



# REAL TIME VISIBILITY OF MANUAL VALVES FOR SAFER OPERATIONS



# WHAT IF YOU COULD PREVENT OPERATIONAL MISTAKES BEFORE THEY HAPPEN

INCIDENT REPORTS

EVENTS REPORTED TO THE CSB UNDER THE ACCIDENTAL RELEASE REPORTING RULE

| Accidental Release Events |               |                           |             |             |          |                |  |
|---------------------------|---------------|---------------------------|-------------|-------------|----------|----------------|--|
| Number                    | Incident Date | Company                   | City        | State       | Fatality | Serious Injury | Substantial Property Damage (\$ Million) |
| 1                         | 2020-05-10    | Cynaco                    | Winnemucca  | Nevada      |          | 1              |  |
| 2                         | 2020-10-01    | BASF                      | Geismar     | Louisiana   |          | 1              |  |
| 3                         | 2021-02-15    | Chevron Phillips Chemical | Port Arthur | Texas       |          |                | 5.8                                      |
| 4                         | 2021-02-15    | Chevron Phillips Chemical | Sweeny      | Texas       |          |                | 2.5                                      |
| 5                         | 2021-07-02    | Daikin                    | Decatur     | Alabama     | 2        | 1              |  |
| 6                         | 2022-07-29    | W.S. Red Hancock          | Canton      | Mississippi | 1        | 5              |  |
| 7                         | 2022-08-19    | Valero                    | Texas City  | Texas       |          |                | 10                                       |
| 8                         | 2022-09-22    | Rubicon                   | Geismar     | Louisiana   |          | 1              |  |
| 9                         | 2022-10-11    | ExxonMobil (XTO Energy)   | Carlsbad    | New Mexico  |          | 1              |  |
| 10                        | 2022-12-23    | Delek                     | El Dorado   | Arkansas    |          |                | 36                                       |
| 11                        | 2023-01-21    | PBF Energy                | Chalmette   | Louisiana   |          |                | 34.1                                     |
| 12                        | 2023-02-03    | Dow                       | Hahnville   | Louisiana   |          | 4              |  |
| 13                        | 2023-02-18    | Cleveland-Cliffs          | Warren      | Ohio        |          |                | 1  |
| 14                        | 2023-04-03    | IMTT                      | St. Rose    | Louisiana   |          | 2              | 15                                       |
| 15                        | 2023-05-04    | Marathon Petroleum        | Wilmington  | California  |          | 1              |  |
| 16                        | 2023-05-15    | Marathon Petroleum        | Texas City  | Texas       | 1        |                | 829                                      |
| 17                        | 2023-05-23    | CVR Energy                | Wynnewood   | Oklahoma    | 1        | 1              | 8  |
| 18                        | 2023-09-05    | SABIC                     | Ottawa      | Illinois    |          | 1              |  |
| 19                        | 2023-10-13    | Hornady                   | Alda        | Nebraska    | 1        |                |  |
| 20                        | 2023-12-29    | Tradebe                   | Bridgeport  | Connecticut |          | 1              | 6  |
| 21                        | 2024-02-14    | Tronox                    | Hamilton    | Mississippi |          | 2              |  |
| 22                        | 2024-03-17    | ExxonMobil                | Baytown     | Texas       |          |                | 32                                       |
| 23                        | 2024-05-29    | Western Sugar Cooperative | Fort Morgan | Colorado    | 1        | 1              |  |
| 24                        | 2024-07-12    | LyondellBasell            | Channelview | Texas       |          |                | 9.8                                      |
| 25                        | 2024-08-29    | LyondellBasell            | Houston     | Texas       |          |                | 16.8                                     |
| Total                     |               |                           |             |             | 7        | 23             | 1,006                                    |

Incident reports volume 2. March 12, 2025



# MANUAL VALVE MONITORING TODAY

- Manual valve positions are unknown in the control room
- Errors can lead to safety incidents, downtime, or contamination / spills
- Manual checks are slow and prone to human error
- Wired manual valve monitoring solutions are expensive and cumbersome to install





