



Biomimicry:

What we can learn
from 3.8 billion years
of experience of
Nature

Context

Confronted with our current challenges (climate, emissions, energy transition, poverty and inequality, mobility), created by our impact on Nature, Nature can teach us useful lessons on how to deal with those challenges sustainably. COP26 closed its doors, and we are all going to work on emission reductions, but we run a bit behind the facts. Maybe it makes sense to produce more in harmony with nature. Prevention is also in this case better than cure.

Nature has a magic power. Humans only experience their true being in relationship with Nature. Nature learned to do exactly what needs to be done: not too much, not too little. It does create waste. The purpose of Nature is neither growth nor revenue, but it is to evolve sustainably, in harmony and richness of experience. I am, since I belong: Ubuntu. Nature is systemic, autopoietic and transparent.

For whom?

The target group of this series are visitors interested in meaningful contributions to the world's challenges; visitors that seek for realistic and practical approaches and who like to experience that via a story, embedded in science.

This series fits in a Festival, that aims to contribute to a better world, and this via a combination of science, story, and image. The series focusses on what each visitor could do him or herself. It illustrates how we could all generate positive impact, and it aims to bring this power of biomimicry under the attention of the visitor. It gives the feeling: 'it is possible'. It is indeed a message of hope.

The story

Our challenges are big, multiple, complex and the way we approach them for years now, seems to be inadequate; maybe, our approaches even cause the problems. Nature always survives, if left untouched by humans. What can we learn from Nature; time is precious.

This photo series illustrates visually the concept of biomimicry and brings it under the attention as a more profound approach to sustainability. Biomimicry is the science and art of mimicking the best ideas of Nature, to design human solutions, to improve them and to make them more sustainable. On the one hand, the series illustrates the six basic principles of Nature's survival. On the other hand, we show applications with potentially high impact on our lives.

Biomimicry is also a message of hope. We do not highlight what goes wrong, but rather how we could do it differently, how we could contribute positively to a more sustainable world. It shows an impactful way forward.

Our challenges have a great impact on the quality of life on our planet. Some even refer to the risk of extinction of humankind. Using the lessons that Nature learned, to develop 'natural' solutions for our challenges, could have a strong positive impact on our lives, and possibly lead to a sustainable, inclusive society. The chance it too nice, not to try it.

