Lab 5: Feasibility Studies
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Solution Options for WSADC

There are three viable choices to satisfy the needs of the Clearinghouse. First is to upgrade the current system such that it meets requirements and addresses user requests. Second is to custom design an entirely new system to replace the current one. Third is to obtain a web-based system (whether by purchase or as open source freeware), which would also replace the current system.

Technical Feasibility

The following table compares how each solution and its requirements may satisfy the organizations needs regarding that technical requirement. Scores are on a scale of 1-10, with 10 most highly satisfying the need while 1 is least satisfying.

Requirement	**Upgraded System**			**New System**			**Web-based System**		
	Score	Factor	Weighted	Score	Factor	Weighted	Score	Factor	Weighted
New Hardware	7	1	7	2	1	2	8	1	8
New Software	9	1	9	3	1	3	5	1	5
Accessibility	2	3	6	5	3	15	7	3	21
User-Friendly	1	5	5	8	5	40	7	5	35
Simple to learn	1	4	4	4	4	16	5	4	20
Network Capability	1	2	2	5	2	10	7	2	14
Development Time	8	2	16	3	2	6	8	2	16
Total	29		**49**	30		**93**	47		**119**

Factors:

1 = new hardware and new software due to undesirable to incur cost of obtaining;
2 = network capability and development time because while important they are not necessary;
3 = accessibility due to importance of access at multiple locations;
4= simple to learn due to high turnover of volunteer users;
5 = user-friendly because neither paid staff nor volunteers may have technical expertise.

Based on technical feasibility, obtaining a Web-based system is the best solution.

Operational Feasibility

The following table compares how each solution and its requirements may satisfy the organizations needs regarding that operational requirement or request. Scores are on a scale of 1-10, with 10 most highly satisfying the need while 1 is least satisfying.

Requirement	**Upgraded System**			**New System**			**Web-based System**		
	Score	Factor	Weighted	Score	Factor	Weighted	Score	Factor	Weighted
Reporting	3	5	15	5	5	25	4	5	20
Inventory	4	4	16	4	4	16	3	4	12
Orders	3	3	9	4	3	12	3	3	9
Shipping	2	3	6	3	3	9	2	3	6
Client Listing	3	4	12	4	4	16	4	4	16
Supplier Listing	2	2	4	4	2	8	3	2	6
Material Reorder	2	1	2	2	1	2	2	1	2
Website Access	1	2	2	3	2	6	5	2	10
Total	20		**66**	29		**94**	26		**81**

Factors:

1 = material reordering because this is not a frequent evolution needing automation;

2 = supplier listing and website access as they would improve transactions, not required;

3 = orders and shipping are daily operations that would are expected to grow;

4 = inventory and client listing are current processes that need to be maintained;

5 = federal and state funding requirements must be met

Based on operational feasibility, custom designing a new database system is the best solution.

Economic Feasibility

Upgraded System:

Year	Costs	Cumulative Costs	Benefits	Cumulative Benefits
1	10000	10000	7000	7000
2	5000	15000	7000	14000
3	5000	20000	7000	21000
4	5000	25000	7000	28000
5	5000	30000	7000	35000

Payback Period: 3 years **5-year ROI: 16.7%**

New System:

Year	Costs	Cumulative Costs	Benefits	Cumulative Benefits
1	30000	30000	7000	7000
2	1000	31000	7000	14000
3	1000	32000	7000	21000
4	1000	33000	7000	28000
5	1000	34000	7000	35000

Payback Period: 5 years **5-year ROI: 2.9%**

Web-based System:

Year	Costs	Cumulative Costs	Benefits	Cumulative Benefits
1	3600	3600	7000	7000
2	3600	7200	7000	14000
3	3600	10800	7000	21000
4	3600	14400	7000	28000
5	3600	18000	7000	35000

Payback Period: 1 year **5-year ROI: 38.9%**

Costs include expense of development, purchase of equipment, and salaries for IT staff.

Benefits include time-money value of training hours saved, maintenance hours saved, and efficiency gained.

Based on economic feasibility, obtaining a web-based system is the best solution.

Recommendation: Obtain a web-based solution.