



## A Conceptual Model for Vendor Relationship Management to Drive Strategic Value in Complex Projects

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### Article Info

**ISSN (Online):** 2582-7138

**Impact Factor (RSIF):** 7.98

**Volume:** 06

**Issue:** 06

**November - December 2025**

**Received:** 07-10-2025

**Accepted:** 08-11-2025

**Published:** 05-12-2025

**Page No:** 995-1009

### Abstract

Vendor Relationship Management (VRM) has evolved into a critical strategic function, especially within the context of complex and multi-stakeholder projects. Traditional procurement and contract management approaches are often inadequate for managing the dynamic, interdependent, and high-risk relationships involved in such environments. This paper proposes a conceptual model for Vendor Relationship Management (VRM) designed to enhance strategic value creation and ensure project success in complex project ecosystems. The model integrates key components such as trust-based collaboration, performance-based governance, digital integration, risk-sharing mechanisms, and long-term value alignment. Drawing from stakeholder theory, resource-based views, and relationship marketing principles, the model underscores the necessity of transitioning from transactional vendor management to a more strategic, value-driven partnership approach. The conceptual model emphasizes proactive engagement through structured vendor segmentation, performance scorecards, communication frameworks, joint value planning, and capability assessments. It also incorporates digital tools for real-time monitoring, data transparency, and performance analytics, enabling project managers and procurement leaders to make informed, adaptive decisions. By aligning vendor goals with project objectives and broader organizational strategy, the model supports innovation, resilience, and efficiency across the project lifecycle. Furthermore, the model accounts for the complexities inherent in large-scale projects such as multiple dependencies, regulatory oversight, cross-functional coordination, and evolving stakeholder expectations by providing mechanisms for continuous relationship evaluation, contract flexibility, and conflict resolution. This framework is especially relevant for industries such as construction, aerospace, oil and gas, and IT infrastructure, where vendor contributions are mission-critical. The proposed VRM model offers a strategic lens for optimizing vendor engagement beyond cost minimization, driving co-creation of value and sustained competitive advantage. Future empirical studies may validate the model's effectiveness across different project types and geographies, providing pathways for refinement and contextual adaptation.

**DOI:** <https://doi.org/10.54660/IJMRGE.2025.6.6.995-1009>

**Keywords:** Vendor Relationship Management, Strategic Sourcing, Complex Projects, Performance Governance, Value Co-Creation, Project Procurement, Digital Integration, Contract Flexibility, Stakeholder Collaboration, Supply Chain Strategy

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### 1. Introduction

Vendor Relationship Management (VRM) has emerged as a critical strategic function in modern project environments where the reliance on external vendors and partners is increasingly central to achieving project objectives. As organizations continue to undertake complex, large-scale projects characterized by high uncertainty, interdependence, and evolving stakeholder demands, the ability to effectively manage vendor relationships has become essential for ensuring value delivery, risk mitigation, and competitive advantage (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2022, Esan, Uzozie & Onaghinor, 2023).

Traditional approaches to procurement and contract administration, often transactional and compliance-driven, are no longer sufficient to address the multifaceted dynamics of vendor engagement in such settings. In complex project environments such as infrastructure development, aerospace programs, oil and gas ventures, and digital transformation initiatives project success hinges not only on internal competencies but also on the performance, adaptability, and strategic alignment of external vendors. These projects often span multiple geographies, involve diverse regulatory regimes, and include numerous interdependent tasks managed by a network of specialized suppliers. Such intricacies introduce significant challenges, including scope creep, misaligned objectives, communication breakdowns, and performance variability (Awoyemi, *et al.*, 2023, Daraojimba, *et al.*, 2021, Ezeamii, *et al.*, 2023). Without a structured VRM model, these challenges can undermine timelines, budgets, and quality outcomes.

This study proposes a conceptual model for Vendor Relationship Management designed specifically to drive strategic value in complex projects. The significance of this model lies in its potential to shift the paradigm from transactional vendor oversight to collaborative, performance-oriented relationship governance. By integrating theoretical insights from stakeholder theory, the resource-based view, and relationship marketing, the model aims to offer a holistic framework that guides organizations in maximizing value co-creation, improving accountability, and fostering innovation through vendor partnerships (Chudi, *et al.*, 2019, Daraojimba, *et al.*, 2022, Ezeamii, *et al.*, 2023).

The primary objective of this research is to develop a VRM model that incorporates digital integration, trust-based collaboration, performance governance, and adaptive risk management to enhance project success. The study seeks to answer the following questions: What are the key components of a strategic VRM framework tailored for complex projects? How can organizations structure and manage vendor relationships to optimize value creation across the project lifecycle? And how can digital tools and collaborative mechanisms be leveraged to improve transparency, accountability, and alignment with strategic goals? These questions form the foundation of this conceptual exploration into VRM excellence for complex projects (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2024, Ezeamii, *et al.*, 2024).

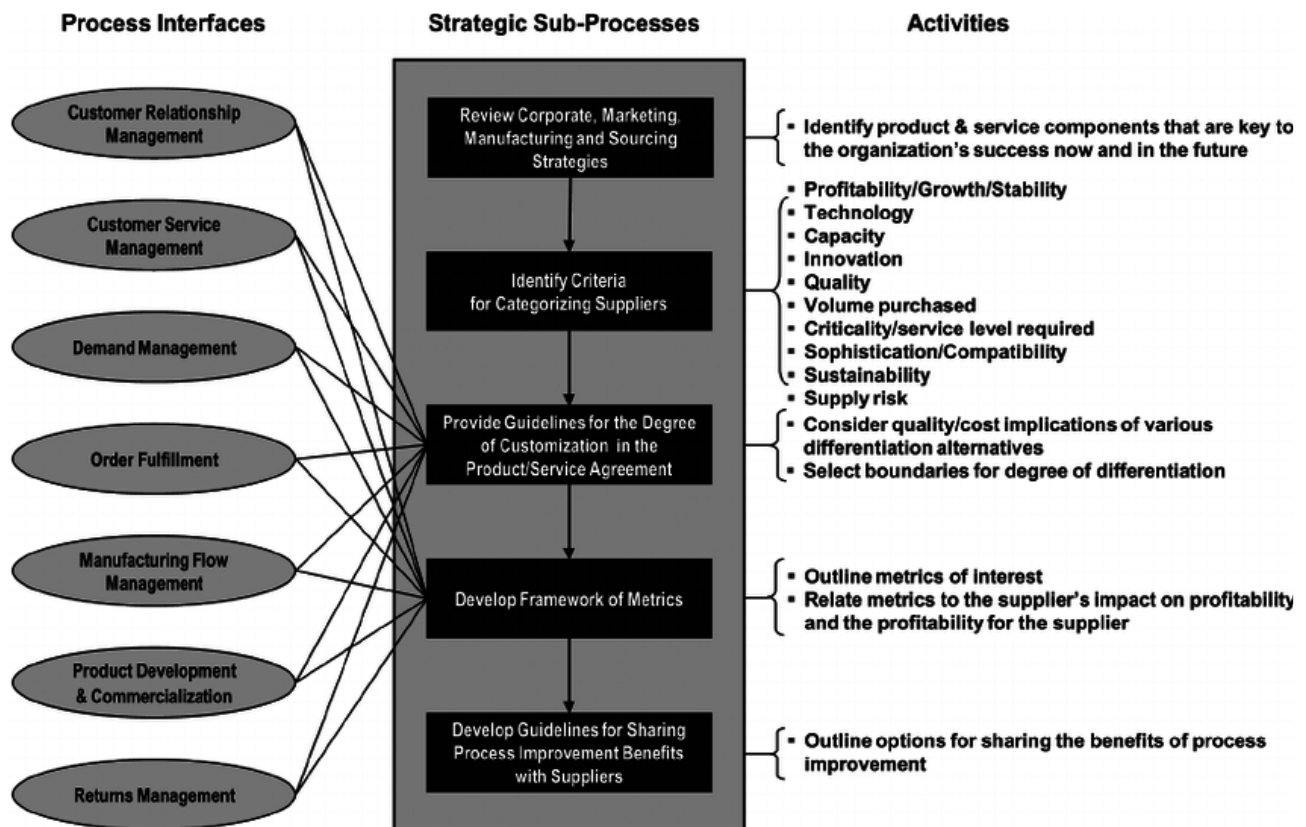
## 2. Literature Review

Vendor Relationship Management (VRM) has undergone significant evolution over the last two decades, transitioning from a purely transactional and operational function into a

