



TATA MEDICALCENTER 1st Annual Cancer Biobanking Workshop 2017



Harnessing Cloud Technology for Biobanking Informatics

By

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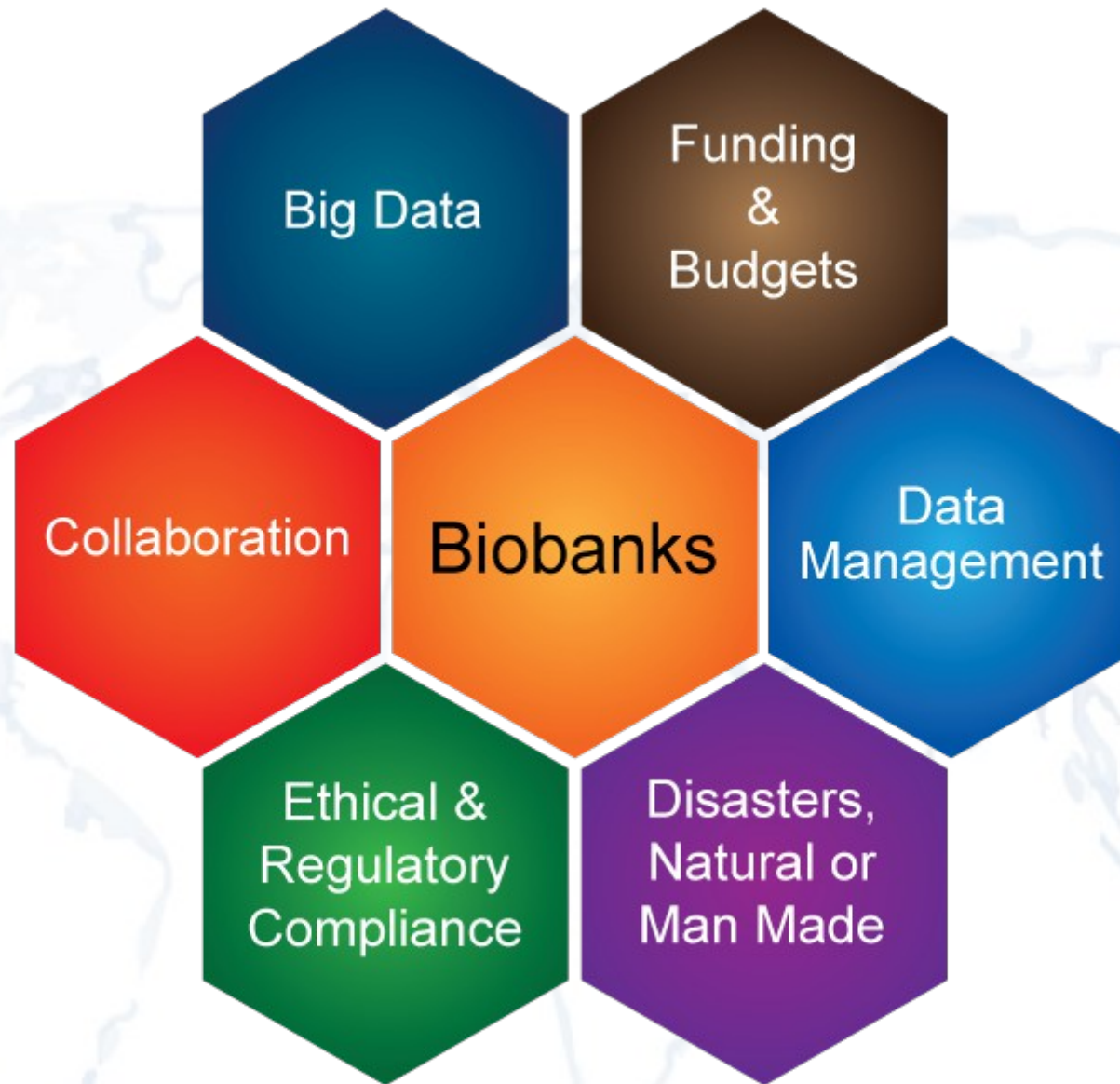
COO, CloudLIMS

Role & Objectives of Biobanks

Biobanks are key resources:

- Contribute towards efficiencies in clinical research
- Facilitate development of new therapies, diagnostic tests, and personalized therapies

Challenges Faced By Biobanks



Data Management

Managing biospecimens using paper-based systems, spreadsheets program & lab notebook tools:

