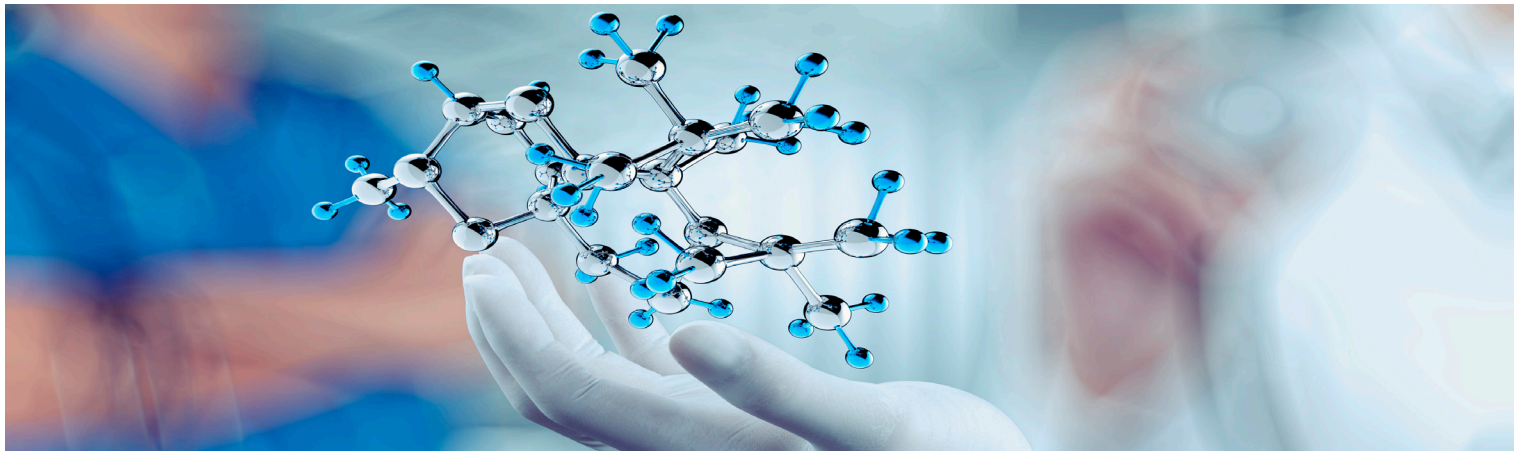




**CitiusTech: Life Sciences
Practice**

We help pharmaceutical & life sciences
organizations drive their business initiatives

Digital Health | Interoperability | RWE | Clinical Trials | Safety and Risk Management | Medical Imaging



CitiusTech has a strong cross-disciplinary team of clinical, bio-informatics and healthcare domain specialists, data scientists and interoperability specialists to help life sciences organizations address their IT needs.

CitiusTech Life Sciences Practice supports regulatory requirements such as FDA, 21 CFR Part 11, HIPAA, PPACA, etc. and offers strong expertise across standards such as HL7, DICOM, FHIR, IHE, CDISC, ICD, SNOMED and LOINC.

CitiusTech has strategic partnerships with leading technology vendors including IBM, Microsoft, AWS, Cloudera as well as large health systems and labs.

Challenges Facing the Life Sciences Industry

Life sciences organizations, healthcare providers and payers continue to feel the regulatory and legislative pressures with the transition from volume to value-based healthcare. To meet these challenges imposed by economic austerity and increasing cost of healthcare, life sciences organizations are moving ‘beyond the pill’ to become ‘solution providers’, focusing on patient experience and value.

With a decade of experience in the healthcare industry and strong portfolio of next generation solutions and services, CitiusTech is at the forefront of driving technology innovation for pharmaceutical and life sciences organizations.

CitiusTech: Key Business Focus Areas for Life Sciences

CitiusTech works with leading CRO’s, pharmaceuticals and biotechnology organizations to help them accelerate technology innovation across big data, cloud, mobile and analytics and transform the way they engage with patients, execute clinical trials and leverage real world intelligence. CitiusTech enables life sciences organizations to achieve their key business focus areas including:

Patient/ Provider Engagement

- Drive patient-centric clinical trials by leveraging wearables, sensors, IoT, etc.
- Improve patient engagement with mobile solutions for self-tracking, alerts, education, adherence and self-management.

Enterprise BI and Analytics

- Communicate the value and safety of drugs/ devices through RWE initiatives. like PASS, observational studies, HEOR, comparative effectiveness, etc.
- Drive value-based care delivery with improved health outcomes.

