

Risk-Based Screening Tool for Selecting Existing Seattle Commercial Office Buildings for Conversion to Multifamily Residential

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ABSTRACT: Since the COVID-19 pandemic, office vacancy rates have increased substantially, causing urban blight, while housing demand remains high. Meanwhile, the built environment is responsible for 40% of global carbon emissions, significantly contributing to climate change. In Seattle, legislative efforts around office-to-residential conversions aim to address vacancy, increase housing, and bolster sustainability and resiliency. However, concerns exist regarding the high uncertainty of such conversions, as there is no standardized risk management approach. Due to the relative novelty of these conversions, decisions are made on a case-by-case basis. In response, this study aims to develop a qualitative risk-based screening tool to evaluate the viability of a given Seattle office building for conversion to multifamily residential, based on a list of factors that impact conversion feasibility. Repurposing a building entails new spatial, functional, and code requirements, affecting conversion costs and, therefore, financial risk — a major decision-making factor. To understand the factors with the greatest impact on conversions, professionals in architecture, engineering, and construction were interviewed about their experience with office-to-residential conversions, highlighting the most impactful factors. Interview results were analyzed to create the screening tool — a checklist — for professionals to use in preliminary screening of potential office-to-residential candidates. To test the applicability and effectiveness of the checklist in prioritizing the most viable buildings for conversion, a multi-case study was conducted. The findings of this study will help stakeholders and policymakers qualitatively understand the feasibility of converting existing office stock and focus strategies towards the most feasible candidates.

1. INTRODUCTION

The ongoing discourse on office-to-residential conversions in Seattle is part of a broader conversation about adaptive reuse as a strategy to counter trends of falling urban property values and associated decline. From an environmental perspective, there is both academic and practical interest in the feasibility of building conversions as a sustainability strategy. This shift has highlighted the importance of repurposing not only landmark buildings, but also more ubiquitous structures, such as commercial offices. However, such projects are already physically complex, with uncertainty and high risk also reducing their financial appeal. These challenges can be mitigated by using a clear approach for evaluating conversion feasibility. The literature review for this study, outlined in Section 2, establishes a direct correlation between building features and conversion feasibility. The research effort focuses on developing a tool to facilitate a simplified and clear decision-making process for use in making early-stage judgements about the likely feasibility of an office-to-residential conversion.

1.1 Research Objectives

The three main research objectives of this study are:

- To identify the factors affecting office-to-residential conversion feasibility,
- To determine the impact the identified factors have on a building’s feasibility for conversion from office to multifamily residential, and
- To propose a checklist incorporating the identified factors, to be used by architecture, engineering, and construction professionals to screen potential office-to-residential candidates.

1.2 Expected Outcomes

This study aims to contribute to a growing body of knowledge around office-to-residential conversions and adaptive reuse feasibility. The main study outcome is a decision-making approach that can focus industry efforts and mitigate the case-by-case nature of office-to-residential conversions. This is significant not only because of the currency of this issue, but also because this work could yield a tool for use in the industry as a framework to help make decisions regarding office-to-residential building conversions in Seattle.

2. LITERATURE REVIEW

2.1 The Case for Office-to-Residential Conversions

2.1.1 COVID-19 and Office Vacancies

The work-from-home revolution of the COVID-19 pandemic brought into question the future of downtown office spaces across the United States. Since 2020, office vacancy rates have risen substantially: in the U.S., national office vacancy rates increased from 9.81% in 2020 to a historic high of 20.1% in 2024 (Moody’s Analytics, 2024). This threatens current and future cash streams due to a sudden decline in projected office demand. Moreover, remote work culture continues to persist as employers invest in aligning corporate infrastructure around remote work, which includes reducing physical office space (Gupta, 2022). The phenomenon of increasing office vacancy also presents a concern for local governments, as lowering property values directly impact the volume of tax revenue collected from commercial offices as well as neighboring retail properties (Chernick, 2021), all of which contributes to urban blight.

