



Material ConneXion®

Every Idea Has A Material Solution™: New York • Bangkok • Beijing • Cologne • Daegu • Istanbul • Milan • Seoul • Shanghai • Skövde

www.materialconnexion.com

7 500 +

Innovative and sustainable materials in the materials database.

1M+

Active members including Fortune 500 companies and educational institutions.

40+

New materials inducted into the library each month.



WHAT WE STAND FOR

01

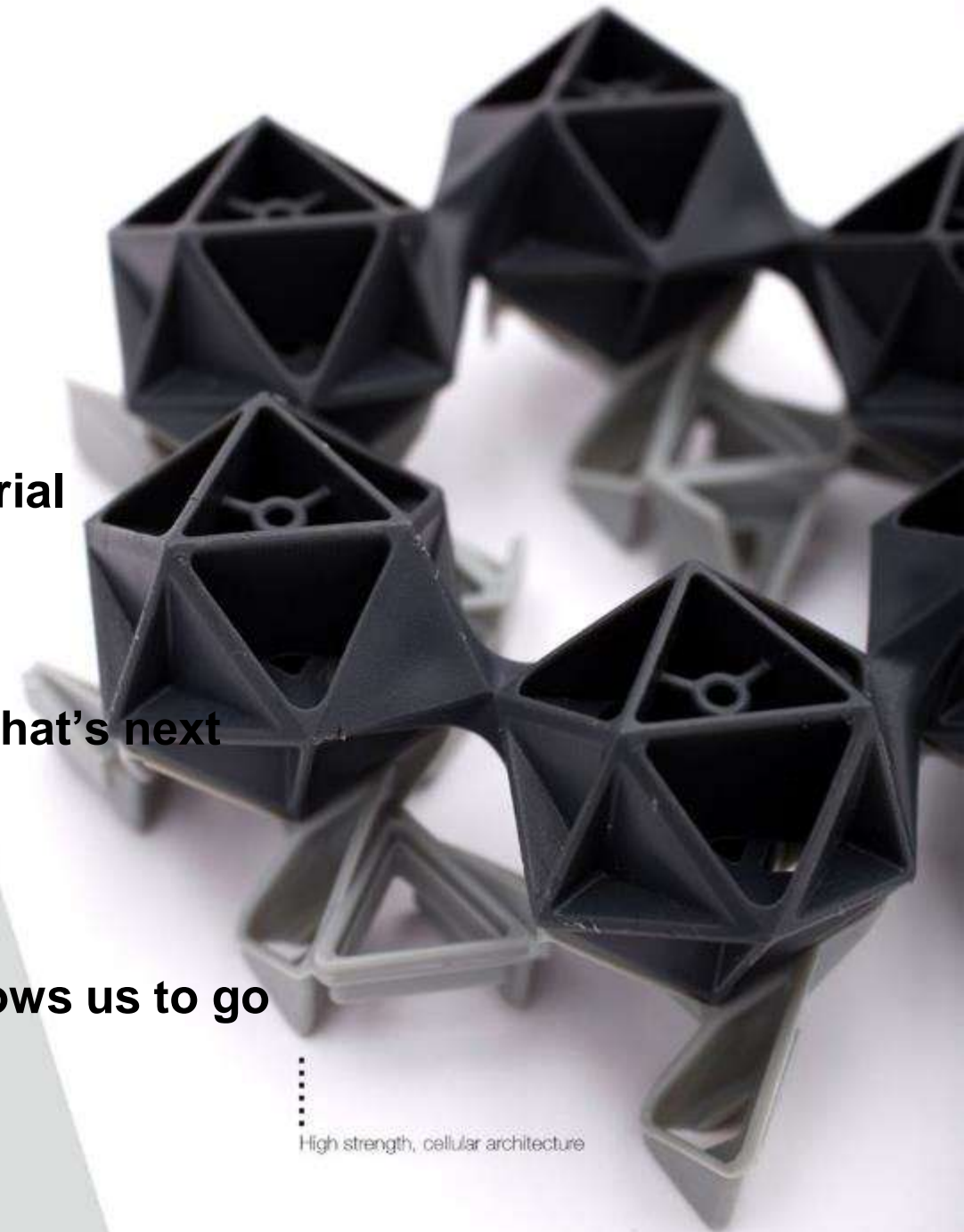
We believe cross-pollination is the key to finding material solutions.

02

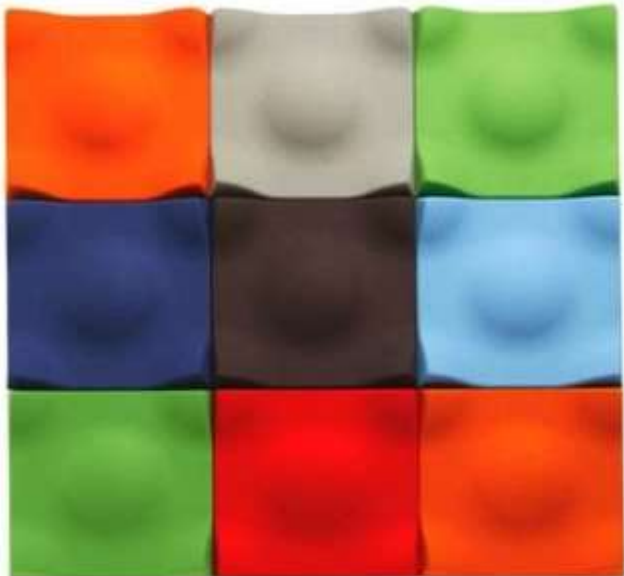
We push boundaries by anticipating what's new and what's next involving the material world.

03

Our curiosity, combined with our proactive stance, allows us to go beyond the conceptual to make it reality.



