



# Mondi Capital Markets Day

Innovations in Consumer Packaging

Herbert Bader | Dorothee Sandtel

2 September 2013



## Vision and Mission

### Innovation Leader

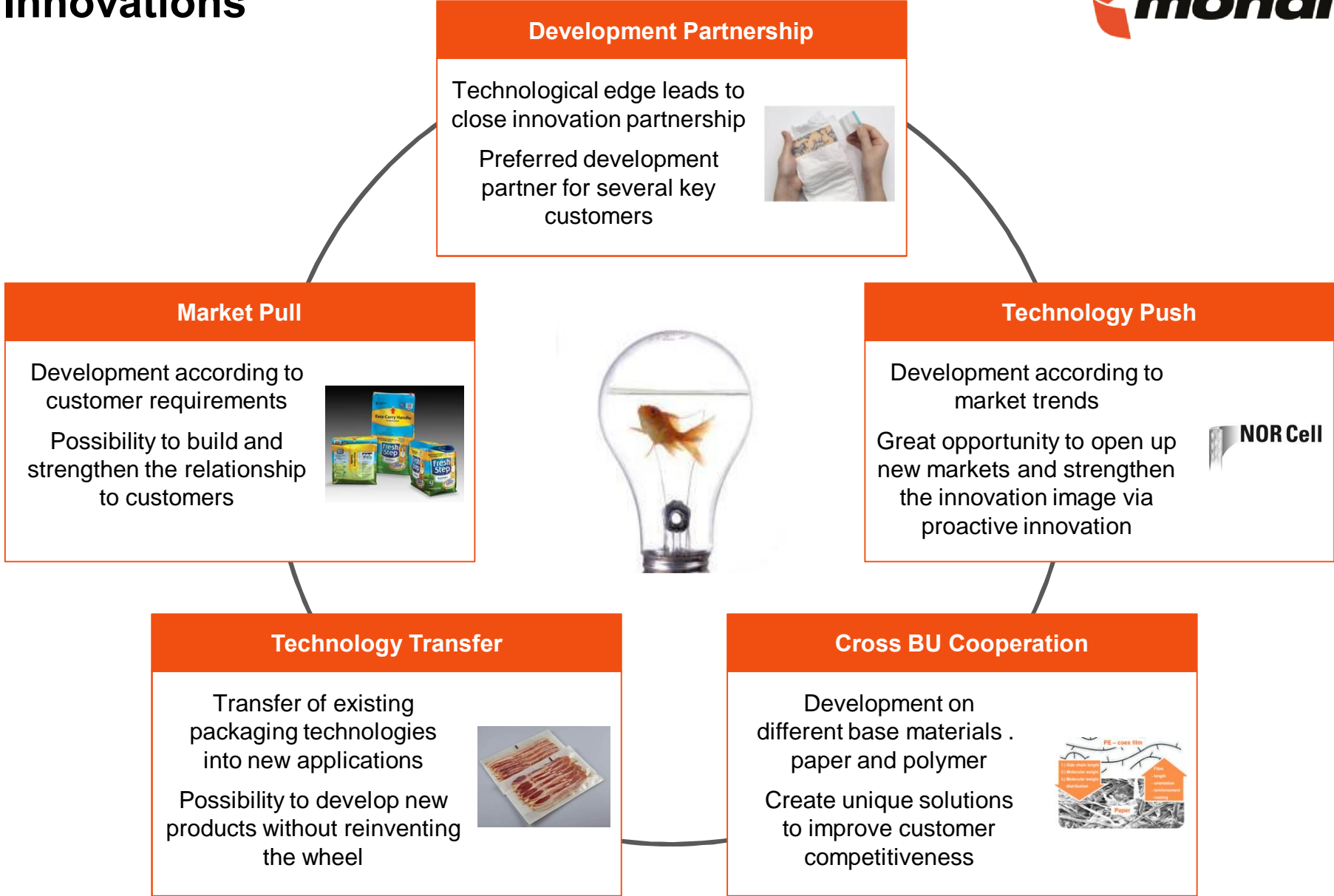
Deliver **pro-actively** innovative solutions to **target markets**