2.1.2 Housing Crisis

The U.S. also continues to grapple with a severe housing crisis, characterized by insufficient housing supply and severe unaffordability (Kolachalam, 2022). According to the U.S. Department of Housing and Urban Development, “many of the same cities that have experienced increases in office vacancy rates also have severe housing shortages”, with the country short of as many as four million houses in a “deeply unaffordable” market (NPR, 2024). High-density cities exhibit the worst of these problems, due to limited space for new construction, high costs, and complex permitting processes (Gupta, 2023). The co-existence of the oversupply of office space and the undersupply of residential space makes office-to-residential conversions highly appealing, as a comprehensive solution to more than one complex issue. And there is a significant precedent for this approach – in New York City, non-residential conversions, specifically office-to-residential conversions, have supplied significant housing stock (Aldana, 2024).

2.1.3 Climate Crisis

Finally, while the drivers for adaptive reuse are primarily functional obsolescence and economic considerations, the environmental benefits of building conversions have garnered much attention in recent years. Reducing carbon emissions across the construction industry is increasingly a priority, as some cities have begun to enact laws penalizing building owners for exceeding established emissions limits, such as Seattle’s Building Emissions Performance Standard and New York City’s Local Law 97. Existing literature emphasizes the embodied carbon benefits of office-to-residential conversions and presents the approach as a viable sustainability strategy (Gavu, 2024; Gupta, 2023).

2.2 Understanding Risk: The Challenge of Conversions

2.2.1 The Economics of Conversions

A core challenge is the high monetary cost of conversion. Sources vary on the specific costs per square foot (Hamman, 2024), however, there is a shared opinion across industry professionals that conversion is an expensive effort. Moreover, demand for quality still drives the pricing of apartment units, even in a tight housing market (Remoy, 2014). On top of that, commercial properties still typically earn higher rent than residential ones (Kolachalam, 2022). So, there is pressure on developers to manage initial conversion costs while delivering high quality apartments that ensure that the conversion remains financially viable.

2.2.2 Zoning and Building Codes

Another significant risk is related to zoning issues (Hamman, 2024; Remoy, 2014). Office-to-residential conversions typically entail proposing residential developments in commercial zones and overcoming zoning classifications and negotiating permission to proceed can be expensive and time-consuming (Hamman, 2024), with no guarantee of a favorable outcome. Local, state, and federal building codes present yet another substantial risk (Hamman, 2024). Residential requirements are different from offices in many ways, and the additional work associated with bringing a building up to code can entail high costs. Moreover, the subjectivity associated with the interpretation of building codes and compliance can result in unexpected delays or costs that are difficult to predict until a detailed proposal is submitted for approval.

2.2.3 Knowledge of Building Conditions

For any conversion, the accuracy of the information available at project conception greatly determines the degree of risk. Incorrect or missing information about existing conditions, particularly any problems such as structural issues or contamination, can cause delays and cost overruns (Remoy, 2014).

Overall, office-to-residential conversions are marked by a high degree of uncertainty, which translates to a high degree of risk. Each building presents different existing conditions in varying states of repair. Moreover, there are inherent inefficiencies in repurposing a building for a use other than what it was originally intended for – especially with purpose-built offices (Kolachalam, 2022). All of this creates uncertainty, which means office-to-residential projects have to operate on a case-by-case basis, requiring a great deal of investment in the initial stages, and increasing the overall risk.

2.3 Identifying Factors Impacting Conversion Success

Researchers and professionals tackling office-to-residential conversion projects identify several key characteristics common to buildings that undergo successful adaptive reuse.

2.3.1 Size: Floor Plate Depth and Square Footage

Floor plate depth, which affects daylighting quality in interior spaces, is a key factor affecting conversion feasibility. Some sources suggest an ideal range (Kolachalam, 2022), while others suggest a hard maximum (Gupta, 2023). Some authors describe “shallow” floor plates qualitatively instead of setting a specific limit (Aldana, 2024). Square footage is also frequently cited as a factor impacting feasibility. However, both the ideal square footage and the reasons why this aspect is important vary.

2.3.2 Location

The location of the subject property is also considered impactful since it determines access to transportation and amenities (Aldana, 2024; Remoy, 2014). According to analysts at Moody’s Analytics, properties within 500 feet of a public transit stop make for more suitable conversion candidates. Additionally, according to Gupta et al (2023), focusing on midtown and downtown areas (in the case of Manhattan) is key as the “negative externalities from office vacancy are the strongest” in those parts of the city.

