



Decision Name: Contractor Selection

Project: Use Cases

01. Decision Summary

Due Date

In Progress

Company B

Decision Status

Selected Alternative

Objective

The goal is to choose a prime contractor for a Lean IPD project.

Collaborators

Doanh Do

02. Alternatives

Company A

Company B

Company C

03. Factors & Criteria

Construction Experience

Want Criterion : The more construction experience the better

Healthcare Experience

Want Criterion : The more healthcare experience the better

Safety Record

Want Criterion : Prefer the best safety record

Experience working with IPD

Want Criterion : Prefer experience on an integrated project

Experience with Lean Construction

Want Criterion : The more Lean Construction experience the better

Quality of Past Projects

Want Criterion : Prefer high quality projects

Building Information Modeling

Want Criterion : Prefer competency in BIM

04. Attributes

Construction Experience

Company A: 60 years	Met meet must criterion ✓
Company B: 20 years	Met meet must criterion ✓
Company C: 40 years	Met meet must criterion ✓

Healthcare Experience

Company A: 30 years of experience	Met meet must criterion ✓
Company B: 20 years of experience	Met meet must criterion ✓
Company C: 25 years of experience	Met meet must criterion ✓

Safety Record

Company A: 4 recordable per ten thousand hour	Met meet must criterion ✓
Company B: 1 recordable per ten thousand hour	Met meet must criterion ✓
Company C: 3 recordable per ten thousand hour	Met meet must criterion ✓

Experience working with IPD

Company A: 3 years of experience	Met meet must criterion ✓
Company B: 8 years of experience	Met meet must criterion ✓
Company C: no experience	Met meet must criterion ✓

Experience with Lean Construction

Company A: 5 years of experience. Basic Lean implementation	Met meet must criterion ✓
Company B: 15 years of experience. Advanced Lean knowledge	Met meet must criterion ✓
Company C: 10 years of experience. Intermediate experience	Met meet must criterion ✓

Quality of Past Projects

Company A: high quality	Met meet must criterion ✓
Company B: high quality	Met meet must criterion ✓

Company C: high quality

Met meet must criterion ✓

Building Information Modeling

Company A: Advance BIM capabilities. Quantity takeoffs

Met meet must criterion ✓

Company B: Advance BIM capabilities. Quantity takeoffs

Met meet must criterion ✓

Company C: Intermediate BIM capabilities. Clash detection.

Met meet must criterion ✓

05. Advantages

Construction Experience

Want Criterion : The more construction experience the better

60 years	Advantage: 40 more years	Most Important Advantage ★
20 years	Advantage: None	Least Preferred Attribute ✖
40 years	Advantage: 20 more years	

Healthcare Experience

Want Criterion : The more healthcare experience the better

30 years of experience	Advantage: 10 more years	Most Important Advantage ★
20 years of experience	Advantage: None	Least Preferred Attribute ✖
25 years of experience	Advantage: 5 more years	

Safety Record

Want Criterion : Prefer the best safety record

4 recordable per ten thousand hour	Advantage: None	Least Preferred Attribute ✖
1 recordable per ten thousand hour	Advantage: 3 recordables less per ten thousand hours	Most Important Advantage ★
3 recordable per ten thousand hour	Advantage: 1 recordable less per ten thousand hours	

Experience working with IPD

Want Criterion : Prefer experience on an integrated project

3 years of experience	Advantage: 3 more years of experience	
8 years of experience	Advantage: 8 more years of experience	Most Important Advantage ★
no experience	Advantage: None	Least Preferred Attribute ✖

Experience with Lean Construction

Want Criterion : The more Lean Construction experience the better

5 years of experience. Basic Lean implementation	Advantage: None	Least Preferred Attribute ✖
15 years of experience. Advanced Lean knowledge	Advantage: advanced vs.	Most Important Advantage ★

basic knowledge

10 years of experience. Intermediate experience

Advantage: intermediate vs. basic knowledge

Quality of Past Projects

Want Criterion : Prefer high quality projects

high quality

Advantage: None

Least Preferred Attribute ✖

high quality

Advantage: none

high quality

Advantage: none

Building Information Modeling

Want Criterion : Prefer competency in BIM

Advance BIM capabilities. Quantity takeoffs

Advantage: Quantity takeoff vs. clash detection

Most Important Advantage ★

Advance BIM capabilities. Quantity takeoffs

Advantage: Quantity takeoff vs. clash detection

Intermediate BIM capabilities. Clash detection.

