UPRIGHT PROJECT

THE NET IMPACT OF REPACK

15.9.2020

RePack

EXECUTIVE SUMMARY

Objectives

1) Create an understanding of the net impact of RePack

2) Determine effective ways for RePack to utilise net impact data to gain business benefits

3) Define ways for RePack to continuously track and communicate its net impact and share its future improvement efforts

Methodology

The net impact profile of a company is based on the impacts of the products and services it provides.

The analysis was conducted with the Upright net impact model. The model utilizes scientific articles and machine learning to summarize how products, services, and companies impact the environment, health of people, society as well as creation and distribution of knowledge.

Read more:
uprightproject.com/about/model

Key results

RePack contributes positively to the societal infrastructure by providing postal packaging materials. In addition, RePack contributes to creation of jobs and taxes.

The positive impacts are achieved by using relatively high amount of scarce human capital. The magnitude of this impact will reduce as the company grows.

Furthermore, RePack causes small amount of waste and emissions, however, the environmental impact is significantly lower than for companies producing disposable packaging.

CONTENTS

1. Objectives: what was pursued?
2. Methodology: how was the analysis conducted?
3. Results: what is the net impact of RePack?
4. Discussion: what is the so-what?

1. OBJECTIVES: WHAT WAS PURSUED?

OBJECTIVES OF THE COLLABORATION

1. UNDERSTAND NET IMPACT

Create an understanding of the net impact of RePack and how its products contribute to the overall profile

2. DETERMINE WAYS TO UTILIZE

Determine effective ways for RePack to utilise net impact data to gain business benefits

3. OUTLINE A WAY FORWARD

Define ways for RePack to continuously track and communicate its net impact and share its future improvement efforts

2. METHODOLOGY: HOW WAS THE ANALYSIS CONDUCTED?

INCENTIVIZE COMPANIES TO OPTIMIZE THEIR NET IMPACT.

WHO HOLDS THE POWER?

a.k.a. reasons for cynics to care, too

INVESTORS

”Where do I dedicate my equity i.e. which company do I **invest** in?”

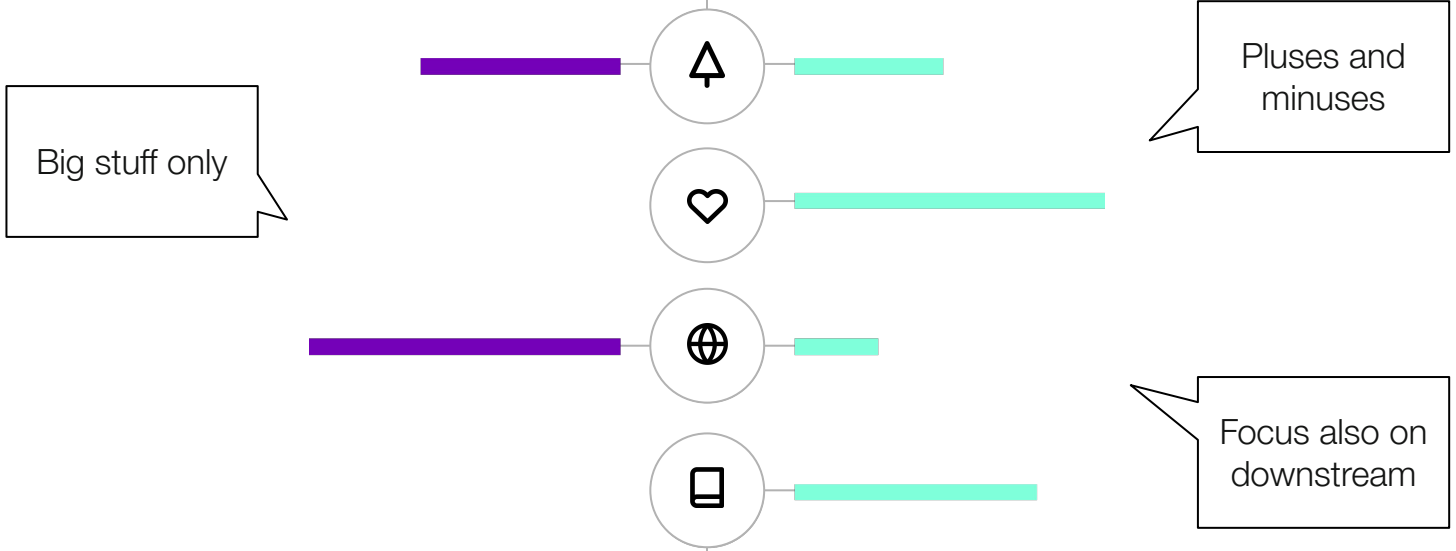
CUSTOMERS

”Where do I dedicate my money i.e. which company do I **buy** from?”

EMPLOYEES

”Where do I dedicate my time i.e. which company do I **work** for?”

A NEW TYPE OF QUANTIFICATION MODEL TO BRING OUT THE SHAPE OF A COMPANY



We do not understand **how resources should be allocated** in the 21st century capitalistic system in order to maximize the likelihood of survival of a thriving humankind and the planet we are inhabiting.

Build a top-down model that allocates all positive and negative impacts/values caused by the private sector globally to real companies.

TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

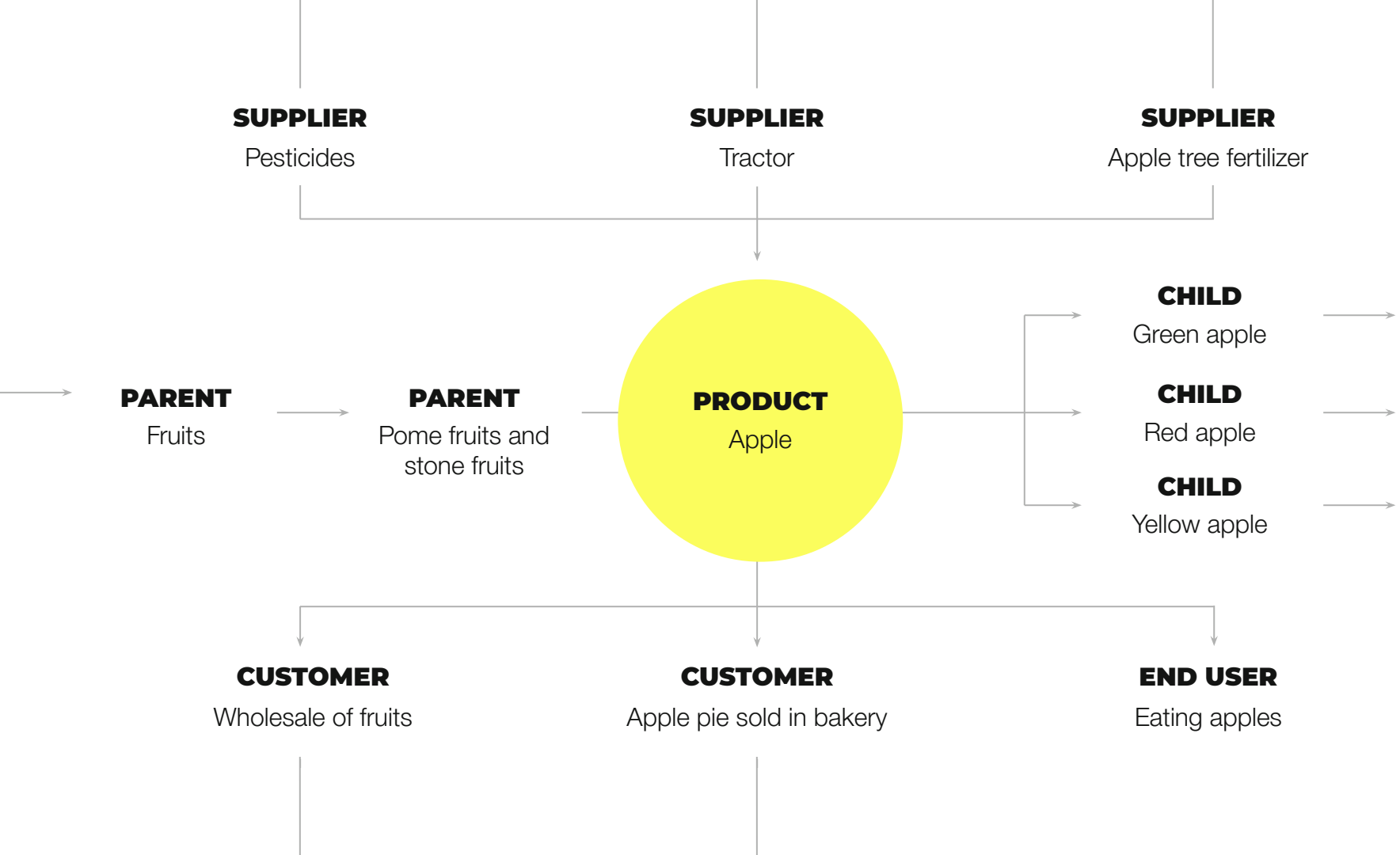
TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)


SUPPLIER
Pesticides
SUPPLIER
Tractor
SUPPLIER
Apple tree fertilizer
PARENT
Fruits
PARENT
Pome fruits and stone fruits
PRODUCT
Apple
CHILD
Green apple
CHILD
Red apple
CHILD
Yellow apple
CUSTOMER
Wholesale of fruits
CUSTOMER
Apple pie sold in bakery
END USER
Eating apples

TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)

TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)

2. DEFINE IMPACT

Build a value creation grid aiming at covering all major positive and negative impacts companies have on the surrounding world

THE UPRIGHT MODEL CONSIDERS 19 IMPACT CATEGORIES IN 4 DIMENSIONS

Impacts can be negative and positive

ENVIRONMENT	GHG emissions Non-GHG emissions Biodiversity Fresh water Waste
HEALTH	Diseases Diet Physical activity Relationships Meaning & joy
SOCIETY	Taxes Jobs Societal infrastructure Equality Societal stability
KNOWLEDGE	Scarce human capital Knowledge infrastructure Creating knowledge Distributing knowledge

TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)

2. DEFINE IMPACT

Build a value creation grid aiming at covering all major positive and negative impacts companies have on the surrounding world

TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)

2. DEFINE IMPACT

Build a value creation grid aiming at covering all major positive and negative impacts companies have on the surrounding world

