

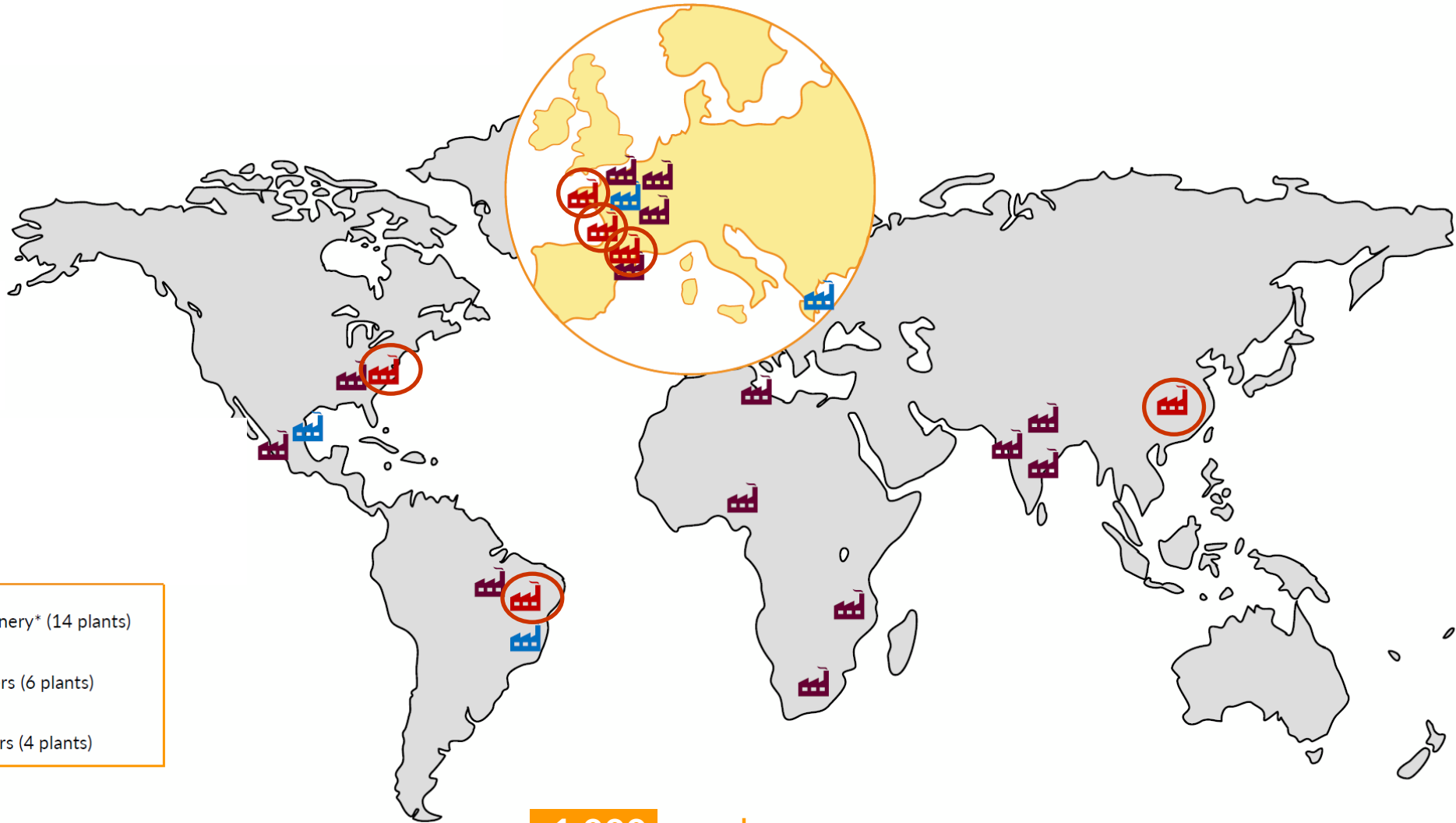
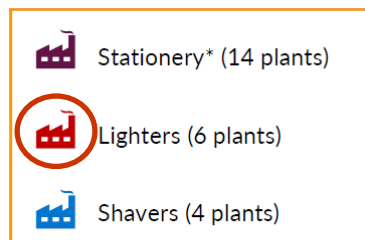