# THE RISK OF DOING NOTHING

- Higher operational risk
- Downtime and costly cleanups
- Loss of productivity





# Real-time manual valve monitoring

## Key features

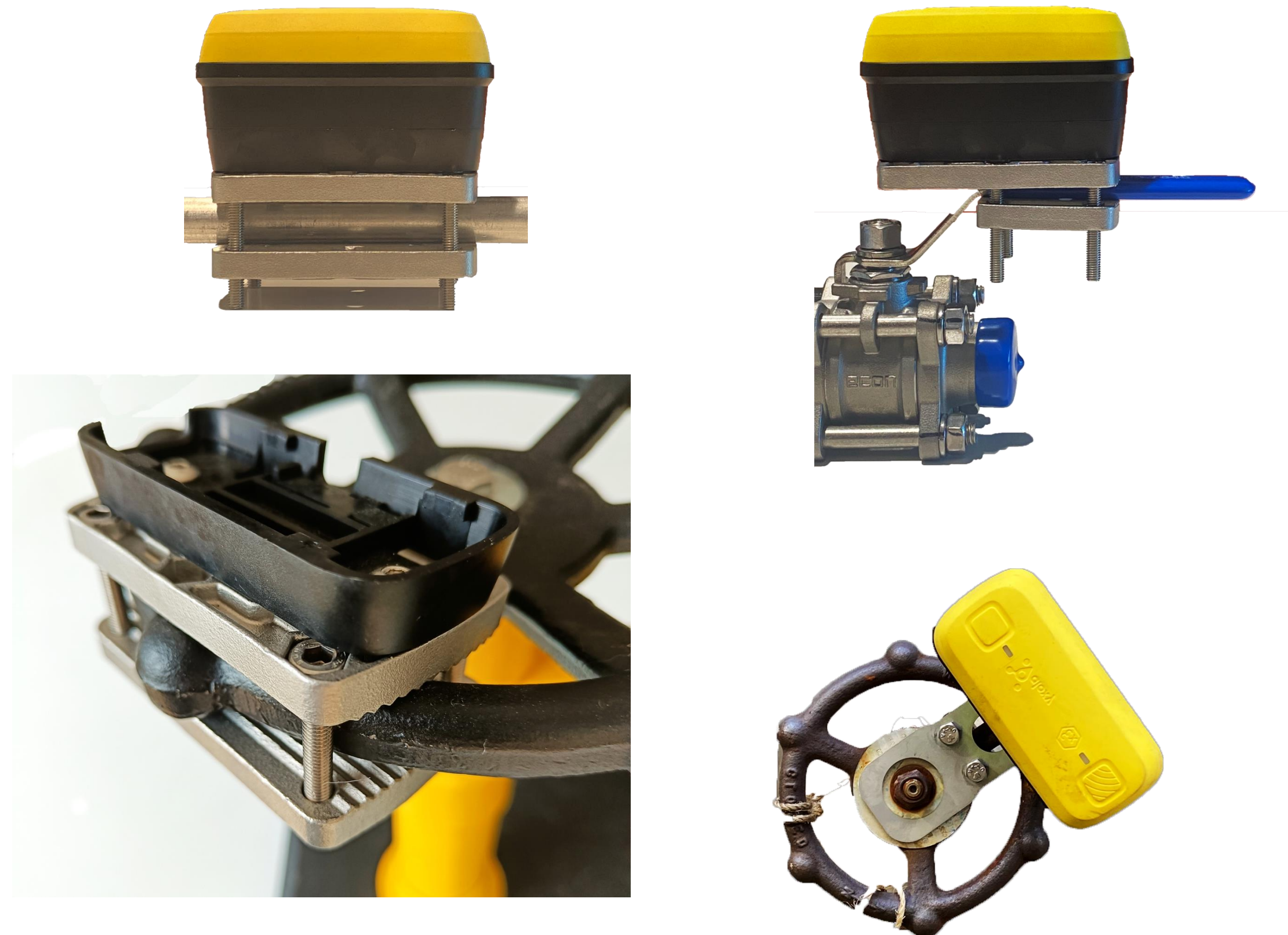
- ✓ Easy and **universal** mounting
- ✓ Cutting edge **Motion Sensors**
- ✓ Measures **accurate** valve position, **open/close** and incremental (%)
- ✓ **5+ years** battery life,
- ✓ **Secure** data end-to end encryption
- ✓ **IP69** ingress protection
- ✓ **II 2 G Ex ib IIC T4 Gb**





# WHY IS ALOXY DIFFERENT

Installed in minutes without customised brackets on any type or size of valve.



