



Global Life Sciences Summit: Data science and technology

May 17, 2023



In today's fast-changing world, it is imperative for businesses to take advantage of the growth opportunities offered by digitization. In this session of the Global life sciences summit 2023, the panelists discussed the importance of technology and data in the life sciences industry.



The life sciences industry is witnessing a new era of big data in healthcare. Businesses are becoming increasingly data-driven to obtain insights and deliver value. Anastasia Miros, Director in KPMG Healthcare and Life Sciences, along with Rachel Lin, Regional Commercial Director, Freddie Yi Yu, Director and Data Science Leader at Janssen Asia Pacific, and Thomas Halliday, Life Science and Healthcare Customer Vertical Leader at Clarivate discussed how data can enable competitive differentiation and strategic advantage for life sciences companies.





"30% of all data generated across the globe is actually healthcare-related," Thomas said quoting a recent bank analyst report. Given the rapidly increasing amount of data, it is imperative for organizations to work with data scientists to create value and ensure the best possible patient outcomes. Emerging technologies and tools can further help extract actionable insights to improve efficiencies, patient and customer engagement, drug development, and guide decision-making. "We are truly evolving into a more data-driven organization," said Rachel, while highlighting Janssen's investment in finding and building new data sources to enhance their internal capabilities. She also emphasized how partnering with trusted third parties can help look at data in different ways, fill gaps, and understand and

pursue better outcomes for patients. This also means organizations now need to focus on building a data science and analytics team internally to analyze the huge amount of data and generate insights that can enable growth. To create efficient solutions, it is also vital to connect and make sense of the data being generated from various sources. "Expertise combined with technology, and the ability to integrate data is where we believe you get contextual intelligence and where we can drive faster, better-decision making, alongside everybody," said Thomas.

Shifting the focus to innovation in life sciences by leveraging data and technology, Thomas discussed how the usage of artificial intelligence (AI) in drug discovery has been a game changer. It's all about fostering innovation by leveraging technology to create value from the available data. "I think the use of AI and machine learning (ML) will also drive significant cost benefits," he said. The panelists also highlighted how companies like Janssen, KPMG, and Clarivate working together can help make the most of the technology available today.

Speaking of the trends in the next few years Rachel emphasized that addressing patient needs by filling the existing gaps will be key focus areas. Making results and insights real-time can help organizations learn and adapt to the changing ecosystem faster. Another priority area would be around precision medicine, focused on developing tailored more personalized patient diagnoses and treatments. Freddie supplemented Rachel's thought by calling out the study on using speech biomarkers to detect early signs of Alzheimer's. "This is an excellent demonstration of how this immersion like nontraditional, unstructured data can help understand deeper about the disease," he said. The end goal is all about driving better patient outcomes by adopting technology.

The panel also spoke about key enablers that life sciences organizations need to consider for the future:

-  Digital and data literacy for people in the life sciences ecosystem
-  Data privacy
-  Changing regulations
-  Partnerships and collaborations.

They concluded the discussion by stressing the need and willingness for life sciences organizations to break silos, share data, and partner with each other. Organizations that invest in digital and data literacy will be the ones that emerge as leaders in the future.



Hank Yang, Managing Director in KPMG Healthcare and Life Sciences, and Roni Kopelman, Managing Director in KPMG Human Capital Advisory shared their insights on developing differentiated experiences through digital technologies.

Connecting the customer and the employee side of things is of prime importance for creating an overall connected experience—central to the human-centered design approach. “That means when you think about this on the employee side, they’re actually part of co-creating the solution,” said Roni. To achieve connected experiences, solutions need to traverse the organization. Advances in technologies can help enable the same. Roni highlighted that while organizations are focused on digital transformation through the lens of process efficiency and effectiveness, considering the value generated from the experiences is equally important.

Workforce expectations are constantly evolving. Organizations need to be agile and rethink ways of delivering value. Businesses that can deliver the right expectations to their workforce will be able to attract top talent and create an advantage in the market. To unlock their talent potential, it is crucial that employees have access to the necessary tools and learning and development programs needed to upskill themselves.






“Enabling productivity by taking advantage of both digital enablers and in-person work is really top of mind and important,” said Roni while moving the focus to productivity and the importance of having access to the right tools and technologies. He highlighted how organizations had to rethink and simplify their strategies and processes for enabling collaboration and easy access in light of the pandemic. “The next generation wants to self-serve in many cases and making sure that we’re delivering these tools and access to information and service or get help or connecting to the organization in a way that’s digital is expected from the workforce today,” he said.

Yang further spoke about delivering customer experiences from the life sciences perspective. “Whether it’s being able to access information quickly from your mobile or being able to search on Google for things that you’re looking for and getting an answer

quickly, the access to information is continuing to evolve and change,” he said. From a sector perspective, understanding how to personalize consumer experience and recognizing the supply and demand challenges with delivering care is of utmost importance. Organizations need to have a futuristic outlook to evolve and move forward. “Whether it’s Med Tech products or services or pharmaceutical products to market, I think what we’re starting to see in many of these areas is that they are continuing to evolve in a way where technology is continuing to be a core part of changing experience and moving towards digital,” he said concluding the discussion.



Justin Hoss, Principal in KPMG Advisory practice and Shafi Ahmed, Chief Medical officer at Medical Realities discussed and shared their thoughts about the healthcare Metaverse. As the healthcare ecosystem rapidly changes and continues to look at additional ways for better patient access, the Metaverse appears to be one of those innovations that could change how we access healthcare today. “I’ve toyed around with technology using Google Glass or virtual reality or avatars to see how we can expand our horizons and teach and scale the teaching so that more people can benefit,” said Shafi highlighting his motivation for exploring this aspect of innovation. He explained Metaverse to be a total digital economy with five pillars:

-  Building a virtual world to interact with
-  Creating replicas of itself as an avatar
-  Creating standards for a healthcare system within this kind of virtual environment
-  Understanding the data and technology
-  Creating experiences and therapies that support patient care

“You can educate and empower patients or teach medical students or professionals how to deliver therapies, treatments, and how do you consult in that environment. And that’s kind of what we’re creating,” he said.

While addressing privacy concerns around metaverse, he highlighted that following the regulations laid by agencies like the World Metaverse Council and HIPAA compliance around patient confidentiality and data ownership can help make it as safe as possible.

Understanding ownership of data in the current ecosystem is an ongoing issue. "I think what we need to do is expand the horizon and say, look, let's confront this conversation head-on. We know it's controversial and it's a bit difficult, but let's have the conversation," he stressed as he spoke about overcoming barriers around ownership of data.

He concluded the session by discussing the possible role and opportunities for life sciences organizations in the metaverse. Creating a metaverse environment for discussing solutions, drug therapies, and treatment options can help improve patient engagements and outcomes. "Question is where metaverse can offer better outcomes?" he said. The world is changing rapidly with an increasing focus on technology. Innovative technologies like AI, ChatGPT, or metaverse can provide flexibility for access and alternatives to conventional medicine to patients but it is critical to validate the methods of treatment to improve the experience and health outcomes.

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