

ICAMP 2.0

UC's Integrated Capital Asset Management Program

ICAMP Overview

February, 2021



Building tomorrow's financially sustainable capital asset portfolio starts today



UNIVERSITY
OF
CALIFORNIA

PRESENTED BY:
ICAMP PROGRAM TEAM

Why ICAMP?



UCOP CFO
Nathan Brostrom

“We need to be able to compare ‘apples-to-apples’ across our portfolio”



**University of
California**



- “Apples to apples” across UC
- Establish a standardized asset inventory
- Standardize and quantify UC’s deferred maintenance (DM) backlog (\$)
- Identify, prioritize and manage risk
- Build credible and justifiable strategies for addressing DM
- Move towards a financially stable portfolio



Optimizing Facility Lifecycle Management

ICAMP's integrated workplace management and decision support system is helping UC manage its capital asset portfolio, address deferred maintenance and optimize its portfolio's total cost of ownership



Integrated Workplace

A real property asset management platform

Supports best practices across the asset management lifecycle, facility condition assessments (FCA), and building and space management

Capture, manage, and report standardized portfolio data



Performance

Common performance management dashboard

Establish benchmarks, set targets and compare actual performance across the system

Continuously drive portfolio improvement



Decision Support

Integrated views of the portfolio allow users to turn data into insights and actionable plans

Supports data-driven decision making to maximize value

Develop justifiable capital and operating budgets



Optimization

Manage portfolio risk

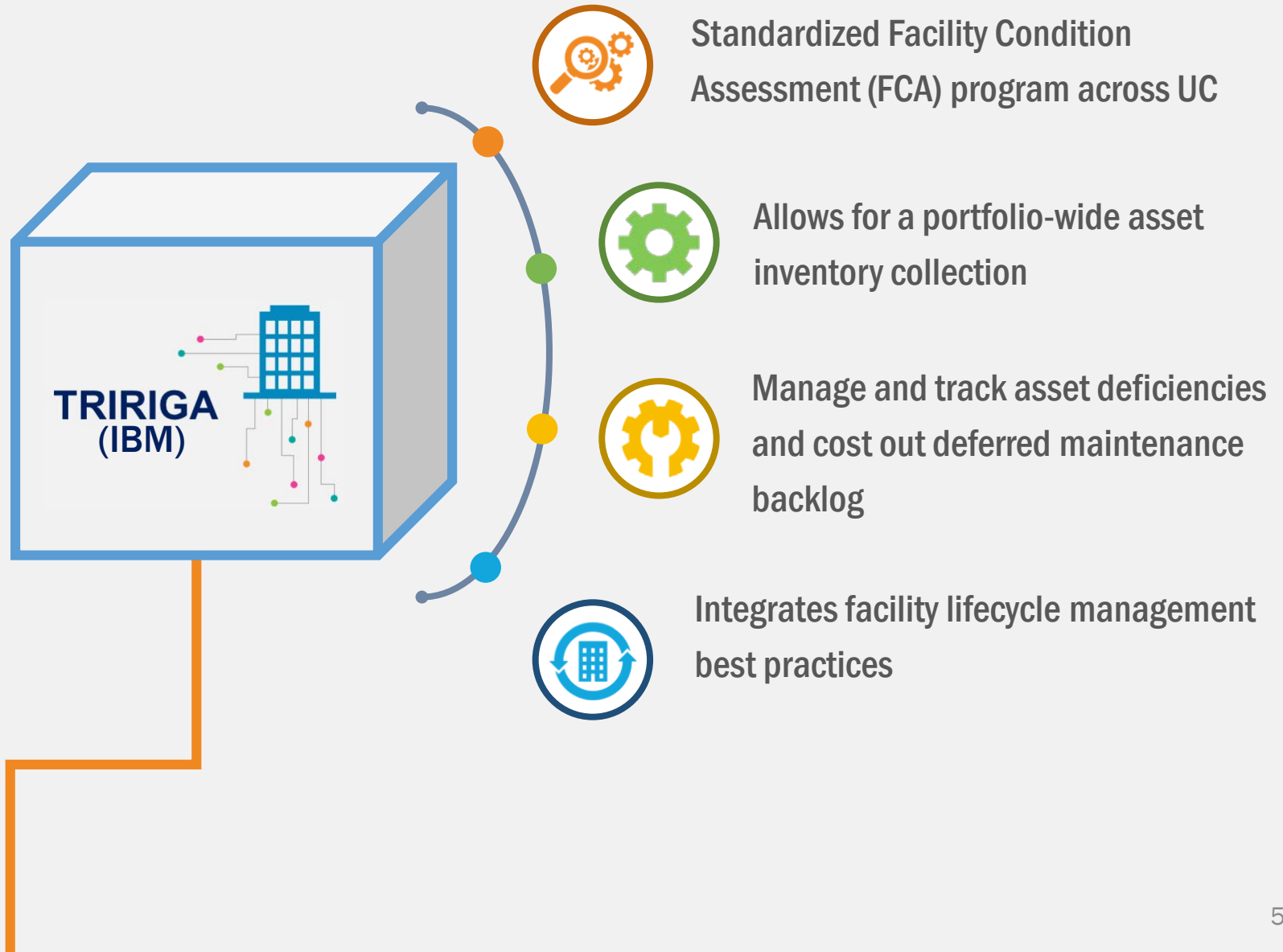
Optimize capital allocation, return on investment (ROI) and total cost of ownership (TCO)