REDON LIGHTER FACTORY TOUR
FRANÇOIS CLÉMENT-GRANDCOURT

24th November, 2022

6 LIGHTER FACTORIES IN THE WORLD

24
PLANTS
WORLDWIDE



* Including BIC Graphic

~1 000 people
1,5 billion lighters produced every year

BJ 75: BIC LIGHTERS HISTORICAL HOME



1947 **FLAMINAIRE**



Gentry et Crillon, first gas lighter ever, manufactured by Flaminaire

1973 **J1,**
First BIC lighter manufactured by BIC, in Redon



Surface : 16 ha
+ 450 people

LIGHTING A FLAME: AN ESSENTIAL NEED

flames answer physiological, psychological and spiritual needs



Heating



Cooking



Restaurant & Catering



Relaxing



Leisure & outdoor activities



Birthday celebration



Spirituality



Emergency situations



Smoking



Manual workers

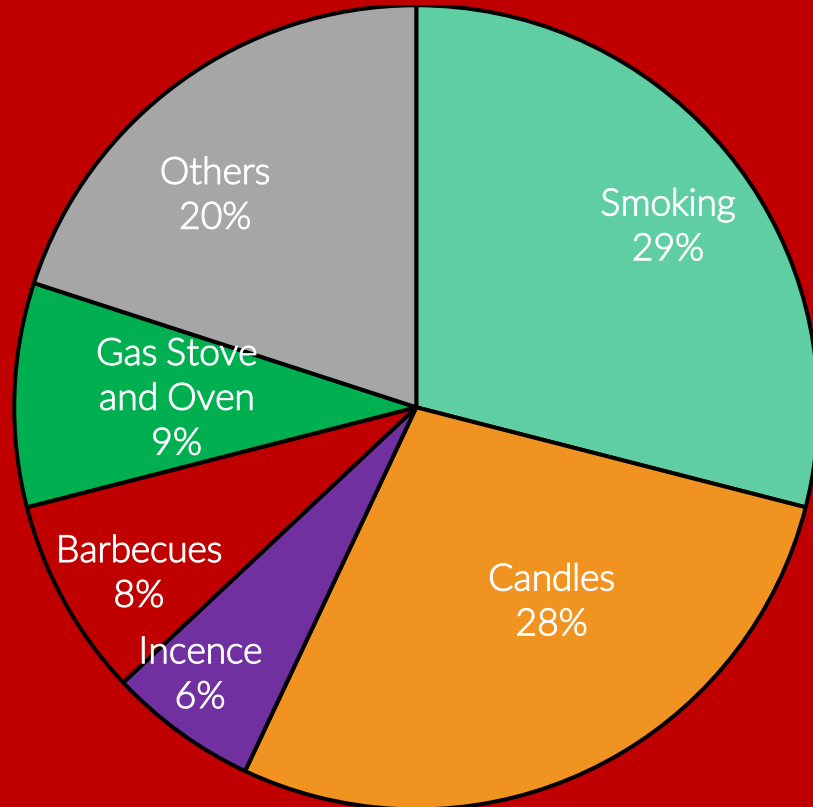
52%

of flames are
for non-
smoking
usages

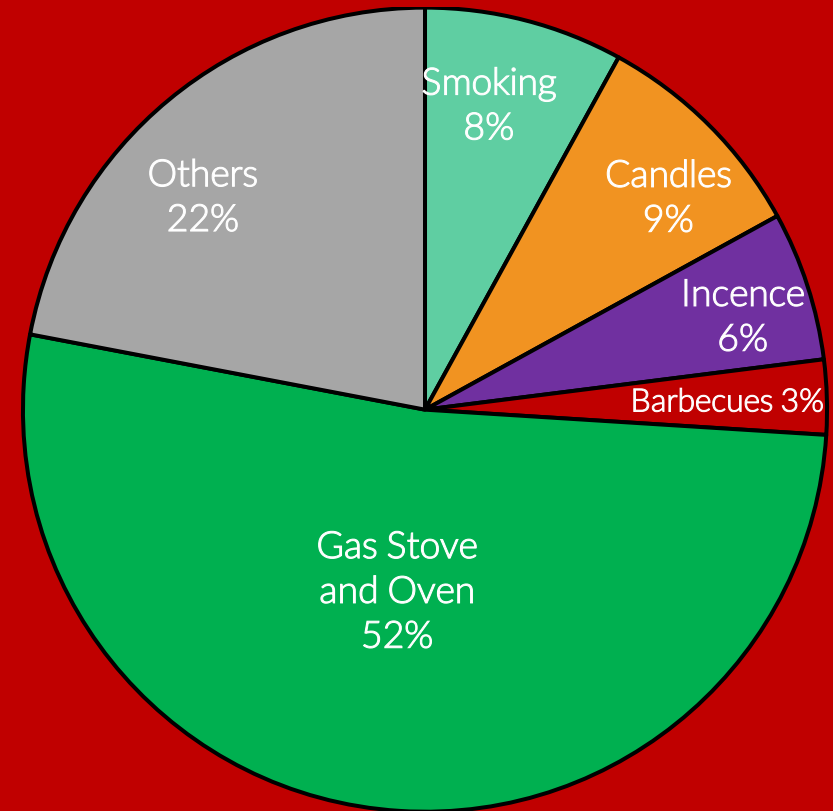
