



storaenso



viewpoint

The future of online packaging

Stora Enso Packaging Solutions, 2015

The shift in retailer dynamics

Online is fundamentally shifting the dynamics in most retail categories. Consumers are given more choices, convenience, and control of their purchases. The shift in consumer behavior creates opportunities and challenges alike for businesses. A few of the more fundamental trends visible as a result of the growth of the online retail channel are the increasing **POWER OF THE CONSUMER**, a **SHIFT IN BUSINESS MODELS**, the availability and reducing cost of **TECHNOLOGY** as well as **SUSTAINABILITY** becoming a source of competitiveness for businesses. All these overall trends impact the use of packaging.

CONSUMER POWER IS PARAMOUNT

FROM

CONSUMER BEARING RISK OF DAMAGE Consumer responsible for safely transporting products home. Packaging designed for easy carrying.

RETURNS BEING AN INHIBITOR OF GOING ONLINE Free shipping encourages return behavior, causing large volumes of returns shipped in various packages and large complexity for retailers.

TO

RETAILER BEARING RISK OF DAMAGE Retailer responsible all the way to consumer's home. Packaging designed smarter to protect products.

RETURNS BEING A WAY TO BUILD CUSTOMER LOYALTY Smart, reusable packaging facilitates returns and builds customer loyalty. Reusable packaging guarantees protection against harsh treatment and is designed for automated reception at retailer.

BUSINESS MODELS ARE CHANGING

FROM

TRADITIONAL Customer buys on demand through traditional, "offline" physical stores.

MONO-CHANNEL Products and packaging adapted to sales in one retail channel, optimized for store display and a small number of SKUs by category.

SHELF IMPACT Visibility in store and ease of handling important. Packaging as a marketing tool and to support easy shelving.

SATISFACTION DRIVEN BY IN-STORE EXPERIENCE Brand building in other customer facing forums, including in-store sales. Packaging has traditional role of providing protection and transporting products.

TO

INNOVATIVE Business models are changing to adapt to a new reality, e.g., subscription models lock in consumers and secure long-term revenue in a world where consumers face more choice than ever, and new payment methods integrate across channels and products. All of these changes are supported by packaging.

OMNI-CHANNEL New sales channels emerge which interact in real time (e.g., consistent promotions and stock level tracking across all channels). Packaging needs to both strengthen marketing messages and be adapted to meet the needs of online and offline channels with a larger number of SKUs.

LAST MILE DELIVERY Home delivery from store/warehouse. Packaging to support easy packing and measurements optimized for increased fill rates.

LARGE SHARE OF CUSTOMER EXPERIENCE IN OWN HOME Packaging a strong differentiator and creator of customer's first impression, e.g., visually appealing outer packaging through use of Stora Enso AvantLiner or a positive unboxing experience through frustration-free features.

AVAILABILITY OF TECHNOLOGY IS EXPLODING AND THE COST OF CONNECTING GOING DOWN

FROM

INFORMATIVE PACKAGING Packaging contains passive information e.g. warnings, list of content.

MANUAL PICK AND PACK

Manual handling calls for large boxes for easy packaging, often with significant spare space.

TO

INTELLIGENT PACKAGING Packaging integrates active, intelligent features such as NFC with loyalty program data activated through smartphones and bar codes telling handling history or providing links to online promotions, among many others.

AUTOMATED PICK AND PACK

Flexible packaging solutions allowing for automated pick and pack.

SUSTAINABILITY'S IMPORTANCE IS GROWING

FROM

SUSTAINABILITY BEING A WAY TO DEMONSTRATE CONSCIOUSNESS Large multinationals display a conscious brand by focusing on efficient modes of transportation, recyclable material, etc.

TO

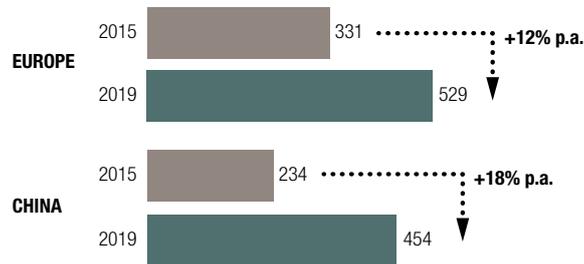
SUSTAINABILITY MANDATORY AND A SOURCE OF COST COMPETITIVENESS Packaging is an even stronger enabler for competitiveness, e.g., use of fewer and lighter materials or reusability, and an enabler to meet tougher recycling legislation.

