



# SUCCESS FORMULA: Development of a District-Wide Sustainability Plan



# AGENDA

- **INTRODUCTIONS**
- **OVERVIEW OF SUSTAINABILITY**
- **GETTING STARTED: PLANNING FOR SUSTAINABILITY**
- **SUSTAINABILITY STRATEGIC PLANNING PROCESS**
- **SUCCESS CRITERIA FOR SUSTAINABILITY PROGRAMS**



# ENERGY & SUSTAINABILITY

Cumming's newest services line, the energy and sustainability division was formed 6 years ago, and has steadily grown to service over 60+ clients and 19 team members

19 Team Members

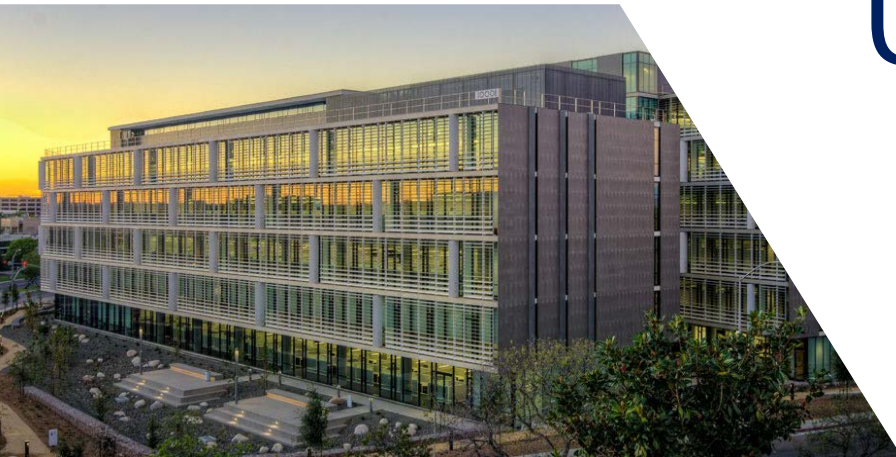
\$22M Cumming Contract Value

20+ Years Staff Expertise

60+ Clients in Education, Transportation, Commercial, Hospitality

USA ENERGY: CA, NJ, NY, SC, DC

COMMISSIONING:  
CA, WA, AZ, MT, TX, TN, MN,  
DC, AL, NC, VA, PA, NJ, GA,  
FL, NY, CT, KY, SC



# CORE SERVICES



## ENERGY

(AUDITING, EFFICIENCY, RENEWABLES, ENERGY MANAGEMENT)



## COMMISSIONING

(Cx, Rx, LEED ENHANCED COMMISSIONING)



## SUSTAINABILITY

(STRATEGIC PLANNING, ENERGY, WATER, SOLID WASTE, TRANSPORTATION)



## GREEN BUILDING CERTIFICATIONS

(LEED, ENVISION, WELL)



## CLIMATE ACTION AND RESILIENCY

(MITIGATION, GHG REDUCTION, ADAPTATION)



## ENVIRONMENTAL COMPLIANCE

(ISO 14001, STORMWATER, CONSTRUCTION)

# OVERVIEW OF SUSTAINABILITY



WHAT IS SUSTAINABILITY?

# SUSTAINABILITY 101



WHAT IS SUSTAINABILITY?

