



**ADVANTICA**

# Forecasting Solution



# Forecasting Problem

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- Applies to
  - Shippers
  - Transporters
  - Local Distribution Companies
  - Traders



- Need to reduce imbalance charges
  - By improving short term forecasts
- Want to minimise gas costs
  - Buying more of portfolio gas cheaper (if possible) in advance
- Want to order sufficient capacity
  - And not to have unwanted excess

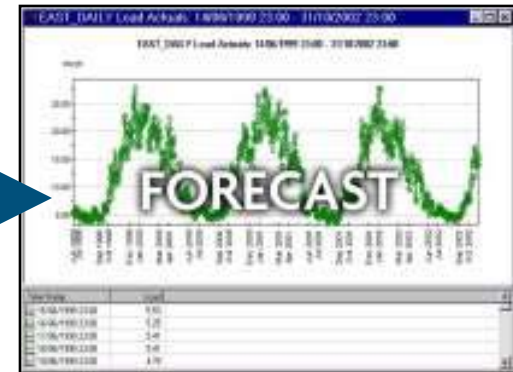
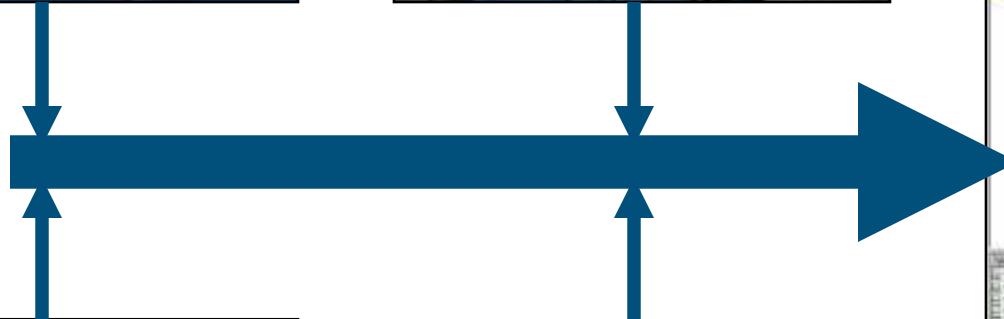
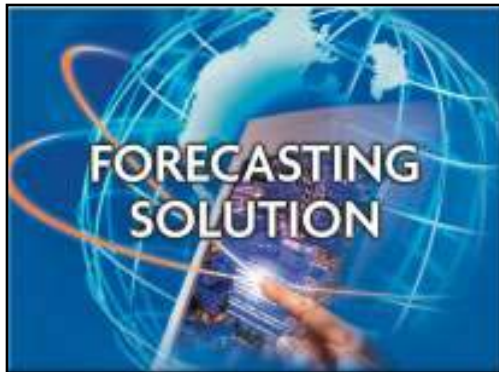


- Need to ensure security of supply
  - Avoid regulatory penalties and massive social/economic impact
- Need to run network efficiently
  - Forecasts can drive predictive simulation processes (e.g. SPS) to optimise compressor usage, linepack
- Reduce CAPEX
  - Use longer term demand forecasts to identify where capacity constraints are going to be and drive network planning tools (e.g. SynerGee)

- Traders need to forecast gas demand
  - To reduce cost of options to mitigate risk
  - To help make buying/selling decisions in times of price volatility
- Local Distribution Companies need to forecast gas demand
  - To balance supply/demand
  - To avoid transporter/regulator penalties
  - To manage usage of supply contracts

