



Inside Track Research Note

in association with

 medidata

and

box

## **The life sciences collaboration gap**

Keeping up with evolving  
needs calls for a more  
joined up approach

Freeform Dynamics, 2018

## Introduction

### About this Document

The insights presented in this document are derived from an online study completed in the Summer of 2018, during which views were gathered from 127 respondents via an online survey. Approximately half of the respondents were from the life sciences industry, with the remainder drawn from other highly regulated sectors. The sample was global but weighted towards North America and the UK, with a range of organisation sizes represented. The work was sponsored by Box and Medidata, and conducted in collaboration with a mainstream IT news site.

Dealing with regulated data and applying strict controls to comply with privacy and GxP regulations in an R&D context is nothing new to the pharmaceutical industry and broader life sciences sector. In recent years, however, those involved in designing, executing and interpreting the results of clinical trials, for example, have been working with an ever-greater range and diversity of information sources. Meanwhile, expectations of flexibility and convenience throughout the research process have been rising, including in relation to information sharing both internally and externally.

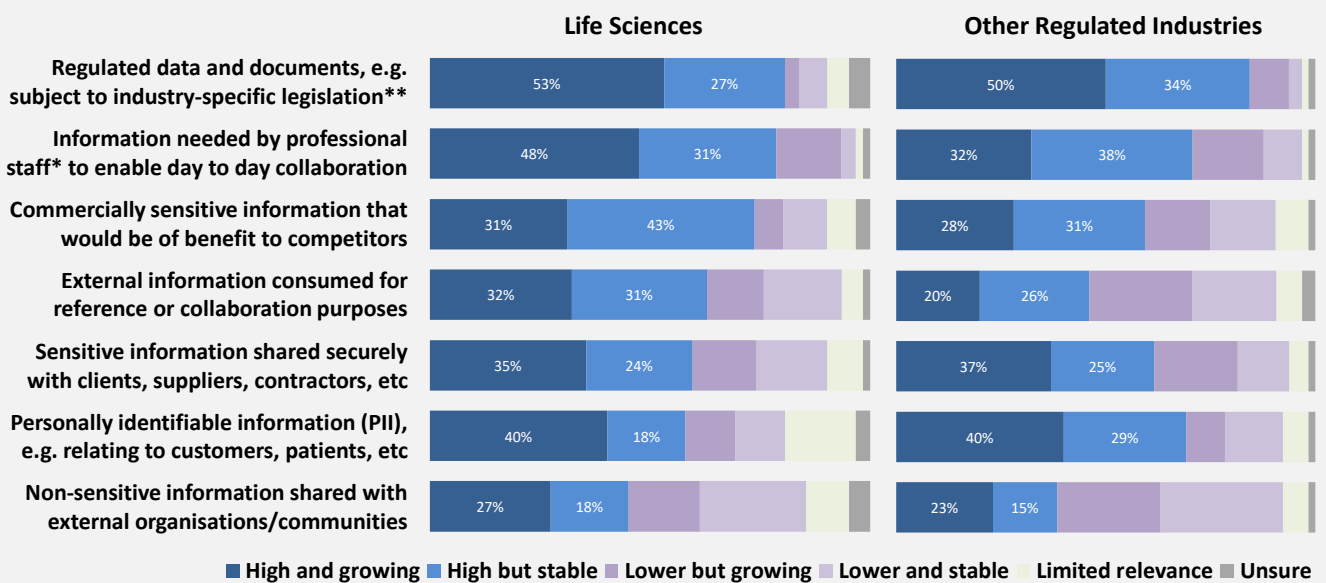
The research presented in this document looks at the way in which information-related needs are evolving in life sciences, and how well systems are keeping pace with escalating demands. Along the way, we compare and contrast what’s going on in life sciences with other highly regulated sectors such as financial services, telecommunications and energy.

The research itself was designed by Freeform Dynamics and conducted via an online survey of 127 respondents during Summer 2018.

## Diversity, dynamics, risk and friction

Some of the information used in life sciences R&D is freely shared across the research community – published papers and associated data, conference proceedings, data that’s part of the public record, and so on. Other material is shared between institutions on a more restricted basis as part of collaborative research initiatives or subcontract activity. Together with purely internal sources, this may or may not be commercially sensitive or subject to regulation (Figure 1).

