

Programme

Operational Savings – Small Actions, Big Impact

Day 1

09:00 - 09:30 **Breakfast and registration**

09:30 - 09:40



Welcome

Henrik Kæmpe, President, the Danish Society of Dairy Technology

09:40 - 10:10



Innovative filtration CIP and surplus heat utilisation at AFI Denmark Protein

Experience the latest breakthroughs in filtration technology at Denmark Protein. We showcase how our new filtration systems utilise heat pump technology to enhance Cleaning-in-Place (CIP) processes. By harnessing heat from our advanced heat pumps, we have succeeded in reducing CIP cycle times by an impressive one hour per cleaning.

Notably, the same heat pump that delivers heat for CIP also supplies chilled water for cooling purposes when the filtration systems are in operation. This innovation is already transforming our operational efficiency and making significant strides toward sustainability.

Hear also how we have succeeded in bringing our steam consumption for space heating and wash water down to zero by taking full advantage of surplus heat recovered from sources like compressed air systems and steam condensate. This approach has not only reduced our environmental footprint, but has also unlocked new possibilities for energy optimisation throughout our operations.

Join Rasmus Ramsgård Bjerger as he shares practical insights and lessons from Denmark Proteins transition to these sustainable practices, and learn how such solutions can be applied to your own operations.

Don't miss this chance to be inspired by real-world examples of innovation driving meaningful change.

Rasmus Ramsgård Bjerger, Energy & Utility specialist, Arla Foods Ingredients Group P/S Denmark Protein

10:10 - 10:40



Energy-efficient cleaning: Modern CIP solutions for lower consumption

In today's dairy industry, significant operational savings are often found in the details. This presentation focuses on practical, real-life cases where simple, low-hanging optimisations have delivered measurable reductions in water, energy, and electricity consumption.

Based on experiences and solutions from Novadan, we will showcase how targeted adjustments in daily operations can unlock hidden potential. We highlight how modern, formulated cleaning detergents are designed to perform efficiently at lower temperatures, enabling reduced energy consumption without compromising hygiene or cleaning performance.

Concrete cases will include water savings through reuse strategies, including return flows to CIP tanks or drain, as well as optimisations achieved through adjusted chemical concentrations and smarter process control. These examples demonstrate how small operational changes can translate directly into both financial and environmental benefits.

Tools such as *Nova Insight*, Novadan's intelligent CIP data analysis platform, provide continuous monitoring of key parameters like temperature, flow rate and conductivity, enabling dairies to optimize cleaning processes, cut water and energy use, and reduce total cleaning costs in a documented, measurable way.

In addition, we will present a coordinated effort between Novadan's Food and Agro departments in addressing thermophilic bacteria - ensuring robust hygiene.

The session provides inspiration and practical insights into what is possible.

Ronni Rasmussen, Application Specialist – Membrane & CIP, Novadan

10:40 - 11:00 **Coffee Break**

11:00 - 11:30



Improving water efficiency in the dairy industry – using simple initiatives

We will explore how dairies can achieve significant operational savings by embracing smart water management strategies. By working within the framework of 'Reduce, Reuse, Recycle, and Rethink', we will look at practical steps companies can take to minimise water consumption, optimise processes, and cut down on losses of valuable raw materials, products, and by-products.

Participants can expect to hear about real-life examples of how simple actions - such as optimizing cleaning processes, recovering, and reusing COW water, and finding new uses for waste streams - can have a big impact on both costs and water efficiency. The presentation will also discuss how a mindset shift towards innovative problem-solving and resource stewardship helps future-proof operations in an increasingly water-conscious world.

Søren Nøhr Bak, Senior Expertise Director - Water & Sustainability, Niras

11:30 - 12:00



A simple way to help improve Dairy Industry sustainability and reduce cost across the entire plant.

- Avoid
- Reduce
- Reuse
- Recycle

With growing pressure on sustainability, efficiency, and cost control, the ability to manage water smarter has never been more crucial. Ecolab brings a holistic approach that integrates chemistry, digital insights, and deep operational expertise to ensure you only use the resources that is truly necessary.

