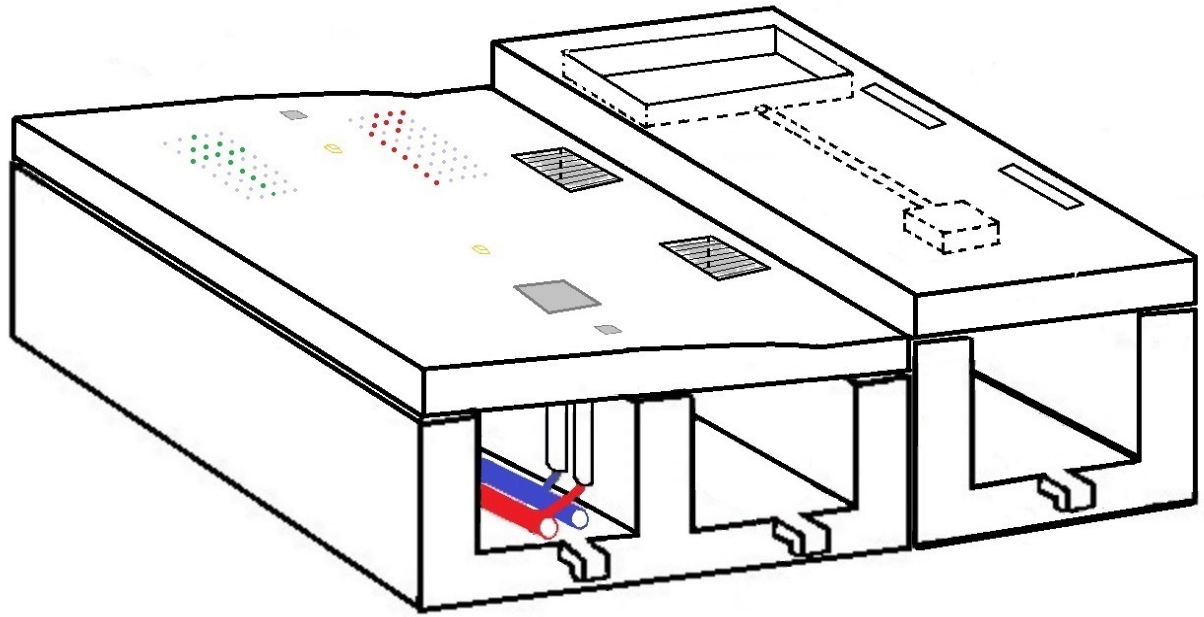
# SMART MODULAR STREET AND SIDEWALK

MODUSTREEET



# Issues → Opportunities

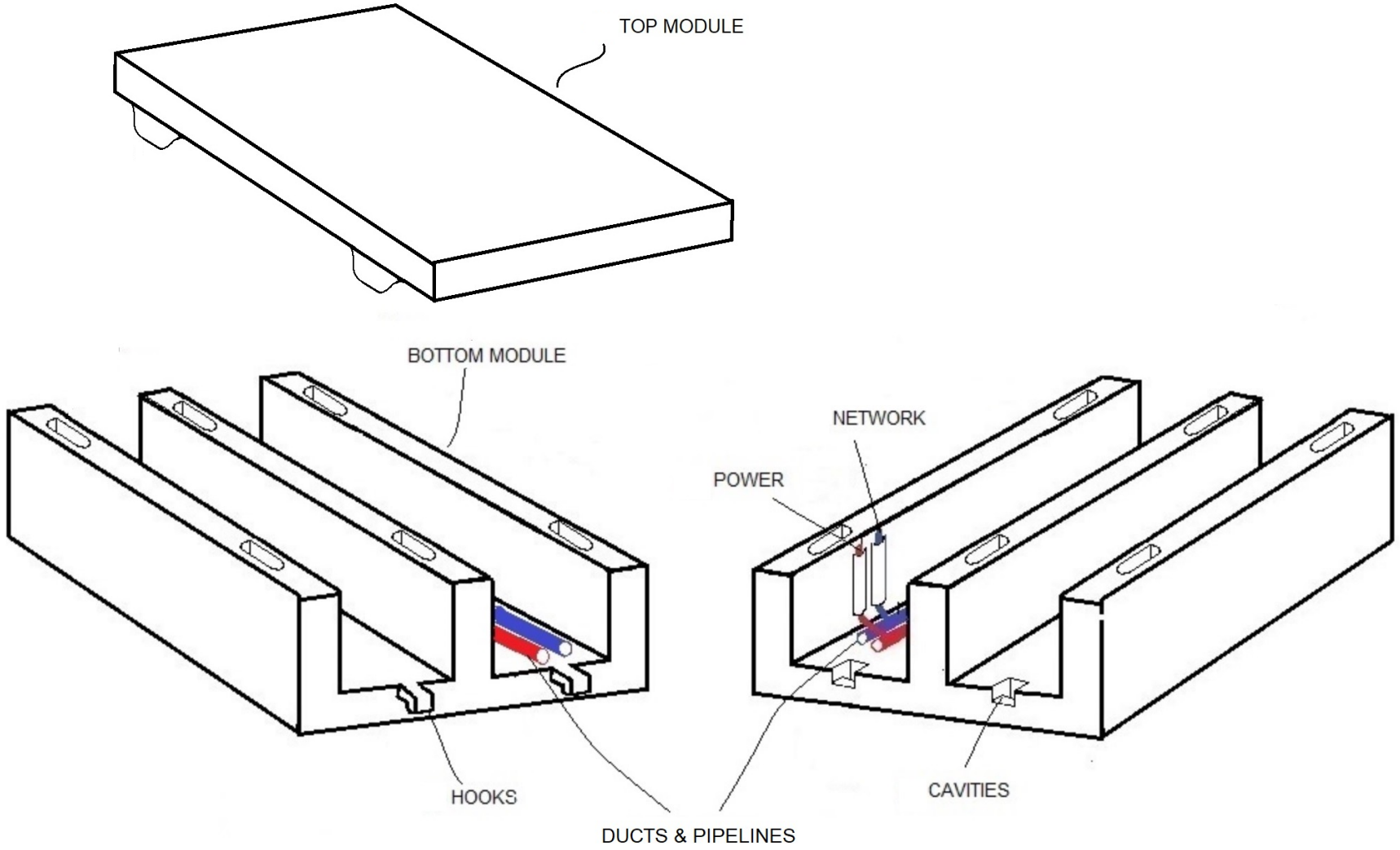
- Broken Underground Utilities
- Accidents
- Traffic Jams
- Floods
- Maintenance
- Obsolescence
- Disposable
- Weather Inclemency

