



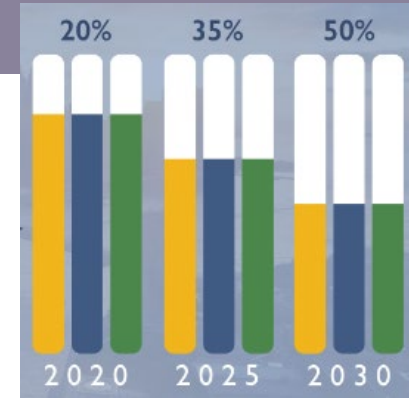
MAINTAINING *for Sustainability*

STUDIO
co + hab

Cohousing Overtime
August 29th, 2021

Maintenance:

MORE THAN JUST A CHORE



SHOULD BE DELIBERATE



UNLOCKS IMPORTANT OPPORTUNITIES

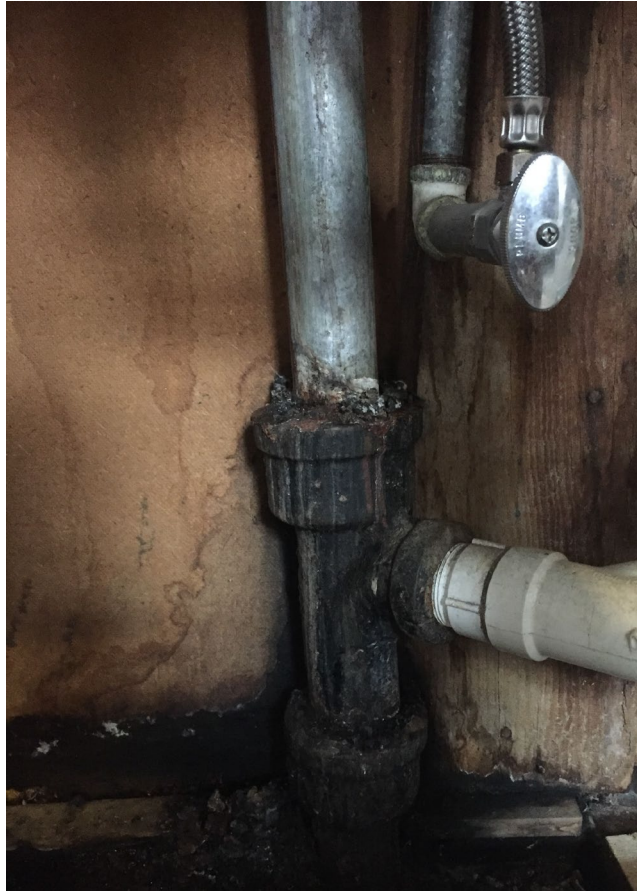


POLL

**How long ago was your
community constructed?**

*Please type your answer
into the chat.*

THE IMPERATIVES

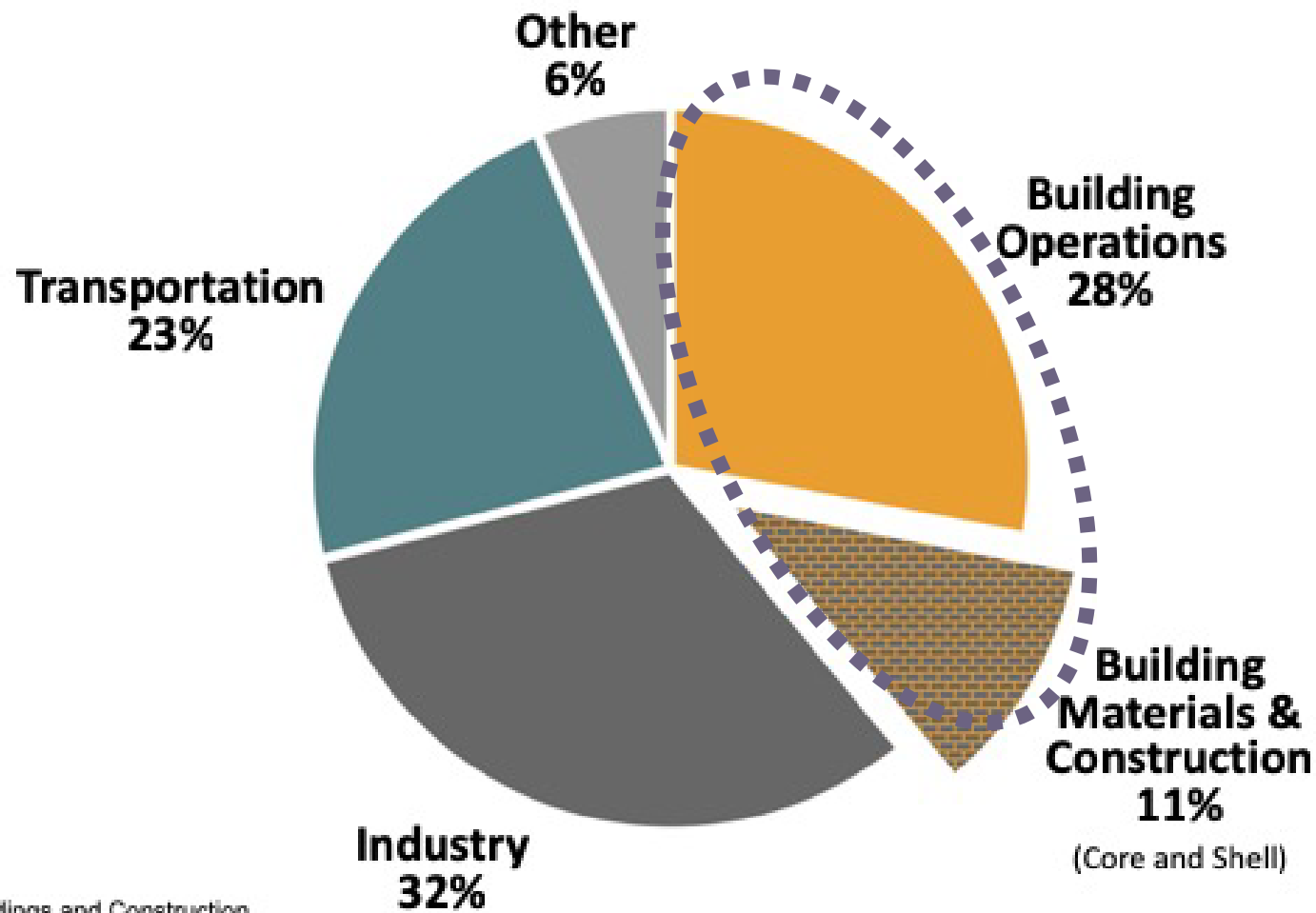


