

allbirds

**Building a purpose-led brand focused on
comfort, design and sustainability**

**Green Chemistry & Commerce Council
Cincinnati ~ May 2019**

**Jad Finck
VP Innovation & Sustainability
Allbirds, Inc.**







THE WALL STREET JOURNAL

THURSDAY, FEBRUARY 1, 2018 VOL. CCLXX NO. 4

NASDAQ 5497.94 0.2% STOXX 600 363.64 0.1% 10-YR. TREAS. 2.53% YIELD 2.20% OIL \$53.76 20.50 GOLD \$1,177.70 \$1590 EURO \$1.0607 YEN 115.35

What's News

Business & Finance

- The yuan surged, posting its largest-ever two-day gain against the dollar as China's central bank cracked down on wagers against the currency. At 4:57 p.m. the Dow fell 42.57 to 18,999.29 as investors sold financial shares and bought government bonds, raising back some popular trades.
- Bitcoin roared red-hot Thursday morning and then plunged as the year strengthened.
- Sears is selling its Craftsman brand for \$800 million and closing more stores as it struggles with slumping sales and mounting losses.
- Trump blasted Toyota over plans for a new Mexican plant hours after the firm signaled a willingness to work with his administration.
- A top Verizon executive said the company is unsure whether it will proceed with its \$4.83 billion purchase of... B3



China's Oil Output Set for Long-Term Slump

Not All Greenhouse Gases Are The Same

By ALEXANDER JULIAN AND JORDAN BLEEN

Most of you know that Earth would be uninhabitable without greenhouse gases. These gases allow solar energy through to heat our surface but help absorb enough long-wave infrared radiation to let our planet warm enough for us to know it.

In that broad and vital role, the greenhouse effect is all-important and good. Without the greenhouse, we wouldn't be here. It's strengthening of that mostly a bad thing. The house effect first appeared in scientific papers in the 1820s and 1830s. A detailed scientific paper on the effect was published in 1896 by the Swedish chemist Svante Arrhenius. Alexander Graham Bell was the first to suggest that the effect could have a sort of "ice-albedo" feedback loop. Water vapor doesn't go away when it goes warm. It stays in the air, and more evaporation leads to more clouds, which have a cooling effect.

Water vapor is the most abundant greenhouse gas in the atmosphere, but it's not the most important. The most important is carbon dioxide. It's the one that's been increasing steadily since the Industrial Revolution. It's the one that's been driving the global temperature up. It's the one that's been causing the most damage to the planet.

By OLIVER ZEV

SÃO PAULO, Brazil. The New Zealand born soccer player-turned-shoe-entrepreneur poured some sugar into his cafezinho, the Portuguese word for "little coffee", a common local tradition to start business meetings. That natural sweetener had been squeezed from stalks of sugarcane that had grown in a field 300 miles to the northwest, in Sao Paulo state, Brazil.

Most of the juice from that sugarcane was converted into the crystal sugar that appears on grocery store shelves, while another portion was



Wool Runner

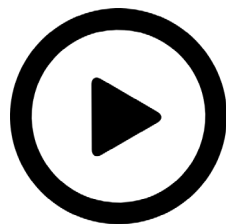
converted into ethanol, a renewable fuel that's an alternative to gasoline and can be used by a majority of the cars in the South American country of over 200 million people. Making sugar from sugarcane has been a tradition in Brazil going back hundreds of

years, with ethanol becoming common in the 1970's as a response to global oil shocks. Now there's a new outlet for this sweet crop, and it involves even older transportation traditions: walking and running. Earlier this month, San Francisco-based shoe brand Allbirds started selling the world's first shoes with soles made from Brazilian sugarcane, using technology provided by Latin America's largest petrochemical company, Braskem.

The story of how the world's first sugarcane based sneakers came to be starts 7,500 miles away in the island nation of New Zealand. Tim

Brown was a professional soccer player for his country's national team and enjoyed a long and successful career including a World Cup appearance. When it came time to hang up his

