

Using Tech-Enabled Solutions to Boost Productivity and Sustainability in Clinical Trials

Pharmaceutical outsourcing: By Kevin Landells, Vice President and General Manager, IQVIA IRT

Clinical trials are expanding rapidly, with government statistics listing 472,608 studies currently taking place across 222 countries. In this landscape, sustainability has become a top priority, reshaping the way clinical trials are conducted.

By embracing orchestrated clinical technology strategies, organizations can enhance data quality and align with pressing sustainability concerns. Investing in the appropriate technology solutions can increase trial productivity and have a direct effect on sustainability goals. All in all, it can simplify the site's technology experience and reduce companies' carbon footprint. So, how can we achieve these efficiencies?

Current clinical trial challenges

The clinical trials industry is grappling with unprecedented challenges that impact the efficiency and effectiveness of trials and have significant implications on patient participation, quality of outcomes, and — as mentioned before — sustainability. Escalating costs exert economic pressures on trials, demanding innovative solutions to maintain environmental pledges. Container costs have surged by a staggering 250%, and the prices of API precursors have risen by 100% to 200%. Additionally, overall inflated fuel costs and volatile spikes in the natural gas market have added to the financial burden. These monetary pressures emphasize the need to align resource optimization with sustainability goals and consistently reduce waste.

Amidst financial burdens, clinical trials are also grappling with the abundance of patient-facing technology and attempting to decrease complexity while increasing patient retention and recruitment. Sites are struggling to connect disparate data sources and can be overwhelmed by reconciling multiple data sources and tackling data redundancy. Organizations are learning that not all technology, integrations, or automation strategies result in the same outcomes and are beginning to seek out technologies that will alleviate trial challenges while improving quality and enhancing processes.

Ongoing shortages in essential raw materials and labor impact trial execution and emphasize the need to conserve resources. Logistical challenges, such as limited drug and API resources, expensive comparator drugs, short IP expiration dates, and high delivery volumes, add to financial strains. Reducing shipping and energy costs is an economic imperative in this environment. Adopting a comprehensive and integrated platform approach, such as embracing advanced drug supply tools, minimizes expenses while promoting efficiency and productivity.

The current state of trial supply chain challenges underscores the essential need to conserve efforts and supplies; this is the only way to address the productivity and technology hurdles mentioned before. Automation of supply strategies based on real-time trial data and deep partnerships in global logistics leads to more efficient and sustainable practices.

Evaluating technology vendors for sustainable partnerships

Optimizing clinical supply and meeting sustainability goals requires partnering with technology vendors specializing in tools and services that deliver on both fronts. The right Interactive Response Technology (IRT) partner can play a critical role in achieving precise supply chain modeling, accurate forecasting and automating supply strategies based on real-time trial data. They can also help in establishing robust global logistics partnerships that reinforce sustainability practices.

Partners should offer innovative solutions that streamline workflows, optimize supply chains, and contribute to environmental goals. Evaluating a vendor's clinical trial safety controls and protocols ensures their technology solutions meet regulatory requirements and, at the end of the day, protect patient well-being. With the increasing reliance on digital platforms, robust data privacy measures are non-negotiable. Potential technology partners must also have strong cybersecurity measures to maintain trial integrity and data security.

Embracing technology for future success

Strategic investments in technology solutions have the power to reshape and redefine trial productivity and sustainability. Adopting advancements that simplify the site technology experience and re-move barriers to patient technology adoption significantly reduces companies' reliance on outdated paper-based processes. The benefits of this approach include:

Eliminating barriers to patient tech adoption

Simplifying the site technology experience helps trials improve patient engagement. User-friendly interfaces and streamlined workflows are key components of this strategy, supporting an environment where patients can be connected without having to be on-site, while sites get all the data and information needed.

Enhancing collaboration and integration

Leveraging technology to encourage collaboration and integration across trial functions leads to more efficient and sustainable practices, for example forming deep partnerships in global logistics and integrating platforms like eConsent, IRT and electronic clinical outcome assessments (eCOAs) help minimize the paper-based tasks which are also reliant on manual work.

Reducing reliance on paper

As mentioned before, the move from paper to digital platforms boosts efficiency and aligns with sustainability goals. By cutting back on paper use, trials can minimize waste and demonstrate a commitment to environmental responsibility.

Reducing IP waste to lower carbon footprint

Intelligent solutions that cut down on IP waste contribute to both cost savings and environmental sustainability. Tools that enable precise tracking and management of inventory prevent unnecessary waste and reflect a mindful approach to innovation and environmental care.

Minimizing unnecessary shipments

Using near-real-time data to cut down on excess shipments and waste is essential for companies to reduce their carbon footprint. Accurate resupply forecasting through technology helps avoid overstocking and aligns with both economic savings and environmental sustainability.



Integration and automation strategies

Integration and automation stand out as vital strategies to maximize efficiency and contribute to sustainability. These strategies go beyond streamlining processes to enable more precise and responsive operations, benefiting sponsors, sites, and patients.

- **Streamlining Workflows:** Integration and automation enable seamless workflows, reducing manual efforts and minimizing errors. This leads to faster decision-making and more efficient trial execution.
- **Enhancing Data Accuracy:** By automating data collection and integration, trials can ensure higher data accuracy and real-time insights. This contributes to better forecasting, planning, and alignment with sustainability goals.
- **Facilitating Collaboration:** Integration fosters collaboration across different trial functions, enhancing coordination and efficiency. This interconnected approach supports both productivity and environmental responsibility.
- **Integrating Processes:** Integrating eConsent, IRT, and eCOA into a unified platform simplifies the technology experience. This leads to better patient engagement and streamlines site operations.
- **Improving Compliance and Monitoring:** A unified platform ensures consistent compliance with regulatory requirements and facilitates real-time monitoring. This enhances both trial integrity and sustainability.
- **Reducing Paper and Waste:** The shift from paper-based processes to integrated digital platforms reduces waste and supports sustainability objectives.

Integrated clinical trial platforms offer a number of advantages over traditional approaches, such as automation of tasks, reduction of errors, and improved data quality. Additionally, these integrations facilitate collaboration across trial functions, enhance patient engagement, and improve sustainability.





Future perspectives: What's next?

Sites are receptive to technology solutions that can improve trial insights, data quality, and patient support. However, technology proliferation without proper integration can add complexities, increase burdens, and prolong trial timelines. Product development strategies and integration roadmaps, along with expertise and guidance from project management and customer services teams, are a must for the successful integration of technology solutions.

Successful integrations will provide measurable benefits to sponsors at every stage of the clinical trial process, incorporating sponsor feedback and collaboration to advance trial solutions. Investments in new solutions, services, and tools will also simplify the site technology experience, eliminating barriers to adoption and reducing reliance on paper systems.

Reshaping the future of trials

Investing strategically in technology solutions is not just about enhancing trial productivity; it's about reshaping how to conduct trials and increasing the focus on sustainability. By embracing these strategies, we can create a future where clinical trials are conducted with efficiency, innovation, and a steadfast commitment to responsible practices and environmental stewardship.