

GSA Region 5 Venture Capital Initiative Proposals

Technologies and Processes for Detecting and Predicting Mold Growth

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Situation: Mold poses a problem for property managers and tenants. Some people with allergies to mold are highly sensitive to its presence. Mold can cause serious disruptions in building operations and agency productivity. Often, the mold growth is detected well after the infection has become serious destructive.

Need: A quick, proactive technique for systematically detecting and isolating mold within buildings is needed. A procedure or technology that could be incorporated into regular building inspections or the biennial building reviews (MARS) would be ideal. Detecting mold early would prevent enormous amounts of time and money from being wasted and greatly improve air quality and tenant comfort.

Compost Programs

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Situation: Currently, all food waste from government employees is simply thrown away. Food waste contains lots of nutrients and energy which can be used to help grow plants and crops.

Need: A program which encourages a portion, or all of the food waste produced at federal buildings to be converted to compost for local farms and plant life. Building infrastructure for capturing food waste along with transportation and tenant education will be needed.

Portable Composting Toilets for Construction Sites

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Situation: Currently, construction sites only use “port-a-john” style toilets. Not only are they are generally unpleasant to use, but they have other serious environmental impacts. A portable composting toilet would reduce use of harmful chemicals and reduce strain on civic waste management services.

Need: A well-designed, portable toilet which uses natural composting processes to eliminate waste.

Farms

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Situation: Currently, rooftops are not utilized to their full advantage. Plenty of sunlight, rainwater and open space make rooftops ideal for small farm plots.

Need: A business portfolio which includes providing feasibility studies, materials and irrigation systems for green roofs.

Natural Sunlight Utilization

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Situation: The cheapest, highest quality light available is not taken advantage of in GSA buildings. Natural light has been proven to increase well-being, productivity, and happiness in workers. Using the maximum amount of natural light can also reduce lighting electricity demand.

Need: A technology that can cost-effectively collect natural light from the roof or sides of the building and bring it via fiber-optic cable or mirrors into the interior spaces of GSA buildings. This is not simply skylights or daylight harvesting on the perimeter of the building, but a way of providing sunlight to the entire building.

Utilizing Building Surfaces for Power Generation

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Situation: Roof-mounted solar panels and wind turbines are great ideas, but there is much more surface area exposed to the wind and sun on the sides of buildings. The sides of buildings are not used to their full, power-generating potential.

Need: Technologies that can cost-effectively utilize the entire surface, including sides, of a building for power generation.

Reducing Kitchen Waste Initiative

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Situation: Currently, government offices waste a lot of resources including paper cups, plates and plastic silverware. Reducing this waste would save resources and be more environmentally friendly. While most employees are aware that it is better to use non-disposal plates, cups and silverware, they choose to use the disposable kind because it is easier. Eliminating the disposable kitchen-ware could save the government money on supplies and waste management and be a positive step towards a more sustainable government.

Need: A fast, water-efficient and easy-to-use dishwashing station in office kitchens combined with a reduction in supply of disposable kitchen-ware would encourage employees to bring their own cups, plates and silverware that they could use everyday.