The Role of GIS in a Strategic AM Program in Ports
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Purpose of Strategic Asset Management

“Optimize the use and value of assets, assessing risk and cost, all driven by data”
ISO 55000 Definitions

Asset Management:

“the coordinated activity of an organization to realize value from assets”

Asset:

“an item, thing or entity that has potential or actual value”
Asset Management vs. Management of Assets

“the coordinated activity of an organization to realize value from assets”

- Management of Assets = Facilities Management
- CMMS = Computerized Maintenance Management System
- This is not synonymous with Asset Management
Assets in the Ports Context

“an item, thing or entity that has potential or actual value”

Four important classes of assets in a port’s asset portfolio:

• Equipment (“item”), e.g. HVAC unit – the best understood
• Structures (“thing”), e.g. building – pretty well understood
• Systems (“entity”), e.g. terminal – less well understood
• Land (“item”? “thing”? “entity”?), e.g. parcel – least well understood
Asset System – Terminal
Asset Sub-System – Berth
Asset – Crane
Equipment – Cable Winch
To Manage an Asset

- Define it
- Locate it
- Identify it
- Describe it
- Value it
- Assess it
How Asset Data is Stored and Identified

- Financial system (purchase price, depreciated value): GL item
- CMMS (what was repaired, how much did it cost): asset ID, address
- Condition assessments (in a system? Document management system?): name, GPS point
- CAD (as-builts): project ID, drawing and inventory item
- GIS (digital maps): feature ID
- Tenant contracts: address
Ports Make Everything Complicated
Really Complicated
Seriously Complicated
Definitions and Identifications Do Not Match

You like potato and I like potahto
You like tomato and I like tomahto
Potato, potahto, tomato, tomahto.
Let's call the whole thing off

No need to call the whole thing off!
The Role of GIS in Strategic Asset Management
Hierarchy
Location Based Organization

• Locate your assets however they are stored
Location Based Organization

• Connect your assets to your data
Conclusion

- AMP relies on data, especially on *connectivity* of data
- Data is hard to collect, harder to maintain, hardest to connect
- While only two things are certain in life (death and taxes)…
- …location is pretty certain too, if managed by a spatial data system
- GIS, a crucial “glue” to connect other systems needed in AMP
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