Introduction

Packaging is one key to success in online retail. To capture the growth opportunity in a profitable way, retailers need to make sure their package creates customer loyalty, protects the product against damage, and is optimized for last-mile delivery.

The market size of European online retailing continues to accelerate its growth and an increasing number of customers are making purchases online across retail categories. In 2015, the European market for online retail across industries amounts to almost EUR 330 billion and experiences double-digit growth¹. China, by contrast, will be a EUR 230 billion market by the end of 2015 with an even higher growth rate¹.

ONLINE RETAIL MARKET (EUROMONITOR 2015)
EXCL. CATEGORIES SERVICES AND LARGE TRAVEL



Across the Nordic, Baltic, Central and Eastern European countries as well as China, which are in focus of the Viewpoint, online retail adoption differs driven by economic and cultural differences. In categories where online is already

well-penetrated, for example consumer electronics, Nordic consumers make 40-60% of purchases online while Baltic and Eastern European consumers make 10-30% of purchases online. In China, online penetration² is already at 60% for internet users despite being a developing country.

Online retail is still largely local, as today only 7% of small & medium-sized enterprises' (10-250 employees) online business is cross-border and only 38% of consumers feel confident to buy from another country³. The European Commission stresses the need to reduce barriers and thereby stimulate competitiveness and growth of the online channel in the region. As a result, online retailing growth will make products travel further from origin to destination in the future.

There are retail categories that have already gone digital (e.g., consumer electronics and music), those where the digital battle is ongoing (e.g., mobile, jewelry, furniture, personal care) and those that largely remain in-store (e.g., grocery, household products)⁴. Differences in online retail adoption are driven by the retailers' economic incentive to sell online, customers' trust in receiving a high-quality product, and the value of the product, among many others.

Across all categories, the use of packaging can be leveraged to solve barriers to online retailing – both to capture growth opportunities but also to solve supply chain challenges caused by the rise of online. A very concrete example is grocery retail – with low online adoption today, but which is growing at double-digit rate in densely populated areas since both retailers' incentives and consumers' trust have increased.

Three categories have been selected in this Viewpoint with different levels of online penetration⁵ – namely Grocery (1-3% penetration), Household and Personal Care (5-20% penetration), and Consumer Electronics (10-60% penetration) – in order to illustrate solutions and needs in terms of packaging for categories of different “online maturity”. The Viewpoint highlights how creative packaging design is becoming a true value driver for online businesses by increasing sales, strengthening brands and improving customer loyalty – not simply being a cost item among others in customers' profit and loss statement.

Philips Hue lamps are packaged in a box which contains protective inserts made from corrugated paper in order to prevent the lamps from breaking during delivery.



There and Back Pack Deluxe box created by Charapak is designed for high end luxury items. It can easily be shipped back to the retailer through refolding and sealing the package.



Apple allows to purchase a product by scanning its barcode, which is printed on the packaging, using a mobile app linked to users' iTunes account.



Coolblue, an electronics provider, uses distinct packing with orange blue logo colors and provides features such as personal messages on the box.



eAgile combines both industry standard and consumer standard RFID for both supply chain functionality and consumer engagement opportunities in one tag



Amazon created a box that can be folded in several different ways to enable the use of the same package for different sizes, reduce complexity, and ensure compatibility with the company's chaotic bar code system.



Dutch stroller producer Joolz designed their corrugated packaging in such a way that it is transformed into fashionable furniture or decorations for children's rooms once the stroller has been unpacked.



