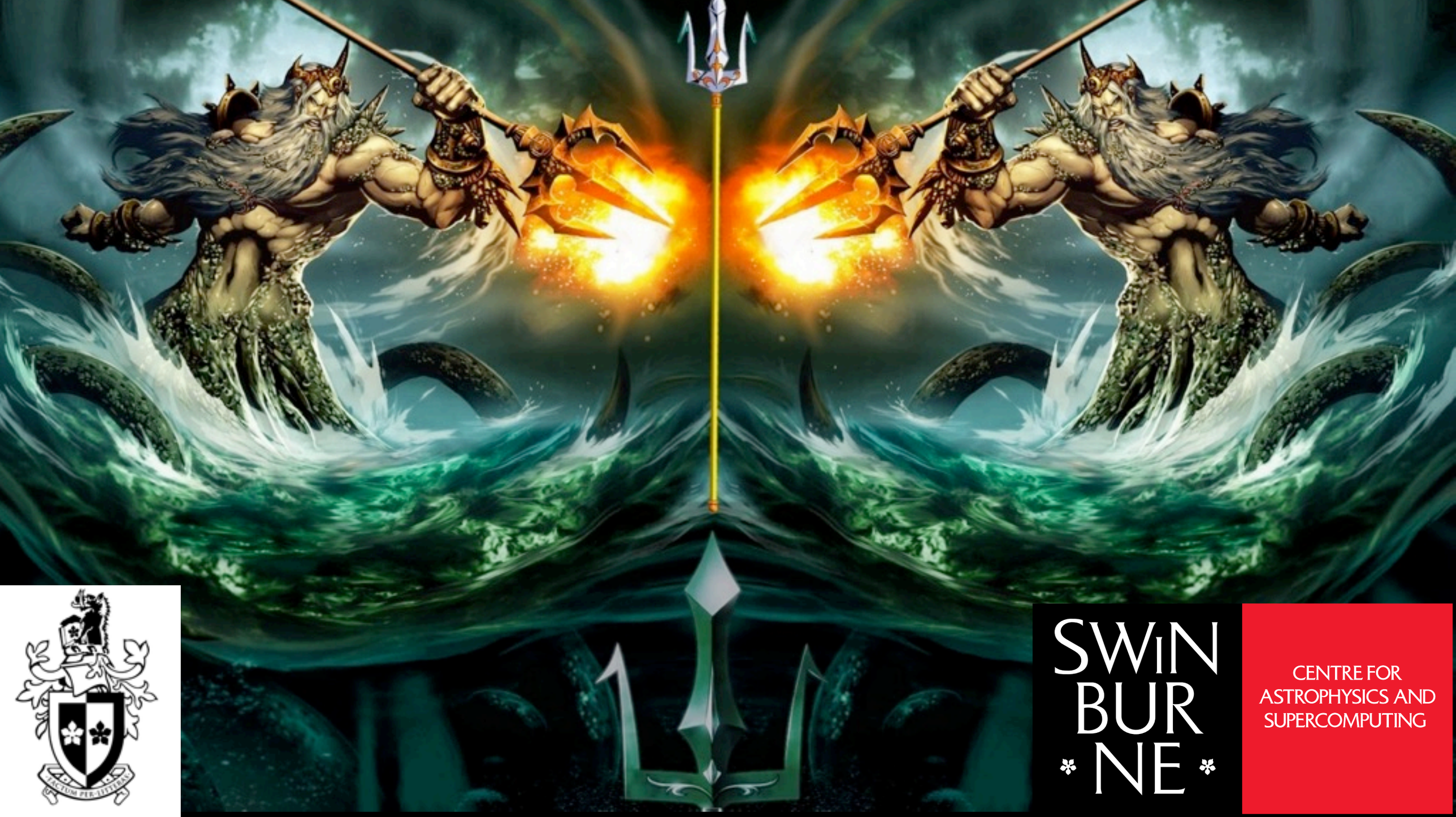


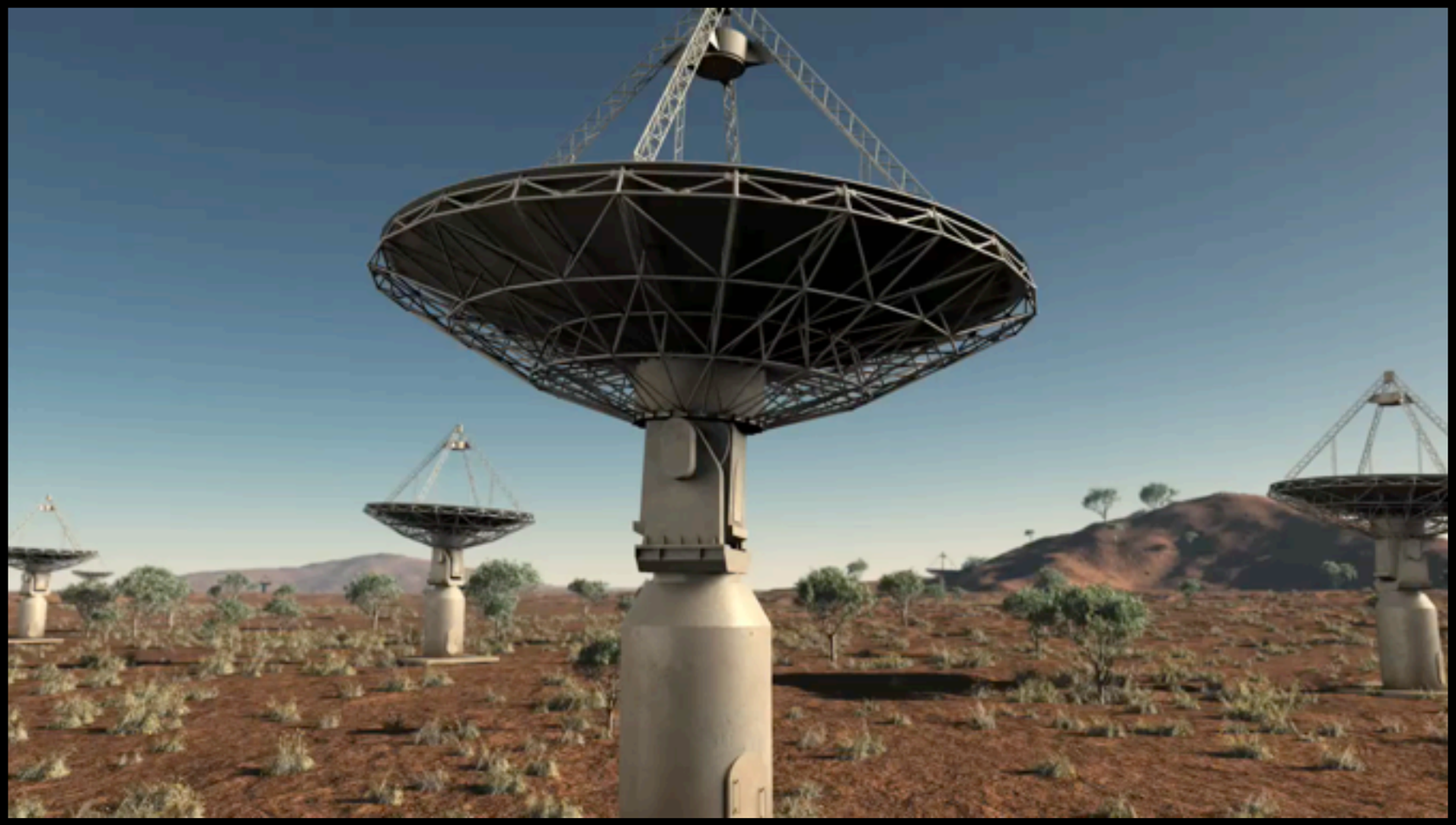
TEAM NEPTUNE