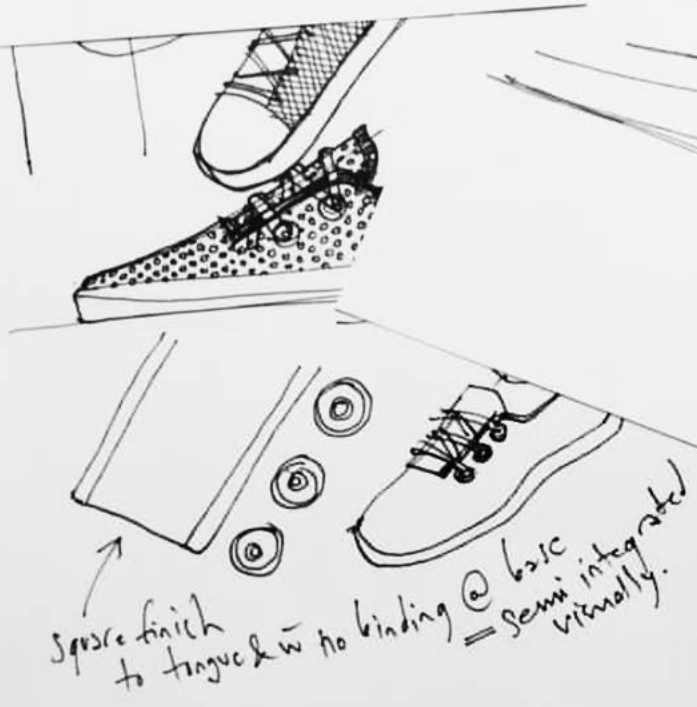
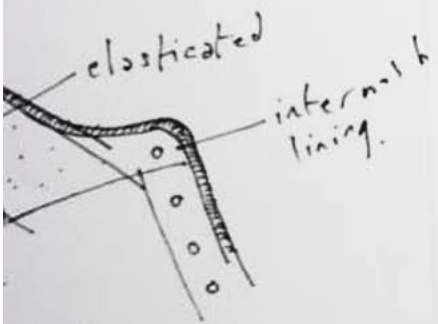
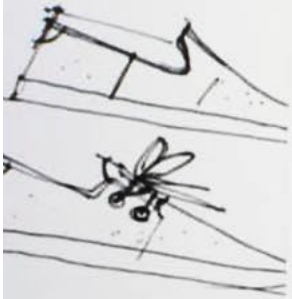
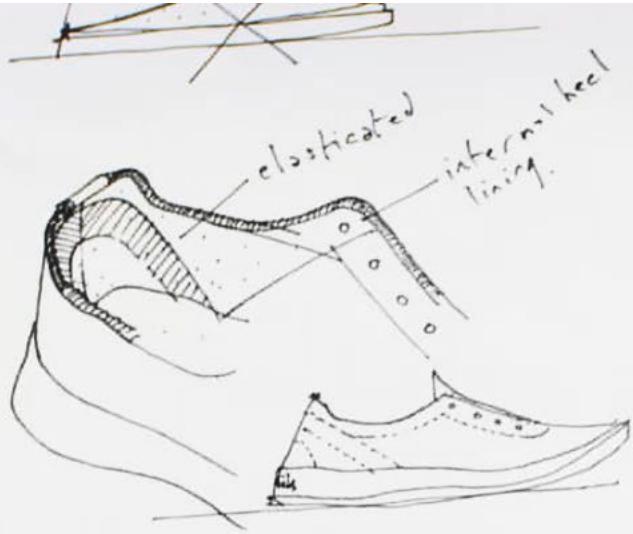
Please see page A4



SweetFoam™

{swēt·fōm}-noun

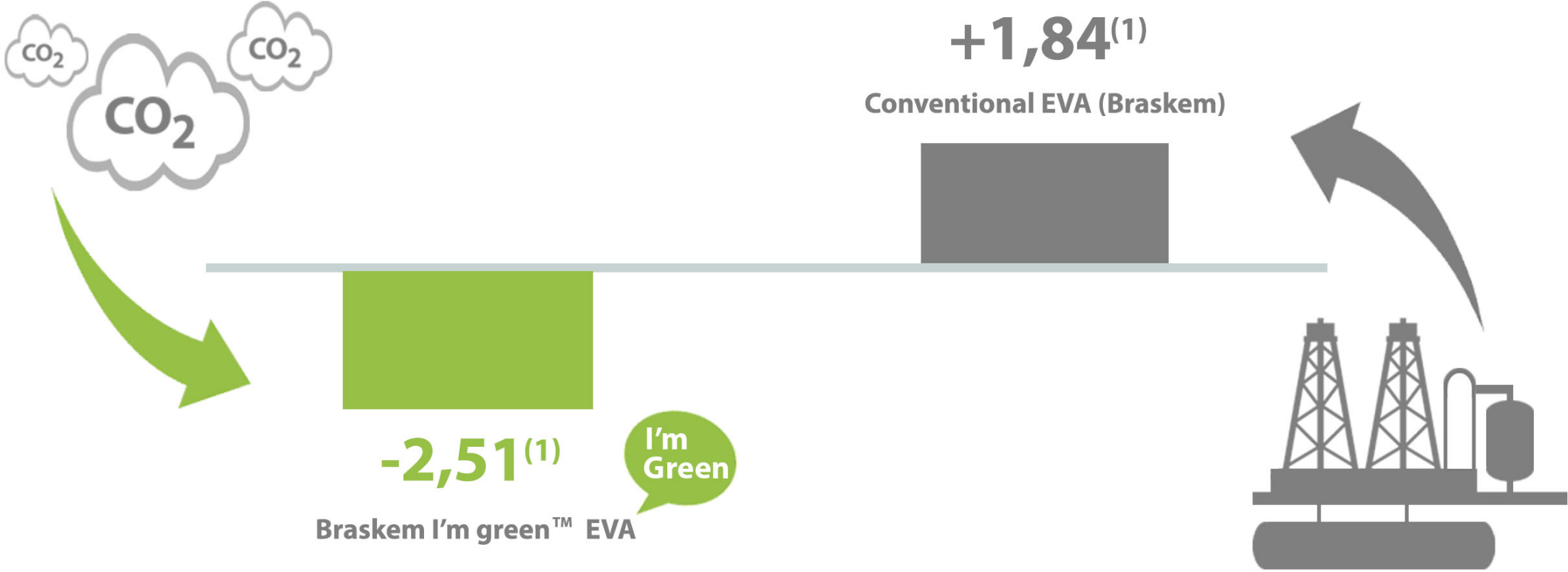
**a revolution in
sustainable manufacturing**





