Kateryna Polek, RCM
Senior Condominium Manager
Nadlan-Harris Property
Management Inc.

Analysis Tools to Drive Decisions

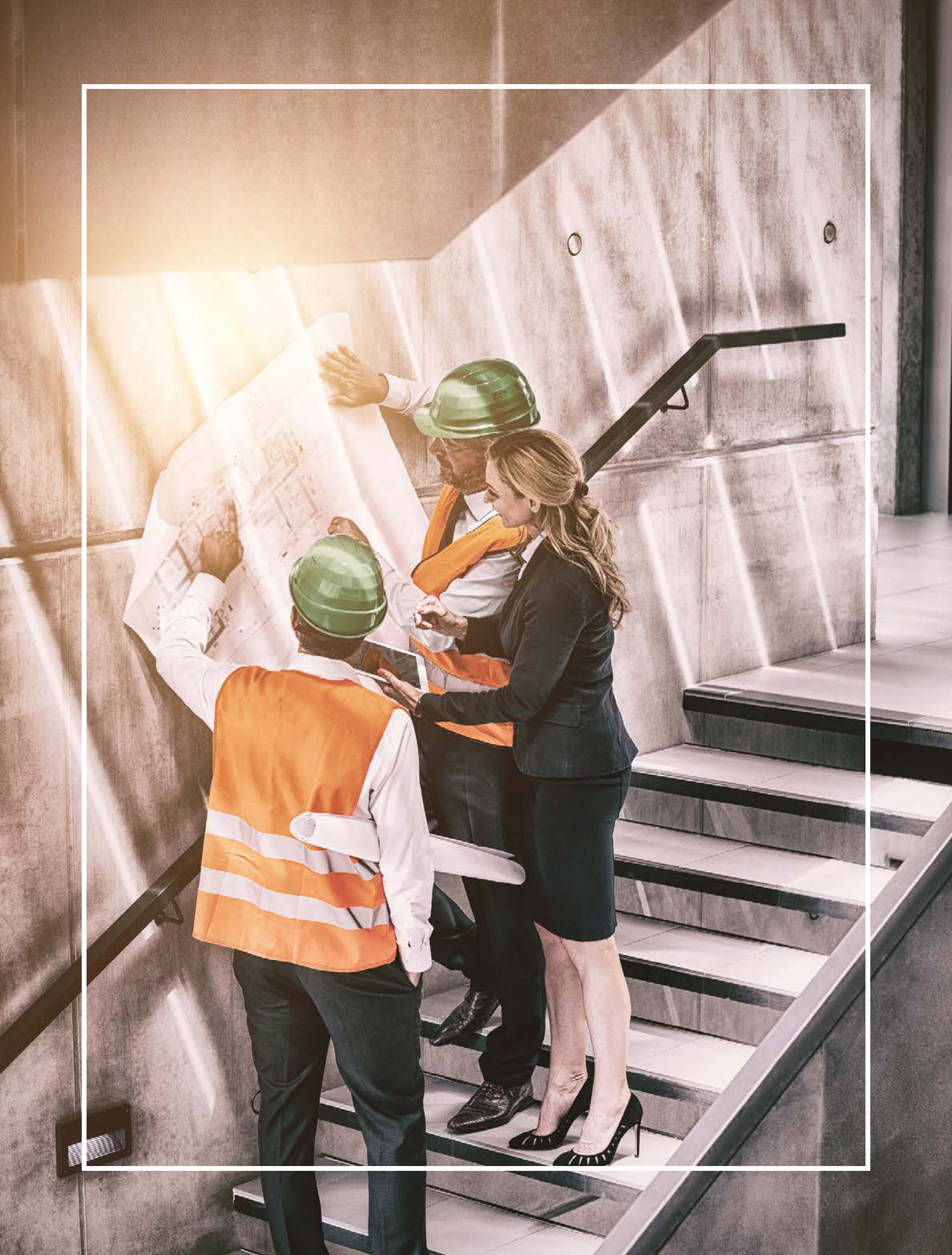
Board members are often hesitant to approve projects because of associated costs, lack of information, or an overall resistance to change. As custodians of the industry, condominium managers empower their directors to make critical decisions within the corporations they manage.

A useful method that can help managers in this process is the application of alternative scenario analysis. This is done by developing an as-is overview of the condition of the components being assessed and establishing baseline performance measures. Often, intangible consequences can be identified, and possible outcomes quantified.

