#### TATA CONSULTANCY SERVICES Experience certainty.





## Life Sciences Debashis Ghosh

## TCS ANALYST DAY March 17, 2016

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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

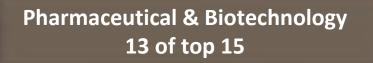
 Standardization

 & optimization of business/IT processes & systems

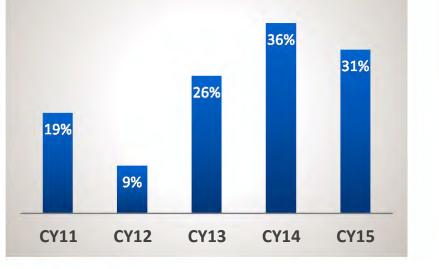
## **Key Technology Trends**

- 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**

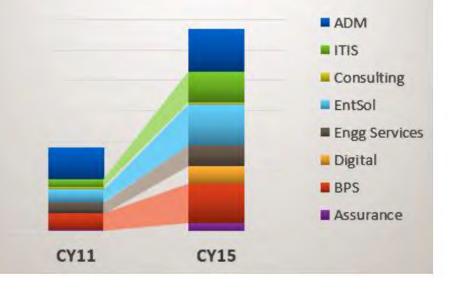






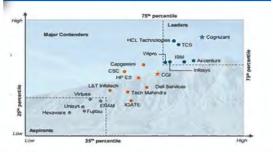
#### Medical Devices & Diagnostics 8 of Top 10

#### Holistic growth across all service lines



## **Recognitions in 2015**

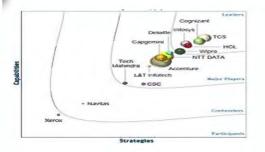
#### Everest PEAK Matrix Life Sciences ITO



#### Sales & Marketing ITO by IDC



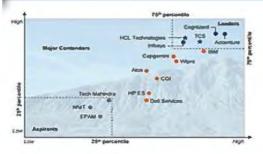
## Manufacturing and Supply Chain ITO by IDC



#### 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



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**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