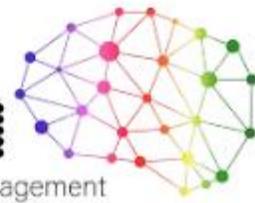




COMOTI
ROMANIAN RESEARCH &
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ANIMA

Aviation Noise Impact Management
through Novel Approaches



AHP applications to Noise Management

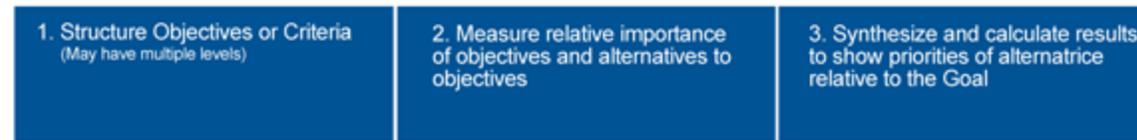
Author(s): Elena Narcisa Burtea, Dan Radulescu

**Affiliation: Romanian Research and Development Institute for Gas
Turbines**

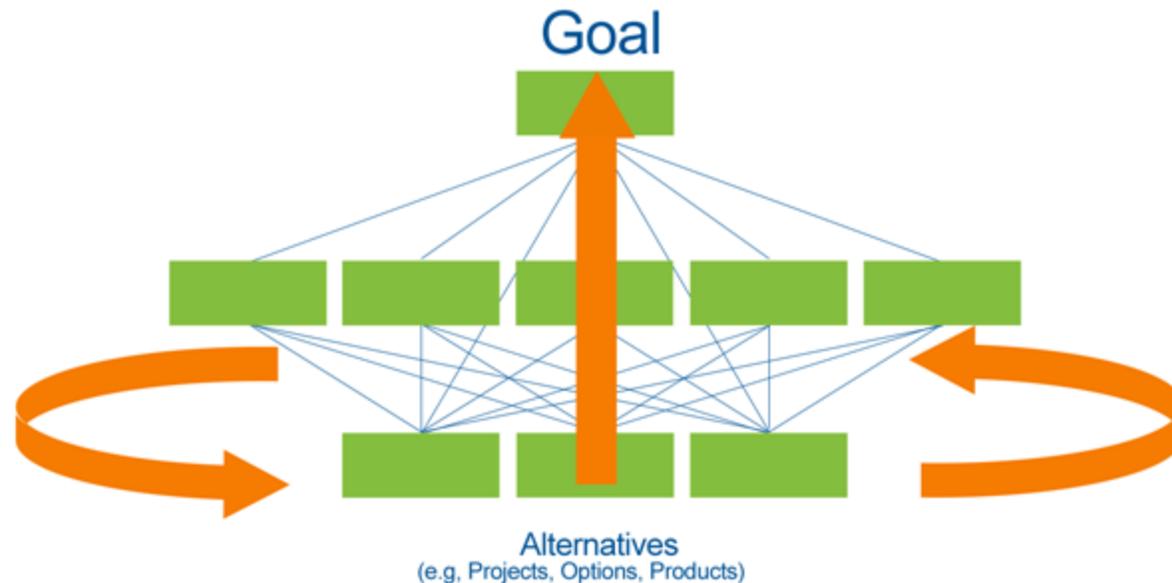
CEAS-ASC 2018 Workshop

Overview of Analytical Hierarchy Processes

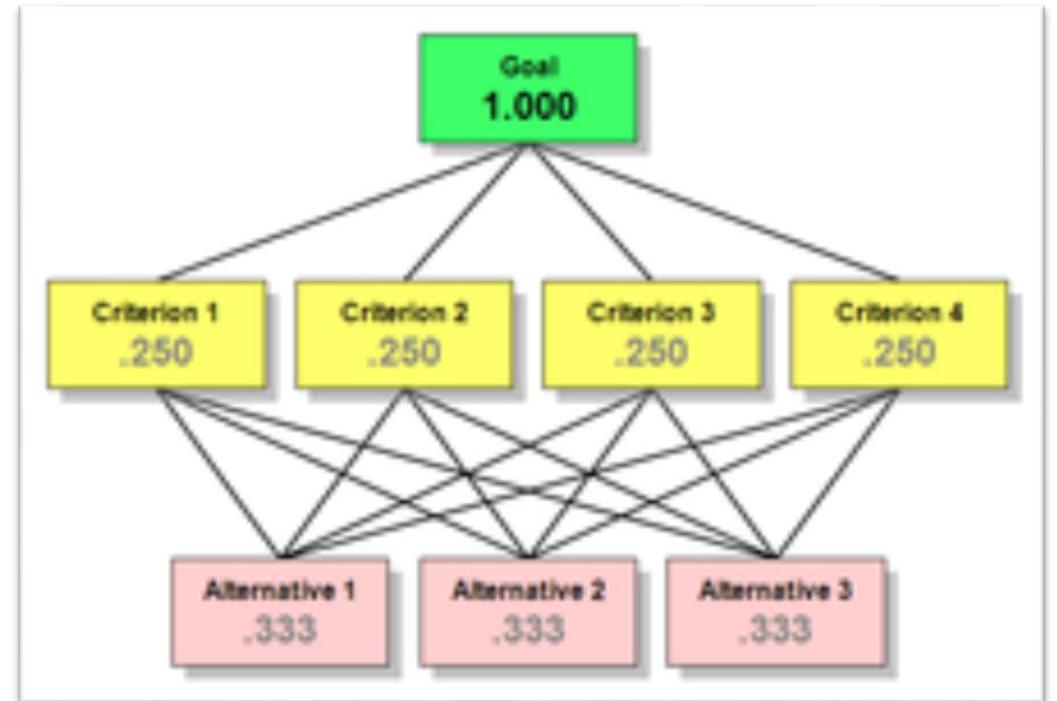
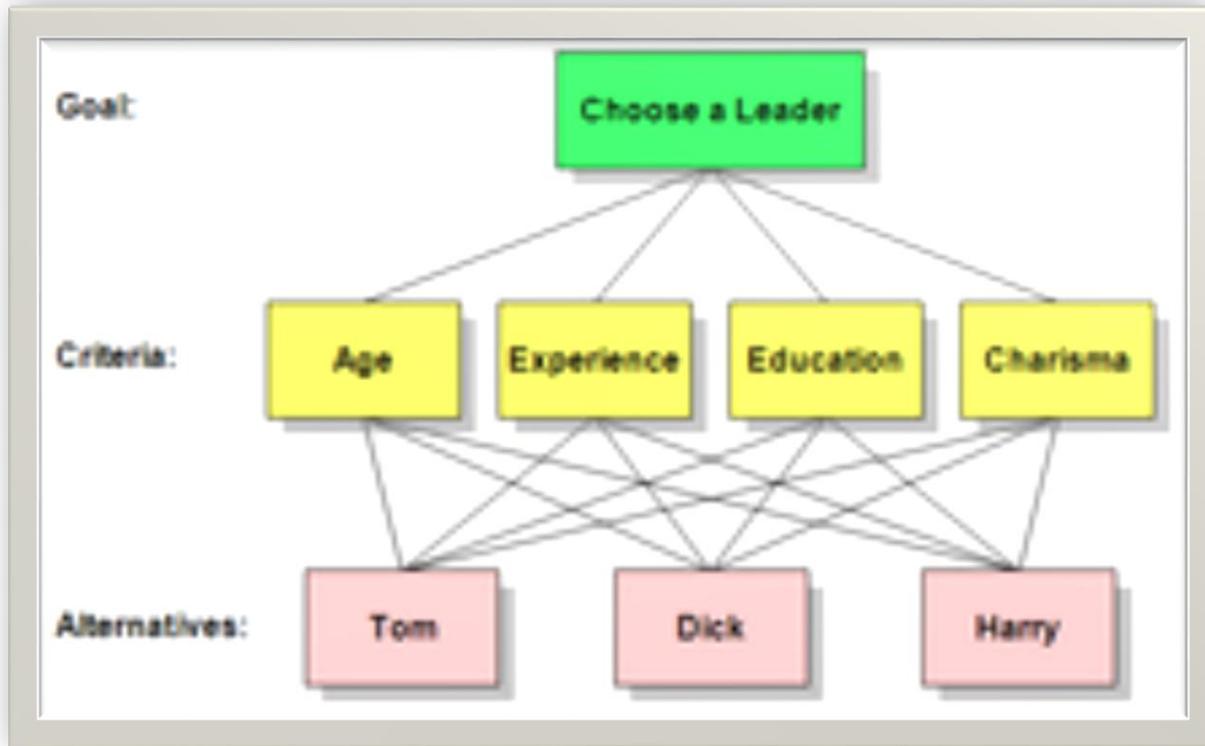
„The analytic hierarchy process (AHP) is a structured technique for organizing and analyzing complex decisions, based on mathematics and psychology.”



