



Jo Stephenson - VP Marketing & Innovation - LINPAC Packaging

GLOBAL CHANGE: WHAT DOES IT MEAN FOR OUR INDUSTRY?



Contents

- Global Change - What does it mean?
- Global Packaging Market Today
- Consumer Packaging Insights
- What do they mean for us?
- How is LINPAC working to support the food industry



Changing world



“The size of the world economy will triple over the next four decades as emerging-market economies wield increasing power”

January 4th 2011
HSBC Holdings Plc

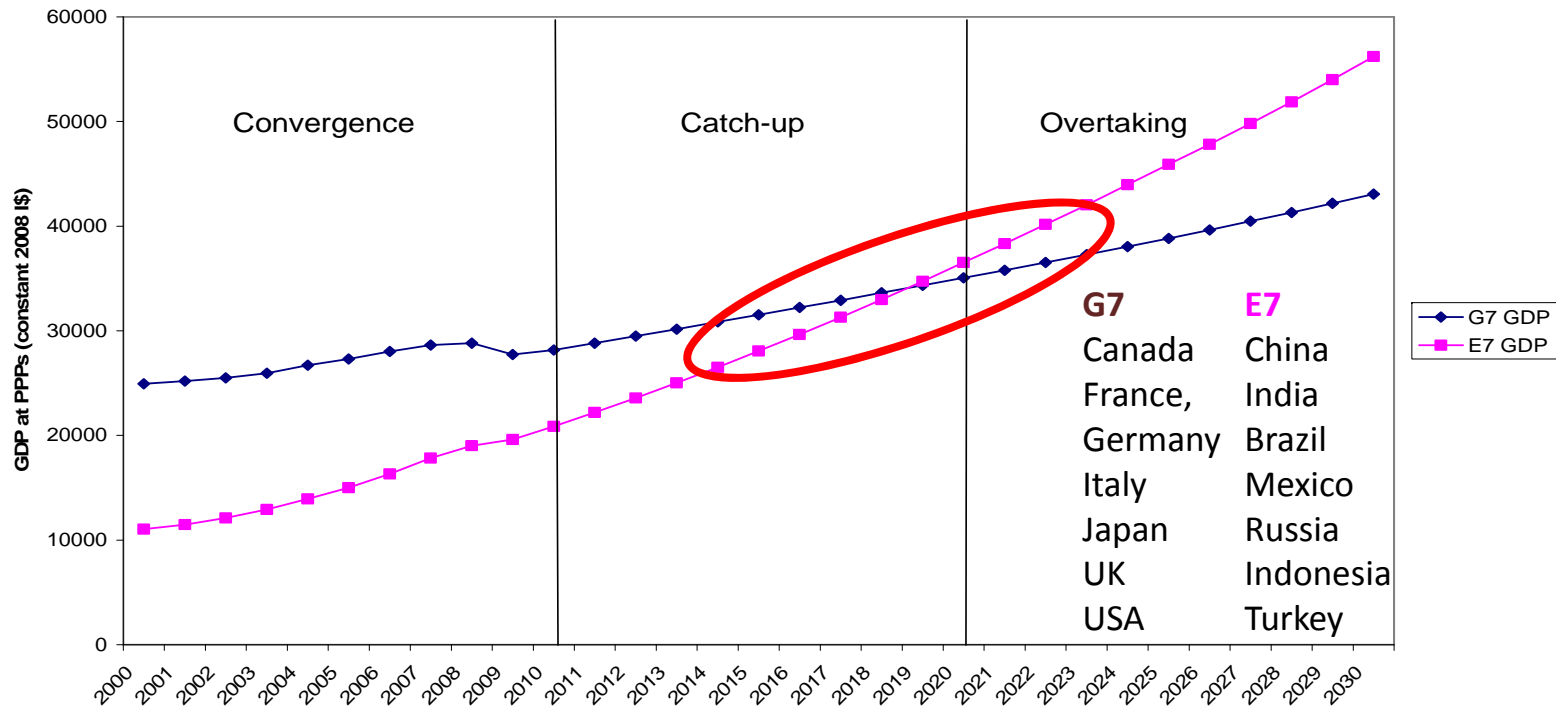


“World GDP to double within two decades”

April 20th 2011
Standard Chartered



E7 to catch G7 in 2019

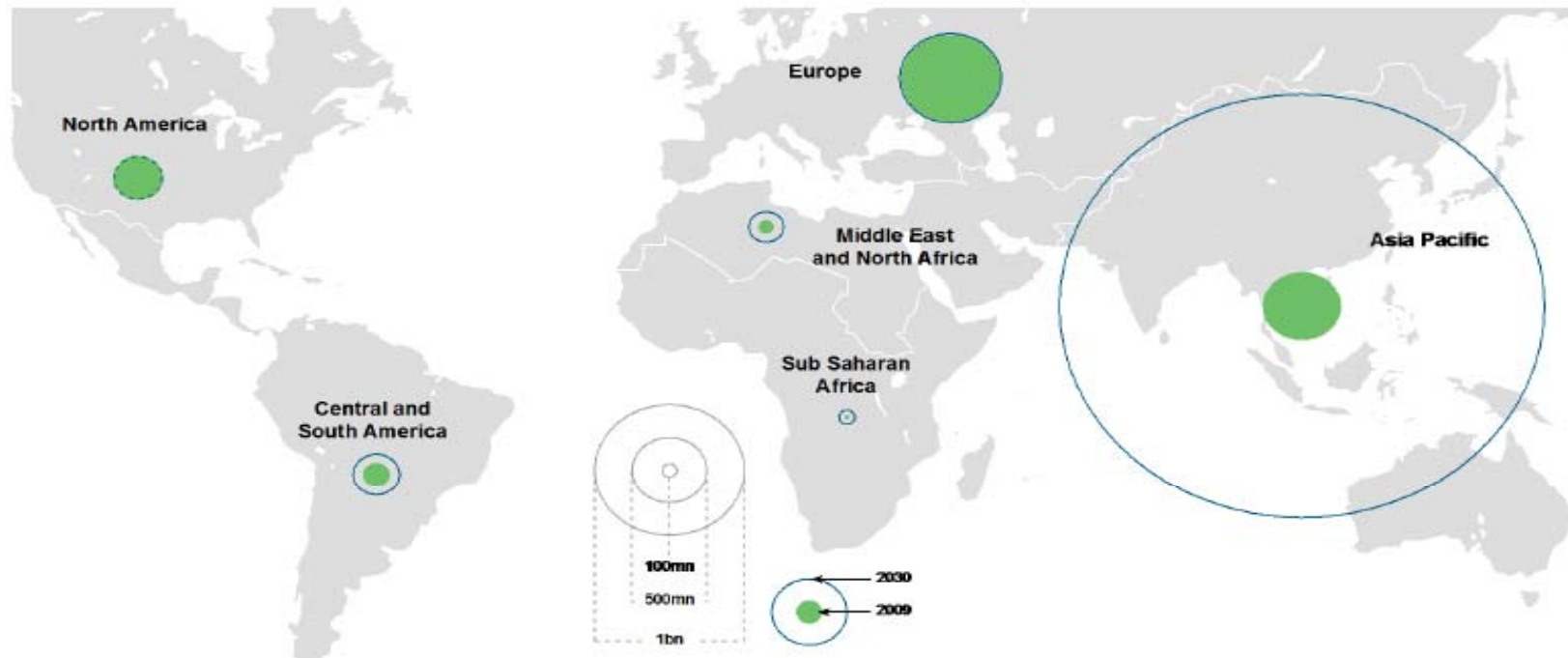


Source: World Bank for 2000-8, PwC projections of actual GDP in 2009-10 and trend GDP thereafter



Source: PwC: January 2010 <http://www.ukmediacentre.pwc.com/Content/Detail.asp?ReleaseID=3547&NewsAreaID=2>

Middle Class 2011 - 2030



70 million becoming 'Middle Class' every year



Source: McKinsey – World Economic Forum

Global warming

- Average temperature 2100
1.8 to 4 degrees Celsius higher
- More frequent, intense and longer:
 - floods, droughts and heat waves
- Reduce crop yields in Africa, Asia and Latin America by 20% - 40%
- 20% - 30% of species at risk of extinction



European sustainability

- Need to:
 - Use less energy
 - Reduce carbon emissions
- By 2020, EU to reduce energy needs by 315 TWh (terawatt hour) per year.
 - Combating unnecessary use
- Water scarcity.
 - Water scarcity - major constraint on food production.
- Bringing more land into production is not an option.
 - Only achieved by clearing the world's rain forests.



