



ELEVATE

Understanding High Performance Buildings (HPB)

Abby Francisco, Jenna Grygier, and Maria Cecilia Quiñones Peña

What is a High Performance Building (HPB)?



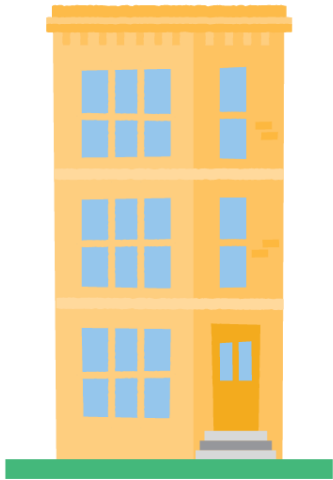
A High Performance Buildings (HPB) is new or existing building that has:

- Low energy and water bills
- Efficient and all-electric building systems
- Renewable energy (rooftop solar)


As a result, High Performance Buildings (HPB):

- Are comfortable, healthy, resilient, and affordable
- Benefit occupants and local communities
- Reduced pollution and CO2 emissions


How Do We Create High Performing Buildings?





We center equity by providing personalized services for **affordable multi-family** and **nonprofit property** owners, managers, and developers to meet their performance and sustainability goals, and include:


 **Portfolio Performance Strategy**
Develop roadmap to achieve decarbonization goals over time


 **Design Review**
Ensure integration of energy, water, health, and resiliency attributes

 **Benchmarking**
Track energy and water use in ENERGY STAR® Portfolio Manager®

 **Property Assessments**
Identify and analyze energy, water, solar, and electrification opportunities

 **Energy Modeling**
Model energy usage to meet high-performance building requirements

 **Financing**
Identify predevelopment and implementation financing, including utility rebates

 **Construction Management**
Support the implementation of energy, water, and solar upgrades

 **Green Certifications**
Complete feasibility checklist and manage green certification process

 **Industry Research**
Performance monitoring and analytics of innovative technologies

We're a Team of Engineers & Technical Experts



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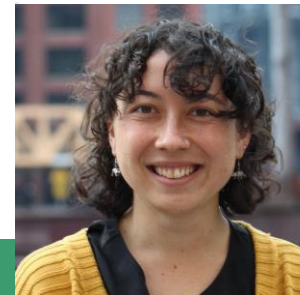
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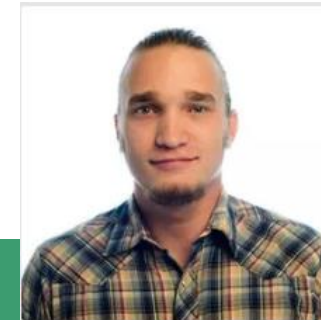
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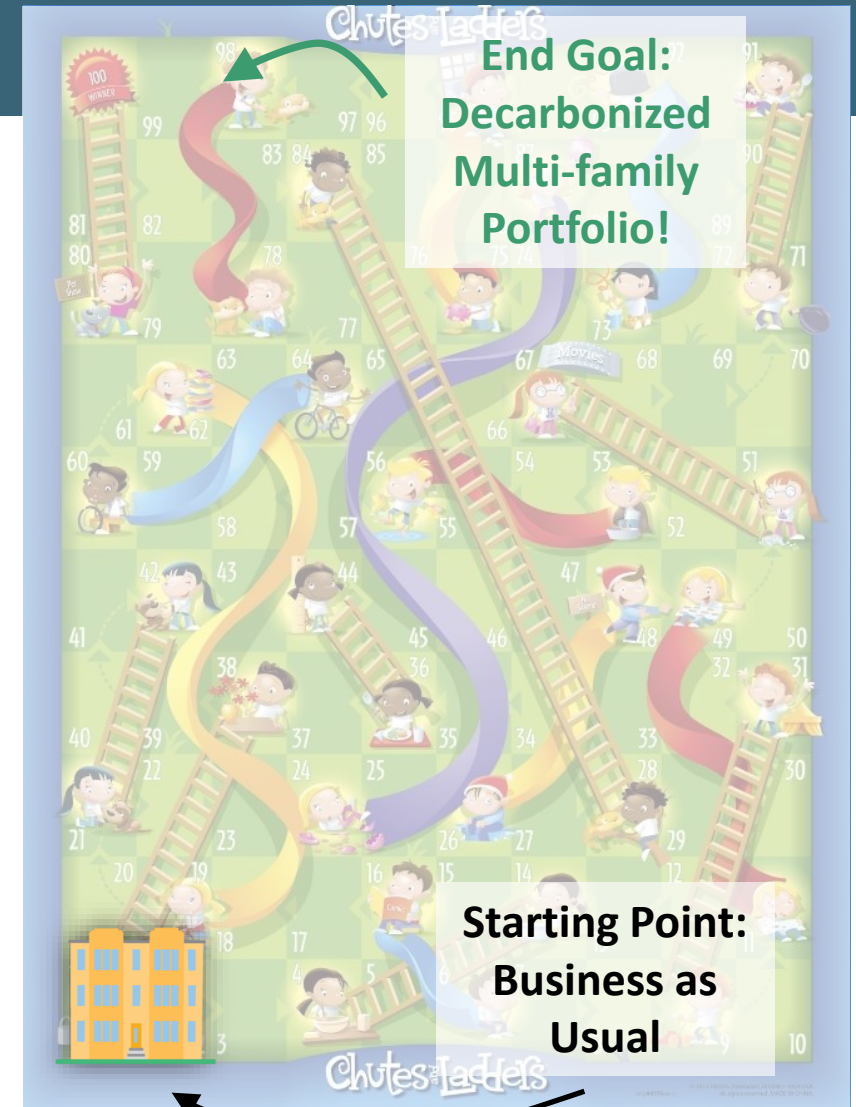
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Let's Run Through an Example ...



