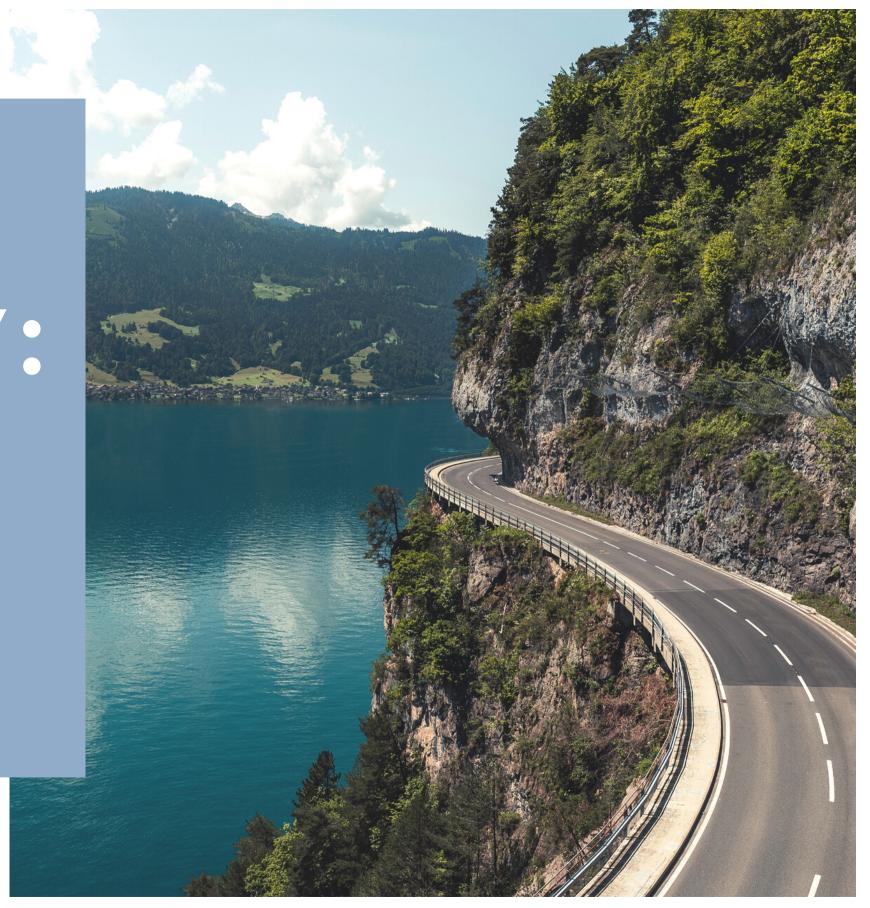
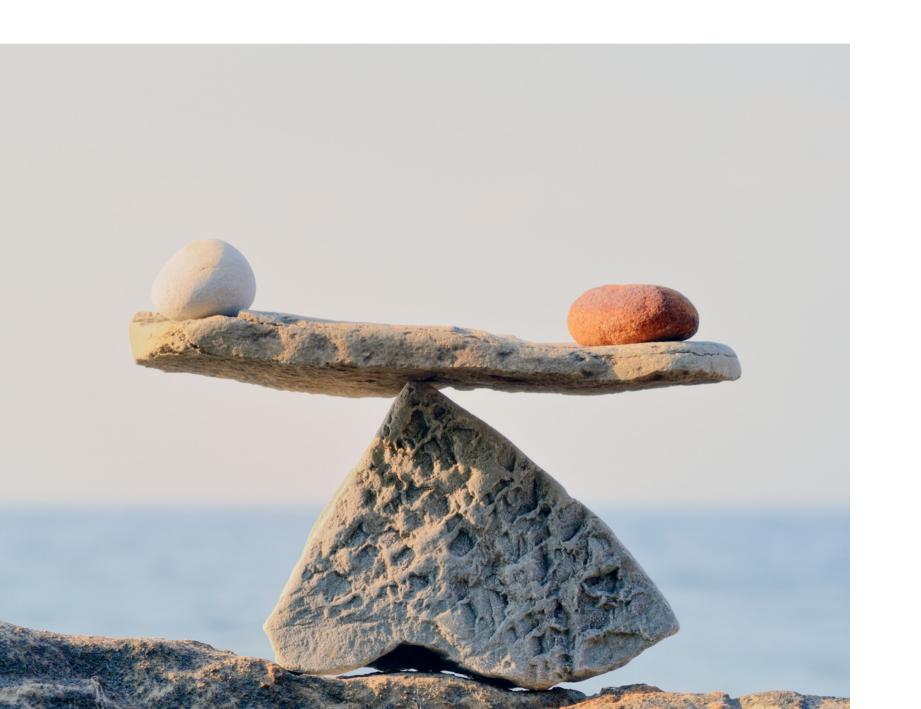
# BEYOND SUSTAINABILITY: THE PATH TO A REGENERATIVE BUSINESS