When evaluating alternatives, managers must consider their board of directors' goals and objectives and the community of owners in general. Each option must be evaluated against their expenses, future value, and potential returns–if any. While the alternatives are typically evaluated and chosen based on a financial criterion, qualitative measures are frequently the major drivers in non-profit condominium buildings. Unlike for-profit properties, condominium managers must rely heavily on qualitative data to determine community needs and drive project approval. As a result, high visibility projects such as hallway and lobby renovations are generally favoured over low visibility initiatives such as mechanical upgrades and electrical retrofits. However, certain tools can provide significant utility for managers and their client Boards to garner support for those critical, low visibility projects.

Consider the decision to conduct a major hallway and lobby refurbishment project. The as-is scenario would leave the hallways and lobby in their current state. Quantifiable costs could include an annual provision to patch portions of wallpaper that have peeled off or light sconces that are end of life. Managers can further expand by quantifying projected savings from upgrading to more energy-efficient lighting systems.

Intangible consequences may be owner dissatisfaction from having



Replacement of Light Fixtures to LED

Year	+ $	- $	Total Cash Flow
0	$15,000.00	($65,000.00)	($50,000.00)
1	$10,000.00		$10,000.00
2	$10,000.00		$10,000.00
3	$10,000.00		$10,000.00
4	$10,000.00		$10,000.00
5	$10,000.00		$10,000.00
6	$10,000.00		$10,000.00
7	$10,000.00		$10,000.00
8	$10,000.00		$10,000.00
9	$10,000.00		$10,000.00
10	$10,000.00		$10,000.00

Discount Rate Applied:	2.0%
Net Present Value	Internal Rate of Return
$39,825.85	15.10%

outdated hallway and lobby finishes. Most of the time, it is easy to push these projects forward, as owners enjoy the benefit of higher property values. On the other hand, it might be the opposite; the owners may be delighted having to forego a major renovation in their building. They might be happy not to have the hassle of construction outside their suite doors. These are factors to consider when evaluating any project. The first step is to know your clients, their needs, and their values.

Let us expand on this scenario and explore possible outcomes. Through discussion with the board of directors, the manager is tasked to test the feasibility of the desired project. The goal is to perform a moderate renovation of the residential hallways; the board of directors wants backing for their decision to proceed with this project. They are specifically interested in exploring the impact of replacing the light fixtures and how projected utility savings may offset the initial cost.

For example, the condominium manager identifies that replacing the existing sconces for LED fixtures will cost $65,000. The LED lighting project will qualify the corporation for an energy rebate of $15,000. Additionally, the new fixtures will save the building $10,000 every year over its 10-year life.

Typically, a manager would calculate the simple payback for the light fixtures, which in this case is five years. That would involve determining the initial investment cost and dividing it by the projected utility savings.

However, this method does not include enough information for a board to decide. The major limitation is that it does not incorporate the impact of the time value of money.

This scenario can be evaluated by discounting the projected cash flows

Alternative 1: Decision to Replace Boiler Today

Year	+ $	- $	Total Cash Flow
0	$5,000.00	($115,000.00)	($110,000.00)
1	$15,000.00		$15,000.00
2	$15,000.00		$15,000.00
3	$15,000.00		$15,000.00
4	$15,000.00		$15,000.00
5	$15,000.00		$15,000.00
6	$15,000.00		$15,000.00
7	$15,000.00		$15,000.00
8	$15,000.00		$15,000.00
9	$15,000.00		$15,000.00
10	$15,000.00		$15,000.00
11	$15,000.00		$15,000.00
12	$15,000.00		$15,000.00
13	$15,000.00		$15,000.00
14	$15,000.00		$15,000.00
15	$15,000.00		$15,000.00
16	$15,000.00		$15,000.00
17	$15,000.00		$15,000.00
18	$15,000.00		$15,000.00

Discount Rate Applied:	2.0%
Net Present Value	Internal Rate of Return
$114,880.47	11.81%

Alternative 2: Decision to Defer Boiler Replacement

Year	+ $	- $	Total Cash Flow
0	$0.00	($25,000.00)	($25,000.00)
1	$0.00		$0.00
2	$0.00		$0.00
3	$0.00		$0.00
4	$0.00		$0.00
5	$0.00	($126,969.29)	($126,969.29)
6	$15,000.00		$15,000.00
7	$15,000.00		$15,000.00
8	$15,000.00		$15,000.00
9	$15,000.00		$15,000.00
10	$15,000.00		$15,000.00
11	$15,000.00		$15,000.00
12	$15,000.00		$15,000.00
13	$15,000.00		$15,000.00
14	$15,000.00		$15,000.00
15	$15,000.00		$15,000.00
16	$15,000.00		$15,000.00
17	$15,000.00		$15,000.00
18	$15,000.00		$15,000.00
19	$15,000.00		$15,000.00
20	$15,000.00		$15,000.00
21	$15,000.00		$15,000.00
22	$15,000.00		$15,000.00
23	$15,000.00		$15,000.00

Discount Rate Applied:	2.0%
Net Present Value	Internal Rate of Return
$63,681.17	6.15%

and comparing them against the initial investment. First, we need to apply an interest rate to match the projected rate of inflation. In this example, 2% is applied. However, it is recommended that condominium managers investigate the external environment and use an appropriate interest rate. Consider the COVID-19 pandemic's impact on the Canadian inflation rate in 2020 and 2021. What decisions would you have made, had you the benefit of your current knowledge?