A LIGHTER IS THE BEST OPTION TO PRODUCE A FLAME

BREAKDOWN OF FLAME USAGES

UNITED STATES



BRAZIL



Source: Ipsos Study for Calysis - 2021

Others include different usages including chimneys, heating systems, fireworks, gardening, ...

PROVIDING SAFE AND AFFORDABLE FLAMES FOR ALL LIGHTING OCCASIONS

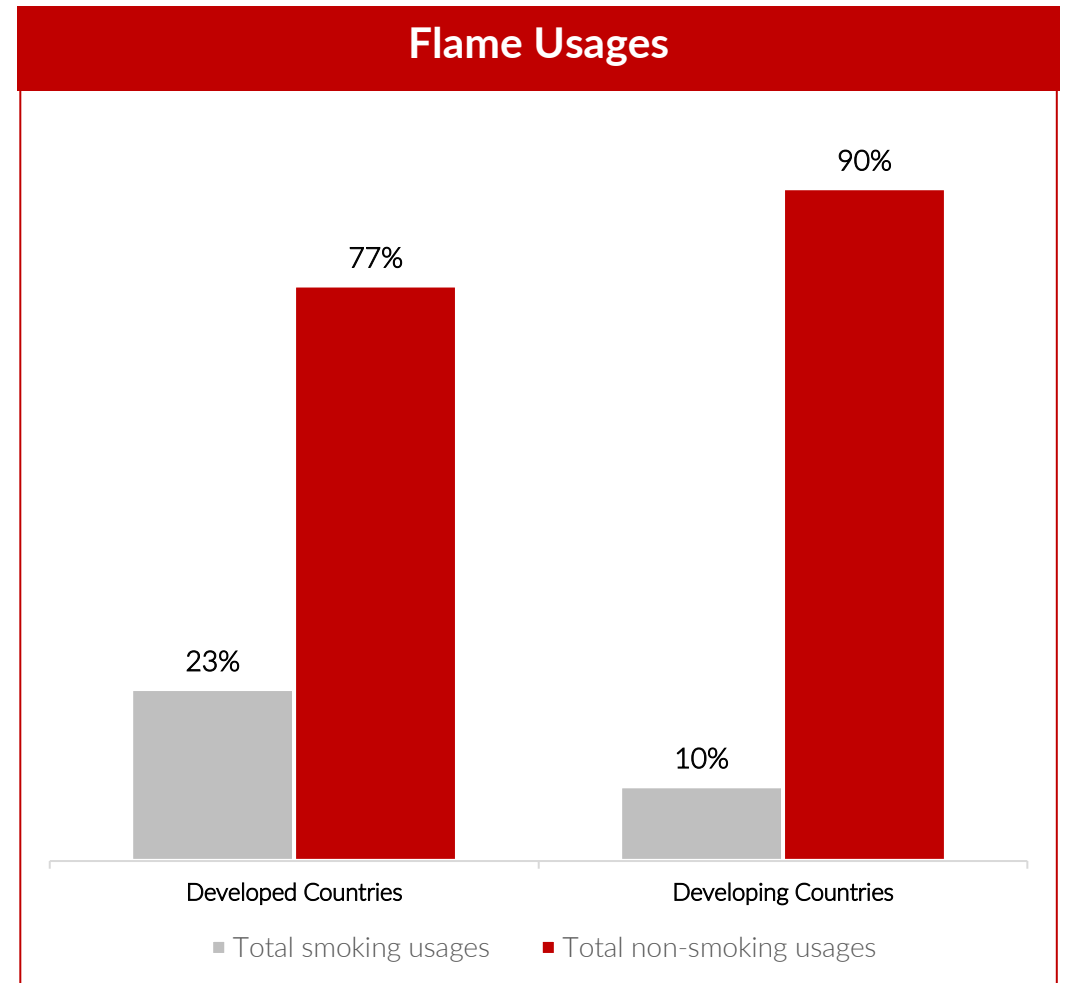
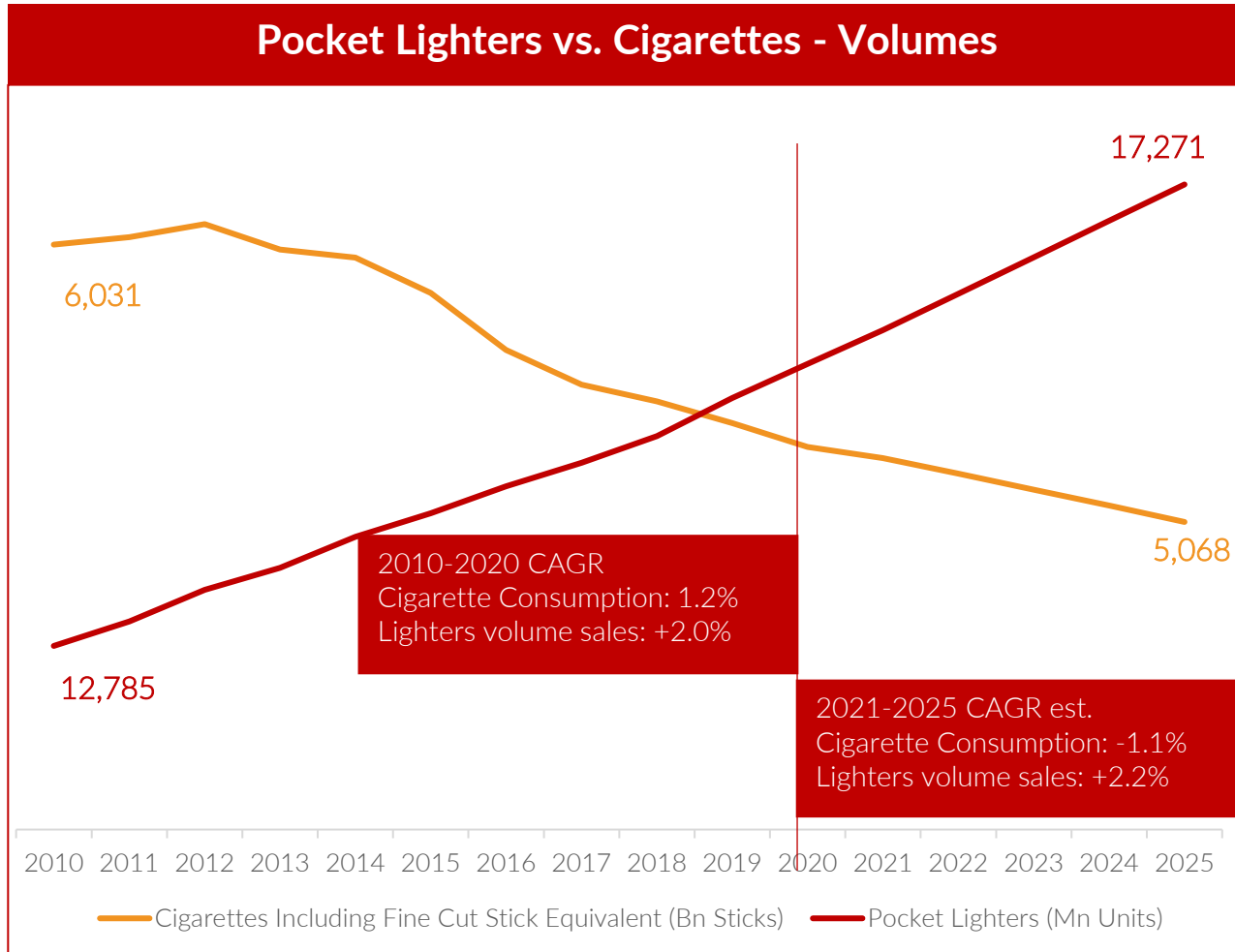
	Tobacco Usages	Selected Non-tobacco Usages		
		Candles	Barbecues	Gas oven
Addressable Markets in 2021	7.1 billion USD*	6.8 billion USD**	6.4 billion USD***	More than 2/3 of Developed and Developing countries households and equipped with a stove, of 1/3 are gas stoves
Growth (in value)	+2.2% (2021-2025)	+6.5% (2021-2028)	+8.0% (2021-2023)	
Growth Drivers	Premiumization, product innovation	At home well-being Lifestyle	Cooking Lifestyle	Cooking

