Everest Group®
RESEARCH

The Future of Clinical Trials

Life Sciences IT Services
Market Report – August 2019: Complimentary Abstract / Table of Contents

EGR-2019-46-CA-3306

Our research offerings for global services

- Market Vista™
  Global services tracking across functions, sourcing models, locations, and service providers – industry tracking reports also available

- Application Services
- BPS | Banking & Financial Services
- BPS | Healthcare & Life Sciences
- BPS | Insurance
- Catalyst™
- Cloud & Infrastructure
- Customer Experience Management Services
- Data & Analytics
- Digital Services
- Engineering Services
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- ITS | Insurance
- IT Services Executive Insights™
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- Locations Insider™
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- Procurement
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Membership information

- This report is included in the following research program(s)
  – Life Sciences IT Services
- If you want to learn whether your organization has a membership agreement or request information on pricing and membership options, please contact us at info@everestgrp.com, unitedkingdom@everestgrp.com, or india@everestgrp.com

More about membership

In addition to a suite of published research, a membership may include

- Accelerators™
- Analyst access
- Data cuts
- Pinnacle Model™ reports
- PriceBook
- Virtual Roundtables
- Workshops

Custom research capabilities

- Benchmarking | Pricing, delivery model, skill portfolio
- Peer analysis | Scope, sourcing models, locations
- Locations | Cost, skills, sustainability, portfolio – plus a tracking tool
- Tracking services | Service providers, locations, risk
- Other | Market intelligence, service provider capabilities, technologies, contract assessment

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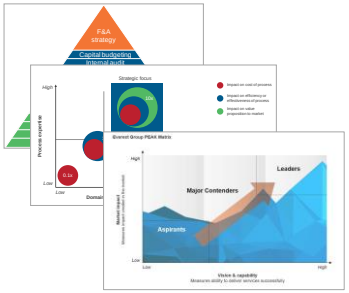
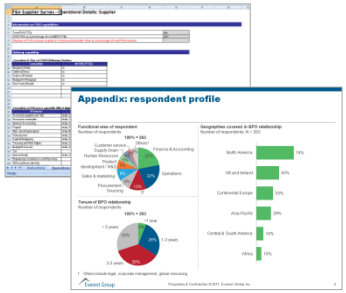
Our research methodology is based on four pillars of strength to produce actionable and insightful research for the industry

- Market thought leadership
- Actionable and insightful research
- Syndicated and custom research deliverables

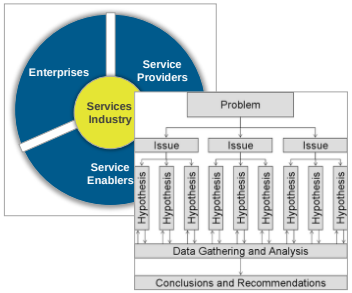
1 Robust definitions and frameworks
(PEAK Matrix™, market maturity, and technology adoption/investment)



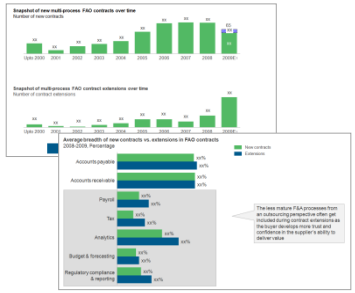
2 Primary sources of information
(Annual contractual & operational RFIs, service provider briefings & buyer interviews, and web-based surveys)



3 Diverse set of market touchpoints
(Ongoing interactions across key stakeholders, inputs from a mix of perspectives and interests, supports both data analysis and thought leadership)



4 Fact-based research
(Data-driven analysis with expert perspectives, trend analysis across market adoption, contracting, and service providers)



- Proprietary contractual database of healthcare and life sciences IT Services (ITS) contracts (updated annually)
- Round-the-year tracking of all major healthcare and life sciences IT service providers
- Dedicated team for healthcare and life sciences outsourcing research, spread over two continents
- Over 20 years of experience in advising clients on ITS-BPS-related decisions
- Executive-level relationships with buyers, service providers, technology providers, and industry associations