- Easy Repairing Underground Utilities
- Control Accidents
- Control Traffic Jams
- Control Floods
- Easy Maintenance
- Easy Upgrade
- Sustainability
- Safety & Comfort
- Marketing

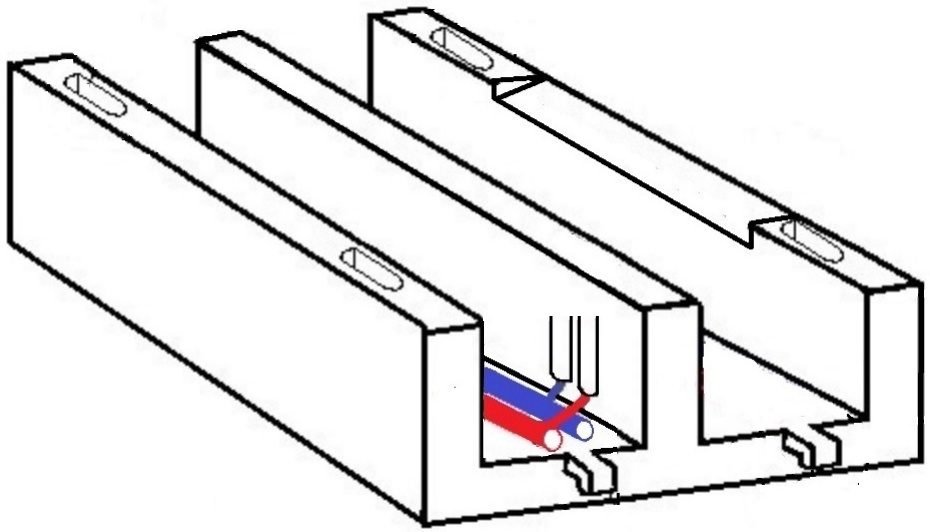
# Modular

- Easy Maintenance
- Easy Repair of Underground Utilities
- Easy Upgrade

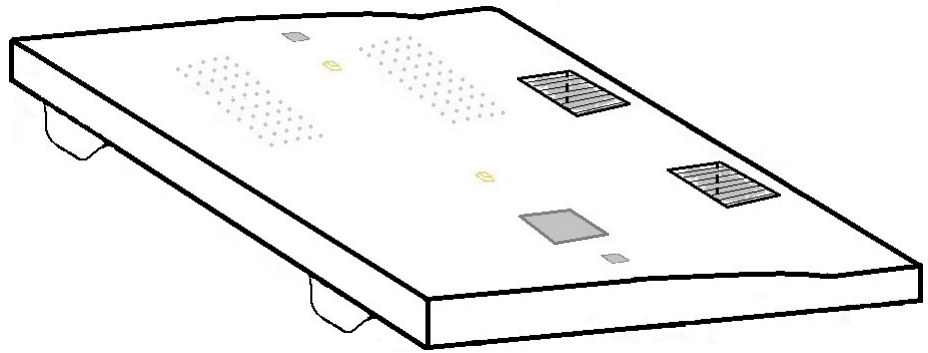
# Modular


TOP MODULE
BOTTOM MODULE
NETWORK
POWER
HOOKS
CAVITIES
DUCTS & PIPELINES

# Street – Bottom Module



# Street – Top Module



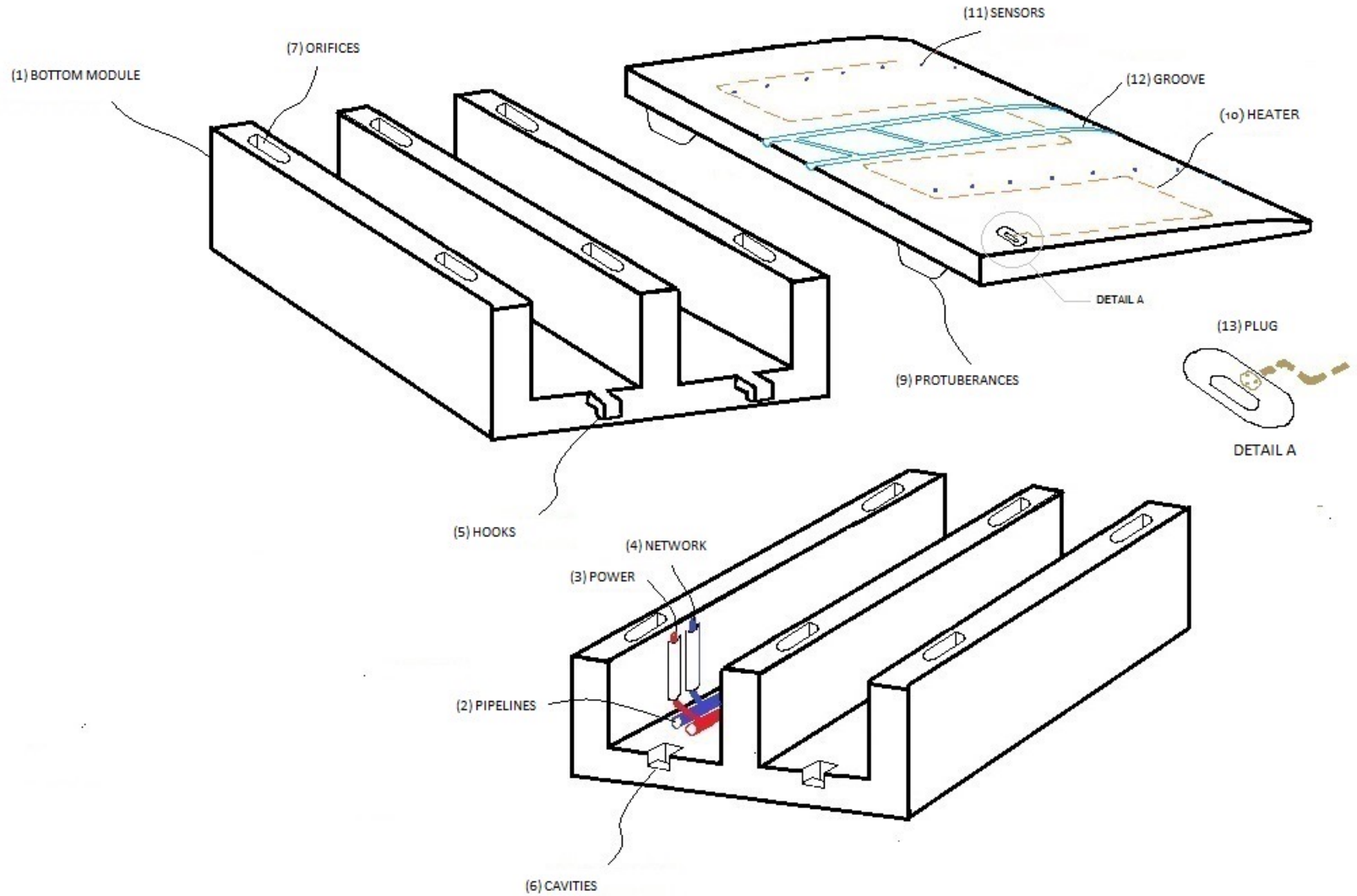
# Smart

1. **Sensors** Collect Information from the Environment and Combine it with Information from the Internet
