

# Aligning Standards with Mission: A New Framework for Sustainable Lending

Art Bridges

**Welcome!**  
Anne Kraybill





**Myth, Risk, and Reality: Climate  
Control in the Era of Sustainability**

**Caitlin Southwick**

Founder of Ki Culture and Sustainability in  
Conservation and Managing Director of  
Ki Futures



Art  Bridges

**Break**

10:15 – 10:30 am

# Art Bridges

Shifting Standards: Case Studies  
from the Field





# Shifting Standards: Case Studies from the Field

## Panel Discussion



**Mike Brown**

Head of Campus Sustainability  
Portland Museum of Art



**Amber Kerr**

Head Conservator and Senior  
Paintings Conservator  
Smithsonian American Art Museum's  
Lunder Conservation Center



**Adam Levine**

Edward Drummond and  
Florence Scott Libbey  
President, Director, and CEO  
Toledo Museum of Art



**Vanessa Applebaum**

Director of Conservation  
Toledo Museum of Art



**Jill Sterrett**

Arts and Cultural Heritage  
Advisor



**Anne Kraybill**

CEO, Art Bridges  
Moderator



## WINS FIRST PLACE ASHRAE TECHNOLOGY AWARD!

ased to announce that Taylor Engineering won the 2018 First Place National ASHRAE Technology Award for our HVAC the San Francisco Museum of Modern Art. Steve Taylor and David Heinzerling will be accepting the award at this year's /inter Conference in Chicago. Also keep a lookout for an upcoming ASHRAE Journal article on the details of our unique d cost efficient design!

**SUSTAINABLE BUILDING ADVISOR PROGRAM**

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**SAN FRANCISCO AWARDED WORLDGBC'S "BEST GREEN BUILDING POLICY"**

Alicia Livitt | January 6th, 2012



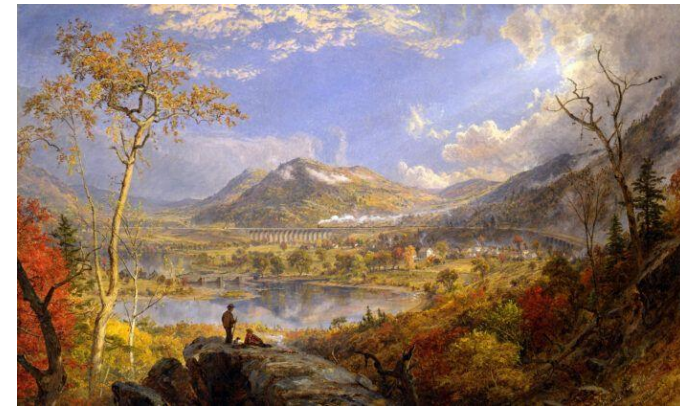
# WHY UPDATE

- Concerns about the actual performance of a 40 year old building and systems in changing environments
  - Heating & Cooling
  - Humidification & Dehumidification
  - Building Envelope
- Competition for scarce operational resources
- No other single piece of equipment upgrade could match impact
- Donors are becoming increasingly aware of our carbon impact and seeking organizations that align with their values



# Case Study: Art Bridges Partner Loan

- Quantifying the tradeoffs
  - Climate profile outside accepted range
  - Dialogue resulted in a new way of measuring risk
  - Integration of conservation risk with mission impact (reach, value)
  - Decision making at senior level for full balance



**TMA works on loan through Art Bridges:**  
Top - Frederic Remington, "Indians Simulating Buffalo"  
Bottom – Jasper Francis Cropsey, "Starrucca Viaduct, Pennsylvania"

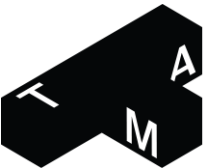


# How TMA Evaluated Risk

**Risk = Chance of Damage x Value Lost**

If Repairable:

**Risk = (Chance x Value Lost x (1- Value Recaptured)) + Cost of Conservation**



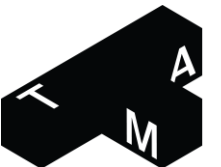
# Risk Calculus: A Case Study

**Risk = Chance of Damage x Value Lost**

If repairable:

**Risk = (Chance x Value Lost x (1 - Value Recaptured)) + Cost of Conservation**

Artwork	Value		
Remington	\$7,000,000	<b>Value Degradation</b>	20%
Hassam	\$2,000,000	<b>Chance of Degradation</b>	20%
Cropsey	\$1,000,000	<b>Value Recaptured</b>	90%
Bierstadt	\$4,000,000	<b>Cost of Conservation (per object average)</b>	\$15,000
<b>Total</b>	<b>\$14,000,000</b>	<b>Downside Risk</b>	<b>\$116,000</b>



# How TMA Evaluated Risk

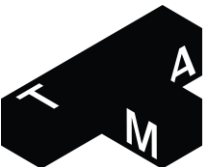
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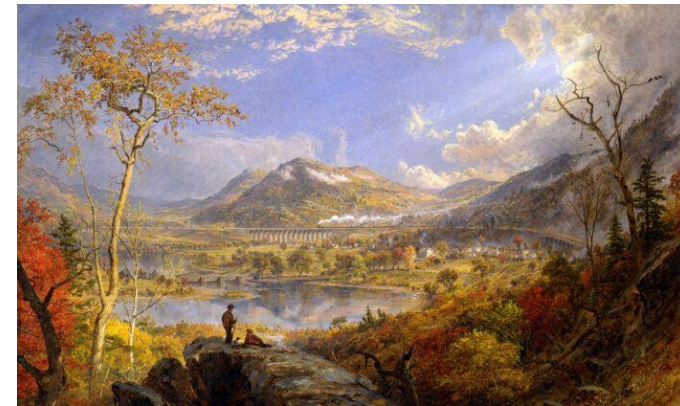
Allows Us to Compare:

- **Risk of Lending vs Risk of Status Quo**
- **Risk per Unit of 'Impact'**



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# Mandated Change...



15% reduction on California's  
already rigorous building requirements

**SF Environment**



NATIONAL ENDOWMENT FOR THE  
**Humanities**

*Rather than trying to meet a textbook target, institutions would be well served by developing strategies designed for your circumstances...that balance effectiveness, preservation, cost and environmental impact.*

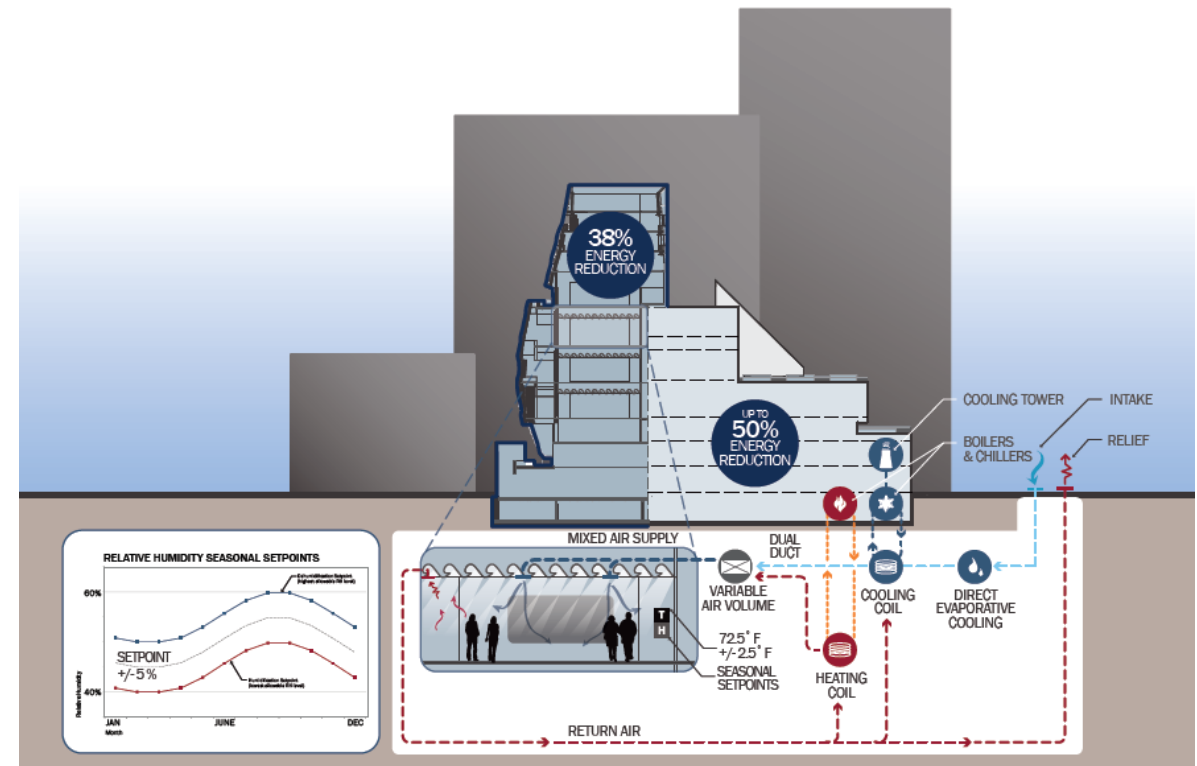
Laura Word, Senior Program Officer

***The Bizot Green Protocol***

Latest refresh: September 2023

## ...& Consensual Change

- 2011 Polled current museum climate and lighting conditions
- 2012 Hosted Sustainability Roundtable at SFMOMA
- 2012 American Institute for Conservation (AIC) summit on climate conditions
- 2013 AAMD ratification of AIC recommendation
- 2014 Internal socialization
- 2014 NEH invitation to speak at American Alliance of Museums
- 2015 Build to new specifications
- 2016 Evaluate.....



# SFMOMA Collections Center



# New ways of sharing a collection

## College and university partnerships



**Medical ethics student from Cal State East Bay  
considering representations of health in art**

- California State East Bay
- San Francisco Art Institute (SFAI)
- California College for the Arts (CCA)
- Mills College
- San Francisco State University
- Columbia University
- UC Berkeley
- Stanford University
- UC Davis
- University of San Francisco

# Building resources - What is needed to implement change?

## Educating

### Educating staff and management

- Ki-Culture Pilot Program on sustainability assessment (2021--2022)
- Getty MCE training on Climate Management Strategies (2024)
- Risk Assessment Training with Head Registrar (2025)

## Building

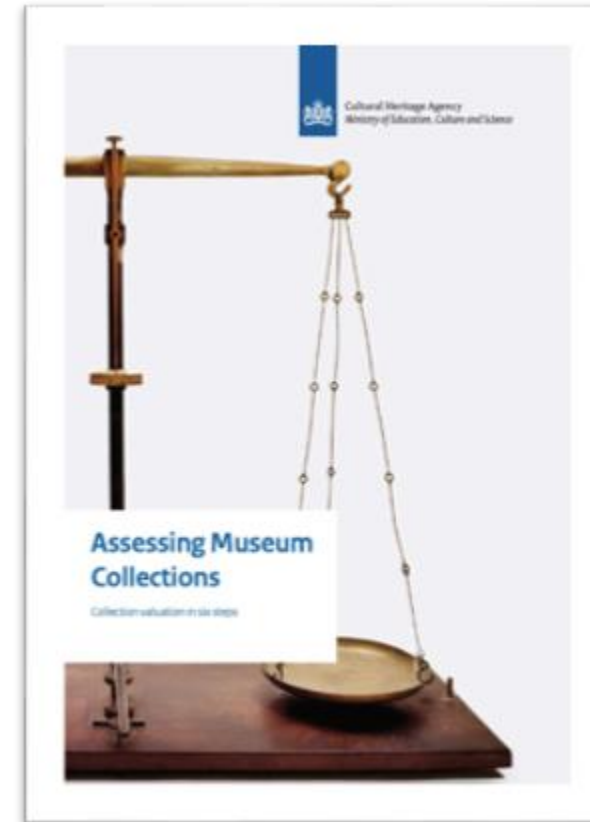
### Building relationships within

- National Collect Program (NCP) Environmental Monitoring Group
- Smithsonian Conservation Council
- Office of Facilities Management and Resources (OFMR)

## Understanding

### Understanding our environmental strategies

- Touring facilities / HVAC - the building envelope & system constraints / strategies
- Meeting with lighting specialists - energy savings with LEDs



<https://english.cultureelerfgoed.nl/documents/2014/01/01/assessing-museum-collections>

# JOURNEY

- Staff buy in
  - Key Leadership staff and notification to the Board of Trustees
- Collect and analyze data about current conditions and facilities
  - Registrars have been collecting climate data in the galleries and art storage for over 25 years, likely longer
- Decide where we would update the parameters
  - Systems in all three buildings are intertwined, however CSP Building was the least stable and the one to focus on
- Select objects to monitor
- Update loan agreements and inform lenders
- Monitor data and collections
  - Continuation of weekly Registrar data collection and emails with Sustainability and Leadership staff, with the addition of documentation by Facilities with Meraki sensors



