



**Game-changing  
technology, finally  
within reach.**



[www.acepackaging.be](http://www.acepackaging.be)



# Index



**03** 1. Meet Benny


---

**26** 5. CEPI certified  
and beyond

---

**06** 2. Why Benny?

---



**29** 6. Sustainability  
to the max

---

**08** 3. Innovation  
ad infinitum

---

**34** 7. Benny is your  
ace in the hole

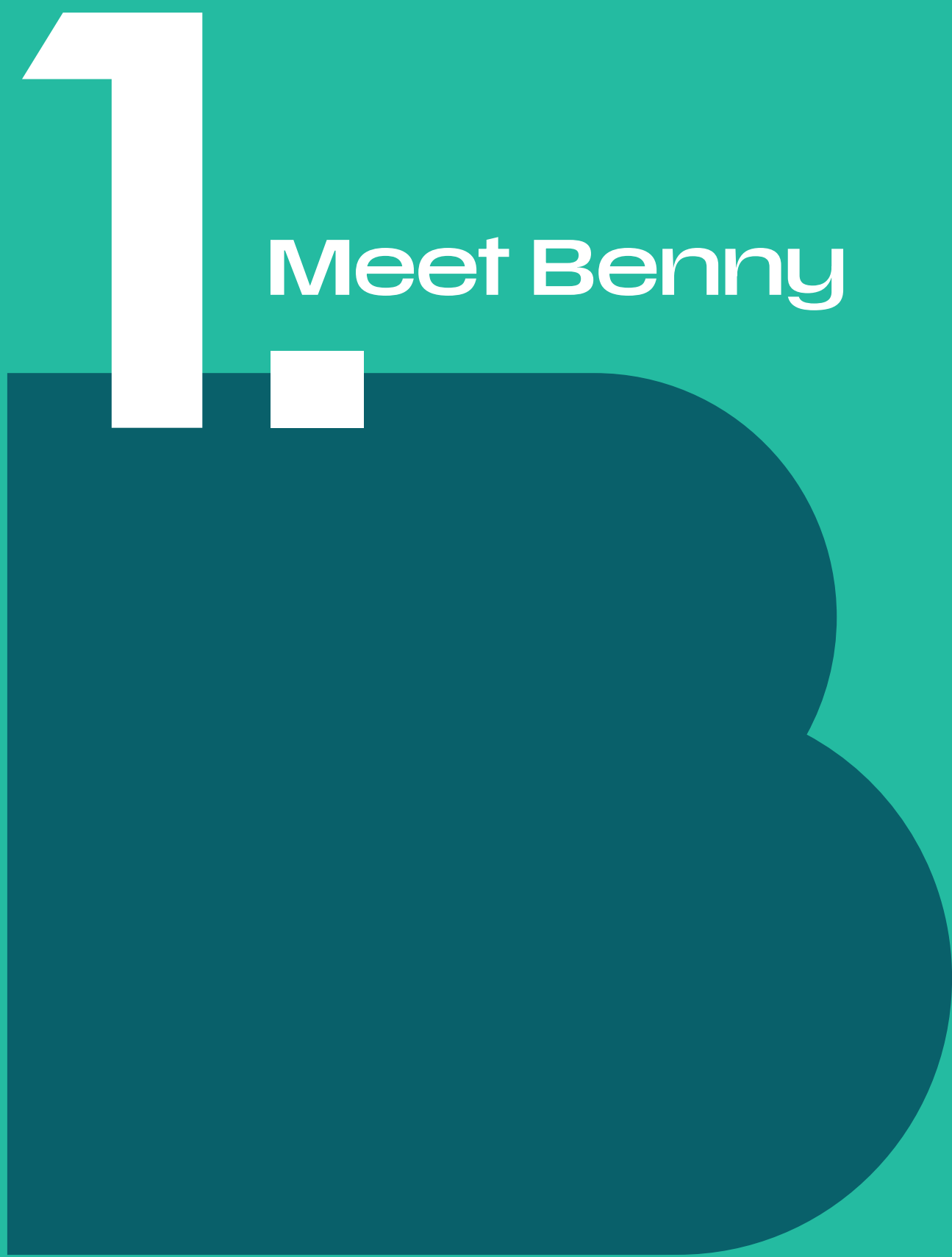
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**16** 4. Your key  
to unlimited  
design possibilities

---

**36** 8. About ACE

---



Meet Benny





# Meet **BENNY**

Benny is a revolutionary piece of technology,  
ready to be the **pioneering machinery**  
powering the fast-approaching **recycling shift**  
within the **single-use packaging industry**.





