



A Zifo White paper

A THOUGHT PROVOKER ON INFORMATICS VENDOR EVALUATION APPROACH TO ENSURE BUSINESS VALUE AND SUCCESSFUL IMPLEMENTATION

Introduction

The R&D industry faces several challenges in adopting new technological advances. Often, customers are forced to switch technologies due to advances, and at other times, it is to evolve and make the best use of them. Lab Informatics vendors offer a variety of solutions, but not all will necessarily fit the scientists' needs.

Key Challenges faced by Scientific R&D

- Struggle to use data-driven insights because the availability of specialized data scientists/analysts, and tools with appropriate business domain expertise are limited.
- Labs generate an enormous amount of data so the demand to manage and store lab data is continually rising, which demands a platform and data storage and integration strategy.
- Delivering 'Lab of the future' focuses on the changes to immersive work behaviours, automation and harmonization of data is collection is not yet common place.
- Complex and new scientific domains and workflows (like NGS, novel modalities, etc) are constantly cropping up, despite most organizations' over-dependence on shadow IT and "patchwork" approach to scientific workbenches leading to limited enterprise empowerment in these areas.
- Upgrading and maintaining legacy systems is a constant demand and can be tricky if platforms do not evolve with the science and workflows.

To add to the above key challenges faced by R&D, many of the core informatics platforms are approaching or are well over a decade in age. Often these legacy systems are monolithic that are heavily customized, making them extremely difficult to maintain and upgrade.

We often see one of two "vendor selection" routes taken by our customers.

1. The lab personnel drive vendor selection themselves, given their familiarity with the lab and processes, leaving informatics to pick up the pieces or
2. Informatics systems being selected by IT without business involvement.

The figure below depicts a general lab informatics summary of small to large biopharmaceutical companies.

Typical Informatics Landscape



Figure 1. A Typical Lab Informatics Summary of Biopharmaceutical Companies

How to go about a Vendor Evaluation

Objective

The goal of the Vendor Evaluation project typically is to understand what is available in the market and to identify the best-suited system that addresses customer challenges.

Principles

The vendor evaluation process would focus on following principles

- AS-IS Analysis – To understand what is happening in the lab.
- Future State Definition – To understand what the lab wants for the next decade or so,
- Gap Analysis – Understand the gaps,
- Market Research – To understand where the R&D industry is heading towards and identify who the players are in the evaluation process,
- Initial evaluation – narrowing down to top/potential vendors for the customer need,
- Detailed Evaluation – Identify the vendors for contract negotiation.
- Final Selection for Implementation.

Traditional Vendor Evaluation Process

We typically see vendor selection processes either run by IT or by the business but typically not as a joint, collaborative, effort.

An RFI/RFP-based evaluation approach is often used to drive vendor selection process.

- The business approaches these projects with a tactical viewpoint by selecting vendors based on scientific features and “bells & whistles” and not from a view of enterprise use and consumption of the data.
- On the other hand, the IT approach the selection from a technical perspective with functional capabilities being a checklist of requirements with little prioritisation on the workflow & lab user perspective & end-user experience.
- In both cases, the process leads to limited collaborative buy-in from IT, Business, and the Vendor to pave way for risk minimized, value generating, successful implementation.

Need for an updated evaluation process

R&D is moving from the data age to the digital age. However, many labs are still in the paper or electronic age and find it difficult to understand what digital is, how to embrace and transform to it and what the value it will bring. Often there is a mix of the meaning of “digitizing” – automating legacy form-based approaches – versus “digitalizing,” which enables new data-driven workflows and business processes. A digital transformation program involves significant effort and capital to assess and implement a digital approach to platforms.

A successful implementation relies on an in-depth and diligent vendor assessment phase that follows on from a well defined digital transformation strategy and architecture. Hence, it is important to focus on the selection process and assess all aspects of the solutions on the market. Though the informatics solution will be live for many years, the selection process should take around 3-6 months - and remember you are selecting a “strategic partner”. With this in mind, it is essential to use an evaluation framework that is established, proven, details and efficient.

