

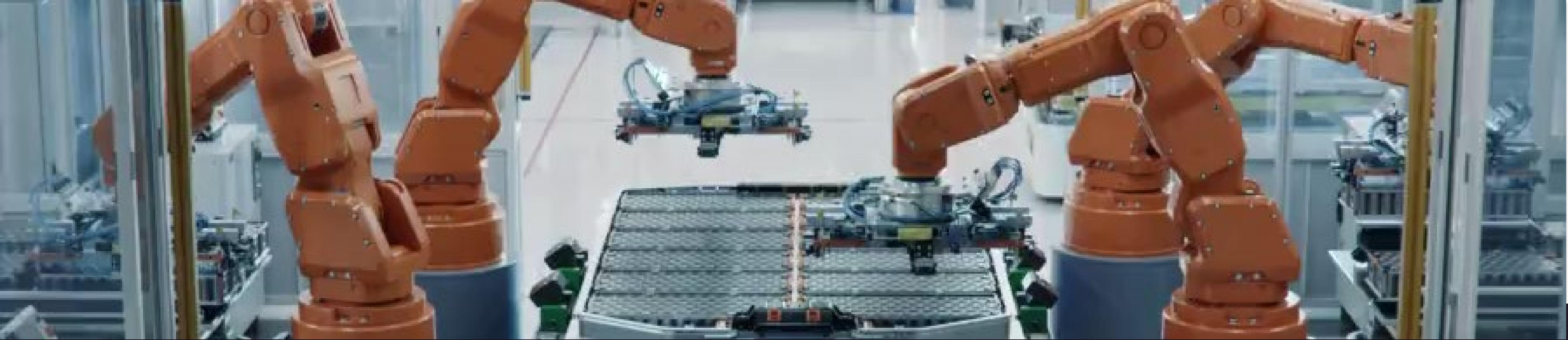
VOLTA

We Power Up Your Data

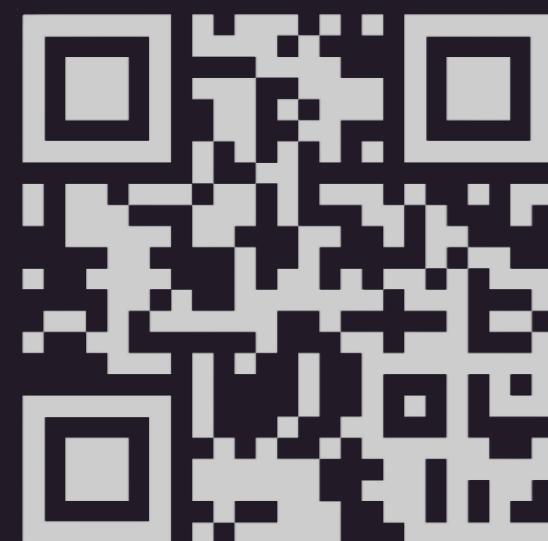
**“ The history of scientific
discovery is a history of
obstacles overcome ”**

Alessandro Volta





AppliediT



AUTOMOTIVE COMPANY - APPLIED IT - VOLTA

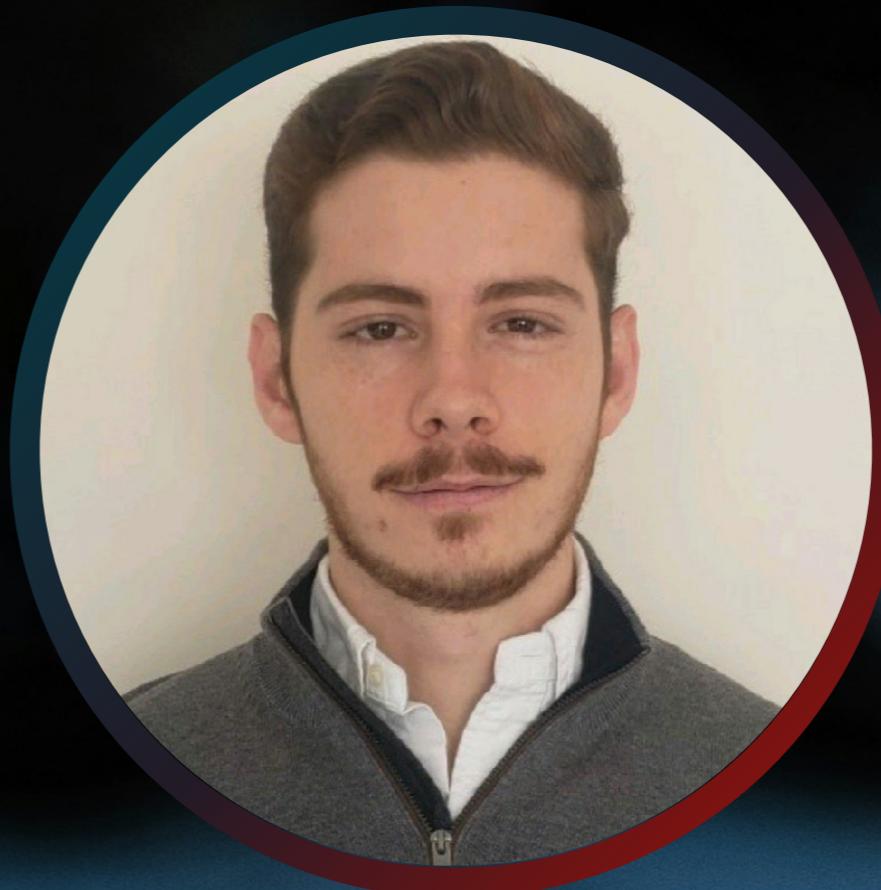
- Experts in solving problems through data analytics
- Solutions provider for Industry 4.0
- Capitalizing on data



