PMMI

The Association for Packaging and Processing Technologies

CONTAINER INNOVATION • CARBONATED AND NON-CARBONATED SOFT DRINKS • EVOLUTION TO GREEN PACKAGING • WATER

SINGLE SERVE PACKAGING • BEER, WINE, & SPIRITS • PLASTIC • ENERGY DRINKS • POUCH CONTAINERS • JUICES • COST REDUCTION

# BEVERAGE PACKAGING MARKET ASSESSMENT

# 2014

11911 Freedom Drive | Suite 600 | Reston, VA 20190 USA

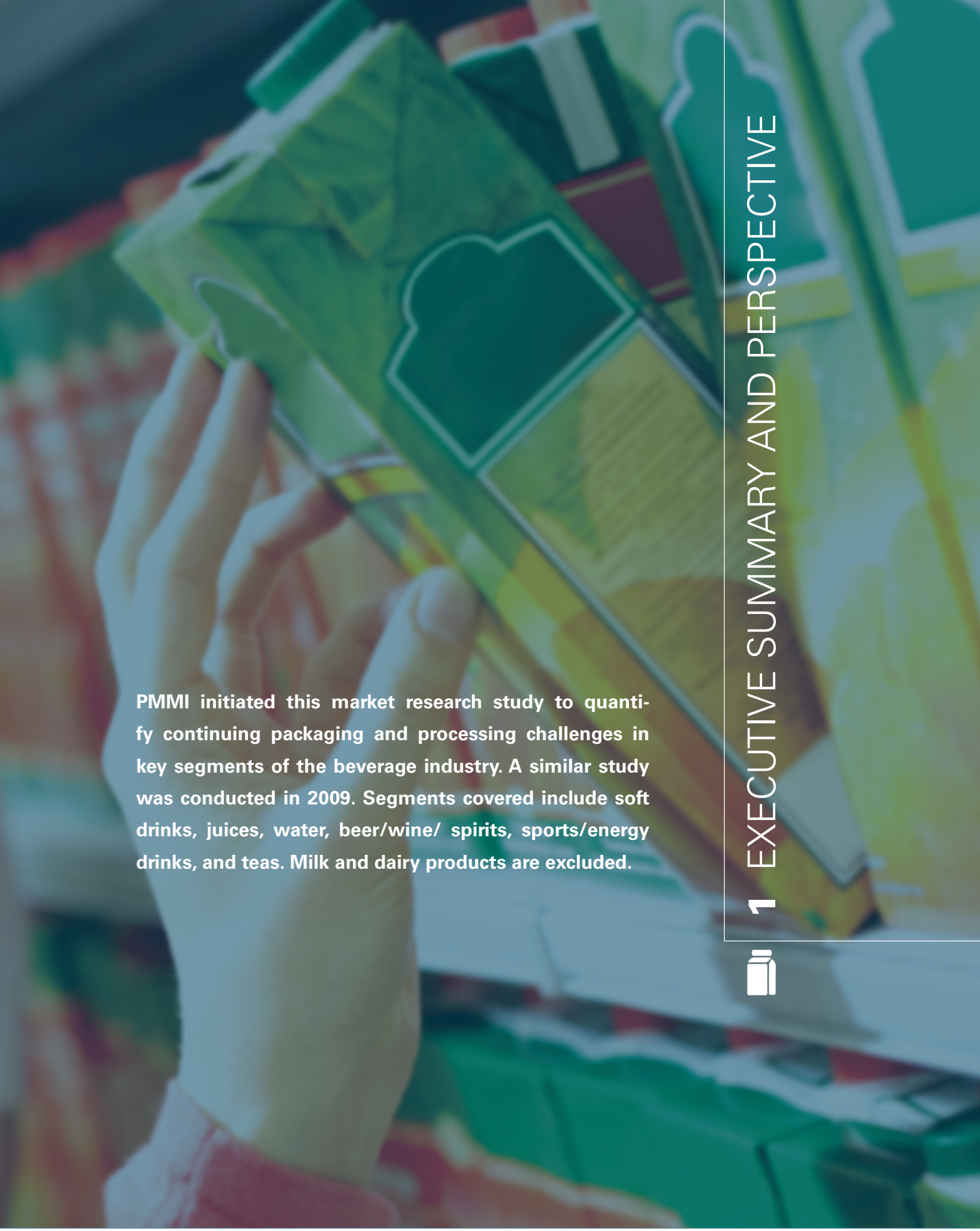
The Findings of an End User Market Research Study that Explores the Issues of Packaging in the Beverage Industry


