



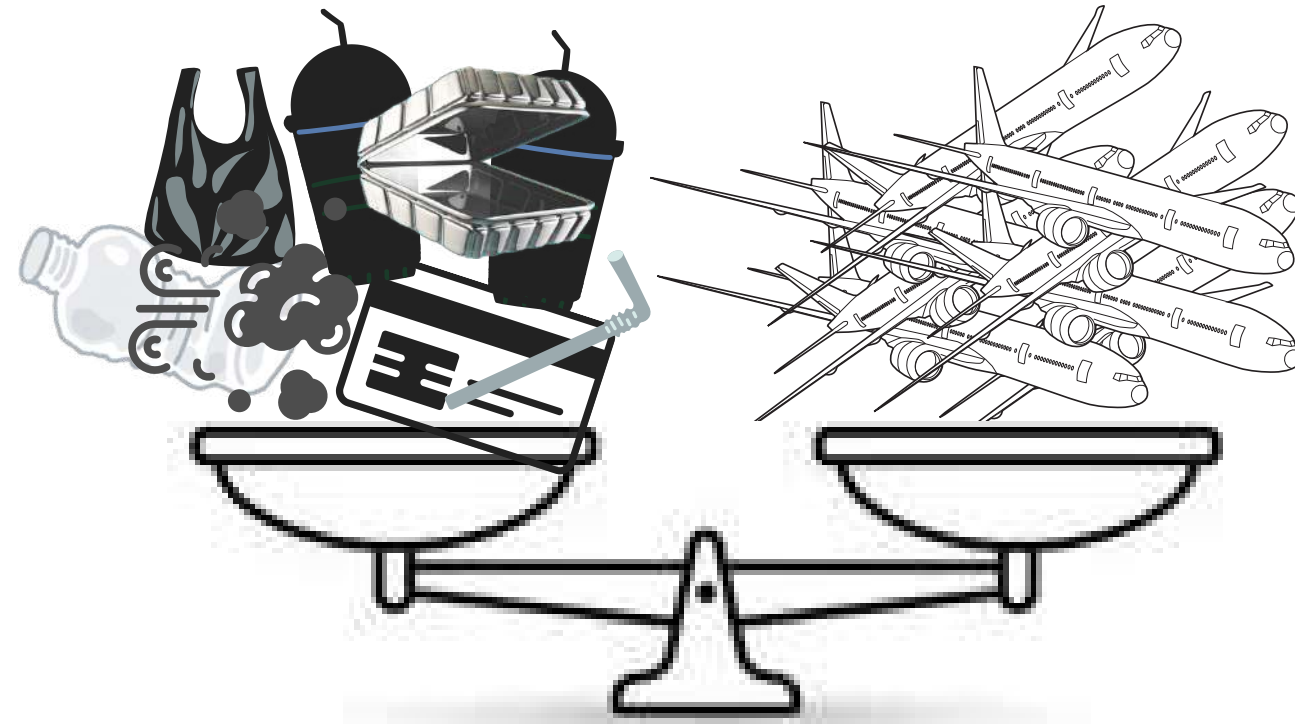
Biocomposite to replace plastics

Made from reed
of Baltic Sea



Problem

Fossil-based plastic is a big part of global pollution



50,8 million tons yearly => 128 000 Boeing 747

Card manufacturers will be **forced to replace fossil plastic** with eco-friendly materials **by 2028***

Solution

SUTU – patentable material from reed plant

REED



100% PLANT-BASED

- Fast-regenerating
- Never used as food
- Scalable all over the world

SUSTAINABILITY COMBINED WITH DURABILITY

- Unique combo of flexibility and strength
- Low-impact throughout the lifecycle
- Technology is already available (existing machines)

Application for cards

Technologie:

thin film

Product verticals:

- card blank (bank, gift, VIP, etc.)
- packaging films (food, gift, etc.)
- adhesive tape
- wax cloth



Reed proportion:

-> 10-30%



Possible other applications

Technologie:

3D-printing

injection molding

Product verticals:

- DIY home kit
- design products (complex)
- everyday items
- parts for drones (defense industry)

- household products
- food containers
- drinking cups & lids
- cosmetic cups



Reed proportion:

-> 20-40%

-> 30-60%

Validation

Validated unique biomaterial for eco-friendly cards



CUSTOMERS

- A test batch 100K pcs for SEB Bank
- Confirmed the demand for the material, potential 240M pcs per year



Biomaterial provider



Producer



CERTIFICATION

- First tests done



Card provider

User



R&D OF REED

- Based on 3 years of R&D with scientists



PILOT CLIENT

- Pilot 100K pcs in Baltics, further at least 1M pcs

Competition



Required conditions:
strength
flexibility
hardness
fatigue resistance
fracture toughness

| | FOSSIL PLASTIC | WOOD | OCEAN PLASTIC | CORN-BASED MATERIAL | SUTU |
|------------------------------|----------------|------|---------------|---------------------|------|
| DURABLE | ✓ | ✓ | ✓ | ✓ | ✓ |
| MICROPLASTIC FREE | | ✓ | | | ✓ |
| PLANT-BASED | | ✓ | | ✓ | ✓ |
| SUSTAINABLY SOURCED | | | ✓ | | ✓ |
| MECHANICAL PARAMETERS | ✓ | | ✓ | ✓ | ✓ |
| PRICE | € | €€€ | €€ | €€ | €€ |