# FOCUS AREAS



Climate



Energy Efficiency  
& Renewables



Water



Solid Waste



Transportation



Green Building &  
Operations



Education & Engagement



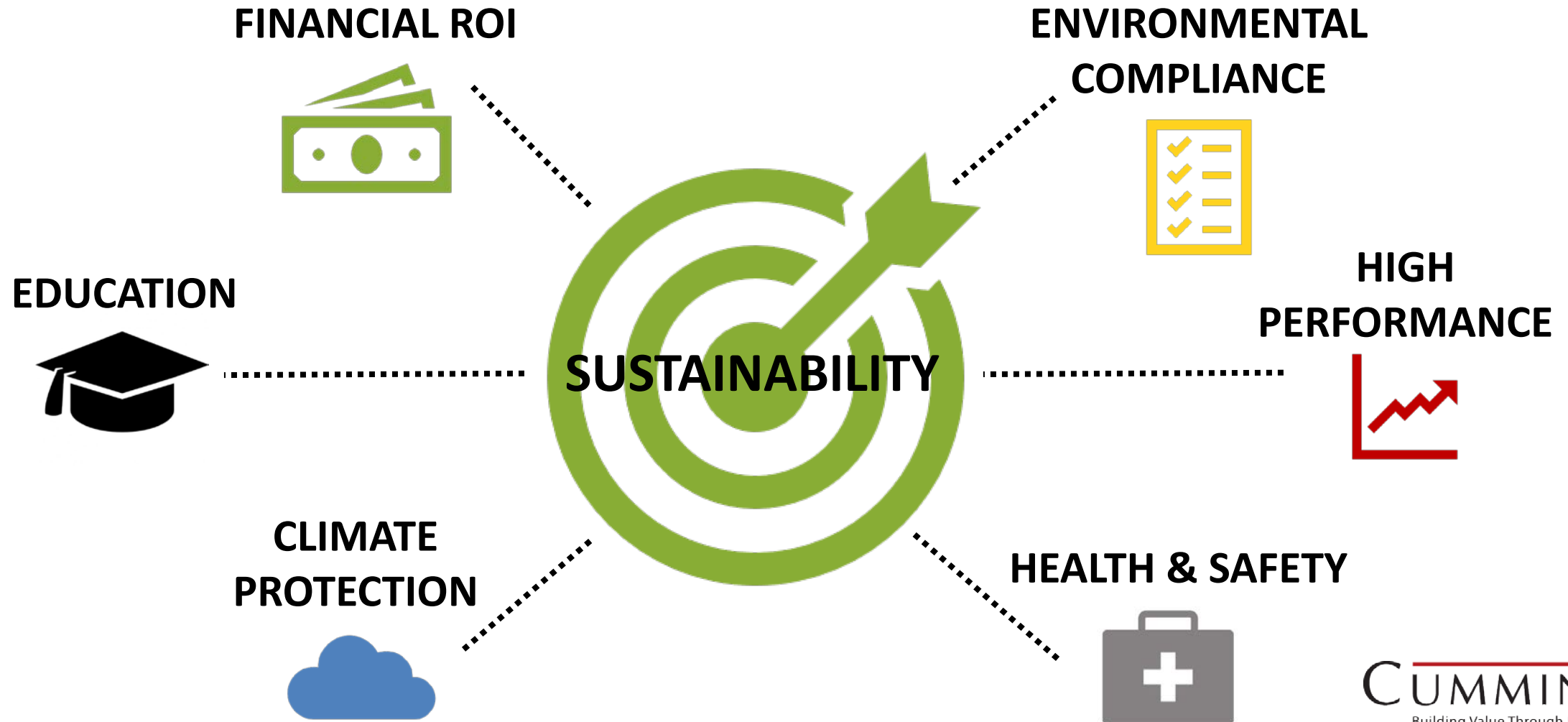
Diversity & Inclusion



Food, Nutrition &  
Wellness

WHAT IS SUSTAINABILITY?

# VALUE PROPOSITION





# THE SMMUSD DISTRICTWIDE SUSTAINABILITY PLAN



# SANTA MONICA–MALIBU UNIFIED SCHOOL DISTRICT

# PLAN OVERVIEW



## DISTRICTWIDE PLAN FOR SUSTAINABILITY

SANTA MONICA – MALIBU UNIFIED SCHOOL DISTRICT | FEBRUARY 2019



## DISTRICTWIDE SUSTAINABILITY PLAN

### Vision

- **UNITE** the many existing sustainability initiatives;
- **INCORPORATE** sustainability into Education Services and all aspects of student learning; and
- **INTEGRATE** climate protection, resource efficiency, waste management, and other sustainability practices into District operations.

### Final Result

- Year-long Planning Process
- Comprehensive Plan Targeting 8 Topic Areas
- Establishes 10-year Sustainability Goals
  - Short-term Strategies



# SANTA MONICA–MALIBU UNIFIED SCHOOL DISTRICT

# PLAN OVERVIEW

## SOLID WASTE

The District recognizes that “the conservation of natural resources and protection of the environment are connected to the District’s educational mission and are essential to the health and well-being of the community” (Board Policy 3511.1 – Integrated Waste Management). Therefore, the District’s solid waste program strives to minimize waste production and landfill disposal resulting from daily operations and construction activities through the implementation of comprehensive waste minimization, reuse, recycling, organic waste, and education programs. These programs look upstream at purchasing decisions and internal practices in order to improve the efficiency of material resource use, as well as downstream at disposal strategies that minimize environmental impact and support a more circular economy. The Solid Waste program employs the waste hierarchy principle, which prioritizes waste management in the order of: Reduce, Reuse, Recycle, Compost, Transform, Landfill.

