

Creating the Lab of the Future: A Shift Toward Greater Agility, Flexibility and Efficiency

INNOVATIONS 2 SOLUTIONS

The Sodexo logo features the word "sodexo" in a blue, lowercase, sans-serif font. A red swoosh underline is positioned beneath the letters "o" and "d", ending in a small blue star above the letter "o".
QUALITY OF LIFE SERVICES

CREATING THE LAB OF THE FUTURE: A SHIFT TOWARD GREATER AGILITY, FLEXIBILITY AND EFFICIENCY



Carl Stanbridge, MSc, Quality & Compliance Director - Global Pharmaceuticals and FMCG, Sodexo

INTRODUCTION

Aging populations, chronic diseases, market expansion, and treatment and technology advances are expected to spur life sciences sector growth in 2015.¹ However, efforts by governments, healthcare providers and others to reduce costs, improve outcomes and demonstrate value are dramatically altering the demand and delivery landscape. At the same time, the patent cliff remains steep, and there is a well-understood need to create more collaborative partnerships across industry and academia. The sector also faces significant difficulty in attracting and retaining talent.

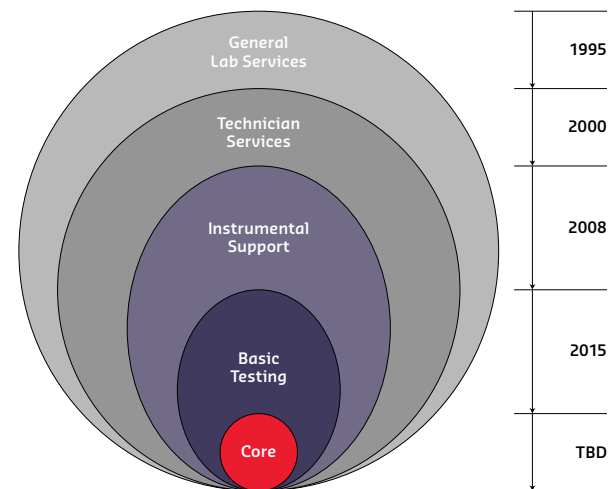
Faced with these developments and challenges, it is increasingly evident that the global life sciences sector is operating in an era of significant transformation. Most companies have adapted by not staying the normal course and changing their strategy. Faced with competitors to “big pharma,” many of whom have become significant players, they are working to adopt more agile and flexible operating models. In doing so, they have demonstrated a renewed focus on their laboratories. This includes reviewing the best way to obtain value from their scientific services, a function which in most cases is outsourced.

The life sciences sector is comprised of the pharmaceutical, biotechnology and medical technology (medtech) segments. The life sciences have applications in healthcare, as well as the agriculture and food science industries. They are helpful in improving the quality and standard of life.

THE EVOLUTION OF SCIENTIFIC SERVICES

Scientific services covers a broad spectrum of activities that have become increasingly closer to the more critical areas of the laboratory (see Figure 1). These services range from general laboratory services (e.g., cleaning, glass-washing, consumable stock control), technician services (e.g., media preparation, cell culturing) and instrument services (e.g., calibrations, servicing, repair, qualifications). The scope continues to widen, as there is also an appetite developing within the life sciences industry for service providers to include basic analytical testing among their solutions.

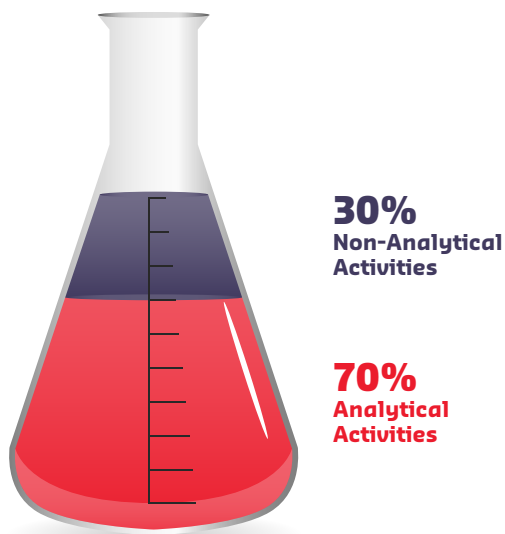
Figure 1. Scientific Services Through the Years



The increasing scope of scientific services allows companies to obtain more value from service providers. Through innovative technologies and approaches embedded in robust compliant processes, scientific services offers life sciences organizations an avenue toward the pursuit of their core business. Specifically, the fundamental benefit that scientific services seeks to deliver to the life sciences industry is the ability for scientists to spend as much time as possible working toward organizational objectives and supporting the key assets of the organization.

