TATA CONSULTANCY SERVICES Experience certainty.





Life Sciences Debashis Ghosh

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From biology, chemistry and anatomy...to data, analytics and technology

Analytics driven Genomics Research

We identify disease causing genetic mutations By analyzing unknown rare genetic disorders of immunodeficiency





Technology driven Personalized Implants

We customize cutting blocks for knee implants

By reviewing knee X-Ray & MRI to develop 3D printer specification & precise pre-op planning

Key Industry Trends

Adopting Digital Wave

- Transformation in Clinical Trial landscape

 A shift towards
 Digital Clinical Trials
- New age Sales & Marketing using digital channels & tools
- Shift towards Cloud (as-a-service model)
- Real world evidence through social media analytics

Personalized Medicine

- Genomics driven new Drug R&D – Pharmacogenomics & Companion Diagnostics
- Translational research : from benchside to bedside

- Smart Connected Devices
- IoT, Medical Electronics & 3D printing for miniature, noninvasive devices

Changing Regulatory Landscape

- Increasing focus on regulatory compliance & submissions
- Integrate regulatory affairs, patient safety and quality assurance to drive synergy

Merger & Acquisitions

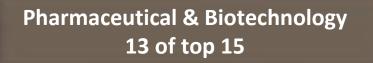
 Standardization

 & optimization of business/IT processes & systems

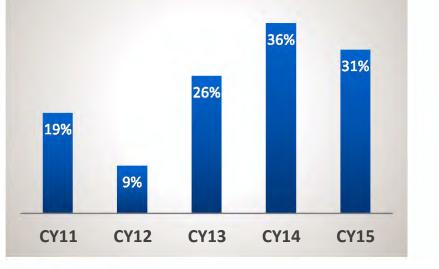
Key Technology Trends

- Increasing cloud adoption as data security and privacy concerns are addressed by vendors
- Movement to **Platform as a service** (PaaS)
- Heavy focus towards Analytics
- Technologies for gaining insights on already available data especially in R&D
- Big data becoming mainstream and companies creating data lakes
- Leveraging next generation collaboration and KM across enterprise
- Simplification of application landscape and consolidation of technologies

Holistic growth

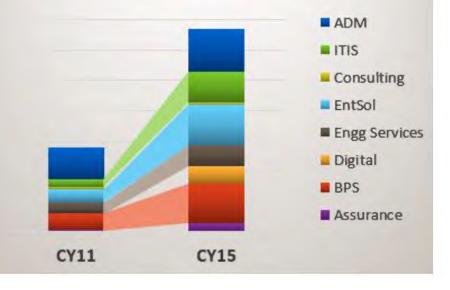






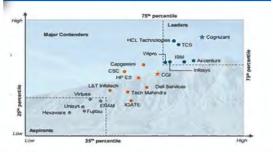
Medical Devices & Diagnostics 8 of Top 10

Holistic growth across all service lines



Recognitions in 2015

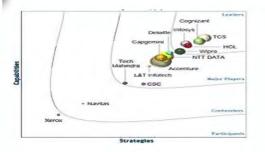
Everest PEAK Matrix Life Sciences ITO



Sales & Marketing ITO by IDC



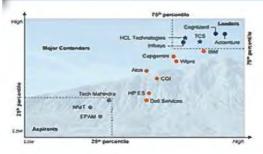
Manufacturing and Supply Chain ITO by IDC



Everest PEAK Matrix Life Sciences Clinical and R&D



Everest PEAK Matrix Life Sciences European ITO



Life Science R&D BPO Services by IDC



...& 4 more

TATA CONSULTANCY SERVICES

Trusted Digital Services Partner for Global Top Pharma

Business Approach 'Think Digital First'

Delivering seamless Digital Experience with efficiency, effectiveness and global reach



Digital Marketing Services: Unified Global Platforms & Assets supporting 1200+ sites, Solutions for each stakeholder (patients, physicians, sales & marketing teams)



Mobility CoE: Global Team working across US, UK and India serving multiple geographies as exclusive partner. Developed 75+ Mobile apps on Android & iOS.



Digital Risk Analysis and Compliance Services: Identify risks across externally facing Digital touch points covering 20+ risk domains with 90+ compliance requirements

Drug Development Insights Platform for US Leading Pharma

TCS IP based Clinical Data warehouse Platform for clinical and operational analytics delivering significant savings



Scale: 35+ Studies on-boarded in 2 years with a plan to onboard 150 studies by this year end supporting 4300+ study sites & 21000+ patients



03

Cost Savings: > 100 M USD in 1 .5 years for Risk Based Monitoring

- Risk Based Monitoring
- Master Data Management
- Information Integration
- Operational Analytics

On-Demand Access to Gold Quality Clinical Data



TCS designated as a Leader in Worldwide Life Sciences R&D Risk-Based Monitoring by global market intelligence firm, IDC, in the "IDC MarketScape 2015"

Digital Disease Management for US Leading Pharma

A Digital Health Platform for disease management in resource constrained countries



Disease Covered - HIV & TB



Key Features – Patient Management, Symptom checker & automated decision support, Counselling, HCP portal, and integration with external health platform



Patient-centric Solution for better patientphysician engagement improved adherence through IVR & SMS and reduced visits to Clinics



State of the art architecture



Standard phone & Smartphone Enabled



Disease Tracking & Reporting

Innovation and Investment Led Change

Strong Life Sciences Industry Alliances Product Vendors, Partners and Academia

Global Transformation Experience



Dedicated Life Science Innovation Labs

- Genomics
- Bio-Informatics
- MBDD
- Clinical Development and Ops
- Drug Safety and Regulatory

- Serialization
- IoT/RFID Lab
- Predictive Analytics
- Process Engineering Lab
- SCM Optimization

- Digital Labs
- Enterprise Information Fusion
- Social Media Analytics
- Connected Marketing

Medium term outlook

Increasing adoption of digital technologies

- Experience with large scale global digital transformation programs
- Trained Digital workforce & Digital CoEs

Innovation with External Partners by Life Sciences Industry

- Continue cutting edge research
- Establish TCS Life Sciences Cloud Platform

Personalized Medicine & Implants to expand

- Investments in TCS DNA Sequencing Lab & Translational Research capabilities
- Investments in 3D printing capabilities

'Saving Lives by Serving Customers'

Thank You

IT Services Business Solutions Consulting