



Quantitative Techniques

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Quantitative Techniques of Decision Making



Linear programming

Technique maximizes objective using limited resources, focusing on utility optimization or disutility minimization, but may not be useful in uncertain situations.



Probability decision theory

Managers use probability-based decision-making techniques like decision trees or pay-off matrices to determine outcomes' probabilities and make informed decisions.



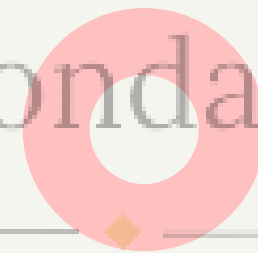
Network techniques

Complex activities require concentrated efforts; techniques like Critical Path Method and Programme Evaluation & Review efficiently segregate work.



Game theory

Game theory approach simulates rivalries in businesses, aiming to gain at the expense of rivals through quantitative techniques.



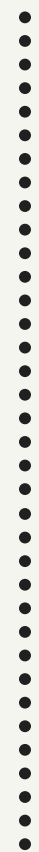
Simulation

Simulation technique helps managers understand outcomes in hypothetical or artificial settings, reducing risks.



Queuing theory

Business waits for personnel, equipment, resources; theory aims to minimize waiting periods and reduce expenses.



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Multi-Criteria Decision Analysis (MCDA)

MCDA facilitates a judgment of value by incorporating multiple criteria important to patients, families, doctors, and society such as:

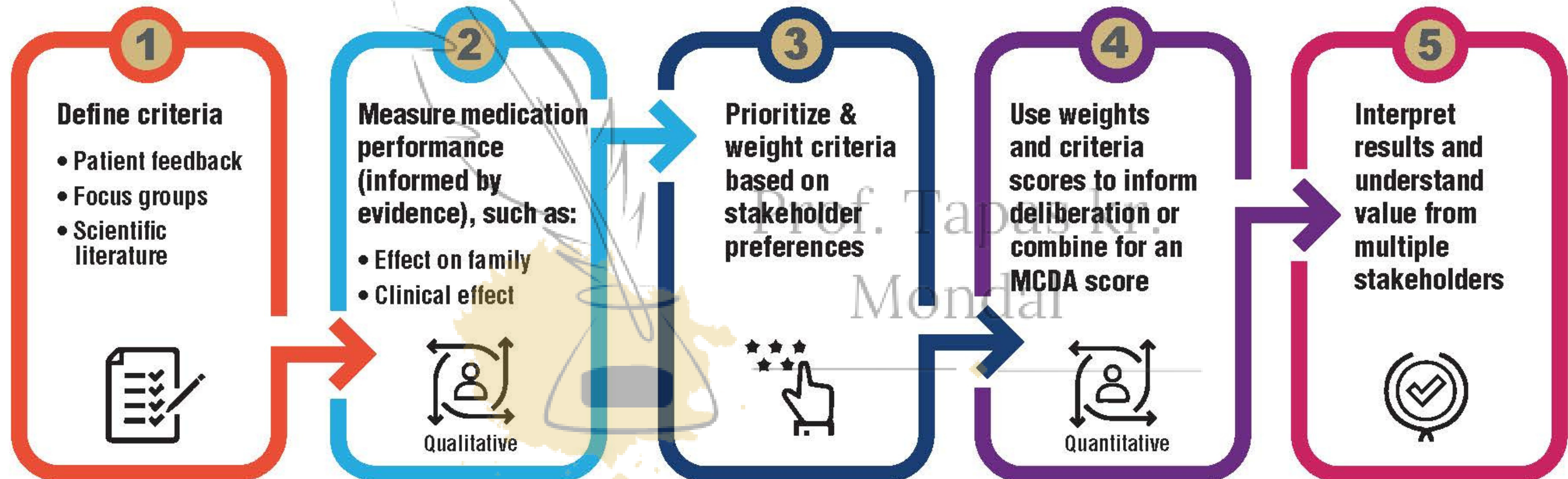
Daily functioning

Disease severity

Caregiver & family burden

Clinical trial evidence

Uncertainty



MCDA Advantages

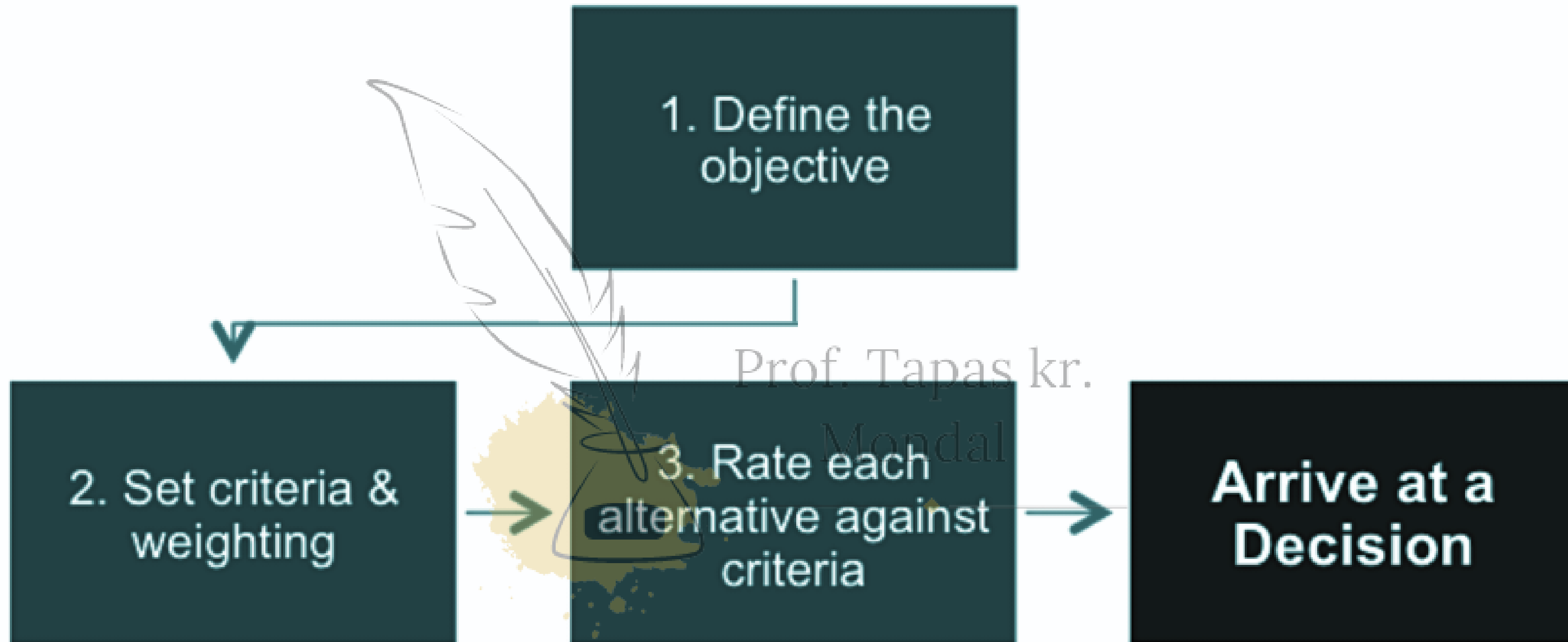
Flexibility allows for non-traditional measures of value to be incorporated

Identifies data gaps for future evidence generation

Transparent

Formally incorporates stakeholder preferences

Analytic Hierarchy Process



Thank You



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