

Circular Self-Assessment Checklist

Focus: Circular Procurement

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Appendix B: Circular Self-Assessment and Areas of Opportunity

The following table invites building managers to assess which circular economy strategies are already in place in their building(s) (“Existing Strengths”). From there, recommendations are given to further build on current strengths and more deeply embed circularity within building operations.

The areas of opportunity are not listed in any order of priority or importance.. building managers can start acting according to the opportunities available to them

at any given time. Furthermore, building managers can choose to either expand their existing strengths, or focus on implementing the next steps of existing strengths. The beauty of the circular economy is that all actions are beneficial, and together they can bring about change.

A bonus? The implementation of most of the circular economy strategies listed below can earn building managers additional points under the BOMA BEST certification.

Areas of Opportunity	ReSOLVE Action	Starting Point: Existing Strengths	Next Steps
Building operations, repair, and maintenance	Optimize, Loop, Exchange	<input type="checkbox"/> Equipment is selected for maximum efficiency	<input type="checkbox"/> Procure equipment made with materials with low embodied emissions <input type="checkbox"/> Procure equipment made with materials with low environmental impact over lifecycle of building <input type="checkbox"/> Procure equipment that is durable and repairable <input type="checkbox"/> Equipment use generates no emissions (e.g., fuel switching) <input type="checkbox"/> Configure equipment to minimize waste of resources (e.g., task lighting vs area lighting) <input type="checkbox"/> Develop procurement templates (e.g., RFP, SOW) that incorporate elements of circular economy
		<input type="checkbox"/> Suppliers are selected to minimize their impact across the supply chain (e.g., avoid resource extraction and use of harmful chemicals; fair labour practices, etc.)	<input type="checkbox"/> Purchase products as services instead of standalone items <input type="checkbox"/> Select performance contracts to ensure efficiency <input type="checkbox"/> Select suppliers that support take back models <input type="checkbox"/> Develop procurement templates (e.g., RFP, SOW) that incorporate elements of circular economy

Areas of Opportunity	ReSOLVE Action	Starting Point: Existing Strengths	Next Steps
Building operations, repair, and maintenance	Optimize	<input type="checkbox"/> A preventative maintenance program has been implemented to prolong life of materials/equipment	<input type="checkbox"/> Conduct ongoing improvements to building envelope
Building operations, repair, and maintenance	Optimize, Loop	<input type="checkbox"/> Energy and water efficiency training is provided to building operations staff	<input type="checkbox"/> Provide and participate in training focused on maximizing efficient use of technology <input type="checkbox"/> Provide and participate in training on understanding system efficiency (optimizing system based on configuration and equipment selection) <input type="checkbox"/> Provide and participate in training on future trends (smart buildings)
Building operations, repair, and maintenance	Virtualize	<input type="checkbox"/> Paperless billing and/or monitoring (e.g., through apps) is requested	<input type="checkbox"/> Align occupants with circular objectives <input type="checkbox"/> Allow occupants to participate in decision-making <input type="checkbox"/> Support/select retailers/tenants with aligned CE business models such as stores that sell products made from recycled content, reusing materials, valorizing food waste
Utilities	Optimize, Exchange	<input type="checkbox"/> Energy use is optimized through building automation systems (e.g., sensors, metering, BAS, BIM, etc.)	<input type="checkbox"/> Purchase products as services instead of standalone items <input type="checkbox"/> Select performance contracts to ensure efficiency
Utilities	Optimize, Exchange	<input type="checkbox"/> Potable water is used efficiently. <input type="checkbox"/> Water-conserving measures are implemented (e.g., aerators, timers)	<input type="checkbox"/> Implement grey water or rainwater collection and use (e.g., toilets and landscaping)

Areas of Opportunity	ReSOLVE Action	Starting Point: Existing Strengths	Next Steps
Utilities	Exchange	<input type="checkbox"/> Low carbon energy sources are selected / A switch has been made to cleaner fuel types (e.g., renewably generated electricity)	<input type="checkbox"/> Integrate renewable energy technologies such as combined photovoltaic and solar hot water, small-scale bio-digestion, and electricity storage via batteries for emergency back-up power <input type="checkbox"/> Purchase green energy through power purchase agreements
Utilities	Optimize, Exchange	<input type="checkbox"/> Active heat recovery strategies are implemented (e.g., ventilation air heat recovery, server room heat recovery, wastewater heat recovery, heat pump systems)	
Construction/ Renovation/ Retrofit	Optimize, Share, Loop, Exchange	<input type="checkbox"/> Building materials are selected for their environmental properties	Draft SOWs that require that materials and components: <ul style="list-style-type: none"> <input type="checkbox"/> Can be repurposed <input type="checkbox"/> Can be returned for remanufacture into the same or a different product (e.g., drywall, carpet) <input type="checkbox"/> Are designed for disassembly <input type="checkbox"/> Are made using bio-based materials or bio-mass waste products (e.g. sawdust) <input type="checkbox"/> Are made from recycled content (e.g. steel, gypsum)
Construction/ Renovation/ Retrofit	Share, Loop	<input type="checkbox"/> Management program has been developed to minimize construction, renovation, and demolition waste being sent to landfill	<input type="checkbox"/> Document materials used in construction, including their recommended destination in a second life (a “material passport”)