Brands

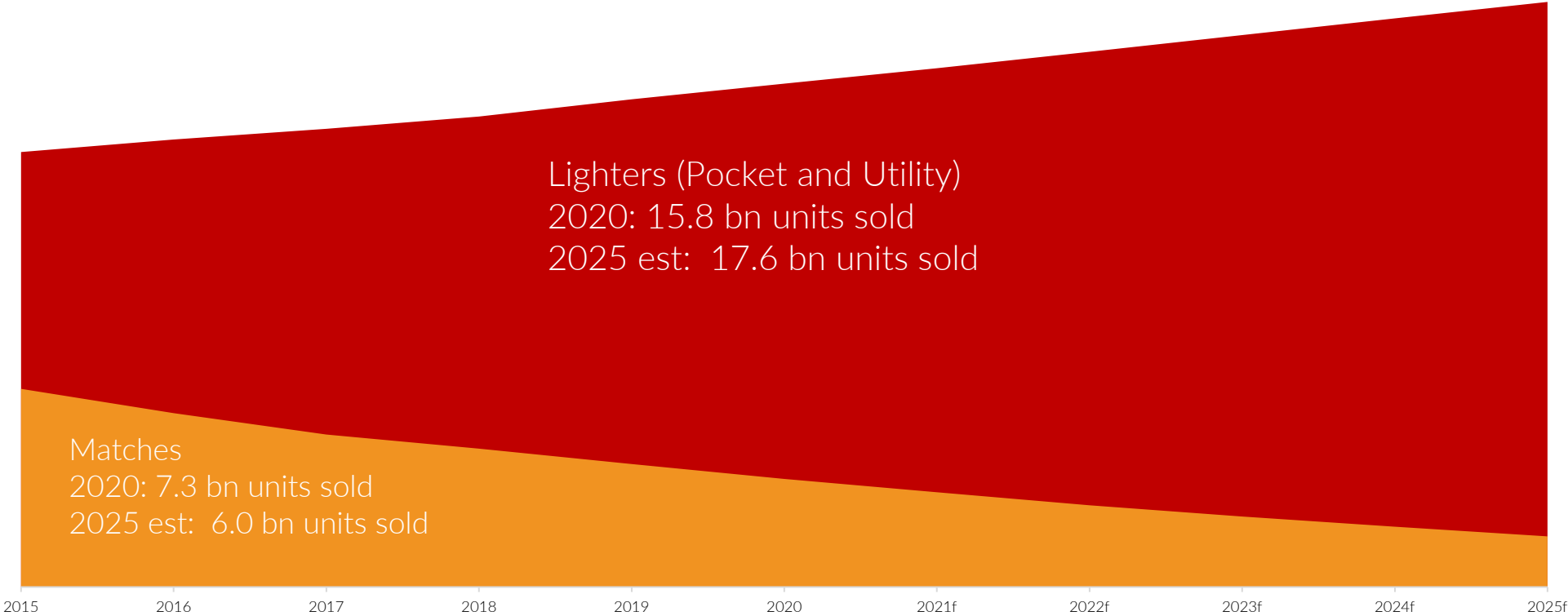


POCKET LIGHTER VS CIGARETTES

Lighters' Sales are not only linked to Cigarette consumption

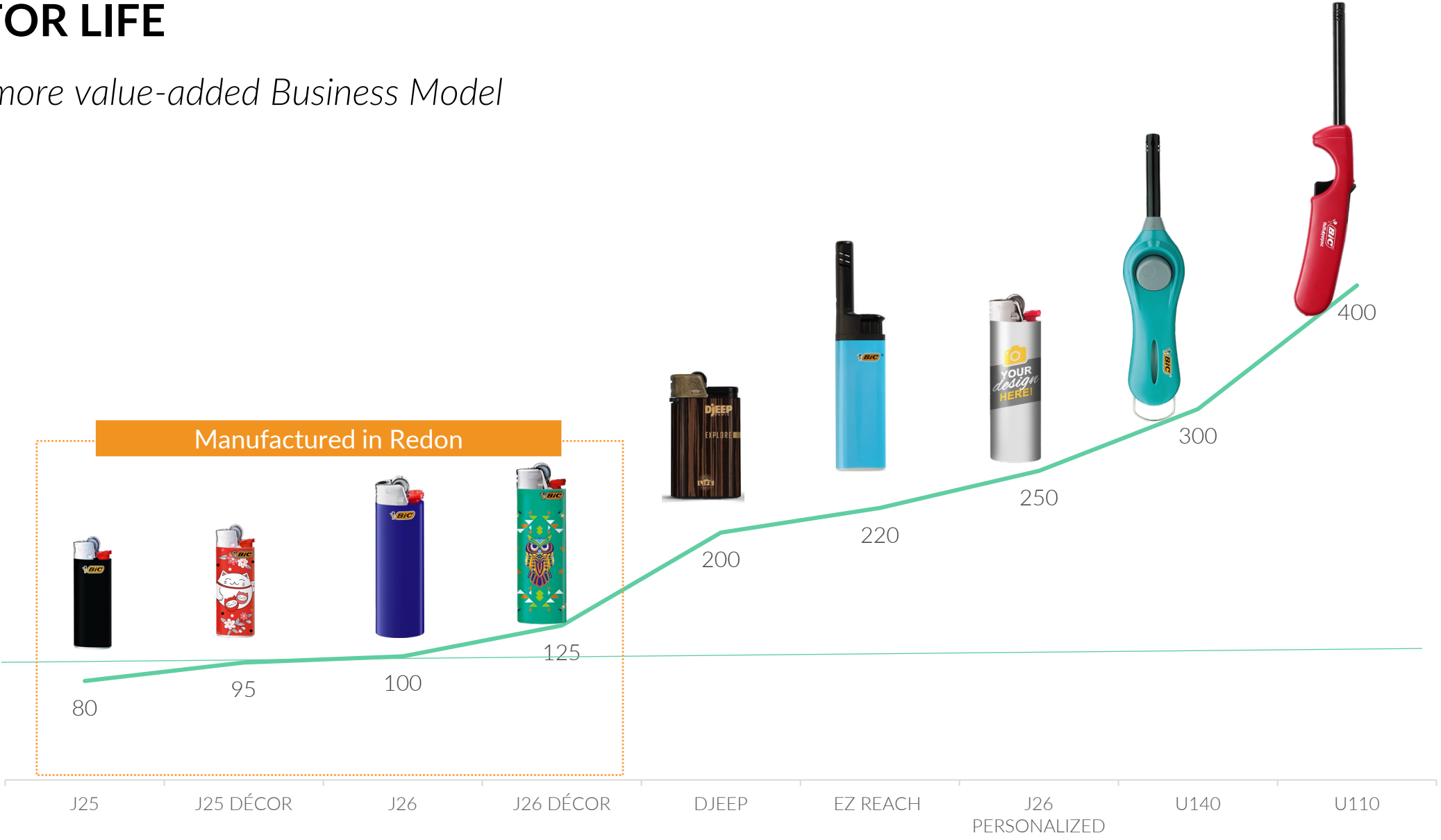


POCKET LIGHTER VS MATCHES



FLAME FOR LIFE

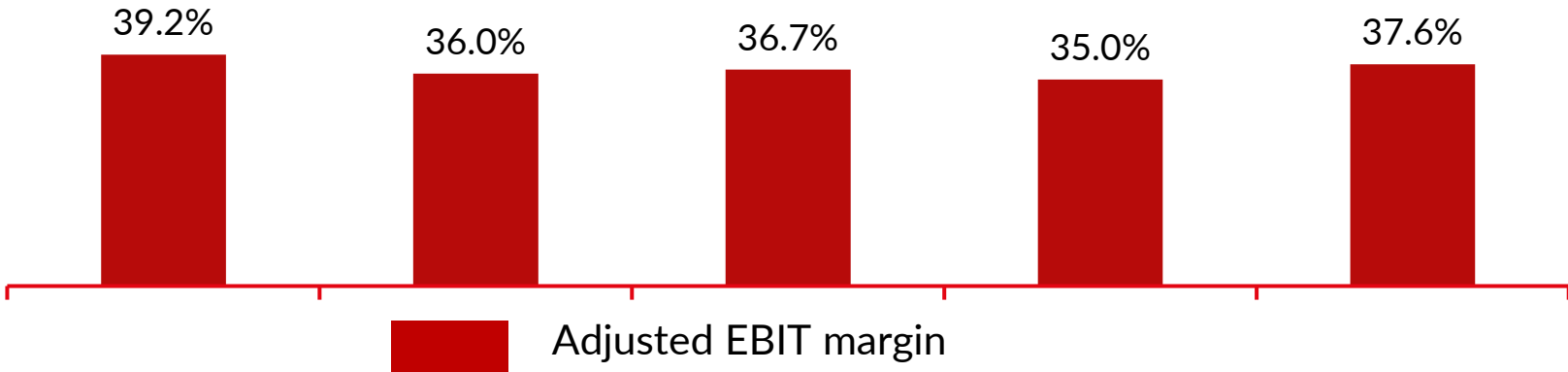
Towards a more value-added Business Model



BIC FLAME FOR LIFE KEY FIGURES

FY 2021 Net Sales	€718.5M	FY 2021 EBIT	€268.5M
------------------------------	----------------	-------------------------	----------------

Growth (on a comparative basis for Net Sales)					
Volume	+2.0%	+1.6%	-4.9%	-9.8%	+12.7%
Value	+2.2%	+2.4%	-3.7%	-4.7%	+18.2%
	2017	2018	2019	2020	2021



2017 figures: After restatement from IFRS 15. 2019 & 2020 figures restated for unallocated costs

LIGHTING DEVICE SNAPSHOT

LOW TECH SOLUTIONS



Briquet solaire



Pierre à briquet



Allumettes

SIMPLE SOLUTIONS

Briquets de poche



Briquet à essence

Briquets à gaz



Briquet métallique rechargeable



Briquet plastique rechargeable



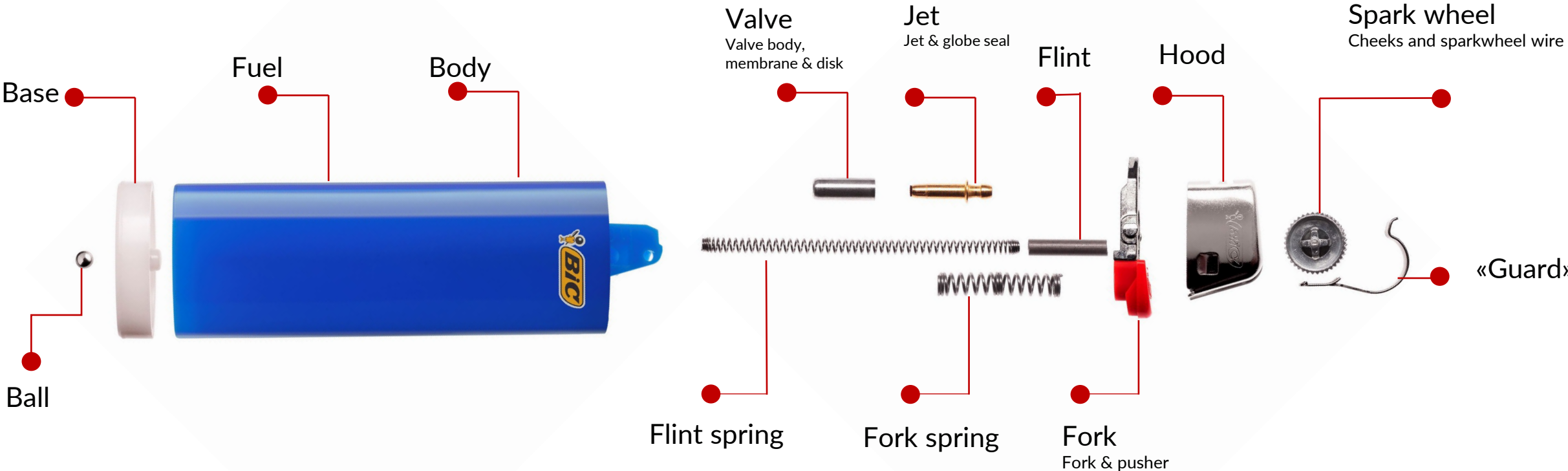
Briquet plastique non rechargeable

TECHNOLOGICAL SOLUTIONS



Briquets torches

RELIABILITY : HIGH PERFORMANCE FOR A SIMPLE PRODUCT



LONG LASTING HIGH-PERFORMANCE PRODUCTS (up to 3,000 lights for BIC® Maxi) made with « just what's necessary » materials

