

Facilities Investments are Risk-based Investments

**Finance and Facilities Leadership Workshop
September 23, 2018**

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**So if facilities investments are
risk-based investments...**

**...who's defining the
institutional risk tolerance?**

Creating a **SHARED CONTEXT**

for Value-Based Collaboration
& Decision Making

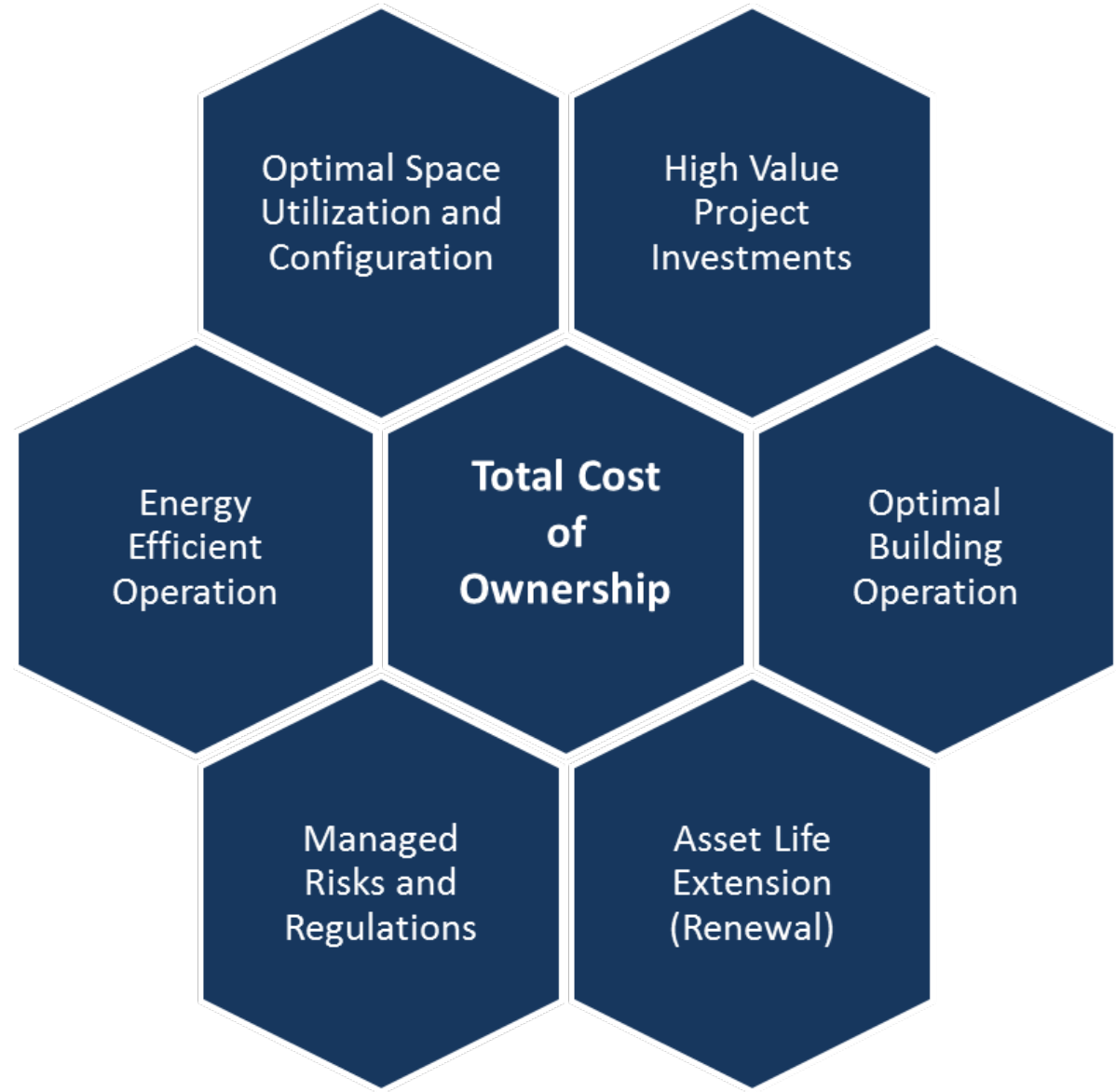
BY DONALD J. GUCKERT, APPA FELLOW,
AND JERI RIPLEY KING

How do you succinctly communicate the breadth, complexity, and forward-thinking approaches that are necessary for facilities management organizations to operate in today's complex and ever-changing environment? Recently, we were asked to do just that here at the University of Iowa Department of Facilities Management. The assignment was to develop the "physical asset management" portion of a short presentation that would be used to help external audiences understand institutional services.

We were tempted to describe our menu of services and offer overviews of our custodial care, maintenance services, grounds care, utilities production and distribution, energy management, space management, project management, master planning, and other areas.

Depending on the audience, we might add internal support services such as communications, accounting, information technology, human resources, safety, and other "life support services" critical to the effective operation of a facilities management organization.

The natural tendency in our business, as with most businesses, is to describe our work in a narrow context often bounded by the organization charts that bring structure and order to our worlds. However, this approach would not really capture the



Main Types of Business Risks

- Compliance Risk
- Operational Risk
- Financial Risk
- Reputational Risk
- Strategic Risk



Facilities Related Risks

Ensuring Continuity of Operations

Protecting Physical Assets

Protecting Research Assets

Protecting Personal Assets

Managing Indoor Air Quality

Ensuring Safe Drinking Water

Ensuring Healthy Environments

Complying with Gov't Regulations

Complying with Building Codes

Preparing for Catastrophic Events

Managing Fire & Life Safety Systems

Managing Building Security Systems

Maintaining IT Operations

Completing Construction On Time

Managing Claims & Disputes

Mitigating Future Operating Costs

Managing Energy Performance

Ensuring Personal Safety

Understanding Facilities Risks

- Capital Project Management
- Building Operations & Maintenance
- Utilities Procurement, Production & Distribution

Capital Project Delivery

High Risk Industry

- Code violations
- Delayed project completion
- Business continuity interruption and interferences
- Safety of workers and the public
- Public procurement requirements
- Weather and unforeseen conditions
- Claims and disputes
- Courts, arbitration and legal variability

Managing Investment Decisions

A principal responsibility of an owner's project manager is to manage the decisions that guide design and construction efforts. (i.e. Manage the “connection points” of the institution)



Competing Goals

Project Manager wants...

Lower Project Cost
Delivered in Budget
Shortest Delivery Time
High Quality
Clear & Complete Documents
Program Driven Design

Operating Manager wants...

Lower Operating Cost
Change Order Customized
Long Term Performance
Perfection
Clear & Complete Standards
Functional Driven Design



Aligning Project Goals

Misalignment of goals creates risk

- How are the goals prioritized?
- Who determines that priority?
- How are results measured?



Aligning the Decision Framework

What is the guiding framework for decision-making?