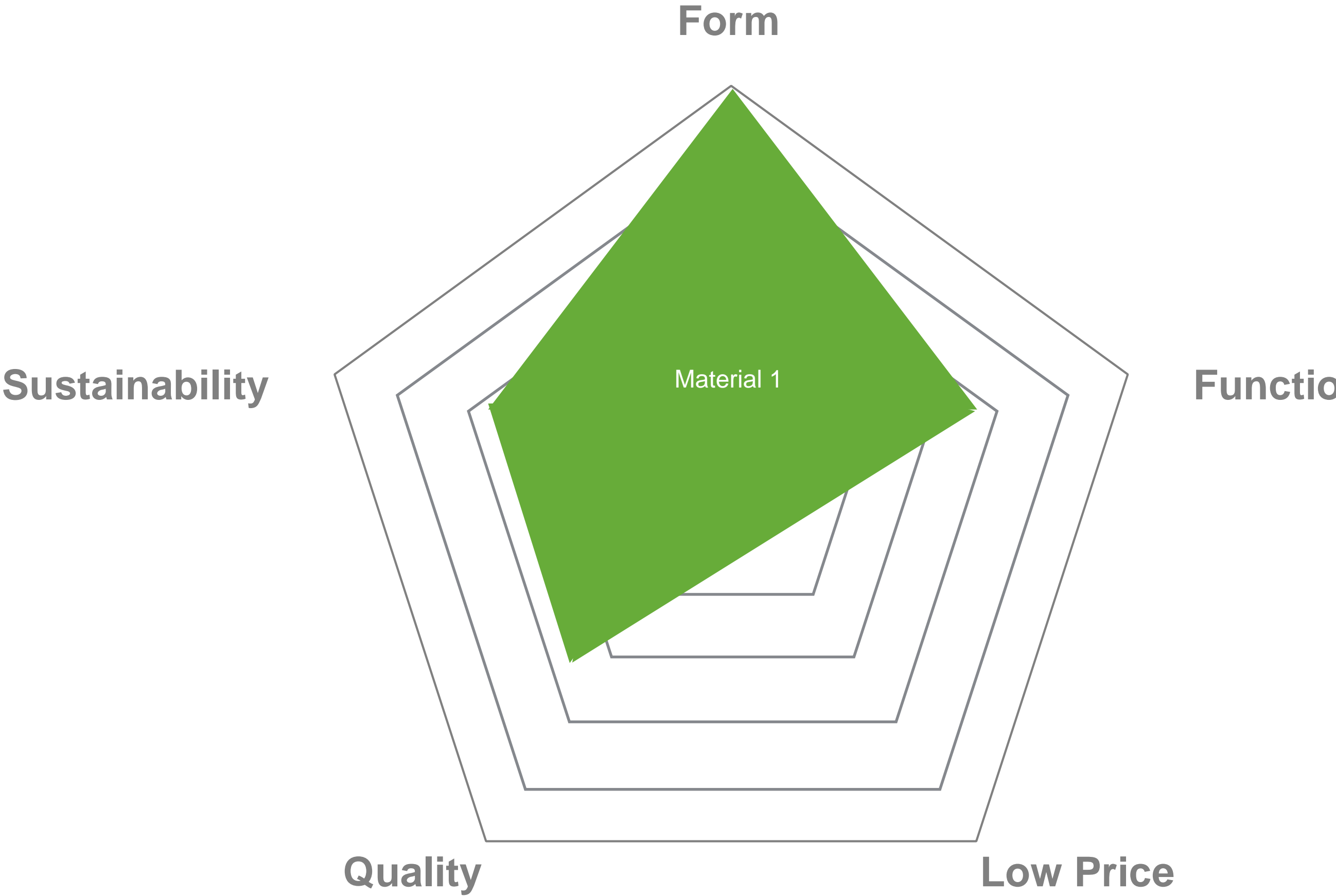
High strength, cellular architecture

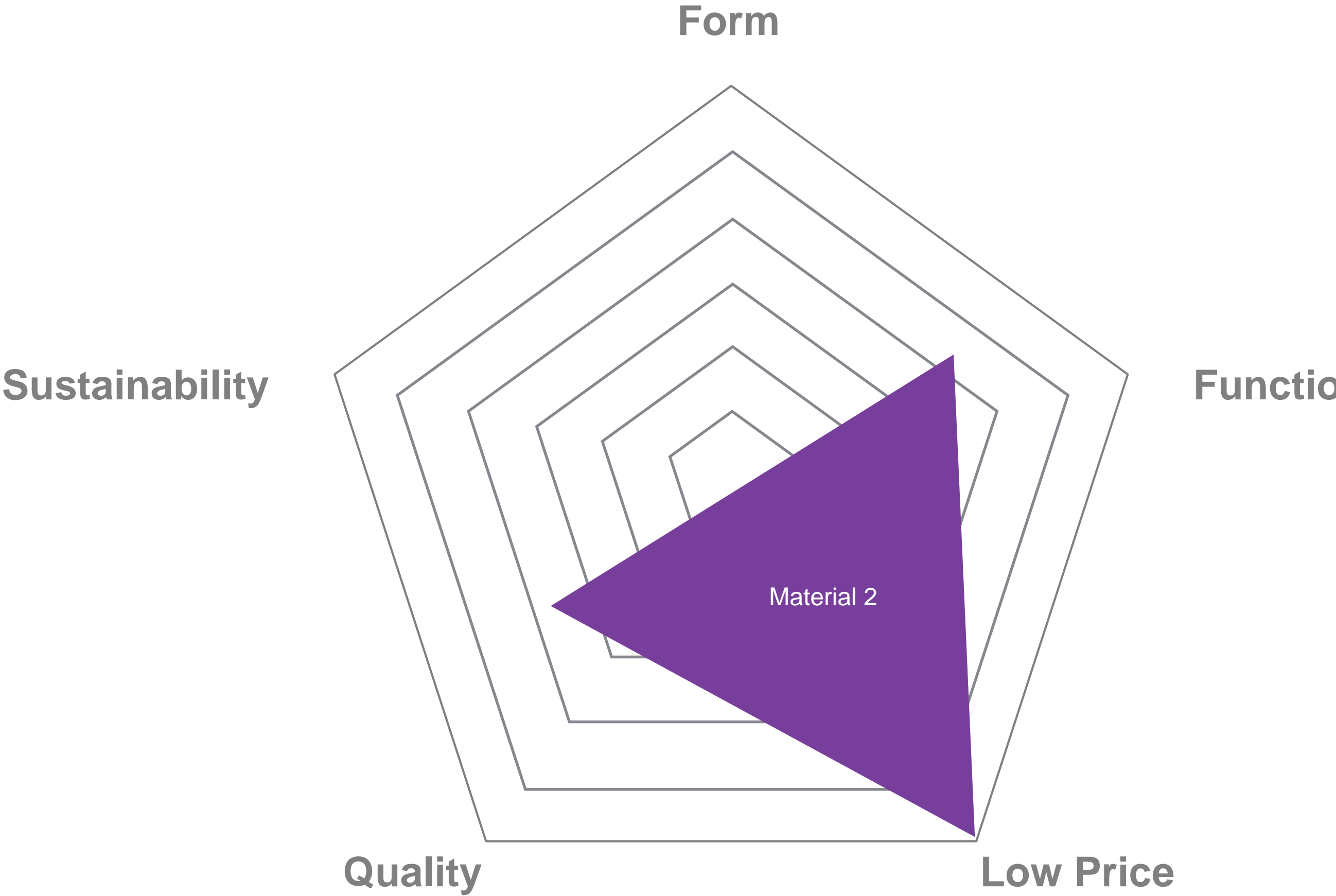


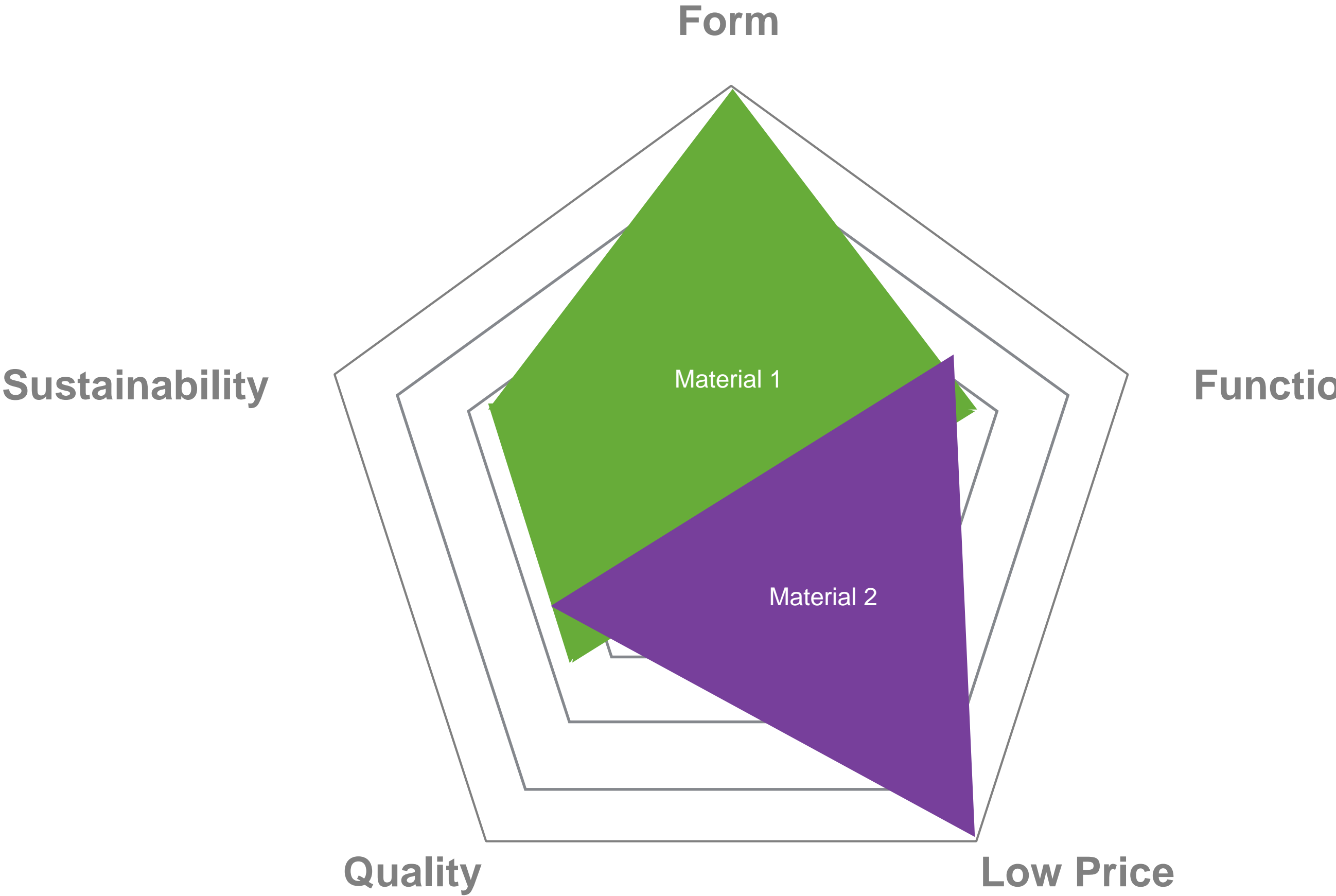
CROSS POLLINATION

Our unique point of difference lies in our understanding and experience of work in different industries









Form

Function

Sustainability

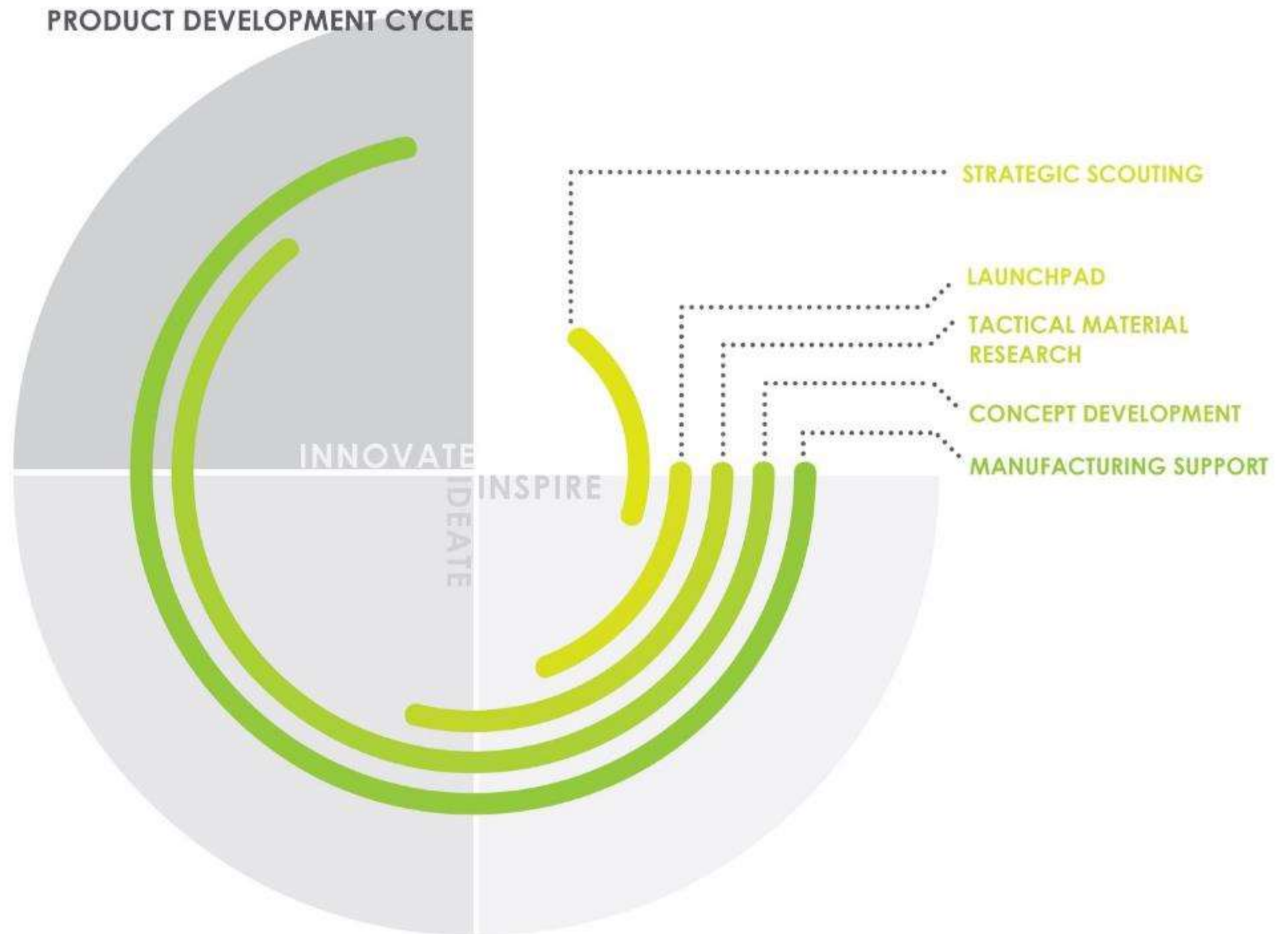
Low Price

Quality

Material 1

Material 2

**You can engage our team
at any stage of your
development cycle.
We can help you
generate inspiration
and ideas or solve
your material
problems and bring
your products to
market.**







