



FOOD & BEVERAGE

Delivering more. Much more.



[eadcorporate.com](http://eadcorporate.com)



## Engineering & Automation, Project & Construction Management, Business & Operations Consulting Solutions Customized for the Food & Beverage Industry

Since 2001, EAD has completed over 10,000 projects and provided more than 2 million hours of professional services for predominantly food and beverage manufacturers. We closely collaborate with you to solve your industry challenges, offering world-class expertise and a comprehensive suite of services tailored to your specific needs. Our experts are licensed and certified professionals who excel at enhancing food and beverage manufacturing production efficiencies, navigating regulatory requirements, and ensuring product and facility safety. Our tailored services include hygienic design, food systems automation, cross-contamination prevention, and guidance for cGMP, FDA, USDA, OSHA, and other regulatory standard compliance.

### ENGINEERING EXCELLENCE

Our engineering solutions are designed to meet the unique needs of the food and beverage industry. We follow the front-end loading (FEL) process to deliver solutions that integrate seamlessly with your existing operations in every project phase. Our experienced project engineers plan, execute, and manage engineering projects and work closely with you to develop innovative solutions that enhance your production processes, ensure compliance with regulatory standards, and create efficiencies. Our engineering services include:

**Mechanical and Process Engineering** We design and optimize production processes to maximize efficiency, reduce waste, and ensure product quality. We design for HVAC systems, piping and wastewater systems, tanks and pressure vessels, and a variety of other systems that drive a thriving food and beverage operation. Our services include equipment sizing, energy and time studies, and recipe management. We even generate 3D models in BIM and VR to allow you to conceptualize your space in real-time. Our mechanical and process engineering solutions are tailored to your specific needs, whether you're looking to improve existing processes or develop new ones.

**Electrical Engineering** Our electrical engineering services cover everything from power conversions and equipment selection and installation to systems integration and maintenance. We ensure that your electrical systems are safe and designed to meet all operational requirements and regulatory standards.

**Structural Engineering** We safeguard the structural integrity of your infrastructure, ensuring your food and beverage manufacturing operation is safe and functioning at its highest potential. Our structural engineering team designs structures that are safe, functional, and customized to your project's unique requirements. Our services are wide-ranging and include load-bearing studies, environmental hazard protection, structural failure and fall prevention, critical lift plan development, and structural steel, masonry, and concrete design.

**Controls and Automation Engineering** The key to maximizing throughput and minimizing operational downtimes in food and beverage manufacturing is automation. Our automation design solutions are system-agnostic and reduce labor costs while increasing the efficiency of your key product processes:

### VALUE ENGINEERING FOR FACILITY SPACE ASSESSMENT & CUSTOM PASTEURIZATION PROCESS DESIGN SERVICES

#### *Multi-discipline engineering & value engineering consulting*

- Delivered  $\pm 30\%$  cost estimate for a novel egg pasteurization process to boost production
- Applied value engineering to ensure the best value at lowest cost
- Provided stakeholders with up-front transparency on costs and options

### \$20MM TIC HYGIENIC RE-DESIGN & INSTALL OF A PROCESS WASTE SYSTEM

#### *Project & construction management, multi-discipline engineering, safety consulting - standards development*

- Resolved critical sanitary sewer safety issues through targeted engineering solutions
- Completed system replacement with no disruption to 24/7/365 operating schedule
- Delivered sanitation solutions that were implemented company-wide as new hygienic design standard

### \$25MM PROJECT TO BRING A PRODUCTION LINE FROM THE BONEYARD TO 125% CAPACITY

#### *Multi-discipline engineering, project management*

- Ensured line produced product 3 weeks ahead of schedule
- Increased production capacity by 25%
- Generated \$30MM in additional sales for our client

### HYGIENIC BUILDING ASSESSMENT AND SPIRAL FREEZER DESIGN ANALYSIS

#### *Mechanical & process engineering, safety consulting, project management*

- Developed a hygienic assessment that identified and addressed food safety risks
- Evaluated spiral freezers and delivered engineering solutions aligned with hygienic design best practices
- Provided actionable recommendations to improve site sanitation and safety

### WAREHOUSE ADDITION FOR FORTUNE 500 FOOD MANUFACTURER

#### *Construction & project management, multi-discipline engineering*

- Designed a complex warehouse expansion to meet growing product demand
- Leveraged in-house team for full project continuity
- Delivered on time and within budget

- **PLC, HMI, and DCS Programming** We design and integrate cutting-edge automation systems tailored to your specific production requirements.
- **Data-Driven Systems Optimization** Using real-time data analytics, we optimize production line speeds, reduce bottlenecks, and minimize waste, increasing overall productivity.
- **Predictive Maintenance** We implement predictive maintenance strategies that minimize downtimes by identifying potential issues before they cause failures.
- **Systems Modernization** Keep the systems that drive your food and beverage operation running smoothly and up-to-date. We resolve systems obsolescence issues to prevent system downtimes and failures, security breaches, and lost profits.