During the presentation, we will explore practical ways to reduce water, energy, time and chemistry consumption through targeted optimisation of CIP and rinsing strategies, valve and pump performance, and improved measurement - changes that require minimal investment but deliver immediate impact.

We then expand into reuse opportunities, where moderate CAPEX enables plants to recover rinse water, loop process streams, and repurpose utilities like cooling tower and boiler water.

Join us to learn how the Dairy Industry can reduce environmental impact, strengthen compliance, and lower operating costs through proven, scalable water management solutions.

Glenn Madsen, Corporate Account Manager, F&B INDUSTRY, Ecolab

12:00 - 12:15

Q & A - for this morning's experts

12:15 - 13:15



Lunch

13:15 - 13:45



Energy savings and process optimization through cooperation, knowledge and trials in the potato starch and protein industry

Two cases will be presented highlighting the importance of cooperation between different departments combined with process knowledge in process and energy optimisations. The first case will be focused on process optimisation of potato protein production leading to energy savings and increased production capacity. The second case will focus on energy recovery and reuse with regards to spray cooking of starch. Both cases will highlight the benefits that come from working together with different backgrounds.

Mathias Greve-Poulsen, Senior Process Engineer, Technical Projects, KMC

13:45 - 14:15



To save energy, follow the water!

Unlock significant savings in both water and energy by leveraging technologies you may already have but are not yet fully utilising. In the food and beverage sector, especially dairy processing, energy use is closely tied to water consumption. Depending on the purpose of use, water requires pretreatment, chemicals, pumping, and wastewater handling - each step consuming energy. Even water reuse demands energy, so the golden rule is: Reduce before you reuse.

Join Allan Bruun, whose 25 years at Alfa Laval, combined with engineering, business, and a recent master's in sustainable engineering, bring a unique perspective to maximising sustainability within your budget. This talk will spotlight practical opportunities for water and energy savings and tackle the real-world barriers to implementation - from technical challenges to financial considerations.

Whether you're looking to optimise existing systems or invest in new solutions, this session will equip you with actionable strategies to drive efficiency and sustainability in your operations. Don't miss the chance to learn how following the water can lead to smarter energy use and a greener bottom line!

Allan Tao Bruun, Head of Optimization, HFH Service, Alfa Laval Kolding A/S

14:15 - 14:35

Coffee Break

14:35 - 15:05



Grundfos' approach to sustainability and energy optimisation

Grundfos is a global pump and water technology company with roots in Denmark and a clear purpose: to solve the world's water and climate-related challenges through innovative and energy-efficient solutions. Sustainability is not an add-on for us, but an integral part of both product development, production and consulting.

Our climate work is anchored in the Science Based Targets initiative, SBTi, which ensures that our CO₂ reduction targets are scientifically based and in line with the goals of the Paris Agreement. This means that we are not only working with ambitions, but with concrete and measurable reductions – both in our own value chain and with our customers.

In dairies, we see great potential for energy and water savings, especially in process water, heating, cooling and pressure boosting. Here, intelligent pump control, high efficiency and correct dimensioning can provide significant savings without compromising on operation and food safety.

Finally, I will touch on practical energy optimisation. With data, system insight and concrete initiatives, sustainability can be translated into documentable results in daily operations.

Steen Bovbjerg, salgsingeniør, Industri, Grundfos

15:05 - 15:45



Smarter dairy processing through real-time sensor insights

1. **Membrane systems:** How do you prevent your Brix/concentration sensor from fouling during production?
2. **Real-time membrane & seal failure detection:** Identify failures within milliseconds – and get an alarm before your permeate is contaminated with protein or fat.
3. **Fat monitoring:** Continuous measurement of fat % at centrifuges, reception, or similar process
4. **Wastewater COD monitoring:** Using sensors, we can measure COD/Lactose in real time – and pinpoint exactly where in the plant the product comes Typical reduction around 30%

Kim Andersen, Maskinmester / Marine Engineer, Tech Instrumentering

15:45 - 15:50

Q & A - for this afternoon's experts

15:50 - 16:00



Evaluation & Closure

Henrik Kæmpe, President, The Danish Society of Dairy Technology