Advantage: None

Least Preferred Attribute ✖

06. Importance of Advantages

Construction Experience

Want Criteria : The more construction experience the better

Alternative	Attribute	Advantage	Weight of Advantage
Company A	60 years	40 more years	52
Company B	20 years	None	
Company C	40 years	20 more years	40

Healthcare Experience

Want Criteria : The more healthcare experience the better

Alternative	Attribute	Advantage	Weight of Advantage
Company A	30 years of experience	10 more years	36
Company B	20 years of experience	None	
Company C	25 years of experience	5 more years	21

Safety Record

Want Criteria : Prefer the best safety record

Alternative	Attribute	Advantage	Weight of Advantage
Company A	4 recordable per ten thousa...	None	
Company B	1 recordable per ten thousa...	3 recordables less per ten thousand hours	49
Company C	3 recordable per ten thousa...	1 recordable less per ten thousand hours	22

Experience working with IPD

Want Criteria : Prefer experience on an integrated project

Alternative	Attribute	Advantage	Weight of Advantage
Company A	3 years of experience	3 more years of experience	51
Company B	8 years of experience	8 more years of experience	100*
Company C	no experience	None	

* Paramount Advantage

Experience with Lean Construction

Want Criteria : The more Lean Construction experience the better

Alternative	Attribute	Advantage	Weight of Advantage
Company A	5 years of experience. Basic...	None	
Company B	15 years of experience. Adv...	advanced vs. basic knowledge	60
Company C	10 years of experience. Inte...	intermediate vs. basic knowledge	27

Quality of Past Projects

Want Criteria : Prefer high quality projects

Alternative	Attribute	Advantage	Weight of Advantage
Company A	high quality	None	
Company B	high quality	none	0
Company C	high quality	none	0

Building Information Modeling

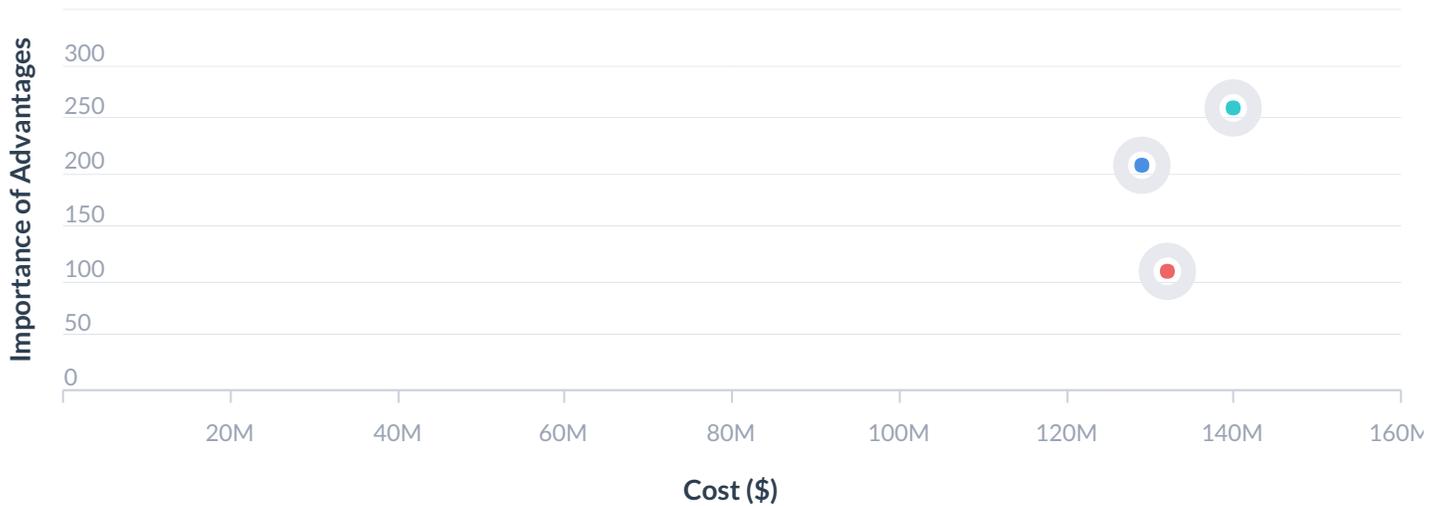
Want Criteria : Prefer competency in BIM

Alternative	Attribute	Advantage	Weight of Advantage
Company A	Advance BIM capabilities. Q...	Quantity takeoff vs. clash detection	68
Company B	Advance BIM capabilities. Q...	Quantity takeoff vs. clash detection	51
Company C	Intermediate BIM capabiliti...	None	

07. Costs

Alternative	Total GMP	<Empty>	<Empty>	<Empty>	<Empty>	Total*
Company A	\$129,000,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$129,000,000.00
Company B	\$140,000,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$140,000,000.00
Company C	\$132,000,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$132,000,000.00

Importance of Advantages vs. Cost Graph



Alternative	Importance of Advantages	Cost
① Company A	207	\$129,000,000.00
② Company B	260	\$140,000,000.00
③ Company C	110	\$132,000,000.00

Selected Alternative	Importance of Advantages	Life Cycle Cost
Company B	260	\$140,000,000.00

Final Notes

Last Modified

May 29, 2016, 4:45 a.m.