1 Euromonitor 2015. Total online retail market excluding services and large travel category
 2 60% of respondents in China iConsumer survey 2015 responded that they have engaged in online shopping in the past 3 months, across all city tiers and including rural areas
 3 European Commission, A Digital Single Market Strategy for Europe, 2015
 4 McKinsey & Company's iConsumer survey of 150,000 consumers around the World in Europe and China between the years of 2012 and 2015
 5 Online penetration is defined as the share of all purchases made online within the category

Packaging becomes even more important in online retailing

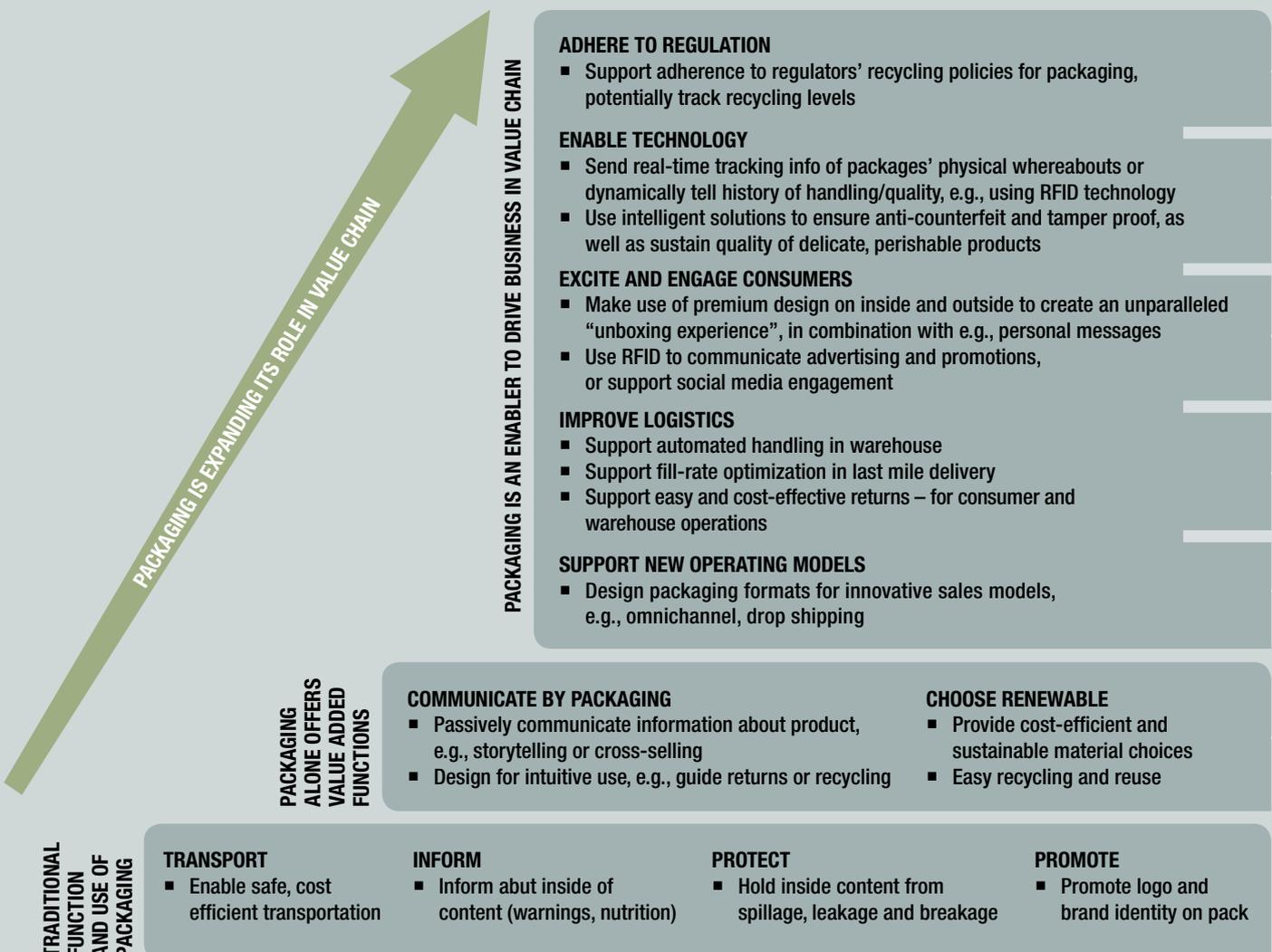
Over the last decades, the role of packaging in retail has changed substantially – and the emergence of online retail is further moving the role of packaging to new heights. In this next horizon beyond 2016, packaging will enable retailers and brand owners to drive customer value, customer loyalty, and truly affect product competitiveness, compared to previously being seen as providing basic functionality and cost optimization.