1. Meet Benny

## 4 unique technologies

Unparalleled in quality, efficiency, and adherence to EU-guidelines, Benny is the culmination of 4 unique technologies:

**1** 90% transparency  
**nADA**

A (RI)EVOLUTION OF THE PAPER BAG

**2** Increased shelf life  
**COMPY® +**

05

**3** Fat barrier function  
**rAFA**

**4** Wet-strength  
paper

Be prepared for the  
start of the new era  
of paper packaging  
production.

Game-changing technology, finally within reach.





2



Why  
Benny?





# Why Benny?

## Innovation ad infinitum

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- › Power up your products
- › Starkraft x ACE Packaging

## Unlimited design possibilities

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## CEPI certified and beyond

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## Sustainability to the max

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- › Future-proof
- › Cost-effective





Innovation  
ad infinitum







# Innovation ad infinitum



Innovation is the  
only path forward.

- Dr. Ir. Jef Van Dun, Materials Scientist



## Power up your products

Benny grants you four advantages  
to optimize your paper packaging  
products:



Transparency



Increased  
shelf life



Fat barrier  
function



Wet-strength  
paper



# 90% transparency

**nADA**  
A (R)EVOLUTION OF THE PAPER BAG  
BY **BENNY**

## 90% transparency

Benny has the capacity to make the transparent window as big or small as the client wants. Additionally, it adds the option to print across transparent parts, unlocking a whole new world when it comes to different designs and branding.

## Less is more

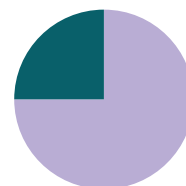
Our paper bags are constantly becoming stronger, thinner and more sustainable. Currently, the maximum transparency stands at a staggering 90%, **surpassing today's Crystal Windows**.

- › Recyclable
- › Lower energy consumption in production process than Crystal:

1,25 kWh per

**1000** breadbags

- › 25% lower carbon footprint than products made with petroleum based wax coating
- › Vegetal coatings: natural wax
- › Reduced use of inks
- › Starch-based glues



# Increased shelf life

COMPY +  
BY BENNY

3. Innovation and infintum



## Increased shelf life

One of the options you get with Benny is the **increased shelf life**, which is made possible by Benny's ability to apply coating exactly where you want it at the exact level that is needed. This precision is the key to perfecting the performance of your food packaging.

- › Preservation of quality and freshness
- › Reduction in food waste
- › Enhanced operational efficiency
- › Consumer trust and brand loyalty

Game-changing technology, finally within reach.

# Fat barrier function

**rAFA**  
BY **BENNY**

## Fat barrier function

In the diverse world of packaging materials, paper with a fat barrier function stands out for its exceptional ability to resist the penetration of oils and fats. Paper with a fat barrier function is not just a choice — it's a strategic solution for anyone in the food industry looking to enhance product quality, operational efficiency, and environmental sustainability.

Moreover, the fat barrier is completely **fluorine-free**, aligning with the highest standards of environmental sustainability.

Aside from being sustainable, Benny maximizes your production efficiency by letting you control two core properties of the fat barrier on your paper:

- › Position
- › Amount

This way, you will always use **the exact amount** of coating needed.





# Wet-strength paper

Wet-  
Strength  
BY BENNY

3. Innovation and Infinitum



## Wet-strength paper

In the world of paper products, not all types are created equal. Among the most robust and versatile is wet-strength paper, a material designed to withstand exposure to water and moisture without compromising its integrity. This exceptional feature makes wet-strength paper an indispensable asset in numerous applications, from packaging to labeling, and even in everyday items like napkins and paper towels.

