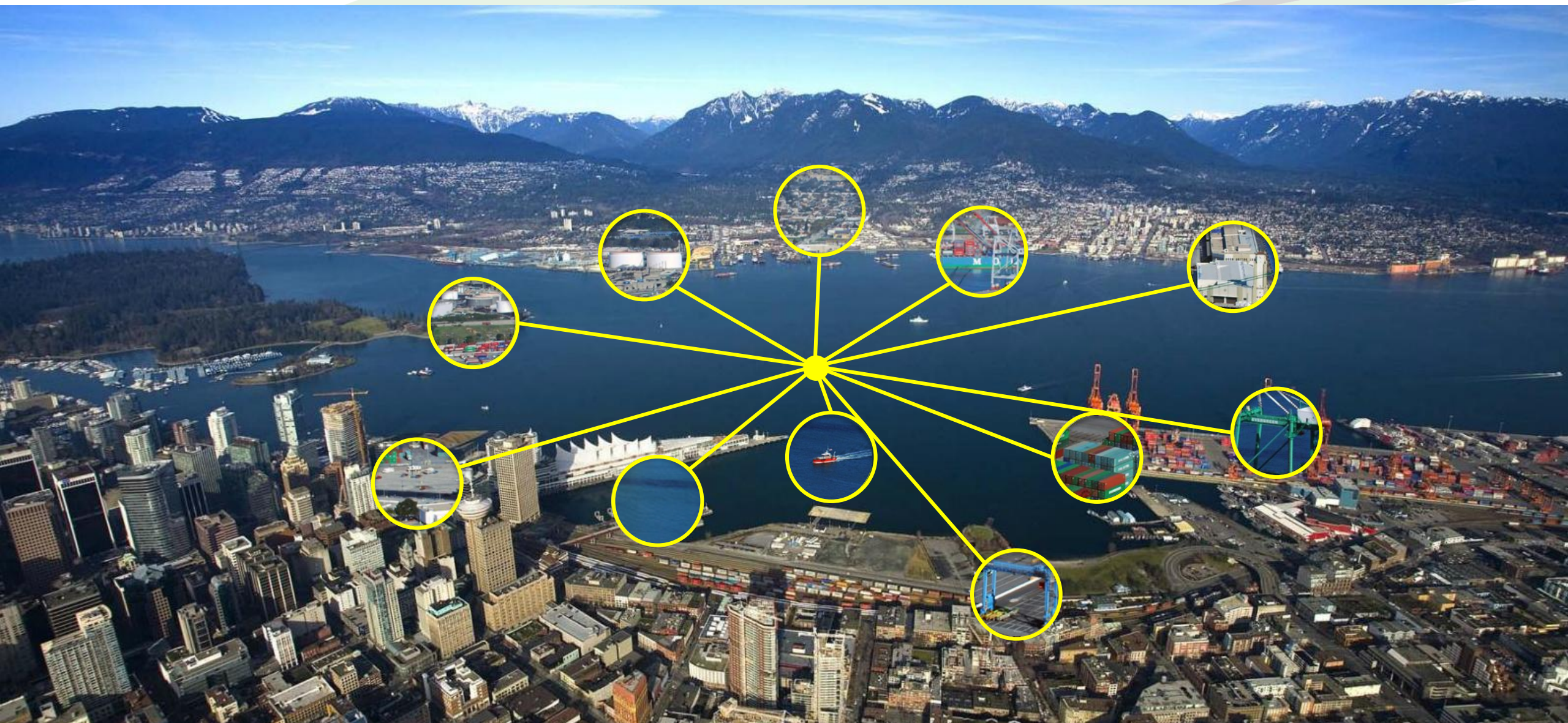


# The Role of GIS in a Strategic AM Program in Ports



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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”*

