Technical Due Diligence (TDD)

2020-02-08T08:57:31+08:00

## Rationale

Technical Due Diligence (TDD) is an engineering management process for evaluation and assessment on operation and condition of assets of engineering systems (e.g. buildings, industrial plants, factories). TDD can be considered as a simple application of the Asset Management Framework.

* Buy/Acquire the property
* Execute an intervention strategy/program for the targeted engineering systems at a set of points in time

TDD is usually done in a quick fashion by a team of a few senior engineers and specialists who understand the targeted engineering systems. The team will normally visit the site/office to perform visual inspection and desktop study on historical records (e.g. as-building drawings, O&M manual, corrective and intervention logbooks). In some case, the work might also involve physical testing for a certain level of audit.

a TDD work is carried out by implementing a methodology involved assessment on

* Functional
* Technical
* Quality
* Operational

The figure below gives a quick snapshot on how to deliver the work.

In many cases, Clients might extend a TDD service to include legal and commercial aspects.

## Example

In an effort to automate the TDD process in my team, I used R to code real examples for a few number of Clients (including a Global Investment Capital Firm and a Japanese company with its main business in railway but wanna to expand into real estate business in the Philippines)

Three major projects I worked for these two Clients involves

* TDD and EDD for Hanjin Shipyard in Subic. This shipyard is one of the biggest one in the world. The owner Hanjin has been in bankruptcy since 2018. Till the early 2020, it has been closed, resulting the lost of employment for about 25,000 workers. This job was for a Capital Investment Firm.
* TDD and asset management study for a 30 storey building in Bonifacio Global City (BGC) (a Japanese railway firm)
* TDD and asset management for estate water facilities for Manila Water

Example in below link is a fictive one with values being generated randomly for demonstration purpose. The structure of data is of standard one for automation of TDD process.

[Link to full article on example and R code for a Technical Due Diligence Study](/cases/tdd.html)

Kindly leave your comments in this page after reading the article. Thanks!

## Reading Materials

Some good articles on TDD are

* [RICS Best Practice & Guidance Note for Technical Due Diligence of Commercial, Industrial & Residential Property in Continental Europe](http://www.der-flurfunk.de/wp-content/uploads/2011/06/TDDGuidanceNote20111_1.pdf)
* [RICs Technical due diligence of commercial property](https://www.rics.org/globalassets/technical-due-diligence-of-commercial-property.pdf)