

# ENSURING RETURN ON INVESTMENT

## GETTING BEST RECIPE FOR ROI

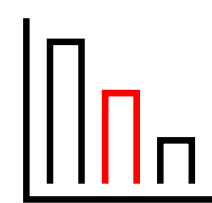
In an industry operating on razor-thin, low double-digit net margins, manufacturers cannot afford automation projects that "may or may not help." The problem isn't automation itself - it's the all-or-nothing approach. Smart F&B manufacturers are abandoning massive, unproven overhauls and searching for proven automation recipes, where the main ingredients are targeted, step-by-step solutions that deliver measurable ROI at every stage. When each percentage point of margin improvement can mean the difference between market leadership and market exit, precision matters more than ambition.



## INDUSTRY INSIGHTS & STATISTICS



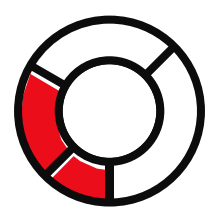
**ROI uncertainty blocks adoption:** Industry surveys identify "demonstrating clear return on investment" as the most significant obstacle among F&B manufacturers. 40% of producers won't attempt AI integration due to cost concerns and uncertain payback.



**The margin reality:** F&B operates at 12% net profit versus 20-30% for best-in-class, with gross margins of just 19% compared to 46% across all sectors - leaving zero room for expensive experiments.



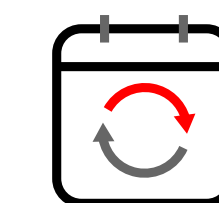
**Economic pressure intensifies:** 42% of manufacturers cite economic uncertainty as major concern (up 15 points year-over-year), while 33% worry about high interest rates (up 60%) - making ROI justification more critical than ever.



**Hidden costs erode returns:** Equipment purchase price represents only 20-30% of 10-year total cost of ownership - annual operating costs often exceed initial savings projections.



**Step-by-step approach works:** Manufacturers achieving best results start with modest, scalable investments that prove ROI before expansion - building confidence through measured success rather than betting on unproven comprehensive systems.



**Sustainability goes hand in hand with ROI:** Energy optimization projects can deliver payback under 24 months with ongoing savings - proven by manufacturers who started small and scaled based on verified results.

## HOW TO TAKE CARE ABOUT ROI?

- ▶ Choose scalable solutions that grow with results - begin with critical bottlenecks, verify savings, expand without system redesign.
- ▶ Start with energy visibility before optimization - measure first, identify waste, then invest in targeted solutions rather than comprehensive overhauls.
- ▶ Select technology that works with existing equipment - protect current investments while delivering efficiency gains.
- ▶ Prioritize predictable total cost of ownership - evaluate 5-10 year maintenance and operating costs, not just purchase price.
- ▶ Require concrete examples with measured savings from similar facilities.

# CASE STUDIES

## ▶ FAMIEL CONFECTIONERY: STEP-BY-STEP ENERGY MANAGEMENT

### ● CHALLENGE

Japanese confectionery manufacturer needed to control electricity costs, with three ovens consuming 25% of total factory power. Without detailed visibility into consumption patterns, they couldn't identify improvement opportunities or justify automation investments.

### ▲ SOLUTION

Started small in 2015 with EcoMonitor energy measurement units on key equipment. After proving value, expanded in 2017 with EcoWebServerIII and demand monitoring when relocating factory. Doubled monitoring points, added gas and water measurement, integrated automated HVAC control.

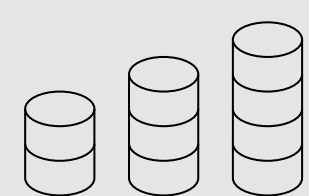


I was confident about the ROI since we had already saved more than we spent for our initial investment.

