

Sustainable Business Practices in Alameda Small and Medium-Sized Enterprises (SMEs): The Gap Between Goal and Action

Abstract

In California, 95% of Small and Medium Sized Enterprises (SMEs) recognize the importance of sustainability, but less than 10% participate in sustainable business practices like pollution reduction, alternative fuel transportation, and renewable energy. While California SMEs want to operate sustainably, there exists a disconnect between goal and action. This study aims to investigate the cause of this disconnect and how the Supervisor's office can provide adequate resources, supplies, and guidance to allow more Alameda County SMEs to meet their sustainability goals. This study draws data from Alameda SMEs through a comprehensive survey that inquires about general perspectives, specific actions taken, problems encountered, and desired needs from the Supervisor's office. The data concludes that problems occur due to the difficult implementation of technical or infrastructural changes, the limited capabilities of SMEs as tenants, the requirement for individualized advice, the application for permits or licenses, and the overlooked importance of people-based shifts. The Supervisor's office can support SMEs to overcome these problems by providing technical and consultation support through the SLEB, encourage landlords to collaborate with tenants, subsidize fees for obtaining permits or licenses, and guide people-based shifts through training guides.

Introduction

Businesses affect the planet through energy consumption, transportation, manufacturing, waste treatment, water use, and various other procedures. As such, they play an integral role in the preservation of our at-risk environment. In California, commercial activities are responsible for nearly 67% of solid waste. Improving the performance of SMEs is crucial to mitigating this damage, allowing California to reduce its waste and environmental damage. Additionally, making SMEs more sustainable is expected to yield higher customer flow and loyalty, as 89% of consumers cite sustainability as a considering factor in their purchasing decisions. As a county renowned for thriving small businesses, it is important to understand how to continue supporting SMEs as they transition to more sustainable business practices.

Existing studies show that 95% of California SMEs already recognize the importance of sustainability. However, only 42% of California SMEs utilize energy conservation methods, 33% utilize water conservation, and less than 10% implement measures to reduce pollution, use alternative fuel vehicles, use renewable energy, or practice sustainable farming. There exists a significant disconnect between goal and action. By investigating the cause of this gap between goal and action, an adequate understanding of what makes sustainability difficult for Alameda

SMEs can be developed. This informs future efforts to aid SMEs in reaching their sustainability goals. This study aims to deduce meaningful trends from survey results with Alameda SMEs to develop a comprehensive understanding of energy conservation, water conservation, pollution reduction, and alternative fuel transportation efforts in SMEs and how the Alameda Supervisor's office can help in achieving the business's goals.

Methodology

This study utilizes survey responses to gain a better understanding of the barriers preventing SMEs from achieving their sustainability goals. Survey questions were divided into five sections: Basic Information, Energy Conservation, Water Conservation, Pollution Reduction, Alternative Fuel Vehicles and Transportation, and Future Takeaways.

The Basic Information section was used to ensure that responders represented businesses that were part of Alameda County and certified as SMEs. This process was completed through a definition checklist of an SME, and the responder could only continue with the survey if they certified that the business they represent complies with the definition of a SME in terms of organizational status, ownership, monopoly status, employee count, and annual revenue. In addition, the location of the business was verified. Following this verification, the remaining questions contextualize the importance of sustainability to their business values, the responsibility of businesses to be sustainable, and how important sustainability is for consumer perception and business performance. Lastly, the section ended with open-ended responses about the surveyed business's sustainability goals, current policies, and motivations to be sustainable.

For each of the Energy Conservation, Water Conservation, Pollution Reduction, and Alternative Fuel Vehicle and Transportation categories, a standard set of questions was used. The first question of each category asks if the responder's business has participated in the most common measures: LED lighting, smart thermostats, and HVAC for energy conservation; low-flow fixtures, water-efficient appliances, and leak monitoring for water conservation; recycling, composting, and reduced packaging for pollution reduction; and electric vehicles, hybrid/alternative fuel vehicles, and optimized delivery routes for alternative fuel vehicles and transportation. The second question asks the responder to evaluate to what extent their business's goal for that area of sustainability matches their current action on a scale of 1 to 5, where 1 means the responder has implemented far fewer measures than they had hoped and 5 means the responder has implemented all or nearly all of the measures they had hoped. In the third question, responders who rated their performance 1 or 2 were asked to elaborate on barriers preventing them from achieving their vision. The last question of each category asks what specific resources the surveyed SME would appreciate in helping them reach their goal.

