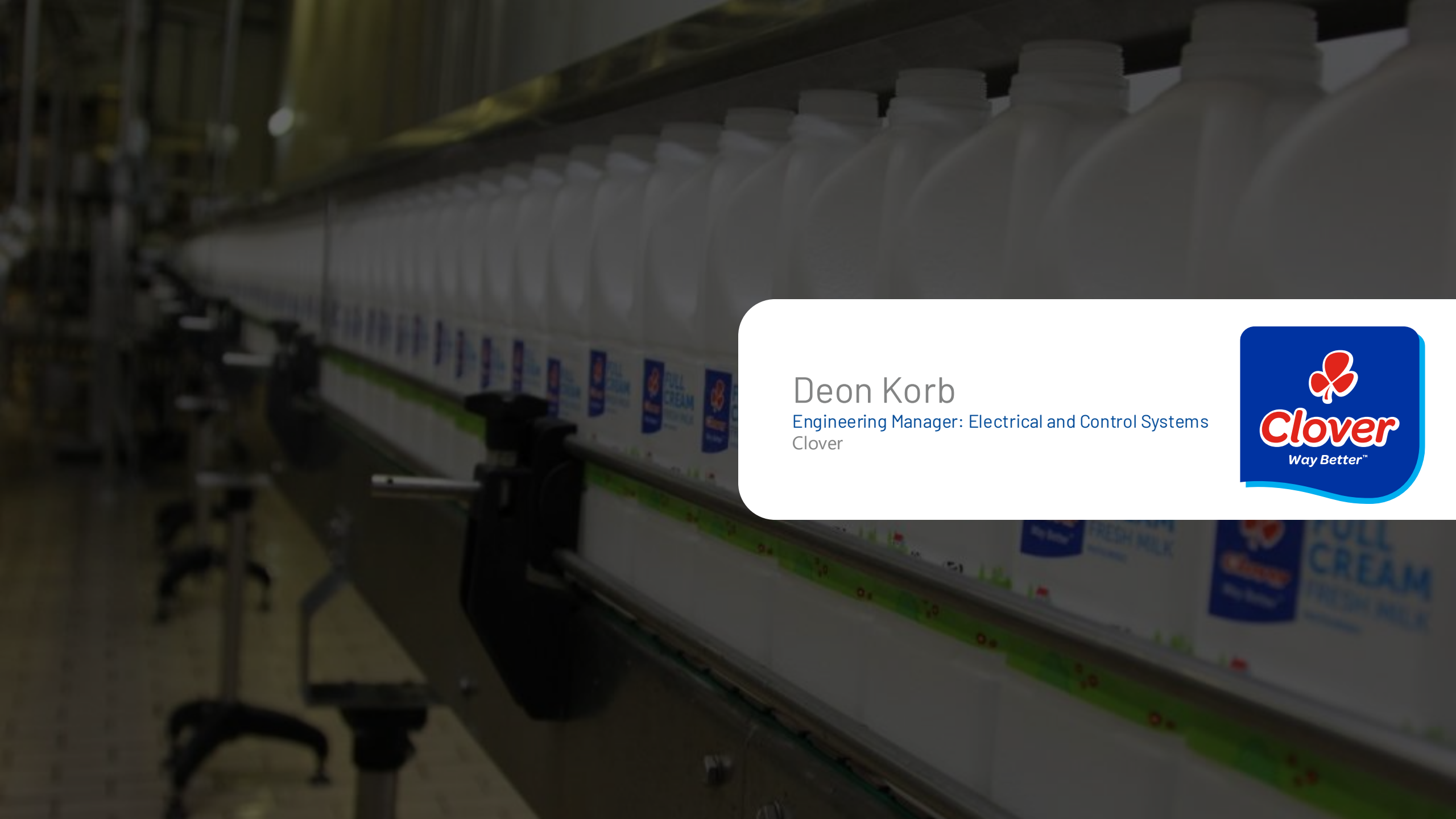