Drive sustainable portfolio strategies

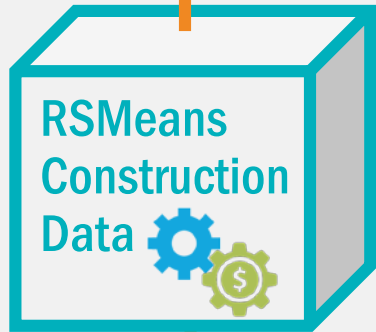
Program Building Blocks



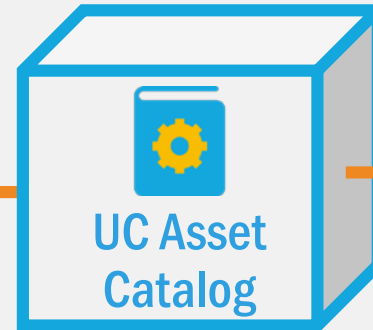
The Enterprise Asset Management Platform




The UC Asset Catalog



RSMeans
Facilities Maintenance
& Repair Cost Data




Standard
Uniformat
Classification
Framework




An icon consisting of four horizontal orange bars of decreasing length, representing a classification framework.

Facility and
Infrastructure
Assets



A blue gear icon representing facility and infrastructure assets.

Unit of
Measure




An icon of a blue brush with a white handle, representing a unit of measure.

Lifecycle
Activities
and Costs




A green gear icon with a white dollar sign inside, representing lifecycle activities and costs.

Lifecycle
Frequency
of Activities



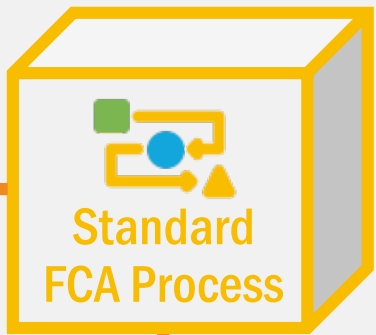
A blue gear icon with a white clock face inside, representing lifecycle frequency of activities.

Drives
“apples-to-apples”
across its asset
portfolio



An icon of two apples, one yellow and one blue, representing the concept of apples-to-apples comparison.

