

Economic Feasibility Analysis for MediConnection Telemedicine Website:

Costs	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Total
Salaries	50	50	50	50	50	50	300
Hardware & Software	40	0	0	0	0	0	40
Training	10	0	0	0	0	0	10
Support & Maintenance	0	0	0	0	10	10	20
Total Costs Benefits	100	50	50	50	60	60	370
Increased Revenue	0	100	200	300	400	500	1500
Cost Savings	0	0	0	0	0	0	0

Total Benefits	0	100	200	300	400	500	1500
Net Cash Flow (NCF)	-100	50	150	250	340	440	1130
Cumulative Net Cash Flow (CNCF)	-100	-50	100	350	690	1130	2120

Numbers are in thousands of DHS

NCF: Net Cash Flow

CNCF: Cumulative Net Cash Flow

One period corresponds to one month

H/w and S/w correspond to Hardware and Software respectively

- Return on Investment (ROI):

$$\text{ROI} = (\text{Total Benefits} - \text{Total Costs}) / \text{Total Costs}$$

$$\text{ROI} = (1500 - 370) / 370$$

$$\text{ROI} = 3.05 \text{ or } 305\%$$
- Break-even Point (BEP):

$$\text{BEP} = (\text{period.net cash flow} - \text{Cumulative net cash flow}) / \text{Period. Net cash flow}$$

BEP occurs in Period 3 when the CNCF turns positive (100).

Conclusion:

The ROI for the MediConnection Telemedicine Website project is exceptionally high, indicating a strong financial return on investment. The break-even point occurs relatively early in the project timeline, which implies a lower risk. Based on this economic feasibility analysis, the MediConnection Telemedicine Website project appears to be financially viable and a potentially lucrative investment.

System Size Function Point Estimation:

[illegible]

Complexity Factor	Complexity (0-3)
Data communication	3
Team cohesion	1
Familiarity with technology	3
On-line data entry	2

Total Processing Complexity (TPC) = 9

The adjusted processing complexity (APC):

$$APC = 0.65 + (0.01 * TPC) = 0.74$$

The total adjusted function points (TAFP):

$$TAFP = TUFP * APC = 226 * 0.74 = 167.24$$

Converting Function Points to Lines of Code (LOC):

Language/Tool	Number of LOC / FP	Percentage
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C++	50	60%
HTML	15	10%
Access	40	30%

Assuming the percentage split and LOC/FP conversion rates you find relevant:

- 60% will be done in C++
- 10% will be done in HTML
- 30% will be done in Access

For C++ = $(167.24) * (50) * (60/100) = 5017.2 \text{ LOC}$

For HTML = $(167.24) * (15) * (10/100) = 250.86 \text{ LOC}$

For Access = $(167.24) * (40) * (30/100) = 2006.88 \text{ LOC}$

So the total LOC = 7274.94 LOC

Estimating the effort:

Effort = $2.4 * \text{LOC} / 1000 = 2.4 * 7274.94 / 1000 = 17.45 \text{ person-month}$

Estimating the scheduled time:

Time = $2.5 * (\text{Effort})^{0.38} = 2.5 * (17.45)^{0.38} = 7.41 \text{ months}$

Estimating the number of persons:

Average number of persons = $\text{Effort} / \text{Time} = 17.45 / 7.41 = 2.35 \text{ persons}$