

PACKAGING SUSTAINABILITY WHERE LESS IS MORE

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Mondelēz International

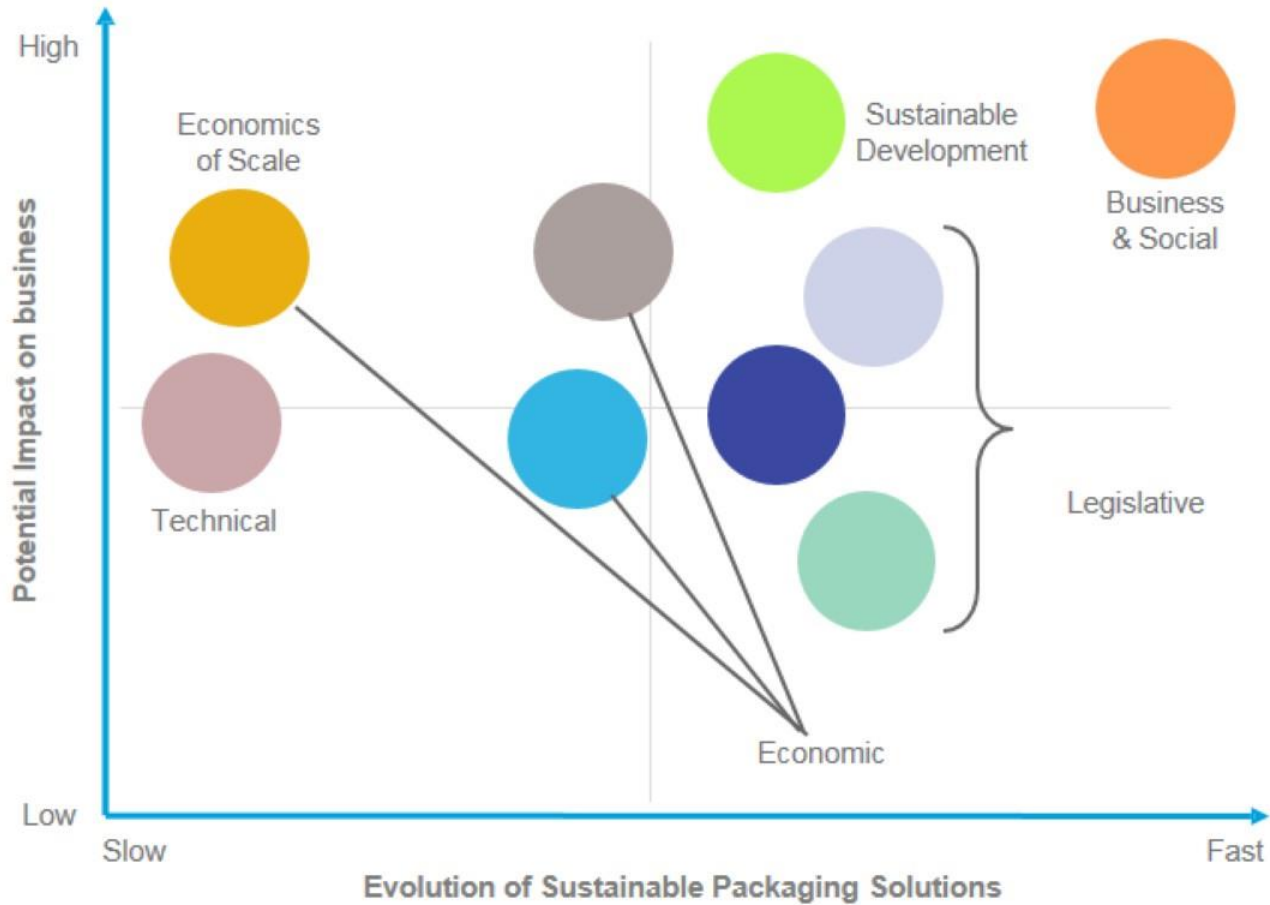


How do you take a bull by the horns...



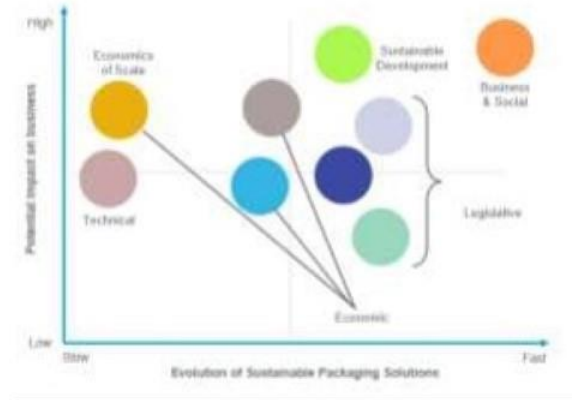
more than three horns in fact...