The Future Takeaways section returns to questions with general scopes as opposed to focusing on one category of sustainability. SMEs reflect on future initiatives and plans to adapt their

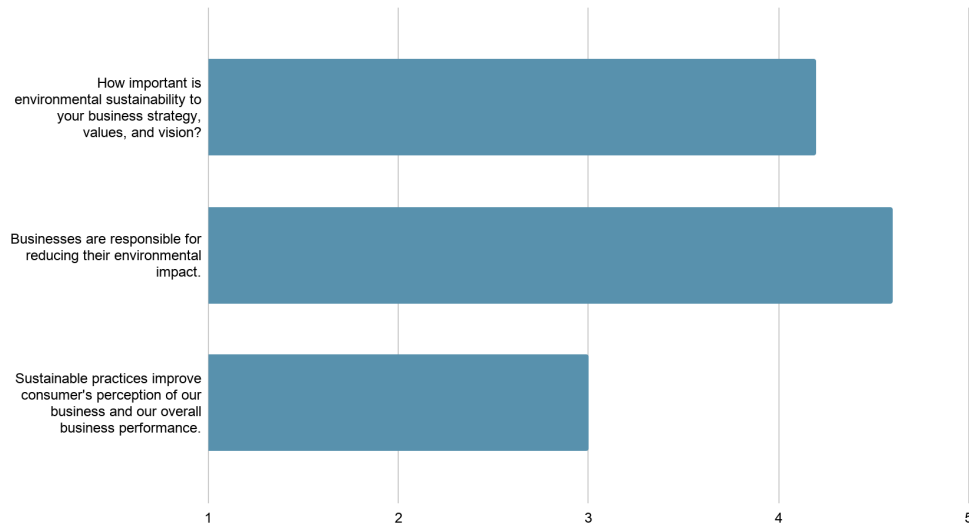
business practices in the future. The survey asks responders how interested they are in implementing sustainable business practices in the next 5 years, how aware they are about resources that can help them, and how confident they are in knowing what to do to improve their sustainability. In addition, the survey inquires about the overall status of the SME, where they can choose from a selection of statements about their readiness to improve and willingness to improve. Then, the responders were asked about the observed influence of the sustainability of their business on consumer purchasing decisions and business performance. They were asked about their urgency in improving each of the four categories, as well as what specific sustainability improvement they are looking to initiate soon at their business. For action after the survey, businesses were asked about what resources, if provided, would be most useful to improving their sustainable business practices and what topics in sustainability they would be interested in learning more about.

This survey was distributed through cold emailing, Supervisor Haubert's Instagram, and the Haubert Huddle event. Over 400 Alameda county SMEs and business coalitions were emailed, asking interested business owners to fill out the survey. On Supervisor Haubert's Instagram, a reel was posted with a link to the survey. At the Haubert Huddle event, attendees—predominantly small business owners—were given a blurb regarding the survey and encouraged to fill it out. Limitations to this methodology include the inability to eliminate bias from the surveyed businesses. It is likely that those who submitted demonstrate pre-existing opinions, interest, and preferences with regards to the topic since they were not randomly selected. This may result in a concentration of responses from already environmentally aware organizations or environmentally conscious business leaders who are more willing to share their status.