# STAFF BUY-IN

*Conversations occurred organically but were initiated from recent AAMD conferences attended by the Director*

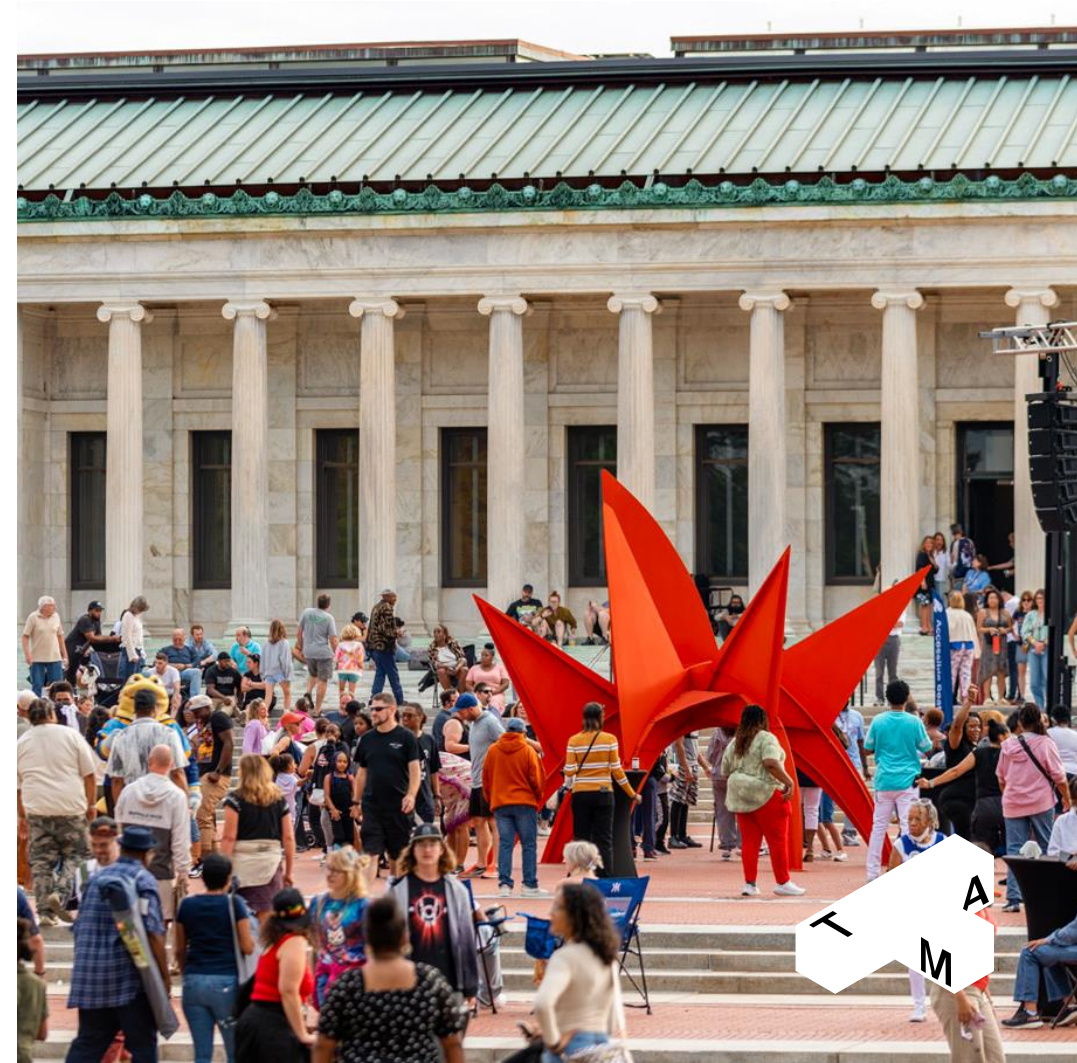
- Director, Deputy Director, Chief Curator, Director of Collections, Director of Campus Sustainability in March 2023.
- Once “green-lit” involvement at all levels from registrars, prep/art handlers, building/facilities, security staff. By November 2023 having our first 1:1 with coaches

*Already had established good pathways for open and honest interdepartmental communication. Without this foundation implementation would have been more challenging.*



# Rethinking Risk at TMA

- Advancing risk management as a practical and understandable framework
- Aligning risk practices with our institutional mission, vision, and values



# How the Field is Shifting

- **Climate:** wider parameters, proofed fluctuations
- **Light:** light budgets, scientific analysis, value assessment
- **Loans\*:** conditions by sensitivity and history, wider parameters, couriers only as appropriate
- **Manage risk, not eliminate at any cost**

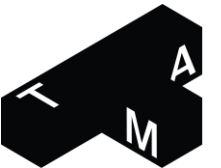


\*Informed by recent sector research on loan specifications and decision-making, such as Taylor & Spangler-Bickell, 2025.

# Psychology of Risk



- “How it feels” vs. “What it is”
- A decision-making framework can shift psychological burdens from individuals to an institutional model



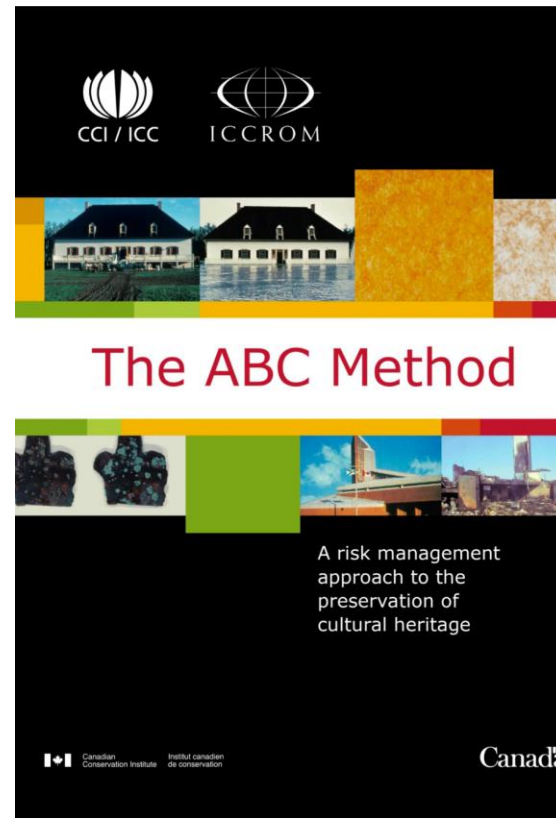
# Implementing change - What does it mean to be sustainable?

- **Establishing new guidelines for environmental monitoring prevention**
  - Evidence-based decision-making
  - Seasonal change and broadening temp & RH
  - Life Cycle Assessment (LCA) of collections - are they meant to last forever?
- **Understanding the collection needs through risk assessment & management**
  - Identifying challenges and reducing risk
  - Avoid establishing broad protocols based on perceived risk
- **Opening communications and being transparent**
  - Establishing training & dialogues across departments
  - Advocating for change and building alliances for sustainability

*“There’s an unspoken but underlying assumption in preventive conservation that our role is to make things last as long as possible...(instead)...We should be in charge of interpreting, explaining, and managing the life expectancy and longevity of objects.”*

Jane Henderson,  
Professor of Conservation,  
Cardiff Univ.

# Risk Assessment (The ABCs) & Robert Waller's 10 Agents of Deterioration



► <https://www.iccrom.org/publication/abc-method-risk-management-approach-preservation-cultural-heritage>

► <https://www.iccrom.org/publication/guide-risk-management>

# Quarterly NEBC Summary Report

## Executive Summary

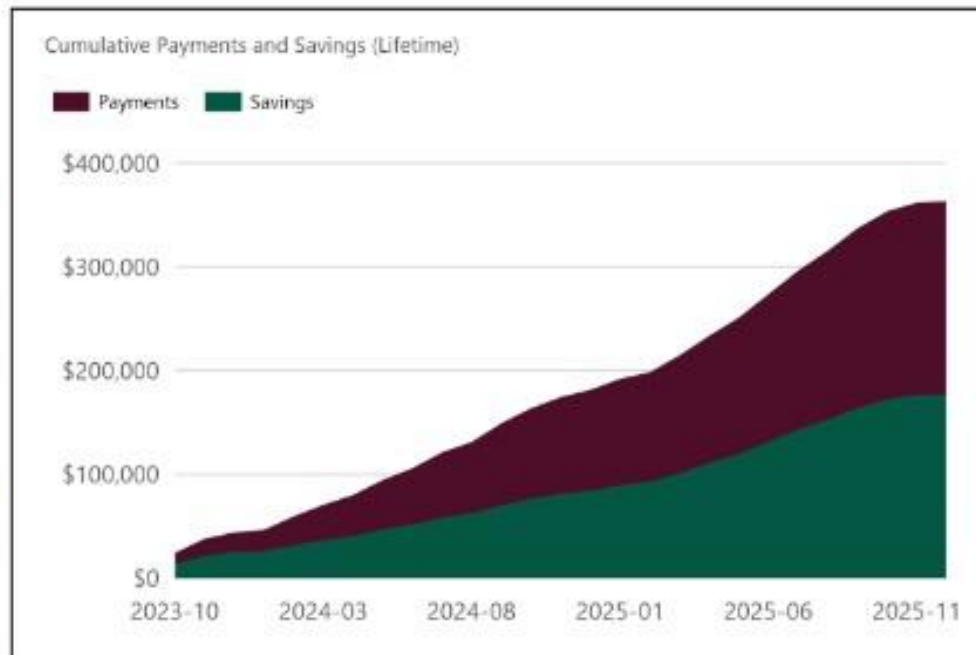
Portland Museum of Art  
03/06/2026



### 2025 Q4



### Lifetime Summary



# Identifying the goal - What changes are needed?

- **Expanding the dialogue**
  - Consensus building and understanding
  - Inclusive conversations and active listening
- **Understanding the challenges**
  - Rigid climate control is expensive and energy-intensive
  - Shifting “one-size-fits-all” to evidence-based solutions for sustainability and collection management
- **Increasing knowledge and Identifying resources**
  - Building cohorts
  - Establishing training



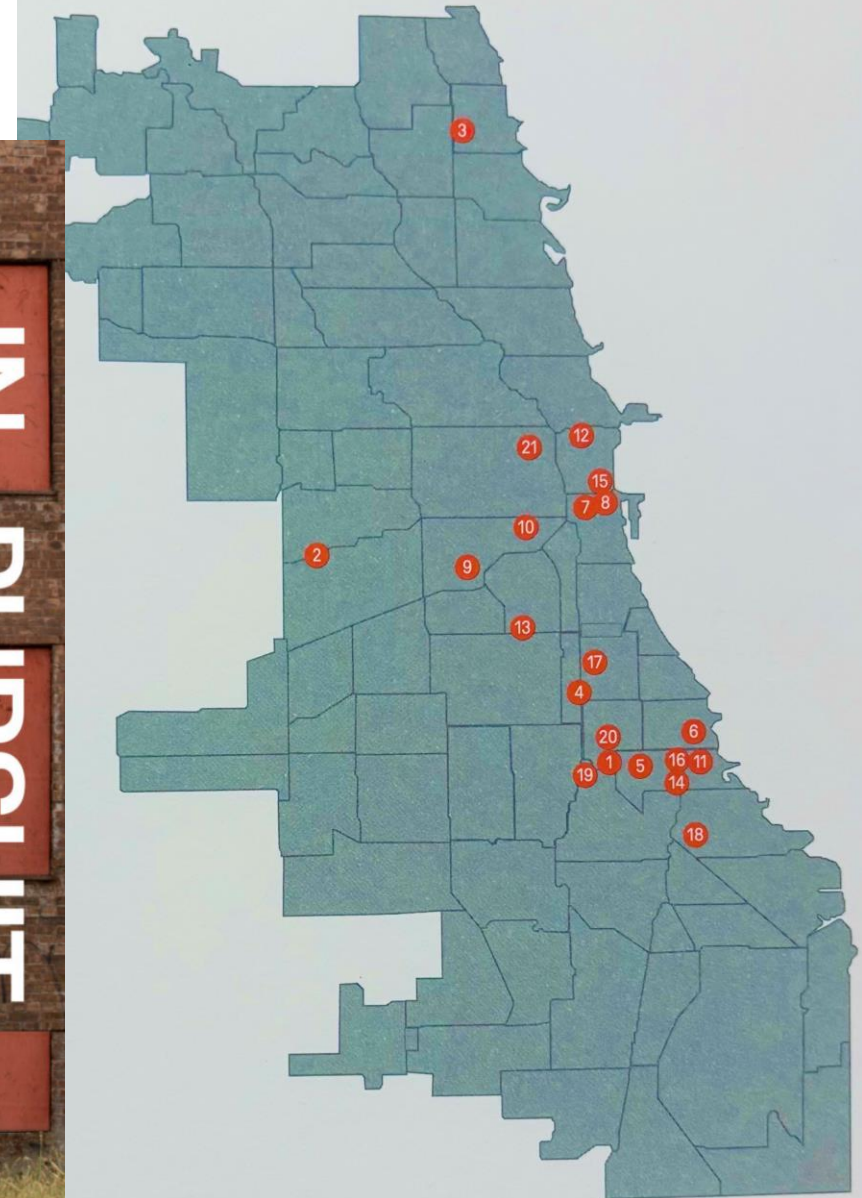
# How essential is art?