Accelerating Innovation



Clever Little Bag Case Study

Innovation platform, Materials Roadmap and Implementation

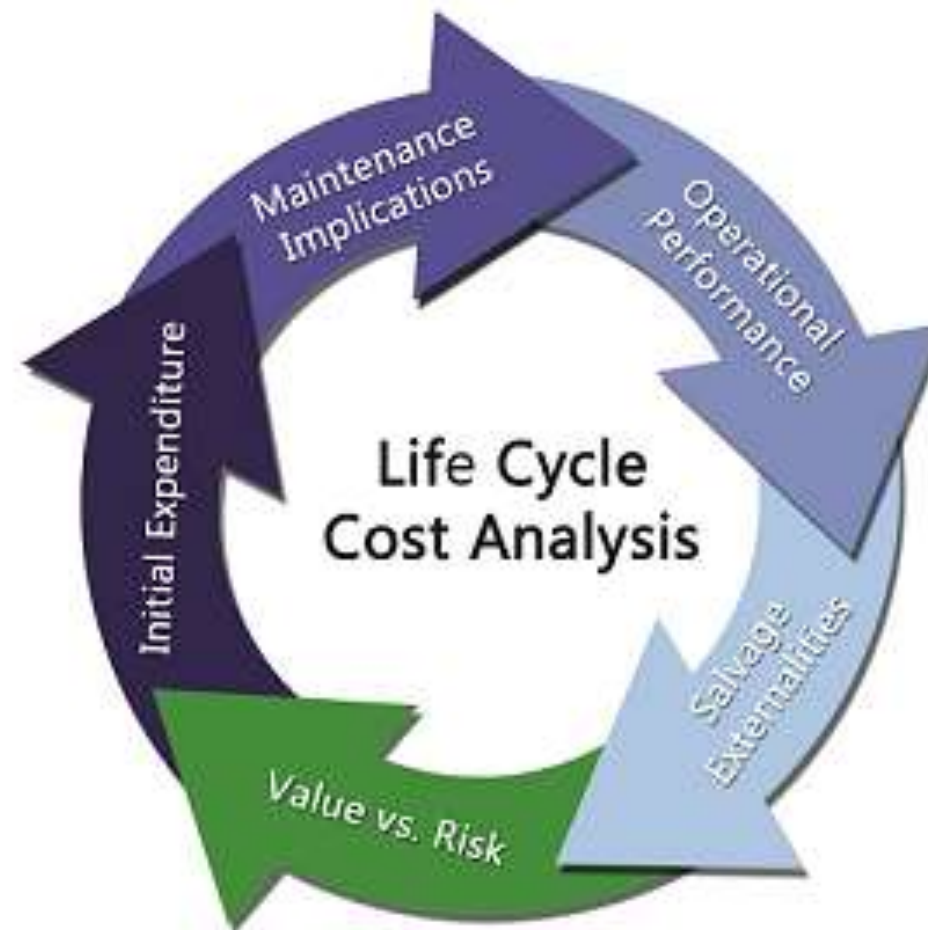
New worldwide packaging system



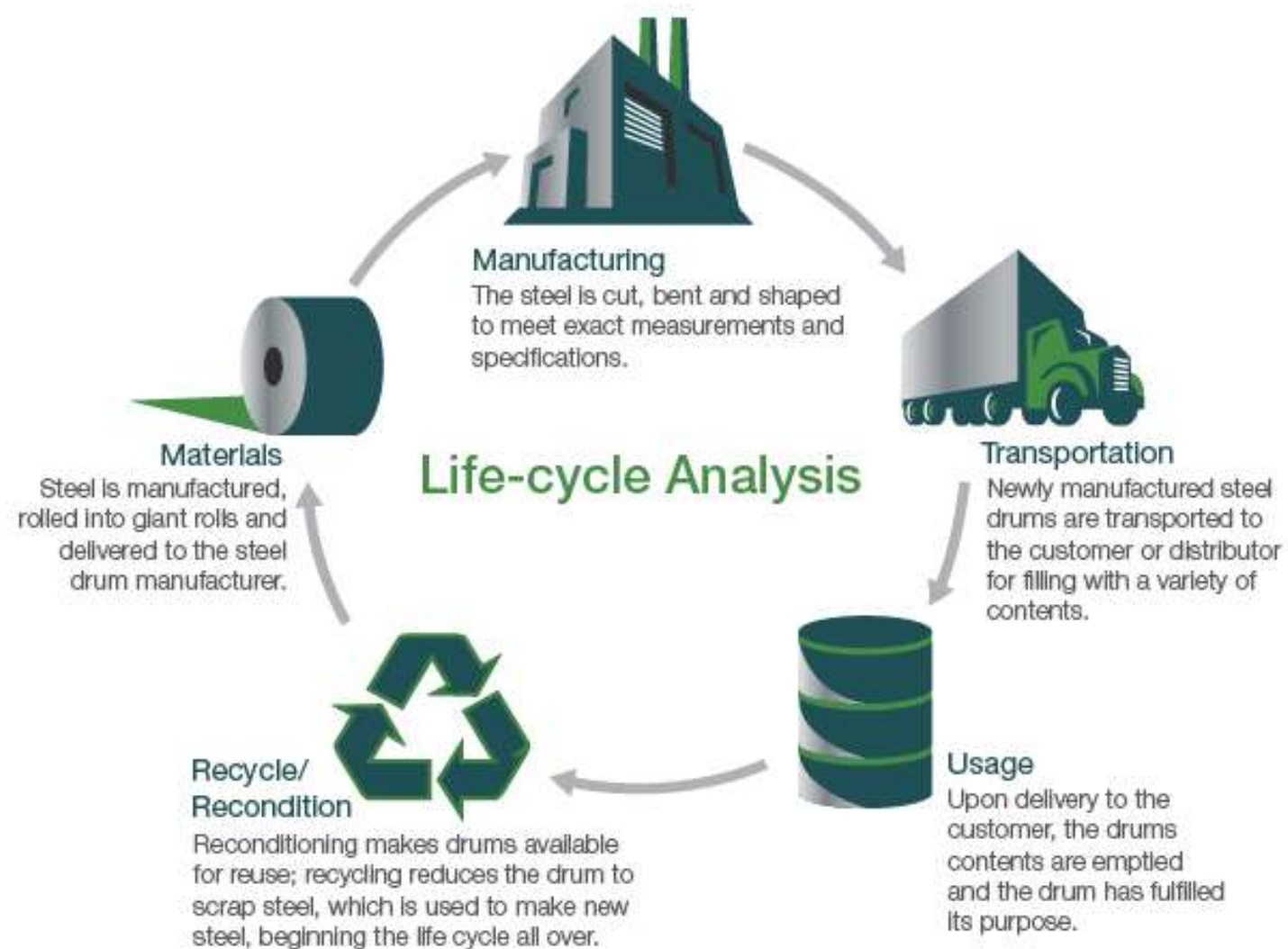
8,500 TONS OF PAPER	20 MILLION MEGAJOULES OF ELECTRICITY	1 MILLION LITRES OF WATER
1 MILLION OF FUEL OIL	500,000 LITRES OF DIESEL OIL	275 TONS OF PAPER OVER 2.5 MILLION \$ SAVED.

THE CLEVER PROCESS

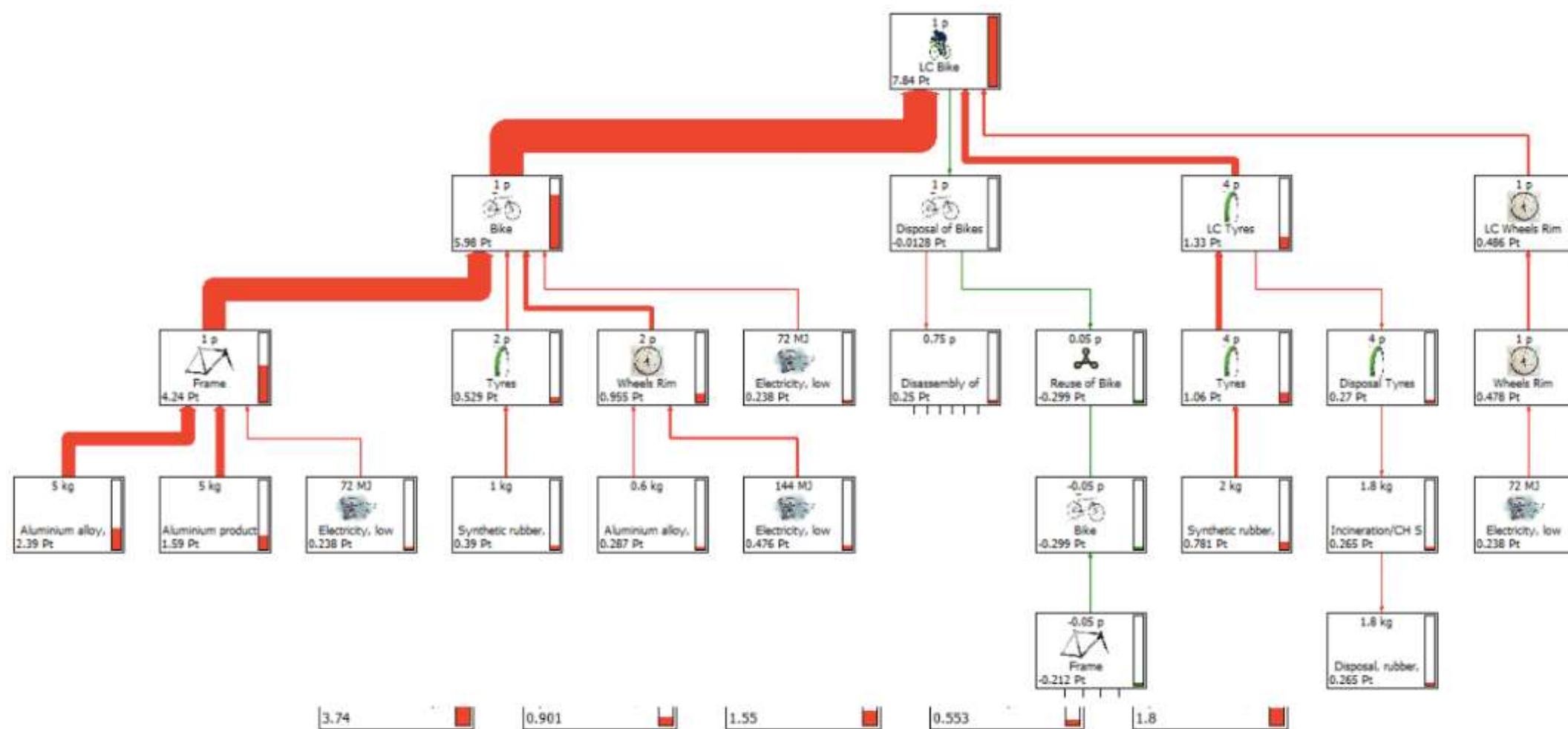




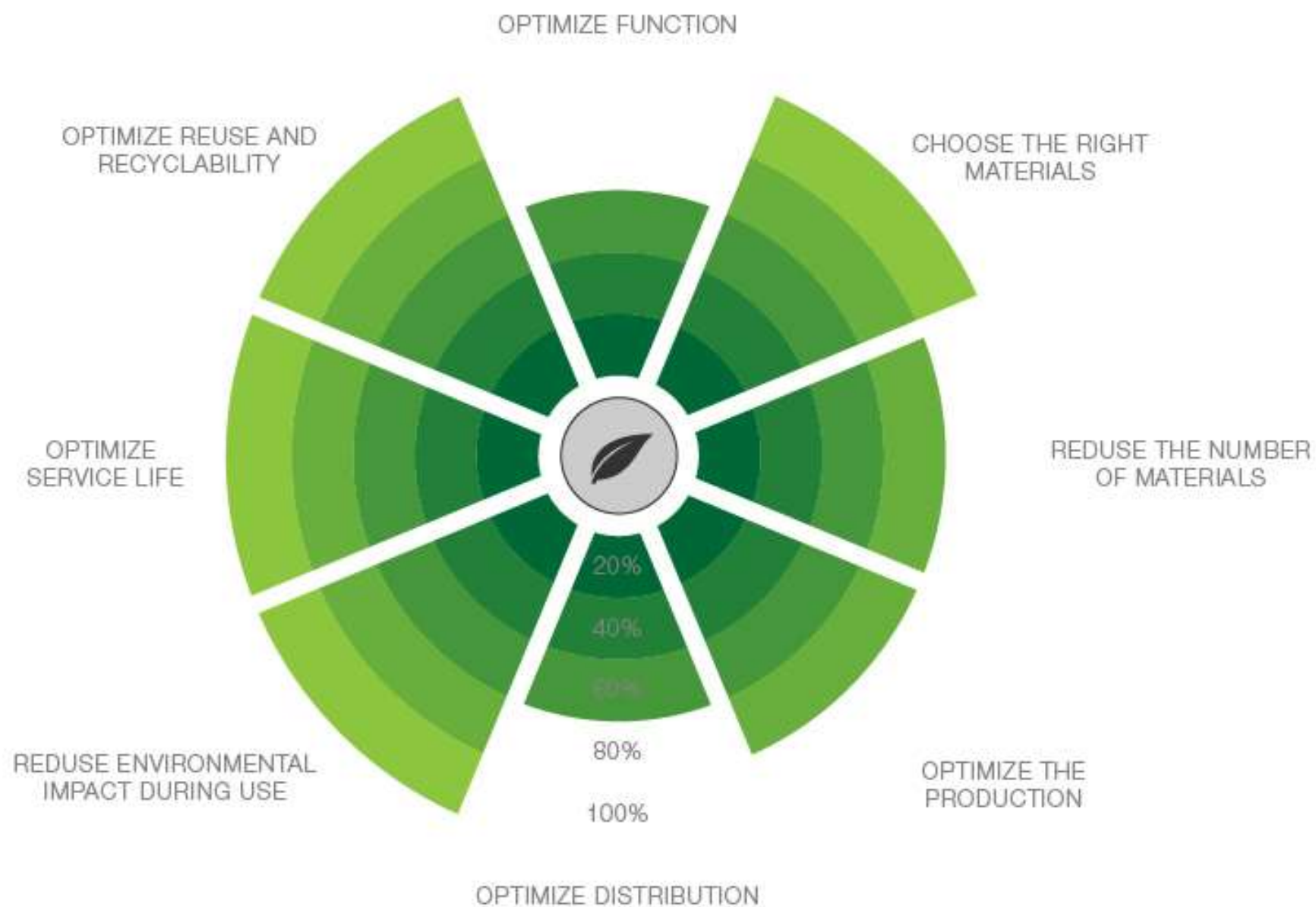
Life-cycle assessment (LCA)