QUALITY AND SAFETY : AN ABSOLUTE PRIORITY: all BIC® lighters meet or exceed the requirements of international safety standards

19 PARTS vs 30 for Asian lighters

LIGHTERS : POTENTIALLY DANGEROUS PRODUCTS

2 MANDATORY STANDARDS IN EUROPE

| **ISO 9994:** safety specifications for pocket lighters

| **EN 13869:** child safety

UNFORTUNATELY WITH LITTLE COMPLIANCE

| More than 2/3 of lighter models do not comply with **ISO 9994**¹ in Europe

| **90% of lighter models** do not comply with child safety standard² in Europe

WHICH LEADS TO ACCIDENTS EVERY YEAR

| **30 000 severe accidents/year** in the EU (80/ day)³

| **Societal cost:** 10-14 B€⁴

HAVING ENVIRONMENTAL IMPACT

| **+40% :** Accident environmental impact (burn treatments)⁵

QUALITY & SAFETY ARE ABSOLUTE PRIORITY

SAFETY AND SUSTAINABILITY WORK TOGETHER

The environmental impact of the medical treatment of burns due to accidents amount

6769 tons CO₂eq

representing the overall GHG impact of
40 million lighters imported every year in France
out of 100 million lighters every year

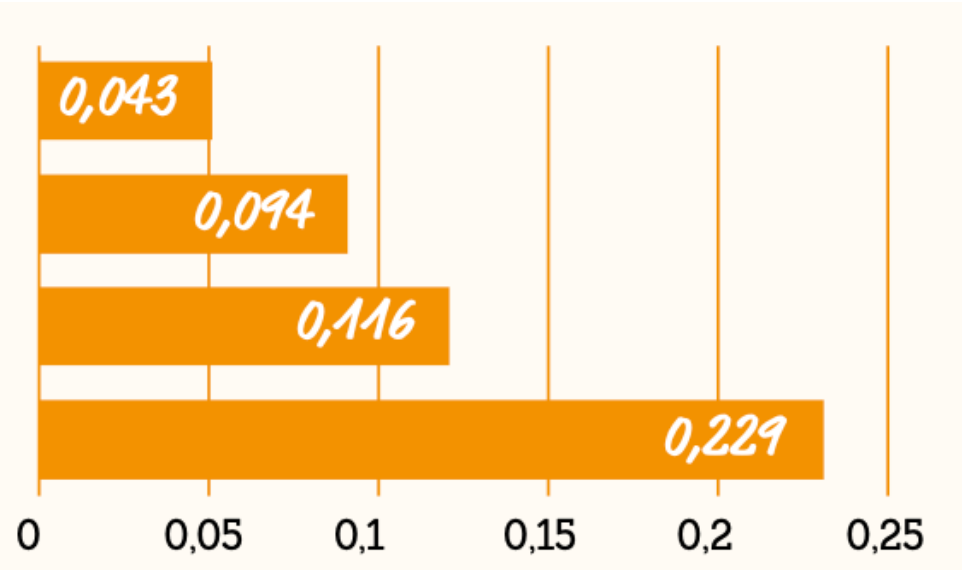
i.e. **more than 40% of CO₂ emissions** from the lighter market in France

A SIMPLE, SAFE AND RELIABLE PRODUCT



BIC Maxi
COMPETITOR (flint)
COMPETITOR (piezo)
MATCHES

CO2 Impact Per flame (CO2 eq)



EVEA, Comparative LCA, 2020

A HIGH PERFORMANCE, SAFE LIGHTER DESIGNED WITH « JUST WHAT'S NECESSARY » RAW MATERIAL

... BUT UNTIL NOW DISCARDED AT ITS END OF LIFE

ACCELERATE ON SUSTAINABLE DEVELOPMENT



#1 Fostering sustainable innovation in BIC® products

#2 Acting against climate change

#3 Committing to a safe work environment

#4 Proactively involving suppliers

#5 Improving lives through education

Taking our circular economy journey to the next level by transforming the way we use plastic

- by 2025, 100% of BIC packaging will be reusable, recyclable, or compostable
- by 2030, BIC will use 50% non-virgin petroleum plastic in our products, with an intermediate target of 20% by 2025

- In May 2021, we upgraded our renewable electricity target and committed to achieve 100% by 2025.
- In May 2022, we announced our CO2 emissions reduction roadmap

BIC CO2 EMISSION REDUCTION OBJECTIVES BY 2030

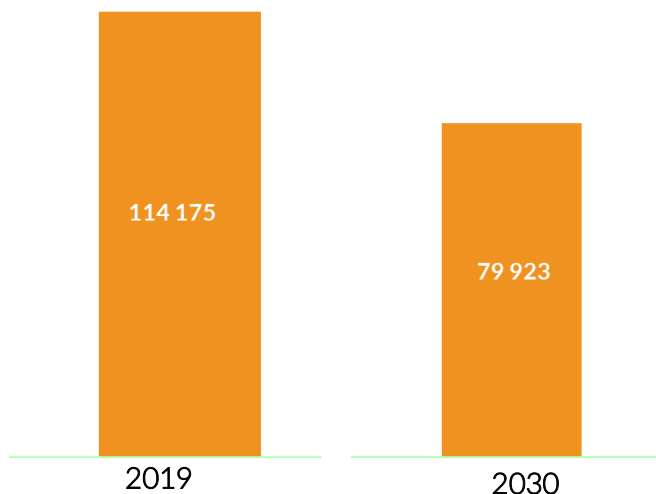
Long term objectives : "Net Zero" for the 3 scopes by 2050

Aligned with Paris Agreement

-50% SCOPE 1
-100% SCOPE 2

-5%
SCOPE 3

Of which **-30%** scope 3
For Flame for life



LEVERS- *FLAME FOR LIFE*

- | Working with suppliers to source recycled and biobased raw materials
- | Use of biofuel in local transportation
- | Investigating alternative transportation methods
- | Reintegrating recycled materials into lighters and other BIC products
- | Plastic-free packaging