29 MacArthur 'geniuses' answer that question in 'Toward Common Cause'

*How does art deal with the pressing issues of a community?*

Our compass document:

- Lower barriers of access to art
- Explore collaboration as a form of social and political capital
- Go beyond the transactional to build true partnerships
- Trust process to reveal opportunities



**Art Bridges**

# **Lunch**

11:45 am – 1 pm

Heartland Whole Health Institute, Ballroom B




# Conservation Standards and Loan Realities: An Evidence-Based Approach

**Joel Taylor**

Senior Researcher

Norwegian Institute for Cultural Heritage Research





# Alignment and the costs of change in museum loan agreements

Joel Taylor

Aligning Standards with Mission:  
A New Framework for Accessible Lending

8 April 2026

# Loan specifications

There is no 'ideal' climate.

We will never have certainty.

Implicit bias towards moderate, temperate environments.

Every set of numbers has a story behind it.

“the standard specification of +/- 4 or 5% in RH control is based more on what we can reasonably expect the equipment to do than on any deep knowledge of the effect of small variations on the exhibit”.

*Thomson (1986, 116).*

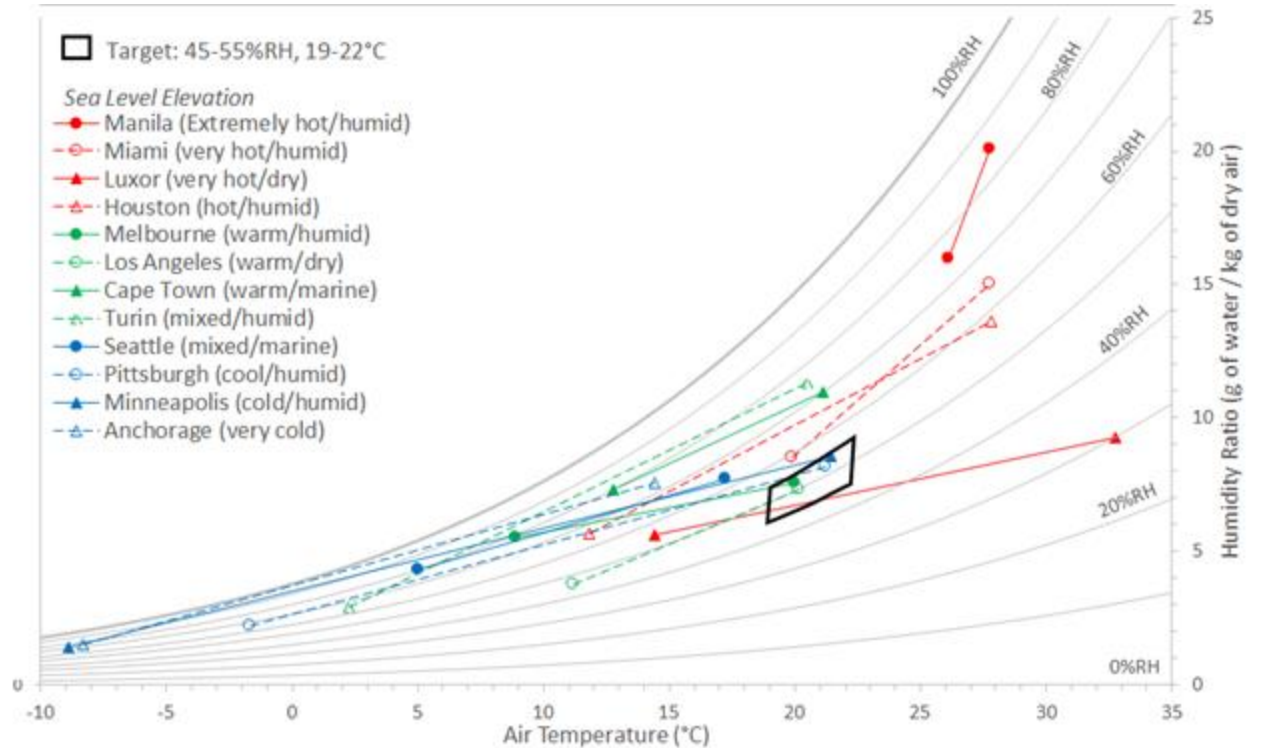
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Taylor, J. & Boersma, F. 2018. 'Managing Environments for Collections: The Impact of International Loans on Sustainable Climate Strategies', Presented at IIC Congress 'Preventive conservation: State of the Art', Turin

# Beyond Numbers




Evan Guston for Getty Conservation Institute

Not just a technical matter, but a social one.

Literature often cited numbers, but not context.

Scientific evidence is necessary but not sufficient to move forward.



“No one ever made a decision  
because of a number.  
They need a story.”

— DANIEL KAHNEMAN, 2017

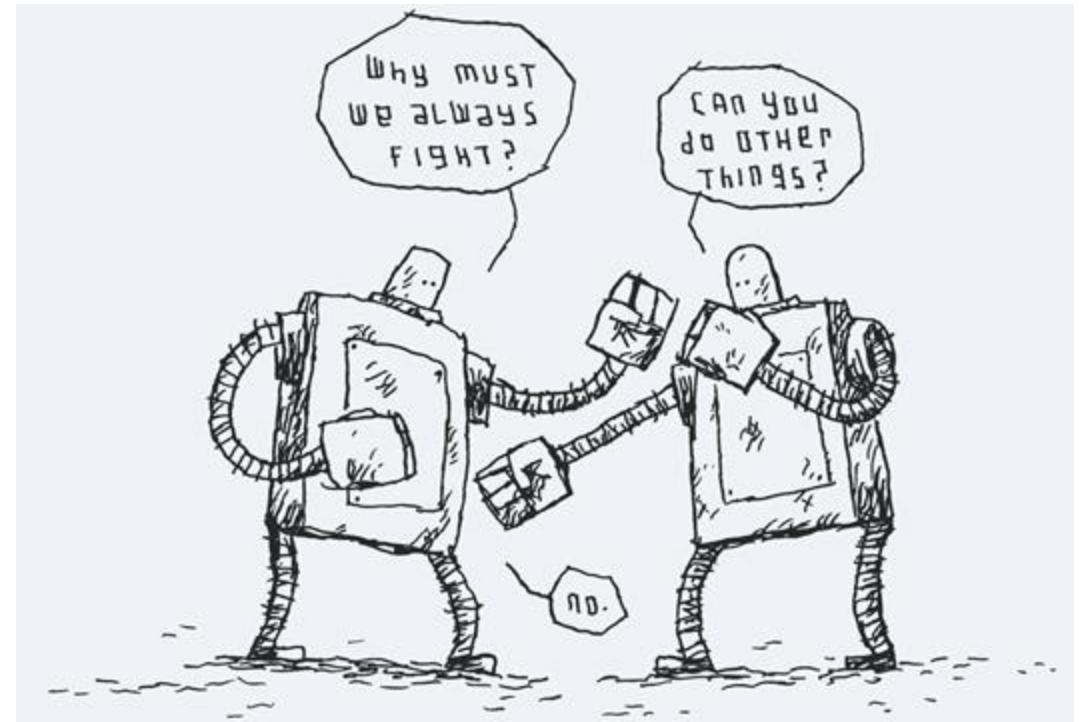
# Asymmetry in loans

Any reduction in energy consumption (and costs) is enjoyed by the borrower.

Any risk (or perceived risk) is borne by the lender; who sets the parameters for the loan conditions.

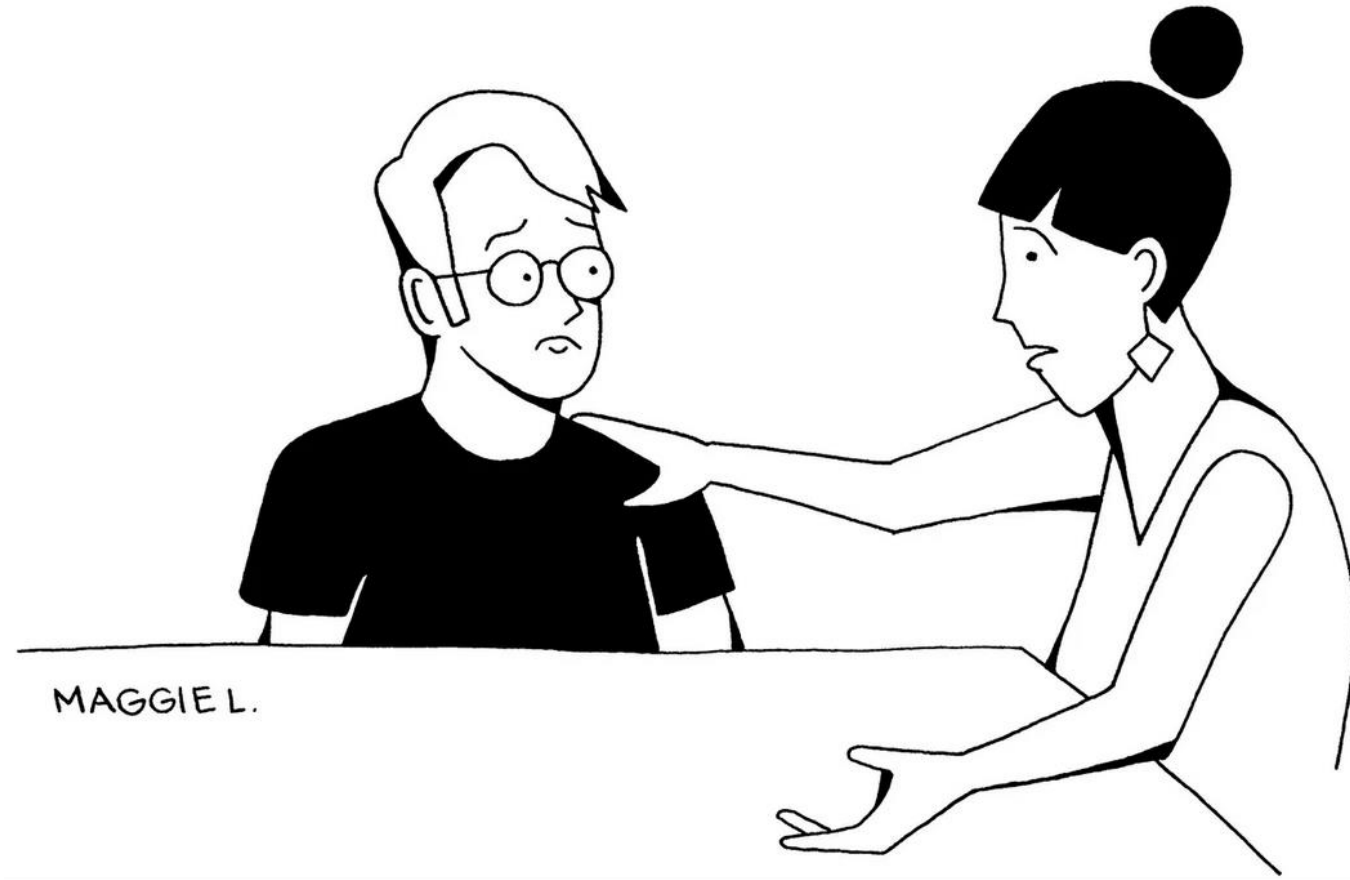
Action comes with no incentive, and no guaranteed reciprocation.

Loans have a transactional nature.



Tom Gauld 2005. *Robots Monsters etc.*

# When we talk about relative humidity...



MAGGIE L.

