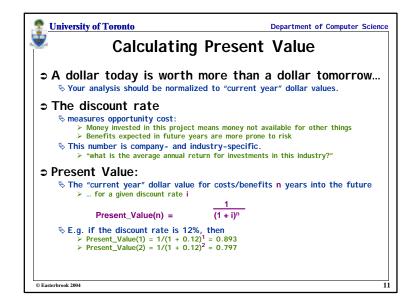
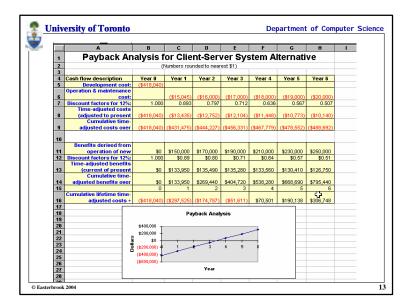


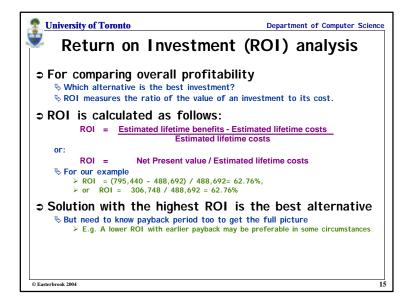
Unive	rsity of Toronto	Department of Computer		
E	xample: costs for small C	lient-Server projec		
_	Personnel:			
E	2 System Analysts (400 hours/ea \$35.00/hr)	\$28,000		
L	4 Programmer/Analysts (250 hours/ea \$25.00/hr)	\$25,000		
L	1 GUI Designer (200 hours/ea \$35.00/hr)	\$7,000		
L	 Telecommunications Specialist (50 hours/ea \$45.00/hr) 	\$2,250		
L	1 System Architect (100 hours/ea \$45.00/hr)	\$4,500		
	 Database Specialist (15 hours/ea \$40.00/hr) 	\$600		
L	1 System Librarian (250 hours/ea \$10.00/hr)	\$2,500		
	Expenses:			
Г	4 Smalltalk training registration (\$3500.00/student)	\$14.000		
þ	Development Server (Pentium Pro class) Server Software (operating system, misc.) DPMCs cannot accommon Development	\$18,700 \$1,500		
	1 DBMS server software 7 DBMS Client software (\$950.00 per client)	\$7,500 \$6,650		
L	Total Development Costs:	\$118.200		
	PROJECTED ANNUAL OPERATING COSTS	\$110,200		
	Personnel:			
-	2 Programmer/Analysts (125 hours/ea \$25.00/hr)	\$6,250		
	1 System Librarian (20 hours/ea \$10.00/hr)	\$200		
-	Expenses:			
	1 Maintenance Agreement for Pentium Pro Server	\$995		
	1 Maintenance Agreement for Server DBMS software	\$525		
	Preprinted forms (15,000/year @ .22/form)	\$3,300		
	Total Projected Annual Costs:	\$11.270		

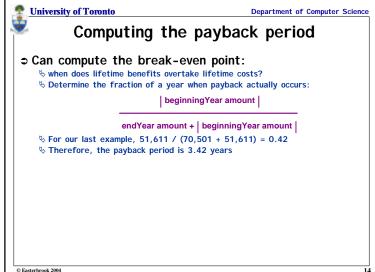


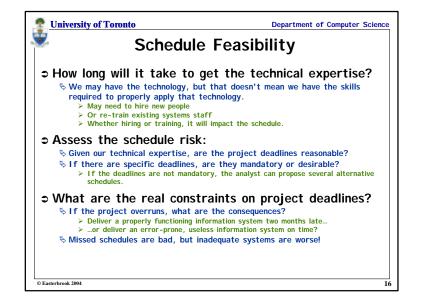
University of Toronto	Department of Computer Science
Analyzing Cost	ts vs. Benefits
⇒ Identify costs and benefit	nd recurring
⇒ Do cost/benefit analysis % Calculate Return on Investment: > Allows comparison of lifetime profit ROI = Lifetime	tability of alternative solutions. le benefits - Lifetime costs
Scalculate Break-Even point:	ay back the accrued costs: cremental) < Accrued Benefit
© Easterbrook 2004	10

