PC Replacement Plan

There are basically three options in coming up with a new PC replacement plan.
- First is to leave the plan at its current four year replacement cycle.
- Second is to go to a five -year replacement plan with the same criteria as our current four year plan.
- Third is to go to a four, five and six- year replacement plan based on the level of operational importance. The costs associated with the PC replacement plan are what are driving this plan change.

Replacement Plan details for a four to six-year plan:

The key to the four, five and six-year replacement plan is to classify PC's into three groups based on usage. This is to be determined by the Department Heads with input from IT&S.

Three levels of operational importance:

1. Low Usage PC's
   - GroupWise (e-mail)
   - Basic software applications (Office Suite)
   - Basic Internet Surfing

2. Standard Usage PC's
   - GroupWise (e-mail)
   - Office Suite Applications
   - Use of additional software (JustWare, AS400, CRS, etc)
   - Use multiple printers
   - More intensive Internet Surfing, research, forms, macros and certificates

3. High usage PC's
   - PC's that have multiple users and are used more than the standard business hours (dispatch, LEC Patrol Room, LEC Airport, fire station, etc)
   - PC's that run processor and memory intensive (GIS, Accounting, Engineering, etc).
   - PC's that use all the standard software applications (GroupWise, Office Suite, Adobe, AS400)
   - Network Management PC's

Asset Categorization
- Department Heads will determine which category a PC will fall into with recommendations from IT&S
  - Factors to observe
    - How critical is PC uptime?
    - What software packages are running on the PC?
    - How many different users are using the same PC? (LEC, Cooney)

Replacement Plan Ideas
      Four-Year Cycle Replacement
- High Usage PC's

      Five-Year Cycle Replacement
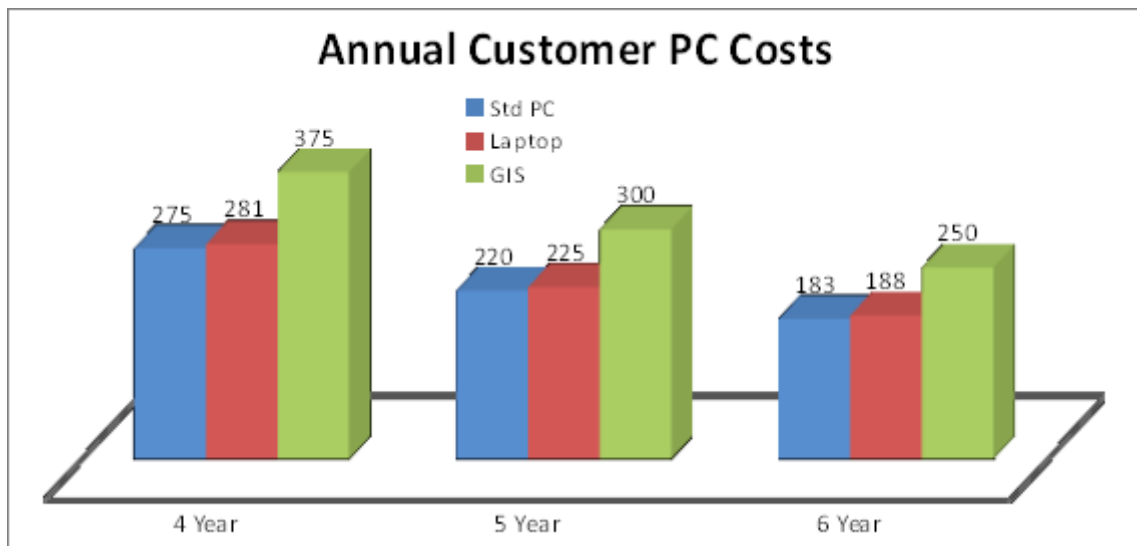- Standard Usage PC's

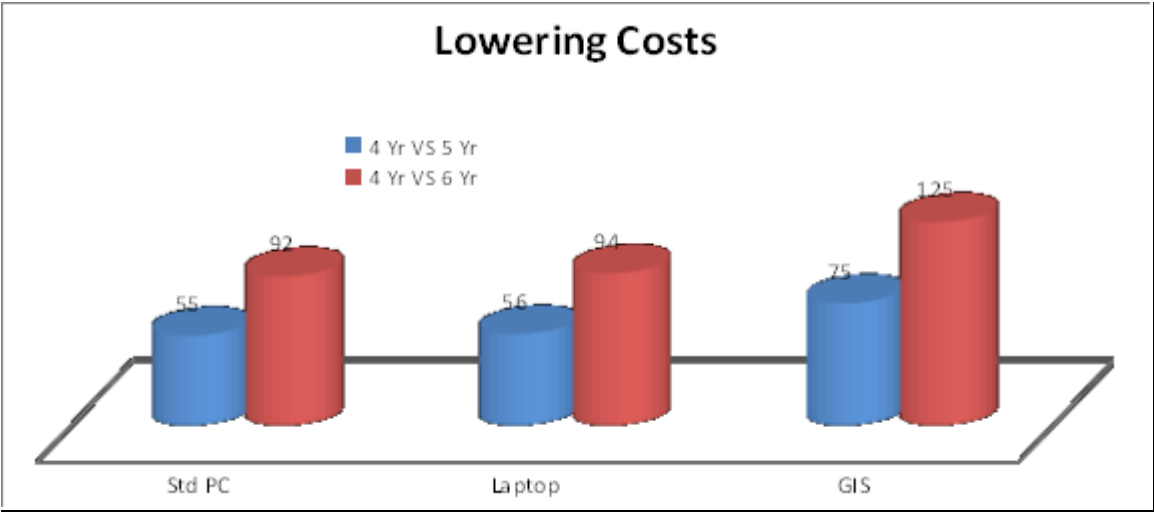   Six-Year Cycle Replacement
- Low Usage PC's