Results

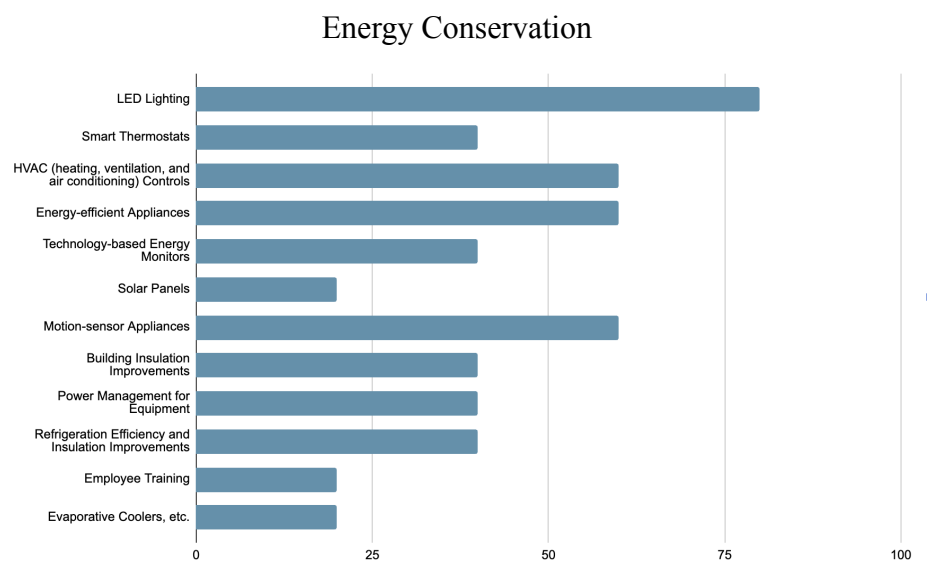
Business Attitude Toward Sustainability

Responses regarding business attitudes toward implementing sustainable business practices were measured through a set of three questions. The average value of the ratings assigned on the Likert Scale, where 1 represents strongly disagree and 5 represents strongly agree, is presented by the following bar graph.

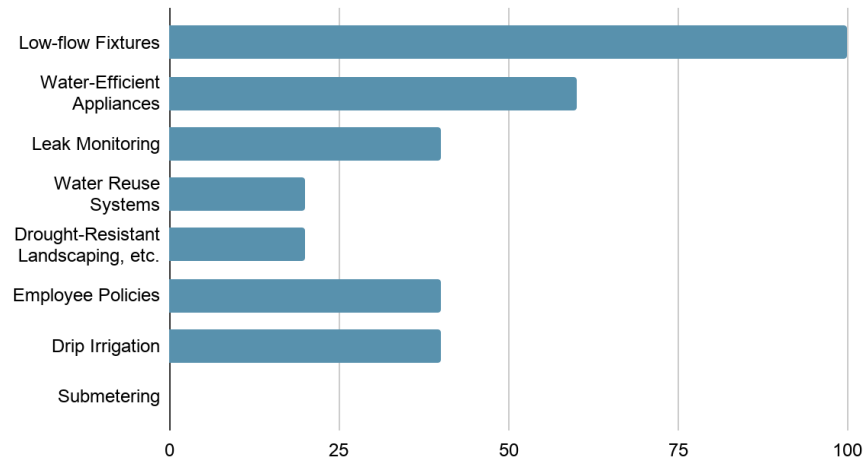


Current Sustainable Business Practices

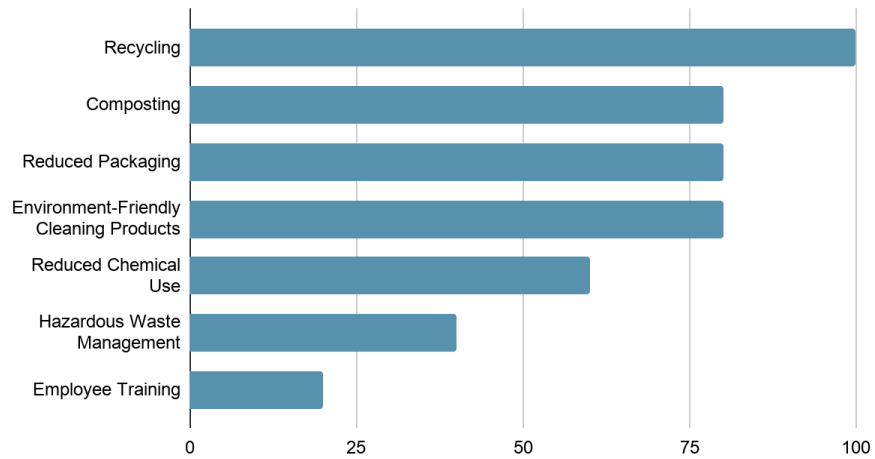
Responses regarding current sustainable business operations in terms of energy conservation, water conservation, pollution reduction, and alternative fuel vehicles and transportation were measured through a series of questions for each category. The percentage of surveyed businesses who implemented each business practice is presented in the bar graphs.



