

A large, yellow industrial machine, likely a PET bottle blowing machine, is the central focus. It has a large glass-enclosed section showing internal components and a control panel with a screen on the right. The machine is situated in a dark industrial environment with various structural elements visible in the background.

# **HUSKY®**

## **Market Trends and New Opportunities for PET packaging**

Mustafa Öztürk,

September 17, 2014

# Where are the opportunities for growth?

**First Moment  
of Truth**



**Right-weighting**



**Smaller  
Package Size**



**Necessary  
Diversification**



**Lowest Total  
Cost to Produce**



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# Global Beverage Market



**1** Trillion Units  
Global Beverage  
Packaging Retail  
Volume in 2013

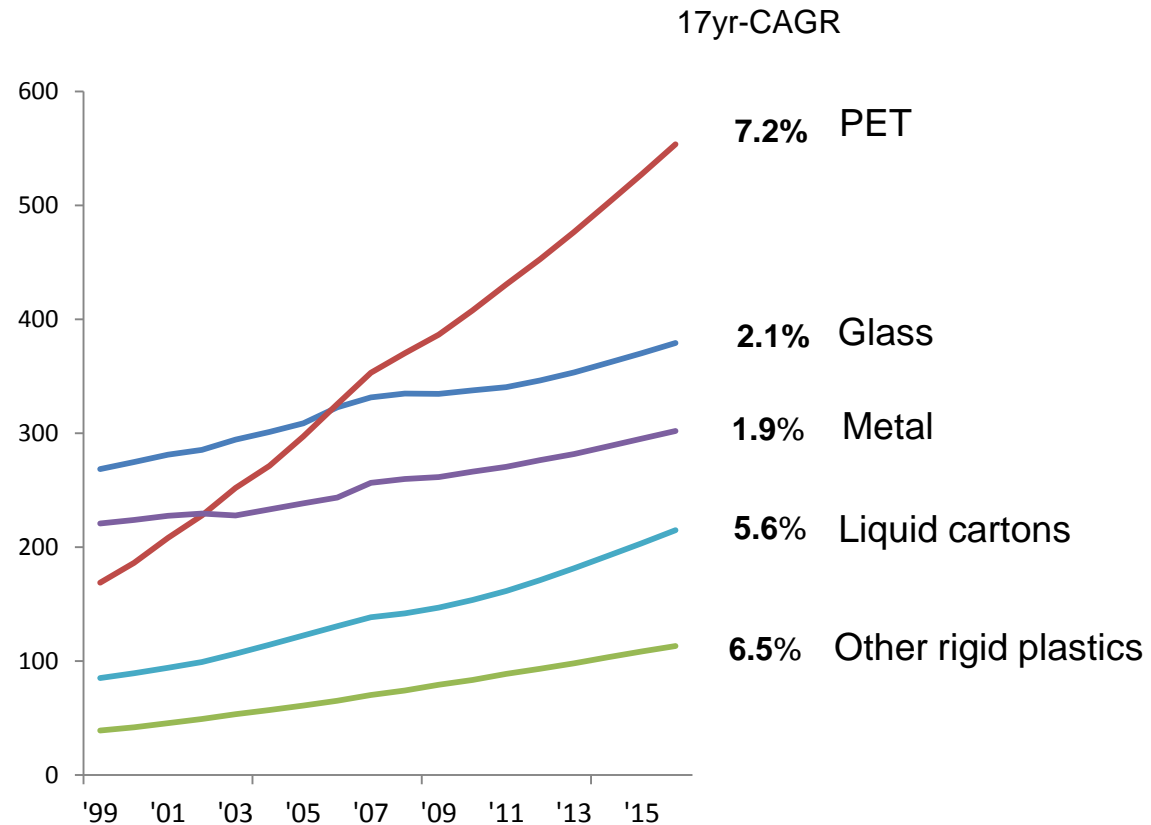
**373** Billion  
PET Bottles Retail Units  
Volume in 2013

**98%** of the Global  
PET Bottles  
are for non-alcoholic drinks

Source : Euromonitor International 2014

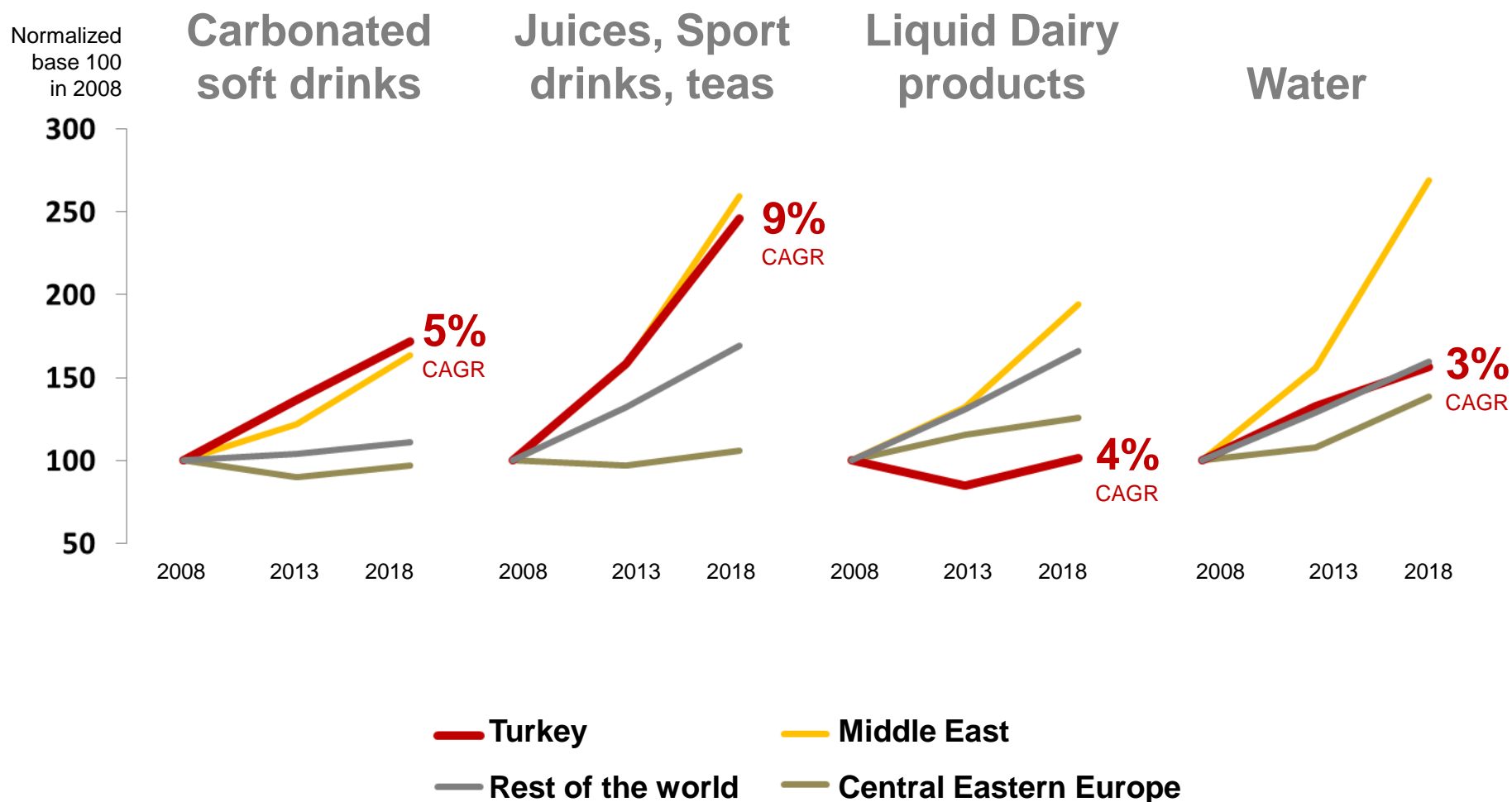
# PET is the Fastest Growing Packaging Substrate