Protecting Health and Safety



Retaining Value

40% OF CO₂ EMISSIONS ARE FROM BUILDINGS

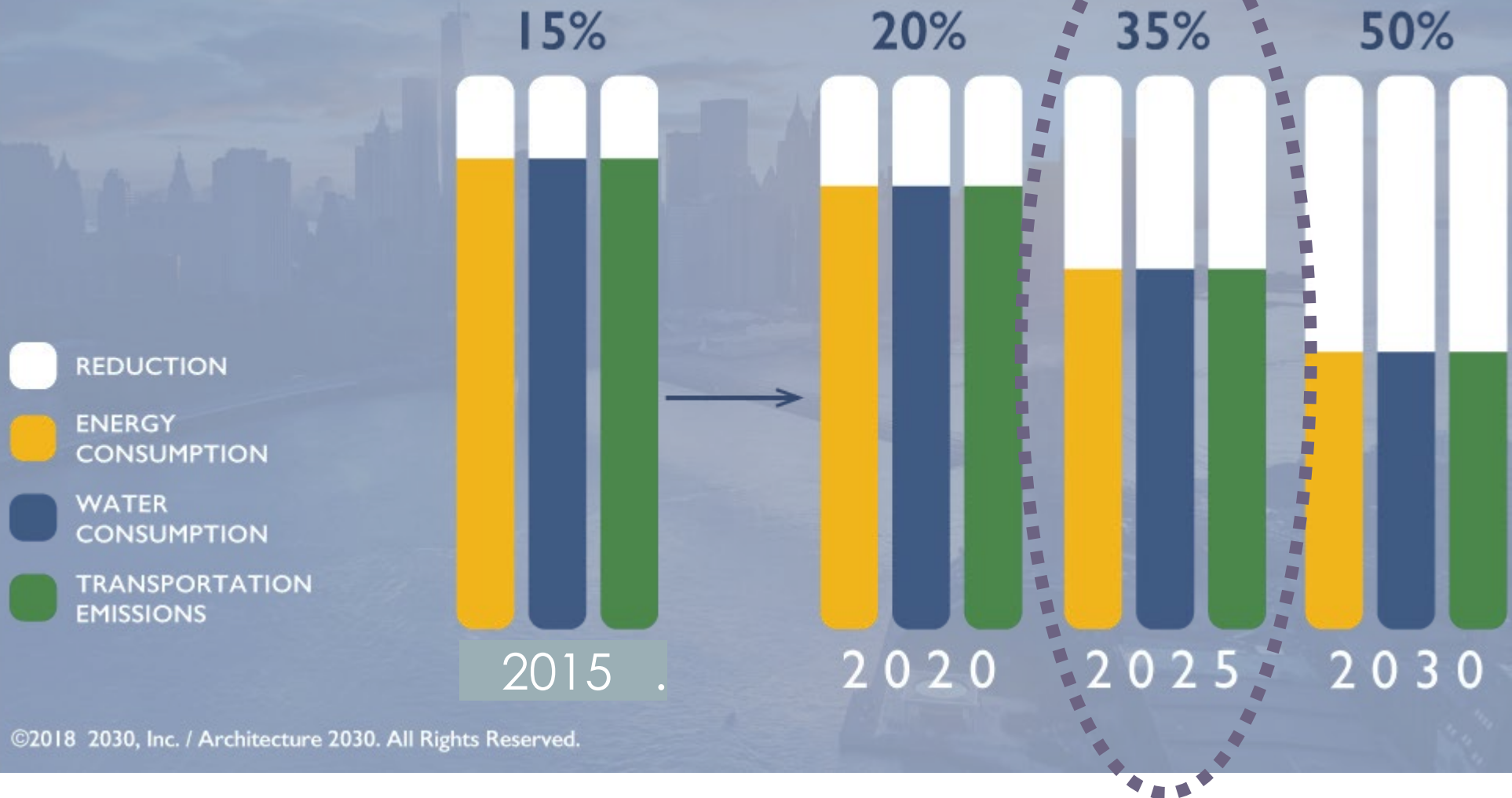


Source:
Global Alliance for Buildings and Construction.
2018 GLOBAL STATUS REPORT.

Climate Imperative

THE 2030 CHALLENGE FOR PLANNING

EXISTING BUILDINGS



Existing buildings need to make big cuts

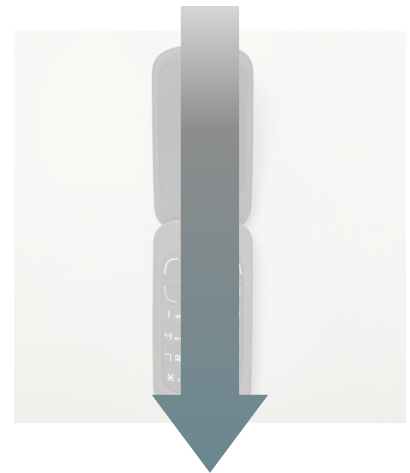
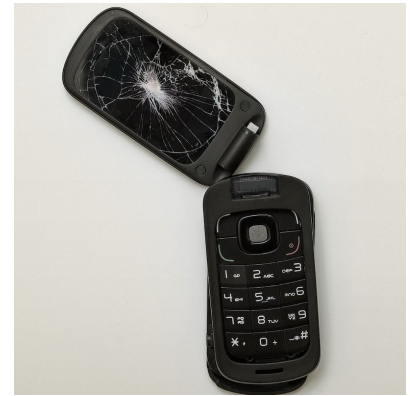


