AMCL
LEADING ASSET MANAGEMENT

USING ASSET MANAGEMENT TO IMPROVE INVESTMENT DECISION-MAKING

Simon Smith

Transportation Research Forum – New York Chapter

February 1st, 2019

endorsed ASSESSOR
endorsed TRAINER
The Institute of Asset Management PATRON

Introductions – Simon Smith

- Originally from UK
- Lived in NYC region since 2008
- Past 12-years focused on transportation

simon.smith@amcl.com
646-724-8912

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AMCL – Leading Asset Management Since 1997

60 Asset Management Specialists

Operating in **7** locations

Across **4** Continents

Transportation

Power

Cities/Utilities

- Gap assessments and roadmaps
- Implementation support
- Technical advisory
- Capability improvement
- Training and change management

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The New York Metropolitan region has a wide variety of assets

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We all play a role within the transportation system

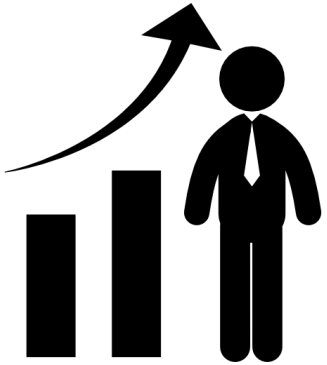
Operations

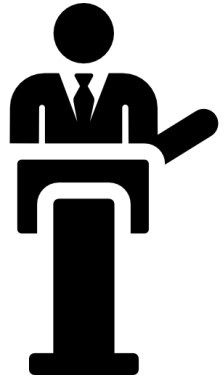
Maintenance

Engineering

Finance

IT


Planning


Politicians

Suppliers

Consultants

Construction

Customers

Taxpayers

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Our assets are overstretched, yet funding remains a challenge

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A key question

Given limited funding, what are the *right investments* for my assets?

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Using Asset Management to improve investment decision-making

1. Introduction to Asset Management
2. Asset Information as a foundation
3. Making asset investment decisions

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Some Asset Management definitions

*The **optimal lifecycle** management of physical assets to **sustainably** achieve the stated **business objectives***

EFNMS Asset Management Committee

***Coordinated** activities of an organization to realize **value** from assets*

ISO 55000

*The **strategic and systematic** practice of managing capital assets over their **lifecycle** to balance their **performance, risks, and costs***

Federal Transit Administration (paraphrased)

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The Institute of Asset Management "Conceptual Model"

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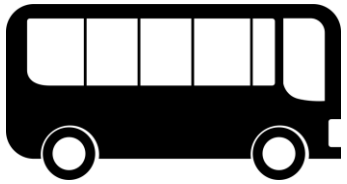
Managing Assets vs Asset Management



Daily service

Age

Up-front cost

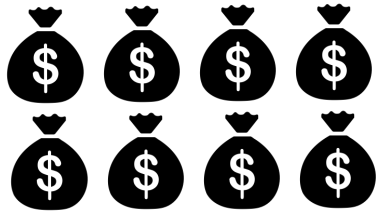
Maintenance

Silos

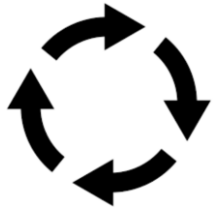
Reactive

Long-term performance

Condition and risk



Whole-life cost



Lifecycle management

Integration

Proactive

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Asset Information is the foundation for good Asset Management

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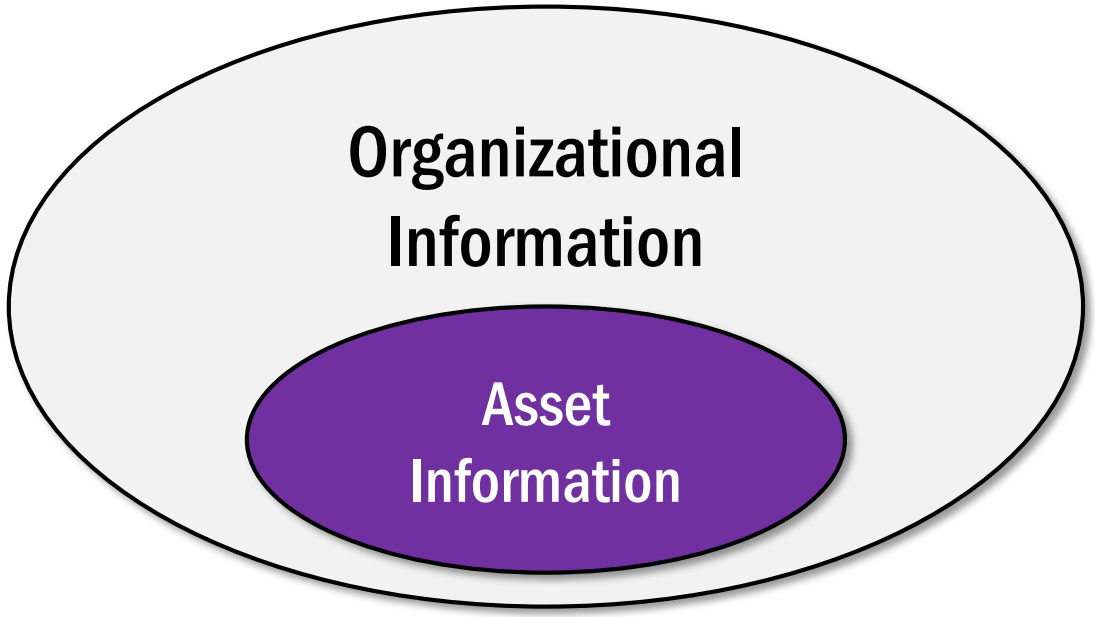
Asset Information supports Asset Management decision-making

