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# Update on Technology Implementation Office (TIO) Activities

Executive Committee Meeting

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December 14, 2017  
Ranyee Chiang  
Michael Montgomery



# Outline

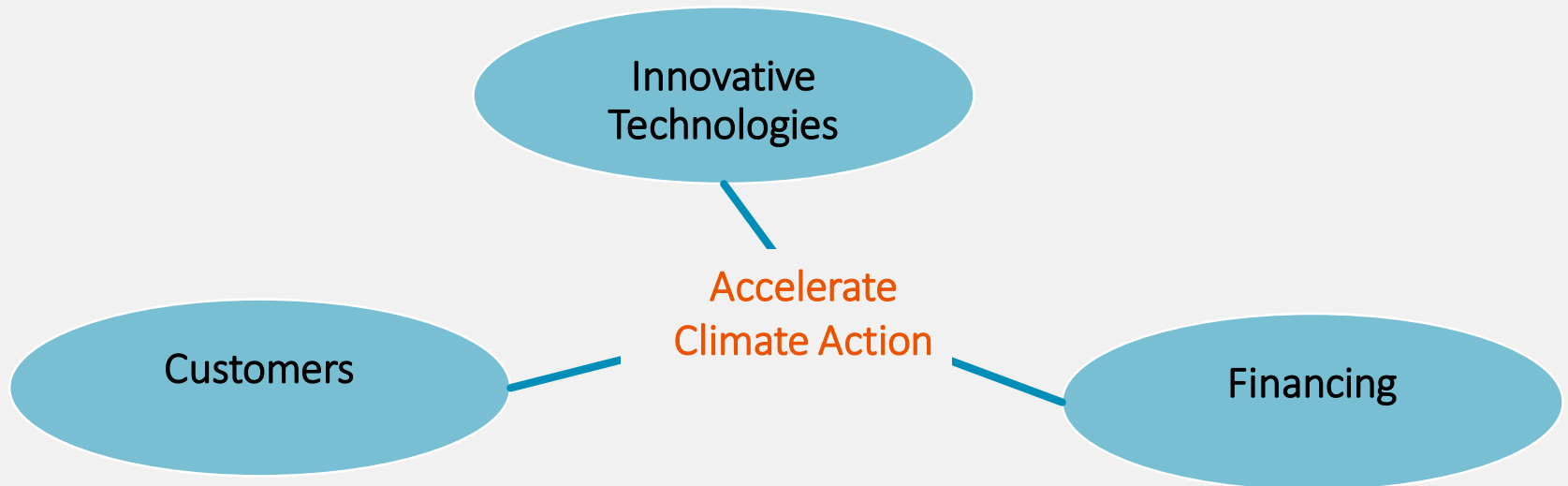
- TIO Background
- Stakeholder Engagement
- Stationary GHG Reduction Program
- Mobile Emissions Reduction Programs
- Next Steps