*"It's not you, it's the humidity."*

# Exploratory interviews about loans

## **Professions**


- Conservation
- Registration
- Exhibitions
- Insurance
- Curation
- Collections
- Art Law
- Facilities

## **Locations**

- Australia
- Belgium
- Brazil
- Denmark
- Sweden
- USA
- UK

## **Institution types**

- Art Museums
- Natural History Museums
- Library Special Collections
- Insurance Companies
- Artist Estates
- Artist Foundations



# Embedded uncertainty & impact of perceived roles

# Imagined conflict, and imagined harmony

- Impact of each role/actor on the whole system
- Different professional disciplines
- No-one knew where the 'Industry standard' came from



# Professional humility

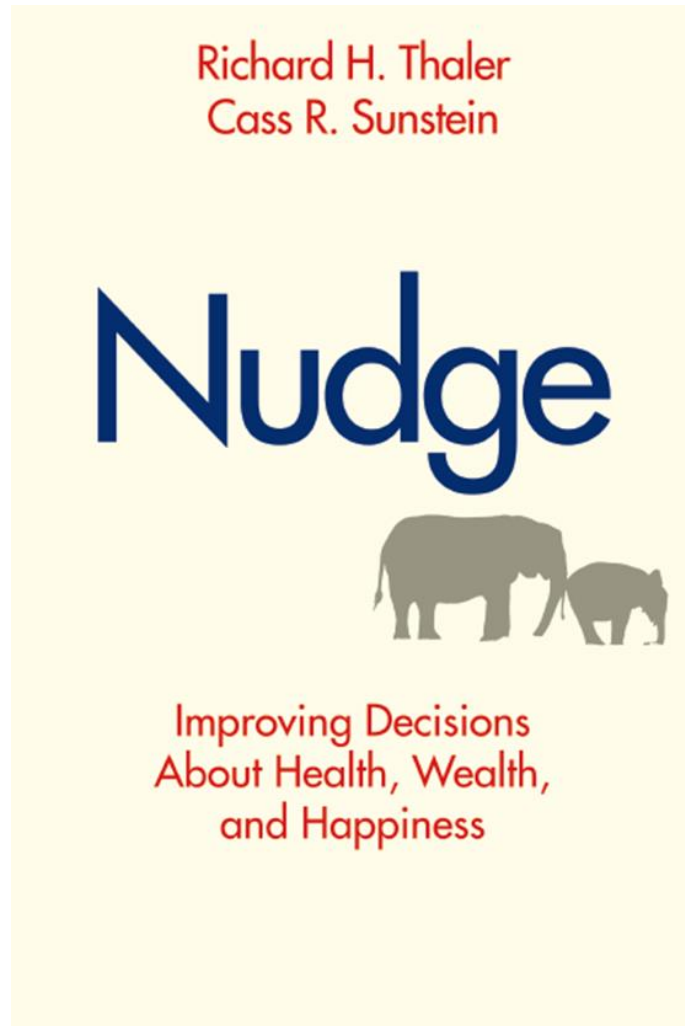
“Registration will say, ‘conservation said this’,  
or ‘conservation will say this’ [and]  
conservation will say ‘well registration are  
going to say this’ ... I am ... both those things,  
and we’re not saying that; either one’.”

– INTERVIEW 15



Tom Gauld, 'Robots Monsters etc.' (2005)

# Perceived lack of agency



“Of course, a group will shift if it can be shown that the practice is causing serious problems. But if there is uncertainty on that question, people might well continue doing what they have always done”.

*Thaler & Sunstein (2008, 58-59)*

# Procedural uncertainty

“I was given my templates...  
That’s what you do. You never  
questioned it.”

– INTERVIEW 15



@Dudettewithsign

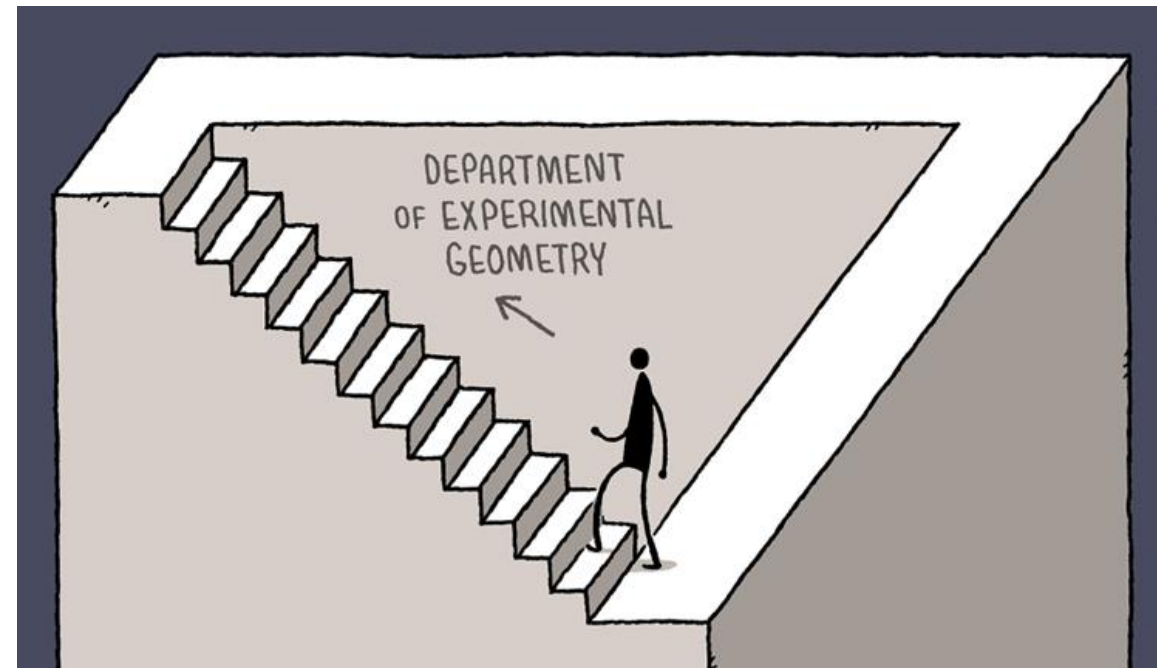


# Hidden Costs

# The cost of uncertainty

“the thing about the 50 plus/minus 5 is ... it's been like a Bible; you just believe the text, you don't have to question it.”

— INTERVIEW 4



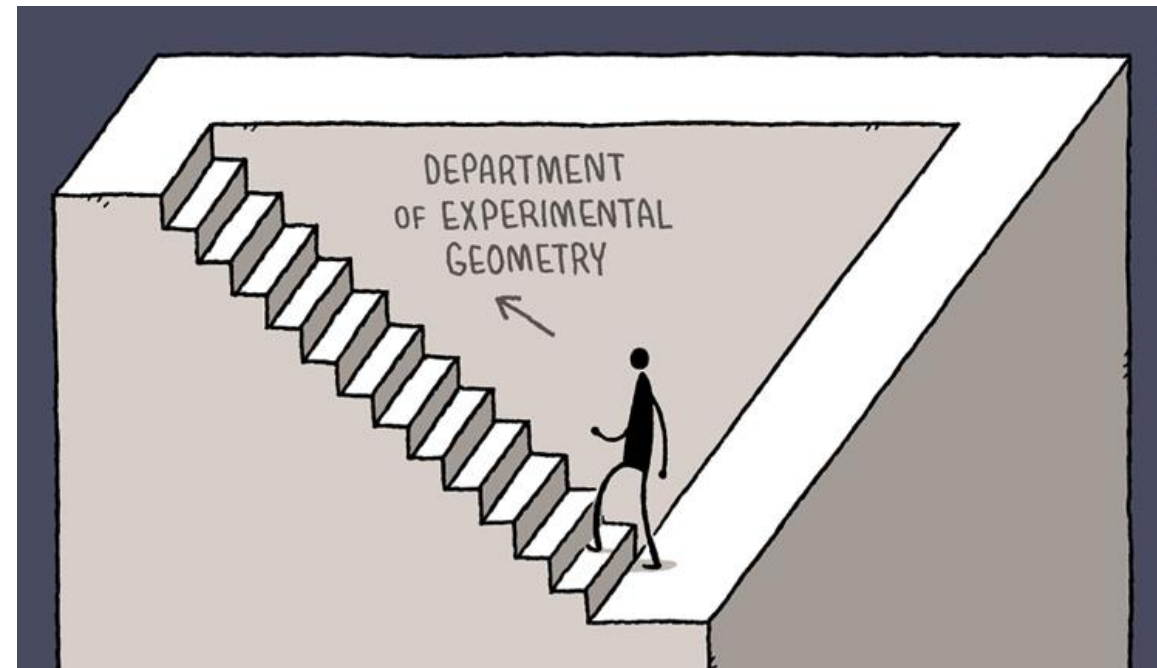
Tom Gauld

# The cost of uncertainty

Without a specific number to present, there is a cost to developing specifications.

Impact of each role/actor on the whole system is uncertain.

The 'Industry standard'...



Tom Gauld

# Fear of consequences

“It’s really hard as the conservator to write in that conservation memo, ‘this is what your range of climate control is, and it could be anything’ ”.

— INTERVIEW 18



@Dudettewithsign

# Aversion to negative repercussions

“there's no risk to me. It's well-documented. And if what I've told you is wrong, then all of these other generations of people in front of me were wrong too.”

— INTERVIEW 4



@Dudettewithsign

# The cost of bargaining

A lot of time spent in back-and-forth discussion about to reach a mutually agreeable specification.

“it just causes a lot more work to try to negotiate, whether you're lending or borrowing.”

—INTERVIEW 18



*“I’ll let you know if I need anything other than air-conditioning.”*

Lynn Hsu

# The industry standard and the Marketplace

“A lot of horse trading goes on in loans.”

— INTERVIEW 4

- Marketplace
- Market rate
- Different currencies

Tomato And Garlic Stand With Price Tags by  
Scopio from NounProject.com





# Issues of trust

# Good neighbour, reciprocity

"there's a lot of quid pro quo in museum work ... you know, you want to help; you want to work with them"

— INTERVIEW 19



Photo by Scpio from Noun Project

# Retaliatory conditions

Lenders who requested that their object get “better conditions while it was on loan than it would whenever it’s sitting in storage or on display at the museum where it’s coming from”

— INTERVIEW 4



Photo by Scpio from Noun Project

# Retaliatory conditions

Even professionals who resented lenders requesting what was deemed a “spa treatment” for loans...

— INTERVIEW 4

can end up inserting “the standard line” of 50 +/-5% for outgoing loans

— INTERVIEW 18



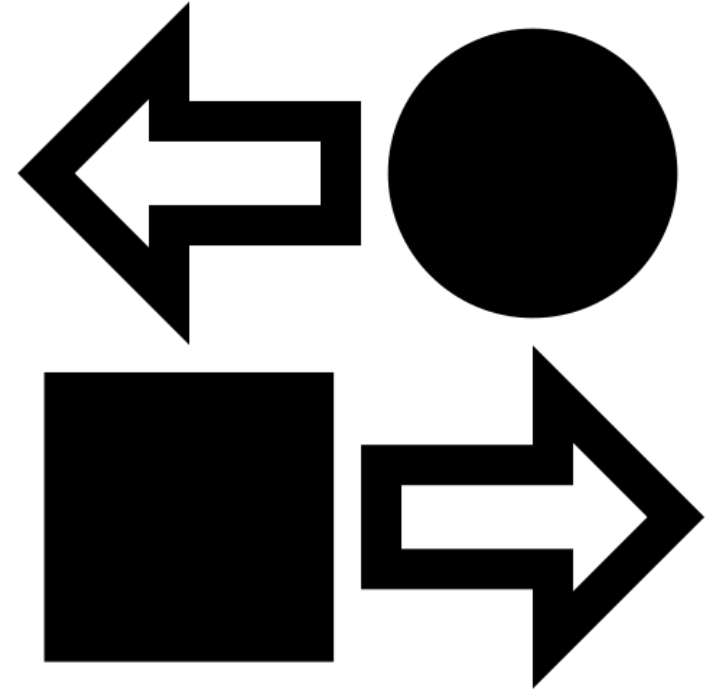
Photo by Scpio from Noun Project

# Reciprocity (and reciprocal concessions)

Reciprocity and long-term relationship building – often more of a priority for curators than conservators.

Reciprocity is important, especially when actions are repeated and reputation is at stake.

"Tit for Tat" strategies.



