

Exploring the positive correlation between equipment booking and power consumption data

We ran a 30-day study with a top-ten pharmaceutical company in Boston and found a **73.5% average correlation** between equipment bookings in Calira and power consumption data captured by the company’s IoT monitoring system. We have also separately found that, when labs adopt a booking system, utilisation tends to rise: we typically observe a **~15% utilisation improvement** among our customers.

In other words, instrument utilisation can both be understood and improved without installing IoT hardware in labs.

This report summarises the experiment and explains why booking data gives R&D organisations a credible path to understanding and improving utilisation without procuring additional lab-based hardware.

Study overview

Scope

Company	Top 10 Large Pharma
Country	United States
City	Boston
Duration	30 days
# of users	135
# of instruments	125
Type of lab	Bioprocess and analytical

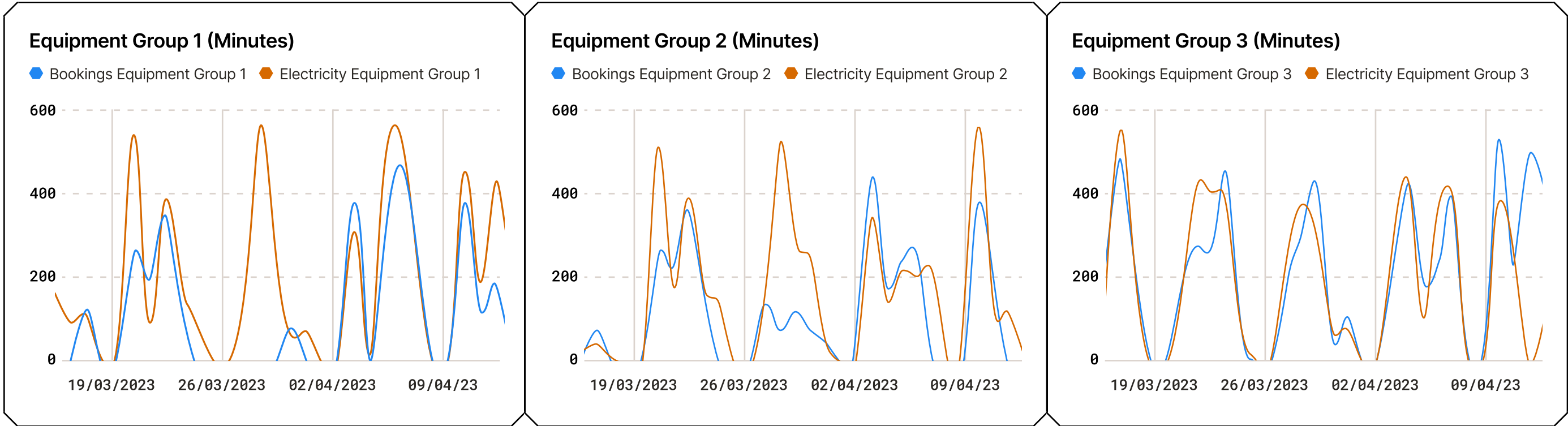
Utilization source

Reservations	Calira
Energy consumption	Power IoT provider

Outcome

Correlation equipment group 1	73.27%
Correlation equipment group 2	73.29%
Correlation equipment group 3	73.94%
Avg correlation	73.50%

Figures



Why it matters

Booking data gives insights IoT data cannot

While power data shows whether an instrument is on or off, booking data shows who used it, why, for how long, and how it fits into shared workflows. This context is essential for improving utilisation.

IoT hardware is expensive and requires installation

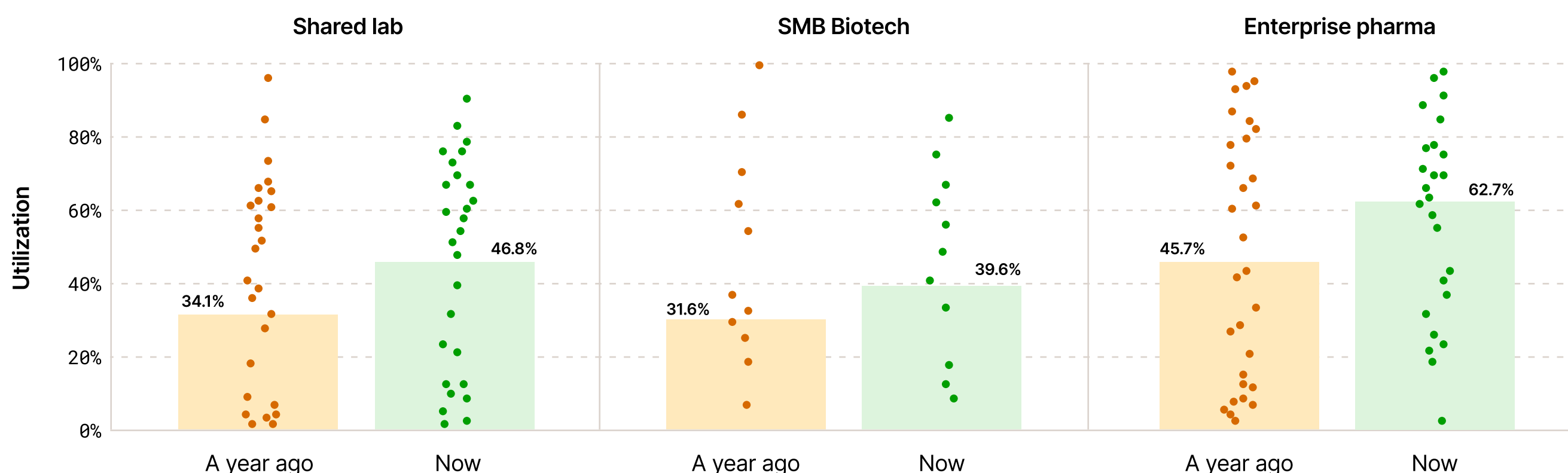
IoT monitoring requires installation, maintenance, and specialised hardware. It often delivers narrow utilisation signals without the operational detail needed to act on them.

Booking systems improve behaviour

In addition to measuring use, booking systems drive better planning and coordination. This is reflected in the **~15% utilisation increase** observed across existing Calira customers in their first year.

Industry research supports the need: McKinsey reports **average R&D equipment utilisation at ~35%**, indicating significant unused capacity in most labs.

Average utilisation improvement in n=3 labs after Calira deployment



Final thought

A strong correlation between bookings and power consumption shows that laboratories can largely rely on booking data to understand and improve equipment utilisation without installing IoT hardware.

Best-in-class lab operations teams will, in all likelihood, want to deploy both IoT and equipment scheduling at the same time. But for those teams looking to enhance visibility, reduce idle time, and gain actionable insight, a booking system is a practical necessity.

If your organisation is exploring better utilisation monitoring, we'd be happy to discuss the findings in more detail.

"Without it, we probably would have bought more kit than we really needed. Calira gave us the visibility to see where we could share or reallocate instead."



Jasmine Freeman
Lab Manager, Moa Technology



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