



Boats, IoT, and Law Enforcement

Empowering marine law enforcement through Connected Boat® Technology

Daniel Harper, Founder & CEO of Siren Marine

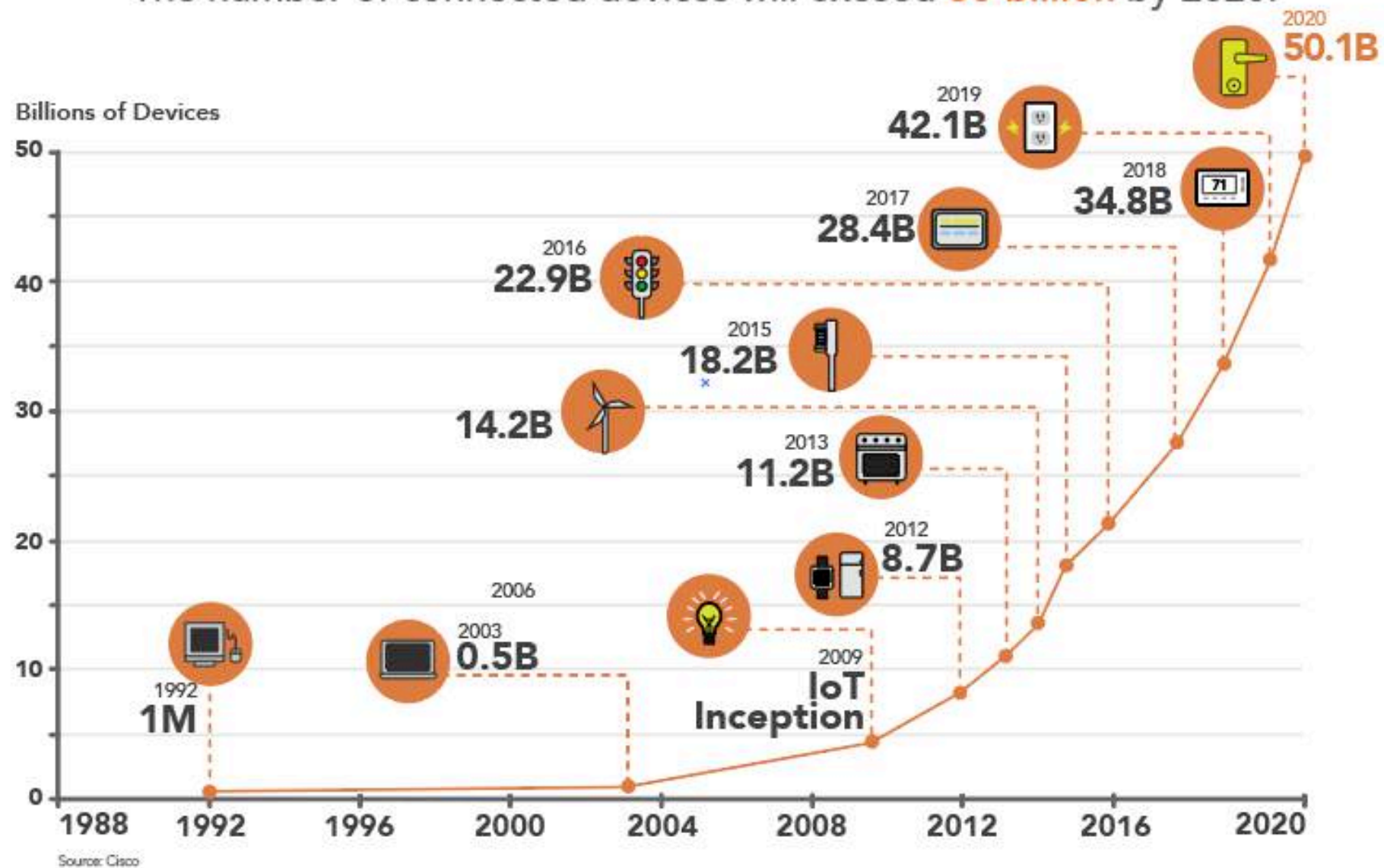
Jeffrey Poole, Vice President & Director of Business Development

IoT Timeline

The most significant technological advance since the cell phone.