# BEVERAGE PACKAGING MARKET ASSESSMENT

**Packaging Machinery Manufacturers Institute**
**11911 Freedom Drive, Suite 600**
**Reston, Virginia 20190**
**(703) 243-8555**

**Publication Date: August 2014**
**Jorge Izquierdo, Vice President, Market Development**
**Paula Feldman, Director, Business Intelligence PMMI**

# TABLE OF CONTENTS



# 1 EXECUTIVE SUMMARY AND PERSPECTIVE

**PMMI initiated this market research study to quantify continuing packaging and processing challenges in key segments of the beverage industry. A similar study was conducted in 2009. Segments covered include soft drinks, juices, water, beer/wine/ spirits, sports/energy drinks, and teas. Milk and dairy products are excluded.**


The beverage packaging industry continues to face a host of challenges. It needs more packaging innovation. It is under pressure to reduce costs. It is looking for machines with more functionality that are still simple to operate. There is a call for more and better training. And retailers are demanding packaging that is easy to use with appealing designs that meet the changing needs and preferences of consumers. PMMI members need to stay abreast of how these challenges will be met and their implications for the packaging industry.

The current research updates the 2009 study, identifying how the market has changed while providing analysis and insights for packaging equipment suppliers. The research is based on in-depth discussions with 61 beverage packaging industry respondents. The scope questions are identical to those used five years ago to maintain consistency. Note that the research participants are different. The research questions can be found in the appendix with additional information on the methodology used. The significant differences in findings between now and the 2009 beverage packaging study are noted throughout the report.

## Beverage Packaging Trends

By 2015 the value of the North American beverage packaging industry is expected to be $27.2 billion. Plastic is expected to continue to be the dominant packaging material for the next 10 years, comprising over 40% of the market. Bottles are the most common container type, making up 55% of the market. Plastic packaging material and the bottle packaging type are expected to provide the vast majority of incremental sales increases in beverage containers to the forecast horizon (to 2025).

Beverage marketers see the beverage container as their main tool to communicate brand essence and to differentiate their product. With the proliferation of new drink categories and new product offerings, the importance of establishing a unique shelf presence cannot be overemphasized. This is driving beverage companies to reconsider the broad range of design and material aspects of containers and graphics to best present their brand positioning on the shelf and in the consumer's hand. Key trends include:

**Size and Dimension Ratios:** New sizes are being offered to help consumers with portion control and to better target specific consumer groups. New taller, thinner containers stand out from other cans and bottles on the shelf.

**Openings:** Can diameters are being expanded to provide different, premium drinking experiences. Some companies are experimenting with tear-off tops to make the drinking experience feel more like drinking from a glass.

**Resealability:** To help with portion control and enhance convenience and value for consumers, companies are exploring ways to make aluminum cans resealable.

**Texture / Feel:** Some companies are seeking to go beyond the standard undifferentiated feel of a can to provide distinctive textures (e.g., rough sandpaper, grooved edges, or extra-glossy surfaces) so consumers may actually feel the brand distinction.

**Labels / Colors / Graphics:** Research participants would like to see additional research and development around labels, colors and graphics, including colors that change with temperature and colors that shift depending on the angle at which the container is held (e.g., a container that appears orange when held at a 90-degree angle and yellow when held at a 45-degree angle). In other developments, companies are moving to shrink sleeves in order to get a full bodied label and in-line printing to give beverage manufacturers the ability to change labels as needed.

**Pack Sizes:** Instead of traditional 6, 12, or 24 packs, some companies are experimenting with 2, 3, 4, 8, 15 and 32 packs to better target specific consumer groups or to align with specific drinking occasions and to meet various price points.