Global Packaging Demand (billions of units)



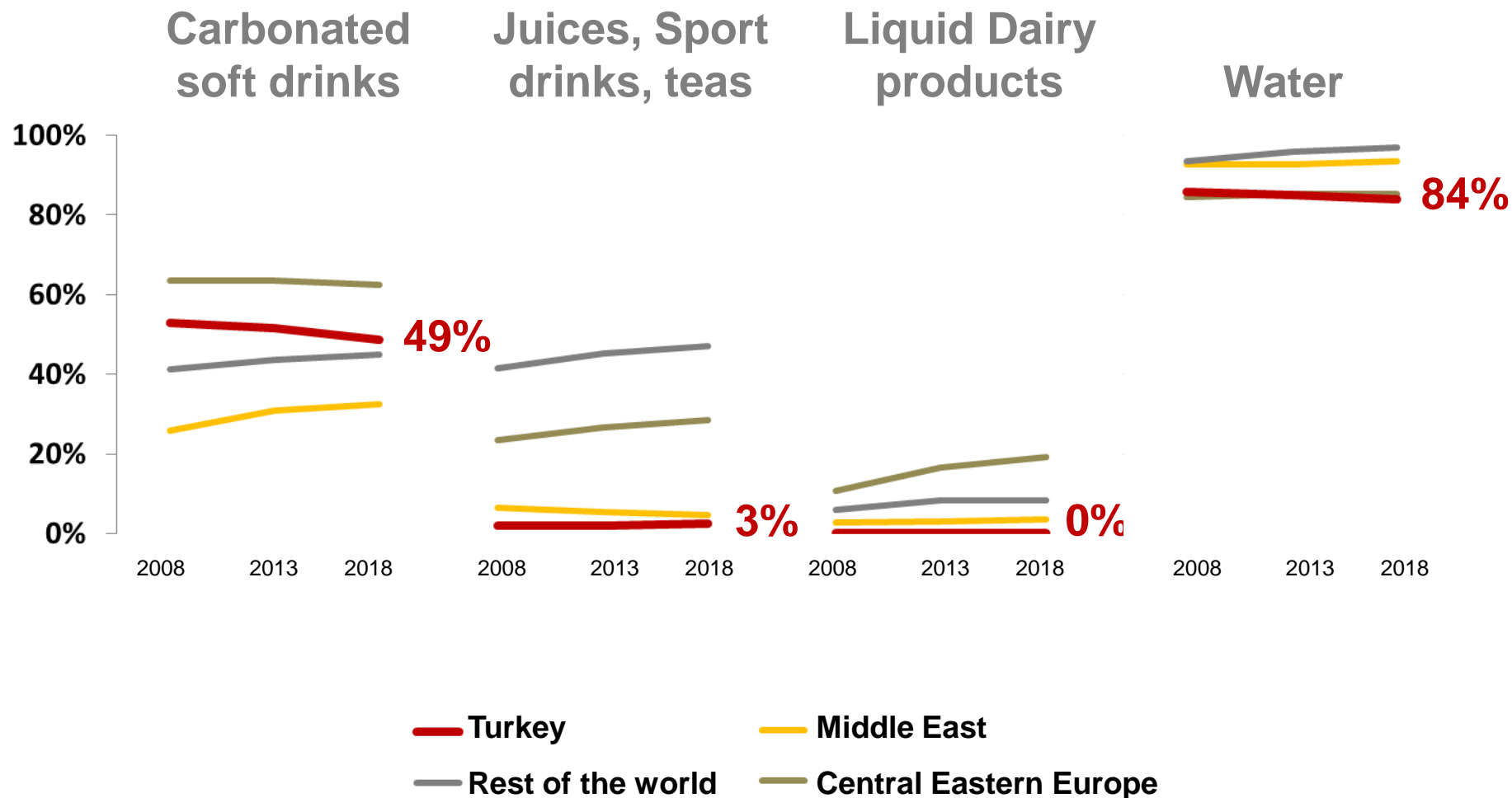
Source: Euromonitor 2013

# Turkey shows stronger than average growth in carbonated soft drinks, juices, sport drinks & teas



Source: © Euromonitor International

# In Turkey, PET has a market share below average for all beverages except carbonated soft drinks



Source: © Euromonitor International



# Shelf appeal enabled by freedom in packaging design





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**Right-weighting**