Created by Round Icons,  
from the Noun Project



# Power dynamics

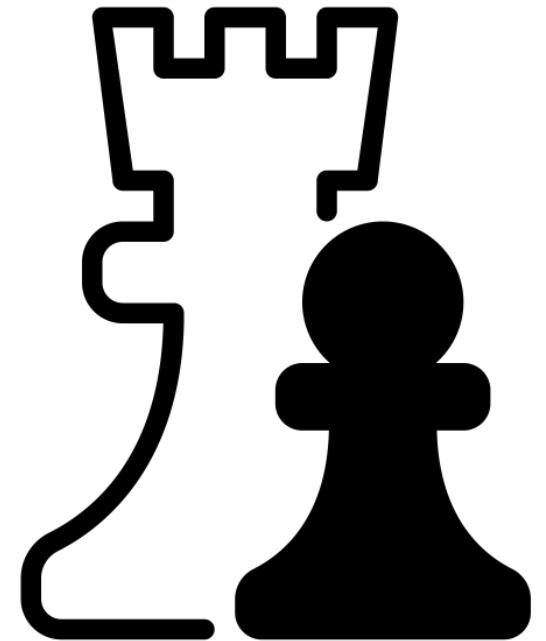
*X-ref: Marketplace, Perceived lack of agency, Good neighbour, Hidden costs,  
Fear of consequences, Cost of uncertainty, Issues of trust*

# Cultural diplomacy

Lending as an act of cultural diplomacy

Building relationships over risk to a single object

Home vs. loan requirements (lender holds advantage)



Chess by Vecon from Noun Project

# Power differentials

“Maybe we work harder to prove we can meet these parameters as well.”

— INTERVIEW 30



@Dudewithsign



# Reputation, and reputation

# Reputation (prestige)

“We know we’re not gonna decline a request from them.”

—INTERVIEW 13



@Dudewithsign

# Reputation (traits)

A strong regulating factor when years of interactions between institutions are involved.

Loans are not back-and-forth but rest on many years of relationships and interactions.



Photo by Gigih Hardhia from Noun Project

Orange Butterfly Sitting On Person's Hand  
by Gigih Hardhia from NounProject.com



# Analysis

# Social norms

“For a norm to be perpetuated  
it is not necessary for the  
majority to believe it, but only  
for the majority to believe that  
the majority believes it.”

—  
ALAN BERKOWITZ, 2005

# Signalling and momentum

Messages, but mainly actions, of visible actors (e.g. default conditions) can impact others' decisions.

Signals are often costly, which creates expectations from other parties.

- Messages alone are weak signals



Blue And Green Peacock Feather by Scopio from NounProject.com

# The Cost of Changing

## Technical problems

Easy to identify

Often quick solutions

Often solved by authority/ expert

Requires change in few places

People generally receptive

Solutions can be implemented quickly

## Adaptive challenges

Difficult to identify

Requires change in values/ approach

People with the problem solve it

Requires change in many places

Resistance (to even acknowledge)

Solution require new knowledge / can take a long tome to implement

# Collective action

The issue of influence and of market rate can be affected by a groundswell.

Even costly actions can be seen as worthwhile, if there's enough interest.

Institutions working together reduce asymmetry.



Tom Gauld, for *The World Today* (2012)

# Policy, power, and perspectives

What happens between institutions is more important than what happens within them.

Wider parameters are a starting point, not a new 'industry standard'

Acknowledge one's own power (for better and worse).



Mort Gerberg



# Summing up

Acknowledging the costs of change helps avoid  
the cost of not changing.

No single action resolves this.

The biggest challenges aren't about standards.

We need to do it together.

# Acknowledgements

Thank you!

Caitlin Spangler-Bickell

All of our interview participants

The Loans Project Advisory Panel members

Professionals who gave us insights and contacts

Justin Granna (formerly RAND) & Mark Toukan (RAND)

Norwegian Institute for Cultural Heritage Research (NIKU)

The Managing Collection Environments Initiative

The Getty Conservation Institute

Art Bridges & organizers

You, for listening

# Art Bridges

Smart Sharing: Preventative Tools that  
Reduce Risk and Cost- Panel Discussion





# Smart Sharing: Preventative Tools that Reduce Risk and Cost

## Panel Discussion



**Adrienne Reid**  
Senior Vice President  
Huntington T. Block  
Insurance Agency, Inc.



**Dave Masom**  
CEO  
Conserv



**Fiona Graham**  
Owner  
Graham Conservation



**Annika Erikson**  
Founder and CEO  
Articheck



**Caitlin Southwick**  
Founder of Ki Culture and  
Sustainability in Conservation and  
Managing Director of Ki Futures  
Moderator

# Aligning Standards with Mission: New Framework for Sustainable Lending Convening

**Panel:** Smart Sharing: Preventative Tools that Reduce Risk and Cost

Adrienne F. Reid, CIC



IF THE WORLD TREASURES IT,  
HUNTINGTON T. BLOCK  
INSURES IT.





# Risk and Responsibility

Thoughts on sustainable collection care  
from a fine art insurance professional.

By Adrienne Reid

# Insurers & Sustainable Collection Care

- Survey of fine art insurers about the BIZOT Protocol and if/how their underwriting standards are changing related to:
  - Environmental Conditions
  - Sea Freight Transit
  - Packing and Couriering
- Fine art insurers support sustainability—but only when object preservation is not compromised.
- **Core Insurer Position:** An **object-first** approach

# Environmental Conditions

- Move beyond 50/70 rule.
- Research shows tailored climate strategies can benefit both objects and the planet.
- Factors to consider:
  - Type of collections (material sensitivities)
  - Microclimates (cases, localized controls)
  - Regional climate & building infrastructure
- Insurance policies do not cover gradual deterioration.
- **Insurer Stance on Environmental Changes:** Supportive when changes are evidence-based, documented, and maintain object stability.

# Sea Freight

- Transit is always a high risk: Around 60% of fine art claims are transit-related.
- **Sea Freight:** Far less oversight/control, precarious climate conditions, and extended time element.
- **Insurer Stance:** Fine art insurers overwhelmingly indicated that they generally do not support the use of sea freight unless air transport is not feasible.



# Reusable Crates & Sustainable Packing Materials

- Crate construction and packing materials have improved considerably in the past several decades.
  - Deterioration is cumulative - Need to manage object's "vibration life"
  - Aim to dampen vibrations
  - Build a box within a box
  - Crates carrying multiple items
- **Insurer stance on packing:** Support sustainable/reusable materials only if protection from shock, vibration, and climate is not reduced.



# Couriers & Oversight in Transit

- **Traditional preference:** Physical couriers, especially for high-value or high-risk works. Couriers help prevent accidents and advocate for the object in transit.
- **Emerging practices:** Virtual, bookend, and shared couriers can reduce emissions.
- **Insurer expectation:** Courier model should be chosen based on a risk assessment of the object and route—not just cost or carbon.
- Consider couriering as professional development tool.



# Conclusion & Insurance Considerations

- Sustainability and preservation can align, but trade-offs must be managed deliberately.
- **What insurers expect from museums:**
  - Object-first mindset
  - Evidence-based climate and transit decisions – tailored approach
- Physical protection and preservation of the insured objects must be primary priority.



## **Smart Sharing: Preventive Tools that Reduce Risk and Cost**

Aligning Standards with Mission:  
A New Framework for Accessible Lending  
Art Bridges Foundation  
April 8, 2026



**Dave Masom**  
Chief Executive  
Officer

The background of the slide is a reproduction of the painting 'The Starry Night' by the Dutch Impressionist painter J.M.W. Turner. The painting depicts a night scene with a dark, swirling sky filled with stars and a prominent, dark, turbulent sea in the foreground. In the middle ground, a small town with a church spire is visible. The overall mood is dramatic and atmospheric.

**Access is the mission**  
**Access affects risk**

# Three Information Barriers to Access

## Status Quo

**We rely on norms instead of collection-specific needs**

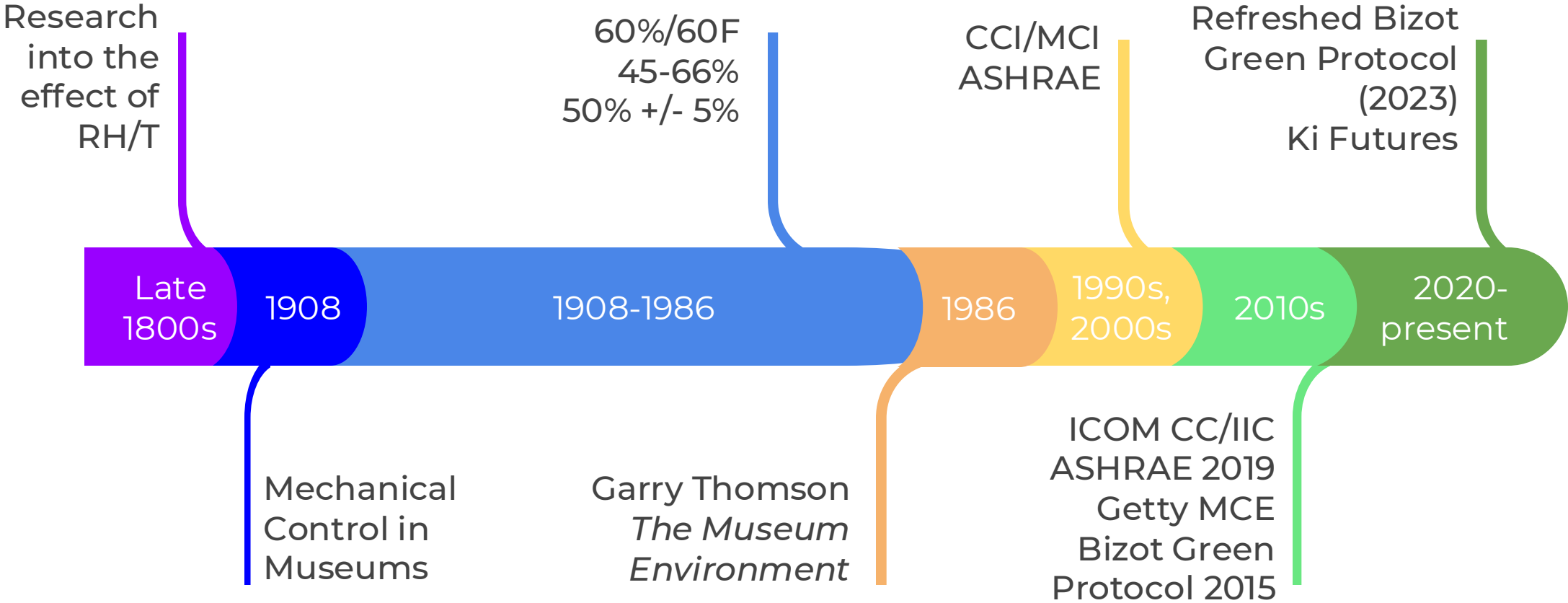
## Subjectivity

**We overemphasize some risks and overlook others**

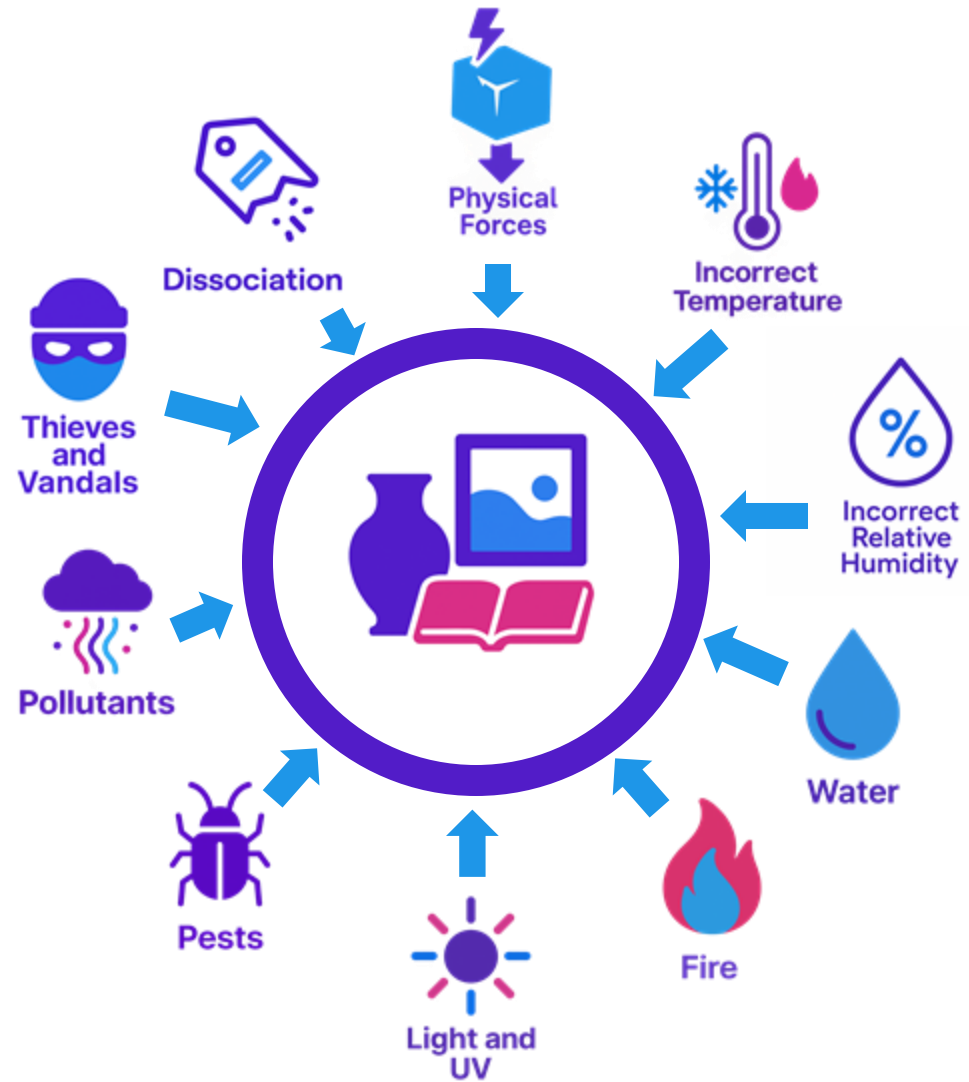
## Uncertainty

**We use strict requirements as it feels safer**

# The evolution of standards (status quo)



# Risk assessment: a tool to manage subjectivity



# Understand the system to reduce uncertainty



# Addressing these barriers in practice

**Understand  
your baseline**

What is your desired state?  
What are your actual conditions?