### Innovation Challenge 35

Realize **35% of our turnover** with products **younger than 5 years**



# Innovations

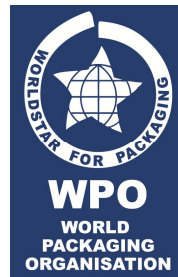


# Example – Technology Push



## Nor<sup>®</sup>Cell – Get more with less

- Nor<sup>®</sup>Cell is a physically micro-foamed film
- Through patented technology a microcellular foamed layer is produced in the extrusion process, resulting in a **best-in-class foamed structure** and extremely low surface roughness, even suitable for direct printing
- Benefits:
  - Material and weight reduction (reducing environmental impact and costs for Green Dot<sup>®</sup> fee)
  - Less use of oil / gas → Green marketing benefit
  - Increase in stiffness or reduction of weight
  - Unique appearance, adjusted by the amount of foaming agent
  - No impact on packaging processes



**WORLDSTAR  
WINNER 2013**

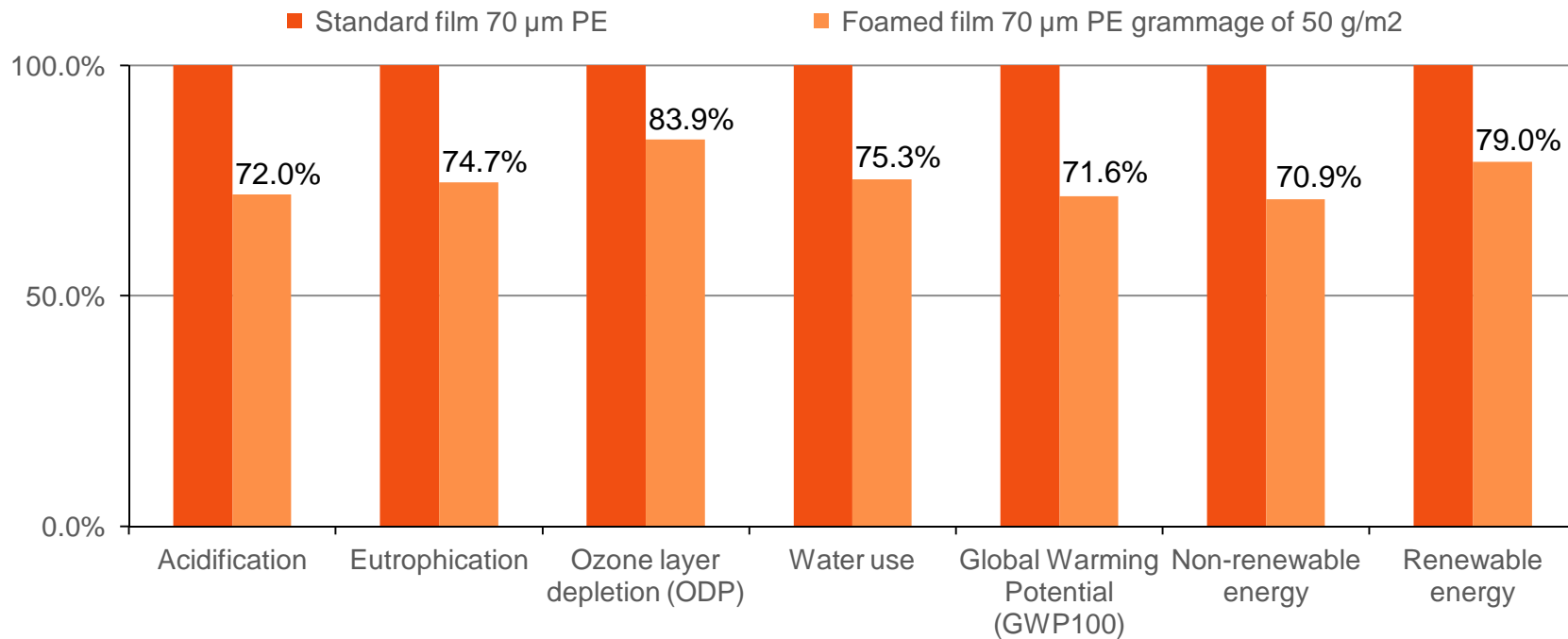


**NOR Cell**

# Nor<sup>®</sup>Cell – Sustainable effect



## Sustainability effect\* per m<sup>2</sup>



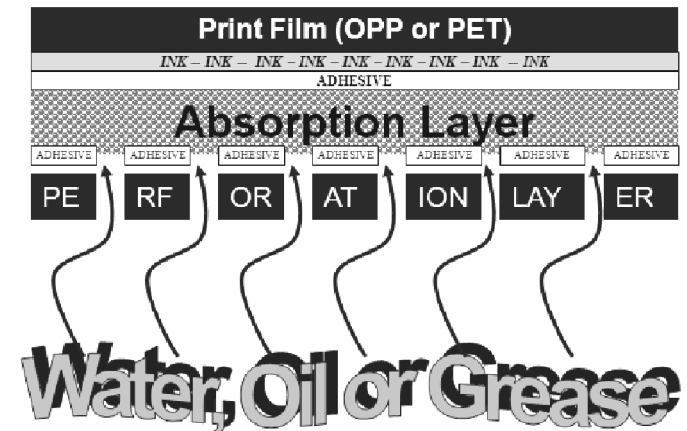
- Savings up to 30% in the different impact categories of the LCA (Life Cycle Analysis)
- Guidance value! To be defined depending on structure / thickness / amount of foaming, etc.

\*Cradle-to-gate analysis according to DIN EN ISO 14040, June 2011

## Example – Technology Transfer

### NorAbsorbit – Moisture absorbing

- Packaging absorbs moisture and grease that is generated during the microwave cooking process
- The packaging keeps breaded and bread food items dry and crisp (sogginess issue is drastically reduced)
- Wraps keep their strength and do not fall apart
- Avoids greasy fingers during the consumption of so called finger-foods
- Potential applications:
  - Breaded food items like chicken nuggets or fish sticks
  - Wraps / Burritos
  - Bacon
  - French Fries



# NorAbsorbit – Example Application

## Microwave bacon

### Concept

- Use the NorAbsorbit technology to create a **new packing concept for Bacon** (5-6 stripes per package)
- No preparation needed from the consumer . put the package in the microwave and you get **crispy bacon within 90 sec**

### Benefits

- Convenience:
  - No preparation / easy handling
  - Small size for single / small households
  - Short preparation time
  - No cleaning after preparation
  - Out of home usage
- Avoid food spoilage: Small portion pack