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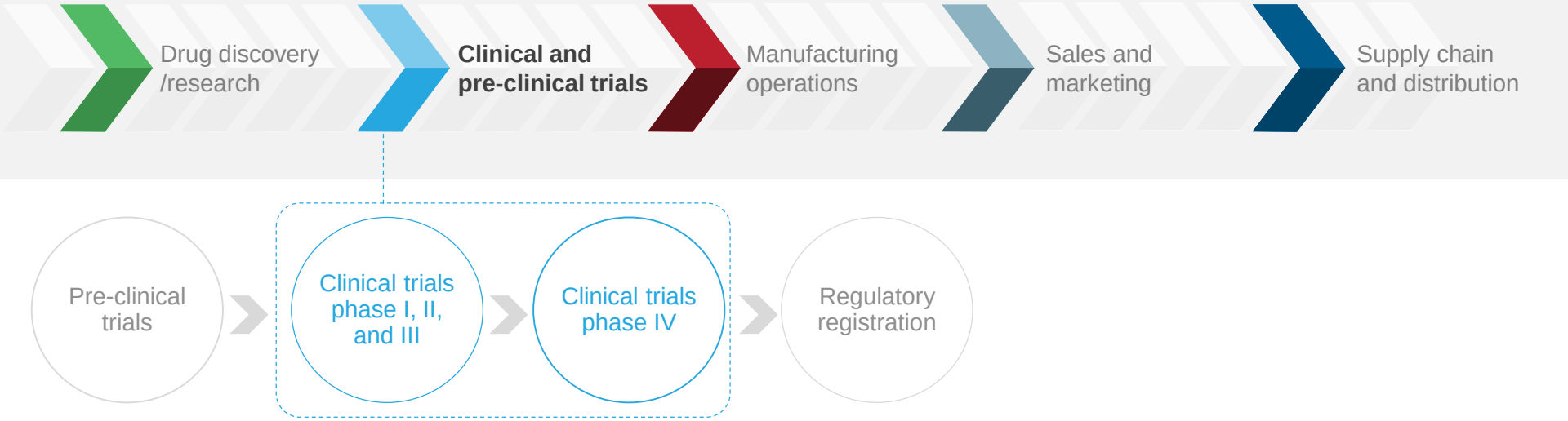
Future of clinical trials | Scope of the research

In this report, Everest Group focuses on the clinical trials phase of the life sciences value chain

Scope of this research



Underlying technology layer		
Applications layer	Business process layer	Infrastructure layer

Building blocks of clinical trial systems			
EDC	eTMF	RTSM	CTMS
Safety	eCOA	Investigator grant payments	Study startup

Background and scope of the research

Background of the research

Today's clinical trials are faced with challenges such as high patient dropout rates, high costs of drug development, high failure rates, and an increase in trial duration. While the drug pipeline has grown over the last few years, the efficiencies in clinical trials have not followed a similar trend. Rather, it would be surprising to find that the clinical trials are still as inefficient as they were a decade ago, despite the introduction of technologies such as analytics. There is, therefore, a need to transform clinical trials for the better, by bringing in technological interventions to improve efficiency, speed, costs, and also make the trials more patient centric. In this report, we have outlined six interventions that will transform clinical trials.

In order to transform their clinical trials, enterprises will need to prioritize their investments in these technologies, develop a strategy for external collaboration, and adopt a platform strategy to unify the clinical trial applications landscape.

In this report, we focus on:

- The current scenario of the clinical trial landscape
- Factors that are driving the change in the trial landscape
- The interventions that would change the clinical trials for the better
- The implications for the businesses

Scope of this report:

Geography
Global

Industry
Life sciences (pharmaceuticals, medical devices, biotechnology, and other life sciences[1])