To illustrate, for a retailer just entering the online channel the cost of new customer acquisition is up to EUR 60, while repeat customers are only 17% and close to 50% of items are returned⁶. These numbers pose significant challenges to retailers – spending a little bit more on packaging is insignificant in the greater scheme of things but can both help build customer loyalty and facilitate returns. Packaging could well be considered best value for money among other options available to online retailers.

The growing role of packaging is illustrated in the matrix below. On the right-hand side real-life examples further describe the development mentioned in the matrix.

6 Deloitte 2015, "Omnichannel retail – A Deloitte Point of View"

Packaging moves quickly from traditional use to a strategic value provider



Packaging as strategic value driver



ENSURE REUSABILITY: Grand & Toy, a Canadian based office product company, created the Boomerang Box, a reusable shipping solution. When a customer delivery arrive, the box from the earlier delivery is picked up and reused for new orders. The box is made out of reinforced corrugated packaging and is 100% recyclable, stackable and traceable. During a pilot in 2011 a box return rate of 60% was sustained.



ENSURE SAFE DELIVERY AND CONSUMER ENGAGEMENT: Kezzler has developed an algorithm and a code printed on every individual product. Upon receiving the shipment, the consumer can scan the code, send a text message to Kezzler, and receive notice back within seconds whether the product is authentic. Hong Kong's regional security often finds counterfeit products about 6-8 months after any new product launch. Introduction of Kezzler SMS labels in 2012 has guaranteed authenticity for all products where label has been used.



CREATE CUSTOMER LOYALTY: A recent Dotcom distribution survey stated that 52% of consumers were likely to make repeat purchases for e-retailers that deliver in premium packages. Several examples of this exist, like matchesfashion.com which delivers goods in a premium outer and inner packaging (which is also easily resealable for returns). Through the use of differentiated, paper-based premium packaging, they are gaining sales volumes from other well-established luxury goods retailers.



REDUCE NEED FOR TRANSPORTATION: FedEx and UPS changed to dimensional charges for ground shipping in 2015. By doing so, FedEx wins on two fronts: higher revenue per package on many ground shipments, and denser freight on others. Optimizing for less waste in packaging, and dimensions and shapes to reduce packaging size, is as a consequence becoming a concern to retailers. For example, a global furniture manufacturer developed a new solution together with Stora Enso that significantly increased packing efficiency. The company went from one single package with plastic wrapping to two separate corrugated packages. As a result, packaged volume reduced by 38% and products per truck increased by 60%



REDUCE DAMAGED GOODS: A global, leading fast-moving consumer goods player estimates that 1-7% of goods are damaged during last-mile delivery due to packaging that is not optimized for home delivery of grocery. The importance of this point is reflected in a recent Sealed Air e-commerce packaging survey, which indicates that up to 81% (depending on age group) of respondents would avoid a retailer or consider purchasing from a competitor if the product was damaged on delivery.



IMPROVE SUSTAINABILITY: For the Samsung Galaxy S4, a 100% recyclable box with a printed wood design and manual were developed (compared to previously being packaged in a more traditional glossy box using less ecofriendly materials and plastics). It is estimated that the packaging saves approximately 1,000 tons of CO₂ emission.



Key challenges differ between categories

A number of different opportunity areas where packaging can solve the most pressing issues for retailers and brand owners are presented below in the **GROCERY, HOUSEHOLD AND PERSONAL CARE** and **CONSUMER ELECTRONICS** retail categories.

GROCERY

The key challenges that online grocers face vary by region, but generally include protecting fresh produce during last-mile delivery and managing complexity in picking and packing operations. Improved packaging design could solve many of these issues.