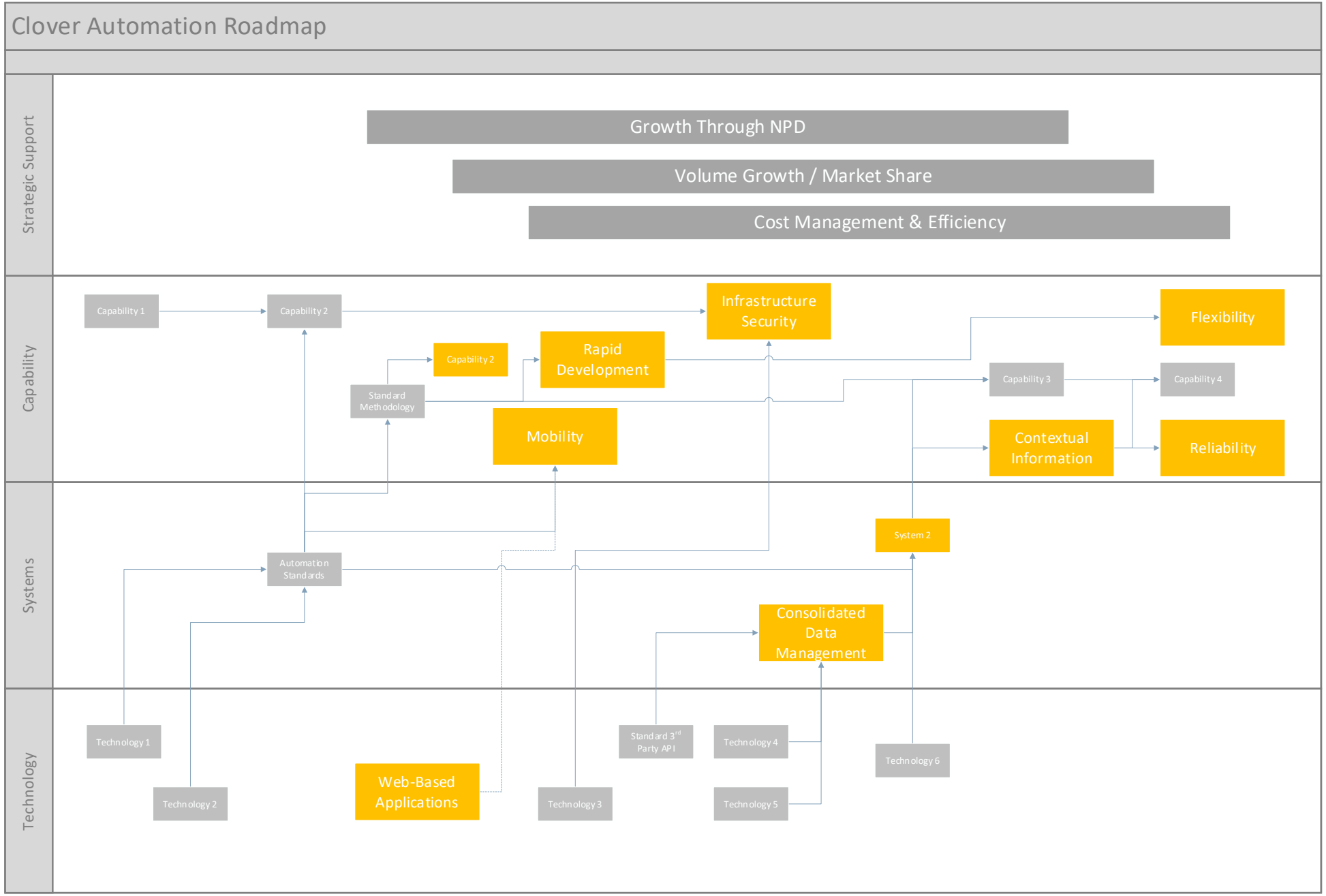