Opportunities for enhancement

REPAIRS

VS

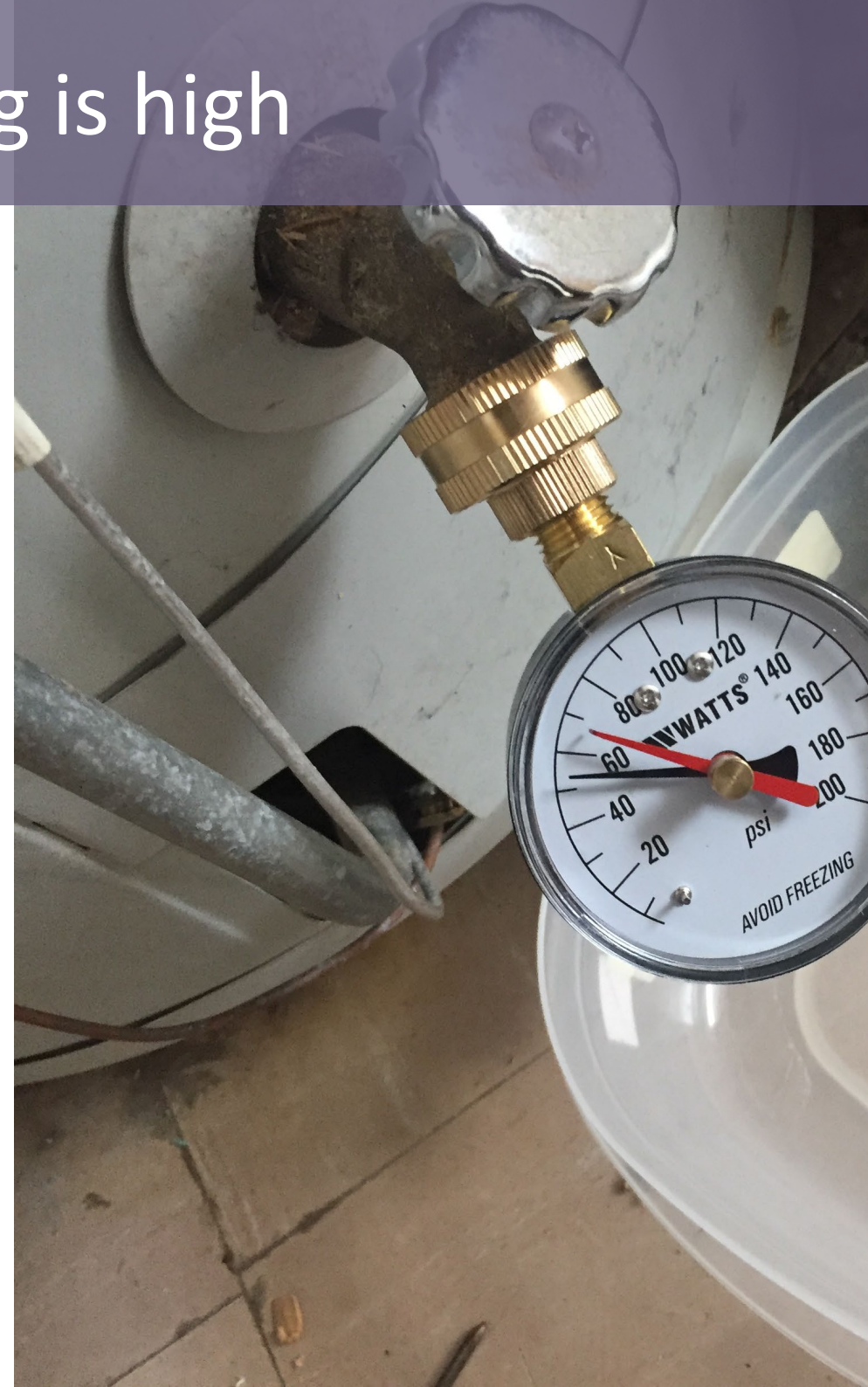
RETROFITS



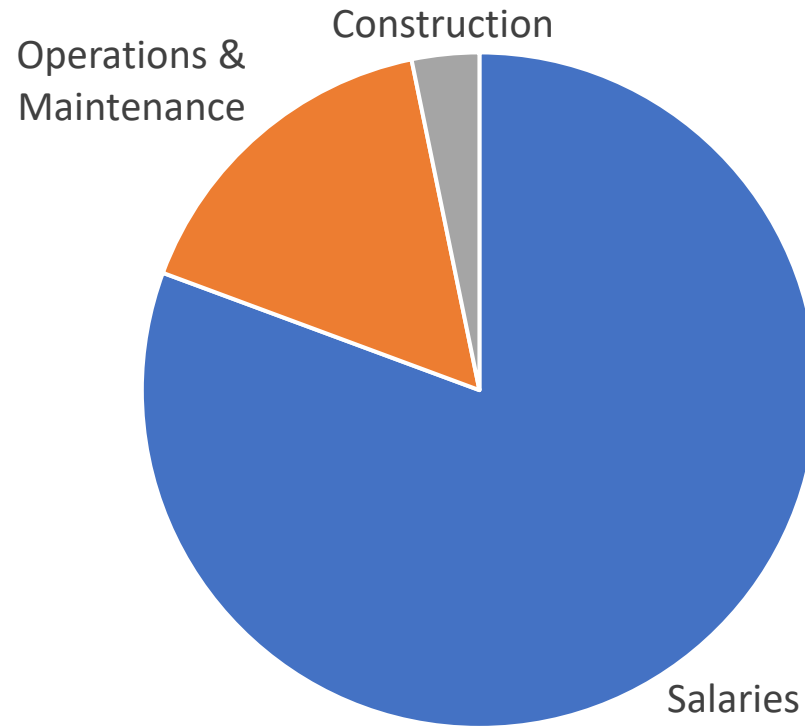
OPPORTUNITY-ORIENTED MANAGEMENT

The cost of doing nothing is high

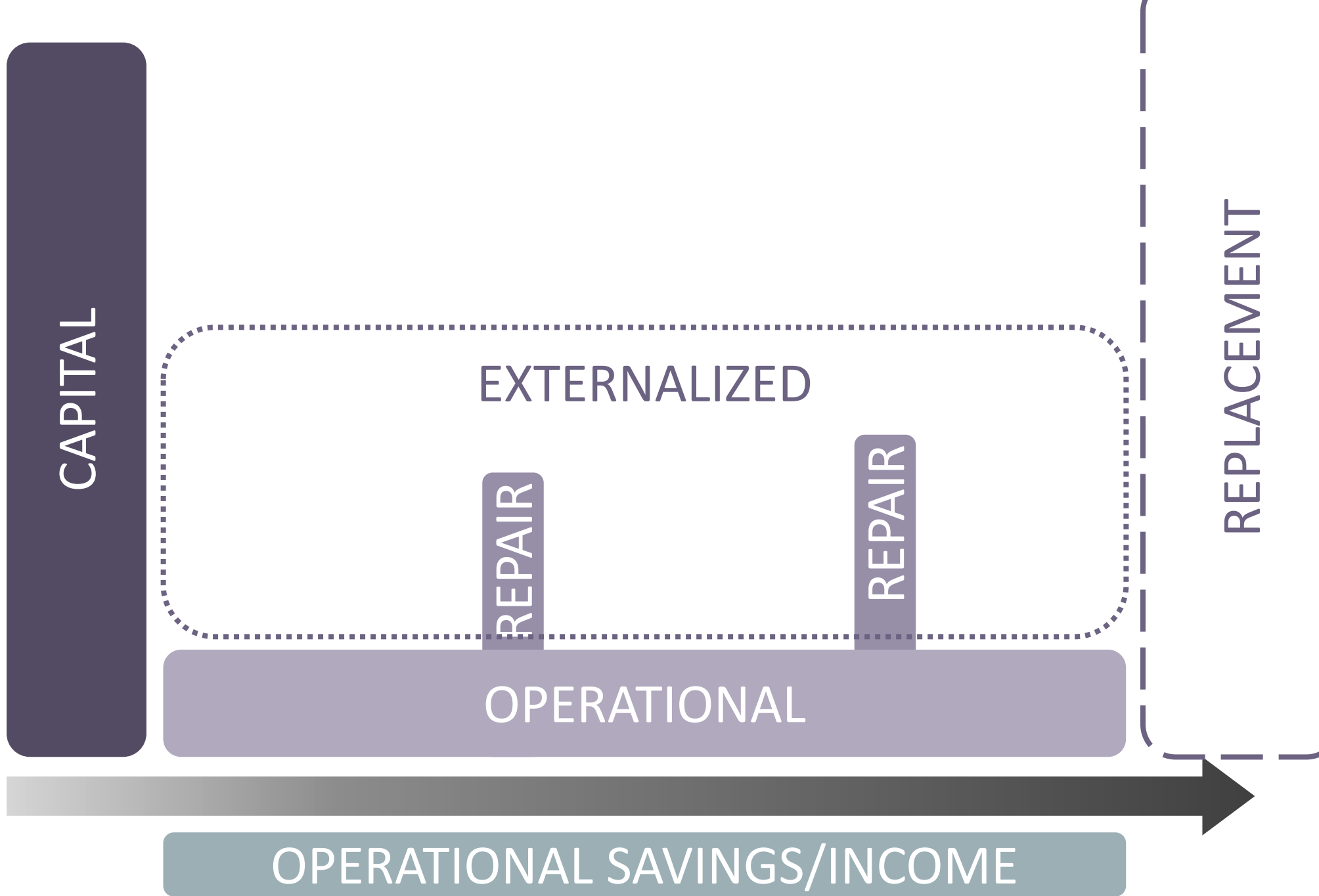
- Damage
- Stress
- Costlier operation
- Missed opportunities
- Lower quality