Yes, there are many challenges....



Legend	Driver
	Economies of Scale
	Technical Performance
	Sustainable Feedstock
	Tax incentives / penalties
	Circular Economy
	Bans, RoHS
	Peers, Consumer, Retailers and Lobbies.
	Cost of Disposal
	Sustainable Development (Ref. Latest UN Approach)

But the Good News is....



...that all these challenges are being successfully met as we speak.....

because, when there is a will, there is a way.....



Mondelēz International remains committed to our Sustainability 2020 climate change goals and the Paris Climate Agreement.

“As a global company with sales in more than 165 countries, we believe acting on climate change is critically important. Growing our positive impact for people and the planet is not only at the core of who we are as a company, it also helps to accelerate our growth.

Smart and sustainable use of natural resources to reduce our environmental impact is necessary now more than ever.”

Chairman & CEO
Mondelēz International
June 2017

Our goals place us at the forefront of the fight against climate change by setting science-based targets to support the global effort to limit climate change to less than 2°C. We've reduced CO₂ emissions from our factories by 7 percent since 2013 and we're on track to deliver our 2020 goal of 15 percent reduction in CO₂ emissions.

Beyond this, we're also addressing deforestation in our key supply chains - the biggest single contributor to our end-to-end carbon footprint. We have just published a new Cocoa Life strategy to combat climate change in cocoa producing countries and we were founding members of the Cocoa and Forest Initiative. Our palm oil action plan aims to make sustainable palm oil the mainstream option by requiring suppliers to improve practices across their operations.

1. THE ARENA

Harnessing the evolution



Sustainable Packaging is going to be key differentiator

Growth Trends: 1 of 2

Sustainable packaging is growing really fast

Current Sustainable Packaging's market size is estimated to be \$244 Billion out of the total Packaging market of \$930 Billion.

In spite of several challenges (opportunities) including the current capacity, supply chain and the Circular Economy related issues, Sustainable Packaging will continue to grow in importance over the next decade and is predicted to become the number one challenge for the industry & governments soon.

Half of the top four areas of fastest growth within flexible packaging films are from the Sustainability Arena:

- Active & Intelligent (Smart) Packaging
- **Recyclability**
- Packaging Openability
- **Biobased polymers**

Top drivers from a manufacturing viewpoint:

- New materials & **Polymer technology including Bio-polymers**
- **Savings in materials**, manufacturing and transportation costs
- **Increased line filling speeds** for bags & Pouches to **substitute rigid packaging**.

Growth Trends & Opportunities : 2 of 2

From the consumer viewpoint, two important drivers will be the growing focus on:

- Convenience and
- Sustainability

The most common sustainable packaging trends in the next 5 year horizon:

1. Downsizing/light-weighting of packaging
2. Increased recycling and wasterecovery
3. Increased use of recycledcontent
4. Increased use of renewably sourced materials including bio-polymers
5. Improvements in packaging and logistical efficiency



Source: PackagingStrategies.com

A winning approach in action- the MDLZ Way

- **Less is more.** Therefore, we constantly reduce the source itself, i.e., pursue packaging weight reduction while at the same time, **optimise packaging to prevent food waste.**
- Our **sustainability metrics** across the group are aligned and tracked with recognized global standards, e.g. DJSI
- We recognize the importance of **recyclability of packaging** and over 70% of our global packaging is already recyclable as it is paper, foil or glass based. We also participate with local and global partners in the industry & supply chain to identify approaches and technologies which can deliver the best environmental solutions for all our product packaging.

2. TOOLS

+ Success Stories



Prevention is better than cure

The Waste Hierarchy

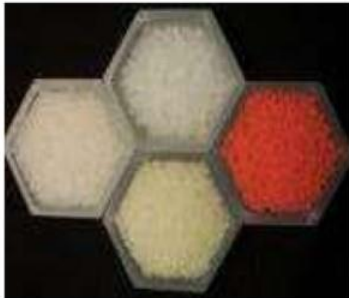
Preferred Environmental Option



Least preferred Environmental Option

...taking bull by the horns; the key levers that we use

Raw Materials & Designs



Packaging Conversion



Resource usage



Infusing Common Purpose



External Collaboration



Scientific base & Information



Executive Engagement



Programmes & Leadership



Using a combination of these has helped us exceed our packaging sustainability targets some of the examples follow....

