

Capital Renewal and Deferred Maintenance

APPA Facilities Institute September 2023

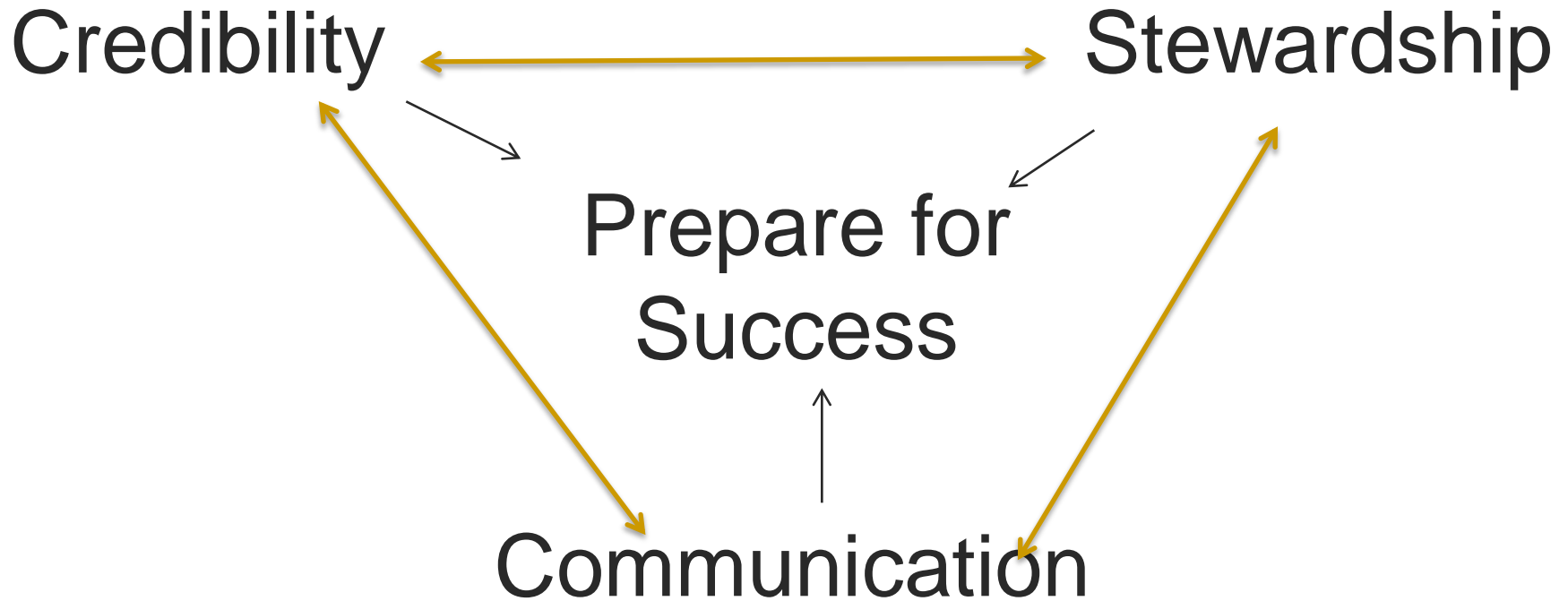
Steve Kraal
Senior Associate Vice President (retired)
Campus Planning and Facilities Management
The University of Texas at Austin

Getting Started or Maintaining Progress

Focus will be on Capital Renewal/Total Cost of Ownership, however...

- What do you think will be, or is your biggest, challenge to starting or maintaining a CR/TOC program?

Program Infrastructure



[Stewardship]

“The careful and responsible management of something entrusted to one's care”

Positive Traits

- Innovation
- Inclusive
- Team Player
- Communication

Not So Positive

- Status Quo
- Ownership
- Exclusive
- Control

[Stewardship – Risk Factors]

- Building Age Profile
- First cost vs. durability
- Absence of life cycle funding
- Competing institutional priorities
- Changing Climate

Stewardship - Managing Risk

Roles and Responsibilities

The Institution

- What comprises risk
- Acceptable levels of risk
- Resources provided for mitigation

Facilities Management

- Identify and communicate facility risks
- Outline solutions and costs
- Insure effective implementation