Growth in the Internet of Things

The number of connected devices will exceed **50 billion** by 2020.



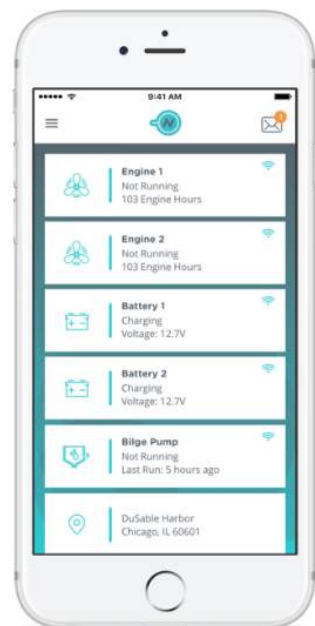
Connected Boating

Consumer/Recreational Solution:

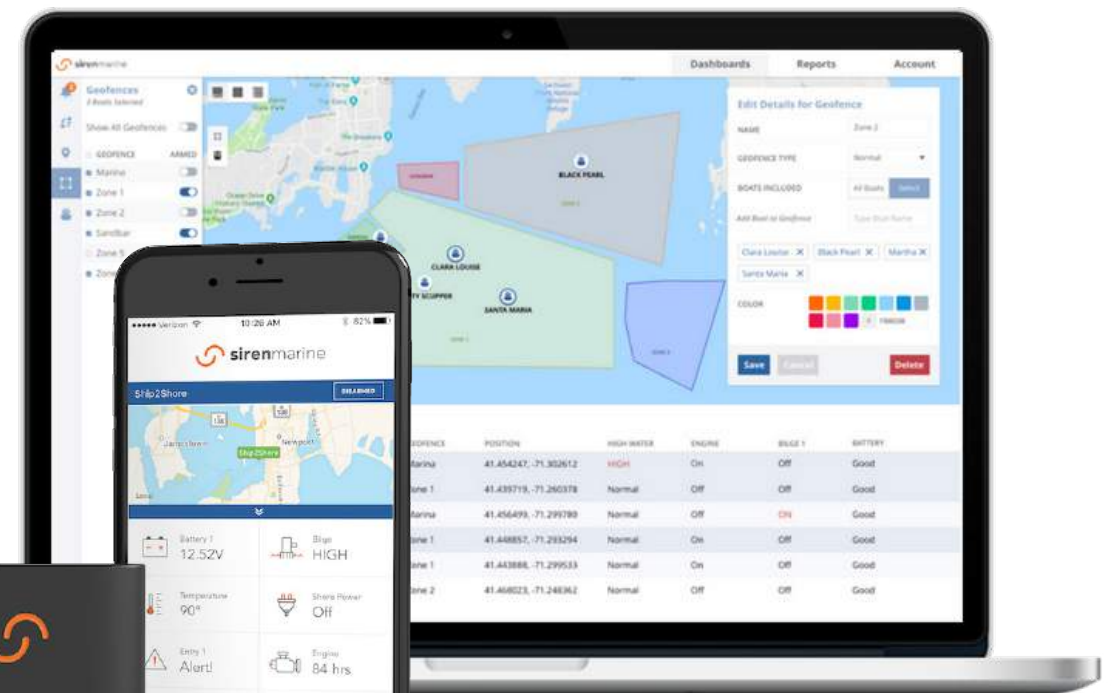
- Systems Monitoring (bilge, battery, shore power)
- Tracking (geofence, anchor drag, recovery)
- Security (focus on prevention, unauthorized entry, notifications)
- Insurance Breaks (3 standard discount agreements and growing)
- Peace of Mind (the ultimate value proposition)