Deon Korb

Engineering Manager: Electrical and Control Systems

Clover



Strategic Alignment

Common Challenges

1. Cost
2. Complexity
3. Resource Requirements

Requirement: Capability

1. Fit on existing PLC standards and Infrastructure
2. Run on Microsoft platform with latest and greatest versions
3. Robust architecture and a variety of client devices

Criteria Met: Capability

1. Installed and connected to our controllers in minutes
2. Accessed easily from many client devices
3. Redundancy that works, with caching and store and forward

Requirement: Scalability

1. Start small and expand (SCADA and Historian)| Tags and Clients
2. Simple licensing model that does not require a precise forecast
3. Scalable project implementation, concurrent development

Criteria Met: Scalability

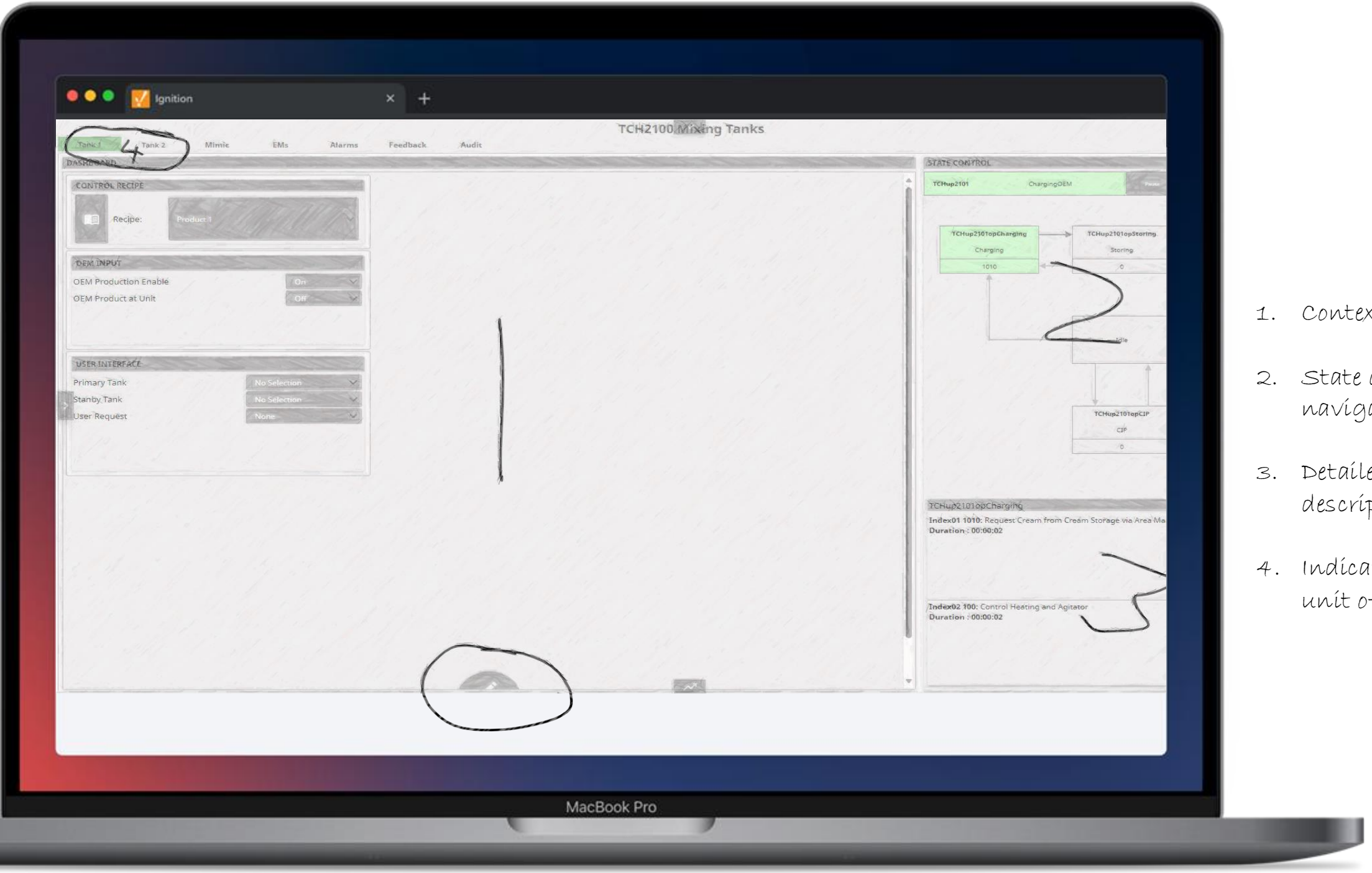
1. Unlimited tags, unlimited clients
2. Multiple servers, across multiple sites
3. Concurrent development

Requirement: Simplicity

1. User interface. High-performance HMI. Familiar levels of information
2. Reusable assets and templates
3. Rapid rollout of instance without redevelopment

