ERP for the Food and Beverage Industry

A White Paper For U.S. Manufacturers and Distributors

Focusing on Business Drivers and Technology Requirements

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Introduction

The U.S. food and beverage industry is a $2 trillion market[1] that employs more than 1.5 employees in the food processing segment.[2] This subset of the U.S. manufacturing market includes more than 31,000 food and beverage processing establishments[3] including globally known leaders like Coca Cola, Tyson, Nestle, Kraft and Anheuser-Busch.

While North America is the largest global food market across all food segments, its growth rate is about half of that in global emerging markets like Argentina, Brazil, China and India. The U.S. food industry is forecast to grow at a steady rate of 2.9% CAGR through 2022 [4], though snack foods are expected to outperform with a growth rate of over 3% growth due to consumer demand for portion control and convenience options.

1 Plunkett Research LTD, website 2017.

2 U.S. Bureau of Labor Statistics, 2017.

3 USDA Economic Research Service, website, 2017.

4 Food Packaging Trends and Advances report, PMMI, Association for Packaging and Processing Technologies.

Industries in the Food Manufacturing subsector transform livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products. The food products manufactured in are typically sold to wholesalers or retailers for distribution to consumers.

Different Industries – Similar Issues

The food manufacturing and processing industry consists of nine North American Industry Classification System subsectors according to the U.S. Department of Labor's Bureau of Statistics:

- Animal Food Manufacturing (NAICS 3111)
- Grain and Oilseed Milling (NAICS 3112)
- Sugar and Confectionery Product Manufacturing (NAICS 3113)
- Fruit and Vegetable Preserving and Specialty Food Manufacturing (NAICS 3114)
- Dairy Product Manufacturing (NAICS 3115)
- Animal Slaughtering and Processing (NAICS 3116)
- Seafood Product Preparation and Packaging (NAICS 3117)
- Bakeries and Tortilla Manufacturing: (NAICS 3118)
- Other Food Manufacturing (NAICS 3119)

Beverage manufacturing includes three types of establishments: those that manufacture nonalcoholic beverages; those that manufacture alcoholic beverages through the fermentation process; and those that produce distilled alcoholic beverages. Ice manufacturing, while not a beverage, is classified with nonalcoholic beverage manufacturing because it uses the same production process as water purification.

Accordingly, the beverage and tobacco product manufacturing subsector consists of two industry groups that combine these sectors:

- Beverage Manufacturing (NAICS 3121)
- Tobacco Manufacturing (NAICS 3122)

Key Industry Drivers

Despite a number of emerging trends that reflect changing U.S. lifestyles and preferences for food/beverage consumption, a recent study [5] of 259 U.S. food plant operational managers and other key decision makers shows that this is still a price-driven industry. Per-unit costs determine profitability, necessitating a continuing drive to automate and increase throughput. The one proven recipe for sustained competitiveness: technology improvements.

Automation spending is up 56%. There is a driving thirst for automation technology investments that improves process and quality controls, that tracks data from all business areas on a real-time basis, and that monitors/controls food safety from all aspects.

5 Food Processing Magazine, Special Report, What's Diving Automation Investments in the Food 7 Beverage Industry 2017.

The two primary worries that keeps middle to high- level management awake at night is having to respond to a major recall event or a disruption in production for whatever reason.

Also, on their radar from a product creation or packaging innovation perspective is: a drive to reduce sugar without sacrificing flavor, "cleaner" labels that lead with more natural/ whole/organic (at least sounding) ingredients, and integrating smaller eat-on-the-go products that are more frequent but replacing historical three-times-a-day dining.

Nutrition Facts

Serving Size: About (20g)
Servings Per Container: 16

	Amount Per Serving	% Daily Value*
Total Calories	60	
Calories From Fat	15	
Total Fat	2 g	3%
Saturated Fat	1 g	4%
Trans Fat	0 g	
Cholesterol	0 mg	0%
Sodium	45 mg	2%
Total Carbohydrates	15 g	5%
Dietary Fiber	4 g	17%
Sugars	4 g	
Sugar Alcohols (Polyols)	3 g	
Protein	2 g	
Vitamin A		0%
Vitamin C		0%
Calcium		2%
Iron		2%

* Percent Daily Values are based on a 2,000 calorie diet.

