

# Deciding on a Solution

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- Rank-Order:
  - Apply weights to the design goals
  - Formulate a scheme to assign ratings to each design concept
  - Combine those weights and ratings to score each solution
  - Compare those scores to identify the best overall solution
- Decision Matrix:
  - Results from the formula  $DF = WF \cdot RF$ , where  $DF$  is the decision factor,  $WF$  is the weighting factors, and  $RF$  is the rating factor
  - Come up with different designs and rate them on a 1-10 scale (1 being poor and 10 being excellent) in their fulfillment of ranking categories
  - Create a table and sum up the decision factors for each category — the highest number is the best design
- Kepner-Tregoe (KT) Approach
  - Decide which problem to address
  - Decide the best solution
  - Decide how to avoid additional problems
  - Evaluation Criteria:
    - \* Timing
      - How urgent is the problem?
    - \* Trend
      - What is the problem's potential for growth
    - \* Impact
      - How serious is the problem?

- Kepner-Tregoe (KT) Decision Analysis
  - Write a concise decision statement
    - \* Identify what you are trying to accomplish and what resources are available
  - List all the objectives
    - \* Musts
      - Mandatory to achieving a successful solution
    - \* Wants
      - Wants are desirable but don't affect overall success
  - Develop a list of solutions or options
    - \* This would be the results of all of your ideation
  - Evaluate the solutions against the musts
    - \* Simple go or no go
  - Incorporate the wants and assign weights
    - \* Apply a rating to the wants
- Kepner-Tregoe (KT) Potential Problem Analysis
  - List potential problems, potential causes, preventative actions, and contingent actions in a table