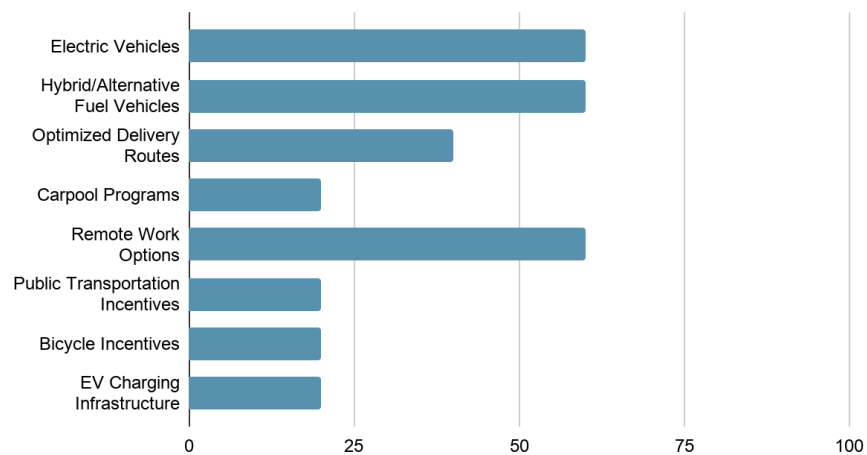
Water Conservation



Pollution Reduction



Alternative Fuel Vehicles & Transportation

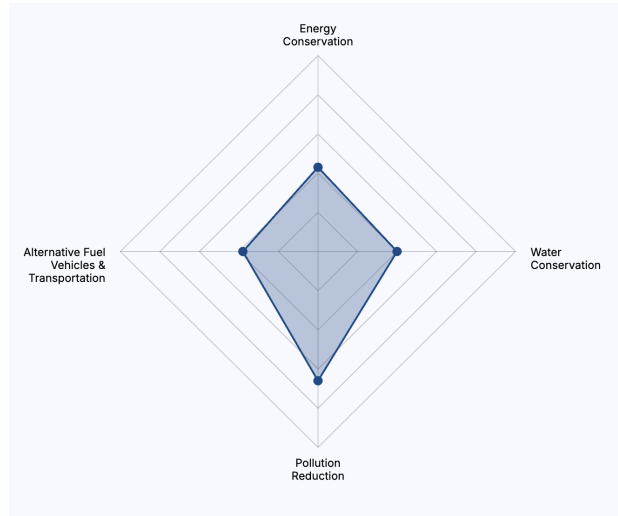


Implementation Across Fields

This graph uses an index to calculate the percentage of total potential implementation achieved by the businesses who participated in the survey. The calculation of the index develops an understanding of the performance across different areas for the surveyed businesses.

Category	Index
Energy Conservation	43.33
Water Conservation	40.00
Pollution Reduction	65.71
Alternative Fuel Vehicles & Transportation	37.50

Index = (Sum of percentages)/(Number of Practices)

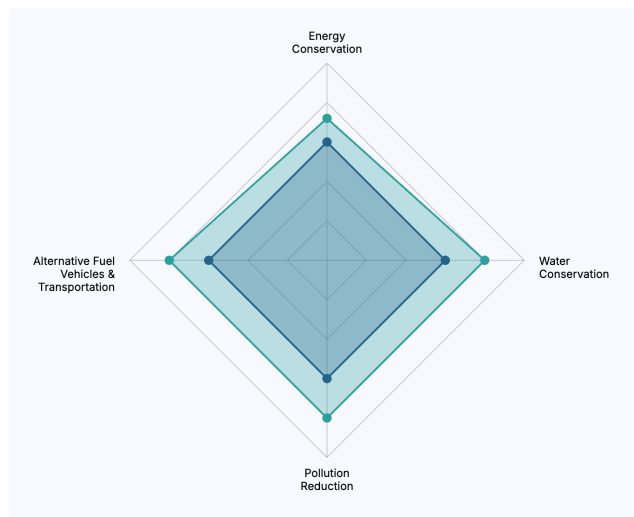


Goals and Actions

Responses regarding current sustainable business operations in comparison to the goal were collected in terms of the categories: energy conservation, water conservation, pollution reduction, and alternative fuel vehicles and transportation. Surveyed businesses' self-reported their assessment of action and goals was used to formulate a numeric score. The blue represents the standard goal for the surveyed businesses, while the green represents how well businesses performed with respect to their goals.