Source: <https://expertchoice.com/our-decision-making-methodology/>



Understanding weightings in AHP



Requirements for AHP application

- Data availability
 - Knowledge of noise implications and concepts
 - Information from measured noise levels and socio-acoustic surveys
 - Health-related information
 - Risks (measurement, perception, circumstances, others)
- Steps
 - Establish a goal (what is needed to be measured)
 - Select the relevant data to be used
 - Develop a mindmap
 - Establish the weighting factors



Challenges and solutions

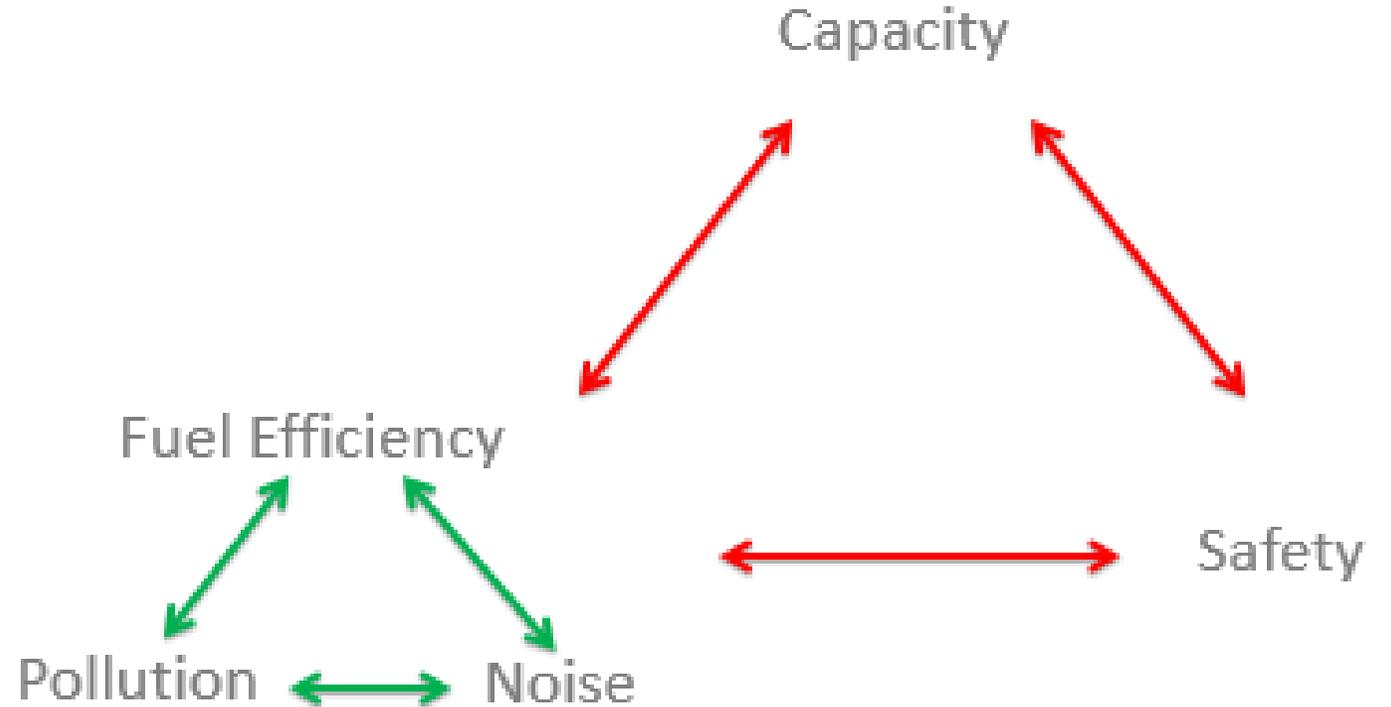
- Combine “tangible” and “intangible” elements
- Engage all relevant stakeholders
- Assess the level of understanding and perception of concepts
- Assess the relationship between various factors
- Find practical solutions
- Use a cohesive management tool



Source: <https://www.foodstuffs.co.za/top-10-challenges-food-manufacturers/>

AHP Advantages for Noise Management

- Both judgments and experience are included
- 'Tangible'-'Intangible' relationship
- Insight on key management indicators
- Bias reduction
- Focus on trade-offs



Source: O.T.Pleter ATA Course 2018, FIA, UPB, Bucharest, Romania

Thank you for your attention!