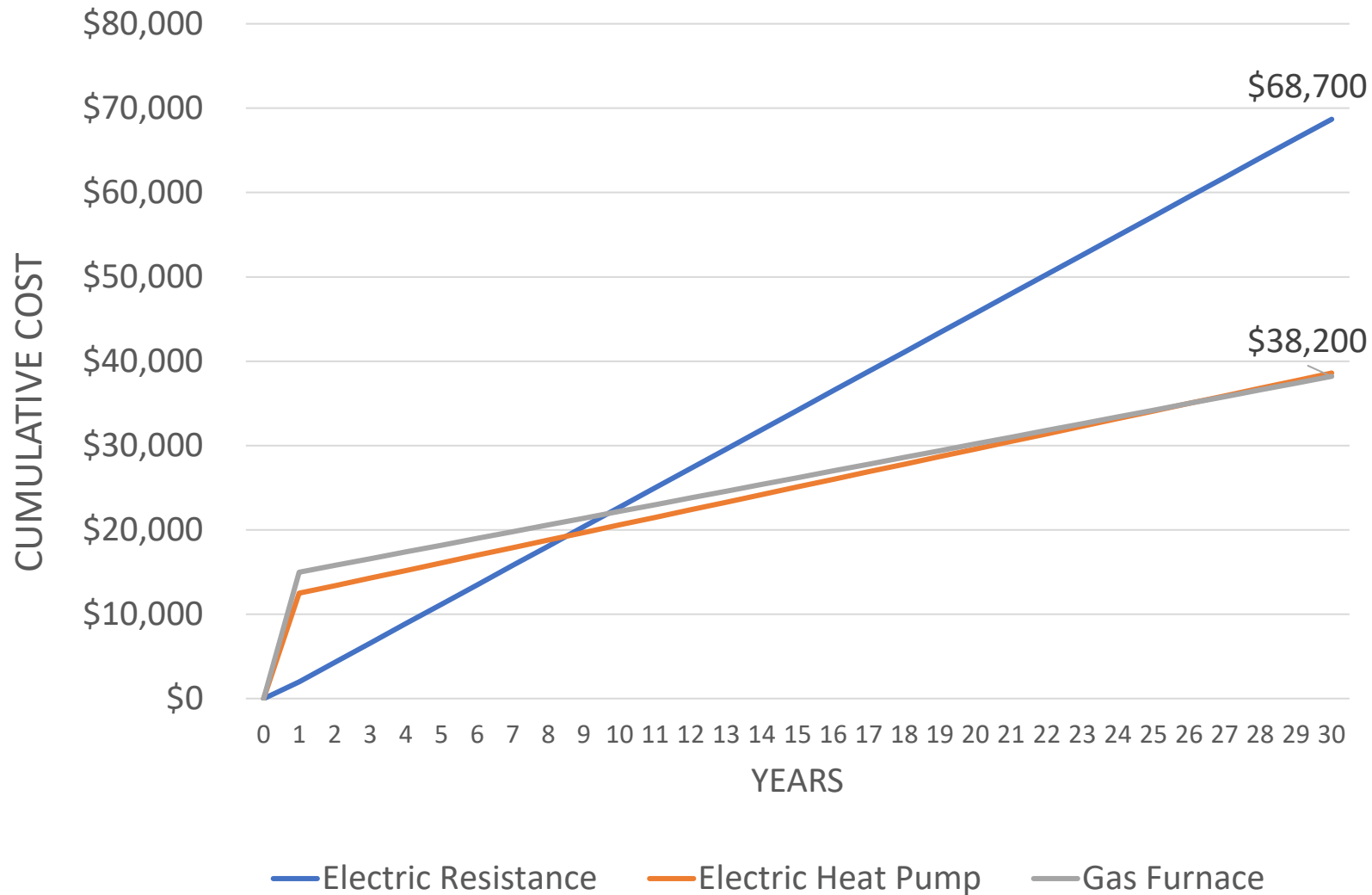
COMMERCIAL FACILITY COSTS



Use a lifecycle perspective for maintenance projects



LIFECYCLE HEATING COST (BOZEMAN)