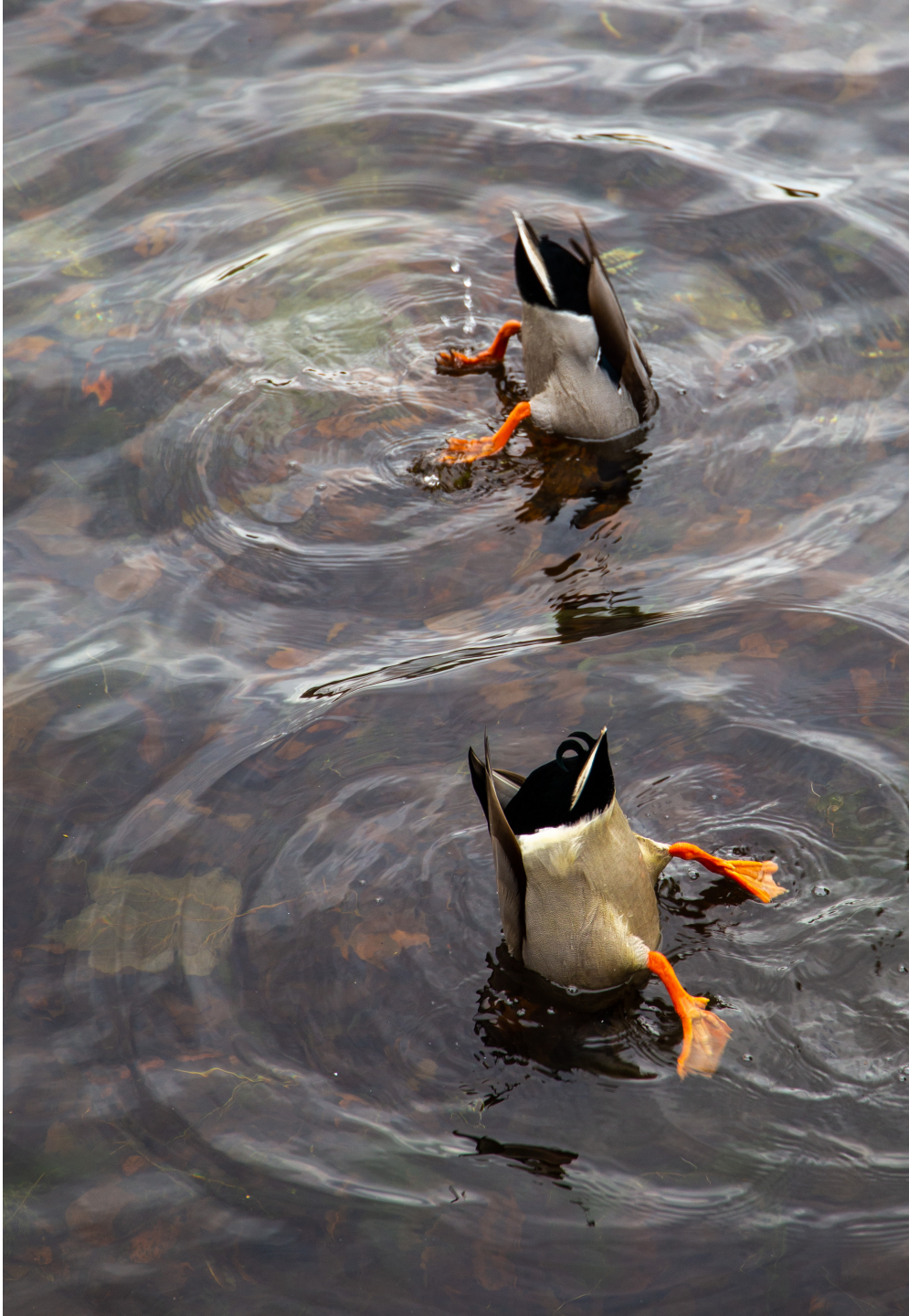
A few lessons learned by Nature



Nature integrates development into growth, it is self-organised and based on community development



Nature is in harmony with its immediate environment, it is circular and cooperative