Patient/ Provider Engagement

- Digital trials to enhance patient engagement
- Integration with devices, IoT, wearables, biosensors
- Remote monitoring, safety reporting and others
- Data driven real-time alert and decision support

Clinical Trial Optimization

- Cloud and mobile-based solutions for patient recruitment, investigator credentialing, remote monitoring
- Clinical Data Warehouse and clinical trials analytics for site feasibility, risk-based monitoring
- Lab workflow automation, LIMS modernization, etc.

| BI/ Analytics | | |
|--|--|-----------------------|
| Solution Design & Development | | |
| Digital Health | Comparative Effectiveness and Outcomes | Real World Evidence |
| Clinical Trial Development and Support | Medical Imaging and Devices | Data Interoperability |
| Data Integration & Management | | |

Enterprise BI/ Analytics

- Population health and clinical quality outcomes
- Real world evidence – market access, HEOR, etc.
- Advanced analytics – machine learning, AI, cognitive
- Observational research
- Sales and commercial analytics
- Risk management and safety

Data Integration and Interoperability

- Standards-based data integration- FHIR, HL7, CDISC, CDASH, IHE, SAS
- Integration of clinical, claims, research systems, devices
- Data mgmt. – normalization, linking and de-identification
- Commercial data set integration and mgmt. e.g., IMS, Truven, Symphony



Clinical Trial Optimization

- Leverage cloud, mobile and big data to optimize clinical trial workflows and enable faster and efficient clinical studies
- Build EIM and clinical trial analytics solutions to measure performance and quality indicators, manage risk and ensure compliance

Data Integration and Interoperability

- Integrate key systems (clinical, operational, research, safety, etc.) and devices using standards like CDISC, ASTM, FHIR, HL7, IHE, etc.
- Manage data de-identification, normalization, and aggregation from sources such as IMS, Truven, Symphony, Health Verity, and others

CitiusTech: Key Offerings for Life Sciences

To meet the unique technology needs of the pharmaceutical and life sciences industry, CitiusTech offers a comprehensive portfolio of healthcare services and solutions to accelerate IT strategies.

| | |
|---------------------------------------|---|
| Digital Health | Engage with patients and providers using digital technologies like apps, IoT, wearables, implantables, biosensors, etc. to drive digital trials, remote monitoring, ePROs, etc. |
| Data Integration and Interoperability | Enable collaboration within healthcare ecosystem by integrating disparate business systems for real-time access to data |
| Real World Evidence | Provide managed analytics services to build and support RWE platforms for safety studies, commercial insight, observational research, comparative effectiveness, etc. |
| Clinical Trial Solutions | Build next generation solutions for clinical trial optimization – recruitment, lab automation, risk-based monitoring, etc. |
| Safety and Risk Management | Provide safety services and solutions to assess true AE incidence rates for marketed products and mine real world data/ social media information for adverse event detection |
| Medical Imaging | Leverage emerging technologies like cloud and big data to transform imaging solutions and address current challenges around point-of-care unscheduled workflows and image analytics |

Life Sciences: Success Stories

Real World Evidence: Analytics platform for consolidation of real world datasets to deliver actionable business intelligence

Patient Recruitment/ Engagement: Cloud-based solution for site feasibility, patient and investigator engagement

ComparativeEffectiveness: HEOR as a service to analyse and compare costs, benefits and effectiveness of drugs/ therapies

Image Processing/ Analytics: Advanced analytics to analyse and interpret data from live feed cell assays and quantify multiple biomarker expression

Big Data Platform for Insertable Devices: Big data ecosystem for aggregation of clinical and operational data (2 million transactions/ day) from insertable cardiac devices

Clinical Trial Design using i2b2: i2b2 ecosystem to support clinical study and protocol design, site selection, and patient recruitment

Remote Patient Monitoring Apps: Apps to capture biometric data from remote monitoring devices and share it with caregivers for chronic condition management

About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to medical technology companies, providers, payers and life sciences organizations, with over 2,700 professionals worldwide. CitiusTech's services and solutions include healthcare software development, healthcare interoperability, regulatory compliance, BI/analytics, consumer engagement, care coordination and population health management. CitiusTech helps customers accelerate innovation in healthcare through a number of solutions and accelerators for clinical quality reporting, healthcare big data, cloud computing, mobile health and predictive analytics. With cutting-edge technology expertise, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare clients worldwide.

Princeton | Rochester | Dallas | Toronto | London | Dubai | Mumbai | Bengaluru | Singapore