

# Healthcare Facilities Management

## Module 4: Finance

### Student Workbook



### Lesson 15 ~ Finance 2





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**MODULE 05-A**  
**FINANCIAL DECISION-MAKING TOOLS**  
Time Value of Money, Terms, Methods, Perform Life Cycle Analysis

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# 1

## Financial Analysis Tools

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### Financial Tool Categories

- Cost-Benefit Analysis
  - Non-Discounting
  - Discounting
  - Life Cycle Analysis
- Trend Analysis
  - Moving Averages, etc.
- Ratio Analysis
  - Facility Condition Index, etc.

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# 2

## Cost-Benefit Analysis

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### Cost Benefit Analysis: Terms

#### Terms

- > **Time Value of Money (TVM)** is the idea that money that is available at the present time is worth more than the same amount in the future, due to its potential earning capacity.
- > **Inflation** - a general increase in prices and fall in the purchasing value of money
- > **Discounting** - technique for converting cash flows that occur over time to equivalent amounts at a common time.
- > **Future Value** - the value of a benefit or a cost at some point in the future, considering the TVM
- > **Present Value** - the value of a benefit or cost found by discounting future cash flows to the base (current) time
- > **Hurdle Rate** - Minimum corporate rate of return to consider investing in a project (takes into account cost of capital and corporate profit margin).
- > **Study Period** - when comparing project opportunities with different useful life periods, a study period must be chosen for financial analysis that is equitable

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### Cost Benefit Analysis: Non-Discounted Methods

- Simple Payback (SPB) Period
  - The time required for the cumulative annual benefits from an investment to pay back the investment cost, not considering the time value of money. Expressed in time units (e.g. years)
- ROI
  - The rate of return per year of the annual benefits compared to the initial investment cost, not considering the time value of money. Expressed as a percentage.

Initial Investment Cost: \$10,000  
Annual Benefits: \$3,000

$$SPB = \frac{\$10,000}{\$3,000/\text{Year}} = 3.33 \text{ Years}$$

$$ROI = \frac{\$3,000/\text{Year}}{\$10,000} = 30 \%/ \text{Year}$$

$$ROI = \frac{1}{SPB}$$

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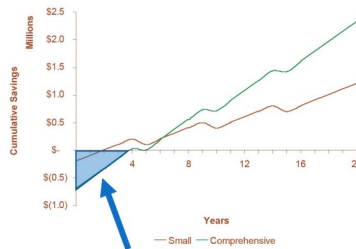
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### Comparison of Small Project & Larger Project

Figure compares the energy cost savings for a small energy efficiency project to those of a large, comprehensive project. The small energy efficiency project has an initial investment cost of \$200,000 and returns energy cost savings of \$100,000 annually (50 percent ROI) for 5 years before an additional investment of \$200,000 is needed. The initial investment cost of the large energy efficiency project is \$700,000 and the project returns annual energy cost savings of \$184,000 annually (26 percent ROI) for 20 years with replacement costs of \$200,000 every five years. (For comparison purposes, we have assumed that both projects have identical 20-year effective useful lives.)



SPB only tells you this!

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### Cost Benefit Analysis: Time Value of Money

Time Value of Money (TVM) is based on the concept that a dollar that you have today is worth more than the promise or expectation that you will receive a dollar in the future.

Money that you hold today is worth more because you can invest it and earn interest (or profit).

\$1000 today (Present Value)  
Invested at 6%/year for 1 year

What is the value after the year (Future Value)?

$$FV = \$1,000 \times 1.06 = \$1,060$$

$$PV = \$1,060 / 1.06 = \$1000$$

$$FV = PV \times R \quad PV = \frac{FV}{R}$$

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### Cost Benefit Analysis: Discounted Methods

Net Present Value (NPV)

- The difference between the benefits and the costs, where both are discounted to the present.

$$NPV = PV(\text{Installation}) + PV(\text{Energy}) + PV(\text{Maint}) + PV(\text{Disposal})$$

(1<sup>st</sup> Cost)
(Annual Costs Each Year)
(End of Life)