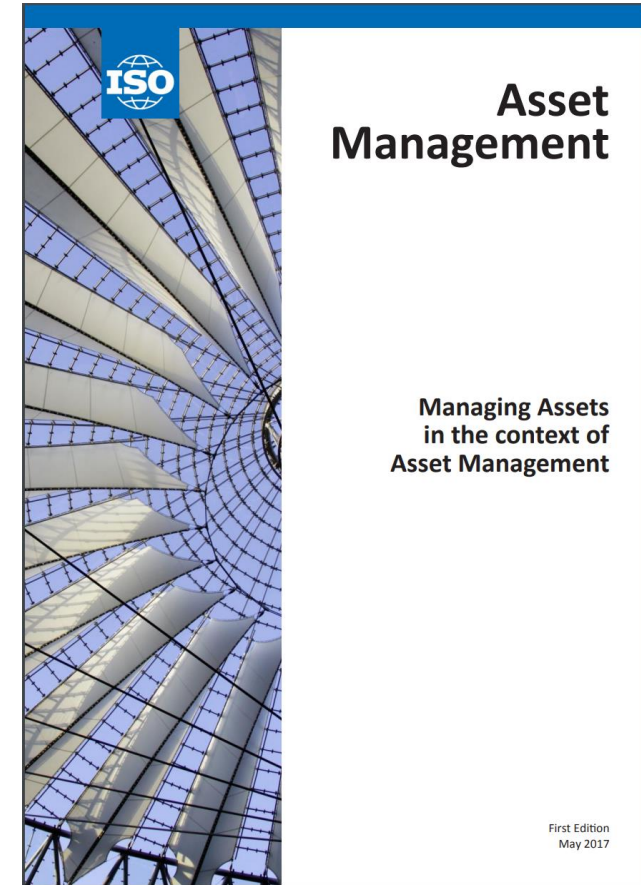
## Asset:

*“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”*

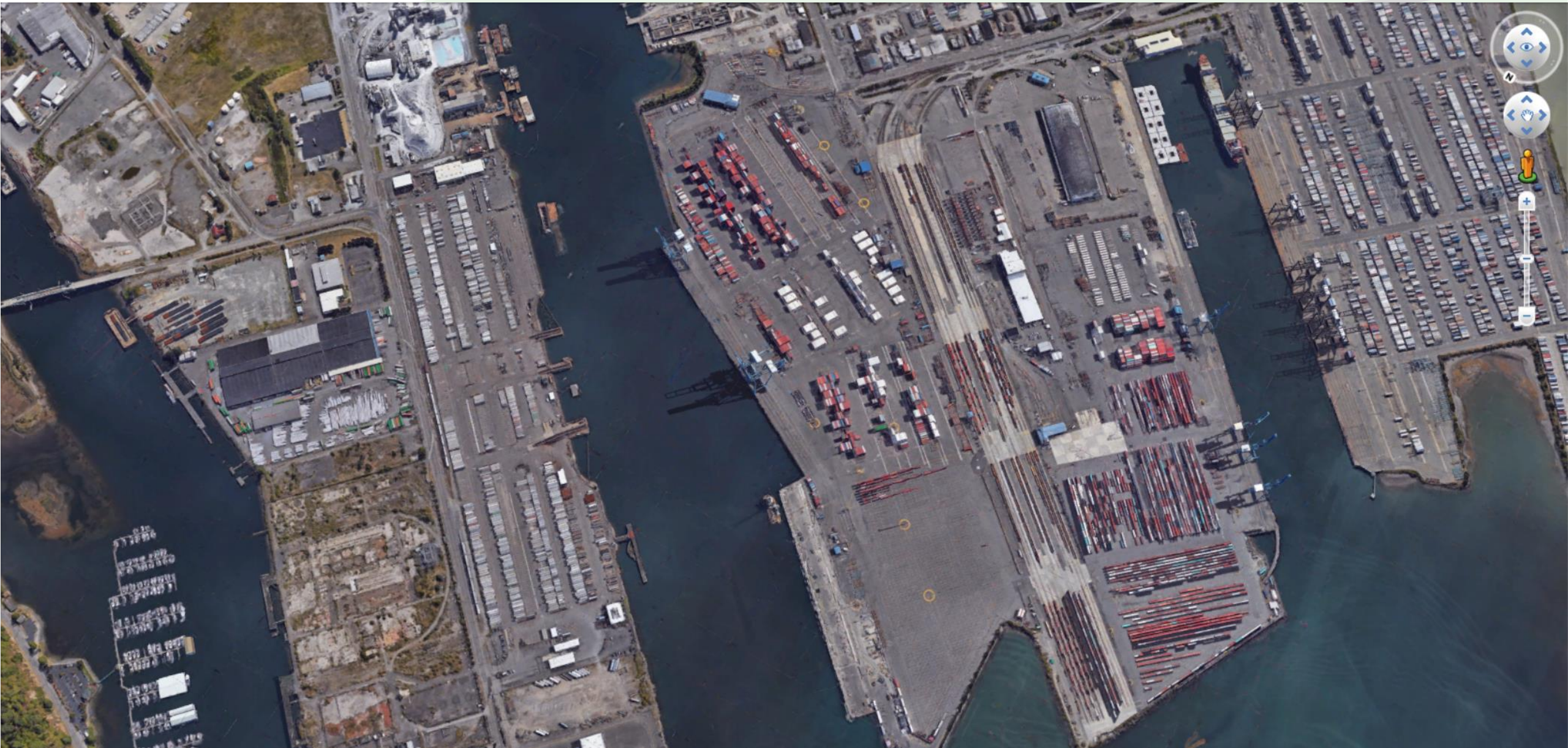
Four important classes of assets in a port’s asset portfolio:

