

Quantify Or Qualify Your Bid Decision

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From
BEST PRACTICES

...to
BODY OF KNOWLEDGE

APMP®

Making Bid/No-Bid Decisions

- Many companies fall into the trap of depending on software tools and techniques to develop Win Probability (Pwin).
 - These tools use statistics based on probability theory which link dependencies between variables.
- Makes decision making easier by quantifying a combination of options.
 - These tools tend to miss important qualitative decision making criteria.
- Let us discuss the use of a blended approach of quantifying and qualifying bid/no-bid decisions.

Decision Tools

- How many of you use automated tools to provide Win Probability (Pwin)?
- Example of some tools & services:
 - WinAward
 - Decision Lens
 - Expert Choice
 - Others

Quantitative vs. Qualitative

- Quantitative
 - Use of Probability to reason quantitatively.
 - Assign values to the chance of an event occurring and derive values based on observations.
- Qualitative
 - Logic gives a qualitative approach to uncertainty.
 - We can say that one event is more common than another or that something is a possibility.
 - Useful in cases where we don't have statistics or we want to reason more abstractly.

Probability-Bayesian Reasoning

- Probability distribution is a mathematical form of capturing what we know about uncertainties and how confident we are of what we know.
 - *A decision maker believes there is a 30% chance of a product having less than 10% market share 2 years after its launch and a 60% chance of the product having less than a 30% market share.*
- Probabilistic dependencies between these decision points can be expressed in a model.
- These dependencies can then be quantified as numerical probabilities.
- Put in terms of Bid Decisions = P_{win}

Probability-Bayesian Reasoning

- Bid Decision Criteria
 - How well does the customer know us?
 - What is our past performance on a relevant contract?
 - Are we the incumbent?
 - Who are the key personnel?
 - Do we have the staff needed to do the job?
 - Do we have the required facilities?
 - How are our rates or our cost?
 - Do we have a proposal process?
 - How much time do we have to prepare or take action?
- Tools can build a quantified decision network
= Win Probability (P_{win})

Decision Tools

- Understand the limitation of your tool and sensitivity to the answers.
 - Are these the right questions?
 - What if we need to ask more questions?
 - What if our answers are not so *black or white*?
- If we stop our decision process here, we are missing part of the information needed to make a good bid decision.
- Go to Logic or Intuitive Reasoning.
 - Sometimes called the Law of Evidence
- Put yourself in front of a jury. Can you defend your decision?
 - Ever see Law and Order getting someone convicted with; “*Your Honor, his probability of guilt is 87%*”

Decisions

- Is there anyone here artificial?
 - How many of you can make a decision?
 - How many of you made a decision to come to this session or this conference?
- Automating decisions, decision methodology and decision making processes are very serious business.

The Issues Iceberg

What do we know about icebergs?



- Requirements
- Public knowledge

Water Line

- What keeps your customer up at night?
- What are the issues that aren't public?

Limits to Logic Automation

- Logicism -To build an intelligent Robot
 - Feed a robot with logical formulas that present common-sense knowledge about the world.
 - Logical formulas to express robot's observations.
 - Let the robot plan its actions by applying the rules of logic to these formulas.
- Soon realize that standard logic is not sufficient.
 - Common-sense knowledge has a high rule-of-thumb nature.
 - Lots of conflicting rules and exceptions
 - i.e. Birds Fly...

Use Both Methods

- Probability methods capture what we know and how confident we are in it.
- Logic reasoning allows for a comparison of arguments for and against a conclusion.
 - Helps to capture the adversarial aspects.
 - Facilitates the distinction between direct vs. ancillary evidence.
- Combine both to build a Capture Plan to support a Bid/No-Bid Decision.
 - Supports communication in making sense of the data.

A Good Capture Plan

- Customer Analysis
 - Issues, Process, Environment & Requirements
- Competitive Analysis
 - Approaches, Position & Solutions
- Capture Strategy
 - Bidder Comparison, Solution Strategy & Cost
- Action Plans
 - Contact, Intelligence, Solution Development, Contingency & Risk

Conclusion

- Understand the limitation of your tool and sensitivity to the answers.
 - One thing a tool will do for you is get you to ask questions that you have to find answers for.
 - As you get smarter and find answers, more questions or rather the right questions will come forward.
- Use all the tools you have available blending your decision on logic and reasoning as well as probability.