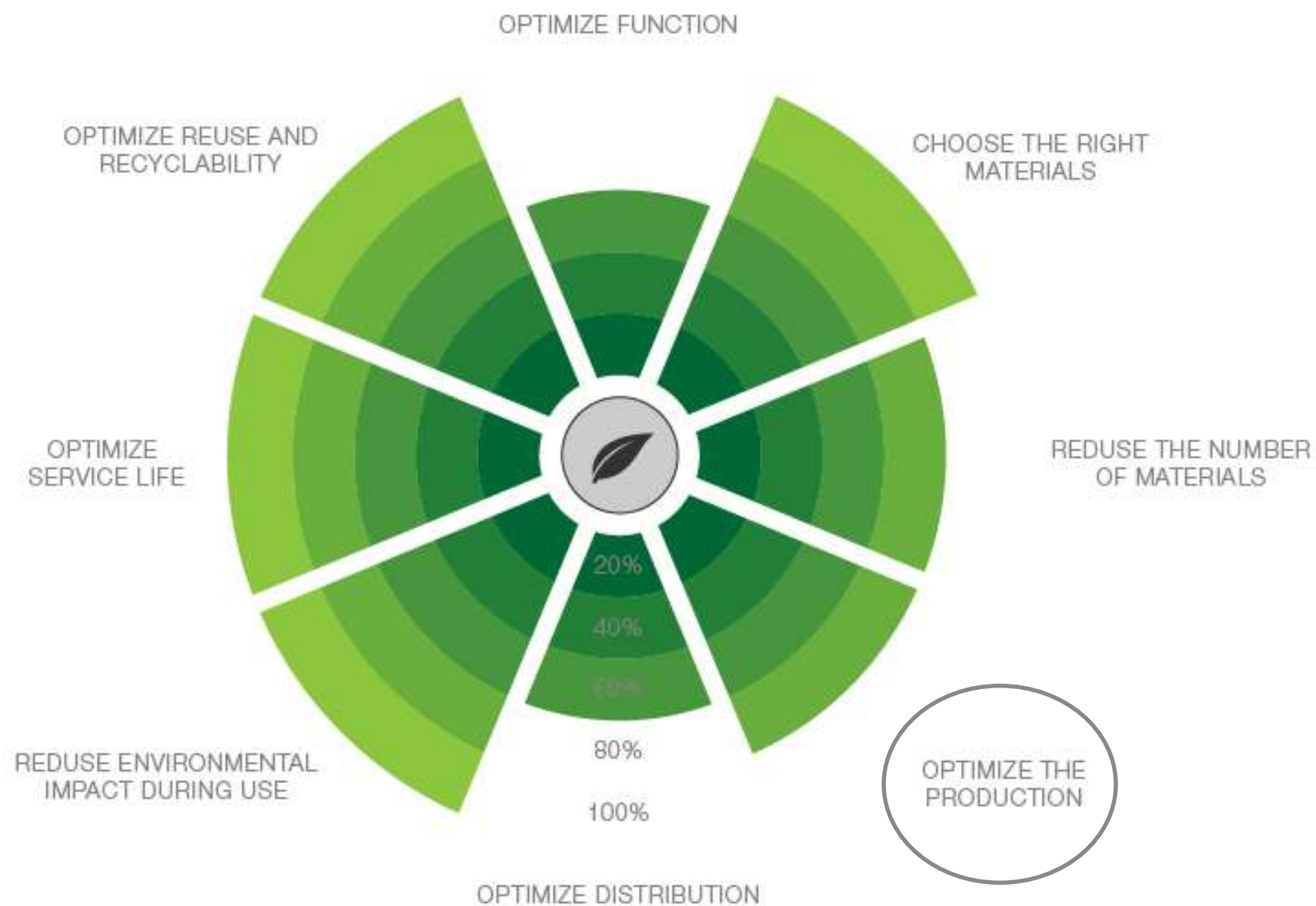
Example of a bike's LCA



Design for product's LCA and LCC (OEM)



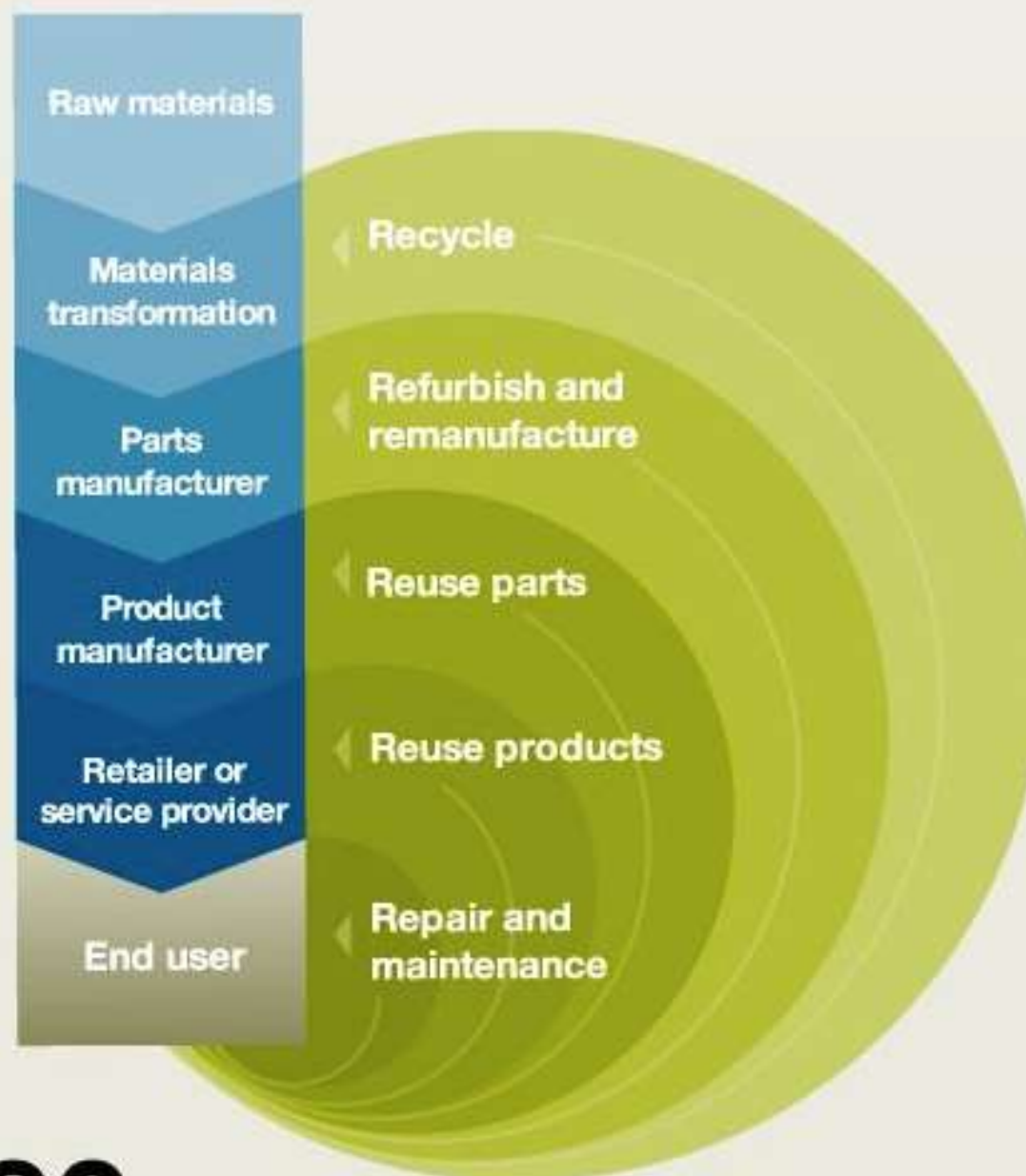
Design for product's LCA and LCC (OEM)



Green Lean..! (TIER & OEM)



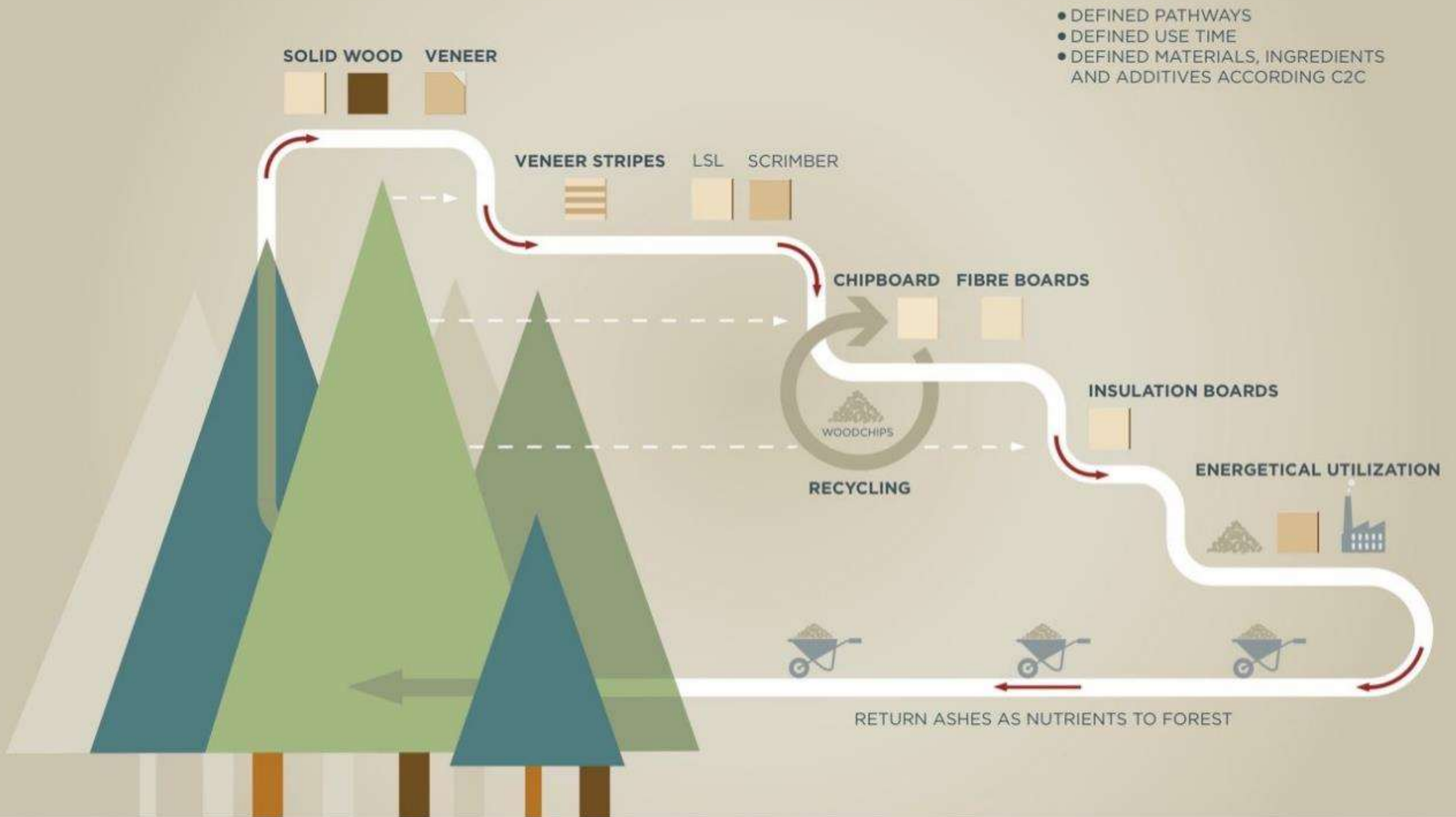
Value is created by looping products, components, and materials back into the value chain after they fulfill their utility over the life of a product.



