



Brewing for a Better Today and Tomorrow

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CIRCULAR INNOVATION
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Carlsberg Group 2016 overview



17%

Renewable energy

We use a mix of biomass, solar power and renewable energy certificates with guarantees of origin.



9%

Reduction in relative water consumption at our breweries since 2010

In 2016, our water efficiency improved to 3.2 hl/hl.



42.000

Number of employees

62,6

Net revenue DKKbn

8,2

Operating profit DKKbn

90

Jobs created by every 10 Carlsberg Group employees

20

Partnerships with external organisations to promote responsible drinking

These included Night Owls, a Scandinavian volunteer group.



Zero

Accidents at over 50% of Group production sites

In 2016, more than half of our sites had an accident-free year.

Our beers



Carlsberg



Tuborg



Grimbergen Kronenbourg
1664



Brooklyn



Jacobsen



Feldschlösschen

Birrificio Angelo Poretti



LE ORIGINALI



LE STAGIONALI



**LE ARMONIE
DI GUSTO**



**LE
OLT'RECONFINE**

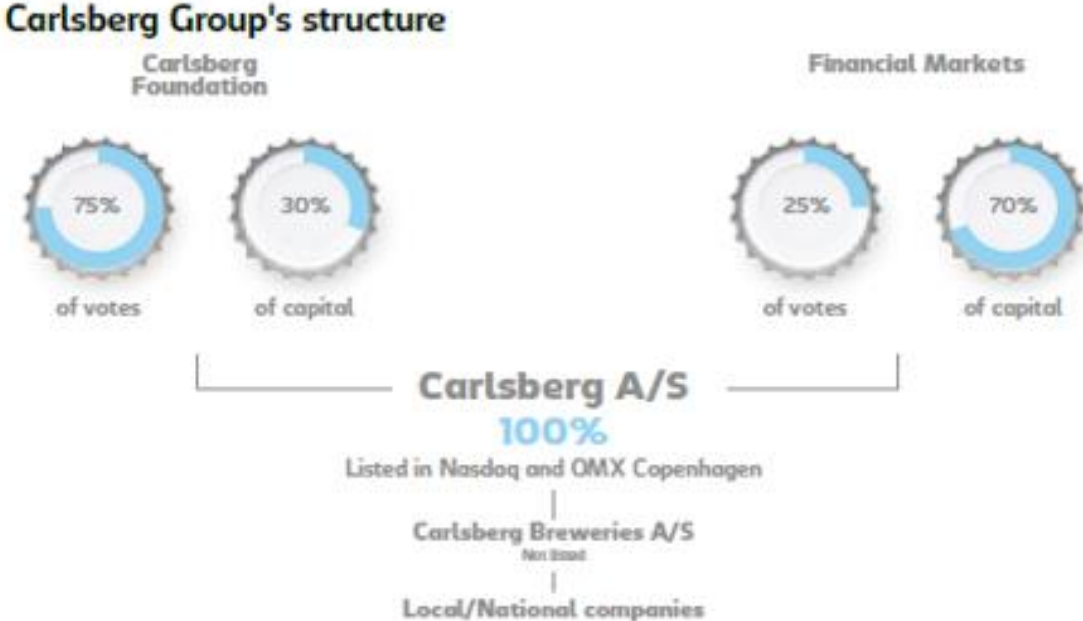


**LE
BOLLICINE**



**Angelo –
Le Riserve del Birrificio**

Corporate Governance: Carlsberg Foundation as a way of working on the Market and not only ...



The Golden Words

**In working the Carlsberg Breweries
it should be a constant purpose, regardless of
immediate profit, to develop the art of making beer
to the greatest possible degree of perfection
in order that these breweries as well as their products
may ever stand out as a model and so,
through their example, assist in keeping beer brewing
on a high and honourable level**

J.C. Jacobsen

How were these words made alive? Through the Carlsberg Research Laboratory

Focus on 4 main areas

RAW MATERIALS



YEAST AND FERMENTATION



INGREDIENTS



TECHNOLOGY



Sustainability must be part of the business





**WORLDS
FIRST BIO-
BASED
BEER
BOTTLE**

The 1st result of our Carlsberg Circular Community, presented @Davos - World Economic Forum: the Green Fiber Bottle



The Green Fiber Bottle Project Better World in the Making



KNOCK ON WOOD

A biobased bottle made from sustainably sourced wood-fiber.