Carbon Footprint Comparison

Carbon footprint (t CO₂ eq./t polymer)



(1) LCA Study conducted by ACV Brasil/2017 (from cradle to Braskem factory gate)

BEST INVENTIONS of 2018

TIME

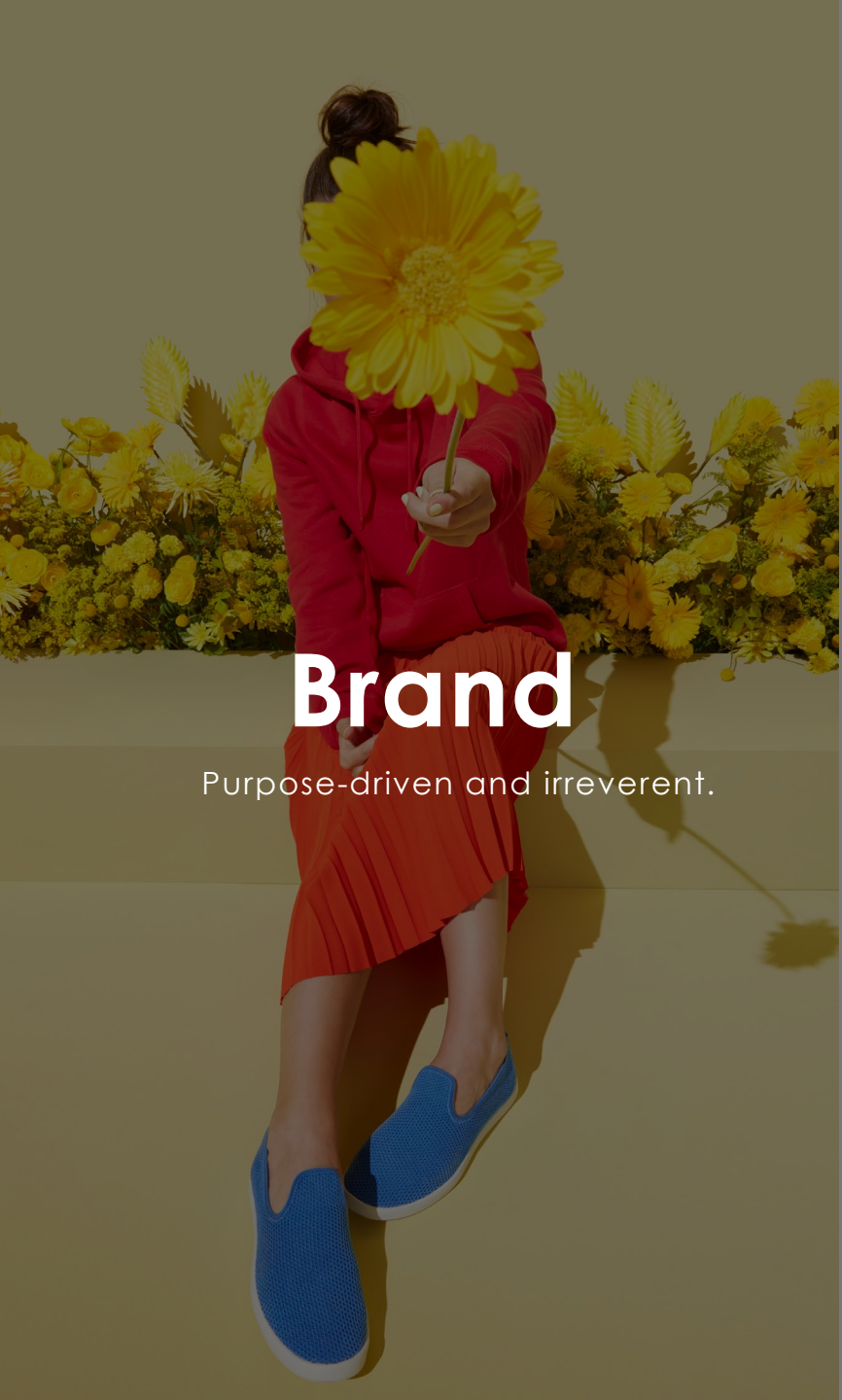
A VACUUM
THAT EMPTIES
ITSELFA GRAVITY-DEFYING
TOOLBOX50
AMAZING
INNOVATIONS
CHANGING
HOW WE
LIVEA SMARTER
BABY BOTTLEA LID FOR
ANY POTCLOTHES
FOR EVERY
BODYA LIFESAIVING
HELMETA REVOLUTIONARY
ROBOTIC ARMA SUPER-ACCESSIBLE
GAMING CONTROLLERBRACELETS THAT
KICK BAD HABITSA MORE FUN WAY
TO COMMUTE