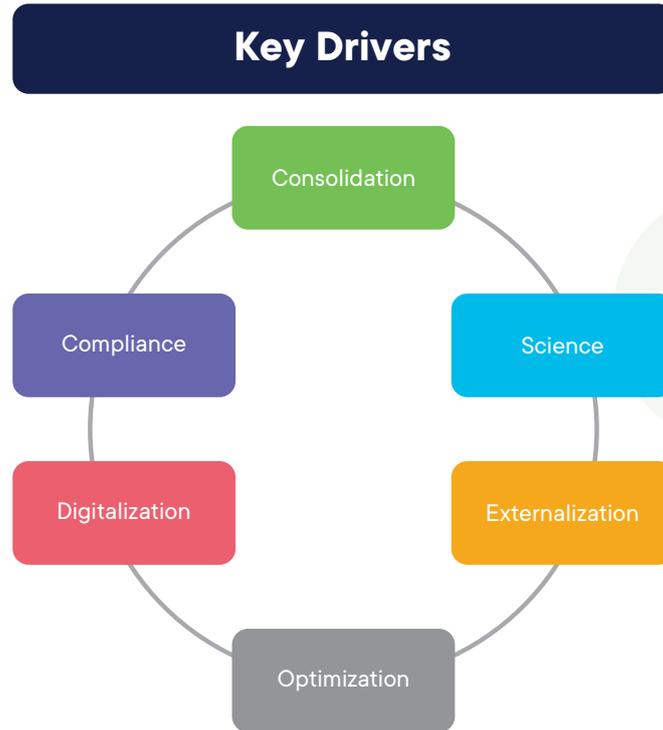


Figure 2. Key Business Drivers for Solution Evaluation and Selection

Key Factors to consider for a product selection

The key influencing factors to consider for the right product selection includes but are not limited to the following:

1. The product shall meet the Data Integrity requirements
2. The product shall have rich Out of the Box (OOTB/OOB) functionalities and have a strong road map for future releases
3. The product shall be future-proof to scale with science
4. The product shall be technologically advanced – Thin client, modern architecture, easily accessible by different devices, user-friendly and easily upgradeable
5. The product shall be flexible enough to support review and approval workflows of static and dynamic data
6. The product shall have good accessibility of data to provide seamless searching and analytics & visualization experience
7. The product shall satisfy the concerns of Internal and External Auditors
8. The product shall meet the domain and regulatory standards
9. The product shall allow for customizations and easy integrations

Recommended Vendor Evaluation Approach

Vendor Evaluation Framework

The evaluation framework should focus on five key pillars – Functional, Technical, Regulatory, Supplier, and Data. The evaluation framework is the backbone of the selection process and is often tailored to meet customer needs.

