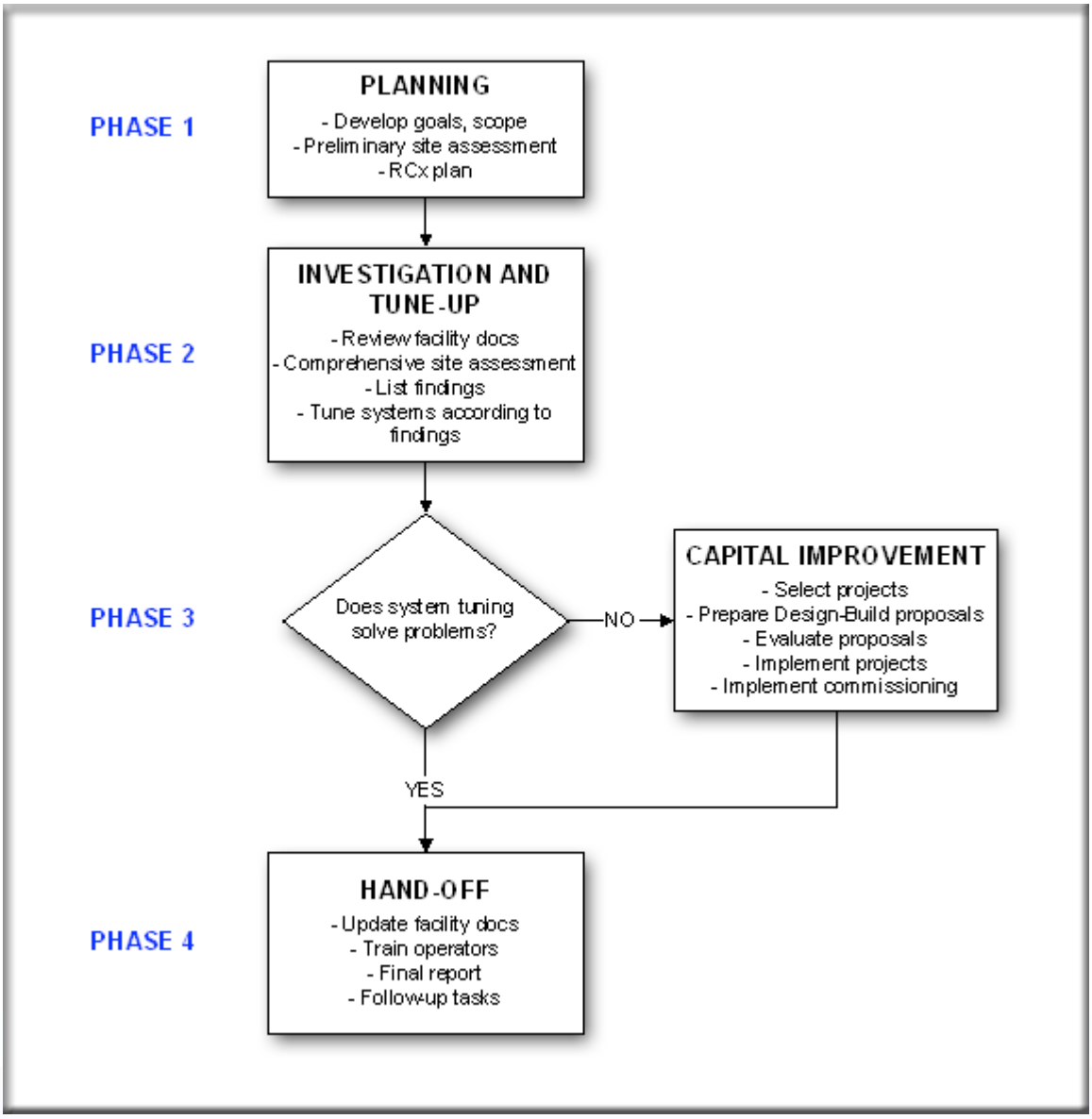
integrated DESIGNS

Retro-commissioning

Retro-commissioning is one of the most cost effective processes available to facilities managers to enhance building performance. The focus of the Retro-Commissioning (RCx) process is to investigate and tune-up building systems to improve building performance, as well as identifying capital improvement projects. The process also includes a high level of owner participation and training.

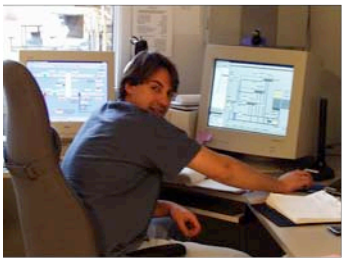


Retro-commissioning Process

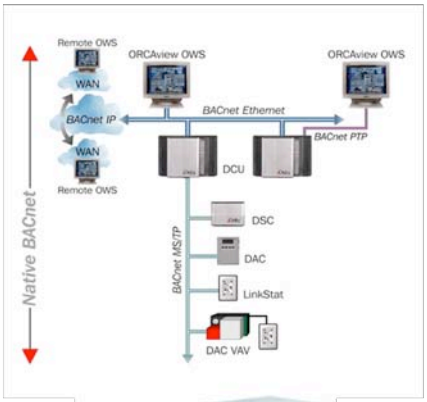
Retro-commissioning projects typically reduce operating costs by 15% with paybacks of 6 months to 2 years. More importantly, retro-commissioning addresses the number #1 challenge facing organizations, which is to house their most valuable resource, their people, in quality work environments.

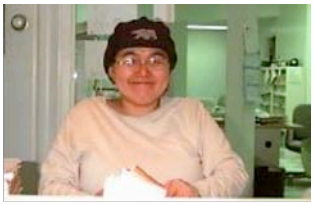
The building industry has come to realize that commissioning is a very important process to achieve quality indoor environments. Because of this it has become a **mandatory requirement** for the two main building standards, BOMA Go Green Plus for existing buildings and Leadership in Energy and Environmental Design (LEED™) standard for new buildings.

Placing a high priority on the quality of the indoor environment makes sense for business owners when you consider that their people costs are $350/sq.ft. as compared to rent at $20/sq.ft. or energy at 3.50/sq.ft.



OPERATORS SKILLS





COMFORT

AIR QUALITY

Another significant benefit of the retro-commissioning process is that operators will be properly trained to gain the knowledge and confidence to operate systems effectively.

Some highlights from successful Retro-commissioning projects include:

- ✓ **Meadow Lake Tribal Council: Flying Dust First Nations School:** A faulty CO2 sensor was identified that was causing additional outside air to be brought into the building. Fixing of this problem reduced energy costs by $13,000/yr.
- ✓ **City of Saskatoon Electrical Facility:** A comprehensive BMS upgrade, energy retrofit, and RCx resulted in a significant reduction in building loads, improved indoor environmental quality and avoided the replacement of the central cooling plant that still had ten years of useful life.
- ✓ **SPM North Battleford Young Offenders Facility:** SPM were able to avoid a $1M retrofit that was being considered to fix existing indoor air quality problems until the RCx process discovered that the primary heat recovery unit had never been commissioned and was not controlled properly. The system has been fixed and the facility is operating satisfactory without a major capital expenditure.