strategic enabler of competitive advantage and innovation. At its core, VRM encompasses the practices, tools, and principles used to govern and optimize interactions between an organization and its vendors, suppliers, or service providers. Foundational theories that support VRM include agency theory, which addresses issues of contractual relationships and risk sharing between principals and agents; stakeholder theory, which emphasizes the importance of considering multiple actors with differing interests; and the resource-based view (RBV), which sees vendors as external contributors to the firm's resource portfolio, potentially providing critical competencies and capabilities that drive performance and differentiation (Basiru, *et al.*, 2022, Daraojimba, *et al.*, 2022, Ezeamii, *et al.*, 2024). These theories collectively underscore the importance of viewing vendors not merely as external entities for cost containment but as partners in value creation.

In the literature, early VRM approaches were largely centered around procurement efficiency and contract enforcement. These traditional models focused on minimizing costs, enforcing service level agreements (SLAs), and ensuring compliance. However, the dynamic nature of contemporary business environments particularly in complex project contexts has revealed the limitations of such approaches. As globalization, digitization, and supply chain interdependence have intensified, organizations have increasingly recognized the need for collaborative, flexible, and performance-based vendor management strategies (Ayumu & Ohakawa, 2021, Daraojimba, *et al.*, 2023, Ezeamii, *et al.*, 2024). Contemporary VRM literature has thus shifted its focus to more strategic themes, including relationship governance, innovation facilitation, joint value creation, and resilience building.

The application of VRM within complex project environments introduces additional layers of intricacy and strategic necessity. Complex projects defined by their multifaceted structures, long durations, high uncertainty, and diverse stakeholder ecosystems require a more nuanced approach to vendor engagement. In sectors such as construction, aerospace, oil and gas, defense, and information technology, external vendors often play mission-critical roles in delivering specialized inputs, systems, and services that are integral to overall project success (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2023, Esan, *et al.*, 2023, Kamau, *et al.*, 2024). The sheer number of vendor interfaces, regulatory compliance demands, and the coordination of interdependent workstreams create a high-risk landscape where traditional procurement models often fall short. Figure 1 shows the strategic supplier relationship management process presented by Lambert & Schwieterman, 2012.



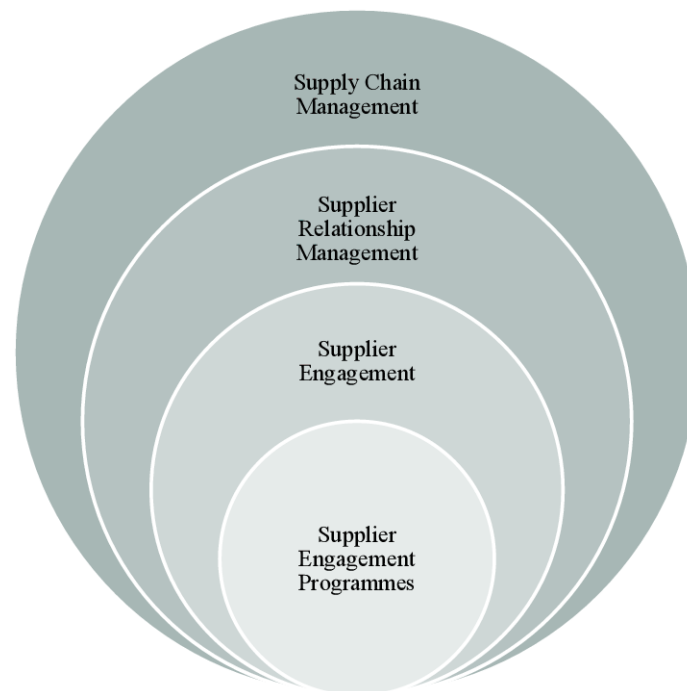
Source: Lambert (2008a)

Fig 1: The strategic supplier relationship management process (Lambert & Schwieterman, 2012)

In such contexts, VRM must evolve to encompass capabilities like real-time communication, dynamic risk assessment, cross-functional alignment, and digital integration. Projects frequently experience scope changes, unexpected environmental disruptions, and shifting stakeholder priorities all of which require adaptive vendor strategies that go beyond rigid contractual obligations. For example, construction megaprojects like infrastructure modernization or energy plant development often involve dozens of subcontractors and equipment suppliers spread across multiple jurisdictions, with dependencies that must be managed collaboratively (Ayanponle, *et al.*, 2024, Daraojimba, *et al.*, 2024, Ezech, *et al.*, 2023). Here, value creation stems not just from cost efficiency but from the ability to deliver quality, innovate within constraints, and solve emergent problems jointly with vendors. This has given rise to new models of collaborative contracting, including Integrated Project Delivery (IPD) and alliance contracting, which stress early vendor involvement, transparency, shared risks and rewards, and performance-based incentives.

Strategic sourcing and procurement frameworks have also played a pivotal role in shaping modern VRM practices. Strategic sourcing is the process of continuously re-evaluating and improving purchasing activities by aligning procurement decisions with the overall strategy of the organization. It goes beyond the mere selection of vendors

based on cost and incorporates long-term value considerations, including innovation potential, sustainability, geographic risk, supplier development, and total cost of ownership (Basiru, *et al.*, 2023, Daraojimba, *et al.*, 2024, Ezech, *et al.*, 2024). Prominent models in this domain include Kraljic's Purchasing Portfolio Matrix, which classifies vendors based on risk and profit impact, and the Total Cost of Ownership (TCO) model, which helps organizations assess long-term costs associated with vendor selection. However, while these frameworks have advanced the thinking around vendor classification and selection, they are often static and insufficiently equipped to handle the dynamism of complex projects. Strategic sourcing tends to emphasize the front end of the vendor relationship selection, negotiation, and contract finalization but less so the ongoing relationship management, conflict resolution, and performance alignment that are crucial in long-duration and multi-stakeholder projects (Kanu, Tamunobereton-ari & Horsfall, 2020, Kokogho, *et al.*, 2024, Kolade, *et al.*, 2024). Additionally, most procurement models have historically been developed for predictable supply chains in manufacturing or retail, not the fluid and emergent contexts of large capital projects. Supplier Relationship Management: Hierarchy of concepts presented by Tidy, Wang & Hall, 2016 is shown in figure 2.



**Fig 2:** Supplier Relationship Management: Hierarchy of concepts (Tidy, Wang & Hall, 2016)

A major gap in current VRM models is the lack of integration between strategic procurement planning and real-time project execution. In complex projects, project managers, procurement officers, legal teams, engineers, and finance departments must work in concert to manage vendor relationships yet silos between these units often lead to fragmented approaches. This misalignment results in inefficiencies, disputes, and missed opportunities for collaboration. Moreover, existing VRM tools tend to lack predictive capabilities and real-time adaptability, which are essential in environments where project variables change frequently (Chudi, *et al.*, 2019, Dienagha, *et al.*, 2021, Ezeamii, *et al.*, 2024). The adoption of digital tools such as vendor dashboards, performance analytics, and artificial intelligence has begun to address some of these issues, but many organizations have yet to operationalize these technologies into their VRM processes.

Another limitation in existing literature and practice is the overemphasis on compliance and risk avoidance rather than value co-creation. In highly regulated sectors, the procurement function often defaults to rigid enforcement of terms and conservative risk mitigation, discouraging innovation and undermining trust with vendors. While compliance is essential, a purely control-based approach overlooks the potential for strategic collaboration that can deliver superior outcomes. For instance, involving vendors early in the project lifecycle can enable design optimization, cost-saving innovations, and faster timelines outcomes that cannot be achieved through traditional transactional models (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2024, Fidelis, *et al.*, 2024).