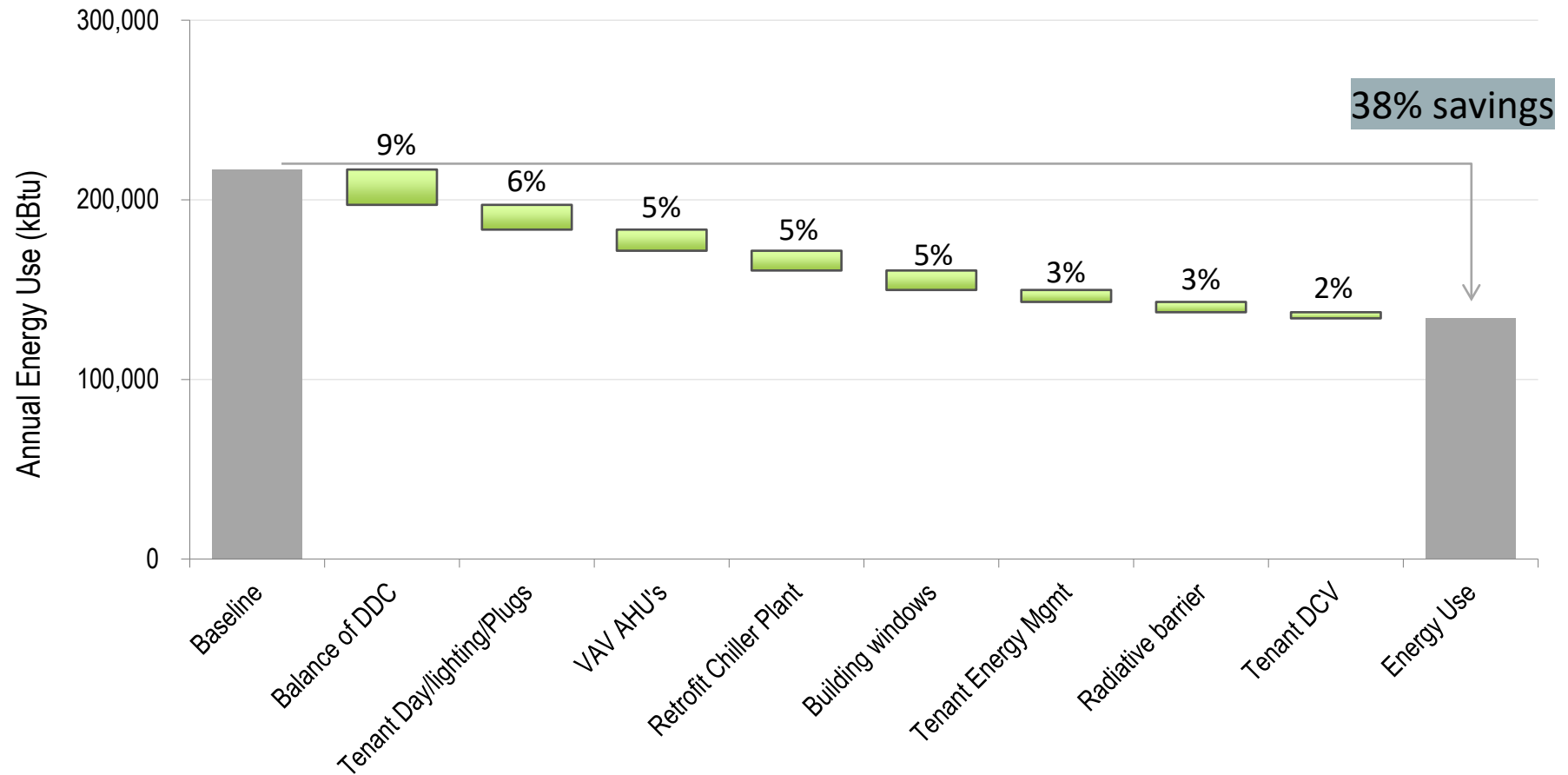


Use a lifecycle perspective for maintenance projects

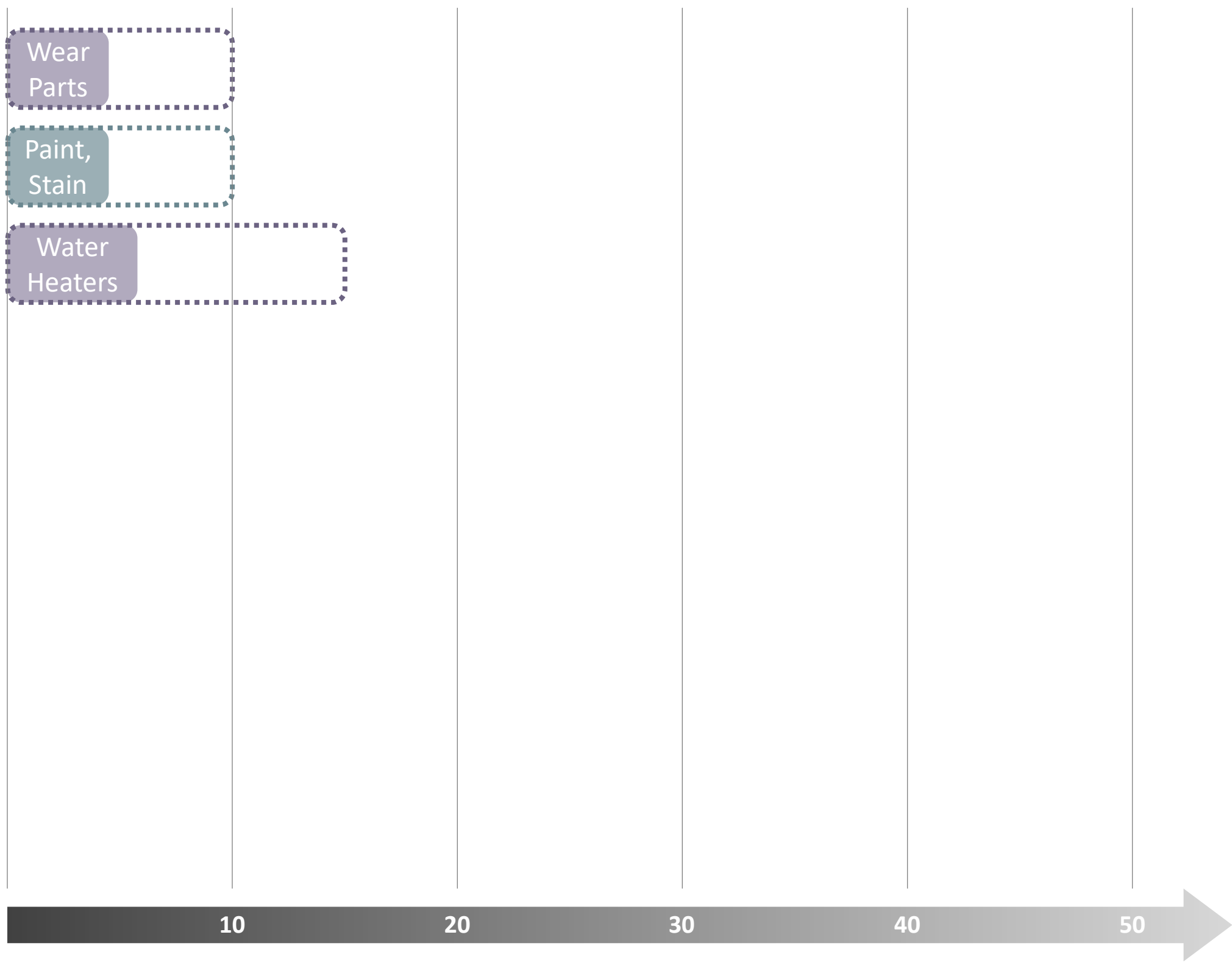


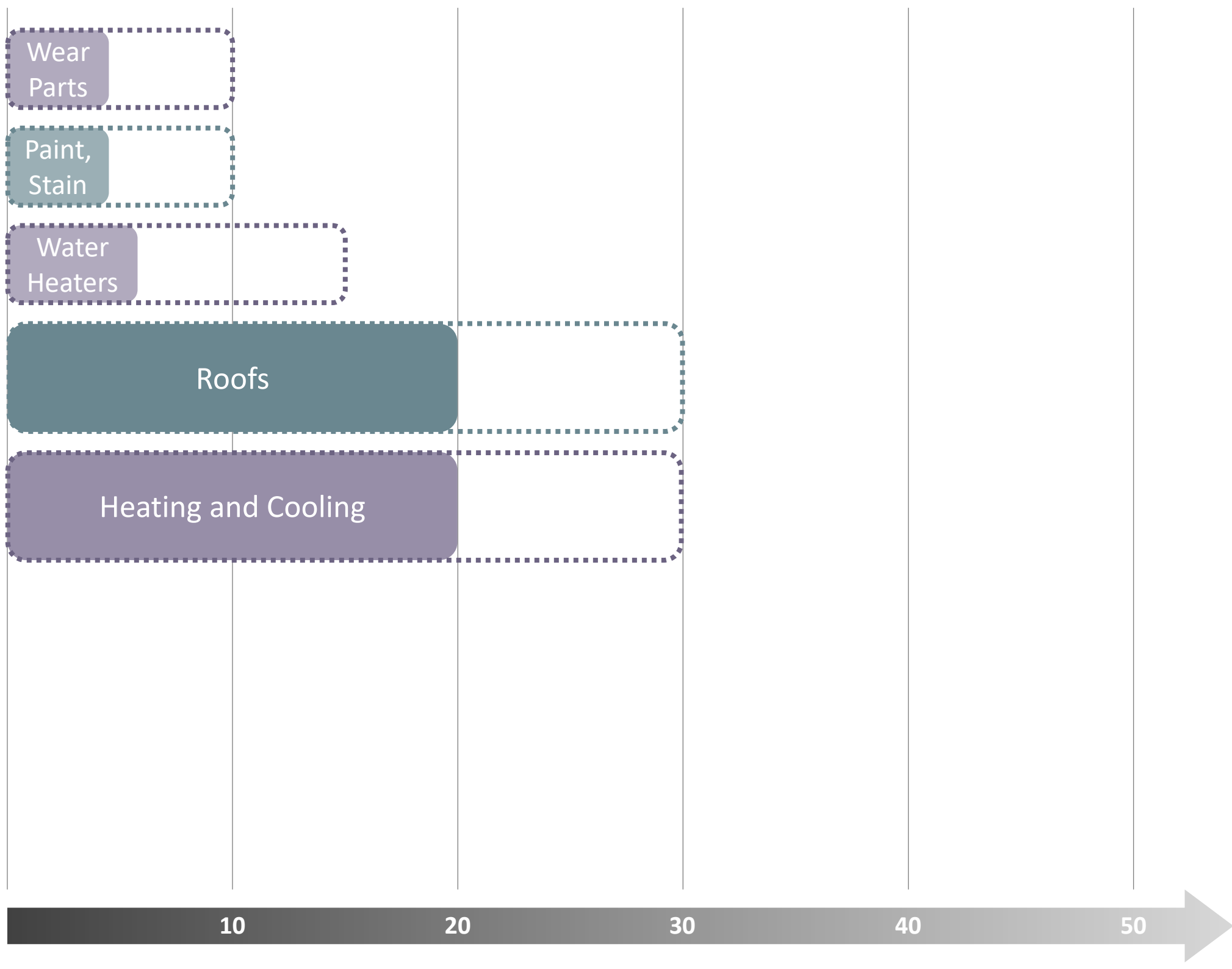
Deep Retrofits transform building performance