Aloxy's Universal Valve Brackets

Aloxy IIoT Possibilities



Ball valve

Gearbox

Gate valve





# Easy to install

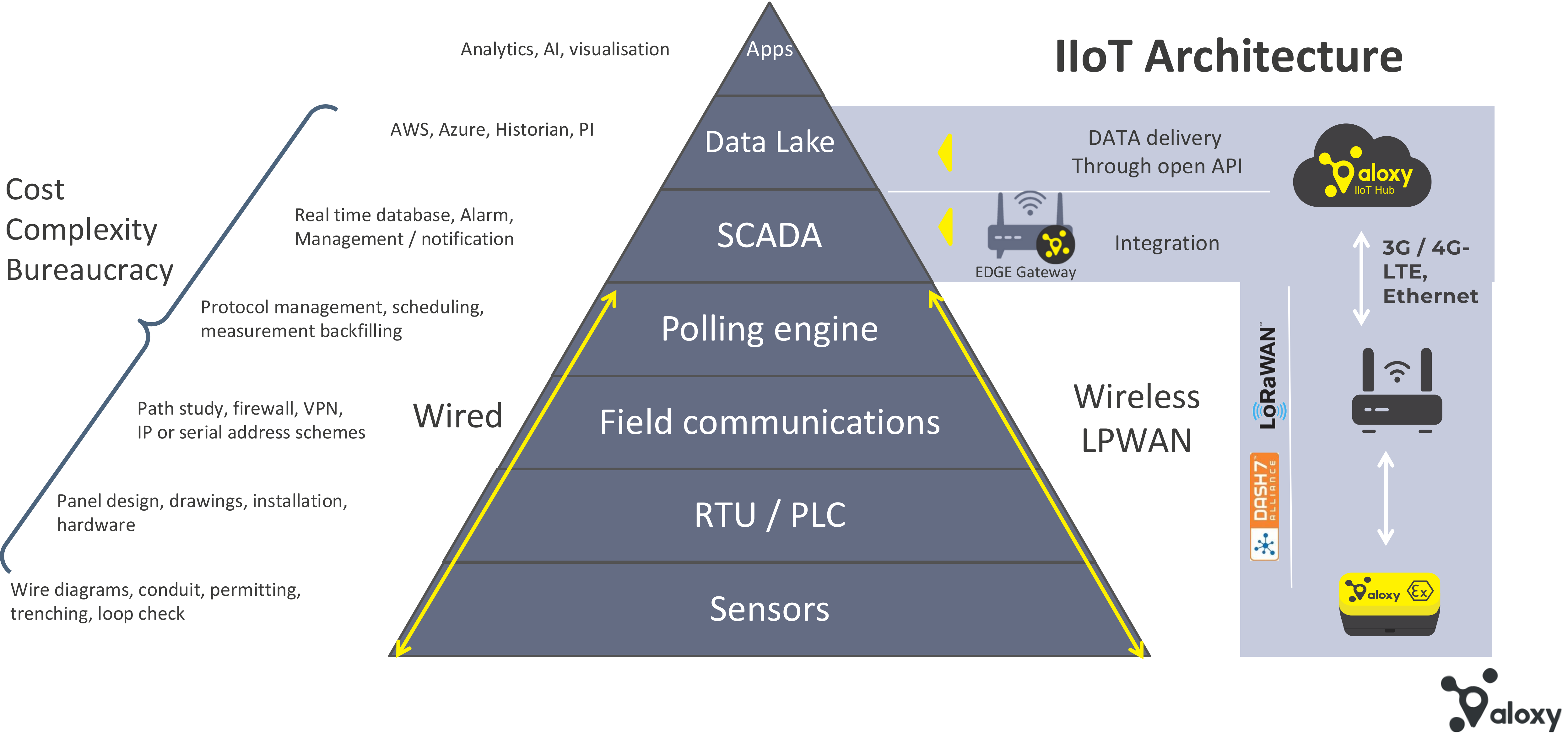
Calibrate by Using buttons or by smartphone



- ✓ Suitable for **Atex phones**  
(Android & IOS)
- ✓ Firmware **updates** over  
NFC.
- ✓ **Calibration** of device over  
NFC.
- ✓ Identification of **device ID**
- ✓ **Lock** devices.



