**Trends and Issues of OEMs**

The agenda of this document is to bring together the current trends and pain areas of Packaging OEM’s broadly. This will help us to understand the market needs and propose relevant solutions. Most of the information is collected from analysis reports and surveys in the region of US and Europe. Keeping sustainability, quality and traceability as main concern, the below documents are complied.

**Packaging:**

The following topical items are major packaging industry trends and issues identified. All of these are regarded to be primary drivers of the packaging industry over the next several years and/or to represent major needs and expectations for the types of packaging machinery, technologies, and value-adding services that manufacturers should be prepared to offer in the future. Trends and issues summarized here are equally important in terms of impacting the future of the packaging industry, reflecting customer expectations, or driving objectives-strategies of machinery manufacturers.**[1]**

1. Continuing **product-brand-package proliferation**, in response to changing customer requirements and consumer demands for convenience, will occur for the foreseeable future.
2. An increasing strategy and operational emphasis on **sustainability in packaging, materials, and operations** is being driven by customer requirements and consumer “green movement” sensitivities
3. Machinery customers are **challenged to attract and retain a workforce** – at operator, technician, and mechanic levels – with skill sets needed to operate increasingly sophisticated packaging machinery.
4. Packaging machinery customers are not, in many instances, able to obtain capital needed to purchase innovative packaging machinery needed to meet production and marketing objectives.
5. Machinery customers continue to be frustrated by the l**ow level of effectiveness in post-sales** or technical support strategies of manufacturers in areas like operator training, machinery breakdowns, poor or inconsistent machinery performance, and documentation.
6. Customers continue to place emphasis and value on “packaging solutions” and expect machinery manufacturers to employ line integration approaches to fulfil these requirements.
7. A global emphasis on **worldwide product production** and sourcing of packaging machinery continues to occur as customers continue to seek extended marketplace opportunities and achieve competitive advantages through low-cost producer strategies.
8. **Customers would welcome the development of sound relationships with manufacturers to exchange information, share risk, and facilitate development of innovations**.
9. Risk assessment, focusing on all aspects of safety in machinery design and operation, represents a core or essential requirement of customers.
10. **Particularly in regulated industries (pharmaceuticals and foods in some categories), requirements for product-package traceability across all components of the supply chain.**

Against these strategic drivers, the following packaging manufacturer strategy development and implementation imperatives emerged from customer input.**[2]**

1. U.S. packaging machinery manufacturers must develop and implement offensive and defensive strategies on both a domestic and global market basis, to serve current and potential customers better than European and Chinese competitors.
2. U.S. packaging machinery **manufacturers must become “intimate” with customers** to understand their strategies and requirements for packaging solutions.
3. U.S. machinery manufacturers build a strong sustainability platform in their machines targeted to helping customers achieve their objectives.
4. U.S. manufacturers need to be brutally realistic when calculating and communicating packaging machinery performance data.
5. U.S. manufacturers must clearly meet or exceed mandated or voluntary standards and compliance requirements that affect machinery they produce for use by customers.
6. U.S. machinery manufacturers should adopt a “total product” approach by “adding value” to all aspects of their interface with customers.



In summary, a “customer driven” focus presents opportunities for manufacturers to align their objectives, strategies, and tactics with “marketplace realities” as perceived by customers. This is the essence of a core approach that will be needed to sustain current and build future levels of success and profitability.

**Sustainability:**

U.S. packaging machinery manufacturers can offer their customers more sustainable packag­ing technologies and be competitive in doing so. A number of OEMs are successfully selling machinery, services, and related products based on sustainabil­ity. These companies focus their efforts on enabling their customers to cut costs through source reduc­tion.[7]



The principal findings of this study include the following:

* Packaging machinery OEMs operate in a global packaging supply chain that faces increasing demands for sustainability.
* Retailers, in particular, play a key role in driv­ing demand for more sustainable packaging throughout the supply chain, even though they generally are not end users of packaging machinery.
* Reducing customers’ consumption of pack­aging materials and ancillary products is the common objective of packaging machinery OEMs that have incorporated sustainability into their core business strategy.
* Reducing customers’ packaging-related con­sumption of energy and water and emissions of greenhouse gases (GHGs) are also key compo­nents of successful sustainability strategies.
* Opportunity and innovation drive a successful business strategy based on sustainability for packaging machinery OEMs.

This study also contains, the factors for changing business environment for Packaging OEM’s, and best practices for sustainable manufacturing.

**Telematics and The Internet of Things:**

Telematics is the blending of computers and wireless telecommunications technologies, ostensibly with the goal of efficiently conveying information over vast networks to improve a host of business functions or government-related public services. The most notable example of telematics may be the Internet itself, since it depends on a number of computer networks connected globally through telecommunication [backbone](http://searchtelecom.techtarget.com/definition/backbone)s.