\$380 billion

Potential annual net material cost-saving opportunity in the EU from adoption of 'circular' business practices³

WOOD CASCADE ACCORDING TO CRADLE TO CRADLE



Example branding sustainability (OEM)



Som arbetsgivare, hur mycket är du beredd att investera per dag för att en anställd får en bra sittplats på jobbet?

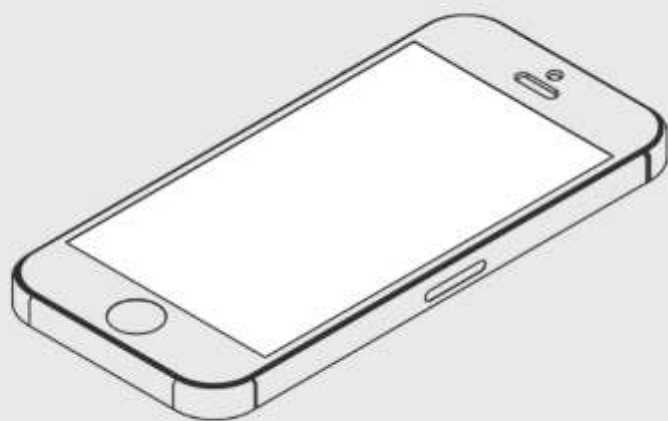


Go to **www.govote.at** and use the code **22 96 43**

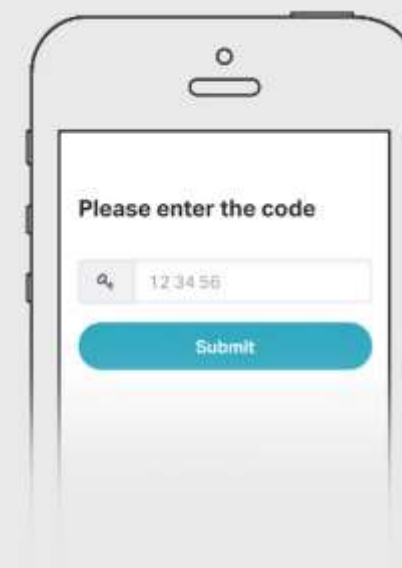
1

Värdet för att dina anställda får arbeta
i en ergonomiskt riktig kontorsstol?

Material Connection



www.govote.at



1 Grab your phone

2 Go to **www.govote.at**

3 Enter the code
22 96 43 and vote!

0	0	0	0	0
1	3	5	7	9
kr/dag	kr/dag	kr/dag	kr/dag	kr/dag



DXracer Formula FE08

1 → 2 590:-



Arozzi Monza

2 → 1 463:-



DXracer King KF06

3 → 3 790:-



Arozzi Torretta

4 → 1 990:-



Arozzi Enzo

5 → 1 463:-



DXracer Iron IF11

6 → 3 290:-



Arozzi Mugello

7 → 1 390:-



Herman Miller Aeron stol Storlek B (Medium)

8 → 7 100:-



FIGURE 13
Washing machines: Leasing durable machines can be beneficial for both parties

Customer's net present costs¹ of washing machine usage over time²
 USD per customer



High-end machine manufacturer's profits from primary sale and leasing
 USD per machine

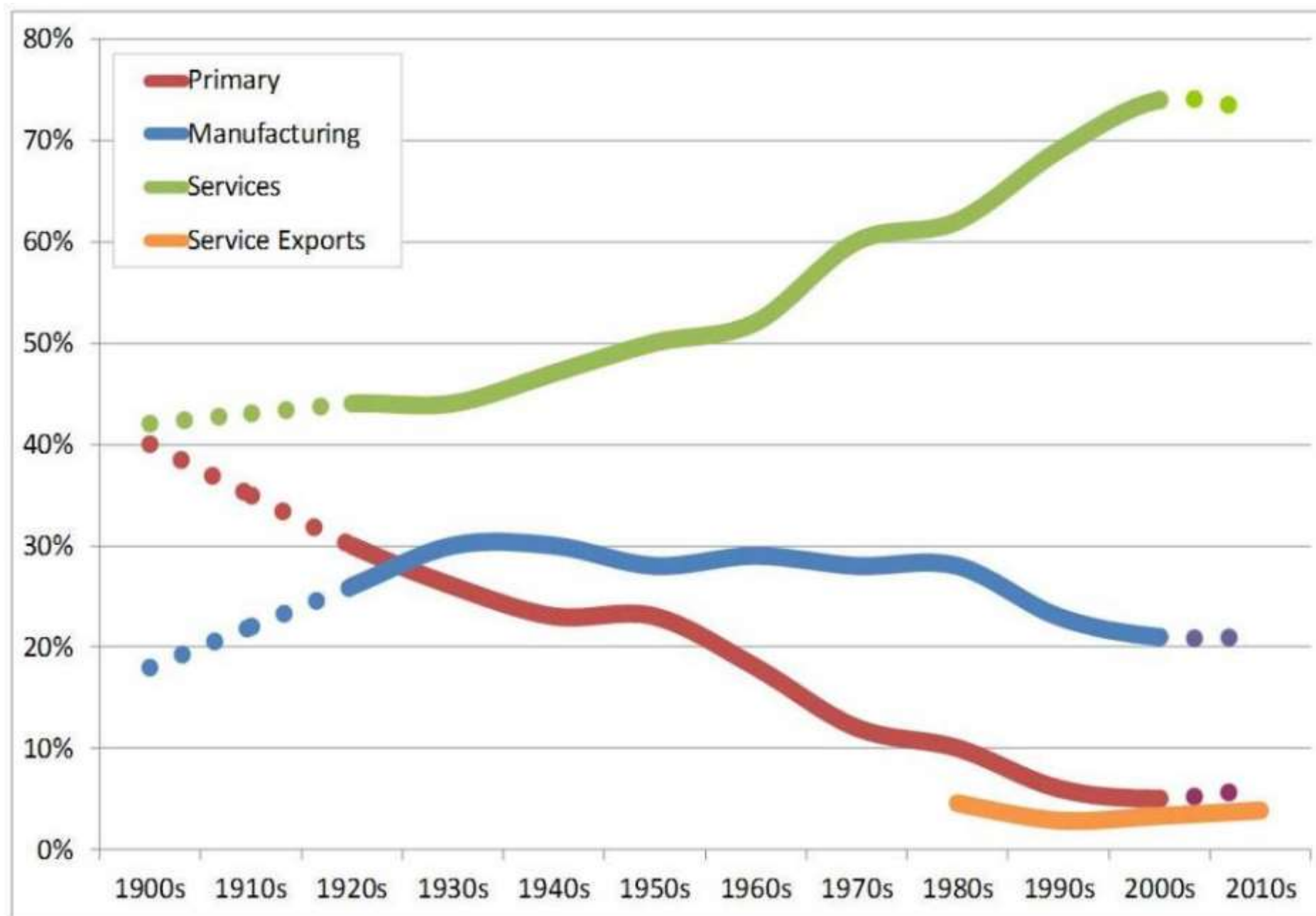


¹ Here, net present cost is the sum of a customer's discounted cash outflows for washing machine purchases over a specific time horizon (5, 10, and 20 years)

² Applied 8% discount rate

³ Low-end washing machines with a lifetime of 2,000 cycles and cost around USD 540

SOURCE: Company information; Öko-Institut; Sundin (2004); UNU (2008); Stamminger et al. (2005); Ellen MacArthur Foundation circular economy team







