

Procuring Emerging Technologies in the NHS: Lessons from Ambient Voice Technology (AVT)

A whitepaper from the Health Innovation Network South London (HIN)

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Introduction & context

Procuring emerging technologies, particularly artificial intelligence (AI) tools, within the NHS poses a unique set of challenges. Markets evolve quickly, supplier capabilities change month to month, and there is often limited evidence available to guide decision-making.

Ambient Voice Technology (AVT), a form of non-clinical AI designed to support clinicians with real-time documentation and workflow assistance, is a prime example of a technology experiencing rapid growth, high interest, and evolving functionality.

In 2023–2025, multiple pilots of AVT were undertaken across the NHS. While these pilots demonstrated strong potential to reduce administrative burden and improve staff wellbeing, they also highlighted the difficulties of assessing emerging technologies: evidence bases were limited, standards were inconsistent, and vendors differed widely in maturity. Demand signalling from the NHS was strong, yet often unclear; organisations knew they needed solutions but were not always sure what was possible or what features would be essential in practice.

Amid this complexity, South West London Acute Provider Collaborative (SWL APC) commissioned the Health Innovation Network South London (HIN) to support the procurement of AVT across its trusts. The experience has generated a set of insights that can support other NHS organisations embarking on similar procurement journeys, whether for AVT or for other emerging AI enabled technologies.

Drawing on [our experience with AVT](#) and across multiple AI supported initiatives over the years – including the [TeleRehaB Decision Support System \(DSS\)](#) and [Robotic Process Automation \(RPA\)](#) – the HIN is well placed to translate learning from this work into practical guidance for systems facing similar challenges.

This whitepaper sets out:

1. A practical, high-level view of pre-procurement and early procurement activity for emerging technologies
2. A detailed case study of AVT procurement in southwest London
3. Lessons and insights applicable to AVT and broader non-clinical AI tools
4. Resources and details for further support

While this paper presents a structured view of the procurement journey, in practice the process was iterative rather than linear. Some activities progressed in parallel, and others evolved over time as understanding of the technology, market, and system requirements developed. This reflects the reality of working with emerging technologies, where established pathways are still forming.

Supporting the procurement journey

Key steps for procuring emerging technology



A detailed description of the procurement journey and its key steps is included in [Appendix A](#).

Case study: procuring Ambient Voice Technology (AVT) in south west London

How the steps played out in practice

The procurement of AVT in southwest London brought together all four acute trusts facilitated by the SWL APC, creating a significant opportunity to deliver impact at scale and to combine expertise across the system. Early pilots at Kingston and Richmond NHS Foundation Trust and St George's University Hospitals NHS Foundation Trust offered useful insights into how AVT could support clinical teams, and these experiences informed discussions about what a wider deployment could achieve. As interest in AVT grew, so did the recognition that a coordinated, system-wide approach would enable trusts in south west London to shape a shared set of priorities and requirements. This collective starting point helped establish a shared direction, although requirements and priorities continued to evolve as understanding of the technology developed.

Building the right multidisciplinary team

A wide range of stakeholders were involved from the outset, bringing together expertise from clinical and operational teams, clinical safety, legal and commercial specialists, digital and data teams, procurement colleagues and transformation leads. Clinicians from both outpatient and emergency settings contributed valuable insight into day-to-day workflow needs, while corporate and technical teams helped ensure that considerations such as safety, integration, data flows and implementation planning were fully reflected.

This multidisciplinary collaboration played an important role, although aligning different perspectives and priorities required ongoing iteration throughout the process. Each group contributed a distinct perspective including clinical priorities, operational feasibility, digital integration requirements, commercial considerations, and system-wide transformation ambitions. Combined, this created a well-rounded and future-focused view of what the AVT solution needed to deliver. Working collectively in this way helped ensure the resulting specification captured the needs of all four trusts and laid strong foundations for a consistent and impactful system-wide approach.

Understanding the problem and system need

Although the burden of clinical documentation was well understood, the specifics of how AVT should and could integrate into varied clinical workflows required careful articulation. Different services had slightly different needs, and the specification had to reflect these differences without becoming impractically long or overly complex.

Understanding and engaging the market

The HIN began by conducting a market review to assess the emerging AVT landscape. The market is evolving rapidly: new suppliers are entering the space, established vendors are enhancing their capabilities, and a varied evidence base is being developed across solutions. This market review enabled the SWL APC and trusts to identify which providers were appropriate to engage early in the programme and to gain a clear understanding of the key opportunities and risks associated with AVT.

A pre-procurement market engagement event was critical. It enabled suppliers to understand the ambitions as well as the specific southwest London context (e.g., digital infrastructure). Similarly, it informed NHS colleagues about vendors' capabilities, what to consider as part of a procurement specification, what timeframes were realistic, and to learn from implementations elsewhere, including what levels of tailoring are both optimal and feasible. It also gave NHS colleagues an opportunity to understand potential future developments in the technology, which was particularly important given its emerging nature. The event was a great opportunity to bring colleagues together from the four different trusts to build momentum behind the project and share ownership of the upcoming procurement exercise.

Developing the business case

Developing the business case was an essential part of the process, drawing on evidence from other NHS deployments to help illustrate likely benefits and realistic expectations for impact. A key focus was understanding which financial benefits could be confidently quantified, and where financial impact cannot yet be attributed to AVT adoption because evidence is still nascent.

Creating business cases for emerging technologies is inherently challenging, so input from a broad range of stakeholders was essential to strengthen the narrative and ensure accuracy. In this example, the HIN team held three peer-review sessions with multidisciplinary colleagues from all four trusts to test assumptions, ensure completeness and bring the right expertise to each section of the case.