Zifo's Vendor Evaluation framework

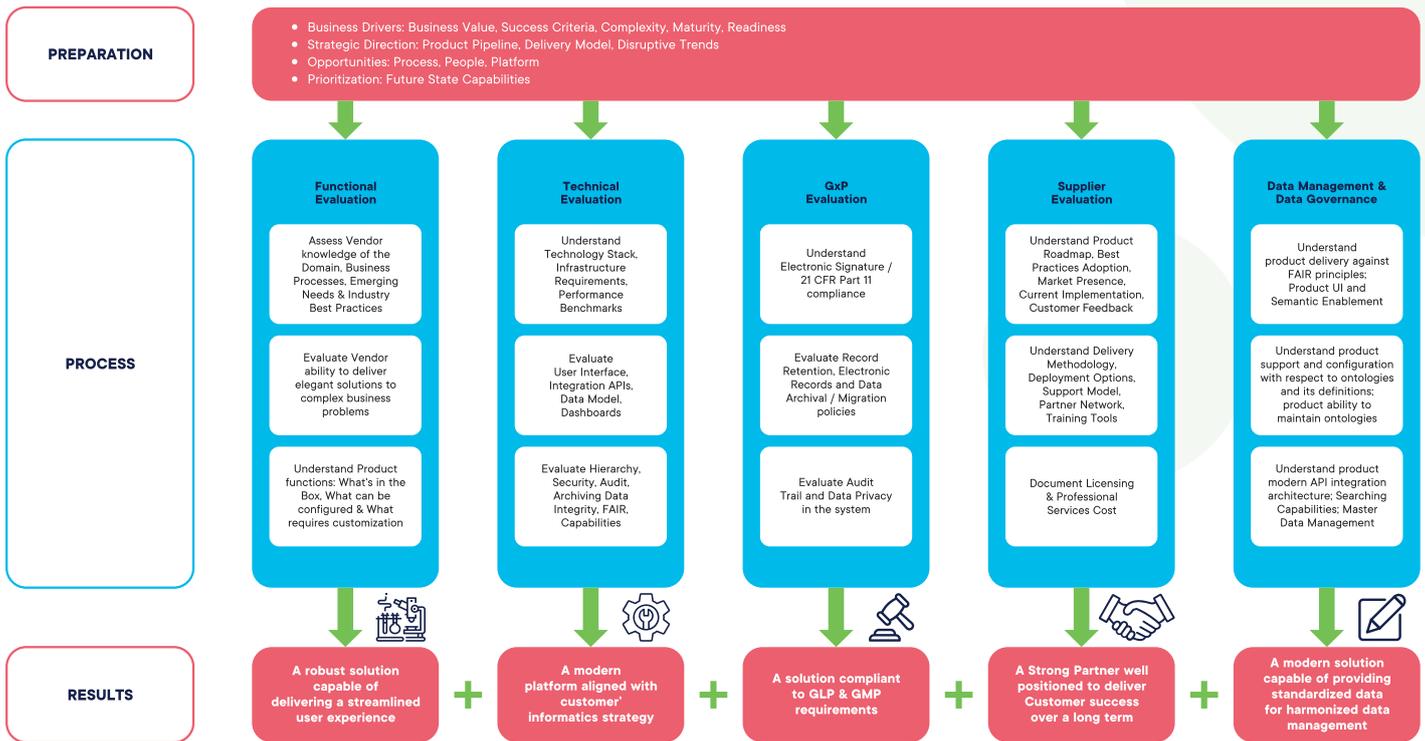


Figure 3. Zifo's Recommended Solution Evaluation Framework for right product selection

Use-Case + RFP-based evaluation methodology

Though there are various evaluation methodologies available to evaluate and select the vendors, a Use-Case + RFP-based evaluation methodology is recommended over other evaluation methodologies.

The figure below describes use-case definition and use-case based demo process steps.

What is Use-Case based Demo?

- A use-case based demo is one in which the product vendors setup their demo system **closely in alignment with a real-life use-case** provided by Consultants. This way, SMEs would be able to relate to the system more closely in alignment with what they do in the lab.
- Use-cases are a concise list of key capabilities** that are representative of a larger set of requirements.
- Use-case demos aimed to evaluate the capabilities and coverage across various functional areas both from business and digital perspective. To understand if the product has a **broad spectrum of capabilities to satisfy all of customer's needs and eliminate those that don't**.