## AGENDA



- **O 1** Introduction
- **Q2** Part One: Analysing the Characteristics of Regeneration
- **Q3** Part Two: Identifying Ugly Ducklings
- **Q4** Part Three: Creating an Ugly Duckling
- **05** Conclusion

Imperial College London



## INTRODUCTION

#### REGENERATION

The act of improving a place or system to establish conditions for all life to flourish resiliently and infinitely.

Challenges whether sustainability is sufficient to guide the world towards a better future.

Can be adopted by businesses to enable the movement from the profit-driven approach to an approach that acknowledges the importance of nature.

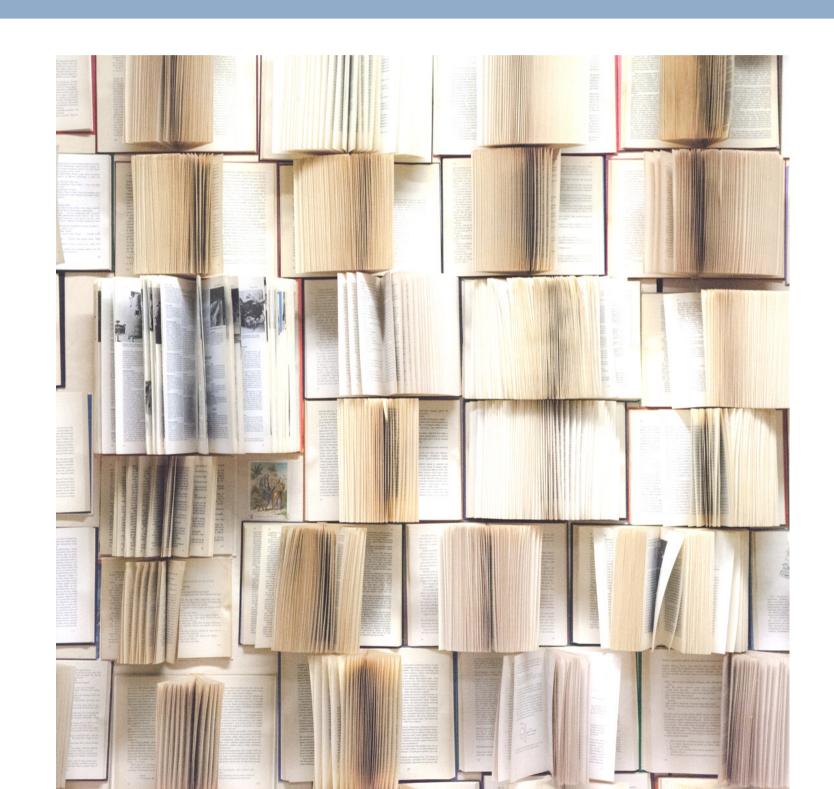


## MINDSET COMPARISON

SUSTAINABLE	REGENERATIVE
DO LESS HARM	DO MORE GOOD
BALANCES PLANET, PEOPLE, AND PROFIT	CONSIDERS PLANET, PEOPLE, AND PROFIT AS MUTUALLY DEPENDENT
MAINTAIN	RESTORE AND IMPROVE
PASSIVE	ACTIVE
MAXIMISE VALUE FOR SOME STAKEHOLDERS	MAXIMISE VALUE FOR ALL STAKEHOLDERS
USER OF THE ENVIRONMENT	EMBEDDED IN THE ENVIRONMENT
EMPHASISES EFFICIENCY	EMPHASISES RESILIENCY