- First Cost?
- Total Cost of Ownership?
- Stewardship?



Project Manager as Budget Officer

Project managers essentially perform as budget officers.

They determine through their management of project decisions how much future funding will be committed by the institution for operations and renewal.



Investment or Expense?

Short-changing project management staffing will squeeze out the stakeholder engagement.

Under-skilling and staffing exposes an owner to unmanaged industry-inherent risks.

Understaffing project management efforts may increase financial exposure and cost owners many times over each year.

Building Operations & Maintenance

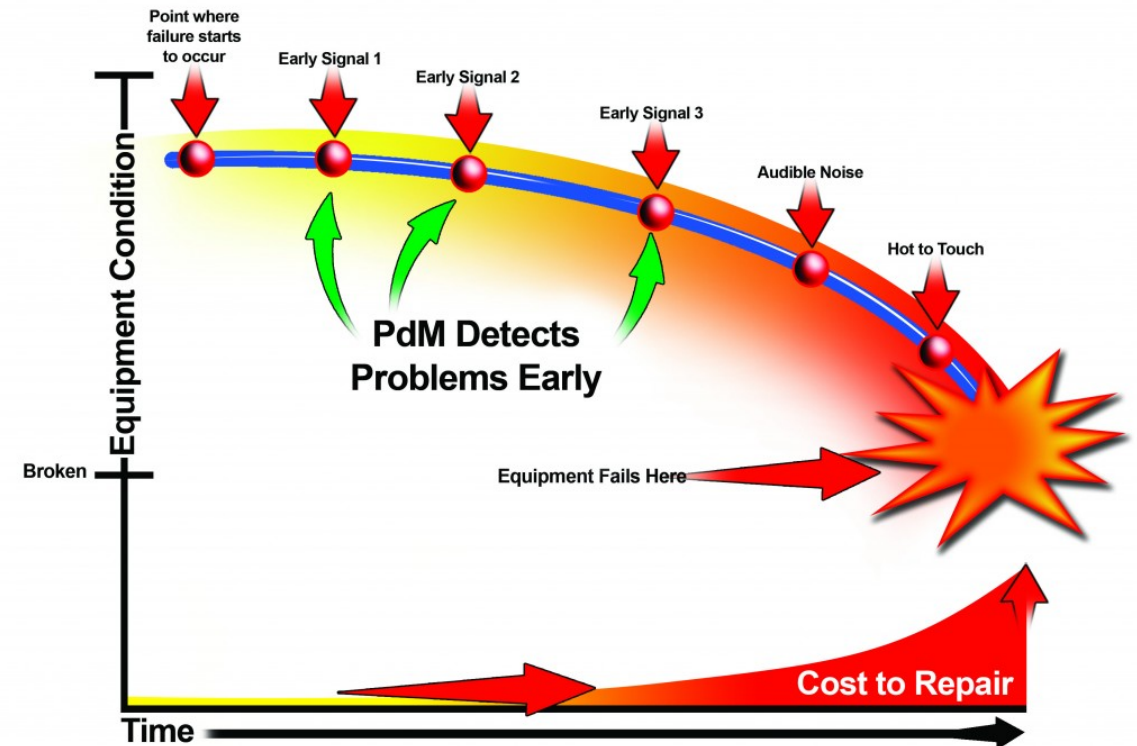
Competition Among Risk Investments

How do you evaluate and prioritize your facilities investments?

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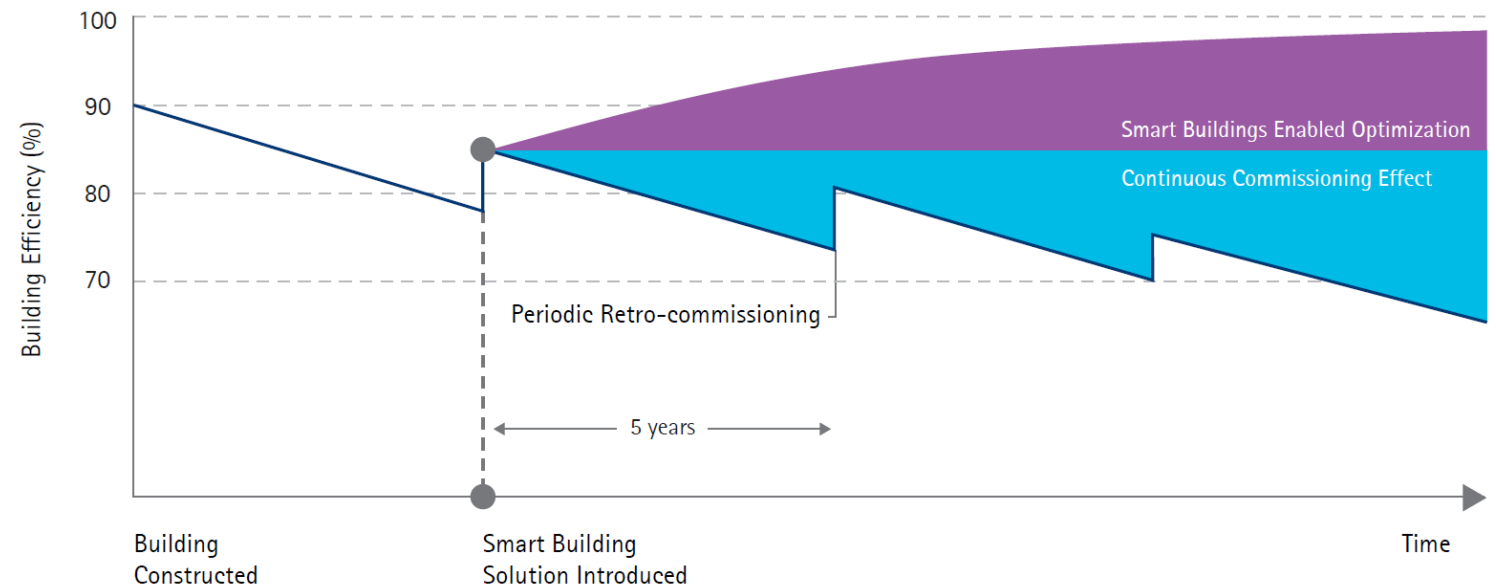
- Building Systems Reliability



Competition Among Risk Investments

How do you evaluate and prioritize your facilities investments?