The Institute of Asset Management

"A combination of data about physical assets used to inform decisions about how they are managed, both for short-term operational purposes and for long-term strategic planning"



- Inventory
- Age
- Condition
- Criticality
- Risk
- Environment
- Purchase cost
- Maintenance cost
- Replacement cost
- Failures
- Performance
- Utilization
- Etc.

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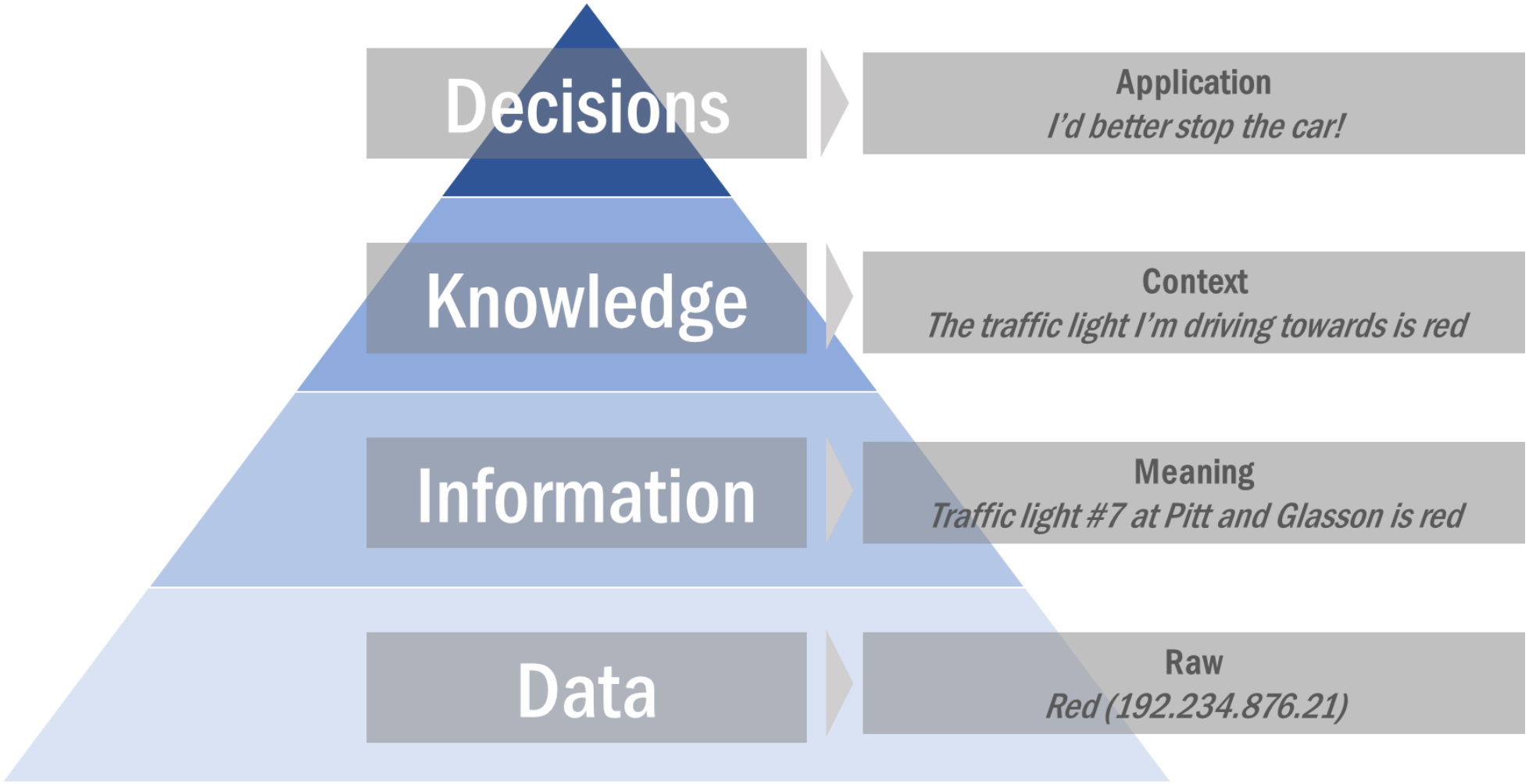
From asset data to asset decisions



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Using Asset Information to make an asset decision

When should we replace this asset?