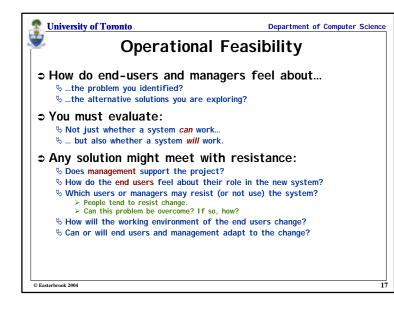
Measures the	ne total	value o	f the ir	ivestme	nt
	gures adjus				
NPV = Cumul	ative PV of a	ll benefits -	Cumulative P	V of all cost	S
Cash Flow	Year 0	Year 1	Year 2	Year 3	Year 4
Dev. Costs	(\$100,000)	(\$4,000)	(\$4.500)	(*** 000)	
Oper.Costs Present Value	4	(\$4,000) 0.893	(\$4,500)	(\$5,000)	(\$5,500) 0.636
Time-adj Costs	(\$100,000)				
Cumulative Costs			(\$107,159)		
00010	(\$100,000)	(\$100,072)	(\$107,100)	(\$113,713)	(\$113,100)
Benefits	0	\$25,000	\$30,000	\$35,000	\$50,000
T-adj Benefits	0	\$22,325	\$23,910	\$24,920	\$31,800
Cumulative Benefits	0	\$22,325	\$46,235	\$71,155	\$102,955
Net Costs+Benefits	(\$100,000)	(\$81,243)	(\$60,924)	(\$39,564)	(\$11,580)

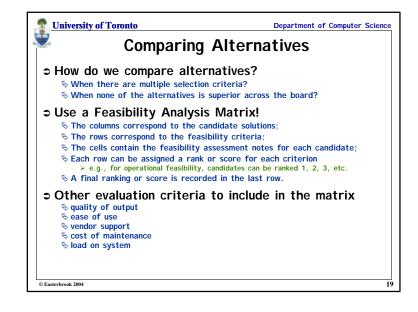












r cusionity c	tudy Contents
 Purpose & scope of the study Objectives (of the study) who commissioned it & who did it, sources of information, process used for the study, how long did it take, 	 5. Possible alternatives including 'do nothing'. 6. Criteria for comparison b definition of the criteria 7. Analysis of alternatives
 Description of present situation organizational setting, current system(s). Related factors and constraints. Problems and requirements What's wrong with the present 	 description of each alternative evaluation with respect to criteria cost/benefit analysis and special implications. 8. Recommendations what is recommended and implications
situation? What changes are needed? Objectives of the new system.	 what to do next; E.g. may recommend an interim solution and a permanent solution Appendices
$\boldsymbol{\S}$ Goals and relationships between them	$\$ to include any supporting material.

Example matrix								
	Candidate 1 Name	Candidate 2 Name	Candidate 3 Name					
Description								
Operational								
Feasibility								
Technical								
Feasibility								
Schedule								
Feasibility								
Economic								
Feasibility								
Ranking								

Feasibility Criteria	Wt.	Candidate 1	Candidate 2	Candidate 3	Candida
Operational Feasibility Functionality . Describes to what degree the alternative would benefit the organization and how well the system would work. Political . A description of how well received this solution would be from both	30%	Only supports Member Services requirements and current business processes would have to be modified to take advantage of software functionality	Fully supports user required functionality.	Same as candidate 2.	
user management, user, and organization perspective.		Score: 60	Score: 100	Score: 100	
Technical Feasibility Technology . An assessment of the maturity, availability (or dotterministic), availability abstrahility of the compare technology needed to support this candidate. Expertise. An assessment to the technical expertise needed to develop, operate, and maintain the candidate system.	30%	Current production release of Platinum Plus package is version or each market for of or each market for of or each market for of or each market for of product is a risk and company charges an additional monthly fee for technical support. Re-appendix for perform modifications for integration requirements.	Although current technical staff has only Powerbuilder experience, the senior mMS Visual Basis demonstration and presentation, has agreed the transition will be simple and finding experienced VB programmers will programmers and at programmers and at programmers and at programmers of the programmers of the programmers of the programmers of the programmers of the programmers of the programmers of the programmers of the programmers of the programmer	Although current technical staff is confrontable with Powerbuilder acquisition of Powerbuilder by Sybase Inc. MS SQL Server is a current compared standard and commence with we have no guarantee future Versions of Powerbuilder will Powerbuilder will Powerbuilder will Powerbuilder will Powerbuilder will Powerbuilder will Server.	
		Score: 50	Score: 95	Score: 60	

Feasibility Criteria	Wt.	Candidate 1	Candidate 2	Candidate 3	Candida
Operational Feasibility	30%	Score: 60	Score: 100	Score: 100	
Technical Feasibility	30%	Score: 50	Score: 95	Score: 100	
Economic Feasibility	30%				
Cost to develop:		Approximately \$350,000.	Approximately \$418,040.	Approximately \$400,000.	
Payback period (discounted):		Approximately 4.5 years.	Approximately 3.5 years.	Approximately 3.3 years.	
Net present value:		Approximately \$210,000.	Approximately \$306,748.	Approximately \$325,500.	
Detailed calculations:		See Attachment A.	See Attachment A.	See Attachment A.	
		Score: 60	Score: 85	Score: 90	
Schedule Feasibility	10%	Less than 3 months.	9-12 months	9 months	
An assessment of how					1
long the solution will take to design and implement.		Score: 95	Score: 80	Score: 85	
Ranking	100%	60.5	92	83.5	