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TEXAS EXECUTIVE EDUCATION | STRATEGIC DECISION & RISK MANAGEMENT

Decision Quality

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What are the primary challenges* you see in decision-making in your organization?

- _____
- _____
- _____
- _____
- _____
- _____

*Or, what are the characteristics of great decisions?

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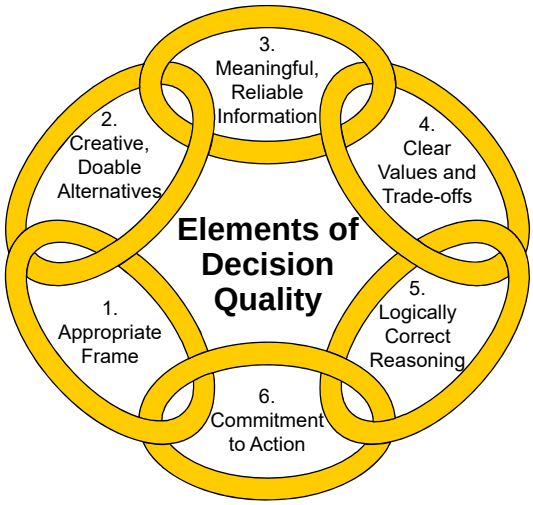
Achieving quality in each of six elements produces quality in the overall decision.



Like a chain, overall quality is no stronger than the weakest link.

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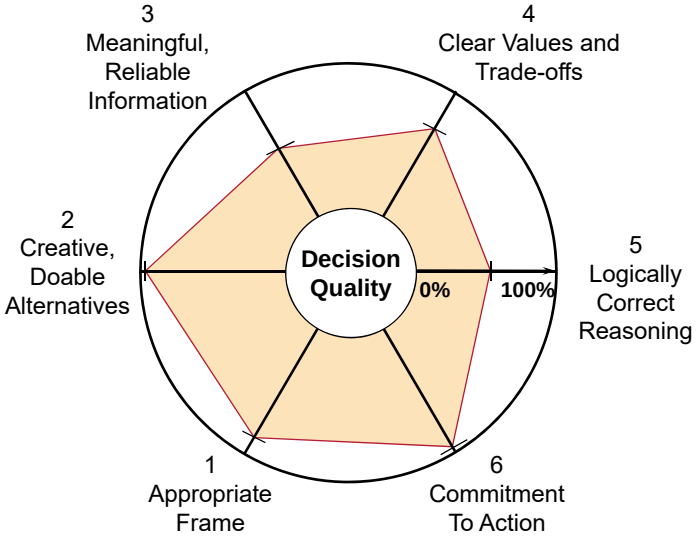
A "spider" diagram helps gauge decision quality at any point in the decision-making process.



The 100% point is where additional effort costs more than it is worth.

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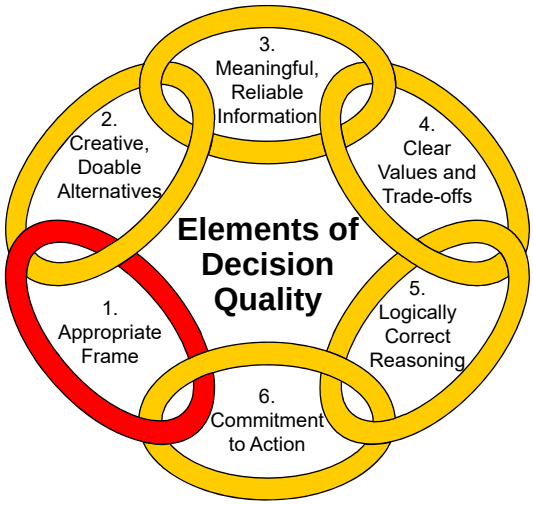

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Imagine that the US is preparing for the outbreak an unusual disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:

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How a decision is framed can alter the decision people make.

Imagine that the US is preparing for the outbreak an unusual disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:

If Program A is adopted, 200 people will be saved.