- NPV is expressed as a \$ amount

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## Cost Benefit Analysis: Discounted Methods

### Internal Rate of Return (IRR)

- the compound rate of interest that, when used to discount study period costs and benefits of a project, will make the two equal.

$$PV(\text{Installation}) - (\text{IRR}\% \times PV(\text{Energy} + \text{Maint} + \text{Disposal})) = 0$$

$$PV(\text{Installation}) = (\text{IRR}\% \times PV(\text{Energy} + \text{Maint} + \text{Disposal}))$$

$$\frac{PV(\text{Installation})}{\text{IRR}\%} = PV(\text{Energy} + \text{Maint} + \text{Disposal})$$

- IRR is expressed as an interest rate

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## MIRR vs IRR

- The modified internal rate of return (MIRR) and the internal rate of return (IRR) are two closely-related concepts.
- The MIRR was introduced to address a few problems associated with the IRR.
  - The IRR assumes that the obtained positive cash flows are reinvested at the same rate at which they were generated.
  - The MIRR considers that the proceeds from the positive cash flows of a project will be reinvested at the external rate of return.
    - Frequently, the external rate of return is set equal to the company's cost of capital (Discount Rate and sometimes the Hurdle Rate).

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## Cost Benefit Analysis: Hurdle Rate

- Also known as minimum acceptable rate of return (MARR)
  - The minimum required rate of return or target rate that investors are expecting to receive on an investment. The rate is determined by assessing the cost of capital, risks involved, current opportunities in business expansion, rates of return for similar investments, and other factors that could directly affect an investment.
  - Most companies use their weighted average cost of capital (WACC) as a hurdle rate for investments.
    - Theory is this would be equivalent to buying back their stock for the dividends
    - Essentially equal to discount rate
- Better approach? Discount rate only establishes a “neutral” base, minimum acceptable rate of return (opportunity cost) should be added to discount rate to establish a hurdle rate.
- Profit is what you earn above the cost of capital

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## Cost Benefit Analysis: Life-Cycle Analysis (TCO)

- Usually comparison of alternatives
  - “do nothing” base case?
- Cost to acquire
- Cost of annual operation
- Periodic renewal cost
- Cost of disposal
- Study Period effects

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Calculate payback potential of possible improvements in existing systems

2013 Honda Civic LX and Honda Hybrid



Sticker Price	\$20,000	\$25,000
Annual Mileage	18,000	18,000
MPG	34	44
Fuel Price	\$3.75/gal	\$3.75/gal
Annual Maintenance	\$400	\$500
Analysis Period (SL)	5 yrs	5 yrs
Resale Value (5 yrs)	\$10,000	\$12,000

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Calculate payback potential of possible improvements in existing systems

2013 Honda Civic LX and Honda Hybrid



PV of Purchase Cost	- \$20,000	- \$25,000
PV of Annual Fuel Cost	- PV/Ann, 5yrs, 3%	- PV/Ann, 5yrs, 3%
	$18,000/34 \times \$3.75 = \$1,985$	$18,000/44 \times \$3.75 = \$1,534$
PV of Annual Maintenance	- PV/Ann, 5yrs, 3%	- PV/Ann, 5yrs, 3%
PV of Resale Value	+ PV/LS, 5yrs, 3%	+ PV/LS, 5 yrs, 3%
<b>Total of Present Value</b>		

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Calculate payback potential of possible improvements in existing systems

2013 Honda Civic LX and Honda Hybrid



PV of Purchase Cost	- \$20,000	- \$25,000
PV of Annual Fuel Cost	- \$ 9,091	- \$ 7,025
PV of Annual Maintenance	- \$ 1,832	- \$ 2,290
PV of Resale Value	+ \$ 8,626	+ \$10,351
<b>Total of Present Value</b>	<b>- \$22,297</b>	<b>- \$23,964</b>

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Simple Lifecycle Costing Worksheet