In evaluating the abovementioned scenario, you organize the information below.

The next step is to understand what net present value (NPV) means and how we can derive value from it. The net current value discounts the $10,000 annual utility savings over ten years, using the 2% discount rate we identified earlier. It then takes the discounted cash flows and subtracts them against the capital investment to determine the present value of the project outcomes. In short, it is the difference between the cost of the project and all anticipated future fiscal benefits.

If NPV is zero, that means that only the initial capital investment was recuperated, and no additional benefit was realized. If the NPV is negative, the investment will earn less than the discount rate applied. Finally, a positive NPV means that the present value is greater than the capital cost, and the investment outperforms the interest rate.

In addition to calculating NPV, we also identified an internal rate of return (IRR) throughout the life of the new fixtures. In this example, the net present value is positive, and our internal rate of return is also positive, at 15.10%.

The presented example is simple. Let us consider another scenario where the alternatives provided are much more complex and span multiple years.

In this example, we have a failing boiler system servicing the potable water and heating system in a mid-rise condominium building. Your HVAC vendor advises you that the corporation will need to replace both boilers at the cost of $115,000 immediately. The new components will be 98% energy efficient, and the corporation will observe a $15,000 annual reduction in utility costs. You will also be eligible for a $5,000 energy rebate following the installation. You know from experience that the typical life of a standard boiler is 18 years.

In evaluating the interest, you apply a 2.0% discount rate. You organize the above information to generate a cash flow table.

While you are in the process of tendering the boiler replacement project, your incumbent engineer advises you of a mechanical vendor who can defer the capital investment cost by five years. He is very familiar with the type of boilers in the building and believes that a refurbishment to the heat exchangers will be sufficient in the meantime. The cost of the heat exchanger refurbishment is $25,000 in total. There will be no rebate or energy savings. You will still need to replace the boilers in five years; however, you do not know if the energy rebate program will still be in effect, so you decide not to include that in your scenario.

You input the above scenario into your cash flow analysis. You know that the cost of the boiler replacement project will be worth much more five years from now. You calculate the future value of the new boilers using the same interest rate you researched earlier (2%) by compounding their present value.

Your evaluation of alternatives yields the following results:

The NPV of conducting the boiler replacement project right away is significantly higher in Alternative 1. The internal rate of return is almost double, at 11.81%, when compared to deferring the replacement of the boilers, at 6.15%.

From a financial standpoint, the option to replace the boilers right away seems to be the most beneficial decision for the corporation. However, the condominium manager is also responsible for understanding the needs of the board and the community. Perhaps your board of directors signed the contract for the moderate renovation of the hallways before discovering the failing boilers. Conducting the project right away may place the reserve fund below its minimum required balance. Foregoing the capital cost for five years and using that time to fund the reserve fund may be a prudent solution.

Alternatively, if no extenuating factors play a role in the boiler replacement decision, a board may be hesitant to approve a major capital project. A $115,000 expense, even with a guaranteed rebate and subsequent savings, may be too intimidating to get behind. It is the responsibility of the condominium manager to advise their boards on the impact of their decisions. While deferring the project in favour of a significantly smaller expense might seem tempting, the net present value gained from waiting is almost half of the alternative.

Homeowners expect a higher level of due diligence from their elected boards, and this expectation is extended to condominium managers by proxy.

Many condominium boards may be happy with making decisions based on simple payback calculations. In fact, the assessment of net present value may not even be possible for specific projects. However, the scope of our industry and the projects we engage in continue to expand. Homeowners expect a higher level of due diligence from their elected boards, and this expectation is extended to condominium managers by proxy.

Consider decisions that your client boards may be deferring right now. It might be a retrofit to the makeup air unit, installation of carbon monoxide detectors, booster pump replacement, etc. Unfortunately, these projects tend to be low visibility and frequently deferred until a major mechanical failure occurs. At that point, the project is executed reactively and under greater constraints. ■

Kateryna Polek, RCM, is a Senior Condominium Manager at Nadlan-Harris Property Management Inc. She is also a CPM candidate under REIC. She is a York University graduate with a passion for learning.
nadlan-harris.com