- Building Systems Reliability
- Energy Performance



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- Fire & Life Safety
- Access & Security



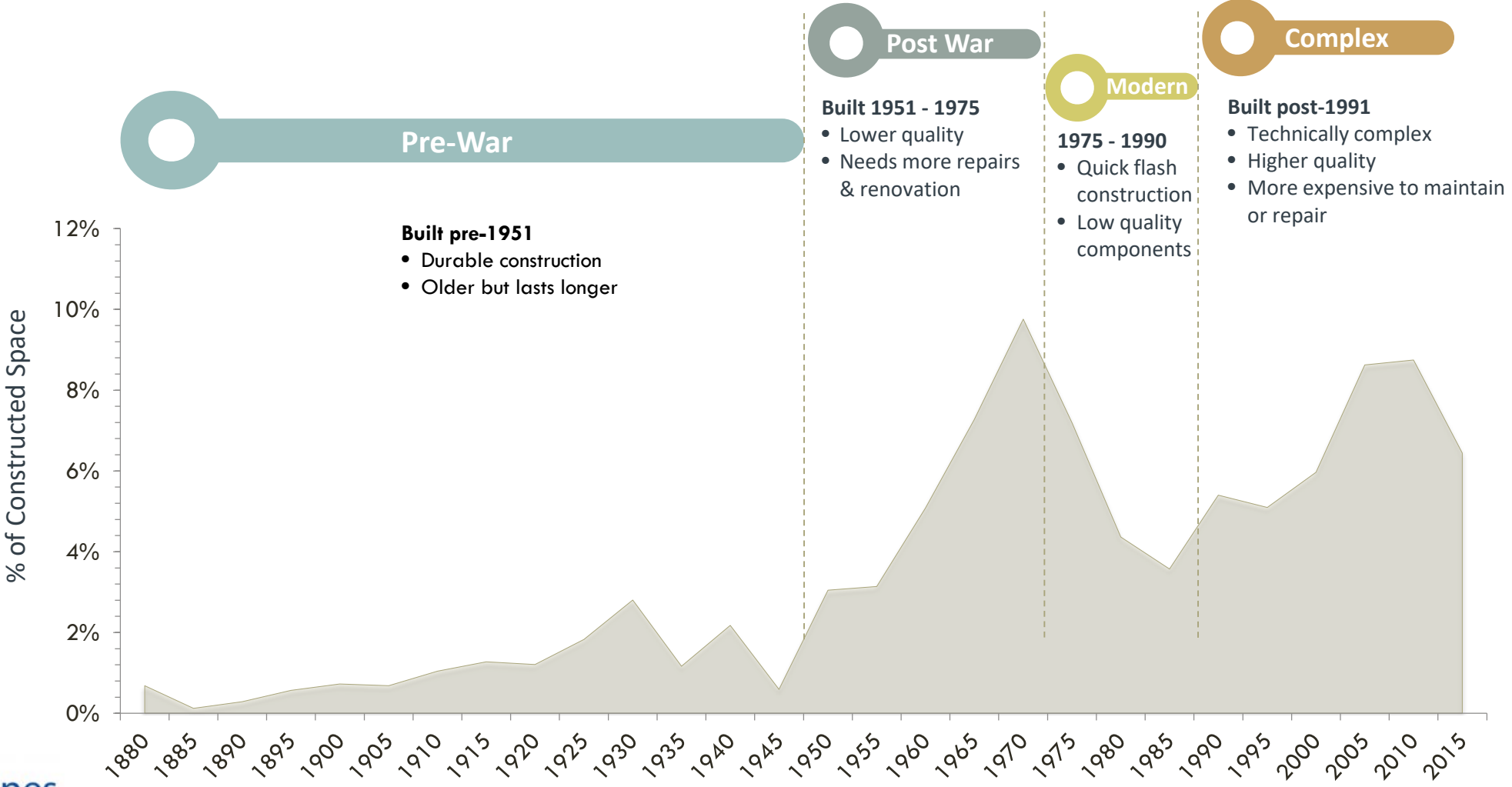
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How do you evaluate and prioritize your facilities investments?

- Building Systems Reliability
- Energy Performance
- Fire & Life Safety
- Access & Security
- Facilities Asset Renewal