<http://www.innovationeu.org/news/innovation-eu-vol2-1/0266-renewable-energy.html>

<http://www.sweden.se/eng/Home/Society/Sustainability/Facts/Sustainable-living/>

http://www.publicservice.co.uk/feature_story.asp?id=15466

New Polar sea route

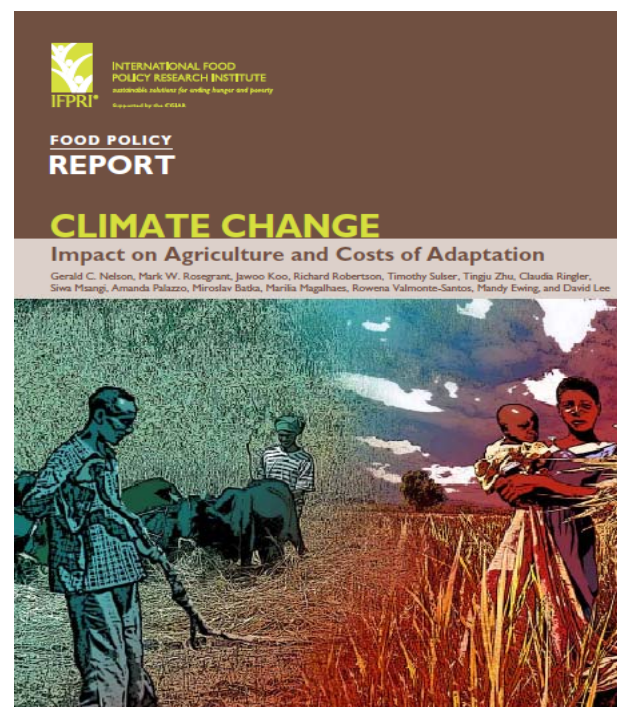


Pen Hadow, Arctic Explorer

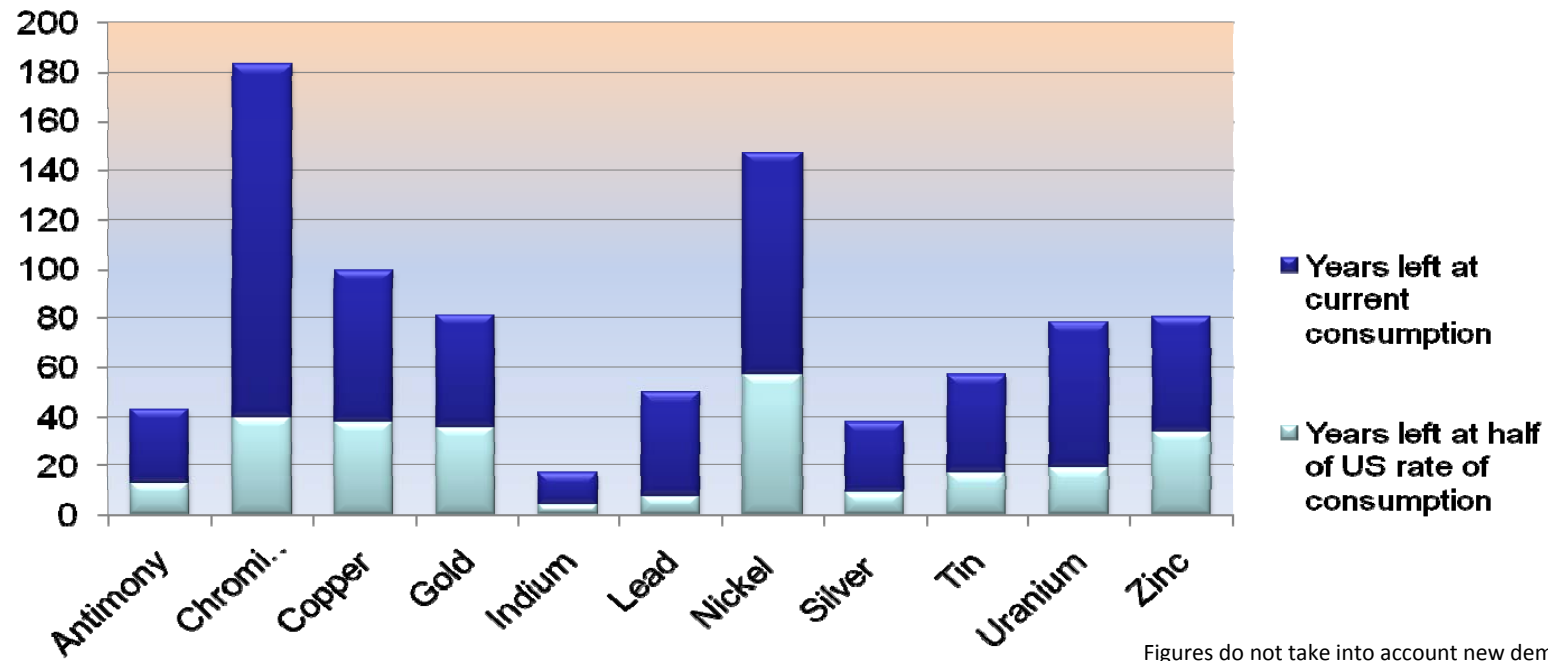


Food production innovation

- **Food prices to triple by 2050**
International Food Policy Research Institute .
- **Without climate change prices rise:**
 - 40% for wheat
 - 60% for both rice and maize by 2050
 - As the world population grows.
- **With climate change:**
 - Wheat prices to rise 170% to 194%
 - Rice prices 113% to 121%
 - Maize to go up 148% to 153%.



Increasing scarcity of key materials for many technologies

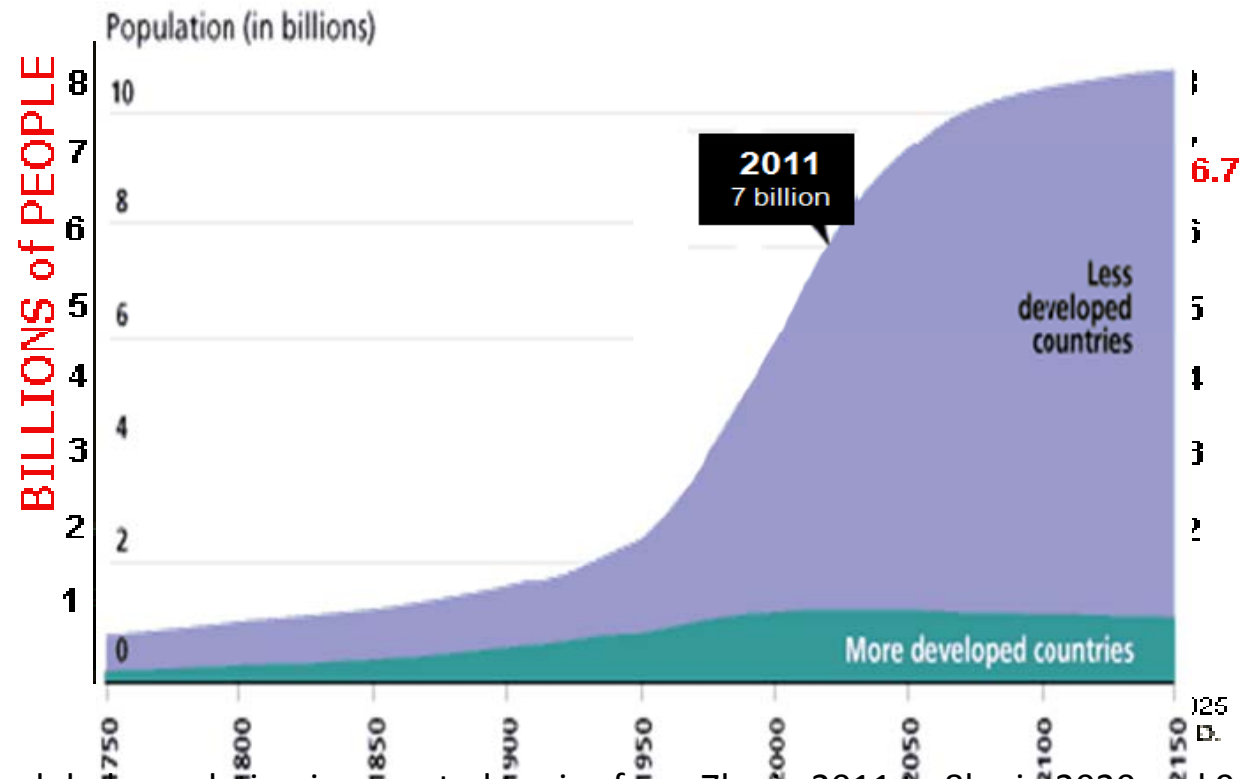


Figures do not take into account new demand arising from new technologies



Source: LabNol 'How Long Will Rare Metals Last?' October 2009
<http://www.labnol.org/home/how-long-will-metals-last/10648/>

Global population growth



The global population is expected to rise from 7bn in 2011 to 8bn in 2020 and 9.2bn in 2050