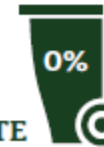
IN THE NAME OF BEER LOVE

Will contribute to spreading sustainable beer love everywhere in partnership with ecoXpac.



AS GOOD AS GREEN

Strong, durable material, 100% compliant with the strictest food and beverage regulations.

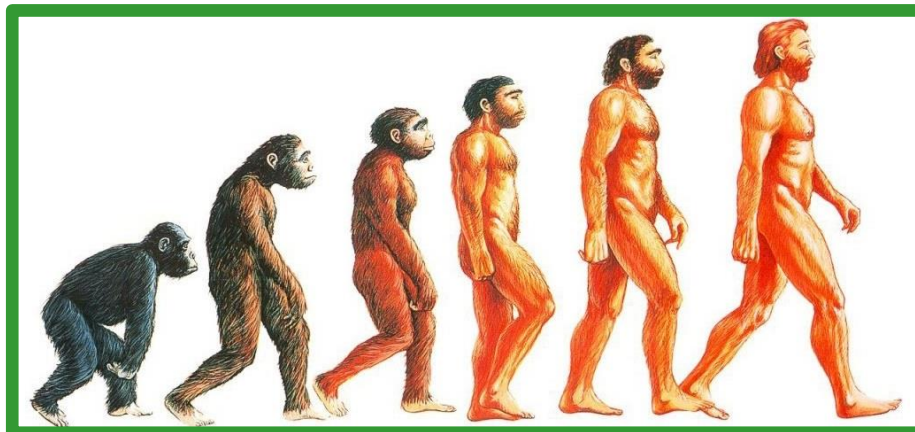


ZERO WASTE

Will be 100% biodegradable and generate 0% waste.

And we wanted to change the (beer) world: the DraughtMaster system

«Insanity is to keep doing the same thing while expecting a different result» A.Einstein