- What is it, and where is it? **Inventory**
- How is it performing? **Performance**
- How much does it get used? **Utilization**
- How important is it? **Criticality**
- How often and badly does it fail? **Failures** **Risk**
- What will it cost to replace? **Replacement cost**
- What will it cost to continue maintaining? **Maintenance cost**
- What condition is it in now and in the future? **Condition**
- How much environmental strain does it face? **Environment**

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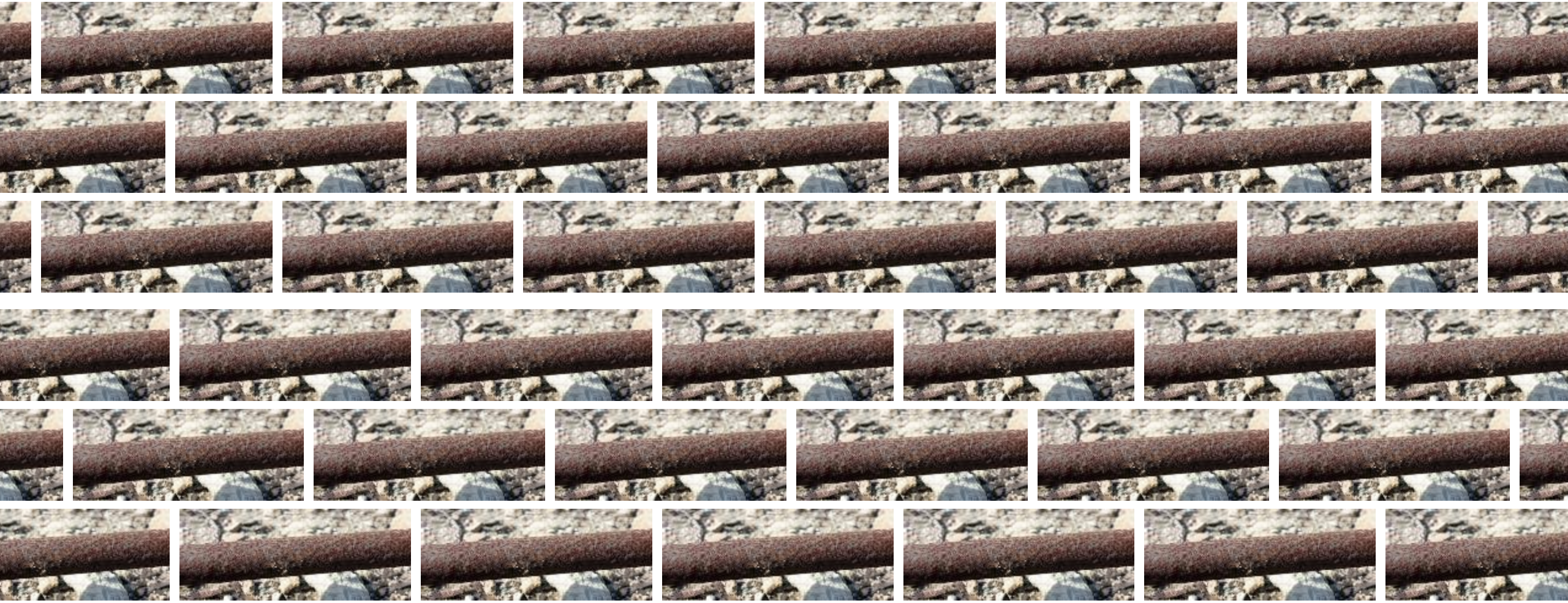
Now imagine you had thousands of assets…



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Developing an investment plan relies on good decision-making

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An example capital investment plan

