

# IMPORTANT NEW DEVELOPMENTS IN HYGIENE ABSORBENT PRODUCTS AND RAW MATERIALS

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**PRICE HANNA**  
CONSULTANTS

**Hygienix 2016**

# PRICE HANNA CONSULTANTS

- **A consulting firm specializing in nonwovens and hygiene absorbent products, wipes, key raw materials and related fields.**
- **Services that we offer:**
  - Strategic planning support enriched by extensive market and technology information
  - Specialized in-house information and data models
    - global and regional supply/demand outlook
    - manufacturing costs and capacities for end use products, nonwoven technologies and raw materials
  - Customized assistance to clients is provided by experienced consultants with uncompromising respect for client confidentiality



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# MEGA HYGIENE TRENDS driven by consumer priorities



## Comfort

- Needs and priorities
- Innovations
- Impacts
- Opportunities



## Secure

- Needs and priorities
- Innovations
- Impacts
- Opportunities



## Discreet

- Needs and priorities
- Innovations
- Impacts
- Opportunities



## Convenient

- Needs and priorities
- Innovations
- Impacts
- Opportunities

# MEGA HYGIENE TRENDS: COMFORT



## Comfort

- Needs and priorities
- Innovations
- Impacts
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## Secure



## Discreet



## Convenient



# END USER NEEDS AND PRIORITIES - COMFORT

- **COMFORT - Underwear-like feel**

- **Soft**

- Silky, smooth – like ladies' lingerie
    - Lofty, fuzzy – like cotton knit underwear
    - Flexible, cushioning

- **Skin Dryness**

- Maintain dry topsheet against skin

- **Cool**

- Breathable, air flow to maintain dry skin
    - Prevent body heat build up over time of use, especially for active adults
    - Prevent body sweating inside product



# INNOVATIONS – COMFORT

## ► Softness

- **Silky, smooth** – lingerie
  - Bicomponent nonwovens with polyethylene sheaths
- **Lofty, fuzzy** – cotton knit
  - High loft, crimped bicomponent spunbond
  - Carded air through bonded with bicomponent fiber
  - Purified, hypo-allergenic cotton fiber in carded topsheet
- **Flexible, cushioning**
- Example: SCA's *Libero Touch* diapers



### Superabsorbent CORE

All open Libero diapers Touch provides reliable protection for small children. Diapers absorbent core keeps sensitive skin dry and wonderfully soft between diaper changes.

### SOFT AND ELASTIC WAIST

All open Libero Touch Diapers have a super soft waist that adapts to the little baby body. Regardless of size, your child may experience an incredibly beautiful and comfortable fit.

### COMFORTABLE CHANNELS

The flexible ducts adapts always looking for the baby's shape. You will find the channels on Libero Touch, size 1 and 2, where they ensure that the diaper is kept in place and protects properly.

# INNOVATIONS – COMFORT

## ► Softness

Example: **Avgol's nonwoven portfolio for topsheets**

- **Silky, smooth** – silk touch, cushion and visual softness

### **Avgol Lux Bi-Component**

Silk touch, highly uniform, spunbond Bi-Component fabrics from Avgol delivers excellent cushion and bulky soft touch as well as visual softness, thanks to soft pattern, mechanical and elongation performance properties.

- **Lofty, fuzzy** – cottony bulkiness

### **Avgol Ultima Fabrics**

The ultimate non-woven top sheet solution - a combination of silky soft Bi-Component fabric with cottony bulkiness delivered through hydro-entanglement technology.

### **Avspun® Dimple**

Market leading, cotton-soft bulky fabric with good tensile performance and elongation properties, delivered through the hydro-entanglement combination process, with dimple patterning and additional treatments to further enhance softness.



# INNOVATIONS - COMFORT

## ► Skin Dryness

- **3D Topsheets** – soft, bulky with distinctive bonding for skin health
- Example: Topsheet on Kimberly-Clark's **Huggies Little Swaddlers**



### GentleAbsorb\* Liner

The GentleAbsorb\* Liner has tiny pillows that provide a cushiony layer of protection between your baby's skin and the mess.

Huggies® Little Snugglers Diapers help keep your newborn's perfect skin clean and healthy.



# INNOVATIONS - COMFORT

## ► Skin Dryness

- **3D Topsheets** – soft, bulky with bonding patterns for skin health
- Other examples: topsheets on Kao's *Merries* diapers in Japan and Parasol's designer diapers

Kao's *Merries* skin friendly topsheet

## Parasol's e-commerce diapers

Our ultra-soft top sheet, combined with a thinner design and thoughtful features, means your baby feels at home no matter where you are in the world.