Shoes That Could Help Save the World

Allbirds SweetFoam



The shoe industry has a big carbon footprint, thanks in part to the fact that many shoe parts—including plastic soles, logos and shoelace tips—are made from petroleum. Retail startup [Allbirds](#) is testing an eco-friendly alternative: SweetFoam, a new material made from parts of



Brand

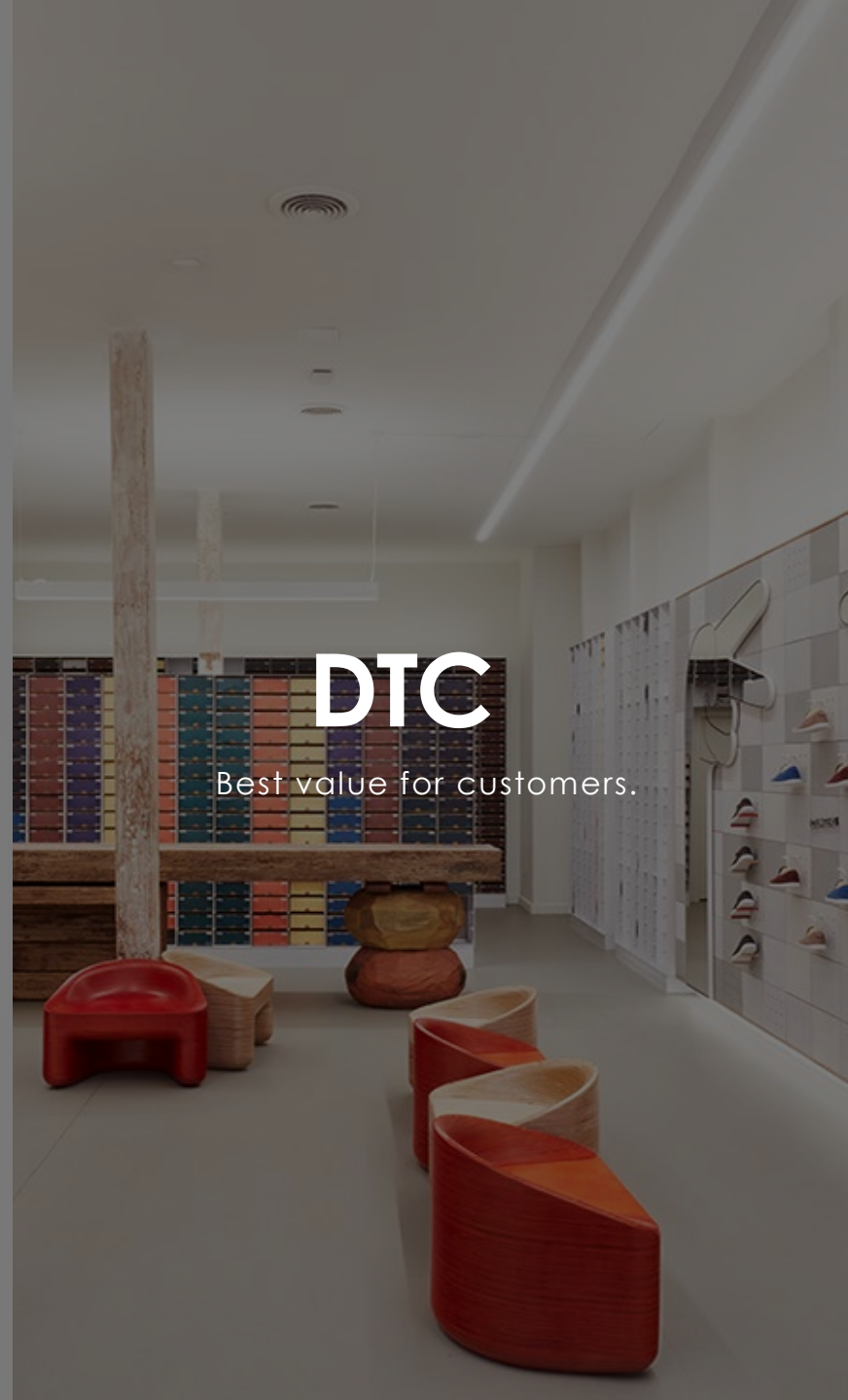
Purpose-driven and irreverent.