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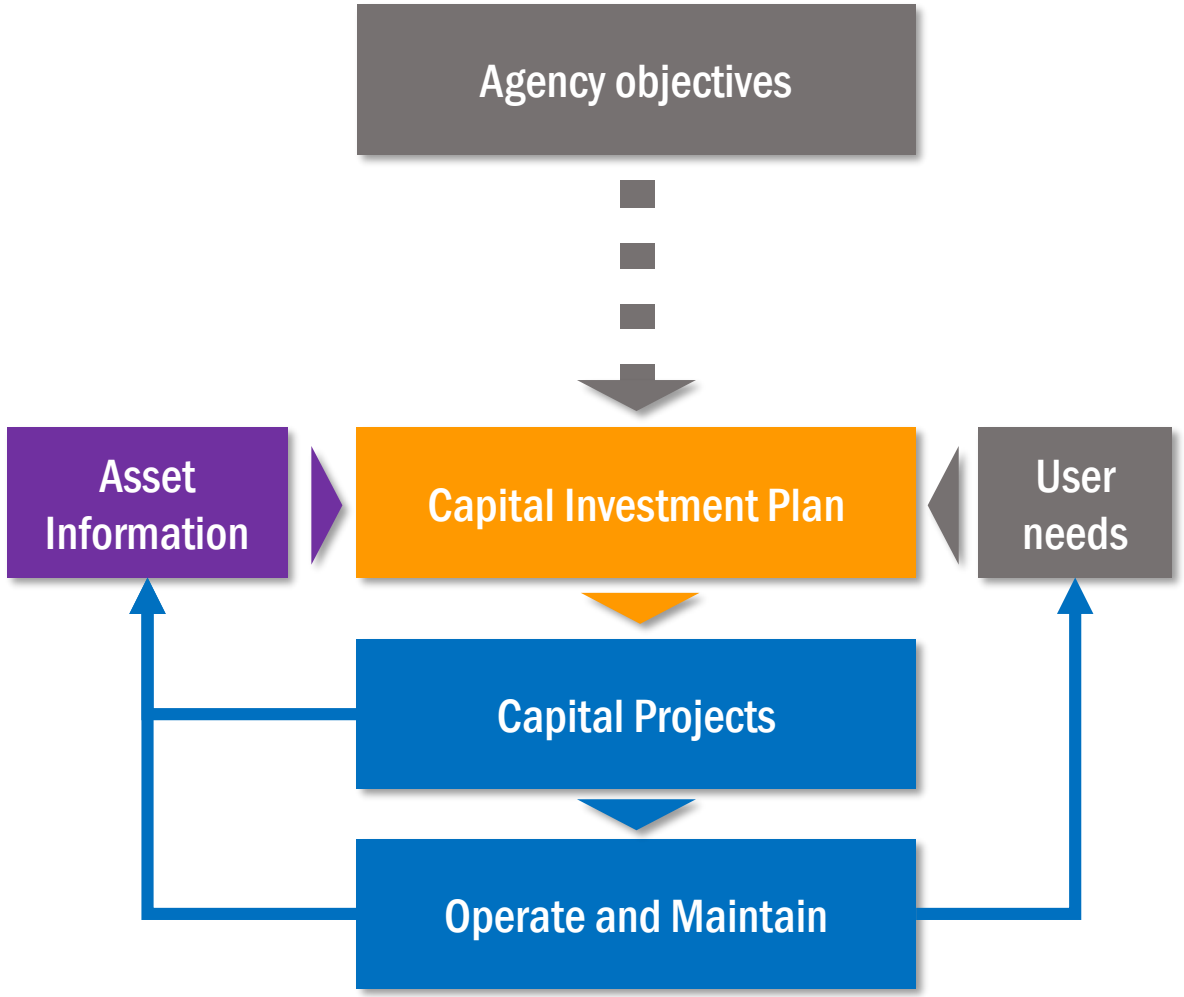
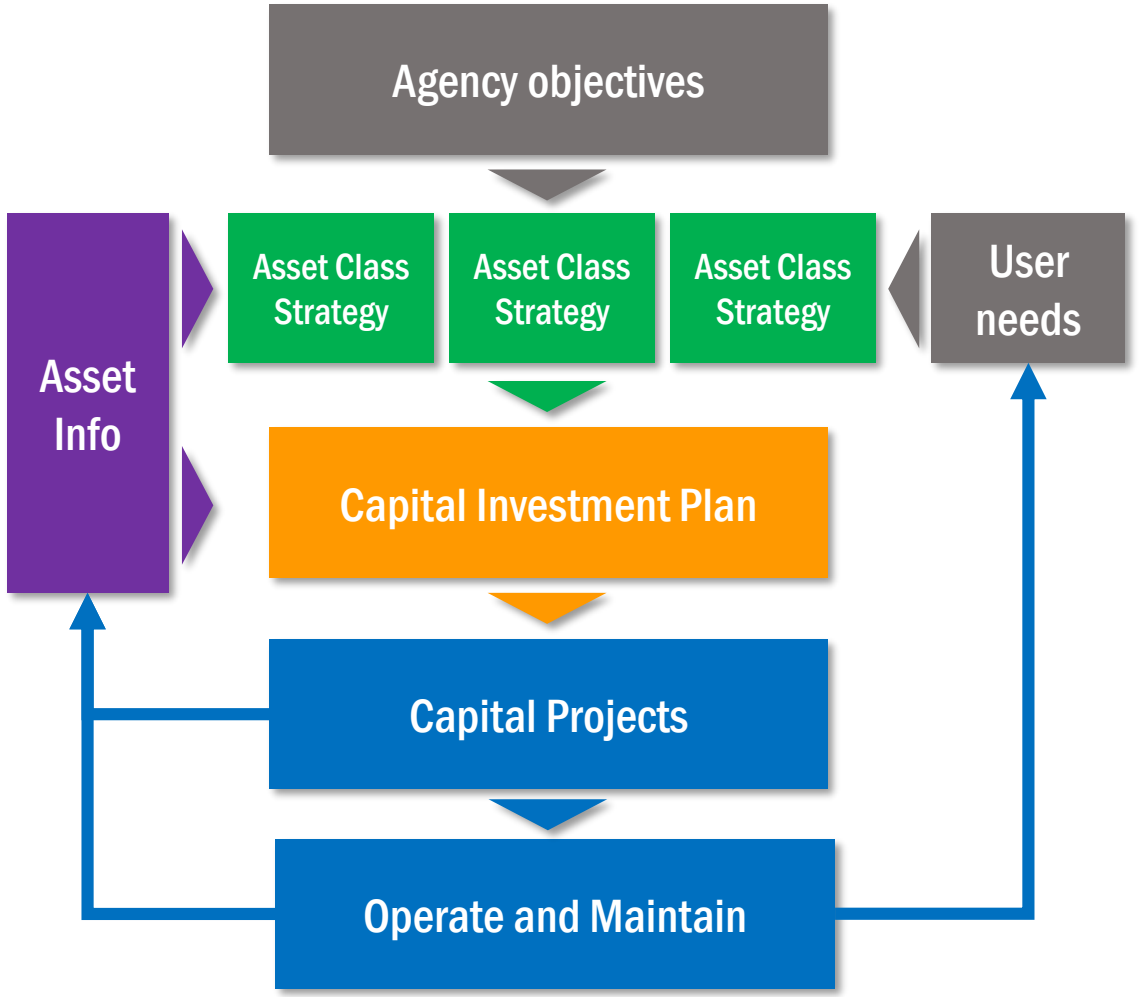
The Asset Class Strategy in the context of the end-to-end Capital Planning process





