SYSTEMS THINKING TECHNIQUE 3

CONNECTED CIRCLES MAPPING

WHAT ARE CONNECTED CIRCLES MAPS?

Connected Circles maps (also referred to as interconnected circles or connection circles) are a systems thinking tool designed to understand complexity in a system. It is a tool that can be used in a wide range of applications and help to delve into an issue and manage a number of different ideas at once.

Connected circles are an intermediate step to creating causal loop diagrams. This tool provides a visual representation of the system dynamics and helps to figure out where to start to create a causal loop diagram because the challenge of creating a causal loop diagram is that people often do not know where to start. Therefore, connected circles help to generate ideas about changing conditions within a system by identifying the most important elements and connections to change, then drawing arrows to trace cause-and-effect relationships and unravel the feedback loops that exist within the system.

WHEN TO APPLY THE CONNECTED CIRCLES MAPS?

Connected Circles Mappings are is one of the systems thinking model to help you to transform and begin to trace webs of relationships within complex systems. The goal of using this tool is not to find one specific connectedion circle that will correctly describe a given problem. Rather, the tool intends to generate ideas and to clarify thinking about complex issues.

STRUCTURAL ELEMENTS OF CONNECTED CIRCLES:

To map the system with connected circles you would need to know the following points below.

Make use of the Kumu systems mapping software, which is provided as part of your Map the System registration.

a. **Variables.**

b. **Arrows indicating causal relationships**

c. **Polarity of a causal relationship:**

   +: when the cause increases, the effect increases; the relationship between variables goes in the same direction

   -: when the cause increases, the effect decreases; relationship between variables goes in the opposite direction

HOW TO USE CONNECTED CIRCLES MAPPING ?

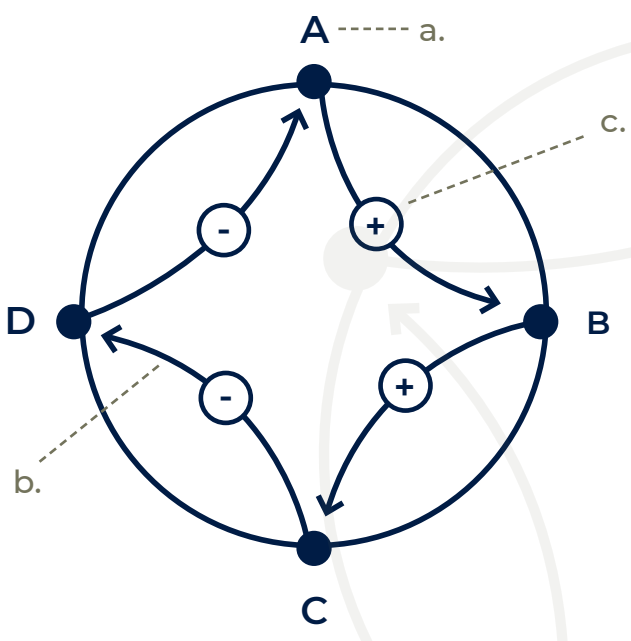
1. Simplify the problem. Remove unnecessary details that distract from the problem, and focus on identifying the key elements.

2. Brainstorm key elements. Collaborative brainstorming improves understanding of the cause-effect relationships that exist in a complex system. Draw a connected circle and focus on the key elements first. As a rule of thumb, try to keep within 10 elements.

4. Rethink. The rethinking process is important. Always be open to adapt and challenge your assumptions. Note: elements are not limited to one connection and some elements may not have any connections.

5. Exchange. Be prepared to state explicitly how and why the connections between the elements manifest. Share your connected circle map with others and receive feedback and new insights. Follow the connected circle around a second time and notice what happens to the elements through having received feedback and new insights.