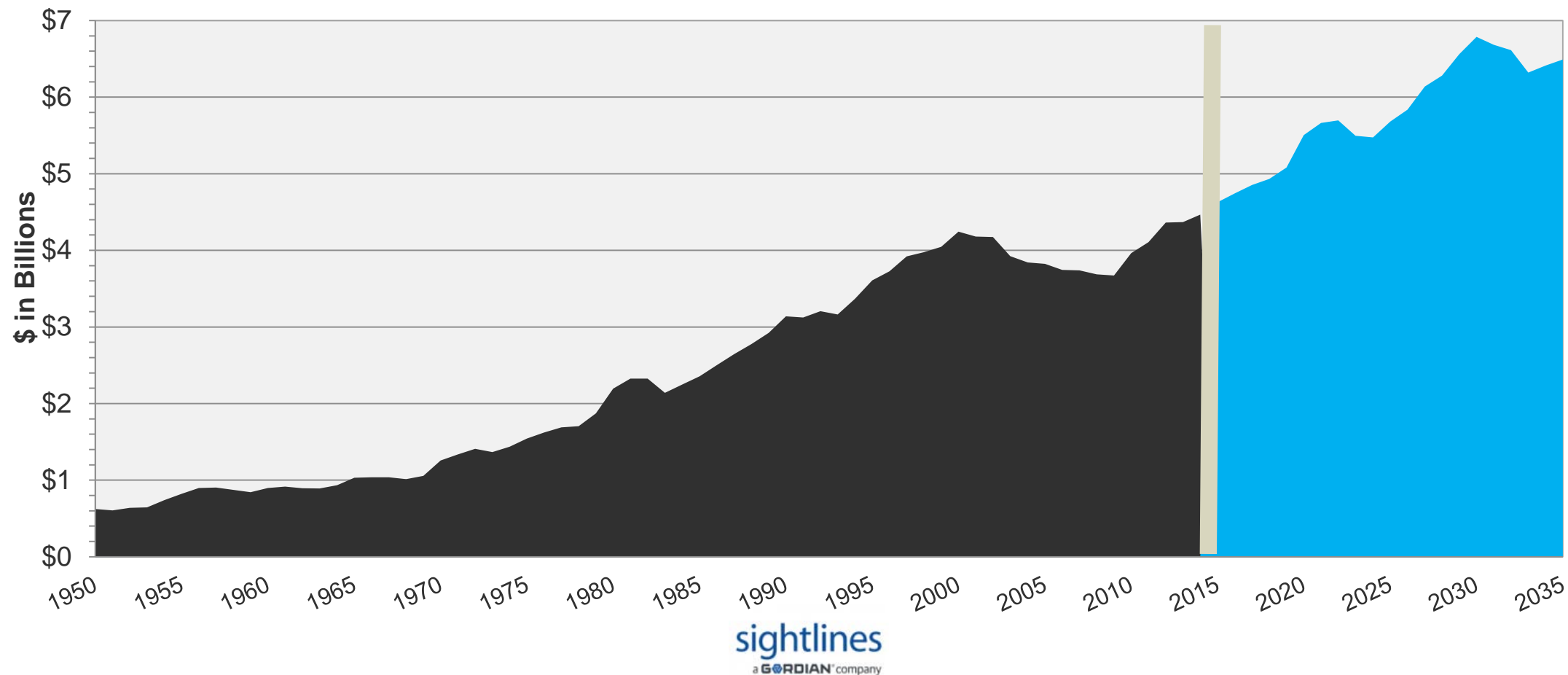


Campus Age Drives Overall Risk Profile



Growing Challenge

Total Sightlines Database Need 1950-2035



Utilities Procurement, Production & Distribution

Redundancy

Robustness

Reliability

Firm Capacity

Power

Steam

Chilled Water



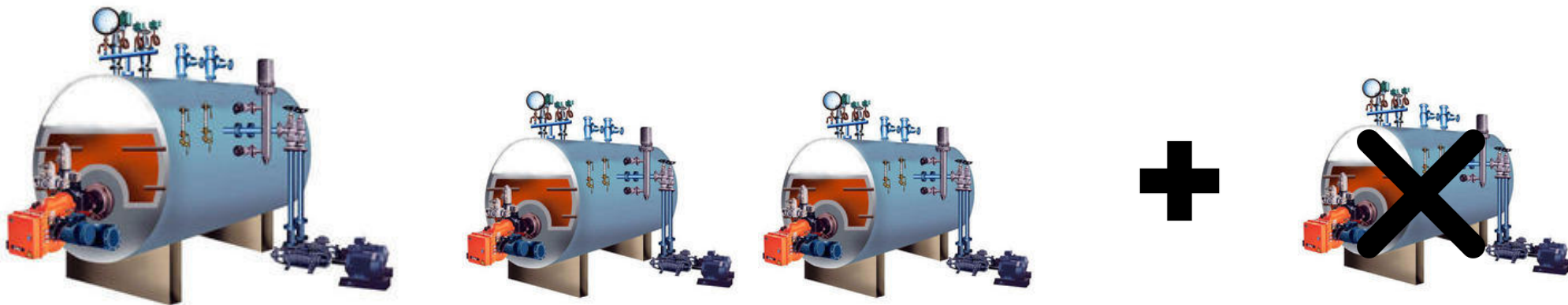
