



*New raw materials, new uses, new processes:*  
***Innovation at the heart  
of the bioeconomy***

Daphna Nissenbaum, CEO and Co-founder



# The Flexible Plastic Packaging Waste Challenge






Flexible packaging market size:

**\$91Bn\***  
industry

Source: Smithers Pira





Plastic cereal box liner = ~ 500 years

Plastic fresh produce package = ~ 500 years

Plastic  
apparel  
package  
=  
~ 500 years

Plastic snack  
bar package  
=  
~ 500 years

The Flexible Packaging Industry has

# Zero

Ecological Waste Management Alternatives

Landfills and incineration  
are considered the two worst environmental options

Plastic pasta  
package  
=  
~ 500 years

Plastic frozen  
food package  
=  
~ 500 years

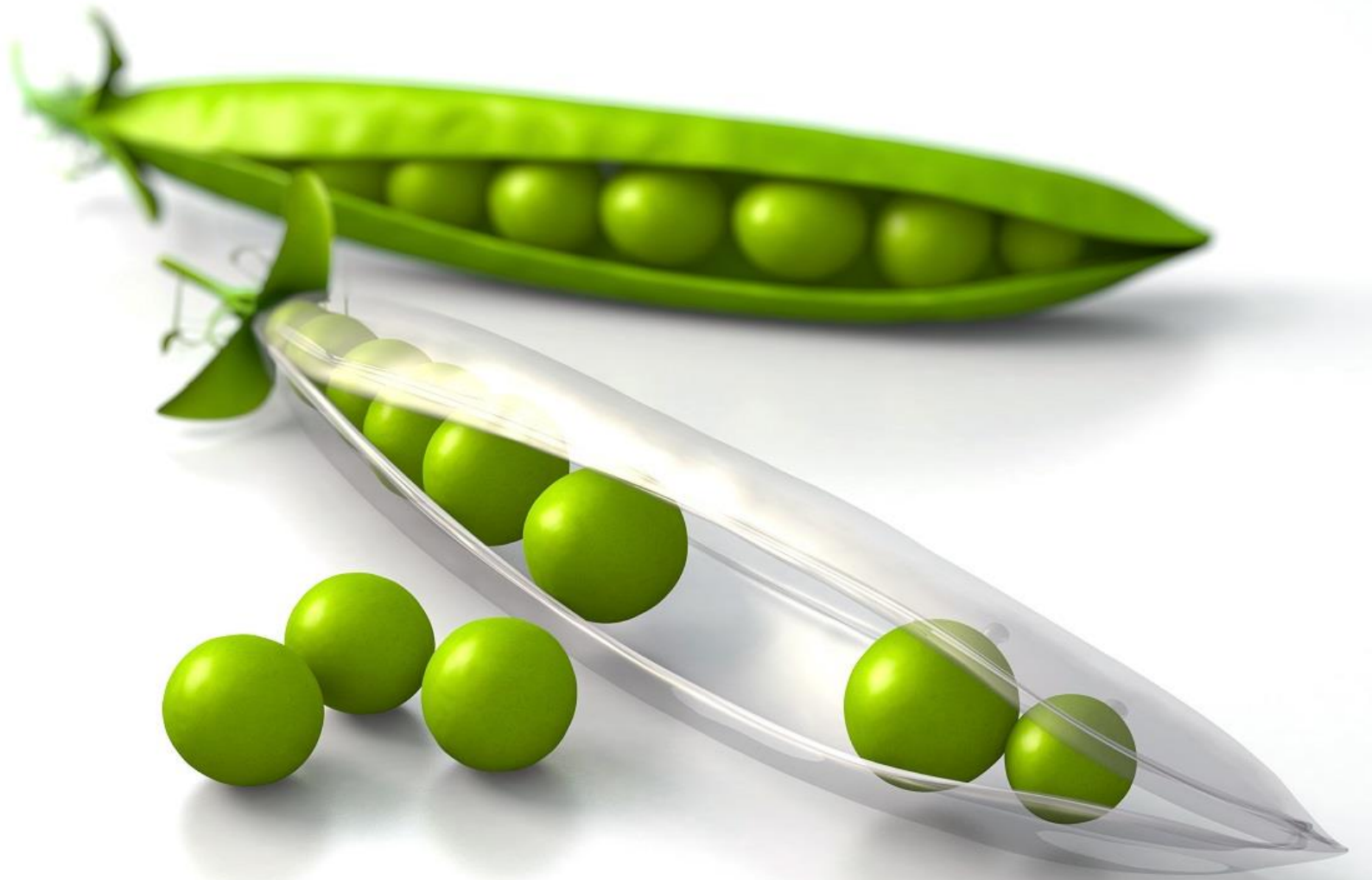
Plastic muesli package = ~ 500 years

Plastic potato chip bag = ~ 500 years





*What if ...  
Plastic packaging  
could behave just like  
an organic material?*