# INNOVATIONS - COMFORT

## ► Skin Dryness

Huggies® DryTouch® Liner



### DryTouch® Liner

The DryTouch® liner<sup>†</sup> in Huggies® Little Movers Diapers absorbs moisture on contact, providing comfortable movement for your moving baby.

<sup>†</sup> Except for Size 6

# INNOVATIONS – COMFORT

## ► Cool

### • Breathable, Air Flow

- Diapers with elastic waistbands: Spandex strands/bands
- Pants with breathable stretchable outer cover: Spandex strands, apertured elastic film/nonwoven laminates or elastic netting/nonwoven laminates
- Example: Procter & Gamble's **Pampers Diaper Pants** (in Asia)

	<p><b>world's first!</b> <b>Comfortable fit</b> <b>Revolution! S-</b> <b>Curve</b></p> <p>To any movement, in any posture, Pampers comfortable fit with its own technology. Or of such a comfort not anything wearing like.</p>	 <p><small>レステッチ技術のことを指します。世界のリーディングブランドとの比較。2015年6月。P</small></p>
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# GLOBAL & REGIONAL IMPACTS OF NEW DEVELOPMENTS

## - COMFORT

- **Three strong Asian trends are rapidly becoming global**
  1. **Ultra-soft materials with silky, smooth feel**
  2. **Preference for pants vs. taped diapers**
    - Diaper pants and adult pants
  3. **3D topsheets for skin dryness**
    - Kao's soft 3D topsheet has become the standard for premium diapers in Western markets and China.

# MEGA HYGIENE TRENDS: *SECURE*



Comfort



Secure

- Needs and priorities
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- Impacts
- Opportunities



Discreet



Convenient



## END USER NEEDS AND PRIORITIES - **SECURE**

- **Gentle and enduring elastics**

- **Non-irritating to skin**

- No red marks from elastics or nonwoven gathers
    - Not uncomfortably tight

- **Product does not leak or sag during use**

- No open gaps at back waist
    - Effective waistband elastics to hold up heavy, wet diaper
    - Elastic materials maintain stretch over long hours of use and exposure to body heat



# INNOVATIONS - *SECURE*

## ► Gentle and enduring elastics

- No skin irritation from elastics or nonwoven gathers



### Super Soft & Stretchable

MamyPoko Pants Extra Soft is equipped with cotton-like Extra Soft material for ultimate comfort with almost no irritation.

Its softer and stretchable waistband and leg gathers also enables your baby's skin to breathe comfortably and preventing unwanted red marks on your baby's skin.



# INNOVATIONS - *SECURE*

- Gentle and enduring elastics

- Product does not leak or sag during use

- Example: Procter & Gamble's *Pampers* diapers with *Extra Absorb Channels*<sup>™</sup> to prevent sagging



# INNOVATIONS - *SECURE*

- Recent innovations with future growth potential

- ▶ H.B. Fuller's *Conforma*<sup>™</sup> adhesive for stretch nonwovens



Conforma<sup>™</sup> adhesive—the latest in adhesive technology that is designed to enable next generation product designs to look and feel like cotton underwear. A conformable fabric created from Conforma adhesives is an attractive choice for producers as disposable articles continue to evolve into the soft, stretchable, and comfortable engineered products that consumers want.

- ▶ Suominen's *FIBRELLA Lite*<sup>™</sup> stretchable spunlaced facing for elastic components

- ▶ Mitsui Chemical's *ISuper*<sup>™</sup> proprietary stretch nonwoven technology for diaper backsheet and side gathers for a gentle, snug fit.

# INNOVATIONS - *SECURE*

- Gentle and enduring elastics

- Product does not leak or sag during use

- 360° stretchy waistbands for no waist gaps

- Examples:

- Unicharm's **Moony Man** and **MamyPoko** diaper pants

- Procter & Gamble's new **Pampers Easy Ups** training pant with elastic strands



# GLOBAL & REGIONAL IMPACTS OF NEW DEVELOPMENTS

## - SECURE

- Stretch waistbands or tape-fastening ears are global criteria for premium quality baby diapers and adult incontinence pants
  - Examples: Procter & Gamble's **Pampers Baby Dry Pants** in India and Hengan's **Anerle** tape-fastening diapers in China



腰贴拉升高度对比

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# MEGA HYGIENE TRENDS: *DISCREET*