Category	Score
Energy Conservation	72
Water Conservation	80
Pollution Reduction	80
Alternative Fuel Vehicles & Transportation	80

Score = $100 * (\text{Sum of Ratings}) / (\text{Number of Ratings})$



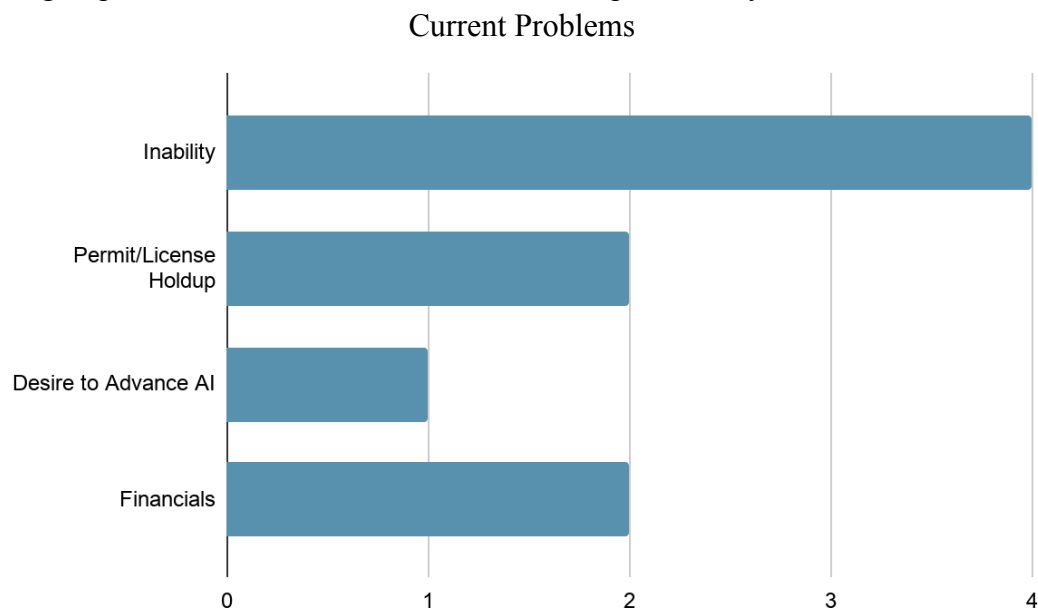
Current Problems

Responses regarding problems preventing businesses from reaching their sustainability goals were collected in each category section of the survey then aggregated into four types of problems: inability, permit/license holdup, desire to advance AI, and financials. The bar graph represents the most frequency of each problem among surveyed businesses.

Responses grouped into Inability include: not owning building, requiring demolition of areas of building

Responses grouped into Permit/License Holdup include: solar panels

Responses grouped into Financials include: limited EV profitability



Desired Resources

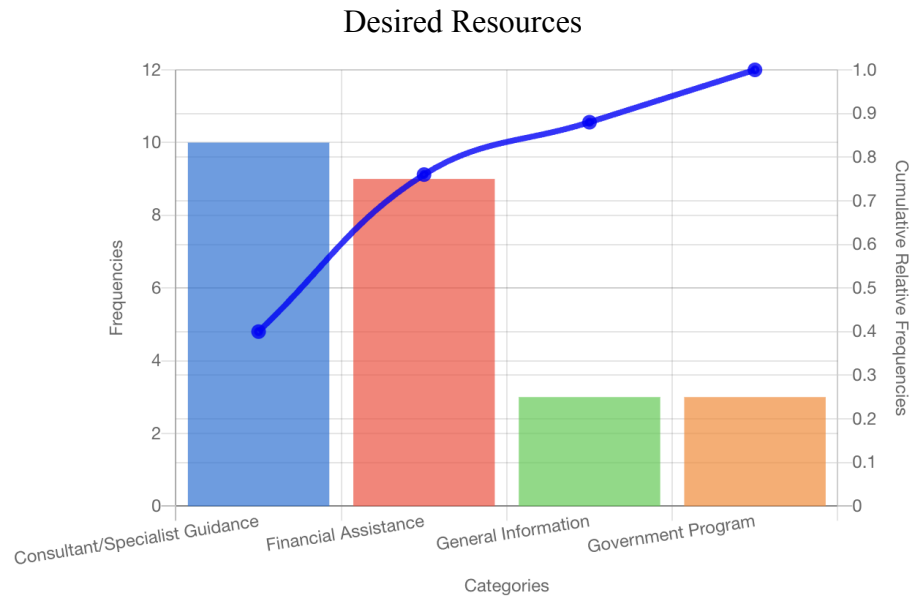
Responses regarding needs from the Supervisor's office to reach the business's sustainable goals were collected by category of the business practice then aggregated into four types of resources: consultant/specialist guidance, financial assistance, general information, and government programs. The Pareto Chart represents the most dire needs of the surveyed businesses.