## PART 1: ANALYSING THE CHARACTERISTICS OF REGENERATION

- **01** Research
  - Individual research conducted on original principles and new definitions proposed.
- **Q2** Adjusting the Regenerative Principles
  - New definitions were further developed and business application was explored.
- **03** Creating a Diagram of the Principles
  - Principles were organised into a framework, and overarching mission was determined.



## THE REGENERATIVE PRINCIPLES

A REGENERATIVE BUSINESS IS...



## 1

## ADDRESSING A PROBLEM TO INTENTIONALLY CREATE POSITIVE IMPACTS

A business should first and foremost address a problem and strive to create positive impacts.

#### Guiding Questions

Does this business address a problem?

If every business did what this company is doing, would it make a significant difference?

Interface

## INSPIRED BY NATURE

#### Original definition: Learning from nature

#### **New definition**

Billions of years of evolution has enabled nature to develop highly resilient, self-sustaining processes to maintain a balanced ecosystem that regenerates over time. A regenerative business values this and not only minimises impact on the system, but actively strives to learn from these natural processes and where possible, enhance them.

**Guiding Questions** 

Is biomimicry at the core of the business' products or services?

Does the business empower nature to self-heal?

Wize Tea

CHAIN

## PROGRESSIVE IN ITS VALUE

#### Original definition: Interconnectivity and Circularity

#### **New definition**

A business' impact extends beyond its primary product or service – it incorporates the entire supply chain, other businesses in the market, and the surrounding ecosystem and community. A regenerative business understands its interconnectedness with the wider system and aims to operate with a progressive value chain that generates spiralling or endlessly unfolding social, economic, and environmental benefits.

**Guiding Questions** 

Does the business act to form strong connections and partnerships?

Is there evidence of the creation of spiralling social, economic, or environmental value, rather than just the creation of more material?

## HONEST TO LISPEOPLE

LIVE LIFE ON THE VEG

Riverford Organic Farmers

#### Original definition: Aligning Inner and Outer

#### **New definition**

A business that invests in its people and fosters a collective culture reflective of its wider purpose will be comprised of empowered employees who feel a sense of well-being and trust the business for its integrity. A regenerative business strives to do this, as it recognises that its employees are the greatest force for driving positive impact whilst standing the test of time.

#### **Guiding Questions**

Does the business ensure it is building a just and equitable future?

Does the business recognise their colleagues as assets and invest in their personal development?

## 

Fogo Island Inn

## INTEGRATED IN THE COMMUNITY

#### Original definition: Rooted in Place/Context

#### **New definition**

The impacts of business exceed its direct operations and encompass the surrounding ecosystem. A regenerative business does not view itself as isolated from the community. Instead, it recognises that it is embedded in the community and this cobeneficial relationship results in positive outcomes for all.

#### **Guiding Questions**

Does the business acknowledge and engage with its local community?

Is the business actively investing both socially and financially in local community initiatives unrelated to business operations?

### DYNAMIC



#### Original definition: Dynamic

#### **New definition**

Nature is dynamic: not only is it constantly changing but it is also capable of using these disturbances to its advantage, as a tool for improving its resilience. Likewise, a regenerative business should strive to be dynamic and capable of adapting to changing environments in order to create long-term positive impact.