WAEL FARAH, COLIN JACOBS, SRDJAN KOTUS,
THEMIYA NANAYAKKARA, VIVEK VENKATRAMAN KRISHNAN

SWINBURNE

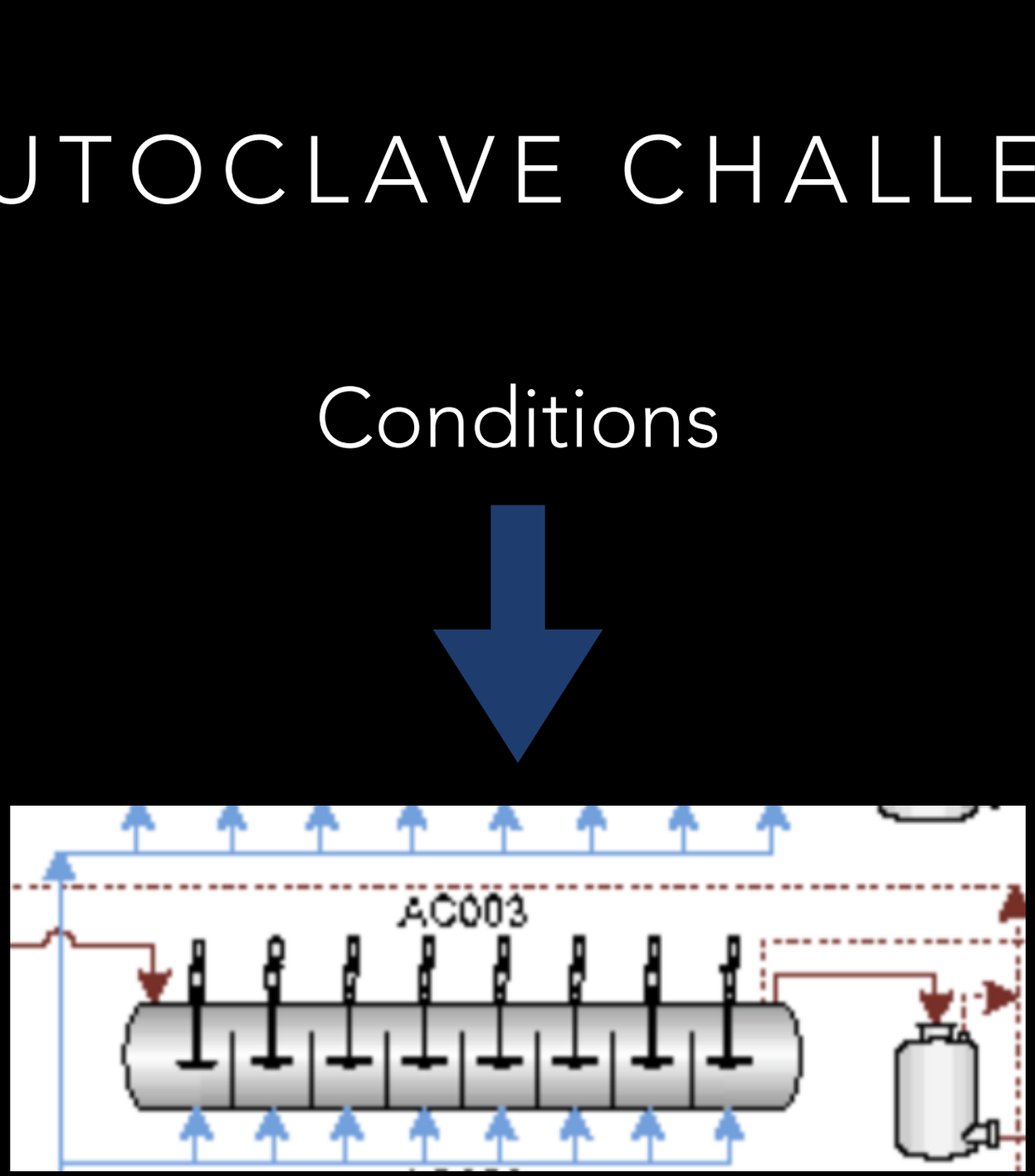
CENTRE FOR ASTROPHYSICS AND SUPERCOMPUTING