Responses grouped into Consultant/Specialist Guidance include: on-site consultant, an ombudsman

Responses grouped into Financial Assistance include: grants, financial support for efficient vehicles/ plug in

Responses grouped into General Information include: general information on appliances, information on how to keep up to date on AI while respecting environmental impact

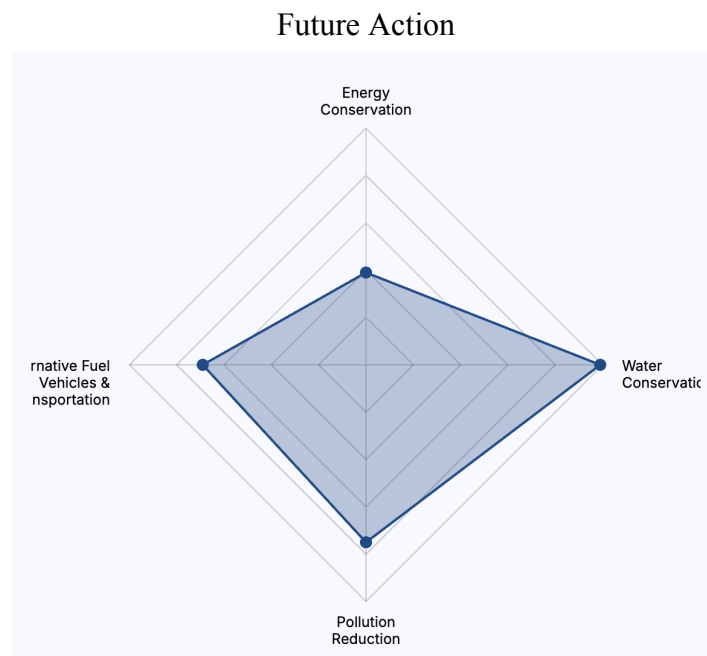
Responses grouped into Government Program include: government program



Future Action

Responders were asked to rank the importance of each category in the future action plans of their SME. The Radar chart below represents the average importance assigned to each category by the surveyed business owners.

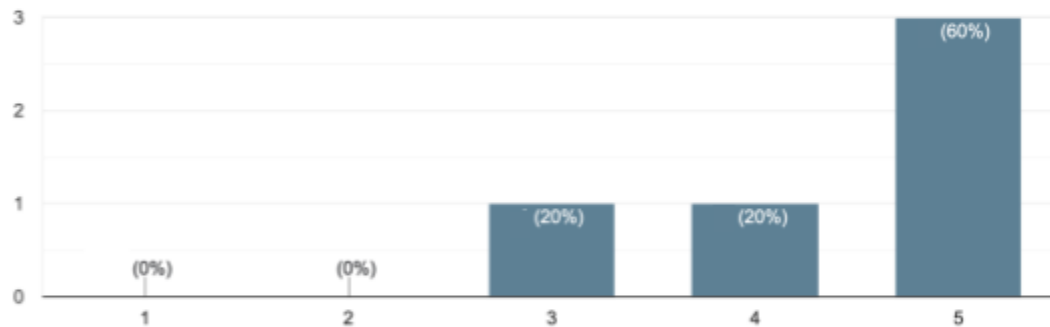
*There exists null answers in this section of the survey, such as when multiple categories were assigned the same ranking. Answers with the same rank were both removed from final calculation. To ensure equal treatment of all answers, the sum of values was then divided by the number of answers to achieve the values for this final radar chart.



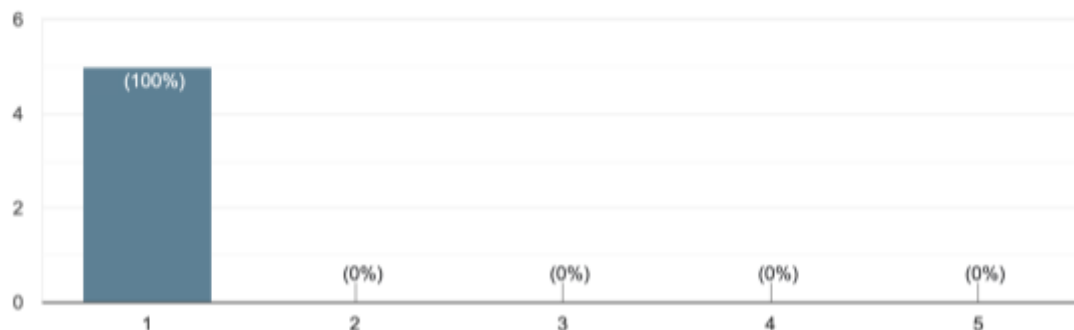
Future Readiness

Responses regarding future readiness, action, and awareness were collected from all surveyed businesses. The bar graphs below represent responses to disparate questions regarding different aspects of future readiness. For responses requiring a score from 1 to 5, 1 represents strongly disagree while 5 represents strongly agree.