### Thinking of your professional staff\*, how would you describe their level of need to work with the following? (we realise some of the categories overlap)



\* For Life Sciences respondents, we asked specifically about research staff  
 \*\* For Life Sciences respondents, we asked specifically about GCP, GLP, GMP, etc

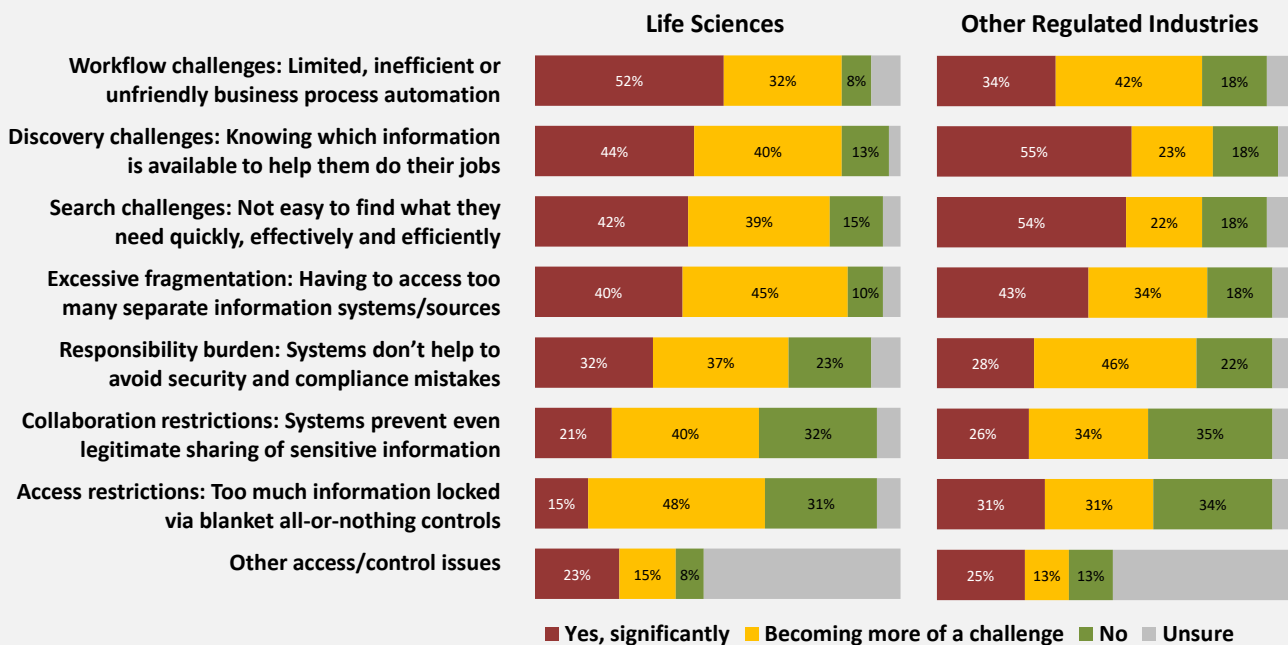
Figure 1 Diversity and growth of key information requirements

*The global, collaborative, yet still fiercely competitive and highly regulated nature of life sciences creates challenges for research staff.*

As you can see from the above chart, the diversity of professional staff information needs and the way demands are growing in the life sciences sector are not unique. While the nature of the material may be different in other highly regulated industries, the patterns are similar. That said, the global, collaborative, yet still often fiercely competitive nature of life sciences R&D activity is reflected in the increased prominence of external reference sources, material required for day to day collaboration, and commercially sensitive information.

Against this background, the key question is how research staff requirements for information access, sharing and collaborative working are balanced with industry and institutional needs for security, privacy and regulatory compliance. The answer in a lot of cases would seem to be 'not very well' when we look at the challenges often experienced by professional staff (Figure 2).