Tomás
Gonzalez



Matías
Orozco



Mirko
Aivasovsky



Guillermo
Rodríguez

1. Index



2. The
Process



3.
Analysis



4.
Conclusions
and Next Steps

HGCC22



2. The Process



Station A



A1



A2



A3

Station B



x 48

~34,7%

Not OK

x 12

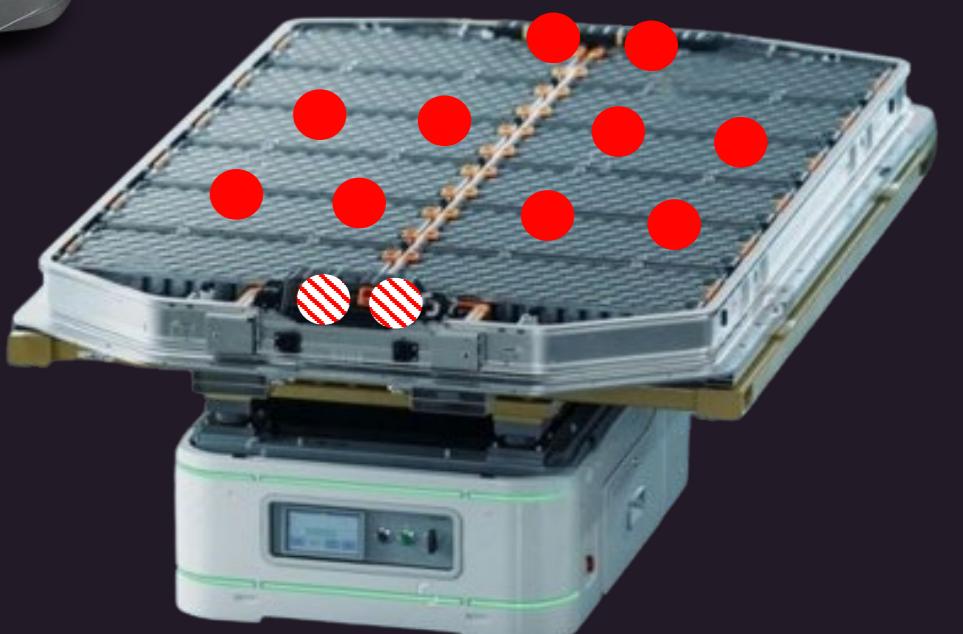
~81,%

Not OK

B1



B2



12 :



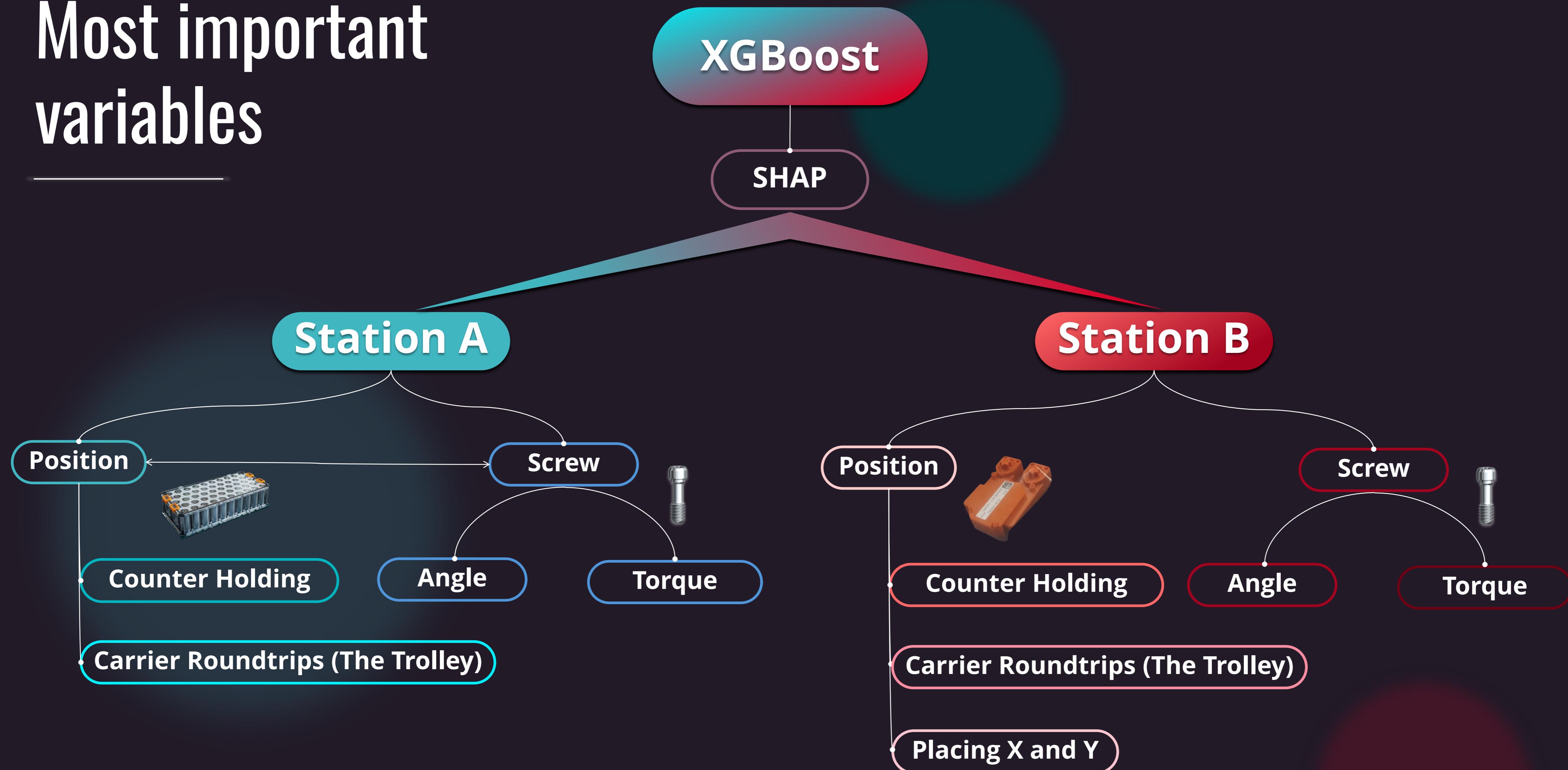
2 :