- 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 Portfolio – Port

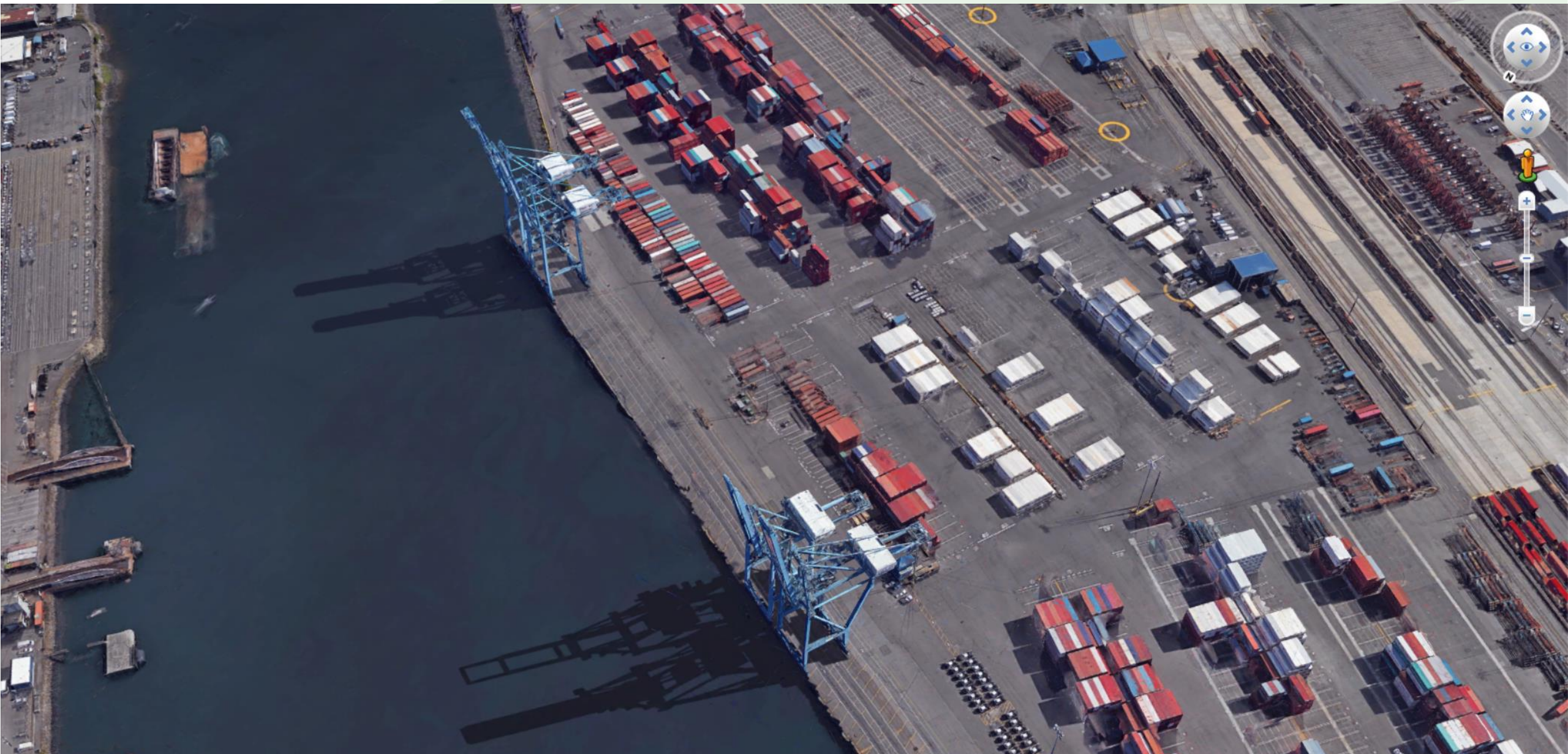


# Asset System – Terminal





# Asset