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VIEW POINT

SYSTEMIC LITERATURE REVIEW: ACCELERATING EVIDENCE - BASED DECISIONS IN PHARMA

In the evolving landscape of pharmaceutical innovation and evidence-based policy, Systematic Literature Reviews (SLRs) and Targeted Literature Reviews (TLRs) have emerged as critical tools for informed decision-making. **SLRs are considered the gold standard for evidence synthesis**, offering a transparent, reproducible, and comprehensive approach to aggregating clinical data. Their methodological rigor, often aligned with PRISMA or Cochrane standards, makes them indispensable for regulatory submissions, health technology assessments (HTAs), and clinical development strategies. In contrast, TLRs provide a more agile and pragmatic alternative, focusing on specific, high-priority questions such as treatment landscapes, epidemiology, or early-phase evaluations. Together, **SLRs and TLRs form a complementary evidence ecosystem that empowers cross-functional pharmaceutical teams to make timely, data-driven decisions across the product lifecycle—from R&D to commercialization.**

The Core Challenge: Efficiency and Reliability

Despite their strategic importance in pharmaceutical decision-making, conventional SLRs and TLRs are often characterized by the following:

Manual Screening:

SLRs, known for their methodological rigor, often require extensive **manual screening of thousands of articles**, making them time-consuming and resource intensive. This process is **vulnerable to human error**, especially during abstract skimming and data extraction.

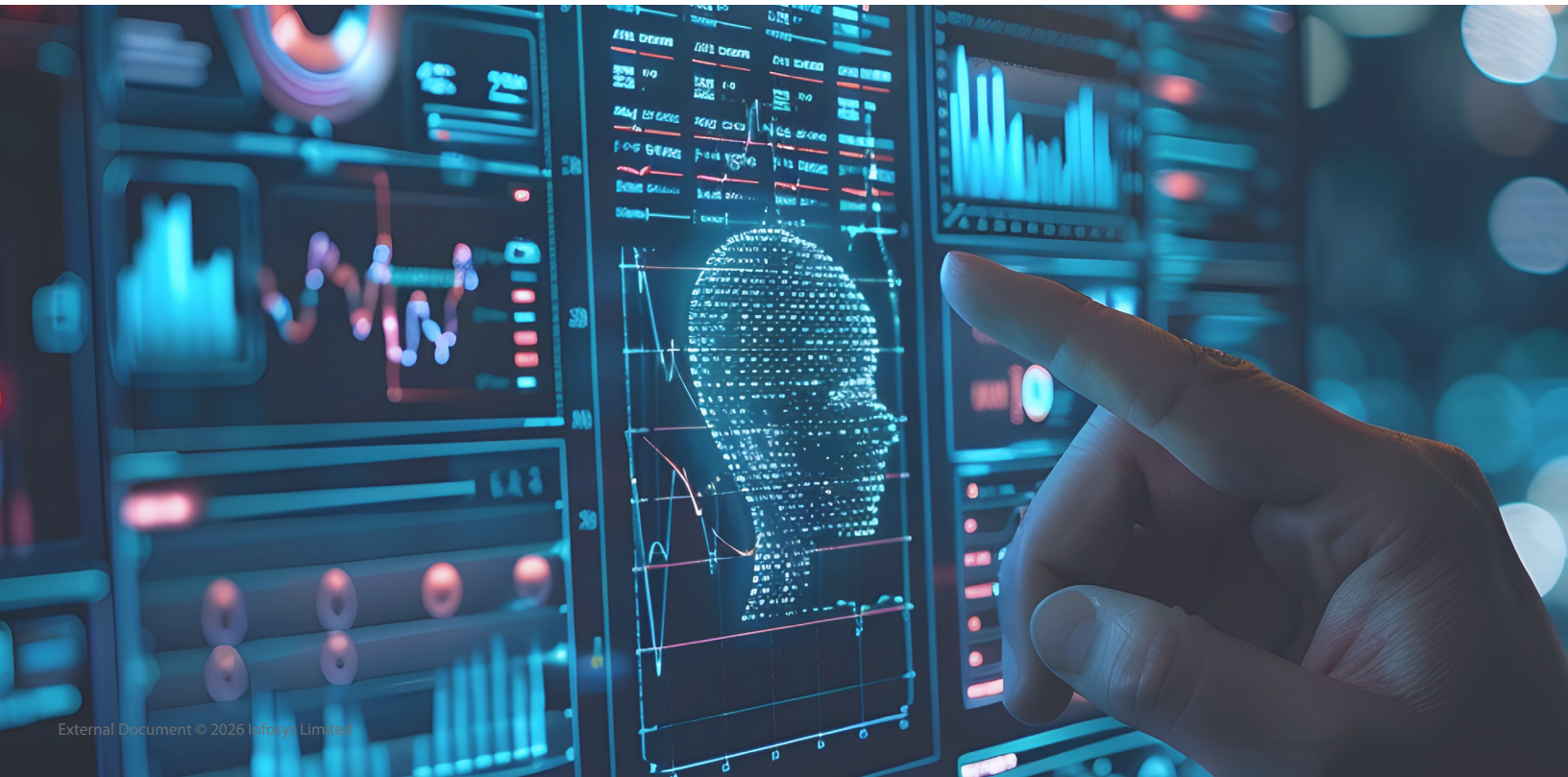
Fragmented Data Sources:

Loosely defined search strategies due to fragmented data sources, with relevant evidence scattered across multiple databases and grey literature, complicates the comprehensive synthesis.

Lacking Real-time Insights:

Findings can quickly become outdated, especially in fast-moving therapeutic areas.

These limitations underscore the urgent need for automation, AI-assisted screening, and integrated data platforms to enhance the speed, accuracy, and strategic value of literature reviews in pharma.



Navigating the flaws:

With **the advent of Generative AI and Large Language Model (LLM)-backed screening tools, automation can largely revolutionize this landscape**. By automating literature searches, deduplication, relevance screening, and even preliminary data extraction, **GenAI-powered platforms can dramatically reduce manual workload, minimize errors, and enable real-time synthesis of evidence**. This not only accelerates the review process but also enhances the accuracy, consistency, and strategic value of SLRs and TLRs, empowering pharmaceutical teams to make faster, more informed decisions across the product lifecycle.

The Future of Literature Reviews: Transformation - At a Glance

With the transformative potential of GenAI and Large Language Model (LLM)-backed solutions, the transformation journey should be a phased, strategic approach that focuses on building a platform that is able to automate and accelerate every stage of the literature review process that can **extract, summarize, and interlink key insights from thousands of scientific studies within minutes** - turning what once took weeks into a matter of moments.

1. Build

These advanced platforms offer **seamless integration with trusted databases such as PubMed, ScienceDirect, and Embase, enabling automated literature searches, relevance filtering, and contextual summarization at scale.**

By bridging fragmented data sources and delivering near real-time evidence synthesis, GenAI-powered tools not only reduce manual workload and minimize human error but also empower pharmaceutical teams to make faster, more informed decisions across clinical development, market access, and health technology assessments.

This will mark a paradigm shift in how evidence is generated and utilized, positioning pharma organizations to respond with agility in an increasingly data-driven landscape.

2. Making the Impact

The adoption of a GenAI-powered SLR/TLR solution delivers tangible business impact across the pharmaceutical value chain. By dramatically accelerating evidence synthesis, it **enables faster market access and reimbursement decisions, allowing teams to respond swiftly to payer requirements and regulatory timelines.**

The system's ability to extract timely insights from vast volumes of literature directly contributes to improved patient outcomes, as clinical and commercial strategies can be aligned with the most current and relevant data.

Automation of manual tasks - such as **keyword-based extraction, summarization, tagging, and source linking** - translates into significant **cost savings and operational efficiency**, freeing up expert resources for strategic initiatives.

Customizable dashboards tailored to commercial, medical, and market access teams ensure that insights are not only accurate but also actionable, driving smarter, faster, and more confident decision-making across the product lifecycle.

Systematic and Targeted Literature Reviews are **foundational to pharmaceutical decision-making, yet they are often constrained by manual processes, fragmented data sources, and delayed insights. The emergence of GenAI-powered solutions marks a paradigm shift - transforming literature reviews from operational bottlenecks into strategic enablers.** As pharma companies increasingly adopt these technologies, the future of evidence synthesis will be defined by speed, precision, and strategic agility - unlocking new possibilities for innovation and impact.

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Parikshit is a Principal Consultant with 13 years of experience in Life Sciences and Healthcare, driving digital transformations, analytics and large-scale programs. He brings an innovation-led, automation-first mindset to solving complex commercial and patient focused business challenges.

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Eshan is a seasoned pharmaceutical and healthcare consultant with seven years of progressive experience across research, operations, supply chain, and commercial strategy. He has successfully led multiple clinical and commercial process improvement and corporate strategy initiatives, helping global life sciences clients optimize performance and drive efficiency across the value chain. With a strong foundation in pharma strategy consulting and a passion for innovation, Eshan is keenly focused on leveraging data-driven insights and emerging technologies to solve complex business/industry challenges.

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