## Case Study

### Environmental Monitoring at Matheson History Museum

- **Real-time data and alerts**
  - Identified issues in the attic
  - Basement concerns unfounded
- **Metrics and reports**
  - Improved stakeholder comms
  - Funding for improvements



# Analyze

COMMUNITY



Sensors

Pests

Observe

Analyze

Reports

Events

LOCATIONS / SPACES / SENSORS

Living Roo... Clear

Search sensors

## READINGS

### CLIMATE

- Temperature
- Relative Humidity
- Dewpoint

### LIGHT

- Illuminance
- Ultraviolet

### OBSERVATIONS

- Observations

### WEATHER

- Weather Data
- Precipitation

### PERIOD

7 days

CREATE REPORT

CUSTOMIZE

## Metrics



## Graphs



# Addressing these barriers in practice

**Understand  
your baseline**

What is your desired state?  
What are your actual conditions?

**Understand  
your collection**

What conditions has the object experienced?  
How do these compare to planned exposure?

# Combining environment and object data: Conserv & Collector Systems

**COLLECTOR SYSTEMS** CS Museum Demo Collector System...

Objects Artists Authors Locations Addresses Collections Contacts Exhibitions Publications Acquisitions Expenses Components Conservation Conditions Inventory Sales  
 Group Valuations Consignments Insurance Loans Shipments Places Audits Lighting Photography Scientific Analysis Process Collections Review **Environmental Sensors** Exit  
 Deaccession Disposal Entry Crates Trends Calendar Repatriation Finding Aids Frames Associations Recommendations Events Archival Repositories

Sensor Name:

← + / [ ] 1 of 1

Sensor Name: Sensor 2  
 Sensor ID:  
 Temperature Maximum: 65  
 Temperature Minimum: 35  
 Humidity Maximum: 65  
 Humidity Minimum: 30  
 Email Notification List: support@collectorsystems.com  
 Sensor Location:  
 Sensor Address Name: 169 Hudson St  
 Memo:

Time Range Filter  
 Today Yesterday **Last 7 Days** Last 30 Days Custom Range

**Climate Metrics**

Temperature (°F) Humidity (%) Dewpoint (°F)

**Light & UV Metrics**

Illuminance (lx) Ultraviolet (UV)

Objects (25) Environmental Data (579)

Inventory Number

1-20 of 20 1

Inventory Number	Artist Name	Title	Object Date	Imperial Dims	Collection Name	Location Name
2011-F4	Ruhlmann, Emile-Jacques (1879-1933)	"BLOCH" Armchair, Model 51 AN266 NR	c. 1925	Object: 28 5/8 x 26 1/4 x 32 1/2 in.	Furniture	Museum
2011-F8	Majorelle, Louis (1859-1920)	"Canaanite" Settee	c. 1924	Object: 41 3/4 x 51 3/4 x 22 7/8 in.	Furniture	Museum
2011-F5	Yonke, Edward (1907-1990)	"Lemon To Me" Chaise, Model no. 4873	c. 1978	Object: 25 1/4 x 76 1/4 x 26 1/2 in.	Furniture	Museum
2011-F6			1975-1980	Object: 15 1/4 x 74 3/4 x 31 1/8 in.	Furniture	Museum
2015-J4		18 Karat Gold and Diamond Brooch			Jewelry & Watches	Museum
2015-J5		18 Karat Gold, Polarium, Amethyst, Turquoise, and Diamond Necklace	1945		Jewelry & Watches	Lent to Museum
2015-A2		A Figure of a Goddess	Early Spelman, c. 2600-2500 B.C.	Object: 8 3/4 in.	Sculpture	Museum

# Addressing these barriers in practice

**Understand  
your baseline**

What is your desired state?  
What are your actual conditions?

**Understand  
your collection**

What conditions has the object experienced?  
How do these compare to planned exposure?

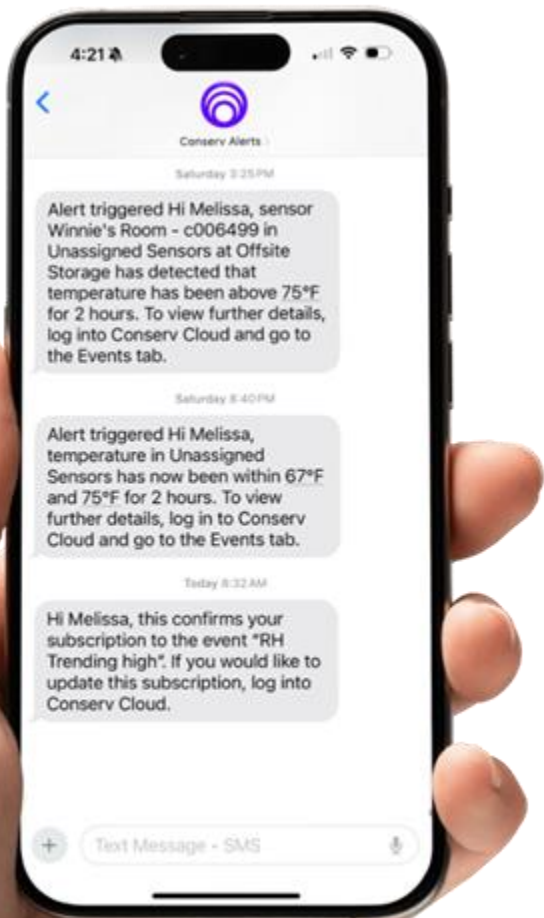
**Monitor and  
respond**

How will you know if something changes?  
What is the plan if the unexpected occurs?



# Facilities Report

Created on March 23, 2026



Temporary Exhibition Galleries	Temporary Exhibition Storage
--------------------------------	------------------------------

Range*	Temp °F	RH %	Temp °F	RH %
Spring/Summer	61.4 - 74.7	22 - 53	64.3 - 69.1	31.8 - 45
Fall/Winter	51 - 80.7	18.1 - 66.3	N/A - N/A	N/A - N/A

24Hr Fluctuation**	Temp Flux	RH Flux%	Temp Flux°F	RH Flux
Spring/Summer	+/- 12.7%	+/- 27%	+/- 6%	+/- 14%
Fall/Winter	+/- 11.8%	+/- 22.9%	+/- N/A%	+/- N/A%

+ Spring/Summer: Mar 01 to Aug 31 Fall/Winter: Sep 01 to Feb 28/29

\* Range is calculated as the difference between the min/max readings during the period

\*\* 24HR fluctuation is calculated as maximum fluctuation percentage per day averaged across the days



## Case Study

### Collaboration at Gothenburg Museum of Art

#### Challenges prior to Conserv

- Limited collaboration between teams
- Manual data collection process
- Tricky to interpret data

#### Impact of Conserv

- Better cross-department collaboration
- Easier loan management/reporting
- Improved pest management

# Five takeaways for smarter sharing

1

Preservation should consider present and future needs

2

Ample evidence exists for relaxing requirements (with data!)

3

Real-time and historical data manages risk

4

Match collections to environments, not environments to collections

5

Clear communication and collaboration is essential



# *Conserv*

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**Thank you!**

Please reach out to chat:

Dave Masom

[dave@conserv.io](mailto:dave@conserv.io)

[linkedin.com/in/davemasom](https://www.linkedin.com/in/davemasom)



GRAHAM CONSERVATION

Art  Bridges

# Win-win: Reducing Energy Consumption While Preserving Collections

Fiona Graham, MAC, CAPC, CAHP

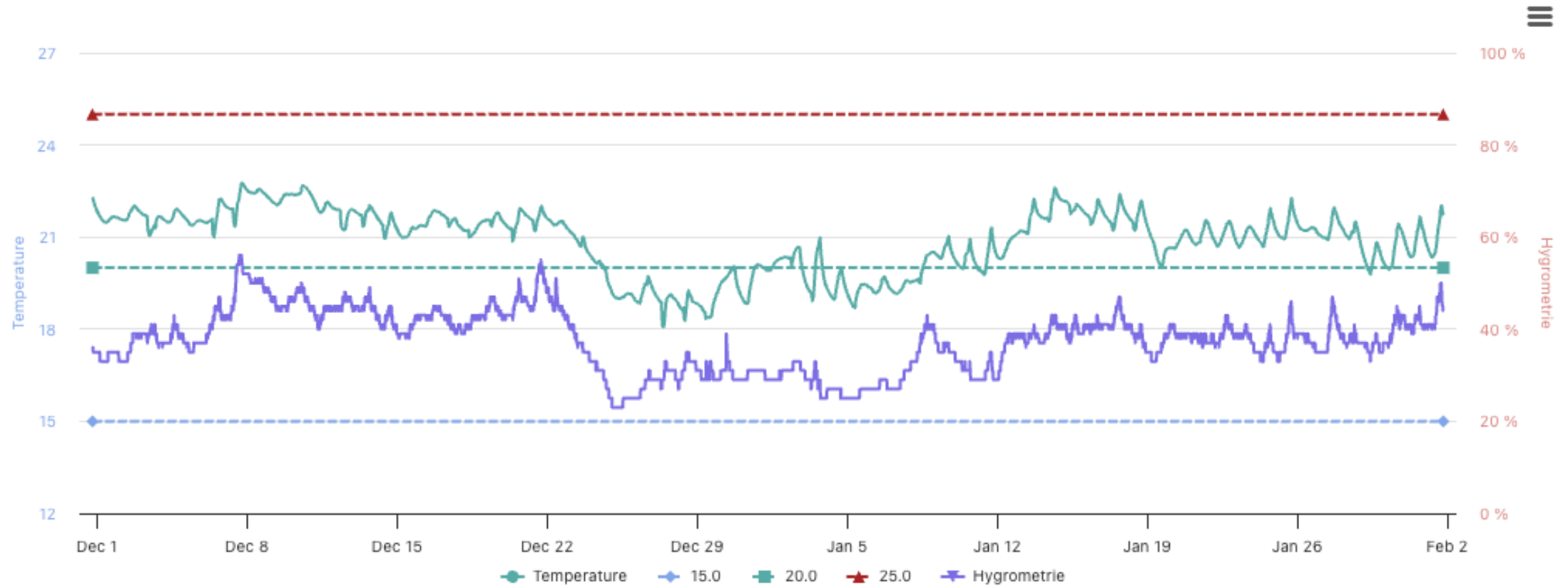
Aligning Standards with Mission: A New Framework for  
Accessible Lending

8 April 2026

# First steps: verify current conditions

8 SEMAINES

Précédent Suivant



# First steps: energy audit, HVAC efficiencies



Photo: Hauser & Wirth



Photo: S. Loiret



Photo: Viguier

## Hauser & Wirth Gallery, Menorca

- Raised setpoint on chiller, lowered on reheat coil
- Created unoccupied mode with lower fan speed
- Adjusted room setpoints to minimize difference with outdoor temperature
- Gallery temperature max. 77°, RH max. 70%
- Reduced energy use by 46%

# Building design, HVAC design



## Royal BC Museum (2012)

- HVAC efficiency upgrades
- ASHRAE Class A to Class AA
- Saving \$24,000/year, ~ 500 tonnes of carbon

## North Carolina Museum of Art (~ 2005)

- More efficient HVAC
- ASHRAE Class C to Class AA
- Using 57% less energy

## SFMOMA (2016)

- New building
- More efficient HVAC
- Cold vaults
- Narrower indoor climate range, although with seasonal change to RH setpoints
- Using 37% less energy

# Energy saving strategies related to climate control operation

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- Enlarging the temperature and RH range, including seasonal changes
- HVAC shutdowns, overnight and longer
- Using unoccupied modes (e.g., lower fan speed, reducing or eliminating fresh air intake)
- Lowering fan speed during occupied hours as well as unoccupied
- Managing fresh air intake, circulation rates based on CO2 levels

# Louisiana Museum of Modern Art, Denmark



Photo: Hanlu Cao

- Changed from  $\pm 2\%$  to  $\pm 10\%$
- AI control of fan speed
- Strategic use of outdoor air
- Small HVAC equipment changes
- Energy use down 45%, more stable indoor climate

# Skagens Museum, Denmark



Photo: Skagen's Art Museums

- Changed from 50%  $\pm$  2.5% to 40 – 60%  $\pm$  10%
- Overnight HVAC shutdowns
- Energy use cut by 22% and indoor climate more stable

# Vardemuseerne, Denmark



← Right museum,  
wrong building !