3. Analysis

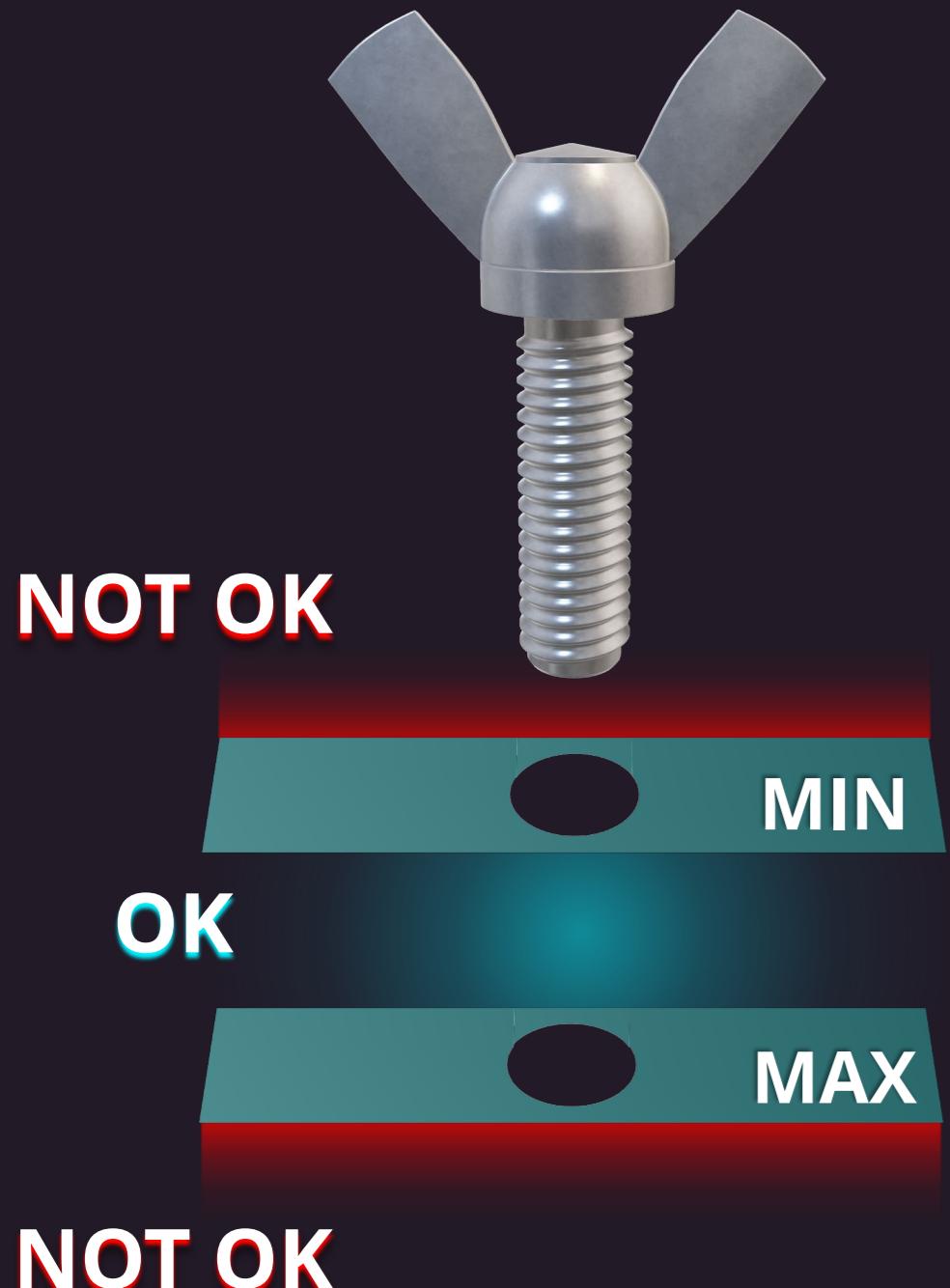
Most important variables



Screw

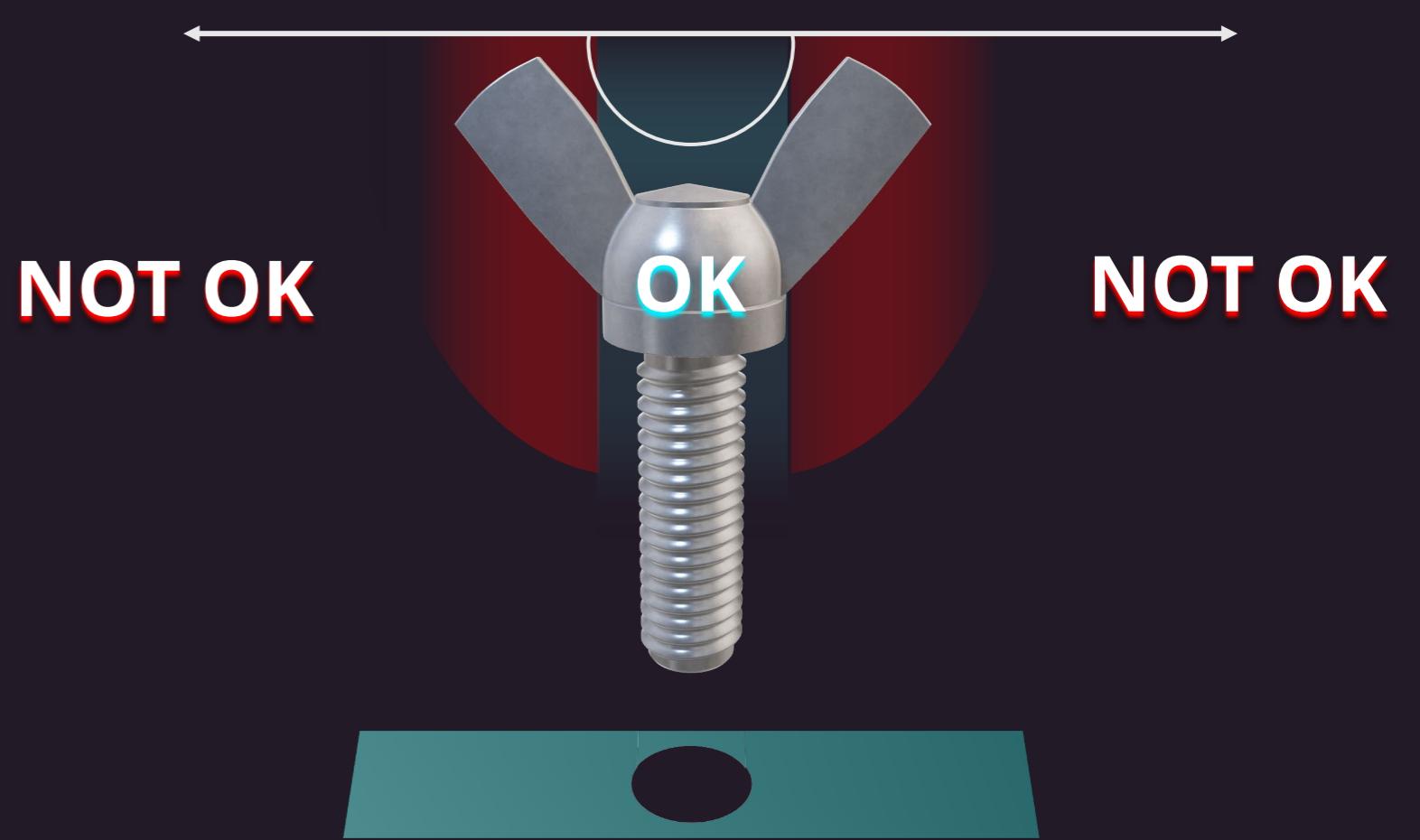
Torque, Angle and its Thresholds

Torque



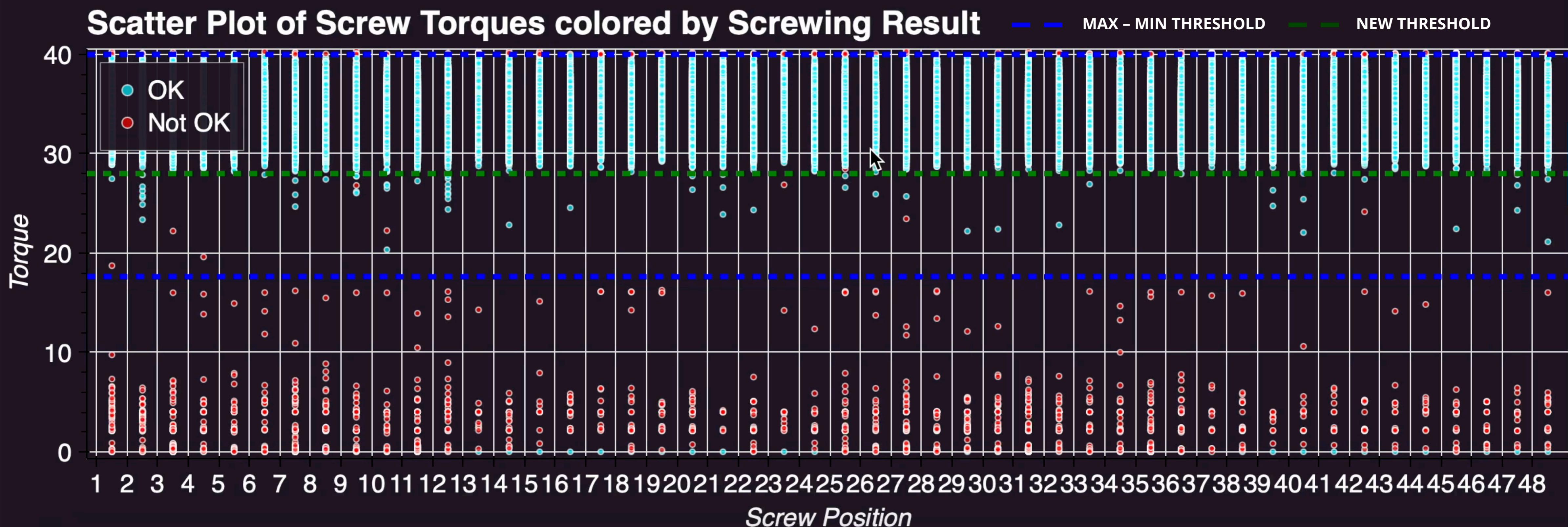
- Measures the **rotational force applied to an object**, like turning a bolt or a wheel
