



FROM INSIGHT TO IMPACT

How Proximie Unlocks Hidden OR Capacity

Proximie's work with three global health systems shows how hospitals can add one more case per OR per day - without extending hours.

EXECUTIVE SUMMARY

The opportunity to improve OR efficiency is remarkably consistent across settings. And so is the impact.

Across three health systems in the US and UK, Proximie's data-led approach to OR intelligence revealed that **19%-25% of total OR time was lost to unnecessary delays, variations and inconsistencies** - and therefore represents 'opportunity time' for improving efficiency.

Modelling of interventions to cut unnecessary non-clinical delays suggested that the time unlocked would allow for **one additional procedure to be carried out per OR**, per day - without any additional staffing or time requirements.

This was confirmed in a practical implementation of changes guided by Proximie data at a high-performing specialist thoracic unit in the UK.

Most delays and inconsistencies in the OR are non-clinical, predictable and snowball throughout the surgical day.

Over 55% of time variations observed in our data were stemmed from procedural inefficiencies before first incision and after close. Only 15% were the result of clinical complexity.

Major bottlenecks in workflows follow predictable patterns, including inconsistent staff entry, a lack of synchronization in preparation, and avoidable turnover delays.

A single delay early increases the probability of further delays throughout the surgical list, increasing turnover times and risking cancellations.

Non-clinical variations and delays present universal opportunities for providers to deliver more with what they already have.

Synchronizing patient prep and materials setup reduces **OR time by up to 28%.**

Minimizing idle time between cases can reclaim up to **76% of turnover time.**

Fed by data from all OR systems, Proximie's Intelligence Suite provides real-time performance visibility throughout the surgical day, enabling dynamic day planning and proactive intervention to prevent slippage.

INTRODUCTION

In 2024 and 2025, Proximie partnered with three leading healthcare systems to investigate intraoperative processes and demonstrate how our data-led approach could reveal opportunities for making game-changing efficiency gains.

Despite differences in geography, funding models, and clinical specialisms, all three systems - two major healthcare providers in the US, and an NHS hospital trust in the UK - faced similar constraints and challenges in their surgical provision. Persistent backlogs, overstretched staff, inconsistent OR utilization and high costs presented barriers to improving patient outcomes. What decision-makers across all three lacked was a clear understanding of the root causes of these inefficiencies, where opportunities lay to address them, and how to put improvements into practice.

Using our Intelligence Suite to gather in-depth observational and performance data about surgical procedures and workflows, Proximie's objective is to shine a light on inconsistencies and variance in operations that have no valid clinical explanation. Armed with these data-led insights, providers are then empowered to make changes in targeted areas that have a real-world impact on efficiency, surgery times, patient throughput and outcomes.

Across all three settings, in different ORs delivering procedures in different specialisms, we found remarkable consistency in the latent OR capacity waiting to be unlocked - 19%-25% across settings, equivalent to one additional surgery per OR, per day. In this case study, as well as exploring these findings, we also share how one healthcare system has already used Proximie's insights to pilot recommended changes, and how that translated directly into increased surgical volume.

PROBLEM

Surgical services around the world are battling on multiple fronts to cope with spiralling costs, staff and skill shortages, and growing numbers of patients, all while trying to improve patient outcomes.

ORs have become one of the most expensive and capacity-constrained resources in any hospital, accounting on average for 35–40% of total operating costs, and face several high profile and pervasive challenges, including



Growing backlogs and spiralling waiting times. As of late 2024, around 6.28 million individuals in England were on the waiting list for elective care, 3.06 million of whom had been waiting for longer than the 18-week standard. In the US, the average wait time for a new patient appointment across multiple specialties was 38 days - far exceeding the recommended 14-day benchmark.

Workforce shortages. According to a recent survey carried out by Proximie of surgical leaders, 73% reported team members leaving due to poor work-life balance. And in work, a common problem is staff members having their time taken up with non-clinical issues caused by various inefficiencies. For example, 50% of OR staff report spending over an hour daily resolving scheduling conflicts or looking for misplaced equipment.

Frequent cancellations, either due to scheduling conflicts or staff shortages. In the US, 7.2 million surgical cancellations each year cost hospital systems an estimated \$32.7 billion. In the UK, 135,000 on-the-day cancellations cost the NHS £400 million annually - 80% of which could be avoided.