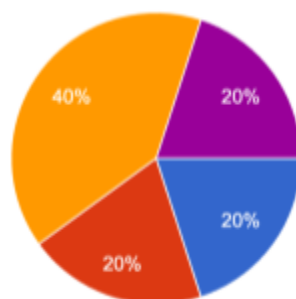
To what extent do you agree with this statement? My business is interested in employing more sustainable business practices in the next 5 years.



To what extent do you agree with this statement? My customers ask me about my sustainable business practices.

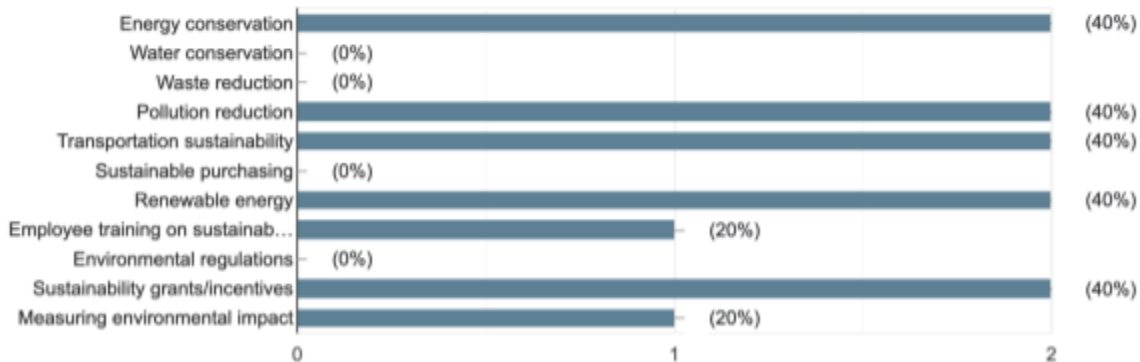


Which statement best describes your business?



- We know what improvements to make and are actively implementing them.
- We know what improvements to make but lack the resources to implement them.
- We want to improve but are unsure what actions would be most effective.
- We have not yet considered specific sustainability improvements.
- This specific business is a Green business constantly inspected to keep current.

Which sustainability topics would your business be most interested in learning more about?



Discussion

To improve the sustainable business actions of Alameda's SMEs, it is important to provide technical support, offer specialist consultations, account for tenancy issues, streamline permit application processes, and aid with people-based shifts. With adequate county support in these fields, SMEs will be able to achieve more of their sustainability goals.

95% of California's SMEs recognize the importance of sustainability, and the average score surveyed by businesses assigned to their responsibility to care for the environment is 4.6. It is evident that the surveyed SMEs demonstrate similar levels of understanding of the importance of sustainability as the aggregate study done across California. Given this context, it is clear that SMEs desire a transition to more sustainable business practices.

Technical, Infrastructural Support

The first barrier preventing this transition is the need for technical, infrastructural support. When asked about business practices currently implemented at their SME, surveyed businesses reported surprisingly high participation (implementation rate >80%) in the use of LED lighting, energy-efficient appliances, motion-sensor appliances, HVAC controls, low-flow fixtures, water-efficient appliances, and environmental-friendly cleaning products. However, there is a consistent low (implementation rate <20%) among infrastructural changes like solar panels, drought-resistance landscaping, and EV charging infrastructure.

Specialist services to carry out infrastructural changes resolves the problem of low implementation of related services would be helpful to bridging the gap on business practices that are difficult to implement. The Alameda County Small, Local, and Emerging Business (SLEB) Program is known for its plethora of services such as technical training, contracting opportunities, SLEB certification, and networking events. As the central hub for SME support in Alameda, the SLEB could create a new initiative that employs technicians and specialists to perform technical transitions and difficult infrastructural changes for sustainability free of

charge. This would incentivize SMEs to leverage this resource, leading to more personalized support across Alameda. Successful implementation of these initiatives can lead SMEs much closer to their goals, as numerous previously technologically impossible operations are now able to be accomplished.