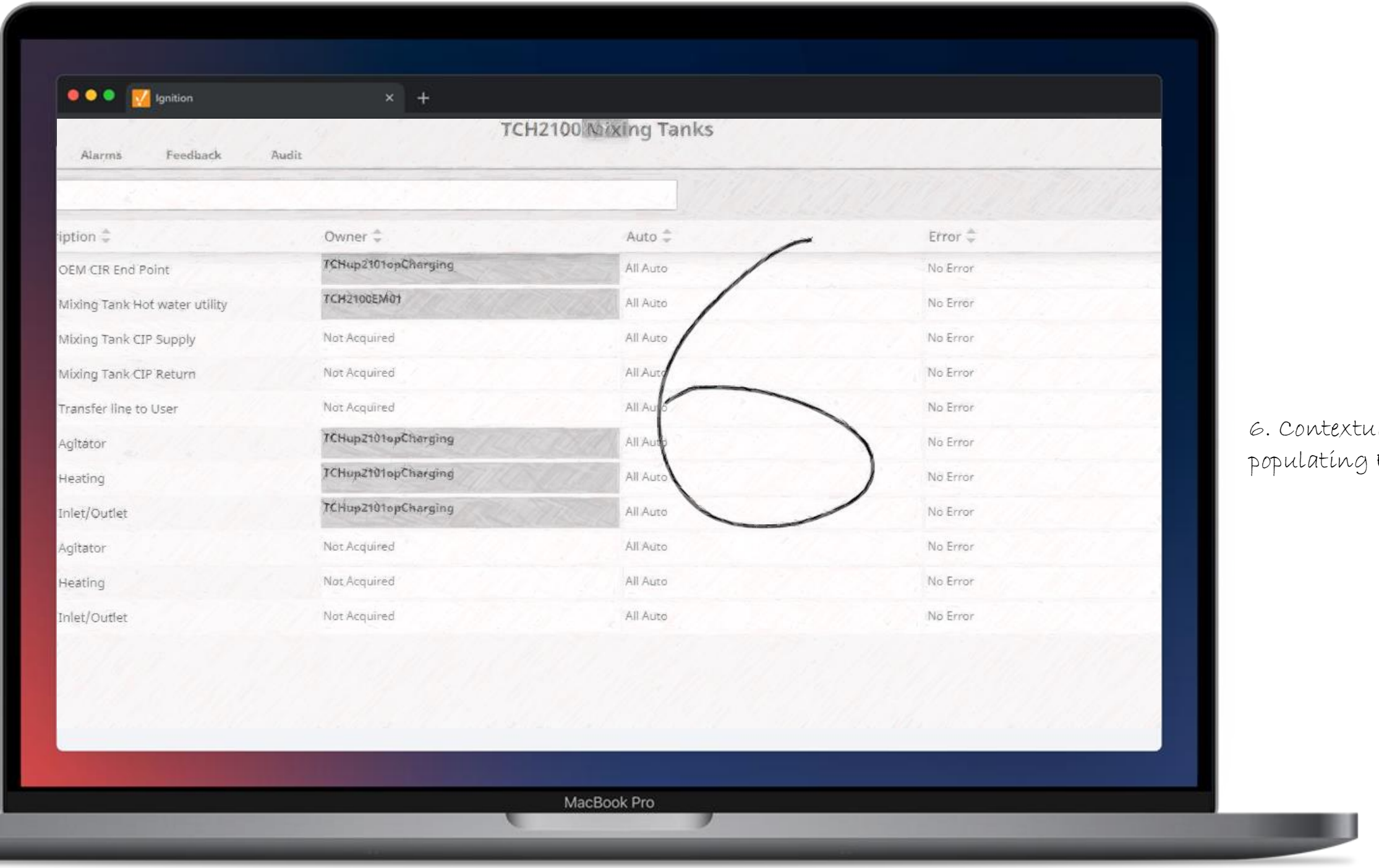
Criteria Met: Simplicity

1. Familiar information using a modern navigation strategy for the user
2. Reusable assets with rapid instantiation for our integrator partners
3. Runtime editing and configuration for the commissioning engineer

