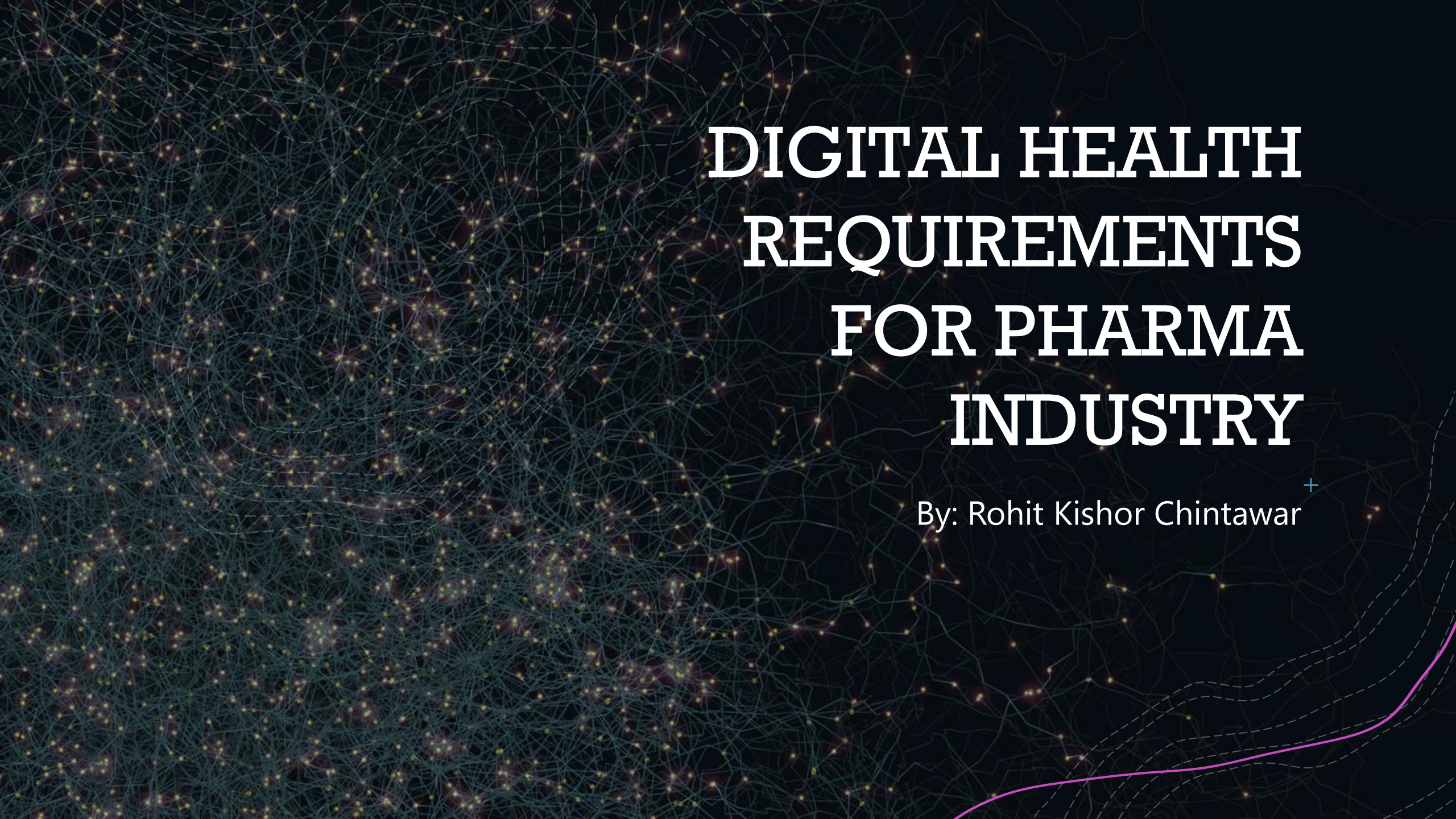




DIGITAL HEALTH REQUIREMENTS FOR PHARMA INDUSTRY

By: Rohit Kishor Chintawar ⁺

Methodology

- + Research Question :-

What are the new digital health requirements for pharma industry in India?

- + Research Design :-

Secondary Research/ Narrative Literature Review

- + Type Of Research :-

Observational Study.

- + SETTING :-

Tata Elxsi

Digital Trends in Indian Pharmaceutical industry

- + E-Pharmacy
- + Digitization using Artificial Intelligence and Machine Learning
- + Digital Records
- + Cloud Computing
- + Digital Trainings
- + Blockchain Technology and Big Data

Key Elements driving the need of digital health in Pharmaceutical Industry

- + Telehealth, Telemedicine & E-detailing
- + Drug Discovery
- + Decentralized Clinical Trials
- + Digital Supply chain

How Pharmaceutical Companies using Digital Technology

- + Acceleration of Drug Discovery And Development
- + Increasing The Efficacy Of Clinical Trials
- + Personalize & Create Targeted Medications
- + Reduction in Cost And Advancement Drug Utilization
- + Drive Effective Sales & Marketing Operations
- + Improving Operations & Employee Training

Predictive Analytics in Pharmaceutical Industry

- + Predictive Analytics for Drug Discovery and Development
- + Predictive Analytics for Pharmacovigilance and Drug Safety
- + Predictive Analytics for Clinical Trials
- + Predictive Analytics for Pharma Supply Chain
- + Predictive Analytics Drug Distribution and Sales