Canadian Lay Flats Simplification & Harmonization

Harmonization & Simplification of key Canadian brands Cookie packaging formats resulted in annual packaging weight savings of over 1,200 MT



Ritz Club 18ct Zto EFlute

Packaging strength optimization through rigorous optimizations while still maintaining a safety factor of 5 resulted in an **annual package material reduction from Z to E was over 300 MT**



CA! Chewy JS Tray Optimization

Reduction of the overall footprint of Chips Ahoy! Chewy trays for significant packaging weight reduction and increase in transportation efficiency



12.5% Surface Area Reduction



Sustainability through footprint harmonization

Harmonized Canadian and US Packs from a 24 x 50g to a 30 x 42g count carton.

The Canadian product reduced its corrugate consumption by 25%, film consumption by 7% while both products increased transport efficiency by 10%



Moving from XPOS-Pusher to Internal Puller System (IPS)- CDM cases

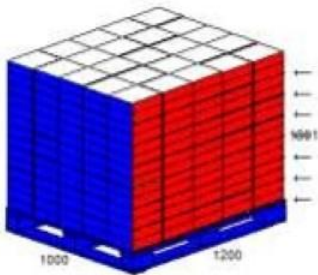


From

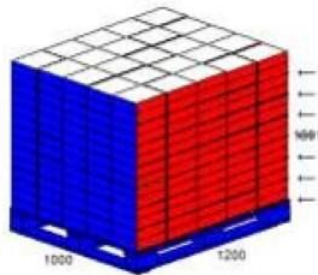


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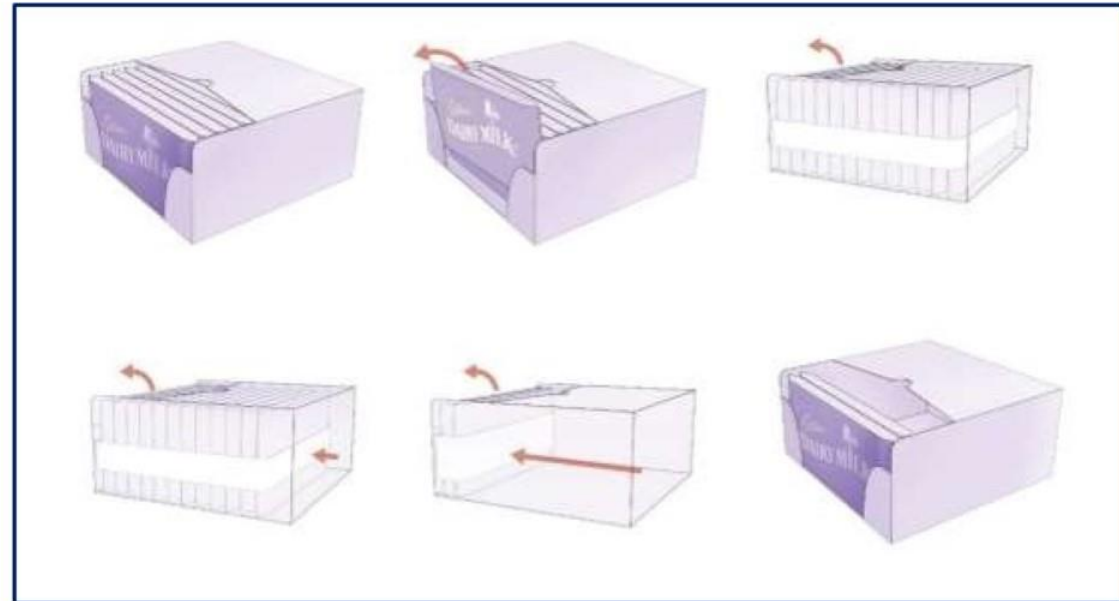
Wave 1, Small PMP & Export:
Packaging weight reduction $\geq 19\%$ for 11 SKUS



2016: 5950 tablets*
Case utilisation **74%**



2017: 7700 tablets*
Case utilisation **95%**



A bigHERO

Objective

- New Heroes tubs shape: 17% less material
- New shipping pallet count

Key deliverables

- New incoming shipping pallet count: 1160 tubs/pallet (instead of 720)
- No Capex



Small steps make big difference



Before

After

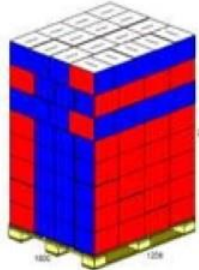
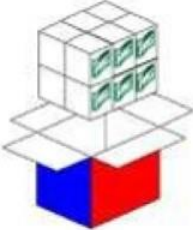
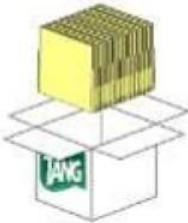


17%

Less packaging material used.