Market



Plastic cards in circulation today worldwide

 **33 billion pc** →  **24 billion €**

Europe has the second largest share (23.2%)

 **7,6 billion pc** →  **5,5 billion €**

Sutu's partner Tag covers 55% of European fintech&neobanks market

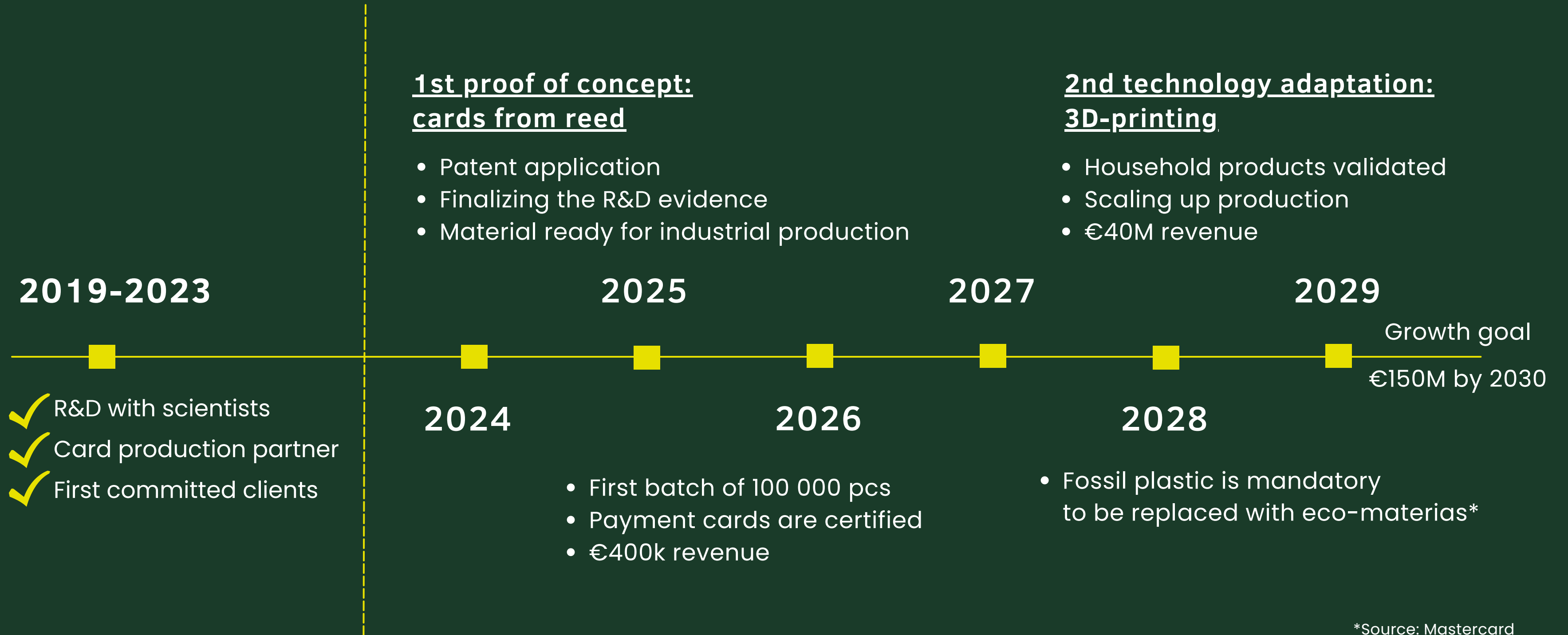
 **240M new bank cards per year**

Cards won't disappear (expected growth rate 2–3% each year)

 **as banks seek close customer ties**

Sources:
The International Card Manufacturers Association (ICMA)
The Nilson Report - <https://nilsonreport.com/>

Milestones



*Source: Mastercard

Business Potential



2025 we will produce 3,9 tons of reed material for one partner

2026 35,5 tons of reed material for three partners

2027 90,5 tons, incl 3D printing and household items adaptations

Potential REVENUE by 2030:

- **CARDS** → **60 million €**
- 3D-printing → 50 million €
- Household items → 40 million €

Total REVENUE →  **150 million €**
4% of the market by 2030

→ B2B2B
→ licensable

SUTU team

OUR EXPERIENCE



Ailet Õis-Saar
CEO, M.Sc.



Mihkel Karu
Advisor
Product & Business Development



Anneli Laines-Ensling
Growth & visibility manager



Kaido Saar
Hands-on advisor
20+ years in banking

Impact

SUTU's impact per year:

- Removing 2,03 million tons of fossil plastics
- Optimizing the use of resources and saving 2,5 million tons of CO2
- Cutting the reed eliminates from the wetland:
 - > 5,3 thousand tons of phosphorus
 - > 0,5 million tons of nitrogen
 - > more than 1 million tons of organic carbon



Deep Tech batch '24



Winner, Estonia '23



Impact batch '23

Fundraising

To bring the reed card to market:

300 000 € total



- production of 100 000 cards
- material certification
- reed card on producers' product list


✓ 50% of this is committed as a grant




Thank **you!**

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