In fact, any activity which does not directly contribute toward the progression of an asset, should be considered an activity that can be delivered by someone else. It is these non-core activities — which make up 30% of a scientist’s time² — which form part of the scientific service offer. As part of their evolution, companies in the life sciences industry have revisited the rather difficult question of “what is core and what is non-core” in an effort to re-evaluate what can be outsourced to strategic partners.

How Scientists Spend Their Time



The scientific community also increasingly acknowledges that an extremely important factor in aiding them to perform their duties are the caliber, behavior and ongoing management of the people charged with the responsibility of scientific services — at all levels. Accordingly, service providers must adapt to the new demands placed on them by more effectively anticipating trends in the industry.

AN INNOVATION-FOCUSED END-USER COMMUNITY

Given the increased engagement among the scientific community, it is appropriate to examine in more detail any trends that have been observed in recent years, with respect to their demands on scientific services — not just from a service perspective, but from a strategic perspective. Effective scientific services: (1) provides highly qualified personnel — an extension of the scientific community, (2) delivers innovative solutions, and (3) is “connected” and understands scientists’ expectations and the regulatory environment.

Perhaps the most notable and potentially all-encompassing requirement is that of innovation.³ Scientific services plays an important role in providing innovative solutions in laboratory areas. When delivered correctly, it has a positive effect on the scientists’ experience and in turn their productivity.

“Supply chain-driven innovation, such as novel manufacturing techniques, alternative modes of distribution, supply chain segmentation, and partnerships with third-party service providers infusing innovation where it makes sense, will be critical to sustaining a new business model focused on different types of products, services, and methods of patient engagement.”

– Deloitte,
2015 Global Life Sciences Outlook Report

Today’s unique culture in life sciences is also vitally important. As the pace of life science R&D accelerates, laboratories face heavy demands to produce timely, accurate results at reduced costs. It is not uncommon for senior management to push for throughput to quadruple while reducing costs by 30 percent.⁴ At the same time, social media and immediate access to information have changed the expectations of the end user. In addition to this, there is a changing viewpoint relating to compliance. It is increasingly accepted that sustainable customer satisfaction cannot be achieved through compliance alone, but instead through a shift in culture that places quality as the forerunner to cost reduction and efficiency.

The Workplace: A Sum of Its Tools

Whether it is a laboratory, a write-up area, a glass-washing room, consumables and chemicals store, ancillary area or a home office, these are all now included within the definition of “workplace.” Effectively, **today’s life sciences workplace is very much the sum of its parts.** Along with this, scientists have transitioned from intellectual contributors burdened with menial responsibilities to controllers of intellectual science management. They are an extension of the facility, and along with the facility, they have increasing demands on scientific service providers.

Scientific services can truly add value to the scientist. Through adopting and implementing technologies for stock monitoring, location tracking, usage-based maintenance, paperless tools and many more tasks, the end user community can significantly benefit from a specialized service provider.

At the same time, with cyber threats and other security breaches on the rise, life sciences companies should consider whether they need to assess potential capability gaps, define their security and privacy needs, and coordinate their efforts with their partners.⁵

Innovation is an area that has seen much change in recent times. With the introduction of wireless technologies, and devices from smartphones/tablets to interactive “tables,” Web broadcasting and global connectivity, scientists *should* have ample choices. However, in many parts of the industry, there has been slow progress. This has led to an overwhelming desire for scientific services to introduce the latest and greatest technologies, including the ability to access laboratory information and control laboratory equipment from remote locations.

When scientific services embraces and implements these innovations and the workplace is changed, people view and use the workplace differently. Innovation is infectious, especially among scientists. It is inspiring to work in an environment where technology in the workplace means that services “come to you.”

The Workplace: A Sum of Its Processes

Laboratory operations are constructed of processes, and advances in technologies are unquestionably correlated with corresponding improvements in these processes. An important part of a scientist’s and an organization’s responsibility is to define those processes that they consider core to their operation — that is, processes that have a direct impact on a company asset. Scientific services can add value and allow scientists to divert effort to their core business as opposed to investigating the leanest method of moving a sample through the laboratory.

Scientific services add value by allowing scientists to focus on their core activities.

The hunt for non-value added tasks and inefficiencies in the process has now escaped the confines of manufacturing operations, and has very much entered the laboratory space. Efficiency has spread like wildfire, as it has become apparent that laboratory

operations (e.g., booking in samples, allocating work, equipment reservations, testing lead times, atypical investigations) are, in fact, processes, each one with various steps and therefore opportunities to be made lean. However, the life sciences industry must continue to maintain a risk-based approach in order to remain compliant with regulatory requirements.

Scientific services is increasingly relied upon to improve processes and perform additional tasks, while taking into account these requirements.

Processes relating to scientific services often transcend any local situation at a site level. Whether it is equipment related or technical, significant process commonalities exist between sites and entire divisions within an organization. However, the scientific community does not always see this, because they are too busy to look — and if they do see the issue, they are too busy to fix it. Scientific service providers, on the other hand, can manage processes and deal with any issues that arise. It is perhaps not an innovative solution that is needed, but an innovative mindset within the scientific community and service providers alike to really challenge what is considered “core” and then to explore the full potential of outsourcing non-core to strategic partners.

