# Box-Jenkins Methodology

**STEP 1**

**IDENTIFICATION**
Analyze ACF/PACF patterns
Determine p, d, q orders

Plot time series
Check stationarity
Transform if needed

**STEP 2**

**ESTIMATION**
Estimate parameters
MLE or Yule-Walker

Maximum Likelihood
Least Squares
Method of Moments

**NO**

Revise model

**STEP 3**

**DIAGNOSTIC CHECKING**
Residual analysis
Ljung-Box test

Model Adequate?

**YES**

**STEP 4**

**FORECASTING**
Generate predictions
Confidence intervals

Point forecasts
95% prediction intervals
Model uncertainty