THE TWO MAJOR CHALLENGES

PLASTIC MATERIALS ARE (SO FAR)
FOSSIL FUEL DERIVATIVES

IN SPITE OF THEIR INTRINSIC QUALITIES, A
MISMANAGEMENT OF LIGHTERS' END OF LIFE
CAN BE AN ISSUE

▼
climate change



▼
ocean pollution



**BIC WANTS TO PIONEER A CIRCULAR ECONOMY MODEL FOR THE
LIGHTER INDUSTRY**

FROM DISPOSABLE TO SUSTAINABLE

Exploring a circular economy model

Success conditions

Supported by Top Management

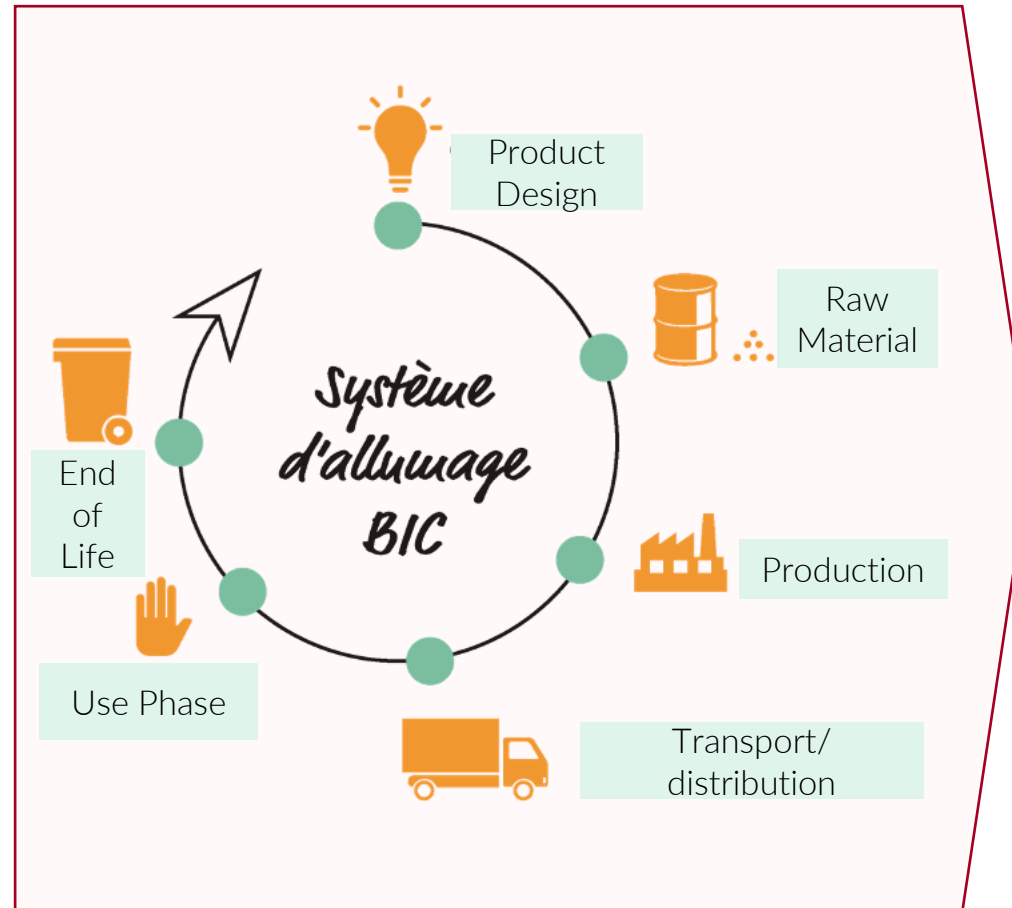
Science-based approach

R&D

Project monitoring and continued improvements

Stakeholder Dialogs

Strengthening local Roots



Expected impacts

Reducing resource consumption and plastic pollution

Protecting biodiversity

Contributing to carbon-neutrality

Improving Resilience

ADOPTING A SCIENCE-BASED APPROACH: BIC SEA PROGRAM

SAMPLES & DATA COLLECTION, DIFFUSION



- | Abiotic degradation
- | Colonization and biodegradability
- | Toxicity tests
- | Alternative plastics respecting environment



DEGRADATION & TOXICITY TESTS



- | Modelisation of plastics degradation
- | Plastics characterization
- | Conditioning and aging

STUDYING CONSUMER BEHAVIOR

A SOPHISTICATED UNDERSTANDING OF ALL IMPACTS

Exploring ways to promote responsible management of lighters usage and disposal.

- | Incentive to use lighters' full capacities
- | Process and nudges to properly dispose used lighters
- | Design the best option to collect used lighters

An extensive investigation of consumer behavior in North America and Europe in partnership with the CIRAIQ at University of Quebec in Montréal Canada



CIRAIQ^{MC}

Centre interuniversitaire de recherche sur le cycle de vie des produits, procédés et services



BREAKING STEREOTYPES

Lighters are **not only**
for smokers



Heating



Cooking

Matches don't
produce more
sustainable flames*

**Environmental
impact:**
6 times higher than a
J26 Maxi¹
lighter

3 times more likely to
cause accidents

Uses **70% more
plastic** compared to a
J26 Maxi ² lighter

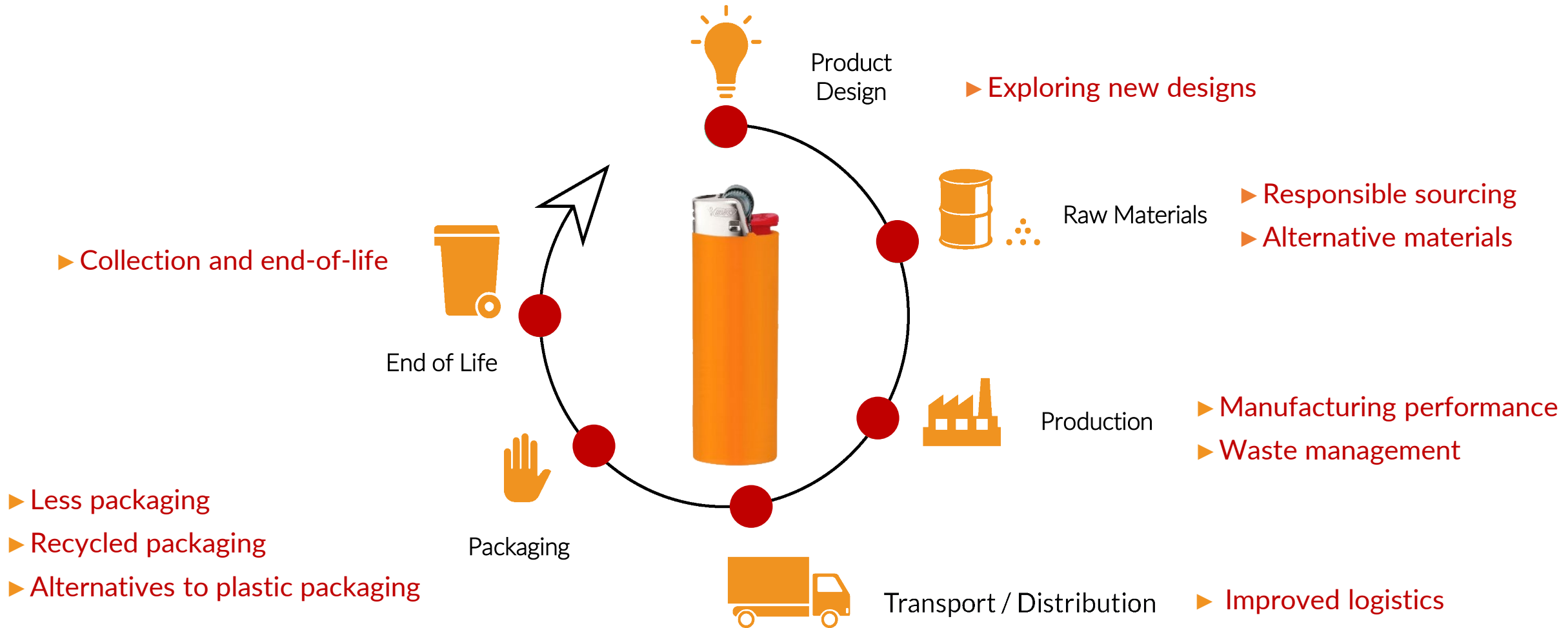
Refillable lighters **are
not** the answer

Refilling a lighter or
owning a refill poses a
potential and dangerous
risk of a **serious accident**

