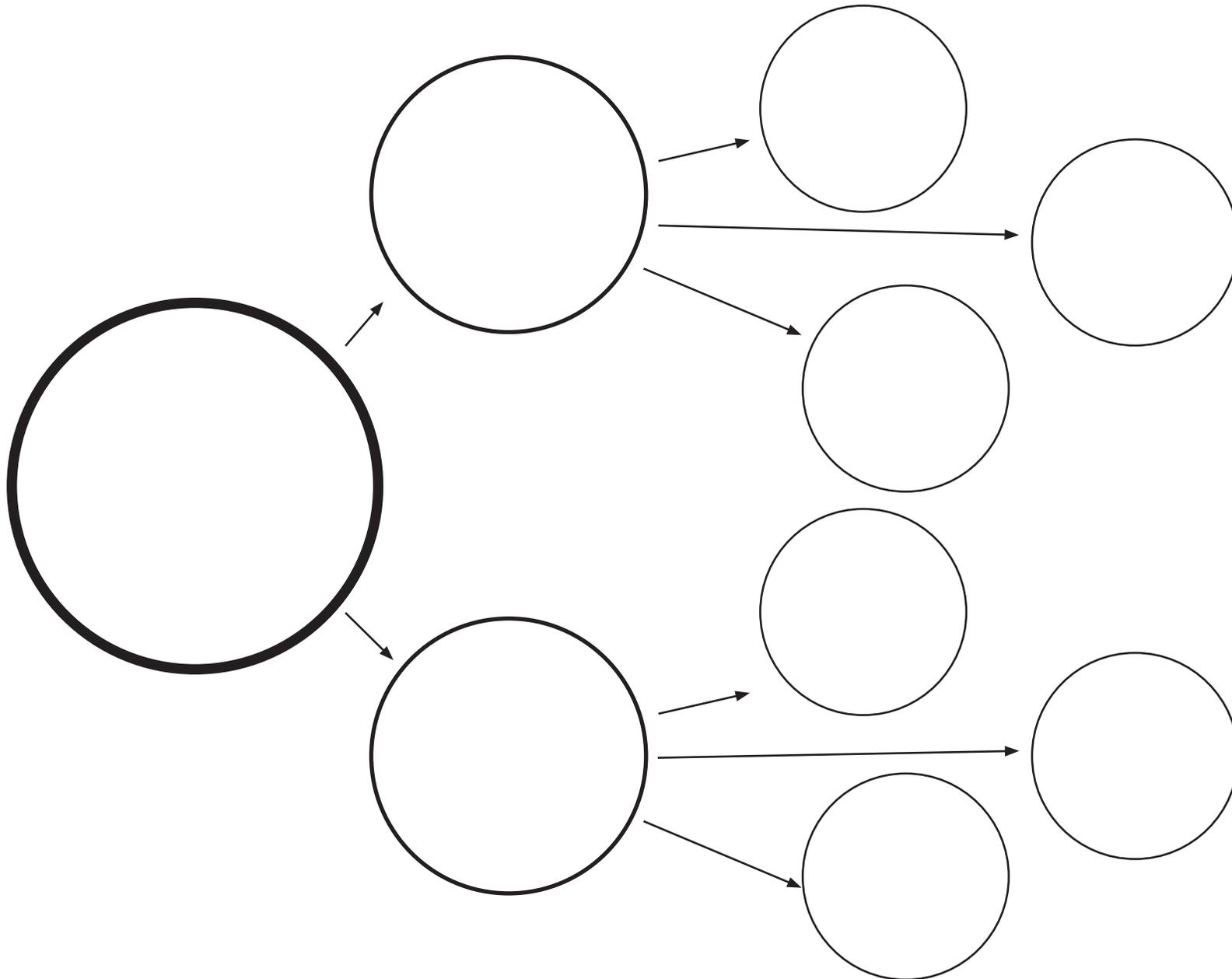


## DEFINING THE PROBLEM

Defining exactly what problem to solve is an important first step for designers. Use the chart to identify a global problem that matters to you, then break that problem into smaller pieces so that you can create a focused design solution.





## DESIGN TACTICS

Use the design tactics below to help investigate ways your design can positively affect, borrow from, work together with, or utilize nature to create a solution to a global problem.

### ZOOM IN

**Dissect the properties, elements, structure, and/or functions of a particular part of nature to implement in alternative uses.**

What are the individual components and what are their properties?

What is unique or noteworthy about one or more of the specific components?

What is happening on a material or molecular level that supports this part of nature?

### USE EVERYTHING

**Consider all the elements or materials involved in a process and how you might use everything, leaving no waste or leftovers.**

Trace the system or process from the very beginning to the end and consider all the individual inputs and outputs.

What raw materials or waste materials might be reused or redirected positively? What elements might need to be removed entirely to create a positive effect?

How might nature be incorporated in the process? What positive outputs or outcomes might be produced from the process?

### ZOOM OUT

**Design with the entire location or ecosystem in mind, thinking about the various components and how they will interact or affect one another.**

How many different elements or organisms compose this location or ecosystem?

What are the threats or challenges to sustaining the location or ecosystem?

What are the positive effects or features of this location or ecosystem?

### REVERSE COURSE

**Intervene in a harmful process or system to create a positive impact on nature.**

Trace the system or process from the very beginning to the end and consider all the individual agents or elements involved.

Where is nature incorporated or impacted and in what capacity?

What elements might need to be removed or redirected to create a positive effect?

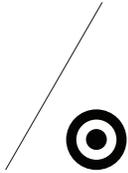
### MIMIC ACTIONS

**Apply the systems, patterns, behaviors, and networks of the natural world to inform your design.**

What are the cycles or steps? How do they transition from one to another?

What are the various components or factors and how do they communicate, interact, or work together?

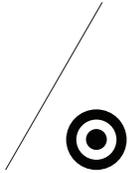
What are the results or positive outcomes?



## DESIGN TACTICS MATRIX

Use the design tactics below to help investigate ways your design can positively affect, borrow from, work together with, or utilize nature to create a solution to a global problem.

NATURE	ZOOM IN	ZOOM OUT	MIMIC ACTIONS	USE EVERYTHING	REVERSE COURSE



## MAPPING

Use one of the defined challenges and natural elements that you have explored in the “Defining the Problem” and “Design Tactics Matrix” and add them to the bold circles. Map related properties, components, elements, ideas, behaviors, and users to identify potential solutions to your challenge. Add additional circles as needed and try to find as many connections and solutions between the two ideas as possible.

