1.0 Why

When applied appropriately, Choosing by Advantages (CBA) allows for visual and transparent decision making. It also aligns with the desired values and culture of Lean/IPD and allows teams to emphasize a project’s value to its stakeholders (customers and clients). With CBA, decision makers can reach consensus, focus on outcomes and understand all of the factors considered during the decision-making process.

CBA is a decision-making system that acknowledges all decisions are essentially subjective—but then guides the participants towards basing the subjectivity on objectively discovered and documented facts.

2.0 What

Many decision-making methods or systems are flawed, and can thus lead to poor decision making.
CBA is a decision-making system that acknowledges all decisions are essentially subjective—but then guides the participants towards basing the subjectivity on objectively discovered and documented facts.

Jim Suhr, the creator of CBA, explains: “First, we teach people how to use correct data. Second, we teach them how to use data correctly.”

Within the CBA system, language is very important. Five major CBA terms are defined as:

- **Alternatives are people, things or plans from which one will be chosen.**
- **An attribute is a characteristic, quality or consequence of one alternative—one person, one thing or one plan.**
- **An advantage is a difference between the attributes of two alternatives.**
- **Factors are parts of a decision—such as a canoe-weight, stability or color. Factors contain data that are required for making a decision. (A factor is not the same as an attribute).**
- **A criterion is a standard, rule or test on which a judgment or decision can be based. A criterion is a decision that guides further decision making. The meaning of the word criterion is not the same as the meaning of the word factor. (They are also not attributes or advantages.)**

CBA is based upon the following four principles:

1. **The foundation principle of sound decision making:** Sound methods base decisions on the importance of prospective differences among the alternatives—not factors, criteria, goals, roles, categories, objectives, attributes, pros and cons, and so forth. (This principle was recognized and validated at least three centuries ago.)

2. **The fundamental rule of sound decision making:** Sound methods base decisions on the importance of advantages—not advantages and disadvantages. (An advantage is a difference between the attributes of two alternatives.)

3. **The principle of anchoring:** Sound methods anchor decisions to the relevant facts. (In the CBA vocabulary, methods that do not base decisions on the relevant facts are called unsound methods.)

4. **The pivotal (critically important) sound–decision-making principle:** Engineers, architects, leaders in organizations, and so forth are professional decision makers. They need to learn and skillfully use sound methods of decision making.
Jim Suhr, the creator of CBA, explains: “First, we teach people how to use correct data. Second, we teach them how to use data correctly.”

### 3.0 How

**CAUTION!** CBA must be facilitated by someone trained and practiced in CBA. The process can appear to be deceptively simple, but if it is applied incorrectly, it will yield unsound results.

The facilitator and participants should be aware of and guard against gaming the system to railroad a decision into a predetermined outcome.

It is recommended that active participants in a CBA effort attend a one-hour introduction to CBA session that is facilitated by an expert user of the system.
4.0 When

CBA often is used when multiple variables need to be considered to make an informed decision. This may mean multiple solutions exist but a team can’t determine the best outcome. This process is often useful when various constituents are focusing on their individual needs and not those of other stakeholders. CBA often leads to alternatives previously not considered as participants gain a deeper understanding of the attributes, factors, criteria, and advantages. This is an excellent tool to document the reasons behind decisions, particularly if parties not involved in the process need justification for these critical decisions.

CBA often is used when multiple variables need to be considered to make an informed decision. This may mean multiple solutions exist but a team can’t determine the best outcome.

CBA offers multiple ways to reach both simple and complex decisions. To be effective and sustainable, CBA should be applied to any decision facing a team. Teams that frequently use CBA readily build a trust and familiarity with the system.

CBA works well when teams are assessing mutually exclusive alternatives (i.e., different HVAC systems or structural frame types for a building). It also works well when prioritizing resource allocation such as how to best apply labor resources or which value-add options should be adopted to generate the most savings.

References

*The Choosing by Advantages Decisionmaking System, Jim Suhr*

One can become a Certified Masters of CBA through Jim Suhr’s training program offered periodically.
CHOOSING BY ADVANTAGES

Quick Reference

Lean Construction Defined .................. 27
The Value Proposition .......................... 19
Learning to See Waste .......................... 23