Urbanization

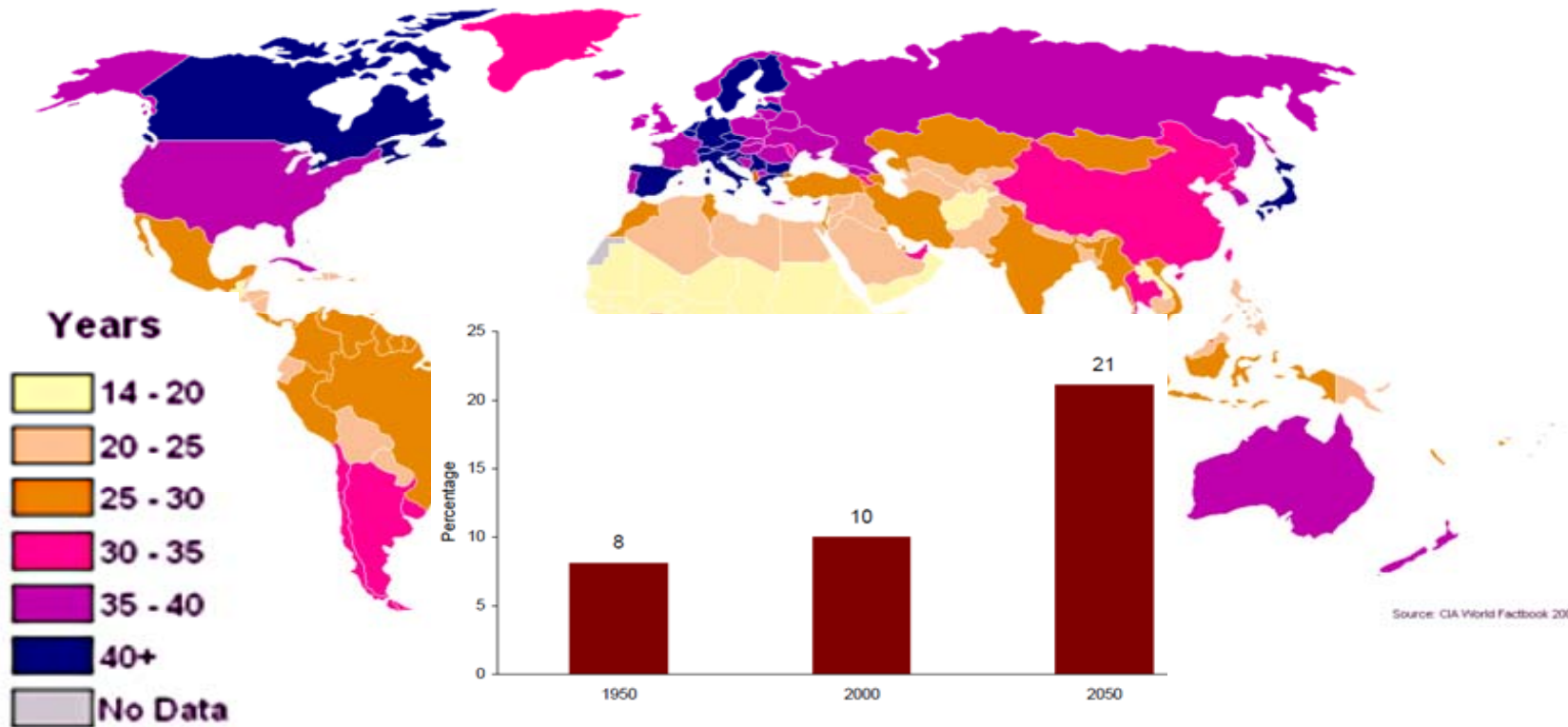


Smart Cities



Vertical farming

Ageing populations



Percentage of Global population over 60

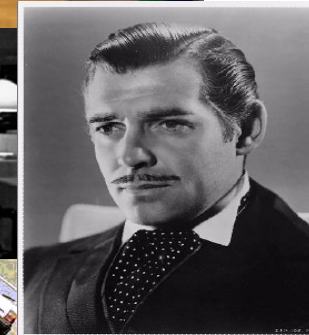
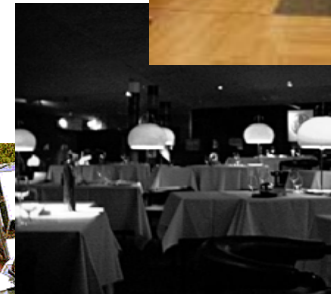
Life expectancy climbing

- Men born in 1985 can expect to live to 91 ...all existing projections are too low.
- Upper forecast - 97.
Cass Business School - 2009
- Those with access to advanced technologies can expect a healthy life beyond 120 years Institute for Alternative Futures



and what do older people want ?

- Larger Print
- Relevant icons
- Brighter lights
- Seating
- Parking
- Toilets
- Time
- Etc.



Obesity



VITAL STATISTICS			
Percentage of obese men: ♂		Percentage of obese women: ♀	
1. Malta	25.1%	1. UK*	23.0%
2. UK*	22.3%	2. Germany	21.7%
3. Hungary	19.7%	3. Malta	21.2%
4. Germany	18.8%	4. Latvia	19.0%
5. Lithuania	16.3%	5. Hungary	18.1%
6. Ireland	15.1%	6. Estonia	16.7%
7. Finland	14.7%	7. Lithuania	15.8%
8. Czech Rep	13.5%	8. Portugal	15.9%
9. Slovakia	13.5%	9. Czech Rep	15.3%
10. Portugal	13.4%	10. Slovakia	15.0%

* Figures for England only



By 2015, approximately 2.3 billion adults will be overweight and more than 700 million will be obese.

(The World Health Organisation)

Drivers of the consumer shift

1. Better educated (more savvy).
2. Declining disposable income
3. Transparency - of pricing and operations afforded by the internet.
4. Social media penetration.
5. Demand for personalized products.
6. Lower barriers to entry in many industries leading to increased competition.
7. Smart technology
8. 24/7 society.
9. Trust in business. (or lack of)
10. The rise of Green.
11. Service differentiation now key.



Ethical consumerism

“Roughly **40%** of the food currently produced worldwide is wasted before it is consumed.”

Brian Halweil of the Worldwatch Institute

“We are seeing a trend toward ethical consumerism,”

Jens Lönneker, Cologne based Rheingold



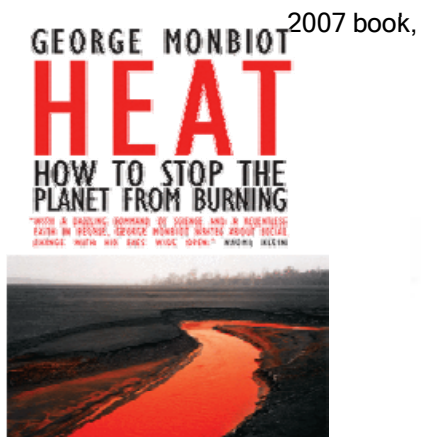
<http://pennalternativefuels.com/content/innovative-local-farming-key-global-hunger-fight-group-says>

http://www.greenerpackage.com/green_marketing/interpack%E2%80%99s_eye_sustainability

Online Shopping is Green

“If deliveries completely replaced shopping in “distant stores” there might be a 80% to 90% reduction in carbon emissions.”

George Monbiot in his Heat.



http://carnbikes.files.wordpress.com/2008/07/online_shopping.jpg



<http://www.triplepundit.com/2009/05/is-the-warehouse-model-the-future-for-grocery-stores/>

What's changing?

Everything and everybody

- Economies
- Populations
- People
- Planet
- Places
- Technology
- Work
- Business models



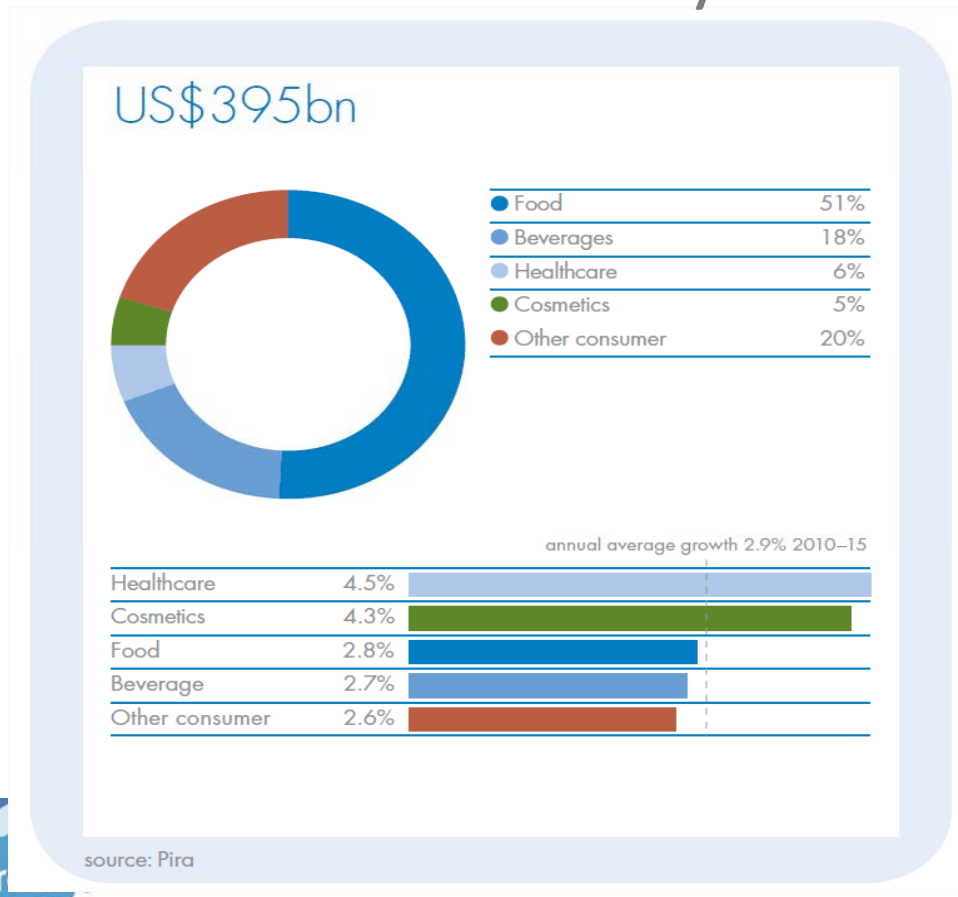
IF "Plan A"
Didn't Work.
The alphabet has
25 more letters!
Stay Cool.