If Program B is adopted, there is a 1/3 probability that 600 people will be saved, and a 2/3 probability that no people will be saved.

Which of the two programs would you favor?

☐ A ☐ B

If Program C is adopted, 400 people will die.

If Program D is adopted, there is a 1/3 probability that nobody will die, and a 2/3 probability that 600 people will die.

Which of the two programs would you favor?

☐ C ☐ D

Source: Kahneman, Daniel and Amos Tversky, "The Framing of Decisions and the Psychology of Choice," *Science,* Vol 211, 30 Jan 1981.

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Kahneman and Tversky's Results

Imagine that the US is preparing for the outbreak an unusual disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:

If Program A is adopted, 200 people will be saved.

If Program B is adopted, there is a 1/3 probability that 600 people will be saved, and a 2/3 probability that no people will be saved.

Which of the two programs would you favor?

72% A 28% B

N = 152

If Program A' is adopted, 400 people will die.

If Program B' is adopted, there is a 1/3 probability that nobody will die, and a 2/3 probability that 600 people will die.

Which of the two programs would you favor?

22% A' 78% B'

N = 155

Source: Kahneman, Daniel and Amos Tversky, "The Framing of Decisions and the Psychology of Choice," *Science,* Vol 211, 30 Jan 1981.

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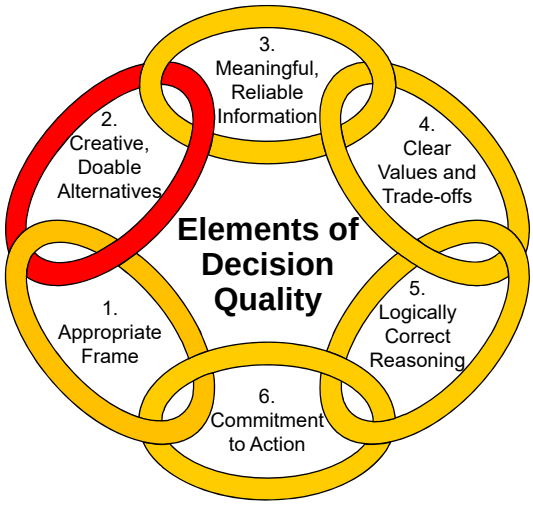

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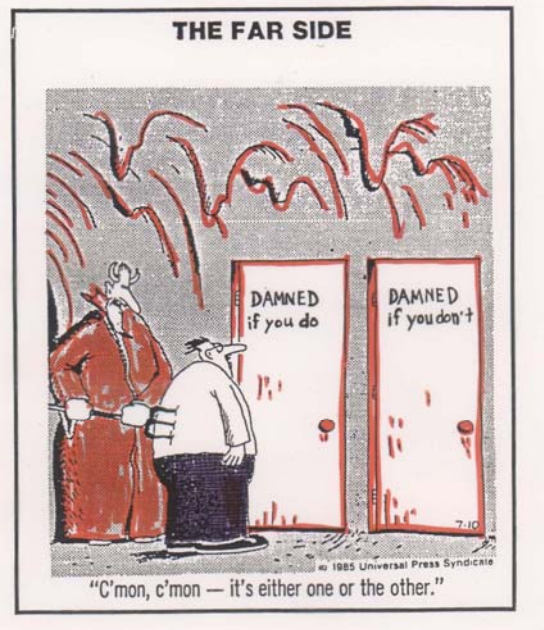

"C'mon, c'mon — it's either one or the other."