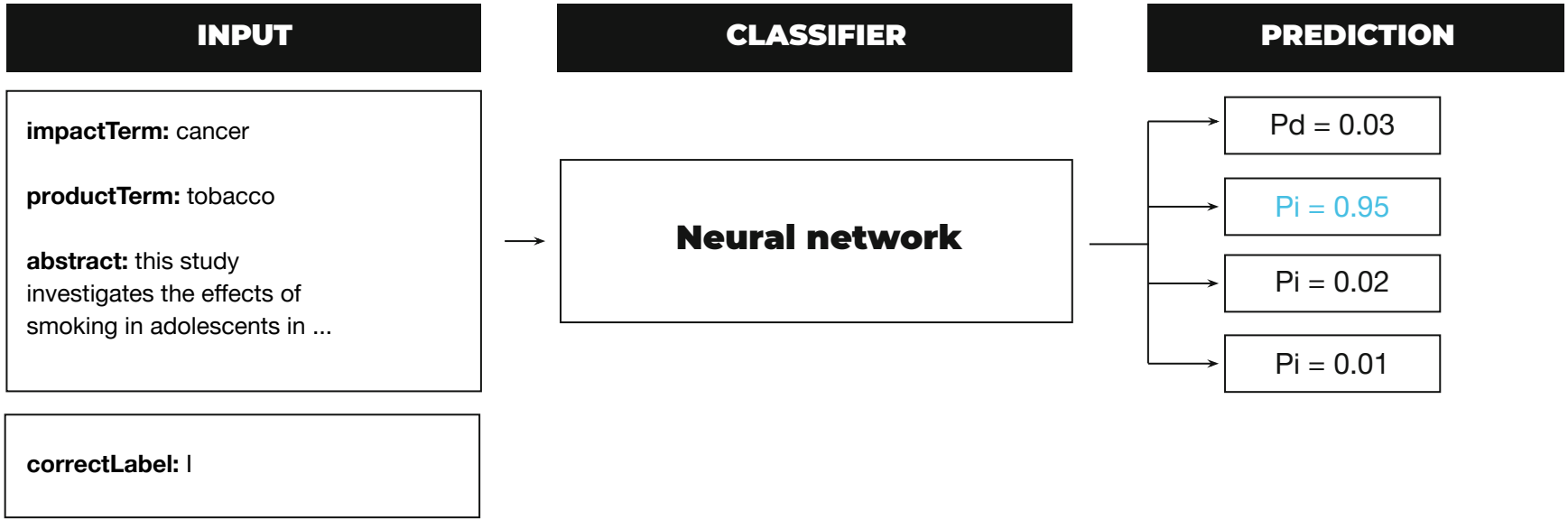
3. ATTRIBUTE IMPACT

Attribute 100 % of each impact caused by companies globally to each node in the above mentioned network

CLASSIFICATION OF SCIENTIFIC ARTICLES

135M+ scientific articles
from CORE database + datasets
from e.g. IPCC and OECD

- Deep neural network based on BERT* from Google Research
- Pre-trained with the full Wikipedia corpus for transfer learning
- **Trained with 35,000+ articles manually classified** by Upright



TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)

2. DEFINE IMPACT

Build a value creation grid aiming at covering all major positive and negative impacts companies have on the surrounding world

3. ATTRIBUTE IMPACT

Attribute 100 % of each impact caused by companies globally to each node in the above mentioned network

TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)

2. DEFINE IMPACT

Build a value creation grid aiming at covering all major positive and negative impacts companies have on the surrounding world

3. ATTRIBUTE IMPACT

Attribute 100 % of each impact caused by companies globally to each node in the above mentioned network

4. FORM COMPANIES

Build compositions consisting of products and services, weighing with revenue contributions, to form companies

TASK

BUILD A MODEL OF NET VALUE CREATION BY COMPANIES

SUB-TASKS

1. DEFINE PRODUCTS

Build a network of all products and services traded globally and their links to one another (value chain relations, enablers, generalizations / specializations)

2. DEFINE IMPACT

Build a value creation grid aiming at covering all major positive and negative impacts companies have on the surrounding world

3. ATTRIBUTE IMPACT

Attribute 100 % of each impact caused by companies globally to each node in the above mentioned network

4. FORM COMPANIES

Build compositions consisting of products and services, weighing with revenue contributions, to form companies

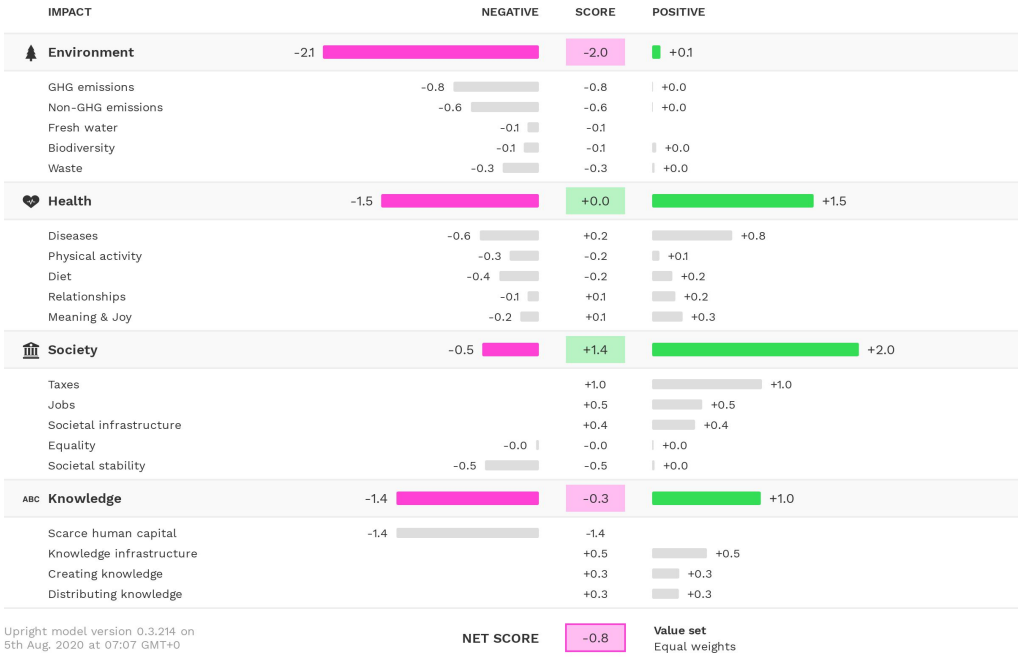
---

+ FORM COMPANY GROUPS

Build compositions consisting of companies, weighing with funds invested/loan size/revenue/etc, to form funds/portfolios/industries/company groups/etc

BEFORE JUMPING INTO THE RESULTS: WHAT DOES “NORMAL” LOOK LIKE?