- Paper-based records are not sustainable
- Non-standardized, error-prone data recording
- Laborious and time consuming
- Lack of efficiency due to unavailability of biospecimen records readily
- Unorganized labs

Data Management

With Traditional On-premise LIMS:

- Lack of interoperability
- Lot of customization to fit specific work-flow needs
- Heavy investment in IT infrastructure
- Requirement of trained Healthcare Information Technology professionals (HCIT)
- Annual maintenance & support

Funding & Budgets

A second major bottleneck in accelerating advancements in research is the lack of long-term secure funding for developing and sustaining biobanks and biobanking research:

- Inappropriate business model to estimate all costs arising from owning, operating, and maintaining a large centralized biobank
- Funding shortages
- No or limited budget for informatics support
- Short-term funding

Big Data

Large biological data sets (such as tissues, blood and derivatives, other body fluids, cells, DNA, etc. and associated data) result in:

- Unprecedented volume of data due to development of high-throughput methods for genome interrogation
- Multifactorial data, both large in sample size and heterogeneous in nature
- Data management
- Data privacy and security

Collaboration, Ethical & Regulatory Compliance

Sharing of data is imperative but posed by several challenges:

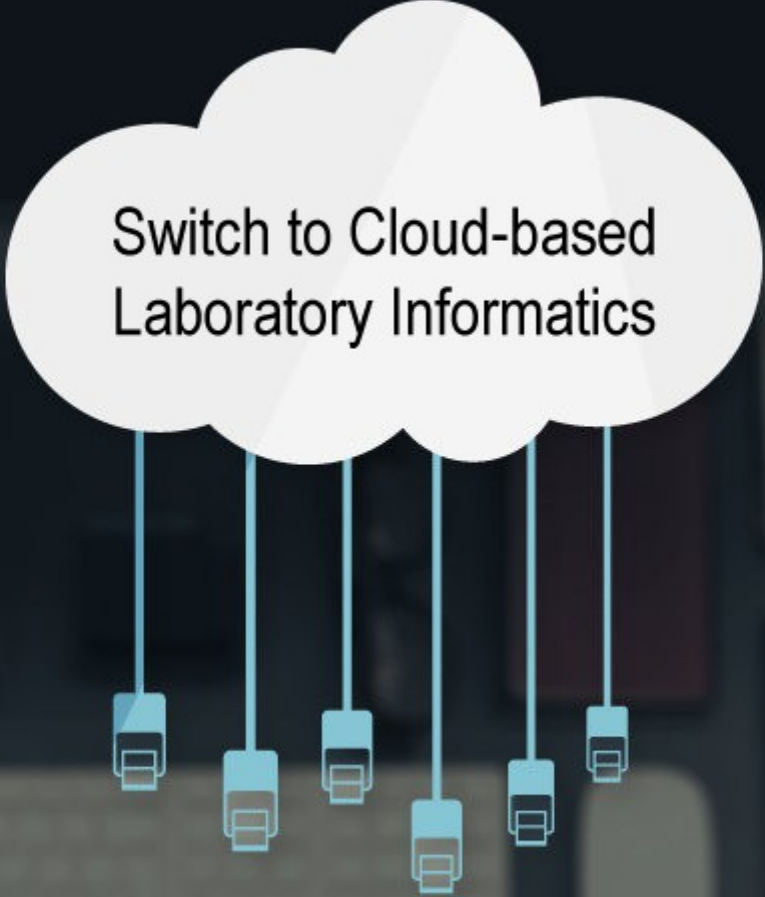
- Non-uniformity of ethical and legal compliance for data sharing across the world
- No interconnection between network of biobanks
- Informed consents for data sharing

Disaster and Recovery Management

Disaster Management Issues:

- No focus on risk management and risk mitigation while establishing biobank infrastructure
- Lack of awareness
- Loss of samples and associated data
- Ineffective backups
- No support services

Technology Alternative



Switch to Cloud-based
Laboratory Informatics

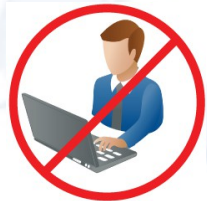
Cost Saving



Light on pocket



Zero Capex, no need to buy, setup and maintain hardware



No IT personnel required



No maintenance, no operational expenses

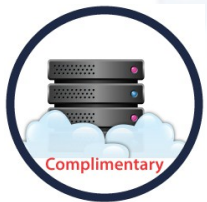
Infrastructure



Easy accessibility, access using any browser anytime anywhere just like Gmail, Facebook and Twitter