The disposal of commercial solid waste in landfills has been identified as a significant source of greenhouse gas emissions, therefore, diverting waste from landfill is also a critical component of the District’s climate protection strategy.

### PROGRAM MISSION

Design an integrated waste management program that minimizes the generation of waste, encourages the recovery and diversion of reusable materials from the waste stream, improves efficiency in the utilization of natural and material resources, and protects the environment.

– Board Policy AR 3511.1(a), *Integrated Waste Management*

### GOALS

ONGOING	2020	2025	2030
<ul style="list-style-type: none"><li>Comply with all local, regional, state, and federal solid waste regulations.</li><li>Recycle 100% of e-waste.</li><li>Exceed CalGreen C+D recycling requirements for all construction projects.</li></ul>	<ul style="list-style-type: none"><li>Reduce total waste generation by 5% compared to 2017-18 baseline.</li><li>Increase diversion from landfill to 45%.</li><li>Eliminate single-use plastic water bottles Districtwide.</li></ul>	<ul style="list-style-type: none"><li>Reduce total waste generation by 10% compared to 2017-18 baseline.</li><li>Increase diversion from landfill to 60%.</li></ul>	<ul style="list-style-type: none"><li>Reduce total waste generation by 20% compared to 2017-18 baseline.</li><li>Increase diversion from landfill to 85%.</li></ul>



### PERFORMANCE INDICATORS

#### METRICS



**Total Waste Generation**  
Tons of Municipal Solid Waste (MSW) generated.



**Diversion from Landfill**  
Percent of Municipal Solid Waste diverted from landfill.



**E-Waste Recycling**  
Percent of e-waste recycled.



**Construction + Demolition Recycling**  
Percent of C+D waste recycled per project.

## CURRENT INITIATIVES



### 3

#### EDUCATIONAL SPECIFICATIONS

The District’s new Educational Specifications, to be adopted in 2019, include additional requirements for green building design and planning considerations. The design specifications target sustainable materials and indoor environmental health, which augment and reinforce the District’s other green building commitments. Interior building materials are required to comply with LEED criteria from several Materials & Resources and Indoor Environmental Quality credits. The Specifications emphasize the use of natural materials that not only employ sustainability principals, but also contribute to student performance and reinforce the health and wellness components of the District’s education program. The potential for positive reinforcement between the District’s instruction space and student performance will be further prioritized as part of the green building program, with a goal to design facilities that support academic success and can themselves be a source of sustainability education for students, teachers, and the District community. The updated Educational Specifications also support the implementation of this sustainability plan broadly by including requirements for teaching gardens, functional kitchens, natural lighting, and other facilities that support aspects of the District’s sustainability program.



### 4

#### GREEN BUILDING IN PRACTICE

The District recognizes the importance of using sustainable design strategies and innovative technologies in order to minimize the environmental impact and improve the health and performance of District facilities. Several innovative materials and design strategies have been used by the District in recent projects that demonstrate the commitment to both sustainability and performance. Strategies recommended by the CHPS framework and featured in recent projects include:

- Solar photovoltaic panels
- Day lighting
- Natural ventilation
- Bio-swales, rainwater collection, filtration and re-use for irrigation
- Green roofs
- Reduction of urban heat island effect
- Outdoor learning and gathering spaces
- Low-emitting materials

**Fly Ash Concrete:** The District has made a concerted effort to replace a portion of the cement needed for construction and modernization projects with fly ash concrete. Fly ash is generated through combustion and captured prior to release into the atmosphere to prevent air pollution. In addition to providing a more durable alternative to cement, fly ash concrete requires 10% less water, saves energy, reduces GHG emissions, and prevents the disposal of this material in landfill. For every ton of fly ash used instead of cement, enough energy is saved to provide electricity to an average American home for 24 hours. Fly ash concrete has been incorporated into projects at SAMOHL, John Adams Middle School, and other District locations.



## RECOMMENDED STRATEGIES



The recommended strategies identified for the solid waste program include improvements to the District’s solid waste infrastructure, policy development, support services, internal program creation/expansion, and the development of education and training programs. These strategies address deficiencies identified through recent program assessment efforts, as well as opportunities to expand and institutionalize existing best practices Districtwide.