The Packaging Market Overall



GLOBAL CONSUMER PACKAGING MARKET

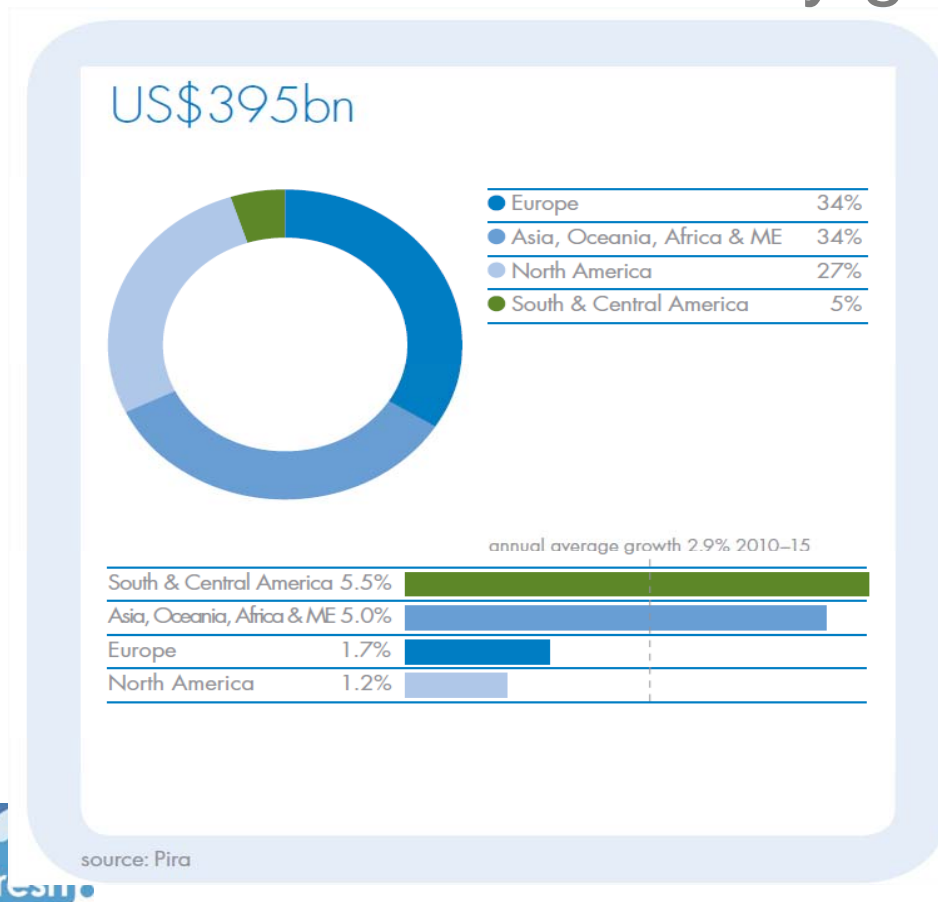
By end use



- Food Packaging is the largest segment, accounting for 51% of the total market value at US\$202bn

- Food Packaging is growing in line with overall packaging growth at c.3%

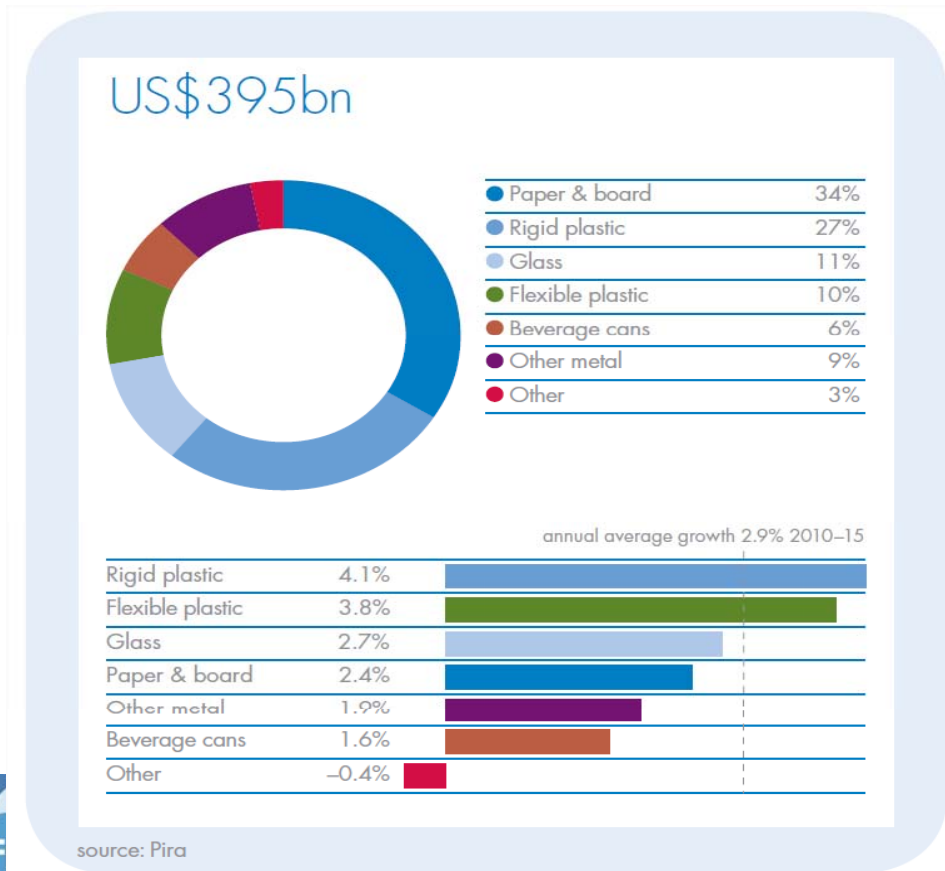
GLOBAL CONSUMER PACKAGING MARKET by geography



▪ Long term growth strongly underlines a shift in balance towards the emerging markets

▪ The Asia, Oceania, Africa & Middle East region has now increased its packaging market value share to 34%

GLOBAL CONSUMER PACKAGING MARKET by material type



- Plastic (rigid plastic and flexible) accounted for 37% of all global packaging sales in 2010, the largest share of the market

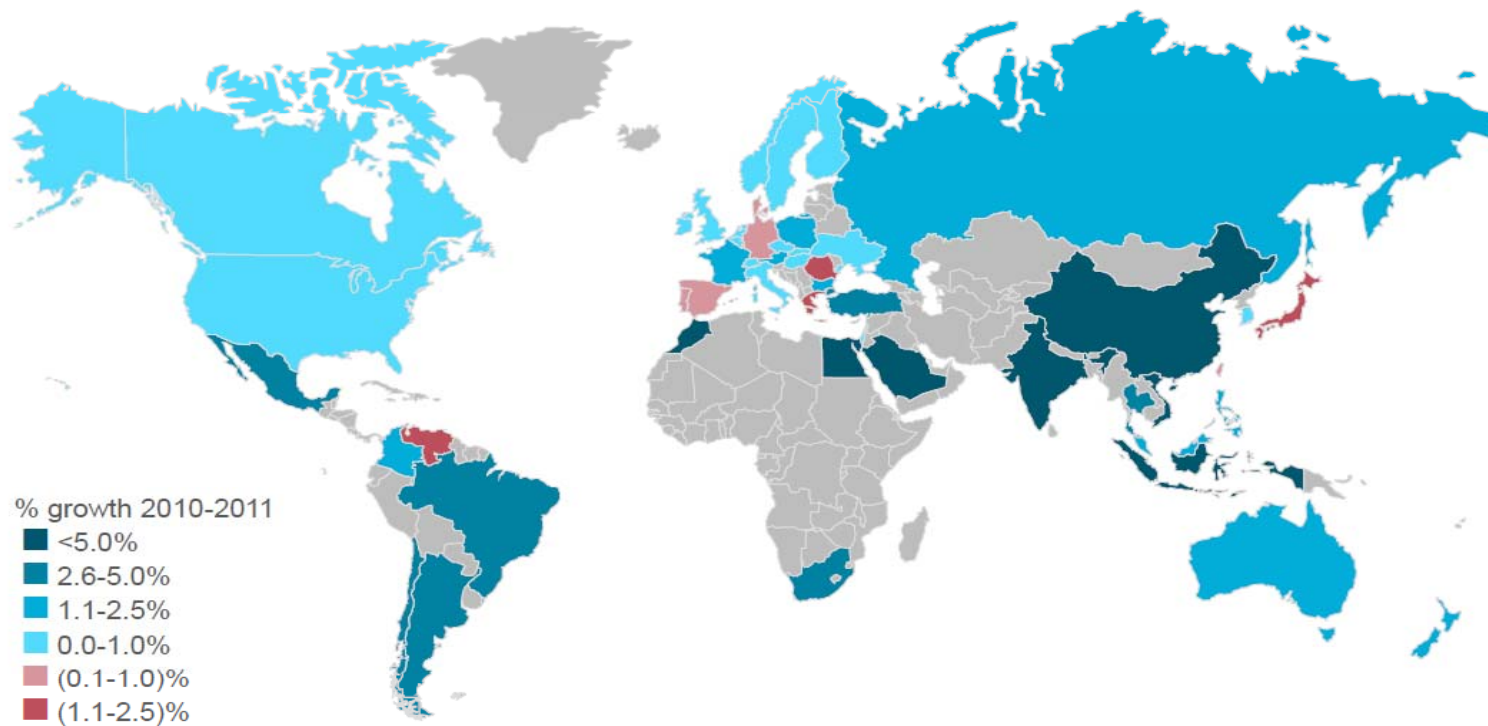
- Within plastics, rigid plastics is expected to be the fastest growing packaging material during the period 2010-2015 with a predicted annual growth rate of just over 4%

