KT Kepner Tregoe

Decision Analysis

Clarify Purpose

State the decision

What is the fundamental purpose of this choice?
What specific choice or recommendation needs to be made?

Include
• Choice word (decide, select…) • Result • 1-2 modifiers

Develop objectives

What short- and long-term benefits or results do we want?
What resources should we use or save?
What restrictions influence this choice?
What minimums or maximums must we meet?
Which objectives need to be clarified?
Consider how time, cost, customers, management, etc., influence this choice
Be clear and specific *Use short statements*

Establish measures for each objective (as measured by…)
Consider: Time, speed, monetary units, accepted norms, or other hard numbers

Classify objectives

If the objective is Mandatory, Measurable, and Realistic, label it a MUST
(Select 'MUST' from drop-down)

Weigh the WANTs

For the other objectives, what is the relative importance of each WANT? (Most important WANT = 10; Others = 1-10, relative to the '10')

Objectives	Measures	

Evaluate Alternatives

Generate alternatives

What different alternatives are available?
Review Decision Statement and objectives
Consult experts and research many sources
Ask stakeholders who will approve or implement
List alternatives without debate
Use creative thinking techniques
If necessary, combine or design alternatives or consider the status quo

Screen alternatives through the MUSTs

Does this alternative meet each MUST objective?
Gather and record factual data
Determine if Go or No Go
Eliminate any No Go alternatives

Use knowledge and experience

Which alternative best satisfies each WANT objective?
Examine how each alternative performs against each WANT objective
Mark the best performers with an asterisk (*)
*Each WANT objective should have at least one **
*The alternative with the most * is the best performer*

OR

Compare alternatives against the WANTs

How well does each alternative perform against each WANT objective?
Record supporting data, then for each objective:
Find the best performing alternative and give it a score of 10
Score other alternatives (0-10) relative to the best performer
Multiply objective weights x scores *Add for total weighted scores*

☐ = *Indicate final choice* Total = ☐			☐ = *Indicate final choice* Total = ☐			☐ = *Indicate final choice* Total = ☐			☐ = *Indicate final choice* Total = ☐		
Alternative 1	Score	Weighted score	Alternative 2	Score	Weighted score	Alternative 3	Score	Weighted score	Alternative 4	Score	Weighted score

Assess Risks

Identify adverse consequences

Start with the highest scoring alternative *Imagine you have implemented this alternative*

What risks are associated with this alternative?
What could go wrong, short and long term, with this alternative?

What are the implications of being close to a MUST limit or threshold?
What information about this alternative might be invalid? What are the implications?

Use "If…, then…" format; e.g., If X happens, then Y is the adverse consequence

Identify adverse consequences for all alternatives that are close to the best performer

Assess the threat

How likely is each adverse consequence? (probability—record the rationale; mark each H, M, or L)
What level of impact will this adverse consequence have? (seriousness—record the rationale; mark each H, M, or L)

Make Decision

Make the choice

Are we willing to accept the risk(s) to gain the benefit of this choice?
Can we manage the risk(s) to an acceptable level?

If yes, pick it
If no, repeat for the next best alternative
Record and communicate the final choice
Plan and take action to implement the chosen alternative
Plan how you will manage its risk(s)

Assess Risks	Probability	Seriousness	Assess Risks	Probability	Seriousness	Assess Risks	Probability	Seriousness	Assess Risks	Probability	Seriousness
If…			*If…*			*If…*			*If…*		
then…			*then…*			*then…*			*then…*		
If…			*If…*			*If…*			*If…*		
then…			*then…*			*then…*			*then…*		
If…			*If…*			*If…*			*If…*		
then…			*then…*			*then…*			*then…*		
If…			*If…*			*If…*			*If…*		
then…			*then…*			*then…*			*then…*		

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Decision Analysis

Evaluate Alternatives

Generate alternatives

What different alternatives are available?

Review Decision Statement and objectives
Consult experts and research many sources
Ask stakeholders who will approve or implement

List alternatives without debate
Use creative thinking techniques
If necessary, combine or design alternatives or consider the status quo

Which alternative best satisfies each WANT objective?
- *Examine how each alternative performs against each WANT objective*
- *Mark the best performers with an asterisk (*)*
- *Each WANT objective should have at least one **
- *The alternative with the most * is the best performer*

How well does each alternative perform against each WANT objective?
Record supporting data, then for each objective:
- *Find the best performing alternative and give it a score of 10*
- *Score other alternatives (0-10) relative to the best performer*
- *Multiply objective weights x scores*

☐ *= Indicate final choice* *Total =* ☐

Alternative 5	Score	Weighted score

Assess Risks

	Probability	Seriousness
If...		
then...		
If...		
then...		
If...		
then...		
If...		
then...		