Our secret sauce.



Innovation

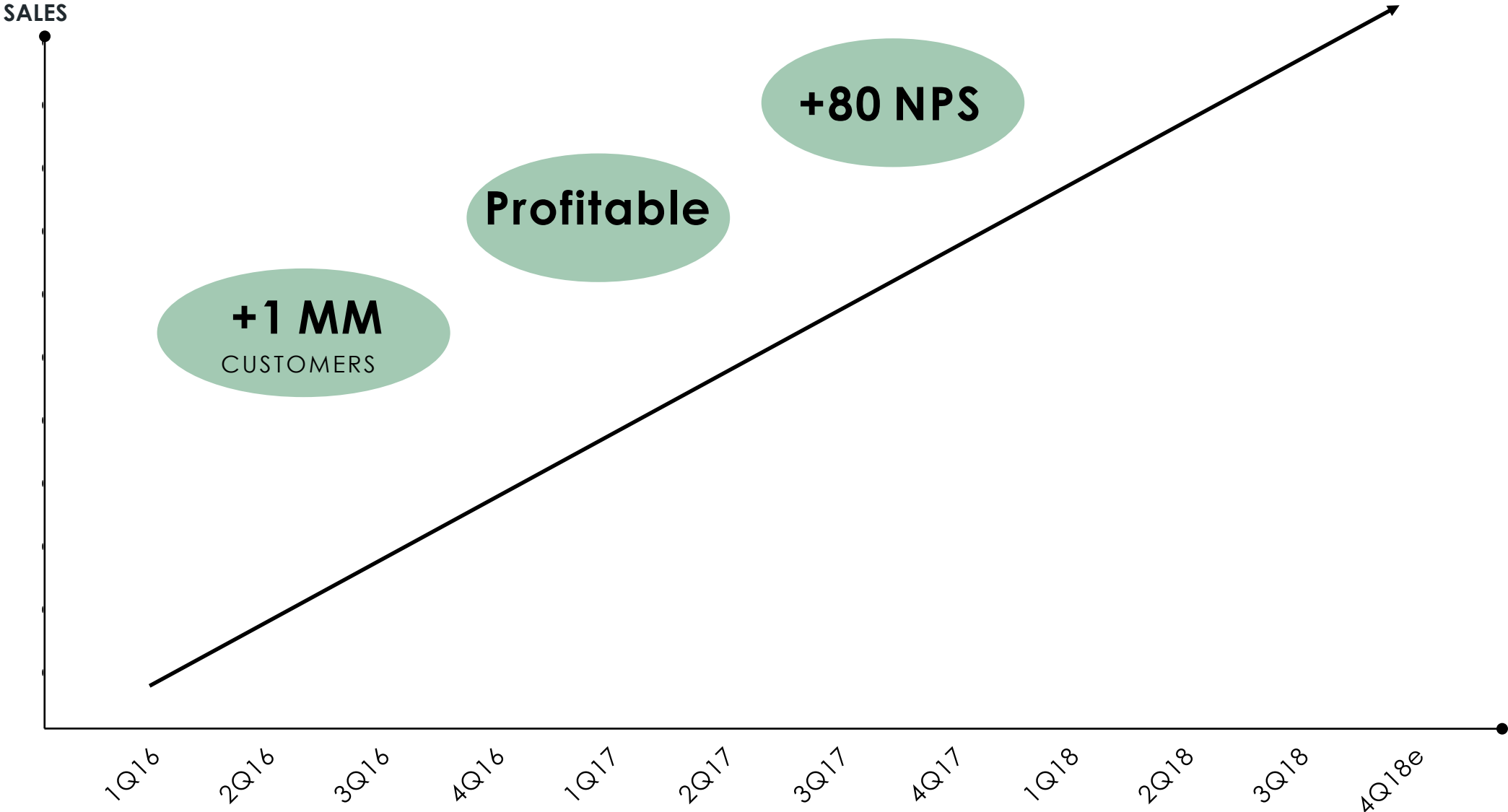
Superior comfort via material R&D.