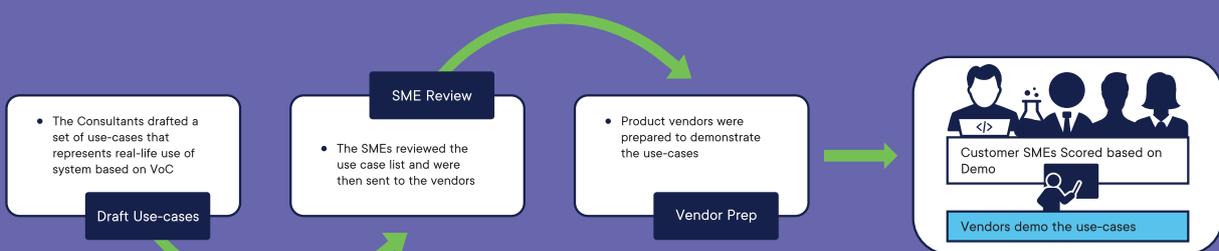


Figure 4. Use-case based Demo Evaluation overview

Key Benefits of this methodology:

- Users experience the product to assess Functional capabilities based on real-life scientific and lab Use-cases.
- Collaborative buy-in from Vendors and scientists paving the way for better adoption during implementation.

While this approach seems very beneficial, it can take significant time from business and IT stakeholders to run it. Therefore, careful attention is needed for efficient planning.

Our recommendations to plan an effective and efficient Use case + RFP methodology are:

1. Parallelise activities when ever possible - Voice of customer and Market research for example can be run alongside each other, which can save a lot of time.
2. Narrowdown the number of vendors for the deep dive use case targeted demos, will be hugely helpful and save the evaluation teams time.
3. Careful selection of use-cases - Having a crisp but detailed use-cases will help reduce the number of “DEMO” sessions and preparation needed by the vendors.

Imagine having 10 vendors at the use-case demo stage, with each vendor demonstrating 10 use cases! That would be 100 sessions, making it a logistical and time consuming nightmare!