Simple Lifecycle Costing Worksheet				
Class				
Project				
Alternative Description				
<b>Inputs</b>	<b>Results</b>			
Study Period (Years)	7	Simple Payback Years (Years)	7.50	
Discount Rate (Rate)	10%	Simple Payback on Investment (\$/yr)	361%	
Cost of Money (\$/yr)	4.0%			
Study Period (Rate)	10%			
Discount Rate	10%			
Initial Investment Cost (\$)	10,000	Net Present Value of Savings (\$/yr)	40,224	
Annual Energy Savings (\$)	1,000	Internal Rate of Return (IRR)	32%	
Annual Fuel Savings (\$)	1,000	Multiple Internal Rate of Return (MIRR)	30%	
Annual Cost Savings (\$)	1,000			
Annual Cash Flow				
Year	Costs	Discount Factor	Present Value	Present Value
0	\$ 10,000		\$ 10,000	\$ 10,000
1	\$ 1,000	0.909	\$ 909	\$ 9,091
2	\$ 1,000	0.826	\$ 826	\$ 18,182
3	\$ 1,000	0.751	\$ 751	\$ 27,273
4	\$ 1,000	0.683	\$ 683	\$ 36,364
5	\$ 1,000	0.623	\$ 623	\$ 45,455
6	\$ 1,000	0.568	\$ 568	\$ 54,546
7	\$ 1,000	0.518	\$ 518	\$ 63,637
8	N/A	N/A	N/A	\$ 72,728
9	N/A	N/A	N/A	\$ 81,819
10	N/A	N/A	N/A	\$ 90,910
11	N/A	N/A	N/A	\$ 100,001
12	N/A	N/A	N/A	\$ 109,092
13	N/A	N/A	N/A	\$ 118,183
14	N/A	N/A	N/A	\$ 127,274
15	N/A	N/A	N/A	\$ 136,365
16	N/A	N/A	N/A	\$ 145,456
17	N/A	N/A	N/A	\$ 154,547
18	N/A	N/A	N/A	\$ 163,638
19	N/A	N/A	N/A	\$ 172,729
20	N/A	N/A	N/A	\$ 181,820
21	N/A	N/A	N/A	\$ 190,911
22	N/A	N/A	N/A	\$ 200,002
23	N/A	N/A	N/A	\$ 209,093
24	N/A	N/A	N/A	\$ 218,184
25	N/A	N/A	N/A	\$ 227,275
26	N/A	N/A	N/A	\$ 236,366
27	N/A	N/A	N/A	\$ 245,457
28	N/A	N/A	N/A	\$ 254,548
29	N/A	N/A	N/A	\$ 263,639
30	N/A	N/A	N/A	\$ 272,730
31	N/A	N/A	N/A	\$ 281,821
32	N/A	N/A	N/A	\$ 290,912
33	N/A	N/A	N/A	\$ 299,003
34	N/A	N/A	N/A	\$ 308,094
35	N/A	N/A	N/A	\$ 317,185
36	N/A	N/A	N/A	\$ 326,276
37	N/A	N/A	N/A	\$ 335,367
38	N/A	N/A	N/A	\$ 344,458
39	N/A	N/A	N/A	\$ 353,549
40	N/A	N/A	N/A	\$ 362,640
41	N/A	N/A	N/A	\$ 371,731
42	N/A	N/A	N/A	\$ 380,822
43	N/A	N/A	N/A	\$ 389,913
44	N/A	N/A	N/A	\$ 399,004
45	N/A	N/A	N/A	\$ 408,095
46	N/A	N/A	N/A	\$ 417,186
47	N/A	N/A	N/A	\$ 426,277
48	N/A	N/A	N/A	\$ 435,368
49	N/A	N/A	N/A	\$ 444,459
50	N/A	N/A	N/A	\$ 453,550
51	N/A	N/A	N/A	\$ 462,641
52	N/A	N/A	N/A	\$ 471,732
53	N/A	N/A	N/A	\$ 480,823
54	N/A	N/A	N/A	\$ 489,914
55	N/A	N/A	N/A	\$ 499,005
56	N/A	N/A	N/A	\$ 508,096
