

# Unlocking Forward-looking Data Analytics Synergies

## Advanced Machine-learning Decision Support on Chemicals and Materials Trends

Mir Insight provides advanced machine-learning (ML) decision support and forecasting on chemicals and materials trends by offering an enriched and forward-looking data analytics software for the materials sector. The company's vision is to empower companies in the value chain by enabling them to collaborate with better data while keeping company secrets safe. The Oslo, Norway-based company was established in late 2021 with the aim to empower domain experts with explainable forecasts of future product trends based on global market activity. CHEManager asked co-founders Bjol R. Frenkenberger and Lisa Z. Mobeck about their path so far and future plans and goals.

### How did it all start, when did the founding team first meet?

**Lisa Z. Mobeck:** The team met during a venture program and decided to start the company as we combine diverse perspectives to tackle this complex issue of trend forecasting from multiple angles. In November 2021, Mir Insight was incorporated.

### What did motivate you to address the topic of forecasting?

**Bjol R. Frenkenberger:** When faced with uncertainty we always rely on our experience and feelings and combine them with rational facts. The better our facts, the better we can evaluate the 'reality' of our feelings, the better our decisions will be. Solely relying on information from customers, suppliers and historical activities is not enough in today's increasingly complex world, especially in terms of accuracy.

**L. Mobeck:** Especially when we know how complex our world is becoming and how unique each supply chain is and how differently affected they are by external influence, we still tend to use the same traditional approach when forecasting, by going after the already known—there should be a smarter and better ways to solve this.

### How did you develop your data analytics software?

**B. Frenkenberger:** The team has continuously iterated and tested the method and model with feedback

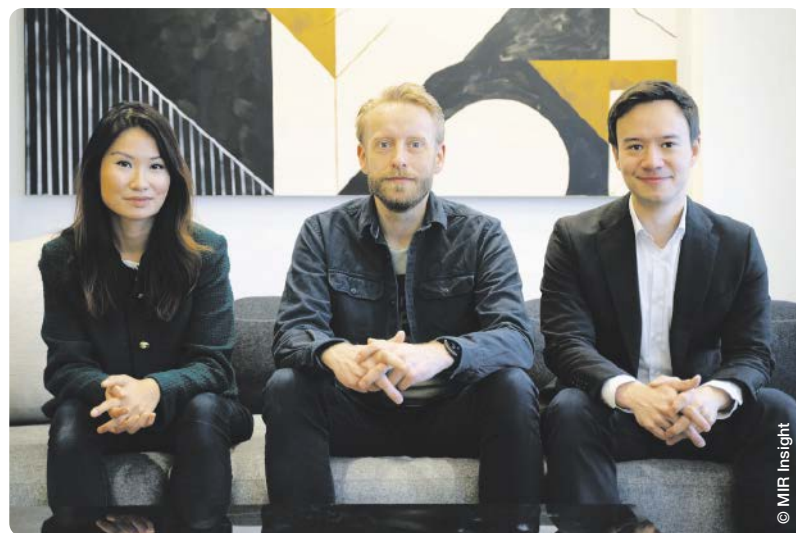
from SMEs and multinationals in Europe and uses 500 million data series covering 40+ countries. Our methodology and ML-model has proven to generate a 50% better forecasting output than traditional forecasting techniques.

### Did you get feedback from users already, how was the response so far?

**L. Mobeck:** We have just started out, but the results we have achieved are promising. According to some users we managed to provide them with the additional information they needed to minimize risk and save time on planning, so they can evaluate new trends related to more sustainable materials and their replacement potential. They also say that they gain better visibility when making purchasing decisions, obtain a more holistic understanding of upcoming demand trends beyond what they would get from their customers and partners alone. So, with our help the users can be more specific and explain to their customers why and when they should act, ahead of time. This creates a positive domino effect down the value chain and reduces the information lag, one step at the time.

### This sounds promising, but what about the good old-fashioned consideration of experiences and assumptions and the reliance on instinct and intuition?

**L. Mobeck:** Our forecasting and decision support software does not intent



Co-founders of Mir Insight (from left to right): Lisa Z. Mobeck (COO), Fredrik Larsen (CTO), Bjol R. Frenkenberger (CEO)

to eliminate human Instinct and intuition. Gut feelings from past experiences will always be important but we aim to reduce guesswork and assumptions with explainability. That is why we provide a decision support tool to ensure that companies get more depth and visibility into actual activities, with more speed and precision. So, they can stay more ahead and eliminate guesswork.

**B. Frenkenberger:** The world is heading towards large-scale change, which most people have never been exposed to in their professional lives. This will lead to even greater explanation difficulties. That's why we think it's necessary to move towards informed, data-driven decision making by keeping up with your partners and market trends in real-time. This is what Mir Insight strives to enable.