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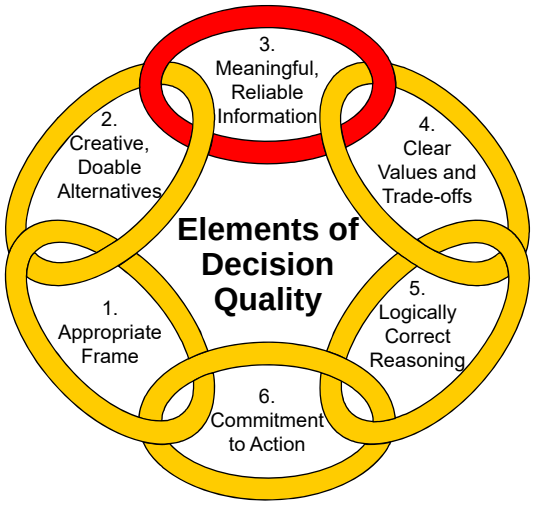

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Below are several phrases commonly used to express the likelihood that an event will occur.

Indicate ***your*** range of probabilities (0-1.0) for each phrase.

Common Expression	Minimum Probability	Maximum Probability
"It is likely"		
"There is a good possibility"		
"There is a fair chance"		
"There is a distinct possibility"		

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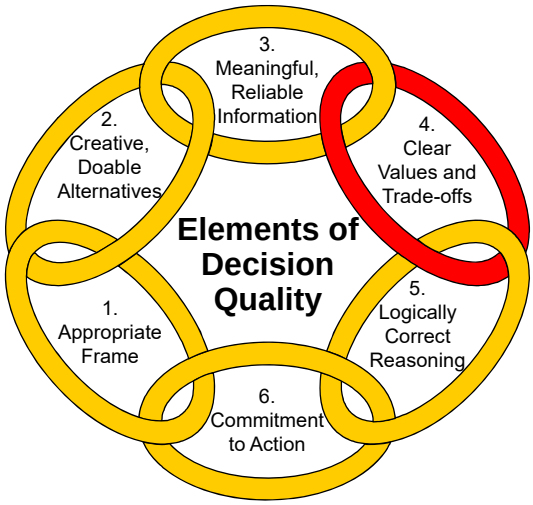

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A new purchase ...

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The metric that you focus on also alters your decision making.

You are in the computer store about to purchase a new case for your smartphone for $40, when your friend tells you that the same case is on sale for $20 at another store that is a 15-minute drive away. Would you drive to the other store to get the cheaper case?

☐ Yes ☐ No

N = ?

You are in the computer store about to purchase a new computer $1000, when your friend tells you that the same computer is on sale for $980 at another store that is a 15-minute drive away. Would you drive to the other store to get the cheaper computer?

☐ Yes ☐ No

N = ?

Source: J. Edward Russo and Paul J. H. Schoemaker, *Decision Traps: The Ten Barriers to Brilliant Decision-Making and How to Overcome Them,* Simon and Schuster, 1989.

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Russo and Schoemaker's Results

You are in the computer store about to purchase a new case for your smartphone for $40, when your friend tells you that the same case is on sale for $20 at another store that is a 15-minute drive away. Would you drive to the other store to get the cheaper case?

90 Yes 10 No

N = 100

You are in the computer store about to purchase a new computer $1000, when your friend tells you that the same computer is on sale for $980 at another store that is a 15-minute drive away. Would you drive to the other store to get the cheaper computer?

50 Yes 50 No

N = 100

Source: J. Edward Russo and Paul J. H. Schoemaker, *Decision Traps: The Ten Barriers to Brilliant Decision-Making and How to Overcome Them,* Simon and Schuster, 1989.

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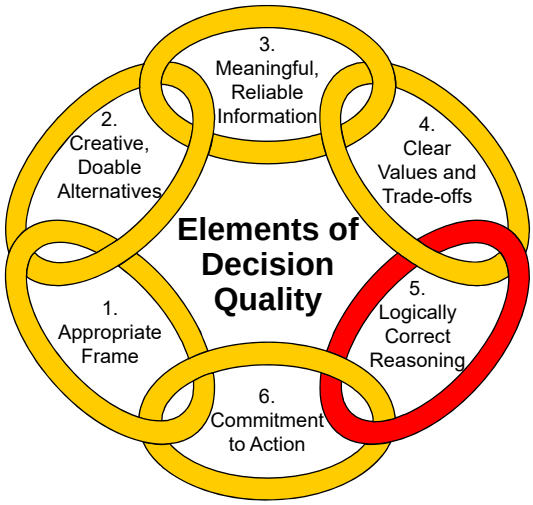

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Assume you have been exposed to a life-threatening disease. The disease is treatable is diagnosed early (however, the treatment is quite painful).