More quality & economic benefits



SustainaBEERity



Innovation & Networking



Product and Business Innovation: Benefits for the whole Market



**DM
Modular
20**



**DM Flex
20**



**DM Select
10**



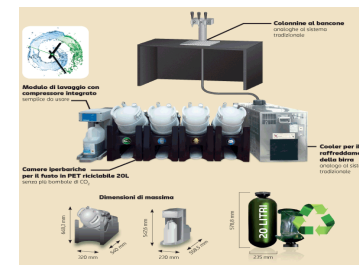
**More
quality**



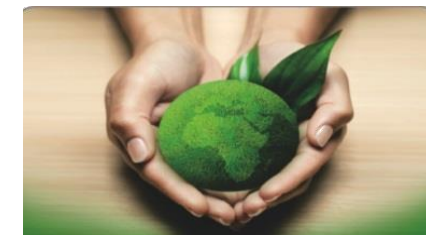
**More
business**



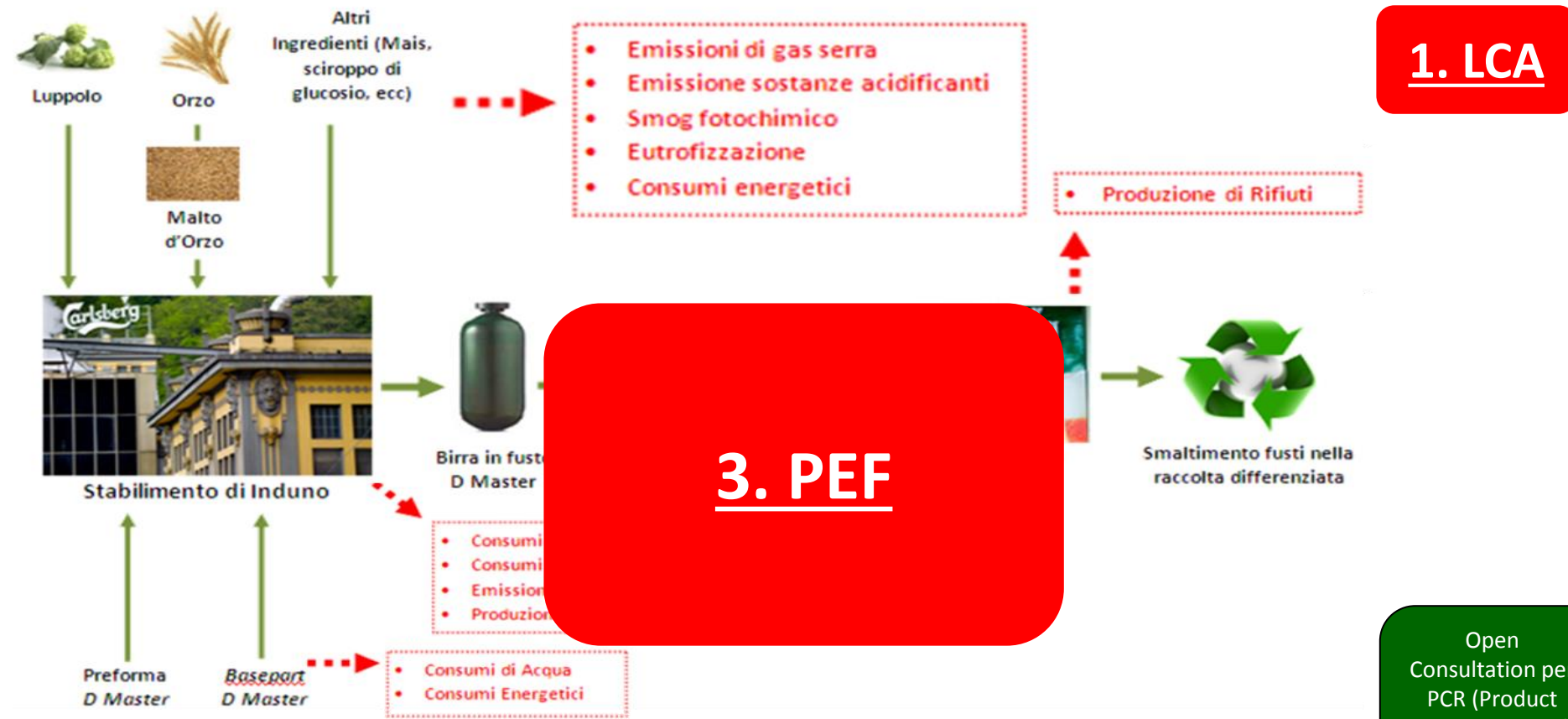
**More
handiness**



**More
sustainability**



Sales are not everything (almost)... numbers are



Open Consultation per PCR (Product Category Rules) a livello mondiale



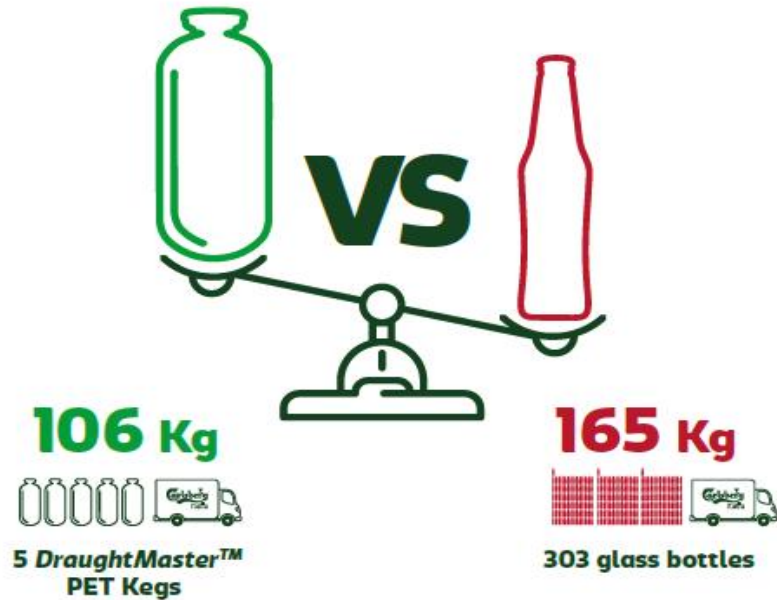
The incredible sustainability of PET

Today PET kegs are considered the point of reference in the draft beer segment. The advantages of *DraughtMaster™* are now clear compared both to steel kegs and also to glass bottles, in terms of product quality, of the product, lower environmental impact and

respect of the urban decorum. Logistics' figures also confirm *DraughtMaster™* sustainability: the transportation of 100 liters of beer mean 106 KGs of total weight in PET kegs versus 165 KGs in glass bottles (33 cl).



What is the weight of 100 liters of beer?