Grocery is currently one of the least developed areas of online retail in terms of penetration and therefore represents a great opportunity for future growth. There are two main business models used in online grocery: home delivery and click-and-collect, which both pose similar challenges to online retailers. The prevalence of these business models varies by country with the UK, Germany, and Poland being predominantly home delivery while in click-and-collect accounts for 80% of online retail in France. Let us exemplify the main challenges and how packaging design can relieve them by two case examples:

In Poland, preserving the quality of fresh food is a key concern since many groceries are packaged at the point of sales. Consumers are reluctant to buy online since the delivered product often looks ugly upon delivery and, therefore, mistrust online grocers. This is true especially for meat and fish which are packed in store. The two images show two examples of fish packaged for online grocery. The first image shows a package of mackerel delivered by a Polish e-tailer, which looks unappealing due to the juices running uncontrolled. The second image shows salmon sold by Ocado, a British pure-play online grocer, with packaging optimized for better containing the juices. This shows how the design of packaging plays a major role in creating a positive customer experience and drive loyalty.

MACKEREL DELIVERED BY POLISH GROCERY E-TAILER



SALMON SOLD BY UK GROCERY E-TAILER OCADO



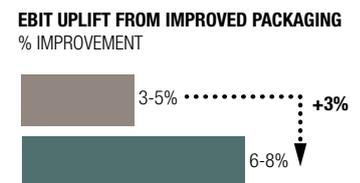
For Scandinavian grocers, a key challenge is picking and packing products for online delivery which is mostly done manually. Picking is slow and often done in the physical store which is not optimized for picking operations. In addition, a larger number of bags are

used to pack food safely compared to the number of bags used by the average consumer packing by him/herself. Altogether this makes online grocery retail 10-20% more expensive than offline operations. In these cases, inefficiencies can altogether kill the business case for online groceries.

As becomes clear there are several ways packaging can capture additional value for online grocers, among others:

- Design packaging for home delivery which maintains look and feel of product, e.g., outer packaging that hides meat juices or sturdy/innovative packaging which preserves the quality of perishable products (e.g., keep them chilled or frozen)
- Change secondary packaging from normal in-store shopping bags to packages designed for online retail, e.g., with protective corrugated inserts which adds extra support and hence both increases speed and reduces complexity in packing operations.
- Make use of intelligent indicators to tell whether food has been contaminated during transportation to home, e.g., broken cold chain, and how the expiry dates need to be adjusted to account for this are needed to increase consumers' trust and reduce claims
- Optimize primary packaging formats of products sold in various channels (physical stores and online) to suit the logistics and operations of all channels

In Grocery – an industry of average profits of 3-5%, the potential of clever packaging design can fundamentally change industry dynamics. If packaging material can be reduced by 10-20%, and picking & packing and last mile transportation fill rates can be improved by as little as 5-10%, this would lead to a 3% increase in profitability for the online grocer. This implies a doubling of EBIT margin.



HOUSEHOLD AND PERSONAL CARE

Personal care as a category enjoys higher penetration of online than grocery, but has also experienced challenges in shifting sales from offline to online. Challenges include optimizing product formats for efficient shipping, achieving highly automated warehouse operations, and ensuring both user-friendly and sustainable packaging. There are also specific challenges that vary by region, such as the need for tamper-proof packaging in Eastern Europe where consumers will often purchase the same product from several retailers due to the relatively unreliable supply chain. As a result, the return rate of products is high and the retailer needs to find a cost-efficient way to ensure products have not been tampered with.

A cosmetics retailer operating in Northern and Eastern Europe, with a business model where most goods are delivered via mail, has been chosen to explore how some of the challenges may

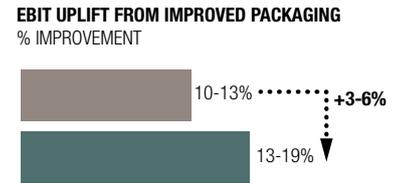
be overcome. The company has adapted its packaging in the following ways

- Tamper-proof packaging has reduced the level of returns to <5%. For example, the company is utilizing tamper-proof seals for shampoo bottles, which has been especially critical in Eastern Europe for reasons mentioned earlier
- Packaging has been optimized for pick and pack operations. Today, most of the company's operations are automated and manual work is kept to a low ~5%. Packages used in this case are simple boxes in three sizes and the selection of the box is optimized for easy packing – however, this highlights another challenge: today, spare space in each box is as high as 50-75%.