- Determines **how much twisting force is needed to cause rotation**
- "How hard you need to turn a wrench to tighten a screw"

Angle

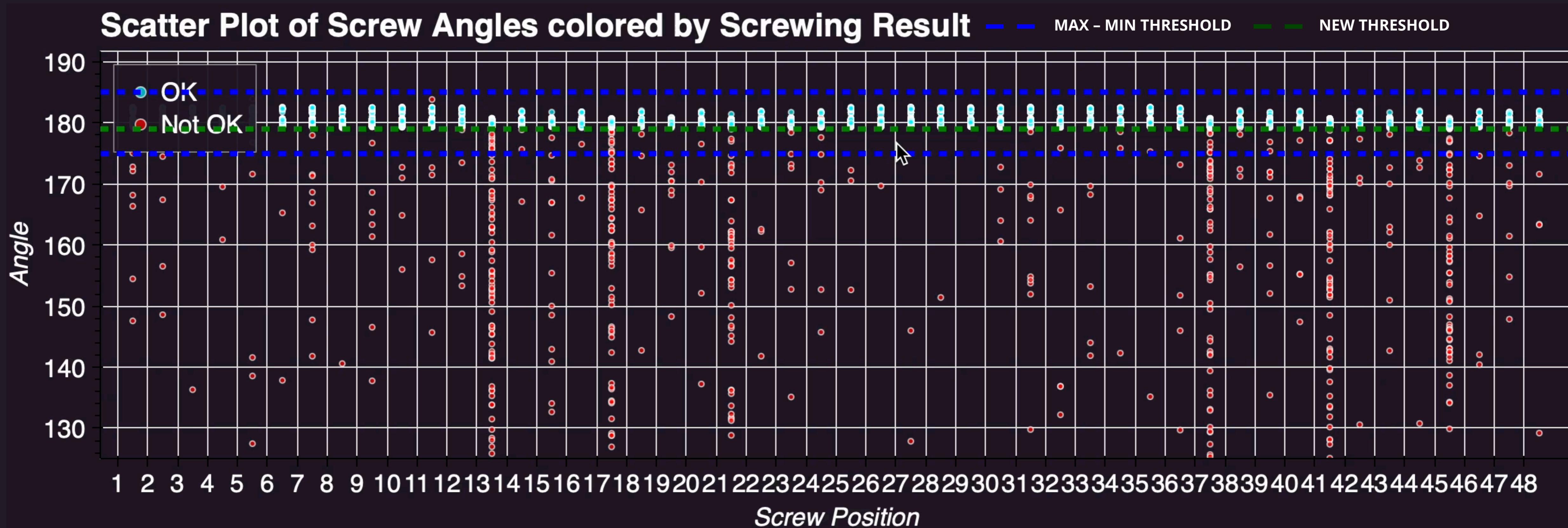


Both OKs are needed to achieve an OK in SCREW.