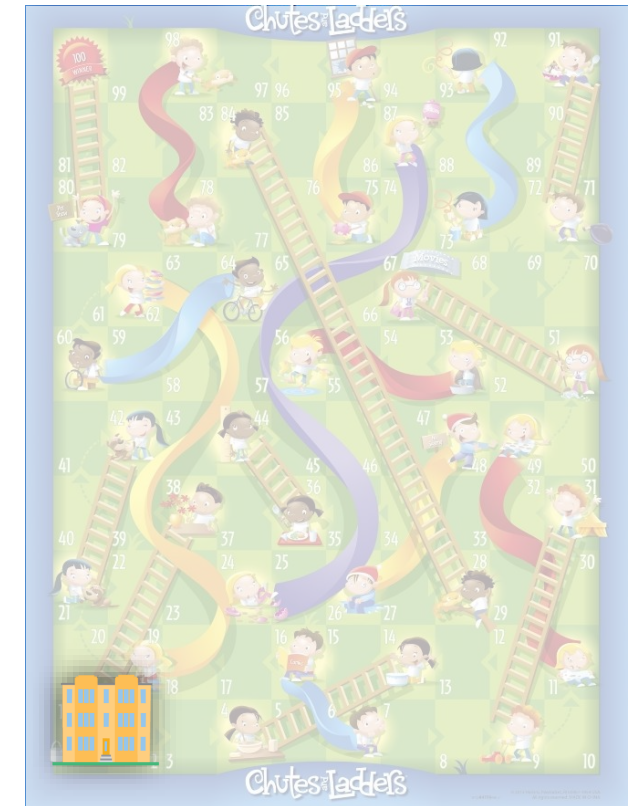
Example Owner: Harold Washington Properties*

- Affordable housing owner
- Owns 500 buildings across the Midwest
- Already implemented basic efficiency projects
- Has goal of decarbonization, but doesn't know how to prioritize properties or what measures are feasible for their building stock
- Heard from a friend about Elevate and reached out



Introduction Call

- **Goal:** Learn about Harold Washington Properties' sustainability goals, existing practices, and building stock
- Harold Washington Properties identifies needing a roadmap to achieve decarbonization of their portfolio over time
- ***Ladder moment:*** Harold Washington Properties requests that Elevate develop a proposal to create a tailored portfolio performance strategy



Service 1: Portfolio Performance Strategy

- **Goal:** Prioritize carbon reduction investments to develop a phased strategy for decarbonization across a portfolio
- **Data requirements:**
 - Property characteristics
 - Whole building utility data
- ***Chute moment*:** Tenant data requires tenant signature – regroup on how to obtain this data