2. The Information is sent to a **Computer** Embedded in the Street or Sidewalk which makes Calculations based on Programing and/or AI
3. The results from calculations produces Outputs to Devices embedded in the Street and Sidewalk Modules to Perform **Tasks**

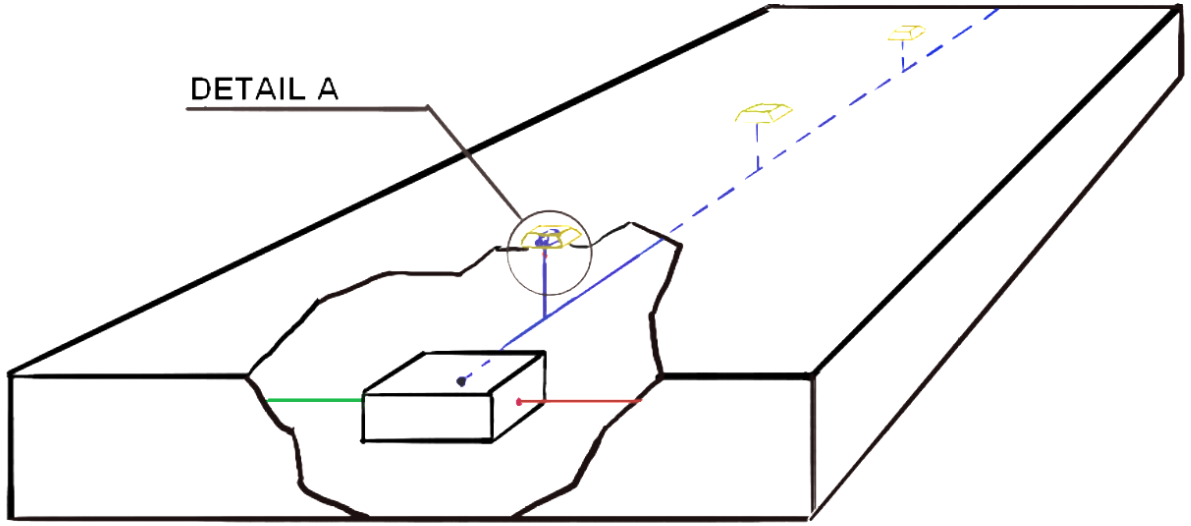
# Tasks

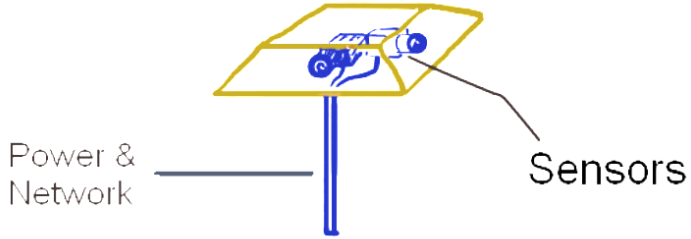
- Signaling
- Heater to Melt Snow or Ice
- Cool Air for Pleasant Walk
- Flood Control
- Traffic Stop or Rerouting
- Car Chargers
- Screens/Ads
- Irrigation

# Modular - Smart

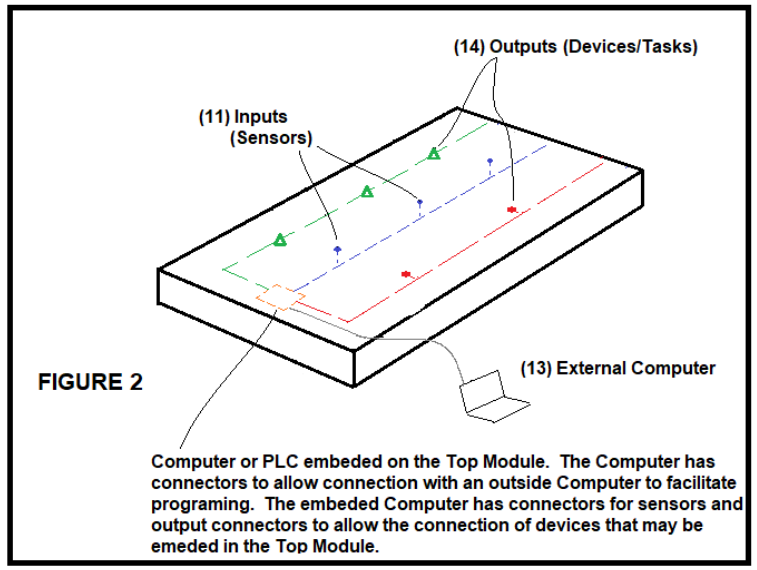


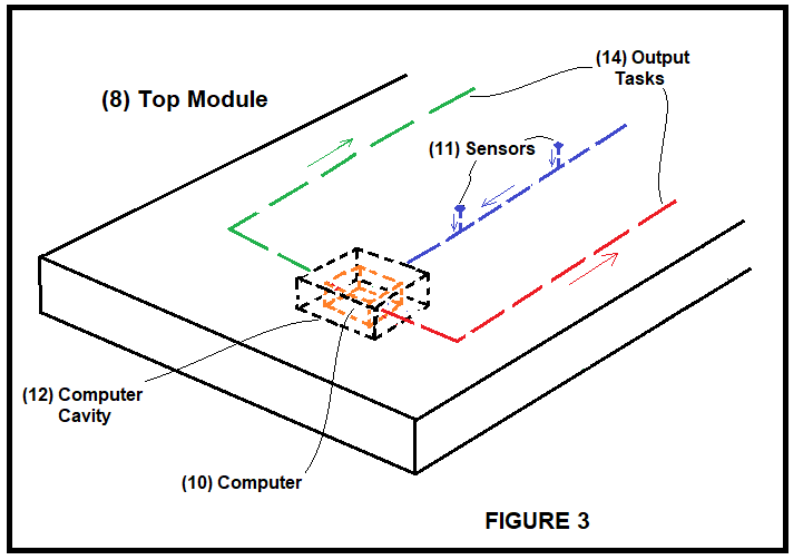
# Smart Street – How Does it Work?