Station A: Torque



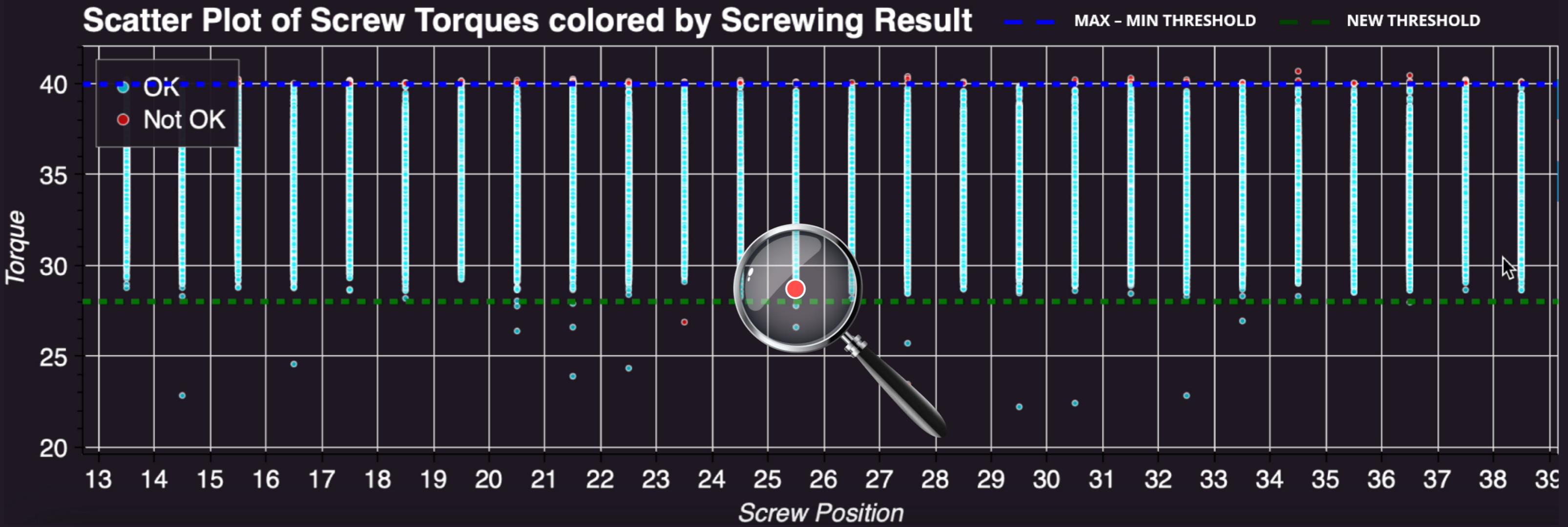
Station A: Angle



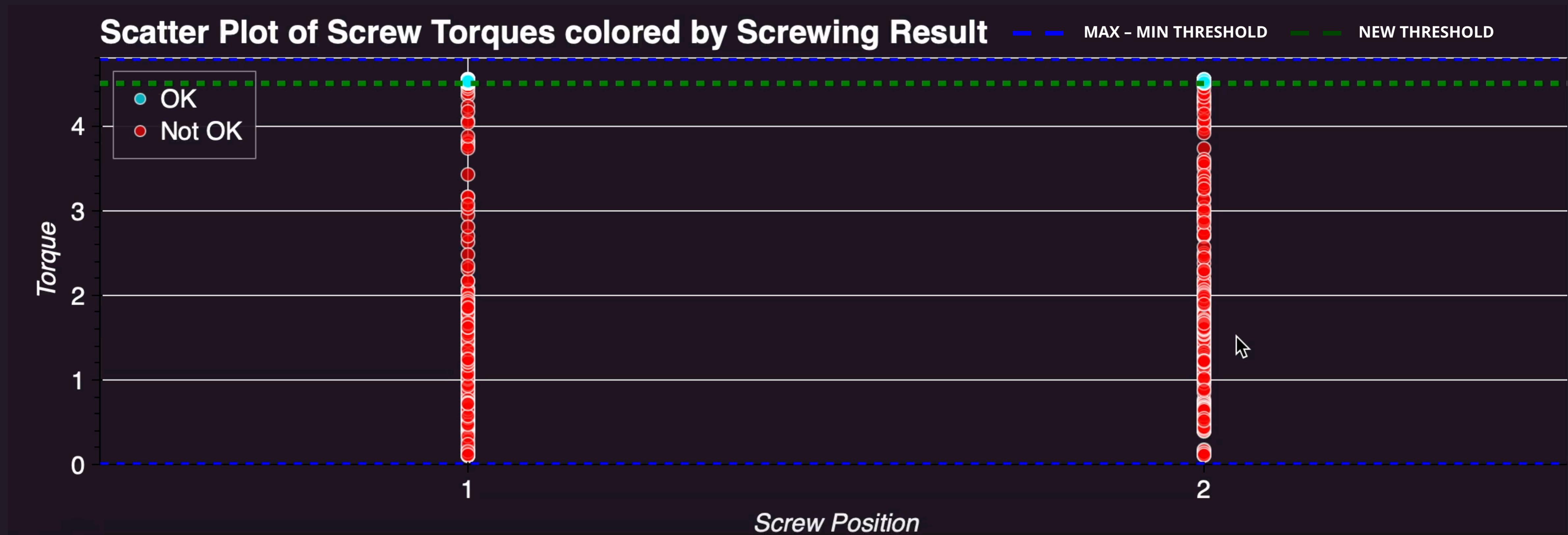
Station A: Torque and Angle

Then, Why there are
Not Oks inside the
threshold?

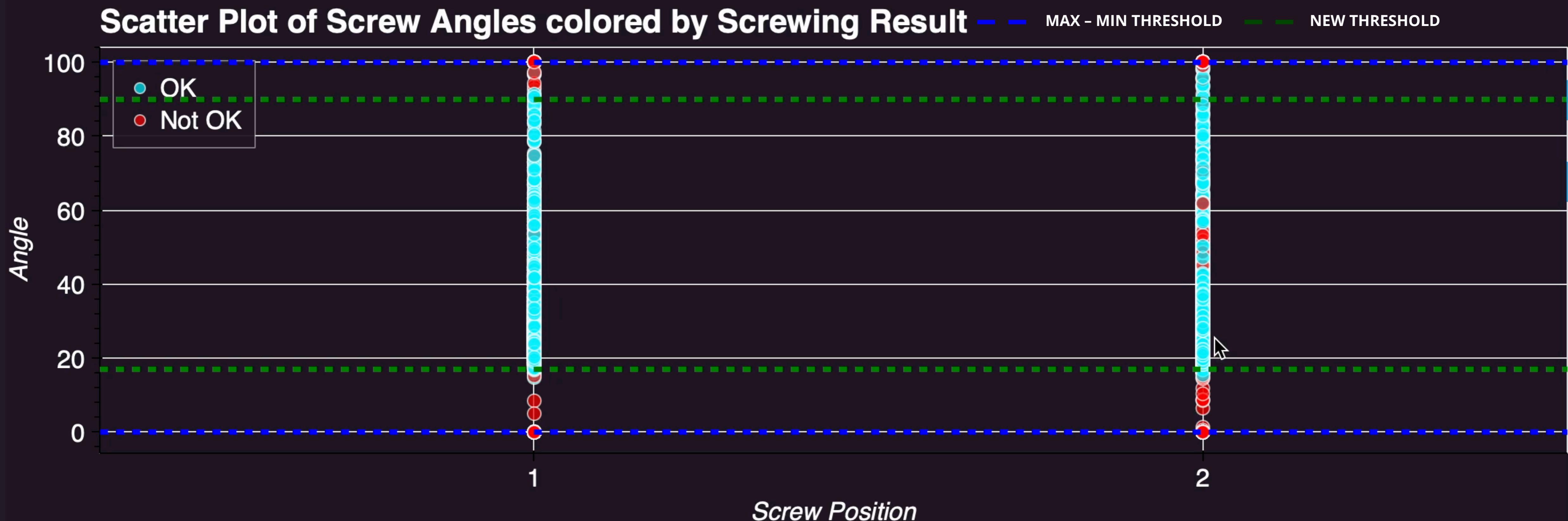
Both Results in
Torque and Angle
must be inside of the
Threshold for an OK
Result in Screw