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The Asset Class Strategy is an iterative, analytical process (some of which can documented)

Objectives
Safety, reliability, financial, safety, customer, etc.

User Needs
Improved reliability, enhanced functionality, more assets etc.

Strategic Influences
Political, economic, socio, tech, legal, environment

Constraints
Access, resources, funding, regulatory, etc.

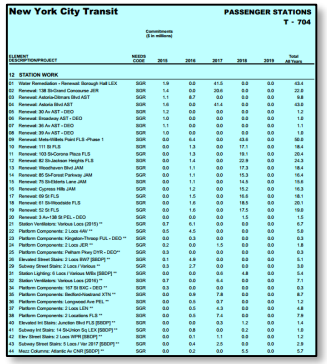
Asset Class Strategy and investment 'rules'
- Replace track at condition 4…
- Refurb station every 7 years…

Iterative analysis and discussions

Asset Class Investments

- Pump 1, replace 2019, $30m
- Pump 2, refurb 2021, $11m
- Pump 3, add 2022, $41m
- Etc.

Capital Plan
- All asset classes



Asset Information
- Inventory, age, condition, cost, performance, etc.

Some, or all, can be documented in an "Asset Class Strategy" document

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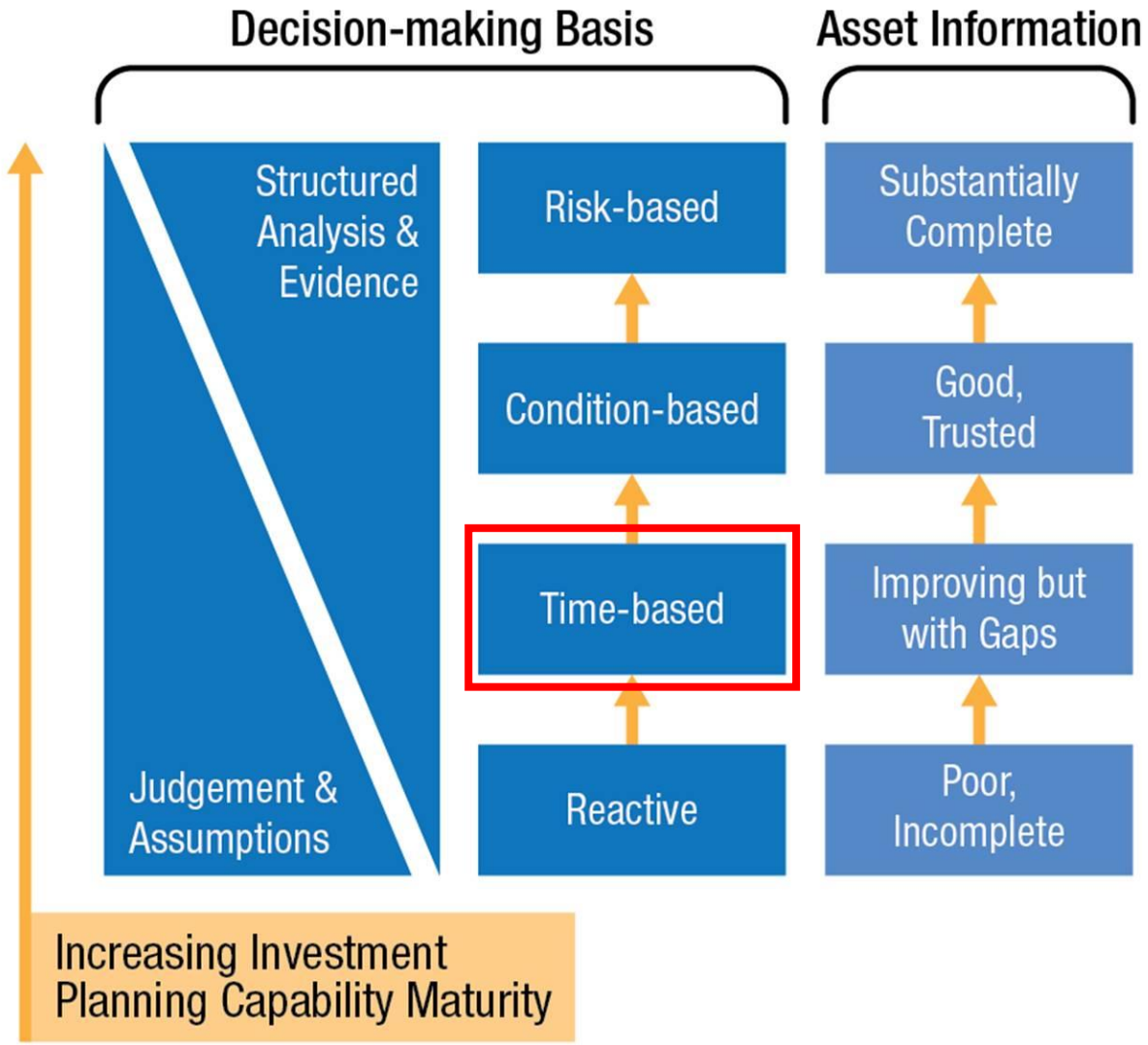
Improving your investment decision-making maturity

Asset Class Strategy and investment 'rules'



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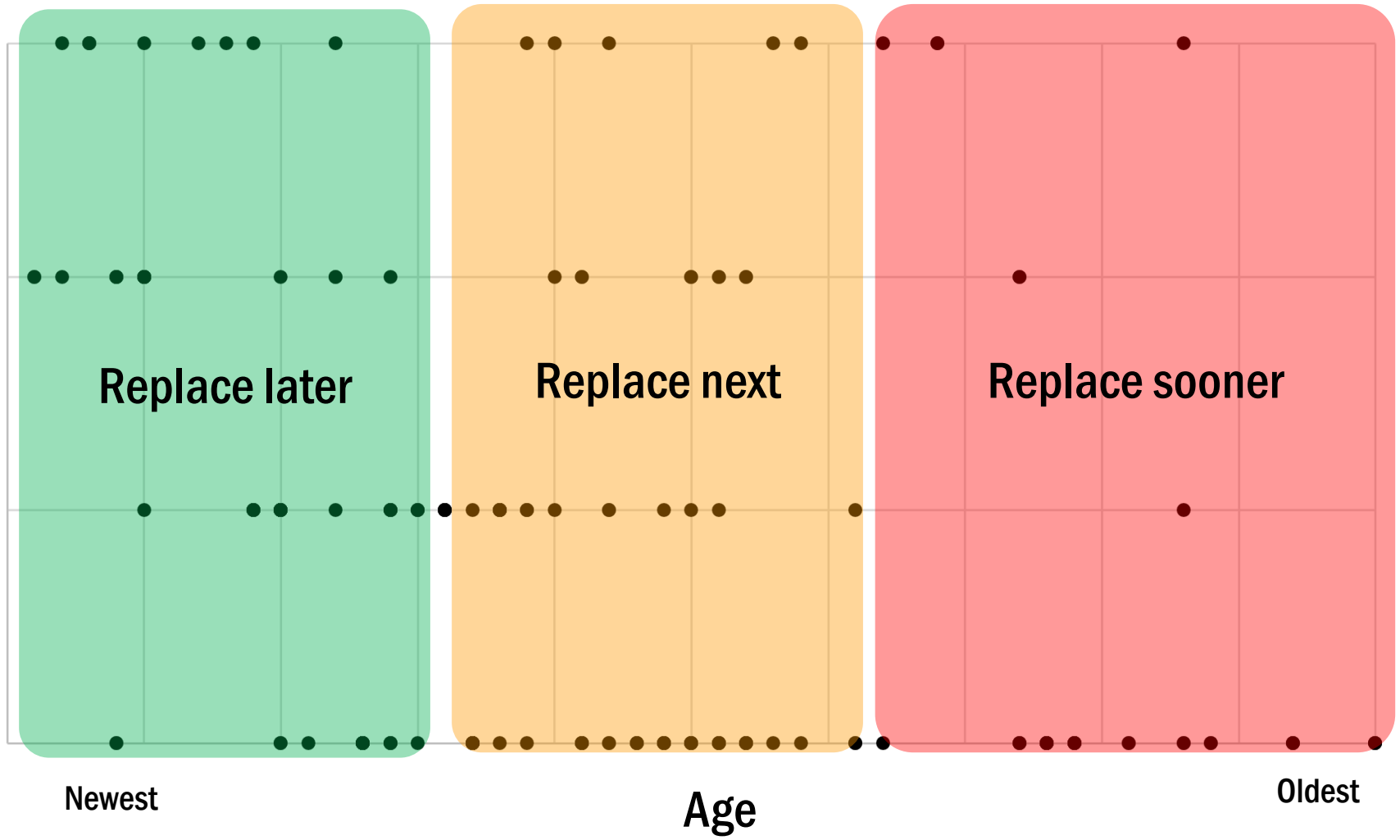
Moving from age-based to condition-based decision-making