RECOMMENDED STRATEGIES	RESOURCES NEEDED	PRIORITY LEVEL	KEY STAKEHOLDER
<b>Policies and Support Services</b>			
Implement a Districtwide plastic-free food service policy in alignment with the City of Santa Monica.	No Additional Funding Needed	1	Food Services
Adopt a polystyrene material ban in alignment with the City of Santa Monica and Malibu.	No Additional Funding Needed	1	Purchasing
Incorporate dish washers into the Educational Specifications as required equipment for all food service facilities to support the use of reusable dishware.	No Additional Funding Needed	1	Facility Improvement Projects
Establish policy requirements for waste management plans to be prepared as part of the project development process for all construction projects.	Funding Needed: Staff Time	2	Facility Improvement Projects
Update the District’s Integrated Waste Management policy (AR 3511.1(a)) to include all waste related policies, an integrated waste management hierarchy, District roles and responsibilities, performance goals, and industry best management practices.	Funding Needed: Staff Time	2	Board of Education
Revise the District’s waste service provider contract and RFP to include requirements for monthly waste disposal and diversion reporting, material end use/disposal method specifications, periodic waste auditing, staff training, signage, and communications materials.	Funding Needed: Staff Time	3	Purchasing, M+O
Conduct a bin subscription evaluation to assess the most cost-effective combination of bin sizes, quantities, and pick-up frequencies to meet the District’s solid waste capacity needs.	Currently Funded: Staff Time	3	M+O
Develop an Environmentally Preferable Purchasing policy that considers material waste and establishes standards for reusable products, reduced packaging, cradle-to-cradle product design, supplier take-back programs, and recycled content materials.	Funding Needed: Staff Time	4	Purchasing
<b>Waste Prevention</b>			
Accelerate the installation of water bottle filling stations to add an additional 30 stations in 2 years and conduct an assessment of the additional stations needed to provide access to all students.	Funding Needed: General Fund	1	M+O
Set double-sided printing as the default standard for all District computers.	Funding Needed: Staff Time	1	IT
Develop an implementation plan for transitioning Food Service disposable trays and utensils to reusables.	Funding Needed: Staff Time	1	Food Services
Replace single use water bottles at District events with bulk water dispensers and marine degradable cups.	Funding Needed: General Fund	2	Facility Use Department
Develop a Sustainable Event Certification and Zero Waste events policy in partnership with the Facility Use Department.	Currently Funded: Staff Time	2	Facility Use Department
Develop a surplus property program to internally reuse, sell, or donate surplus furniture, office/school supplies, and other equipment no longer needed by the District.	Funding Needed: Staff Time	2	M+O

★ Indicates existing programs or initiatives that are considered a best practice.



# GETTING STARTED: PLANNING FOR SUSTAINABILITY





# PROCESS OVERVIEW

## SUSTAINABILITY PLANNING PROCESS



# GETTING STARTED



## PREPARE FOR YOUR PLANNING PROCESS

### A 'Getting Started' Toolkit:

1. Build Your Team
2. Identify Program Drivers
3. Conduct Current State Assessment
4. Scope Your Plan
5. Identify Resources



# GETTING STARTED



## BUILD YOUR TEAM

- Establish a Core Project Team
- Identify Key Stakeholders

## IDENTIFY PROGRAM DRIVERS

- Policy Commitments
- Internal/External Stakeholders:
- State and/or Local Government

## CONDUCT CURRENT STATE ASSESSMENT

- Prior Accomplishments
- Current Initiatives
- Data Availability



# SANTA MONICA–MALIBU UNIFIED SCHOOL DISTRICT

# CASE STUDY



## PROGRAM DRIVERS AND CURRENT STATE

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### Key Priorities

- Minimize the District's environmental impact
- Transition to a top-down management structure
- Institutionalize resources and programs Districtwide
- Make the District more resilient



# GETTING STARTED



## SCOPE YOUR PLAN

- Select Sustainability Priorities
- Determine “Boundaries”
  - Direct Operational Control

## IDENTIFY RESOURCES

- Internal Staff Resources (Time)
- Available Funding (Money)