Nature is efficient with its resources,
material and energy



Nature adapts
constantly to
changing
conditions.
It is resilient

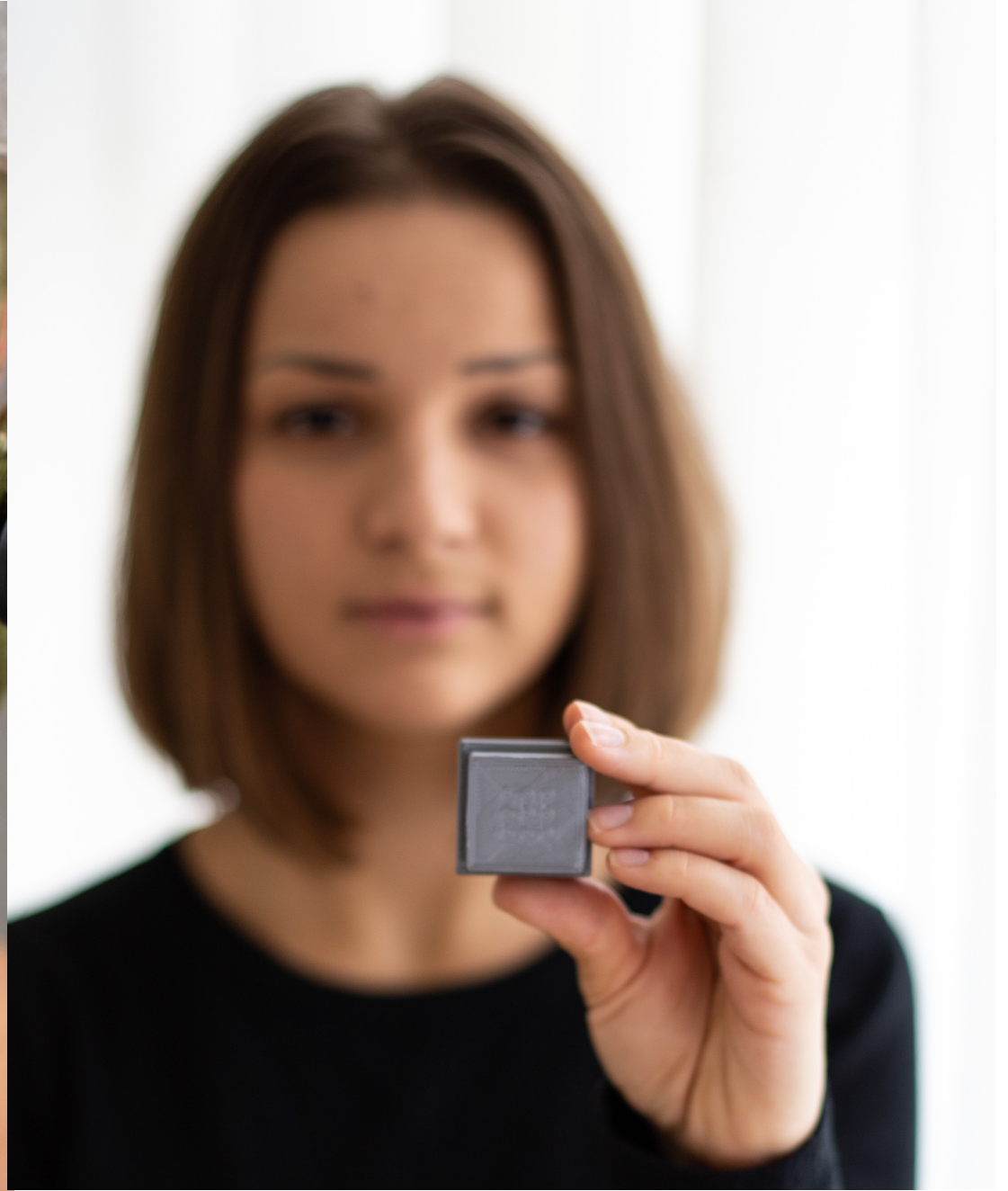
Nature evolves, it
integrates the unexpected,
and it re-organises
information constantly