ASTRO = BIG DATA



LIHIR AUTOCLAVE CHALLENGE

Conditions



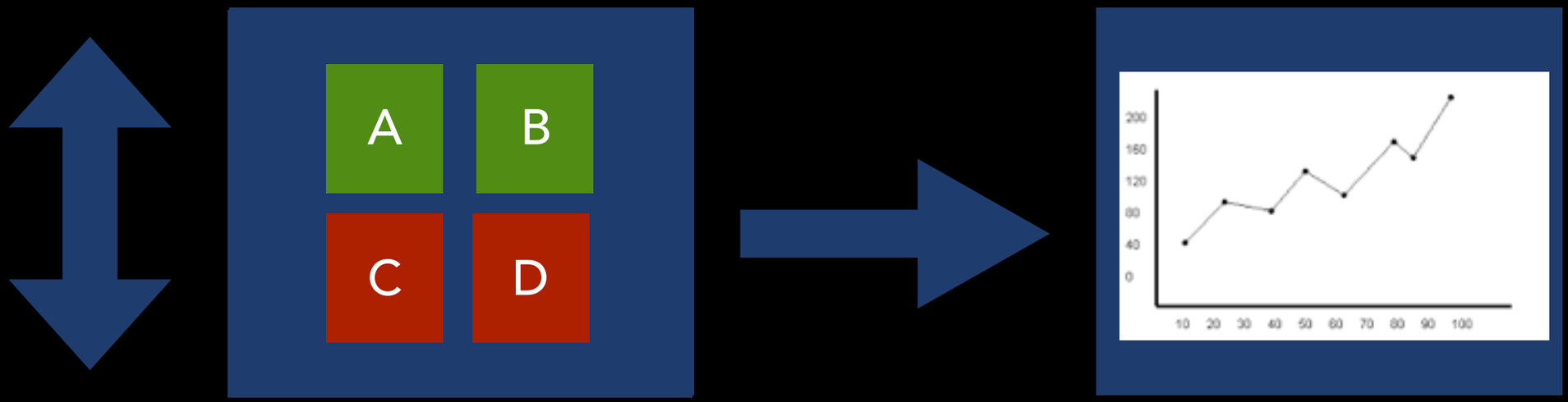
What we have: Data

- Internal sensor network, outputs every 5 minutes
- 12 months of data
- Metrics to measure performance