57	N/A	N/A	N/A	\$ 517,187
58	N/A	N/A	N/A	\$ 526,278
59	N/A	N/A	N/A	\$ 535,369
60	N/A	N/A	N/A	\$ 544,460
61	N/A	N/A	N/A	\$ 553,551
62	N/A	N/A	N/A	\$ 562,642
63	N/A	N/A	N/A	\$ 571,733
64	N/A	N/A	N/A	\$ 580,824
65	N/A	N/A	N/A	\$ 589,915
66	N/A	N/A	N/A	\$ 599,006
67	N/A	N/A	N/A	\$ 608,097
68	N/A	N/A	N/A	\$ 617,188
69	N/A	N/A	N/A	\$ 626,279
70	N/A	N/A	N/A	\$ 635,370
71	N/A	N/A	N/A	\$ 644,461
72	N/A	N/A	N/A	\$ 653,552
73	N/A	N/A	N/A	\$ 662,643
74	N/A	N/A	N/A	\$ 671,734
75	N/A	N/A	N/A	\$ 680,825
76	N/A	N/A	N/A	\$ 689,916
77	N/A	N/A	N/A	\$ 699,007
78	N/A	N/A	N/A	\$ 708,098
79	N/A	N/A	N/A	\$ 717,189
80	N/A	N/A	N/A	\$ 726,280
81	N/A	N/A	N/A	\$ 735,371
82	N/A	N/A	N/A	\$ 744,462
83	N/A	N/A	N/A	\$ 753,553
84	N/A	N/A	N/A	\$ 762,644
85	N/A	N/A	N/A	\$ 771,735
86	N/A	N/A	N/A	\$ 780,826
87	N/A	N/A	N/A	\$ 789,917
88	N/A	N/A	N/A	\$ 799,008
89	N/A	N/A	N/A	\$ 808,099
90	N/A	N/A	N/A	\$ 817,190
91	N/A	N/A	N/A	\$ 826,281
92	N/A	N/A	N/A	\$ 835,372
93	N/A	N/A	N/A	\$ 844,463
94	N/A	N/A	N/A	\$ 853,554
95	N/A	N/A	N/A	\$ 862,645
96	N/A	N/A	N/A	\$ 871,736
97	N/A	N/A	N/A	\$ 880,827
98	N/A	N/A	N/A	\$ 889,918
99	N/A	N/A	N/A	\$ 899,009
100	N/A	N/A	N/A	\$ 908,100
101	N/A	N/A	N/A	\$ 917,191
102	N/A	N/A	N/A	\$ 926,282
103	N/A	N/A	N/A	\$ 935,373
104	N/A	N/A	N/A	\$ 944,464
105	N/A	N/A	N/A	\$ 953,555
106	N/A	N/A	N/A	\$ 962,646
107	N/A	N/A	N/A	\$ 971,737
108	N/A	N/A	N/A	\$ 980,828
109	N/A	N/A	N/A	\$ 989,919
110	N/A	N/A	N/A	\$ 999,010
111	N/A	N/A	N/A	\$ 1,008,101
112	N/A	N/A	N/A	\$ 1,017,192
113	N/A	N/A	N/A	\$ 1,026,283
114	N/A	N/A	N/A	\$ 1,035,374
115	N/A	N/A	N/A	\$ 1,044,465
116	N/A	N/A	N/A	\$ 1,053,556
117	N/A	N/A	N/A	\$ 1,062,647
118	N/A	N/A	N/A	\$ 1,071,738
119	N/A	N/A	N/A	\$ 1,080,829
120	N/A	N/A	N/A	\$ 1,089,920
121	N/A	N/A	N/A	\$ 1,099,011
122	N/A	N/A	N/A	\$ 1,108,102
123	N/A	N/A	N/A	\$ 1,117,193
124	N/A	N/A	N/A	\$ 1,126,284
125	N/A	N/A	N/A	\$ 1,135,375
126	N/A	N/A	N/A	\$ 1,144,466
127	N/A	N/A	N/A	\$ 1,153,557
128	N/A	N/A	N/A	\$ 1,162,648
129	N/A	N/A	N/A	\$ 1,171,739
130	N/A	N/A	N/A	\$ 1,180,830
131	N/A	N/A	N/A	\$ 1,189,921
132	N/A	N/A	N/A	\$ 1,199,012
133	N/A	N/A	N/A	\$ 1,208,103
134	N/A	N/A	N/A	\$ 1,217,194
135	N/A	N/A	N/A	\$ 1,226,285
136	N/A	N/A	N/A	\$ 1,235,376