# Forecasting Solution

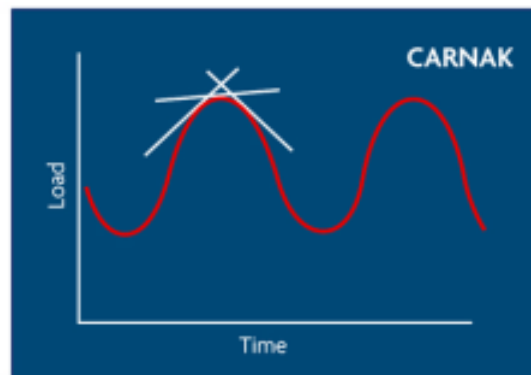
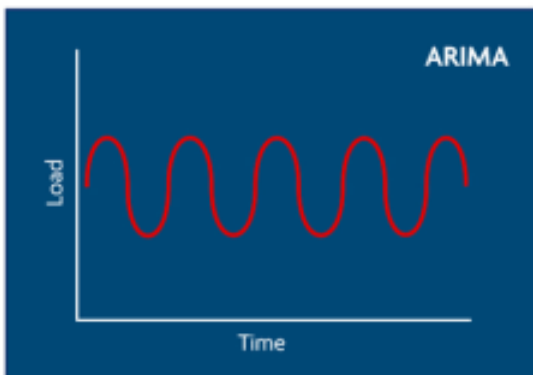
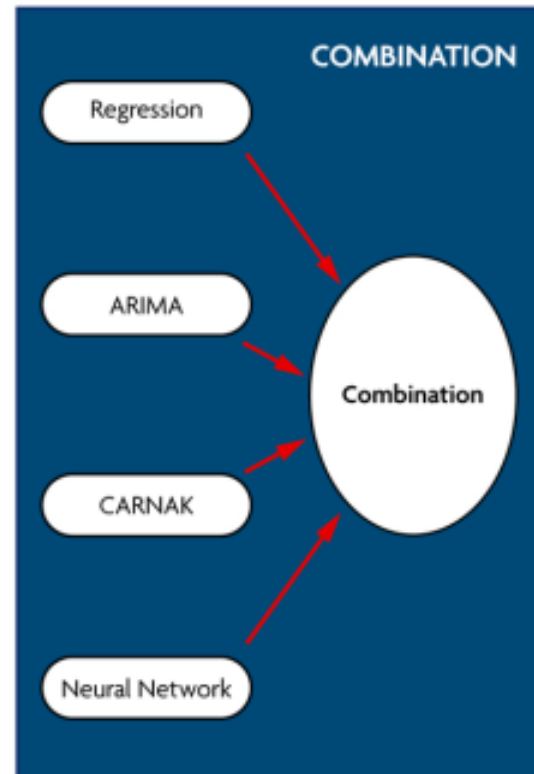
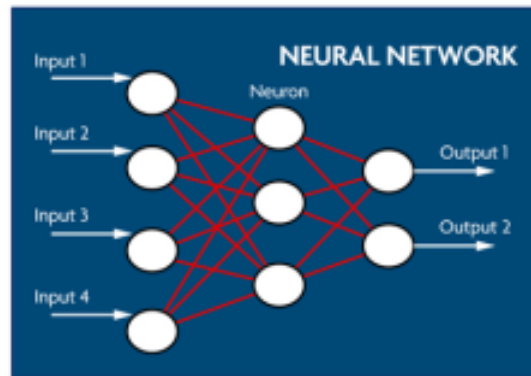
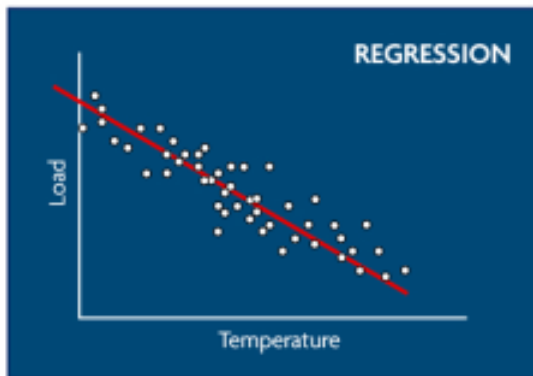
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# Forecaster Models