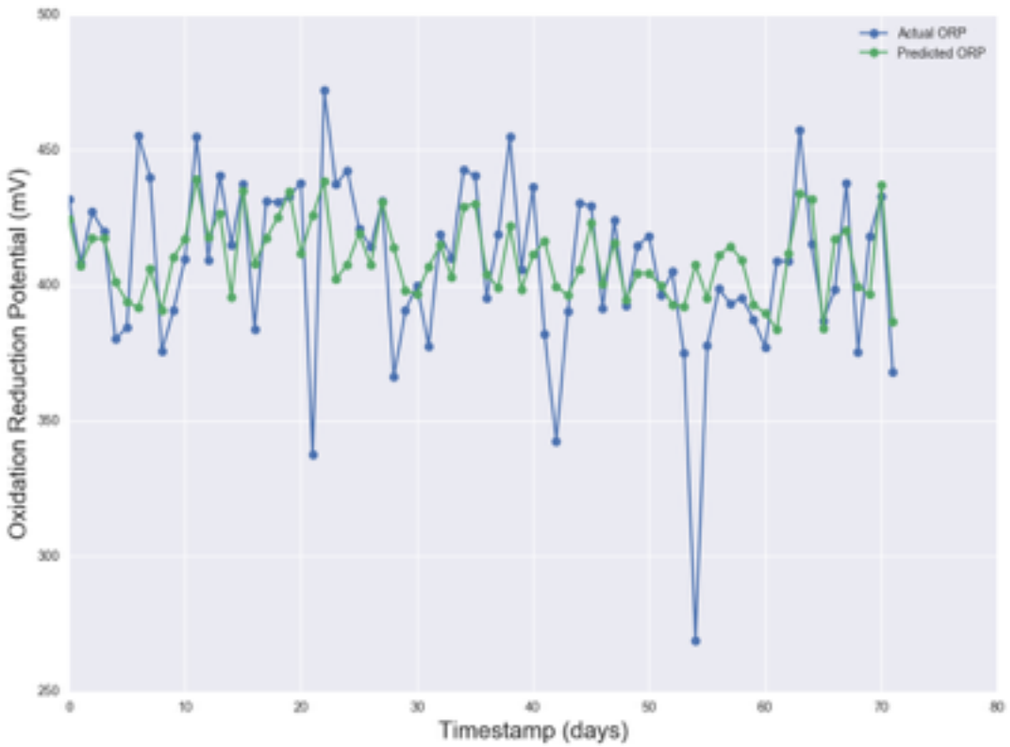
What we want: Change

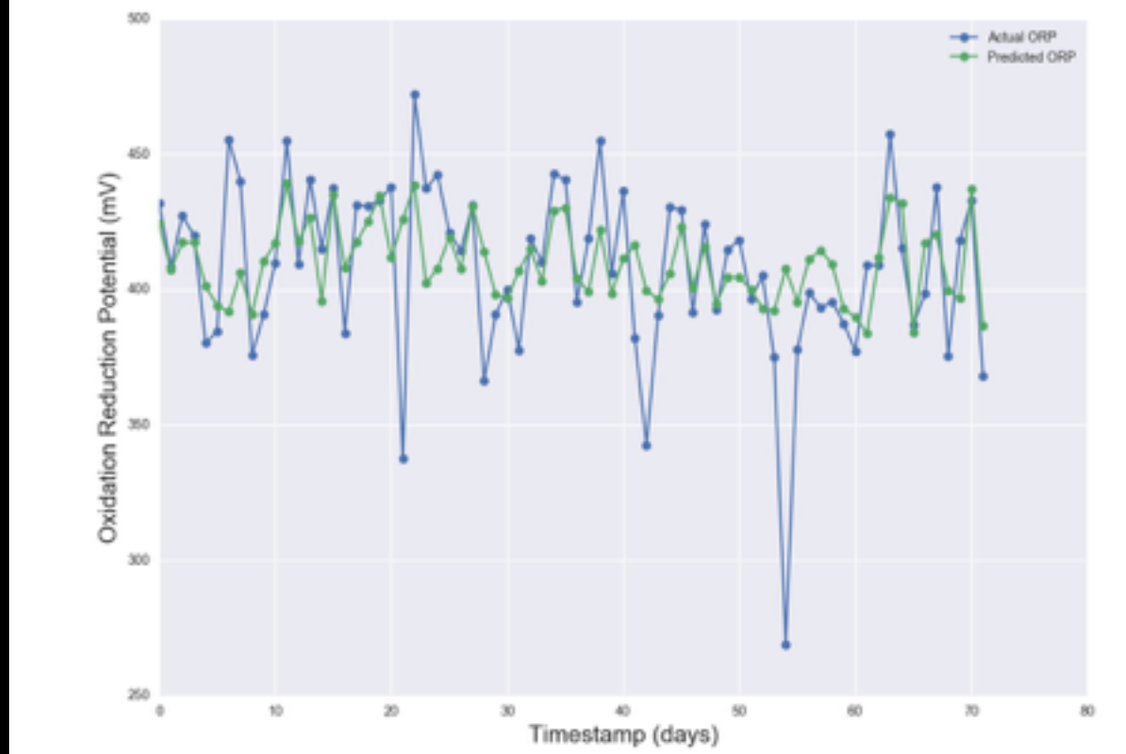
- **New insights** into the operation of these systems
- A way to **action** this understanding

