



**Introduces**

**Sustainability Management Solutions by**

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# Our Mission, Vision & Goal

- ▶ **Enable compliance with new CA regulations.**
  - ❑ AB 341 and SB 1383 require the state to achieve 50% reduction by 2020 and 75% reduction by 2025.
  - ❑ Some cities are more ambitious and wants to reach zero by 2022 making it part of their plan.
- ▶ **Provide waste receptacle monitoring with management reporting via remote sensors and software solution.**
- ▶ **Accumulated knowledge over time to improve and stabilize cost of services in the future.**

# The Big Problems

- ▶ We are running out of landfill
- ▶ We are polluting the planet
- ▶ We are adversely affecting future generations
- ▶ Cities must comply with new regulations
  - AB 341 and SB 1383 require the state to achieve:
    - 50% reduction by 2020
    - 75% reduction by 2025

# The Local Problems

- ▶ **Students cross contaminate the compost or recycling bins**
- ▶ **Proper signage through out entire District**
- ▶ **Teachers allow students to eat in classroom causing food scraps to be generated in class without proper disposal.**
- ▶ **Custodial staff emptying bins that are not full**
- ▶ **Increase in cost of processing of recycling and compost**

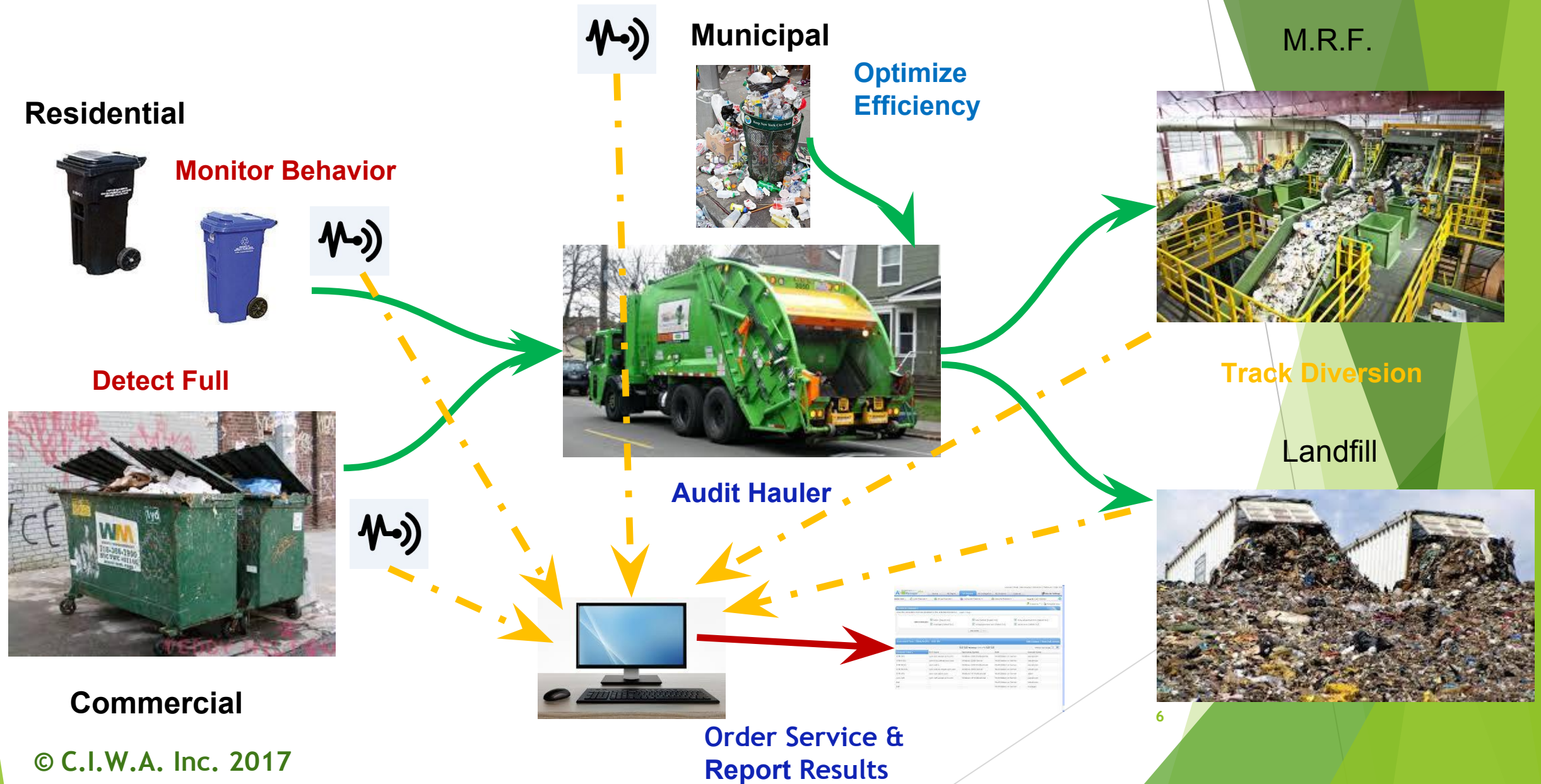
# The Solution: **S.M.S.**™

- ▶ Install monitoring devices on carts

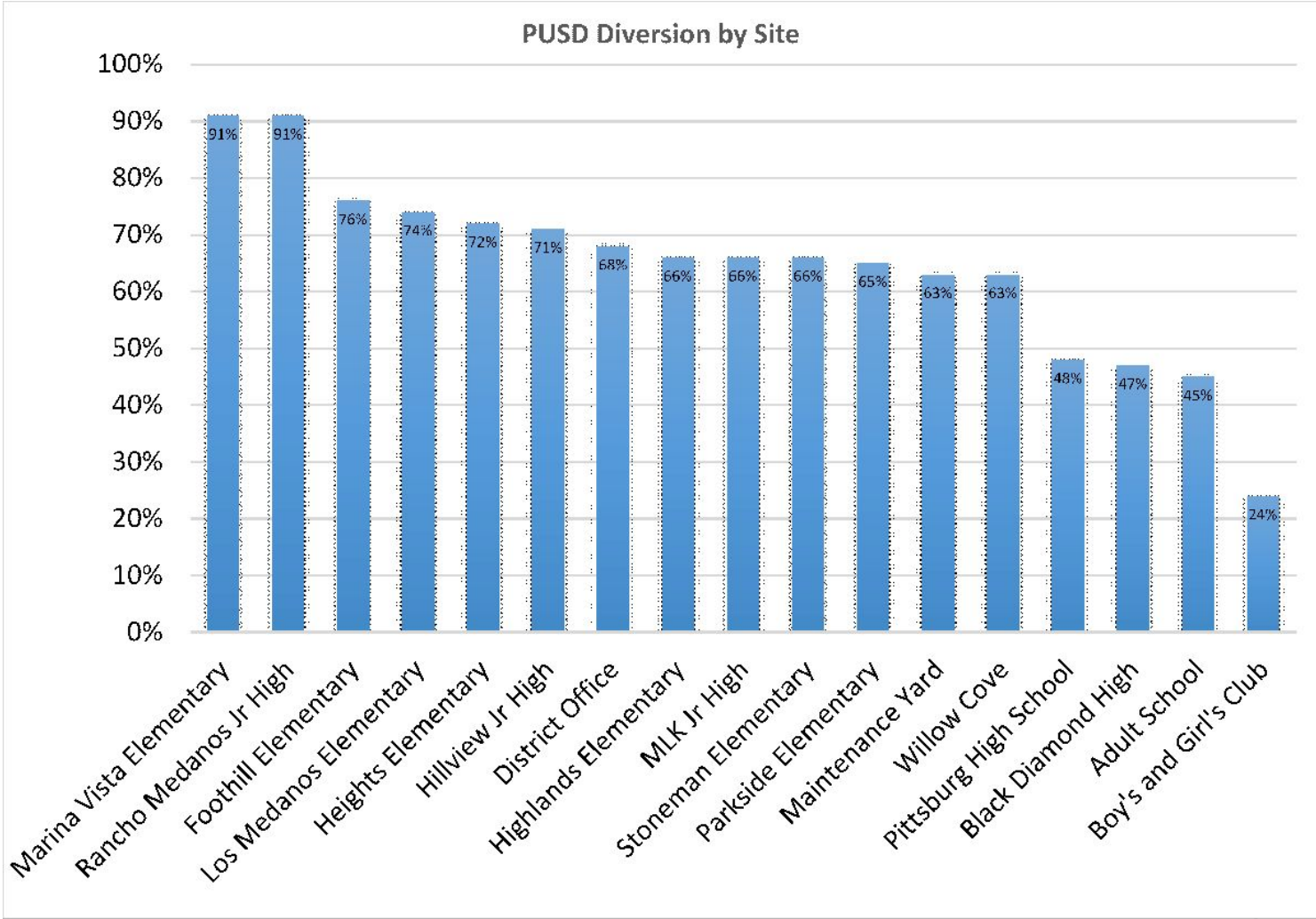
## CIWA provides:

- ✓ Analytics and management reporting
- ✓ Exception reporting for school audits
- ✓ Recommend changes to school site for compliance where needed
- ✓ Real-time monitoring via website & mobile app

# Sustainability Management System (SMS)



# Diversion by School Site



# Cost Savings due to SMS System

- ▶ 2015-2016 Annual budget \$257,973

Implementation of SMS System District Wide  
Summer 2016

- ▶ 2016-2017 Annual budget \$171,544  
(33.5%) cost reduction.