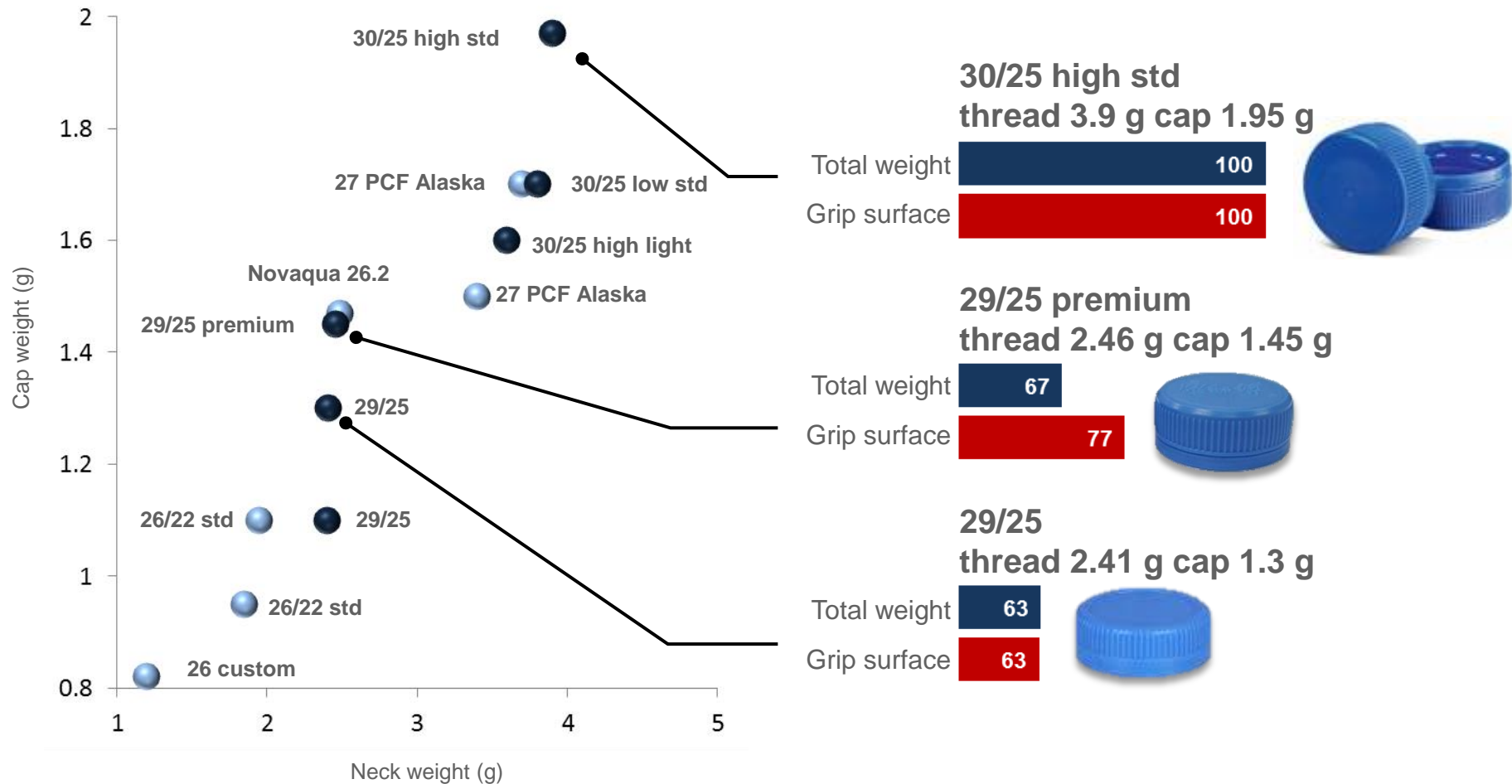
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# Reduce costs with increasing emphasis on customer expectations



# Freedom in packaging design helps combine lowest weight and best consumer experience



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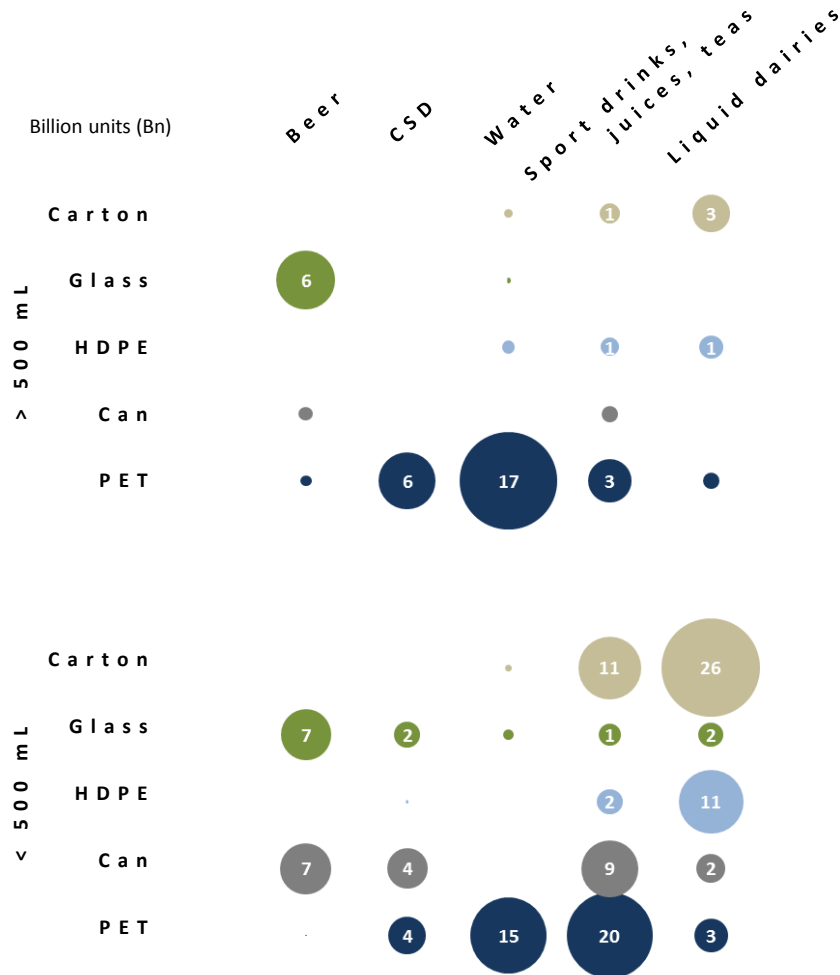
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# Juices and liquid dairies represent majority of cumulative additional consumption over 2013–2017