Aggregate net impact profile of US Fortune 500



IMPACT	NEGATIVE	SCORE	POSITIVE
Environment	-2.1	-2.0	+0.1
GHG emissions	-0.8	-0.8	+0.0
Non-GHG emissions	-0.6	-0.6	+0.0
Fresh water	-0.1	-0.1	
Biodiversity	-0.1	-0.1	+0.0
Waste	-0.3	-0.3	+0.0
Health	-1.5	+0.0	+1.5
Diseases	-0.6	+0.2	+0.8
Physical activity	-0.3	-0.2	+0.1
Diet	-0.4	-0.2	+0.2
Relationships	-0.1	+0.1	+0.2
Meaning & Joy	-0.2	+0.1	+0.3
Society	-0.5	+1.4	+2.0
Taxes		+1.0	+1.0
Jobs		+0.5	+0.5
Societal infrastructure		+0.4	+0.4
Equality	-0.0	-0.0	+0.0
Societal stability	-0.5	-0.5	+0.0
Knowledge	-1.4	-0.3	+1.0
Scarce human capital	-1.4	-1.4	
Knowledge infrastructure		+0.5	+0.5
Creating knowledge		+0.3	+0.3
Distributing knowledge		+0.3	+0.3

Upright model version 0.3.214 on
5th Aug. 2020 at 07:07 GMT+0

NET SCORE -0.8

Value set
Equal weights

More impact profiles available at
https://model.uprightproject.com/

3. RESULTS: THE NET IMPACT OF REPACK

REPACK'S IMPACT IS BASED ON THE IMPACTS OF THE PRODUCTS AND SERVICES IT PROVIDES

680 000 € REVENUE (2020)	4 PRODUCTS & SERVICES	15 EMPLOYEES (2020)

Main product:

- Reusable postal packages made of recycled plastic

Contributing products (minor weight in the product set):

- Promotion services
- IT support services
- Customer analytics services

NET IMPACT PROFILE OF REPACK

RePack has a strong contribution to the society while causing only little strain on the environment

All businesses use some environmental resources and create emissions throughout their lifecycle. RePack creates **small amount of waste and emissions**, however, the environmental impact is significantly lower than for companies producing disposable packaging.

RePack's impact on health related issues is minimal.

RePack **contributes to society through jobs and taxes paid**. As a startup, RePack creates lots of new jobs compared to its revenue. Postal packages enable postal services, which are part of essential **societal infrastructure**.

Scarce human capital illustrates the opportunity cost of scarcely available human capital. RePack employes highly educated workforce, but this is well compensated for on the positive side.

IMPACT	NEGATIVE	SCORE	POSITIVE
Environment	-2.5	-2.5	+0.0
GHG emissions	-0.2	-0.2	+0.0
Non-GHG emissions	-0.1	-0.1	+0.0
Fresh water	-0.1	-0.1	
Biodiversity	-0.0	-0.0	+0.0
Waste	-2.1	-2.1	+0.0
Health	-0.2	+0.1	+0.3
Diseases	-0.1	-0.0	+0.1
Physical activity	-0.0	+0.1	+0.1
Diet	-0.1	-0.1	+0.0
Relationships	-0.0	+0.1	+0.1
Meaning & Joy	-0.0	+0.0	+0.0
Society	-0.0	+7.9	+7.9
Taxes		+1.4	+1.4
Jobs		+4.2	+4.2
Societal infrastructure		+2.3	+2.3
Equality	-0.0	-0.0	+0.0
Societal stability	-0.0	-0.0	+0.0
Knowledge	-2.2	-2.0	+0.2
Scarce human capital	-2.2	-2.2	
Knowledge infrastructure		+0.0	+0.0
Creating knowledge		+0.0	+0.0
Distributing knowledge		+0.1	+0.1

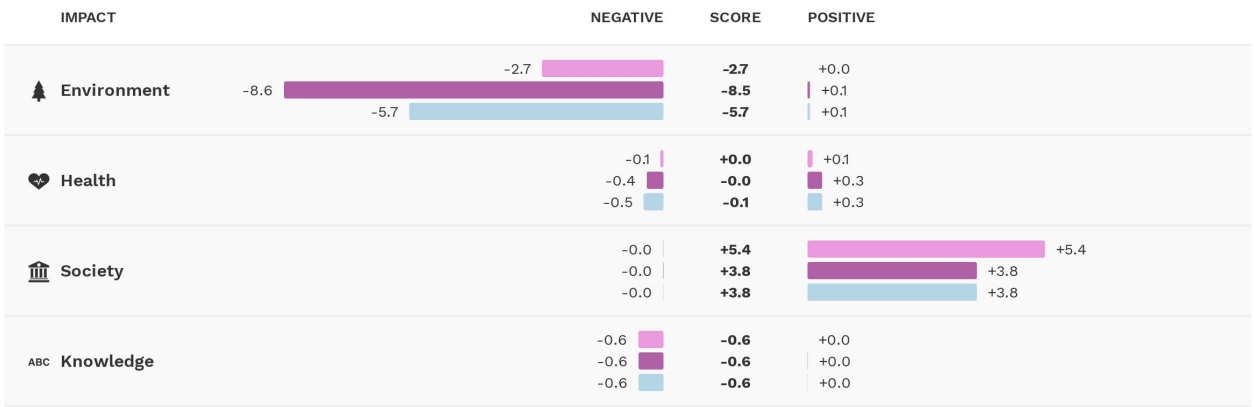
Upright model version 0.3.265 on 17th Sep. 2020 at 09:39 GMT+0