Stewardship

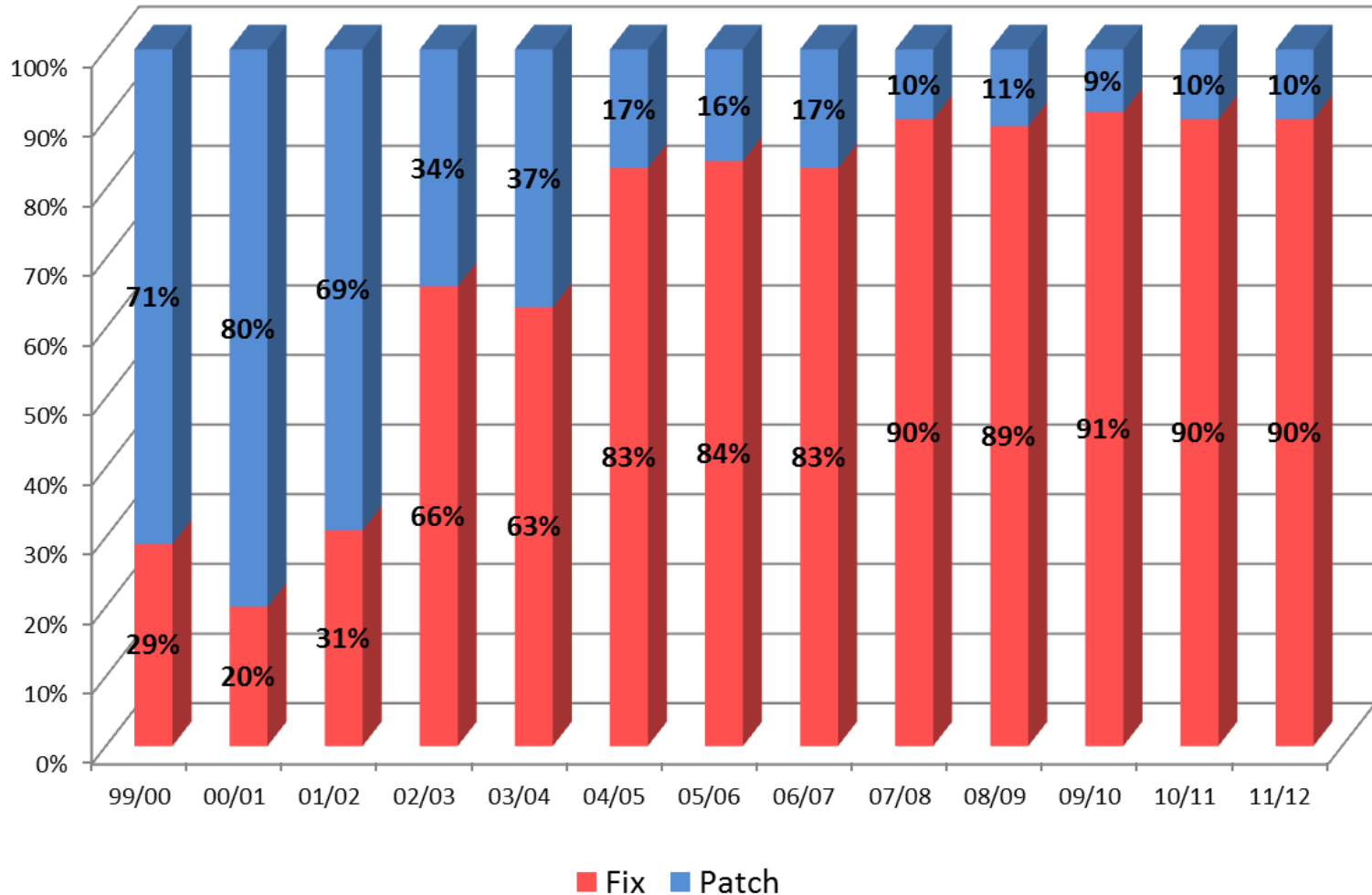
Effective Use of Funding

Opportunities

- ❖ Improvement in Facility Condition
- ❖ Outside inspections
- ❖ Reduction in operational expenditures

Performance Metrics

Effective Use of Funding



[Communication]

Your stakeholders include:

- Academic/Research Faculty
- Students
- Finance/Budget Office
- Governing Board
 - Institutional
 - State-wide
- Facilities staff

[Stakeholders]

Possible Areas of Nonalignment

- Risk Tolerance
- Risk Factors
- Time Frame – long vs short
- ROI/Financial Impact
- Tolerance for Interruptions

[Communication Strategies]

- Be consistent in the message
- Use terms and definitions that make sense to your institution
- Focus on specific audiences
- Identify how they benefit
- Keep it simple, bumper sticker
- BE PATIENT

[Data]

- The infrastructure of your program
- Quality determined by validity and reliability
- The importance of skepticism

Data and Analysis

Data → Information → Knowledge → Wisdom

- Ask questions, beginning with you and your organization
- Find out what questions your stakeholders have
- Use the data that you have before gathering more
- Take advantage of the Pareto Principle (80/20 rule)

[Data and Analysis]

Where can you get data?

