



Boost cost savings with production audits

NIRAS' proven methodology for identifying operational improvement initiatives has helped food and beverage players at production sites around the world to cut cost effectively.



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quite significant in the food and beverage industry and is strengthened by the fact that improvements can often be implemented with short payback times.

Tailor-made factory audits

NIRAS has developed a smooth, industry-unique methodology for conducting food and beverage factory audits in close cooperation with factory management and owners. An audit can be tailored to the individual production site in terms of scope and focus area, but the overall approach is always the same: Define, Measure, Analysis, Improve, Control (DMAIC).

The phases Define, Measure and Analysis are typically conducted on-site over a two week period. This work

leads to a management audit report that presents an overview of improvement initiatives. Each initiative is assessed and described in detail both technically and financially: What is the impact of the improvement initiative, what is the cost of implementing the improvement initiative and what is the expected payback time? Is it a complex or simple improvement initiative and what are the risks?

Proper planning is half the success

In close cooperation with the production site management, NIRAS carefully prepares the audit including interviews, equipment and line mapping as well as mid-term and final reporting. Steffen

Wissing, Business Consultant and experienced auditor at NIRAS, explains: - Half of the success is secured through the people working on the plant in combination with our own observations. This is a comprehensive data collection process and alignment of understanding that requires all parties to have a clear plan for the audit and to know exactly what to do. The other half of the success comes from a well-proven tool kit operated by the right handful of subject matter experts.

For reporting, all improvement initiatives are summarised, and the total potential saving and total required investment are identified and presented. This enables site management to prioritise the improvement initiatives and make an implementation plan. Typically, the implementation of initiatives runs 6-24 months following the audit (Improve phase), and the improvements are monitored going forward (Control phase).

Full success through a multi-disciplinary approach

Over the years, NIRAS has conducted production audits on all continents where food & beverage production takes

place. Not two audits are the same; producers have different plants and focus areas. However, an audit scope typically includes Support functions, Logistics, Utility, Process lines, and Packaging.

Rolf Pedersen, Expertise Director at NIRAS, says:

- We always open a thorough dialogue with our customers, before we conclude an audit scope. It is vital for the outcome of the audit that the scope and focus is customised to meet the customer's exact needs. NIRAS is able to fit the audit to the individual customer while taking into account that to succeed, the audit most often will become a multi-disciplinary exercise that requires a high level of expertise in many areas of food production. This is one of our unique forces.

Historically, we have always identified improvement potential

NIRAS has over the last decade developed and refined the production audit service. Though we cannot guarantee a financial benefit of the identified improvement initiatives, the many production audits that we have conducted

#	Improvement Initiatives	OPEX Savings	Capex Investment	Estimated payback time
1	Waste Water Reduction	233,800	225,000	1,0
2	Cleaning Optimisation	55,500	76,500	1,5
3	Heat Recovery	1,484,400	2,015,000	1,5
4	Automation Initiatives	1,100,500	1,900,000	2,0
5	CIP Upgrade Initiative	1,885,000	3,350,000	2,1
6	Electricity Metering	170,800	340,000	2,4
7	Raw Material Handling	150,000	315,000	2,5
	Total Euro	5,080,000	8,221,500	1,9

The table shows improvement initiatives from a recent production audit conducted with a European beverage producer. The overall savings are 5 million Euros against a total investment of 8.2 million Euros.

NIRAS

NIRAS covers all disciplines as consulting engineers and has its headquarters in Denmark. The company has approximately 2,200 employees and holds offices in 27 countries with Sweden, UK and Norway being the largest ones outside Denmark. NIRAS is one of the leading engineering consultants to the Food & Beverage industry globally. Contact: +45 4810 4200 www.niras.com



throughout the years, globally, have always shown significant improvement potential.

Steffen Wissing says:

- We focus on delivering improvement initiatives with tangible cost savings and payback in our audit reporting. In one of our recent audits, we managed to identify savings of 5 million Euros per year based on an investment of 8.2 million Euros. The savings were related to 7 improvement initiatives.

The improvement findings of an audit are presented in the audit report where each initiative is presented individually so that the initiatives subsequently can be handled and implemented individually.

NIRAS production audit has proven to be an efficient method for identification of improvement initiatives. ■