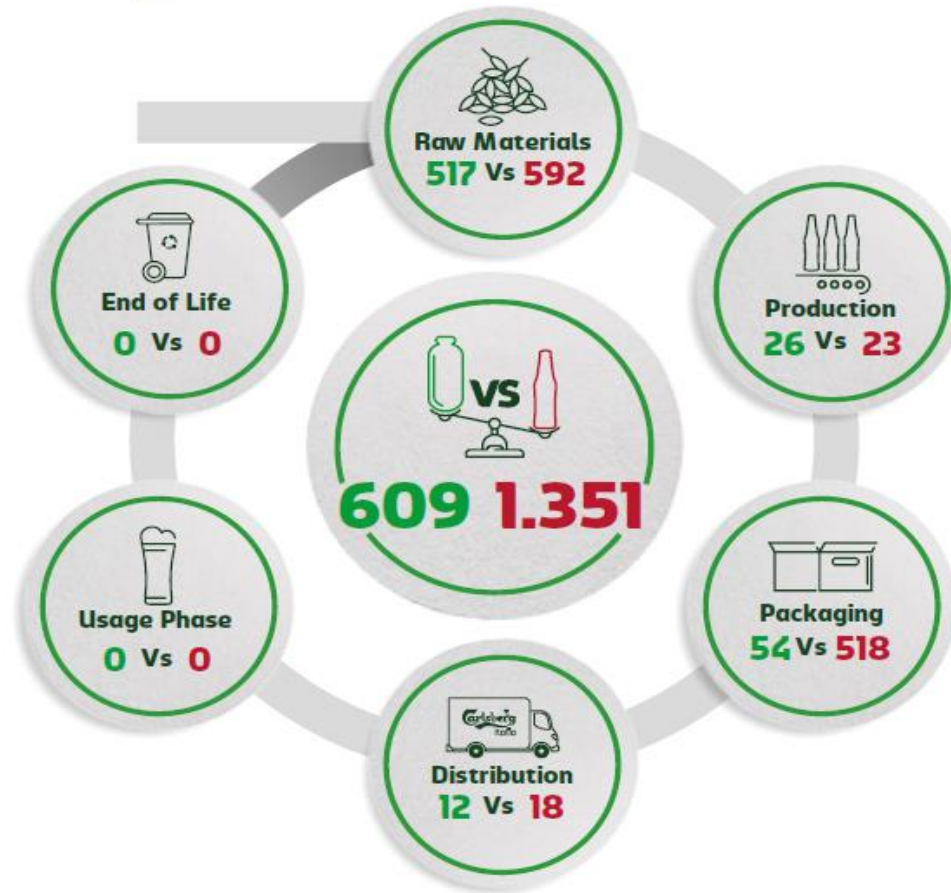


Water (L)