The question providers have long faced in turning around these challenges boils down to how they can do more with less? Or, how can they improve the efficiency of current operations so that they can clear backlogs and cope with growing patient numbers without more ORs and more staff?

Even attempting to answer these questions depends on the belief that there is extra capacity to be unlocked in surgical provision, that the root causes of all the delays and variations and inconsistencies that lead to scheduling and capacity issues stem from non-clinical breakdowns in processes and a lack of coordination - things that can be improved. The majority of practitioners accept this is the case. What they have lacked to date is the real-time insight from surgery to surgery throughout the day to see where inconsistencies and variances occur, and therefore understand where and how improvements can be made.

The majority of surgical professionals and administrators understand this, too. In our survey of over 100 OR leaders, 75% said that replacing manual data input with real-time data collection across all OR functions would be key in helping them treat more patients with the same amount of resources.

SOLUTION

Proximie is a healthcare platform designed to help hospitals and health systems unlock hidden capacity in their operating rooms through data-led intelligence. Cloud-based and systems-agnostic, the Proximie platform serves as a single source of truth for all performance data and measurement in the OR, automating and streamlining data capture and eliminating the need for manual data entry.

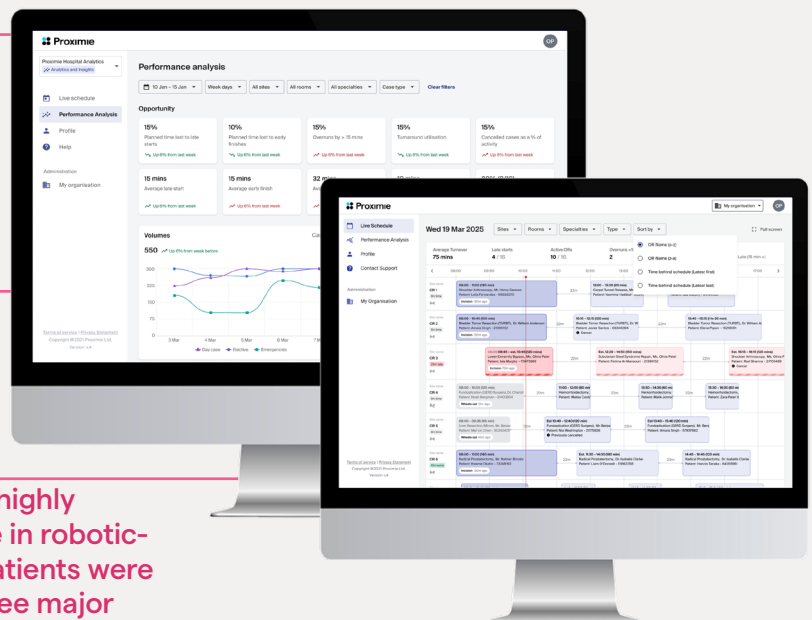
At the platform's heart, our AI-powered Intelligence Suite captures data from digital systems in the OR and feeds it into visual analytics dashboards. From these, practitioners can monitor performance and progress in real time, and they can see the day plan change dynamically in response to clinical requirements. This level of real-time, 360-degree insight throughout procedures and throughout the surgical day empowers OR teams to tackle challenges and find data-led solutions by asking the right questions - and it's this that helps drive meaningful, sustainable improvements.

All three health systems we worked with were keen to see whether Proximie's real-time and retrospective reporting capabilities could identify opportunities to streamline workflows, reduce delays, and increase procedural volume in their ORs, and to what scale. The projects we undertook comprised of:

In the first health system, a study of procedures in three surgical areas (robotic bariatric surgery, vascular, and endoscopy), covered more than 700 hours of video and 10,000+ data points from surgical devices, captured and analyzed across 35 days.

In the second health system, a four-month study of more than 120 cases in three ORs was followed by a deep-dive six-week analysis of 20 subprocesses.

In the third health system, the focus was on a highly optimised, high-performance specialist centre in robotic-assisted thoracic surgery. Procedures for 41 patients were analyzed across 14 lists, with an average of three major resections per list.



FINDINGS AND ANALYSIS

Across all the different ORs, surgical specialisms, hospitals and health systems involved in these three separate projects, we found remarkable consistency both in the opportunities to make efficiency gains, and in the scale of the opportunity.