Asset Class Strategy and investment 'rules'



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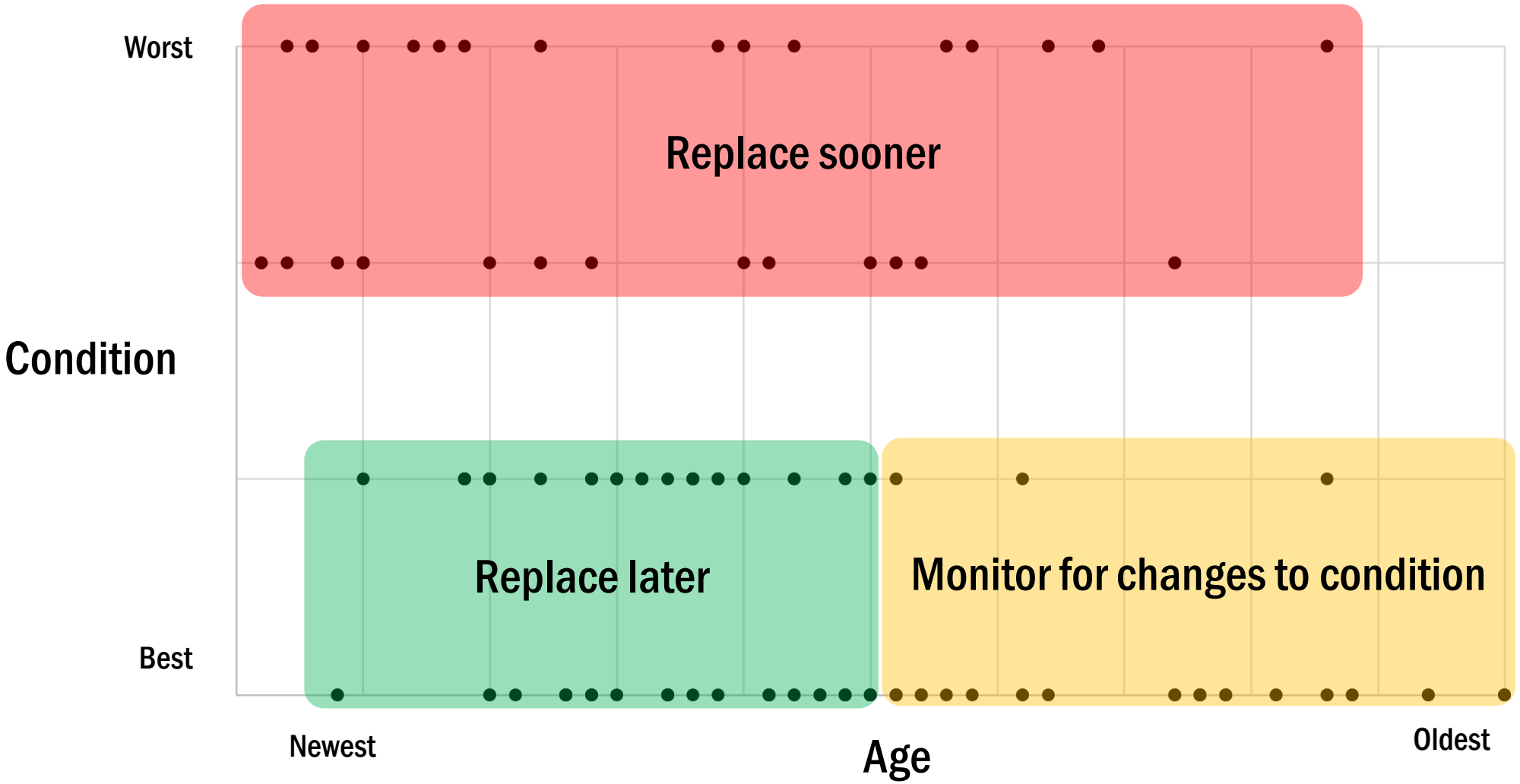
Asset Class Strategy and investment 'rules'