The refillability of
lighters is often
theoretical

Refills have a **greater
environmental impact**
than new lighters

PIONEERING A CIRCULAR MODEL FOR THE LIGHTER INDUSTRY

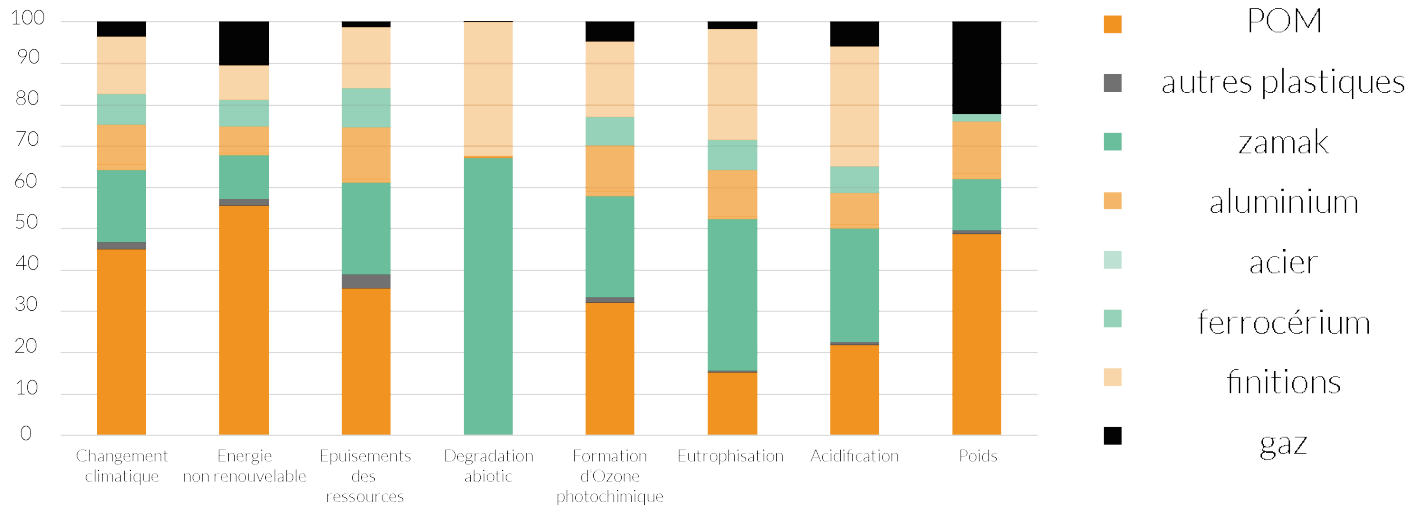


ANALYSING THE LIFE CYCLE OF A BIC LIGHTER

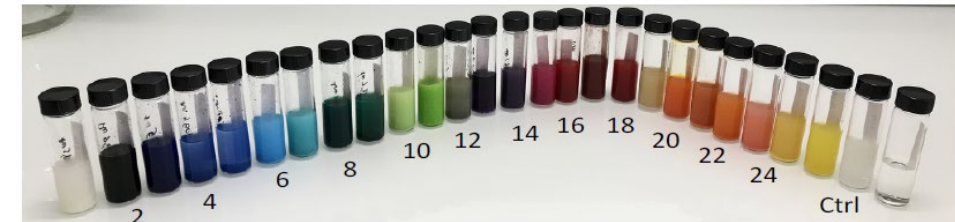
A SOPHISTICATED UNDERSTANDING OF ALL IMPACTS: DETAILED LCA



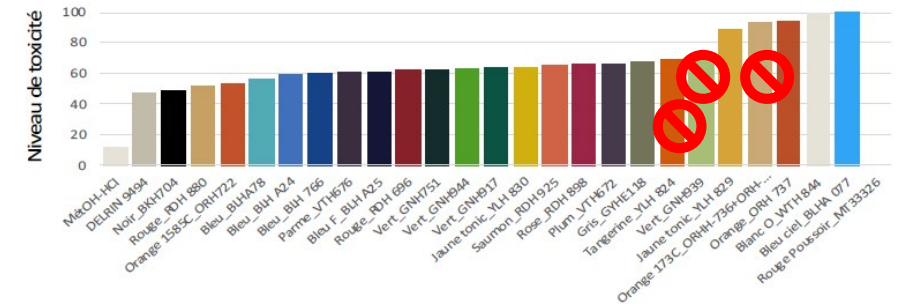
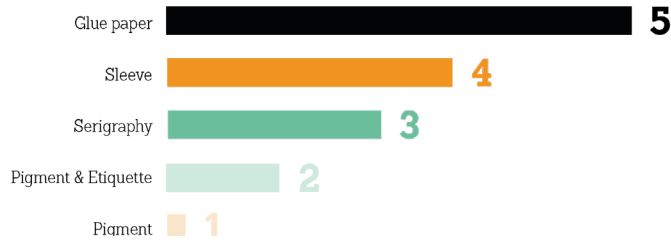
Contribution of the different materials used to produce the BIC J26 Lighter



COMPARAISON DES NIVEAUX DE TOXICITE DES COLORANTS BRIQUETS BIC

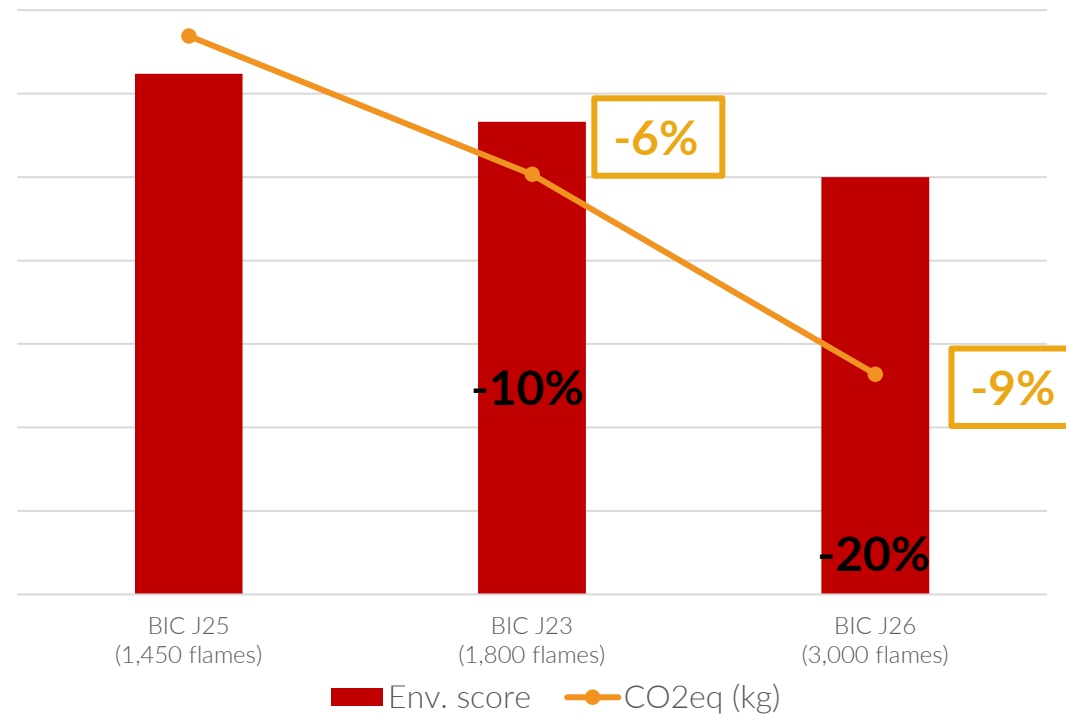


Life cycle Analysis - Decors



REDUCING IMPACT BY MAXIMIZING THE NUMBER OF FLAMES

Environmental impact and carbon footprint of BIC Lighters



To reduce lighter impact=> **Increase the number of flames per lighter**

MAXIMIZING THE NUMBER OF FLAMES TO REDUCE THE IMPACT

RANGE 2019:
1,820 flames in average



RANGE 2021:
2,410 flames in average

+ 33% vs 2019 range

ECO-DESIGN

1

4 X less plastic per flame
 66% reduction of CO₂ / flame
 30% reduction in packaging



*J38 Wand
 Vs BIC Megalighter*



Utility lighter

2

-30% of CO₂

16% improved environmental impact (thanks to recycled and biosourced material + green electricity) and benefits from 14% CO₂ compensation programs

