

Chapter 3

RESEARCH METHODOLOGY AND FRAMEWORK

After laying out the theoretical foundation and reviewing the gaps in existing studies, this chapter turns to the approach used to carry out the research. The aim is not only to design a governance framework that fits PT. XYZ's context, but also to show step by step how the framework can be validated in practice. The method chosen combines both qualitative and quantitative elements so that the findings reflect real operational conditions while still being measurable and structured.

The overall design follows a Governance Operational Evaluation (G-O-E) logic. At the governance level, the study applies COBIT 2019, focusing specifically on APO10, DSS01, and MEA01, since these domains speak directly to vendor management, service delivery, and performance monitoring. At the operational level, the current practices are measured using NPFL capability thresholds and mapped against SLA/KPI results. Finally, at the evaluation stage, the study applies a vendor rationalization model using the Simple Weighted Average (SWA) method, with input and validation from experts who are directly involved in EDC service operations.

This layered approach ensures that the framework is grounded in established IT governance principles but is also tested against the day to day realities faced by PT. XYZ. By moving from governance theory to operational evidence and then to evaluation and validation, the methodology provides a clear path for answering the research questions and demonstrating the practicality of the proposed solution.

3.1 Research Design

The design of this research is guided by the need to link governance principles with operational realities in vendor management at PT. XYZ. Since the problems identified in Chapter 1 are multi-layered ranging from governance gaps in vendor appointment to underperformance in SLA delivery this study adopts a layered approach that connects theory, practice, and validation.

To achieve this, the research design is organized into three stages, referred to as the

Governance Operational Evaluation (G-O-E) framework:

1. **Governance Stage:** At this stage, COBIT 2019 is applied to identify which governance and management objectives are most relevant for vendor management. The domains APO10 (Managed Vendors), DSS01 (Managed Operations), and MEA01 (Performance and Conformance Monitoring) are selected as the backbone. These domains are then assessed against PT. XYZ's existing practices to highlight capability gaps.
2. **Operational Stage:** After governance priorities are established, the operational realities are analyzed. This involves evaluating current SLA performance and vendor practices using the NPFL capability rubric (Not, Partially, Largely, Fully) as well as PT. XYZ's internal performance records. The goal of this stage is to translate broad governance objectives into measurable operational indicators.
3. **Evaluation Stage:** Finally, a vendor rationalization model is developed using the Simple Weighted Average (SWA) method as a Multi-Criteria Decision Making (MCDM) tool. This model allows different vendors to be scored and ranked based on agreed SLA/KPI criteria. The results are then validated through expert reviews with stakeholders from PT. XYZ, ensuring that the framework is not only theoretically sound but also practically acceptable.

By structuring the research in this way, the design ensures continuity: starting from governance theory, moving through operational measurement, and ending with evaluation and validation. This flow mirrors the logic of solving the original research problem, where gaps in vendor governance are not just identified but addressed through a framework that is both systematic and implementable.

3.2 Data Collection

The research relies on a mix of qualitative and quantitative data so that both governance perspectives and operational realities can be captured. Data were gathered from several sources that directly relate to PT. XYZ's EDC service operations:

1. **Internal Reports and SLA Records:** Performance data from 2024 were collected to understand how well PT. XYZ and its vendors met agreed SLAs

for onboarding and maintenance services. These records provide the quantitative foundation for assessing where SLA gaps occurred and how consistently targets were achieved across different regions.

2. **Forum Group Discussion (FGD) with Stakeholders:** An internal FGD was conducted with representatives ranging from Executive Vice President level to field staff. Each participant contributed insights based on their role in the service delivery chain, from strategic oversight to daily execution. These discussions were then mapped into categories using the Ishikawa (fishbone) method to identify recurring problems such as weak vendor qualification, inconsistent outsourcing practices, and gaps in SOP coverage.
3. **Vendor Documentation and Contracts:** Existing vendor agreements and tender-related documents were reviewed to examine how governance mechanisms were applied in practice. This included analyzing contract terms, SLA clauses, and vendor evaluation criteria. The purpose was to see whether governance controls (such as re-tender requirements or performance penalties) were formally defined and whether they were effectively enforced.
4. **Expert Validation Inputs:** Toward the evaluation stage, expert input was gathered from senior managers and operational staff who were directly involved in managing EDC vendors. Their role was to validate both the capability assessment (using COBIT's NPFL scale) and the vendor scoring model (SWA). This ensured that the framework would not only reflect theory but also resonate with those who implement it in daily operations.

Collecting data from these multiple sources allows the study to triangulate findings. SLA records show what performance gaps exist, FGD discussions reveal why these gaps occur, vendor documentation indicates how governance is currently structured, and expert validation tests whether the proposed framework is practical. Together, these methods provide a holistic evidence base for designing and testing the vendor governance framework.