# **SUSTAINABILITY STRATEGIC PLANNING: A STEP BY STEP GUIDE**

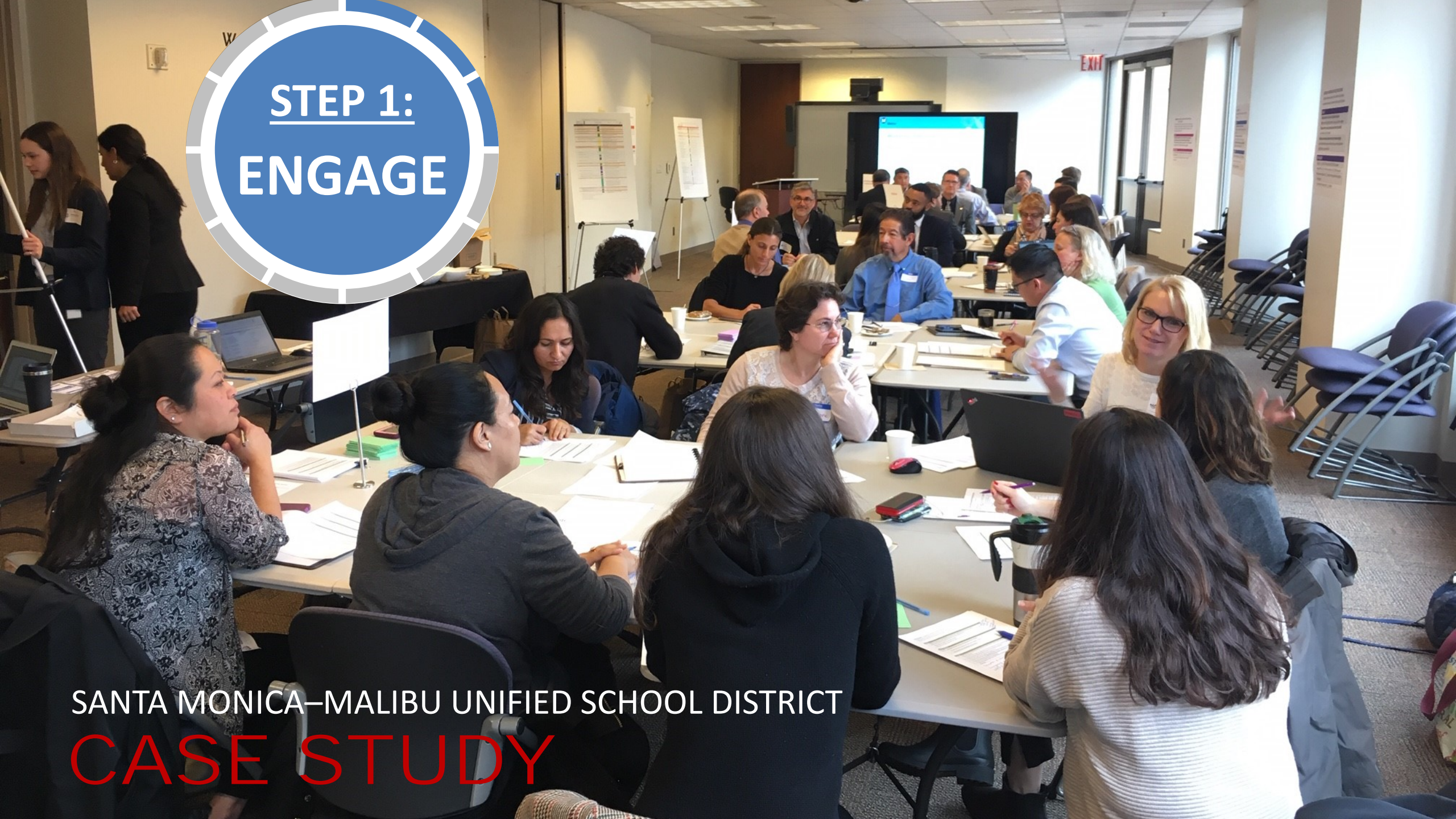


PLANNING FOR SUSTAINABILITY

# STRATEGIC PLANNING







SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT  
**CASE STUDY**



# RECOMMENDED APPROACH

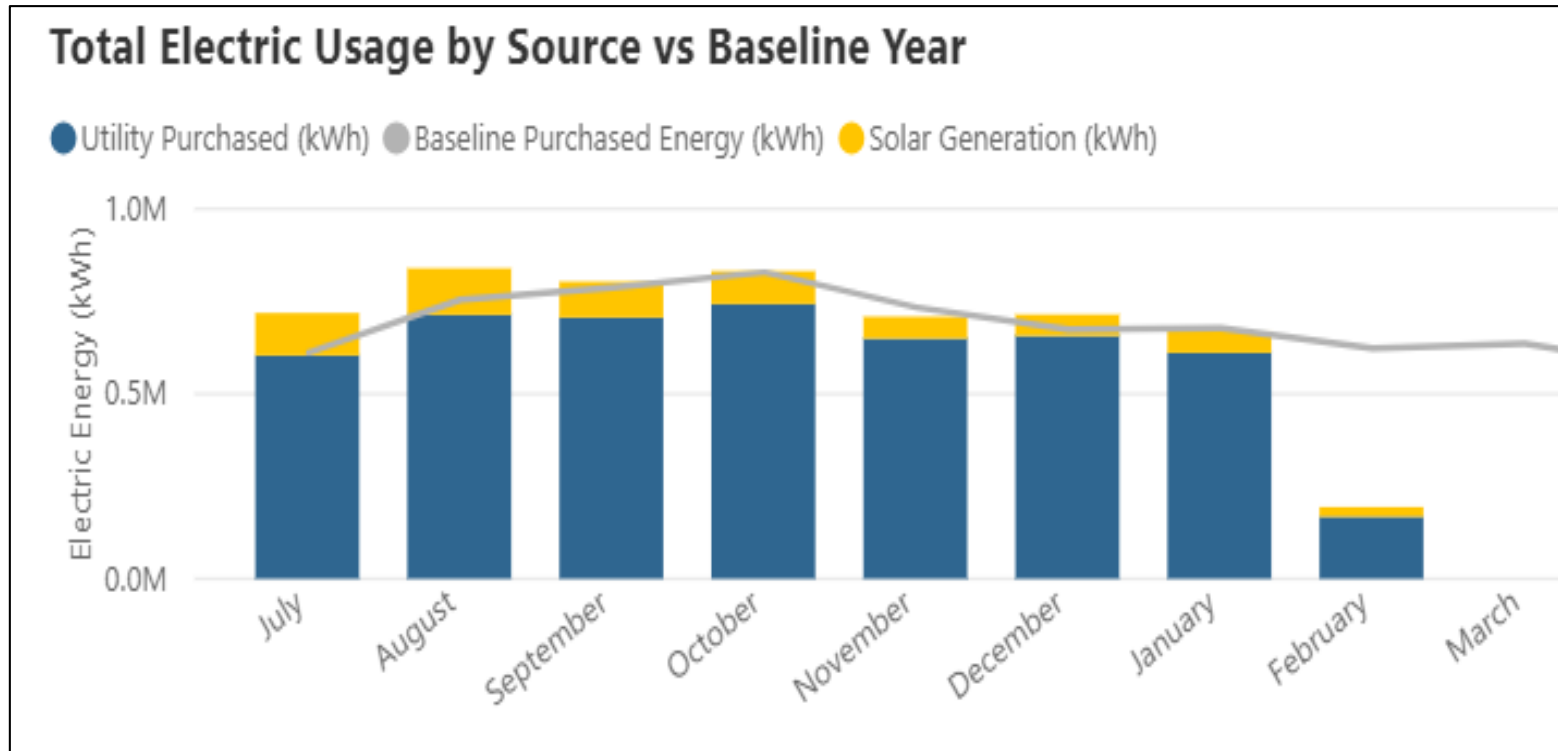


## ENGAGEMENT STRATEGIES AND AUDIENCES

- Engage Internal District Community
  - Staff and Administration
  - Students
  - Teachers
  - Parents
- Establish an Advisory Committee
  - District Representatives
  - Community Stakeholders
    - City/County Representatives
    - Community Groups



# STRATEGIC PLANNING



# RECOMMENDED APPROACH

## STEP 2: ASSESS

### ESTABLISH YOUR BASELINE

- Conduct Utility Analysis
- Review Design Specifications – Capital Program
- Document Existing Sustainability Programs and Initiatives
- Highlight Opportunities: *EXAMPLE – Energy Efficiency*
  - LED Lighting Retrofits
  - Lighting Controls
  - HVAC Retrofits
  - Boiler and Chiller Equipment Replacements
  - Variable Frequency Drives
  - Programmable Smart Thermostats
  - Energy Management Systems
  - Cool Roofs