- › Enhanced durability and longevity
- › Cost-effectiveness and efficiency
- › Versatility and utility
- › Eco-friendly options
- › Safety and hygiene

In conclusion, wet-strength paper is not just a paper choice — it's a smart, strategic decision for anyone seeking durability, efficiency, versatility, and environmental responsibility. Embracing wet-strength paper means embracing a solution that stands strong, even when wet.

13

Game-changing technology, finally within reach.

# One machine, four technologies

## nADA

A (R)EVOLUTION OF THE PAPER BAG

## COMPY +

Each unique in its properties,  
while fully compatible with  
one another.

Pick one or two,  
or combine them all  
in one product.

**It's your call.**

## What's next?

Integrating Benny's technologies in your manufacturing process guarantees exclusive access to the innovation of the upcoming 20 years, which amounts to having a limitless pool of untapped potential at your fingertips.

Meanwhile, the applications of Benny materials are getting traction in different industries. For example, Benny has the potential to make a difference in the world of eCommerce: think of new branding and environmental possibilities for packaging clothing.

When it comes to industrial  
innovation, *the sky really is  
the limit* for ACE Packaging.



# BENNY

## *rAFA*

## Wet- Strength



**starkraft**  **x**  **ace**  
packaging  
& technics

We are proud to say that Starkraft has been a believer from the very beginning.

Putting their trust into our ambitions, they decided to combine their vast knowledge of paper materials with our decades of expertise and engineering minds to create the paper bag of the future: nADA.

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**Starkraft** has been an acclaimed packaging industry heavyweight for the past decade, being the key manufacturer of paper materials around the world.





Your key to  
unlimited design  
possibilities







# Your key to unlimited design possibilities



## A new approach to packaging design

The appearance of transparency components is now **entirely up to you.**

This **versatility in design** will open up unprecedented **branding possibilities** and will make your product stand out from the crowd.





4. Your key to unlimited design possibilities

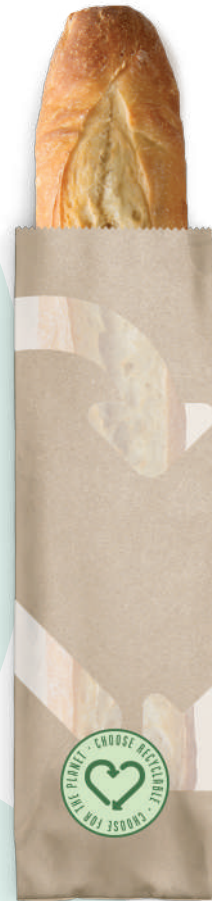
18

Game-changing technology, finally within reach.

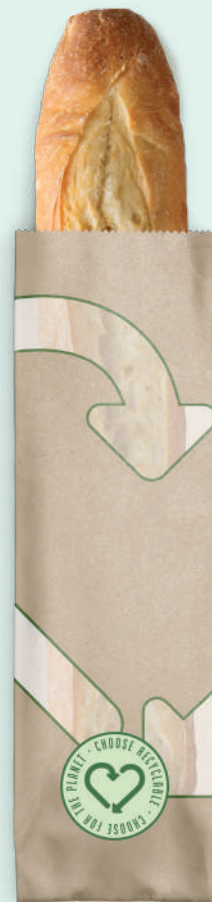




4. Your key to unlimited design possibilities



19



Game-changing technology, finally within reach.







4. Your key to unlimited design possibilities



Game-changing technology, finally within reach.





4. Your key to unlimited design possibilities

21

Game-changing technology, finally within reach.







4. Your key to unlimited design possibilities

22

Game-changing technology, finally within reach.



