SUSTAINABILITY - THE 4TH DIMENSION OF INNOVATION

Dirk Ploss, Senior Early Innovation Manager, Beiersdorf AG
DIRK PLOSS. ONLINE SINCE 1985.

1985
300 bit/s

2023
10,000,000,000 bit/s
BEIERSDORF.

- Inventors of modern skin care
- Founded in 1882 by Paul C. Beiersdorf
- Headquarters: Hamburg
- Revenues 2022: 8.8 bn €
- Employees: 21,000
- Markets: >170
- Publicly traded (DAX40: FRA:BEI)
WHY SUSTAINABILITY MATTERS
PROFITS
HOW CONSUMERS DECIDE ON PURCHASES:
1. EFFECT

HOW GOOD DOES THE PRODUCT SOLVE MY PROBLEM?
2. **EFFORT**

How much time and energy do I have to put into this?
3. COST
HOW MUCH DO I HAVE TO PAY FOR THIS?
4. FEELINGS
WHAT DO I BELIEVE ABOUT THIS SOLUTION?
HOW CONSUMERS DECIDE ON PURCHASES:
PRETTY OFTEN QUITE WRONG
TO GET TO A LOWER CARBON FOOTPRINT THAN

<table>
<thead>
<tr>
<th>1 HDPE PLASTIC BAG USED ONCE</th>
<th>1 PP PLASTIC STRAW USED ONCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YOU HAVE TO USE</td>
<td></td>
</tr>
<tr>
<td>A PAPER BAG 3 TIMES</td>
<td>A PAPER STRAW 5 TIMES</td>
</tr>
<tr>
<td>A COTTON BAG 131 TIMES</td>
<td>A METAL STRAW 150 TIMES</td>
</tr>
</tbody>
</table>

Sources: Rana et al., MSU, 2020; Edwards et al., Env. Agency, 2011
SUSTAINABILITY IS NO LONGER A VALUE-ADD, BUT A MUST-HAVE

Level of Satisfaction

Level of Dislike

BASE FEATURES

PERFORMANCE FEATURES

DELIGHTING FEATURES

SUSTAINABILITY
INVEST NOW OR PAY (HUGE) PENALTIES LATER
SO... WHAT EXACTLY IS SUSTAINABILITY?
IN FMCG, MOST PEOPLE ONLY SEE PLASTIC
4 OF OUR FOCUS AREAS

- PLASTIC WASTE
- ENERGY USAGE
- CO$_2$ EMISSIONS
- RAW MATERIALS
FOCUS AREA: CIRCULAR ECONOMY
FOCUS AREA: CIRCULAR ECONOMY

NOT A CIRCLE!
PROBLEMS & LIMITATIONS IN RECYCLING
TECHNICAL HURDLES

OIL → PLASTIC → STILL PLASTIC!
RECYCLING

NEEDS ENERGY,
(LOTS OF) WATER,
EMITS CO2,
CREATES (TOXIC) WASTE...
AND: THERE’S NOT ENOUGH PLASTIC TO RECYCLE!
ONE HOPE: PLASTIC "EATING" ENZYMES

0 Hour 12 Hour 24 Hour 48 Hour

Sources: University of Texas in Austin, Alper et al., 2023
FOCUS AREA: CO$_2$ EMISSIONS
EMISSIONS BY SECTOR

That’s us!
That’s also us.
And this.
O yeah, that as well.
Yes, and this…
Okay, okay, okay…
INNOVATION TO THE RESCUE!
NEW CARBON-CAPTURING CONCRETE
SOLAR POWERED TRANSPORTATION
RENEWABLE ENERGY AND STORAGE
LAB-GROWN MEAT AND SEAFOOD

**GREENHOUSE VEGETABLES & FRUITS**
- **EXTRACT**
  - Start with plant cutting/seeds
- **GROW**
  - The plant cutting is grown in nutrient-rich environment like greenhouse
- **EAT**
  - Enjoy your vegetables & fruits!

**SHIOK MEATS PROCESS**
- **START**
  - Start with a small sample of shrimp/crab/lobster cells from our cell bank
- **GROW**
  - The cells are grown in nutrient-rich, controlled environment inside bioreactors/cultivators
- **EAT**
  - Enjoy your seafood and meats, like Shioh Shrimp in Siu Mai (dumplings!)
EXAMPLES FROM BEIERSDORF
THE 4TH DIMENSION OF INNOVATION

D = DESIRABILITY

F = FEASIBILITY

V = VIABILITY

S = SUSTAINABILITY
STARTUP INVESTMENTS

OSCAR & PAUL®
BEIERSDORF VENTURE CAPITAL
LEVERAGING ARTIFICIAL INTELLIGENCE
STAY AT HOME, SAVE A PLANET!
CO₂ RECYCLING TECHNOLOGY

A brief explanation of our CO₂ recycling technology

Carbon is captured

Fermented and filtered to cosmetic ethanol

Our climate care moisturizer's formula contains 14% of this ethanol

- Moisturizes
- Refreshes and soothes the skin
- Protects the skin
REFILL STATION
WE JUST GOT STARTED
3 THINGS TO DO RIGHT NOW
1. CREATE A SUSTAINABILITY CULTURE
2. DEFINE A STRATEGY AND SET CLEAR OKR
3. MAKE SUSTAINABILITY MANDATORY IN INNOVATION
THANK YOU