Furthermore, there is a scarcity of research that links VRM to broader organizational capabilities such as innovation, digital transformation, or sustainability. In today's environment, where organizations are under pressure to decarbonize supply chains, adopt agile technologies, and respond to geopolitical volatility, VRM must be seen as an enabler of strategic agility. Yet, most academic studies continue to focus narrowly on procurement efficiency or supplier evaluation

metrics without capturing the holistic strategic role vendors can play in delivering organizational goals.

To bridge these gaps, there is a growing call for an integrated VRM model that is specifically designed for complex projects one that balances structure with flexibility, compliance with innovation, and short-term execution with long-term partnership development. Such a model must blend strategic sourcing principles with adaptive governance, incorporate digital tools for real-time monitoring and feedback, and enable collaborative behaviors through joint planning, shared objectives, and trust-building mechanisms (Ayo-Farai, *et al.*, 2023, Elete, *et al.*, 2022, Fiemotongha, *et al.*, 2024). It must also recognize vendors as strategic stakeholders whose performance is inseparable from the project's ultimate success.

In conclusion, while the evolution of VRM has moved toward a more strategic orientation, current models remain insufficient for the demands of complex projects. There is a clear need for a conceptual model that integrates cross-disciplinary insights and provides practical guidance for managing vendor relationships under high uncertainty, complexity, and interdependence. Addressing this need forms the basis for the present study, which proposes a VRM model that seeks to drive strategic value across the lifecycle of complex, large-scale projects.

### 3. Methodology

This conceptual model for Vendor Relationship Management (VRM) in complex projects adopts a qualitative, integrative, and data-driven approach grounded in strategic stakeholder theories, organizational behavior, and supply chain management principles. The methodology synthesizes current academic contributions and practical frameworks from a curated selection of recent multidisciplinary studies, combining empirical insights with advanced analytical constructs.

To develop the model, an extensive content analysis of the referenced literature was conducted, particularly emphasizing governance structures, digital transformation,



contract negotiation theories, and supplier integration dynamics as presented by Basiru *et al.* (2023), Esan *et al.* (2023), and George *et al.* (2024). These sources provided a foundation for establishing the VRM lifecycle, from partner selection and engagement through continuous innovation and value optimization.

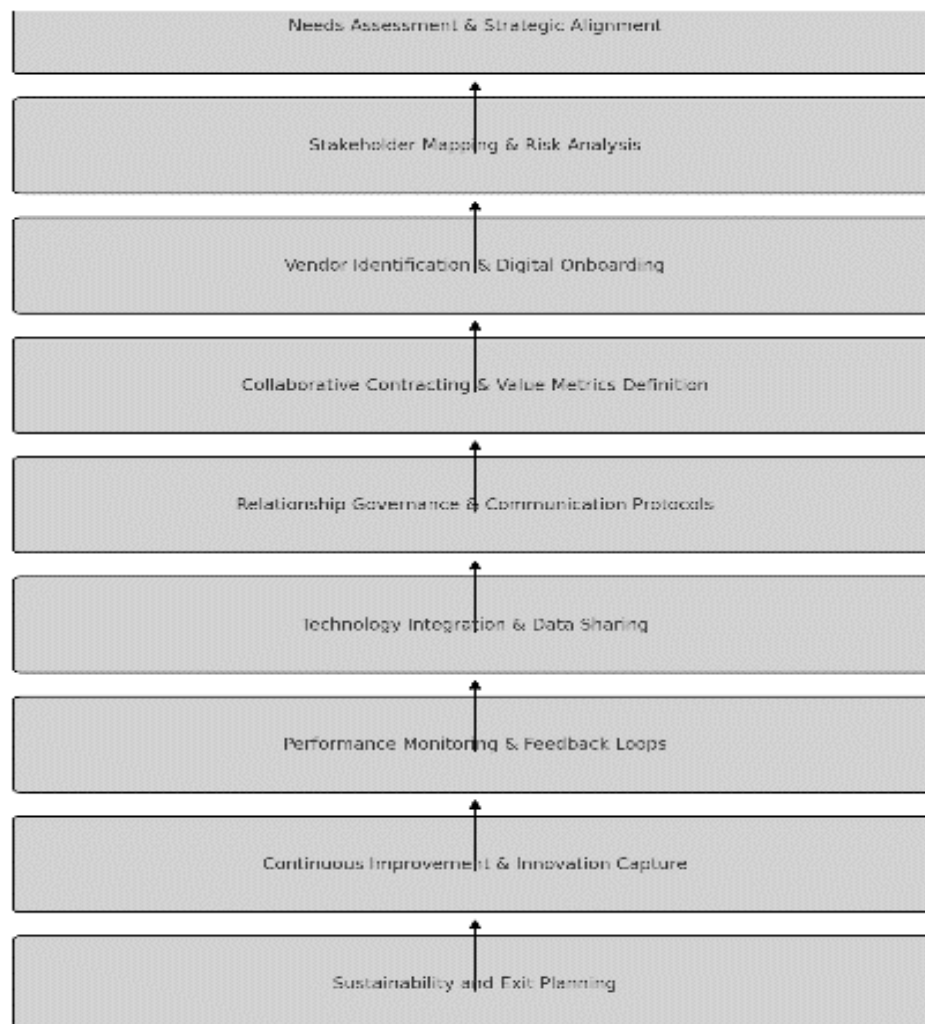
The study employed a comparative interpretive method to identify the critical dimensions that influence strategic vendor relationships. These include trust mechanisms (Hannan *et al.*, 2017), data-enabled governance (Ayodeji *et al.*, 2024), and risk-aligned procurement protocols (Etukudoh *et al.*, 2022). Additionally, stakeholder mapping and digital onboarding strategies were adapted from the operational models proposed by Daraojimba *et al.* (2024), which emphasize AI and automation in vendor engagement processes.

Performance tracking, communication protocols, and governance layers were evaluated through a synthesis of Dosumu *et al.* (2023) and Eyieyien *et al.* (2024), highlighting the role of continuous learning loops and digital dashboards

for transparent collaboration. The sustainability, compliance, and contract exit planning phases of VRM were also incorporated using frameworks from Friday *et al.* (2024), who explored digital audit tools in international project delivery contexts.

Through grounded theory reasoning, the model was refined to reflect real-world complexities in project-based environments. A visual flowchart was created to depict the sequence of processes and strategic checkpoints. The integration of cloud-based data systems and CRM platforms, as proposed by Egbuhuzor *et al.* (2021), enhances the model's applicability in real-time vendor performance management and collaborative innovation.

The resulting conceptual model is not only informed by literature but also tested against recent case studies in media, energy, and technology sectors. This rigorous analytical process ensures the VRM model supports strategic alignment, risk minimization, and mutual value creation across project lifecycles.