2.3.3 Age

Most authors comment on the age of the building in one way or another. Some point to a particular year of construction as a cut-off date (Kolachalam, 2022; Gupta et al, 2023) while others indicate periods of time (Campion, 2022). The general preference for older buildings is justified for various reasons, including smaller floor plates and lower property values, the latter of which impacts the viability of redevelopment as opposed to conversion.

2.3.4 Gupta et al. (2023)'s Model to Select Candidates for Conversion

A 2023 working paper published for the National Bureau of Economics (NBER) by a group of researchers at New York University and Columbia University was especially informative for the literature review. The paper outlines an algorithmic process to select the commercial office building stock viable for conversion to apartments. The approach is one of elimination, rather than selection or screening of a specific property for feasibility. Emissions performance and real estate data are used to create an initial dataset. Then, the following sequential criteria are used to retain a set of office buildings that are viable candidates for conversion to residential:

1. Location: Only buildings in midtown and downtown Manhattan are retained
2. Date of Construction: Only buildings constructed before 1990 are retained
3. Building Class: Only Class B and C buildings are retained
4. Square footage: Only buildings larger than 25,000 SF are retained
5. Depth of Floor Plate: Only buildings with a core-to-window distance of up to 60 feet are retained
6. Vacancy: Only buildings with no (or few) major long-term leases left are retained
7. GHG Emissions: Only buildings that exceed the 2030 GHG limit per NYC Council's Climate Mobilization Act are retained

In this way, Gupta et al.'s proposed approach creates a list of available building stock suitable for office-to-residential conversions. Using the broader datasets, the research team has generated such lists for a number of major cities across the United States. The list for Seattle forms the starting point for this study.

2.3.5 Other Selection Models

Models such as the one proposed by Gupta et al. (2023) can mitigate the complex process of determining a vacant office building's suitability for use as a multifamily residential property. Geraedts and van der Voordt (2004) proposed one such framework, considering various aspects of the building. However, the model is over 20 years old and may not sufficiently address contemporary issues. More recently, the architectural practice of Gensler has developed an algorithmic tool called *Conversions+™* (*Conversions+™ by Gensler*, n.d.), which assigns scores to buildings based on conversion suitability. However, a challenge with a proprietary tool such as this can be accessibility across industry stakeholders.

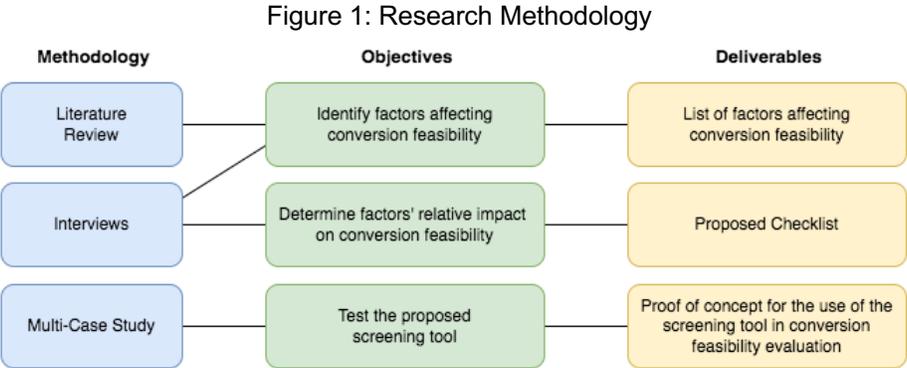
2.4 Gaps in Literature

The literature review establishes that office-to-residential conversions are considered risky due to the high degree of uncertainty associated with them. A significant portion of this uncertainty comes from the difficulty in determining whether or not a building is suitable for an office-to-residential conversion. Currently, the process requires detailed feasibility studies, which entail significant initial investment in terms of time, effort, and capital – at the end of which, a project may not be viable after all. This makes already daunting projects even less appealing to the various stakeholders involved.