Comfort



Secure



Discreet

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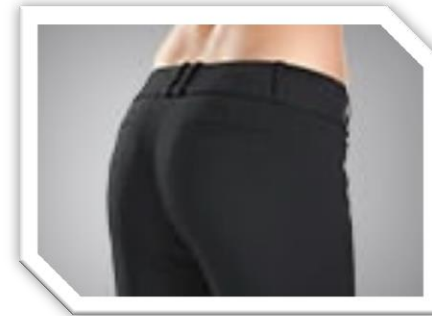


Convenient



# END USER NEEDS AND PRIORITIES - *DISCREET*

## • DISCREET UNDER CLOTHING



### ▶ **Body-hugging, thin**

- Flat, smooth skin contact
- Underwear design shapes
- Ultra-thin absorbent pad that is not bulky or too wide between legs

### ▶ **Priority for active adults**

- Not visible under clothing

### ▶ **Aesthetic preference for training pants in some regions**

- Not visible under clothing

# INNOVATIONS - *DISCREET*

- **Not Detectable Under Clothing**

  - ▶ Body-hugging, flat materials and underwear style below-waist cuts

- **Premium Adult Pants - Apertured Elastic Film as Stretch Engines**

  - ▶ SCA's *TENA Lady Pants Discreet*

  - ▶ Kimberly-Clark's *Depend Silhouette Active Fit Pants*

  - ▶ Unicharm's *Lifree Slimwear Sawayaka Absorbent Underwear*

  - ▶ Elleair's (Daio) *Attento Sports Pants*



# GLOBAL & REGIONAL IMPACTS OF NEW DEVELOPMENTS

## - DISCREET

- Western premium adult pants with apertured film/laminates are recently penetrating the high-income Asian markets.
- However, pants made with elastic strands are the dominant adult pant design worldwide.



Unicharm's *Lifree Slimwear Sawayaka Absorbent Underwear*



### Diao's *Attento Sports Pant*

■ New material! The entire stretch film adopted ※ except for the absorber part.



The stretchy material is placed over the entire surface, it fits the body in a lot of moving scenes. In the sense of cloth underwear, it does not stand out from the top of the pants.



# MEGA HYGIENE TRENDS: CONVENIENT



Comfort



Secure



Discreet



Convenient

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# END USER NEEDS AND PRIORITIES – CONVENIENT

- **E-commerce**

- Fast Purchasing and Free Delivery
- Subscription Services Reordering Devices
- Mobile Apps and Reordering Devices



- **Easy to use**

- Quick product checking or changing



# INNOVATIONS - CONVENIENT

## • E-Commerce

### – Fast purchasing, reordering and delivery

- **Amazon Prime** – free shipping for members
  - Diaper delivery in 2 days
  - *Dash Buttons* one touch reordering
  - 20% discounts for diaper subscriptions
- **Walmart**
  - Expedited delivery of diapers in 3 days
  - Free standard shipping on orders over \$50
- **Target**
  - Expedited delivery of diapers in 2 days
  - Free standard shipping of diapers in 3 days
  - 5% discounts and free shipping for subscriptions
- **CVS**
  - Free 2 day shipping for orders over \$39
  - *Ship & Save* subscriptions with up to 20% discounts



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# INNOVATIONS - CONVENIENT

## • E-Commerce

### – Home Delivery Subscriptions

- Diaper and adult incontinence product subscriptions
  - major retailers
  - manufacturers
  - e-commerce websites
  - baby diaper and adult incontinence specialty websites
  - medical supply dealers (adult incontinence only)