- Modified ranges from 50%  $\pm$ 5% RH and 66 - 70° to 50%  $\pm$ 8% and 61 - 77°
- Cut energy costs by 30%
- Switched from natural gas to district heating
- Reduced carbon emissions by 61%

# Hauser & Wirth Gallery, Los Angeles



- Modified ranges from 67 - 72° and 45-55% RH to 67 - 77° and 40 - 60% RH
- HVAC efficiencies and new equipment
- CO2 regulating fresh air intake
- Energy use cut by 45%

# HVAC shutdowns



- Overnight or longer
- Frequently reduces energy use more than changing setpoints
- Not an option for all museums (e.g., leaky building envelope)
- May be appropriate at some times of the year and not others
- System design or service contracts may not permit them
- Consider hazardous VOCs from collections and finishes

# H.C. Andersen's House (Museum Odense), Denmark



- Overnight HVAC shutdowns
- No significant change in RH or temperature
- 50% reduction in energy use

# Statens Museum for Kunst (National Gallery of Denmark)



- Overnight HVAC shutdowns (11.5 hrs)
- Increased RH and temperature stability
- Energy savings

# Some French cohort results



## Palais des Beaux-arts de Lille

- 15% energy savings from overnight shutdowns and lower temperature setpoint in winter, acceptably small drift in RH and temperature

## MUCEM, Marseilles

- 7.5 hr daytime shutdown, less than 2° change in temperature, max 2% change in RH, very large display space

## Interesting findings

- Display cases buffered better than expected
- Developed workarounds for estimating changes in energy consumption
- The usefulness of unintended shutdowns

# Tools and programs

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- ClimaSpec – Canadian Conservation Institute
- HERIe - Poland
- GoGreen – European Union
- Energy Star Portfolio Manager – North America
- Benchmarking laws (e.g., California)
- Climate2Preserv – Belgium
- Getting Climate Control Under Control – Ki Futures

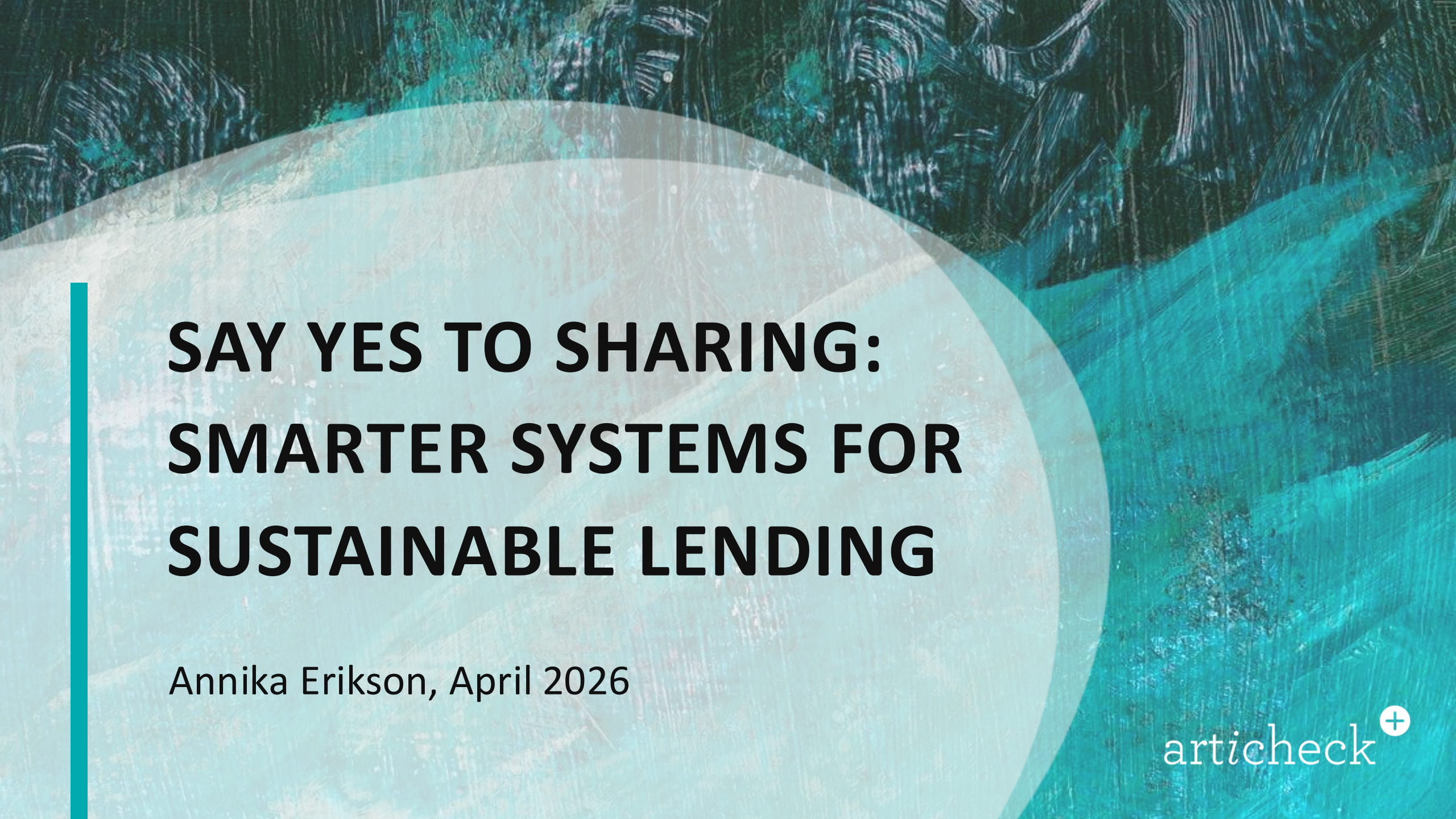


Thank you!

Fiona Graham

[fiona@grahamconservation.com](mailto:fiona@grahamconservation.com)

[www.grahamconservation.com](http://www.grahamconservation.com)



# **SAY YES TO SHARING: SMARTER SYSTEMS FOR SUSTAINABLE LENDING**

Annika Erikson, April 2026

artichек<sup>+</sup>



## ANNIKA ERIKSON

### Why I started Artichек...

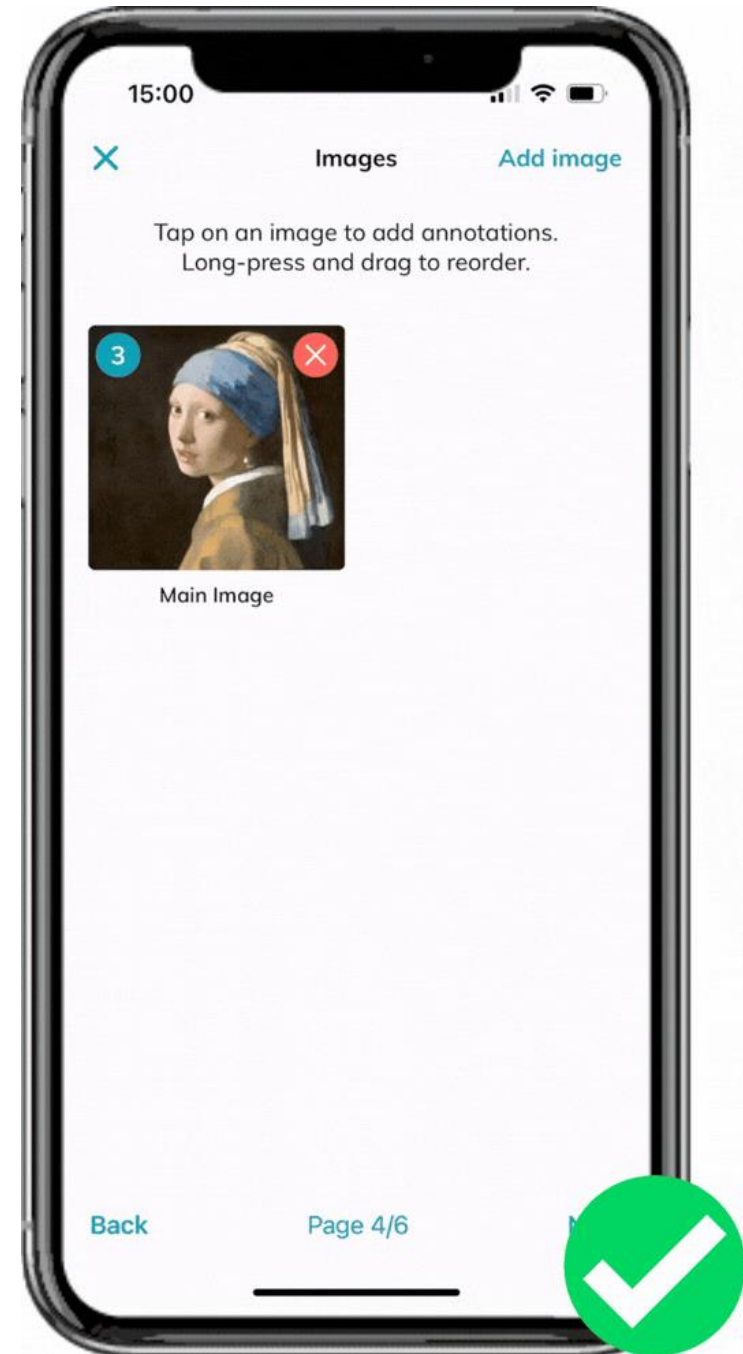
“Having worked in conservation at leading institutions like Tate and St Paul’s Cathedral, I saw first-hand the need for a digital solution to streamline condition reporting and manage risk.

My passion for preserving cultural heritage drove me to create Artichек, where we have set a new standard for protecting artwork while embracing innovation in the art world.

Today, we help art organisations of all kinds improve efficiency and security through our platform.”