WHY



BUILDING MODEL





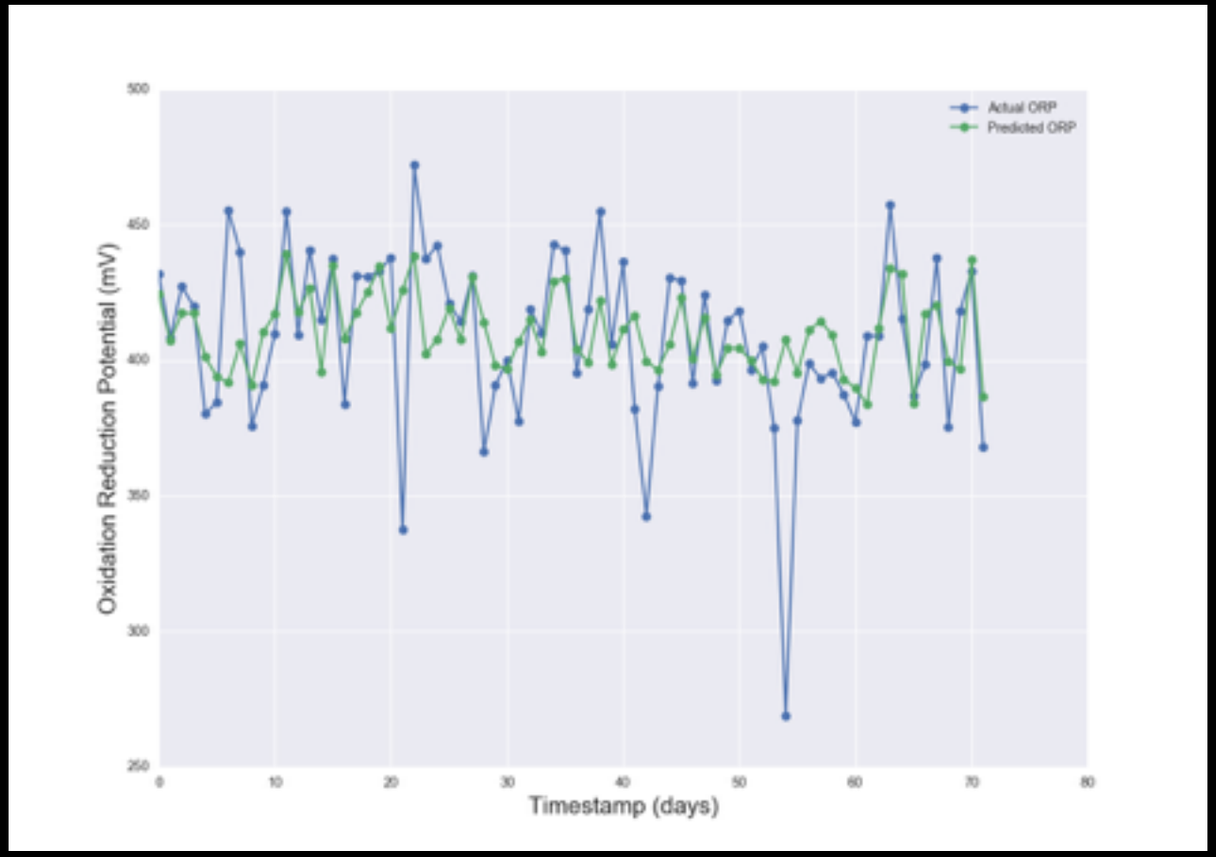
IMPLEMENTATION

- Monitor performance
- Model spots mistakes and suggests changes
- Improve the model by learning from continued operations

DEPLOYMENT

Autoclave: AC1

```
PPO:PV028:WI073       | O2_SUPPLY_MASS_FLOW    [XXXXXXXXXX       ] 60%
PPO:PV028:TI073       | O2_SUPPLY_TEMP         [XXXXXXXXXXXXXXX  ] 90%
PPO:PV001:TIC122-SP   | AC#1 Exit_Duct.        [XXXXX            ] 38%
PPO:TK2240:LIC7501-PV | TK2240 LEVEL CONTROL   [XXXXXXXX         ] 51%
```



NEXT STEPS

- Explore model in detail
- Find low-hanging fruit
- Build deployable tool

Sparge challenge