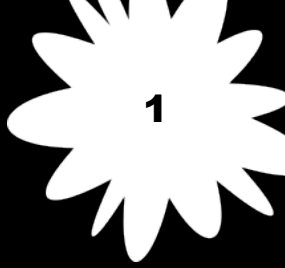


SAVONIA

Multidisciplinary Research Development and Innovations

Dr. Tuomo Eskelinen
Research Manager

Towards Sustainable Society



Example of ESG-Sustainability performance

S&P Dow Jones Indices

A Division of S&P Global

Indices

Research & Insights

Exchange Relationships

Professional Resources

Governance



As of Feb 21, 2024

EXPORT

INDEX NAME	1 DAY	MTD	QTD	YTD	1 YEAR	3 YEARS Annualized	5 YEARS Annualized	10 YEARS Annualized
<u>S&P 500 ESG 3% Decrement Index</u>	-0.71%	2.27%	3.55%	3.55%	21.54%	8.25%	12.37%	9.99%
<u>S&P 500 ESG Index</u>	-0.68%	2.34%	3.79%	3.79%	23.30%	9.81%	13.83%	11.14%
<u>S&P 500 ESG Leaders Index</u>	-0.65%	2.25%	3.69%	3.69%	25.21%	10.34%	14.52%	11.33%
<u>S&P 500 ESG Tilted (Heavy) Index</u>	-0.65%	2.18%	4.40%	4.40%	23.43%	9.69%	12.75%	10.83%

The cold truth about circularity ... Ellen McArthur Foundation, 2024

Despite the circular economy entering the mainstream, global circularity is still in decline.

Over the past five years, the volume of discussions, debates, and articles addressing this topic has almost tripled, reflecting a heightened awareness and interest in circularity. However, the vast majority of extracted materials entering the economy are virgin, with the share of secondary materials declining steadily since the *Circularity Gap Report* began measuring it: from 9.1% in 2018 to 7.2% just five years later in 2023.¹ Meanwhile, the total amount of materials consumed by the global economy continues to rise: in just the past six years alone we have consumed over half a trillion tonnes of materials—nearly as much as the entirety of the 20th century. These statistics display the cold, hard truth: despite the circular economy reaching ‘megatrend’ status, lofty speeches and targets are not yet translating into on-the-ground actions and measurable impacts. Without bold, urgent action to

Multidisciplinary RDI

Key figures

TURNOVER 2022
3 million €

Local solutions for global challenges
with
university & industry collaboration
by
cross-pollinating different expertise.

NUMBER OF EXPERTS
40

Regional, national and international levels.

NUMBER OF PROJECTS
28

Business and innovation development focus with a cross
sectoral twist.

**JOINT INTERNATIONAL
PROJECTS**
20

Triple Transition (Green shift)
SDGs, regional climate roadmap,
sustainable business models

Savonia UAS' mission-based RDI

As global challenges, Savonia UAS' actions are guided by the Agenda 2030 goals, as well as Human Security. In addition to these, each of the Institute's six RDI departments has its own challenges typical of its operations.



Multidisciplinary RDI focuses its activities especially on agenda goals 8, 11, 12 and 13.

Climate & innovation road maps:

- ILCA (Innovation Laboratories for Climate Actions): <https://eit-hei.eu/projects/ilca/>
- Climate security: <https://ilmastoturvallisuus.savonia.fi/en/front-page/>

Circular business & accepted solutions:

- ValueWaste: <https://valuewaste.eu/>
- Waste4Soil : <https://www.itene.com/en/success-stories/waste4soil-recovery-food-waste/>
- EFE (Ethical Food Entrepreneurship): <https://ethical-food.eu/>

Impact assessment:

- Future DiverCities2: <https://future-divercities.eu/>

Ecosystem development:

- BoostECO: <https://superecosystem.fi/>

Universities for Sustainable Development & their respective programs

- Consortium of Universidad Pablo de Olavide (ES), OpenODS (ES), Vilniaus Kolegija (LT) & Savonia UAS (FI)



IMPACT ASSESSMENT *Iterative* PROCESS

Creator view

FRAME CREATION WORKSHOP

Pre Phase

Participatory Phase

Post Phase

Recap / Re-research

Understanding context & framework of the pilot/ venture
The Theory of Change

Initiation

The current situation of the pilot/venture
The topic of the workshop
Evaluation criteria
Key stakeholders

Archaeology

Feel the space
Dreaming what could be?