Optimized packaging can support value capture also in online Household and Personal Care; some examples include

- Design packaging format for last-mile delivery, e.g., sized to fit mail box or optimized to reduce spare space
- Include tamper-proof features to reduce waste and manual return handling, e.g., seals, or intelligent solutions for automated handling or real-time tracking, such as NFC and RFID
- Optimize packaging for easy returns, e.g., through use of strong paper like Stora Enso AvantFlute or AvantLiner that stand uncontrolled return shipment conditions
- Offer creative design – or consist of sustainable materials – to build customer loyalty

In Household and Personal Care, it is estimated that margins can improve by ~3-6% by changing the type of packaging and increasing packing efficiency. This would lift player profitability from ~10-13% to 13-19%. Not ground-breaking, but still a significant uplift.



CONSUMER ELECTRONICS

Consumer electronics is one of the most advanced categories in terms of online retail, with 40-50% of products sold online in Western Europe. Hence, the challenges online poses are a central part of consumer electronics retailers' and brand owners' operations. The main challenges in online retail is protecting the quality of goods – and guarantee warranty – as well as ensuring theft protection during both initial delivery and possible returns. Shipments are often subject to rough handling during delivery and needs to withstand high drops. In addition, many retailers make use of drop shipping models where the retailer is never in physical possession of the actual product shipped and hence cannot control the choice of packaging.

A globally leading consumer electronics company considers packaging strategic, both as a way to save cost and as a way to boost sales in online and offline channels. By targeted actions to optimize packaging, they have been able to reduce return levels to 3-5% in the company's lightning business. Specifically the following actions have been taken

- To meet minimum requirements for protection corrugated inserts have been developed to limit impact of shock and strict safety tests are conducted to ensure strong packaging. For example, the packaging must protect the product even after seven drops from the same height.

- Packaging has been optimized for returns since a low damage rate is critical as the retailer is bearing the risk of damage (except in case of technical issues with product)
- Packaging has been designed to give the best possible brand experience, for example through the use of bold colors and consistent marketing across sales in many channels
- A positive unboxing experience has been guaranteed through the use of "frustration free packaging", which provides easy opening and resealability
- Packaging has been improved to ensure sustainability. For example, through minimized use of plastics, keeping all inserts on one side of the box, better use of space in box and selecting suppliers providing sustainable materials

As noted, optimized packaging design can support value capture in Consumer Electronics in many ways, among others

- Design packaging for safe delivery and return – as well as guaranteed warranty – e.g., through use of protective inserts, resealable features, and clear return instructions
- Include intelligent solutions, e.g., NFC, for real-time tracking of packages' physical location or consumer engagement
- Once again, offer creative design – or consist of sustainable materials – to build customer loyalty

Stora Enso DesignStudios develop creative packaging solutions

Stora Enso Packaging Solutions' DesignStudios can offer customized solutions for your business needs, which lead to proven customer results. We engage with joint product development and hold workshops at our design studios, following a defined work flow where nothing is left to chance. Our DesignStudios bring together best-practice solutions from our international designer network and help you discover trends in packaging design and consumer behavior. Some of our recent solutions for online retailers include;

PREMIUM PACKAGES FOR HIGH-FASHION SCANDINAVIAN BRANDS PEAK PERFORMANCE, TIGER OF SWEDEN, AND BY MALENE BIRGER'S ONLINE SHIPMENTS

IC Group, the Danish parent company managing the three Scandinavian luxury brands, was looking for a premium packaging for its online channel that would protect the goods inside and create a superior customer experience. Together with Stora Enso Packaging Solutions, boxes made out of a sturdy corrugated material that would withstand pressure during delivery and protect sensitive pieces of clothing, e.g., suits, were developed. The packages were also designed to represent the brands' notion of



premium clothing and were given a handle for easy carrying. The improved brand experience will drive repurchases and loyalty.

