Hackathon: the circular diaper

Team 10 - ASAP

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"CONSIDERING THE WORLD'S APPETITE FOR ONE-WAY PRODUCTS, WE SIMPLY CAN'T AFFORD TO THROW AWAY ANY HIGH-QUALITY FIBRE [...]."

ROY BROWN, PRESIDENT & CEO OF KNOWASTE

Edana Hackathon

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WE TACKLE TWO MAJOR PROBLEMS...

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500

YEARS NEEDED FOR DEGRADATION ON LANDFILL

$82BN

GLOBAL GDP IN FLOOD DAMAGES IN 2019

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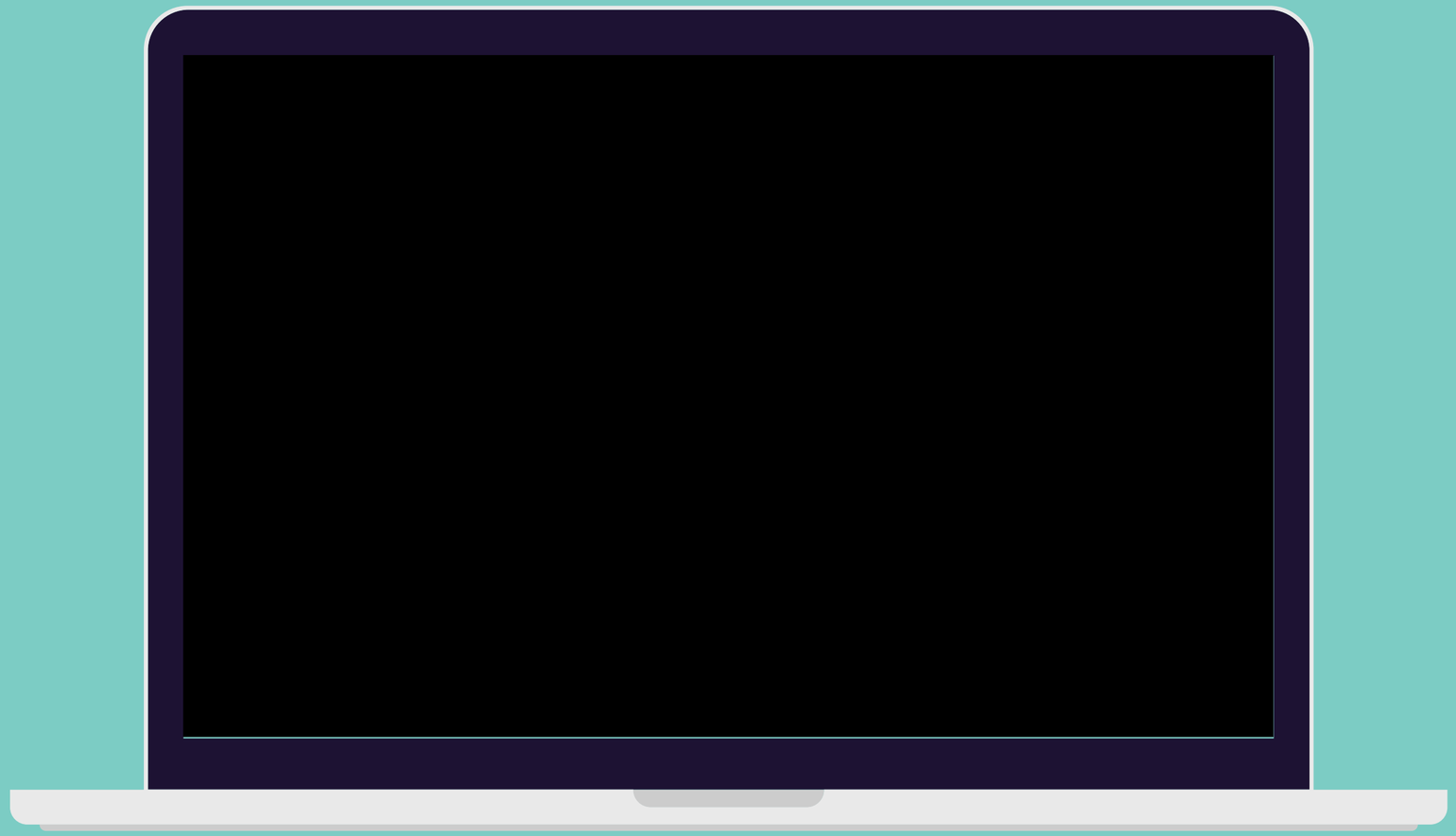

WHAT DO END-USERS THINK?