**Are professional staff\* in your organisation experiencing issues in relation to the following?**



\* For Life Sciences respondents, we asked specifically about research staff

**Figure 2 Information-related challenges**

The differences between life sciences and other regulated industries here are interesting to consider. A lot of activity in financial services companies and telcos, for example, has traditionally taken place in heavily process-driven silos. The higher level of pain in areas such as discovery and search is therefore understandable as digital transformation mandates a more joined-up approach to doing business, at both an industry and organisation level.

In life sciences, the journey is a bit different. While systems and data silos have also been a feature of most environments, research staff out of necessity have more frequently found ways to work around challenges and get to what they need. Related to this, some participants in our study anecdotally alluded to the collation and hoarding of secondary copies of information for convenient future access. Mention was made in some cases of unofficial departmental servers and the unsanctioned use of cloud storage in this context, with sharing via personal email accounts.

*Workarounds to system constraints include unofficial departmental servers, unsanctioned use of cloud storage, and sharing via personal email accounts.*

*A more integrated and/or consistent approach is needed to meet research staff needs for access, sharing and collaboration.*

Such behaviour, apart from being risky from a security, privacy and compliance perspective, also means that the data used may not always be the latest. It's also indicative of the need for better workflow enablement in life sciences, which is less frequently a challenge in other regulated industries given their generally higher level of structure and automation, e.g. in areas such as case and incident management.

So how are those in life sciences looking to address the challenges, and deal with the need for speed, efficiency and flexibility, while still maintaining adequate control?

## Desire vs reality, and the IT systems gap

At the highest level, the prevailing view among life sciences respondents to our survey was that a more integrated and/or consistent approach is needed to meet research staff needs for access, sharing and collaboration around a diverse set of both controlled and uncontrolled information. In specific terms, this translates to a specific set of desirable or highly desirable capabilities (Figure 3).