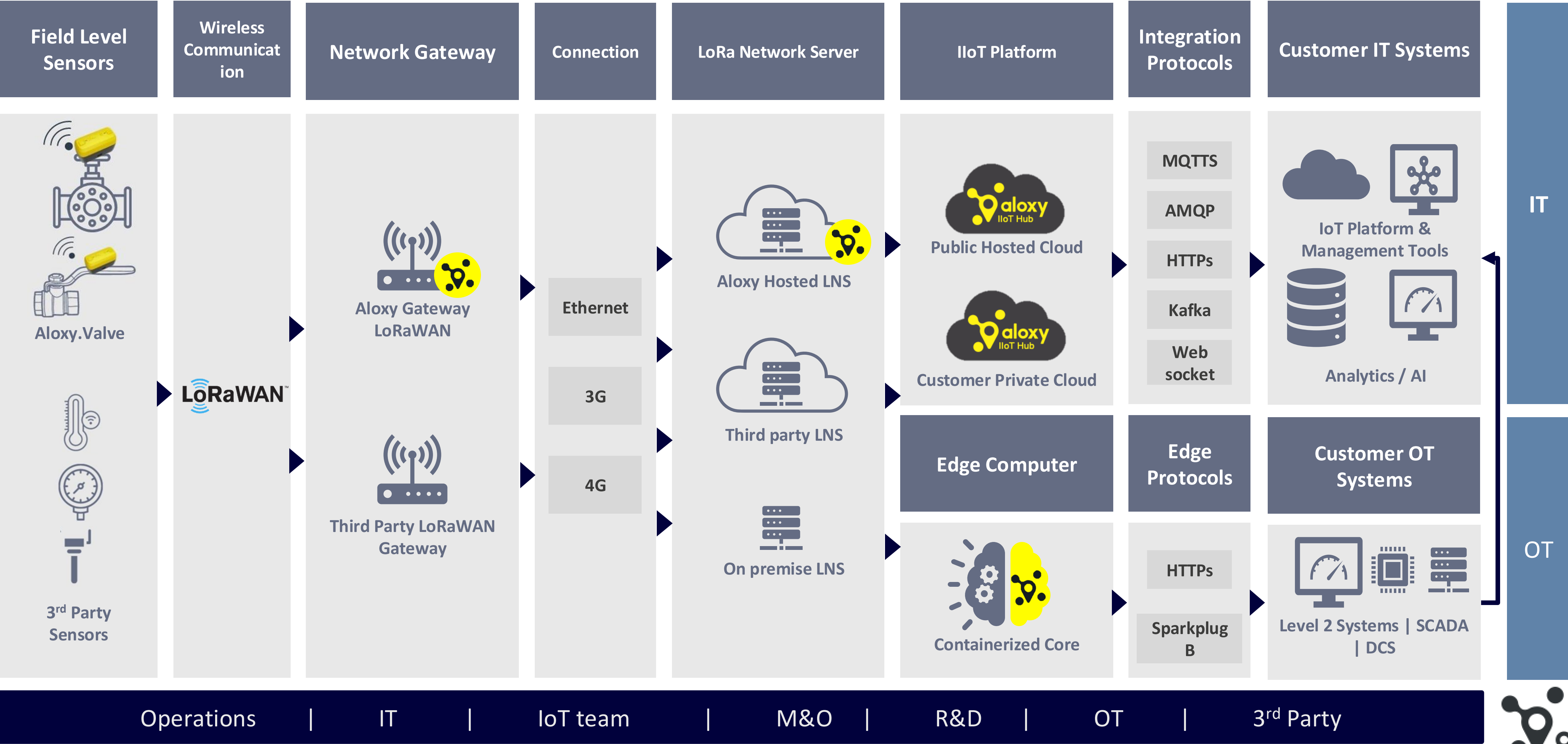
# TRADITIONAL SCADA DATA CREATION.





# ARCHITECTURE OVERVIEW

Get the data where you need it





# ALOXY IIOT HUB.

An essential part of the solution



1

## PROCESSING POWER.

Processes raw data from the sensors into useable valve positions resulting in lighter, and more affordable sensors.

2

## RELIABLE DATA.

Issue detection, heartbeat monitoring and network connectivity checks to validate the data is correct.

3

## MANAGEMENT TOOL.

Increase the effectiveness of large amounts of sensors.

4

## FLEXIBLE PLATFORM.

Connect downstream through different API's. Deployment in Aloxy's Multi tenant cloud. Customers' private cloud or On-premise

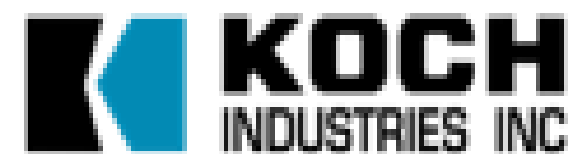


Containerized Core

Also available as light weight on-prem software application



# TRUSTED BY INDUSTRY LEADERS...





# Valve position Monitoring Starter kit

Engage in a Proof of Value with us

## Aloxy provides

- 50 + sensors
- Universal brackets
- Outdoor Gateway
- LoRa Network Server (LNS)
- Access to IoT Hub
- Gateway with 3G, 4G Sim card or Ethernet
- No connection to IT/OT systems are made
- Training and support

Identify valves that are operated frequently and prone to error.

- Drains
- Vents
- Manifolds
- Steam circuit valves
- Bypass valves
- Emergency Showers
- Isolation valves







THANK YOU