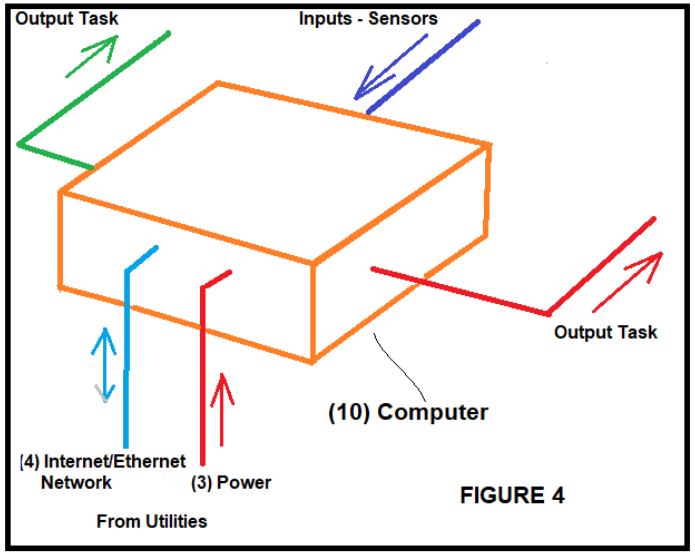


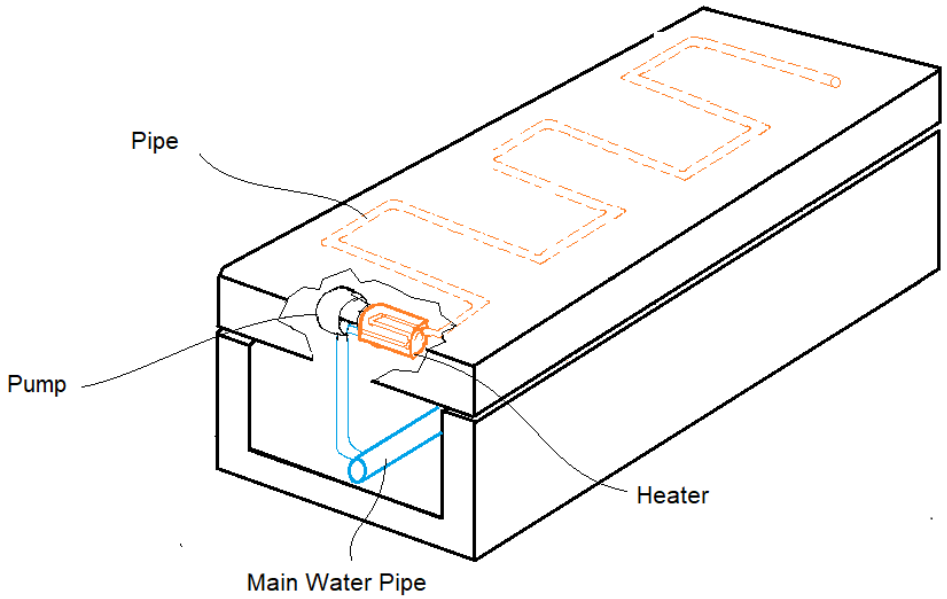
# Smart


(14) Outputs (Devices/Tasks)
(11) Inputs
(Sensors)
(13) External Computer
FIGURE 2
Computer or PLC embeded on the Top Module. The Computer has connectors to allow connection with an outside Computer to facilitate programing. The embeded Computer has connectors for sensors and output connectors to allow the connection of devices that may be emeded in the Top Module.


(8) Top Module
(14) Output
Tasks
(11) Sensors
(12) Computer
Cavity
(10) Computer
FIGURE 3


Output Task
Inputs - Sensors
Output Task
(10) Computer
(4) Internet/Ethernet
Network
(3) Power
From Utilities
FIGURE 4