DTC

Best value for customers.

Early results are promising



An aerial photograph of a large flock of sheep running across a green, grassy field. The sheep are clustered together in the center-left of the frame, moving towards the right. The field is dotted with small, brownish tufts of grass. The text 'THANK EWE' is overlaid in white, bold, sans-serif font at the top of the image.

THANK EWE

Jad Finck
VP Innovation & Sustainability
jad@allbirds.com

A collection of various LEGO parts including a blue gear, a yellow 1x4 Technic brick with holes, a red square, a blue circle, and a yellow circle.

Engagement and Partnering from a LEGO perspective

A collection of various LEGO parts including a blue Technic axle with pins, a yellow circle, a red square, a yellow 1x4 Technic brick with holes, a blue circle, a red circle, and a blue triangle.

Søren Kristiansen



Engagement is Key



The LEGO Group “2030 Materials Ambition”

Suppliers and
supply chain
parties

Universities &
technology
institutes

NGO's and
3rd party
organisations

LEGO Employees

Consumers,
children and the
general public

Substitution of resins

Different challenges requires different engagements

Current LEGO products



1 to 1 substitution polymer
(same chemical composition)

1 to 1 substitution polymer
(same physical properties)

Other substitution polymer
(new physical properties)

Future LEGO products





Feedstock

Farming

Chemical
industry

Design

Manufacturing

Distribution

Universities
Tech centers





Collaboration with Suppliers

- Building supplier relations through openness and trust.
- High focus on CSR.
- Build capabilities at suppliers to speed up development.
- Risk and cost sharing is decided from case to case.
- Joint Development Agreements.