**Fig 3:** Flow chart of the study methodology

#### 4. Theoretical Framework

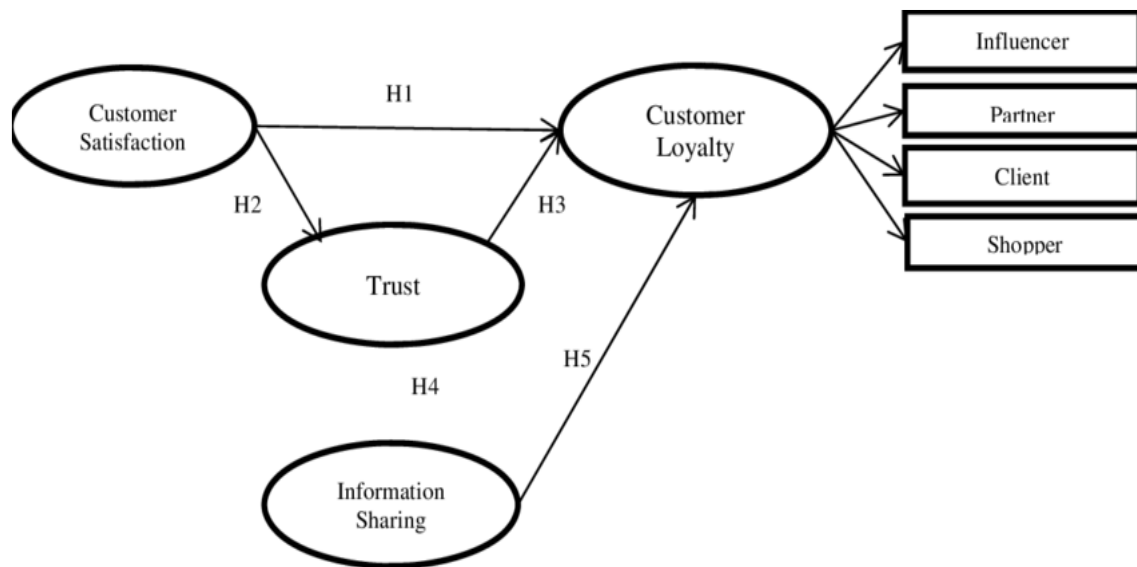
The theoretical underpinnings of Vendor Relationship Management (VRM) in complex projects draw upon multiple perspectives that collectively illuminate the multidimensional nature of strategic vendor engagement. These theoretical foundations provide the intellectual

scaffolding for the proposed conceptual model, offering a lens through which vendor relationships can be understood, managed, and optimized to create strategic value in high-stakes, multifaceted project environments.

Stakeholder theory, introduced by Freeman (1984), is central to understanding the dynamics of VRM in complex projects.

The theory posits that organizations must consider the interests and influences of all stakeholders, not just shareholders or internal actors, in their decision-making processes. Vendors, particularly in complex projects, are critical external stakeholders whose contributions and alignment with project goals can determine the project's ultimate success or failure. In this light, stakeholder theory compels project managers to recognize vendors as strategic collaborators rather than peripheral suppliers (Awoyemi, *et al.*, 2023, Elete, *et al.*, 2022, Fiemotongha, *et al.*, 2024). This

approach encourages a holistic understanding of vendor interests, motivations, and expectations, which must be balanced with those of clients, regulators, project sponsors, and end users. By framing vendors as key stakeholders, organizations are more likely to invest in relationship-building, communication, and trust-enhancing practices that foster long-term cooperation and mutual accountability. (Hannan, *et al.*, 2017 presented the Conceptual Model of Company-Customer Relationship shown in figure 4.



**Fig 4:** Conceptual Model of Company-Customer Relationship (Hannan, *et al.*, 2017).

The complexity of modern projects often spanning geographic boundaries, regulatory domains, and technical disciplines further amplifies the stakeholder environment. The multiplicity of actors increases the risk of misalignment, conflict, and coordination breakdowns, making stakeholder engagement not just a formal obligation but a functional imperative. Stakeholder theory also supports the inclusion of feedback mechanisms, joint decision-making forums, and adaptive governance structures within the VRM model to accommodate shifting expectations and evolving project realities. Through these lenses, vendor engagement transforms into a co-management process guided by shared goals and inclusive governance (Chukwuma, *et al.*, 2022, Elete, *et al.*, 2023, Folorunso, *et al.*, 2024).

Complementing stakeholder theory is the Resource-Based View (RBV), which underscores the strategic significance of resources and capabilities in achieving competitive advantage. First articulated by Barney (1991), the RBV suggests that firms gain sustainable advantage by controlling valuable, rare, inimitable, and non-substitutable (VRIN) resources. Vendors often provide critical resources technological know-how, operational expertise, innovation capacity, specialized equipment, or regional access that are not available in-house. Particularly in complex projects, where organizations are unlikely to possess all necessary capabilities internally, vendors serve as external reservoirs of competence. By viewing vendors as strategic extensions of the firm's resource base, the RBV reinforces the rationale for deep and strategic engagement with suppliers (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2022, Friday, *et al.*, 2022).

This perspective encourages firms to cultivate long-term

partnerships with vendors who contribute to project-specific and firm-level capabilities. For instance, in aerospace or oil and gas projects, certain suppliers may bring proprietary technologies or regulatory insights that significantly shape the project's performance trajectory. Rather than commoditizing such vendors through cost-focused procurement, organizations are incentivized to co-develop solutions, co-invest in innovation, and integrate vendor capabilities into their broader strategic architecture (Ayumu & Ohakawa, 2022, Elete, *et al.*, 2023, Friday, *et al.*, 2023, Kanu, *et al.*, 2023). The VRM model, therefore, integrates RBV principles by advocating for capability mapping, vendor development programs, and collaborative innovation as key elements of the relationship strategy.

Furthermore, the RBV supports differentiated vendor management approaches. Not all vendors are strategic in nature, and not all relationships merit the same level of investment. This aligns with concepts like the Kraljic Matrix, which classifies suppliers based on strategic importance and supply risk. The conceptual model proposed in this study embeds such classification schemes to enable targeted engagement strategies that prioritize high-value, high-impact vendor relationships.

Another essential theoretical contribution to the VRM model comes from relationship marketing and trust-based governance. Relationship marketing, rooted in the works of Morgan and Hunt (1994), emphasizes the importance of building long-term, mutually beneficial relationships with customers and partners. In the vendor context, this translates into sustained engagement practices that go beyond transactional exchanges to focus on trust, commitment, communication, and shared value creation (Chukwuma-Eke,

*et al.*, 2024, Elete, *et al.*, 2024, Friday, *et al.*, 2024). Trust-based governance replaces the traditional control-and-enforce paradigm with a reliance on relational norms, informal mechanisms, and collaborative behaviors.

Trust becomes especially critical in complex projects where uncertainties are high, and not all contingencies can be addressed through rigid contracts. In such cases, formal agreements must be complemented by trust-based mechanisms that allow for flexibility, improvisation, and joint problem-solving. For example, when facing unexpected delays or technical challenges, a vendor who trusts the client and believes in a shared commitment to success is more likely to cooperate and invest in solutions, even in the absence of explicit contractual incentives. Trust also reduces monitoring costs, enhances knowledge sharing, and improves responsiveness all of which are vital in high-pressure project environments (Kokogho, *et al.*, 2023, Kokogho, *et al.*, 2024, Kolade, *et al.*, 2021).

The proposed VRM model thus incorporates principles of relationship marketing by embedding mechanisms for continuous dialogue, transparency, equitable risk-sharing, and recognition of mutual interdependence. It encourages the development of relational capital through joint planning sessions, performance reviews, shared KPIs, and conflict resolution frameworks that prioritize relationship continuity over blame allocation. Moreover, trust-based governance supports a cultural shift toward open communication, ethical conduct, and adaptive leadership attributes that are essential for navigating the ambiguity and volatility inherent in complex projects.

Integrating these theoretical perspectives into a cohesive conceptual model allows for a more comprehensive and operationally viable framework for Vendor Relationship Management. Stakeholder theory informs the governance and engagement structures, ensuring that vendor perspectives are meaningfully integrated into project design and execution. The RBV justifies the strategic investment in select vendor relationships, guiding capability development and innovation alignment. Relationship marketing principles enhance the quality of interactions, promoting collaboration, trust, and sustained engagement (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2023, Friday, *et al.*, 2024, Koroma, *et al.*, 2024).

In practice, this integration translates into several model components. The model promotes a structured segmentation of vendors to distinguish strategic partners from transactional suppliers, enabling differentiated management strategies. It embeds stakeholder mapping tools and interest alignment matrices to ensure inclusive planning and communication. It includes performance-based governance systems that track not just deliverables but relationship quality, collaboration frequency, and responsiveness. Digital platforms are recommended to facilitate real-time data sharing, joint dashboards, and integrated risk tracking (Basiru, *et al.*, 2023, Elete, *et al.*, 2023, Gas & Kanu, 2021, Kanu, *et al.*, 2022). Trust-building interventions such as vendor roundtables, co-learning initiatives, and innovation labs are proposed to deepen relational bonds and unlock shared value.