### PROJECT & CONSTRUCTION MANAGEMENT SOLUTIONS

Our project management and construction management team are experts at project execution. We adeptly handle the project scope, schedule, cost, quality, procurement, and manage stakeholders to ensure project success. Our experienced project and construction managers—many of who are P.M.P. certified and trained in LEAN, Six Sigma, and other management methodologies—collaborate closely with you to define goals, manage timelines, and control budgets. They act as your advocate to ensure your project is completed on time, on budget, and to the highest standards, helping you avoid costly delays and missteps.



### REGULATORY COMPLIANCE SOLUTIONS

Your job is critical, and the stakes are high. Ensuring regulatory compliance, optimizing processes, and maintaining product safety are tasks that demand technical expertise and industry knowledge. EAD helps you stay ahead of FDA, USDA, cGMP, HACCP, and FSMA regulations with compliance solutions built to address your specific needs:

## MACHINE GUARDING DESIGN & IMPLEMENTATION FOR BAKED GOODS MANUFACTURER SERVICES

*Safety services – machine safety*

- Designed and implemented machine guarding to improve equipment safety
- Developed safety control systems and functional requirement specifications
- Coordinated cross-stakeholder efforts for smooth design and installation

## AMMONIA REFRIGERATION SYSTEM UPGRADE & CONTROL PANEL DESIGN FOR ENSURING SAFETY COMPLIANCE

*Safety consulting (PSM/PHA), mechanical engineering, industrial control panels*

- Scoped and budgeted ammonia system upgrade, securing capital approval
- Designed OSHA, PSM, & PHA-compliant alarm detection and control panels
- Coordinated contractors to ensure timely, compliant, and on-budget delivery

## \$85MM MAJOR FOOD PROCESSING & PACKAGING LINE EXPANSION

*Multi-discipline engineering, project & construction management, controls & automation, industrial control panels*

- Used FEL approach and construction phasing to deliver a new process & packaging line within a tight deadline
- Completed on time and on budget in under 11 months

## \$200,000 HYGIENIC DESIGN AND INSTALL OF A DUST COLLECTION SYSTEM

*Controls & automation, mechanical engineering, construction management, dust safety consulting*

- Engineered a hygienic dust collection system to mitigate accumulation hazards
- Reduced maintenance downtime and health safety risks
- Eliminated dust safety hazard, enabling staff to focus on food production rather than housekeeping

## LOTO CHARTS & \$16MM BAGGER PACKAGING LINE DESIGN FOR LEADING FOODS MANUFACTURER

*Safety consulting (Lockout/Tagout), mechanical/process engineering, controls & automation*

- Custom designed bagger packaging line to eliminate need for a facility expansion and meet product demand
- Boosted packaging efficiency and speed of delivery
- Ensured compliance with OSHA LOTO and corporate safety standards

- **Engineering Design for Compliant Facilities and Processes**  
We design facilities and processes from the ground up, ensuring they comply with the latest food safety standards and building codes.
- **Gap Analyses** Our experts uncover compliance gaps and deliver actionable solutions to resolve them efficiently.
- **cGMP Excellence** We implement industry-leading Good Manufacturing Practices (cGMPs) to safeguard product quality.
- **Validation and Audit Support** From protocol development to audit preparation, we make sure your operation consistently meets or exceeds regulatory standard requirements.



## HYGIENIC DESIGN & SANITATION

Food safety standards are strict in food manufacturing facilities. Failure to ensure food safety can have severe, long-lasting consequences, compromising public health and damaging consumer trust. We help navigate the complexities of food safety requirements and design to ensure compliance.

**Cleanable Systems Design & Allergen Prevention** We design systems and facility processes that reduce facility contamination risks, simplify cleaning, and optimize product flows to control product mixing and prevent food cross-contamination. We design for facilities with existing CIP (Clean-in-Place) and COP (Clean-Out-of-Place) systems.