INNOVATIVE CONCEPTS TO SOLVE PRESSING ISSUES IN ONLINE GROCERY

Stora Enso has developed innovative concepts for grocery in order to solve two problems. Firstly, fresh produce run the risk of damage if not packed properly, and if packaged without risk of damage the grocer instead incurs significant spare space in the bag or box. Secondly, many consumers dislike receiving products in big corrugated boxes due to its size or in several bags since reuse is difficult. To solve the first problem, Stora Enso has developed a grocery box with inserts of various small boxes. This allows for more efficient pick and pack, as well as better protection of sensitive food. To solve the second problem, a sturdy box with handle and separate compartments is developed. The box can be used for recycling of glass, paper, plastics etc. and can also be recycled at the recycling station, which is ideally located next to the "click-and-collect" grocer. The new design can significantly increase EBIT as a result of the improvements.





GILLES VAN NIEUWENHUYZEN
Executive Vice President
Stora Enso Packaging Solutions
gilles.vannieuwenhuyzen@
storaenso.com



BJÖRN THUNSTRÖM
Vice President Marketing and
Customer Loyalty
bjorn.thunstrom@storaenso.com



JON HAAG
Director DesignStudios
jon.haag@storaenso.com

Executive summary

This Viewpoint discusses how the growth in online retail is creating a new reality for businesses across the globe. European online retailing continues to accelerate its growth and penetration throughout retail categories. In 2015, Euromonitor estimates that the European market for online retail spanning all industries amounts to almost EUR 330 billion and grows at 12% p.a. In China, online retail is already a EUR 230 billion market and grows at 18% p.a. The shift towards online drives a few visible macro trends – for example, the power of the consumer is increasing to new heights, business models are innovated to capture opportunities, the availability of technology is increasing as costs reduce and sustainability become a source of competitiveness.

The trends have implications for the use of packaging, which now grows from its basic functions of protecting, transporting, and informing to driving a larger share of business value. Some concrete opportunities reviewed in the Viewpoint are

- **CREATE CUSTOMER LOYALTY:** The customer experience is shifting from store to home, which puts higher demands on the visual design of outer and inner packaging – up to 50% of consumers claim to develop a preference for a product delivered in premium packaging. Packaging with a premium feel, easy opening and reseal, as well as alternate uses post-opening, help capture consumers interest in the longer term.
- **ENSURE SUSTAINABILITY AND REUSABILITY:** Recyclable and reusable packaging is becoming a means to meet consumers' preferences for, and legislators' requirements on, the circular economy. 100% recyclability can be ensured by use of fully paper-based solutions, including innovative solutions for items traditionally made of plastics, e.g., protective inserts.
- **ENSURE SAFE DELIVERY AND RETURN:** Reducing the risk of theft, proving authenticity, ensuring validity of warranty, and ensuring tamper-proof products are yet largely unsolved challenges where intelligent packaging can help track packages' whereabouts and quality. In addition, use of strong paper materials ensures an attractive look and feel of the package, as well as safe returns.
- **REDUCE NEED FOR TRANSPORTATION:** Packaging design can reduce claims, for example, through the use of corrugated boxes that offer more protection, and therefore reduce the need for transportation. Clever design can also increase efficiency in both warehouse pick-and-pack and optimize space used in last-mile transportation. This is a significant problem for many traditional retailers growing its online presence and can easily have a significant impact on profitability. For example, in online grocery, this lever alone can double EBIT margins.
- **REDUCE DAMAGED GOODS:** 1-7% of fast-moving consumer goods are damaged in last-mile transportation, clearly higher than in a traditional retail store and solved by optimized packaging formats and methods of protection, such as sturdy materials in outer packaging and inserts to protect vulnerable items.

This Viewpoint aims to show brand owners and retailers alike the opportunities packaging can offer and the value it can create. However, capturing these opportunities requires a great deal of expertise of both consumer trends and packaging design. Stora Enso Packaging Solutions DesignStudios are well-equipped to support businesses across industries in developing packaging solutions that create a competitive advantage for your business. Through joint product development, a well-defined work flow and knowledge of the latest thinking in packaging and consumer behavior, Stora Enso Packaging Solutions are an optimal partner in your pursuit to capture online opportunities or solve online supply chain challenges.

We hope to meet you soon.