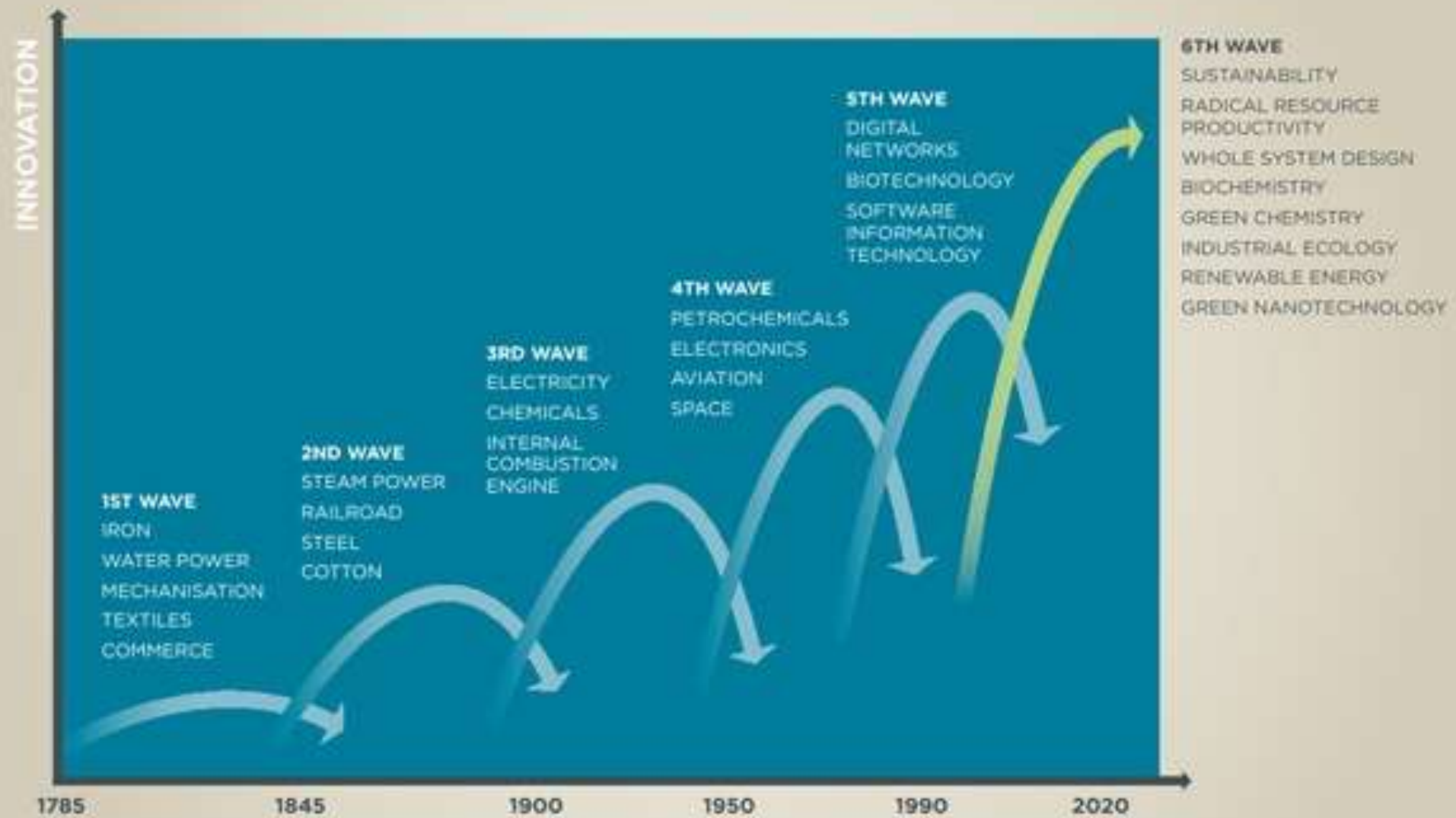






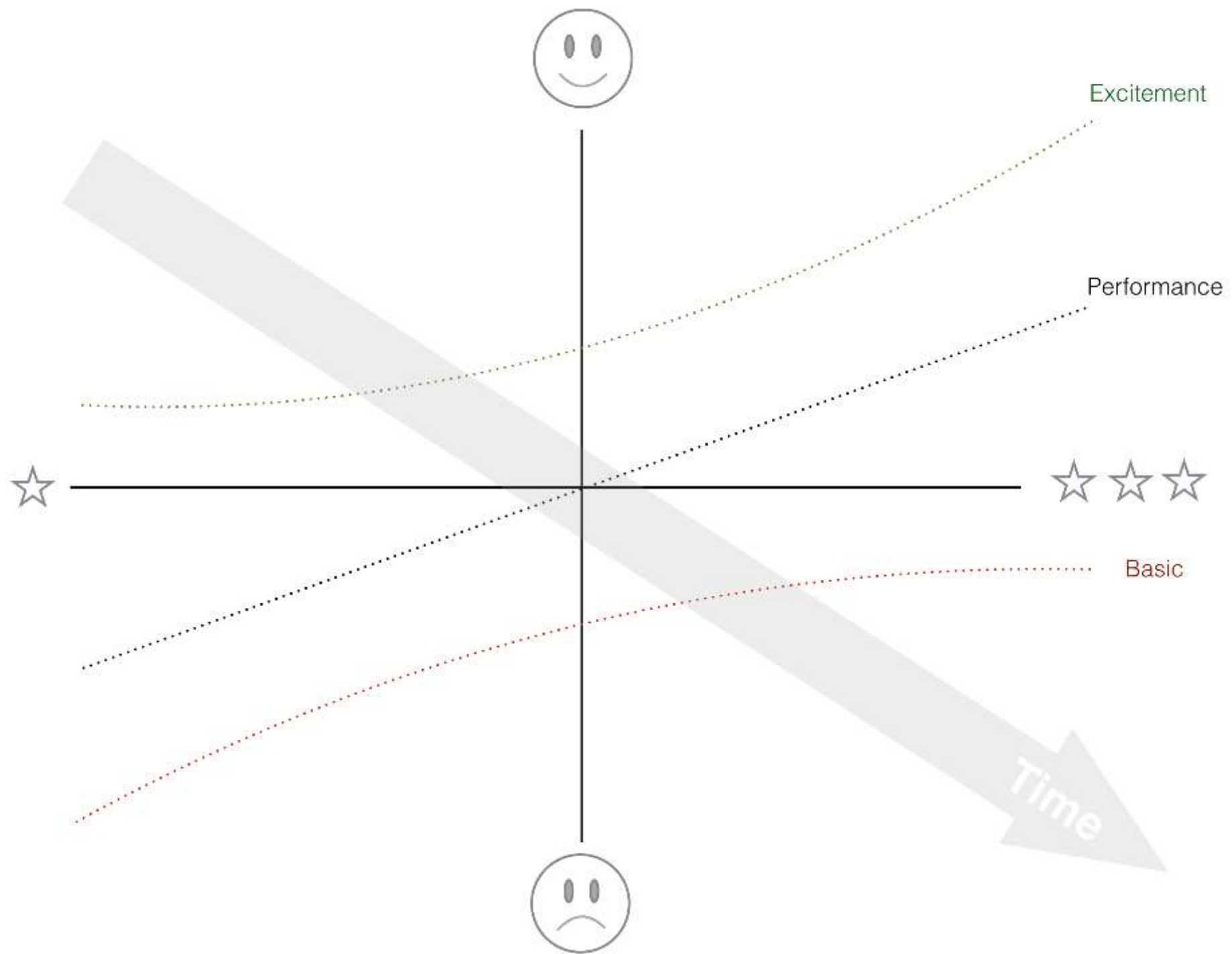


WAVES OF INNOVATION



ORIGIN: THE NATIONAL INNOVATION PROJECT BOOK

ELLEN MACARTHUR FOUNDATION



5 ways the Internet of Things is about to change the electronics landscape

**Hundreds of
smart objects**
in the typical home by 2022

**70% of global
manufacturers**
will offer connected
products by 2017

**70% of healthcare
organizations**
will invest in consumer-facing
mobile applications, wearables,
remote health monitoring and
virtual care by 2018

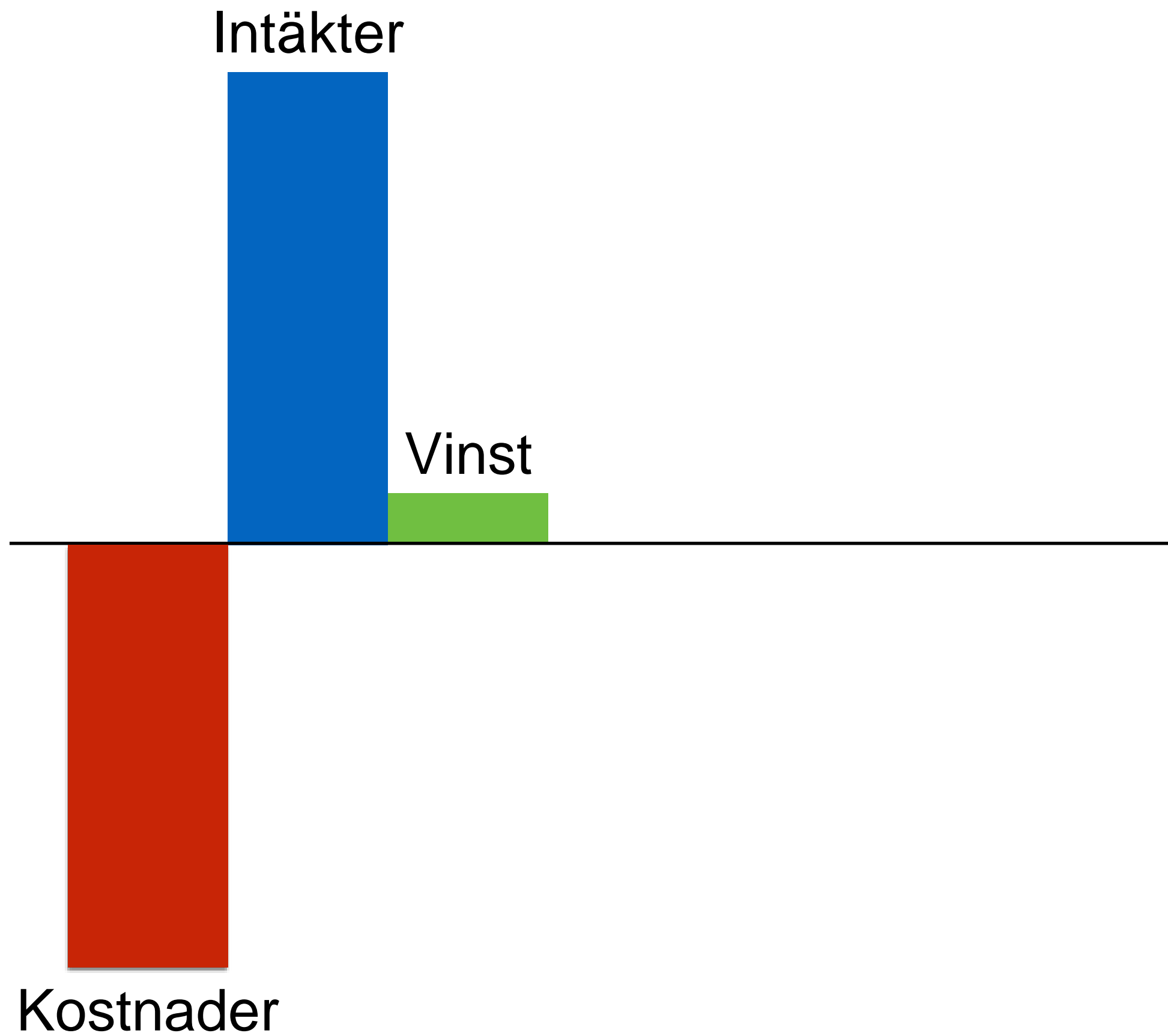
**99.4% of
physical objects**
that may one day be part of
the Internet of Things are
still unconnected

The Internet of Things revenue
from the worldwide Discrete
Manufacturing vertical market