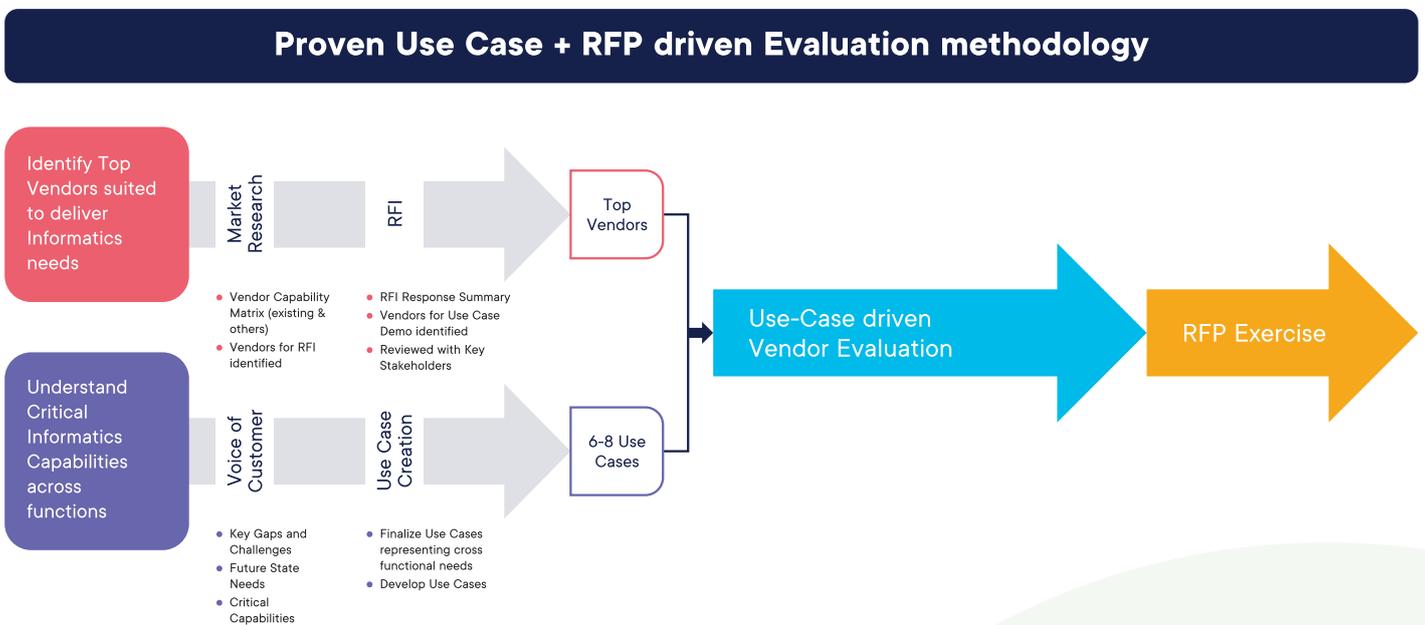


Figure 5. Key milestones and activities in a use-case based evaluation process

Vendor Evaluation Journey Map

The journey map below describes stakeholders journey in a Phase 0 evaluation process.

STAGE	Planning	Design	Execution	Analysis	Reporting
Customer Activities	Identification of Goals & Objectives that aligns with Org. strategy Identification of potential vendors Identification of key stakeholders (Resources with scientific, compliance & regulatory needs)	Finalization of Vendor Evaluation Approach Focusing on the parallel initiatives that would overlap with the program Market Awareness Industry Trends & Best Practices Risk Analysis & Mitigation	Run workshops & VoC exercises Process Mapping/Mining (AS-IS, TO-BE) Customer Journey & Experience Mapping Architecture Planning Vendor Screening RFI/RFP Preparation Program Management	Evaluation Summary & Recommendations	Strategic Implementation Roadmap POC Conduct SOP Data Governance Plan Change Management Plan Systems Architecture Design Process Standardization & Harmonization SDLC Planning Health Assessment
Customer Goals	Engage key stakeholders from across the org. Generate excitement at all levels Engage right Partners	Understand the market trends & alignment with org. strategy Confidence in Evaluation Team & Strategy	Select an ideal Solution that meets the needs of the Stakeholders Level playing field for all Vendors (eliminate Prejudices) Consensual agreement with the selection Function specific Value Proposition Robust & Descriptive documentation	Proposal for endorsement of the vendor finalization	Pragmatic Implementation Strategy Steering Committee Approval Alignment with Org. strategy Reliable Implementation Partner Long Term Capital Planning completed Engaged Innovators & Early Adopters
Touchpoints	Kick-off	Stakeholder Meetings	Stakeholder Meetings	Stakeholder Meetings	Stakeholder Meetings
Business Goals	Select an ideal Solution that aligns well with the scientific workflows	Select an ideal Solution that aligns well with the scientific workflows	Active participation in the intended sessions Voice out the pain points & future needs Narrow down the potential vendors	Endorse the vendor finalization proposal	Engage with project team for implementation scoping
KPIs	Not Applicable at this stage	Signoff all evaluation strategies & plans by key stakeholders	% of stakeholders' turnout Vendor's Turnaround time and participation Document Signoff by Stakeholders	Stakeholder Satisfaction Rate	Approval from Leaders
Data Entities	Program Objectives SMEs Mapping List Potential Vendor List	Vendor Evaluation Approach Interview Schedule VoC Questionnaire Analysis Plan Risks & Mitigation Plan	Current State Process Maps & Data Flow diagrams Future State Workflow diagrams Reference Data & Systems Architecture User / Integration Requirements Use Cases / Personas / User Stories RFI Vendor Capability Scoring Matrix REP	Vendor Evaluation Summary	Implementation Roadmap Vendor MSAs & Contracts Project Plan Data Management Plan Change Management Plan Communication Plan Project Health Metrics
Technology Systems	MS Office Tools (Excel, PowerPoint)	MS Office Tools (Word, Excel, PowerPoint, Forms, Project)	Legacy Systems, Systems to be evaluated, MS Office Tools (Word, Excel, PowerPoint, Visio, Forms, Project)	MS Office Tools (Excel, PowerPoint)	CRM, MS Office Tools (Word, Excel, PowerPoint, Visio, Forms, Project)
Experience	Core Project Team				
	Business				
	IT / Digital				
	Vendor				

Figure 6. Representative End to End Journey in Phase 0/Solution Evaluation Process

Customer Success Story

Below is a success story from one of our customers for the vendor evaluation program.