NET SCORE +3.5

Value set
Equal weights

REPACK PROVIDES AN ENVIRONMENTALLY SOUND ALTERNATIVE TO DISPOSABLE PACKAGING PRODUCTS

NAME	NET SCORE
Reusable postal packages made of recycled plastic	2.08
Plastic postal packages	-5.30
Biocomposite postal packages	-2.55



Upright model version 0.3.262 on
15th Sep. 2020 at 09:04 GMT+0

Comparing different types of postal packages reveals **differences** especially in **GHG and waste** impact categories.

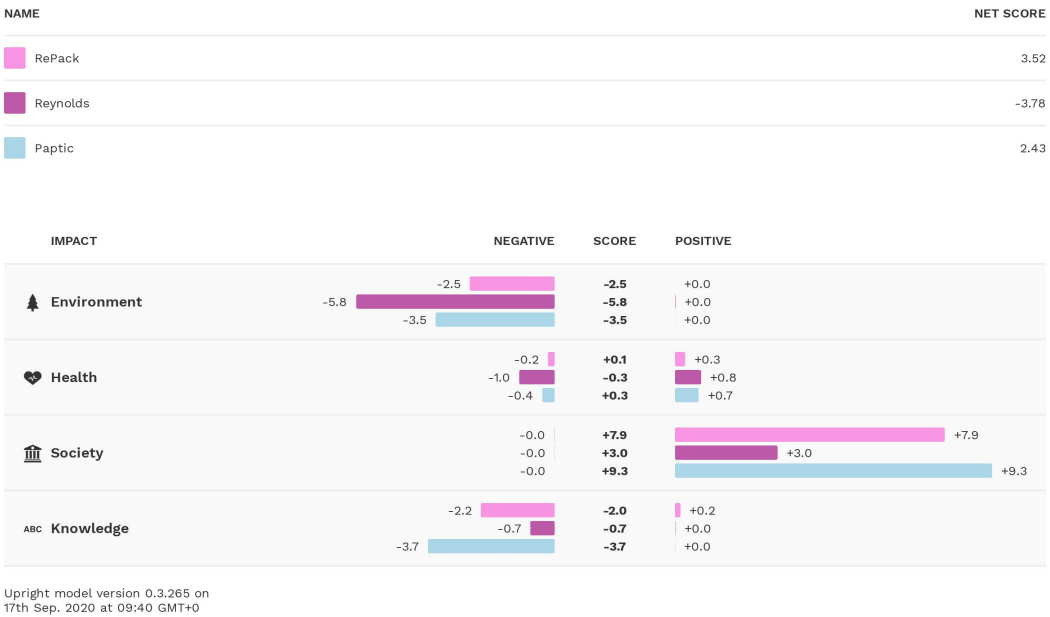
Reusability of packaging also increases a product's positive score in the Society dimension for two main reasons:
- refurbishment of used packaging provides **jobs**
- each package can be used multiple times, resulting in a larger positive score on **societal infrastructure**

REPACK'S PROFILE STANDS OUT POSITIVELY IN COMPARISON TO OTHER PACKAGING MATERIAL MANUFACTURERS

In the environment dimension, the biggest difference can be seen in the **waste** category.

Reynolds' main material is plastic, which creates more severe environmental impacts.

Paptic produces packaging materials from wood-fibre biocomposite, which reduces its waste and GHG impact. However, Paptic's products are disposable.



Upright model version 0.3.265 on
17th Sep. 2020 at 09:40 GMT+0

NB: these are **relative scores**, so groups and companies of different sizes can be compared.

As RePack and Paptic are both small and newly-established companies, they create **more jobs relative to revenue**. This results in a higher score in the Society dimension.

NET IMPACT PROFILE OF REPACK - FUTURE SCENARIO

In an imaginary future scenario for Repack (10 mil.€ revenue + 100 employees), the role of jobs and scarce human capital decreases