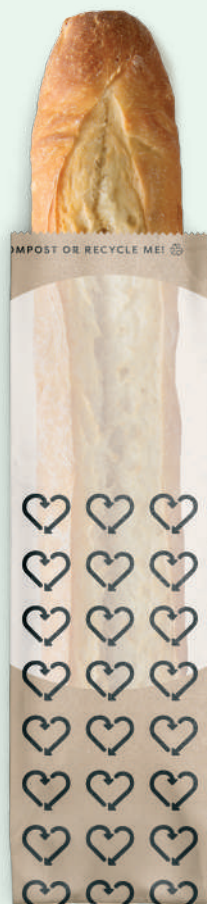




4. Your key to unlimited design possibilities



24



Game-changing technology, finally within reach.







4. Your key to unlimited design possibilities

25

Game-changing technology, finally within reach.



CHOOSE RECYCLABLE  
CHOOSE FOR THE PLANET





CEPI certified  
and beyond





# CEPI certified and beyond

The **CEPI test** is an established norm within the industry. The testing process is specifically developed for determining whether a type of material is eligible for the recycling process. The test entails emulating the recycling process by pulping the paper before filtering and measuring the non-paper particles such as coatings and glue.

## Never-seen-before results

Something unexpected happened during the CEPI testing process for all Benny-products ...

Instead of leaving behind residual particles, **our vegetal coating dissolved altogether!**

This remarkable disappearing act was an unforeseen test result, baffling scientists and rendering us extremely hopeful for the future of sustainable packaging.



This has never happened before. I think we made an unseen discovery by creating Benny.

- Dr. Ir. Jef Van Dun, Materials Scientist



Suffice it to say, nADA will be more than welcome at paper recycling mills.





Sustainability  
to the max



# Sustainability to the max

Benny combines the best of both worlds: sustainable AND cost-effective manufacturing is no longer unattainable.

## Benny is future-proof

Leaving plastic behind forever, your packaging will be the apex of sustainability.

This is your opportunity to wield **pioneering technology** and make a tremendous impact on the planet **without any sacrifices**.

### European PPWR policy

The new **European PPWR-policies for sustainable product packaging** states that the consumer separating paper and plastic packaging materials at home should be verifiable by 2027. If not, new policies banning or heavily taxing plastic will be put into place, which might be a very plausible outcome.

By preemptively adhering to (near) future EU laws, you will stay ahead of your competitors and increase your market share significantly.

#### Did you know

Benny's paper packaging is not only in line with near future EU-directives, you will also be living up to the standards of 2040 since nADA consists of up to 98% paper.

### Eco awards

Henry van de Velde Awards



GREENER PACKAGING AWARD

Milieuambassadeur 2017



Vlaams netwerk van ondernemingen



## Ecodesign determines future environmental laws & policies

The direction of European standards is founded on ecodesign, which makes it a fundamental concept for packaging manufacturers across the globe.

### Definition: Ecodesign

*“The integration of environmental aspects into the product development process, by balancing ecological and economic requirements”*

### Benny is a prime example of ecodesign

- › Position and quantity of barrier or window is adjustable
- › Very thin paper
- › Natural glue
- › Recyclable


### Benny-technology as an investment is

- › Smart
- › Low-risk

Not only will Benny prevent unnecessary costs in the future, but you will also be saving costs during the years leading up to the shift in policies because of the effective use of production materials.

### Benny is a legally protected investment

The nADA-bags are a renowned product, protected by a cluster of 9 patents. This complex patent-structure ensures that this technology remains exclusive to investors and allows us to keep innovating for the upcoming decades.

 **We are ready for a global implementation.**







6. Sustainability to the max

31





## Benny is cost-effective

Implementing Benny is cost-effective due to its ability to maximize production efficiency, reducing overall operational costs. Additionally, incorporating this method in your manufacturing process leads to lower environmental taxes both now and in the future, enhancing our financial sustainability.

### Case: Supermarket & taxes

# COMPY +

## Benny will initiate the extinction of the new plastic bread bag.

Aside from adding a high-quality product to your arsenal, Benny will make sure that you also save a substantial sum in environmental taxes. For example, a big supermarket chain in Belgium still uses bread bags with PE coating. After a thorough analysis of environmental taxes, stubbornly holding on to the same methods seems to come with an outrageous cost.