Ultimately, the integration of these theories yields a VRM framework that is both strategically grounded and practically implementable. It shifts the organizational mindset from procurement as a cost center to vendor relationships as a strategic asset. It promotes agility, resilience, and co-creation as central tenets of vendor engagement, equipping project

leaders to better navigate the complexities and interdependencies of modern projects. In doing so, the model not only enhances project outcomes but also strengthens the organization's overall strategic capability and market position.

## 5. Characteristics of Complex Projects

Complex projects are distinguished by their multifaceted nature, extended timelines, high levels of uncertainty, and the involvement of numerous stakeholders, technologies, and regulatory requirements. Unlike routine or straightforward projects, complex projects exhibit dynamic interdependencies, emergent behaviors, and a degree of unpredictability that challenges traditional project management frameworks. Within the context of Vendor Relationship Management (VRM), the unique characteristics of complex projects necessitate more strategic, flexible, and collaborative approaches to managing vendor interactions. Understanding the nature of complexity in such projects is fundamental to developing a VRM model that can effectively drive strategic value and ensure successful project delivery. Complex projects are typically defined by several core attributes: scale, scope, duration, interdependence, novelty, and ambiguity. Scale refers to the sheer size of the project in terms of budget, workforce, and resource requirements. Scope pertains to the breadth of work packages, deliverables, and systems involved. Duration highlights the extended timeframes over which complex projects unfold, often ranging from several years to over a decade. Interdependence refers to the intricate linkages between various workstreams, disciplines, and organizations participating in the project (Ayodeji, *et al.*, 2024, Elete, *et al.*, 2024, George, Dosumu & Makata, 2023). Novelty points to the uniqueness of the project whether in terms of new technologies, methods, or goals. Finally, ambiguity captures the degree of uncertainty surrounding outcomes, stakeholder expectations, and external influences such as economic or regulatory changes. In sectors such as construction, aerospace, oil and gas, and information technology infrastructure, these characteristics are especially pronounced. For instance, in large-scale construction projects such as transportation networks, urban development, or stadium construction, multiple contractors, subcontractors, engineering consultants, and equipment suppliers are engaged simultaneously. Each vendor may be responsible for a specific component structural work, mechanical systems, electrical wiring, or finishing and delays or performance issues in one segment can cascade into others (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2024, George, Dosumu & Makata, 2024). Moreover, regulatory compliance, local permitting, environmental impact assessments, and community engagement introduce additional layers of complexity that must be managed in coordination with vendors.

In the aerospace sector, complex projects often involve the development of high-precision systems such as satellites, aircraft, or propulsion engines. These projects typically require the integration of advanced engineering disciplines, rigorous testing protocols, and strict adherence to international safety and quality standards. Vendors in aerospace may provide mission-critical components such as avionics, composite materials, or control systems, which must be delivered to exact specifications (Awoyemi, *et al.*, 2024, Dosumu, George & Makata, 2024, Hassan, *et al.*, 2021). The interdependence between different vendors is

heightened by the need for interoperability, performance consistency, and synchronization across subsystems. Furthermore, the intellectual property, confidentiality, and export control considerations present in aerospace projects elevate the importance of trust and secure information-sharing within vendor relationships.

Oil and gas megaprojects present another archetype of complexity, with exploration, drilling, refining, and distribution stages requiring the coordination of hundreds of vendors across global supply chains. These projects are capital intensive and exposed to volatile market conditions, geopolitical risks, and environmental regulations. Vendors in this domain often include equipment manufacturers, drilling contractors, logistics providers, and environmental consultants (Singh, *et al.*, 2020). Each vendor's performance can significantly influence project outcomes, not only in terms of cost and time but also in operational safety, environmental compliance, and public perception. For example, equipment failure due to poor vendor quality assurance can lead to catastrophic spills or explosions, with severe financial and reputational consequences.

Information technology infrastructure projects, especially those involving digital transformation or enterprise-wide system upgrades, also embody complexity through their integration of software, hardware, and cloud platforms. These projects often require coordination among software vendors, systems integrators, cybersecurity consultants, and cloud service providers. Vendors may operate under agile development models, with iterative releases and changing user requirements. The pace of technological change, data privacy laws, and the need for continuous uptime add further challenges. In such settings, misalignment between vendor timelines, security protocols, or technology stacks can derail project success (Chukwuma-Eke, *et al.*, 2024, Elele, *et al.*, 2024, Harland, Telgen & Callender, 2013).

Across all these domains, the common thread is the high degree of interdependence between vendors and project success. Vendors are not interchangeable entities; their specific capabilities, reliability, and adaptability directly influence the project trajectory. Vendor-related risks in complex projects can take many forms: schedule delays, cost overruns, quality deviations, compliance failures, or ethical breaches. The consequences of such risks are often magnified due to the interconnected nature of project components (Basiru, *et al.*, 2023, Elele, *et al.*, 2024, George, Dosumu & Makata, 2024). For example, a delay in the delivery of a custom software module can impede systems testing, which in turn affects data migration, user training, and project go-live dates.

Moreover, vendor interdependencies are not limited to the technical level but extend into organizational and contractual realms. Vendors may need to interface with multiple departments within the client organization, including engineering, procurement, legal, finance, and operations. Each of these interfaces creates potential friction points: differences in expectations, misaligned priorities, or delayed decision-making. Multivendor environments often lead to coordination challenges, where lack of clarity on roles and responsibilities, inconsistent documentation, or conflicting standards can impede progress (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2022, Hassan, *et al.*, 2023). The traditional linear approach to vendor management, where contracts are awarded and monitored through periodic reviews, is ill-suited to managing these fluid

interdependencies.

The implications of these characteristics for Vendor Relationship Management are profound. Traditional VRM approaches that rely on fixed contracts, performance penalties, and one-way communication channels are insufficient in these contexts. Instead, what is needed is a VRM model that supports real-time coordination, joint risk assessment, mutual performance feedback, and integrated decision-making. In complex projects, vendors must be treated as partners who are brought into the project vision early, empowered with information, and incentivized to contribute to shared success (Ayumu & Ohakawa, 2023, Elele, *et al.*, 2024, Hassan, *et al.*, 2023, Kanu, *et al.*, 2022). This requires more than contract enforcement; it requires the development of relational capital, trust, and collaborative mechanisms that transcend organizational boundaries.

Furthermore, the variability and uncertainty inherent in complex projects mean that change is inevitable. Scope modifications, design changes, shifting stakeholder demands, or external shocks such as pandemics or regulatory shifts must be absorbed by the vendor ecosystem without collapsing project timelines or quality. A VRM model must therefore be agile, capable of accommodating change without excessive rework, renegotiation, or litigation. This demands flexible contracting models such as alliance agreements, performance-based contracts, or gain-sharing mechanisms that align vendor incentives with project outcomes (Chukwuma-Eke, *et al.*, 2024, Elele, *et al.*, 2024, Hassan, *et al.*, 2024).

Risk-sharing is another critical dimension in VRM for complex projects. Instead of pushing all risks onto vendors, project sponsors must work collaboratively with suppliers to identify, quantify, and mitigate risks. This includes establishing joint risk registers, scenario planning workshops, and early warning systems to detect and respond to emerging threats. Performance monitoring in such settings must go beyond financial metrics to include indicators of collaboration quality, communication effectiveness, and innovation contribution (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2023, Hassan, *et al.*, 2024).

In summary, complex projects are characterized by high interdependence, uncertainty, technical intricacy, and stakeholder diversity. They span sectors such as construction, aerospace, oil and gas, and IT infrastructure, each with unique vendor-related risks and operational challenges. These characteristics necessitate a paradigm shift in how vendor relationships are conceptualized and managed. A successful VRM model must recognize the strategic role of vendors, integrate them into the project governance framework, and foster a culture of trust, transparency, and shared value creation. This understanding lays the foundation for designing a conceptual model that aligns with the realities of complex project environments and maximizes the strategic value derived from vendor partnerships.