Context/Field

Commoning
How are involved?
Key values & meanings

Paradox

Why the situation is so hard to solve?

Themes/Frames

Brainstorming new possible & futures
Framestorming

Analysis

Storytelling new futures
Pilot data collection

PRIA framework & INTO

Transformation Integration

Storyboarding
Impact scenarios

Paths to actions
Mapping out the activities that need to be done
The Change

Done by a pilot/venture team

Done together with end-users, stakeholders and pilot/venture team

Done by a pilot/venture team



Business Model Canvas

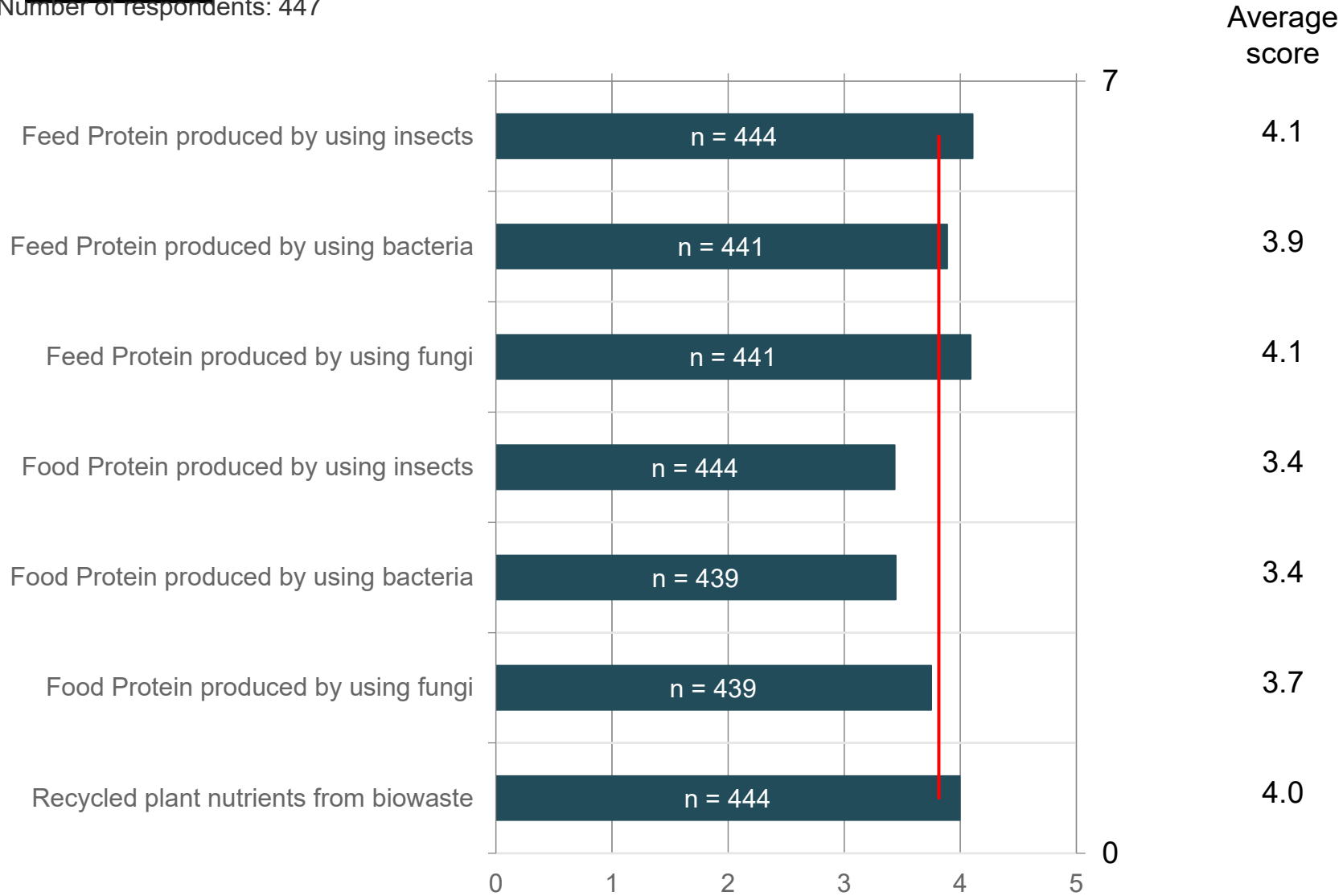


Example from Social Acceptance study.