### When considering information access and control needs, how desirable would you regard the following?

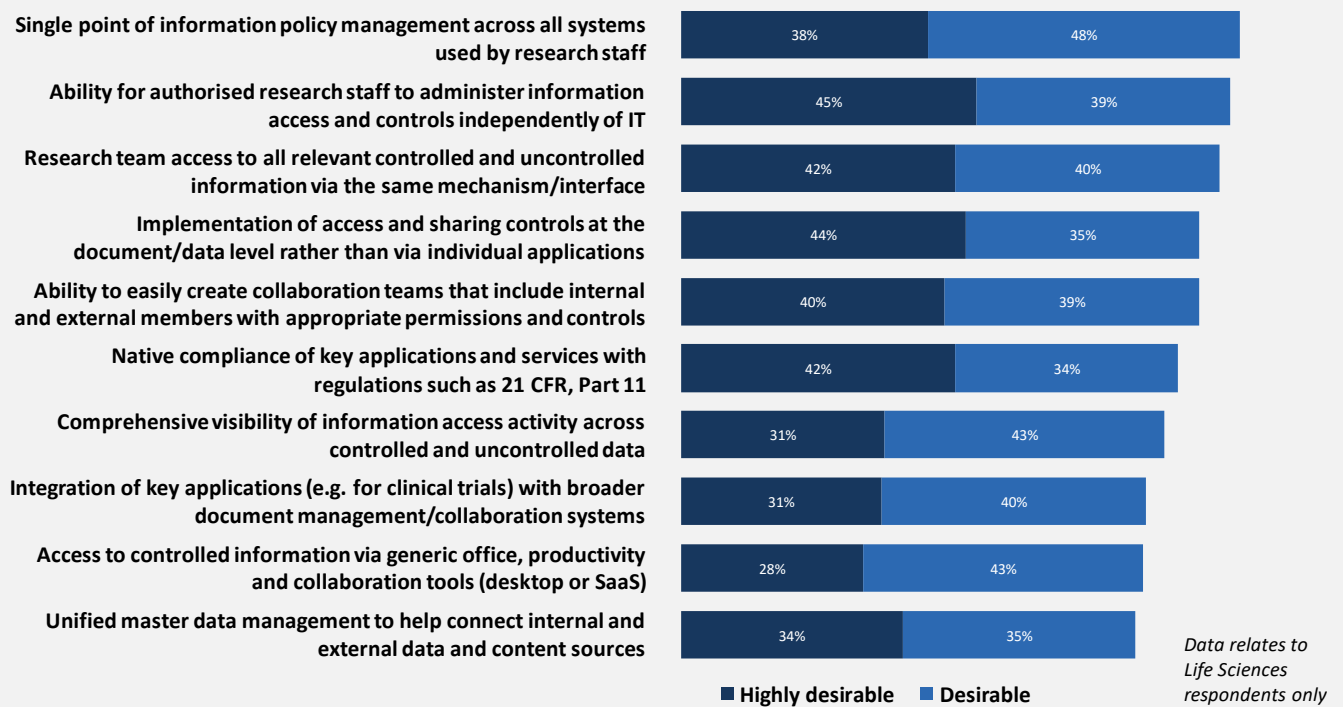


Figure 3 The need for a more consistent, integrated and user-friendly approach

*The importance of empowering non-technical staff to manage information policy is well understood.*

The principle of centralised, or at least coordinated, management of information access comes through strongly, with policies and controls as much as possible implemented at a document and data level. The importance of empowering non-technical staff is also well understood, which makes sense as users and business managers are the ultimate owners of data and policy. And, of course, there's then the need for user-friendliness and convenience when it comes to access mechanisms.

A huge gap between desire and reality is evident, however, when we look at how well current systems deliver against the above requirements (Figure 4).

