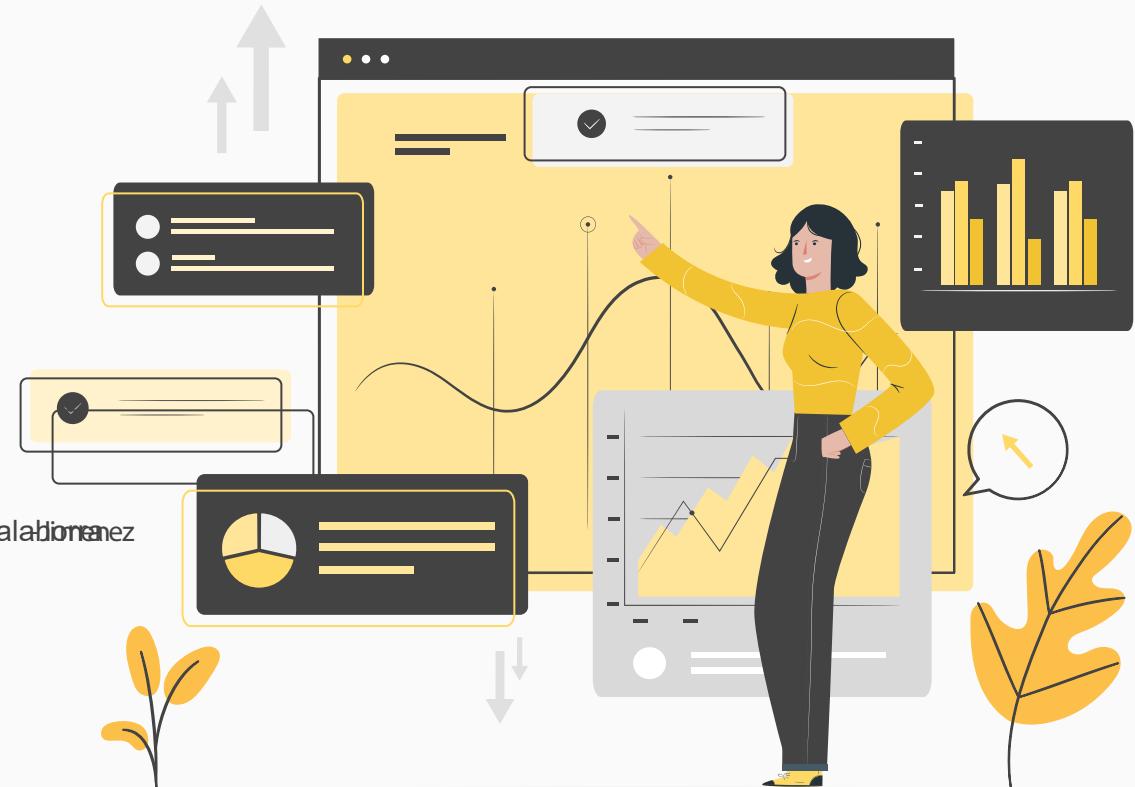


CHOOSING BY ADVANTAGES

By: Guadalupe Cervantes, Prof. Maria Calatia



BACKGROUND

After meeting together Maria and I have decided ~~to work on~~:

- Choosing by advantages (CBA) Method
- *Lean Construction Institut* Defines CBA as: "... a decision making method that helps team members make sound decisions in a group setting to ensure that the decision made yields the most value and leads to the best outcome for the stakeholders."
 - In other words: A method in which a certain decision is reached through the different specs in an item as compared to those same specs in another similar item

Factor	Alternative 1: Toyota Camry Hybrid	Alternative 2: BMW X5 SUV	Alternative 3: Mercedes C Class
Fuel Economy (mpg)	40 mpg	18 mpg	22 mpg
Trunk Space (liters)	5 liters	2 liters	5 liters
Reliability	reliable	Extremely reliable	reliable

Table 1. Summarizing attributes (Attributes were created for this example)

Example From: [Lean Construction Blog](#)

DETAILS OF RESEARCH



01 OBJECTIVE

Evaluate how good CBA method is for deciding —
-----in the City of
Madera Engineering
department.

03 RESULTS ANALYSIS

02 METHODOLOG Y

Phase 1, Phase 2, and
Phase 3

04 CONCLUSIONS

PHASE 01.

In this phase, objective: identify a decision taking situations (examples: selecting subs, selecting materials..) that might benefit the use of an structured approach to make the decision.