GLOBAL PACKAGING GROWTH



GLOBAL PACKAGING PICTURE IN 2011

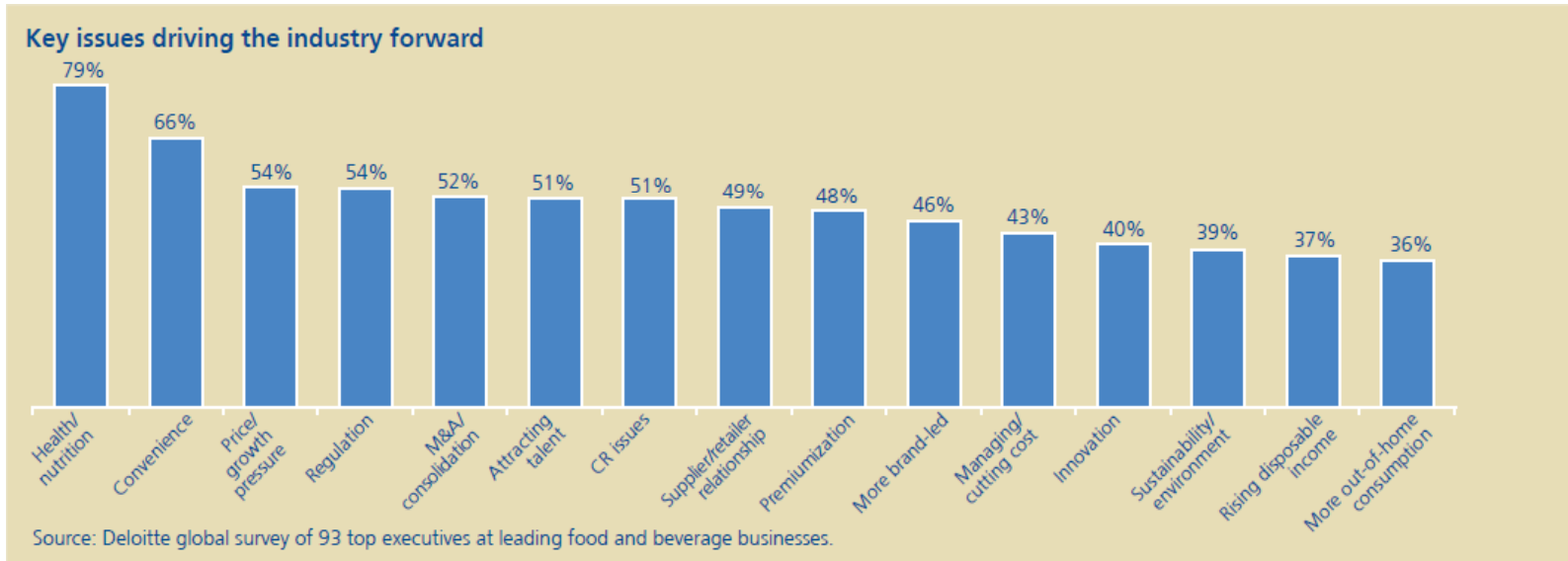
Widespread global packaging growth in 2011