### So, what is on your agenda right now to develop the company?

**L. Mobeck:** We are currently fundraising and always interested in talking to industry experts, who could give feedback regarding what we do. The only way forward for an early-stage business like ours is active engagement with all of you, so we can arrive at a solution that works for the industry as a whole. So please get in touch, we would be more than happy to hear your thoughts.

## PERSONAL PROFILE

**Lisa Z. Mobeck**, CCO of Mir Insight, worked several years with multiple supply chains and industries—from insurance and risk management to raw materials and chemical distribution—and gained experience as an intermediary between suppliers' and customers' needs in B2B sales and product development roles. She studied International Marketing at BI Norwegian Business School, International Marketing and Business at Nanyang Technological University, Singapore, and received her MSc degree from Universitat Pompeu Fabra, Barcelona. She also took graduate courses at Harvard Extension School and is a specialist in business, operations and marketing management.

**Bjol R. Frenkenberger**, CEO of Mir Insight, received his PhD in Entrepreneurship Studies/Anthropology from the University of Oxford. During his thesis he gained deep understanding on how uncertainty affects decision making in organizations. He combines this knowledge with his experience of more than six years in AI and data analytics start-ups. Bjol advanced the international expansion of start-up businesses as Global Business Manager and Business Development Lead at Fuller and at FINC Technologies. Before co-founding Mir Insight, Bjol performed as a prize-winning concert pianist across Europe.



**BUSINESS IDEA**

**Smart, Dynamic and Customized**

Today, it seems that companies want to keep up with fast-moving and ever-changing events and, therefore, the time of static forecasting approaches its end.

We are living in the information era. There are great amounts of information available but underutilized because companies lack the right methods, know-how and applications to collaborate, draw the right conclusions, and produce the necessary results and use cases.

However, too much information is not necessarily beneficial for precise decision making, it is about understanding and acquiring the right information relevant for a company's needs on a continuously updated basis. It is essentially about acknowledging the fact that every product has a unique supply chain with their unique sets of drivers. This is what Mir Insight delivers.

The Oslo-based start-up offers enriched and forward-looking data analytics software for the materials sector to facilitate data collaboration within the supply chain. The team has continuously revised its product, adjusted its offering based on customer needs and tested with different companies to create a

methodology and predictive model fitting the chemical supply chain using advanced machine-learning (ML) techniques.

Unlike traditional black box ML algorithms, which are hard to explain and difficult to understand even by the best domain experts, Mir Insight develops transparent ML models that produce understandable results, discover overlooked information on a continuous basis and breaks down global market activity to a product level. Their service dynamically analyses 500 million data series regarding economic, financial, or industry activity and brings them in connection with your own product trends. Going forward the service will also enable data synergies between supply chain partners in an anonymous and confidential manner. Customers can then easily understand how and why their product trends have been affected by market developments throughout time and draw their own conclusions.

- Mir Insight AS, Oslo, Norway
- www.mirinsight.com



Mir Insight facilitates networking possibilities with industry experts across supply chain verticals from the Nordics, Benelux, UK, DACH region or Asia.

**ELEVATOR PITCH**

**Business Planning and Forecasting**

A diverse and passionate team on a mission to enrich and empower domain knowledge with cutting-edge technology, Oslo-based start-up Mir Insight combines more than 30 years of experience from the chemical industry, software development, research, data science, sustainability, materials, risk management, renewables, and finance.

The growing team of domain experts from multiple industries strives to provide the best practices from a large variety of sectors — towards a world where companies can easily make informed decisions to accelerate sustainable innovation with significant societal impact.

The name Mir stems from multiple languages such as Japanese, Russian or Spanish, meaning: to look into the future, peace, and mirror. As a small but multidisciplinary and multicultural team with the relevant industry experience as well as scientific and technological expertise, the founders of Mir Insight see and understand the world differently, which enables them to push the boundaries of innovation in a useful and creative way.

**2022**

- Granted Commercialization funding from Innovation Norway (Norwegian Government)
- Granted Skattefunn from Norwegian research council
- Joined FECC (Association of European Chemical Distributors) as a member
- Participated in the FECC Annual Congress in Sitges, Spain
- Forecasted 36 unique chemicals and materials for pilot customers across Europe
- SMBs and multinationals
- Reached on average 50% higher accuracy on forecasts than traditional methods covering 40+ countries, and markets from petrochemicals to renewable materials and minerals

**Roadmap**

**2023**

- Further development on explainability and simulation
- First projects with customers to figure as independent data link between them and their partners
- Research project on the modelling of supply chains with leading European research institution

**Milestones**

**2021**

- Mir Insight incorporated (November)



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