

Are my Assets Fading or Degrading?

David Albrice, March 15, 2015



"Snow and adolescence are the only problems that disappear if you ignore them long enough" - Earl Wilson.

We all know that if we ignore our assets they will eventually suffer from physical deterioration -- it is a reality of life. But some assets also fade. What's the difference and why care?

Fading refers to obsolescence -- the state of no longer being wanted even though our asset may still be in good working order.

Some building owners and managers may think that their physical assets, such as roofs and boilers, will only need to be replaced when their physical condition degrades below a certain acceptable level. These are usually measured in the form of cracks, blisters, corrosion, etc.

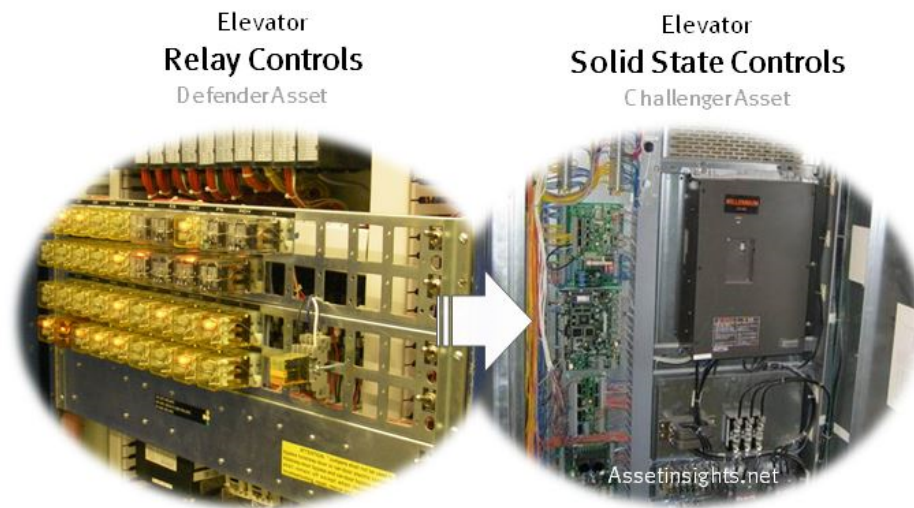
But there are other *forces of retirement* that have a significant bearing on lifespans and it is important for stakeholders to also take these into consideration.

Here are five of these forces that cause our assets to gradually fade into obscurity and therefore, beyond our effective reach. They are drivers of asset replacement that are just as powerful as physical deterioration and are a force to be reckoned with.

1. Technological Obsolescence

The process whereby an asset, or the components of an asset, become irreplaceable due to changes in technology over time. The asset has therefore reached the end of its technological life. Just imagine trying to repair your old tape deck or VCR - it is all about what parts and skills are still available today to work on old systems and technologies.

An example with buildings -- being unable to get replacement parts for the elevator relay control panel, which is antiquated, and therefore having to carry out an elevator control modernization using current solid state technology. Elevator control technologies have taken about 25 years to fade into antiquity.

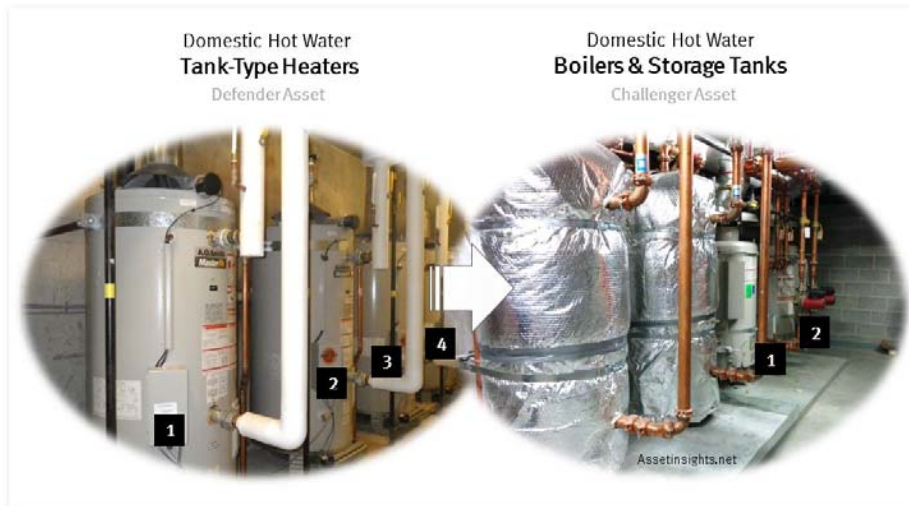


Rapidly changing technologies, with shorter product cycles and accelerated supply chains, are resulting in the menace of planned obsolescence. In some cases, it is anticipated that our newer assets will fade even faster than the assets that they themselves replaced.