## Increasingly Popular Packaging

Although the sales of aluminum cans have suffered from the decline in soft drink sales over the last 10 years, a number of new drink categories are being sold in aluminum cans, including energy drinks and microbrew beers. These categories are experiencing strong growth and replacing that lost volume.

Energy drink companies believe that consumers overwhelmingly prefer their drinks in aluminum cans. Microbrew beer manufacturers have traditionally preferred the drinking experience in bottles. The microbrewer industry has recently been shifting, though. Microbrewers have begun to market microbrew beer in cans for a variety of reasons. They save costs on shipping and material. Aluminum provides better light protection. And cans allow beer to be consumed in places where glass may be inappropriate, such as baseball games, summer festivals and other densely-populated or public settings.

Another packaging type demonstrating strong growth is extended shelf life (ESL) packaging. This type of packaging offers beverage companies, retailers, and consumers convenience and cost savings by avoiding spoilage by expanding the shelf life of juices and sports and nutritional drinks from a few weeks to 75 - 180 days.

## Challenges with Pouches

The most surprising find in the study was the slower-than-expected growth of flexible pouches in the beverage industry as they were expected to exhibit triple digit growth in the 2009 study. Pouches are being used in many other product categories, but consumers, and therefore beverage companies, have been slow to adapt to this package type for a number of reasons:

**Bad initial experiences:** Over the last five years, a number of companies rolled out new products in pouches at the same time and saturated the market. Consumers demand for the format didn't materialize. These companies had significant losses and discouraged other companies' from offering pouch formats.

**Challenges conveying brand image:** Some respondents believe it is difficult to convey a premium image with a pouch container that is becoming ubiquitous across so many product categories. Packaging similarity with shampoo bottles, breakfast cereals and laundry detergents detracts from a beverage product's image. Additionally, because the shapes of bottles and cans have become so important to marketers, the flexible nature of pouches prevents shape from being a defining element of the brand when packaged in a pouch.

**Negative perceptions:** Pouches are almost too space-efficient and look like they have less liquid in them than their bottle/can counterparts. They also have a tendency to look messier on store shelves compared to cans and bottles. Some don't believe the format can directly offer consumers new and significant benefits.

**Recyclability:** Many respondents are skeptical about whether and how well pouches can be recycled.

**Cost comparison:** Opinions vary on the cost of pouches. Respondents from beverage manufacturers say pouches are significantly more costly. However, respondents from pouch equipment providers explain that pouches cost significantly less than PET bottles when directly comparing the containers. Pouch equipment providers also stated that in assessing the total lifetime cost of ownership across the entire supply chain, pouches provide substantial savings due to lower costs for materials, storage, transportation and printing.

**Speed comparison** - Pouch filling speeds are significantly slower than bottling and canning. Pouch lines typically fill from 100 to 300 containers per minute. In comparison, cans range from 1,000 to 1,800 per minute at the most sophisticated beverage companies. Although respondents in the 2009 beverage study predicted pouch filling speeds would quickly catch up to cans, this prediction has not materialized.

It is worth noting that pouch formats are more likely to succeed when marketed to consumers under the age of 35. These consumers grew up with the Capri Sun beverage and their pouch format so they have a level of comfort with that packaging type. Pouches are perceived as suitable for most beverages aside from most ultra-premium and indulgent brands and carbonated beverages. Consumers usually prefer rigid packaging for these beverages to better convey a premium image and to better handle carbonation. Many research participants expressed hope that pouches will become popular and point to how the baby food industry revolutionized it's packaging when upstart companies launched successful new pouch products that inspired larger, established companies to follow suit.

## Supply Chain for All Beverage Packaging-Related Products

Many research participants expressed supply-chain concerns about the quality and type of glass they are acquiring for their bottles. A similar concern was noted in the 2009 study. Respondents are not satisfied with the glass they are receiving, are frustrated by the lack of a diverse set of glass suppliers due to industry consolidation, and have strong feelings that the quality of glass was higher years ago. An additional concern they expressed is that many companies are seeking to light-size their bottles and are mitigating the manufacturing challenges inherent in this process by making extra effort to smooth out their manufacturing operations to minimize glass breakage during production.