Designing the specification

When designing the specification, the programme adopted a structured, collaborative and multidisciplinary approach, supported by clear governance. A pan-system working group brought together clinical, operational, digital and commercial leads from across participating trusts, using the [NHS T.E.S.T framework](#) as a common starting point to structure requirements and shared expectations. Early discussions surfaced differences in local workflows, digital maturity and risk appetite between trusts, as well as varying views on what should be mandated versus left flexible.

Consensus was reached through regular, facilitated meetings that focused on prioritising, reprioritising and stress testing requirements against both trust needs and market capability. Insights from the pre-procurement market engagement workshop were used alongside this process to validate what suppliers could realistically deliver and to identify areas where ambitions needed to be refined. An initially extensive specification was deliberately streamlined through iterative review, ensuring the final document remained robust but deliverable.

Proposals were escalated and assured through the SWL APC Board, while individual trust leads tested and validated draft requirements locally before feeding back into the collective process. This combination of system-level governance and trust-level validation ensured decisions were made transparently, reflected shared ownership, and resulted in a specification that was grounded in real-world workflows, aligned with market readiness, and adaptable to local implementation.

Navigating procurement frameworks and processes

Navigating the procurement framework was an important part of the process, and the HIN team worked closely with procurement colleagues to build a shared understanding of how to apply the chosen NHS framework, in this case the Crown Commercial Service (CCS) Artificial Intelligence Dynamic Purchasing System (AI DPS). Using an approved framework supported a compliant and transparent approach, although applying an existing framework to an emerging technology required interpretation and adaptation. The framework also provided a clear and consistent route for engaging suppliers in a rapidly developing market, giving the trusts confidence that the procurement was being carried out in a structured and governed way.

Multidisciplinary involvement continued to play an important role during vendor evaluation and selection. Rather than all stakeholders reviewing all content, clinical, operational, digital, data, clinical safety, commercial and transformation colleagues focused on assessing those aspects of submissions that aligned most closely with their specialist expertise, against the agreed criteria. This targeted but coordinated approach ensured proposals were subject to appropriate professional scrutiny while avoiding duplication, supporting a balanced and well-rounded assessment overall. The structured governance provided by the procurement team, combined with the collective insight drawn from these specialist reviews, enabled the system to select a

solution that aligned with the specification.

Insights and lessons learned

From this process, several key insights emerged:

- **Build in enough time** – due to the range of perspectives required and adaption needed to standard procurement processes, emerging technology procurement usually takes longer than expected
- **Establish clear leadership and governance** – particularly in high interest, multi-stakeholder contexts
- **Engage multiple stakeholders early and deeply** – clinicians, digital and data teams, legal and commercial teams, procurement teams and operational leads all shaped the success of the process
- **Understand the market from the outset** – it clarifies what is possible before defining what is required
- **Use pre procurement market engagement to bridge expectations** – it helps suppliers understand NHS needs and helps the NHS understand supplier reality and future potential
- **Manage evidence expectations** – emerging tech rarely has the level of evidence seen in established technologies
- **Learn from elsewhere** – a lot can be learned from those who have explored the same technologies
- **Take a flexible, agile approach** – procuring emerging technology is unlikely to follow a traditional, well-established process.
- **Select an appropriate procurement framework** – supports compliant, scalable and value-driven adoption while effectively managing risk, cost and interoperability.

Relevance to other technologies

While this case study focuses on AVT, the approach described here is highly transferable to other **non- clinical AI technologies**, such as:

- agentic and back-office automation tools
- virtual administrative assistants
- predictive workflow tools
- technologies to reduce missed appointments

For clinical AI tools, established procurement principles provide a foundation, but the process is substantially shaped by additional layers of clinical safety oversight, regulatory compliance, risk monitoring and ongoing assurance, reflecting the higher level of scrutiny required for

technologies used in patient care.

An additional point to note is that as AVT evolves and develops, the procurement process itself may change, particularly if AVT becomes a regulated medical device (e.g., [Class II](#)).

Conclusion

The procurement of AVT across south west London trusts provide a powerful example of how the HIN supported the APC and teams within trusts to navigate the complexities of emerging technology markets.

By combining multidisciplinary engagement, structured market understanding, clear specification design, and adaptive procurement processes, NHS organisations can make confident and informed decisions even in emerging markets, with rapid technological change.

Importantly, this work reflects a pragmatic approach taken under real-world constraints. The intention is to share learning that can inform and accelerate future work.

If you are considering procuring AVT or other emerging digital and AI technologies, your local Health Innovation Network can support you - you can find contact details for your local network [here](#).

If you are in south London, we can support you with:

- AI and digital procurement, working with your procurement teams
- Pre procurement market engagement design and facilitation
- Market reviews, horizon scanning and market engagement
- Business case development
- Broader digital transformation and implementation support
- Real-world evaluation
- AVT-specific market information, procurement guidance, or implementation support

To discuss how we can help, please get in touch.

Appendix A: Key steps for procuring emerging technology

Step 1: Build the right multidisciplinary team

Bring together clinical, operational staff leaders, digital/IT, data, procurement, IG, legal, finance, transformation and commercial colleagues early.

Step 2: Understand the problem and system need

Clarify the challenge that needs to be addressed and identify the outcomes that technology should achieve.

Step 3: Understand and engage the market

- **Conduct a market review** to explore available solutions and market maturity
- Use **pre procurement market engagement events** to signal NHS needs and understand vendor capability and readiness

Step 4: Develop the business case

Develop a business case using NHS evidence and multidisciplinary peer review to test assumptions and set realistic expectations.

Step 5: Iteratively design the procurement specification

Co-develop requirements with a multidisciplinary team to agree essential needs and priorities.

Step 6: Navigate procurement frameworks and processes

Understand the structure, requirements and limitations of relevant frameworks (e.g., Dynamic Purchasing System).