1 Includes healthcare data & information services and medical products distribution

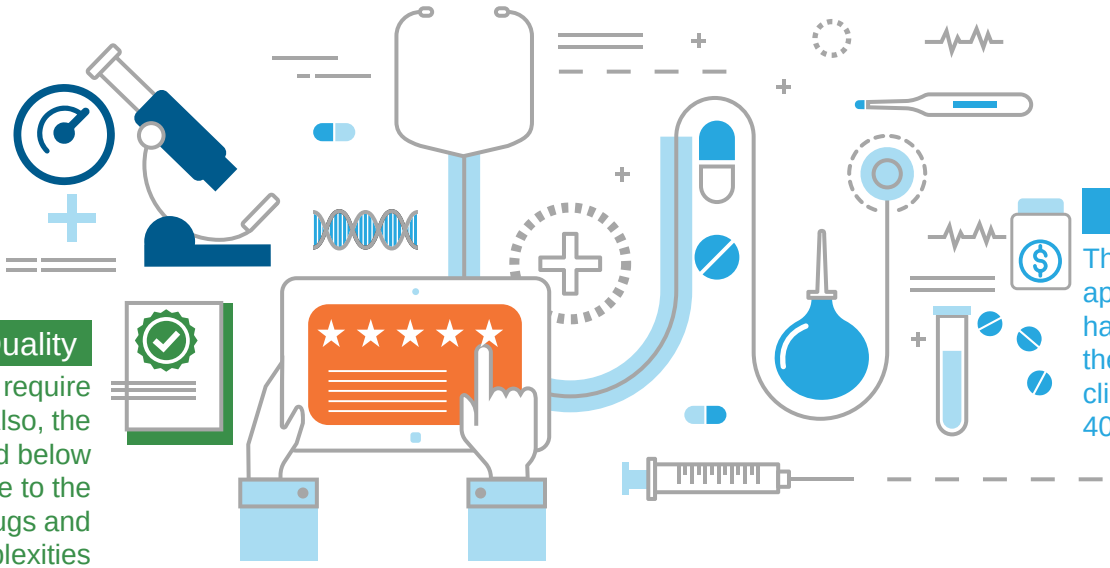
The clinical trials today are inefficient. Enterprises are focusing their efforts on transforming them and there are several drivers leading to this change in the trial landscape

Time

The clinical trials done today are 15% slower than those a decade ago, and the average time to complete a trial has reached 12.5 years

Quality

Nearly 6 out of 10 protocols require a substantial amendment. Also, the success rates have dropped below an average of 14%, due to the availability of specialty drugs and the rising complexities



Cost

The cost of bringing an approved drug to the market has more than doubled over the past decade, and clinical trials account for 40% of R&D expenditures

Patient satisfaction

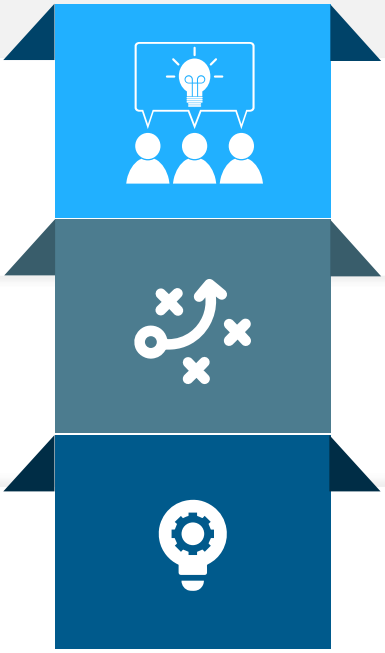
Nearly half the sites under-enroll participants and the average patient dropout rate is 30% for a trial

Technology drivers	Business drivers
Proliferation of technology	Regulations favoring technology adoption
Use of smartphones and wearables	Pressure to reduce complexity & costs
Availability of patient data for data analysis	Adopting a patient-centric view

Everest Group has identified key interventions that will change the way the clinical trials today are conducted

1. Patient-centric virtual trials would improve patient retention, and make trials richer and more widespread
2. Digital endpoints enable continuous evaluation through the use of high-quality data
3. Accessing untapped markets (e.g. Africa) to gain a competitive advantage
4. In Silico Clinical Trials (ISCT) simulate real world trials to reduce, refine, and replace trials
5. Adaptive trials allow for modifications to protocols based on pre-specified rules
6. Storing trial data on blockchain would enable a unified and secure view of clinical data

To get to the future view of the clinical trial, Everest Group recommends a three-pronged approach for key stakeholders



Collaborate
The simplification of trials can be a herculean task especially when done without any collaborations or partnerships. Life science-specific collaborations can help accelerate and improve the clinical trial process

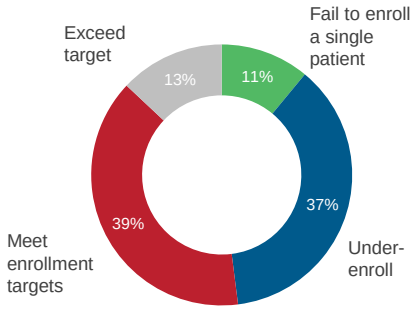
Plan
Getting to a right mix of short-term and long-term investments in the portfolio could help to improve the trial landscape, as funds are limited

Adopt
A unified trial management solution which can help reduce inefficiencies as well as siloed data generated while conducting clinical trials