Sub-System – Berth



# Asset – Crane



# Equipment – Cable Winch



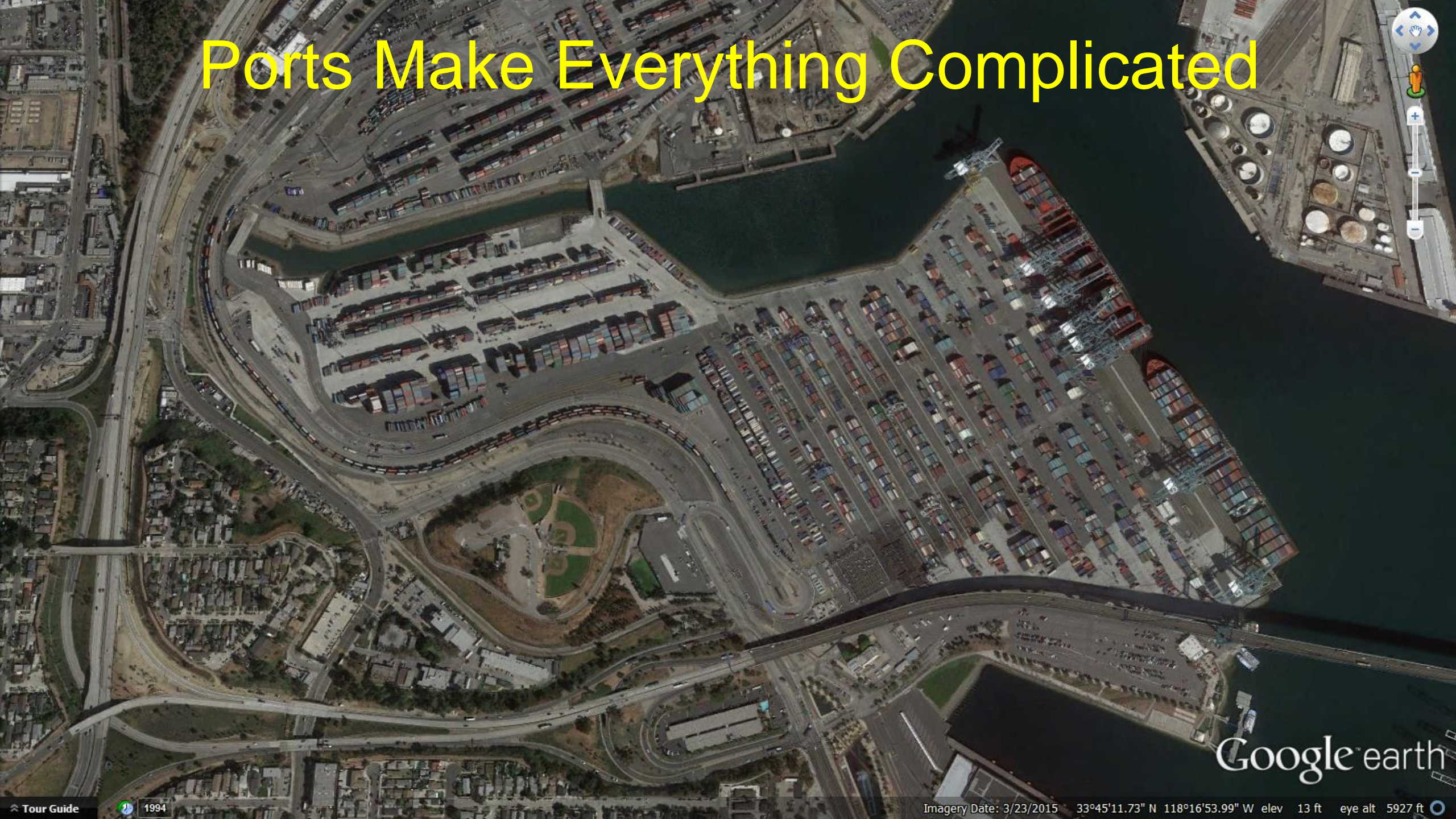
# To Manage an Asset

- 