The Facility Condition Assessment Process



Inspect
Asset



Inventory
BSC ➔ BSI



Log Deficiency
Opportunity

Standard process for inspecting UC's portfolio of real property assets

Standard process for managing and inventorying UC's assets

Standard process for evaluating, identifying and tracking asset deficiencies

The Inspectors



Architectural



Electrical



Mechanical

Inspectors use their knowledge and experience to inspect real property assets

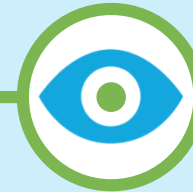


Real Property

Permanently fixed elements that support the building or structure



Facilities, Systems & Components



Visual & Non-Invasive

Inspect the readily accessible elements of the facility and assets

Managing Risk



Real Property Risk

The overall risk a real property asset introduces to a facility, its mission and the capital portfolio



Quantifying Risk

Two dimensions of risk, “**Consequence of Failure**” and “**Likelihood of Failure**” are rated to drive a total real property risk score

Scoring & Prioritization

Each rating is scored, all ratings are totaled, and total scores can be used to prioritize opportunities



Consequence of Failure

Quantify the consequence an asset failure will have on a facility and the mission it serves



Mission Impact Rating



Mission Risk Rating



Regulatory Rating



Likelihood of Failure

Quantify how likely an asset is to fail and when



Urgency Rating



Deterioration Rating

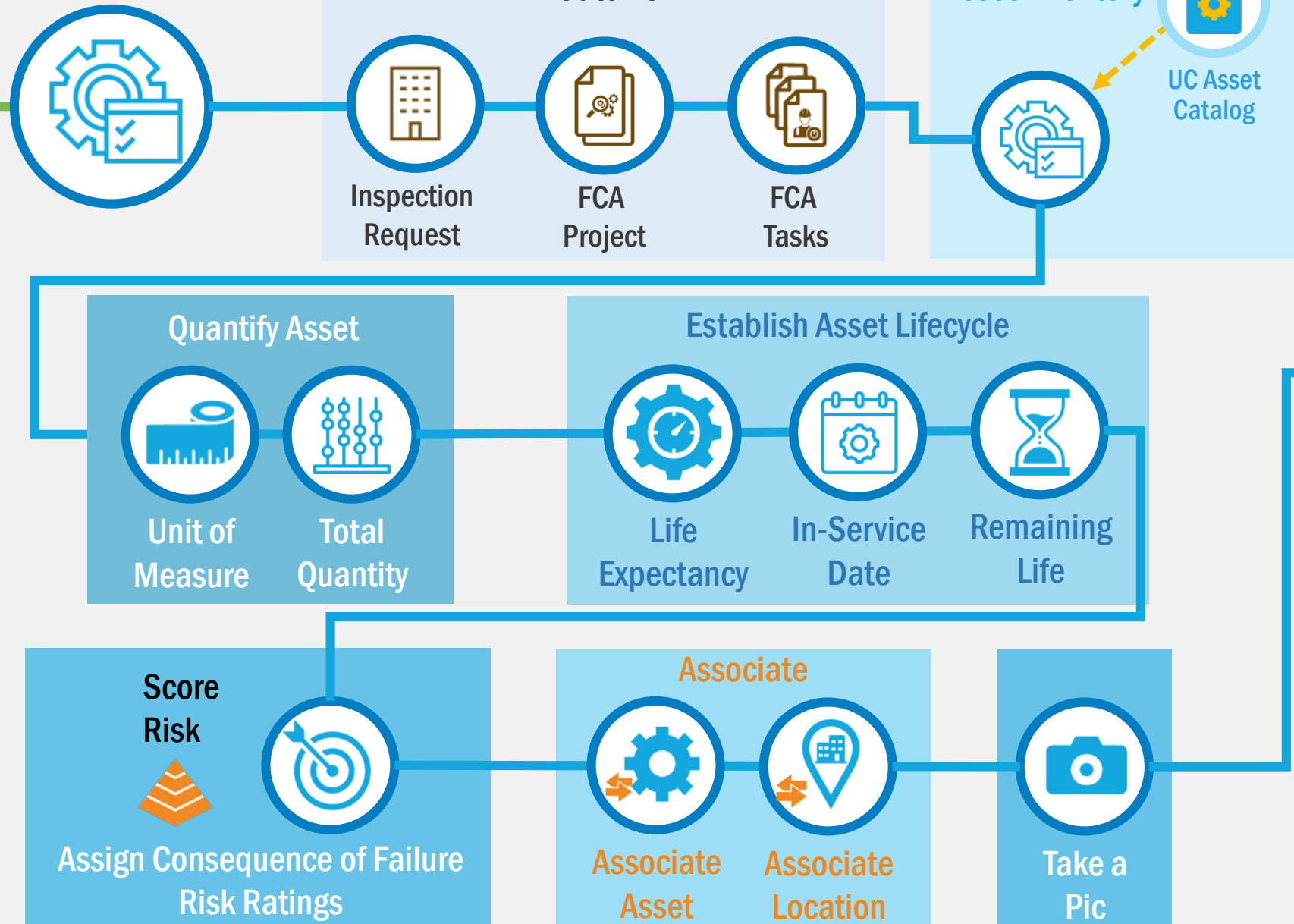


Condition Rating

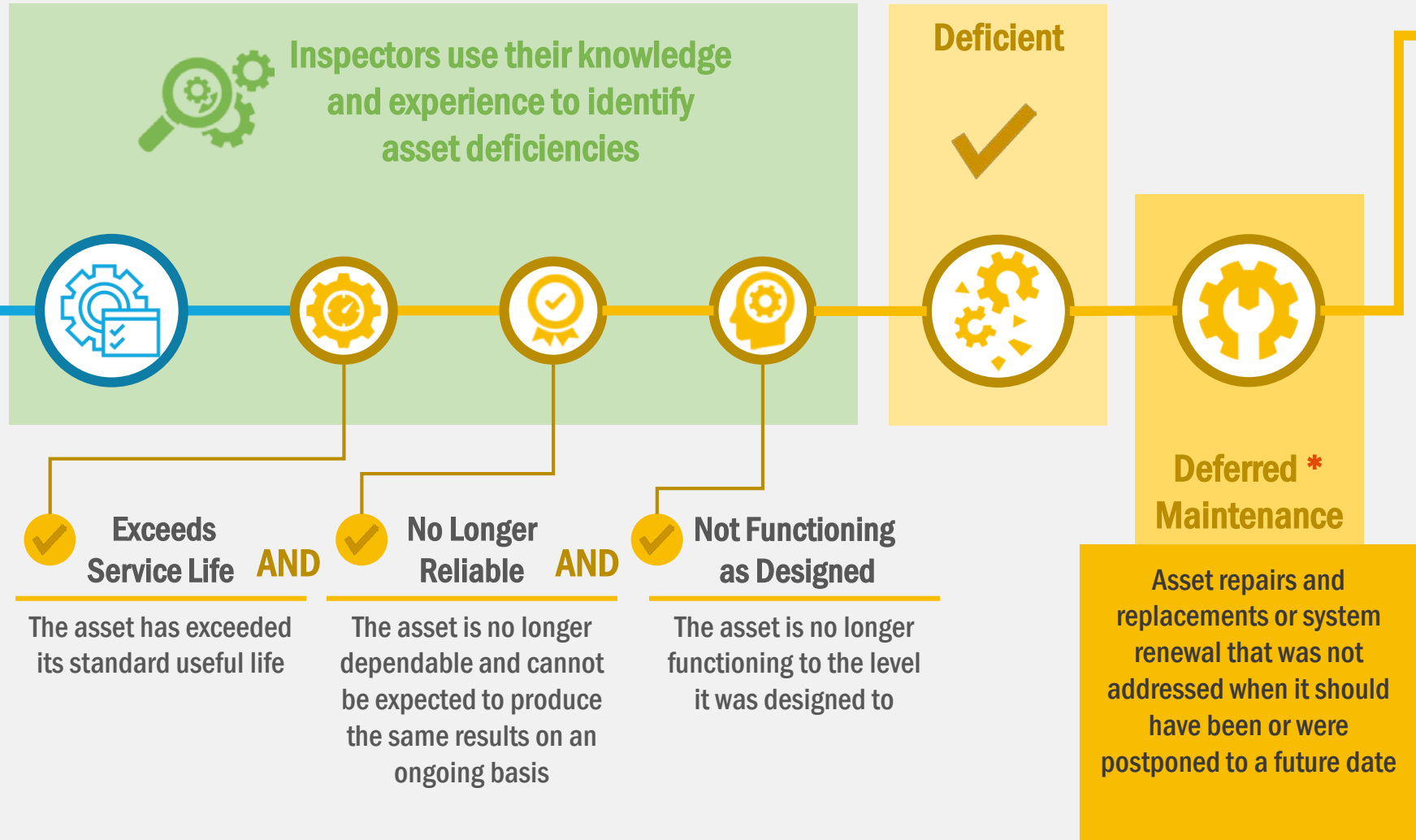


Rigor of Use Rating

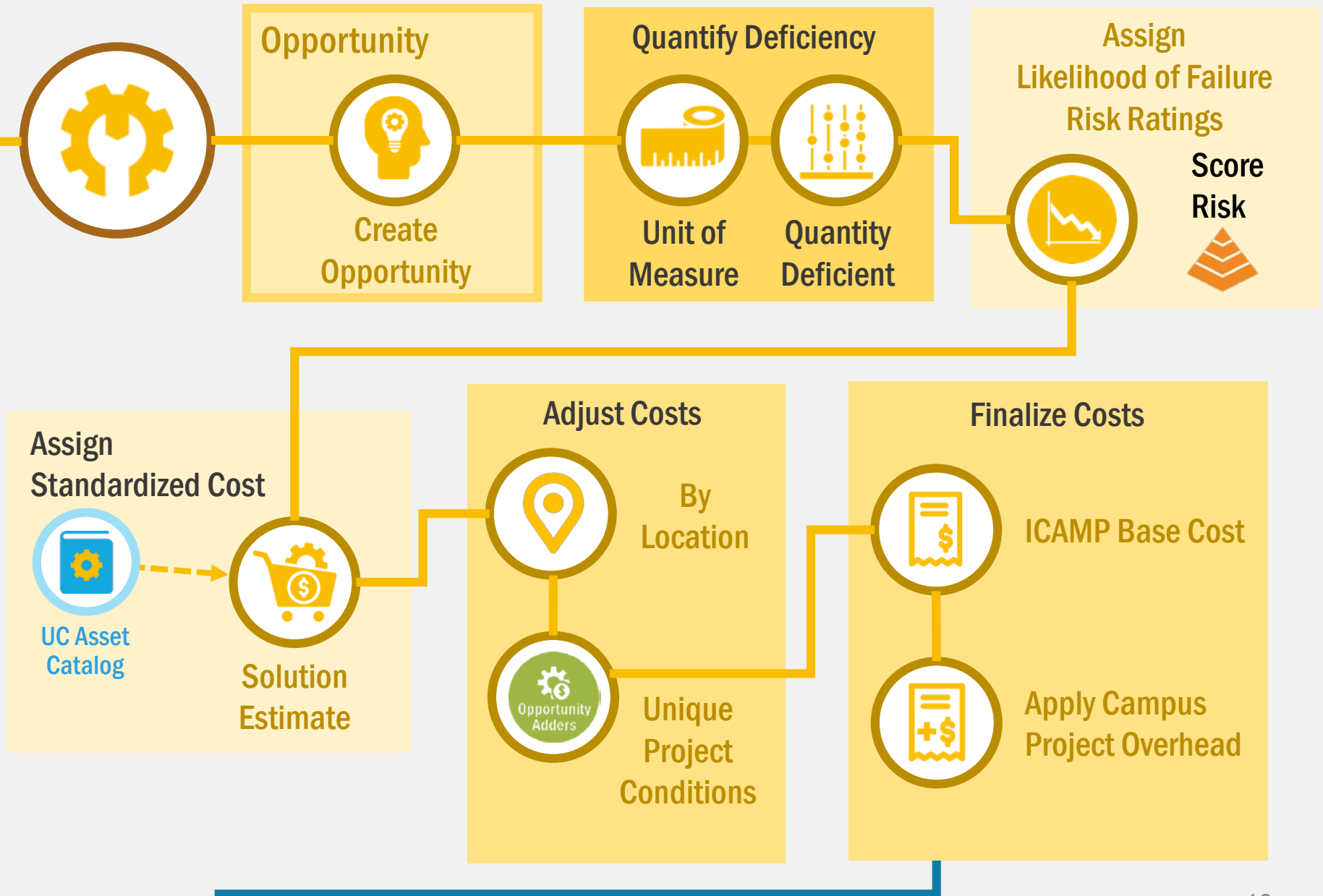
Inventory Assets



When is an Asset Deficient?