STUDY OBJECTIVES



METHOD

Interview

Need to select who is the best person for giving you this information

	A	B	C	D	E	F	G	H	I	J
2	Design-Bid-Build Projects									
3	Area/phase	Pre-construction	Construction	Project Close-Out	In design-Bid-Build Projects					
4	Materials	1) Compile submittals for approval 2) Medium 3) High 4) Very Relevant 5) Water Water Plant Rehab	1) Get approval for submittals 2) High 3) High 4) Very Relevant 5) Fire Station 38	1) Provide certs and material warranties and extra material call for under contract 2) High 3) Medium 4) Very Relevant 5) Final Payment 4) Relevant in regards to final payment 5) HVAC and Steam Retrofit VA Wilshire, Bldg.	For each cell: Please, (1) tell me about decision that you need to take in <Pre-construction> about material? (2) How is the impact of this decision in cost (high, medium, low)? (3) And in schedule (high,medium, low)					
5	Equipment	1) Identify equipment limitations set by contract 2) Medium 3) High 4) Very Relevant 5) Emergency Generator for New Melones Power Plant/ Dam	1) Protection for Backup Diesel Gen for Dam within sub station, foundation for equipment, route for equipment through dam auxiliary switches and Automatic Transfer Switch within a Dam. New Melones Dam	1) provide Operation Manuals, Warranties and Training 2) low 3) High 4) Very Relevant -Needs to be completed to bring Equipment Safely on Line. New Melones Dam	(4) How relevant is this decision for the project as a whole (very relevant, relevant, not relevant)					
6	Labor/subs	1) Discuss with subs requirements for labor classification of crews being provided and critical task to be performed and key certification required for project 2) medium 3) medium 4) Relevant 5) VA Hospital Whistshire	1) Meet with crew actually on site, as often crew discuss with project manager and changed and discuss task to be performed with onsite crew 2) low 3) Medium 4) low areas, duration of task to be performed and any off hour work 2) High 3) High 4) Very Relevant 5) ICU and Isolation Wing of VA Hospital	1) Regards to labor typically, review and discuss of Payroll Records and close out documents of any personal who did not work on the project 2) Low, other than abnormal manifest which could affect final payment 3) Low 4) Relevant 5) VA Facilities	(5) For the decision indicated before, please indicate the type of project where you took that decision (name of the project)					
7	Management	Discuss terms of agreement, identify possible Change Orders, Submittal processing, Potential Delays regards to Sub coordination, and CPM schedule 2) High 3) Medium 4) Very Relevant 5) Interim and Final Payment, DEA Floor Space and Customs Floor Space, San Francisco	?	?						
8										

PHASE 02.

objective: selecting the decision making situation that will be analyzed



STUDY OBJECTIVES



METHOD

Expert panel

Researcher will meet with expert to decide what option might be more interesting to analyze.

1	A	B Decision-Making Situation	C Type of project where the decision is taken	D Area	E Phase	F Impact of the decision		G Relevance of the decision in the project as a whole	I	J
						Cost	Time			
3	1	Compile submittals for approval	Waste Water Plant Rehab	Materials	Pre-construction	Medium	High	Very Relevant		
4	2	Get approval for submittals	Fire Station 58	Materials	Construction	High	High	Very Relevant		
5	3	Provide certs and material warranties and extra material call for under contract	HVAC and Steam Retrofit VA Wilshire, Bldg	Materials	Project Close-Out	High	Medium - Could hold up final resolution	Relevant in regards to final payment		
6	4	Identify equipment limitations set by contract	Emergency Generator for New Melones Power Plant/ Dam	Equipment	Pre-construction	Medium	High	Very Relevant		
7	5	Protection for Backup Diesel Gen for Dam within sub station, foundation for same, routing of conduit throughout dam, auxiliary switches and Automatic Transfer Switch	New Melones Dam	Equipment	Construction	-	-	-		
8	6	provide Operation Manuals, Warranties and Training	New Melones Dam	Equipment	Project Close-Out	Low	High	Very Relevant		
9	7	Discuss with subs management the labor classification of crews being provided and critical task to be performed and low cost/ high cost to project	VA Hospital Whilshire	Labor/subs	Pre-construction	Medium	Medium	Relevant		
10	8	Meet with crew actually on site, as often crew discuss with management has changed and discuss task to be performed and low cost/ high cost to project	ICU and Isolation Wing of VA Hospital	Labor/subs	Construction	High	High	Very Relevant	Choose this one	
11	9	Regards to Labor typically, want to check closeout of Payroll Records and close out documents of any personal who did Hazardous Abatement Work Review terms of agreement - don't necessary change	VA Facilities	Labor/subs	Project Close-Out	Low - other than statement	Low	Relevant		
			Remodel of GSA Ground Floor, DEA Floor							



Survey...

Survey Prt 2 ▾



PHASE 03.

objective: apply CBA into the decision-making situation selected from phase 3



STUDY OBJECTIVES

10	8	Meet with crew actually on site, as often crew discuss with management has changed and discuss task to be performed with specific crew specific to isolation of work. Regards to Labor typically, want to check closeout of	ICU and Isolation Wing of VA Hospital	Labor/subs	Construction	High	High	Very Relevant	Choose this one
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METHOD

Follow the specific CBA procedure

Conduct Workshop with key decision-makers

Deliver short questionnaire to the participants

8	Factor	Alternative 1: Don't meet up with crew	Alternative 2: Meet with crew once a week	Alternative 3: Meet with crew every weekday	L = Low, M= Medium, H=High
9	Intel on who's on site	L	M	H	
10	Importance, and effectiveness of completing specific task	L	H	M	
11	Daily logs, backup documents	L	M	H	
12					

RESULTS/ CONCLUSIONS

PHASE 1

Chose CBA Method

PHASE 2

Send out a survey

PHASE 3

Applied CBA method with data collected

TEAMWORK

Alone we can do so little.

TOGETHER

we can do so much.



Teamwork Quality Councils

"Teamwork

Alone we can do so little.

Together

We can do so much."

—HELEN KELLER

THANKS

Does anyone have any questions?

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Construction Mgmt Undergraduate Student



Sources

[Lean Construction Blog](#)

[Lean Construction Management: Resources & Tools](#)

CREDITShis presentation template was created by [Slidesgo](#) including icons by [Flaticon](#), and infographics & images by [Freepik](#) and illustrations by [Storyset](#)

Finish in Five Grant



Through this method we know what will be able to move the project on budget and on schedule.