The numbers tell you exactly what you need to know:

### Taxes on PE coated bags

€ 1.306.900

### Taxes on Compy+

€ 129.760

### Net difference of:

# € 1.177.140!







### Case: nADA bags vs Crystal window bags

**nADA**  
A (R)EVOLUTION OF THE PAPER BAG

Benny-materials are faster to make and lower in production cost than today's paper bags with crystal window, which is why Benny saves you time and money.

#### Production efficiency

	<b>nADA</b> <small>A (R)EVOLUTION OF THE PAPER BAG</small>	<b>Crystal</b>
Machine output	1.5	1
Reelchanging	1 x	4 x
Glue		
Glue base	Starch based	Petrol based
Underwinder foil		1 x
Paperwidth	- 2 cm	
Paper min	30 gsm	35 gsm
Waist	1%	3%

**Making a window bag at the same price of a regular bag.**





Benny is  
your ace  
in the hole



# Benny is your ace in the hole

**nADA** A (R)EVOLUTION OF THE PAPER BAG **COMPY** + **rAFA** **Wet-Strength**

## Sustainable monomaterial

recyclable and  
compostable

## CEPI certified

necessary credentials  
are in place

## Future-proof investment

adheres to current AND  
future EU directives  
are in place

## Cost-effective

save on taxes,  
production cost  
and material cost

## Flexible transparency

boundless design  
possibilities

## Heavily patented

gain advantage  
over your competitors

Join the next-generation paper packaging  
industry and lead the market of tomorrow.



# 8

About  
ACE







# About ACE

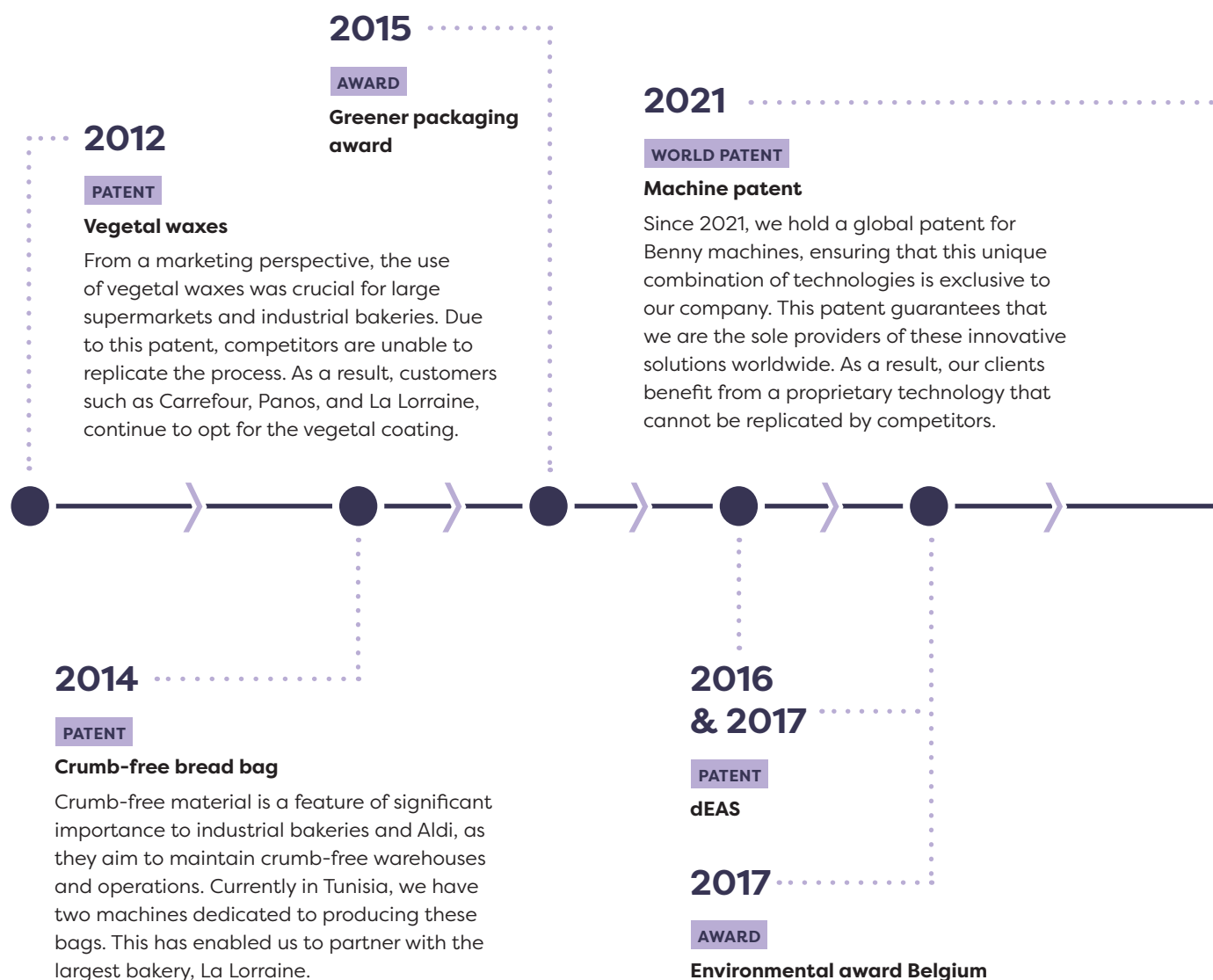
For decades, ACE Packaging has been a pioneer in the development of diverse packaging solutions for the food industry. Our extensive experience ensures high-quality, reliable packaging that meets the stringent standards of food safety and preservation. Committed to innovation, we continually explore and integrate cutting-edge technologies to enhance our product offerings. Our latest advancements focus on creating superior paper products that are both sustainable and efficient, aligning with our dedication to environmental responsibility.