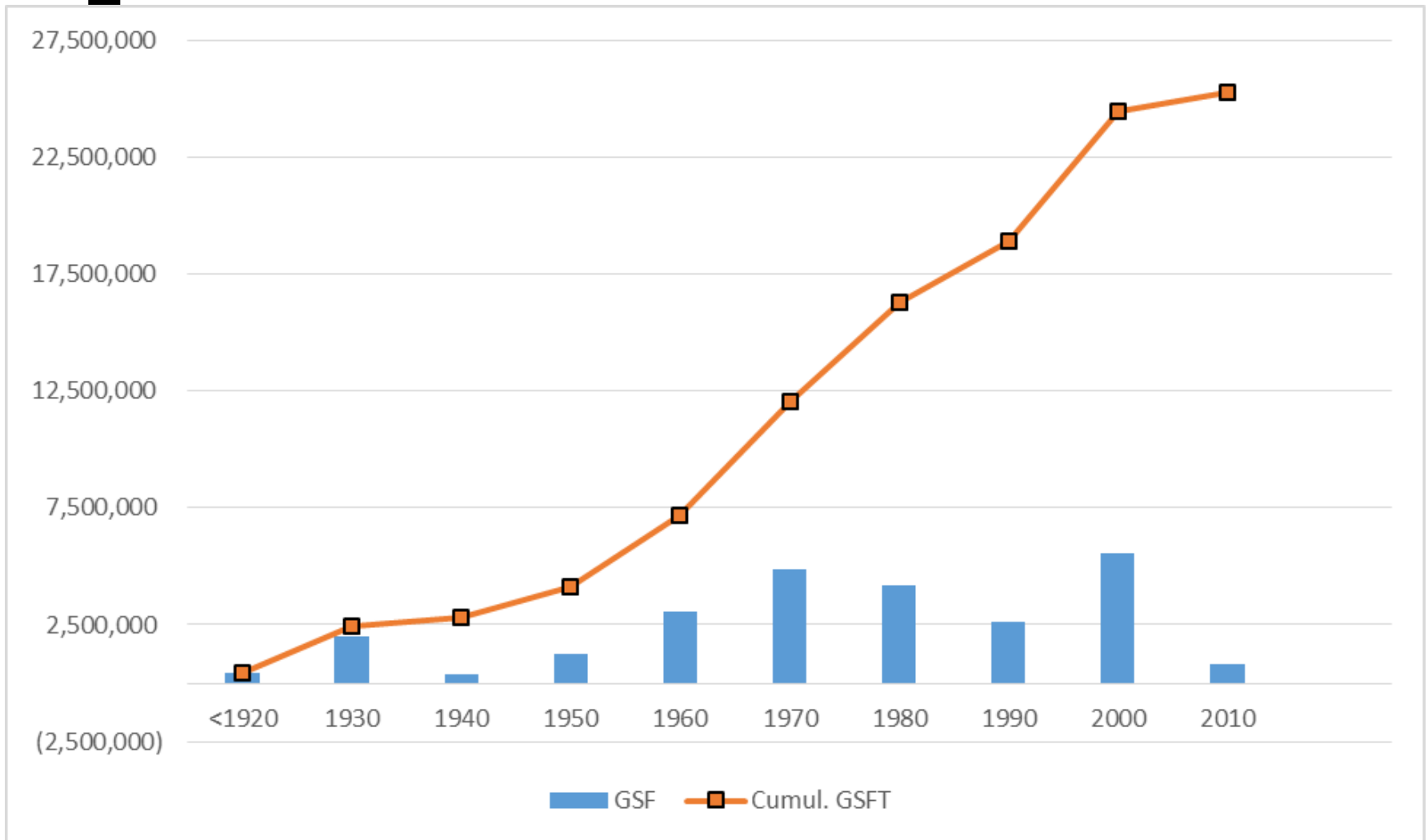
- ✓ Building inventory
- ✓ Annual Financial Report
- ✓ Institutional Studies
- ✓ Campus History
- ✓ Floor Plans
- ✓ Design and Construction records

Useful Starting Points

- What don't you know, or wish you knew more, about your facilities?
- What do you know that your campus would find useful?
- What do you and your stakeholders need to understand better?

Getting Started

A Journey of 1000 miles begins with...



Assessing Capital Renewal Needs

Three basic approaches:

- ❑ “Rule of Thumb” – based on a percentage of replacement value(not capital investment), primarily a funding model. **This is not depreciation**
- ❑ Predictive modeling – determination of future funding requirements based on building system life primarily a statistical analysis
- ❑ Condition or Deficiency-Based – comprehensive physical inspection performed on regular cycles, identifying building system functionality and cost

[Comparison of Approaches]

University of Texas at Austin
Cost to maintain current facility condition

<u>Approach</u>	<u>Outcome</u> <u>(\$ per year -50 yrs)</u>
Rule of Thumb at 2.5%	\$55M
Condition Assessment	\$45M
Predictive Life Cycle	\$50M