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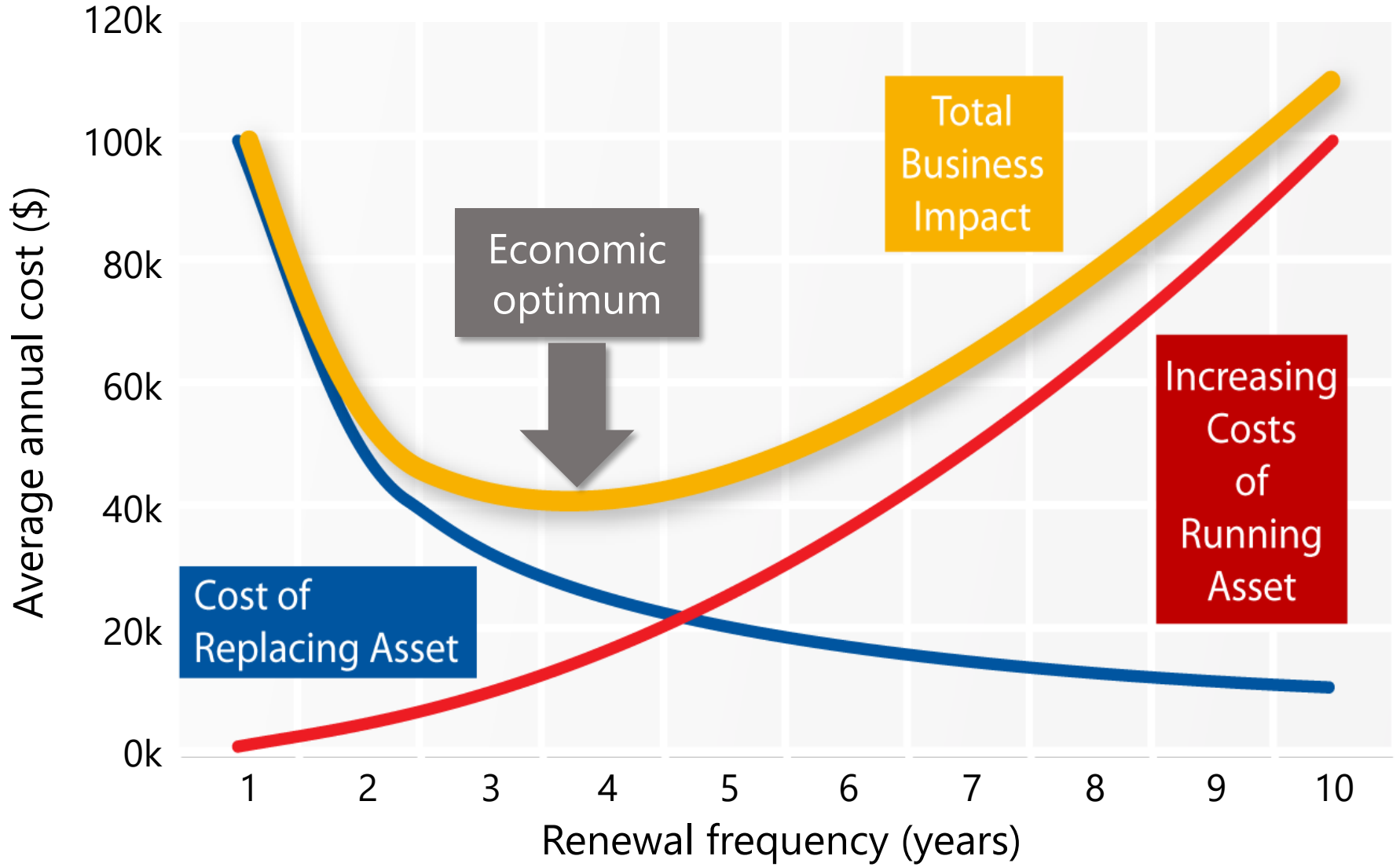
Understanding the economic optimum life of your assets

Asset Class Strategy and investment 'rules'



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