Log Deficiency (DM Opportunity)



ICAMP Outcomes



A **Standardized Asset Inventory and Condition Assessment** of the major components and building systems across the UC portfolio



Cost out and track **Deferred Maintenance (DM) Backlog**; develop DM buydown strategy



Cost out and track **Asset Replacements and System Renewal** needs which, when funded, prevent future DM accumulation



Use **Real Property Risk** scoring to drive investment towards the reduction of mission critical risk; and help balance funding demands

ICAMP Decision Support



Leveraging ICAMP Data Today and Tomorrow



Integrate

Blend multiple data sets and points to provide an expanded and integrated view of the portfolio

Provide users with interactive views of the data so they can manage their portfolio as well as slice and dice multiple data points to discover new insights and begin to consider new courses of action...



Manage and Analyze



Planning and Decision Support

Establish an interactive decision support framework to allow users to create their own scenarios - setting filters and conditions across variable dimensions (time, funding capacity...)

Build a common performance management dashboard and establish benchmarks, set targets and compare actual performance across the system to continuously drive portfolio improvement



Performance

Develop a capital investment and allocation modeling framework



Integrating Portfolio Data



Modernizing UC's Data Management and Analysis



Integrated decision support

- Incorporate UC priorities (e.g. seismic, deferred maintenance, growth)
- Navigate portfolio horizontally or vertically
- Improve capital planning outcomes
- Enhance operational execution
- Develop holistic data-driven strategies

Drive Improvement with Performance Management



Dashboards

Monitor Performance

- Investments
- Operations
- Project Delivery
- Space



Benchmarks

Determine Standard

- Industry
- UC System
- Campus



Metrics

Measure Performance

- Use KPIs and Metrics to manage portfolio



Targets

Evaluate Performance

- Actuals vs. Benchmarks
- Actuals vs Targets



Initiatives

Improve Performance

- Identify areas for improvement to drive initiatives



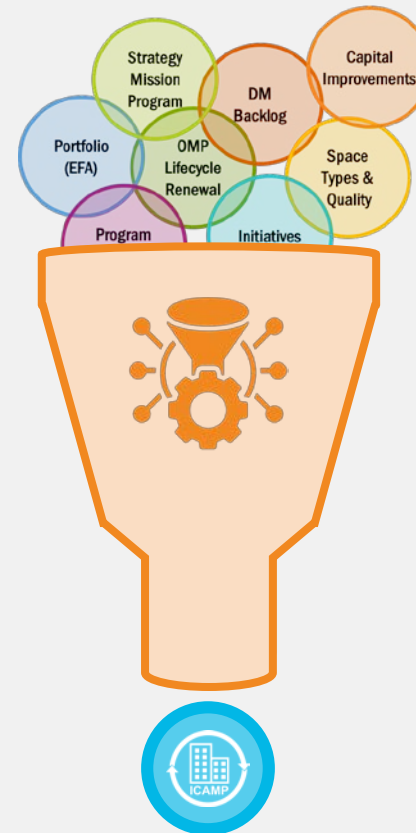
Continuous Improvement



Enhance Planning and Decision Support



- ✓ Blend multiple “raw data” sources
- ✓ Use filters and conditions to slice and dice data
- ✓ Set variable dimensions (time, funding...) to drive scenarios
- ✓ Use portfolio scoring and prioritization to help order and refine outputs
- ✓ Turn raw data into actionable plans