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

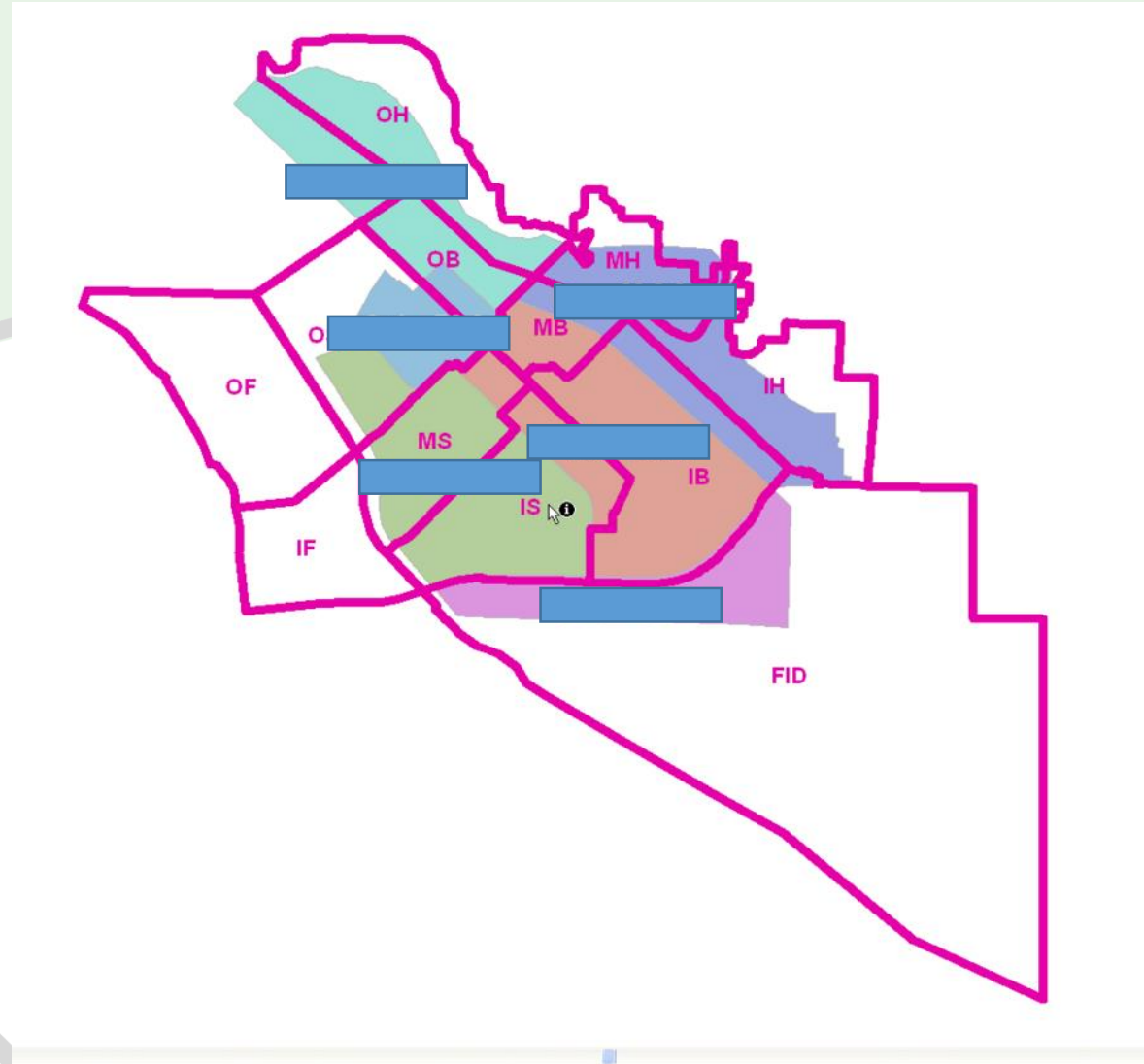


Google earth

# 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*