Challenges in Digital Health

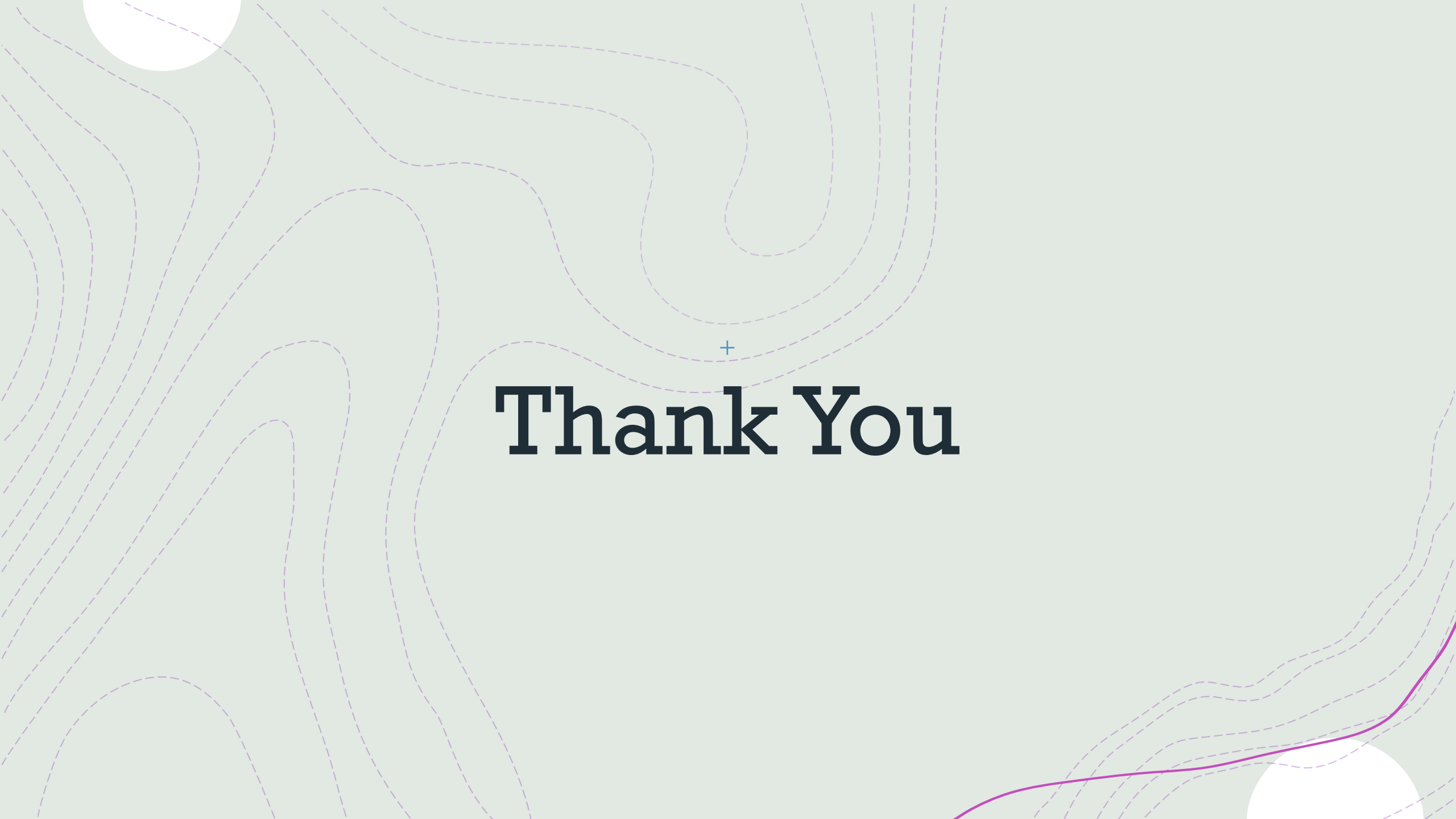
- + Security Remains a Focus in Healthcare
- + Regulating adaptive A.I. algorithms
- + Initial Investment
- + Lack of experience in manufacturing

Digital Solutions From Some Big Companies in the Market

LivingWith App	Mabu (Robot)	Beyond the Pill	Watson Health platform	Belysa	REACH	Roche (CDS)
Pfizer	Pfizer	UCSF	Apple-IBM	Merck	Roche	Roche
Oncology Patients	Everyone	Women	Companies	Analysts	Healthcare Workers	Doctors
• Gives Support • Gives Updates	• Tracking	• Covers all areas of healthcare	• Uses new technologies	• Multi-analyte views • Curve fit optimization • Auto flagging & Data hygiene	• Multilingual Counseling • Available on all platforms	• Use AI & ML • Value based support
Gives reminders	Emergency Updates	Helps to find gaps and Improve process	Helps to make robust system	Testing parallelism & curves	Improve well being Mental Support	Provide decision support to doctors

Recommendations

- + Integration of AI and ML in drug discovery and E-prescription.
- + Using digital technologies and devices in Clinical trials.
- + Using of Blockchain, AI, ML, IoT, RFID (Radio Frequency Identification) in Supply Chain Management.
- + Need to concentrate on patient centricity in case of PAPs/PSPs.
- + Using of Predictive Analytics in Production & Maintenance
- + With the help of Technologies like Advanced Analytics, AI to monitor the quality levels, Cloud based platforms enables Real-time Tracking & ML to address drug Safety in Pharmacovigilance.
- + Create a shared understanding of general digital capabilities requirements across business functional areas, north stars, and value streams.
- + Develops internal organizational capacity for digital innovation (either from center level or from the functional level) to take new creative ideas from conception to full-scale execution.
- + To connect with creative stakeholders in especially technological, medical, and geographic sectors, develop an ecosystem engagement plan.
- + Examine innovation archetypes, their benefits and drawbacks, and their consequences for business strategy.



Thank You