

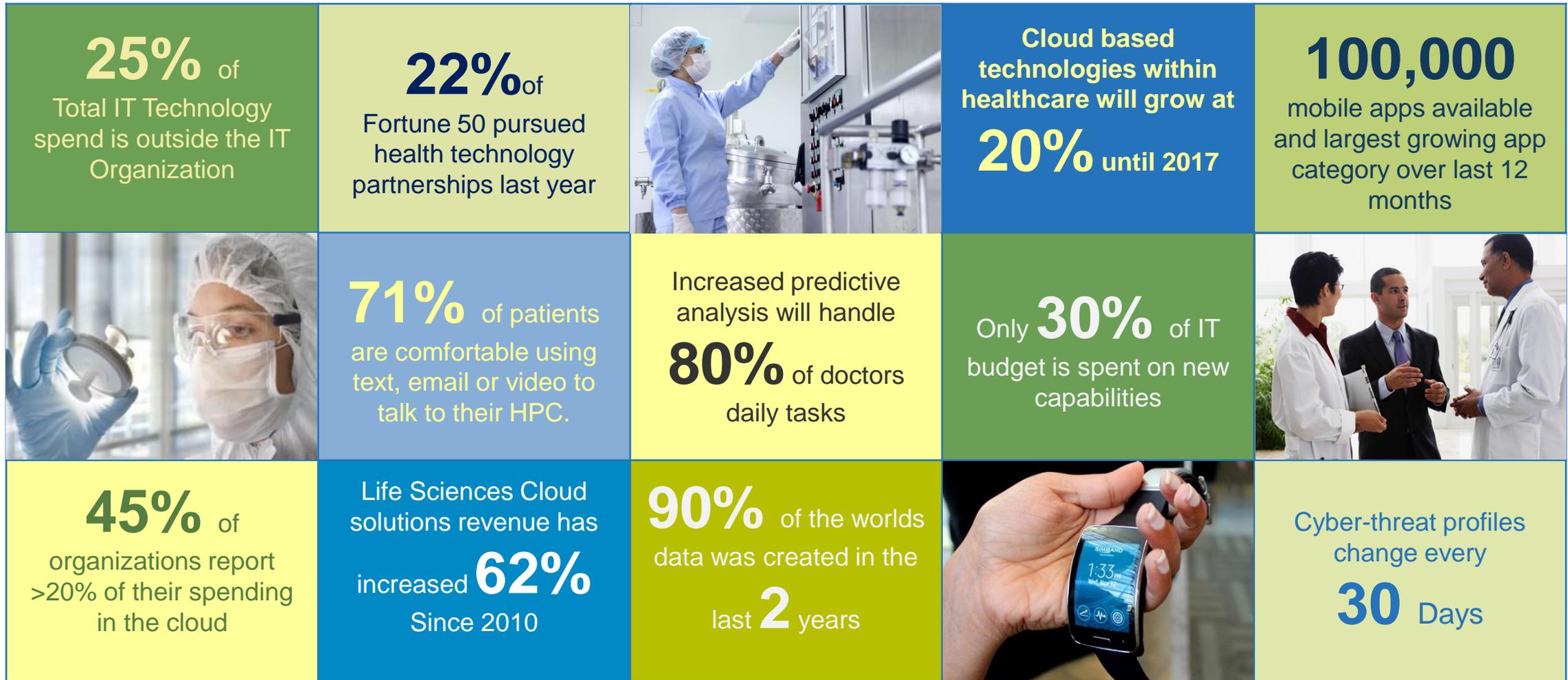


# Cloud disruption of the Biopharmaceutical industry

The changing landscape of technology

Matt Griffiths - March 14<sup>th</sup> 2016

# The New Enterprise IT Landscape



# Leading life sciences companies will be able to leverage the cloud as a source of competitive advantage.

**Examples**

- Outcome based, payment by results
- Integrated diagnostics and services
- Accelerated product development