# Mission Statement

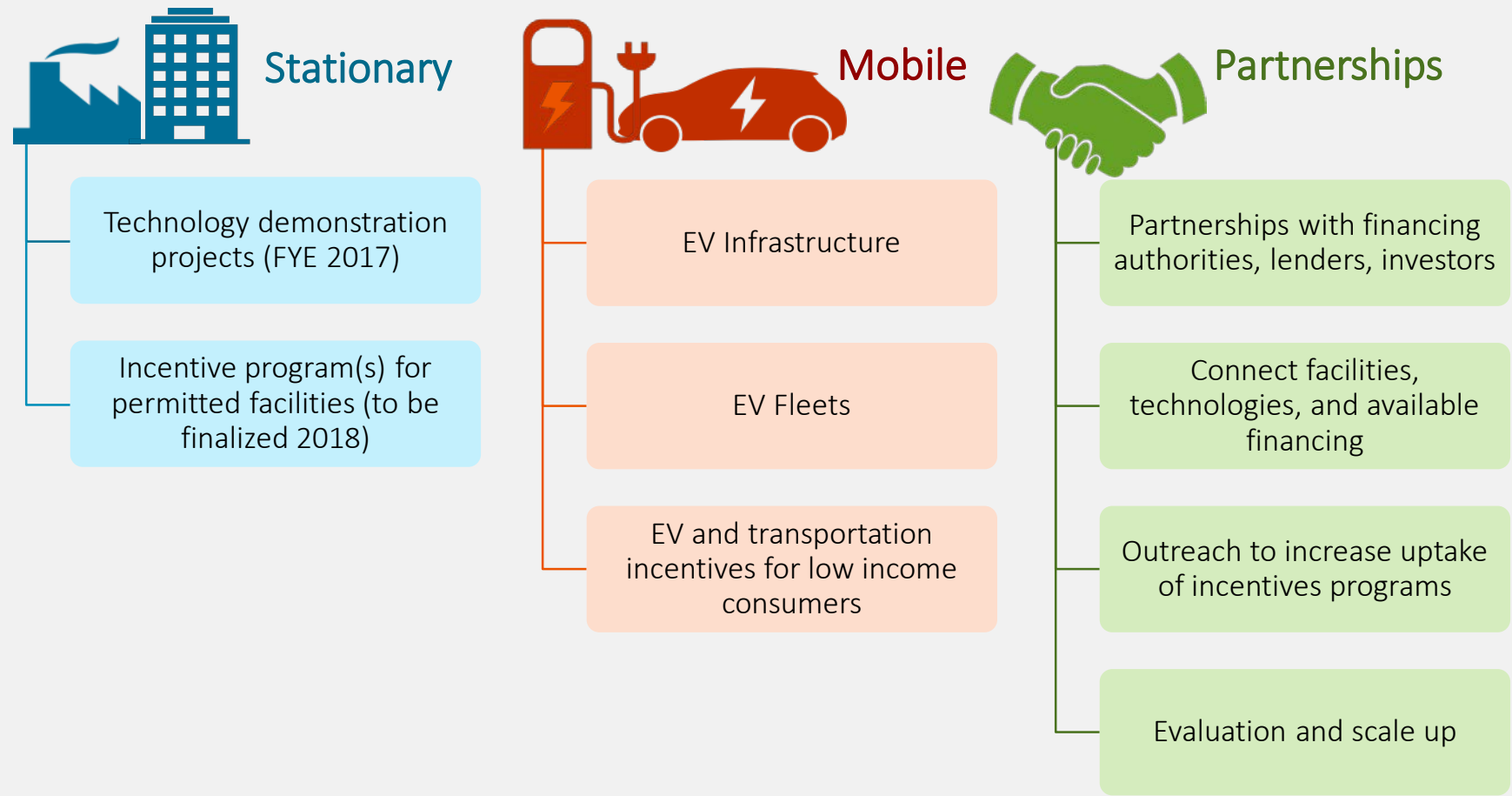
Launched as part of Clean Air Plan vision for a post-carbon Bay Area by 2050

## Mission Statement

*Catalyze innovation to combat climate change by incentivizing disruptive, low-cost technologies that reduce greenhouse gas emissions for mobile and stationary sources*



# Technology Implementation Office - Incentivize Climate Action



# Technology Options



- Energy efficiency
- Alternatives to gas turbines and diesel ICEs (e.g. gas microturbines, hydrogen FCs)
- Cooling and heating (e.g. geothermal, electric heat pumps)
- Carbon sequestration and use
- Methane capture and use
- Waste-to-energy



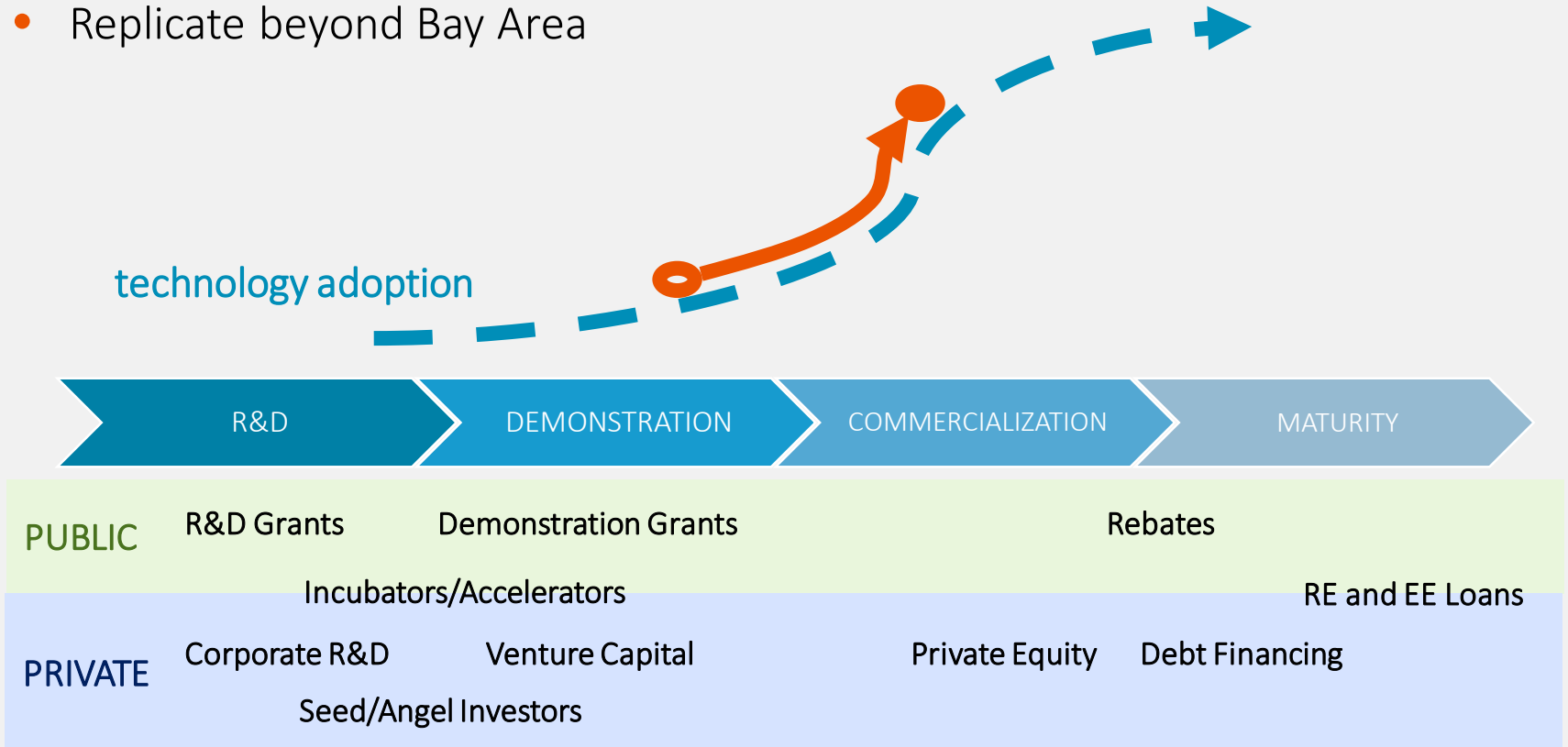
- Zero emissions vehicles and infrastructure (lifecycle)
- Autonomous electric vehicles
- Renewable fuels (e.g. renewable diesel, renewable natural gas)