Examples of a simple connected circle mapping

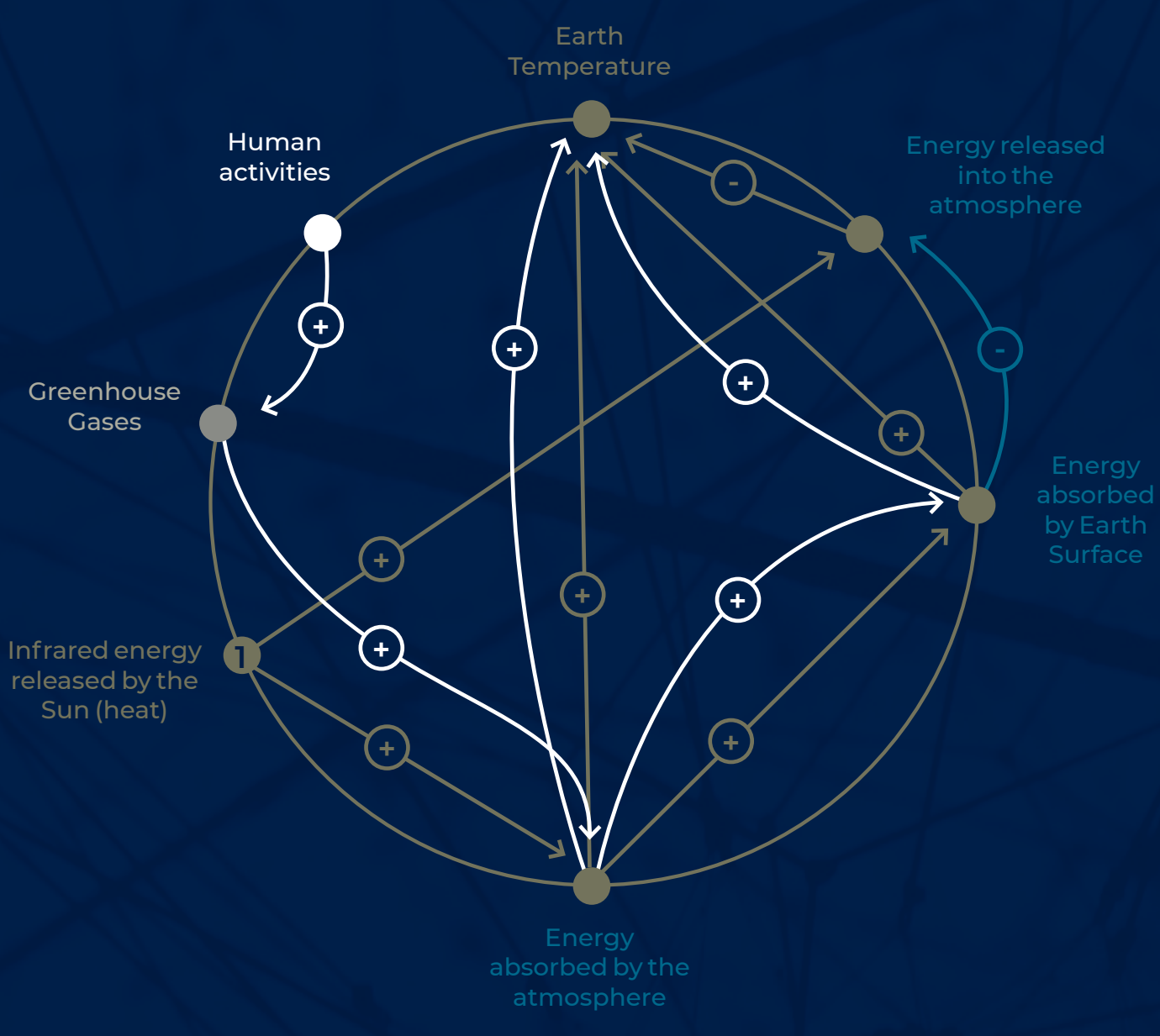


Example:

A = French Fries Eaten > B = Fat Consumption > C= Concern about Health Risks > D = French Fries Sold > A = French Fries Eaten

Example

GLOBAL WARMING THROUGH THE LENSES OF THE CONNECTED CIRCLES DIAGRAM



HELPFUL TIPS:

1) Begin with identifying the key elements and connections in connected circles.

2) Write your elements around the circle. Include between 5 to 10 elements.

3) Choose elements of the problem that are:
   - Have the greatest influence on the current problem.
   - Nouns as elements (do not label too vague) and, if necessary, provide them with units.

4) Identify elements that cause another element to increase or decrease.
   - Draw an arrow from the cause to the effect.
   - The causal connection must be direct.

5) Draw polarities of relations (“-”, “+”) and delays (“//”).

6) Review your maps throughout your project and as your research advances.

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