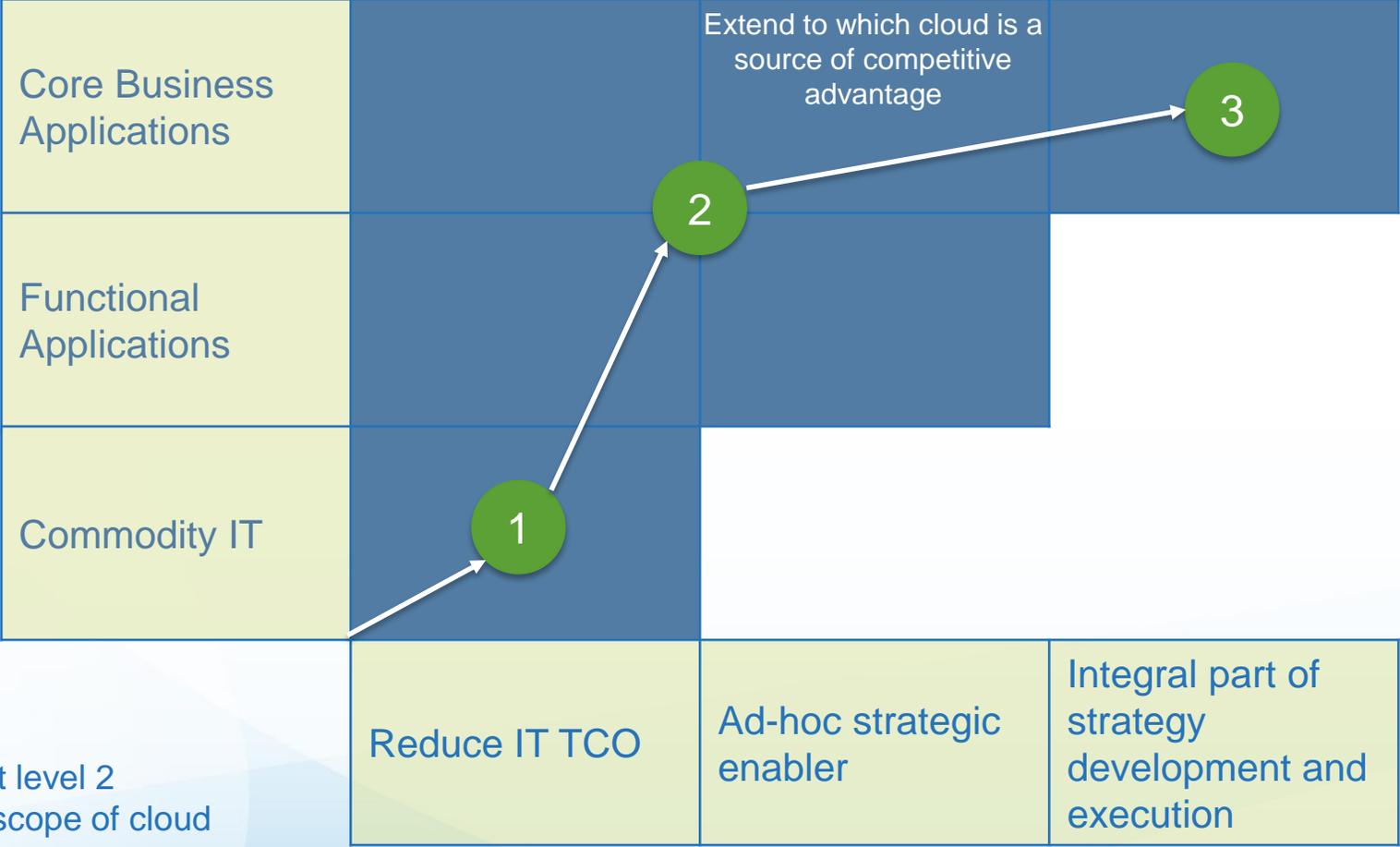
- Point solutions for R&D, Manufacturing & Supply and sales and service
- Internal and external collaboration

- Storage and compute
- Email
- Collaboration tools

**Leading life sciences companies will be:**

- Realizing the available value from level 1
- Proactively and systematically exploring opportunities at level 2
- Preparing for level 3 as the cloud matures – depth and scope of cloud market increases

Product Centric ← → Patient Centric



Business Value →

# Cloud first is now the norm across the Enterprise

But growth has been organic and point solution focused.

## Corporate



## Research



## Development



## Operations



## Commercial



## Infrastructure



# Cloud driving significant behavioral change

Cloud technology shift has far reaching implications.



## Engagement

- The 'old' engagement model doesn't work. New focus is on business process change rather than software change.
- Harder to ensure engagement in early discussions.



## Talent & Skills

- Increased demand for Business Analysts, Enterprise architects & integration specialists
- Testing & Quality functions increasingly important in a 'trust but verify' relationship



## Policies

- New expectations from vendors on disaster recovery, scalability, change management
- Limits of liability are difficult to negotiate



## Financial Management

- Spending shift from Capex to Opex inconsistent with current budget and accounting models
- Expect multi-year agreement, vendor break even is usually 18-22 months



## Security

- Cyber-security audit scope extending outside the enterprise.
- Ability to support BAA/HIPAA or CFR21 Part 11 reqs may vary



## Operational Excellence

- SLA's lower than internal standards, 99.5% is common, difficult to get meaningful penalties
- Requires active role in continuous improvement initiatives

# Discussion: Finding the guardrails

## 1. Managing Organic Growth

- Governing strategy and architecture without stifling innovation.
- Ensuring early engagement in business problem definition.

## 2. Private vs Hybrid vs Public cloud

- Consolidating, reporting on and driving insights from disparate data sources
- Balancing cost, reliability, performance
- Enterprise IT role in managing SaaS providers and solutions.

## 3. Transforming the workforce

- Culture shift from 'developing software' to 'developing processes'
- Delegating responsibility to Cloud solution providers