99.9% availability



Complimentary hosting

Collaboration



Efficient collaboration



Real-time data sharing

Scalability & Extensibility



Easily scale up or down depending on requirements



Extensibility

Security & Reliability



Data Security



Patient Security



Periodic Back-ups



Network Security



Electronic Signature

Disaster Management



Disaster recovery plans

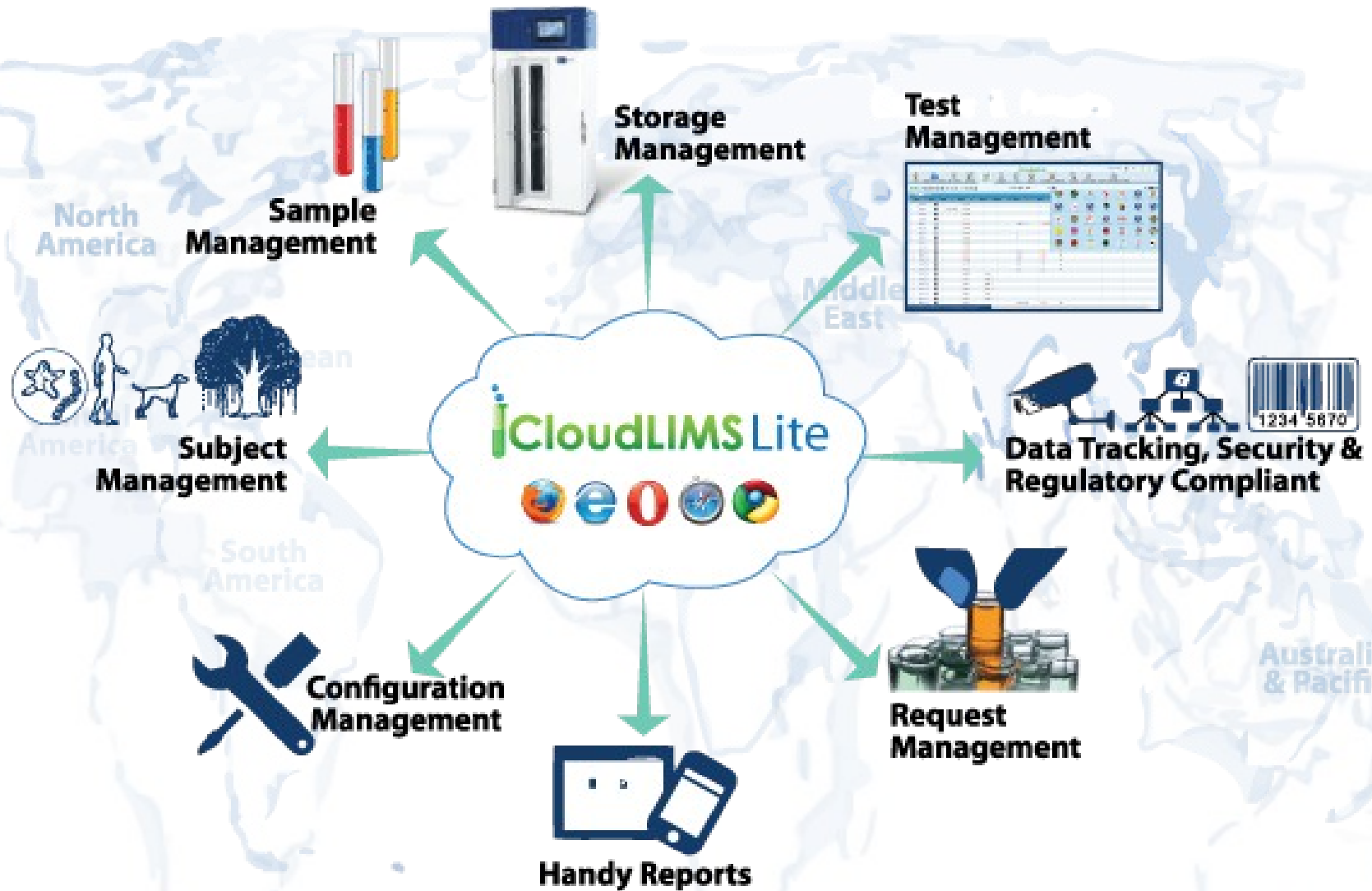


Back-ups & Migration



Business continuity

Key Features





Thank You!

For more details, visit us at [PUSHTI](#)