STONE PAPER

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AGENDA

01 Problem

02 What is stone paper?

03 Need for stone paper

04 Industry Findings

05 Our Research

06 Recommendation

The Problem

01

PROBLEM

- The packaging industry has a huge environmental footprint
- Cardboard, plastic, byproducts of production, waste, and transportation

WHAT'S WRONG WITH PULP PAPER

Production

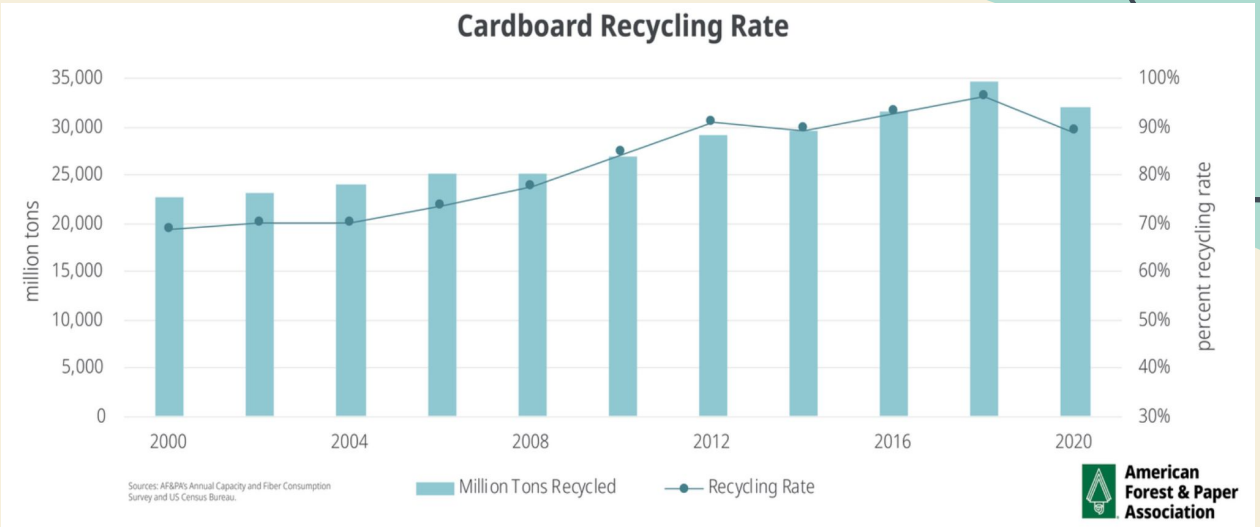
- Deforestation
- Water intensive

Consumption

- In the US 80 billion cardboard boxes are used per year
- 80% of all US packages are in cardboard

Waste/Recycling

- 800 million tons of cardboard and paper thrown away annually
- Recycled cardboard saves 24% of the energy needed to create new cardboard
- If wet, cardboard is tossed out in recycling process


Cardboard Recycling Rate
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
million tons
100%
90%
80%
70%
60%
50%
40%
30%
percent recycling rate
2000
2004
2008
2012
2016
2020
Sources: AF&PA's Annual Capacity and Fiber Consumption Survey and US Census Bureau.
Million Tons Recycled
Recycling Rate
American Forest & Paper Association


Paper Recycling Rate
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
million tons recycled
70%
60%
50%
40%
30%
20%
10%
0%
percent recycling rate
2000
2004
2008
2012
2016
2020
Source: AF&PA's "Paper Industry Annual Statistical Summary"
Million Tons Recycled
Recycling Rate
American Forest & Paper Association

What is Stone Paper?

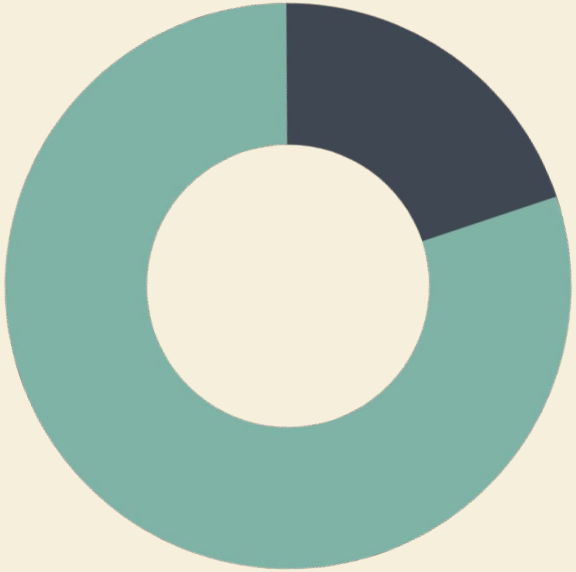
02

COMPONENTS

80%

Calcium Carbonate

A common compound found in nearly all rocks



20%

HDPE

High-density polyethylene

Non-toxic, recyclable, binding compound

BENEFITS OF STONE PAPER

100% Recyclable

- Recycling stone paper does not compromise it's durability.
- Materials can be recycled in the same facility as production.
- **Ideal for creating a circular economy**