137	N/A	N/A	N/A	\$ 1,244,467
138	N/A	N/A	N/A	\$ 1,253,558
139	N/A	N/A	N/A	\$ 1,262,649
140	N/A	N/A	N/A	\$ 1,271,740
141	N/A	N/A	N/A	\$ 1,280,831
142	N/A	N/A	N/A	\$ 1,289,922
143	N/A	N/A	N/A	\$ 1,299,013
144	N/A	N/A	N/A	\$ 1,308,104
145	N/A	N/A	N/A	\$ 1,317,195
146	N/A	N/A	N/A	\$ 1,326,286
147	N/A	N/A	N/A	\$ 1,335,377
148	N/A	N/A	N/A	\$ 1,344,468
149	N/A	N/A	N/A	\$ 1,353,559
150	N/A	N/A	N/A	\$ 1,362,650
151	N/A	N/A	N/A	\$ 1,371,741
152	N/A	N/A	N/A	\$ 1,380,832
153	N/A	N/A	N/A	\$ 1,389,923
154	N/A	N/A	N/A	\$ 1,399,014
155	N/A	N/A	N/A	\$ 1,408,105
156	N/A	N/A	N/A	\$ 1,417,196
157	N/A	N/A	N/A	\$ 1,426,287
158	N/A	N/A	N/A	\$ 1,435,378
159	N/A	N/A	N/A	\$ 1,444,469
160	N/A	N/A	N/A	\$ 1,453,560
161	N/A	N/A	N/A	\$ 1,462,651
162	N/A	N/A	N/A	\$ 1,471,742
163	N/A	N/A	N/A	\$ 1,480,833
164	N/A	N/A	N/A	\$ 1,489,924
165	N/A	N/A	N/A	\$ 1,499,015
166	N/A	N/A	N/A	\$ 1,508,106
167	N/A	N/A	N/A	\$ 1,517,197
168	N/A	N/A	N/A	\$ 1,526,288
169	N/A	N/A	N/A	\$ 1,535,379
170	N/A	N/A	N/A	\$ 1,544,470
171	N/A	N/A	N/A	\$ 1,553,561
172	N/A	N/A	N/A	\$ 1,562,652
173	N/A	N/A	N/A	\$ 1,571,743
174	N/A	N/A	N/A	\$ 1,580,834
175	N/A	N/A	N/A	\$ 1,589,925
176	N/A	N/A	N/A	\$ 1,599,016
177	N/A	N/A	N/A	\$ 1,608,107
178	N/A	N/A	N/A	\$ 1,617,198
179	N/A	N/A	N/A	\$ 1,626,289
180	N/A	N/A	N/A	\$ 1,635,380
181	N/A	N/A	N/A	\$ 1,644,471
182	N/A	N/A	N/A	\$ 1,653,562
183	N/A	N/A	N/A	\$ 1,662,653
184	N/A	N/A	N/A	\$ 1,671,744
185	N/A	N/A	N/A	\$ 1,680,835
186	N/A	N/A	N/A	\$ 1,689,926
187	N/A	N/A	N/A	\$ 1,699,017
188	N/A	N/A	N/A	\$ 1,708,108
189	N/A	N/A	N/A	\$ 1,717,199
190	N/A	N/A	N/A	\$ 1,726,290
191	N/A	N/A	N/A	\$ 1,735,381
192	N/A	N/A	N/A	\$ 1,744,472
193	N/A	N/A	N/A	\$ 1,753,563
194	N/A	N/A	N/A	\$ 1,762,654
195	N/A	N/A	N/A	\$ 1,771,745
196	N/A	N/A	N/A	\$ 1,780,836
197	N/A	N/A	N/A	\$ 1,789,927
198	N/A	N/A	N/A	\$ 1,799,018
199	N/A	N/A	N/A	\$ 1,808,109
200	N/A	N/A	N/A	\$ 1,817,200
201	N/A	N/A	N/A	\$ 1,826,291
202	N/A	N/A	N/A	\$ 1,835,382
203	N/A	N/A	N/A	\$ 1,844,473
204	N/A	N/A	N/A	\$ 1,853,564
205	N/A	N/A	N/A	\$ 1,862,655
206	N/A	N/A	N/A	\$ 1,871,746
207	N/A	N/A	N/A	\$ 1,880,837
208	N/A	N/A	N/A	\$ 1,889,928
209	N/A	N/A	N/A	\$ 1,899,019
210	N/A	N/A	N/A	\$ 1,908,110
211	N/A	N/A	N/A	\$ 1,917,201
212	N/A	N/A	N/A	\$ 1,926