## 163 Billion

cumulative additional consumption of beverage packages over 2013–2017

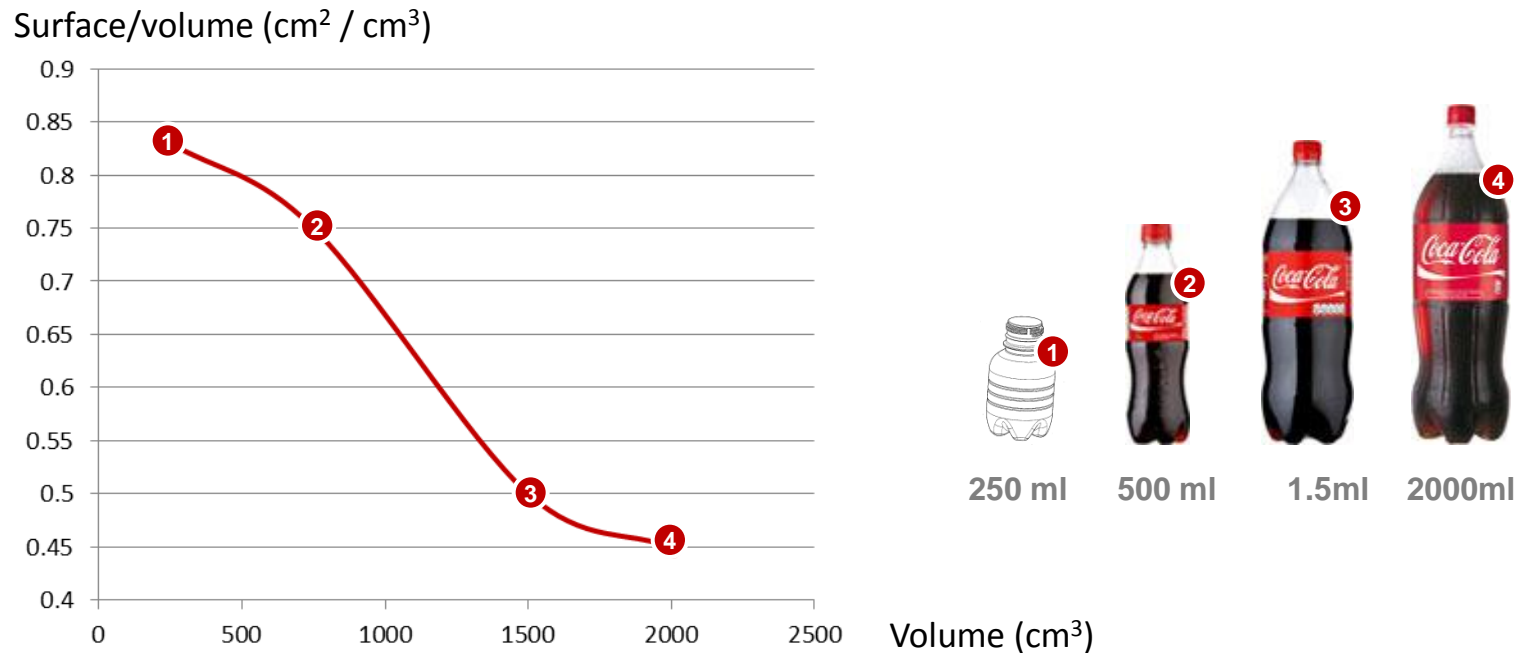
## 60%

juices, teas, sport drinks and liquid dairies

## 80%

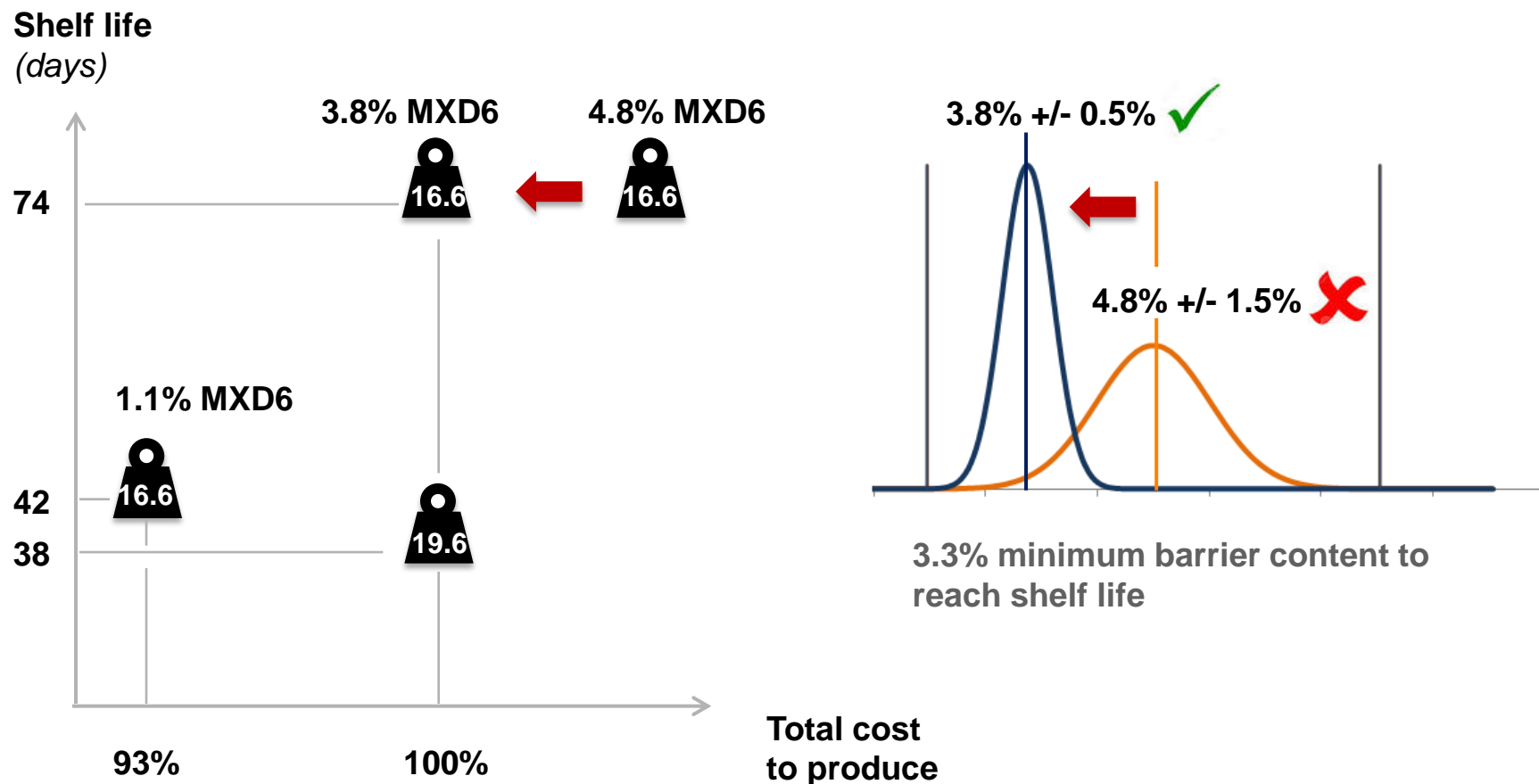
small formats < 500 mL

# High surface/volume ratio on small packages causes shelf life to drop, for a given permeability



## CO<sub>2</sub> loss, Light and O<sub>2</sub> ingress

# Husky is committed to developing a total system solution to enhance packages barrier properties, taking advantage of superior melt control technology





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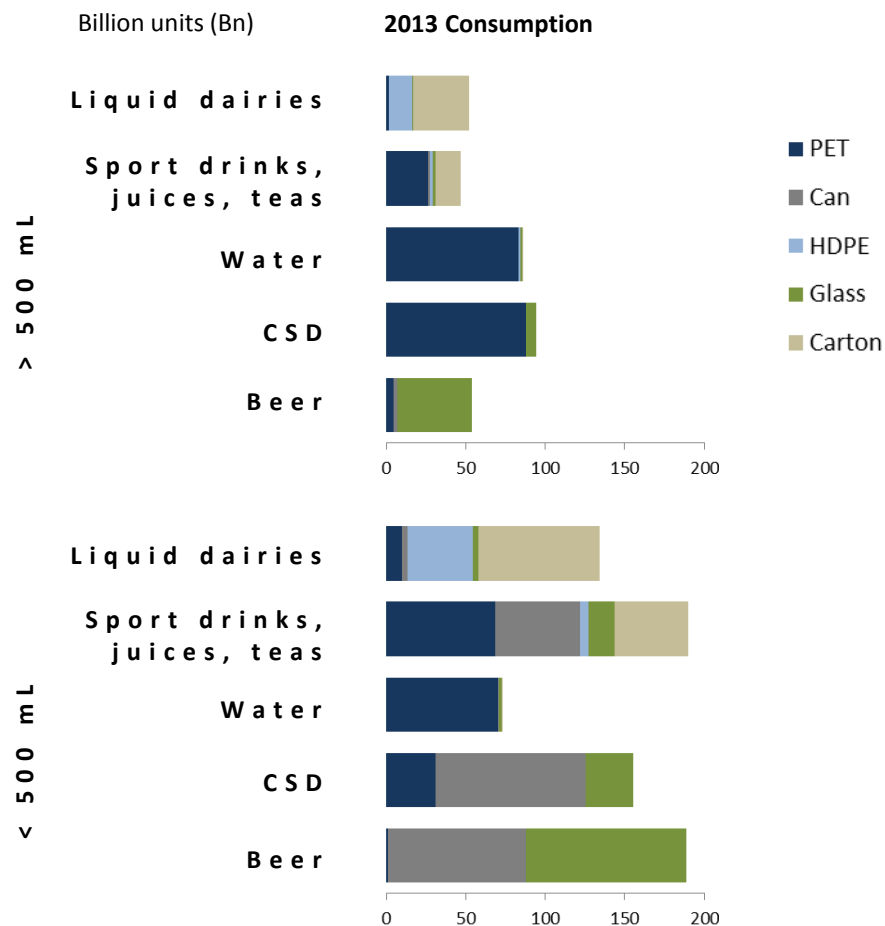