## Cross-cutting

- Smart/connected technologies (sensors, leveraging mobile networks, big data, artificial intelligence, Internet of Things, industrial IoT, software or applications)
- Battery storage for renewable power

# Focusing Incentives and Partnerships on Commercialization “Valley of Death”

- Mainstream game-changing technologies through incentives, information sharing and matchmaking
- Demonstrate costs and payback periods to drive more investment
- Replicate beyond Bay Area



# Stakeholder Engagement



- Meetings with researchers, technologists, incubators, utilities, facilities, partner agencies, financing authorities
- Steering committee members confirmed
  - Partner agencies, Utilities, Investors, Accelerators, Technology analysis
- Developed \$5M funding proposal for MTC for EV programming, outreach, and evaluation
  - Board adopted resolution to accept funding on November 1, 2017

# Stationary GHG Reduction Planning



- Request for Information (RFI) - Identify new technologies with potential to reduce stationary source GHG emissions
- Request for Proposals (RFP) - Organization to conduct a technology assessment of GHG opportunities
- U.S. Environmental Protection Agency senior executive via a service development program
  - evaluate the landscape of monetary programs
  - recommend financing and partnership models for the TIO



# Introduction to Financing Options

- Key Components of a Finance Incentive
  - Customers: understand what customers need
  - Fiscal Stability: understand risk
- Standard Models
  - Revolving loan funds
  - Credit Enhancements/Subsidies
    - Loan Guarantees
    - Commercial Loan Loss Reserves

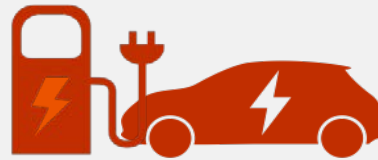
# Introduction to Financing Options (Continued)

- **Revolving loan fund examples:**
  - Clean Water and Drinking Water State Revolving Fund (US EPA/States)
  - CA Lending for Energy and Environmental Needs (CLEEN Fund) at CA IBank
  - CA Clean Energy Fund at California Energy Commission
  - Multiple rate payer funded EE programs (PG&E, BayRen, etc)
- **Credit Enhancement/Subsidy examples:**
  - Title XVII innovative clean energy projects loan program (US DOE)
  - Water Infrastructure Finance and Innovation Act (US EPA)
  - California Capital Access Program (CalCAP) at CA Treasurer-Pollution Control Finance Authority
  - California Hub For Energy Efficiency Finance (CHEEF) Programs/Pilot Loan Loss Reserve for Small Business at CA Treasurer- California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA)