### And how well do your current systems actually deliver in these areas?

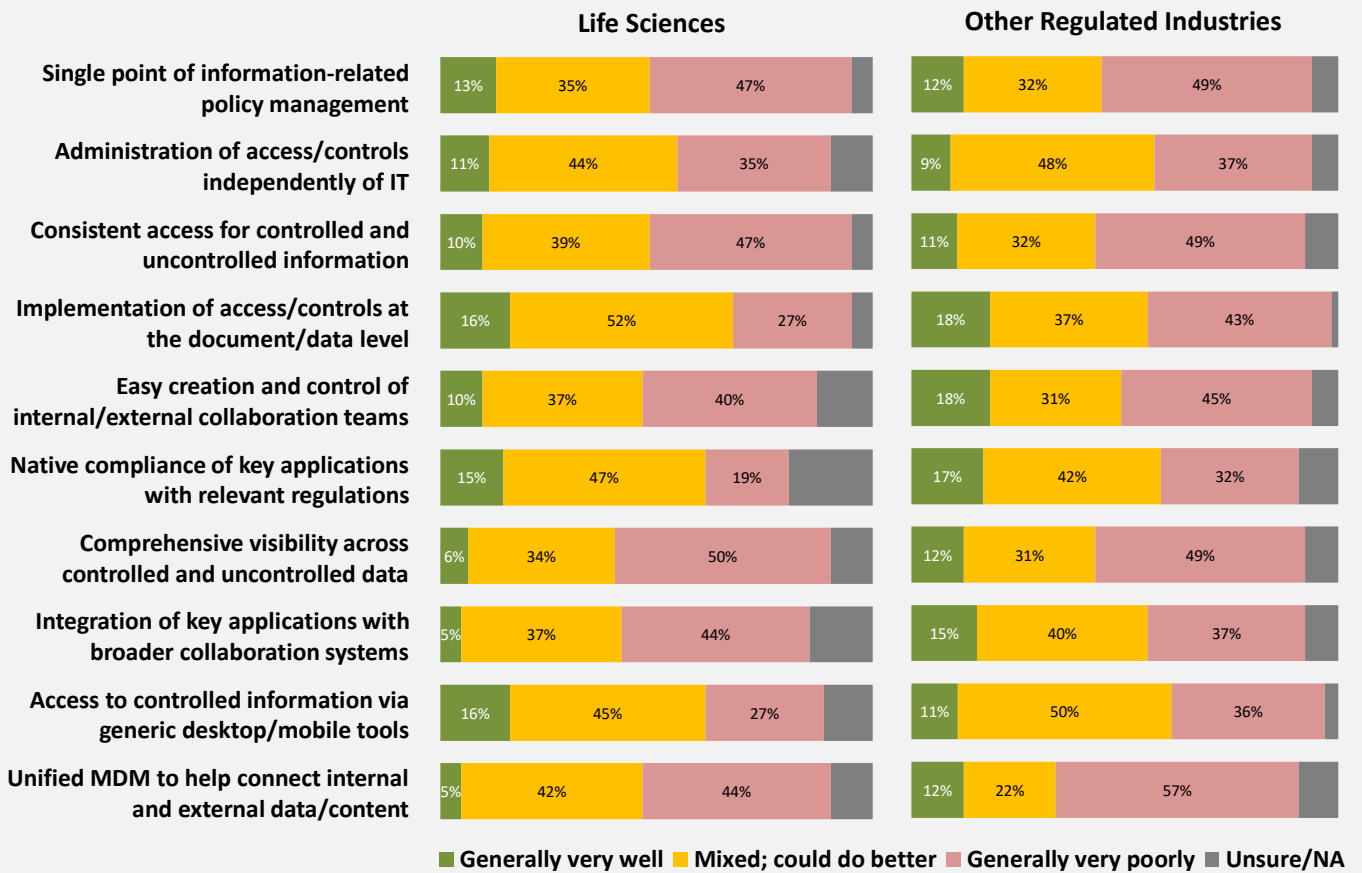


Figure 4 Systems reality generally falls significantly short of desire

*The capability gap is significant.*

Here the differences between life sciences and other regulated industries are not that great, which reflects the fact that most established organisations have naturally accumulated a complex and poorly integrated set of systems and services over time. Historically, the cost, overhead and inconvenience of this may have been tolerable, but in today’s fast-moving digital world, excessively disjointed systems and information has greater consequences in terms of business performance (Figure 5).

### Standing back, how well do the current systems you have in place to support research staff enable the following?

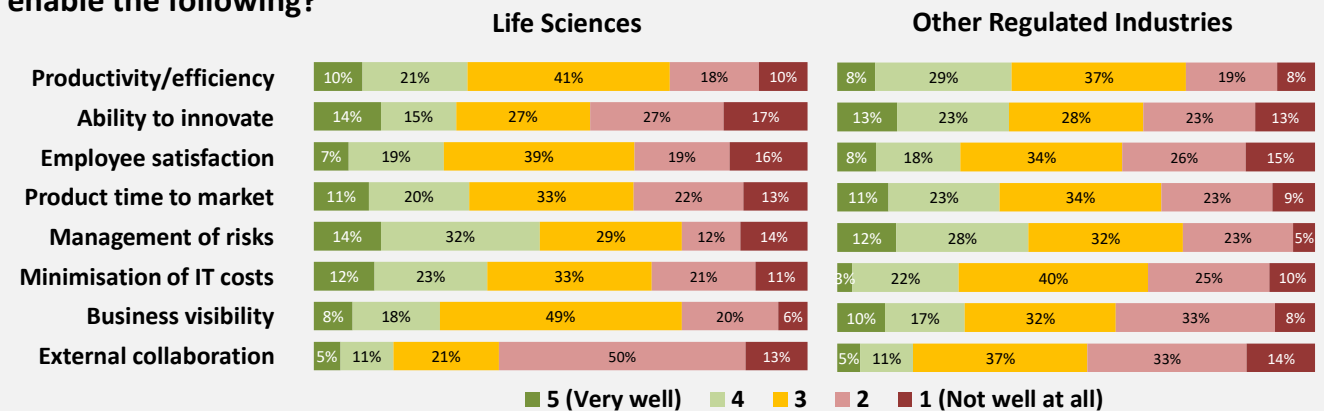


Figure 5 Business performance scorecard

*It's business outcomes that really matter.*

To explore the relationship between 'the gap' and outcomes further, we calculated the average score across the above indicators for each study respondent, then divided the sample into two groups. Given the subjective nature of the 1-5 scale used, this is not an exact science, but when we compared 'Higher performers' (top 40 based on their average score across all areas on the 1-5 scale) with 'Others', we saw some interesting differences (Figure 6).