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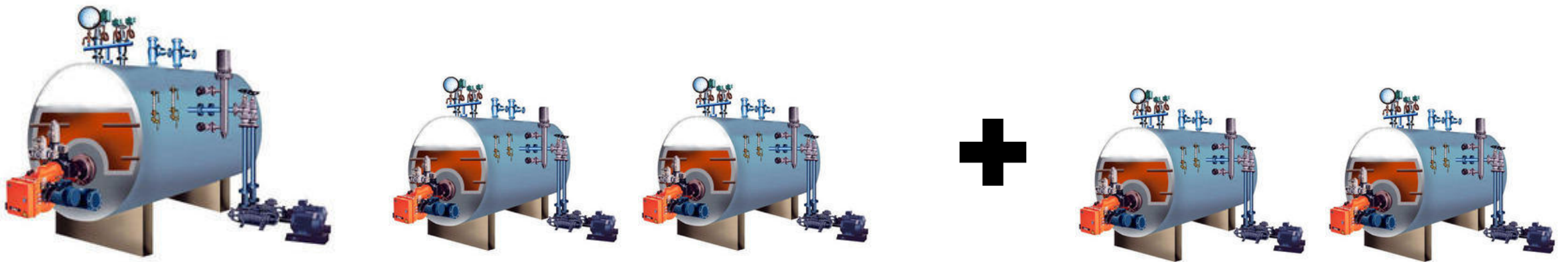
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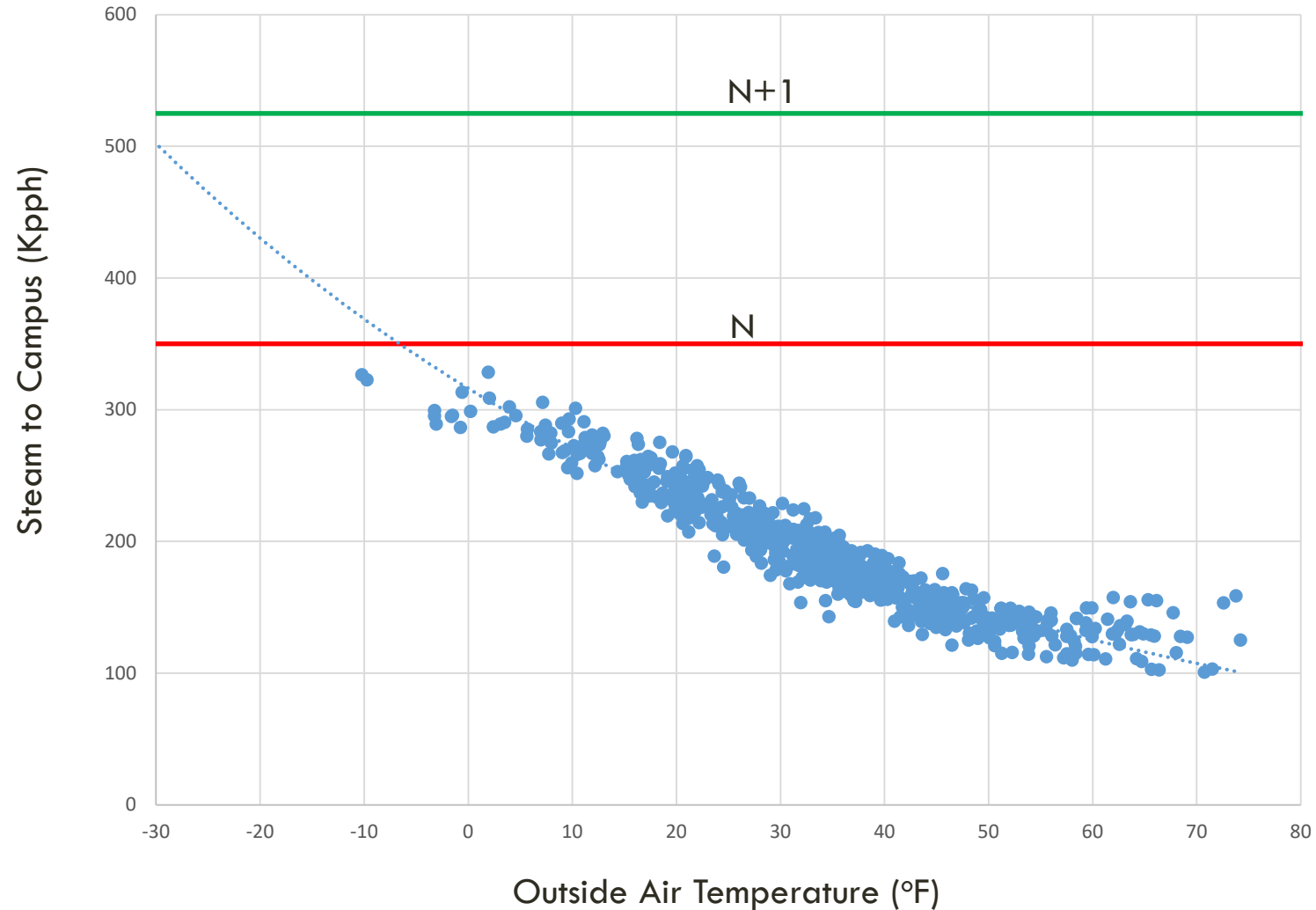
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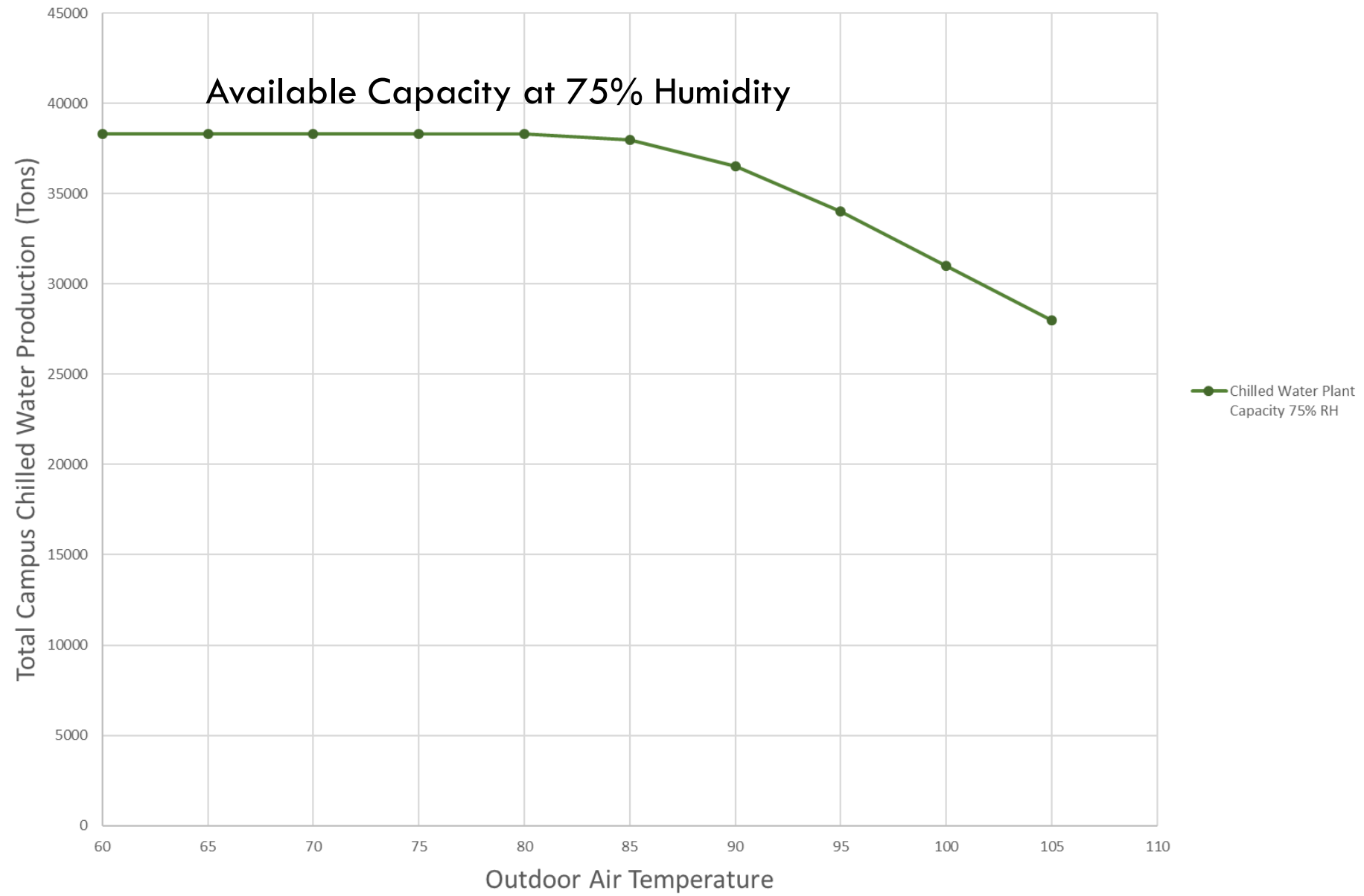
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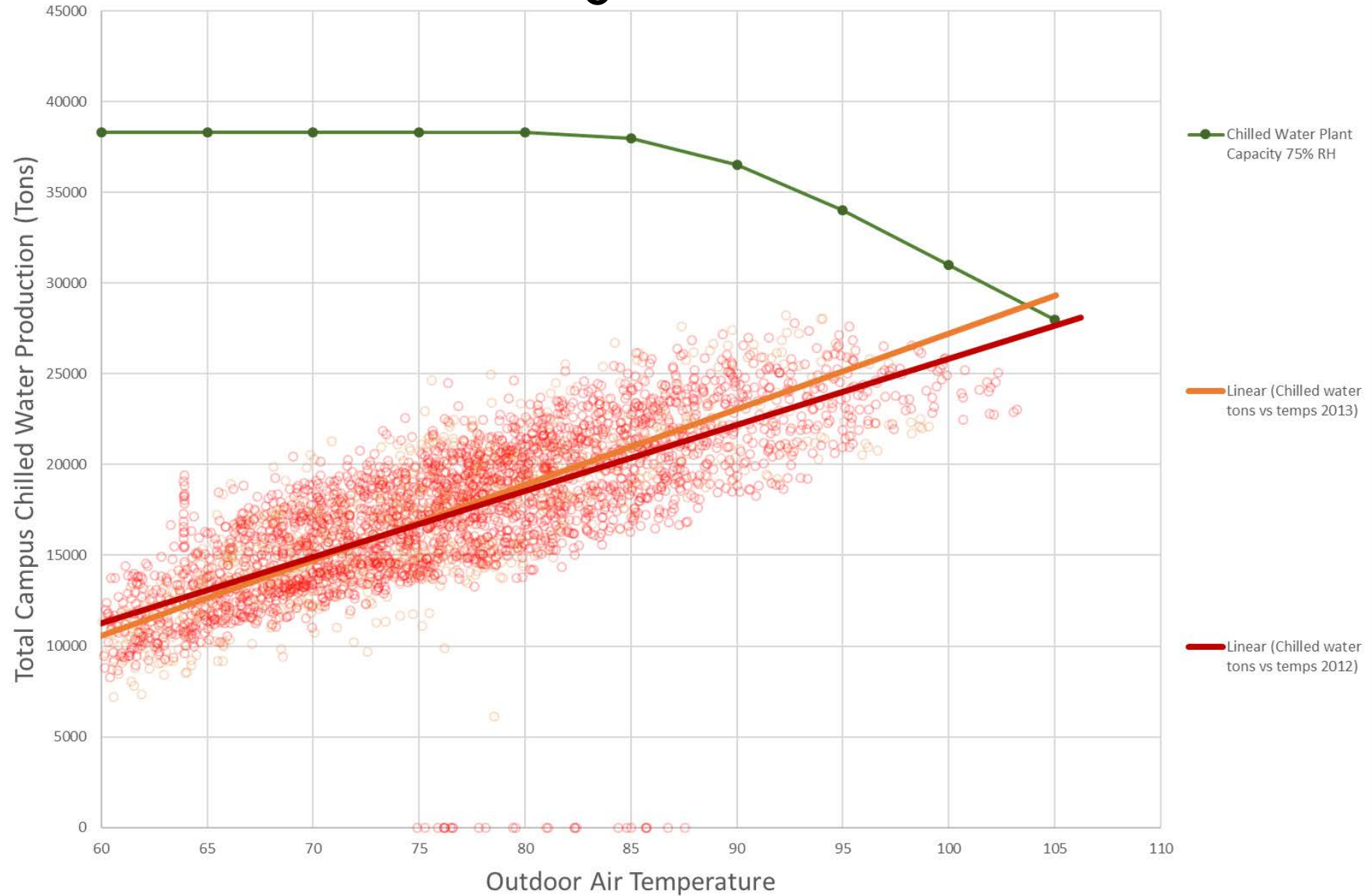
Firm Capacity