Note: Retail/off-trade FMCG unit volume packaging growth 2010-2011

Source: Euromonitor Global New Packaging Developments, April 2012

FOOD INDUSTRY TRENDS

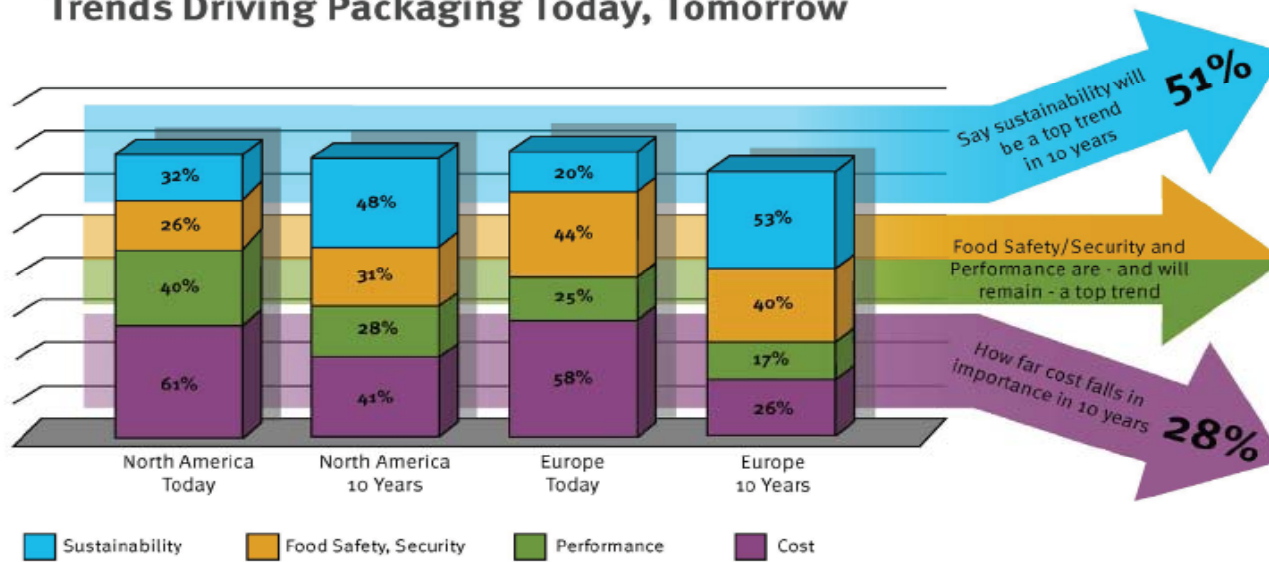


Significant indicators for packaging design going forward

FUTURE PACKAGING TRENDS



Trends Driving Packaging Today, Tomorrow



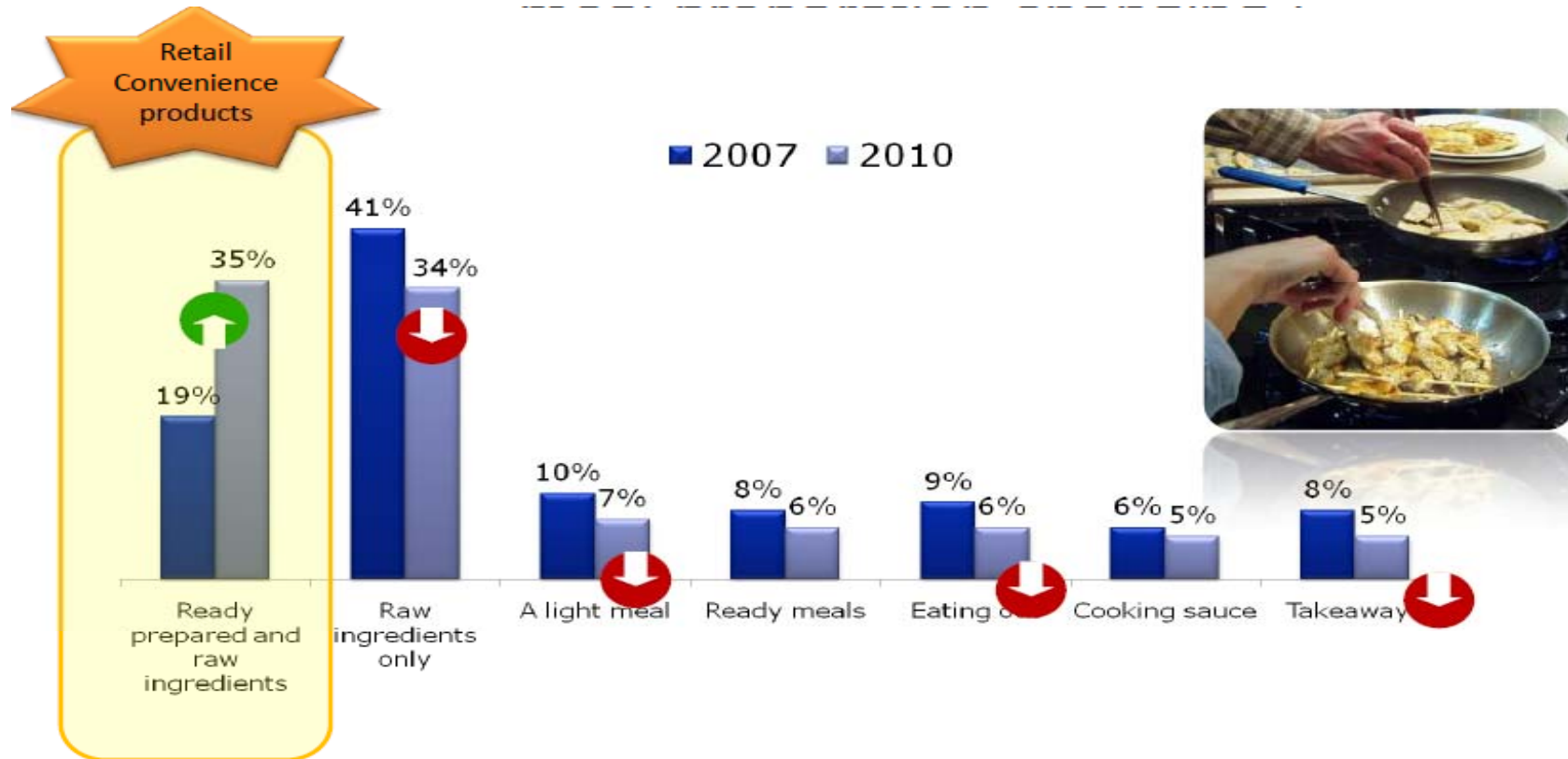
Source: 2012 *Packaging World*, DuPont survey of Future Trends
 Based on 504 responses: Please select the 2 key trends that most impact your packaging work today and the 2 trends you think will most impact the packaging industry 10 years from now.
 The number in the arrow reflects a combination of North America and Europe.



Consumer Packaging Insights

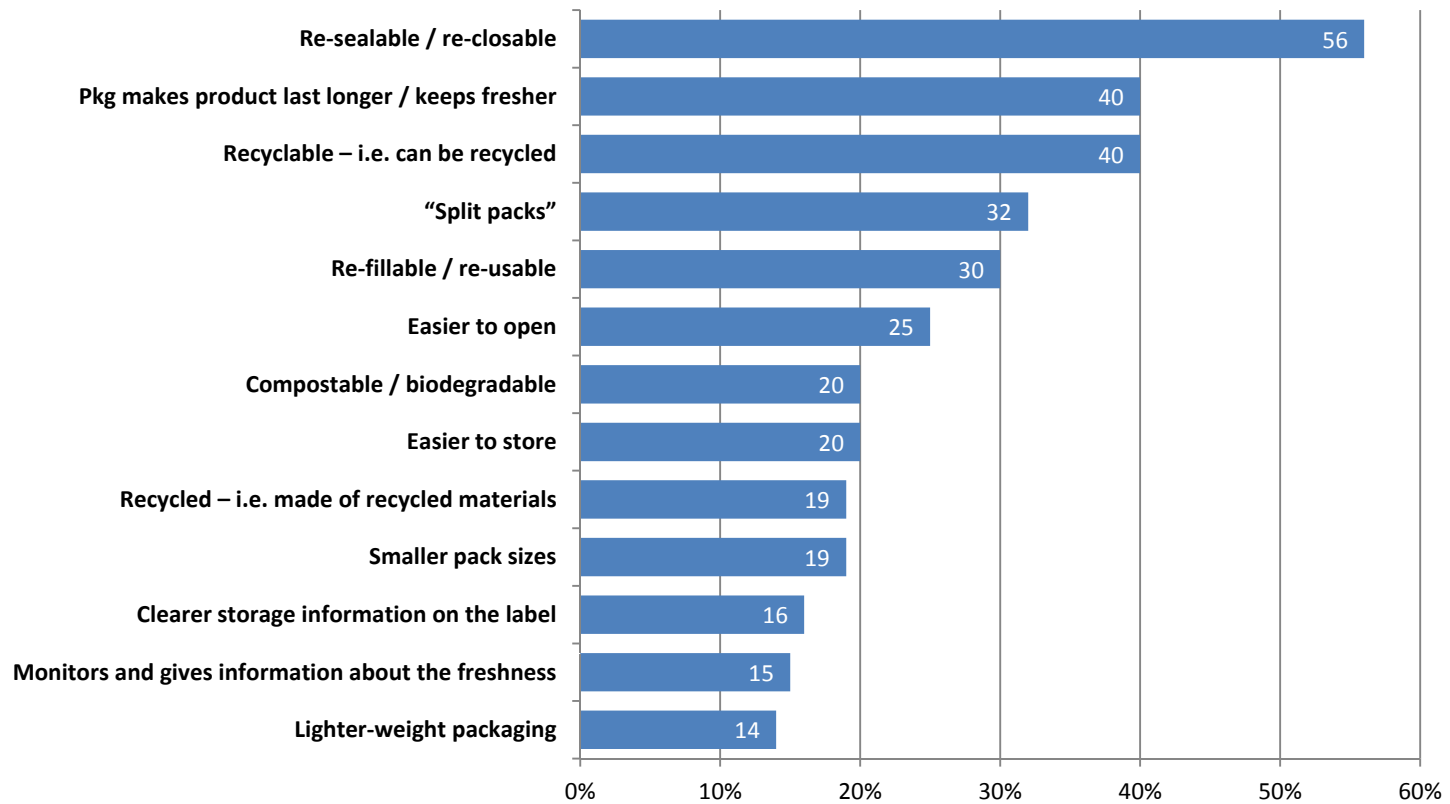


The approach to the mid week main meal is changing



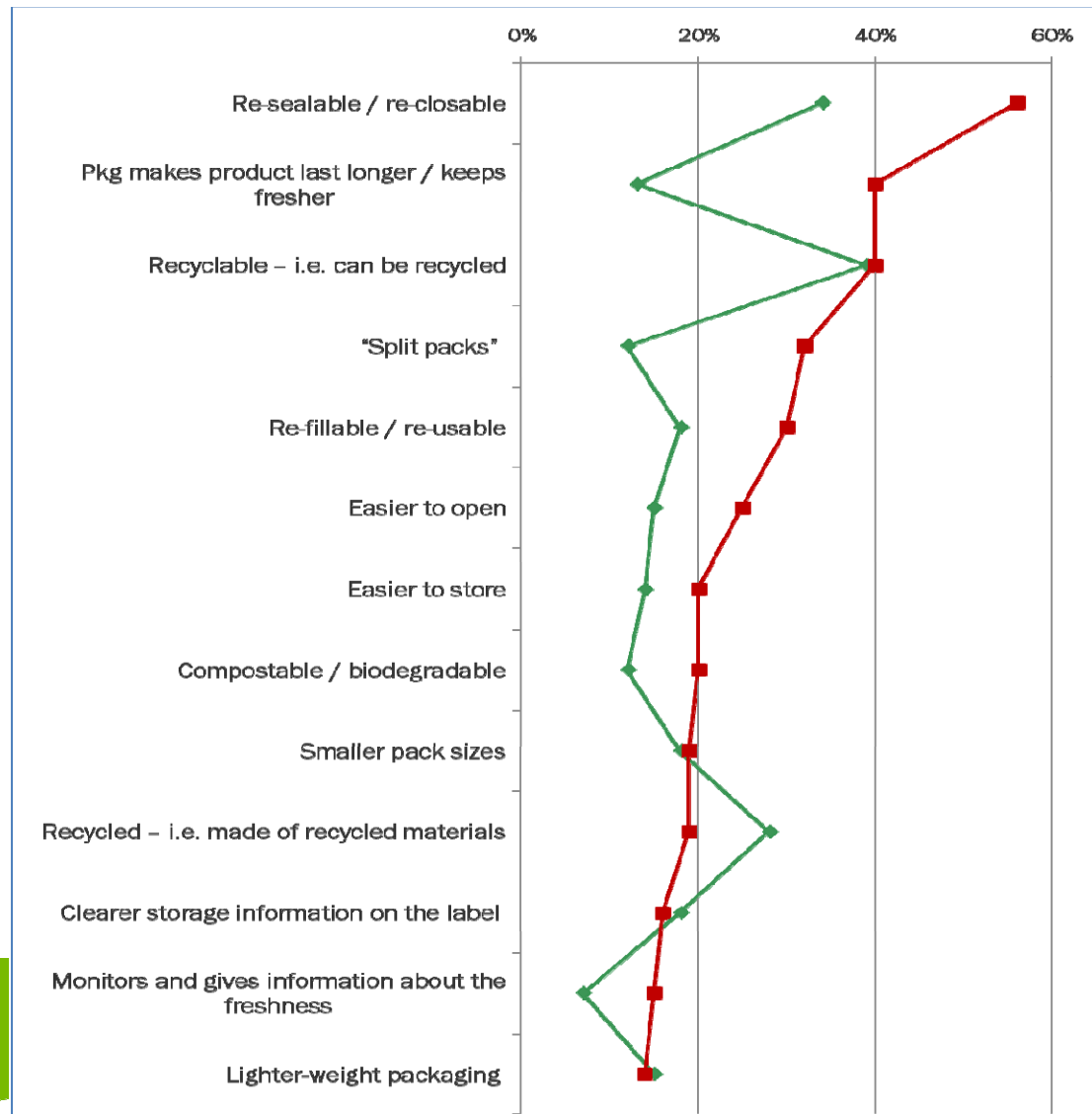


What do consumers want from packaging?