*Inspired by nature's packages*



Flexible packaging should be part of our organic waste





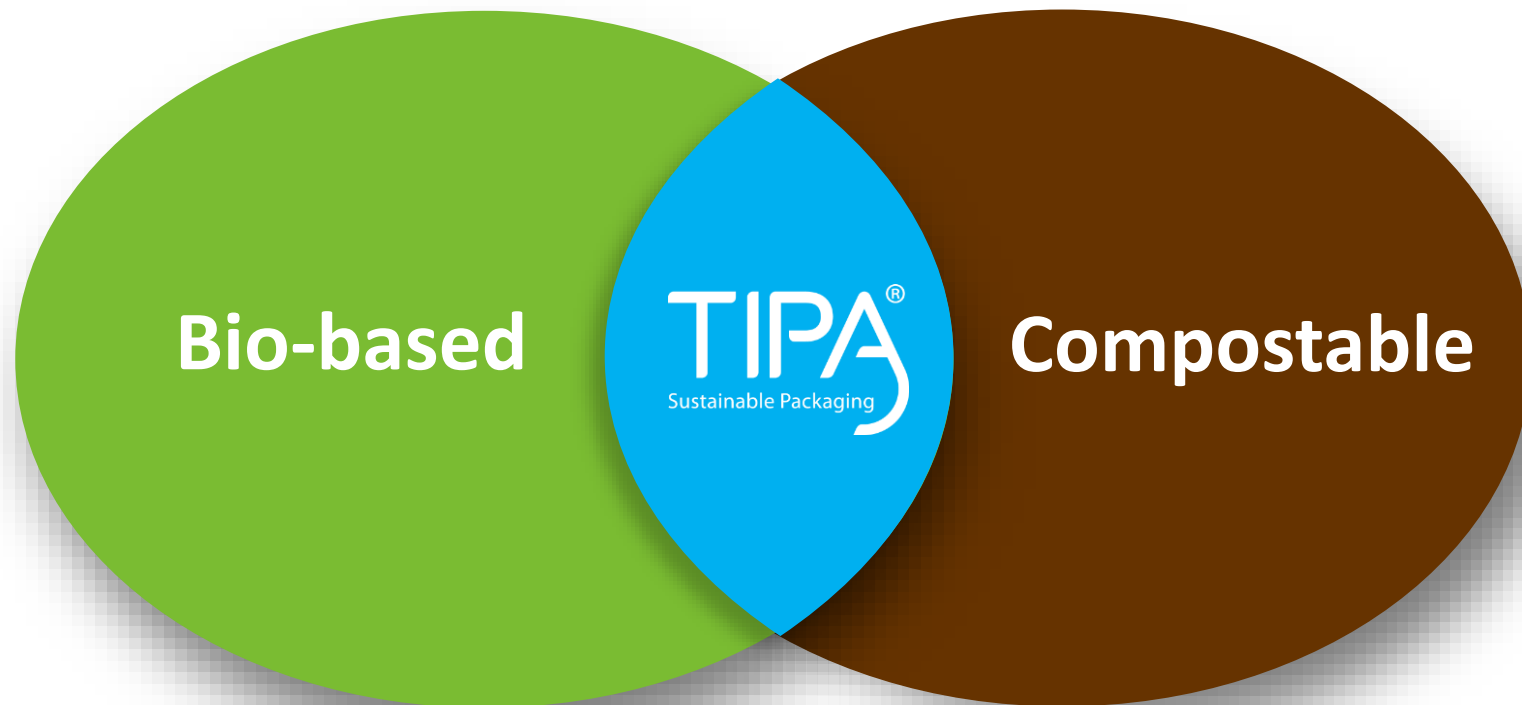
# TIPA's breakthrough packages decompose in less than 6 months!



