Managing Processes & Systems & Projects

Design

Forecasting (3)

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Forecasting

Quantitative methods

- Time series analysis
  - analyses pattern of past behaviour, taking in account reasons for variation in the trend to forecast future behaviour
  - Moving averages
    - $F_t = \frac{1}{4}(A_{t-4}+A_{t-3}+A_{t-2}+A_{t-1})$
    - Ft= 1/4 (60 + 61 + 62 + 63)
  - Exponentially smoothed forecasting
    - $F_t = \alpha A_{t-1} + (1-x) F_{t-1}$
    - Ft= (0.2 x 67) + (0.8 x 68.3)
- Causal modeling
  - Describes and evaluates the complex cause and effect relationship between key variables
    - Regression models

Qualitative methods

- **collecting, appraising judgements and options, best guesses and past performance**
- 1 Panel approach

  - **focus group** of a couple of people
  - although more than just 1 view it can be wrong
- 2 Delphi method
  - reduce influence of face to face
  - use **questionnaire** --> send out to experts, then send out anonymously the summarized answer for refinement --> do that several times. Weight answers by experience etc.
- 3 Scenario planning
  - Panel, make use of a group
  - not consensus is goal but : **range of options** how to avoid risks and how to take action for the best solution