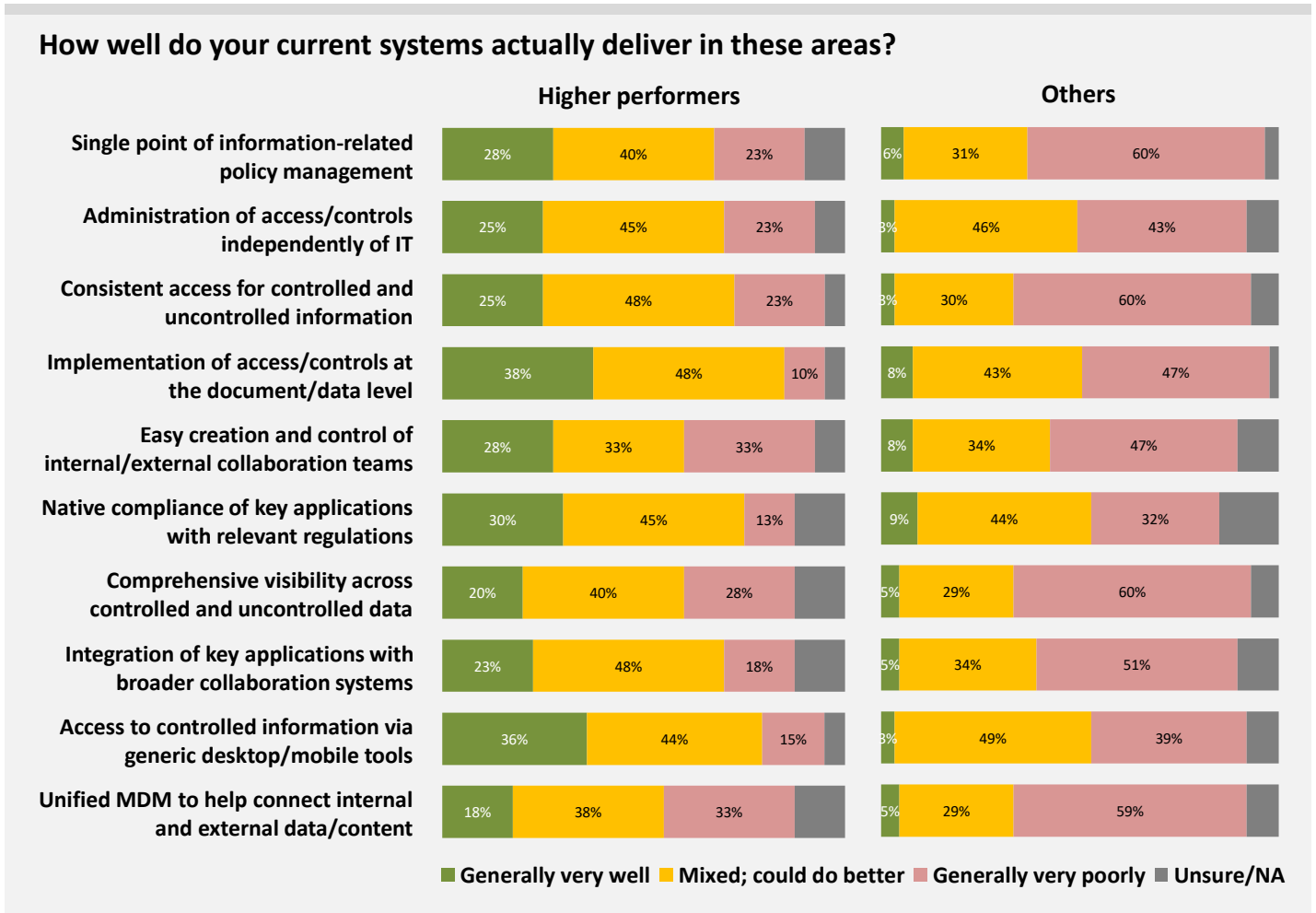


Figure 6 The relationship between business performance and systems capability (data based on all respondents)

The view we are looking at here is across all study participants. The first and most obvious observation from this is that those in the higher performing group, while often still having work to do, have generally made more progress towards implementing the kind of capabilities we have been discussing.

*The strength of your systems environment impacts how well you are likely to be able to keep up with evolving demands.*

To really appreciate the magnitude of the difference when looking at the above chart, don't just focus on the green towards the left, but also the amount of pink on the right-hand side. This tells us that many in the 'Other' (lower performing) group, have yet to even begin to address some of the key requirements in any meaningful way.

