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

☑ = Indicate final choice   Total = ☐

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

☐ = Indicate final choice   Total = ☐

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 = ☐

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 (Alternative 1)

	Probability	Seriousness
If…	☐	
then…		☐
If…	☐	
then…		☐
If…	☐	
then…		☐

Assess Risks (Alternative 2)

	Probability	Seriousness
If…	☐	
then…		☐
If…	☐	
then…		☐
If…	☐	
then…		☐

Assess Risks (Alternative 3)

	Probability	Seriousness
If…	☐	
then…		☐
If…	☐	
then…		☐
If…	☐	
then…		☐

Assess Risks (Alternative 4)

	Probability	Seriousness
If…	☐	
then…		☐
If…	☐	
then…		☐
If…	☐	
then…		☐

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

Use knowledge and experience | OR | Compare alternatives against the WANTs

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

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 = ☐

Alternative 5	Score	Weighted score
Alternative 6	Score	Weighted score
Alternative 7	Score	Weighted score

Assess Risks

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

Assess Risks

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

Assess Risks

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

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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?

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

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

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 | Weigh the WANTs

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

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

Compare alternatives against the WANTs

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)