Customer Background & Scope

One of **world's top 3 large biopharmaceutical** company initiated the ELN Transformation program which focused on

- **Implementing a lab notebook product that facilitates doing R&D to innovate more quickly and positively impact scientific productivity**
- **Modernizing technology platforms to facilitate accessibility, large scale data analysis, scientific technology and lab of the future advancements**, while reducing the lab notebook footprint.



Figure 7. A summary of a recent project executed by Zifo

Problem Statement/Challenges:

- Lack of harmonization in business processes due to a variety of informatics systems and non-standardized data capture across and within groups
- Used ELN as a data repository in Paper-on-Glass mode
- Had multiple eNotebook systems/instances deployed across various Business functions, some sites used paper notebooks
- Diverse Priorities for different Therapeutic Areas
- Most of the business functions were on outdated/siloed/aging platforms

To address these problems, the customer chose to select, implement, and integrate a global ELN solution that would provide

- Improved scientific productivity
- Harmonized lab workflow process with unified product experience
- Support the lab of the future vision
- Accessible and re-usable data with improved data analytics
- Cost Efficiency and lesser informatics systems

Zifo was tasked with executing the assessment phase of the ELN project (Phase 0), which aimed at Evaluating ELN vendors to come up with a go-forward ELN Strategy which included Project Management, Digital Science Consulting, and Scientific Informatics Business Analysis.

The key drivers for this evaluation were:



Figure 8. Business Drivers for ELN Evaluation

Zifo approached the evaluation program with the **Use-Case + RFP based methodology** to finalize a vendor to modernize and digitize the customer ELN landscape. The vendor evaluation framework focussed on the 4 major pillars.