Various sources describe the building characteristics (factors) that are found to make certain office buildings more suitable candidates for conversions. They also explain why these factors are important and how they impact the suitability of a building for conversion. However, the existing literature does not provide a clear prioritization of those factors based on the degree to which they impact the feasibility for conversion. In other words, the relative importance of these various factors to each other is not clear. In response, the effort of the study is to not only identify factors but also understand their relative importance to each other.

3. METHODOLOGY

Figure 1 summarizes the overall research methodology of the study and the output of each research activity.



3.1 Interviews

The literature review highlighted some of the challenges of office-to-residential conversions and the building characteristics that make certain buildings more suitable for conversion than others. To gain a better understanding of the issue within the context of the Seattle building industry and to keep up with more current developments that might outpace academic publishing, the literature review is supplemented with interviews of Seattle architecture, engineering, and construction industry professionals. Five professionals are interviewed about their experiences studying office-to-residential conversions and the building characteristics that most impact conversion feasibility.

3.1.1 Approach

A total of five interviews were conducted in two stages: first, one preliminary interview was conducted to discuss the issue more broadly. Then, four in-depth interviews were conducted to dive into discipline-specific aspects of office-to-residential conversions. The preliminary interview sought to broadly understand office-to-residential conversion, as well as validate the literature review findings. It highlighted challenges that arise from changing the building use and the broad spatial considerations for the creation of functional residential units within an office floor. The interviewee was a senior project manager at a multifamily residential development firm. The second stage of interviews was more focused on the priorities of specific disciplines within the industry: architecture and design (building code and functionality), real estate development (financial incentives and underwriting), construction management (estimating and preconstruction), and mechanical, electrical, and plumbing engineering (systems and services). The selected interviewees were professionals from these various sectors, all locally or regionally based in the Seattle industry. The candidates included senior professionals at a reputed design practice, a prominent regional real estate development firm, a large construction services firm, and a national MEP (mechanical, electrical, and plumbing) and energy services firm. Each interviewee had been involved in at least one feasibility study for an office-to-residential conversion project in Seattle and shared insights gained from these studies during the interviews. There was also a discussion about the factors identified from the literature review. This diverse group of interviewees provided a broad range of perspectives and firsthand knowledge on the subject.

3.1.2 Structure

During the interviews, participants were shown the factors impacting office-to-residential conversions which had been identified through the literature review. They were asked whether these factors were relevant to conversion feasibility and to suggest any additional factors they felt were missing. Each interviewee was

also asked to identify the factor(s) they considered most critical in determining the feasibility of office-to-residential conversions. Factors mentioned consistently across interviews received greater focus in subsequent discussions and in the refinement of the checklist, especially if they also aligned with the literature review findings. Broadly speaking, if a majority of the interviewees agreed that a given factor was important, it continued to be significant throughout the interview process and in the development of the checklist. Additionally, participants also shared their own experiences with feasibility studies. After each interview, the list of factors was revised to incorporate interviewees' feedback.

3.2 Multi-Case Study

Using interviewees' inputs, the list of factors impacting office-to-residential conversion feasibility was refined and transformed into a checklist. To test the format and the usefulness of the checklist, a multi-case study was conducted on a subset of Seattle building stock already deemed as "suitable candidates for conversion" by Gupta et al (2023). The buildings used in the study were selected as follows:

- Only buildings in the City of Seattle were considered. 62 of 91 buildings were located in Seattle.
- Of those 62, eight buildings had floor plans accessible through real estate databases. Thus, the availability of data drove the case selection at this stage.
- The checklist was then applied to those eight buildings.

4. DEVELOPMENT OF THE CHECKLIST

4.1 Interview Findings

The interview process validated the major factors that were identified through the literature review such as floor plate factors and identified additional factors such as structural considerations. The interviews also highlighted Seattle-specific issues that impact conversion feasibility on a local level. Additionally, they provided a more detailed understanding of why the identified factors are important, how they impact conversion feasibility, and the degree to which they impact feasibility, all of which was impactful in the development of the checklist.