Enterprise, Fleet, First Responder Solution:

- Systems Monitoring
- Asset Tracking
- Security
- Dispatching
- Data to Inform Their Business



**Remote Boat
Monitoring.**



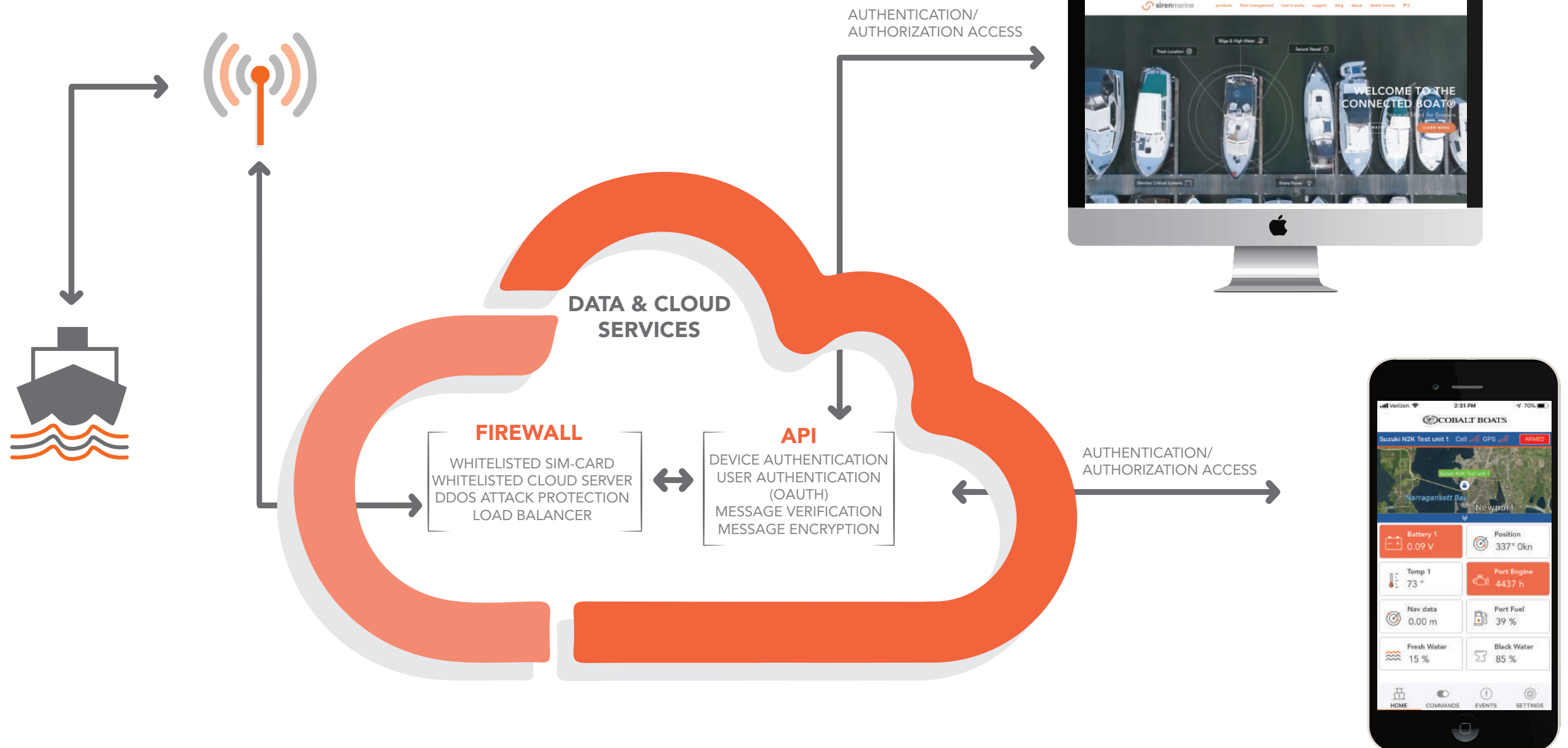
BOATFIX

ZigBoat™
Wireless, cloudless, uniqueness.