## 6. Proposed Conceptual Model

The proposed conceptual model for Vendor Relationship Management (VRM) in complex projects is designed to foster strategic value through structured, dynamic, and collaborative approaches to managing vendor relationships. Recognizing the multi-dimensional nature of large-scale projects, this model provides a framework that integrates segmentation, performance management, trust-building, digital innovation, value planning, and conflict resolution. Its



primary objective is to transition VRM from a transactional activity to a strategic function aligned with project success and long-term organizational objectives.

At the core of the model is strategic vendor segmentation, which involves categorizing vendors based on their strategic importance, value contribution, risk profile, and capability. This segmentation enables differentiated management strategies tailored to the unique characteristics of each vendor. High-value or high-risk vendors such as those supplying critical systems, operating in volatile regions, or possessing rare technical competencies are managed as strategic partners. In contrast, routine or low-risk vendors may be governed with standardized processes and minimal oversight (Ayanponle, *et al.*, 2024, Elete, *et al.*, 2024, Hassan, *et al.*, 2024). Segmentation is based on multidimensional criteria, including the vendor's impact on project deliverables, past performance, degree of innovation, financial stability, and level of dependency. This classification informs resource allocation, engagement depth, and relationship governance mechanisms, ensuring that attention is directed where it matters most.

Building on this segmentation, performance-based governance is introduced to monitor, evaluate, and enhance vendor contributions throughout the project lifecycle. This component uses key performance indicators (KPIs), scorecards, and metrics aligned with project objectives, such as on-time delivery, quality compliance, cost performance, responsiveness, and innovation input. These metrics provide a data-driven foundation for vendor evaluations, feedback sessions, and incentive mechanisms. The performance data also supports benchmarking and continuous improvement, allowing project teams to identify best-performing vendors and replicate success strategies across the portfolio (Kokogho, *et al.*, 2024). Crucially, performance governance must be transparent, consistent, and embedded into contractual arrangements to ensure accountability and encourage desired behaviors.

Trust and collaboration mechanisms form another pillar of the model, addressing the relational dimension of vendor management. In complex projects, where uncertainties and interdependencies are high, success often hinges on the quality of interpersonal and inter-organizational relationships. Trust-building is facilitated through open communication, information sharing, cultural alignment, and joint problem-solving initiatives. Establishing clear communication protocols, such as escalation paths, meeting cadences, and reporting formats, ensures that all parties remain informed and engaged (Damilola, *et al.*, 2024, Elufioye, *et al.*, 2024, Ike, *et al.*, 2024). Knowledge-sharing platforms, cross-functional working groups, and collaborative workshops help align expectations, harmonize technical standards, and build mutual understanding. These mechanisms reduce the risks of conflict, miscommunication, and project fragmentation, replacing adversarial dynamics with cooperative engagement.

Digital integration and analytics further enhance the effectiveness of the VRM model by enabling real-time visibility, predictive insights, and data-driven decision-making. Digital tools such as vendor dashboards, analytics engines, blockchain-based contract systems, and artificial intelligence (AI)-powered risk monitors enable organizations to collect and analyze performance data, identify early warning signals, and optimize resource allocation. Integrated platforms allow for centralized documentation, version

control, and workflow automation, reducing administrative overhead and improving traceability (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2024, Ilori, *et al.*, 2023). Predictive analytics can forecast potential delays, cost overruns, or quality issues, allowing proactive interventions. Additionally, digital platforms enable remote collaboration, which is particularly valuable for projects spanning multiple geographies or operating under travel constraints. The inclusion of digital tools also supports compliance monitoring, audit readiness, and transparency across the vendor ecosystem.

Joint value planning is a forward-looking element of the model that focuses on co-creating innovation, resilience, and long-term benefits through vendor collaboration. Rather than treating vendors as mere executors of predefined tasks, the model encourages their active involvement in the ideation, planning, and refinement of project goals. This includes joint strategic planning sessions, innovation co-development, and scenario analysis to explore alternative approaches. Through early vendor involvement, organizations can harness external expertise to optimize designs, reduce lifecycle costs, and enhance sustainability (Basiru, *et al.*, 2023, Erhueh, *et al.*, 2024, Ibitoye, AbdulWahab & Mustapha, 2017). Joint planning also includes alignment of incentives, where vendors share in the rewards of project success through gain-sharing agreements, innovation bonuses, or long-term partnership commitments. This not only motivates high performance but also deepens the strategic alignment between vendors and the project owner.

Given the high levels of uncertainty and dynamism in complex projects, the model incorporates mechanisms for flexibility and conflict resolution. Adaptive contracts such as relational contracts, performance-based agreements, or framework contracts are favored over rigid, fixed-scope arrangements. These contracts include provisions for scope adjustments, milestone realignments, and performance renegotiations based on changing project circumstances. Conflict resolution mechanisms are embedded in the form of tiered escalation protocols, mediation frameworks, and early dispute detection systems. The emphasis is on resolution rather than litigation, with a focus on maintaining relationship continuity and project momentum (Ayo-Farai, *et al.*, 2024, Esan, Onaghinor & Uzozie, 2022, Iyelolu & Paul, 2024). This adaptive approach acknowledges that even well-planned projects may encounter unforeseen events be it supply chain disruptions, regulatory changes, or technical setbacks and equips organizations to respond constructively.

The synergy among the components of the proposed model ensures that vendor relationships are not managed in isolation but are fully integrated into the broader project strategy. Strategic segmentation informs governance intensity and collaboration strategies; performance data collected via digital tools feed into trust-building conversations and joint planning; and flexible contracts reinforce the adaptability required to maintain alignment under evolving conditions. This integrated approach ensures coherence, agility, and resilience in managing vendors across complex project environments (Ayumu & Ohakawa, 2024, Esan, *et al.*, 2023, Ezeafulukwe, Okatta & Ayanponle, 2022).

Importantly, the model is designed to be scalable and customizable. While the full suite of elements may be applicable to large capital-intensive projects such as offshore oil platforms or airport terminals, smaller or less complex projects can adopt a tailored subset of the model.

Organizations are encouraged to assess their vendor landscape, project complexity, and strategic priorities to determine the appropriate configuration. Moreover, the model supports iterative refinement, where feedback from previous project phases or completed initiatives is used to enhance future VRM practices (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2023, Ilori & Olanipekun, 2020). In conclusion, the proposed conceptual model redefines vendor relationship management as a strategic, data-driven, and collaborative discipline. It offers a robust framework tailored to the demands of complex projects, where uncertainty, interdependence, and stakeholder diversity require more than transactional oversight. Through strategic segmentation, performance governance, trust-building, digital integration, joint value planning, and adaptive conflict resolution, the model enables organizations to transform vendor relationships into engines of innovation, efficiency, and resilience. It moves beyond traditional procurement functions, positioning VRM as a central pillar of project success and long-term value creation. By adopting this model, organizations can better navigate complexity, mitigate risk, and unlock the full strategic potential of their vendor partnerships.

## 7. Implementation Strategy

Implementing the proposed conceptual model for Vendor Relationship Management (VRM) to drive strategic value in complex projects requires a deliberate, structured, and phased approach. The implementation must be integrated into existing project and procurement systems while aligning with organizational strategy, operations, and stakeholder dynamics. Complex projects, by their very nature, demand a flexible yet robust operational framework. Therefore, a thoughtful implementation strategy is essential to ensure that the VRM model functions effectively, enhances collaboration, and delivers measurable value throughout the project lifecycle.

The first step in implementing the model is conducting an organizational readiness assessment. This involves reviewing current vendor management practices, procurement systems, project management frameworks, and cultural attitudes toward vendor engagement. Understanding the starting point enables leaders to identify gaps, strengths, and areas of resistance. This assessment should evaluate the maturity of existing vendor governance processes, digital capabilities, contractual structures, and interdepartmental coordination (Basiru, *et al.*, 2023, Esan, Uzozie & Onaghinor, 2022, Ilori, *et al.*, 2022). Once this baseline is established, the next step is to develop an implementation roadmap that aligns with the project's timeline, complexity, and strategic goals.