4.1.1 Floor Plate Characteristics

Floor plate characteristics, particularly floor plate depth, significantly influence office-to-residential conversion feasibility, affecting daylight penetration, as well as the size and functionality of units. The vertical core's location also affects floor layout, circulation requirements, and unit access. The ideal square footage per floor affects the number of units and unit mix. Despite the consensus on the importance of floor plate depth, opinions on the ideal floor plate area for office-to-residential conversions varied.

4.1.2 Structural Characteristics

The structural bay in an office floor plan will likely not align with that of a residential floor plan, affecting the efficiency of the proposed layout. The condition of the building's structural system also affects conversion feasibility: any necessary repairs may both be costly and involve complex construction activities. Additionally, the change in use of the building from office to residential typically entails code-driven structural upgrades. Finally, the type of structural system can also play a role – post-and-beam systems are often considered easier to work with compared to post-tensioned (PT) concrete, particularly if rework such as coring and rewiring is needed.

4.1.3 Age-Related Upgrades

The age of the building and the timeline of prior work performed on it also impact its suitability for conversion. As noted in the literature review, older buildings typically feature smaller floor plates, which are considered more suitable for conversion. However, they are also likely to require more significant upgrades

to meet current seismic and energy codes. On the other hand, newer buildings are more compliant with current codes, but also may lack other favorable characteristics.

4.1.4 Understanding the Seattle Context

The interviewees discussed the major impact that local and regional building codes have on office-to-residential conversions in Seattle. For example, Seattle's Existing Building Code treats any office-to-residential conversion as a "Substantial Alteration", triggering significant seismic and energy upgrades. Additionally, the building's history of prior work is impactful, as it can be useful in determining the scope of necessary upgrades. It is also important to consider the broader trends of decreasing property values of commercial offices coupled with the high costs of new. This makes properties such as Class B and Class C offices more viable candidates for conversion, as they are valued lower compared to Class A offices, which remain in high demand. The economics of these conversions are also influenced by external factors such as support from the city in the form of tax incentives and code flexibility.

4.1.5 Relative Importance of Factors

Interviewees were asked to rank the various factors based on each factor's importance in determining office-to-residential conversion feasibility. A 5-point Likert scale was used with scores ranging from 1 ("least important") to 5 ("most important"). This provided additional insight into the relative importance of each factor. Overall, the physical characteristics of the building itself emerged as the primary consideration, as they determine the physical viability of the conversion, as well as influence its financial viability. Among these, floor plate characteristics were generally considered the most important, particularly floor plate depth and the location of the core, which received scores of 4 or greater. This was followed by structural considerations, with the structural bay spacing emerging as the most significant, receiving scores between 3-4. Factors specific to the Seattle context, as discussed above, were also generally ranked as important. The organization of factors by relative importance, including the treatment of Seattle-specific concerns, is discussed further in Section 4.2.3.

4.2 Proposed Checklist

4.2.1 Approach

The literature review and the interviews highlighted several important factors influencing the feasibility of office-to-residential conversions. The interviews provided valuable, current insights, particularly relevant to the Seattle real estate and construction industries. They also helped understand the relative importance of these factors in determining conversion feasibility. These findings aligned with those of the literature review. Building on these insights, the study proposes its own list of factors that impact the feasibility of office-to-residential conversions, with a focus on the Seattle context. This list is synthesized into a checklist designed to streamline the initial feasibility evaluation, allowing professionals to conduct preliminary screenings of potential conversion candidates and offering a qualitative evaluation of the conversion's likely feasibility.

4.2.2 Proposed Factors

The checklist addresses three categories of factors that impact office-to-residential conversions in Seattle. Figure 2 shows the three categories and the factors included in each of them. The categories are:

1. **Pre-Requisites:** These are essential requirements that **must** be met before a conversion is considered. If these requirements are not met, the building is not suitable for conversion.
2. **Critical Factors:** These are important physical factors that have a high degree of impact on a building's conversion feasibility. The greater number of these factors that are satisfied, the greater the conversion feasibility. If too few of these factors are present, this indicates low feasibility for conversion.
3. **Preferred Factors:** These are regional factors specific to building and energy standards in Seattle. The presence of these factors suggest that the building aligns well with modern local standards, making compliance relatively easier. If these factors are not satisfied, it suggests that more

extensive work will be needed to meet current code requirements. While these factors help evaluate relative feasibility, they do not necessarily make a conversion infeasible.