Station B: Torque

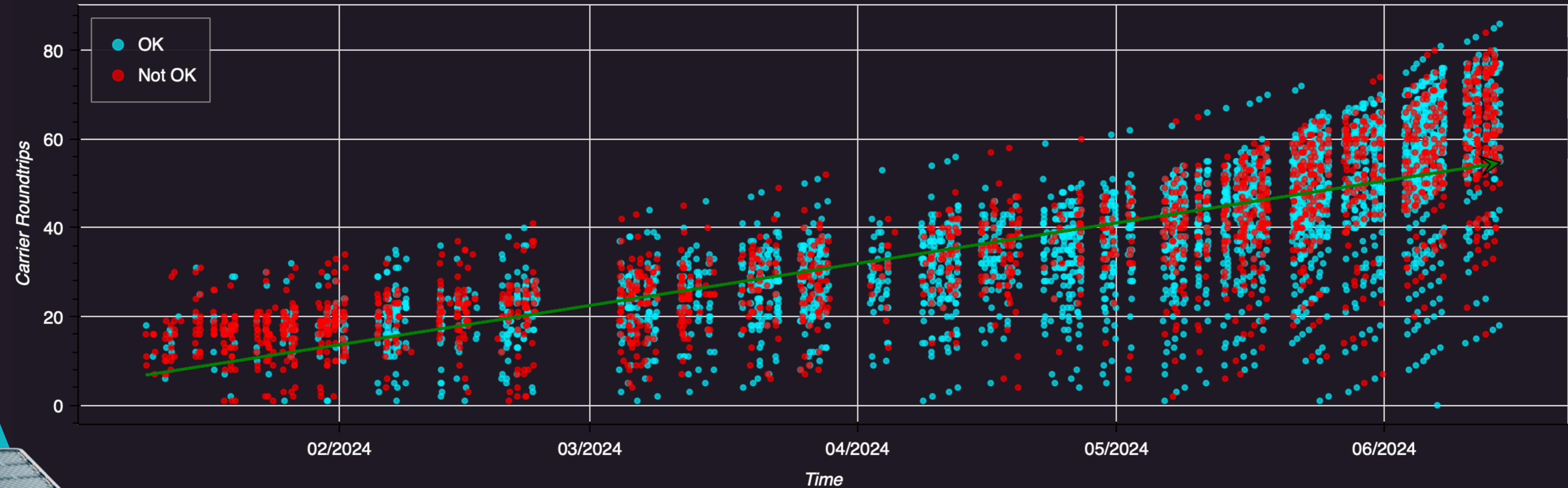


Station B: Angle

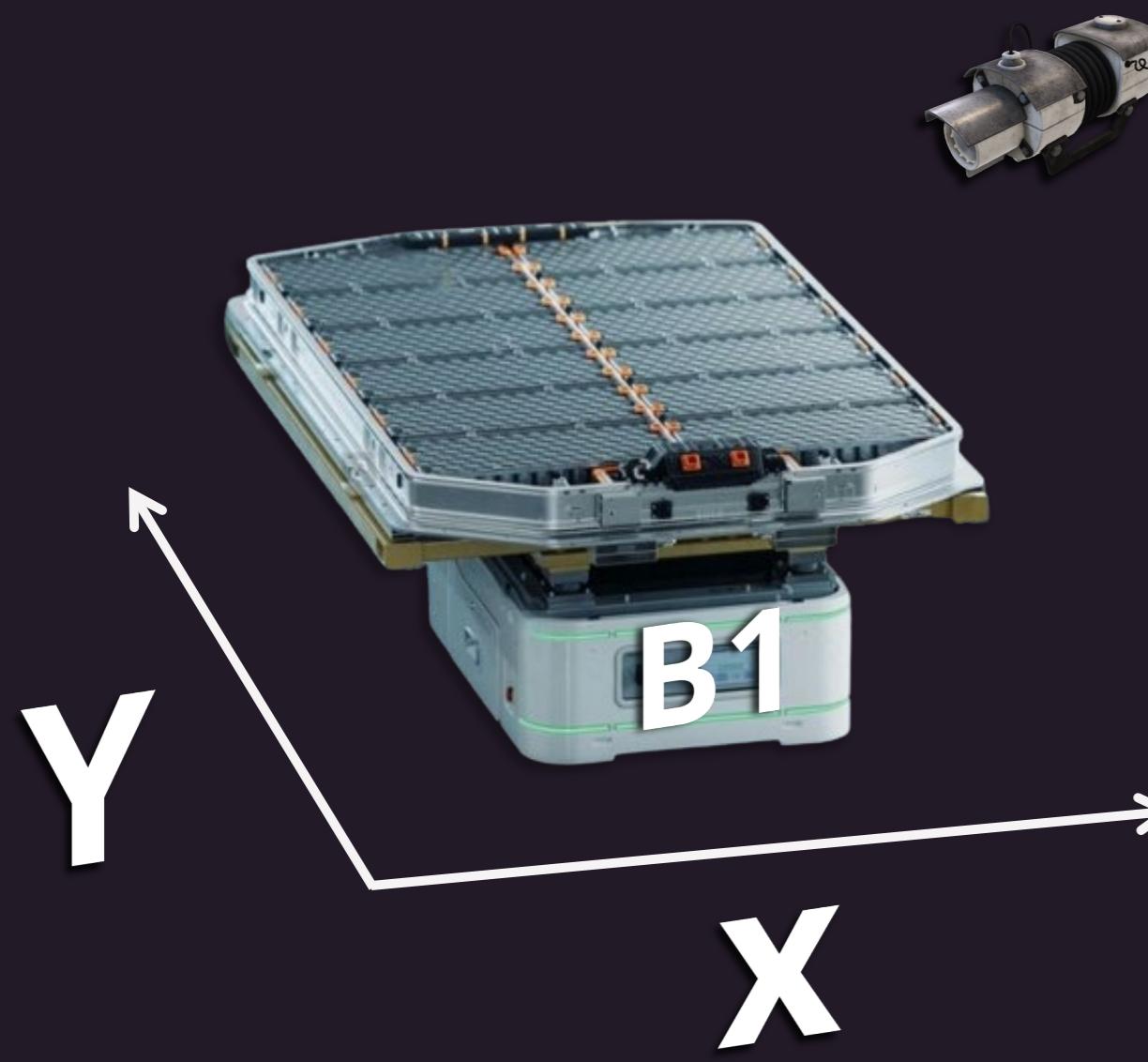


