A very short history of Data Science at Svenska kraftnät

- Forecasting at the national control centre

SVENSKA KRAFTNÄT

Pontus Wallin

- A decade working with forecasting for system operations at Svenska kraftnät
- Head of unit *Data Analytics*, developing forecasts and decision support to the national control center.
- Trying to find ways to bridge between industry and academia



2017: A new Nordic Balancing Model

SVENSKA KRAFTNÄT

We need imbalance forecasts

- **A new type of forecast!**
- **Need to do fundamental research by ourselves.**
- **Dependent on TSO-specific data, not publicly available.**
- **Close to real-time forecasts that needs to be up and running 24/7 – tricky!**
- **Need to step up our forecasting skills…**

SVENSKA KRAFTNÄT

Data Analytics today

Around 25 people

Mixed group, different competences, ages, backgrounds etc

Roles:

- **Data scientists**
- **Industrial PhD:s**
- **Product owners**
- **Business developers**

SVENSKA KRAFTNÄT

Data Analytics – selected work

- Load forecasts
- Wind power forecasts
- Solar power forecasts
- Imbalance forecasts
- Innertia forecasts
- Loss forecasts
- Market optimization/clearing algorithms
- Optimization of reserve procurement (capacity markets)
- Dynamic dimensioning of reserves
- …

SVENSKA KRAFTNÄT

Some things that worked well…

- **Autonomous team – or “how to get things done”**
- **“We build it, we run it” and “Operation vacation”!**
- **”Study circles” to solve complex problems**
- **Keep a critical eye on technology and favor simplicity**
- **A positive, creative and curious environment**

SVENSKA KRAFTNÄT

Thank you!

pontus.wallin@svk.se

SVENSKA KRAFTNÄT