2. Economic Obsolescence

The process by which an asset becomes a candidate for replacement because cost objectives can now be achieved in a more efficient way. The asset has therefore outlived its economic life. It is all about finding a better payback - a higher return on investment (ROI) by extracting value in a way that was not previously available.

A building example -- replacing a low efficiency boiler with a high efficiency condensing boiler in order to reduce energy consumption and save on utility bills. The gas savings could be used for something else, such as to increase reserve contributions.



Another example is the installation of variable frequency drives on a booster pump assembly to reduce energy consumption and wear and tear.

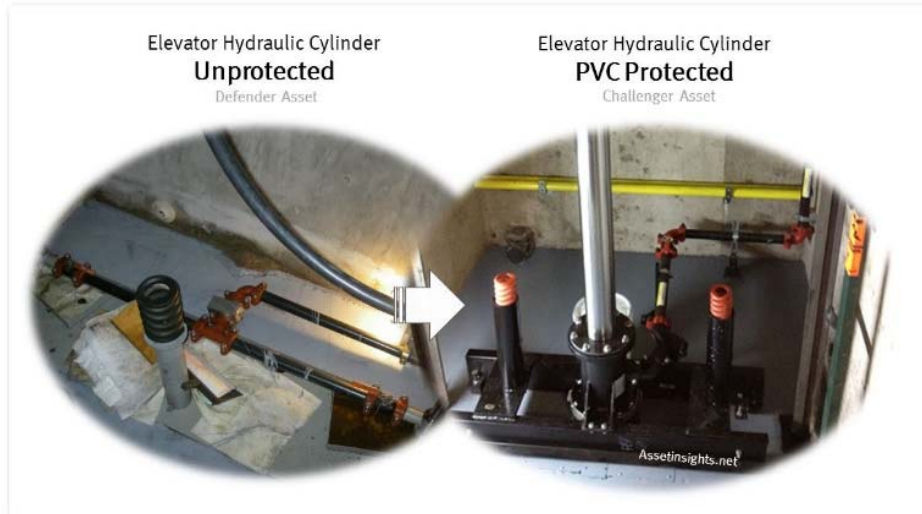
Energy Efficiency Measures (EEMs) also known as Energy Conservation Measures (ECMs) are upgrades to assets to return improved energy performance, lower operating costs, lower carbon footprints and greener buildings. This is sexy stuff that provides a compelling business case for political, social and economic reasons. A huge movement is afoot in the facility industry to seek out greener and cleaner measures.

3. Legal Obsolescence

The process by which legislation, or other directive, issued by an authority having jurisdiction, results in the prohibitive use of certain assets unless specified changes are introduced, typically by a stipulated deadline. It is all about consumer protection to address emerging industry insight into a product failure or hazard that is deemed unacceptable. More information about this can be found in the article entitled "[What's Hiding in My Building?](#)"

While it is fortunate that these product recalls and Orders from the authorities having jurisdiction do not happen often, they can be rather insidious in that we may not be aware of their existence or whether they apply to our buildings

An example in buildings -- being informed of a recall of a certain type of deficient sprinkler head and therefore arranging to have these all replaced so as to maintain the necessary insurance coverage.



This is an external form of obsolescence that is curable by following the stipulated recall procedures.

4. Style/Aesthetic Obsolescence

This occurs when an asset is no longer desirable to the owners because it has gone out of popular fashion. Just imagine that bright orange shag rug from the 1960s. But then again, lava lamps have returned into favour!

A building example -- replacing a lobby floor and furniture as it appears dated and does not match the new design aesthetic.



There is much subjectivity and personal bias in how style obsolescence is perceived by different stakeholders. This is therefore considered an internal form of obsolescence.

5. Functional Obsolescence

A form of obsolescence that occurs when the user's needs have changed since the asset was first placed in service. The asset is no longer able to effectively support the user's requirements or the facility's mission. This form of obsolescence affects commercial, institutional and civic facilities more so than residential facilities.

A building example -- a fire station wants to purchase a new fire truck but realizes that the new trucks are heavier and larger than the old ones, thereby placing different live load on the floors in the apparatus bay and also won't fit through the doorway.

Functional obsolescence is oftentimes one of the most systemic forms of obsolescence that can affect groups of assets and is the hardest to cure. In some cases, functional obsolescence can be so severe that a building is either sold, repurposed or reconstructed.

Each asset is affected by a combination of these forces at different stages in its lifecycle. Anticipating these five forces, and developing optimal intervals for asset renewal, is both an art and science.

Regardless of what is happening to our assets (fading and/or degrading), we cannot ignore them. We do so at our own peril and we will pay dearly later. In upcoming blog posts, we'll look at the following asset management concepts that are applied to the management of the fading/degrading process:

- Sweat-the-assets vs. Run-to-failure
- Adaptive renewals vs. Like-for-like renewals
- Defender assets vs. Challenger assets

Are there other significant forces of retirement that have been missed here?

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