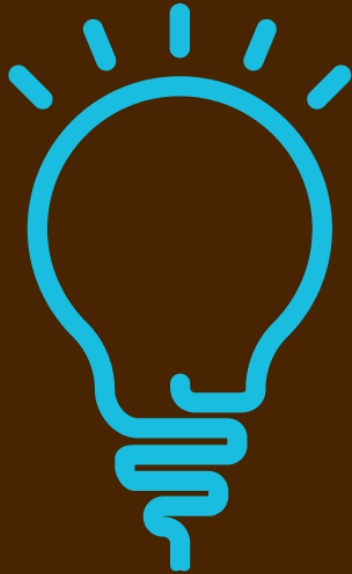


# Circular Economy Approach

*TIPA - Compostable solution  
with increasing amounts of bio-based ingredients*







## *TIPA's Technology*



# The Technology

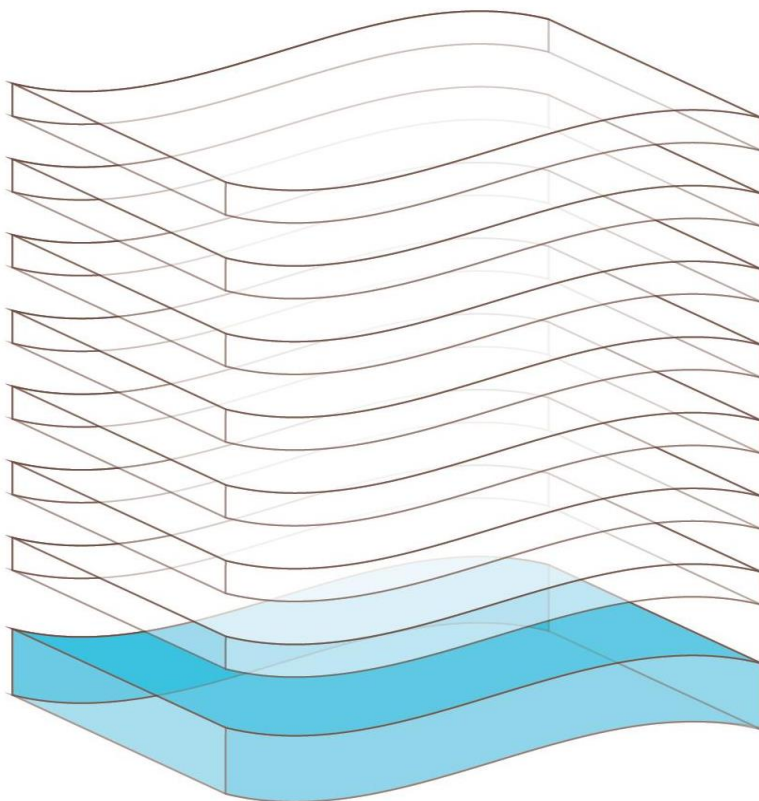
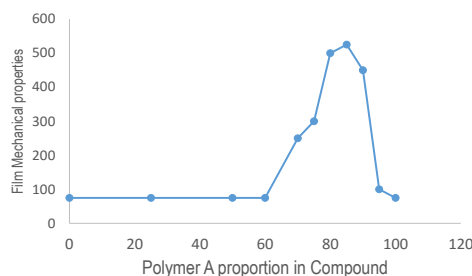
TIPA's intellectual property (IP) and know-how follows a multi-tiered approach to fully capture every aspect of the company's technological developments and is at the core of TIPA's activities

## Patent Applications

Coated  
films/laminates

Novel film and  
laminate  
structures

Novel compounds  
with unique  
features



## Know-how

Large-scale IPC's  
and release criteria

Large-scale process

Large-scale  
formulation

Raw material  
selection



# TIPA's Patent Status

No.	Patent/Application	Status
1	US D657,692 S	Granted
2	WO 2011/158240	Granted in US and Europe; divisional applications pending in Europe and Hong Kong
3	WO 2013/088443	Granted in Australia, New Zealand, Singapore. Pending: BR, CA, CN, EP, HK, IL, IN, JP, KR, RU, US
4	WO 2013/186778	Granted in Australia; allowed in New Zealand Pending: BR, CN, EP, HK, IL, JP, KR, US
5	WO 2015/059709A1	Pending: AU, BR, CA, CN, EP, IL, IN, JP, KR, NZ, SG, US
6	WO 20160/67285	Due to enter national phase 27 April 2017
7	WO 2016/174665	Due to enter national phase 29 October 2017
8	23.6.2015 PCT/IL2016/050663	

*TIPA in the Market*





# TIPA's Products



- Fresh Produce
- Fresh Bakery
- Zipper Bags

# TIPA's Products



- Grains
- Fresh Nuts & Seeds
- Pasta
- Snack Bars



# TIPA's Products



- **Snack Food**
- **Confectionary**
- **Coffee Grains**
- **Snack Bars**
- **Cakes, Cookies**
- **Roasted Nuts & Seeds**
- **Frozen Food**