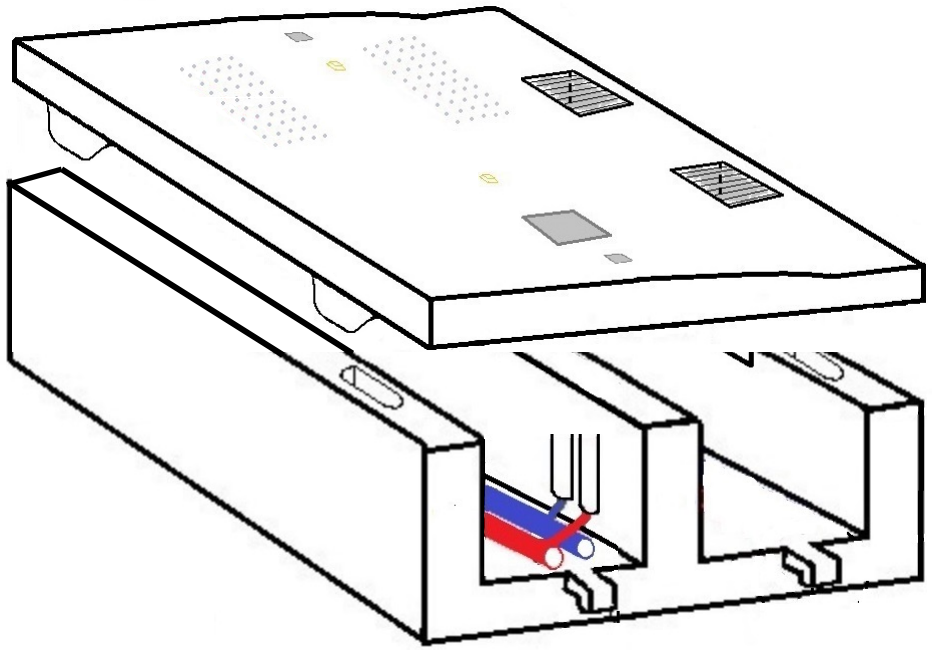
# Smart Heater



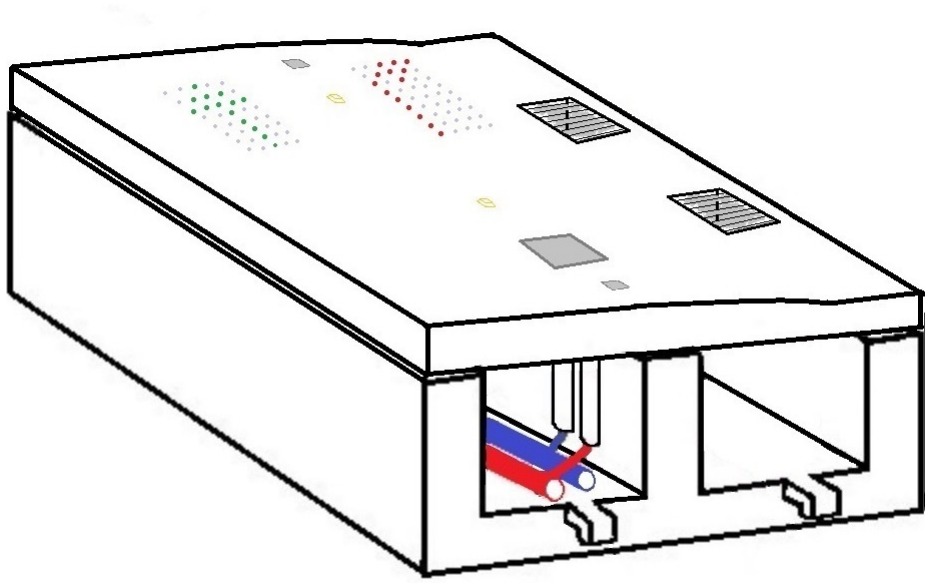

Water gets pumped from the Main Water Pipe by means of the Pump into the Heater where it is warmed and then goes into the Pipe through the Top Module to warm the surface of the Top Module.