3.3 Capability Assessment

At the governance stage, the study applies COBIT 2019 to evaluate how PT. XYZ currently manages vendors, operations, and performance monitoring. The focus is narrowed to three domains APO10 (Managed Vendors), DSS01 (Managed Operations), and MEA01 (Managed Performance and Conformance Monitoring) as they directly relate to the vendor governance and SLA issues highlighted in Chapter 1.

To measure the level of capability in these domains, the NPFL rubric (Not, Partially, Largely, Fully) is used as recommended by COBIT 2019. Each process activity is assessed by gathering evidence from internal reports, SLA records, and stakeholder interviews. The NPFL thresholds are defined as follows:

- **Not (N): < 15% of activities are achieved with evidence.**
- **Partially (P): 15% – < 50% of activities are achieved.**
- **Largely (L): 50% – < 85% of activities are achieved.**
- **Fully (F): 85% of activities are achieved.**

These thresholds allow the assessment to be systematic while still leaving room for contextual interpretation. For example, if vendor selection criteria exist but are not applied consistently across regions, the process would likely fall into the “Partially” category. Similarly, if SLA reporting covers most but not all areas of operations, it may be classified as “Largely.”

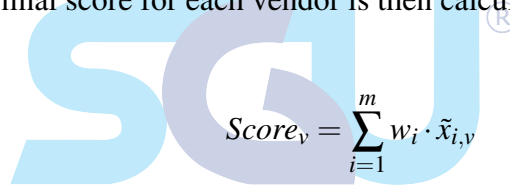
The NPFL results are then mapped against COBIT’s capability levels (0–5), providing a structured view of where PT. XYZ stands today. This mapping not only identifies which controls are missing but also shows how far the organization is from achieving a “Managed” or “Established” level of maturity.

By combining COBIT’s structured objectives with the NPFL scoring scale, the assessment creates a clear baseline of PT. XYZ’s governance capability. This baseline is critical for two reasons: first, it shows the exact nature of gaps contributing to SLA underperformance; and second, it provides the reference point against which any proposed framework or improvement can be measured in the later evaluation stage.

3.4 Vendor Scoring & Rationalization

Once the capability baseline is established through COBIT and NPFL, the next step is to evaluate the vendors themselves. This is necessary because PT. XYZ currently works with multiple outsourcing providers whose performance varies across regions, often leading to inconsistent SLA delivery. To create a fair and transparent way of comparing these vendors, the study adopts the **Simple Weighted Average (SWA)** method as a Multi-Criteria Decision Making (MCDM) tool.

The logic behind SWA is straightforward: each vendor is evaluated across a set of agreed criteria—such as SLA achievement rate, response time, quality of field service staff, reporting accuracy, and compliance with governance requirements. Each criterion is assigned a weight (w_i) according to its importance, and every vendor's performance ($x_{i,v}$) is normalized to a common scale so that comparisons are fair. The final score for each vendor is then calculated as:


$$Score_v = \sum_{i=1}^m w_i \cdot \tilde{x}_{i,v}$$

where $\tilde{x}_{i,v}$ represents the normalized value of vendor v on criterion i . Benefit-type criteria (where higher is better, such as SLA achievement) are normalized using min–max scaling, while cost-type criteria (where lower is better, such as penalty incidents) are inverted to ensure consistency across the model.

Using this approach, all vendors can be ranked based on their weighted scores. Vendors that consistently underperform will appear at the lower end of the ranking, making them candidates for rationalization or corrective governance action. Vendors at the top of the ranking, on the other hand, demonstrate higher reliability and alignment with PT. XYZ's SLA objectives.

The strength of SWA lies in its balance between simplicity and transparency. While more complex MCDM methods such as AHP could be used, SWA was chosen because it produces results that are easy to communicate to stakeholders, replicable across assessment cycles, and practical for use in vendor governance meetings. In this way, the rationalization process is not only data-driven but also

organizationally feasible.

The scoring results from SWA will then be brought back into the governance framework: they provide evidence for decision-making in vendor selection, contract renewal, or standardization of vendor practices. By aligning these results with the COBIT-based capability assessment, PT. XYZ gains a complete picture both of how its governance processes perform and of how its vendors deliver against expectations.

3.5 Expert Validation

To ensure that the proposed framework is not only theoretically grounded but also practical for PT. XYZ's operations, expert validation was conducted as the final stage of the research methodology. The validation process aimed to confirm whether the framework's design, capability assessments, and vendor scoring model were realistic, acceptable, and aligned with the organization's needs.

For the **capability assessment stage**, inputs were gathered from one **Executive Vice President (EVP)**, one **Vice President (VP)**, and three **Assistant Vice Presidents (AVPs)** of EDC Services. These positions were selected because they represent the roles formally mapped to the RACI responsibilities for the COBIT domains APO10, DSS01, and MEA01. By focusing on senior decision-makers with direct accountability for vendor governance and SLA oversight, the assessment ensured that the capability levels reflected the organization's strategic and tactical perspectives.