Position

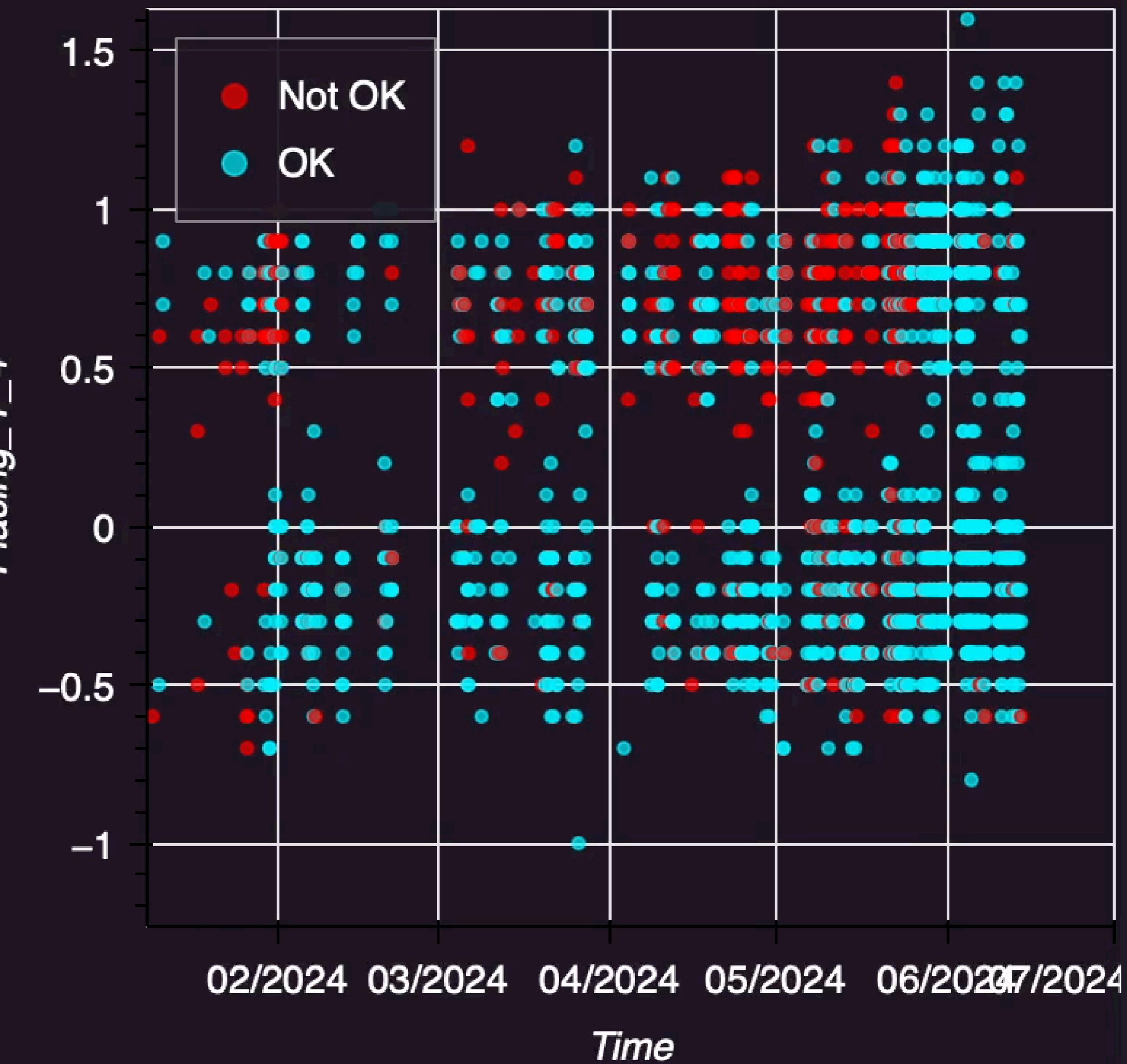
Carrier Roundtrips (The Trolley)