**Hygienic Design Solutions & Construction Expertise** We develop food safety plans and design solutions for continuously operating facilities undergoing construction, including solutions for hygienic zoning, traffic flow optimization, and food contamination prevention. Our deep knowledge of hygienic construction techniques ensures that new builds or upgrades meet stringent food safety requirements.

**Sanitary Materials Selection** We select materials and finishes that meet food-grade sanitation standards, ensuring all surfaces are easy to clean and resistant to bacterial growth.

Our first client, a leading food manufacturer, is still our client today.

Executed Total Installed Cost (TIC) projects:

\$700MM+ food and beverage projects

\$300MM packaging projects

\$200MM+ pet food manufacturing projects

## ENERGY EFFICIENCY & SUSTAINABILITY

Energy costs are on the rise. EAD is ready to help you meet your sustainability goals.

**Energy-Efficient & Sustainable Systems Design** We assess your existing systems and facilities and design upgrades to reduce energy consumption and conserve water among other green solutions.

**Sustainable Practices** We identify opportunities within your facility to reduce waste, improve air quality, and conserve energy.

## SAFETY & RISK MANAGEMENT

EAD keeps your facility safe and compliant through:

### Safety Audits, Risk Assessments and Standards Development

We identify potential hazards, conduct OSHA-compliant safety assessments, and develop tailored safety standards and programs to ensure best practices are followed across your facility and organization.

**Emergency Response Planning** We help you prepare for emergencies by developing and implementing detailed emergency action plans, ensuring the safety of your employees and equipment.

## TRAINING

EAD offers client-tailored safety training programs on topics critical to food and beverage manufacturing. Our on-site and remote sessions are designed to support continuing education and may be eligible for credit through your professional certification or licensing organization. Popular courses include contractor work rules, current good manufacturing practices, food safety risk assessment development, and food-safe construction techniques for continuously operating facilities.



## PACKAGING SOLUTIONS

Packaging is critical for the delivery of on-brand, safe, and quality products. EAD offers complete packaging solutions for the food and beverage industry.

**Flexible, Efficient Systems Design** We engineer packaging lines that can handle multiple product types and sizes, maximizing efficiencies while reducing change-over times.

**Reduced Packaging Waste** By optimizing packaging systems and minimizing excess waste, we help reduce costs and harm to the environment.

**Integrated Automation** Our packaging solutions involve automating systems at every stage of your operation, from product filling to final package labeling, to streamline and improve efficiencies.



## WORLD CLASS PET FOOD MANUFACTURING SOLUTIONS

EAD provides world-class engineering and project management for many of the world's leading pet food brands, developing innovative solutions to meet the industry's strict regulatory and production requirements. We have experience engineering almost every aspect of the pet food manufacturing process, from loaf production, retorts, conveying and batching, to filling, can labeling, and packaging. Our team of experts are knowledgeable in FDA and AAFCO requirements, raw and post-processing segregation, high hygiene zones, and temperature control management. We ensure that the manufacturing processes used to make the foods pets consume are as stringent and code-compliant as those for human food and pharmaceuticals.

## INDUSTRIAL CONTROL PANELS

We are a single-source provider and specialty manufacturer of process and machine control systems and products. We design and fabricate UL 508A and 698A&B control panels in-house in our panel fabrication shop. They can be purchased as a stand-alone product or as part of a multi-discipline project.

## EAD is Your Trusted Partner

We partner with food, beverage, and pet food manufacturers to help them thrive in a competitive industry. Whether your focus is improving efficiencies, ensuring compliance, or enhancing safety, our tailored solutions are designed to meet your unique needs. With EAD as your trusted advisor, you can expect an exceptional client experience and a project delivered on time, on budget, and in alignment with your goals.

As we reflect on the last 20+ years of service, we find ourselves humbled. Working together behind the scenes as an extension of our clients, we've made a lasting impact. We have built our reputation as an expert, a support system and as a part of our clients' families.

With multiple locations across the US and projects on 5 continents, we are actively engaged in the advancement and expansion of Fortune 500 companies around the world. Leveraging the relationships we've built and the lessons we've learned, we hope to engineer a lasting, brighter future for many years to come.



ENGINEERING & AUTOMATION  
PROJECT & CONSTRUCTION MANAGEMENT  
BUSINESS & OPERATIONS CONSULTING

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