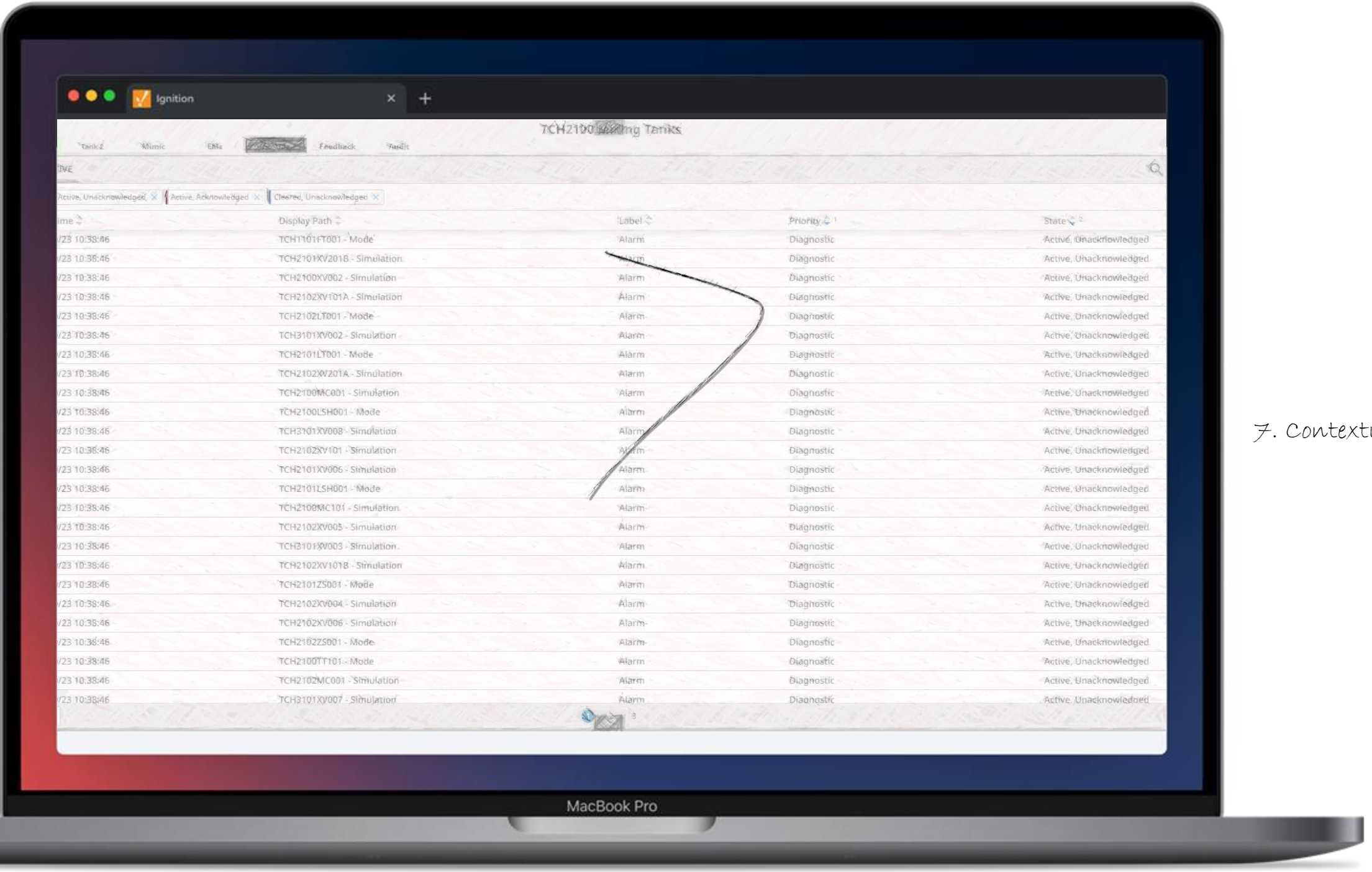


1. Contextual Dashboard
2. State diagram and navigator
3. Detailed step descriptions
4. Indicating tabs per unit of the same class