Data & Security

*A major consideration for any fleet management software is digital security.
Your fleet is only as secure as the security of the platform.*

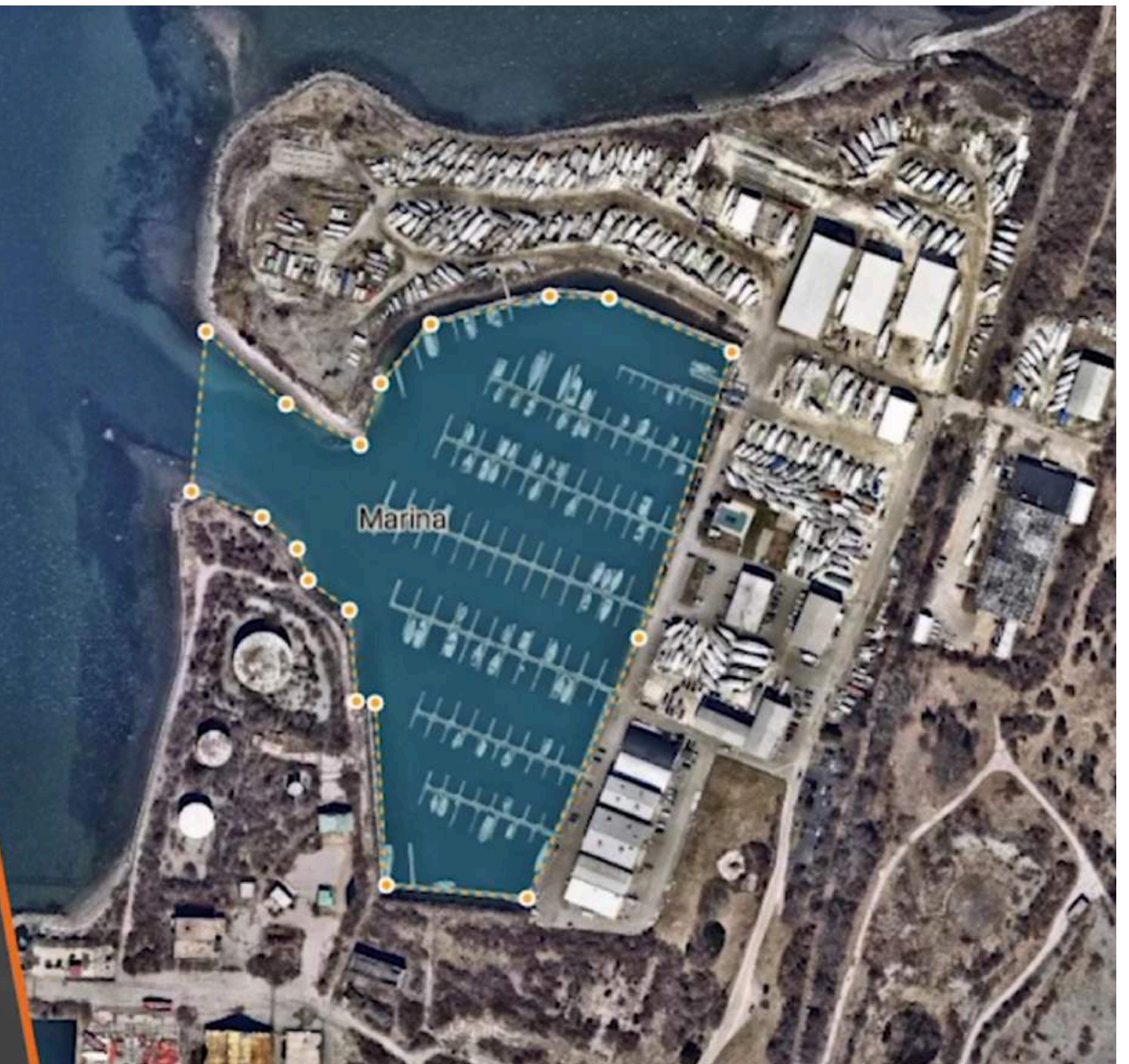
- Connected Boating provides real-time analytics to the entire maritime community
- Security & Peace of Mind for the boater
- Security through Data & Cloud Services
- Service providers (efficiency, preventative maintenance, new revenue streams)
- Insurance providers (risk mitigation)