# Example – Cooperation across BUs

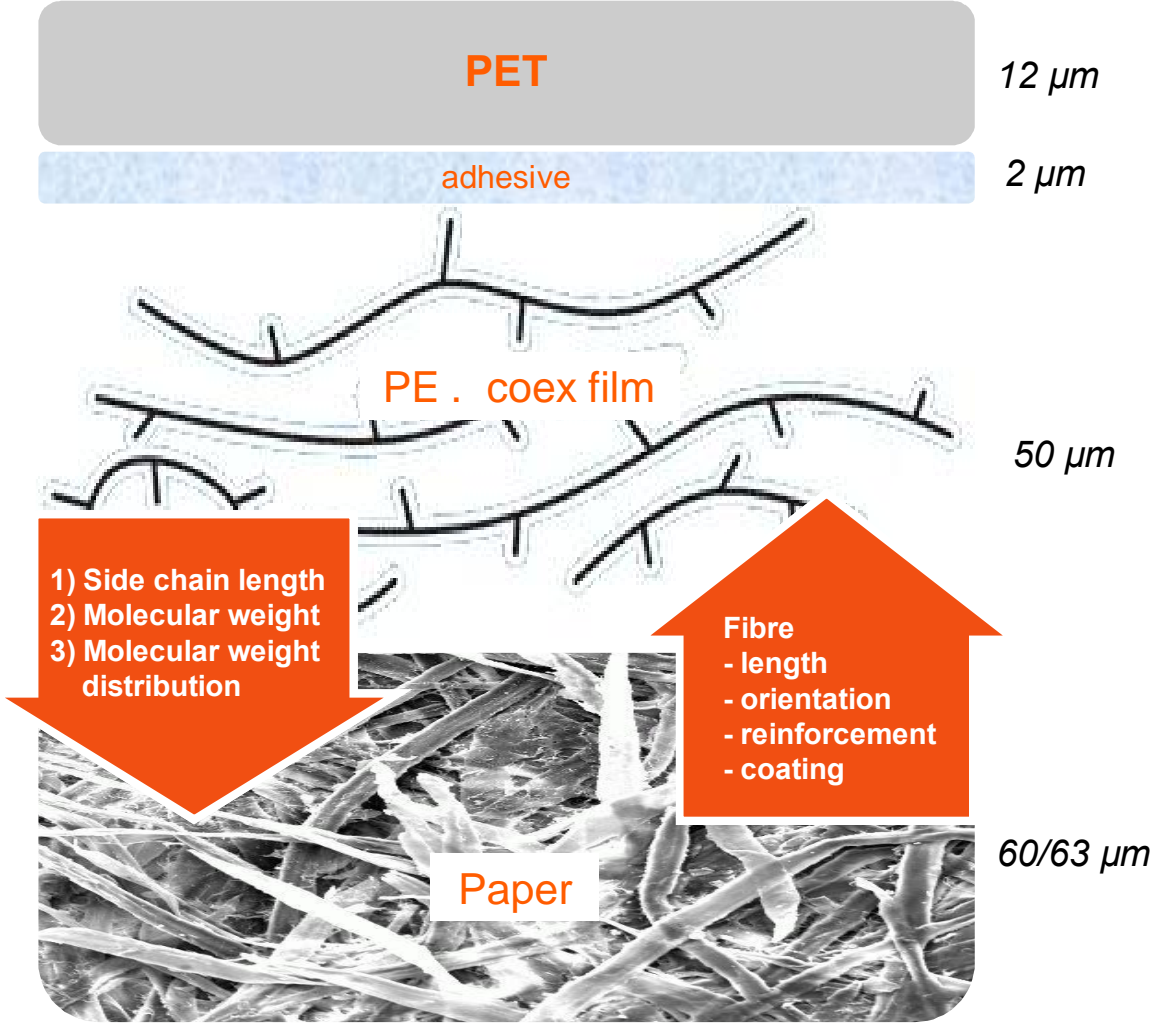


## Medical Films / Laminates

- Packaging for medical devices requires special properties such as
  - Sterilization of packaged product through gas (ETO), irradiation or steam
  - Transparency
  - Easy opening through well defined seal + peel ability
  - No product contamination (no fibre tear off or %angel hair+allowed)
- This can be effectively achieved through a combination of two different base materials
  - Medical paper grades
  - Polymer based laminates with specific seal + peel behaviour
- Potential application
  - Medical devices
  - Surgical blades
  - Medical gloves, bandages, drapes and gowns
  - Orthopedic implants



# Medical Films / Laminates



# Development Partnership



## Technological edge leads to close innovation partnership

- Innovation & Technology
  - Preferred development partner for several key customers
  - Proactive innovation - product differentiation for end product value proposition
  - Joint development efforts for next generation of products and packaging
  - Unique capability in different production steps
  - Specialized, self-engineered and integrated machines
- Extension of product life cycles
  - Continuous cost saving programs
  - Be more than one step ahead: develop the next generation even before the former one is integrated
- Extension of scope of relationship
  - Tempting our partner, proactively do the unexpected
  - Proven ability to follow into new product areas
  - Internal technology transfer
  - Joint patent filing



# Diaper components



## **FORWARD - LOOKING STATEMENTS**

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