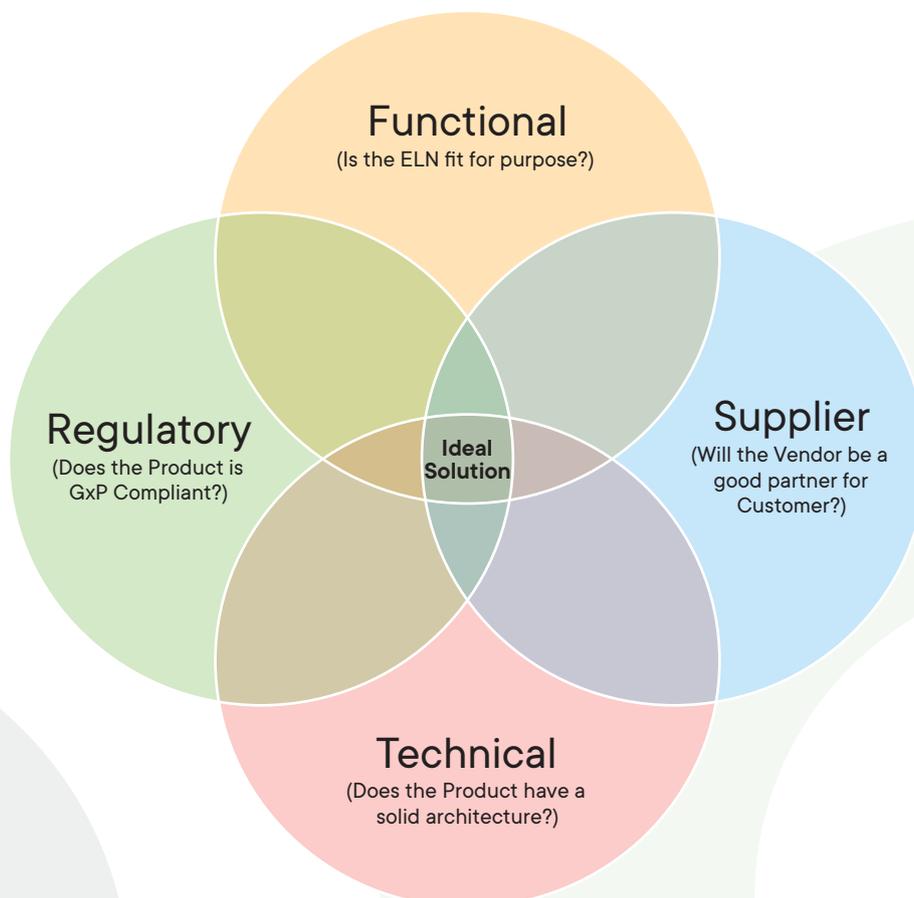


Figure 9. What were the questions we wanted the Evaluation to answer?