Ingredients: Wheat flour, unsweetened chocolate, erythritol, inulin, oat flour, cocoa powder. evaporated cane juice, whey protein concentrate, corn starch (low glycemic), natural flavors, salt, backing soda, wheat gluten, guar gum.

Areas for Operational Improvements

Food manufacturers are finding untapped potential in automating a wide number of operational areas in this sector. Companies are continuously being put under the microscope for both food and worker safety reasons and programs aimed at these are at the forefront. Always, however, is the need to stay competitive:

- **Faster Time to Market with New Products.** The need to differentiate products in a saturated market is challenging even big-name brands. Thousands of companies are aiming at the same consumer profile, pushing the imperative to create new products ahead of competitors while applying discipline to managing recipes, plus tracking and adjusting ingredients

- **No-Compromise, Faster Throughput.** The goal here is to meet the twin requirements for better quality controls plus lowering per-unit production costs. To do that better, food manufacturers are looking to track shop floor activities in real time to enforce accuracy; reduce bottlenecks through automation and better operational processes; and improve production scheduling.

- **Audit-Ready Compliance and Food/ Ingredient Traceability.** As stated in the referenced survey, nothing worries food management and executive staff more than a recall. The same holds true for preventing an out-of-compliance event.

- **Upgrading Controls for Tracking Overall Equipment Effectiveness (OEE).** New innovations with the Internet of Things (IoT) are being watched carefully for practical usage. The goal is to go beyond maintenance/repair actions and predict machinery issues in advance of a problem that slows production.

- **Evolved CRM Solutions.** While the objective of most CRM solutions is to better sell, service and market to the most profitable customers, newer customer input mechanisms are evolving. New programs that provide greater collaboration using social media tools is being sought to bypass old world innovation vehicles like focus groups, surveys, face-to-face taste tests, etc.

The Food and Beverage Industry ERP Checklist

The food and beverage manufacturing industry is highly competitive and highly regulated. The continual influx of new food packaging ideas/demands, supply sources, regulatory requirements and brand challenges requires sophisticated technological support. An Enterprise Resource Planning (ERP) solution with deep industry-specific capabilities, plus a long track record of migrating through the changes of this industry, is the answer.

Here are some of the most important capabilities required from an ERP solution in this market:

- **Product Lifecycle Management** – 360-degree visibility of all predicting, sourcing, inventory, production and shipping components, plus the ability to make changes instantly and easily.

- **Strategic Financial Management Single** – Source streamlined accounting applications, sophisticated analytics and reporting, end-to-end cost analysis.

- **Regulatory and Compliance Management** – Ability to meet Food Safety Modernization (FSMA) and Safe Quality Food (SQF) standards with forward and backwards traceability of lots, serials and supplier ingredients. Streamlined USDA, HACCP, GMP and other regulatory requirements with integration to raw materials receiving, production, packaging and shipping steps. Auditable document automation to mitigate legal risks.

- **Supply Chain Management** – While this is not a new area, it's still one of the top targets for improvements that can deliver decisive bottom-line impact. Improving processes for predicting, purchasing, delivering and storing ingredients and end products can be accomplished via the newest business intelligence and analytic capabilities.

- **Customer Service Management Single** – Screen view of customers, contracts and orders; accurate quoting and historical records; analysis and pricing modification controls for optimizing margins; plus key customer identification and support.

Today's food and beverage manufacturer also requires world-class mobile capabilities from its ERP provider, an easily tailored user interface, the ability to customize the various applications to meet the companies specific business practices and role-based processes in every operational area.

About SYSPRO

SYSPRO is a highly scalable, industry-built Enterprise Resource Planning (ERP) software solution that can be deployed in the cloud, on-premise, or accessed via any mobile device. SYSPRO is designed to simplify business complexity for manufacturers and distributors by providing actionable insight that supports effective decision-making, strong cost control, streamlined processes and improved productivity.

For more information, visit **www.syspro.com**.

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