# Financing portfolio: preliminary evaluation

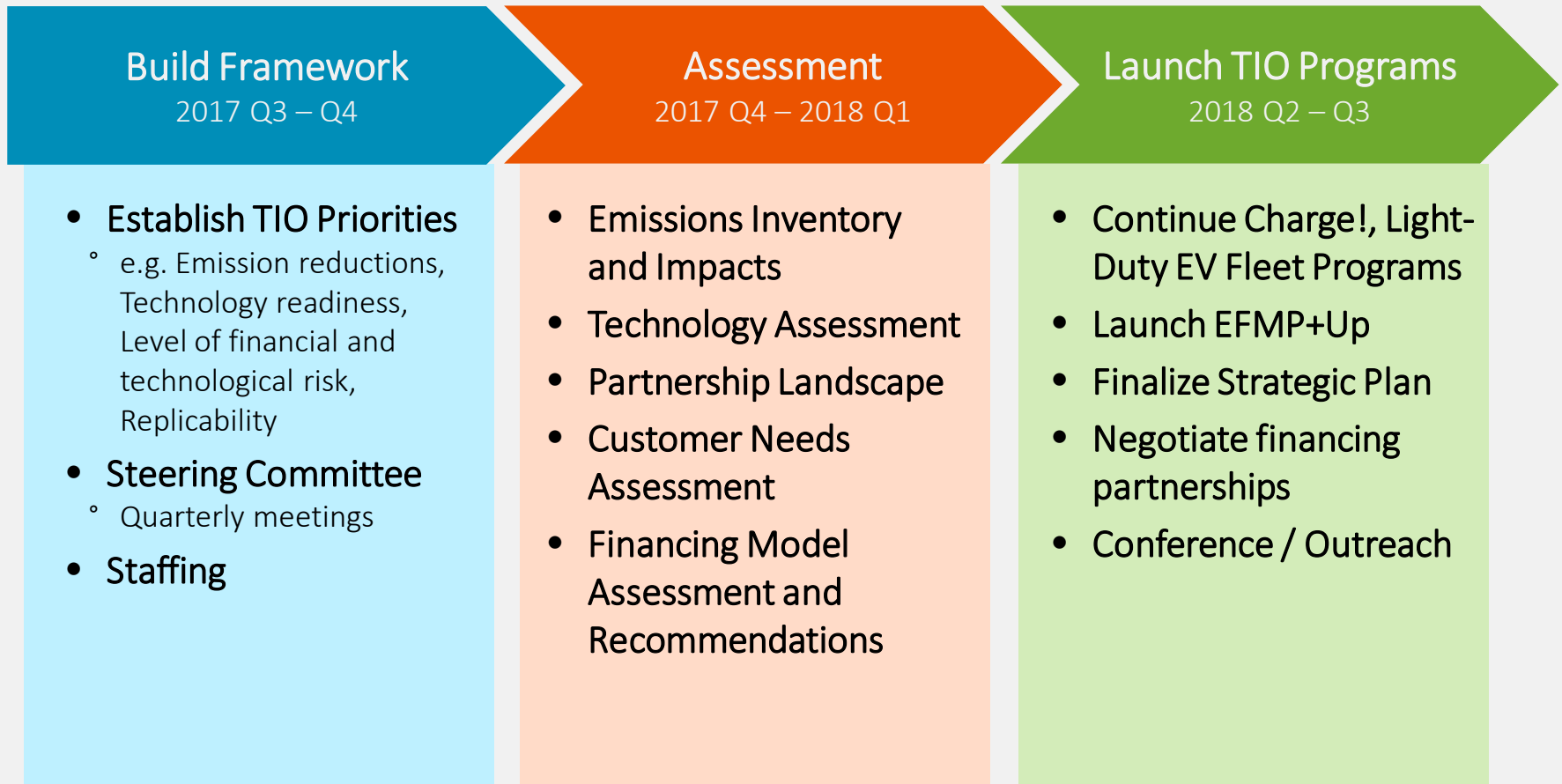
	Access to Public Customers	Access to Private Customers	Ease of Implementation
1) Air District Revolving Loan Program	Medium	Medium/Low	Low
2) Air District Credit Enhancement	Low	Medium	Medium
3) Co-funding or Partnering with an existing RLF and/or Credit Enhancement Program	High	Medium/High	Medium/High
4) Finance program information clearinghouse and technical assistance	High	Medium	High

# Mobile Emissions Reduction Programs



- Transition of electric vehicle programs from Strategic Incentives Division
  - Charge! Program for EV infrastructure (accepting applications)
  - Light-duty EV fleet program (opening early 2018)
- Submitted plan for up to \$10M to ARB for the Enhanced Fleet Modernization Program Plus Up (EFMP+Up)
  - Incentives for low income consumers to assist in the purchase of EVs or transportation support
  - Board adopted resolution to accept funding on November 1, 2017