PLANNING FOR SUSTAINABILITY

# STRATEGIC PLANNING



**STEP 3:**  
**DEVELOP**



# SANTA MONICA–MALIBU UNIFIED SCHOOL DISTRICT

## CASE STUDY

### ENERGY EFFICIENCY + RENEWABLES

The generation of electricity and subsequent consumption of energy in buildings represents the single largest source of greenhouse gas emissions in the U.S. Acknowledging this reality, the District strives to minimize the environmental impacts of the District's energy needs through an integrated approach of energy conservation, efficiency measures, effective energy management, and the transition to clean, renewable energy systems. The District's energy program addresses all aspects of energy use within the District's facilities, including electricity, natural gas, and renewable energy systems, to identify opportunities for energy use and utility cost reductions and to increase the use of onsite, renewable energy. Additionally, the energy program strives to educate students and staff on the importance of energy efficiency and renewable energy while promoting behavior change and providing tangible actions they can take to help the District achieve their energy goals.

#### PROGRAM MISSION

Minimize the use of energy resources, convert to clean, renewable energy sources, and redirect financial resources towards student learning and sustainability initiatives.

#### PERFORMANCE INDICATORS

##### METRICS



**Electrical Consumption**  
Total kilowatt-hours of electricity consumed annually.



**Natural Gas Consumption**  
Total therms of natural gas consumed annually.



**Energy Use Intensity**  
Combined electricity and natural gas consumed in kBtu per square foot.



**Onsite Solar Production**  
Kilowatt-hours of electricity supplied annually by solar.



**Percent Onsite Solar Production**  
Percent of total District electrical consumption supplied by onsite solar.

#### GOALS

##### ONGOING

- Comply with all local, regional, state, and federal energy regulations.
- Monitor and track performance monthly.
- Promote student and staff participation in energy conservation behavior.

##### 2020

- Reduce energy consumption by 20% compared to 2017-18 baseline.
- Generate 20% of the District's electrical need from solar.
- Transition all District sites to 100% renewable electricity through the Santa Monica and Malibu Clean Power Alliance.

##### 2025

- Reduce energy consumption by 25% compared to 2017-18 baseline.
- Generate 30% of the District's electrical need from solar.

##### 2030

- Reduce energy consumption by 30% compared to 2017-18 baseline.
- Generate 35% of the District's electrical need from solar.

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## DEVELOPING YOUR PLAN

### Sustainability Plan Elements

- Baseline & Performance Metrics: *Fiscal Year 2017-18*
- Goals: *Ongoing, 2020, 2025, 2030*
- Current Initiatives
- Recommended Strategies
- Project Costs & Funding Mechanisms:
  - Capital Costs
  - Cost Saving Potential
  - Grants

# RECOMMENDED APPROACH

## STEP 3: DEVELOP

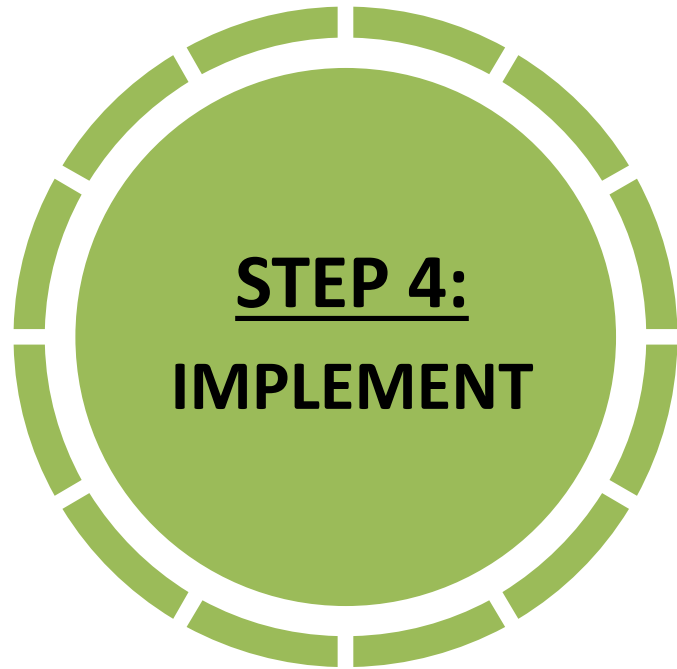
### DEVELOP AN ACHIEVABLE PLAN

- Establish short-term and long-term goals
  - *EXAMPLE: Reduce Energy Use by 10%*  
*Increase waste diversion rate to 50%*
- Identify supporting strategies
  - *Conduct lighting audits*
  - *Implement a streamlined recycling program*
- Determine program costs and savings