This study offers three distinct chapters providing a deep dive into the future of clinical trials; below are four charts to illustrate the depth of the report

Clinical trial patient enrolment rates and reasons for patient dropouts

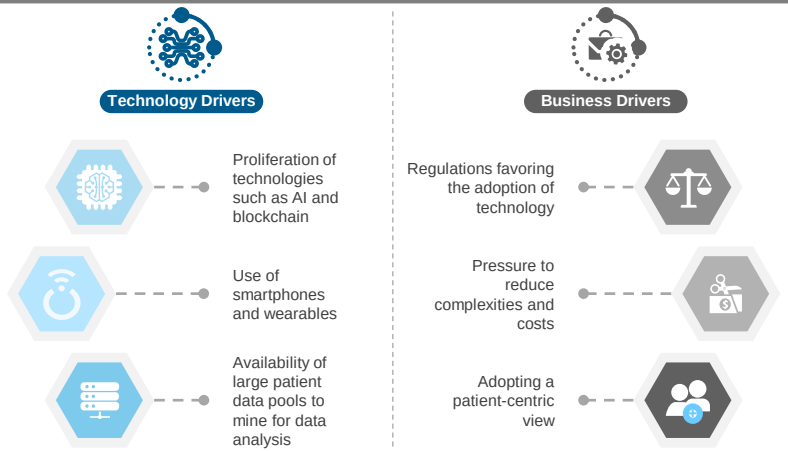
Enrollment of patients in clinical trials



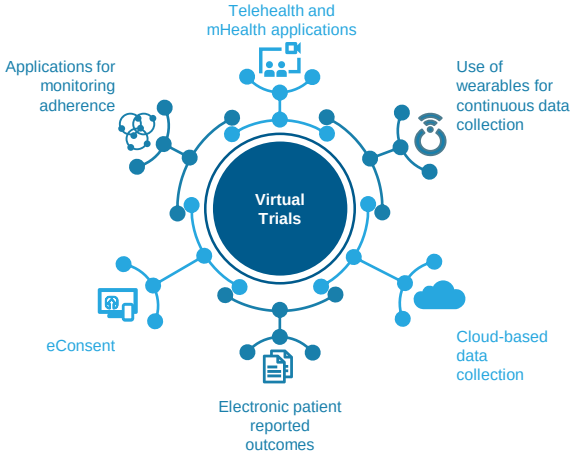
Common reasons for patient dropouts

- Inconvenient locations
- Conflicting schedules
- Misunderstood expectations
- Fear and anxiety
- Lack of appreciation

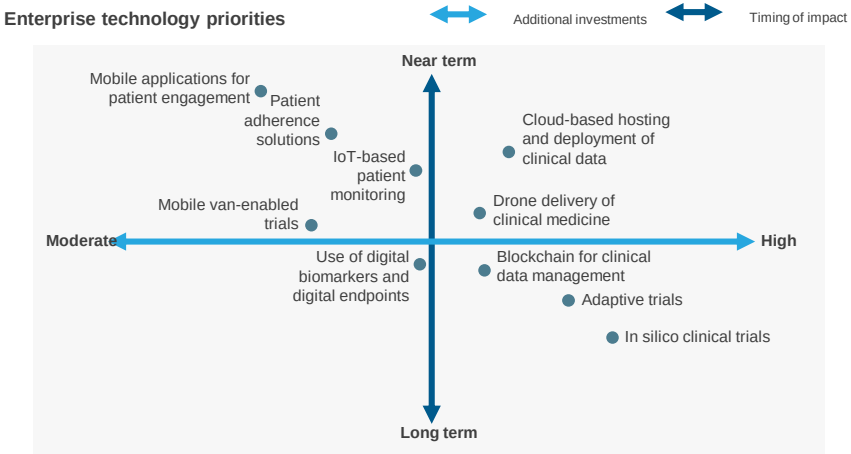
Drivers for change in the clinical trial landscape