Condition Index Clarified

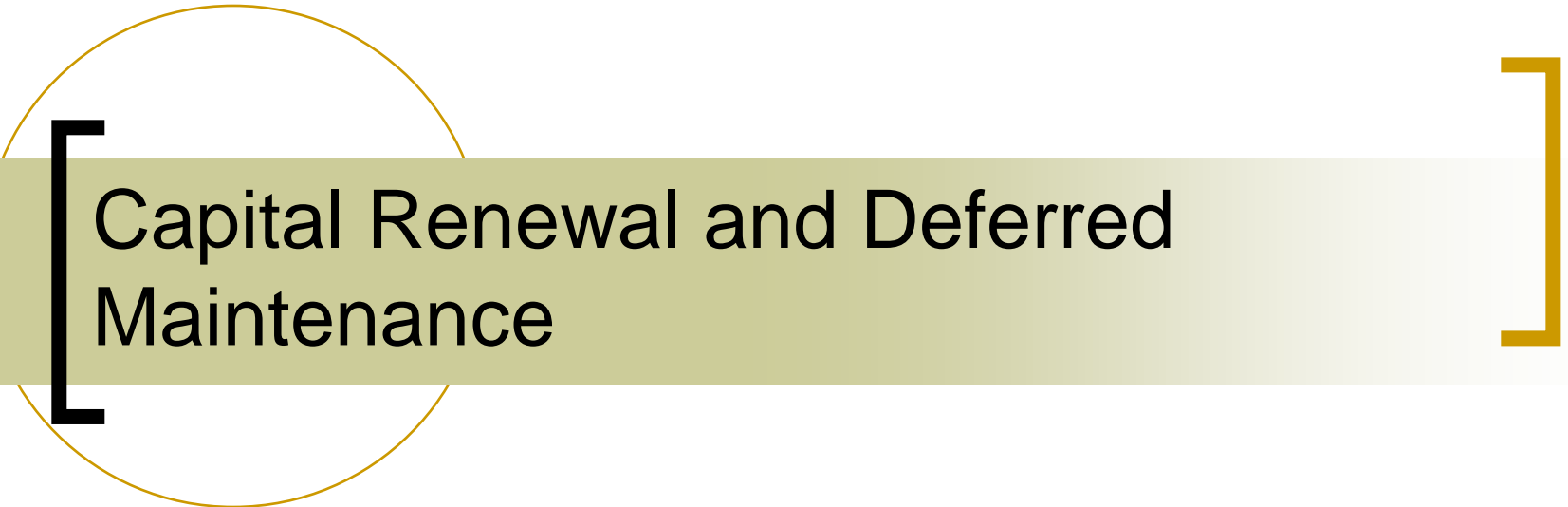
- It is a ratio of reinvestment vs. capital replacement cost
- It's not an indicator of operational capability
- No research on the validity of FCI ranges
- Provides value as a performance metric
- **It may be an indicator of risk**

[Lessons Learned]

- Be skeptical, validate your data and analysis
- Start small, employ the Pareto Principle (80/20 rule)
- Don't drive using your mirrors, what's ahead is more important
- Develop organizational empathy

Building and Maintaining A Successful Program

- Credibility
- Stewardship
- Communication
- Prepare for Success



Capital Renewal and Deferred Maintenance

Questions, Comments, Observations

Sign-in Sheet & Evaluations

[Overview]

This topic is related to four APPA initiatives

- Total Cost of Ownership (TCO)
- Informatics (D-I-K-W)
- Facility Performance Indicators (FPI)
- Body of Knowledge (BOK)

[Resources]

Stewardship

- ◆ <https://waywardjourney.com/2014/08/13/are-you-a-good-steward-or-a-bad-steward/>

Building Systems

- ◆ <https://arc-solutions.org/wp-content/uploads/2012/03/Charette-Marshall-1999-UNIFORMAT-II-Elemental-Classification....pdf>

Resources

Informatics

- <https://www.appa.org/wp-content/uploads/2019/04/20160630APPAFacilitiesInformaticsMaturityMatrixTechnicalReport-4.pdf>

Facility Performance Indicators

- <https://www.appa.org/facilities-performance-indicators-fpi/>

[Resources]

Body of Knowledge

- <http://appa.org/BOK/index.cfm>

Total Cost of Ownership

- <https://www.appa.org/facilities-manager/an-introduction-to-total-cost-of-ownership/>

Resources (APPA Bookstore)

Campus Investment Package

- Strategic Capital Development: The New Model for Campus Investment
- Buildings...The Gifts That Keep on Taking: A Framework for Integrated Decision Making
- Planning & Managing the Campus Facilities Portfolio
- Charting a New Course for Campus Renewal (PDF)
- The Facilities Audit: A Process for Improving Facilities Conditions

Resources (APPA Bookstore)

- 1996 Foundation to Uphold
- 1998 Charting a New Course for Campus Renewal
- The Decaying American Campus: A Ticking Time Bomb