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# Opportunities to convert cans and cartons to PET on small packages, CSD, juices and liquid dairies



**85%**

PET market share for large format CSD, water, sport drinks, juices and teas

**40%**

PET market share for small format CSD, water, sport drinks, juices and teas

**6%**

PET market share for liquid dairies

# PET is challenging the incumbent cartons and HDPE



Clear PET



PET monolayer  
w/ TiO<sub>2</sub> low %



PET monolayer  
w/ TiO<sub>2</sub> high %



PET multilayer  
w/ TiO<sub>2</sub> + carbon

## COLD CHAIN

≈ 10 days  
White



EBM  
HDPE



3 layer  
carton



EBM  
HDPE



3layer  
TETRAPAK

≈ 5 weeks  
Flavored

## ROOM TEMPERATURE

3 months  
White



EBM multilayer  
HDPE



6 layer  
EVERO



6 layer  
carton

6 – 9 months  
UHT - White

# PET solutions exist that can match the barrier to light of cartons



TiO<sub>2</sub> 8 %

TETRATOP

TiO<sub>2</sub> 10-12%

Dairy O+

Co-Inj WBW  
27 gr  
2.4 mm WT  
10 % TiO<sub>2</sub>  
16% Carbon black  
10% TiO<sub>2</sub>

EVERO

Co-Inj WBW  
33 gr  
3.2 mm WT  
10 % TiO<sub>2</sub>  
16% Carbon black  
10% TiO<sub>2</sub>

Lightning with 50W bulb

# Equipment specifically designed to support growth with small production of high value packages for wide mouth applications



## 2-16 cav

available for wide mouth applications on H-PET AE

## 70-185 mm

max preform diameter for wide mouth applications on H-PET AE



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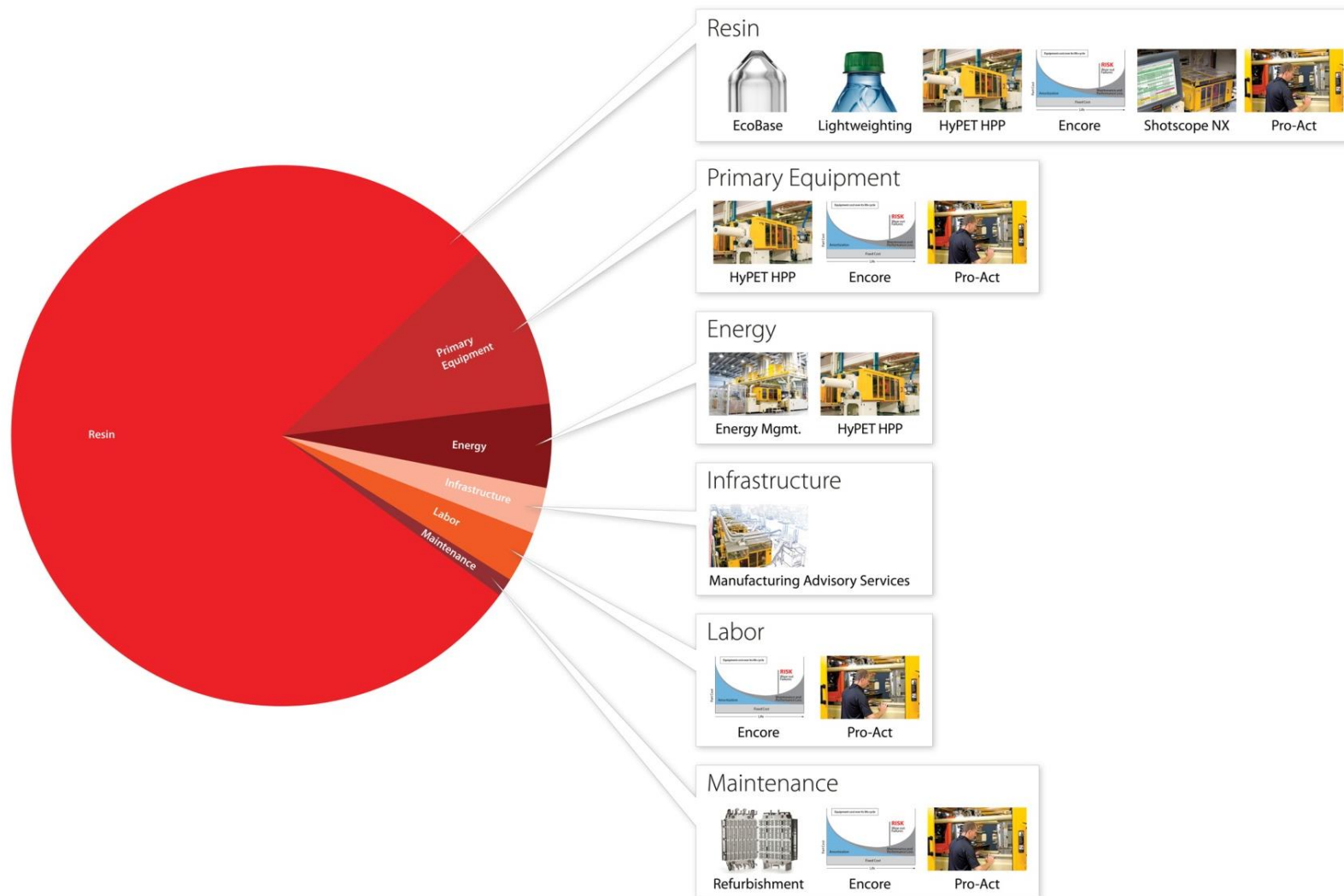