Winter steam demand vs outdoor temp 16-17

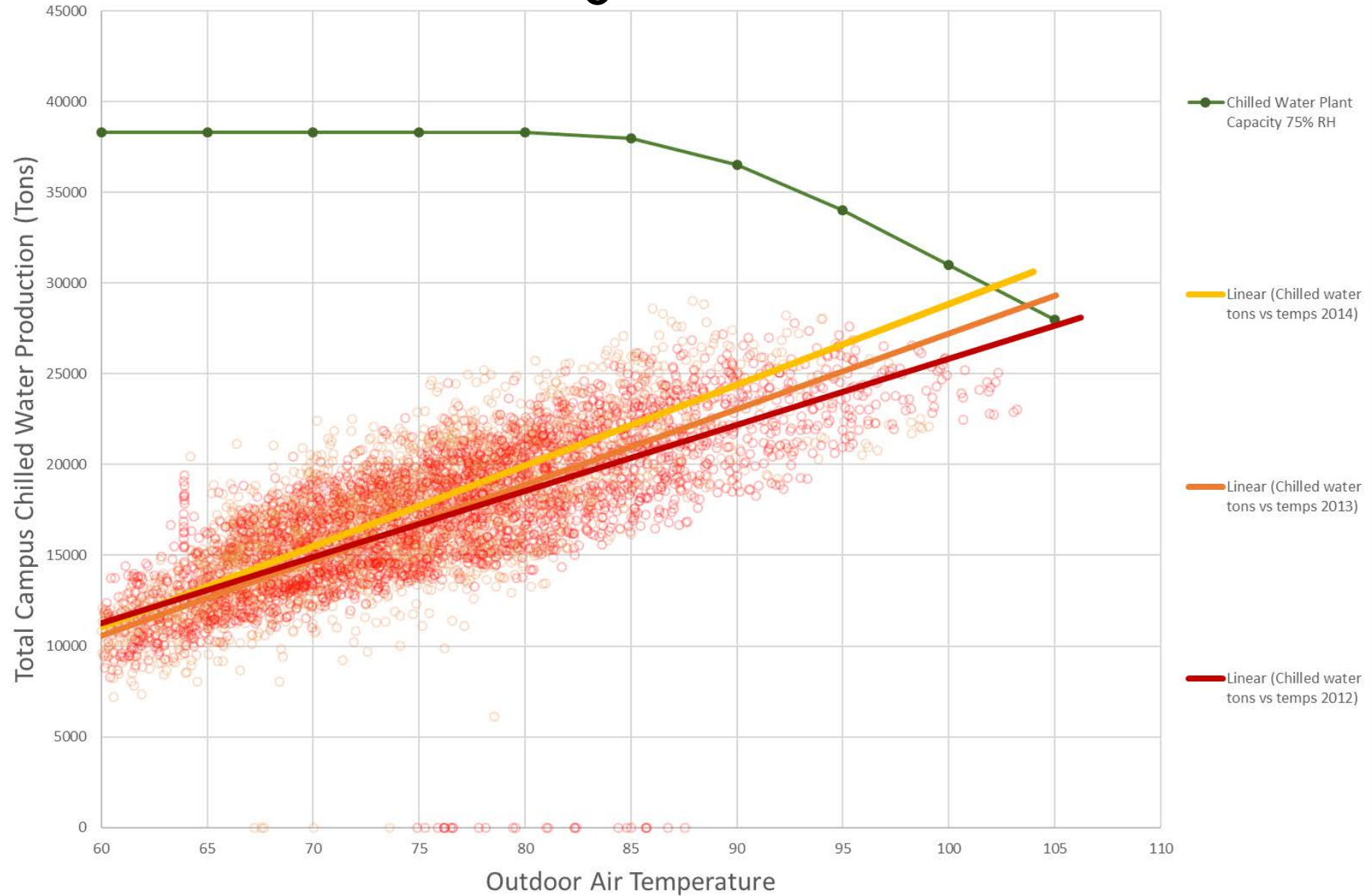




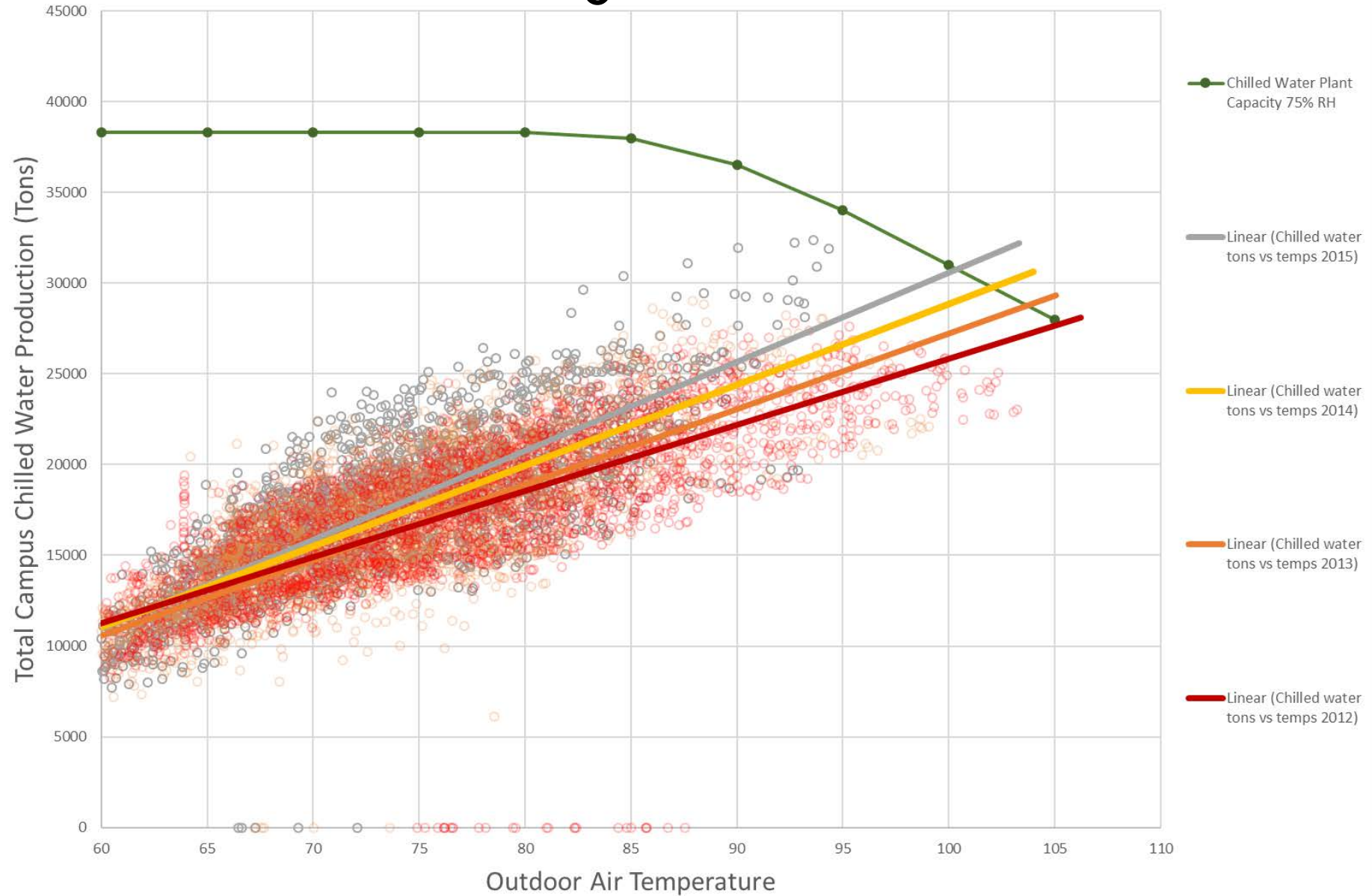
Campus Demand Building Load Curve



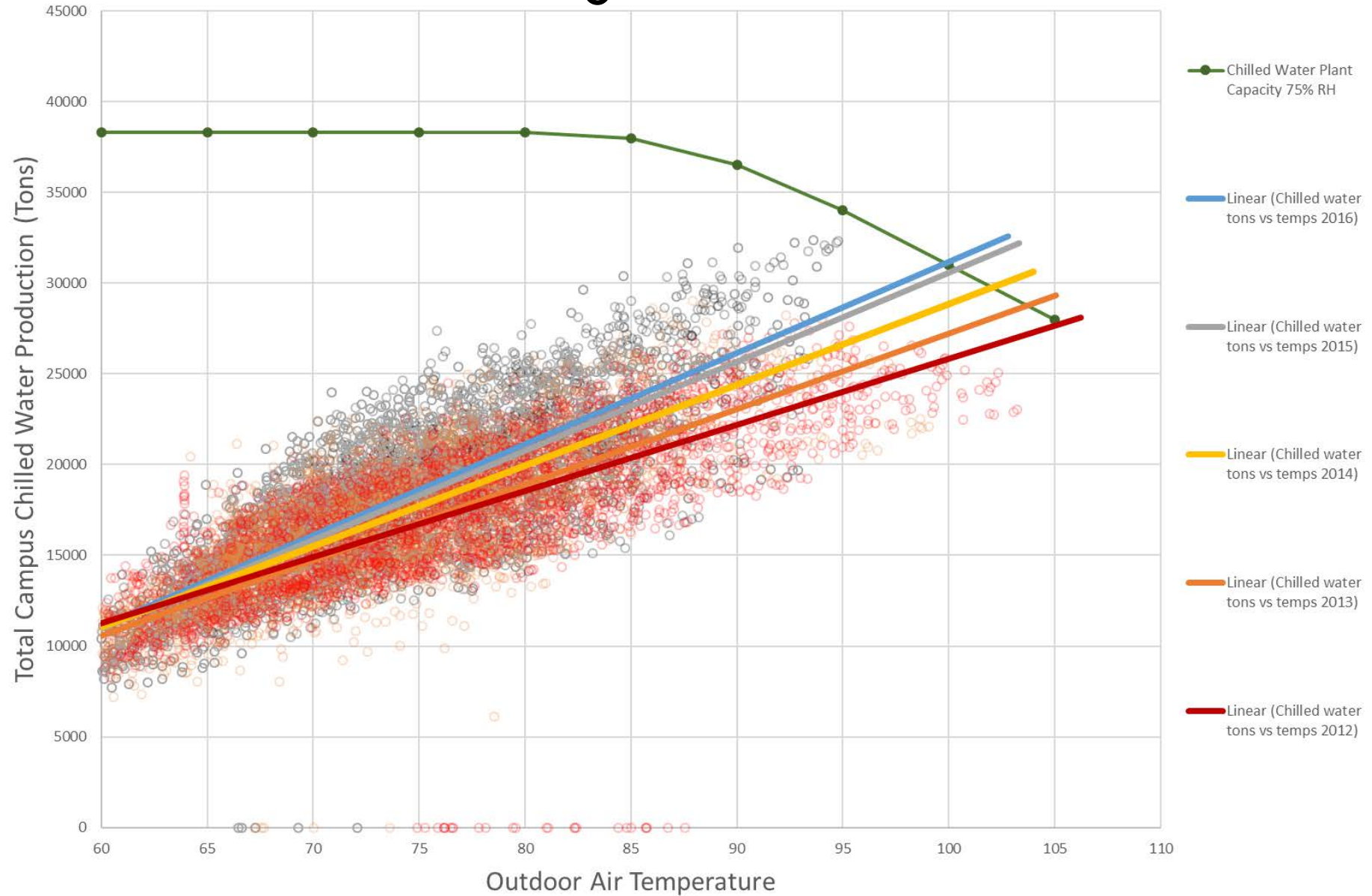