Service 1: Portfolio Performance Strategy

- **Data analysis:**
 - Prioritizes properties based on energy efficiency, water efficiency, electrification, and solar potential
- **Deliverable:** A succinct report with
 - Property rankings
 - Identified trends where opportunities are clustered and therefore can be replicated
 - Recommendations where to prioritize investments in the short and long term and which measures to prioritize
- ***Ladder moment:*** Identify property with best opportunity for efficiency, electrification, and solar



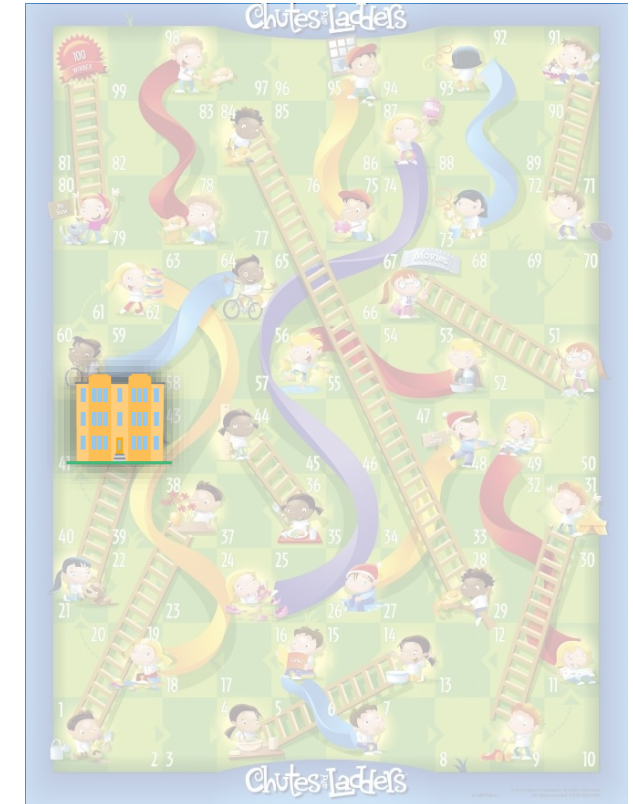
Service 2: Building Energy Assessment

- **Goal:** Assess property onsite, identify opportunities, and quantify utility savings potential of
 - Energy and water efficiency measures
 - Electrification measures
 - Renewable energy measures
- Comprehensive assessment – includes indoor air quality and operations and maintenance recommendations
- **Requirements:**
 - Minimum 12 months of utility data (electric, gas, water)
 - Access to all building areas including a sample of tenant units
 - Plans (floor, mechanical) or prior assessments – as available