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Would you agree to choose from the following new protein or fertilizer sources when made available?

Number of respondents: 447







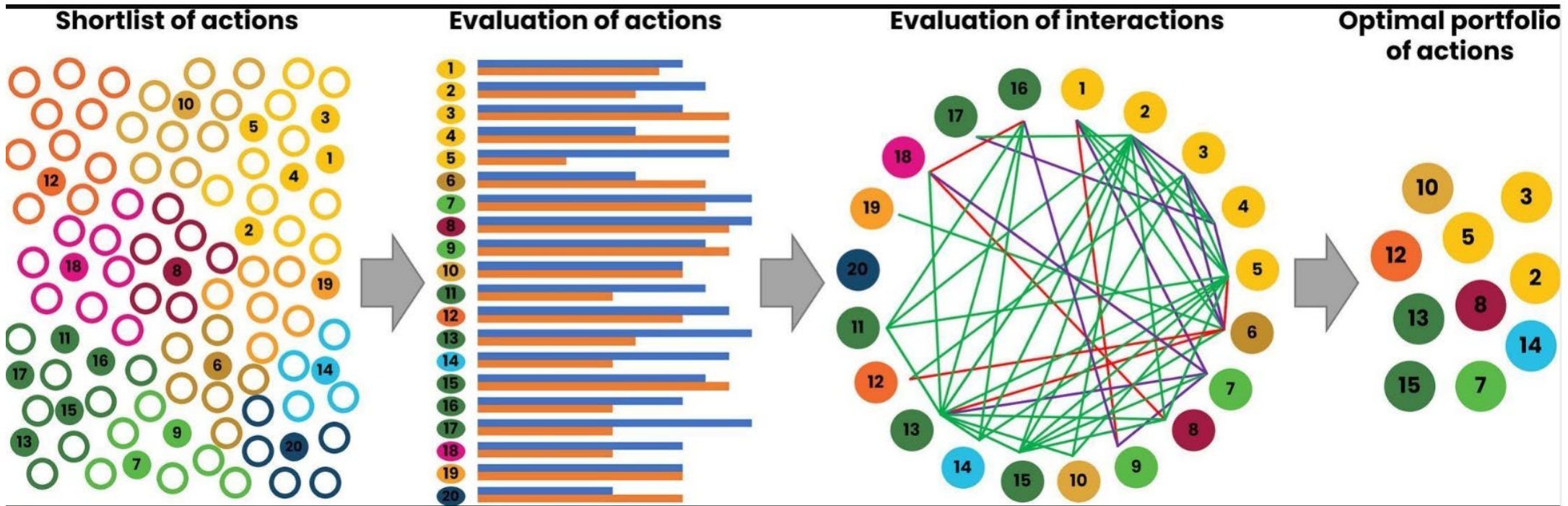
Science of The Total Environment

Volume 912, 20 February 2024, 169548



A portfolio decision analysis approach for selecting a subset of interdependent actions: The case of a regional climate roadmap in Finland

Jyri Mustajoki^a  , Juuso Liesiö^b, Miika Kajanus^c, Tuomo Eskelinen^c,
Saara Karkulahti^d, Taeyoung Kee^b, Anni Kesänen^c, Tapio Kettunen^d,



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