Position X and Y in Station B



Position 4 Station ST160.1

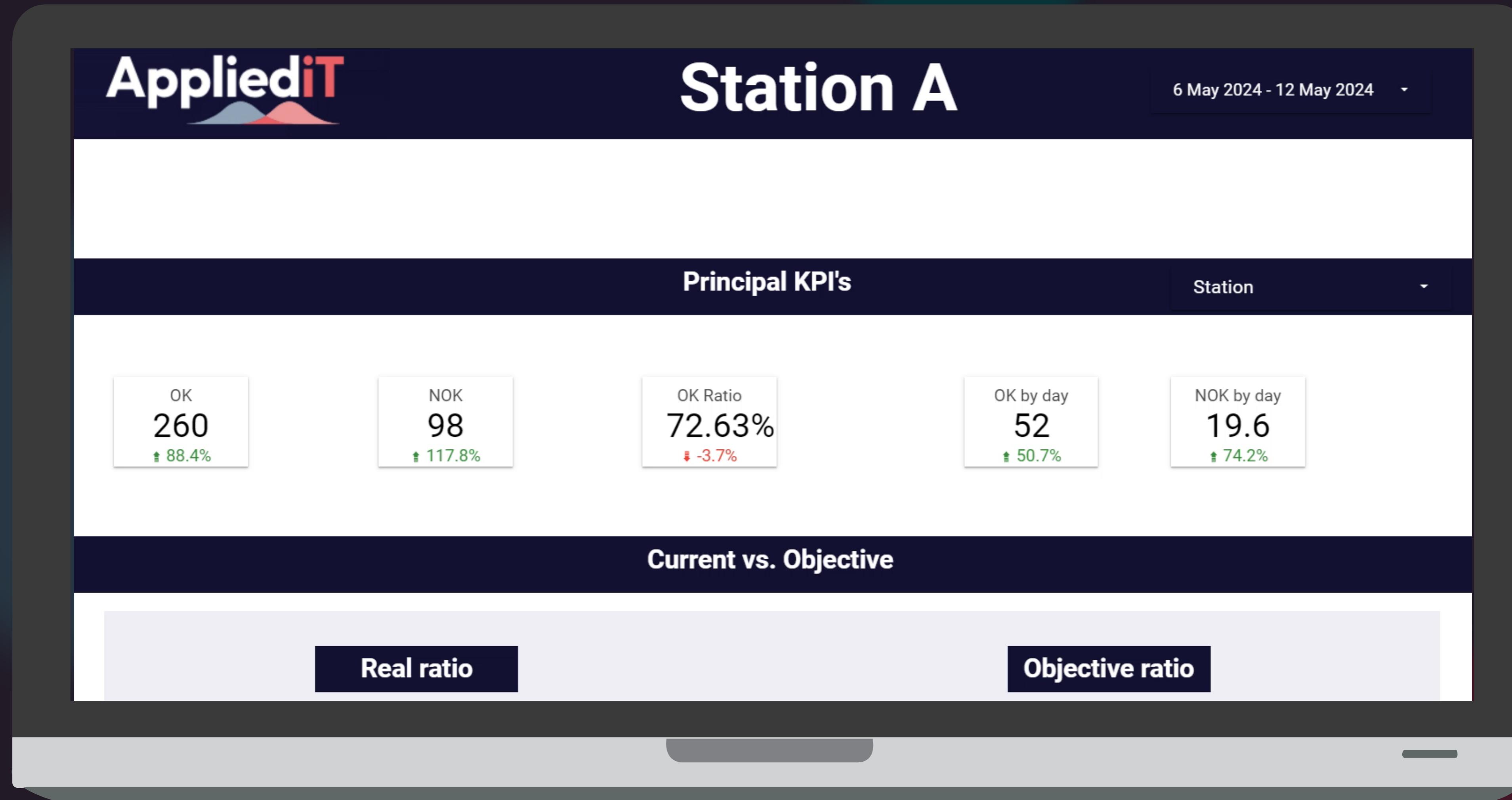


ALEXANDER AKA 'THE ENGINEER'



What would **you** need if you were **Alexander**?

A Project Dashboard: Realizing Efficiency Gains





4. Conclusions and Next Steps

Efficiency Benefits

More torque



Increase minimum level
of torque applied by
robots

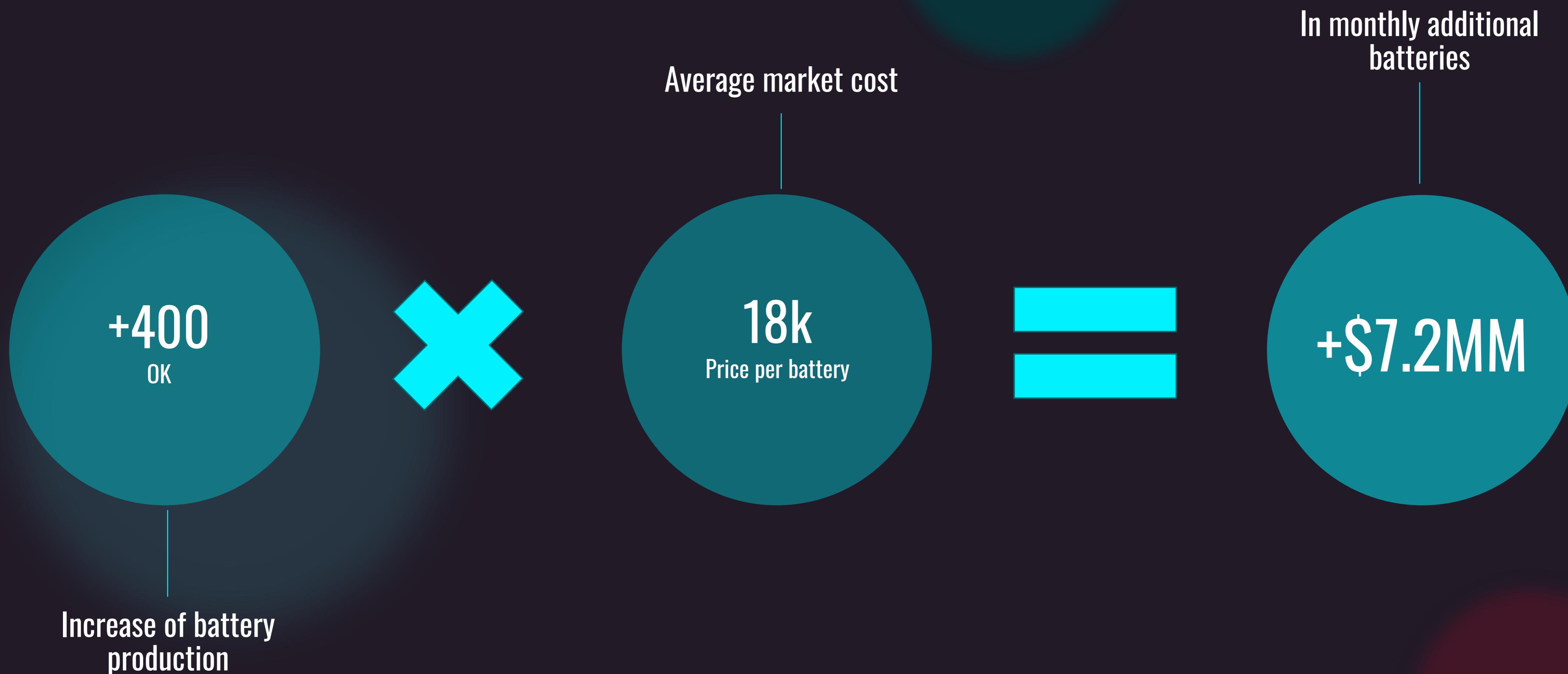
Better angle



Program robots to
maintain a steady angle

+24%
OK/Not OK*

Monetary Benefits - Income



Monetary Benefits - Costs



Next Steps

2. Obtain data regarding the robot holding variable (55% OK)

1

1. Conduct experiment with new torque and angle limits

3

3. Analyze effect of processing time in Not OK rate

2



Appendix

Counterholding Results