PLANNING FOR SUSTAINABILITY

# PROGRAM IMPLEMENTATION





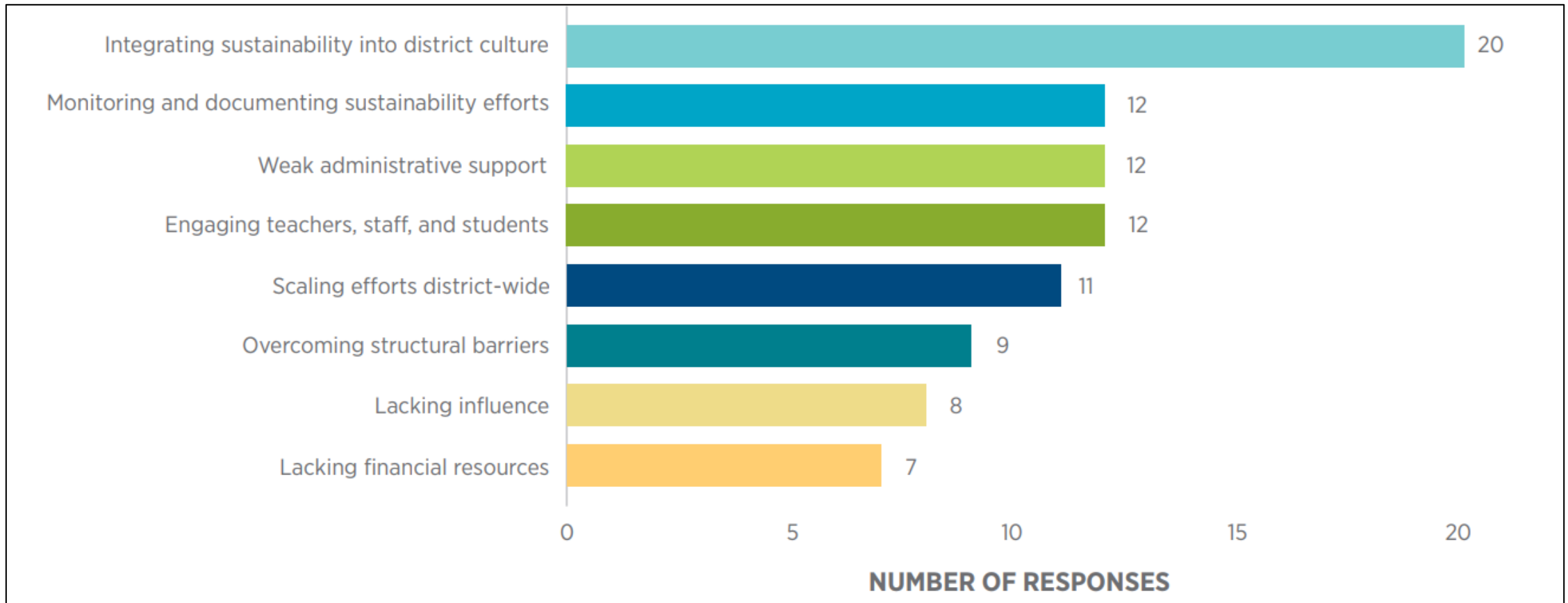
# CRITERIA FOR A SUCCESSFUL SUSTAINABILITY PROGRAM





# SUSTAINABILITY PROGRAM IMPLEMENTATION CHALLENGES

## Identifying challenges and risks before developing a Sustainability Program (Survey of K12 School Districts)



# SUCCESS FACTORS

- **Leadership**
  - ✓ Board and Senior Management commitment; Board Resolution
- **Sustainability Program Management**
  - ✓ Sustainability Director (Position + Support Staff)
  - ✓ Establish program budget (i.e. Green Revolving Fund)
- **Framework for Monitoring and Reporting**
  - ✓ Monitor utility costs
  - ✓ Periodic reporting of performance metrics
- **Outreach and Engagement**
  - ✓ Integration of curriculum; Student, teacher, parent education and engagement programs

# Questions



# Thank You

## CONTACT



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