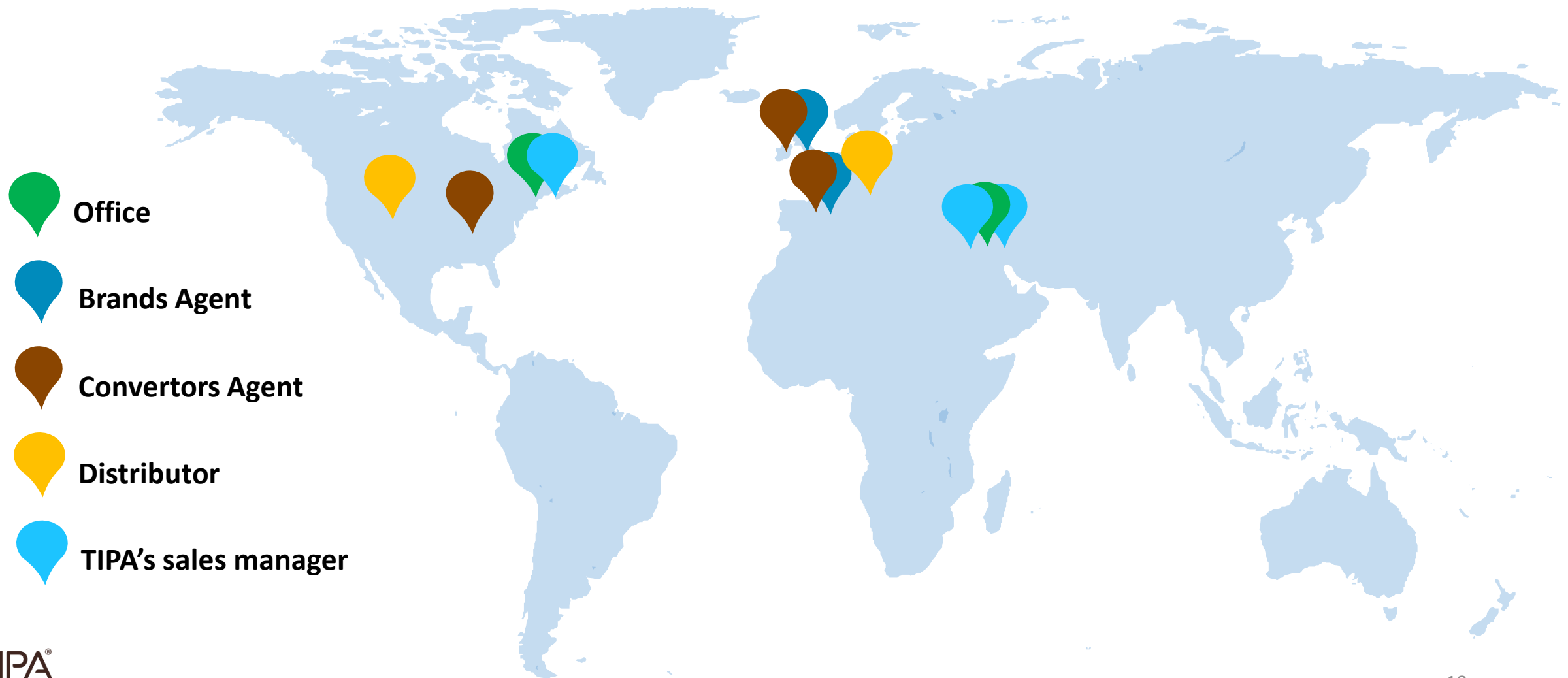
# TIPA's Products



- Supplement
- Magazines
- Apparel



# Territories



# Market Potential

## Flexible Packaging\*

**\$114B**

By 2020

CAGR 2015- 20:

**4.4%**

\* Source: Smithers Pira

## Compostable Packaging\*\*

**\$3.4B**

By 2020

CAGR 2015-20:

**10.8%**

\*\* Source: Markets and Markets





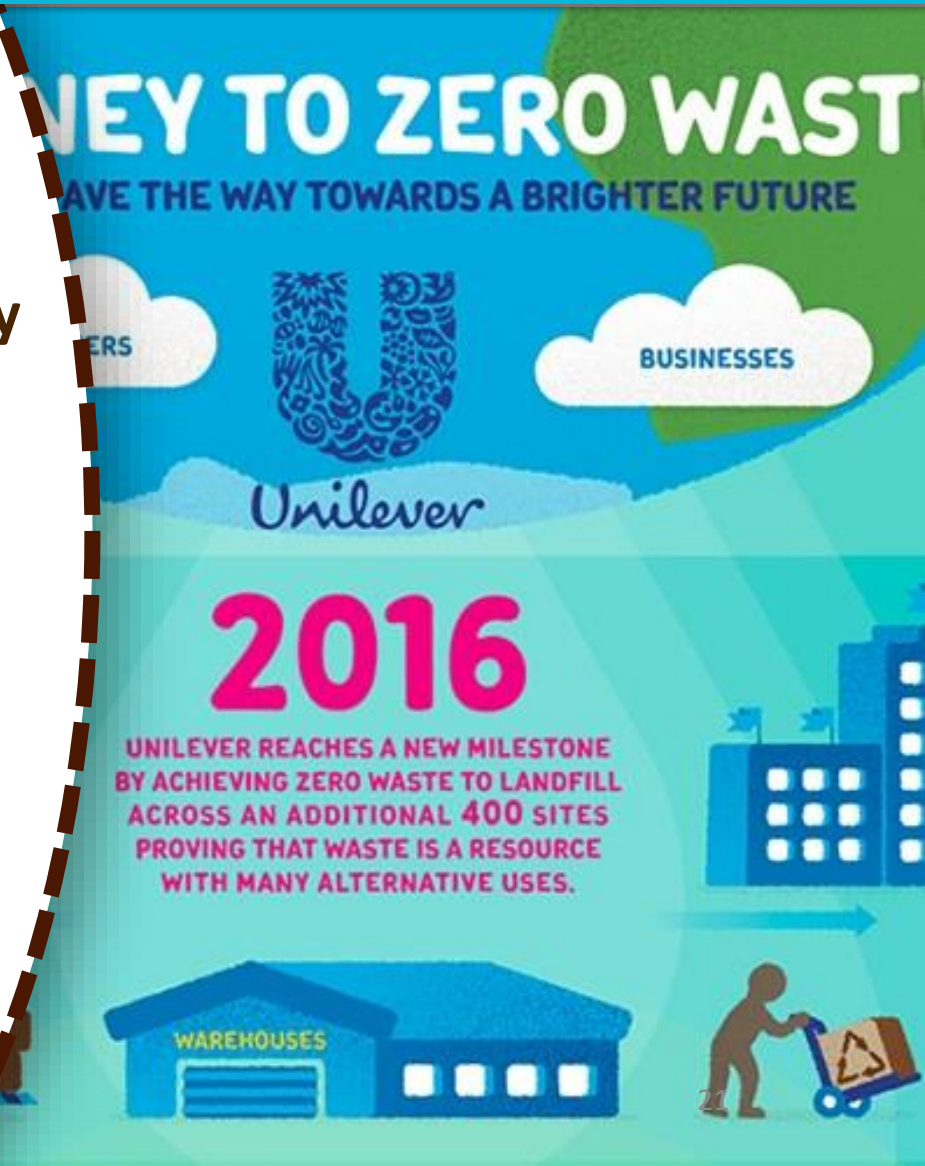
# The Power of End Consumers

- **2.5B** global consumers  
desire responsible consumption
- **75%** of millennials worldwide  
declare they will pay a premium  
for sustainable products
- **68%** of females in the US  
consider themselves “Green Moms”

# The Power of Brand Owners



- Increasing sustainability awareness
- Innovation leaders
- Regulatory restrictions
- Negative campaigns
- CSR goals





# The Power of NGOs

Plastic Pollution Coalition:  
“Plastic poisons our food chain”

Zero Waste Europe:  
“Products should be durable, reusable, repairable, recyclable and toxic-free”

The Story of Stuff:  
“All packaging is just future garbage”

Ellen MacArthur Foundation:  
“30% (by weight) and 50% (by items) of plastic packaging needs fundamental redesign”

Break free from plastic:  
“Future free from plastic pollution”

# Regulation Follows Demand

## The Incentives:

Reduce Dependency  
on Fossil Fuels

Zero Waste

Reduce GHG Emissions

New Job Creation

### France

A complete ban on non-compostable shopping bags, fresh produce packages and mail wrappings

### Netherlands

96% packaging tax reduction for compostable packaging (EPR)

### Germany

Packaging tax reduction for bio-based packaging (EPR)

### India

Various state-wide bans on non-compostable packaging

### EU

Further regulatory support for bioplastics is expected in Europe as part of its zero-waste goal

### ASIA

Both China and India are expected to place stricter regulation on plastic while promoting bio-plastic packaging

# Extensive Coverage of TIPA





# Background

- HQ – based in Israel
- Sales Office- based in USA

## Main Shareholders:



# Thank You