Timeline >>>





# ACE Packaging and sustainable innovation throughout the years



**2024****WORLD PATENT****Patent for custom wax****Recycling & taxes**

Competitors have never been able to use vegetal wax due to our patent, and now they face an even larger issue. The petroleum-based coating they utilize is not recyclable, which is increasingly becoming a requirement from major customers. While the compost trend has faded, legislators are now imposing high taxes on non-recyclable materials. Therefore, our position in Belgium is becoming more advantageous as there is a growing mandate for recyclable packaging.

**Refining rAFA**

Currently, we are exploring with Benny how to penetrate the grease repellent market in the Netherlands, as the fluorine-free grease repellent paper over there is 50% more costly due to increasing bans on fluorine. For the Dutch market, which requires 6 million kg of greaseproof paper yearly, Benny offers a much more affordable solution and can produce 20% thinner paper. rAFA is the answer.

**Paper sheets and rolls**

As of May 2024, our production in Belgium will have two machines to house a Benny, specializing in the rolls and sheets market for unique products. These machines operate faster, wider, and can run twice as long before needing to stop. The sheet machine ensures that everything is precisely cut and measured, allowing us to automate our current production, reduce costs, and focus on specialization. We aim for a production that is almost exclusively unique.

**2022****WORLD PATENT****Paper with transparent zone****2027****nADA wins in 2027**

If by 2027 the paper bag with plastic window is either banned or heavily taxed, nADA has the potential to gain significant traction worldwide. nADA is more cost-effective, simpler to produce, thinner, and is more ecological. Moreover, nADA is only one of Benny's technology options.

**2023****AWARD****Henry Vandeveld design award****Future**

- > 20 fully automated machines at ACE Packaging in Diest (BE) by end of 2026
- > Exploring new markets, such as packaging for eCommerce
- > ...

# BENNY

## One machine, four technologies

**nADA**  
A (R)EVOLUTION OF THE PAPER BAG

COMPY® +

**rAFA**

**Wet-  
Strength**



**Sustainable monomaterial** recyclable and compostable



**CEPI certified** necessary credentials are in place



**Future-proof investment** adheres to  
current AND future EU directives are in place



**Cost-effective** save on taxes,  
production cost and material cost



**Flexible transparency** boundless design possibilities



**Heavily patented** gain advantage over your competitors