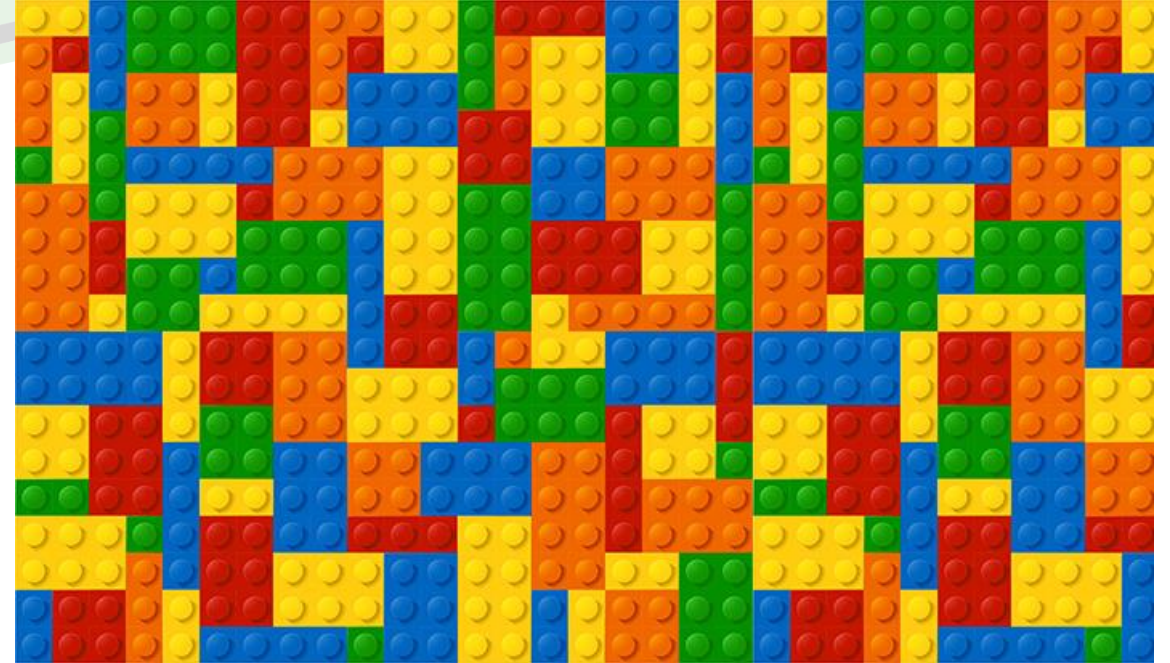
No need to call the whole thing off!



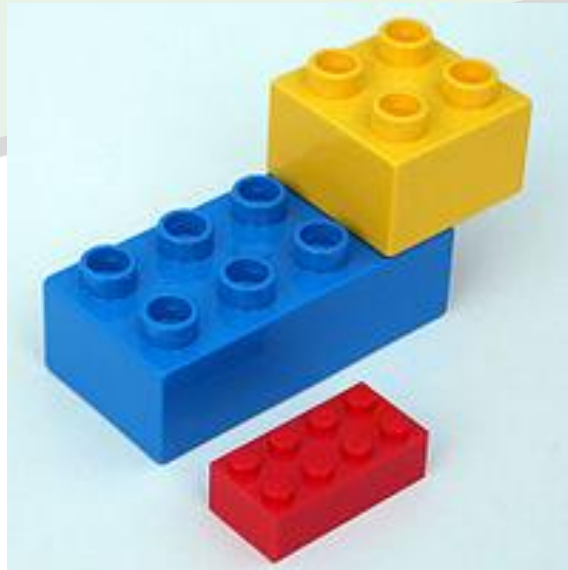
# The Role of GIS in Strategic Asset Management