For the **framework design and vendor scoring model**, validation was extended to include broader operational perspectives through structured feedback sessions and questionnaires. Experts reviewed three main components:

- (a) **Capability Assessment Results: whether the NPFL-based scoring for APO10, DSS01, and MEA01 accurately represented PT. XYZ's current maturity.**
- (b) **Proposed Framework Design: whether the governance–operational–evaluation (G-O-E) structure and its**

supporting SOPs, RACI mappings, and performance indicators addressed the recurring problems identified in Chapter 1.

- (c) Vendor Scoring Model (SWA): whether the selected criteria and weights were appropriate, fair, and useful for differentiating vendor performance.**

Expert feedback was captured using structured questionnaires with Likert-scale responses, supported by open-ended discussion to gather qualitative insights. An agreement threshold of at least 80% “agree” or “strongly agree” across validation items was set as the benchmark for considering the framework fit for purpose. Any items falling below this threshold were documented for adjustment or further refinement.

This validation step was essential to bridge the gap between theory and practice. By directly involving senior stakeholders with decision-making authority over vendor governance, the research ensured that the final framework was not only academically sound but also actionable, acceptable, and capable of driving improvements in SLA performance.

3.6 Research Framework

To integrate the stages described above into a single view, this study develops a research framework that connects governance, operational, and evaluation activities. As illustrated in Figure 3.1 the framework begins with a governance layer, where COBIT 2019 domains APO10, DSS01, and MEA01 provide structure for vendor management, operations, and performance monitoring. This is followed by the operational layer, where SLA performance and NPFL-based capability assessments translate governance objectives into measurable indicators. The final stage is the evaluation layer, in which the vendor rationalization process is carried out using the Simple Weighted Average (SWA) method.

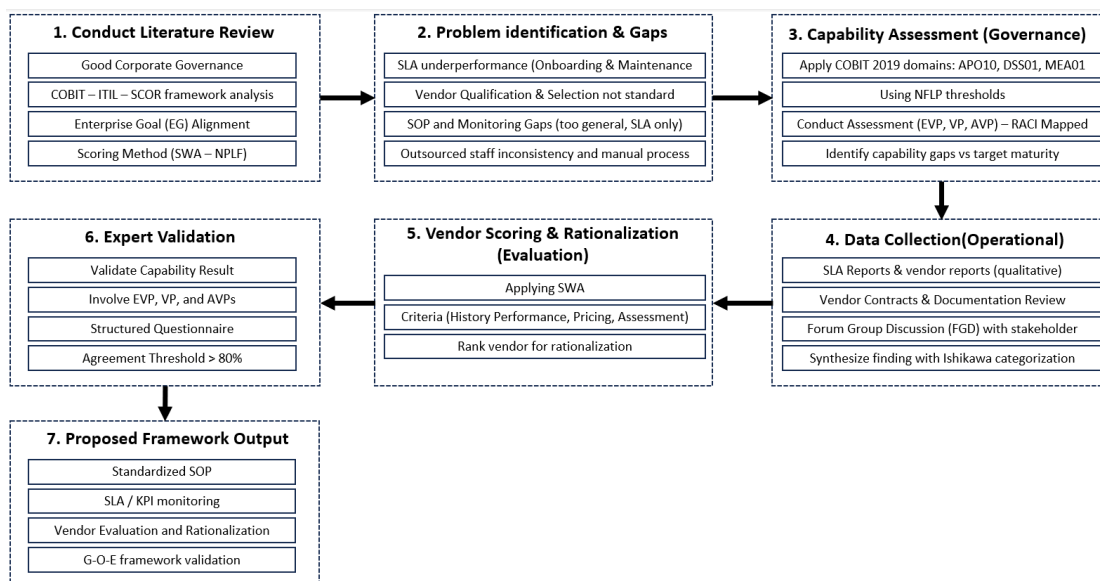


Figure 3.1: Proposed Framework

Figure 3.1 illustrates the proposed research framework, which is structured in five main steps. The first step is the Governance Stage, where COBIT 2019 domains (APO10, DSS01, and MEA01) are assessed using NPFL thresholds to establish a baseline of capability maturity. The second step is the Operational Stage, which translates governance objectives into measurable indicators through SLA and KPI analysis, supported by data collection from contracts, reports, and stakeholder discussions. The third step is the Evaluation Stage, where the Simple Weighted Average (SWA) model is applied to score and rank vendors based on multiple criteria, enabling transparent rationalization. The fourth step is Expert Validation, which ensures that the assessment results, framework design, and vendor scoring model are realistic and acceptable to senior decision-makers (EVP, VP, AVPs). The final step is the Framework Output, which delivers standardized SOPs, RACI mappings, SLA scorecards, and a validated vendor rationalization model. Together, these steps form an integrated Governance Operational Evaluation (G-O-E) methodology tailored to address PT. XYZ's vendor governance and SLA underperformance challenges.