Calculate payback potential of possible improvements in existing systems

EXAMPLE

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# 3

## Trend Analysis

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## Trend Analysis

- Document energy conservation results to substantiate anticipated savings and payback
  - Energy Consumption Records
  - Energy reduction goals
- Estimate future costs for budget purposes based on trends
  - Prior year monthly spend rates as “goal posts” for budget development and management
    - 3 year peak for month
    - 3 year average for month
    - Mid-point as “budget estimate”
    - Assumes energy savings will equal inflation rate

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## Trend Analysis: EUI

EUI = energy use/area/year (12 months)

- Can be calculated as a 12 month moving average, and updated monthly
- Ideally calculated in thousand British thermal units (kBtu) or billion joules (GJ)
  - OK to use watts, therms, etc if not mixing energy types

12 month moving average provides a “smoothed” average energy chart that has reduced weather cycles.

- Seasonality impact year to year greatly reduced
- General trend (ideally towards reduction) can be monitored
- Individual buildings and portfolios can be monitored this way

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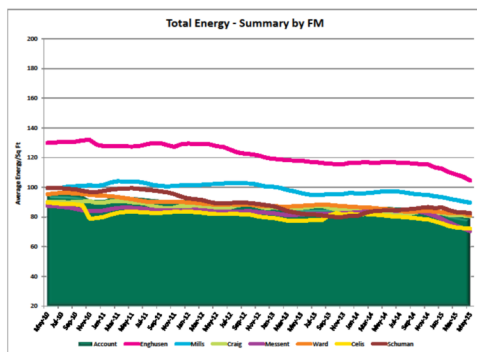
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### Trend Analysis: EUI




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### Trend Analysis: Budget Management

Cost-based instead of energy units, since for budget purposes

- Each value calculated using the monthly value for that month in each of the last three years.
- 3 year max returns the highest value of that month for the last 3 years
- 3 year average is as described
- Budget proposal is the midpoint between the two values
- Actual is added each month during budget year cycle

Assumes energy efficiency savings at least equal utility inflation rates (a good baseline proposal).

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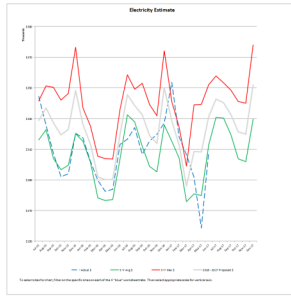


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## Trend Analysis: Utilities Budget & Performance



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# 4

## Ratio Analysis

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### Ratio Analysis: FCI

$$\text{FCI} = \frac{\$ \text{ Deferred Maintenance Costs}}{\$ \text{ Asset Replacement Value}}$$

Deferred Maintenance Costs (industry standard)

- Deferred maintenance/backlog requirements
- Normally excluded (non-condition based requirements):
  - Capital improvements
  - Grandfathered code issues

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### Ratio Analysis: FCI

What is FCI?

- The Facility Condition Index (FCI) is an industry-standard index that measures the relative condition of a facility by considering the costs of deferred maintenance and repairs as well as the value of the facility
- FCI allows condition benchmarking between facilities of unequal size and composition, both within and among institutions.
- Using FCI, an organization can set targets to achieve an overall acceptable condition for facilities.