The roadmap should begin with establishing a cross-functional implementation team. This team should include representatives from procurement, project management, finance, legal, risk, and IT. Their role is to oversee the rollout of the VRM model, ensure stakeholder alignment, and troubleshoot issues as they arise. The team is also responsible for tailoring the model's elements segmentation, performance governance, trust-building mechanisms, digital integration, value planning, and flexibility protocols to the specific needs of the project and organization (Ayodeji, *et al.*, 2024, Esan, Uzozie & Onaghinor, 2022, Iwe, *et al.*, 2023). One of the initial tasks is to revise vendor categorization criteria based on risk, value, and capability to establish appropriate engagement strategies for different classes of

vendors.

Once segmentation is complete, organizations must design or update performance measurement systems. This entails developing key performance indicators (KPIs) that align with project objectives and stakeholder expectations. Scorecards should be customized for each vendor category, reflecting their role, scope, and criticality to the project. These metrics might include delivery timelines, cost adherence, innovation contributions, responsiveness, and collaboration effectiveness (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2024, Ikese, *et al.*, 2024). Performance tracking tools should be linked with contract terms and incentives to ensure vendor accountability and motivation.

Concurrently, communication protocols and trust-building practices must be formalized. Clear communication structures, regular joint reviews, escalation mechanisms, and collaboration platforms should be instituted to promote transparency and timely information exchange. These practices should be incorporated into vendor onboarding programs to establish expectations and cultural norms early in the relationship. Open communication also fosters psychological safety, allowing vendors to raise concerns, propose innovations, and alert project owners to emerging risks without fear of penalty (Basiru, *et al.*, 2023, Egbuhuzor, *et al.*, 2023, Etukudoh, *et al.*, 2023).

Stakeholder engagement and change management play a crucial role in the success of the implementation strategy. Resistance to change is common, especially when transitioning from transactional vendor management to a more strategic, collaborative approach. Therefore, change management efforts must begin early and be sustained throughout the process. Key stakeholders executives, project sponsors, procurement heads, and departmental leads must be educated on the value proposition of the VRM model. This includes explaining how the model aligns with broader organizational goals such as innovation, sustainability, and risk mitigation (Kokogho, *et al.*, 2024, Lawal, 2015, Morgan, 2012).

Workshops, training sessions, and stakeholder briefings should be conducted to communicate the vision, objectives, and operational changes associated with the new VRM model. These sessions serve to build buy-in, clarify roles, and gather feedback for iterative refinement. Establishing a shared vocabulary around vendor engagement, performance management, and collaborative governance is essential for minimizing misunderstandings and aligning expectations. Moreover, success stories from pilot implementations or similar organizations can be showcased to illustrate the benefits and encourage adoption (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2022, Eyieyien, *et al.*, 2024).

Leadership support is vital in sustaining momentum and resolving conflicts during implementation. Senior executives must champion the initiative, allocate resources, and hold departments accountable for integrating the model into their operations. Incentive structures can also be aligned to reward behaviors that support the VRM model, such as cross-functional collaboration, early risk detection, and vendor development efforts.

Technology plays a pivotal role in operationalizing the model. Implementing digital tools to support segmentation, performance tracking, communication, and analytics ensures that the model is scalable, transparent, and efficient. Vendor management systems (VMS), enterprise resource planning (ERP) systems, and project management software should be

updated or integrated to support the new workflows. For example, dashboards can provide real-time visibility into vendor performance metrics, risk alerts, and contractual obligations (Basiru, *et al.*, 2023, Ekwebene, *et al.*, 2024, Eyeyien, *et al.*, 2024). Artificial intelligence (AI) and machine learning algorithms can be deployed to analyze historical vendor data, forecast potential issues, and suggest optimization strategies.

Cloud-based collaboration platforms such as Microsoft Teams, Slack, or Asana can facilitate communication across geographically dispersed vendor teams and internal departments. Document repositories, version control, and workflow automation help streamline administrative tasks and improve accountability. Blockchain technology may also be introduced to enhance contract integrity, ensure traceability, and reduce disputes. When selecting tools, organizations should prioritize user-friendliness, integration capabilities, data security, and scalability.

A phased rollout is advisable to manage risk and ensure learning from early adopters. Piloting the model in one or two projects or vendor categories allows the organization to test assumptions, gather feedback, and make adjustments before enterprise-wide deployment. The pilot phase should be monitored closely, with metrics established to evaluate effectiveness, stakeholder satisfaction, and performance improvement. Lessons learned should inform the full-scale implementation plan (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2023, Eyeyien, *et al.*, 2024).

During the rollout, continuous improvement mechanisms must be embedded to ensure that the model remains responsive to changing conditions. Periodic reviews, stakeholder feedback loops, and lessons-learned sessions should be institutionalized. These mechanisms enable adaptive learning and help refine performance metrics, engagement protocols, and digital tools. Organizations should also establish knowledge-sharing communities or centers of excellence to institutionalize best practices and foster a culture of collaborative vendor management.

Post-implementation, governance structures should be established to sustain the model. This may include a VRM steering committee responsible for monitoring compliance, driving innovation, and resolving systemic issues. Audit and compliance functions should be integrated to ensure that vendor performance data is reliable, contractual terms are enforced, and risks are managed proactively. Additionally, the organization should establish formal vendor development programs, focusing on building capabilities, supporting innovation, and fostering long-term partnerships with strategic suppliers.

In conclusion, the implementation strategy for the conceptual model of Vendor Relationship Management in complex projects demands a comprehensive, multi-level approach that integrates operational systems, cultural change, and digital infrastructure. It involves assessing readiness, building cross-functional implementation teams, redefining vendor engagement strategies, and embedding trust, accountability, and flexibility into every phase of the project. Stakeholder engagement and change management are essential for overcoming resistance and ensuring alignment, while technology acts as the enabler for scalability, efficiency, and data-driven decision-making. By following this implementation strategy, organizations can elevate vendor relationships from administrative tasks to strategic partnerships, thereby enhancing resilience, innovation, and

performance in complex project environments.

## 8. Discussion

The conceptual model for Vendor Relationship Management (VRM) proposed for complex projects is grounded in the recognition that vendor relationships are not merely transactional engagements but strategic partnerships capable of delivering significant value throughout the project lifecycle. The model integrates key components strategic vendor segmentation, performance-based governance, trust and collaboration mechanisms, digital integration, joint value planning, and flexible conflict resolution to foster robust, adaptive, and strategically aligned vendor engagements. By applying this model, organizations can realize several key benefits that extend beyond cost efficiency and contribute to long-term competitive advantage.

One of the foremost benefits of the proposed VRM model is the enhancement of vendor performance and accountability. Through strategic segmentation, organizations can identify vendors that are critical to project success and allocate resources appropriately to manage them. High-impact vendors receive focused attention in the form of advanced performance metrics, relationship governance, and joint planning, while routine vendors are managed using standardized approaches (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2024, Eyeghre, *et al.*, 2023). This ensures that critical relationships are nurtured with the depth they deserve while optimizing resource utilization. Performance-based governance reinforces this approach by establishing clear expectations, measurable KPIs, and transparent feedback mechanisms. Vendors are not only held accountable but are also motivated to perform consistently through incentive structures linked to performance outcomes.

Another important benefit is the development of resilient and collaborative project ecosystems. In complex projects characterized by interdependencies, uncertainty, and extended timelines, trust and collaboration are critical to navigating unexpected challenges. The model's emphasis on communication protocols, knowledge sharing, and cultural alignment helps create a foundation of mutual understanding and respect. Vendors become more than service providers; they become active participants in problem-solving, innovation, and continuous improvement. This can significantly reduce project delays, improve adaptability, and foster a proactive response to risks (Bidemi, *et al.*, 2021, Egbuhuzor, *et al.*, 2021, Ilori, *et al.*, 2022). Furthermore, digital tools embedded in the model enhance transparency, streamline communication, and allow real-time performance tracking, all of which are essential in environments where multiple vendors operate across geographic and organizational boundaries.