Enablers of virtual trials



Enterprises should prioritize their investments for best outcomes



Research calendar – Life Sciences IT Services

Published | Planned | Current release

Flagship Life Sciences IT Services reports	Release date
Life Sciences Clinical Trials – PEAK Matrix™ Assessment for Products 2017	September 2017
Life Sciences Report Card 2017 – Enterprise Initiatives and Service Provider Performance	March 2018
Life Sciences Annual Report 2018: Pharma's DevOps Factor for Digital Transformation	March 2018
Life Sciences Digital in North America – Service Provider Landscape with Services PEAK Matrix™ Assessment 2018	June 2018
Life Sciences Digital in Europe – Service Provider Landscape with Services PEAK Matrix™ Assessment 2018	August 2018
Life Sciences Report Card 2018 – Enterprise Initiatives and Service Provider Performance	March 2019
Life Sciences Clinical Trials Products PEAK Matrix™ Assessment 2019: Integrated Platforms Rise to the Challenge	May 2019
Life Sciences Digital PEAK Matrix 2019 for Services	Q3 2019

Thematic Life Sciences IT Services reports	
Regulatory Stress: Life Sciences Market Under the GDPR Regime	March 2018
Closing the Gap – The Future of IT Skills in the United States	April 2018
Atos Acquires Syntel: Can Atos Win in the North American Battleground?	July 2018
The Dissatisfaction Conundrum: What are Clients not Telling Service Providers?	January 2019
Assuring Trust in a Converging Life Sciences Ecosystem: The Emerging Role of Quality Assurance	February 2019
The Future of Clinical Trials	**August 2019**
Life Sciences: Effectiveness of AI Investments	Q3 2019

Note: For a list of all of our published Life Sciences ITS reports, please refer to our website page

Additional Life Sciences ITS research references

The following documents are recommended for additional insights into the topic covered in this report. The recommended documents either provide additional details or complementary content that may be of interest

1. **Life Sciences Report Card – Outlook for 2019 and Enterprise Initiatives and Service Provider Performance in 2018** (EGR-2019-46-R-3152); April 2019. In 2018, the Life Sciences (LS) industry continued to struggle with achieving growth and accelerating time-to-market amid the challenges of rising costs, pricing regulations, and policy changes. Digital transformation had been identified by many enterprises as a strategic imperative to combat these challenges. However, many of the life sciences firms that tried to implement digital strategies internally failed, and the industry as a whole still yearns for digital maturity. Enterprises are now looking for thought leaders and execution champions that can help them on their digitization journey

2. **Life Sciences Clinical Trials Products PEAK Matrix™ Assessment 2019: Integrated Platforms Rise to the Challenge** (EGR-2019-46-R-3178); May 2019. Digital technologies have the potential to streamline and accelerate each stage of the clinical trials process – from matching eligible patients to studies, to data collection and monitoring adherence. However, the overall life sciences industry has been slow to digitize clinical trials, with even the most technologically advanced enterprises only piloting technologies in different areas of clinical development. As the industry continues to struggle with its fundamental challenge of achieving faster time-to-market, organizations need to act immediately to devise a robust strategy to harness the full potential of digital technologies in clinical development. In response, clinical trials product vendors have been making significant efforts around ramping up their proprietary solutions portfolio, with many now focusing on taking an end-to-end single vendor platform for clinical trials to the market. What remains to be seen is whether these investments and innovative offerings can now translate into positive business outcomes for enterprises

For more information on this and other research published by Everest Group, please contact us:

Nitish Mittal, Practice Director: nitish.mittal@everestgrp.com

Chunky Satija, Practice Director: chunky.satija@everestgrp.com

Nisarg Shah, Senior Analyst: nisarg.shah@everestgrp.com

Website: www.everestgrp.com | Phone: +1-214-451-3000 | Email: info@everestgrp.com

Everest Group®

About Everest Group

Everest Group is a consulting and research firm focused on strategic IT, business services, and sourcing. We are trusted advisors to senior executives of leading enterprises, providers, and investors. Our firm helps clients improve operational and financial performance through a hands-on process that supports them in making well-informed decisions that deliver high-impact results and achieve sustained value. Our insight and guidance empower clients to improve organizational efficiency, effectiveness, agility, and responsiveness. What sets Everest Group apart is the integration of deep sourcing knowledge, problem-solving skills and original research. Details and in-depth content are available at www.everestgrp.com.

Dallas (Headquarters)
info@everestgrp.com
+1-214-451-3000

Bangalore
india@everestgrp.com
+91-80-61463500

Delhi
india@everestgrp.com
+91-124-496-1000

London
unitedkingdom@everestgrp.com
+44-207-129-1318

New York
info@everestgrp.com
+1-646-805-4000

Toronto
canada@everestgrp.com
+1-416-388-6765

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