4.2.3 Checklist Sequence

A strength of the checklist is its sequential structure, which provides a clear and logical framework for evaluation. The sequence is determined by several key considerations to enable a smooth progression through the feasibility evaluation. No single aspect drives the sequence more significantly than others, rather the checklist reflects a combination of all considerations.

- **Relative Importance:** The relative significance of each characteristic in determining the conversion feasibility of a building is taken into account. For example, the floor plate depth is highly impactful, so it appears towards the top of the checklist. However, a factor like building form has less overall impact on feasibility and therefore appears lower on the list. Renovation date and energy efficiency are considered bonus factors – they may simplify upgrades but are not essential for feasibility, since all buildings will require code-related upgrades in Seattle. While code challenges are inevitable, avoiding deeper floor plates is more critical, making floor plate depth a more useful selection factor than energy efficiency.
- **Ease of Answering Questions:** The checklist progresses from questions that are easier to answer, such as vacancy rate, to those that are more difficult to obtain, like performance metrics. This sequence helps streamline the screening process and supports the tool's goal of providing a quick and efficient initial evaluation.
- **General to Specific:** The checklist begins with characteristics that are broadly applicable to a wide range of office-to-residential conversion candidates. For instance, the building class is relevant in all cases, so it is addressed as a prerequisite. More specific performance metrics depend on the building's unique context and associated standards, so they are listed as preferred factors.
- **Red-Yellow-Green Phasing:** Another important feature of the checklist's sequential structure is how it is divided into three phases – Red, Yellow, and Green – each focusing on different levels of requirements. In the Red Phase (Prerequisites), the building must meet essential criteria for it to be considered for conversion. Next is the Yellow Phase (Critical Factors), which considers key physical characteristics of the building. After this, the user can move on to the Green Phase (Preferred Factors), which focuses on regional considerations and compliance with local codes. These factors are not essential for conversion but may make it easier.

4.2.4 Intended Use

The intended users of the checklist are architecture, engineering, and construction professionals – and perhaps property owners with some knowledge of the construction process – who want to quickly and efficiently evaluate the feasibility of a potential conversion. To make the most of the checklist, users would need to have access to basic information about a building and would be aiming to make an initial qualitative judgement about the feasibility of converting it into a multifamily residential property. The tool may also be used to help prioritize which buildings are most viable for conversion when reviewing multiple properties.

PRE-REQUISITES
Vacancy <i>current occupancy status of the property</i>
Building Class <i>assigned building class (A, B, or C)</i>
FLOOR PLATE CHARACTERISTICS
Floor Plate Depth <i>core-to-window distance</i>
Location of Core <i>placement of vertical core within floor plate</i>
Floor Plate Area <i>square footage of typical floor</i>
STRUCTURAL CHARACTERISTICS
Structural Bay Spacing <i>size of typical structural bay</i>
Type of Structure <i>type of existing structural system</i>
EXTERIOR CHARACTERISTICS
Location <i>location and context of property</i>
Southern Exposure <i>daylight exposure of south-facing facade</i>
Building Form <i>physical form or 'shape' of building</i>
DATE AND AGE CHARACTERISTICS
Effective Year <i>effective year of construction used for tax assessment</i>
Date of Renovation <i>year of most recent renovation</i>
PERFORMANCE CHARACTERISTICS
ENERGY STAR Score <i>energy efficiency score relative to similar buildings</i>
Site EUI <i>energy efficiency (energy use per units area) for whole site</i>
EUI Targets <i>energy efficiency targets from Washington state CBPS*</i>

*Clean Buildings Performance Standard

Figure 2: Checklist for Screening Conversion Candidates

5. VALIDATION

5.1 Approach – Multi-Case Study

Section 3.2 outlines the approach for selecting buildings to be included in the case study. Using Gupta et al.'s (2023) list of suitable candidates as a starting point, only buildings located within the City of Seattle for with available floor were selected for the case study. A total of 8 buildings was screened using the checklist.