The picture overall confirms the relationship between the strength of your environment, and how well you are likely to be able to keep up with evolving demands for information access, sharing and control. This is clearly something you could probably have guessed, but it always focuses the mind when you see these kinds of correlations coming through in survey data.

## Options for moving forward

*Modern clinical trials management systems will allow both coordinated and controlled access to multiple internal and external information sources, overlaid with that much-needed workflow and centralised policy management capability.*

As you look around your current systems landscape, and consider the level of fragmentation and disjoint, it might be hard to think about how you could address the issues without a huge amount of cost and upheaval. In areas such as clinical trials management in particular, with all of the internal and external dependencies, the task of modernising and improving may look pretty daunting.

The good news is that solutions are now available to get life sciences R&D activity onto a much firmer footing. Modern clinical trials management systems, for example, will allow both coordinated and controlled access to multiple internal and external information sources, overlaid with that much-needed workflow and centralised policy management capability. If they are pre-integrated with horizontal document management and collaboration capabilities, so much the better for control, flexibility and user convenience.

It is beyond the scope of our discussion here to go into such solutions in depth. Suffice it to say that because of the distributed nature of the information sources and activity concerned, solutions in this space lend themselves particularly well to the Software as a Service (SaaS) delivery model.

This is worth highlighting as life sciences organisations are generally behind the curve in terms of exploiting cloud options, even compared to other highly regulated organisations (Figure 7).

### How well do you currently exploit SaaS based delivery of key applications?

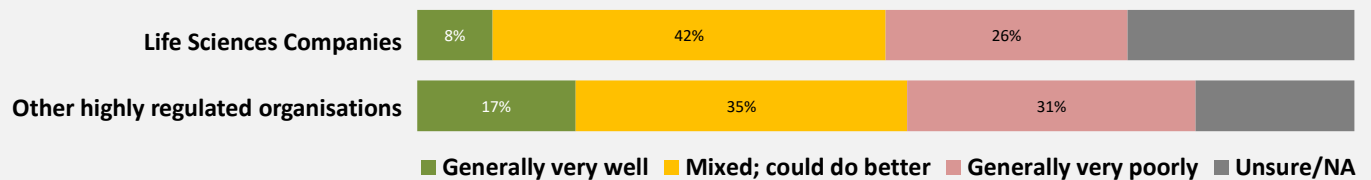


Figure 7 There’s lots of scope for life sciences organisations to make better use of cloud options

Some shy away from the cloud for fear of compliance issues in a highly regulated environment, so it is important to note that SaaS services aimed at life sciences are now available that have native support regulations such as 21CFR, Part 11.

## Final thoughts

Innovation is critical to business performance in the life sciences sector, and modern, effective information access and collaboration are in turn critical to innovation. The chances are, however, that your current systems are falling short of requirements.

As you take steps to address evolving needs and expectations in relation to life sciences R&D in particular, it’s important to pay attention to external as well as internal collaboration requirements. Mechanisms to facilitate sharing, access and workflow have to operate effectively and safely across organisational boundaries.

Some of the greatest advances in this space are taking place among cloud providers, which are ideally positioned to support highly distributed, yet centrally controlled and coordinated activity. SaaS options can therefore accelerate your progress significantly.

*Some of the greatest advances are taking place among cloud service providers. With native support for regulations such as 21CFR, Part 11, the right services can accelerate your progress.*

## About Freeform Dynamics

Freeform Dynamics is an IT industry analyst firm. Through our research and insights, we aim to help busy IT and business professionals get up to speed on the latest technology developments, and make better-informed investment decisions.

For more information, and access to our library of free research, please visit [www.freeformdynamics.com](http://www.freeformdynamics.com) or follow us on Twitter @FreeformCentral.

## About Box

Box (NYSE:BOX) is the cloud content management company that empowers enterprises to revolutionise how they work by securely connecting their people, information and applications. Founded in 2005, Box powers more than 85,000 businesses globally and 69% of the Fortune 500, including AstraZeneca, General Electric, P&G, and The GAP. Box is headquartered in Redwood City, CA, with offices across the United States, Europe and Asia.

To learn more about Box, visit [www.box.com](http://www.box.com).

## About Medidata

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