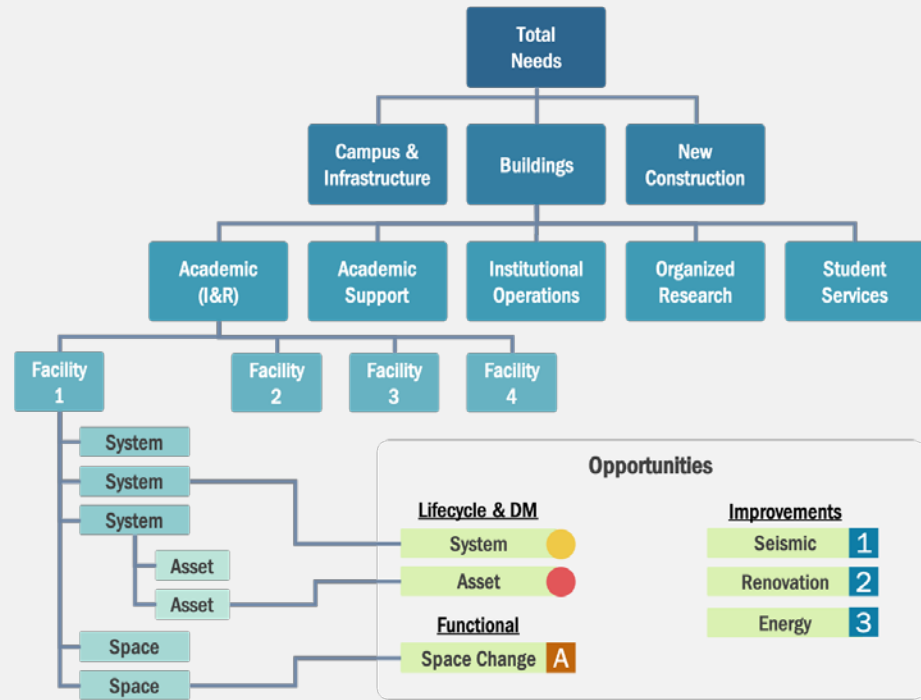
Integrate Capital Investment Planning Model Framework



Integrate Capital Investment Planning Model Framework



Portfolio Hierarchy and Segmentation



- ### Scoring & Prioritization
- Portfolio Category
 - Segment Mission, Program Importance
 - Building Importance
 - Functional Value: FCI & FQI
 - Financial Value: Net Asset Value
 - Building Types
 - System & Asset Importance
 - Opportunity Prioritization:
 - Strategic Priorities
 - Program Priorities
 - Risk (Red, Yellow, Green)
 - Action Timeframe

Capital Investment Plan Output

Ranked capital investment projects with costs and action timeframe

The UC Catalog

Uniformat Classification, Assets & Costs



Unifomat II Classification Framework



Unifomat II is an industry standard format for classifying building elements and site work

Level 1 (L1)

Major Group Elements

The first level of of the classification hierarchy contains “Major Group Elements”