# Next Steps





**EXECUTIVE COMMITTEE MEETING**  
**EMISSIONS INVENTORY SYSTEM**  
**INFORMATIONAL PRESENTATION**

Blair Adams, Manager  
Production System Office

December 14, 2017

# AGENDA

My Air Online Program

Permitting and Compliance System

Complex Facility Portal

Procurement Process

Request for Quotation Scores

Questions

# MY AIR ONLINE PROGRAM

Public Websites

Data Management and Analytics

Permitting and Compliance System



# PERMITTING AND COMPLIANCE SYSTEM CURRENT FEATURES

Permit  
Applications

Annual  
Updates

Permit  
Renewals

Field  
Inspections

Complaints

Wood  
Smoke

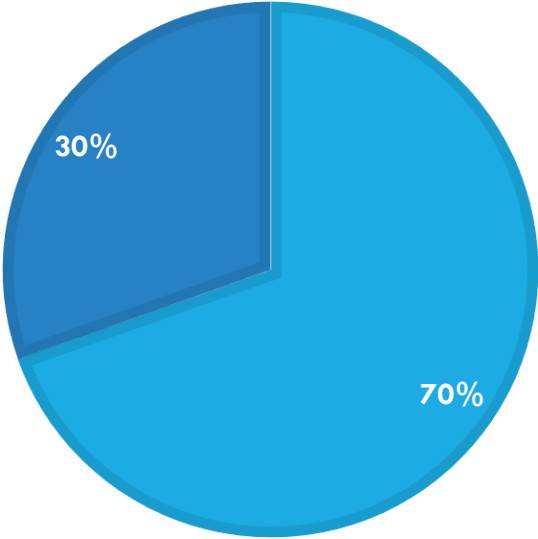
Asbestos