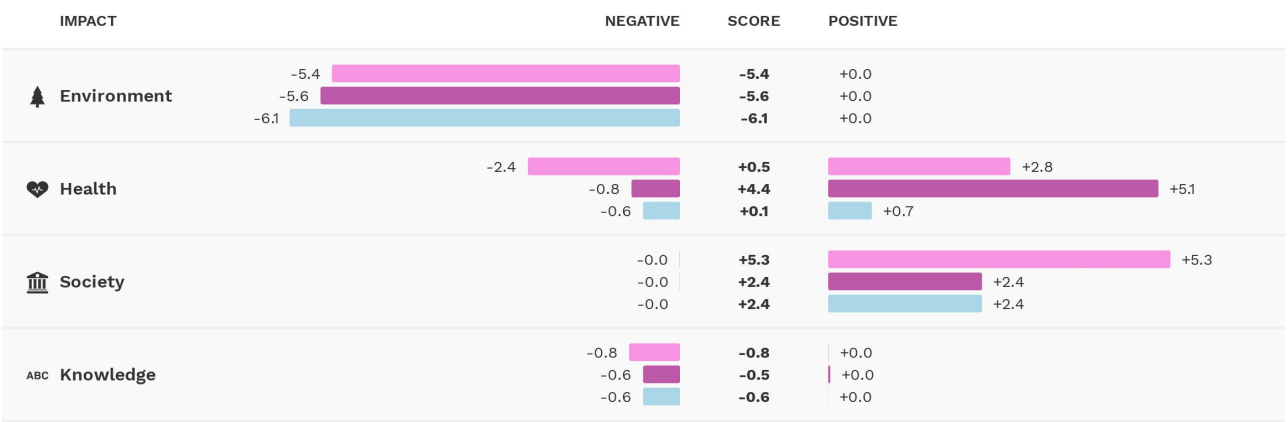
IMPACT	NEGATIVE	SCORE	POSITIVE
Environment	-2.8	-2.8	+0.0
GHG emissions	-0.2	-0.2	+0.0
Non-GHG emissions	-0.1	-0.1	
Fresh water	-0.1	-0.1	
Biodiversity	-0.0	-0.0	+0.0
Waste	-2.3	-2.3	+0.0
Health	-0.1	+0.1	+0.2
Diseases	-0.1	-0.0	+0.0
Physical activity	-0.0	+0.1	+0.1
Diet	-0.0	+0.0	+0.0
Relationships	-0.0	+0.0	+0.0
Meaning & Joy	-0.0	+0.0	+0.0
Society	-0.0	+5.9	+5.9
Taxes		+1.3	+1.3
Jobs		+1.9	+1.9
Societal infrastructure		+2.6	+2.6
Equality	-0.0	+0.0	+0.0
Societal stability	-0.0	-0.0	+0.0
Knowledge	-0.6	-0.6	+0.0
Scarce human capital	-0.6	-0.6	
Knowledge infrastructure		+0.0	+0.0
Creating knowledge		+0.0	+0.0
Distributing knowledge		+0.0	+0.0
	NET SCORE	+2.6	**Value set** Equal weights

Upright model version 0.3.265 on 17th Sep. 2020 at 09:44 GMT+0

NET IMPACT OF A PACKAGE DEPENDS ON WHERE IT'S BEING USED

RePack can improve its impact even further by focusing on net positive customer segments

NAME	NET SCORE
Wood-fibre biocomposite food packages	-0.41
Wood-fibre biocomposite pharmaceuticals packages	0.64
Wood-fibre biocomposite cosmetics packages	-4.15



An **exemplary comparison** between food, pharmaceuticals and cosmetics packaging made of wood-fibre.

Upright model also **considers the downstream impacts**, i.e. the impacts of a company's customers such as food or pharmaceutical companies.

As can be expected, food and pharmaceuticals have a bigger positive impact on health than for example cosmetics.

COMPARISON TO NASDAQ HELSINKI REVEALS TYPICAL DIFFERENCES BETWEEN STARTUPS AND MORE ESTABLISHED COMPANIES

Nasdaq Helsinki includes e.g. companies working in the health sector (such as Orion and Terveystalo), leading to a positive impact in the **health** category.

On the other hand, companies such as Neste and HKScan have negative effects on health through production of fossil fuels and meat products, respectively.

NAME	TYPE	NET SCORE
RePack	company	3.52
Nasdaq Helsinki	group	0.41

IMPACT	NEGATIVE	SCORE	POSITIVE
Environment	-2.5 -2.2	**-2.5** **-1.9**	+0.0 +0.3
Health	-0.2 -1.0	**+0.1** **-0.2**	+0.3 +0.8
Society	-0.0 -0.1	**+7.9** **+2.0**	+7.9 +2.1
Knowledge	-2.2 -1.2	**-2.0** **+0.5**	+0.2 +1.7

Upright model version 0.3.265 on
17th Sep. 2020 at 09:45 GMT+0

NB: these are **relative scores**, so groups and companies of different sizes can be compared.

Per revenue created, Repack provides significantly more jobs than an average Nasdaq Helsinki company.

Telecommunications companies in Nasdaq Helsinki lead the positive impact on **knowledge infrastructure.**

VALUE SETS CAN BE USED TO ASSESS HOW STAKEHOLDERS MIGHT VALUE DIFFERENT IMPACTS

Equal weights value set

Comparing RePack to Nasdaq Helsinki company group through **equal weights** value set.

This is the default value set.

Nasdaq Helsinki is a revenue-weighted group of companies listed in Nasdaq Helsinki.

NAME	TYPE	NET SCORE
RePack	company	3.52
Nasdaq Helsinki	group	0.41

IMPACT	NEGATIVE	SCORE	POSITIVE
Environment	-2.5 -2.2	**-2.5** **-1.9**	+0.0 +0.3
Health	-0.2 -1.0	**+0.1** **-0.2**	+0.3 +0.8
Society	-0.0 -0.1	**+7.9** **+2.0**	+7.9 +2.1
Knowledge	-2.2 -1.2	**-2.0** **+0.5**	+0.2 +1.7

Upright model version 0.3.265 on
17th Sep. 2020 at 09:45 GMT+0

ENVIRONMENT 26.3%

GHG emissions	5.3%
Non-GHG emissions	5.3%
Fresh water	5.3%
Biodiversity	5.3%
Waste	5.3%

HEALTH 26.3%

Diseases	5.3%
Physical activity	5.3%
Diet	5.3%
Relationships	5.3%
Meaning & Joy	5.3%

SOCIETY 26.3%

Taxes	5.3%
Jobs	5.3%
Societal infrastructure	5.3%
Equality	5.3%
Societal stability	5.3%

KNOWLEDGE 21.1%

Scarce human capital	5.3%
Knowledge infrastructure	5.3%
Creating knowledge	5.3%
Distributing knowledge	5.3%

VALUE SETS CAN BE USED TO ASSESS HOW STAKEHOLDERS MIGHT VALUE DIFFERENT IMPACTS

Value set emphasizing the knowledge category

Comparing RePack to Nasdaq Helsinki company group through a value set **emphasizing knowledge impacts**.