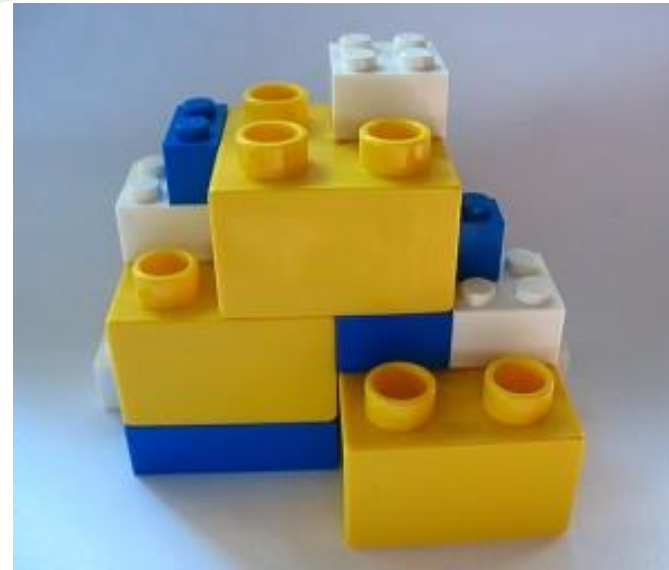
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# Hierarchy