What would be the most useful pack attributes vs what has been noticed by consumers?

— Most useful
— Seen lots of packs like this



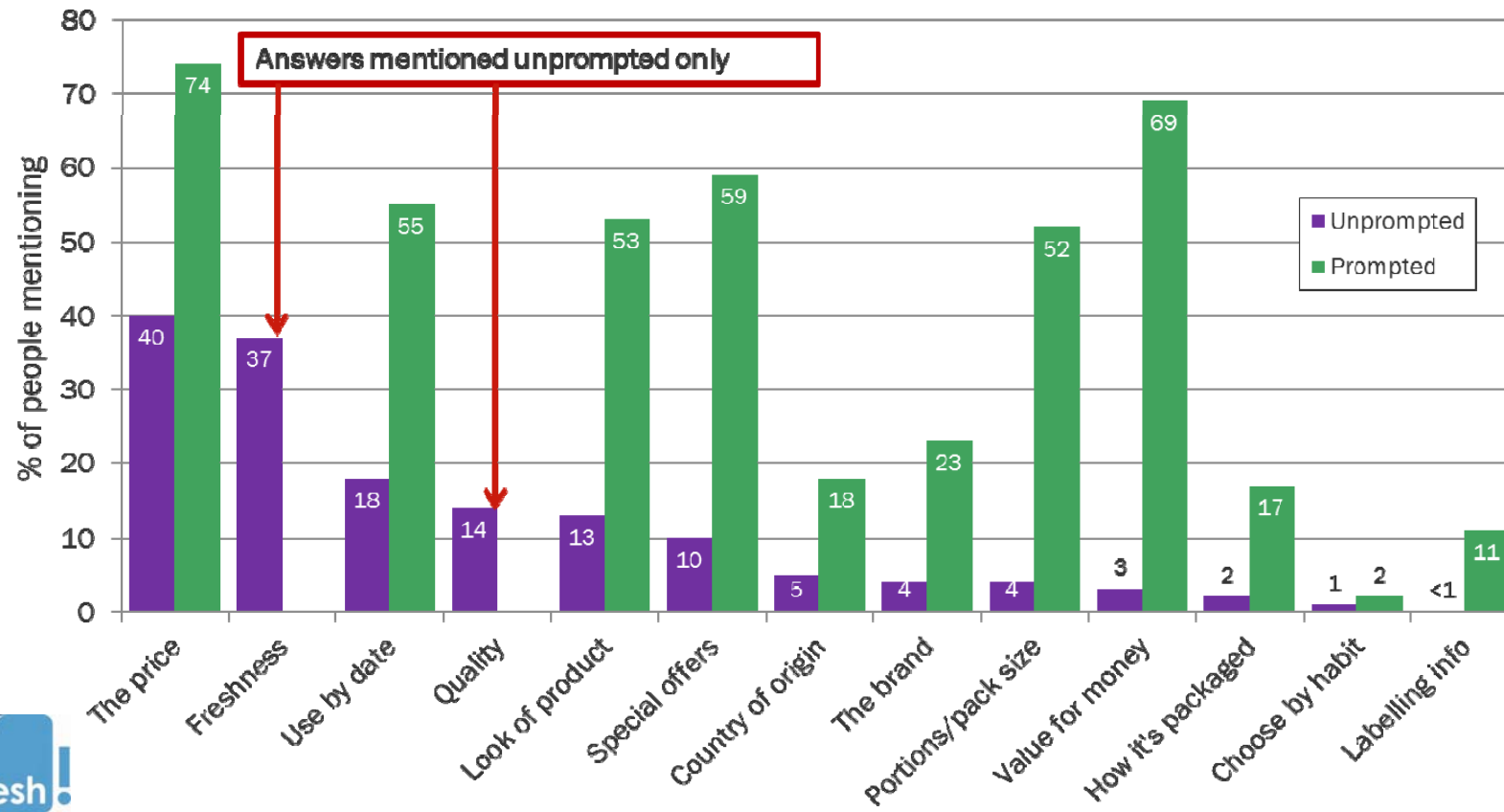


Consumer Perceived Benefits of Packaging



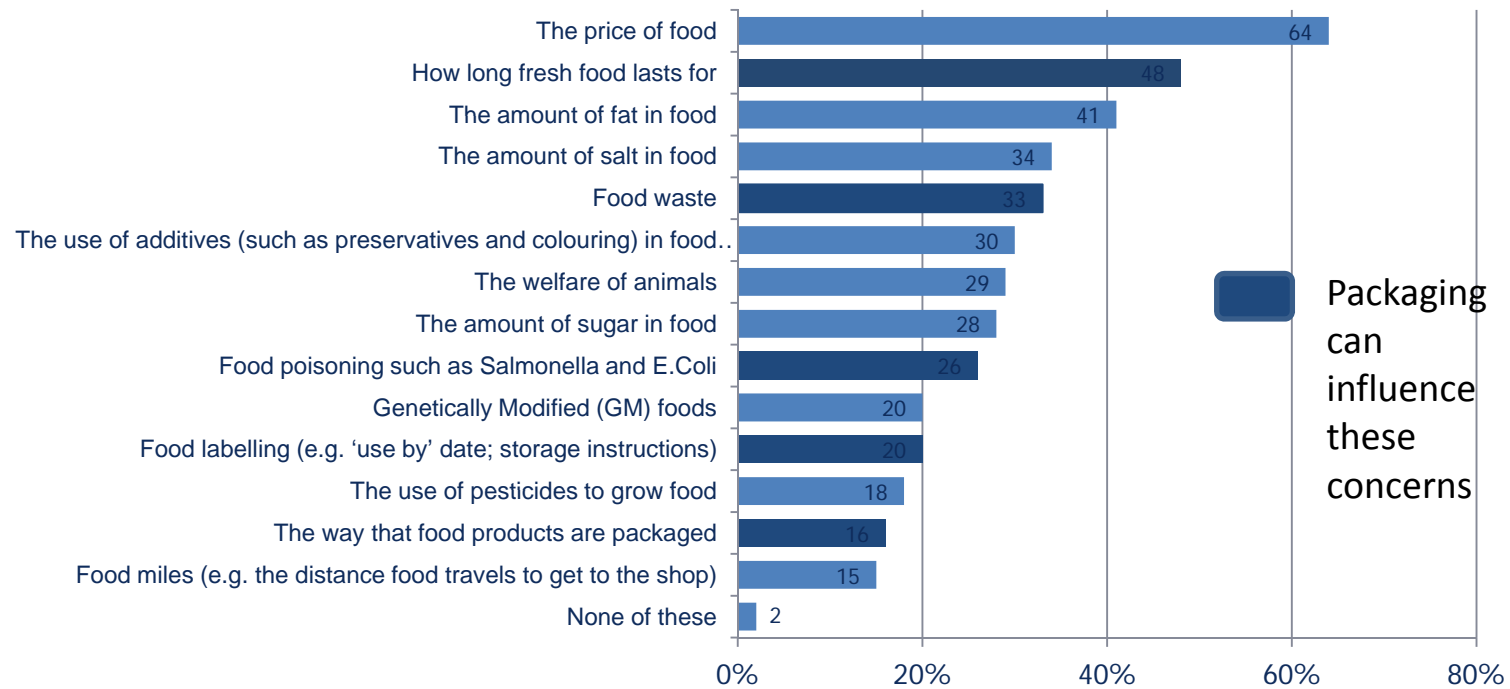


Factors influencing choices in store





What concerns do consumers have about the food itself?