# COMPLEX FACILITY PORTAL

Provide Support for Remaining

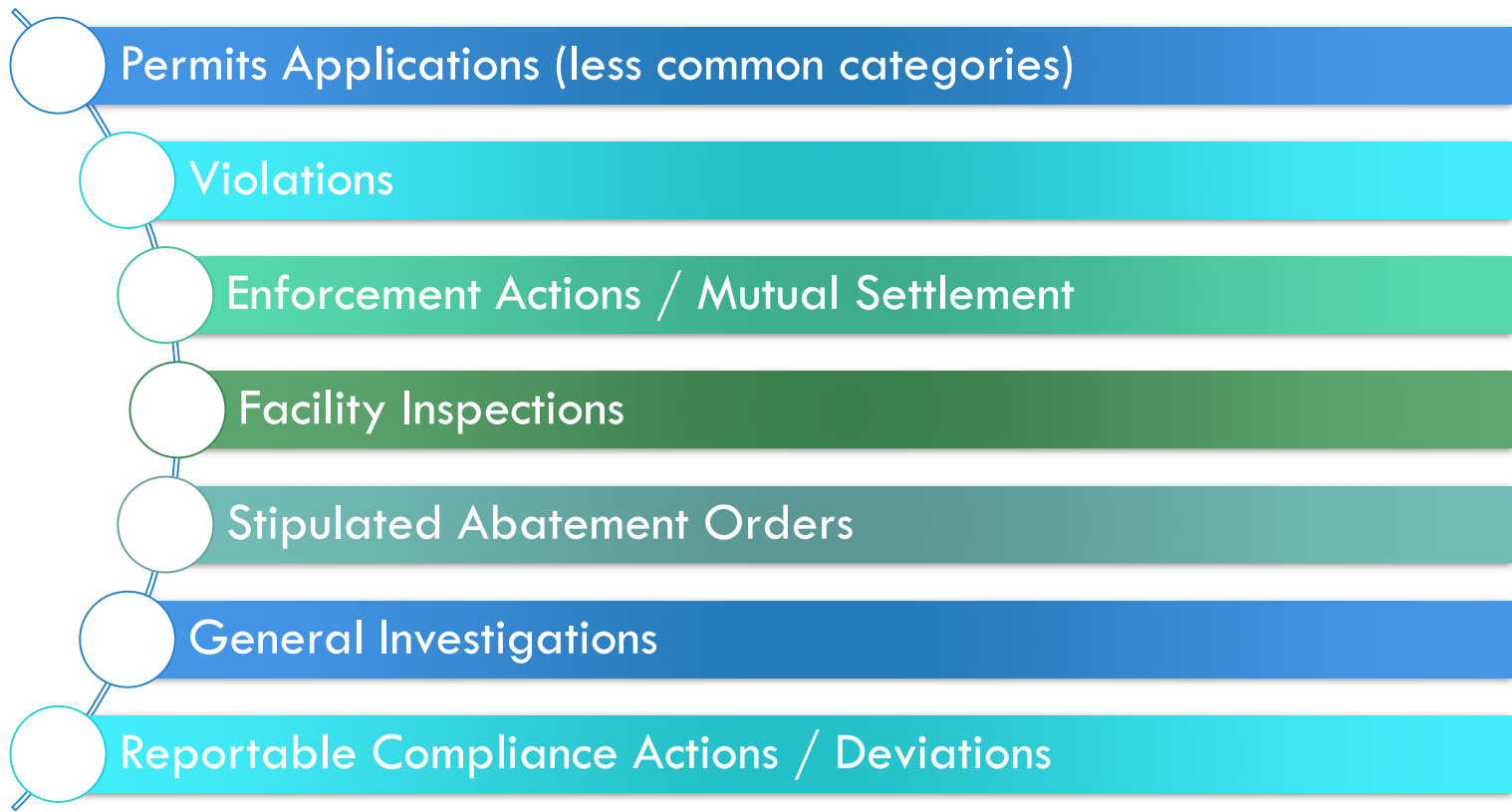
# 30%

of Facilities

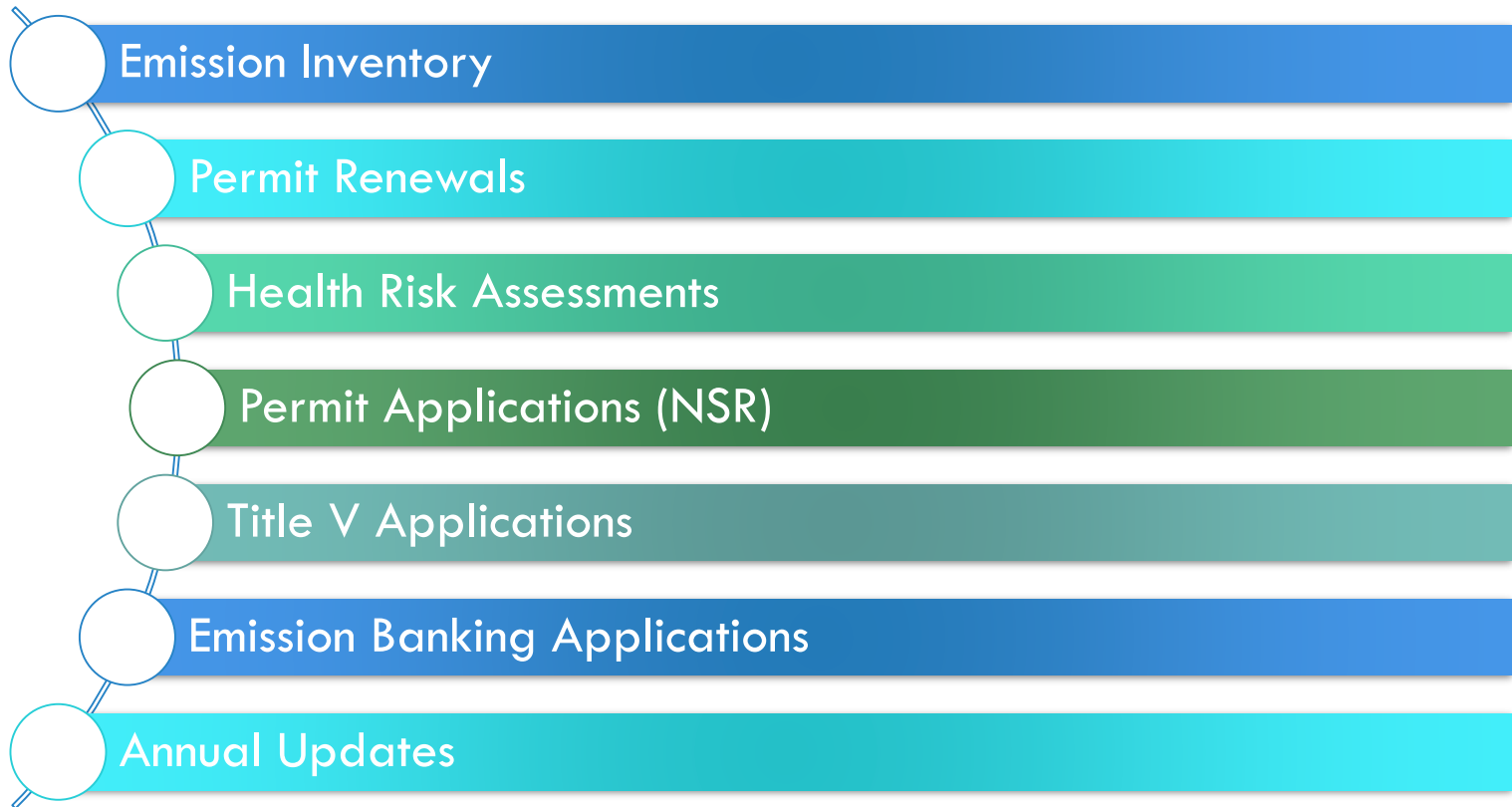


■ Cutover ■ Remaining Facilities

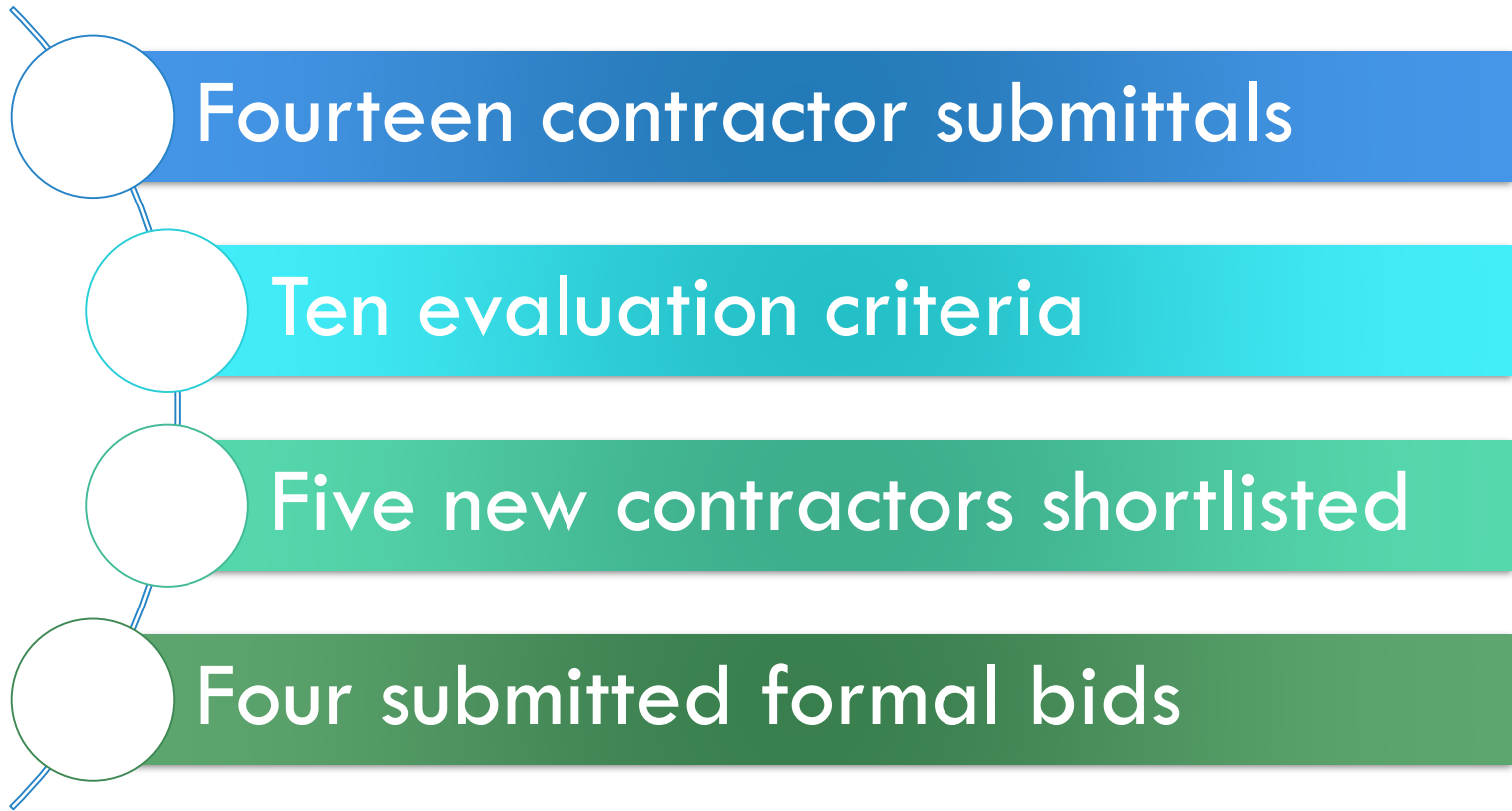
# SMALL FACILITIES PORTAL ROADMAP



# COMPLEX FACILITIES PORTAL ROADMAP



# REQUEST FOR QUALIFICATIONS PROCESS



# REQUEST FOR QUALIFICATIONS EVALUATION CRITERIA

Team  
Longevity

Team  
Experience

Team  
Availability

Enterprise  
Applications  
Experience

Software  
Process  
Experience

Web  
Technology  
Experience

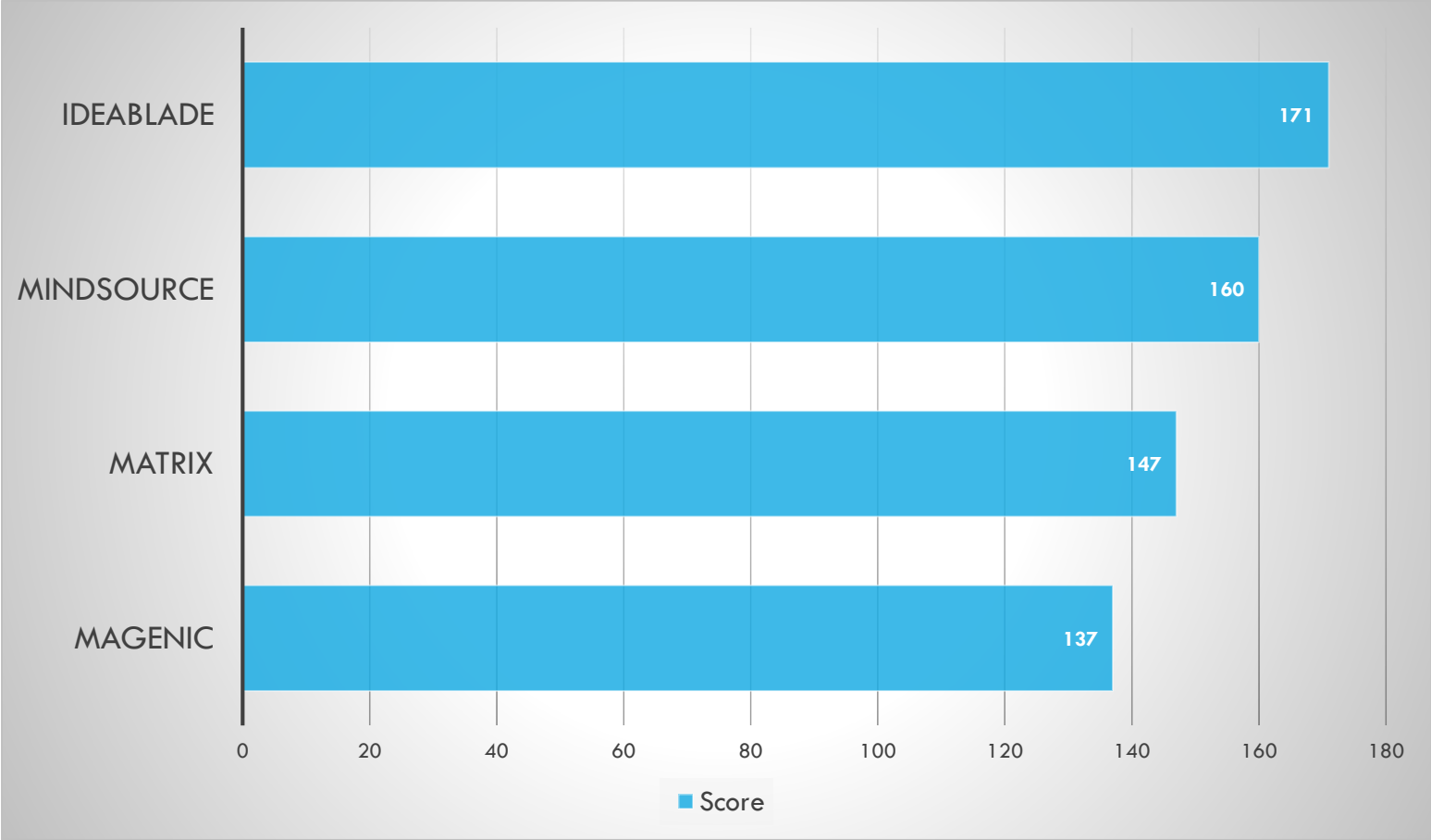
Microsoft  
Development  
Experience

Build  