### – Mobile Apps

- For price comparisons, availability checks and product orders



# INNOVATIONS - CONVENIENT

- ▶ **Easy to use** - Quick product checking or changing



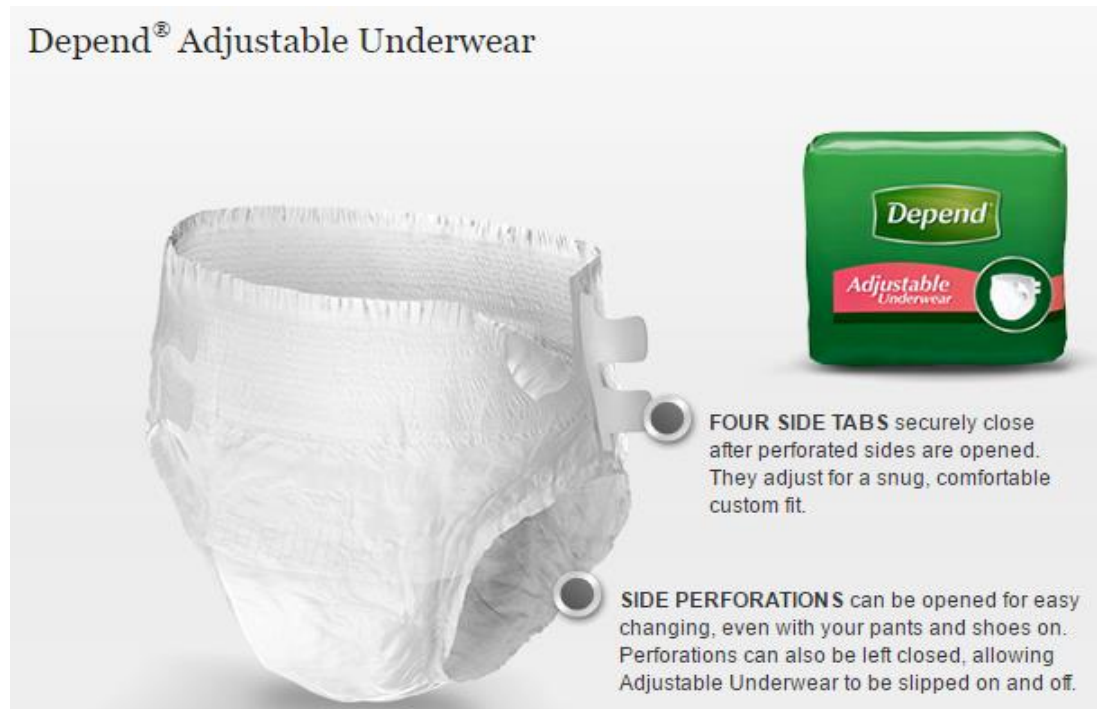
## 360° Stretchy Waistband

360° Stretchy Waistband— for an underwear-like fit that's easy for your toddler to pull up and down

# INNOVATIONS - CONVENIENT

- **Easy to use** - Quick product checking or changing (Continued)

Example: Kimberly-Clark's **Depend Adjustable Underwear**



# GLOBAL & REGIONAL IMPACTS OF NEW DEVELOPMENTS

## - CONVENIENT – E-COMMERCE

- **E-commerce in China is larger than in the U.S. and growing faster**
  - E-commerce has driven the rapid expansion of the premium diaper segment in China
    - Chinese parents order high quality diapers made in Japan from **Tmall.com** (Alibaba Group)
    - Kao and Unicharm are expanding their premium diaper manufacturing capacity in Japan to supply Chinese demand.
- **Diaper penetration is still low in India but E-commerce has already become a driving force.**
  - Parents in Indian cities order diapers from **Flipkart** and **Firstcry.com**.



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# CHANGES IN COMPETITIVE STRUCTURE AND DYNAMICS OPTIMIZING “GO TO MARKET” STRATEGIES

## • Mergers and Acquisitions in Hygiene Industry

- SCA divests South East Asia, Taiwan and South Korea hygiene businesses to Vinda International of China. SCA owns majority of Vinda shares.
- SCA hygiene business spin-off planned in second half of 2017
- Domtar acquisition of HDIS (incontinence e-commerce business)
- Unilever acquisition of Seventh Generation

## • E-Commerce Developments

- Amazon’s growth strategies
- Walmart acquisition of Jet.com
- Walmart considering investment in Flipkart



# EVOLVING MARKET AND TECHNOLOGY OPPORTUNITIES FOR HYGIENE PRODUCTS AND RAW MATERIALS

## COMFORT

- Soft, Loft, Cushiony, Dry and Cool = Comfort

## SECURE

- Gentle, Enduring Stretch = Secure

## DISCREET

- Fit and Shaped so Undetectable Under Clothing = Discreet

## CONVENIENT

- Time-saving Purchasing & Delivery and Ease of Use = Convenient

# RELEVANT SUBSCRIPTION REPORTS BY PRICE HANNA CONSULTANTS

- **Global Outlook for Hygiene Absorbent Products and Key Raw Materials in 2015, 2016 and 2021**  
*(Coming soon: Will be published in February 2017)*
- **Spunbonded and Spunmelt Nonwoven Polypropylene: World Capacities, Supply/Demand and Manufacturing Economics 2010, 2015-2020**  
*(Immediately Available: Published in August 2016)*
- **Global Outlook for Hygiene Absorbent Products and Key Raw Materials in 2013, 2014 and 2019**  
*(Published in February 2015)*
- **Outlook for Barrier Nonwovens and Film in Global Medical Markets 2014-2019**  
*(Published in August 2014)*

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