



### Consumption strategies



It's by starting to build simple elements in limited numbers that life forms more complex elements. Living organisms are built by adding nested systems (cells -> organs -> individuals -> populations -> ecosystems -> Earth).

*Fold on the line*

**Build  
in a basic way**



### Collective strategies



The principle is simple: the focus is on the group, not the individual. This cooperation can go as far as communality and symbiosis, and is at the root of better survival strategies in a crisis!

*Fold on the line*

**Cultivating in  
cooperation in  
crisis situations**



### Collective strategies



All living systems have the remarkable ability to synchronize and transmit information in order to develop, repair or self-organize.

*Fold on the line*

**Share  
information and  
synchronize**



### Collective strategies



Every cell, organism and society needs to be enclosed to ensure its internal functions are otherwise impossible. But these same cells, organisms and societies must be open to receive energy, information and matter!

*Fold on the line*

**Closed but open  
to  
outside**



### Consumption strategies



Life uses the most abundant resources abundant resources (CO2, O2, etc.) and very marginally rare resources. The use of abundant materials avoids dependence on a limited resource.

*Fold on the line*

**Use  
resources  
sustainably**



### Consumption strategies



Waste from one organism becomes a resource for another. Living organisms use the most abundant atoms, which facilitates the circularity of life.

*Fold on the line*

**Recycling all raw  
materials**



### Collective strategies



In nature, there's no centralizing body: on the contrary, all information is decentralized: each individual has the minimum of information at his or her disposal, and communicates with his or her neighbors via dense networks.

*Fold on the line*

**Decentralize**



### Collective strategies



Certain species specialize according to their ecosystem and environment in order to adapt and survive.

*Fold on the line*

**Divide the work,  
specialize**





### Time strategies



The living world's preventive strategies do not always protect against problematic consequences. It is then necessary to repair oneself without depending on an external agent. This is the case for a cut on our skin.

*Plier sur la ligne*

**Self-repair**



### Time strategies



By naturally operating in an under-regulated or non-reactive mode, the body leaves itself room to maneuver, adapting to constraints and mobilizing its full potential when necessary...

*Plier sur la ligne*

**Sub-optimized**



### Resilience strategies



When external disturbances occur, the behavior and characteristics of living beings change. So sacrificing an element can sometimes prove to be a profitable strategy in times of crisis or need.

*Plier sur la ligne*

**Integrate the unexpected / plasticity**



### Resilience strategies



In nature, the emergence of diversity is not hindered, as it promotes long-term robustness. It exists in individuals and organisms, as well as in relationships and ways of doing things.

*Plier sur la ligne*

**Encouraging diversity**



### Time strategies



In keeping with the circular organization of resources, most natural processes are cyclical. Living organisms are subject to this in their metabolisms, which are themselves adapted over the course of evolution to external cyclical processes.

*Plier sur la ligne*

**Design as a cyclical process**



### Time strategies



Faulty components need to be replaced on a regular basis. However, functions must be preserved during renewal. this renewal.

*Plier sur la ligne*

**Maintaining integrity in renewal**



### Time strategies



Interactions between species and their environment produce a range of "services" that are useful to all: these are known as ecosystem services. Generated gracefully, these are useful to other species and even to the ecosystem as a whole.

*Plier sur la ligne*

**Ecosystem services**



### Resilience strategies



Living organisms multiply functions and information to secure the achievement of objectives or targets. A balance is thus maintained in terms of possibilities and ecosystems, enabling adaptation in the event of change.

*Plier sur la ligne*

**Promote functional redundancy**



### Resilience strategies



Trial and error is a fundamental method of problem solving. It is characterized by a series of trials, continued until the search is successful, or until the tester stops searching.

*Fold on the line*

## Encourage and replicate successful strategies



### Resilience strategies



Shapes and functions co-evolve (based on trial and error and natural selection) to best adapt to the environment.

*Plier sur la ligne*

## Adapting form to function