THE SHIFT TOWARD INTEGRATED SERVICES OUTSOURCING

Outsourcing in the life sciences industry has been around for some time. R&D divisions make use of contract research organizations (CROs), while production divisions utilize contract manufacturing organizations (CMOs). In these areas, globally spending is in excess of \$1.5 USD Trillion, of which “over 95% of the outsourcing contracts originate in the U.S. and E.U.”⁶ Outsourcing constitutes 25% of the overall spend in R&D within the U.S. for all industries combined. However, of this, only 12% of the spend is on the “analytical” part of the R&D process, suggesting that there is a lot more potential for growth in the laboratory environment.

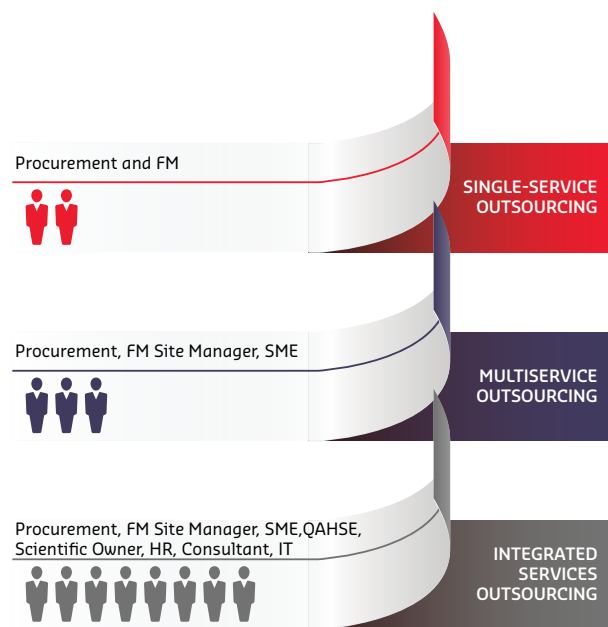
These numbers are here for illustrative purposes only, and are indirectly related to the topic of outsourcing scientific services, which is typically an “on-site” service delivered by a provider as opposed to an off-site organization. They do, however, serve to show the considerable investments being made in science. Scientific services has a pivotal role in ensuring that an organization makes the best use of that spend in aiding the scientific community, through advancing innovation, increasing speed to market, and providing amenities that promote greater talent acquisition.

Although currently considered part of Integrated Facilities Management (IFM), there appears to be an increasing trend toward separating scientific services from other facilities services, evidenced through a review of “request for proposals” (RFPs) from recent years. The transition is not at the expense of integration of services, but does mean that there is additional emphasis placed on the importance of science. As FM is often outsourced to service providers, this shift has a direct impact on FM service providers, who must either develop offers to meet the needs of this position change or maintain the stance that science is merely an extension or an integral part of FM.

A Shift From Cost to Value

In the past, providers of scientific services to the life sciences industry were asked to focus on cost reduction and as such, the contracting processes were led by the procurement function, with little involvement from end users such as scientists. However, more recently, due to the shift toward integrated FM services provision, there is a trend whereby the supplier selection panel is much broader (see Figure 2). The consequences are that while cost remains important, what becomes the defining factor is value.

Figure 2. Integrated Services Outsourcing and the Broadening Supplier Selection Panel



Despite the addition of more disciplines in the process, the key difference has been the inclusion of the end users — the scientists. As such, service providers are expected to place an emphasis on “value” as understood and desired by the end user.

Scientists are expecting the perfect blend of innovation, high standards of service delivery and supply chain leverage, all for the right price and embedded within a thorough program of compliance.

They are asking the “so what?” question, referring to the need for them to be positively impacted by the service provider’s solution, which seeks to tackle the 30% non-core activities for which scientists are currently responsible.

Drivers and Benefits of Outsourcing Scientific Services

To better understand this, it is worth exploring the drivers and benefits of outsourcing scientific services to strategic partners, which will help formulate a rationale for separating this service from other FM services.

In one review, RFP results showed that the economic benefits of outsourcing average between 15–19% savings across five-year contract terms.⁷ These results are consistently strong across North America, Europe and Asia. Even companies in the third generation of facility management contracts continue to see efficiencies.

Drivers	Benefits
Optimizing scientific talent	Removes tasks that do not align with scientists’ core role. Enables scientists to focus on data-based decisions versus data generation.
Designing workplace	More efficient use of laboratory footprint. Improves equipment utilization, reduces asset base, increases access to latest technology, provides more agile environment, promotes collaboration.
Joint investments to increase agility and risk sharing	Creates collaborative partnerships that are financially attractive to all parties involved.
Open-access lab management – shared facilities and equipment	Reduces footprint, increases utilization of equipment, aids method transfer and reduces complexity with multiple equipment types.
“Near” off-site centralization of activities (e.g., reagent preparation, compound stores)	Enables facilities to be designed and fitted to support core activities (e.g., manufacturing) rather than non-core (e.g., chemical preparation).