> *Another concern expressed is that beverage manufacturers cannot find the equipment they need from U.S.-based suppliers, again due to industry consolidation, and lack the ability to find small, niche specialist companies. German equipment manufacturers are known for providing the type of customized equipment that can be challenging to find in the U.S.*

This is not to say that beverage manufacturers are averse to sourcing from foreign equipment suppliers. In fact, the quality from European providers is perceived as significantly higher than from U.S. providers. The perception of the U.S. equipment providers as having a significant quality gap versus European providers first started in the 1980s, but most respondents explained that the current quality gap is much less, or is confined to a few niche segments.

## Government Regulation

Respondents from the beverage packaging industry do not feel overburdened with regulation. Topics that were raised included increasing levels of package recycling, reducing carbon footprint, ensuring that coding is used for traceability, and possibly needing to replace X-ray machines with gamma-rays to increase employee safety.

## Concerns and Unmet Needs

Given the degree of stiff competition and the strong need to differentiate, beverage companies have a high demand for packaging and equipment innovations and see the industry as lacking in this key area. In particular, they want innovation that will lead to more energy-efficient equipment; more flexible, forgiving and faster equipment; new packaging materials; and much faster speed to market with packaging designs.

Countering this urgency is a deep concern among some companies that new packaging formats - such as pouches or newly light-sized containers - will not be adequately tested before launch. Lack of testing can lead to colossal failures in-market and ruin the consumer perceptions of promising packaging technologies before they have time to mature.

Specific frustrations that equipment providers raised include receiving machinery that does not perform to the efficiencies promised; not having adjustable change parts; not having equipment options that are appropriate for their size of operation; and a lack of willingness to provide custom-made machinery.

High-quality service and training are also perceived as very difficult to find. Some beverage company respondents admit to exaggerating their problems to get service as fast as possible and the "right people" on site. Other companies seek more of a relationship with their equipment providers and would like to talk with them about their operations separate from specific sales or service calls. Also, because many research participants stated that their companies have relatively high rates of machine operator turnover, some companies are asking for training that is spread out over the first year, rather than delivered all at once at the time of installation. Participants suggested using tools such as YouTube and Skype to provide training videos and to support service calls. Those tools are seen as simplifying the service and training processes and as having the potential to reduce costs.

## Machinery Providers' Challenges with Beverage Companies

Although beverage companies may set a high bar when putting out a RFP, machinery providers believe it is counter-productive for beverage companies to insist that the equipment have the same control system as the plant-wide control systems. Machinery providers stated that these types of controls are not intended or applicable to high speed packaging machinery and force them to come up with solutions that are more expensive, slower, of lower quality, and with fewer options.

There is also some frustration among equipment providers when a beverage company invests in a sophisticated piece of packaging machinery but uses the cheapest packaging materials available and blames the equipment provider for problems that result.

## Biggest Improvements

The industry continues to rapidly evolve. When beverage manufacturer respondents were asked where they see the biggest improvements, some said that further vertical integration of the packaging process will provide them with total flexibility and control, allowing them to adapt to any retailer request or consumer trend more quickly than their competitors.

Others stated that the machines have reached a critical point of complexity. Future improvements will involve making machines more user friendly, self-monitoring and self-diagnosing so that optimum operation becomes easier.

## Key Take-Aways and Potential Opportunities

Common attributes in packaging innovations and trends often appear at different rates and times across specific beverage industry segments. Six attributes were assessed across eight market segments to demonstrate the relative importance of each packaging factor.

In comparison to the 2009 beverage study, there is a greater focus on uniqueness of packaging in the CSD and wine segments. Overall, the research also revealed a heightened movement toward developing new premium products or enhancing current brands with a more premium image.