Partnerships & Memberships



BUILDING NEW MARKETS

JASON CLARK

Braskem 



I'm
green



41 INDUSTRIAL UNITS:

29 in Brazil, 6 in USA, 4 in Mexico, 2 in Germany



MORE THAN

7.7k

Team Members around the world



PRODUCTION OF OVER

20 MILLION TONS/YEAR

of thermoplastic resins and other chemical products



100 COUNTRIES

Exports to clients in some 100 countries



EBITDA OF \$

3.84 BILLION

in 2017



NET REVENUE OF \$

15.4 BILLION

in investments in 2017



\$

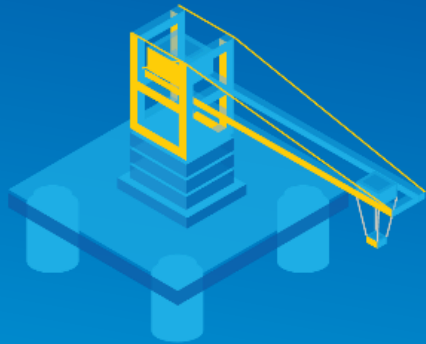
52.4 MILLION

in innovation investments in 2017

EXTRACTION

FEEDSTOCKS

NAPHTHA / GAS / ETHANOL / SALT



1st GENERATION

BASIC PETROCHEMICALS

ETHYLENE / PROPYLENE / CHLORINE / CAUSTIC SODA



2nd GENERATION

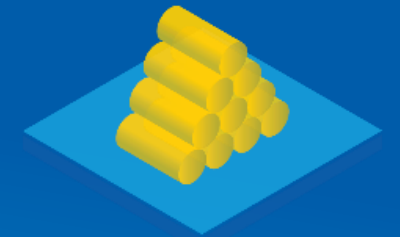
THERMOPLASTIC RESINS

PE / PP / PVC



3rd GENERATION

PLASTIC CONVERTERS

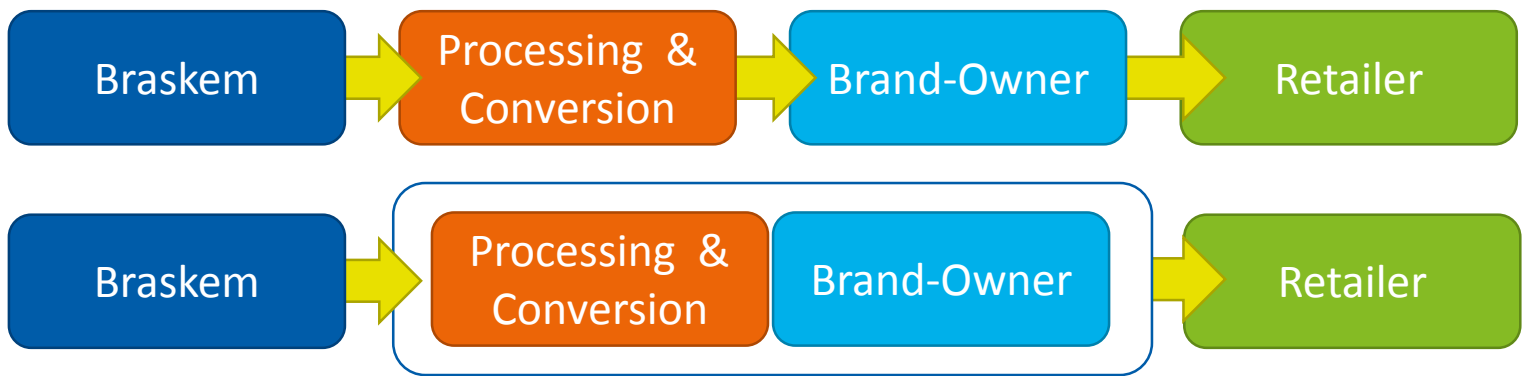


OPERATING FOOTPRINT

Braskem 

KNOWING THE VALUE PROPOSITION

Engage the market with a flexible business model to find the best match



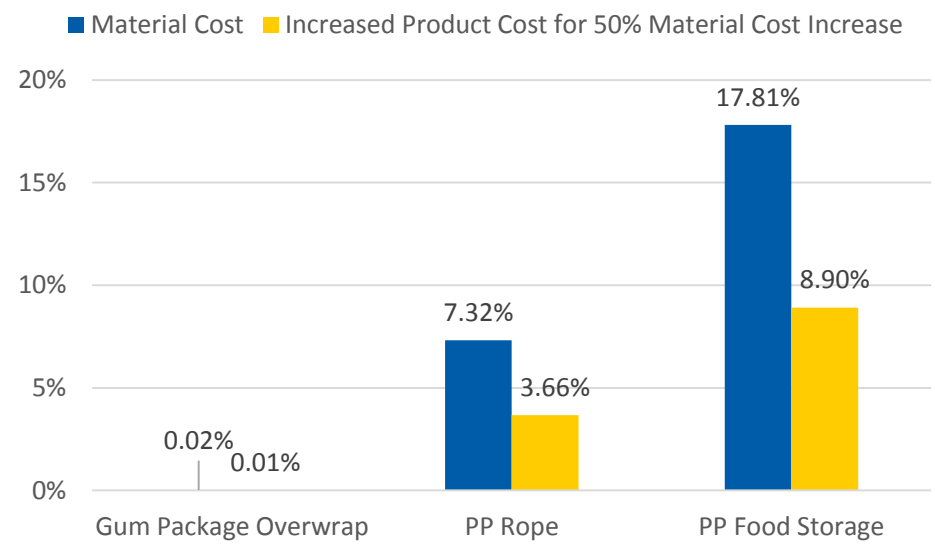
Where to enter?

Different product value-chains likely have different entry points for a chemical or polymer producer. Flexibility during engagement will help to find the best match.

Automotive vs Retail Packaging Integrated vs Non-integrated

How is Value Realized?

The impact of material choice on the end-application varies heavily on position in the value-chain and the application itself. Understanding how this evolves through the value-chain helps facilitate adoption.