Automation  
Experience

Government  
Experience

Automated  
Testing  
Experience

# REQUEST FOR QUOTATIONS RESULTS





# QUESTIONS





# Staffing Request Executive Committee

December 14, 2017



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

Rex Sanders  
Chief Administrative Officer

# BACKGROUND

- New and Expanded Programs
- New Funding Sources
- Staffing Discussions & Request

# NEW AND EXPANDED PROGRAMS

- Regulation 11, Rule 18
- Assembly Bill 617
- Assembly Bill 134
- Various other new sources of grant funds

# COST RECOVERY

- Twenty two new full time staff positions recommended
- Nine of the positions covered by new funding
- Thirteen of the positions covered by state funding and General Fund revenue

# STAFFING REQUEST

Program	Revenue Source	# of New Positions	Location of New Staff
AB 134	New Grant Funding	5	Strategic Incentives Division
AB 134	New Grant Funding	4	Technology Implementation Office
Rule 11-18	General Fund & Fees	5	Engineering Division
AB 617	New State Funding, General Fund & Fees	3	Community Protection Office
AB 617	New State Funding, General Fund & Fees	5	Meteorology & Measurements Division

# RECOMMENDATION

## Recommend the Board of Directors:

1. Amend the Fiscal Year Ending 2018 budget to authorize the creation of 22 additional full time positions