Strategically, the VRM model offers organizations a sustainable competitive advantage. In industries where innovation, speed, and reliability differentiate market leaders, strong vendor relationships can be a strategic asset. For example, early vendor involvement in project design through joint value planning can lead to design optimizations, reduced time-to-market, and lifecycle cost savings. Vendors often possess specialized knowledge and insights that, when integrated into project planning and execution, can improve product quality, regulatory compliance, and customer satisfaction. This alignment not only improves project outcomes but also strengthens the organization's ability to deliver superior value to clients and end-users (Basiru, *et al.*,



2023, Efobi, *et al.*, 2023, Ikese, *et al.*, 2024). Additionally, long-term vendor partnerships developed through this model can enable co-innovation, shared investment in R&D, and the development of proprietary technologies or processes that are difficult for competitors to replicate.

The model also supports organizational agility and responsiveness, which are critical in volatile markets and regulatory environments. Through digital integration and predictive analytics, project leaders gain insights into vendor performance trends, potential risks, and operational bottlenecks. These insights enable data-driven decision-making and timely interventions that prevent small issues from escalating into major disruptions. Adaptive contracts and conflict resolution mechanisms provide the legal and operational flexibility to adjust project scopes, timelines, and deliverables in response to emerging realities (Damilola, *et al.*, 2023, Dosumu, George & Makata, 2023, Imtiaz, *et al.*, 2024). This capability is particularly important in industries such as oil and gas, construction, or information technology, where market conditions and stakeholder demands can change rapidly.

Despite these advantages, the implementation and utility of the model are subject to several limitations and industry-specific considerations. One notable limitation is the resource intensity of implementing the model, particularly in its full form. For small or resource-constrained organizations, establishing advanced digital infrastructure, developing comprehensive segmentation frameworks, and conducting continuous performance reviews may be financially or operationally challenging. Moreover, organizations without a mature procurement or project management function may struggle with integrating the various components of the model cohesively (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2023, Ilori & Olanipekun, 2020).

In some industries, the cultural context of vendor engagement may also pose challenges. In regions or sectors where procurement is traditionally driven by cost or compliance concerns, shifting to a relational and strategic approach may face resistance. Vendors themselves may be skeptical or unprepared to engage in collaborative practices if they are accustomed to arm's-length, transactional relationships. In such cases, change management becomes a critical element of successful implementation, requiring education, training, and the cultivation of trust between parties over time.

Additionally, the model's effectiveness is partly dependent on the availability and quality of data. Performance-based governance and digital integration rely heavily on accurate, timely, and actionable data on vendor activities, project milestones, and risk indicators. Organizations operating in data-poor environments or those lacking integrated digital systems may encounter difficulties in realizing the full potential of the model. Data privacy, cybersecurity, and interoperability are also concerns, particularly in highly regulated industries such as healthcare, defense, or finance (Ayumu & Ohakawa, 2024, Esan, *et al.*, 2023, Ezeafulukwe, Okatta & Ayanponle, 2022).

Another consideration is the variability in project types and lifecycles across industries. In industries such as construction or infrastructure development, projects are often large, capital-intensive, and long-term, making them well-suited to the model's emphasis on strategic partnerships and continuous engagement. However, in industries with shorter project cycles, such as digital services or consumer product development, the depth of engagement proposed in the model

may not always be necessary or cost-effective. For such projects, a more streamlined version of the model focused on segmentation, digital integration, and performance governance may be more appropriate (Basiru, *et al.*, 2023, Esan, Uzozie & Onaghinor, 2022, Ilori, *et al.*, 2022).

Moreover, global projects introduce complexity related to legal jurisdictions, cultural differences, and language barriers that may impact the execution of trust and collaboration mechanisms or dispute resolution protocols. Multinational organizations must tailor the model to accommodate regional differences in vendor laws, labor practices, and business customs, while still maintaining consistency in performance expectations and strategic alignment (Bristol-Alagbariya, Ayanponle & Ogedengbe, 2024, Etukudoh, *et al.*, 2022).

Despite these challenges, the model is inherently adaptable. Its modular structure allows organizations to scale and tailor each component based on their unique needs, resources, and industry dynamics. For instance, while a defense contractor may emphasize security and compliance in its vendor relationships, a tech firm might prioritize innovation and speed. Organizations can prioritize certain components such as joint value planning or digital analytics based on strategic objectives and gradually expand to include other features as maturity grows.

In conclusion, the conceptual model for Vendor Relationship Management in complex projects presents a comprehensive framework that transforms vendor management from a tactical function into a strategic lever for project success and organizational competitiveness. It offers clear benefits in terms of enhanced vendor performance, improved risk management, accelerated innovation, and stronger alignment between vendor contributions and project goals. However, its implementation must be carefully managed, taking into account organizational readiness, cultural context, resource constraints, and industry-specific requirements. With thoughtful adaptation and strong leadership commitment, the model can significantly elevate the role of vendor relationships in delivering complex projects successfully and sustainably.

## 9. Conclusion and Recommendations

The conceptual model for Vendor Relationship Management (VRM) presented in this study offers a comprehensive and strategic approach to managing vendor partnerships in complex project environments. Recognizing the limitations of traditional, transactional procurement methods, the model integrates key elements such as strategic vendor segmentation, performance-based governance, trust and collaboration mechanisms, digital integration, joint value planning, and conflict resolution frameworks. Collectively, these components redefine vendor engagement as a dynamic, value-driven function that directly contributes to project success, risk mitigation, and long-term competitive advantage.

A central contribution of the model lies in its recognition that vendors are not merely service providers but critical stakeholders whose performance and alignment with project objectives are essential to success. By introducing strategic segmentation, the model enables organizations to distinguish between routine and strategic vendors, tailoring engagement strategies accordingly. Performance-based governance enhances accountability and provides a structured mechanism for monitoring and improving outcomes. Meanwhile, trust-building practices and digital tools foster



transparency, agility, and collaboration across organizational and geographical boundaries. Joint value planning encourages innovation and shared success, while flexible contracts and conflict resolution mechanisms ensure that projects remain resilient in the face of uncertainty and change.

For practitioners, the model serves as a practical guide for transforming vendor relationships into strategic assets. It encourages project leaders, procurement professionals, and organizational executives to adopt a holistic view of vendor management one that is proactive, integrated, and adaptable. Practitioners are advised to begin with a thorough assessment of current vendor management maturity and to roll out the model in phases, beginning with high-impact vendors or pilot projects. Cross-functional collaboration, stakeholder buy-in, and change management are essential for successful adoption. Organizations should also invest in digital infrastructure and data capabilities to support real-time analytics, predictive insights, and seamless coordination. Importantly, leadership must champion the cultural shift toward partnership-based engagement and embed the model's principles into procurement policies, project governance structures, and performance evaluation systems. Future research should focus on empirically testing the model across different industries, project types, and organizational contexts to refine its applicability and validate its effectiveness. Longitudinal studies can help evaluate the impact of the model on project performance, vendor innovation, and organizational resilience over time. Comparative analyses between organizations that adopt strategic VRM practices and those that do not would further highlight the model's value proposition. Additionally, further exploration is warranted on the role of emerging technologies such as artificial intelligence, blockchain, and machine learning in enhancing the predictive, analytical, and collaborative aspects of VRM.

In conclusion, this conceptual model represents a significant step forward in aligning vendor relationship management with the strategic imperatives of complex project delivery. By embracing a multi-dimensional, integrated framework, organizations can unlock new levels of value from their vendor partnerships, mitigate risks more effectively, and position themselves for sustained success in a competitive and uncertain global environment.

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### How to Cite This Article

Sanni S. A conceptual model for vendor relationship management to drive strategic value in complex projects. *Int J Multidiscip Res Growth Eval*. 2025;6(6):995-1009. doi:10.54660/IJMRGE.2025.6.6.995-1009.

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