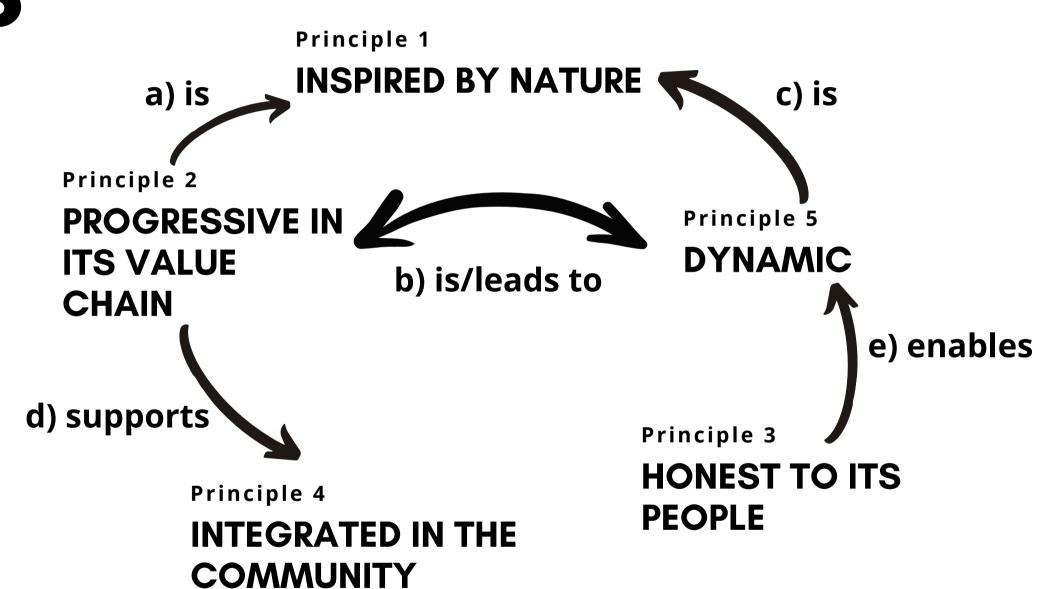
Guiding Questions

Is the business re-thinking the status quo within their industry?

Does the business recognise that a strategy should be assessed frequently?

## CONNECTIONS BETWEEN THE PRINCIPLES

The connections indicated are not exhaustive, however they represent the most apparent relationships.



## PART 2: IDENTIFYING UGLY DUCKLINGS

- O 1 Ugly Duckling Scoping and Selection
  - Individual research to identify Ugly Ducklings.
  - Top 6 selected based on regenerative principle guiding questions (scored out of 4).
- **02** Evaluating the Impact Potential
  - Application in business was explored based on impact potential questions.
  - Identified potential barriers to scale.

IMPACT POTENTIAL INDEX	ASSOCIATED QUESTIONS
Scalability	<ul> <li>Does the business utilise existing knowledge, infrastructure and/or resources?</li> <li>Is the business' product or service easily implemented with minimal cost (social, environmental, and economic)?</li> </ul>
Ecosystem Impact	<ul> <li>Does business scale come with increased benefits to the user and the environment?</li> <li>Does the business inspire competitors to improve their practice?</li> </ul>
Level of Engagement	<ul> <li>Does the business have support from stakeholders who can increase awareness of the product or service?</li> <li>Does the business value and encourage continuous improvement via feedback from all stakeholders?</li> </ul>

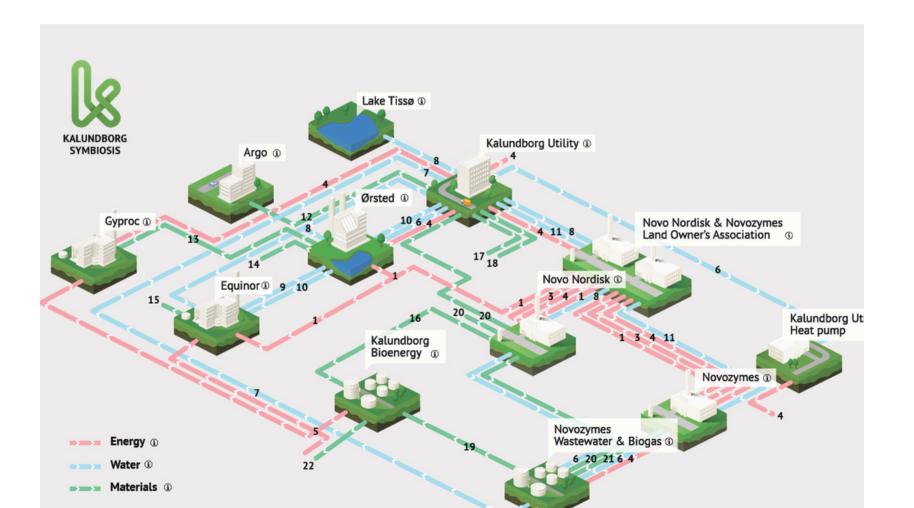
## UGLY DUCKLING BUSINESSES

- 1. Kalundborg Symbiosis
- 2. Made of Air
- 3. Notpla
- 4. Apeel Sciences
- 5. The Bioregional Learning Centre
- 6. Solar foods