Telematics can provide OEMs and customers with considerable and valuable data on assets, which can add significant value to optimizing R&D, investment decisions, manufacturing, and operations. [8]

\* This document has listed the requirement, benefits and challenges of Telematics in OEM.

**Food and Beverage processing and packaging:**

1. One of the most dynamic and fast changing elements of product packaging, labels not only reflect the product manufacturer’s brand, they differentiate product packaging and provide consumers with an abundance of information about the product itself.**[3]**

Product manufacturers want labelling machines that are;

* Capable of handling the array of new labelling materials
* Can accommodate multiple label technologies
* More intuitive to use
* Predicts maintenance

• Easier to clean

Delivering the equipment and retrofit kits product manufacturers need to keep pace

with changes in labelling will require equipment OEMs to have a thorough understanding of:

* New label materials and their respective performance properties
* Direct influences on labels - product safety and regulations
* Growing consumer interaction with labels

\* This document covers the complete trends about labelling

1. From gluten-free to whole grains, consumers are seeking to accommodate their increasingly busy lifestyles with healthier snacks and baked goods on the go. And according to PMMI’s 2012 Bakery & Snacks Market Assessment, sales of global bakery products are expected to increase 4.5% annually, reaching US $410 billion by 2015.**[4]**   
     
   To meet this increasing demand, bakery and snack manufacturers are looking to OEMs for solutions to ramp up production. Those same machinery solutions must also be increasingly flexible to accommodate new packaging materials and formats, from variety packs to single serve. PMMI’s recent Bakery & Snacks Market Assessment identified the following machinery needs from bakery and snack manufacturers :  
    **• Increased automation in the form of more robotics  
   • User-friendly HMIs (human machine interfaces)  
   • Graphic-based controls**

**Automotive Packaging:**

In both the OEM-owned and the supplier-owned packaging scenarios, following are the significant pain points for the players:**[5]**

1. **Excess containers**: OEMs and suppliers surveyed maintain multiple closed loop systems limiting the ability to share idle containers. This typically leads to 20%–25% more containers in the system than needed (requiring excess capital investments in idle containers).
2. **Inconsistent availability**: Despite excess containers in the system, a lack of efficient tracking and limited visibility make it difficult to get the right container to the right place at the right time.
3. **Limited visibility to total costs**: OEMs and suppliers have been challenged to quantify and track all packaging-related costs. Additionally, due to poor tracking mechanisms, OEMs can be charged multiple times for the same containers by their suppliers(from program to program).
4. **High loss rates**: A significant percent (15%–20%) of packaging is lost during the life of the program due to limited tracking.
5. **Inefficient returns**: The return loop logistics are not effectively utilized with many point-to-point returns. There are approximately 10%–15% empty miles on the return loop.
6. **Packaging cleanliness**: Greasy and non-greasy containers are often mixed together and create excess costs for the suppliers.
7. **Process complexity at the suppliers**: Suppliers have to expend significant effort in managing the different OEM requirements around container management.

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**A potential solution - Pooling**

A “Pooling-based” solution is one potential option to address these pain points, as well as reduce annual expenditures for standard returnable packaging. In the “Pooling” solution, the pooler would own the fleet of standard returnable containers and would manage the entire process—shipping, cleaning, preparing, and tracking of the containers. If the pooler is able to serve a sufficiently large number of programs, it can likely generate efficiencies through reduced variability and economies of scale to lower the system-wide cost of packaging services. This would be a significant advantage over the “Supplier Owned” systems. **While OEMs that own their packaging partially achieve these benefits, they could potentially extend these benefits through pooling**.

\* This document is referred and it also contains the details of the solution with pros and cons.

**Other Readings:**

It is mentioned about primary needs in new packaging equipments in case of **Pharmaceutical/Medical Devices** such as:[6]

* Greater flexibility in changing over product lines
* Easier cleaning
* Less maintenance and more diagnostic alerts
* Higher operating speeds for faster throughput
* Improved operator safety
* Intuitive, user-friendly HMI

**Bibliography**

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[2] Philip G. Kuehl, ‘Vision 2015 Focus Group Sessions Summary Report ‘,October 15-17, 2007, PACK EXPO Las Vegas., Page [11-12]

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[3]Paula Feldma,’Trends in Labelling’, 2012 Page[5-6],

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[5] Delloite,’Automative Supply Chain: Unlocking Potential Cost Savings in Automative Packaging ’

[6] <http://www.pmmi.org/files/Research/ExecutiveSummaries/2012PharmaMedExecSummary.pdf>

[7] Packaging Machinery:Sustainability and Competitiveness <http://trade.gov/publications/pdfs/packaging-machinery-sustainability-competitiveness.pdf>

[8] Telematics and the Internet of Things: Value, Opportunities & Risks for Customers and OEMs

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