Overall, our analysis consistently revealed that between 19% and 25% of total OR time was lost to idle time, uncoordinated workflows, and delays in preparation and turnover, and therefore recoverable as "opportunity time".



Broken down by health system, our findings were as follows:

24%

of total OR time across three surgical areas in the same US health system could be cut without clinical compromise.

By bringing the bottom performance quartile into line with the average, we found that our other US partner could reduce avoidable delays by

25%

Even in a high-performing robotic thoracic surgery unit,

19%

of OR time per case was identified as recoverable.

Most delays are driven by process, not clinical need

It is a fact of life in surgical services that procedural times vary, and some of this variability has unavoidable clinical causes. But our analysis shows that clinical causes are by no means the biggest driver of time variations. In one of our three studies, we found that just 15% of surgical time variations were caused by clinical complexities, while 55% were due to variations and inconsistencies in processes that were wholly avoidable.

It is these non-clinical and avoidable delays and variations that present the opportunity to providers. Thanks to Proximie's unique approach harnessing comprehensive real-time data capture across all OR systems, we are able to pinpoint precisely where unnecessary variations, inconsistencies and delays occur in surgical processes. These insights then give providers a roadmap for implementing effective efficiency gains.

Across our three studies, we found the following common inconsistencies (and therefore areas of opportunity):

Delays in material and patient preparation: OR data evidence in one US health system showed practitioners having to search through disorganised case carts to find materials, or having to walk back and forth across relatively large distances to fetch items from sterile instrument tables, adding up to variations of up to 16 minutes in materials prep. In our analysis of vascular surgery, idle times of up to six minutes were observed after patients were wheeled in because materials were not ready. In our other US setting, materials prep took an average of 32.4 minutes after wheels in, with observations of delays in acquiring equipment in 30% of subprocesses.

Delays in staff entry to the OR: In one of our US settings, we observed significant variations in when staff entered the OR, with surgeons present 30 minutes before first incision in 20% of cases, but entering the OR less than five minutes before surgery started in 30% of cases. In 20% of subprocesses, delayed entry of staff to the OR was cited as causing disruption of workflows. In the other US-based health system, delays in draping and first incision were attributed to personnel not being present.

Inconsistent turnover: In the specialist UK-based thoracic unit, 76% of turnover time was identified as inactive, offering a major area for improvement. In another setting, observed turnover time ranged widely from 12 to 60 minutes.

Across all of the above, we observed a consistent lack of synchronization between patient, materials, staff communication, cleaning and handover procedures, leading to idle times and delays. For example, patient preparation, anaesthesia and material setup were often carried out sequentially, when significant amounts of time between wheels-in and first incision could be saved by different teams coordinating these processes in parallel. From data collected at one US health system, for example, our modelling showed that better alignment of materials and patient prep could reduce total OR time by 28% in vascular procedures, and 12.5% in bariatric procedures.

Another important trend we observed was how inefficiencies tend to have a downstream effect, impacting on turnover times, magnifying delays later in the day and ultimately disrupting scheduling. For example, in one of our settings we found that 70% of turnover variations could be predicted by the hour of the day, and that for every hour later surgery starts, turnover time increases by an average of 3.24 minutes. This in turn accelerates delays, with every 10 minutes added to turnover time being associated with anaesthesia taking two minutes longer to complete in the next case.

There are no clear reasons for this cascading of delays and disruptions, so the assumption must be that the disruption of scheduling creates further desynchronization between processes, and perhaps contributes to increased staff fatigue and lower morale. But what is clear is that schedule slippage and not having the means to remedy it in real time increases the likelihood of staff having to work overtime and procedures being cancelled on the day.

IMPACT

Armed with our findings, it was over to the providers to consider how they could turn the opportunity opened up by identifying unnecessary delays into real-life impact in their ORs. In the case of our two US partners, we helped them model the impact of potential changes in further feasibility studies. The UK-based thoracic unit, on the other hand, went a step further and used our data to test out changes in its workflows.



Again, what is remarkable is the consistency of the impact. In our two US settings, the feasibility models showed that the respective **24% and 25%** efficiency opportunities revealed by our data **translated into one additional case per list, per day.**

This was then confirmed by the practical implementation by our UK partner. Testing out changes suggested by our data across lists carried out by the same surgeon, the team compared operational milestones before and after the changes - and concluded that they would indeed **open the door to an extra procedure per list**, with no additional OR time required.