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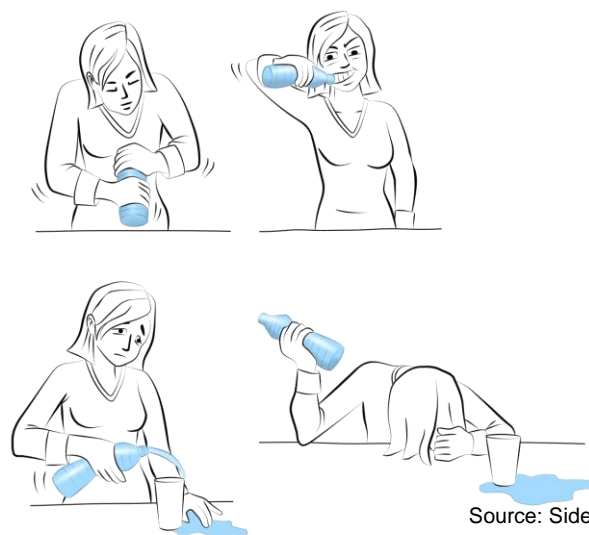
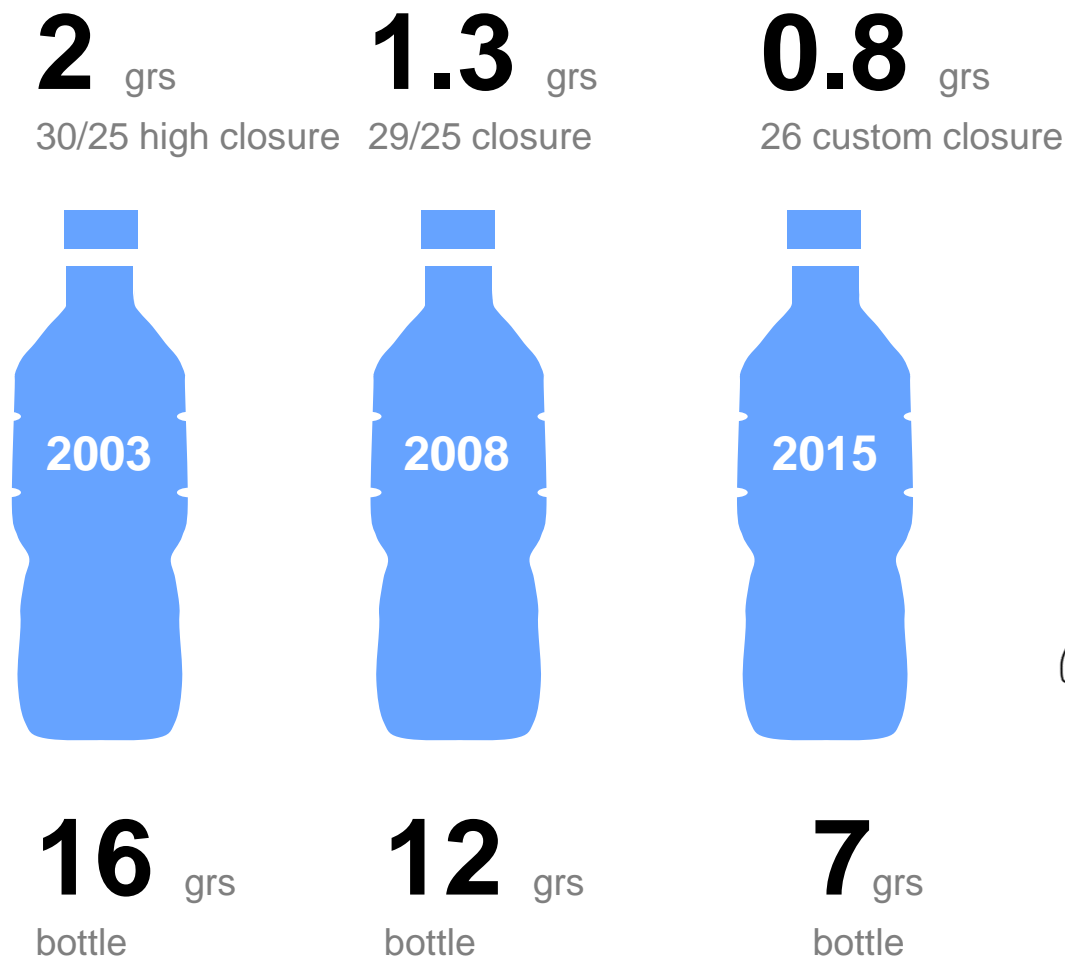