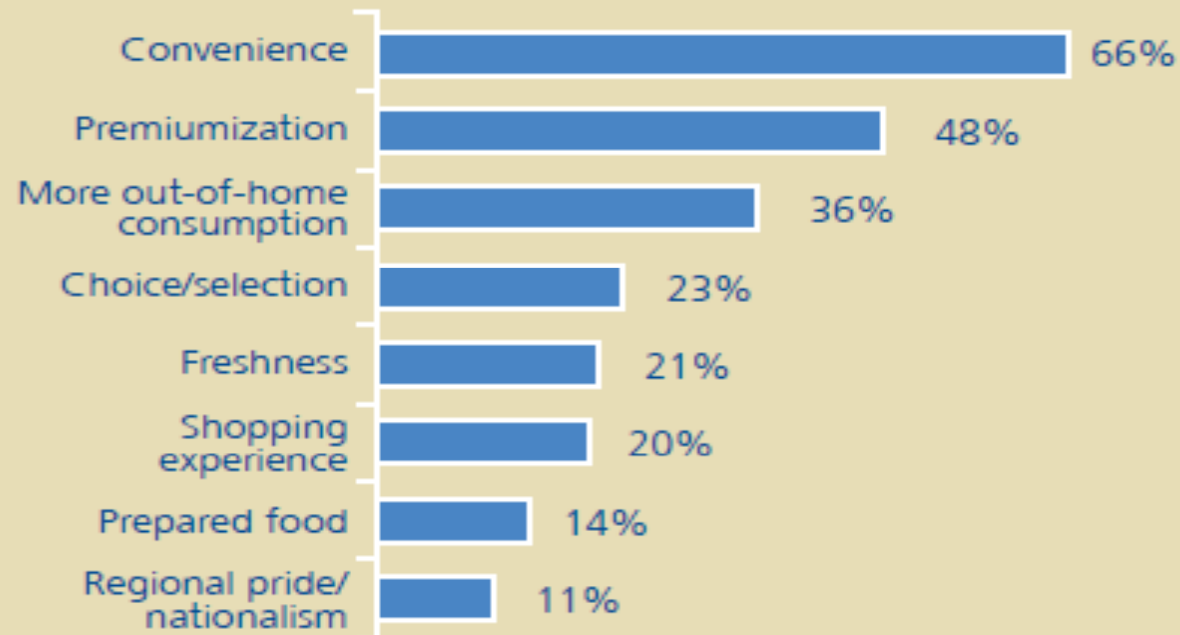
Source: WRAP Fresher For Longer Study March 2013

% of people mentioning (average number of mentions = 4.25)

CONSUMER TRENDS



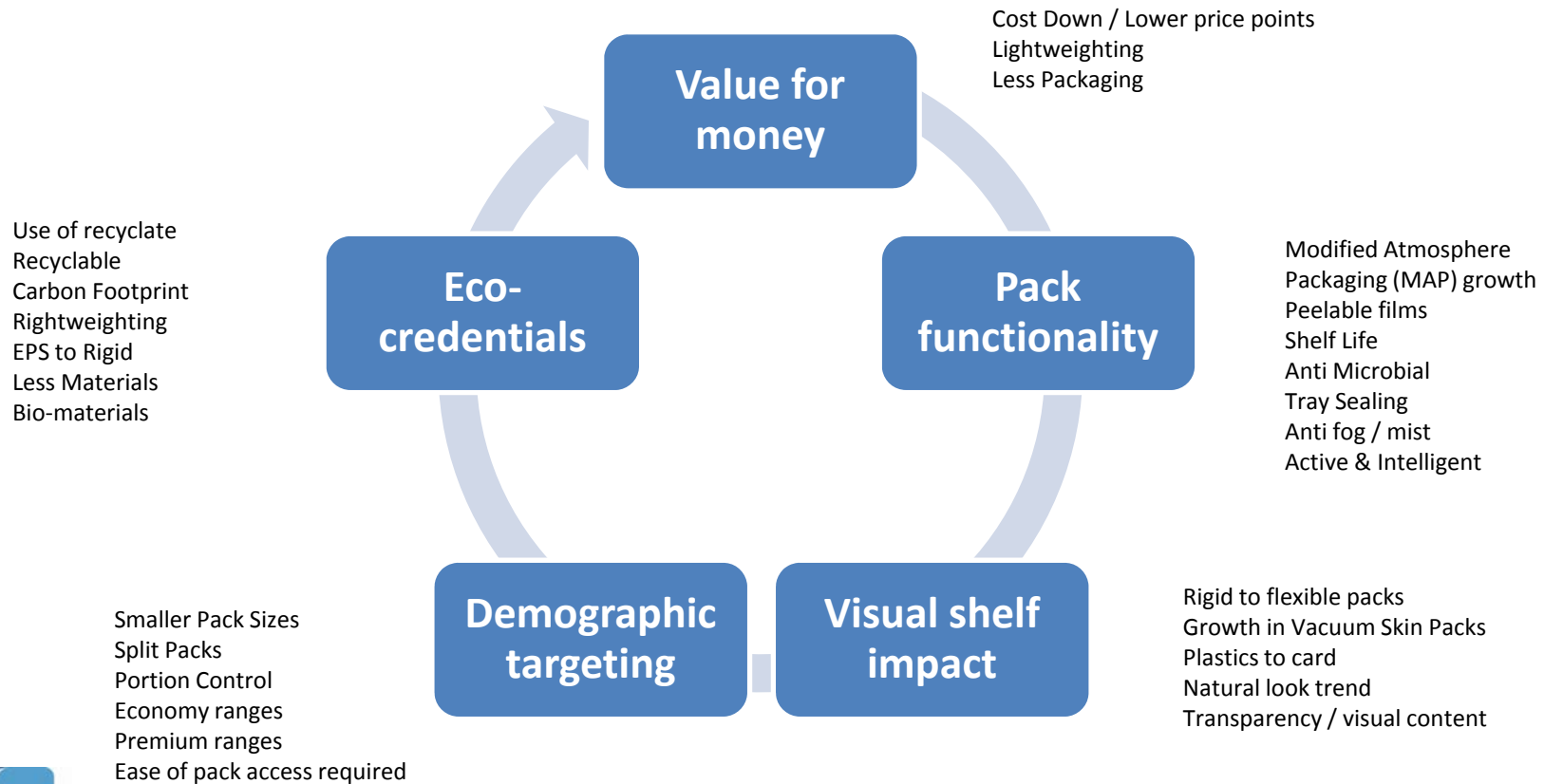
Key consumer trends shaping the industry



Source: Deloitte global survey of 93 top executives at leading food and beverage businesses.



What does this mean for packaging design?



* Shift from instore packing to third party packing in Europe also driving MAP adoption & shift from foam to



How is LINPAC responding?



Eco-credentials

Pack functionality

rfresh elite^o



Super-Lightweight mono material protein trays from LINPAC Packaging utilising a specially formulated sealing material to replace the laminated base film. The PATENT for this has been granted in the U.K., 2478028.

Proprietary sealing material applied to flange for top sealing of complementary lidding films



Super lightweight mono material rPET tray designed using LIFE[®] principles



Visual shelf
impact

Eco-
credentials

New range of lightweight
hinged boxes for bakery
packs

Crystal clear rPET (>50%
PCR) and fully recyclable

Lightweight

Hermetic seal (air tight)
solutions available



LeanBake



Pack
functionality

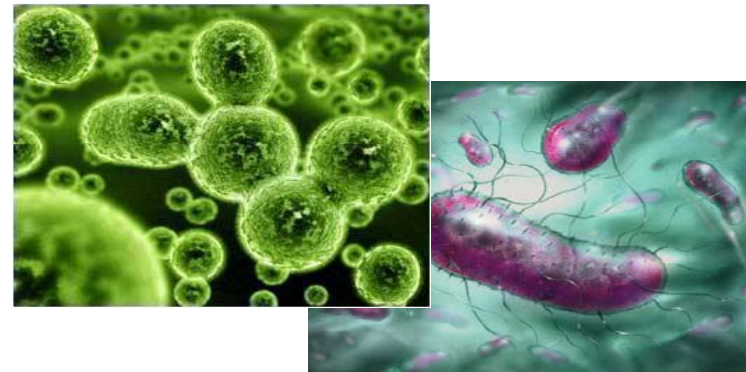
Anti-Microbial



Development of trays containing anti-microbial additives to upgrade external tray hygiene

Cost premium at c.20% above standard rPET/PP

We have found that standard rPET/PE plus Barrier Film does extend shelf life by c.2 days and improve odour performance



Pack
functionality

Demographic
targeting

LOVE
FOOD
hate waste

WRAP

Working together for
a world without waste

Fresh!

L I N
P A C
PACKAGING
fresh thinking!

Eat Me / Keep Me Concepts



Visual shelf
impact

Vertifresh®



Vertical shingled
presentation of prepared
salads & fruit

Round/Square edge bowl

Multiple inserts available
1,2 or 4 compartments

Suitable for tray sealing or
overwrap

Visual shelf
impact

Vertiwrap®



New Food To Go solutions
from LINPAC Packaging

New Vertical Standing Tortilla
/ Wrap Packs for perfect
presentation

Show off product contents

New designs being developed

Visual shelf
impact

Demographic
targeting

Klik 'n' Lok



Involving the consumer in meal
selection for food to go

3 styles of interlocking
containers

- Salad, Pasta or Fruit Pack
- Protein or Fruit Pack
- Dressing or Dip Pot



Crystal clear, ergonomic packs



In development now.....

- Perforated trays
- Freshness indicators
- Antimicrobial
- Incline display
- Easy grip
- Peel and reseal
- Twist locks
- Sporks
- Inlaid portions
- Click & connect
- Table ready





Thank you!

Jo.stephenson@linpac.com