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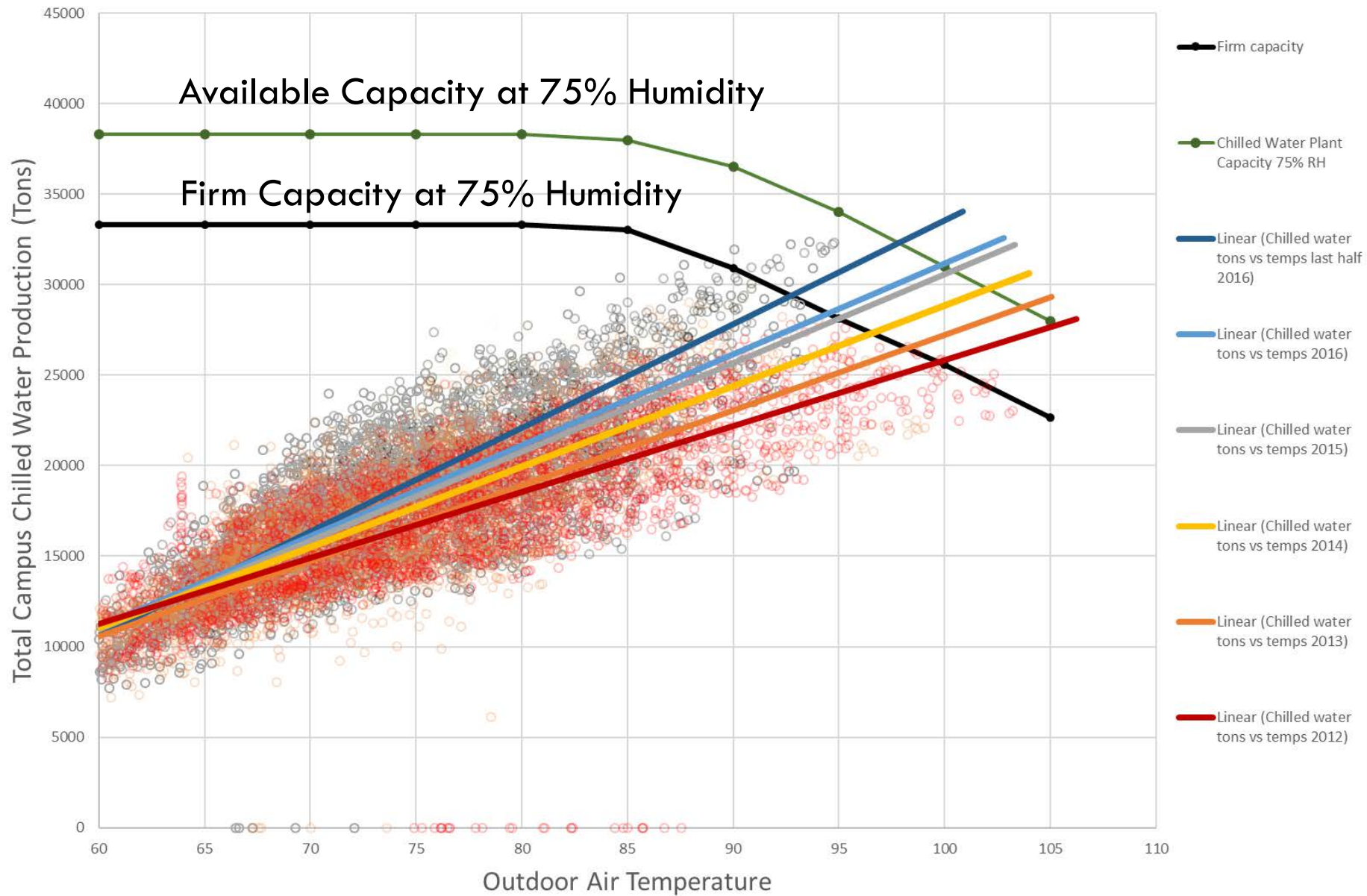
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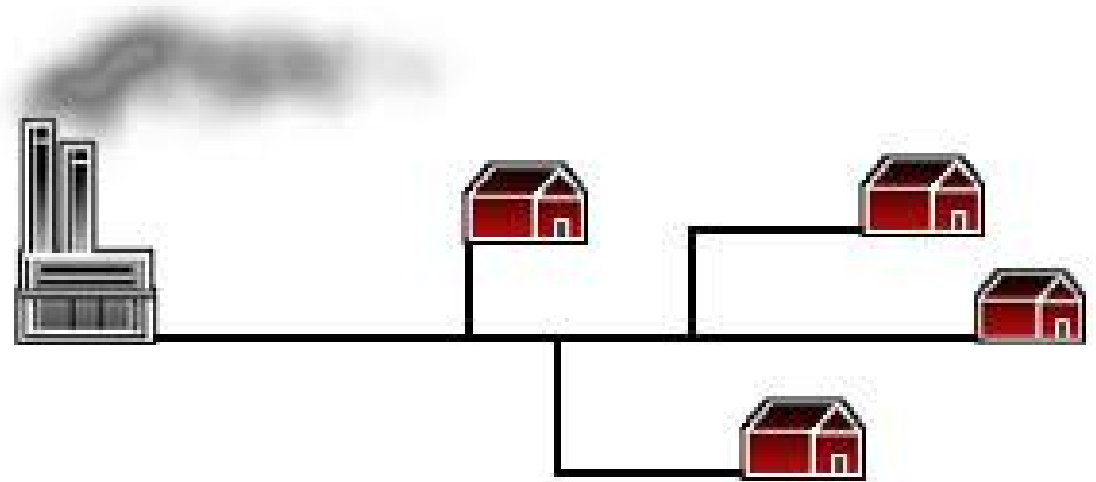
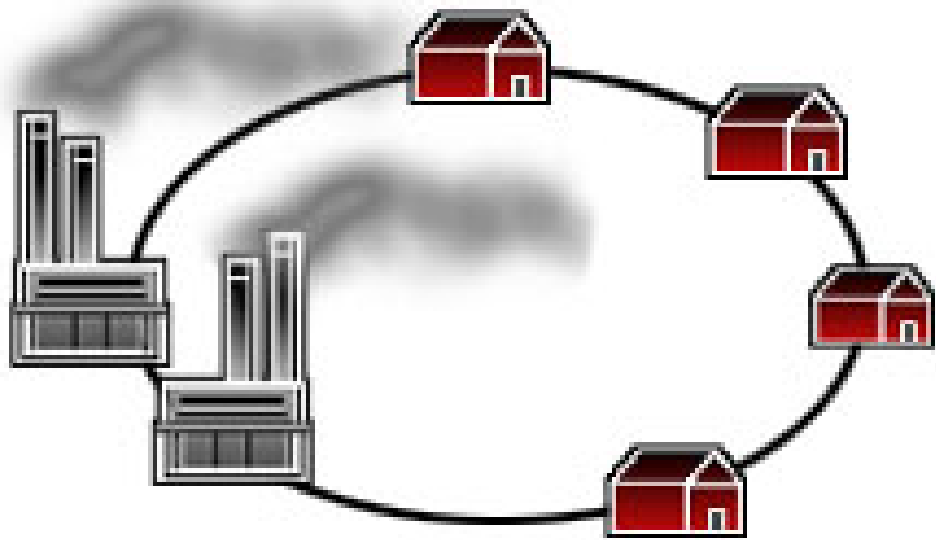


Firm Capacity Chiller Performance Curve



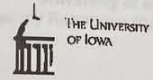


Loop vs. Radial Distribution Systems



Energy Diversity





**UNIVERSITY OF IOWA
FLOOD EMERGENCY RESPONSE PLAN**

January 2016



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Thank You