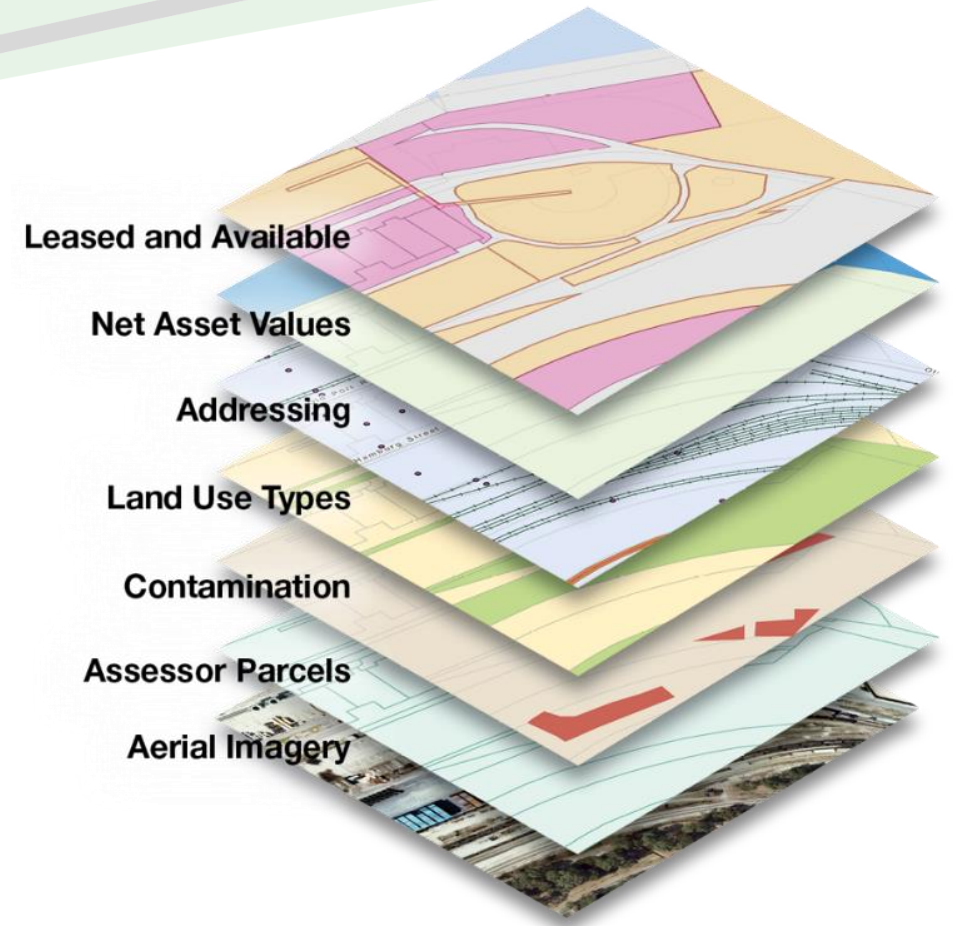
bricks.stackexchange.com



www.thebrickblogger.com

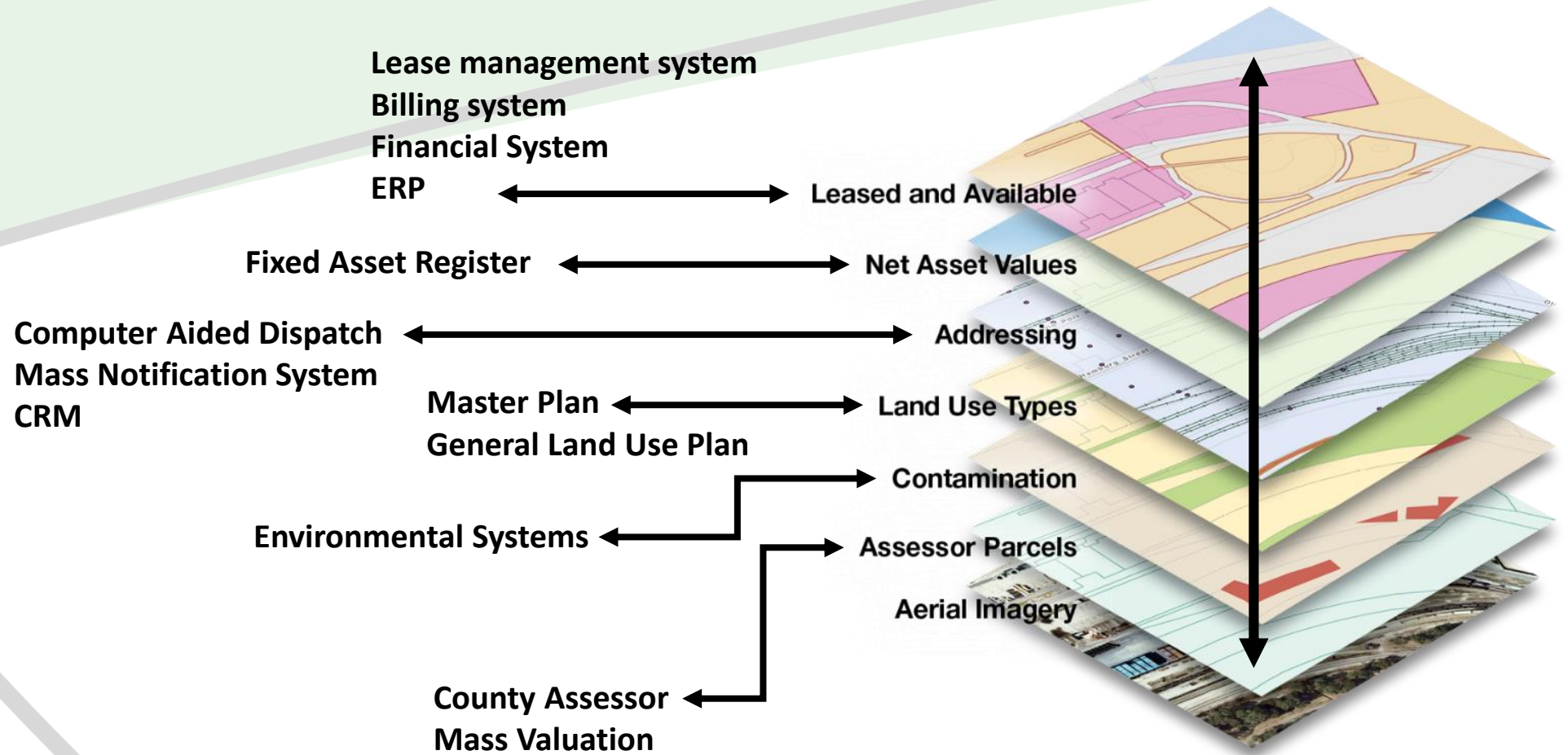
# Location Based Organization

- 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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