Condition	FCI Low	FCI High
Excellent	0.00	0.05
Good	0.05	0.15
Poor	0.15	+

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### Ratio Analysis: FCI Asset List Example

Use	Age	Size	Replacement Value	Cost/Unit	FCI Cost	FCI
Medical - Clinic	3	7,156 SF	1,192	0.17	0	0.00
Medical - Clinic	32	4,836 SF	818	0.17	300	0.37
Medical - Clinic	37	60,597 SF	10,089	0.17	3,389	0.34
Office	35	48,365 SF	9,671	0.20	2,193	0.23
Medical - Clinic	18	149,688 SF	24,084	0.16	2,409	0.10
Medical - Clinic	22	62,987 SF	9,375	0.15	786	0.08
Medical - Clinic	16	7,605 SF	1,268	0.17	214	0.17
Medical - Clinic	28	38,362 SF	7,964	0.21	1,075	0.13
Medical - Clinic	14	5,150 SF	665	0.13	66	0.10
Medical - Clinic	14	7,148 SF	756	0.11	12	0.02
Medical - Clinic	27	11,410 SF	1,712	0.15	262	0.15
Office	16	1,030 SF	184	0.18	0	0.00
Medical - Clinic	27	35,192 SF	6,719	0.19	1,357	0.20
Medical - Clinic	27	10,356 SF	2,580	0.25	222	0.09
Medical - Clinic	21	154,514 SF	29,965	0.19	2,998	0.10
<b>Total :</b>		<b>604,396</b>	<b>107,022</b>	<b>NA</b>	<b>15,283</b>	<b>0.14</b>

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**MODULE 05-A**

**CONTRACT MANAGEMENT**

Requirements, Form, Law, Elements & Specifications

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# 1

## Overview

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### Contract Management: **Introduction**

“A contract is an agreement that can be enforced in court. It is formed by two or more parties who agree to perform or to refrain from performing some act now or in the future.”

Business Law Today, Miller & Jentz 2000



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## Contract Management: Requirements

### Requirements of a contract

- Mutual Agreement
- Consideration
- Contractual capacity / Competent Parties
- Legality / Proper Subject Matter

### Elements / Defenses to Formation & Enforcement

- Genuineness of assent / Agreement to Enter into the Contract
- Form (some contracts, but not all, must be written to be enforceable)

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## Contract Management: Form

### Forms of Contracts

- Bilateral – if to accept the offer the offeree must only promise to perform. (a promise for a promise)
- Unilateral Contract - if the offer is phrased so that the offeree can accept only by completing the contract performance, (a promise for an act)

### Express vs Implied

- Express – terms of the contract are fully and explicitly stated in words, oral or written.
- Implied – a contract that is implied from the conduct of the parties.

### When is a written contract required? (Statute of Frauds)

- Contracts involving interests in land
- Contracts that by their terms cannot be performed within 1 year

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**Contract Management: Law - Uniform Commercial Code**

ART.	TITLE	CONTENTS
1	General Provisions	Definitions, rules of interpretation
2	Sales	Sales of goods
2A	Leases	Leases of goods
3	Negotiable Instruments	Promissory notes and drafts (commercial paper)
4	Bank Deposits and Collections	Banks and banking, check collection process
4A	Funds Transfers	Transfers of money between banks
5	Letters of Credit	Transactions involving letters of credit
6	Bulk Transfers and Bulk Sales	Auctions and liquidations of assets
7	Warehouse Receipts, Bills of Lading and Other Documents of Title	Storage and bailment of goods
8	Investment Securities	Securities and financial assets
9	Secured Transactions	Transactions secured by security interests

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**Contract Management: Law - International**

United Nations Convention on Contracts for the International Sale of Goods

- Part I: Sphere of Application and General Provisions (Articles 1–13)
- Part II: Formation of the Contract (Articles 14–24)
- Part III: Sale of Goods (Articles 25–88)
- Part IV: Final Provisions (Articles 89–101)

Note that the Kingdom of Saudi Arabia is not a signatory to this agreement

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### Contract Management: Law - Kingdom of Saudi Arabia



**Enforcement of Foreign Law Contracts**

Foreign law contracts are generally enforceable so long as they conform to Sharia law. Thus contracts deemed to be usury or dealing with gambling or risk would not be enforceable. Courts and judicial committees in Saudi Arabia also do not recognize the doctrine of conflict of laws. Hence any action based on a foreign law contract can be submitted to the courts even if there are express choice of law provisions.