FIGURE 10

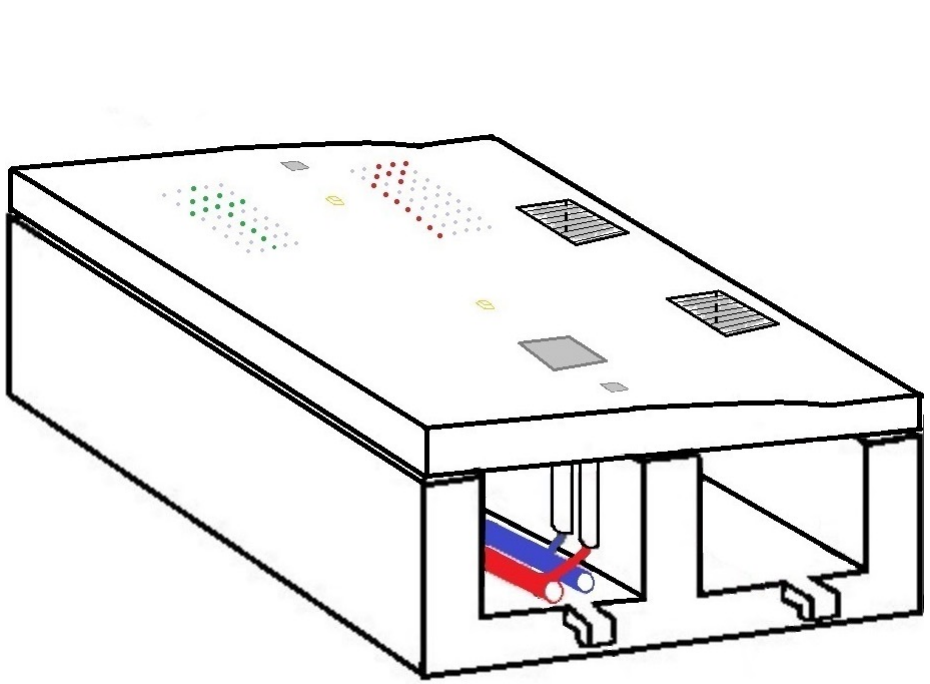
# Full Modular Street

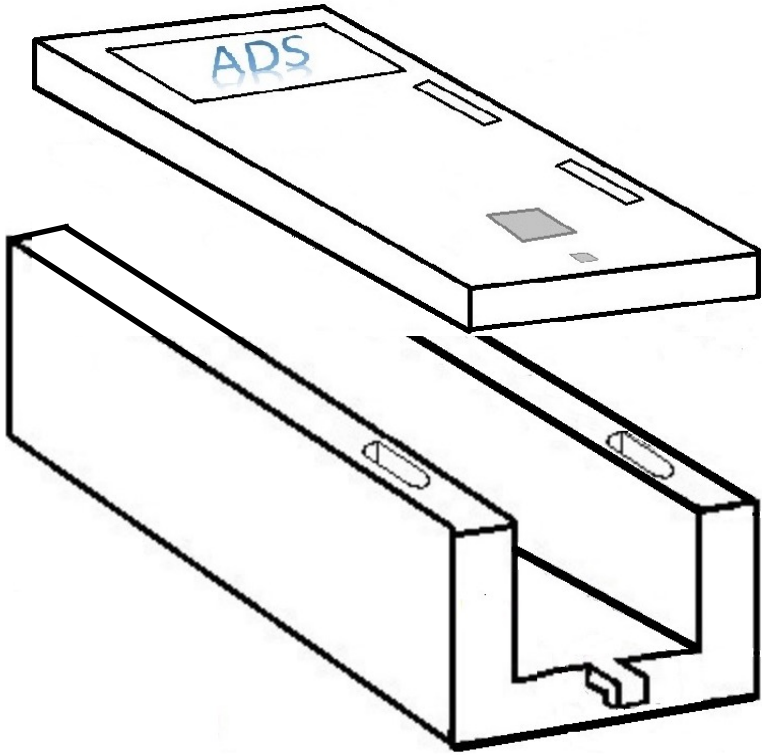


# Full Modular Street

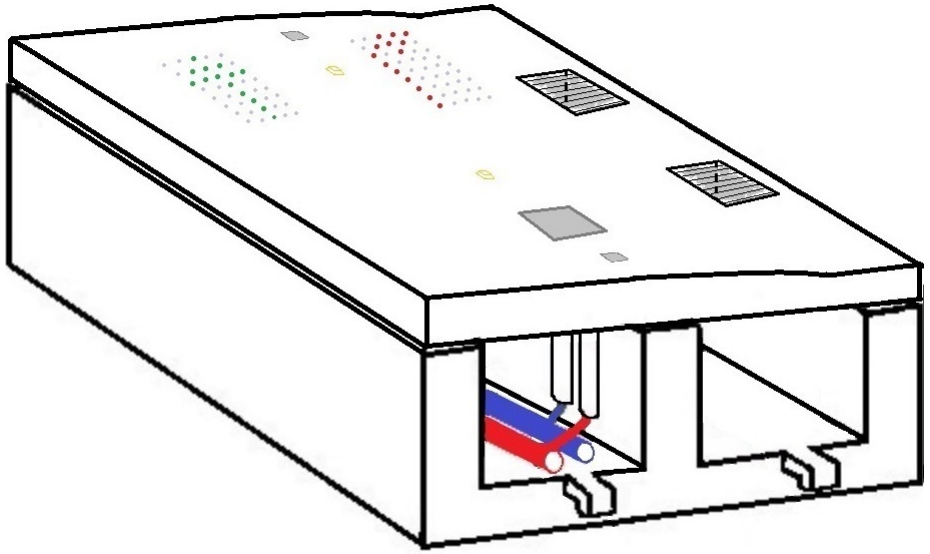


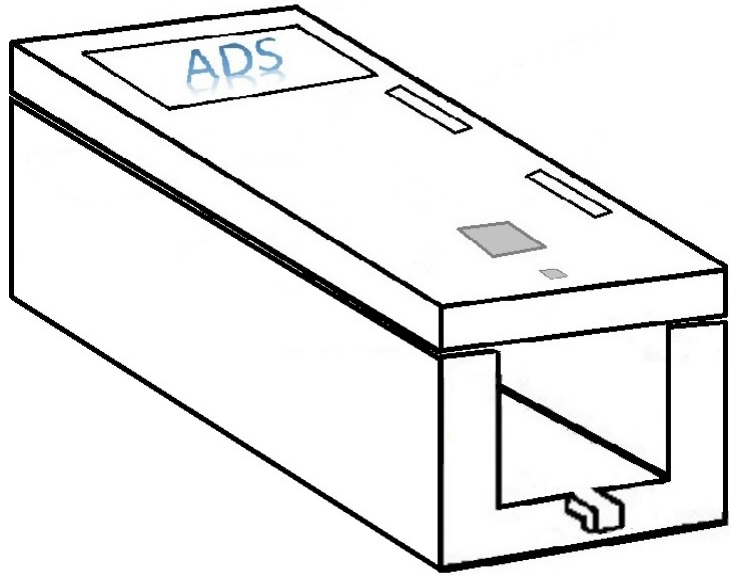
# Smart Modular Street and Sidewalk



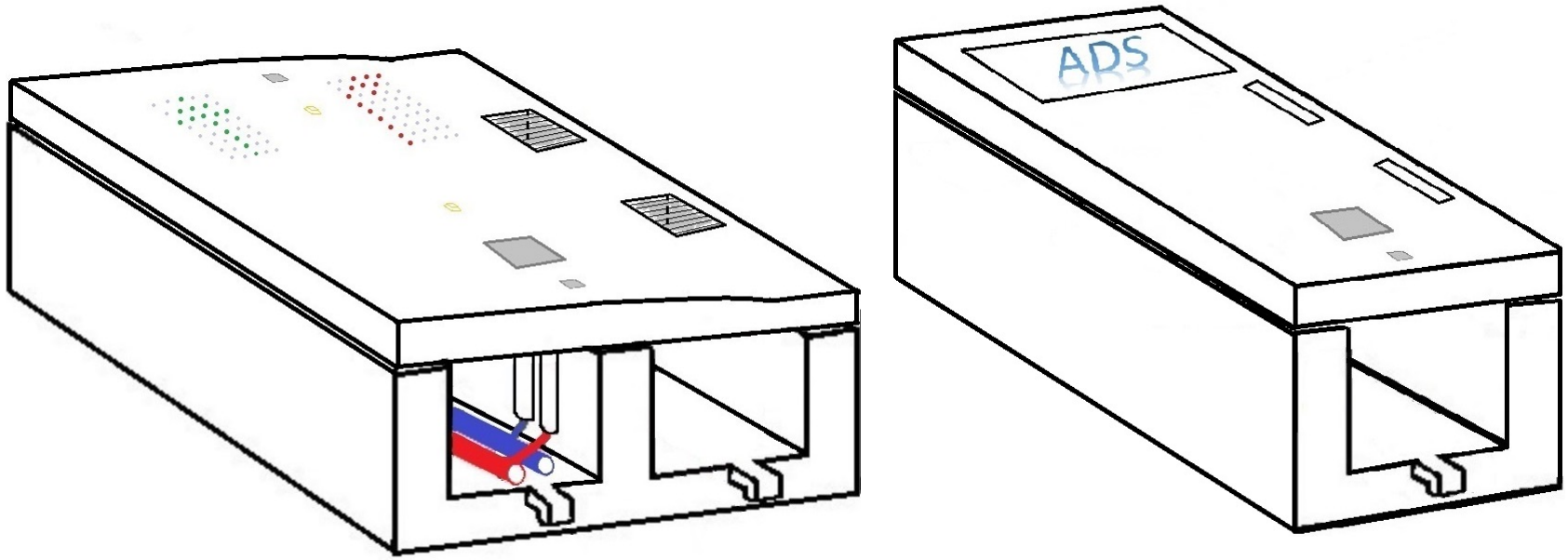


