



01. Objective

Objective: We have a 6 story commercial office space that we must choose an HVAC system for.

Stakeholders: mechanical contractor, building occupant, owner, facility management

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02. Alternatives

Package Unit with metal duct on deck

Split AC system with metal duct on deck

Ductless Mini Split (VRF) system

03. Factors & Criteria

Factor	Must Criteria	Want Criteria
Ease of Constructibility		want the simplest construction possible
Occupancy Comfort	must be comfortable	
Indoor Air Quality		prefer better indoor environment
Flexibility for Future Change		want more flexibility for future change

04. Analysis

Importance of Advantages vs. Cost Graph



Alternative	Importance of Advantages	Life Cycle Cost
1 Package Unit with metal duct on deck	92	\$2,013,000.00
2 Split AC system with metal duct on deck	0	\$1,867,885.00
3 Ductless Mini Split (VRF) system	240	\$1,726,185.00

05. Decision

Selected Alternative	Importance of Advantages	Life Cycle Cost
Ductless Mini Split (VRF) system	240	\$1,726,185.00