The probability you will contract the disease is 1/1000. We can give you a medical test to help determine whether or not you have contracted the disease. The test is 99% accurate.

Unfortunately, you have tested positive. What is the probability you have the disease?

- ☐ 80-100%
- ☐ 60-79%
- ☐ 40-59%
- ☐ 20-39%
- ☐ 0-19%

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There is only a 9% chance you have the disease given you test positive.

	Positive	Negative	Total
Have Disease	0.99 ≈ 1	0.01 ≈ 0	1
Don't have Disease	9.99 ≈ 10	989.01 ≈ 989	999
Total	≈ 11	≈ 989	1000

11 people tested positive, but only 1 has the disease. So, the probability you have the disease given that you have tested positive is 1/11 or about 9%!

Why do we get this wrong?

People confuse the “probability you have the disease given a positive test result” with the “probability of a positive test result given you have the disease”.

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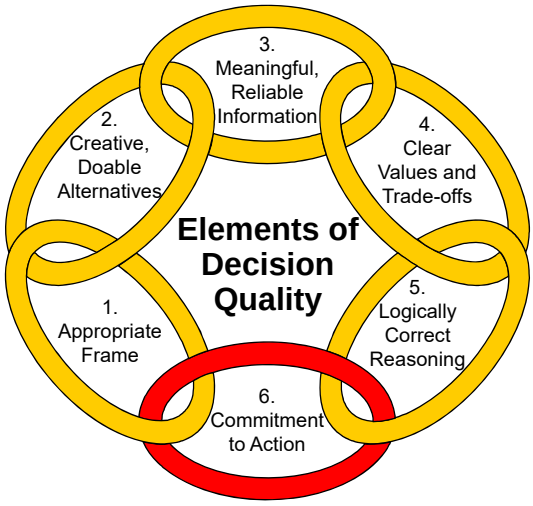

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"Oh, I had some good ideas in my day. It's my follow-through I had trouble with."

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SDRM Webinars: https://sdg.com/thought-leadership/webinars/

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Upcoming SDRM Courses

Decision Quality: Make the Right Choice Every Time

Date	Duration	Location	Instructor	
03/01/20 - 07/31/20	Online	Online Course	Carl Spetzler Bruce Judd Eric Bickel	Enroll
04/20/20 - 04/21/20	2-Days	AT&T Executive Education & Conference Center 1900 University Avenue Austin, TX 78705	Carl Spetzler Bruce Judd	Enroll

Leading Strategic Decision Making

Date	Duration	Location	Instructor	
03/01/20 - 12/31/20	Online	Online Course	Bruce Judd Eric Bickel	Enroll
04/22/20 - 04/23/20	2-Days	AT&T Executive Education & Conference Center 1900 University Avenue Austin,	Bruce Judd Eric Bickel	Enroll

Modeling and Analytics for Strategic Insight

Date	Duration	Location	Instructor	
02/24/20 - 02/25/20	2-Days	AT&T Executive Education & Conference Center 1900	Steven Tani Eric Bickel	Enroll

Negotiation and Collaborative Decision Making

Date	Duration	Location	Instructor	
02/26/20 - 02/27/20	2-Days	AT&T Executive Education & Conference Center 1900 University Avenue Austin, TX 78705	Janet Dukerich Gaylen Paulson	Enroll
06/08/20 - 06/09/20	2-Days	AT&T Executive Education & Conference Center 1900 University Avenue Austin, TX 78705	Janet Dukerich Gaylen Paulson	Enroll

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