Unifomat II Structure

L1

A: Substructure

L1

B: Shell

L1

C: Interiors

L1

D: Services

L1

E: Equipment & Furnishings

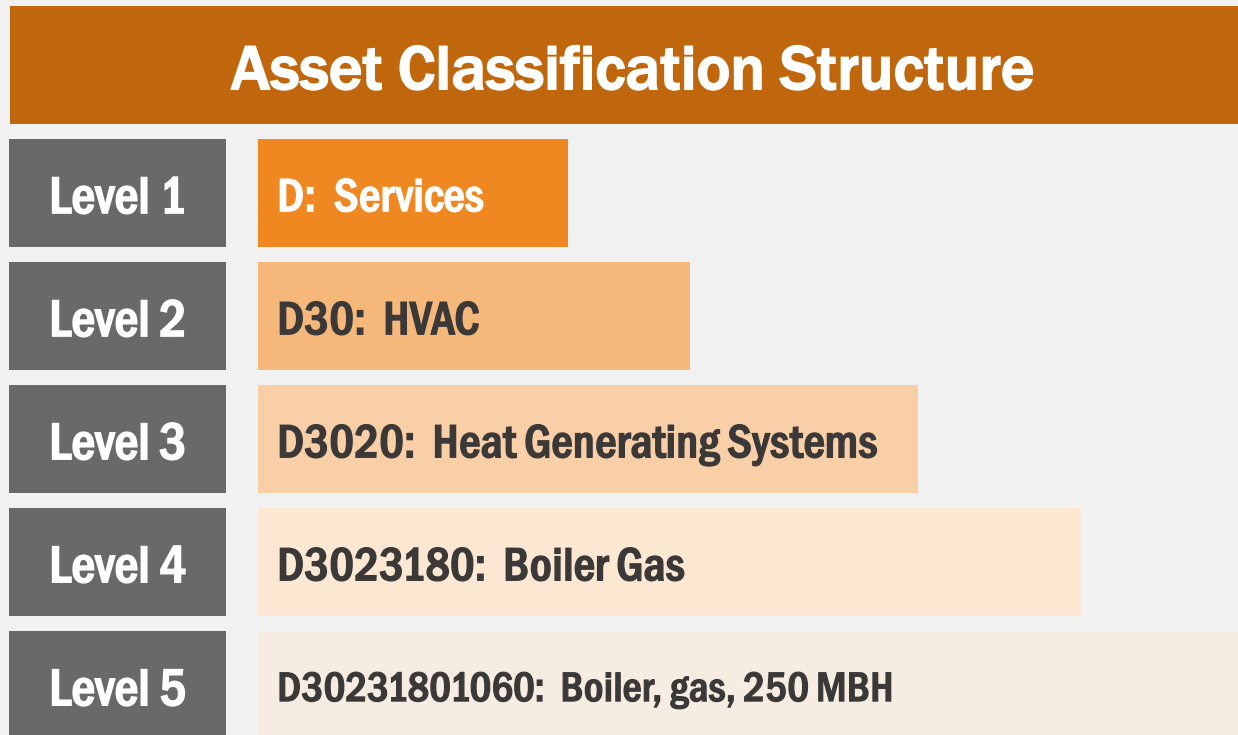
L1

F: Special Construction & Demolition

L1

G: Site Work

UC's Five-Level Asset Classification Framework



UC's Real Property Asset Catalog (Levels 1-3)

A: Substructure

A10-Foundations

A1033-Slab on Grade

B: Shell

B10-Superstructure

B1013-Floor Construction

B20-Exterior Enclosure

B2013-Exterior Walls

B2023-Exterior Windows

B2033-Exterior Doors

B30-Roofing

B3013-Roof Covering

B3023-Roof Opening

C: Interiors

C10-Interior Construction

C1013-Partitions

C1023-Interior Doors

C1033-Fittings

C20-Stairs

C2013-Stair Construction

C2023-Stair Finishes

C30-Interior Finishes

C3013-Wall Finishes

C3023-Floor Finishes

C3033-Ceiling Finishes

D: Services

D10-Conveying

D1013-Elevators & Lifts

D20-Plumbing

D2013-Plumbing Fixtures

D2023-Dom. Water Dist.

D2033-Sanitary Waste

D2043-Rain Water Drainage

D2093-Other Plumb. System

D30-HVAC

D3013-Energy Supply

D3023-Heat Gen. Systems

D3033-Cooling Gen. System

D3043-Distribution Systems

D3053-Terminal & Pkg. Units

D40-Fire Protection

D4013-Sprinklers

D4093-Extinguishing System

D50-Electrical

D5013-Elect. Service & Dist.

D5023-Light. & Branch

Wiring

D5033-Comm. & Security

D5093-Other Elect. Systems

E: Equip. & Furnish.

E10-Equipment

E1013-Institutional Equip.

E1033-Vehicular Equipment

E1093-Other Equipment

G: Site Work

G10-Site Preparation

G1013-Site Demo. &
Relocations

G20-Site Improvements

G2023-Parking Lots

G2033-Pedestrian Paving

G2043-Site Development

G30-Site Mechanical Utilities

G3013-Water Supply

G3063-Fuel Supply

G40-Site Electrical Utilities

G4013-Electrical Distribution

G4023-Site Lighting



Real Property Catalog: Level 5 Asset and Cost Association