Key milestones in the ELN Transformation Journey

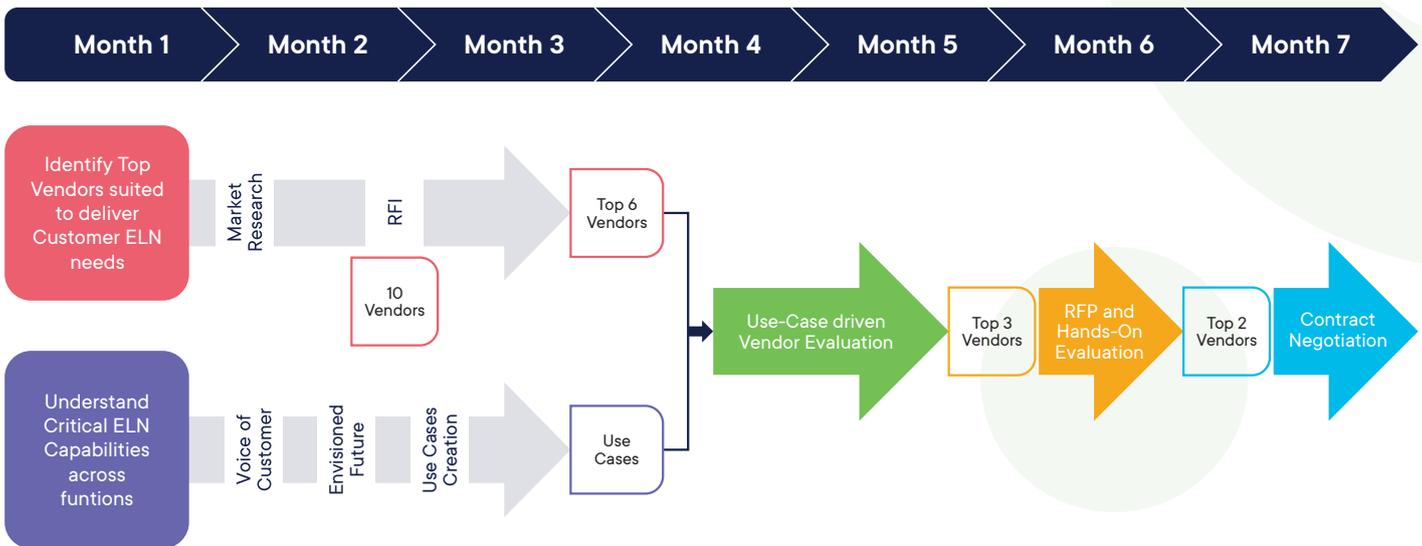


Figure 10. How Zifo effectively conducted a Use Case + RFP based approach

Zifo's Delivery Highlights

- Completed the Phase 0 analysis phase within 6 months
- 100% remote execution (due to COVID-19)
- Finalization of Vendor Evaluation Framework before VOC interviews
- Voice Of Customer (VOC) was conducted for 35+ groups in 3 weeks (with 100+ participants);
- Employed techniques like Pre-Mortem assessment, Force Field Risk Analysis and Future Envisioning to engage the customer SMEs to think toward successful ELN strategy and Lab of the Future goals
- Use-case driven vendor Demos – Early draft of Use cases and vendor engagement; Finalization of demo schedule & SMEs guidance on the evaluation process prior to demos;
- Conducted 150+ demo sessions (~200 hours) with 1300+ SMEs (across sessions) in 4 weeks with 6 vendors.
- ANOVA Test on SMEs scores – to confirm statistical significance
- Documented 930+ solution requirements for business improvements to add significant value during the implementation

Zifo was involved in the scoping and framing exercise for the implementation planning activities after the evaluation phase and is currently engaged with a series of implementation phases to aid in the success of the transformation project.

Key Benefits:

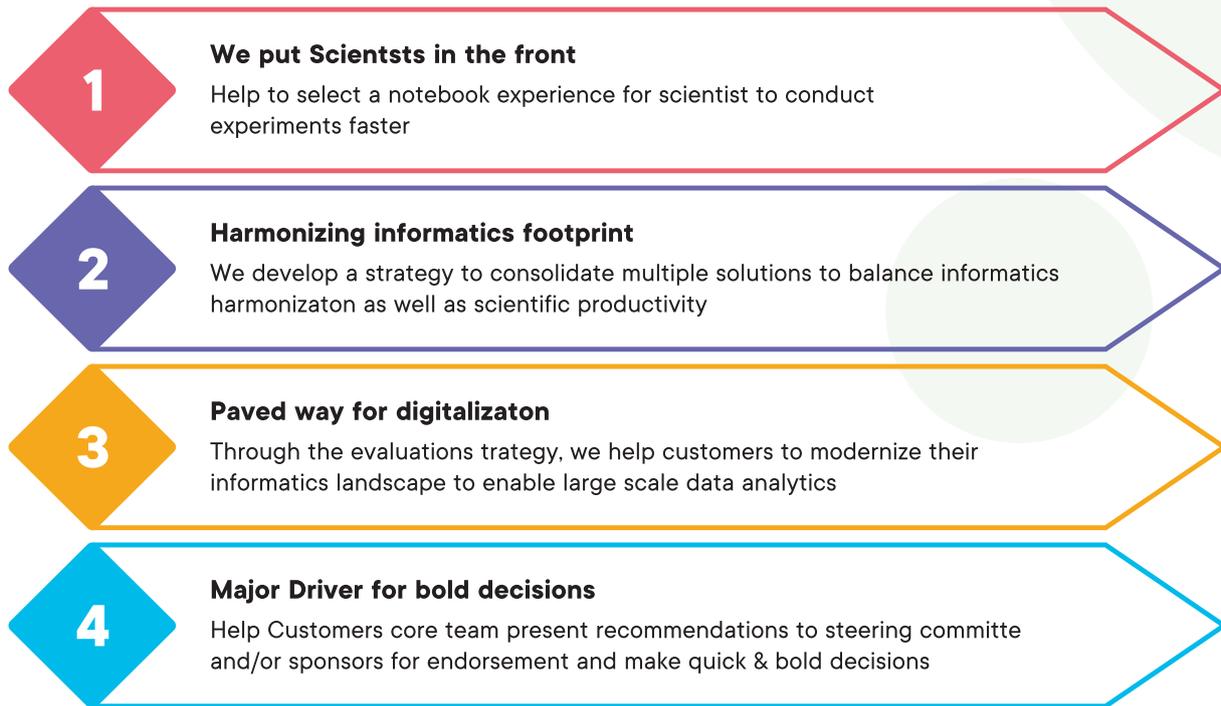


Figure 11. What were the business impacts?

If you would like to know more about our vendor evaluation services or the broader digital science transformation support we offer – [please email us at info@ziford.com](mailto:info@ziford.com)

About the Author



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