Pharmaceutical companies who outsource their FM average 15-19% savings over the course of the contract.

OPTIMIZING SCIENTIFIC TALENT

DESIGNING WORKPLACE

"NEAR" OFF-SITE CENTRALIZATION OF ACTIVITIES

OPEN-ACCESS LAB MANAGEMENT

JOINT INVESTMENTS

DRIVERS OF OUTSOURCING SCIENTIFIC SERVICES

The laboratory environment and the community of scientists are considered the “brain” of the organization. The laboratory is the start of the product pipeline, the beginning of the journey of the molecule to the marketplace. A major challenge is convincing the scientific community that FM as a discipline goes beyond the notion of glorified janitors; it is therefore difficult for it to gain strategic legitimacy above anything other than a cost-savings exercise. It is important to overcome this challenge in order to ensure that FM appropriately supports the scientific community that, in some cases, can be more than 50% of the workforce at the site. Perhaps this explains why scientific services are being separated from general FM.

CONCLUSION

As the industry changes and shifts its focus toward agility and flexibility, the scientific community is being asked to contribute toward meeting the objectives of the organization; as such, scientific services must play its part in this pursuit. It is difficult to know whether scientists’ expectations have changed, or whether they are just more involved in the decisions and solutions relating to how they are supported. In any case, there are clear indications that the discipline of scientific services is an important focus area for the life sciences industry. Organizations are rethinking the role of scientific services in relation to the wider facilities management function. While it may be considered a specialist area that needs to integrate with facilities management, scientific services must have a strategy of its own in order to fully support scientists so they can focus on their core activities.

BEST PRACTICES FOR OUTSOURCING SCIENTIFIC SERVICES

- Projects must start with defining and scoping the “core business” of both the life sciences organization and the service provider.
- Technology demands require clear strategy so that the solution benefits both outsourcer and service provider.
- Staff skill sets need to be clearly outlined so that appropriate staff can be recruited to achieve the objectives within the scope of the defined facility.
- The contract must be progressive and serve both the life sciences company and the service provider.
- The definition of facilities is critical — does it extend to the “human” elements of the workplace or just the physical?
- Senior management must set the overall objectives of the outsourcing arrangement and how they will be measured.

KEY INSIGHTS & IMPLICATIONS

- The fundamental benefit that scientific services delivers to the life sciences industry is the ability for scientists to spend as much time as possible working toward organizational objectives.
- The scientific community is increasingly engaged in the decisions and solutions around scientific services. As a result, service providers are expected to place an emphasis on “value” as understood and desired by the end user.
- Effective scientific services: (1) provides highly qualified personnel — an extension of the scientific community, (2) delivers innovative solutions, and (3) is “connected” and understands scientists’ expectations and the regulatory environment.
- There is an increasing trend toward separating scientific services from other facilities services. With this in mind, scientific services must have a strategy of its own in order to fully support scientists.

LINKING TO SODEXO’S QUALITY OF LIFE DIMENSIONS

- **Ease & Efficiency:** Scientific services manages non-core tasks that do not contribute toward the progression of assets, which allows scientists to focus on core activities.
- **Physical Environment:** A strategic service provider optimizes the life sciences workplace and creates an agile, innovative, and inspiring environment for end users — the scientists.
- **Social Connections:** Scientific services can foster collaboration among scientists through workplace design elements and open-access lab management.







REFERENCES

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1. Deloitte. (2015). 2015 Global Life Sciences Outlook: Adapting in an era of transformation. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-2015-life-sciences-report.pdf>
2. Source: Internal review of Analytical Scientist role profiles and observations during due diligence.
3. Gassmann, G., & Zedtwitz, M. (2013). Leading Pharmaceutical Innovation: Trends and Drivers for Growth in the Pharmaceutical Industry. (2nd ed.). Germany: Springer Verlag.
4. Gwynne, P., & Heebner, G. (2014). Laboratory Technology Trends: Advances in Lab Instrumentation. Retrieved from <http://www.sciencemag.org/site/products/labl.xhtml>
5. Op. cit., Deloitte.
6. Stevens, W. C., & Lim-Wilby, M. (2011). Pharmaceutical Outsourcing: Discovery and Preclinical Services. (2nd ed.). San Diego CA: Pharmamedia Inc.
7. Kishan, R., & Cieslak, A. (2012). Strategies in Outsourcing Facilities Management. *Pharmaceutical Technology*, 36(8). Retrieved from <http://www.pharmtech.com/>

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