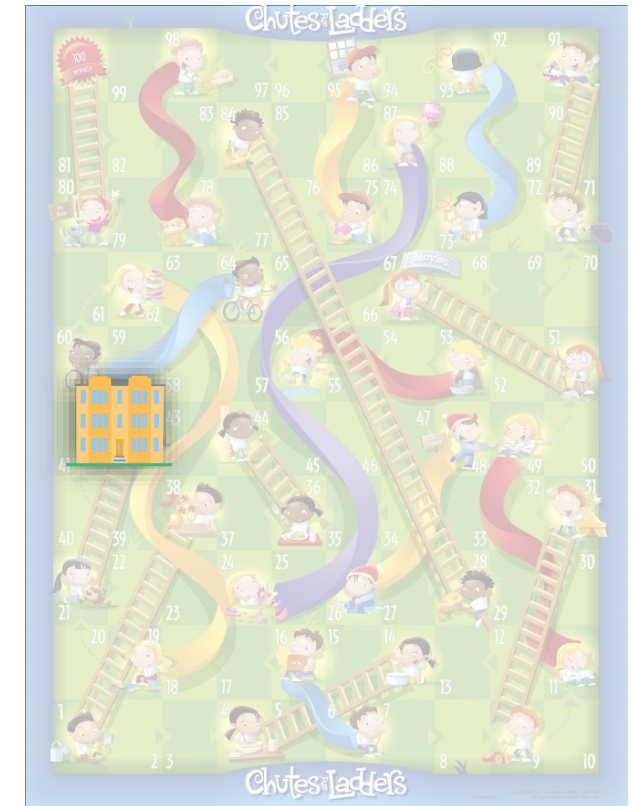
Service 2: Building Energy Assessment

- **Engineering analysis:**
 - Calculations provide insight to the post-retrofit utility cost impact for the owner and tenants; energy modeling can be utilized and/or design load metering strategies
- **Deliverable:** a succinct report with
 - A property description of existing conditions, test results, and recommended projects including operations and maintenance recommendations
 - A table summarizing recommended projects, estimated costs, incentives, and payback period (as applicable)
 - A meeting with the property owner and operations staff to provide an overview of findings and recommendations



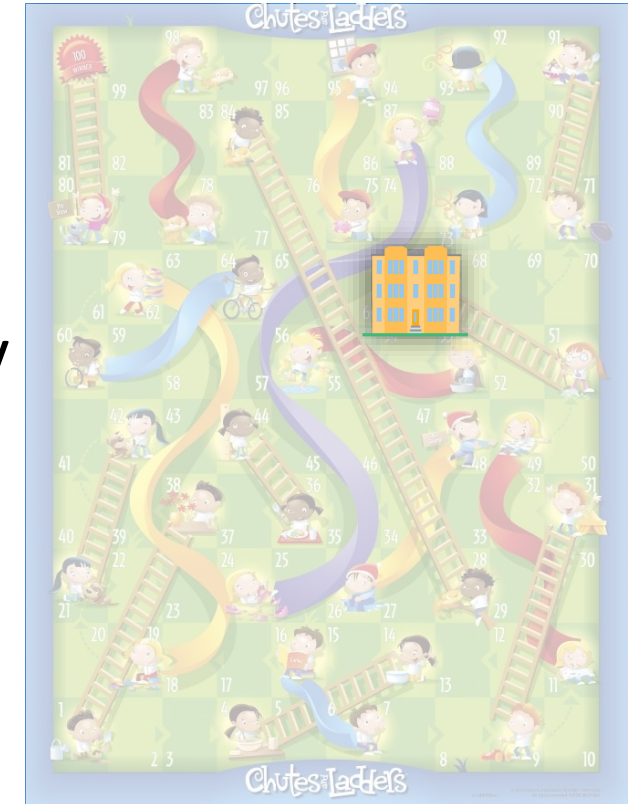
Service 2: Building Energy Assessment

- **Chute moment:** The roof is found in poor condition and is due for replacement based on maintenance concerns and end of useful life
- **Ladder moment:** Owner approves a phased approach to beneficial building electrification. This includes roof replacement through reserved capital funds, allowing the opportunity to pursue both increased roof insulation and a rooftop solar array
- **Ladder moment:** Obtained funding for construction through a combination of owner reserved capital funds, grants, and incentives (utility, state, federal)



Service 3: Construction Management

- **Goal:** Manage the construction process to implement the selected projects identified in Service 2; this includes services such as contractor coordination, bid procurement, bid review, scheduling, and onsite quality assurance oversight
- **Requirements:**
 - Guide specification or request for proposal (RFP) document providing detail for contractors
- **Chute moment:** Lack of contractors available to bid selected projects and it's getting close to the winter when it's critical to maintain safety and comfort



Service 3: Construction Management

- **Ladder moment:** The report from Service 2 streamlined the bid procurement process and 1-2 proposals were obtained for each selected project allowing for a timely construction schedule



Wrap Up

- This first building inspired Harold Washington Properties to pursue efficiency and decarbonization upgrades in more buildings
 - Harold Washington Properties can use the portfolio strategy in the years to come to:
 - Equitably electrify buildings
 - Reduce carbon emissions
 - Reduce utility costs
 - Add central cooling
 - Improve indoor air quality
- ...and ultimately decarbonize their entire portfolio!**



Summary of Services



Portfolio Performance Strategy

Develop roadmap to achieve decarbonization goals over time



Property Assessments

Identify and analyze energy, water, solar, and electrification opportunities



Construction Management

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Benchmarking

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Financing

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Industry Research






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