Some applications that we have learned from Nature

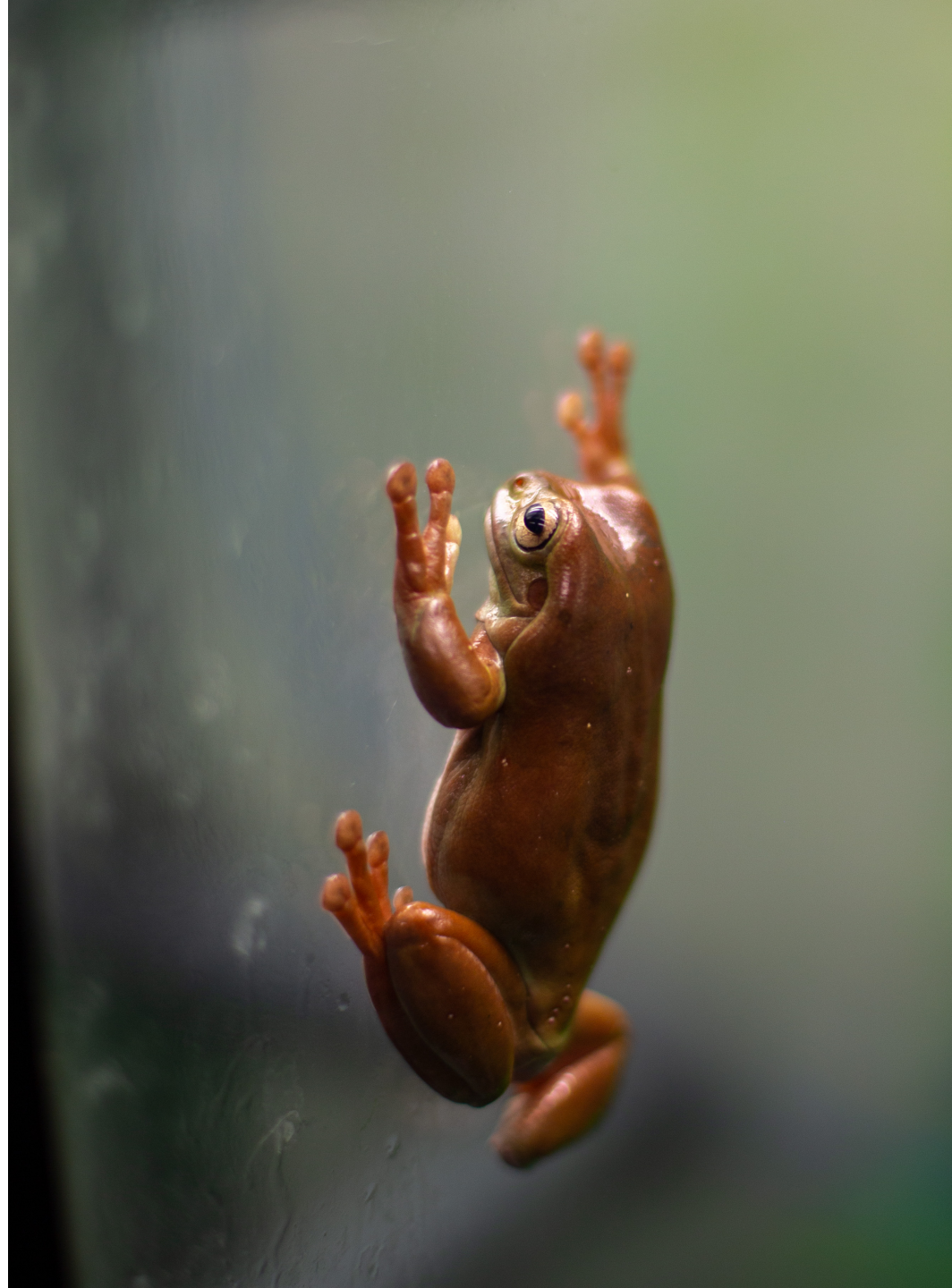
Coffee grounds still contain more than 80% of its nutritional ingredients, and is therefore ideal as fertile ground for growing oyster mushrooms





Worldwide, we throw away 3 million face masks per minute. Mari Genova has studied how the mantaray filters its food out of the water, in order to construct a re-usable filter