No toxic additives

- Like bleach, chlorine or acid

No water, no trees

BENEFITS OF STONE PAPER

Waterproof & Durable

- Resistant to mold
- Water impenetrable
- Washable to maximize reusability

Lower cost

- 50% cheaper than pulp paper
- Equipment to manufacture is 40% cheaper than pulp paper

67% lower carbon footprint than pulp

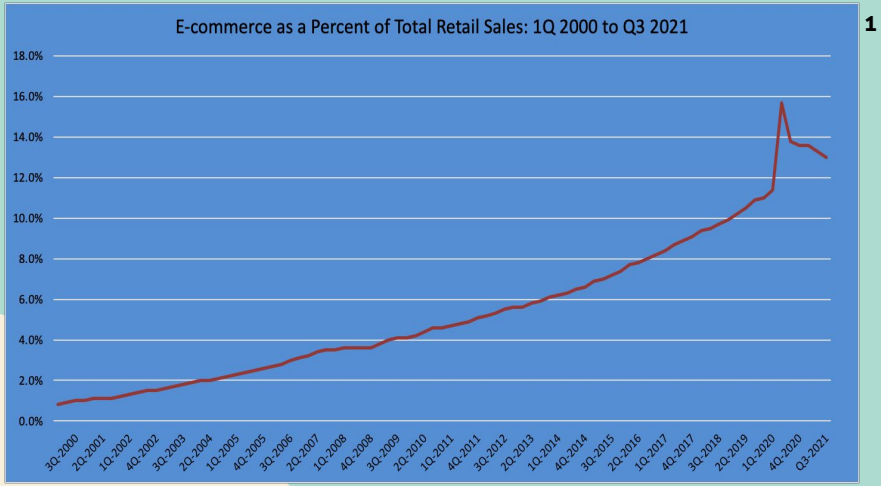
Need for Stone Paper

03

NEED FOR STONE PAPER

- Increasing demand for packaging, labeling, and writing materials
  - Large component is packaging for e-commerce
- Increasing concerns about deforestation and sustainability of paper and cardboard

E-COMMERCE



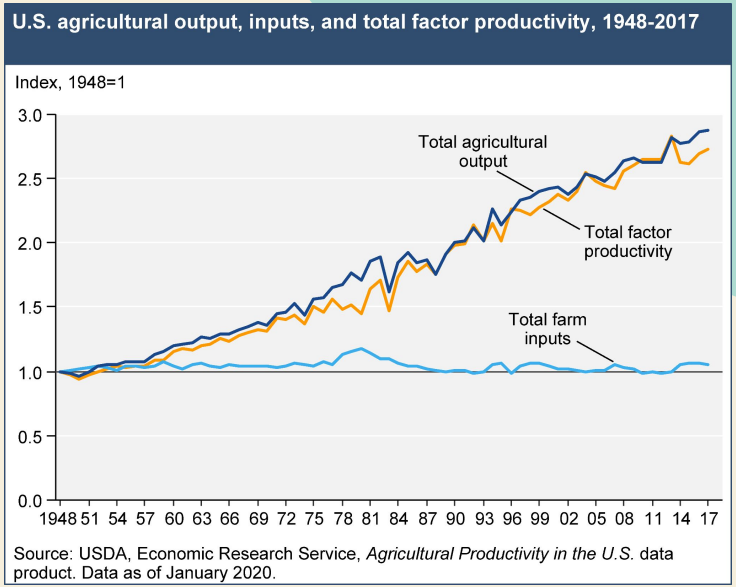
1

$20.89 trillion increase from Q1 2000 to Q3 2021

12.2% increase from Q1 2000 to Q3 2021

1.) Source: United States Census Bureau - Estimated Quarterly U.S. Retail Sales (Adjusted): Total and E-commerce