## KALUNDBORG SYMBIOSIS

A network of 13 businesses that share inputs and outputs via over 30 resource streams that flow between the businesses whilst creating social opportunities.



Regenerative principles

INSPIRED BY NATURE	<b>3</b> /4
PROGRESSIVE IN ITS VALUE CHAIN	<b>4</b> /4
DYNAMIC	<b>3</b> /4

Impact potential

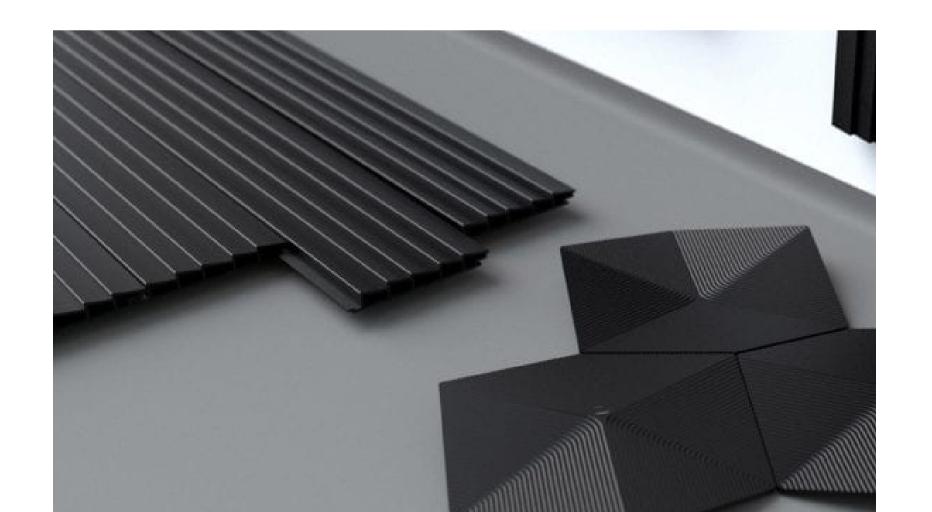
SCALABILITY	<b>3</b> /4
ECOSYSTEM IMPACT	<b>4</b> /4
LEVEL OF ENGAGEMENT	<b>3</b> /4

#### Barriers

- Adoption in novel regions.
- Requires supply chain transformation.

## MADE OF AIR

A manufacturer of carbon negative thermoplastics that replace high emissions materials in automobiles, consumer goods, and the built environment.



#### Regenerative principles

ADDRESSING A PROBLEM TO INTENTIONALLY CREATE POSITIVE IMPACTS	<b>4</b> /4
INSPIRED BY NATURE	<b>3</b> /4
PROGRESSIVE IN ITS VALUE CHAIN	<b>3</b> /4

#### Impact potential

SCALABILITY	<b>3</b> /4
ECOSYSTEM IMPACT	<b>3</b> /4
LEVEL OF ENGAGEMENT	<b>2</b> /4

#### Barriers

 Technological gap - the thermoplastics currently produced are only for replacing longterm durable forms of plastics.

## NOTPLA

A packaging start-up that produces packaging made from seaweed and other plants to provide an alternative to single-use plastic packaging.



#### Regenerative principles

ADDRESSING A PROBLEM TO INTENTIONALLY CREATE POSITIVE IMPACTS	<b>3</b> /4
INSPIRED BY NATURE	<b>3</b> /4
DYNAMIC	<b>3</b> /4

#### Impact potential

SCALABILITY	<b>3</b> /4
ECOSYSTEM IMPACT	<b>3</b> /4
LEVEL OF ENGAGEMENT	<b>2</b> /4

#### Barriers

• Dependence on brown seaweed as primary material.