Fleet Application

Connected boating has proven itself existing fleets the ability to lower maintainers costs and aggressively reduce fuel consumption by monitoring key engine data and times of use. The ability to know where your marine assets are and to deploy accordingly also creates a better operational picture and strategies in times of emergencies and natural disasters. Understanding fleet management via desktop and mobile applications allow for increased productivity and personnel time management in routine and crisis periods.

Users can also mark safe areas such as harbors and docks, and be notified when a boat is returning to port.



Power of Connectivity for Fleet Applications

- **Notifications and Alerts** - Multiple users can receive alerts via SMS text or email in addition to viewing in real time information on the dashboard.
- **GPS Breadcrumb Tracking** - View detailed history of each boat's GPS track, providing critical data around any event.
- **GeoFence Notification** - Create complex geofences with defined parameters for hazards and acceptable navigation points.
- **Control** - Commands can be sent to entire fleets or individual assets to engage critical systems.
- **Reporting** - Dive deep into vessel information and generate reports to maximize efficiencies in maintenance and fuel consumption.

- **User Management** -
A hierarchical user management system allows administrators to assign different permission levels to each user ensuring security and privacy.

Powerful geofencing technology allows managers to mark hazard areas and no-go zones, and enable instant alerts when a boat is in violation.

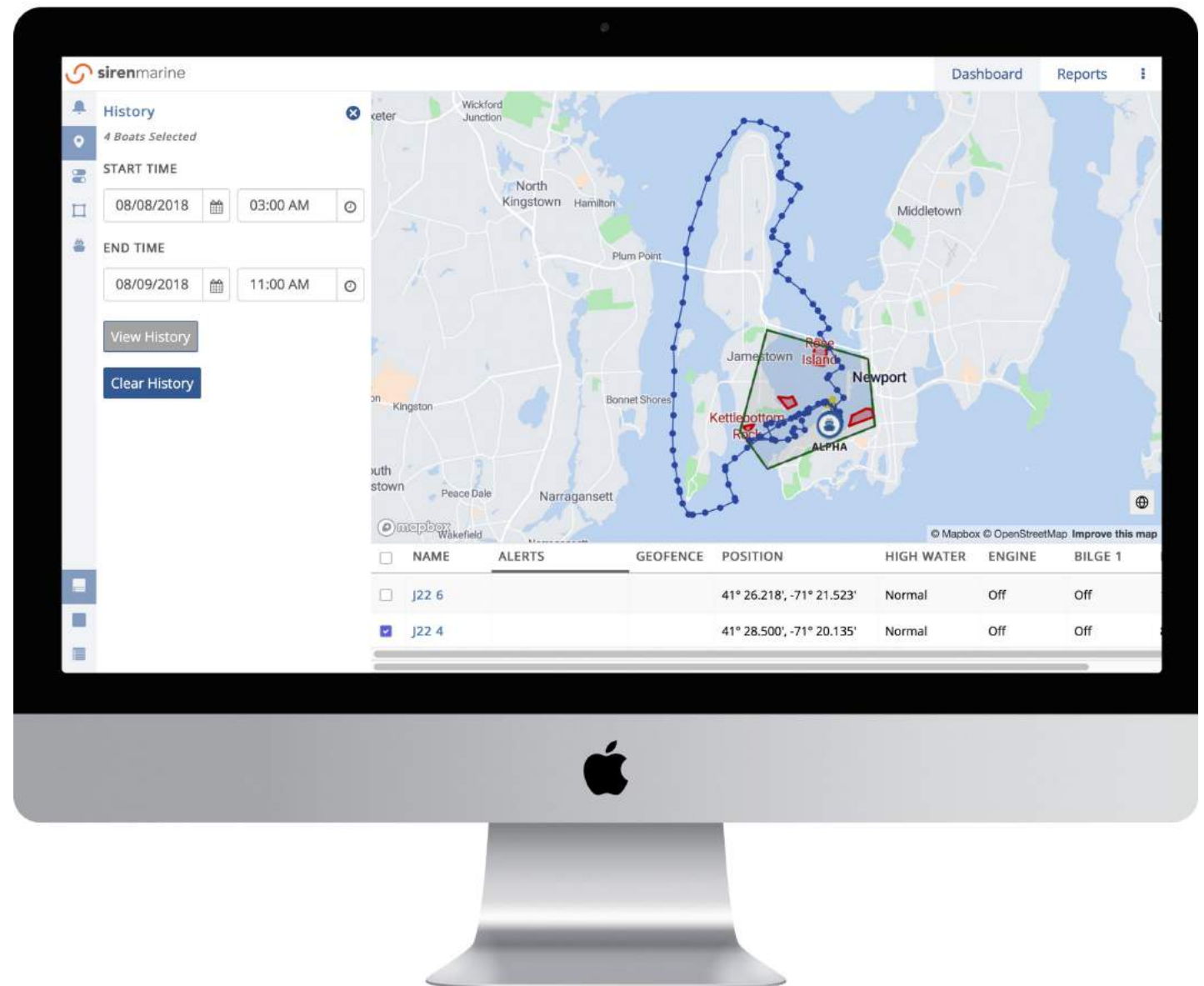


Fleet App Use Case

- Data was generated by a fleet of Siren Marine equipped boats.
- Data set contains 17 boats.
- Database queries were for a period of 30 days

GOALS

1. Find geographic “hot spots”
2. Times of the day for boat operation
3. Duration of boat operation
4. Average distance per hour /day / week
5. Geographic areas where we see the greatest number of alerts
6. Ranking the types of alerts over the whole population



Loss Prevention

Boat loss, theft, and damage happens everywhere.

The Connected Boat provides real-time data to actively prevent and combat security breaches.

- Yacht loss prevention while in tow or breaking mooring / anchor
- Failure of major boat systems such as power, bilge pump, etc
- Unauthorized entry to steal electronics and outboard motors



Someone didn't get a high water alert! Prevent disaster before the weekend, install a Siren Marine system today