**IMPORTANCE OF PACKAGING FACTORS ACROSS BEVERAGE INDUSTRY SEGMENTS**

| | Water | CSD | Sports & Energy | Juice | RTD Tea | Beer / Wine / Spirits | Most Value Brands | Most Premium Brands |
|---|---|---|---|---|---|---|---|---|
| Cost Savings | A | A | B | B | B | B | A | C |
| Green | B | A | B | A | A | B | B | C |
| Convenience | A | A | A | B | A | A | A | B |
| Durability | B | B | A | A | A | A | B | A |
| Uniqueness of packaging | C | A | A | A | B | A | C | A |
| Speed of innovation | C | B | A | B | B | B | C | B |

* A = MOST IMPORTANT; B = LESS IMPORTANT; C = LEAST IMPORTANT

The scores reflect how each segment generally differentiates itself from other beverage segments. For instance, energy drink companies differentiate themselves by prioritizing convenience though multiple sizes, uniqueness of packaging and speed of innovation. Obviously, not all brands within a segment have the same ranking of factors; the last two columns on the right reveal the differences observed in value versus premium brands.

Beverage company respondents, across all beverage segments, shared their insights, concerns, frustrations and desires during the in-depth conversations that took place for this study. The following table summarized their concerns and also suggests how packaging companies can turn those concerns into opportunities.

**RESPONDENT CONCERNS AND POTENTIAL OPPORTUNITIES**

| CONCERNS | OPPORTUNITIES |
|---|---|
| **ADJUSTING TO AN INCREASINGLY HYPER-COMPETITIVE MARKET** | |
| Beverage companies want new sizes, openings, textures and graphics to help avoid getting lost in the parade of new product launches. | Communicate with beverage companies with an understanding that it is paramount that they continuously innovate and differentiate.<br>Continue to explore ways to make machines more flexible.<br>Elements such as the standard can opening are being redesigned for various reasons. Consider exploring what machinery changes would be needed to adjust to these designs, and be ready to discuss options with beverage companies. |

| CONCERNS | OPPORTUNITIES |
|---|---|
| Packaging equipment is not flexible enough to handle different packaging types and sizes. | Continue to explore technologies in robotics, vision systems and machine learning to help machines adapt automatically.<br>Explore partnerships with universities and high technology providers to rapidly advance packaging machine innovation and adaptation. |
| **CREATING OPPORTUNITY FOR POUCHES** | |
| Beverage companies resist pouches because of cost. | Develop and broadly communicate detailed case studies of how companies can save money by using pouches.<br>If cost savings are substantial, seek out value brands that could leverage a cost advantage and capture significant market share with a pouch.<br>Increase R&D to improve line speeds so they are more comparable with cans and bottles. |
| Pouches may not be an effective branding vehicle due to how they look on the shelf. | Explore ways to make pouches stand up straighter and maintain a more consistent look.<br>Explore new beverage pouch designs that differentiate them from pouches in other categories. |
| Consumers are not attracted enough to pouches for them to be a viable solution | Seek out new, innovative, category-defining beverage companies eager to stand out with a pouch.<br>Explore innovative ways of boosting consumer attitudes toward pouches via new/viral media. |
| **ADDRESSING SPECIFIC CUSTOMER SEGMENT ISSUES** | |
| Microbreweries and other medium sized companies perceive there are few equipment options for their size. | Consider providing smaller versions of equipment suited for medium sized players. |
| The quality of glass bottles is going down. | Review glass bottling line design to minimize impacts that could cause breakage |
| Companies are increasingly mandating that equipment providers integrate machines with their facility-wide control systems vendor. | Consider collectively approaching major controls vendors to explore ways in which the control vendors system can work more effectively with high speed packaging equipment. |
| **ENHANCING SERVICE** | |
| Poor technical service from equipment providers | Leverage new technologies (e.g., Skype and YouTube) to improve intimacy with clients.<br>Capitalize on experienced technician knowledge by video journaling their service calls via tools like Google Glass. Videos can then be stored and categorized for training of other technicians or used for future equipment design enhancements. |


The Association for Packaging and Processing Technologies

**PMMI HEADQUARTERS**
11911 Freedom Drive, Suite 600
Reston, Virginia 20190
Telephone: (703) 243-8555
Fax: (703) 243-8556
E-mail: *pmmi@pmmi.org*
*www.pmmi.org*

**PMMI LATIN AMERICA**
Homero 418 Piso 7
Col. Miguel Chapultepec
Miguel Hidalgo, D.F. 11570 Mexico
Telephone: + (52-55) 5545-4254
Fax: + (52-55) 5545-4302
E-mail: *latina@pmmi.org*