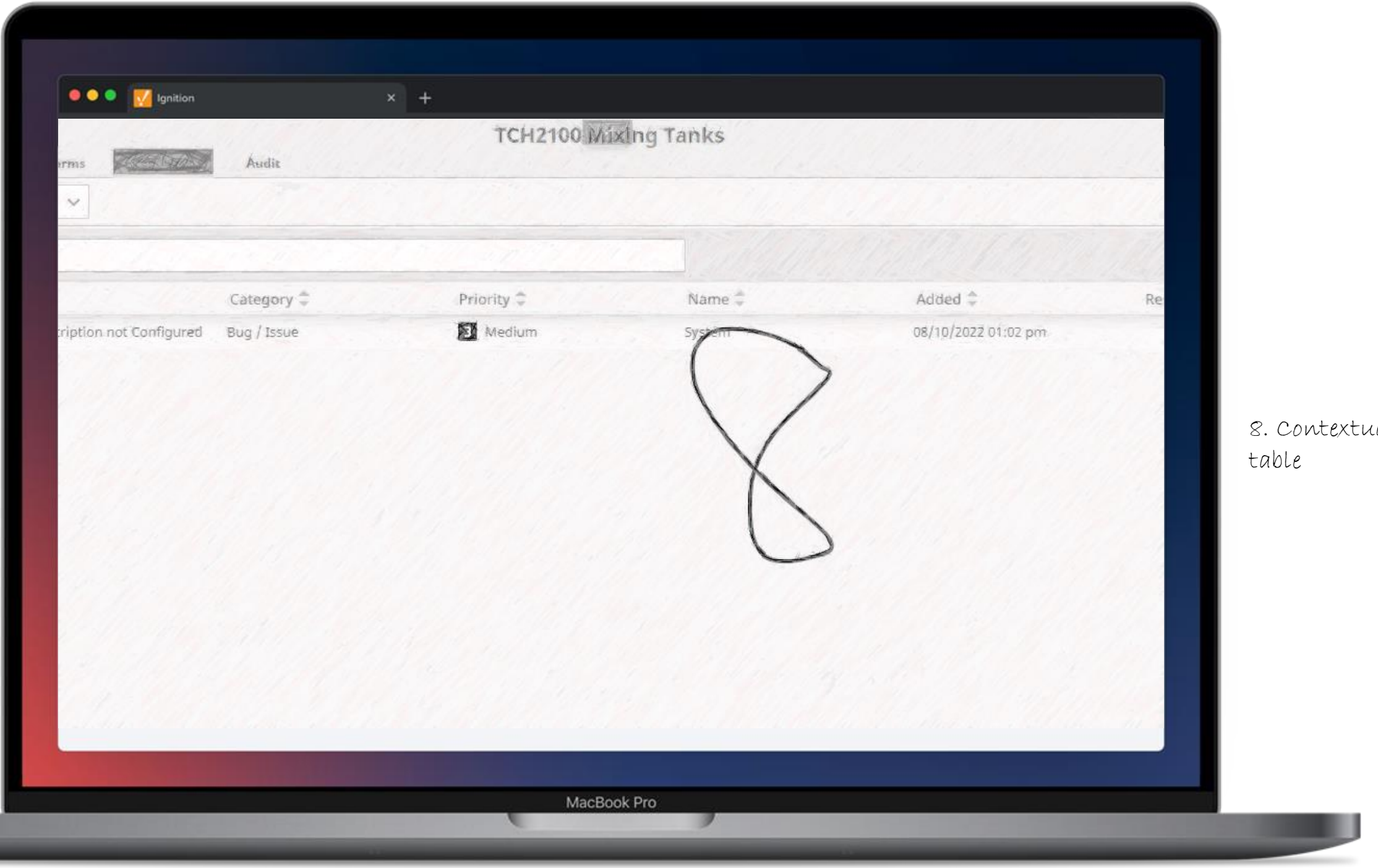
5. Mimic with popups for details and quick actions