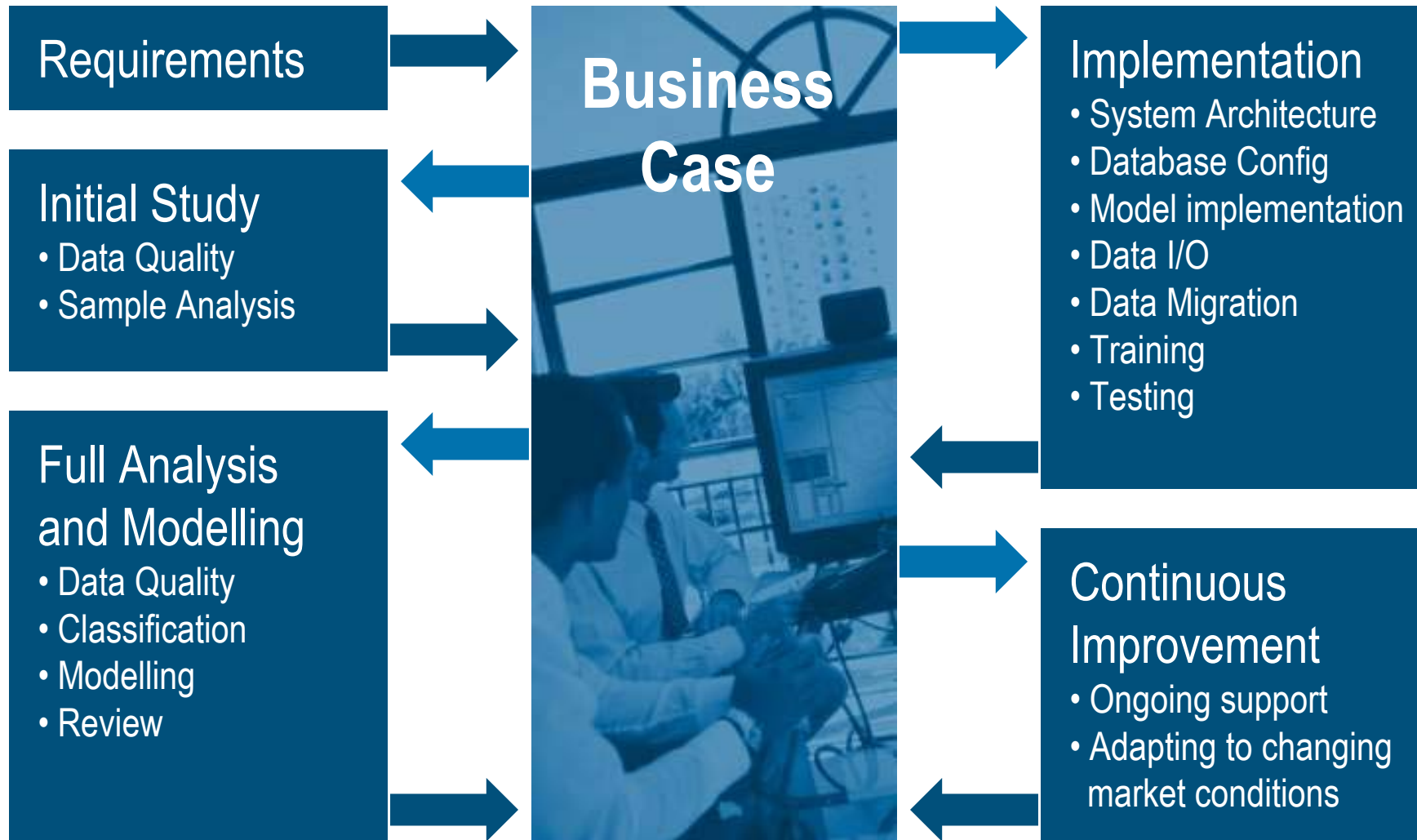


These are the main, configurable forecasting model types used by Advantica, simple out = in type models and Bayesian methods are also available



