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Deferred Maintenance in Higher Education

Unlocking Strategic Approaches and Tactical Approaches

The landscape of facility maintenance in higher education institutions is undergoing a paradigm shift. Traditional approaches, characterized by compartmentalized departments and outdated methodologies, must be equipped to address the escalating deferred-maintenance crisis.

A new, forward-thinking approach is imperative, one that integrates facilities planning across the institution's fabric and harnesses contemporary solutions. Critical to this approach is a plan to refurbish and reinvigorate our aging campus infrastructure, enabling colleges and universities to reclaim stewardship of their facilities, which are currently at risk of undermining their educational missions.

Unpacking the Deferred Maintenance Crisis

In an eye-opening 2019 article by Maclean's Magazine, the deferred maintenance costs across Canadian universities were estimated at a daunting $17.2 billion. This figure is not just a number—it represents a considerable hurdle for institutions as they contend with the upkeep of historical structures and the modernization of facilities that are no longer fit for purpose. Recent examples of deferred maintenance include McGill University $1.31B, the University of Alberta $385.4M, Memorial University $440.9M, and the University of Toronto $961M.

Critical Findings from Gordian and CAUBO

Invaluable insights emerge from the analyses provided by Gordian and CAUBO:

1. **Gordian's 2023 Findings**: Gordian's report uncovers a 36% stewardship shortfall in deferred capital renewal investment—a significant chasm that threatens the integrity of campus facilities. This gap is magnified by inflation's substantial impact on maintenance costs.
2. **CAUBO's 2019 Insights**: CAUBO's report goes beyond merely depicting the current state. It equips members with actionable strategies for managing deferred maintenance challenges and advocates for proactive investment, with successful case studies highlighting pathways to secure additional funding.

Strategic Solutions for Deferred Maintenance

1. Integrating Facilities with Broader Institutional Goals

The University of Toronto's 2021 deferred maintenance report underscores the need to integrate facilities management with institutional planning. This holistic approach evaluates space utility, impending capital projects, and potential failure risks to allocate funds strategically—a model for other institutions to emulate.

2. Proactive and Comprehensive Facility Management

APPA underscores the need for an anticipatory and all-encompassing planning strategy that aligns facility maintenance with the institution's strategic vision. This includes accurate maintenance budgeting, lifecycle asset management, and the use of data analytics to fine-tune facility operations.

3. Aligning Financial Resources with Strategic Planning
California State Polytechnic University, Pomona exemplifies the transformative effects of aligning maintenance needs with capital planning. They remarkably reduced their deferred maintenance backlog from a significant $190 million to a more controllable $38 million over ten years, a testament to the power of coordinated planning and fiscal management.

4. The Imperative of Data-Driven Decision Making
The International Journal of Facilities Management emphasizes the importance of adopting standardized performance metrics that accurately reflect maintenance needs and of incorporating this data into planning and budgeting to facilitate informed decisions.

Tactical Approaches for Managing Deferred Maintenance

Moving beyond traditional methods that focus solely on condition auditing, a comprehensive approach is required that integrates facility planning with the institution's broader goals.

1. **Prioritize and Plan**: Begin with comprehensive assessments to catalogue facility conditions. Prioritize actions based on safety, regulatory compliance, and impact on core operations. Evaluate the urgency of each need to develop a strategic maintenance schedule.
2. **Consider Life Cycle Costs**: Factor in long-term life-cycle costs when prioritizing. Projects that may seem insignificant could provide substantial future cost savings. Focus primarily on energy-efficient upgrades that reduce operational costs and contribute to sustainability goals.
3. **Develop a Funding Strategy**: Collaborate with financial departments and external agencies to create a diversified funding portfolio. Explore a mix of capital allocations, grants, and innovative financing options to support immediate and long-term maintenance objectives.
4. **Engage Stakeholders**: Involve all stakeholders from facilities teams to faculty and students in the planning process. This ensures that maintenance plans align with the needs and expectations of the entire campus community, securing broader support and facilitating smoother implementation.
5. **Leverage Technology and Automation**: Integrate advanced technologies such as IoT sensors and AI-driven analytics for real-time monitoring and predictive maintenance. This can enhance operational efficiency, prevent failures, and optimize resource allocation.
6. **Invest in Preventive Maintenance**: Establish a robust preventive maintenance program that includes regular inspections, routine cleaning, and timely repairs. This approach helps to identify potential issues before they escalate, extending asset lifespans and improving reliability.
7. **Adopt a Predictive Maintenance Approach**: Utilize data-driven tools to anticipate and address maintenance needs before equipment failures occur. Implement systematic inspection and maintenance routines, such as lubrication and calibration, to prevent unplanned downtime and costly emergency repairs.
8. **Cultivate Partnerships and Collaboration**: Forge alliances with industry experts, local businesses, and other educational institutions to pool resources and expertise. Such

collaborations can lead to shared best practices, joint ventures, and cost-sharing opportunities, amplifying the effectiveness of maintenance efforts.

By methodically addressing each of these areas, higher education institutions can create a sustainable framework for facilities management that balances immediate maintenance needs with long-term capital planning and investment.

Preparedness and Resilience in Facilities Management

In addressing the multifaceted challenges of deferred maintenance, preparing for unexpected events that can exacerbate existing issues is equally vital.

1. Effective hazard identification and risk management processes are the bedrock of emergency preparedness, ensuring that potential threats to campus safety and operations are systematically assessed and mitigated.
2. A robust emergency response plan and comprehensive business continuity planning guarantee that institutions remain resilient in the face of unforeseen disruptions.

By cultivating a culture of preparedness, post-secondary institutions can safeguard their communities and infrastructure, ensuring academic missions remain unshaken amidst crises.

Resources for Further Insight

Deloitte - "A New View on Deferred Maintenance and Repair" https://www2.deloitte.com/content/dam/Deloitte/us/Documents/public-sector/us-ps-deferred-maintenance-report.pdf

Gordian - "2023 State of Facilities in Higher Education" https://info.gordian.com/state-of-facilities-2023

APPA - Holistic Planning: The Key to Solving the Deferred Maintenance Crisis https://www.appa.org/wp-content/uploads/2019/11/APPA-Thought-Leaders-2015-03-Final.pdf

Planning for Higher Education Journal - "Tackling the Deferred Maintenance Crisis Through Integrated Planning and Budgeting" https://www.scup.org/resource/tackling-the-deferred-maintenance-crisis-through-integrated-planning-and-budgeting/

International Journal of Facilities Management - "Deferred Maintenance Reporting for Canadian Universities" https://www.ijfm.net/index.php/ijfm/article/view/227

University of Toronto - "Deferred Maintenance Annual Report 2021" https://www.fs.utoronto.ca/wp-content/uploads/2022/01/Deferred-Maintenance-Annual-Report-2021.pdf

Macleans Magazine: https://macleans.ca/education/deferred-maintenance-universities-cant-keep-up-with-expensive-upkeep-and-repairs.