A BRIEF INTERVIEW WITH MUMS AND DADS: THE FIRST DIAPER USERS

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ONE SOLUTION...

FOR TWO BIG ISSUES!

SAP FROM DIAPERS...

...RE-USED AND RECYCLED...

...TO IMPROVE FLOOD MANAGEMENT

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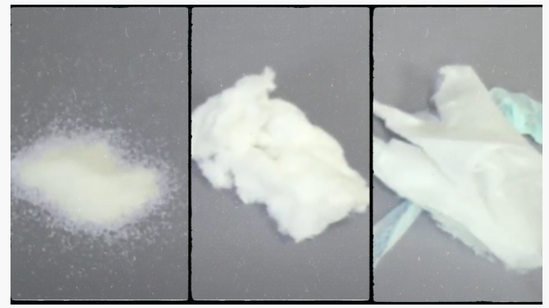
STEP 1

COLLECTING THE DIAPERS

STEP 2A

SEPARATING SAP FROM THE REST OF THE USED DIAPER



STEP 2B

RE-SELLING OTHER COMPONENTS

STEP 3

DEACTIVATING AND STERILIZING SAP

STEP 4

PUTTING SAP IN (SAND) BAGS

STEP 5

SELLING BAGS FOR FLOOD MANAGEMENT USE

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WHY FOCUS ON SAP?

PGW IMPACTS

A VALUABLE ASSET

INCREDIBLE PROPERTIES

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REVENUE MODEL

SAP BAGS FOR FLOOD MANAGEMENT

Brico

BRICORAMA

LEROY MERLIN

POLYPROPYLENE (PP) & POLYETHYLENE (PE)

BOREALIS
Keep Discovering

سابك
sabic
CHEMISTRY THAT MATTERS™

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TIMING

1. PRESENT AND VALIDATE OUR IDEA
2. PILOT WITH HOSPITALS IN THE NETHERLANDS
3. SCALE THE IDEA

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READY FOR THE CHALLENGE?

THE TEAM OF #ASAP IS!

BERNADETTE BÖLLHOFF

STRUCTURED LEADER

GRETA NANNI COSTA

HEAD OF RESEARCH

QUENTIN CHERET

BUSINESS DEVELOPER

EMILIE ROLAND

EXTERNAL RELATIONS

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THANK YOU!

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APPENDIX

Key Partners

Municipalities, governments

For collection:
- Health centres, e.g. hospitals
- For daycare centres

Recycling & chemical manufacturing companies

Research institutes (e.g. Flood Proof Holland)

Key Activities

1. Collecting the old diapers (pickup)
2. Separating SAP from rest of diaper
3. Selling remaining components
4. Deactivating the SAP
5. Putting SAP in (sand) bags

Key Resources

- Used diapers (incl.SAP)
- Collection System
- Machinery
- Expertise to separate (e.h. chemists)

Unique Value Proposition

Superior product qualities compared to (sand) bags without SAP: lighter, faster & less manpower needed

Both rejection and absorption of water

Sustainability Proposition

Restoring value from the diapers' most valuable part (SAP).

Environmentally-friendly technology for flood management.

Customer Relationships

Pilot phase:
Going to conferences like Flood Proof Holland

Afterwards: only a bi-weekly basis (or more frequently if there are currently floods)

Channels

- experiment and showcase at Flood Proof Holland
- showcase on package from diapers the process
- via presentations

Customer Segments

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State actors: Cities, municipalities, governments

Sand bag companies: e.g. Indbag, Absorpent Specialty Products

For PP & PE: (Plastic) Recycling companies, OR potentially chemical manufacturing industries (Sabic &Borealis)

Cost Structure

C1: Separating SAP from the rest of the diaper

C2: Cleaning and deactivating SAP

C3: Manufacturing SAP bags

Revenue Streams

R1: Sales of sandbags with SAP

R2: Sales of PP & PE

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BENEFITS

OF DEHYDRATING SAP THROUGH OXIDATION USING OZONE

Water Absorption Capacity

The absorptivity of **pulp** used to absorb urine is not affected by ozone.

No Toxic Materials

Toxic materials (e.g. chlorine compounds) are not required to disinfect the pulp. Potentially toxic residues are not produced.

Separate SAP and Pulp

The dehydration of SAP by ozone oxidation can help decrease the volume of SAP that has absorbed urine