Through this lens, the net score of RePack drops.

NAME	TYPE	NET SCORE IN VALUE SET: KNOWLEDGE IS KING	NET SCORE IN VALUE SET: EQUAL WEIGHTS
RePack	company	-2.91	3.52
Nasdaq Helsinki	group	1.38	0.41

IMPACT	NEGATIVE	SCORE	POSITIVE
Environment	-2.5 -2.2	**-2.5** **-1.9**	+0.0 +0.3
Health	-0.2 -1.0	**+0.1** **-0.2**	+0.3 +0.8
Society	-0.0 -0.1	**+7.9** **+2.0**	+7.9 +2.1
Knowledge	-2.2 -1.2	**-2.0** **+0.5**	+0.2 +1.7

Upright model version 0.3.265 on
17th Sep. 2020 at 09:47 GMT+0

ENVIRONMENT 13.3%

- GHG emissions 2.7%
- Non-GHG emissions 2.7%
- Fresh water 2.7%
- Biodiversity 2.7%
- Waste 2.7%

HEALTH 13.3%

- Diseases 2.7%
- Physical activity 2.7%
- Diet 2.7%
- Relationships 2.7%
- Meaning & Joy 2.7%

SOCIETY 13.3%

- Taxes 2.7%
- Jobs 2.7%
- Societal infrastructure 2.7%
- Equality 2.7%
- Societal stability 2.7%

KNOWLEDGE 60.0%

- Scarce human capital 15.0%
- Knowledge infrastructure 15.0%
- Creating knowledge 15.0%
- Distributing knowledge 15.0%

VALUE SETS CAN BE USED TO ASSESS HOW STAKEHOLDERS MIGHT VALUE DIFFERENT IMPACTS

Value set emphasizing taxes and jobs

Comparing RePack to Nasdaq Helsinki company group through a value set **emphasizing taxes and jobs.**

Through this lens, both RePack and Nasdaq Helsinki are strongly net positive.

Different value sets highlight that the net score depends on one's values. Therefore dividing companies into good or bad is not meaningful.

NAME	TYPE	NET SCORE IN VALUE SET: TAXES AND JOBS ARE THE REAL DEAL	EQUAL WEIGHTS
RePack	company	34.53	3.52
Nasdaq Helsinki	group	10.76	0.41

IMPACT	NEGATIVE	SCORE	POSITIVE
Environment	-2.5 -2.2	**-2.5** **-1.9**	+0.0 +0.3
Health	-0.2 -1.0	**+0.1** **-0.2**	+0.3 +0.8
Society	-0.0 -0.1	**+7.9** **+2.0**	+7.9 +2.1
Knowledge	-2.2 -1.2	**-2.0** **+0.5**	+0.2 +1.7

Upright model version 0.3.265 on
17th Sep. 2020 at 09:48 GMT+0

ENVIRONMENT	**14.7%**
GHG emissions	2.9%
Non-GHG emissions	2.9%
Fresh water	2.9%
Biodiversity	2.9%
Waste	2.9%
HEALTH	**14.7%**
Diseases	2.9%
Physical activity	2.9%
Diet	2.9%
Relationships	2.9%
Meaning & Joy	2.9%
SOCIETY	**58.8%**
Taxes	25.0%
Jobs	25.0%
Societal infrastructure	2.9%
Equality	2.9%
Societal stability	2.9%
KNOWLEDGE	**11.8%**
Scarce human capital	2.9%
Knowledge infrastructure	2.9%
Creating knowledge	2.9%
Distributing knowledge	2.9%
TOTAL	**100%**

4. DISCUSSION: WHAT IS THE SO-WHAT?

UTILIZING NET IMPACT QUANTIFICATION TO BENEFIT REPACK'S BUSINESS AND SUSTAINABILITY DISCUSSION

What implications does the net impact data have on RePack's own understanding of its value creation?