958

(MT/year)



reduced
pouch height

+4 Pouchs/
Display Unit

+ 48 Pouchs/ Box

+8 Boxes/Pallet
+8M Pouchs/Pallet

Number of trucks
required reduced by
550 pa

Sustainability through brand footprint

Harmonized Canadian and US Packs from a 24 x 50g to a 30 x 42g count carton.

The Canadian product reduced its corrugate consumption by 25%, film consumption by 7% while both products increased transport efficiency by 10%



Carton Material Improvement

Reduction of paper board thickness from 26pt to 20pt in Classic Mix Pack in North America resulted in elimination of several hundred MT of Packaging Material.



SHIVA Removing Intermediate Layers Packaging



This resulted in approximately:

Just the examples you saw today also resulted in a cost savings of several Million\$ per annum in monetary value as well.

Many more projects are always in the pipeline

- ↓ 57% - Small Packs
- ↓ 42% - Medium Packs
- ↓ 27% - Large Packs

389 MT of packaging materials eliminated / year



3. STRATEGY

and overcoming the hurdles



Mondelēz Packaging Sustainability Approach in a Nut Shell

Attitudes to sustainability are changing across the entire value chain

Consumers & retailers look ever more for sustainable products and services

Sustainable solutions and services command a premium price point.

Shareholders encourage that we address environmental related risks and maintain their competitiveness through innovation and new technologies / processes

Everyone expects **us** to take responsibility and make our value chain and those of our partners/suppliers totally transparent.

The MDLZ approach is built around making sense of the total picture and leveraging the information which can be generated – not just chasing every new solution being promoted in the marketplace

Understand the true “levers” which will deliver sustainability

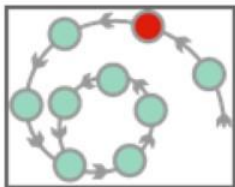
Understand how exactly sustainability **underpins business objectives** and where the best results for delivering sustainability can be realized

Create real measure which drive the correct behaviours in the organisation

Our Metrics are part of everyday activity:
Our clear targets & scientific basis to all that we do to achieve them, e.g., MDLZ bespoke **Eco-Calculator** help us keep on course

Re-invent designs, materials technologies and processes

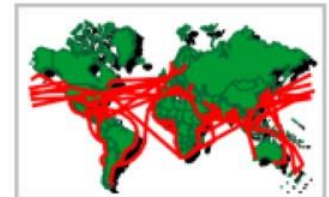
To demonstrate our commitment, we are constantly exceeding our **packaging weight reduction target of 65,000 MT** between the years 2013 & 2020 on a YoY basis



The Waste Hierarchy



Cost and total Environmental Impact



Overcoming some of the hurdles to Sustainable Packaging

Costs

Find different ways to optimize costs while making our packaging sustainable. We constantly monitor & harness the evolution in the materials arena, design, & conversion technology etc. Combining the power of big & small, we also find elements in the packaging that can be recycled or that can be made from post-consumer waste.

Scientific Basis

At MDLZ we don't just design and forget about the rest of the process. We use Eco Tool. We also ask ourselves: is the paper FSC certified? How can we maximize PCW content without needing to increase virgin fiber content? How to use structural design to reduce the carbon footprint for shipping?

Engage the consumer

Keep it simple - make the directions short and clear, consumers don't have the patience to read complex recycling instructions. New processes are also being developed to further recyclability in packaging. Keep an eye & emulate/ build upon them where beneficial.

Diversity of standers in global arena

Deep dive into the regulations both, global and local. This is imperative when making design decisions and selecting substrates. The simplest method may be to follow Japan, EU or California's lead and implement their norms beyond compliance for the rest of the places

Food Protection vs. Green

Currently , some of the essential processes like laminations , metallization and coatings etc. could limit the recycling potential overall.

Focus on research to find alternatives that will make the packaging fully protective & still look aesthetically pleasing.

Use of color, hierarchy and graphics to convey the simple brand message.



4. MAKING THE DIFFERENCE

YOU yourself are making a BIG difference





TUESDAY
THOUGHTS

"The beach may
be long.
There may be
millions of starfish.
But throwing one back
means one life saved.
You can make
a difference!"

-PRAKASH TYER



TIME TO STEP UP YOUR
INDIVIDUAL OWNERSHIP
AND MAKE A BIGGER
DIFFERENCE TO THE
SUSTAINABILITY VALUE
STREAM TODAY

THANK YOU

Keep making the difference