## APEL SCIENCES

A food 'packaging' company that constructs an edible barrier for fruits and vegetables, delaying spoilage and reducing the amount of food waste.



#### Regenerative principles

ADDRESSING A PROBLEM TO INTENTIONALLY CREATE POSITIVE IMPACTS	<b>3</b> /4
INSPIRED BY NATURE	<b>3</b> /4
PROGRESSIVE IN ITS VALUE CHAIN	<b>2</b> /4

#### Impact potential

SCALABILITY	<b>3</b> /4
ECOSYSTEM IMPACT	<b>3</b> /4
LEVEL OF ENGAGEMENT	<b>2</b> /4

#### Barriers

• Smaller businesses lack the resources for implementation.

## BIOREGIONAL LEARNING CENTRE

A community interest company that serves the people of South Devon, focusing on revitalising the region by integrating people with place.



Regenerative principles

ADDRESSING A PROBLEM TO INTENTIONALLY CREATE POSITIVE IMPACTS	<b>3</b> /4
HONEST TO ITS PEOPLE	<b>2</b> /4
INTEGRATED IN THE COMMUNITY	<b>4</b> /4

Impact potential

SCALABILITY	<b>4</b> /4
ECOSYSTEM IMPACT	<b>2</b> /4
LEVEL OF ENGAGEMENT	<b>3</b> /4

#### Barriers

• Indifference of individuals and/or community organisations.

## SOLAR FOODS

A food production company that has created the protein Solein, from microbes, air, and electricity, replacing proteins requiring extensive land and water.



#### Regenerative principles

ADDRESSING A PROBLEM TO INTENTIONALLY CREATE POSITIVE IMPACTS	<b>3</b> /4
INSPIRED BY NATURE	<b>3</b> /4
DYNAMIC	<b>2</b> /4

#### Impact potential

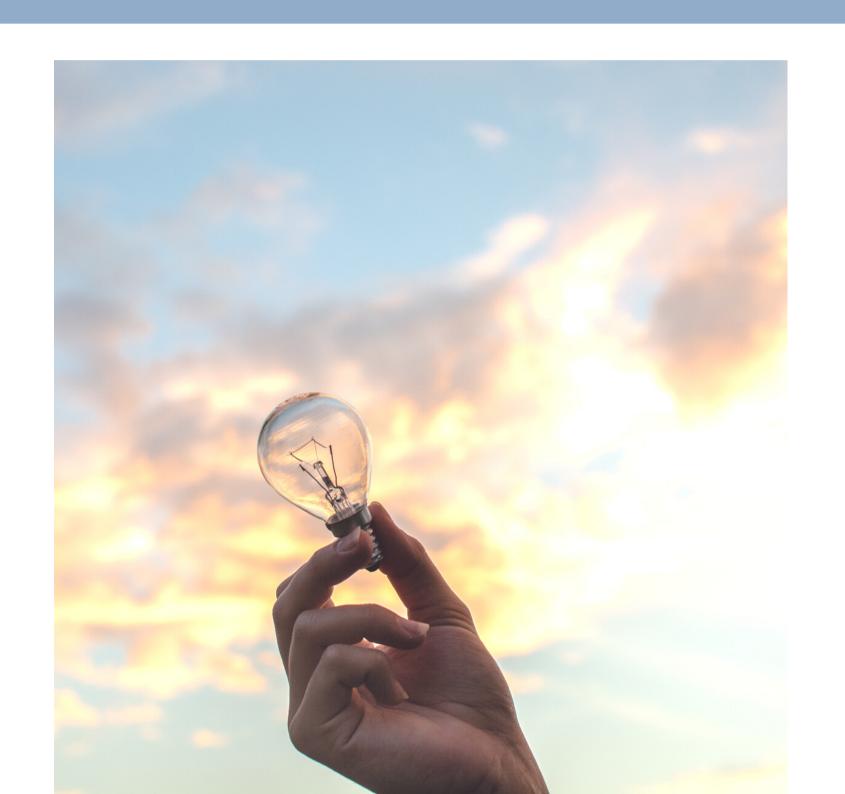
SCALABILITY	<b>3</b> /4
ECOSYSTEM IMPACT	<b>2</b> /4
LEVEL OF ENGAGEMENT	<b>2</b> /4

#### Barriers

- Well-established livestock industry.
- Regulation.