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Construction/ Renovation/ Retrofit	Optimize, Virtualize	<input type="checkbox"/> Environmental renovation/fit-up criteria are included in green leases	<input type="checkbox"/> Design buildings and space to be able to flex with demand, modifying the space to fit different needs (commercial, residential, education)
Food and catering	Regenerate, Share, Optimize, Loop	<input type="checkbox"/> Suppliers are selected who demonstrate commitment to sustainability	<p>Select suppliers that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use regenerative food growing methods <input type="checkbox"/> Use locally sourced ingredients <input type="checkbox"/> Prevent avoidable food waste <input type="checkbox"/> Find value from food and food waste, such as through partnerships with local food banks, farms. <input type="checkbox"/> Avoid material waste (packaging)
Food and catering	Loop	<input type="checkbox"/> Retailers are engaged in an environmental procurement program	<ul style="list-style-type: none"> <input type="checkbox"/> Innovate with suppliers and tenants to offer waste free service options <input type="checkbox"/> Create centralized collection point for used take away containers to return to retailer <input type="checkbox"/> Collaborate with food retailers to source recyclable and municipally compostable cutlery/plates
Waste management	Optimize, Loop, Exchange	<input type="checkbox"/> Initiatives are implemented to decrease the amount of waste generated	<ul style="list-style-type: none"> <input type="checkbox"/> Select products that <ul style="list-style-type: none"> <input type="checkbox"/> Are more durable <input type="checkbox"/> Can be repaired <input type="checkbox"/> Can be adapted to new uses <input type="checkbox"/> Can be remanufactured or refurbished <input type="checkbox"/> Procure services instead of products themselves (e.g. purchasing lighting instead of the lamps themselves). <input type="checkbox"/> Develop waste reduction and education programs on the importance of valuing materials throughout their entire lifecycle

Areas of Opportunity	ReSOLVE Action	Starting Point: Existing Strengths	Next Steps
Waste management	Regenerate, Share, Loop, Optimize, Exchange	<input type="checkbox"/> Waste diversion programs are implemented	<input type="checkbox"/> Change procurement criteria to require vendor take-back <input type="checkbox"/> Select suppliers that support reverse logistics to recover and return materials to manufacturers <input type="checkbox"/> Identify partners who can use certain waste streams as their inputs <input type="checkbox"/> Use local digestors and other clean technologies that capture the value of organic waste streams, such as bio-digestion, heat recovery, mineral extraction and compost for on-site food production or general soil amendment.
Waste management	Virtualize, Optimize	<input type="checkbox"/> Final disposition / destination of all materials leaving the building is identified	<input type="checkbox"/> Improve data collection (waste types, amounts, meters) to inform public policy/ initiatives and calculate GHG avoidance <input type="checkbox"/> Work with waste haulers to improve data transparency or add weight reporting requirements to contracts <input type="checkbox"/> Collaborate with other building managers to provide consistency to waste haulers
Office furniture and supplies	Share, Optimize, Loop, Exchange	<input type="checkbox"/> A green / sustainable procurement program is implemented	<input type="checkbox"/> Select products and supplies that: <ul style="list-style-type: none"> <input type="checkbox"/> Are durable <input type="checkbox"/> Can be repaired or refurbished <input type="checkbox"/> Are modular and can be re-configured <input type="checkbox"/> Are designed for disassembly or re-manufacture <input type="checkbox"/> Use materials efficiently <input type="checkbox"/> Are created using 100% recycled content (e.g., paper products) <input type="checkbox"/> Hold a third-party certification for disassembly <input type="checkbox"/> Select furniture/supply leasing services <input type="checkbox"/> Request that products arrive in minimal packaging that can be recycled or reused <input type="checkbox"/> Collaborate with other building managers to share items between buildings or spaces, and/or to purchase in bulk to reduce packaging and emissions from shipping