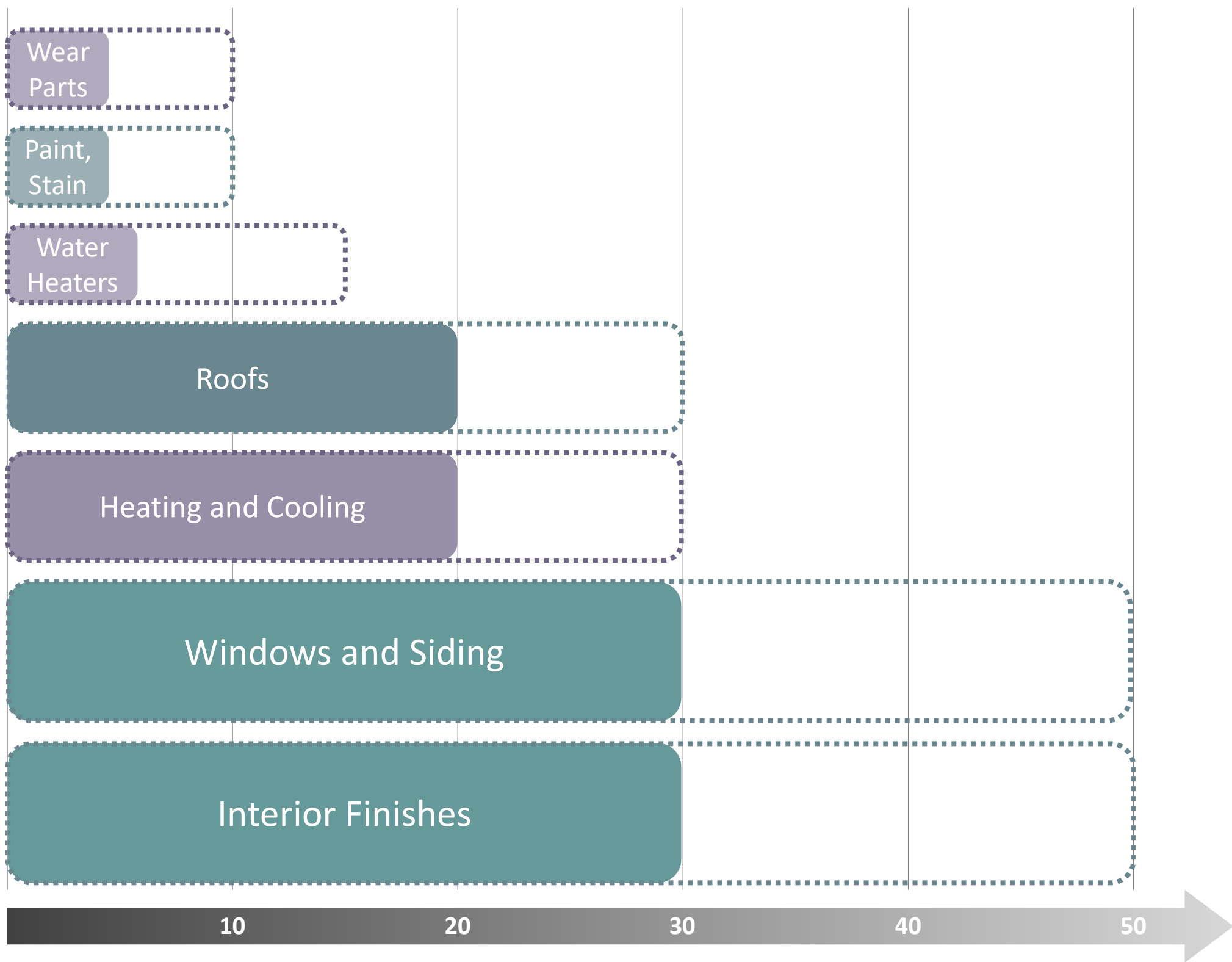
ANNUAL ENERGY SAVINGS BY MEASURE

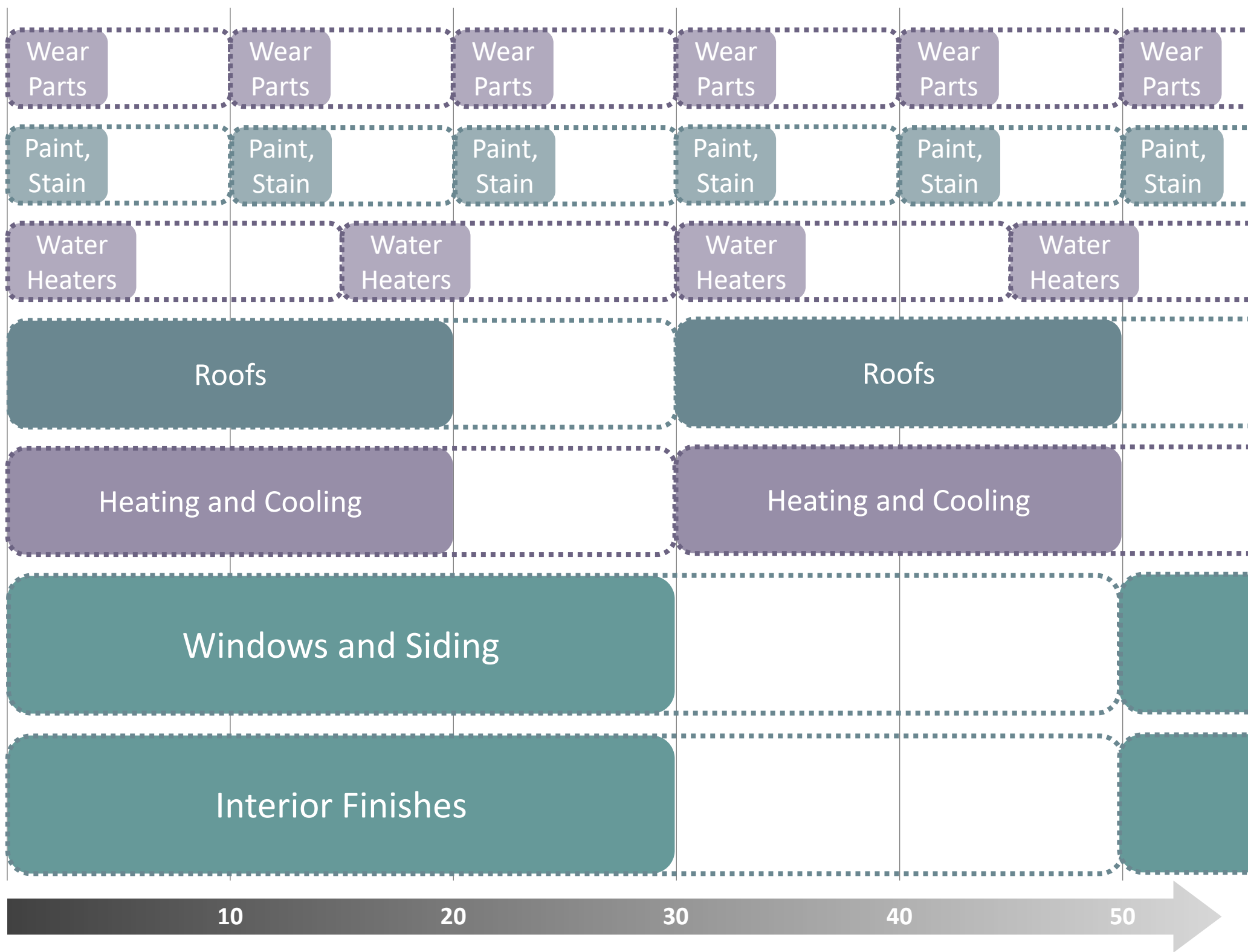


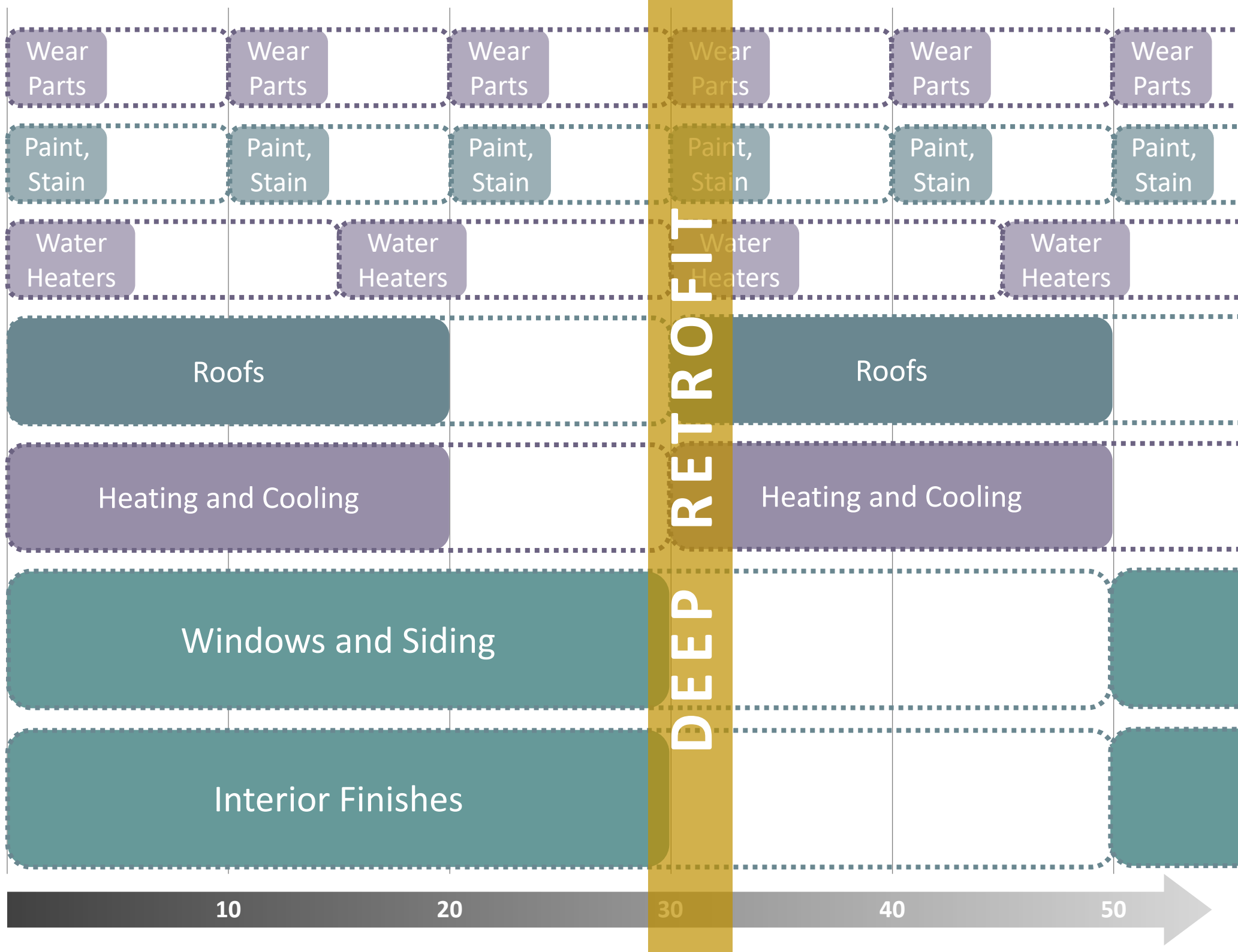
Retrofit measures can enhance one another