## PART 3: CREATING AN UGLY DUCKLING

- Ol Identifying a problem
  - Pollution contributes to 4,000 premature deaths in London each year.
- **Q2** Generating potential solutions
  - Lotus Blossom Technique.
- **03** Research
  - 80% of London's public space is comprised of streets.
  - The scarcity of key plant and animal species leads to a reduction in community connection and belonging.
  - 28% of Londoners doing less than 30 minutes of physical activity a week.



### THE VALUE OF STREETS

TRADITIONAL STREETS

THOROUGHFARES FOR TRANSPORT

PLACES FOR PEOPLE TO LIVE AND WORK

PLACES TO PARK VEHICLES, ACCESS BUILDINGS, AND POST LETTERS

SITES FOR WASTE DISPOSAL AND COLLECTION

AREAS OF HIGH POLLUTION

PLACES WHERE YOU CAN SOMETIMES FEEL UNSAFE

STREETS AS A SERVICE

PLACES TO MEET AND SOCIALISE

HABITATS FOR PEOPLE, PLANTS, AND ANIMALS

PLACES TO EXERCISE, LEARN AND GROW FOOD

SITES FOR WASTE RECOVERY

AREAS OF CLEAN, HEALTHY AIR

PLACES WHERE YOU FEEL A SENSE OF SECURITY

## STREETS AS A SERVICE (Saas)

#### WOH & HOW

- Redefining what a street is
- Through a partnership of five businesses
- Creating bespoke solutions
- Meeting communities needs
- Helping councils fullfil their mandate



## GLOWEE

- Natural light
- Improving urban biodiversity
- Reducing energy demand
- Maintain sense of security





## CITYTREE

- Biofilter bench hybrid
- Improving air quality
- Improving mental and physical health

## ENERGYME 3

- Street light powered by kinetic energy
- Encouraging exercise





## PARKLETS

- Urban green spaces
- Places to meet and socialise
- Improving well-being
- Increasing urban biodiversity