Agriculture

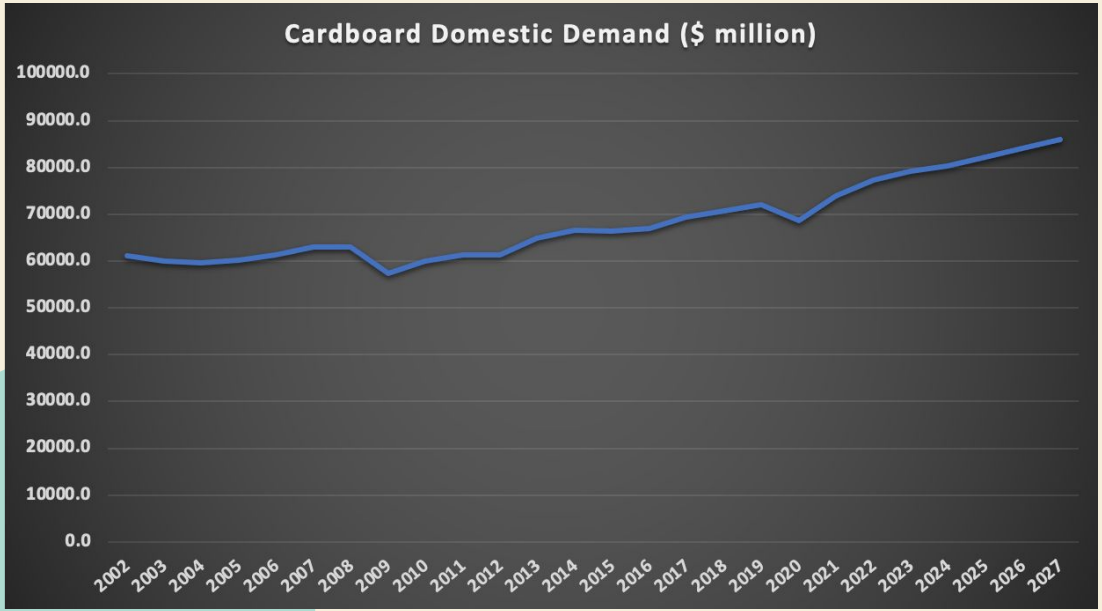


Nearly 3x increase in total agricultural output

~2.75x increase in total factor productivity

The Industry 04

THE CARDBOARD INDUSTRY



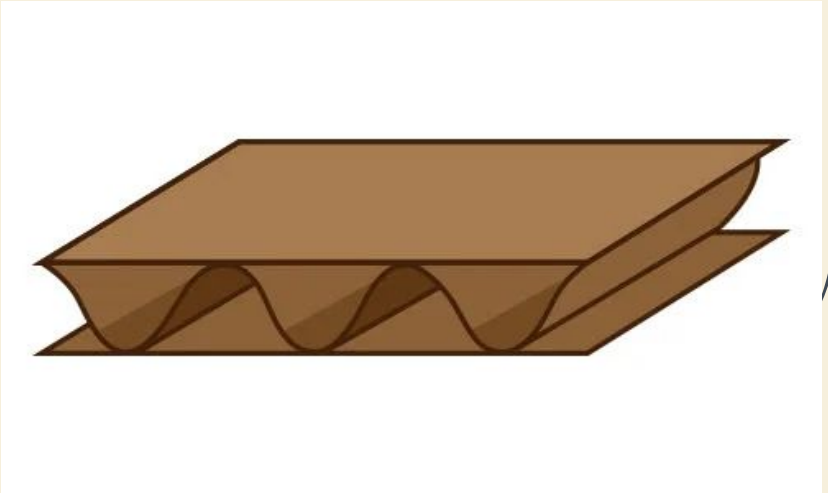
[1]

- $74 billion industry in 2021
- 2.7% expected annual growth from 2021-2026
- E-commerce and the agricultural industry will continue to drive the demand for cardboard

1.) Source: IbisWorld Cardboard Box & Container Manufacturing Industry in the US - Market Research Report

ABOUT CARDBOARD

- There are many types of cardboard with different weights:
  - Corrugated cardboard
    - E.g. cardboard boxes
    - Made of virgin pine tree pulp
    - Recycles into chipboard
  - Chipboard
    - E.g cereal boxes
    - Weaker, shorter fibers
    - Recycles into paper



DOWNSIDES OF CARDBOARD

- Not very durable
  - Falls apart when wet
  - Prone to mold
  - Short product shelf life
- Difficult to recycle
  - Rejected if “contaminated”
    - Pizza grease on pizza boxes
    - Wet cardboard
- Breaks down & weakens each time it is recycled
  - Not infinitely recyclable- eventually ends up in landfill

Our Research

05

REACHING OUT TO COMPANIES

Answers

- Albertsons
- Mad Agriculture

No Answers

- International Paper Company
- Justin's Nut Butter
- Noosa
- BoBo's

PRIMARY SOURCE

- 10,000 products are received per week, most shipped in cardboard
- Grocery stores compress 10-12 bales of cardboard
  - Each bale weighs 400-500 lbs
- 2.25 tons of cardboard per week
- Meat and vegetable containers are usually waxed cardboard and unable to be recycled

Potential Market Entrance Analysis

Store	Sales/Week	Cases of Products/Week	Estimate of % of Cases Shipped in Cardboard	Weekly Cardboard Cases	Number of Stores in Colorado	Cardboard Used in CO/Week
Albertsons	$500,000.00	10,000.00	80%	8,000.00	105	840,000.00

% of Cardboard Replaced by Stone Paper	Stone Paper Cases per Week	Stone Paper Cases per Year
20%	168,000.00	**8,736,000.00**

Percent of Cardboard Thrown Away	Cardboard Cases Thrown Away/Week	Cardboard Cases Thrown Away/Year
30%	252,000.00	**13,104,000.00**

Recommendation 06

RECOMMENDATION

01 Finance Factory

Locate investors to finance a factory in the US to begin the creation of a closed loop system

02 Enter the Market

Starting with small progressive businesses who are eco-conscious

03 Scale

With proof that market entry is successful on a small scale, look for larger players

04 E-commerce

Enter the e-commerce market by targeting smaller businesses

QUESTIONS?

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