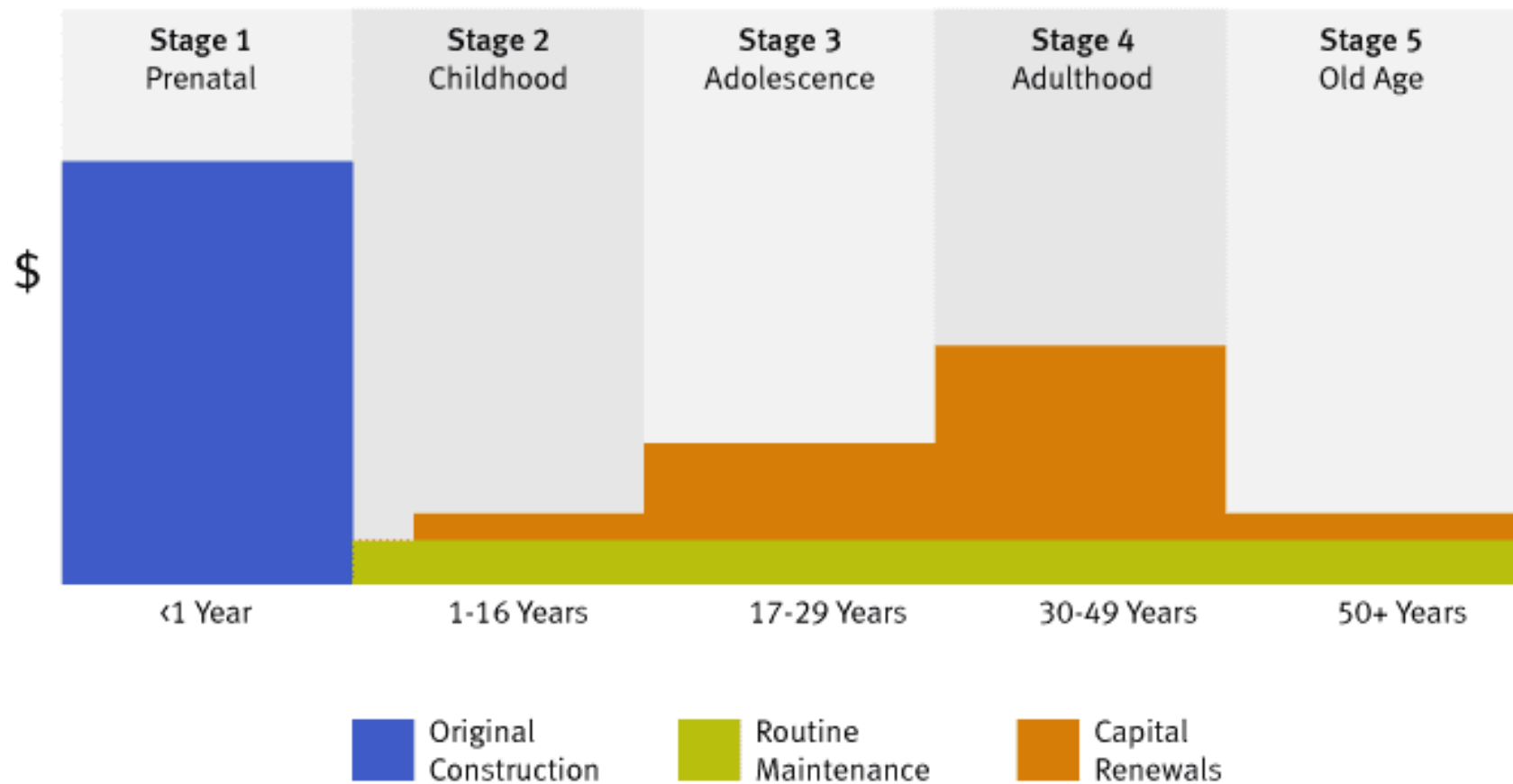


Image source: RDH

As buildings age, maintenance costs become significant

Maintenance Plan

- **Manages Cost**
- **Avoids Damage**
- **Increases reliability**
- **Builds resilience**
- **Unlocks opportunities**
- **Can reposition project**