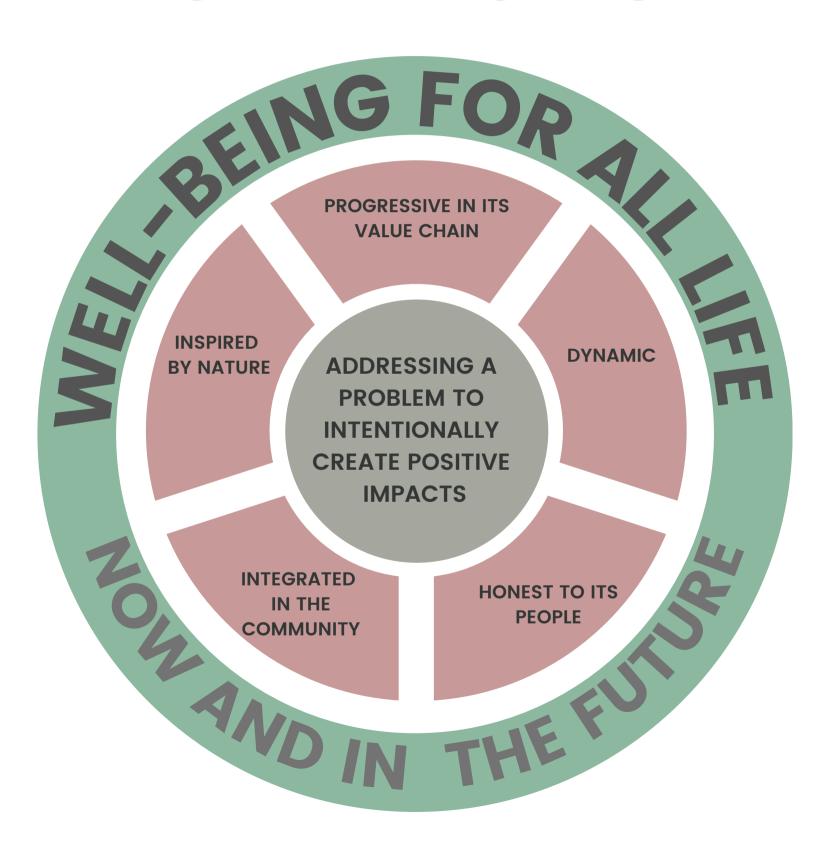


## COMMUNITY COMPOSTER

- Reducing food waste
- Re-building a sense of community
- Creating homes for plants and animals



## HOW DOES IT SCORE?



#### Regenerative principles

ADDRESSING A PROBLEM TO INTENTIONALLY CREATE POSITIVE IMPACTS	<b>3</b> /4
INSPIRED BY NATURE	<b>3</b> /4
PROGRESSIVE IN ITS VALUE CHAIN	<b>2</b> /4
HONEST TO ITS PEOPLE	<b>4</b> /4
INTEGRATED IN THE COMMUNITY	<b>4</b> /4
DYNAMIC	<b>4</b> /4

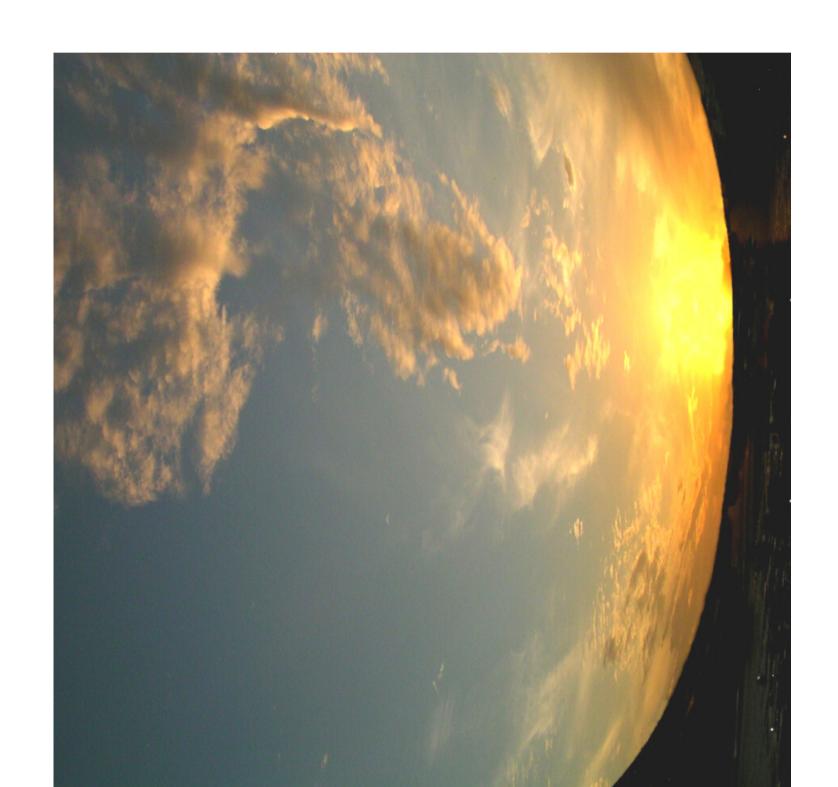
### FUTURE OF SaaS

- SaaS plans to continue grow the partnership, adding new technologies and innovations to its network.
- Influence regulatory frameworks.
- By 2027, SaaS hopes to be working with all councils in the UK.
- SaaS hopes to be a model for systemic change on how urban planners can rethink their streets.



## CONCLUSION

The framework presented can aid Volans in identifying and guiding Ugly Ducklings in their transformation to regenerative businesses, contributing to their main aspiration of enabling the well-being of all life, now and in the future.



### THANK YOU

#### **ANY QUESTIONS?**

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