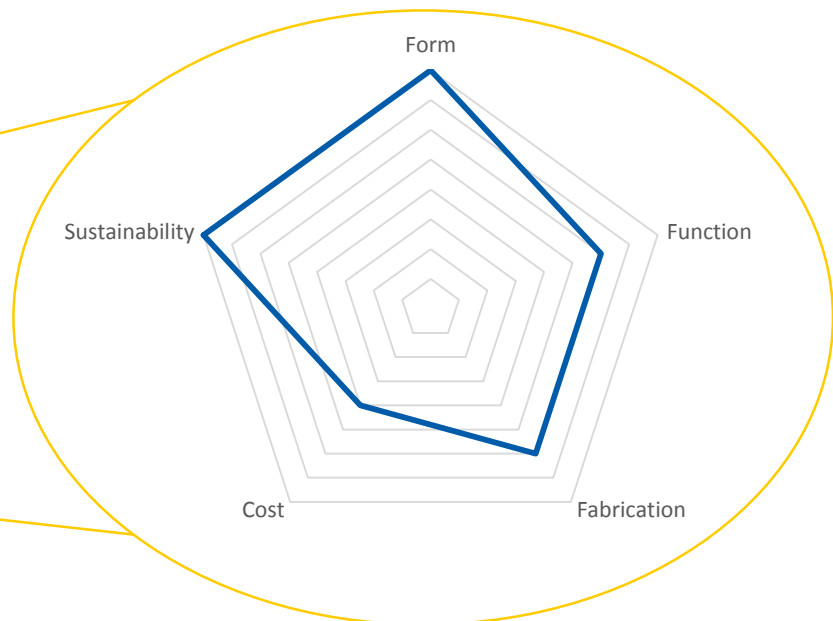


DISCOVERING THE VALUE PROPOSITION

New chemicals and materials are enablers in the design of product solutions

Technical & Economic boundaries are influence by materials

Product design is an expression of a balance in priorities

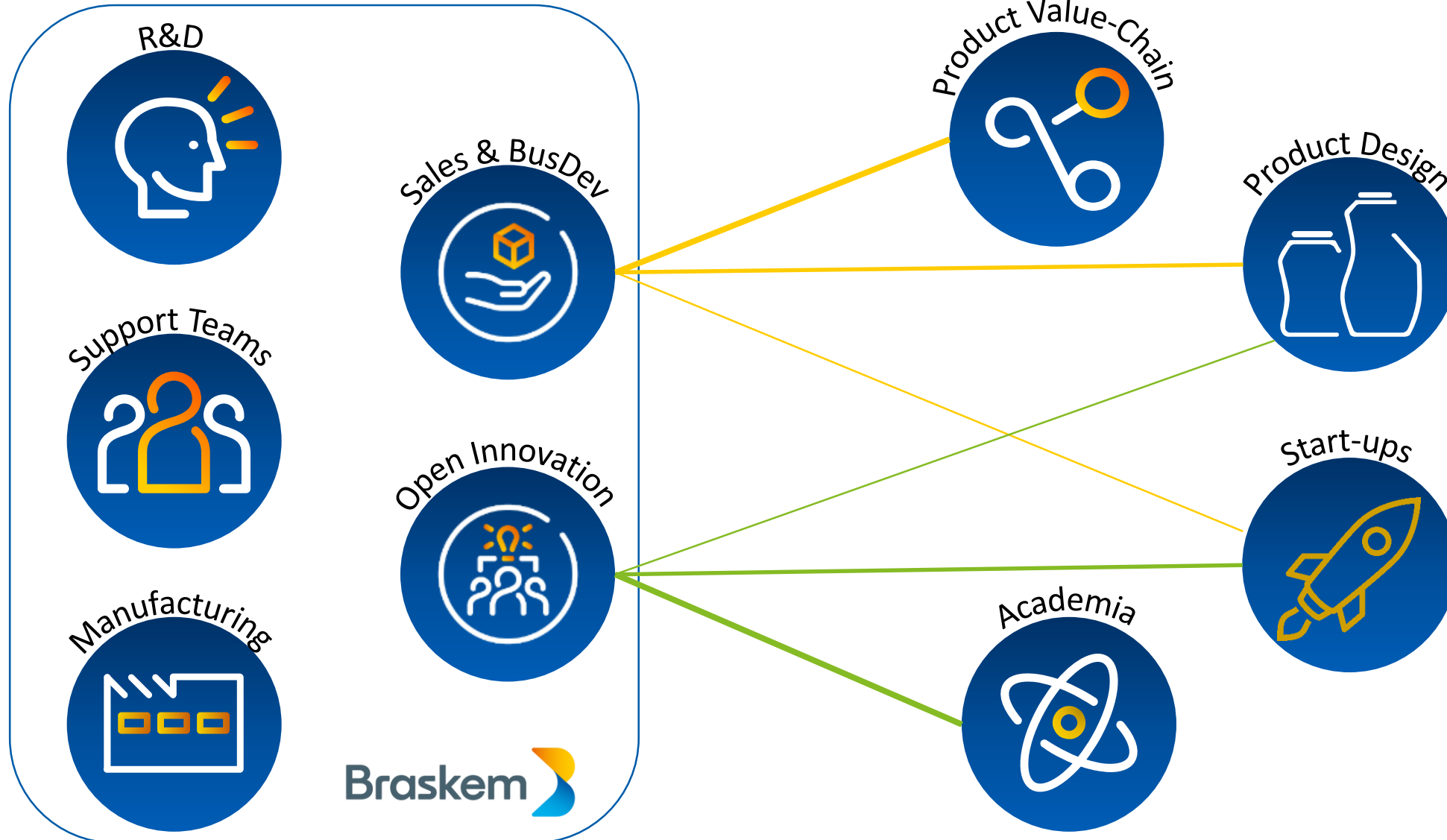


Finding this balance can be a collaborative process that helps to reveal the value proposition of a new chemical or material



ORGANIZING FOR EFFECTIVENESS

Successful collaboration is facilitated through organizational structure



THANK YOU