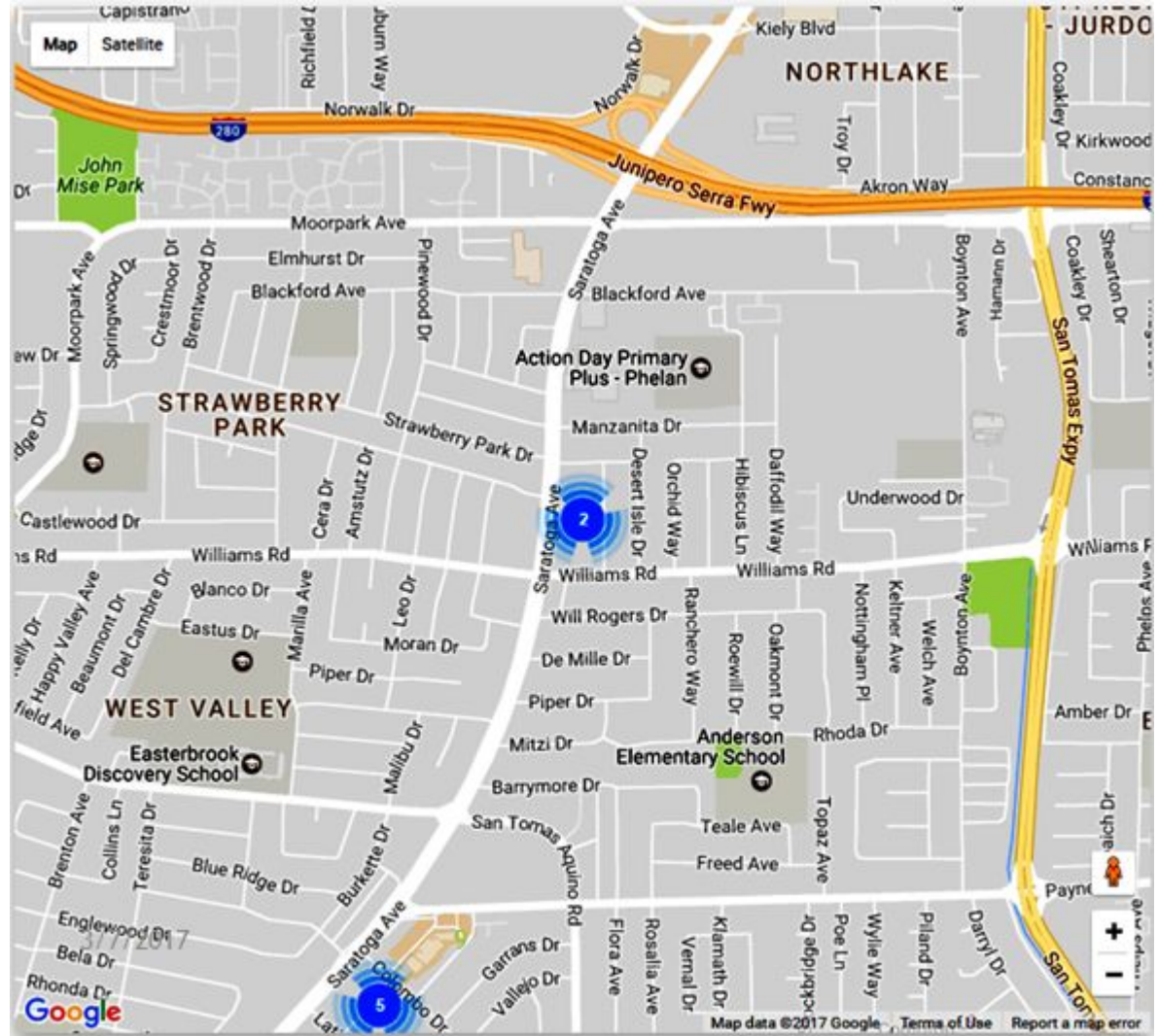
# S.M.S™ Provides...

- ▶ District monitoring of their waste/recycling **volumes** and **diversion percentages** are critical to meet state requirements of new regulations to avoid fines.
- ▶ **Data analytics** to improve waste/recycling services providers reports, better education tool, and monitoring the plan success.
- ▶ **Improved customer behavior** in recycling and waste removal by monitoring carts and educating students.
- ▶ **Reduced** waste and pollution today and **save** tomorrow.

# Underlying Technology

- ▶ **Sonar-based technology with Wifi, Cellular, GPS, tilt, cameras, heat (depending on brand and cost)**
- ▶ **Web-based portal and data repository of current status, exceptions, and trends over time**
- ▶ **More IOT patent pending technology to manage installations**

**Admin Account:** Access to all user accounts, about to create new account, all sites and carts, GPS locations active. Same capabilities, but more expansive and comprehensive.



# Custodial Waste Management Flow Chart



**Service volume:** \_\_\_\_\_  
**Service day(s):** \_\_\_\_\_

No food still in plastic wrap  
No black liners allowed  
10% wrong stuff allowed



**Service volume:** \_\_\_\_\_  
**Service day(s):** \_\_\_\_\_

Break down cardboard boxes  
No black liners allowed  
10% wrong stuff allowed



**Service volume:** \_\_\_\_\_  
**Service day(s):** \_\_\_\_\_

When illegal dumping is a problem, keep this dumpster unlocked and lock recycle and compost.



If service is missed, especially compost, call immediately for special pick up by CIWA Inc.