**\$746.5 billion
in 2018**

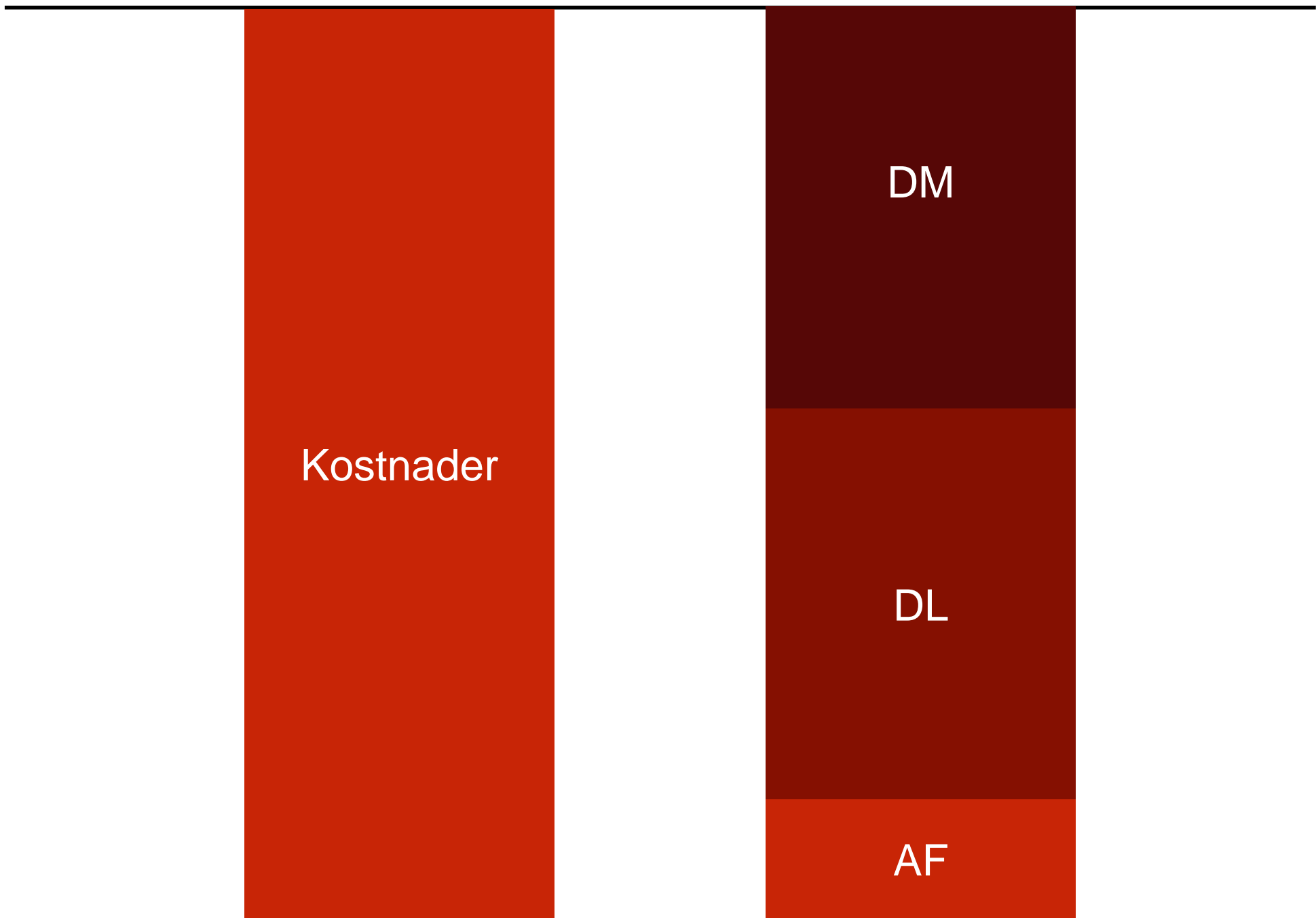
It isn't hype, it's happening

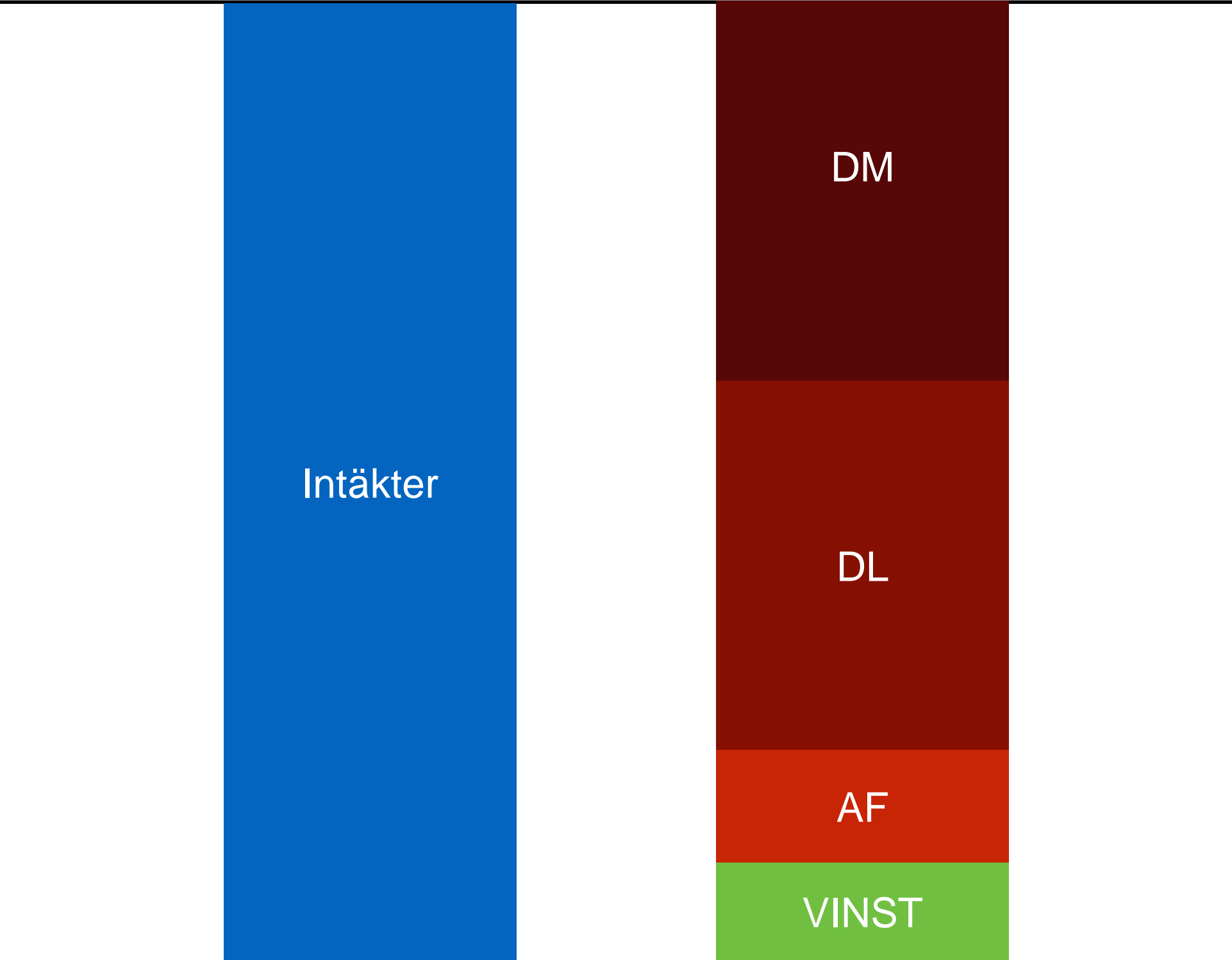
IBM is helping electronics organizations across the globe