Each building was evaluated individually, according to the sequence in which they appeared in Gupta's list. For each building, compliance with the checklist (i.e., whether or not each factor was satisfied) was determined using real estate data, visual analysis of floor plans, and public databases of the King County Department of Assessments and the Seattle Office of Sustainability and Environment. Upon completion of each individual qualitative evaluation, the building was determined to have 'good', 'moderate', or 'low' feasibility. If a building did not meet the prerequisites, it was determined to be 'not feasible'. These

evaluations underwent a comparative analysis which resulted in a ranked list of buildings, ordered from the most to least feasible, relative to one another. The final output consists of a prioritized list of buildings, as summarized in Section 5.2.

5.2 Summary of Results

The multi-case study yielded a ranking of the evaluated candidates for conversion, from most to least feasible, relative to each other, as seen in Table 1 below. To produce the table, a comparative analysis of each building’s compliance with the checklist was conducted, and buildings were placed on the list based on the number of factors in each of the categories that were satisfied. Each building had to necessarily meet the prerequisites to be considered feasible. Two candidates did not meet the prerequisites, receiving the result of ‘not feasible’ and ranking the lowest of the eight. The remainder of the rankings was assigned based on each building’s performance with the critical factors and the preferred factors, with the critical factors receiving greater importance. In essence, the greater the number of factors satisfied, the higher a building was placed on the list.

Table 1: Summary of Multi-Case Study

Ranking	Conversion Candidate	Feasibility
1	1601-1611 2 nd Ave <i>2Pine</i>	Good
2	705 2 nd Ave <i>Hoge Building</i>	Good
3	1424 4 th Ave <i>4Pike</i>	Good
4	1525 4 th Ave <i>Gibraltar Tower</i>	Low
5	3417-3429 Fremont Ave <i>Fremont Building</i>	Low
6	601 Stewart St <i>Lloyd Building</i>	Low
7	600 Stewart St <i>Plaza 600</i>	Not feasible
8	1000 2 nd Ave <i>1000 Second Avenue</i>	Not feasible

6. CONCLUSION

6.1 Summary of Findings

The study addresses the challenges of evaluating the feasibility of office-to-residential conversions in Seattle. It explores the various trends that create a need for repurposing commercial offices and examines the benefits of such a strategy. It also outlines the various challenges associated with such projects and the reasons they arise. The research effort results in the identification of a list of factors affecting office-to-residential conversion feasibility, developed using the literature review findings and interviews of architecture, engineering, and construction professionals. It also outlines the impact that the identified factors have on conversion feasibility. Finally, it synthesized this information into a screening tool – a checklist – to be used by industry professionals to conduct preliminary screening of potential office-to-residential candidates.

6.2 Limitations

The study and all inputs were limited to Seattle both in terms of industry and geography. Although this ensured a more focused tool, it restricted input to properties and professional opinions within Seattle. However, the checklist progresses from general to specific, which makes the initial sections of the checklist

generalizable to other contexts. A more generic version of the tool might retain the same pre-requisites (red phase) and critical factors (yellow phase) while proposing a new set of preferred factors (green phase). Secondly, the checklist is not a comprehensive tool to evaluate conversion feasibility and allows for a qualitative and relative evaluation of feasibility, rather than a quantitative or objective evaluation. If a building is deemed to have 'good' or even 'moderate' feasibility after the checklist is applied, a detailed feasibility study should be conducted, and a proposal developed to determine if a conversion can be executed.

6.3 Contributions

A key contribution of the study is the checklist, which enables a quick preliminary evaluation using limited knowledge of a property. By simplifying and expediting the initial decision, the tool makes the early stages of the conversion process more efficient and accessible. It allows for comparative analysis, helping prioritize properties with higher conversion potential. When used for early screening, the checklist supports better risk management by allowing stakeholders to identify potential challenges upfront and facilitate better planning. This 'risk-based' approach frontloads the identification of risks, ensuring that potential obstacles are understood early and accounted for in decision-making. Additionally, the study is grounded in Seattle, developing a more contextually sensitive tool and addressing post-COVID downtown revitalization efforts, an ongoing priority for the city. The proposed approach could become part of a larger strategy to address concerns of declining property values and urban blight in Seattle and other cities facing similar issues.

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