Hideyuki Moriya,  
General Manager of Production Department



### ▲ RESULTS



**Total savings of nearly 10 million yen over 5 years - far exceeding initial investment.**

**6.3% electricity reduction, 3.7% demand reduction** enabled lower contract power.

**38.4% gas reduction, 25.1% water reduction** through optimized operations.

**Payback:** less than 30 months.

# CASE STUDIES

## ▶ KAGOME CORPORATION: AI-POWERED OPTIMIZATION AT SCALE

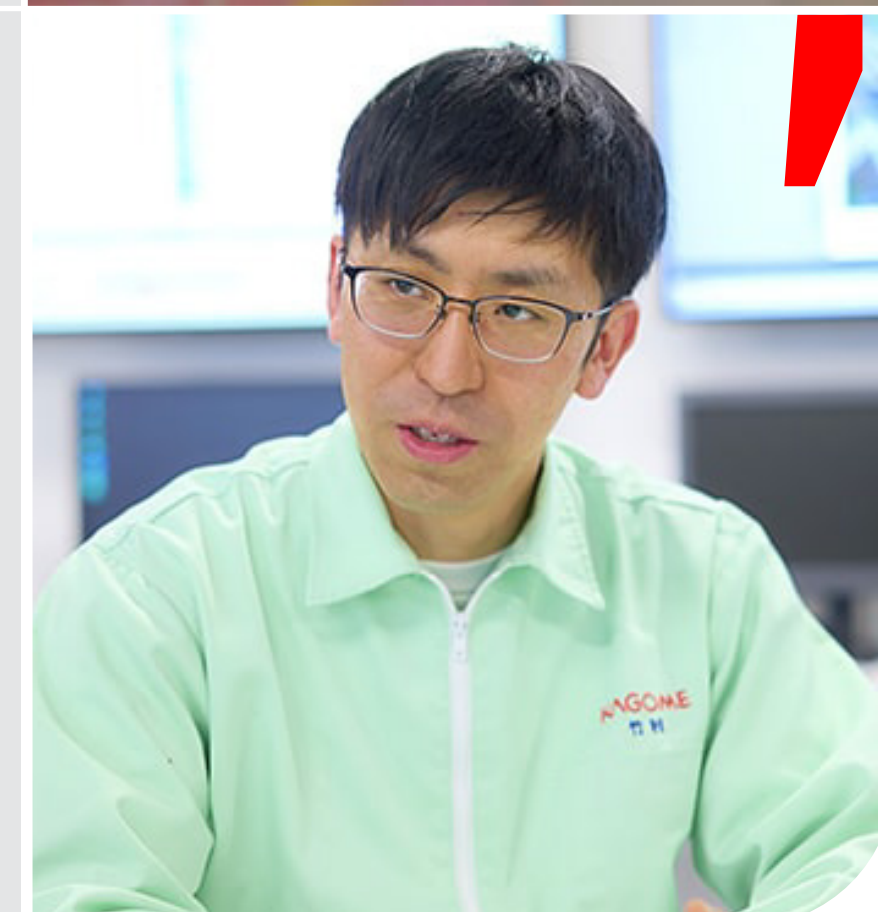
### ● CHALLENGE

At their Fujimi Factory producing Yasai Seikatsu 100 juice, Kagome had 1000+ energy measurement points but lacked tools to analyze the data. "Numbers alone are not sufficient to make complete objective evaluations," noted Ryota Takemura, Production Engineering Supervisor of Production Department. Manual analysis was "practically impossible."



### ▲ SOLUTION

Built on existing EcoWebServer foundation by implementing EcoAdviser with AI diagnostic functions. System analyzes massive datasets to identify waste patterns and recommend improvements. Visualized dashboards enable production staff to independently develop energy-saving initiatives without data science expertise.



We aim to deploy this across numerous lines to construct a smart plant.

Ryota Takemura,  
Production Engineering Supervisor



### ▲ RESULTS

**AI identifies opportunities invisible to manual inspection** - equipment timing, steam usage optimization.

**190 tonnes CO2 reduction** over 3 years - 3.8x regulatory requirement.

**30+ improvement proposals** generated in FY2023 alone, many implemented.

**On-site teams empowered:** "Production staff use EcoAdviser independently to develop their own energy saving efforts".

# TAKE A CLOSER LOOK AT SMART SCALABLE SOLUTIONS



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## ▲ SOURCES

- ▶ <https://www.crbgroup.com/insights/food-beverage/automation-ai-food-and-beverage-report>
  - ▶ <https://foodindustryexecutive.com/2025/12/from-pilot-to-payoff-what-we-learned-about-food-manufacturing-tech-in-2025/>
  - ▶ <https://www.auxis.com/4-cfo-priorities-in-2025-and-the-solutions-driving-success/>
  - ▶ <https://www.supplychainbrain.com/blogs/1-think-tank/post/40959-overcoming-barriers-to-ai-adoption-in-manufacturing-a-roadmap-for-transformation>
  - ▶ <https://www.grassiadvisors.com/news/grassi-food-beverage-survey-reveals-industry-poised-for-growth-in-2025-despite-economic-uncertainty/>
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  - ▶ <https://icicletechnologies.com/wp-content/uploads/2024/04/6-Metrics-for-Maximizing-Margins-in-the-Food-Industry.pdf>
  - ▶ <https://www.mitsubishielectric.com/fa/our-stories/021/index.html>
  - ▶ <https://www.mitsubishielectric.com/fa/our-stories/045/index.html>
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