Innovation & Disruption

How companies innovate and the routes they take to bring new and disruptive technological innovation into their companies determines whether or not they are likely to remain successful in a rapidly evolving marketplace. How aggressively and quickly companies experiment also indicates the strength of their intention to lead their industries and not be left behind.

To gauge this intent, the ITTS framework looks at methods of innovation and disruption, including:

- Formal innovation programs to accelerate transformation across the organization
- Partnerships with startups or incubating startups internally
- Monetization of their technology assets in entrepreneurial ways
- Capitalizing on disruptive business models such as the collaborative economy (e.g. applying the UBER and AirBnB effect to life sciences processes) or disruptive trends like mobile apps and wearables that shift customer engagement\[12\]
Organizational Transformation

Organization design can determine how digital and technological innovation is embraced to build competitive advantage.

Included within the ITTS framework are measures of organizational effectiveness including IT centralization, evolving hiring practices and resourcing models, and aspects of leadership. Key measures of centralization are:

- Reporting line of the IT organization into one Global or Corporate CIO with horizontal governance across all brands
- Centers of excellence (COEs) for IT functions to standardize and improve processes across the organization
- Centralization of hardware procurement and other technology capability under shared services, which helps the CIO to create efficiencies, deliver value consistently across the entire organization, and speed the pace of transformation by creating a common company culture

ITTS also incorporates measures that indicate how agile companies are in adapting, including:

- Changes in hiring, such as the creation of new technology roles aimed at the future and the hiring of IT staff with critical non-technical business and customer focused skills
- Aspects of leadership such as the level of organizational support for a digital strategy and the role that the IT function plays in leading innovation within their organizations
- Use of Business Processes as a Service (BPaaS) outsourcing for on-demand resourcing, which allows the organization to be lean and agile, scale up and down rapidly, and focus on value added activities

Big Data & Analytics

New strategic data sources and analytic systems will be critical to guide precise business actions in a changing life sciences marketplace.

ITTS therefore measures the progress companies have made towards leveraging new data and systems, including:

- Global implementation of a data enabled OCE strategy
- Nature and extent of RWE use
- Breadth and extent of unstructured data use—e.g. to capture patient sentiment data or report adverse events
- Application of company master data management across regions and to different data types;
- Extent of data integration across systems
- Use of analytic systems (including sales and marketing systems) to simplify and reduce data complexity by, for example, offering predictions based on data trends, suggesting or prescribing actions to users, enabling what-if scenarios and offering modern visualizations
Infrastructure

Several elements indicate how proactive companies are in shifting their infrastructure to innovative and efficient business models. The ITTS framework measures whether companies have incorporated cloud-based software as a service (SaaS) into their operations; modernized their communications infrastructure so that guests and innovation-partners can safely access WIFI; and established modern privacy, security & access control parameters that allow employees and offshore staffing full remote-access to files and other capabilities. ITTS also considers whether the infrastructure speeds the IT function’s ability to innovate, such as whether a protected technology sandbox environment has been established to speed the course of innovation, or whether policy and security roadblocks prevent productive experimentation that would allow the department to fail fast, early and cheap.

Whether IT departments are now leading the use of cloud technologies—once considered a disruptive technology that threatened to replace earlier systems installed by IT—is a good gauge of how rapidly companies are embracing infrastructure-led transformation and looking to benefit from it.

Future of Work

The ability of companies to source and attract talent, both in IT and other domains, is critical for company evolution. It is also partly dependent on the creation of a modern work environment. Both Human Resources and the CIO are typically involved in hiring, but it is the CIOs responsibility to make the entire organization an attractive one to be part of from a technology perspective, and to provide a cohesive and seamless environment so that employees can move from one office to another and have the same experience. More than other areas, Future of Work elements are the ones that employees see, touch and help them succeed at their jobs.

The ITTS framework measures whether mobile work tools are available to employees, the extent to which employees can compute on devices other than their computer—for instance receiving and responding to work emails on their phone—and whether they are enabled to use their own personal devices through a flexible bring your own device (BYOD) policy. Collaboration systems are also critical for team-building among employees and external collaboration. Whether the company has installed systems for screen sharing, chat or videoconferencing on all devices is included in ITTS. Finally, the creation of modern work arrangements such as shared workspaces (cube farms, shared offices) or hoteling/office reservation models or roaming user profiles demonstrate whether the IT function (working alongside HR and Facilities) has been able to apply such disruptive models to achieve cost reductions.