☐ *= Indicate final choice* *Total =* ☐

Alternative 6	Score	Weighted score

Assess Risks

	Probability	Seriousness
If...		
then...		
If...		
then...		
If...		
then...		
If...		
then...		

☐ *= Indicate final choice* *Total =* ☐

Alternative 7	Score	Weighted score

Assess Risks

	Probability	Seriousness
If...		
then...		
If...		
then...		
If...		
then...		
If...		
then...		

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Decision Analysis

1 Clarify Purpose

When to use Decision Analysis?

Do we need to make a choice?
Does it make a difference which alternative is chosen?
Are we unclear about which alternative is the best?
Do we need the consensus of a group of stakeholders to successfully implement the choice?

Yes to any of the above = use Decision Analysis

State the decision

What is the fundamental purpose of this choice?

What specific choice or recommendation needs to be made?

Write a short statement that includes:
- *Choice word (decide, pick, select…); Result; 1 or 2 key modifiers*
- *The words you use will broaden or narrow the range of alternatives*

Develop objectives

What short- and long-term benefits or results do we want?
What resources should we use or save?
What restrictions influence this choice?
What minimums or maximums must we meet?
Which objectives need to be clarified?

Consider how time, cost, customers, management, etc., influence this choice
Be clear and specific *Use short statements*

Establish measures for each objective (as measured by…)
- *Determine how the objective will be measured*
- *Document the specific attributes that will indicate the objective has been met*
- *Measures can be subjective*

Involve stakeholders who will approve or implement
Consider things like time, speed, monetary units, accepted norms, the 'Should', etc.
If subjective, determine who will 'make the call'

Classify objectives into MUSTs and WANTs

Is this objective....
- *Mandatory? (required by key stakeholder, regulation, law, policy)*
- *Measurable? (has a specific limit or threshold)*
- *Realistic? (can be achieved)*
  - *Yes to all 3 = MUST—label* Ⓜ *All others are WANTs*

Which MUST objectives should be reflected in the WANTs?

Weigh the WANTs

What is the relative importance of each WANT?
- *Identify the most important WANT(s)*
- *Give it (them) a weight of 10*
- *Compare others to the 10(s)*
- *Assign numbered weights*
- *Confirm weights by comparing to the 10(s)*

2 Evaluate Alternatives

Generate alternatives

What different alternatives are available?

Review Decision Statement and objectives
Ask stakeholders who will approve or implement
Use creative thinking techniques
Consult experts and research many sources
List alternatives without debate
If necessary, combine or design alternatives or consider the status quo

Screen alternatives through the MUSTs

Does this alternative meet each MUST objective?
Gather and record factual data
Determine if Go or No Go
Eliminate any No Go alternatives

Use knowledge and experience OR Compare alternatives against the WANTs

Which alternative best satisfies each WANT objective?
- *Examine how each alternative performs against each WANT objective*
- *Mark the best performers with an asterisk (*)*
- *Each WANT objective should have at least one **
- *The alternative with the most * is the best performer*

How well does each alternative perform against each WANT objective?
- *First record factual, accurate supporting data about how well each alternative meets each objective*
- *Then score, starting with the first objective:*
  - *Find the best performing alternative and give it a score of 10*
  - *Compare the performance of other alternatives and score (0-10) relative to the best performer*
- *Repeat scoring for all remaining objectives*
- *Multiply objective weights x scores*
- *Add for total weighted scores*

3 Assess Risks

Identify adverse consequences

What risks are associated with this alternative?
What could go wrong, short and long term, with this alternative?
What are the implications of being close to a MUST limit or threshold?
What information about this alternative might be invalid? What are the implications?

Start with the highest scoring alternative
Imagine you have implemented this alternative
Use "If…, then…" format; e.g., If X happens, then Y is the adverse consequence
Identify adverse consequences for all alternatives that are close to the best performer

Assess the threat

How likely is each adverse consequence? (probability—record the rationale; mark each H, M, or L)

What level of impact will this adverse consequence have? (seriousness—record the rationale; mark each H, M, or L)

4 Make Decision

Make the choice

Are we willing to accept the risk(s) to gain the benefit of this choice?
Can we manage the risk(s) to an acceptable level?

If yes, pick it
If no, repeat for the next best alternative
Record and communicate the final choice
Plan and take action to implement the chosen alternative
Plan how you will manage its risk(s)