Specialist, Consultant Support

Additionally, the most desired resource by surveyed SMEs is consultant or specialist guidance, with specific answers citing the need for an on-site consultant or ombudsman. Meanwhile, less than 15% of responses asked for general information. This shows that the barriers many SMEs face are not broad strategies, but specific action plans for their business given its location, operations, and needs.

Providing consultation services would help SMEs work around their specific situation and achieve their sustainability goals. The Alameda County Small, Local, and Emerging Business (SLEB) Program is known for its plethora of services such as technical training, contracting opportunities, SLEB certification, and networking events. As the central hub for SME support in Alameda, the SLEB could create a new initiative that employs consultants to perform on-site consulting and provide recommendations for sustainable transitions free of charge. This would incentivize SMEs to leverage this resource, leading to more personalized support across Alameda SMEs. Successful implementation of these initiatives can lead SMEs much closer to their goals, as personalized plans can fasttrack the sustainable transition.

Landlord-Tenant Collaboration

An overlooked constraint to implementing sustainable business practices is ownership of the building. The most commonly cited problem by surveyed SMEs is the inability to enact change since they do not possess ownership of the building. This problem is widespread, as a national average of 55% of SMEs own their buildings, leaving the rest helpless in implementing sustainable transitions that require permanent changes. Numerous business operations that are currently underused (implementation rate <20%), like water reuse systems, drought-resistant landscaping, submetering, solar panels, evaporative coolers, and EV charging infrastructure require landlord agreement and can not be acted on alone by the tenant.

In light of this issue, it is important to establish landlord-tenant collaboration or to innovate short-term sustainable solutions to help SMEs operate sustainably. Thankfully, each of the business practices mentioned above are long-term assets that will remain useful despite a switch in tenant. Education programs targeting private commercial owners, investment corporations, and other groups that rent to SMEs can make landlords more open to sustainable adaptations to their properties and increase the chance of collaboration with tenants. Successful implementation of these initiatives allow for the 45% of SMEs on rented property to gain the opportunity to enhance their sustainability initiatives.

Permits and Licenses

Permit and license holdups is another problem cited more than once in the surveyed businesses. Numerous of the relatively underperforming initiatives (implementation rate <20%) in each category, like water reuse systems, solar panels, evaporative coolers, and EV charging infrastructure, require permits, making the bureaucratic process likely a hindrance for SMEs.

Currently, the permit process is complicated and each permit costs up to \$300. This fee can be subsidized partially or completely for individuals using the permit to improve their business's sustainable business habits. Successful implementation of this initiative would lessen the load on business owners, making it easier for them to transition to sustainable business practices. In the future, this lower cost would encourage more SMEs to obtain their permits and move to more sustainable business practices.

People-Based Shifts

Lastly, it appears that cultural, people-based shifts are more difficult than hardware transitions. Across all four categories, the least implemented (implementation rate <20%) business practices include carpool programs and employee training. These people-based adaptations seem to be more difficult for the surveyed businesses than hardware transitions. It is important to not overlook the power of people-based actions, like collaborations and training, to transition to more sustainable business operations. Hardware, infrastructural, or technical adaptations are not the only way to improve sustainability in SMEs. Simply changing the habits of employees to promote efficient use of appliances, carpooling to work, or recycling properly can make an impact as well.

The Supervisor's office can provide training guides and promote the importance of employee training through organizations like the SLEB. Successful implementation of this initiative allows more SMEs to take advantage of people-based changes to reform the sustainability of their business practices.

***Awareness of Surveyed Businesses**

In addition, while state-wide statistics show that 89% of consumers take sustainability into consideration for their purchasing decisions, the surveyed SMEs scored the impact of sustainable business practices on consumer perception and commercial performance at 3.0 only.

Surprisingly, none of the surveyed SMEs encountered customers who relatively frequently asked about their sustainable business practices (rating 4 or 5 on the relevant question). This shows a potential disconnect between customer perception and business awareness. Given the influence of sustainability on purchasing decisions, it is important to make Alameda SMEs aware of exactly how impactful their transition to sustainable business practices is. Although the surveyed

businesses already demonstrate care for the sustainability of their business, making them more aware of how it reflects on consumers may encourage them to take even more action.

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