BIC MAXI *ECOLUTIONS* fully redesigned

J26 Standard

- PUSHER : Red Pusher in Nylon
- FORK & CHEEKS : ...Cheeks... in Zamak
- SPARK WHEEL : metal
- BODY & BASE : POM (Delrin)
Assorted Colors & BIC logo (Colorants)
- SLEEVE : PVC
- OTHERS :
 100% Green Electricity,
 90% of industrial waste recovery
- PACKAGING:
Tray of 50 in recycled PS + plastic film
Multipack in PET and PP

J26 *ECOLUTIONS*

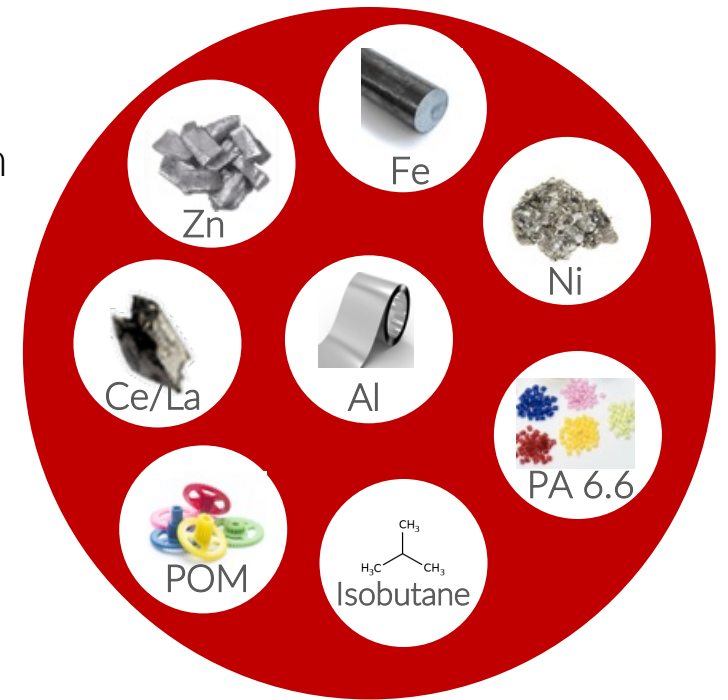


- PUSHER : Biosourced POM (Delrin) in mass balance
- FORK & CHEEKS : 100% recycled Zamak (93% of Zamak Volumes used in J26 are for Fork & Cheeks)
- SPARK WHEEL : 100% recycled scrap metal
- BODY & BASE : Biosourced POM (Delrin) in mass balance. No colorant (white natural body)
- SLEEVE : PET
- OTHERS :
 PVC free,
 100% Green Electricity (certificates),
 90% of industrial waste recovery
Recyclable with Collection Program
- PACKAGING:
Tray of 50 with tray in cellulose + cardboard box
Multipack in cardboard

RAW MATERIALS

Promoting socially and environmentally responsible sourcing by engaging with 26 key suppliers covering 10 priority issues to:

- | Improve transparency of the supply chain
- | Identify social or environmental risks
- | Define the best solutions to mitigate risks
- | Engage suppliers in long lasting changes towards sustainable practices
- | Search for alternatives to the most impactful products



PRODUCTION & LOGISTICS

Improving factory performance



50.1%*

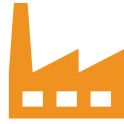
decrease in water consumption
between 2009 and 2019
(consumption per ton of production)



14.3%*

decrease in energy consumption
between 2009 et 2019
(consumption per ton of production)

Optimizing sourcing and transportation systems



To better manage our supply chain, a **100%** of **BIC Lighters** are manufactured in **BIC factories**



To reduce transportation pollution, a **100%** of BIC lighters sold in Europe are **manufactured** in the same continent






Compensating Residual GHG emissions (scope 1 & 2)



Producing energy using solar PV systems



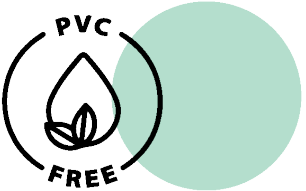
LESS PACKAGING AND MORE SUSTAINABLE PACKAGING

By type of packaging	STEP 1	STEP 2	STEP 3
Trays of 50	 <p>Recycled PS</p>	 <p>Recycled PP</p>	 <p>Cellulose (TBC)</p>
Blisters	 <p>PVC</p>	 <p>r-PET and PP</p>	 <p>Cardboard</p>

Transportation and storage of lighters must comply with detailed safety instructions

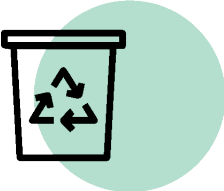
2020

BIC lighters achieved PVC free packaging



80%

BIC lighters volumes in Europe are sold in 50 units Trays to minimize plastic waste



Nearly **100%** of cardboard comes from recycled sources or FSC certified sources

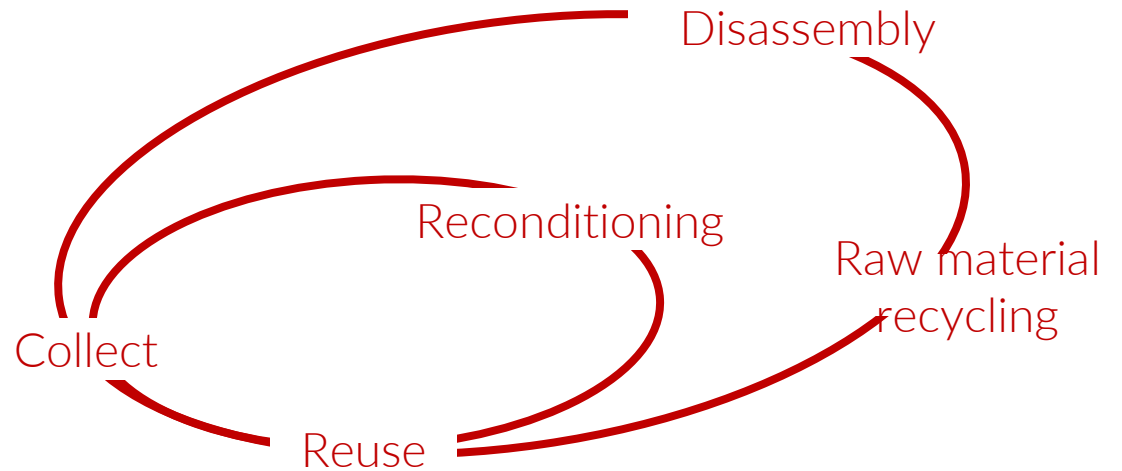


END OF PRODUCT LIFE

LIGHTERS' COLLECTION

Learnings from the used lighter collection pilots

- | **5 years:** average age of collected lighter
- | **87 %** of used lighters are left with only a drop of gas
- | **30%** of BIC collected lighters could potentially be safely reconditioned. Other lighters show corrosion and damages which require recycling (and not reconditioning)



END OF PRODUCT LIFE

THE FIRST EVER DISASSEMBLING & RECYCLING MACHINE FOR LIGHTERS



IMAGINING THE NEXT GENERATION OF LIGHTERS



More flames per lighter



Safe lighter, which do not cause accidents



Eco-designed lighters: less material per flame



Less packaging



Collected, recycled, refurbished...

By 2035, with a population expected to grow + 20%:

- Lighter market **CO2 impact** : **divided by 2**
- Lighter market **Plastic use*** : **divided by 6**



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