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Office furniture and supplies	Share, Loop	<input type="checkbox"/> Re-furnished furniture and supplies are selected and preferred	<input type="checkbox"/> Create opportunities for extending the life of furniture through re-use such as by donation, sharing, or re-selling programs
Office furniture and supplies	Optimize, Loop	<input type="checkbox"/> Maintain warranty documents for furniture	<input type="checkbox"/> Take advantage of product repair, disassembly, and takeback services instead of outright disposal <input type="checkbox"/> For modular items, repair or replace just the parts that require it
Landscaping and Site	Regenerate	<input type="checkbox"/> Landscaping practices that support ecosystem health are implemented	<input type="checkbox"/> Conserve or restore native flora <input type="checkbox"/> Prevent soil erosion <input type="checkbox"/> Select landscaping products that do not contain any harmful chemicals <input type="checkbox"/> Design landscaped areas to require little or no irrigation (xeriscaping)
Landscaping and Site	Regenerate, Share	<input type="checkbox"/> Biodiversity and ecological resilience are supported	<input type="checkbox"/> Encourage food production on-site, supporting employee engagement, education, and mental health
Occupant experience and engagement	Share, Loop, Exchange	<input type="checkbox"/> Occupants are engaged in waste diversion initiatives	<input type="checkbox"/> Provide occupants with opportunities to engage with sharing economy such as by providing space for a tool library, exchange spaces, repair cafes, car/bicycle sharing <input type="checkbox"/> Create a collection point for certain materials such as textiles, to be distributed to partner organizations for re-use or re-manufacture
Occupant experience and engagement	Optimize, Loop, Exchange	<input type="checkbox"/> Occupants align with building's environmental criteria through lease agreements	<input type="checkbox"/> Align occupants with circular objectives <input type="checkbox"/> Allow occupants to participate in decision-making <input type="checkbox"/> Support/select retailers/tenants with aligned CE business models such as stores that sell products made from recycled content, re-using materials, valorizing food waste

Areas of Opportunity	ReSOLVE Action	Starting Point: Existing Strengths	Next Steps
Information Communication Technology (ICT)	Regenerate, Optimize, Loop, Exchange	<input type="checkbox"/> A sustainable procurement program for ICT is implemented	<input type="checkbox"/> Select products and supplies that: <ul style="list-style-type: none"> <input type="checkbox"/> Are durable <input type="checkbox"/> Can be repaired or refurbished <input type="checkbox"/> Can be upgraded with new components <input type="checkbox"/> Are designed for disassembly or re-manufacture <input type="checkbox"/> Use materials efficiently <input type="checkbox"/> Are created using a minimum percentage of recycled content (e.g. plastics and metal alloys) <input type="checkbox"/> Hold a third-party certification or ecolabel (e.g., EPEAT) <input type="checkbox"/> Are energy efficient <input type="checkbox"/> Have a low carbon footprint <input type="checkbox"/> Reduce the use of hazardous substances
Information Communication Technology (ICT)	Regenerate, Optimize, Loop, Exchange	<input type="checkbox"/> Suppliers that offer repair and refurbishment are selected and preferred	<input type="checkbox"/> Select suppliers based on transparency of supply chain for: <ul style="list-style-type: none"> <input type="checkbox"/> Environmental impact of operations (material extraction, manufacturing) <input type="checkbox"/> Labor and human rights records/commitments <input type="checkbox"/> Select suppliers that support reverse logistics and include end-of-life management in the contract
Cleaning	Regenerate, Optimize, Loop, Exchange	<input type="checkbox"/> Green cleaning program with third-party certified products and supplies is implemented	<input type="checkbox"/> Select products and supplies that: <ul style="list-style-type: none"> <input type="checkbox"/> Are made from non-toxic ingredients <input type="checkbox"/> Hold third-party certifications <input type="checkbox"/> Have minimal packaging or 100% recyclable packaging <input type="checkbox"/> Use materials efficiently <input type="checkbox"/> Select cleaning equipment that: <ul style="list-style-type: none"> <input type="checkbox"/> Is durable <input type="checkbox"/> Can be repaired or refurbished <input type="checkbox"/> Are designed for disassembly or re-manufacture <input type="checkbox"/> Use materials efficiently <input type="checkbox"/> Are created using recycled content

Areas of Opportunity	ReSOLVE Action	Starting Point: Existing Strengths	Next Steps
Cleaning	Optimize	<input type="checkbox"/> Training is provided to janitorial staff on the benefits of using specific equipment / supplies as per recommended specifications	
Fleet	Optimize, Exchange	<input type="checkbox"/> Low-carbon transportation options (e.g., electric vehicles) are supported and encouraged	<input type="checkbox"/> Support and encourage subscription models to sharing services for bicycles or cars (e.g., through subsidy)