# Enabled by weight saving, high OEE and reduced operations costs



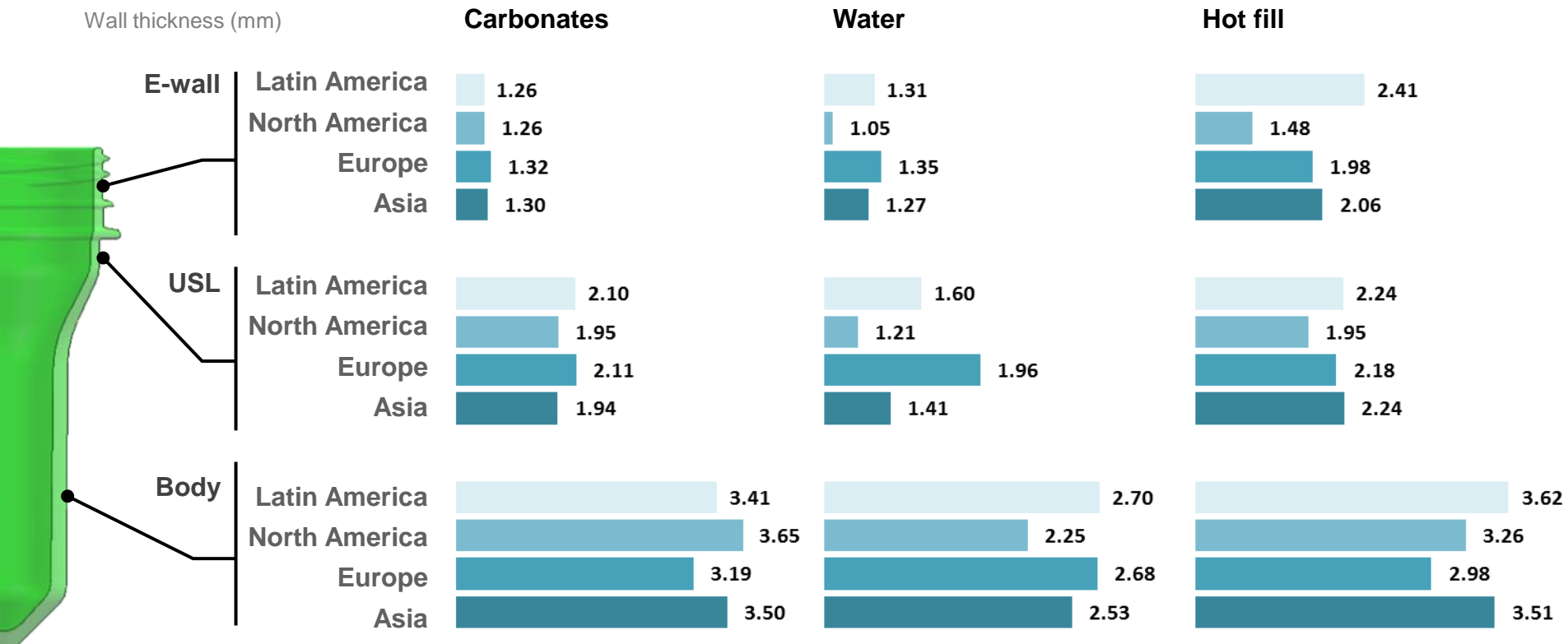


# For water in PET, industry has a track record of making the impossible weight savings possible



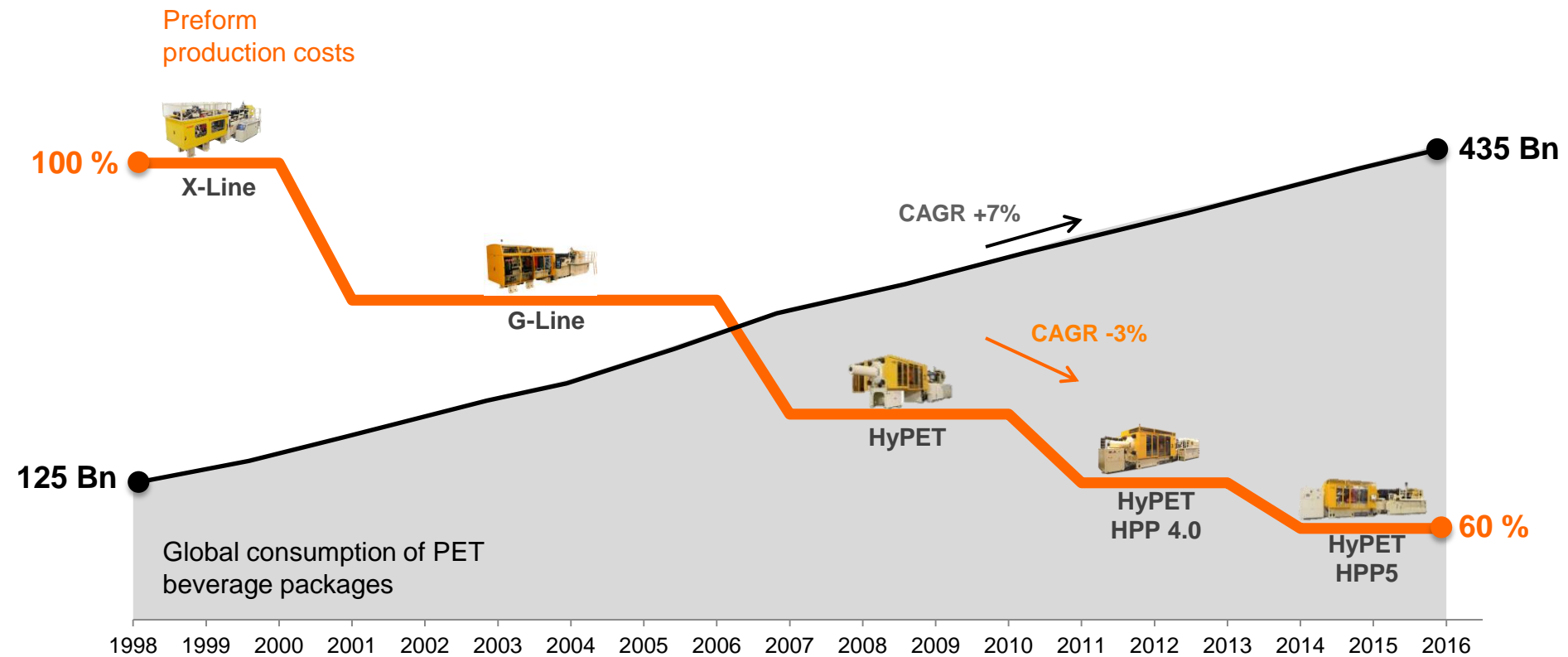
Source: Sidel

# Husky has the largest data base to help you benchmark your application and keep your package in the lead



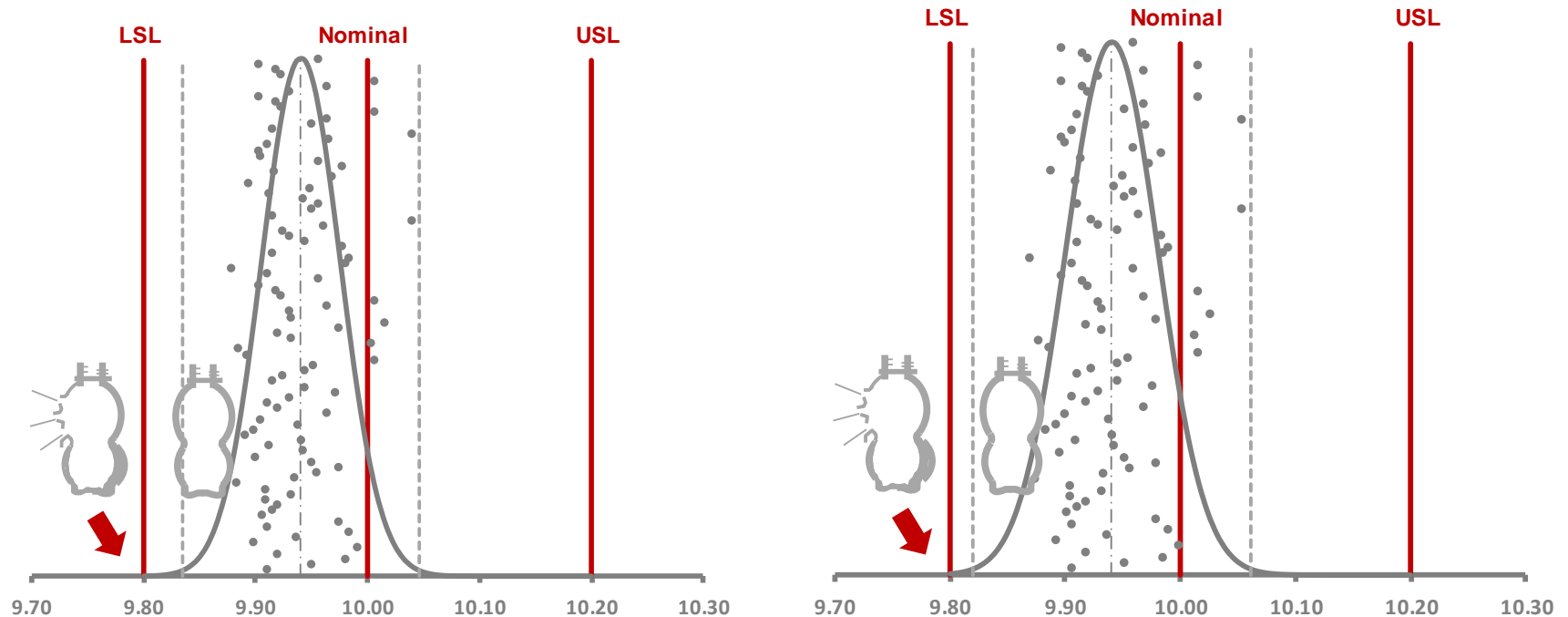
Source: HUSKY data base of 2,500 project over five years