Across our three providers, this impact would mean:

A \$90m per year revenue opportunity,

calculated as a conservative three additional cases per OR per week across 60 ORs in the health system

Extra capacity to deliver
150 additional cases

per OR per year, unlocking
\$1m in additional revenue per OR

An extra

5,000+ additional procedures per year

at our UK hospital, underlining the transformational potential even in a high-performing specialist unit.



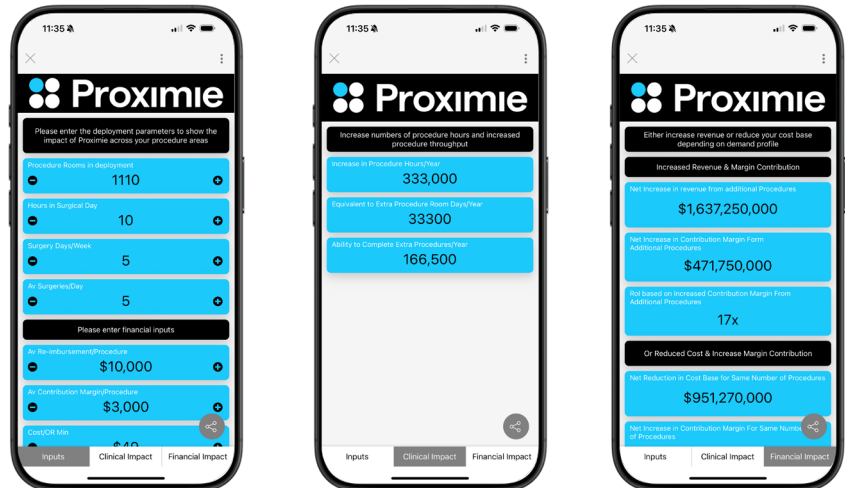
PROXIMIE IMPACT CALCULATOR

Every OR has untapped potential that translates into additional cases performed daily, revenue gains and more patient treated. See what your numbers look like with Proximie's Impact Calculator.

The Proximie Impact Calculator helps hospitals quantify the clinical and financial value of optimizing OR efficiency. By inputting key data such as number of ORs, average surgeries per day, and reimbursement rates, users can model potential gains from reducing delays, improving workflow coordination, and reclaiming "opportunity time."

The tool generates estimates for both clinical capacity (extra procedures, hours, surgical days) and financial returns (revenue gains from additional throughput or cost savings from improved efficiency). Built on real-world benchmarks, it provides hospital leaders with a realistic, data-driven view of what's possible - without expanding infrastructure or staff. See what your OR could unlock.

[Try the Proximie Impact Calculator](#)



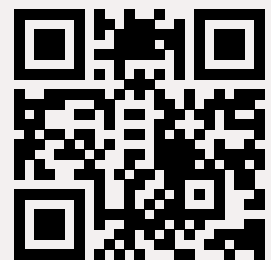
CONCLUSION

Proximie's analysis across three global health systems has shown that despite different structures and specialties, delays and variations in OR processes follow common, correctable patterns. Being 'correctable' is important to the pursuit of efficiency gains in the OR. By showing that non-clinical, procedural variations, particularly prior to first incision and after close, have a much more significant impact on total OR time than intraoperative and clinical causes, our findings confirm that positive change to OR efficiency is realistic and achievable.

Just as importantly, our analysis provides clear insight into how these gains can be achieved. And, thanks to the follow-up study in the UK, we now have confirmation that the gains modelled from our data can be realised in practice. When actioned by the UK hospital, the recommended changes delivered tangible capacity gains in line with expectations. The addition of one case per list is clinically significant. When scaled across a hospital or health system over a period of time, it is more than enough to have an impact on shortening waiting times, improving patient access and sticking to treatment timelines.

Ultimately, this is the opportunity that presents itself to healthcare systems, their surgical teams and their patients. The ability to carry out more procedures in the same timeframe will help to tackle backlogs, deliver treatment to more patients within recommended timeframes, improve quality of life for patients and, by reducing overwork, overtime and stress, quality of life for practitioners, too. In healthcare systems where it is applicable, the additional throughput also creates a revenue opportunity.

As healthcare systems confront rising demand and limited resources, intelligent OR platforms like Proximie offer a new path forward, replacing guesswork in the pursuit of optimised ORs with robust, data-led intelligence.



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