Kostnader





Intäkter

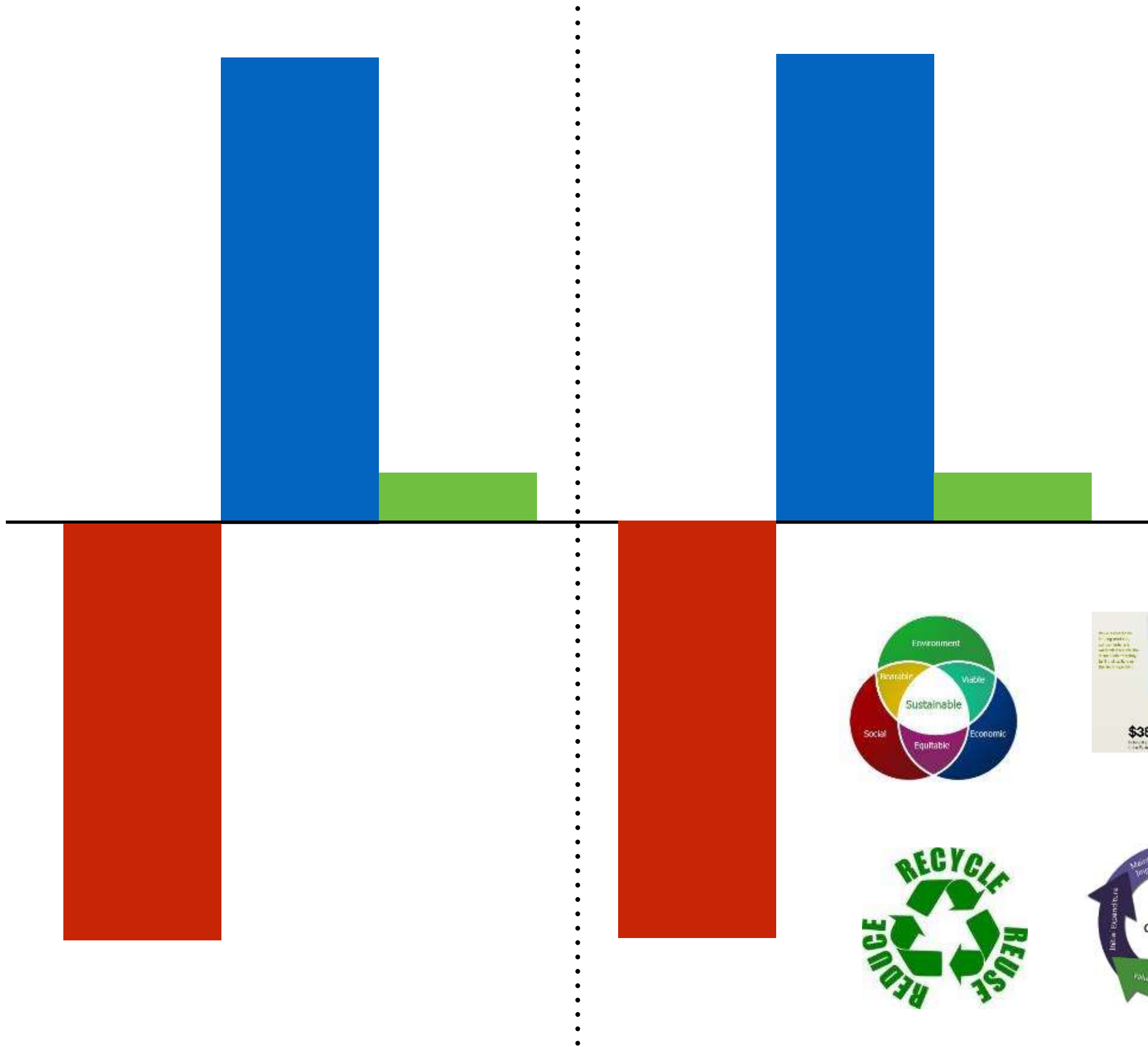
DM

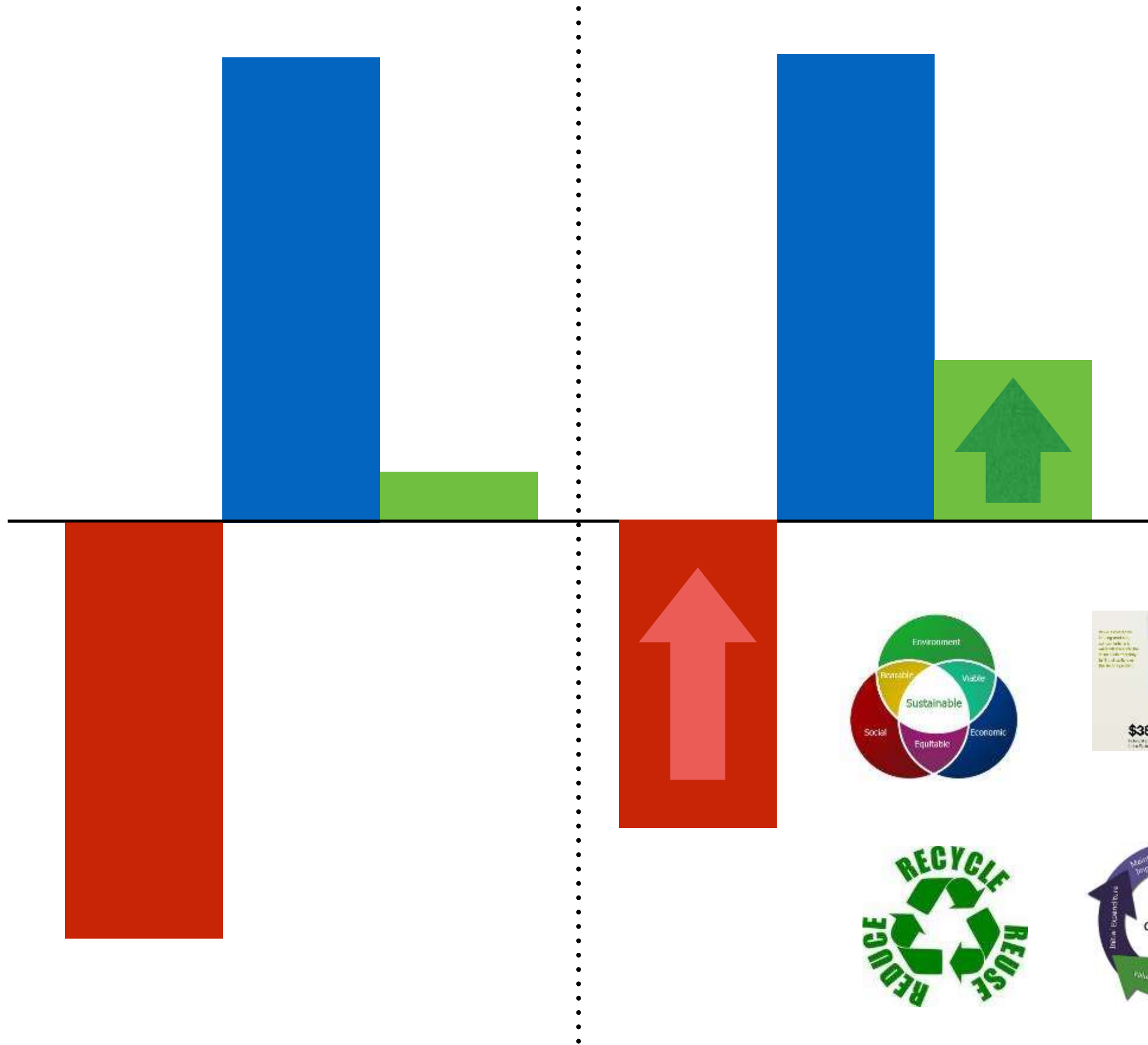
DL

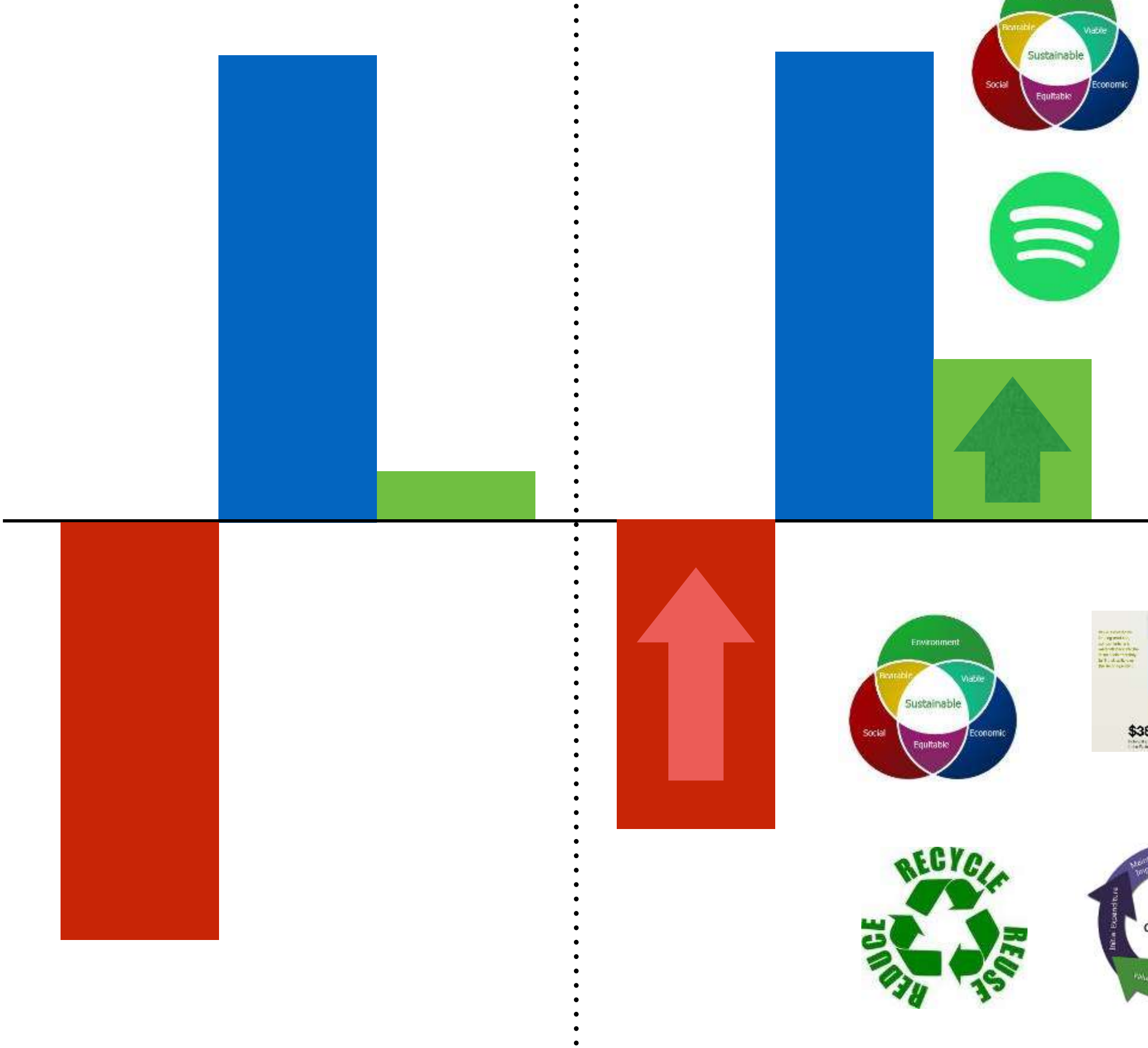
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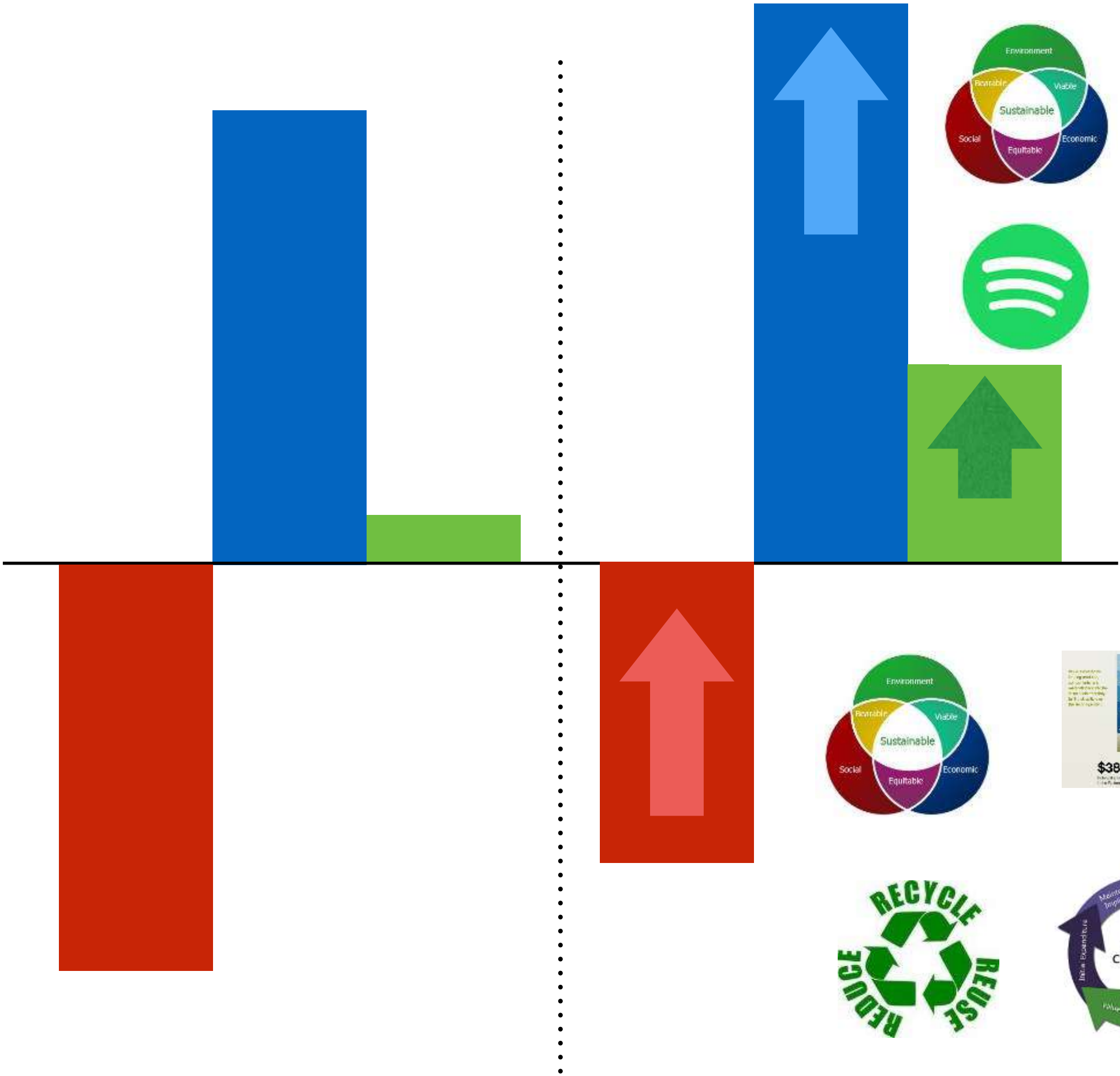
VINST











System level



Buyer // Consumer



Waste // Raw material



Design // Engineering



Sales // Marketing

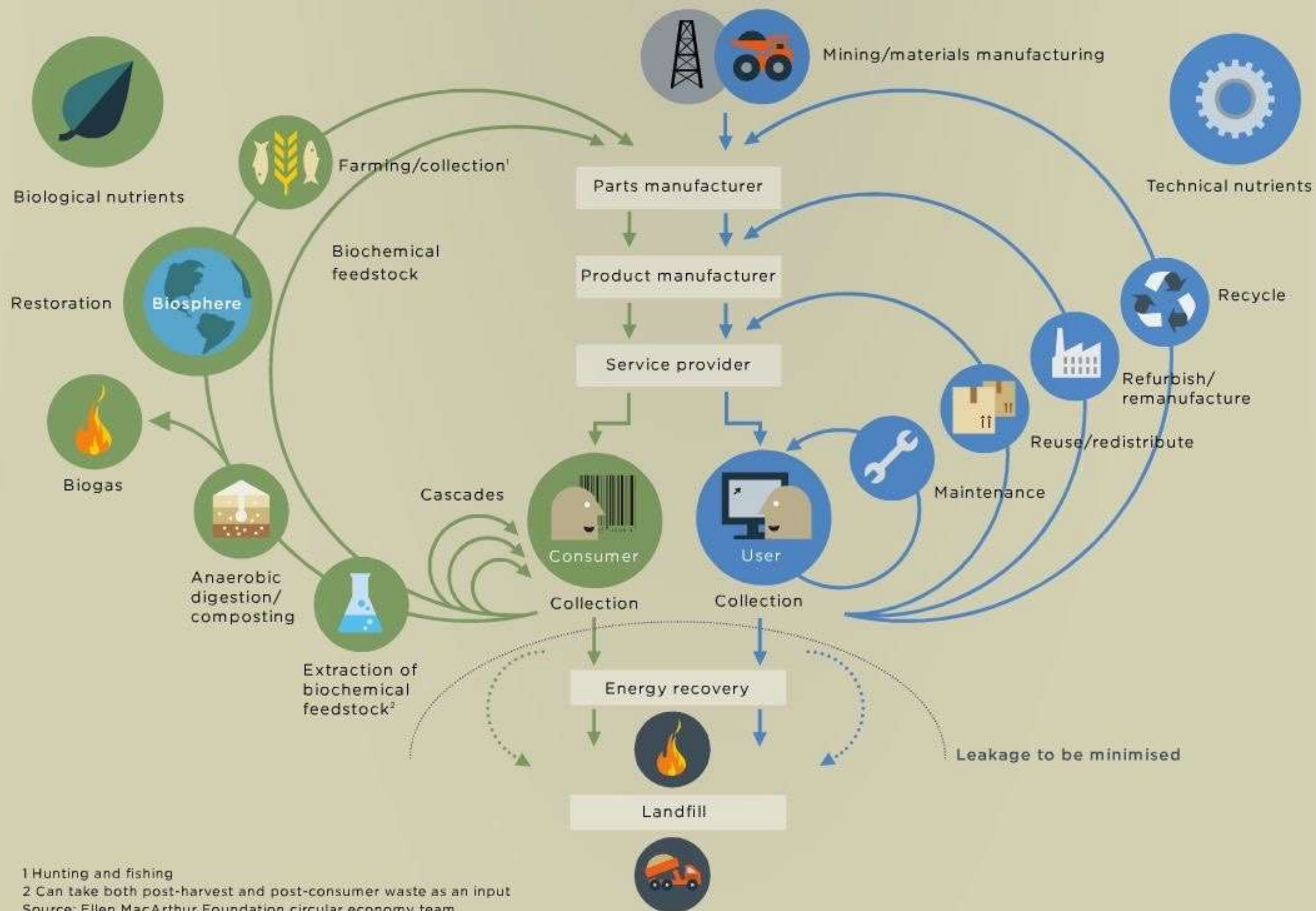


Production // Assembly



Transport // Logistics

The circular economy—an industrial system that is restorative by design



¹ Hunting and fishing

² Can take both post-harvest and post-consumer waste as an input

Source: Ellen MacArthur Foundation circular economy team