# Smart Modular Street and Sidewalk

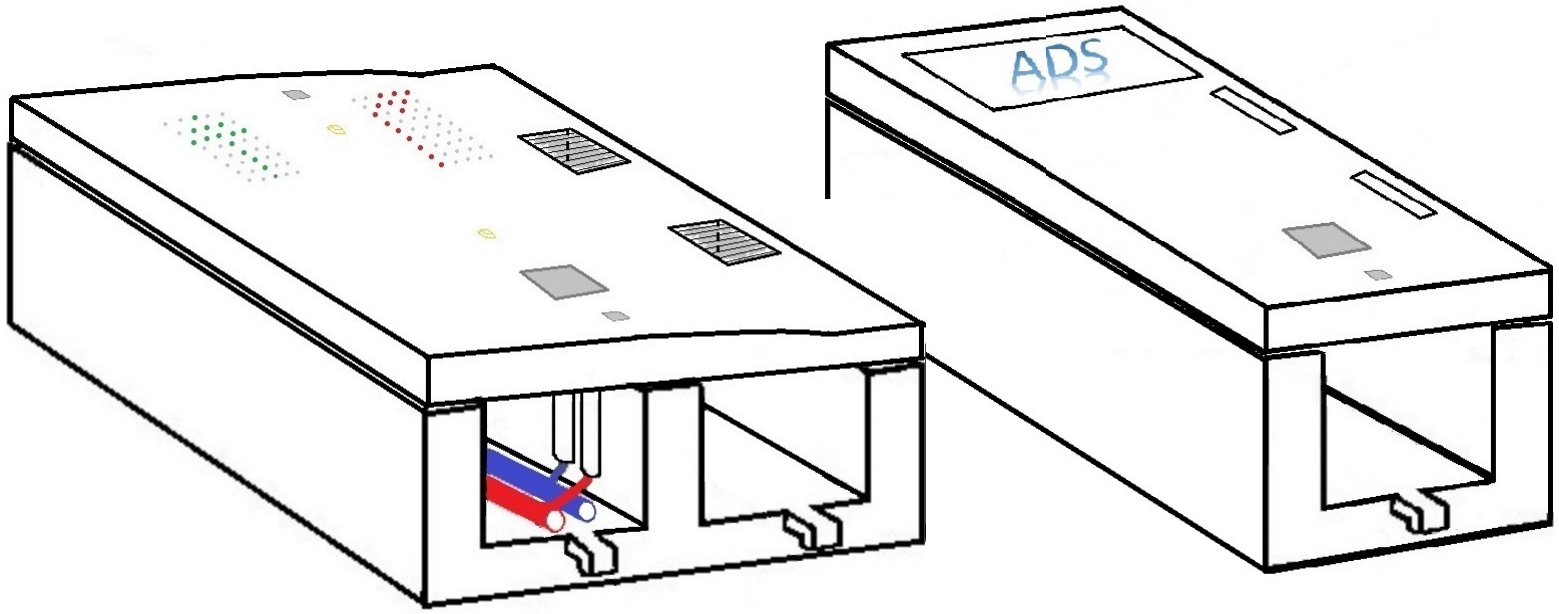




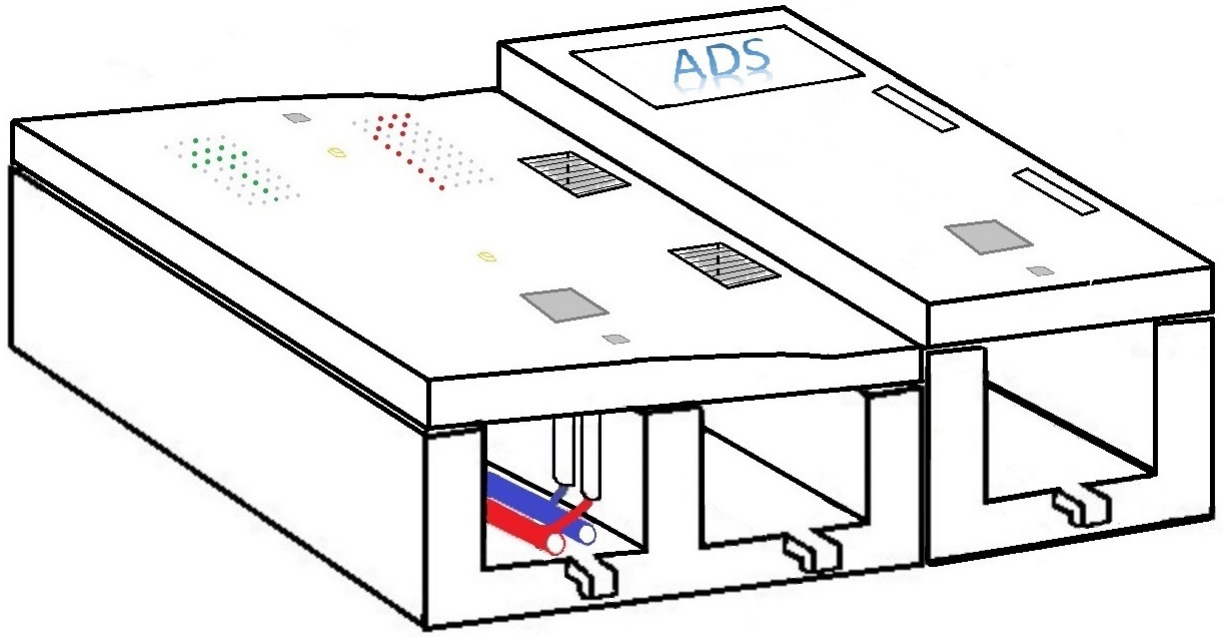
# Smart Modular Street and Sidewalk



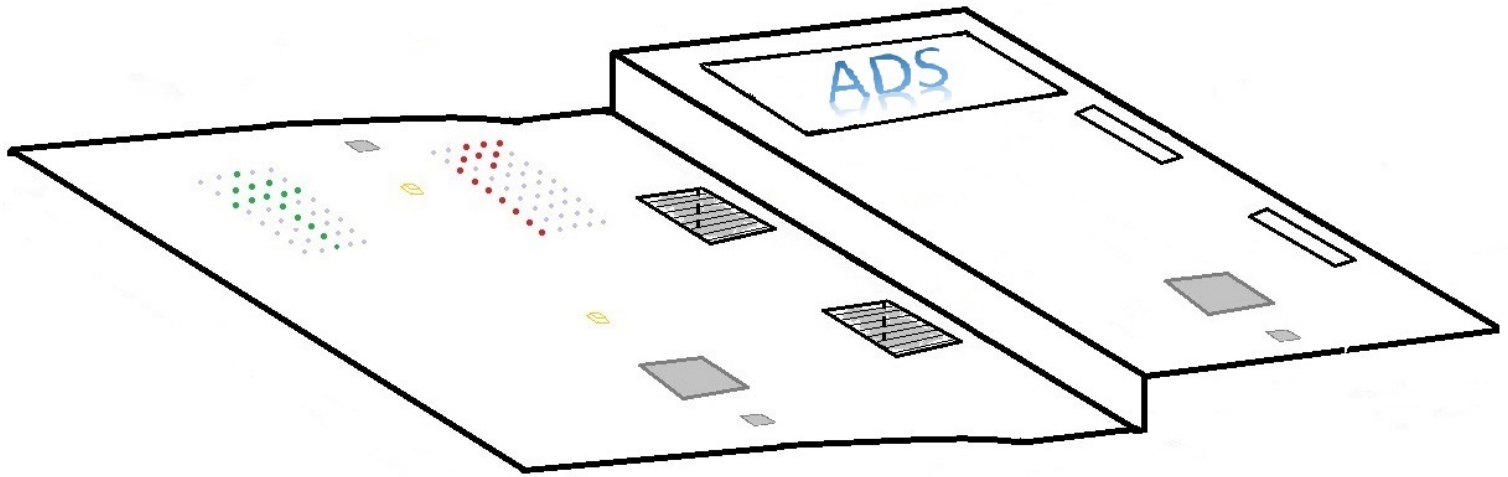
# Smart Modular Street and Sidewalk



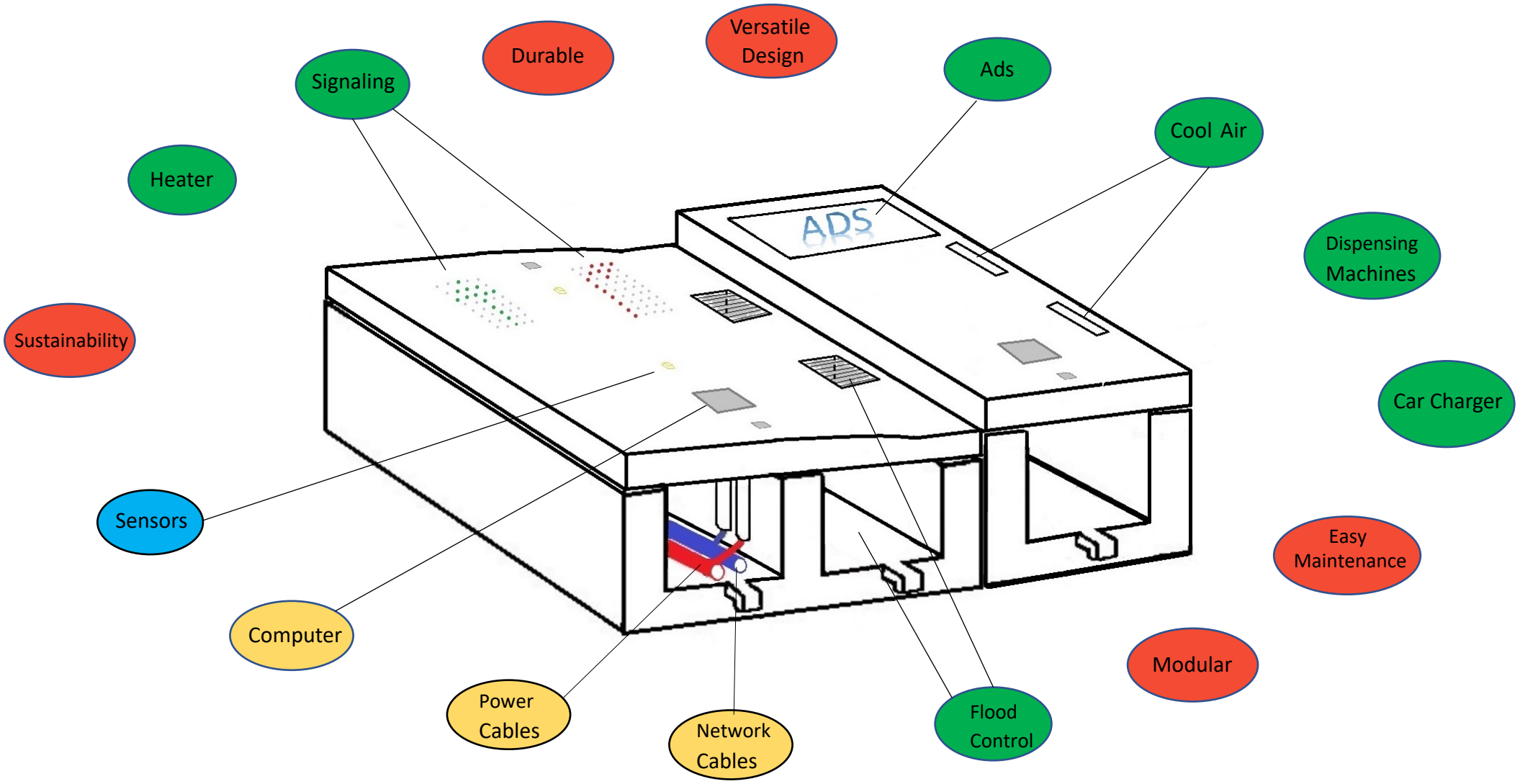
# Smart Modular Street and Sidewalk



# Smart Modular Street and Sidewalk : Benefits



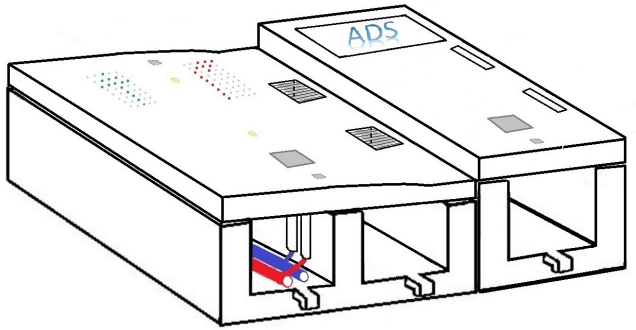
# Smart Modular Street – Tasks & Benefits



# Conclusion – Smart Modular Street

- Easy to Maintain and Upgrade
- Smart Versatile Design with Devices/Tasks
- Sustainability

# Smart Modular Street

## Thank You for Your Time

- Questions
- Feedback