# Husky has the most reliable track record of supporting conversion costs reduction



CAGR: Compound Average Growth Rate

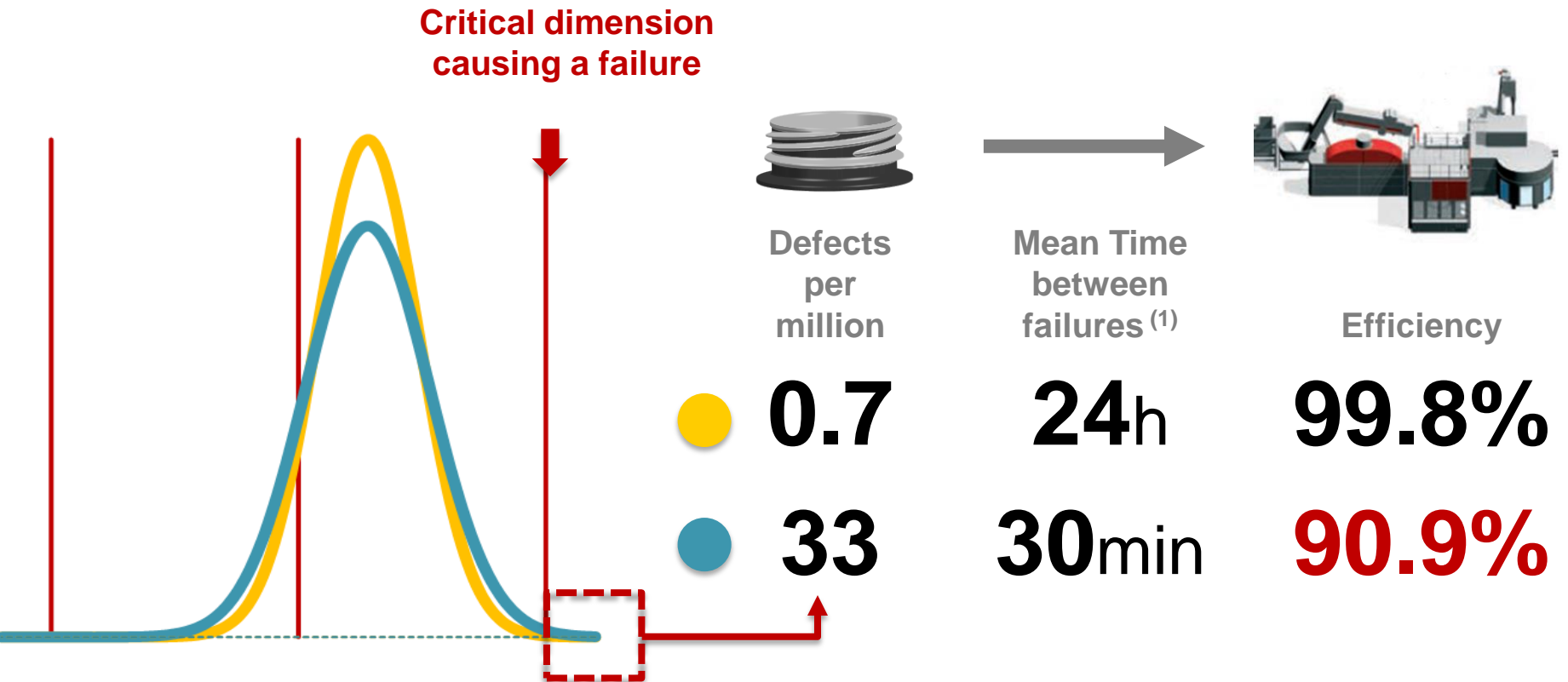
# Capability is an critical tool for preform producers, to control both resin costs and risks of defects



Cm **1.89**  
Cmk **1.33**  
Defects per Millions **33**

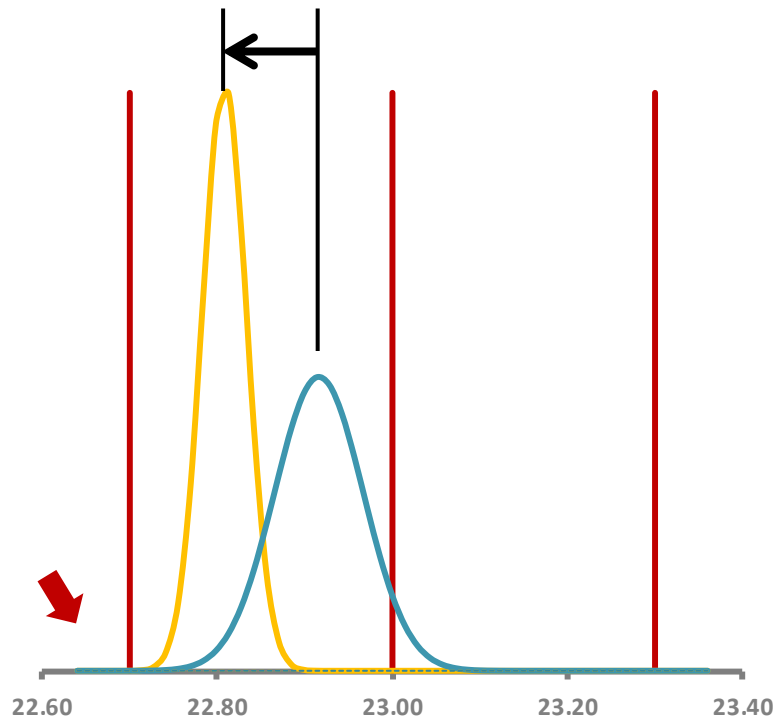
Cm **1.66**  
Cmk **1.16**  
Defects per Millions **240**

# Capability at injection level has an exponential impact on efficiency of downstream equipment



(1) Assuming 60,000 bph and 3 min Mean Time To Repair

## Superior capability allows for resin cost reduction, by shifting the nominal weight of production



# 0.1gr

the weight reduction allowed with higher capability, for the same given risk level

■ Cm 3.94  
Cmk 1.42  
Defects per Million 10

■ Cm 1.97  
Cmk 1.42  
Defects per Million 10

# A leading supplier to the plastic injection molding industry providing complete system approach and value added services

Beverage Preforms



Beverage Closures



Specialty Closures



Medical Molds



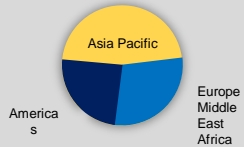
Hot Runners



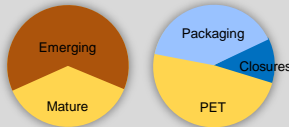


# Positioned for industry's best service and support

4,200+ Husky team members



> \$1.3 billion revenue in 2012



470+ dedicated Husky customer support



250–300 systems per year



500 molds and cold halves per year



500 conversions and refurbishment projects per year



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