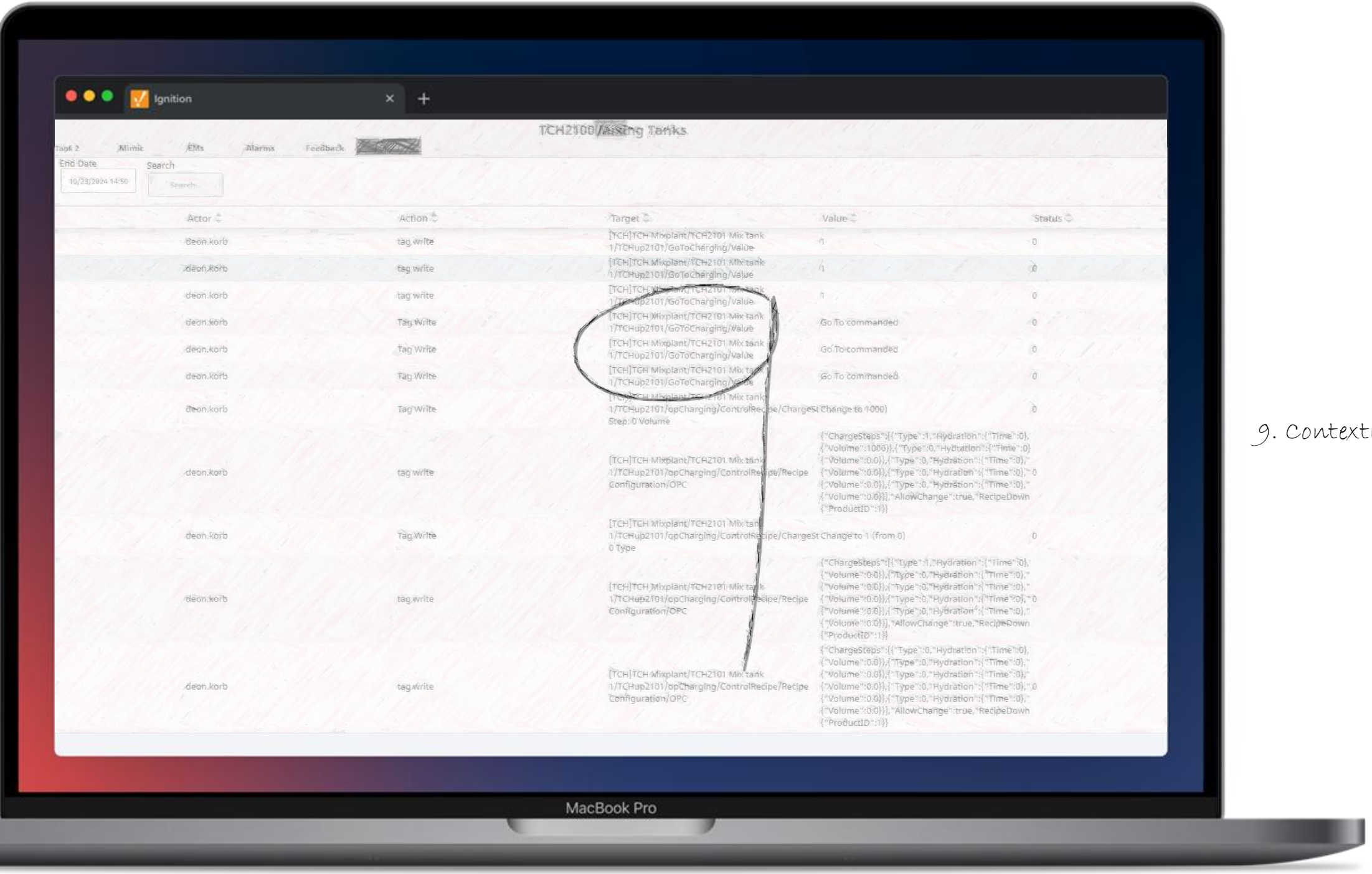
6. Contextual Auto populating EM status table



7. Contextual Alarm table



8. Contextual feedback table



9. Contextual audit table

Ignition
https://localhost:8008/welcome
Deon Korb
QBC2101 Cheese Pasteuriser
Control Page
Mimic
EMs
Alarms
Feedback
Audit
DASHBOARD
PASTEURISER FLOWRATE
QBC2101FT001
22 000 L/h
THERMISATION TEMPERATURE
QBC2101TT003
61 °C
DISCHARGE TEMPERATURE
QBC2101TT004
25 °C
PASTEURISATION TEMPERATURE
QBC2101TT010
73 °C
MAXIMUM WATER CIRCULATION
00:31:27
TIME SINCE CIP
22:28:27
HEATING CONTROL
2101TT401
2101TT402
2101TT201
2101TC301
2101TT302
PASTEURISER TEMPERATURES
2101TT010
2101TT011
2101TT012
STAGE DIAGRAM
QBCup2101
Water Circulation
Pause
Shutdown
Idle
QBCup2101opCIP
Cheese Pasteuriser : Operation CIP
0
QBCup2101opWaterCirc
Cheese Pasteuriser : Operation Water Circulation
5000
QBCup2101opProduction
Cheese Pasteuriser : Operation Production
0
QBCup2101opWaterCirc
Index01 5000: Circulation [CIP or Production request or Temperature not in spec (Yes)] (Duration 00:00:04)
Index02 999: Separator startup complete (Duration 00:27:35)
Index03 999: Clarifier Startup Complete (Duration 00:27:35)
MacBook Pro

Example

ELEV8

THANK YOU.