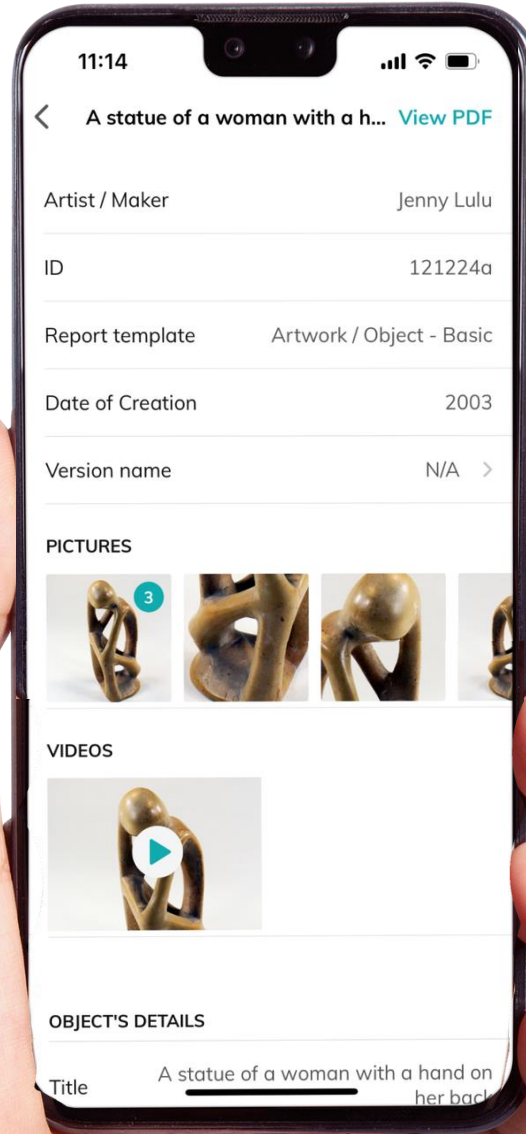
# + ARTICHECK STREAMLINES MUSEUM PROCESSES



**+ 2M+**  
condition reports

**+ 1M**  
staff hours saved

**+ 400+**  
organisations



**+ Efficient & Effective**

Time & cost efficient, freeing up much-needed resources. Facilitates collaboration, customisation, professional standards

**+ Industry standard digital passport**

Secure, legally verifiable audit trail, shipment tracking

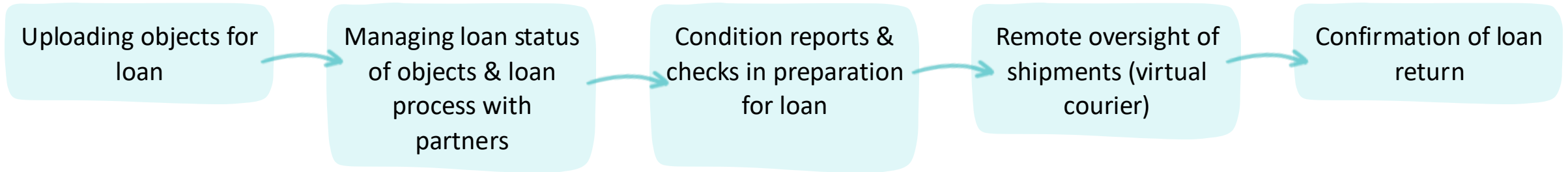
**+ Inform collection care**

Clear, chronological object histories bring clarity and facilitate deep understanding of collection history and status

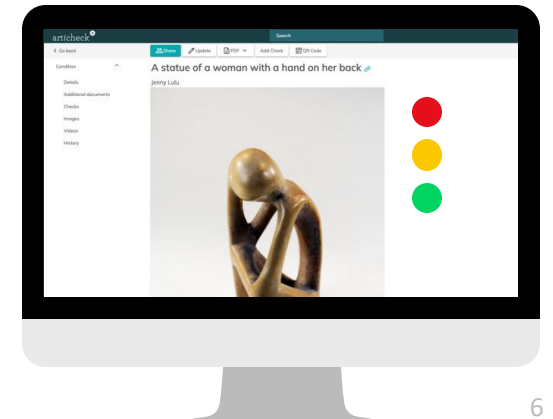


# + LOANS MADE EASY WITH ARTICHECK

Outdated frameworks limit access to art – KFALP is changing that !



All loan partners' live inputs, in one digital space






# ✓ APPROVING A LOAN

The screenshot shows a web application interface for managing art objects. At the top, there are navigation buttons: "Create object", "Import", and "Add group/shipment". Below these is a sidebar menu with categories like "Objects", "Locations", "Loan summary", "Groups", "Shipments", and "Documents". The "Loan summary" section is expanded, showing options such as "All cohort objects", "Available objects", "Objects requested by me", "My borrowed objects", "My available objects", "My requested objects" (which is highlighted), and "My loans".

The main content area displays a table of objects. The table has columns for "Title", "Artist", "ID", "Media template", "Medium", "Year", "Organisation", and "Loan status". A single object is listed with the following details:

Title	Artist	ID	Media template	Medium	Year	Organisation	Loan status
SAMPLE: 	Unknown Artist	AB009	Artwork / Object - Basic			Museum 1	Requested Museum 2

Below the table, there is a pagination control showing "Items per page: 20" and "1 - 1 of 1".

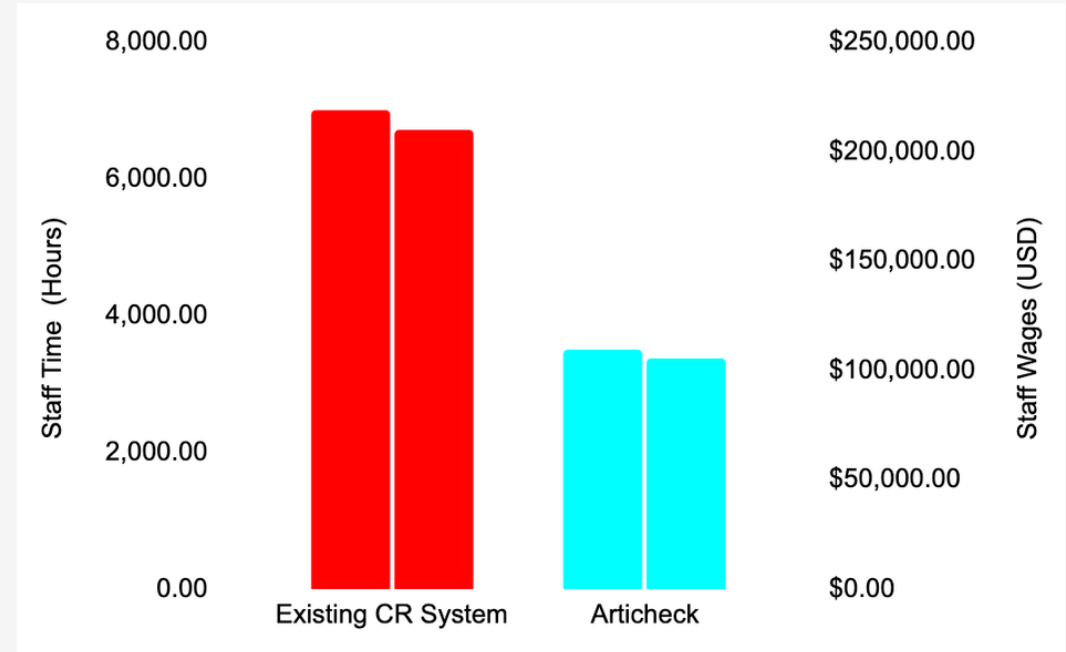
## ✓ CONDITION REPORTS & CHECKS

- 2 x faster than traditional methods
- previous reports build a comprehensive object history
- less duplication of work between lender and borrower

= save time

= proof of due care and diligence

= proven to reduce risk



### Savings using Articheck:

🕒 3.5k staff hours

💰 \$105k staff cost

Based on an organisation doing 7k reports a year, at 1 hour per report and an average hourly staff wage of \$30.

## ✓ SHIPMENTS

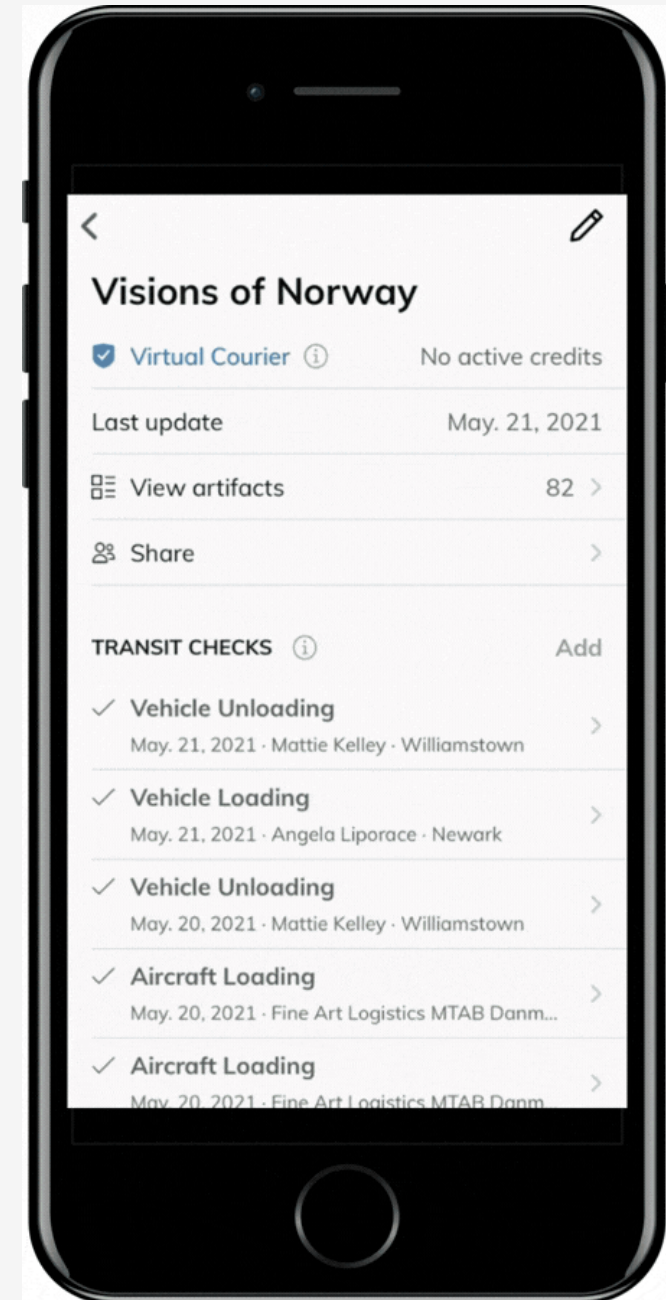
- remote oversight, aka virtual couriering
- track artwork on loan, record its condition
- manage and create shipping records
- effective, secure collaboration across teams/organisations

### **CASE STUDY:** KODE Museum, Bergen

Touring exhibition – 100 objects from Norway > US and Sweden

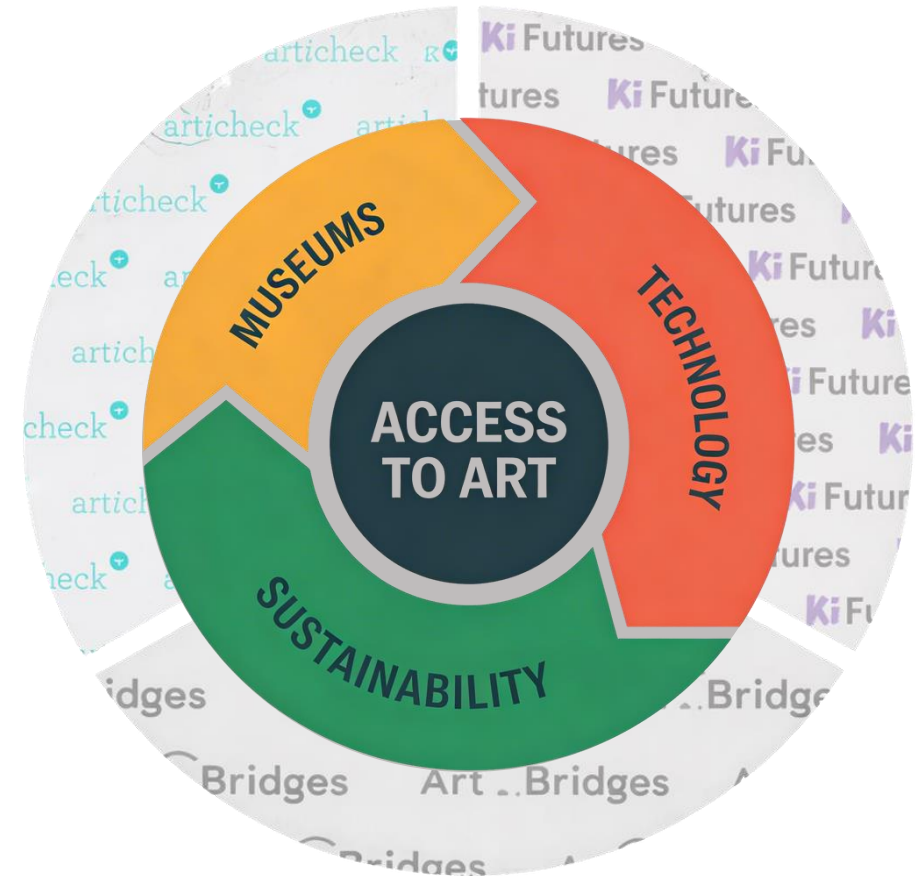
### Savings:

- 49.92 tons of carbon
- \$67,000 in courier costs
- 55 days of staff time



# + ARTICHECK SUPPORTS NEW WAYS OF WORKING

- KFALP: bringing together museum, sustainability, and software expertise in a funded, focused environment
- Help shape a more open, collaborative museum future!
  - more loans, increased access
  - bring your impactful art to communities
  - advance your organisation's mission



# THANK YOU!

Learn more:

[kifutures.com/programs/accessible-loans/](https://kifutures.com/programs/accessible-loans/)

artichек 

Art  Bridges

**Break**

3:15 – 3:25 pm

Art  Bridges

# Roundtables

3:30 – 4:15 pm

Art Bridges

# Final Words

Anne Kraybill





## Tavola Trattoria

108 SE A Street

Bentonville, AR 72712

Bar Service and  
Appetizers

**6:00 pm**

Dinner

**6:30 – 8:30 pm**