47 - Alan Sfeir and Joe Tirado (2010). "The International Comparative Legal Guide to: International Arbitration 2010"(PDF). Global Legal Group. © 2019 FM College, Inc., All Rights Reserved

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# 2

## Types of Contracts

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**Types of Contracts**

- Professional Services (i.e. Design)
- Construction Contracts
- Operations & Maintenance Contracts
- Leasing Contracts
- Ownership Contracts
- Specialized forms (examples):
  - Job Order Contract
  - National Purchasing Contracts

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**Types of Contracts: Examples by Purpose**

Different styles of contracts are used depending on the situation:

<b>Goods/Products</b>	<b>Design &amp; Construction</b>
➤ One-time PO	➤ Fixed Price
➤ Blanket PO	➤ Cost Reimbursement
➤ RFQ / Fixed Price	➤ Open Book
➤ National Buy	➤ Time & Materials
<b>Professional Services</b>	➤ Indefinite Quantity
➤ Lump Sum Fee	➤ CM at Risk
➤ Time & Materials	➤ Project Management only
➤ Fee by Phase	
➤ Fee per service	
➤ Etc.	

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**Types of Contracts: FM Contracts**

- Body-shop contracting
- Management contract
- Indefinite quantity contract
- Job order contract
- Service contracts
- (Construction contracting discussed separately)

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**3**

**Contract Purposes**

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**FM Contracts: Purposes**

- Goods/Products
  - > Routine/stock
  - > Special Purpose/project
  - > Tools & Equipment
- Services
  - > Professional Services
  - > Maintenance Services
- Design & Construction
  - > Design – Bid – Build
  - > Design – Build
  - > Tri-Party (Shared Risk)
- Leasing
  - > As landlord
  - > As tenant
- Real Estate
  - > Purchase
  - > Build to suit
  - > Etc.

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**FM Contracts: Goods/Products**

- Goods/Products
  - > Deliver only
  - > Deliver & install
  - > Lease/purchase
  - > Extended warranty?
  - > Inventory management?

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**FM Contracts: Maintenance Services**

Services

- Scheduled Maintenance/Service
  - Fixed fee – specific service items
  - Materials plus markup
- Corrective Maintenance
  - Hourly rate
  - Materials plus markup
  - Truck charge / travel time?
  - Overtime?
- Emergency Services
  - Maximum response time
  - Rates as per Corrective Maintenance

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**FM Contracts: Professional Services**

Professional Services

- Design
  - Architectural
  - Engineering
- Commissioning
- Software Systems
- Consulting
  - Elevators
  - Training
  - Audit/Inspection
  - Program management

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## FM Contracts: Design & Construction

### Design

- Fee for service
- Fixed fee as % of project value
- Fixed Fee

### Construction

- Fixed Price
- Cost Plus Fee

### Design/Build

- With Bridging
- Without Bridging

### Tri-Party (Shared Risk)

- Owner, Designer & Builder
- Shared contingency/profit/risk

### Other Forms

- PM at Risk
- GM at Risk
- Etc.

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## FM Contracts: Leasing & Real Estate

### Tenant

- Term
- Maintenance/energy costs
- SLA

### Build to suit

- Extended term usually
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### Lease/Purchase

- Lessee avoids bridge financing
- Lessor has collateral for funding construction
- Lessee purchases finished building using it as collateral

### Lessor

- Triple net pass throughs
- SLA with tenant

### ❖ Green Lease

- ❖ Incentives
- ❖ Benefit sharing
- ❖ Defined goals/standards
- ❖ LEED C&S / LEED CI
- ❖ Mass transit/parking

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**THANK YOU**

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