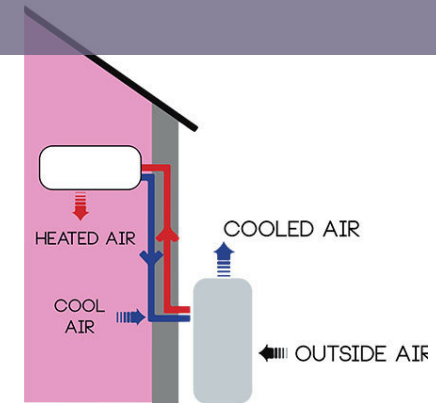


Pilot projects and workdays are implementation tools

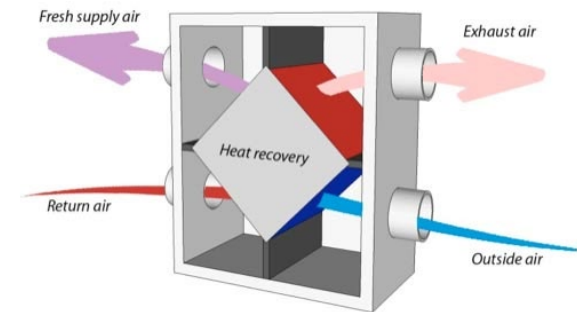
KEY OPPORTUNITIES

Electrification is the future

HEAT PUMPS



ENERGY RECOVERY VENTILATION



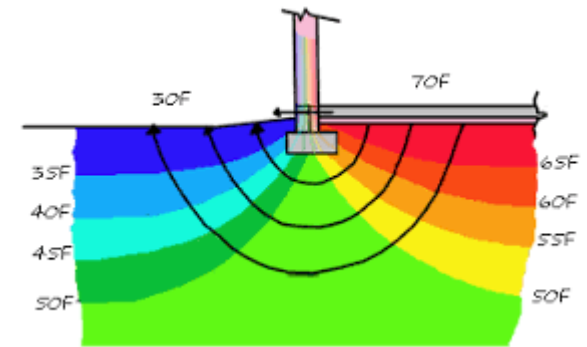
LED LIGHTING



ATTIC INSUL., RADIANT BARRIER



CRAWL SPACE & SLAB INSULATION



EXTERIOR INSULATION & WINDOWS



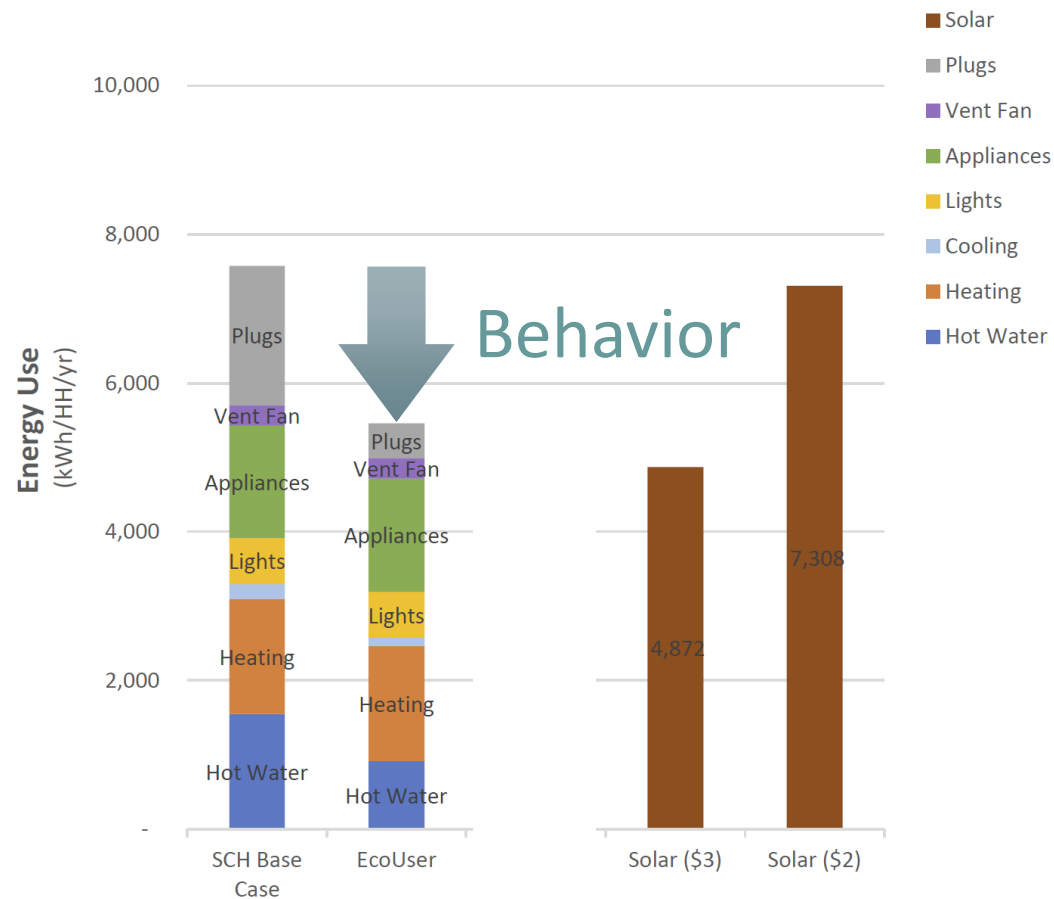
Building envelope measures

Behavioral opportunities

CONSERVATION



Estimated Household Energy Use by Design Case



Behavioral opportunities

CONSERVATION



SUBMETERING



DURABILITY

THERMAL COMFORT

ACOUSTIC PERFORMANCE

AESTHETICS

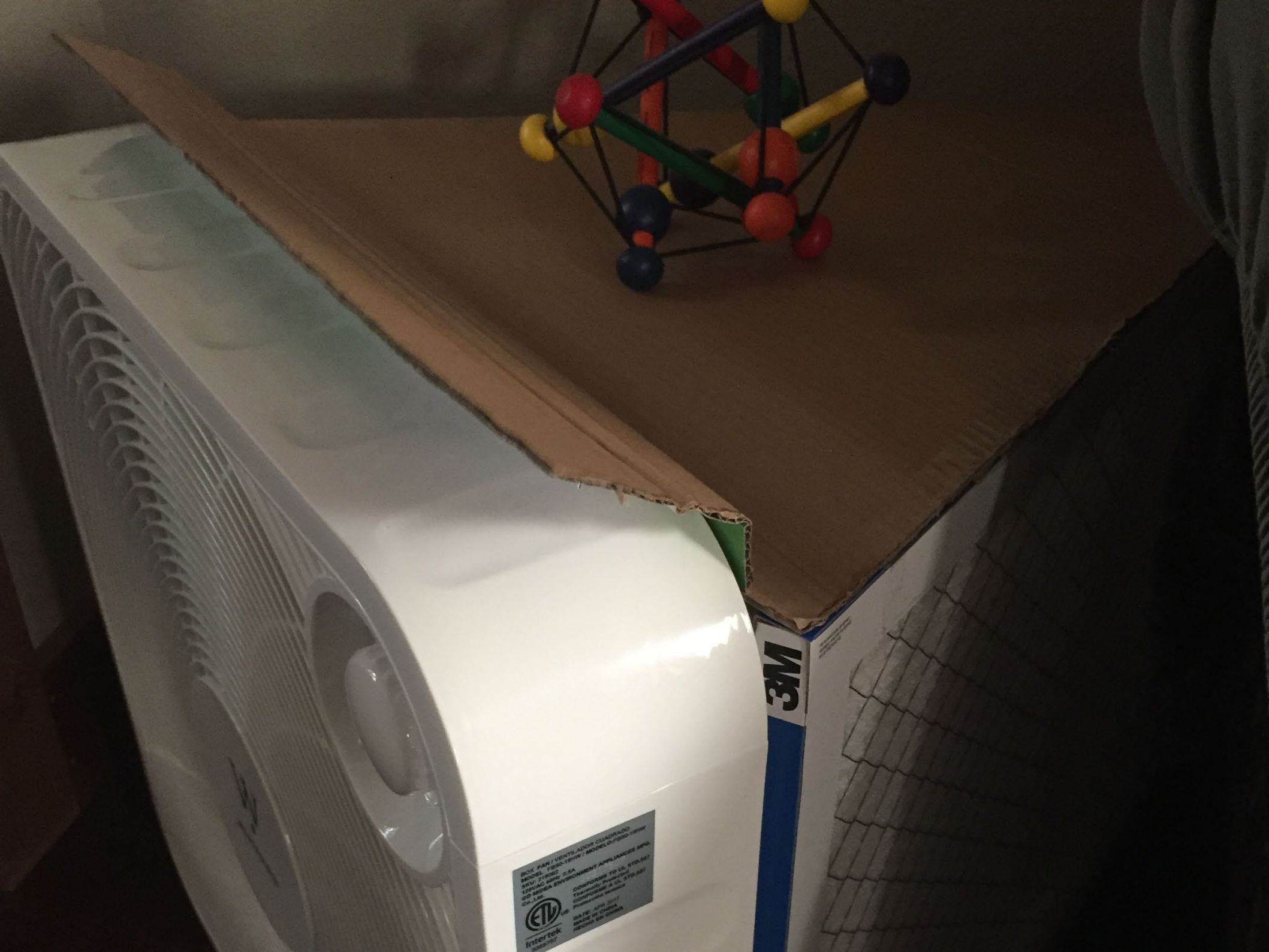
SOLVING PROBLEMS

FUTURE PROOFING



Additional opportunities





BOX FAN / VENTILADOR CUADRADO
MODEL: T-900-191W / MODEL: Q7000-100W
250V 50/60Hz 0.5A
120VAC 60Hz 0.5A
UL LISTED FOR ENVIRONMENTAL APPLIANCES
UL LISTED FOR ENVIRONMENTAL APPLIANCES
DATE: APR 2017
MADE IN CHINA
REPAIR IN CHINA



Climate adaptation

- **FIRE** (ignition resistant construction)
- **SMOKE** (mechanical ventilation & air filtration)
- **HEAT** (Shading, windows, mechanical cooling)
- **WIND** (impact resistant construction)
- **FLOODING** (site work, materials, pumps)
- **POWER OUTAGE** (micro grids, backup systems)



PROFESSIONAL ASSISTANCE IS VALUABLE

Community

Design Professional

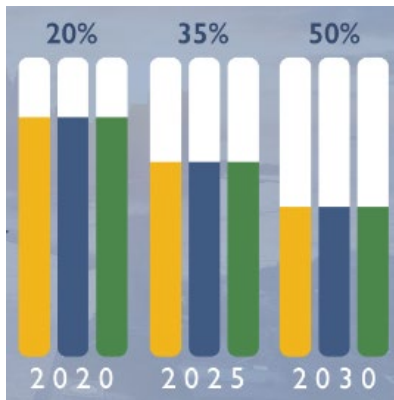
Specialists



Why maintenance is important

How to plan projects to capture opportunities

Where key opportunities lie for cohousing communities





Thank you !

erik@studiocohab.com | www.studiocohab.com