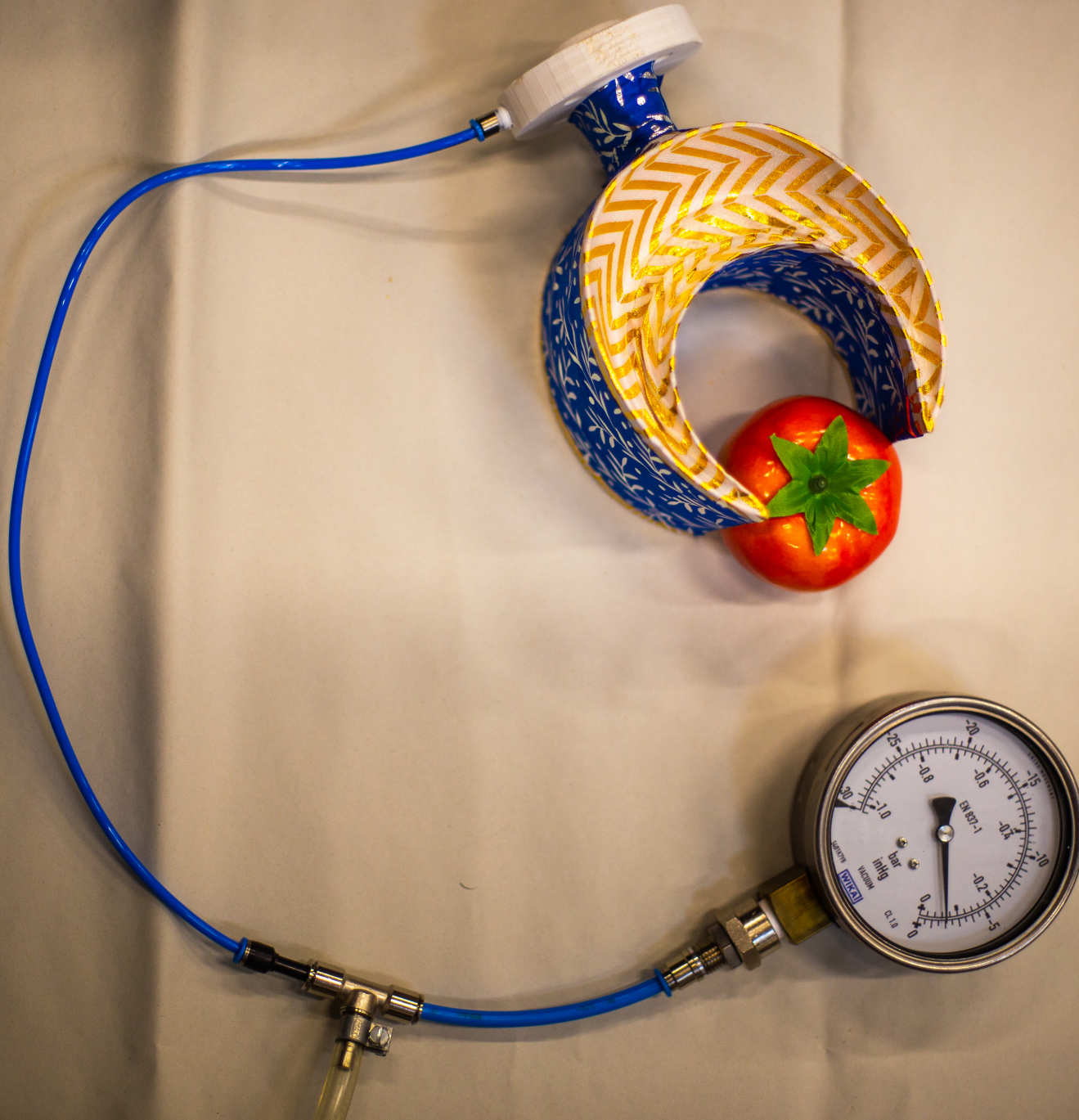
The study of the adhesion of frogs on a glass plate, allows the development of nature friendly glue that sticks onto wet surfaces





We want to be able to reach all internal body parts with minimal damage and to be able to examine them. Minimal invasion instruments are developed, based on the imitation of biological structures





The newest generation of softgrip robots (for agriculture) are inspired by fish tales, and are powered by under pressure



The DelFly Nimble is a highly mobile flying robot (drone), based on the characteristics of the fruit fly



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Thanks to my experience in the field, I could also write an accompanying magazine article.

My background is in systems thinking, values based innovation, societal impact projects, inclusivity and fairness, while accompanying mindset shifts of corporates and organisations. In the practical realisation of those mindset shifts, biomimicry is an exciting tool.

The full series consists of 22 pictures