1,497

People Reached

234

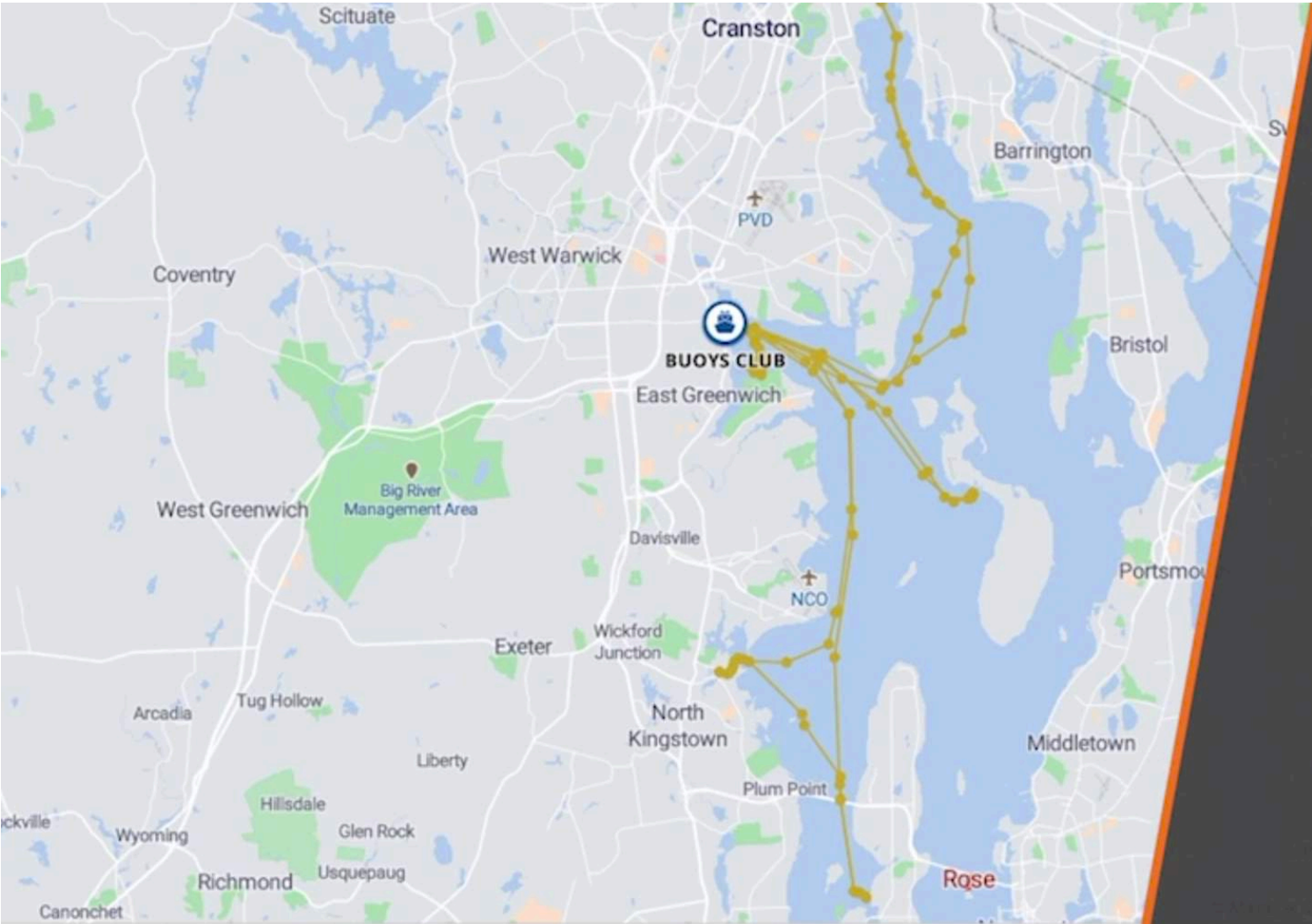
Engagements

Boost Post

You, Cathy Rotolo, Jim Inman and 143 others 5 Comments 22 Shares

Asset Recovery

Monitoring systems can provide better risk management of assets through real time data.
In the event of an insurance claim or theft, monitoring data can be critical to future prosecution or litigation.



GEOFENCE	POSITION	HIGH WATER	ENGINE
	41° 29.091', -71° 18.972'	Normal	Off
Harbor	41° 41.100', -71° 26.913'	Normal	Off

This information can prove to be especially valuable when a boat has suffered damage and an insurance claim has to be filed.

Conclusion

Connectivity is required for today's recreational and commercial boat. It is not just boat monitoring and security any more. Connectivity will be a differentiating factor during 2019 and 2020 when consumers and operators choose a boat. For builders, service providers and motor manufacturers, Connected Boat[®] data will become fundamental to their operation and bottom line. Firmware updates now impact nearly every part of every boat, and require over-the-air updates.

The Internet of Things is an established market in our homes and in our cars. Consumers are now asking for their boats to be connected.