EXCEPTIONS TO ABOVE REPLACEMENT PLAN

- When major software upgrades make the PC hardware incompatible or the software won't run (Operating System upgrade)
- Hardware components that fail after warranty and are obsolete (motherboard, power supply and processor)
- Work environment changes (Requirements or demands change)
- Manufacturer's end of life cycle

Other county, city, and state governments, along with private sector IT departments all share a common thread when discussing PC replacement plans. The consensus is to:

1. **Stick to a consistent replacement plan.**
2. **Standardize equipment**.
3. **Standardize software (Operating System, Office Suite, etc**.)

Annual Customer PC Costs

Legend:
- Std PC
- Laptop
- GIS

4 Year: Std PC 275, Laptop 281, GIS 375
5 Year: Std PC 220, Laptop 225, GIS 300
6 Year: Std PC 183, Laptop 188, GIS 250

Lowering Costs

Legend: 4 Yr VS 5 Yr (blue), 4 Yr VS 6 Yr (red)

- Std PC: 55, 92
- Laptop: 56, 94
- GIS: 75, 125

Lowered Cost Analysis

			4 Year	5 Year	6 Year	Lowered Costs	
		Costs	4	5	6	4 Yr VS 5 Yr	4 Yr VS 6 Yr
	Std PC	1100	275	220	183	55	92
Figures in dollars	Laptop	1125	281	225	188	56	94
	GIS	1500	375	300	250	75	125
		Counts					
	Std PC	33	9075	7260	6050	1815	3025
City Public Works	Laptop	3	843	675	563	168	281
	GIS	10	3750	3000	2500	750	1250
	Totals	**46**	**13668**	**10935**	**9113**	**2733**	**4556**
County Public Works	Std PC	15	4125	3300	2750	825	1375

Computer Replacement By Fiscal Year

Total number based on 469 computers.		**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**
		Jul 2010 Jun 2011	Jul 2011 Jun 2012	Jul 2012 Jun 2013	Jul 2013 Jun 2014	Jul 2014 Jun 2015	Jul 2015 Jun 2016
Number of computers to replace	4-yr. Replacement Plan (1/4 of total)	117 4-5 yrs. old	117 4-5 yrs. old	117 4-5 yrs. old	117 4-5 yrs. old		
Four-Year Starting Next Fiscal Year	4-yr. Replacement Plan (1/4 of total)		117 5-6 yrs. old	117 5-6 yrs. old	117 5-6 yrs. old	117 5-6 yrs. old	
Number of computers to replace	5-yr. Replacement Plan (1/5 of total)		94	94	94	94	94
			94 6 yrs. old	23 7 yrs. old	47 7 yrs. old	70 7 yrs. old	93 7 yrs. old
				71 6 yrs. old	48 6 yrs. old	24 6 yrs. old	1 6 yrs. old

The above chart shows the total number of computers on the network and how many will be replaced in a four-year replacement plan and a five-year replacement plan. If we continued with a four-year replacement plan starting next year, 85 PC's will be six years old and 16 computers will be seven years old with the remaining computers being five years old. If we continue a four-year replacement plan and start next year in FY12 everything will be one year older. Going to a five-year replacement plan will stretch it out even further with six and seven year old PC's on the network. Microsoft will drop support for Windows XP Service Pack 3 in 2014; there are currently approximately 225 computers that will not run well with Windows 7. It is recommended we replace them starting next year in accordance with a four-year replacement cycle.

After researching this extensively and studying the facts, the recommendation is to stay with a four-year replacement plan beginning next year, FY12. Points for the recommendation are listed below.

- The entire budget for the computer replacement is $452,000. Averaging $113,000 annually. Moving to a five year plan lowers the annual cost by $22,600 or one percent of the IT&S budget.
- The City of Helena is responsible for an estimated $9,040
- Lewis & Clark County is responsible for an estimated $13,560
- We have already replaced or will replace 11 GIS workstations due to projects or needed updates.
- In the first two months of this quarter/fiscal year we have replaced five power supplies and recorded 16 hours of tech time fixing "Blue Screens of Death", which means staff needs to analyze the computer to determine corrective actions. This comes at an estimated cost of $1,600 of staff time.
- Rebuilding machines when they become slow or show signs of "bit rot" cost an average of $200 per incident. This usually happens during the third and fourth years increasing with frequency as the machines age.
- Again Windows XP Pro is at end of life and Microsoft will cease support in 2014.
- The enterprise needs four years to replace existing machines and implement Windows 7 at the same time.

- Information Technology changes drastically every two to three years.
- We have 225 older Dell PC's on our network that will not handle Windows 7 without a memory upgrade and a license purchase. Licenses for each Operating System will cost approximately $180.00, additional memory $86.00 for a total upgrade cost of approximately $266.00. Machine rebuild time will be a minimum of four hours along with the added cost of training time with each user.
- Also, it is important to factor in how much downtime may come with users having an older PC. Time costs departments in more ways than one; such as funding and staff morale issues. This is a serious issue to consider.

Summary:

In conclusion the four-year replacement cycle has been a very good standard and has served the enterprise very well over the years. It is highly recommended that the enterprise stay with the four-year cycle starting in fiscal year 2012. It also allows the enterprise to maintain industry standards. The computer continually gets better, faster, and consumes less power which is another good reason to replace them.