# Forecasting Lifecycle

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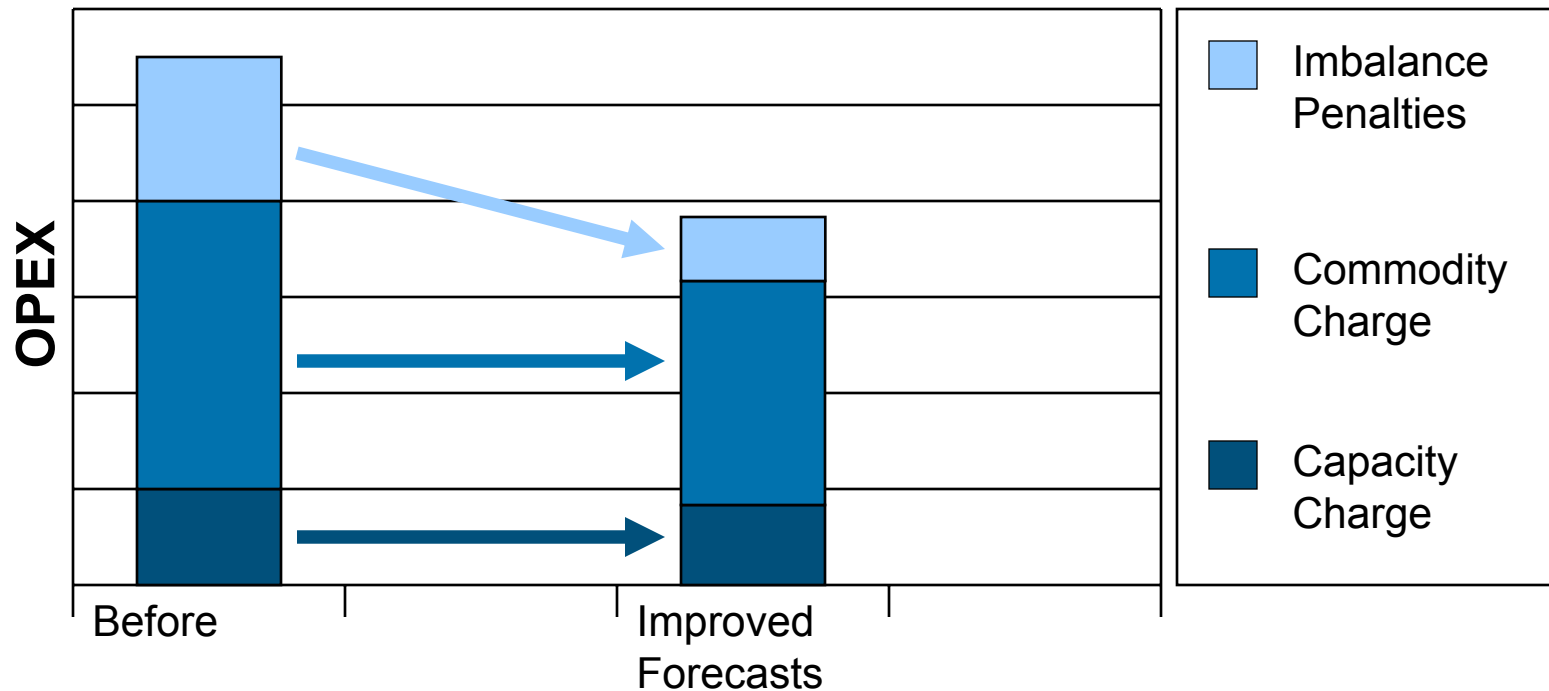


- Ultimately, improved forecast accuracy
- PLUS...
- Automation of mundane, time-consuming tasks
- Consolidation of data into one data warehouse
- Consistent forecast approach
- Flexibility of solution reduces ongoing costs

# Cost Benefits

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## Typical Operational Costs



**1 - Improve long term forecasts to optimise capacity booking**

**2 - Improve medium/short term forecasts to buy more gas in advance cheaply**

**3 - Improve short term forecasts to reduce imbalance charges**

- Small modelling study to demonstrate benefits of improved forecasting performance
- Detailed studies to look at all aspects of forecasting process
- Trial implementations of Forecaster
- Forecaster Lite – limited version of Forecaster
- Forecaster turnkey solutions