PET keg vs Glass Bottle

Liters of water used in every phase of the life cycle of beer

Base: 100 liters of beer



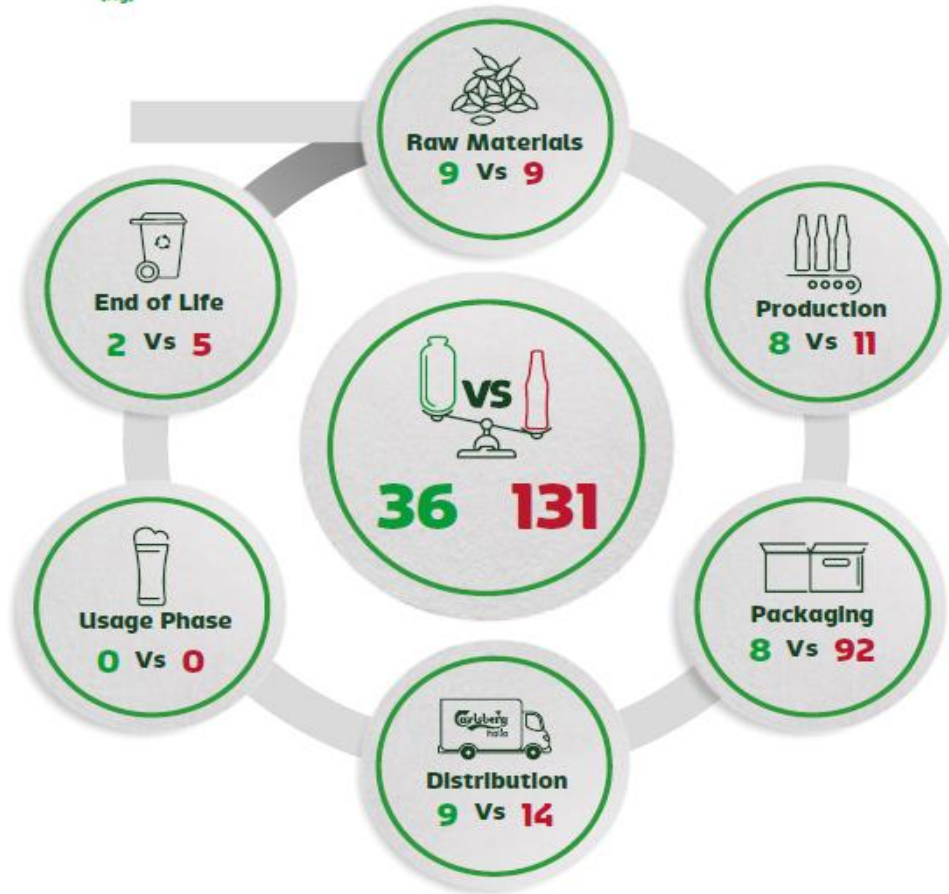


PET keg vs Glass Bottle

Kg of CO₂ produced in every phase of the life cycle of beer

Base: 100 liters of beer

CO₂
(Kg)

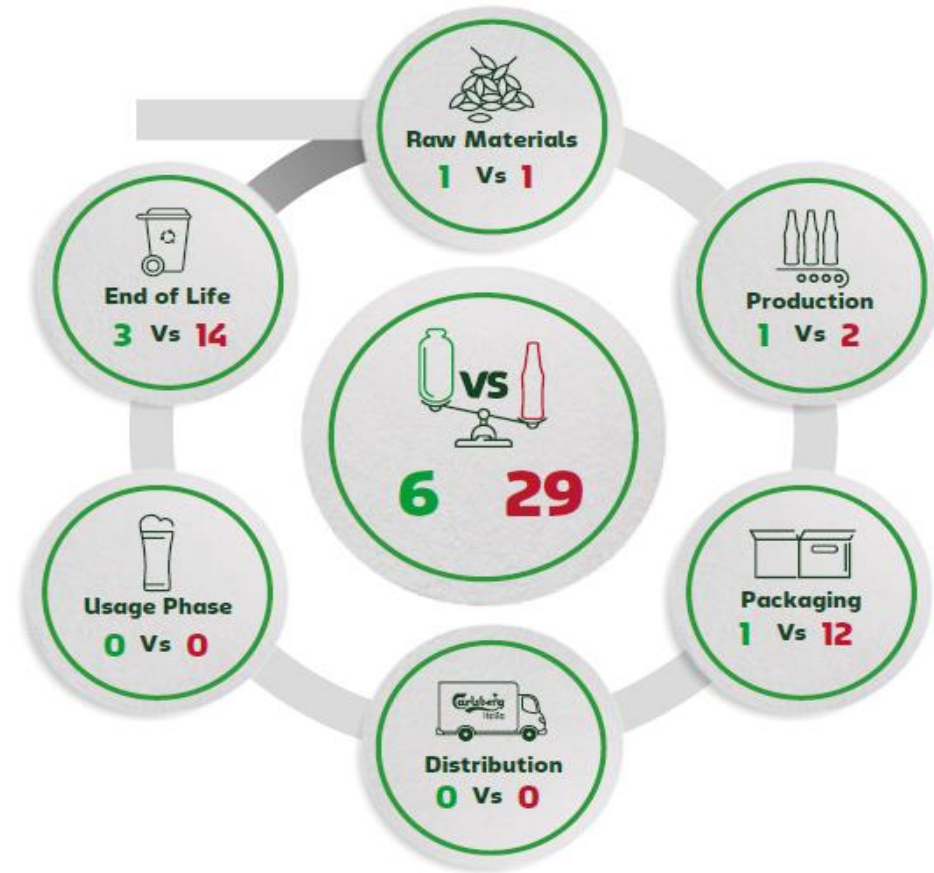


PET keg vs Glass Bottle

KGs of waste produced in every phase of the life cycle of beer

Base: 100 liters of beer

Waste
(Kg)



Last but not least...new ways of communication towards consumers must be found



60 liters of beer from PET kegs reduce the greenhouse effect as 1 tree in 1 year*

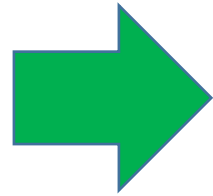
Formula to calculate the #TreesWatch

*Compared to the same quantity of beer in steel kegs. Elaboration based on 2013 EPD data

Orologio degli Alberi



... to the new challenge



“from cradle to cradle”

THANK



YOU

[Carlsberggroup.com/sustainability](https://www.carlsberggroup.com/sustainability)
#TowardsZERO