COMMUNICATIONS

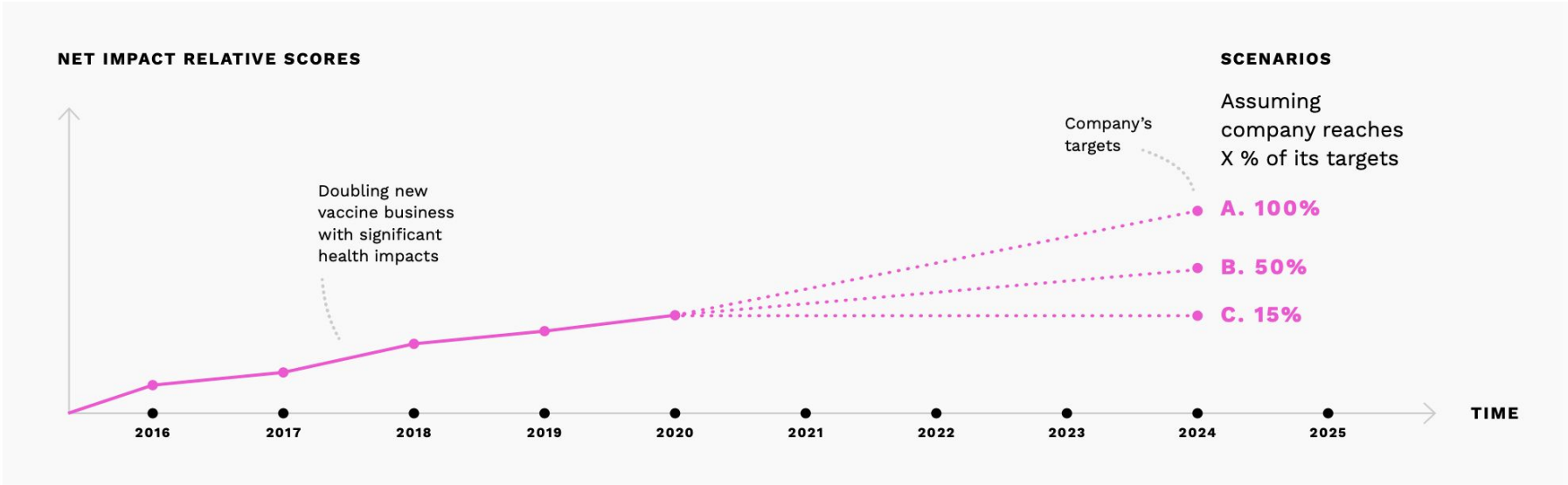
- Highlight RePack's positive impact on society and on the environment compared to other packaging providers
- Set net impact targets and track progress over time
- Tie different initiatives and targets around positive net impact
- Communicate positioning, targets and key initiatives to stakeholders (customers, investors, employees, others)

STRATEGY

- How does RePack's net impact change when the business changes?
- How does RePack's net impact change when the world changes?
- How do RePack's customers affect the net impact?
- Are there choices that remain "safer bets" under future scenarios than others?

SETTING IMPACT TARGETS AND MEASURING IMPACT OVER TIME

Example: Development of a company's net impact over time



NET POSITIVE NORDICS: PHASE 2

Future scenarios with net impact: how do global future scenarios and our business growth scenarios go together?

Questions addressed:

How does your company's net impact change under five global future scenarios?

Are there choices that remain "safer bets" under all scenarios than others?

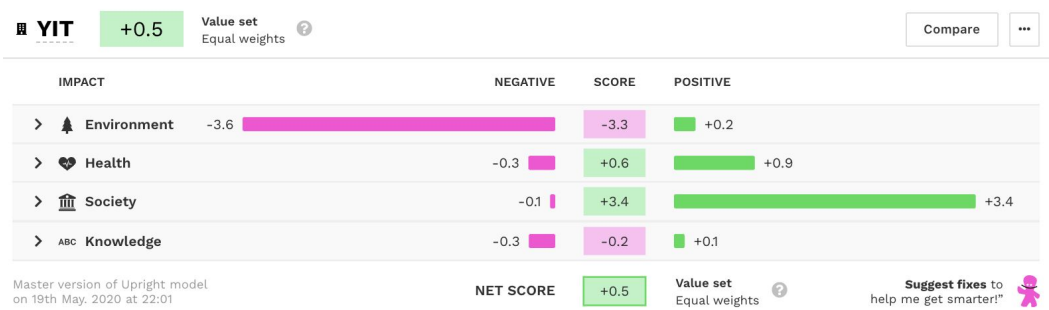
How do your own future business scenarios play together with global changes?

What risks and opportunities arise for investors to be more resilient to global changes?

https://www.uprightproject.com/net-positive-nordics#phase2

UPRIGHT PROJECT

Example: YIT's net impact profile including own commentary.



Key take-aways

- The societal infrastructure stands out in the profile because YIT builds, for example, apartment buildings, train transport infrastructure and sewage systems which are essential for modern societal infrastructure
- Constructing hospitals, schools and parks helps to treat and prevent diseases, sustain biodiversity, increase physical activity and helps people to build relationships, which shows as a positive impact on the health and environment categories.
- On the other hand, the small negative impact on diseases come from potential injuries during construction projects.
- The negative environmental impacts arise from construction projects and using materials that cause emissions and waste.

Company's comments on future improvement

YIT has put sustainable development and services in the core of the new strategy. YIT's long-term climate targets are as follows:

1. halving the CO2 emissions arising from the Group's own operations and YIT's self-developed projects by 2030, using 2019 as the baseline
2. striving to build properties that are carbon neutral during their use
3. starting to report property-specific CO2 indicators for self-developed projects from 2020 onwards.

Achieving the long-term climate targets also involves moves into new areas. Here are some concrete examples which will positively affect YIT's net impact

- Building wind power and other renewable energy production facilities will contribute positively to the society while replacing energy production based on fossil fuels
- Constructing wooden apartment buildings do not emit as much carbon emissions compared to concrete buildings
- Property maintenance services extend the lifetime of buildings and makes customers' everyday life easier
- Car sharing services makes customers' everyday life easier and reduce the need for parking spaces and cars which reduces emissions
- The sale of YIT's Nordic paving and mineral aggregates businesses will allow YIT, in line with its strategy, to invest in new net positive services and products

Hanna Valonen
Communication Specialist, Finance and Sustainability at YIT

TIMELINE FOR RePack

Step 1 (today)	• RePack's net impact workshop
Step 2 (Sep 30th)	• Sign up deadline of *Net Positive Europe with Global Scenarios*
Step 3	• Communicate net impact and strategic positioning internally and publicly
Step 4	• Start tracking net impact progress over time • Set net impact targets

UPRIGHT PROJECT