

Conceptual Framework in Designing a System for Strategic Action Plan Management in Higher Education Institution

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ABSTRACT

Effective strategic action plan (SAP) management is critical for Higher Education Institutions (HEIs) navigating complex, highly competitive, and volatile global educational landscapes. This paper examines a data-driven SAP management framework structured across a three-stage project lifecycle: Project Registration, Progress Reporting, and Project Closure. Implemented and iteratively optimised over a five-year longitudinal horizon (2021–2025) at a public higher education institution in Malaysia, the digital tracking system was designed to evaluate the execution and completion rates of faculty-level strategic projects mapped to the key performance indicators (KPIs) mandated by the university. Longitudinal empirical results reveal that the framework successfully weathered extreme macro-environmental anomalies and sudden operational shifts. During the initial implementation window (2021–2022), the system captured severe baseline friction and operational divergence across academic faculties due to abrupt institutional adjustments and infrastructural disruptions. Furthermore, the architecture exhibited a distinct phase of structural hysteresis in 2023, characterised by temporary performance contractions in project progress as faculties navigated post-crisis backlogs and normalisation protocols. Despite these intense systemic shocks, the framework successfully facilitated a sharp, "V-shaped" recovery in project execution across the academic core. By the conclusion of the 2025 cycle, a compelling trend of structural convergence was evident, characterised by near-perfect project completion rates across all academic faculties in the digital tracking environment. Crucially, this study focuses strictly on the completion rates of these registered projects, the successful execution of planned activities and milestone deliverables, rather than the ultimate achievement of the institutional KPIs themselves, which are subject to external socio-economic variables. To validate these quantitative findings and address potential reporting bias, this study integrates a qualitative mixed-methods evaluative feedback loop, examining the structural tension between procedural completion and material performance. These findings provide strong empirical evidence that organisational alignment and systemic resilience in project execution are not organic byproducts of time but can be engineered into large-scale public HEIs through automated tracking architectures, three-tiered validation protocols, and agile mid-course corrections.

Keywords: Higher Education Institutions; Longitudinal Research; Project Management; Project Monitoring; Strategic Action Plan.

INTRODUCTION

Higher education institutions (HEIs) are under constant pressure to adapt and evolve in an increasingly dynamic and competitive global landscape. Strategic action plans (SAPs) have become essential tools for universities to achieve long-term goals, respond to changing educational demands, and position themselves as leaders in academic innovation and societal impact. A well-structured and effectively managed SAP enables HEIs to align their resources, processes, and stakeholders toward a common vision. However, the structural complexity of modern HEIs, characterised by professional bureaucracies, high academic autonomy, and diverse stakeholder expectations, frequently results in a profound disconnect between formulated strategies and operational execution. Traditional strategic management in higher education has historically relied on rigid, top-down planning cycles that lack the necessary agility to absorb macro-environmental shocks or capitalise on emerging opportunities (Davis, Kee, & Newcomer, 2010). As universities confront severe external pressures, including rapid technological disruptions, fluctuating state funding models, and stringent national accountability regimes, there is an urgent need for governance systems that facilitate continuous feedback, real-time alignment, and resilient execution. In Malaysia, this metrification pressure is particularly acute. The Ministry of Higher Education (MoHE) enforces a highly structured funding formula directly linked to outcome-focused Headline Key Performance Indicators (KPIs). Public HEIs are consequently obliged to implement robust performance measurement systems that cascade national priorities down to localised faculty initiatives (Rose, Ross-Gordon, & Kasworm, 2023). Despite the clear imperative for strategic alignment, many universities struggle to move beyond superficial compliance (Lueg & Jebsen, 2024; Bryson, 2018). Existing strategic planning frameworks often fail to integrate digital monitoring tools with day-to-day operations, resulting in fragmented data, manual validation bottlenecks, and high administrative overhead (Bryson, Anderson, & Alston, 2011; Webber & Calderon, 2015). To address these persistent governance gaps, this study examines the design, implementation, and longitudinal performance of a conceptual framework for SAP management.

Some frameworks fail to integrate strategic planning with operational execution, resulting in a disconnect between formulated strategies and their implementation (Rowley & Sherman, 2004). This disjunction can be attributed to several factors, including inadequate stakeholder engagement, insufficient data utilisation for decision-making, and a lack of continuous monitoring and evaluation mechanisms (Kaplan & David, 1996; Poister & Streib, 2005). Furthermore, existing models frequently overlook the unique challenges faced by HEIs, such as evolving regulatory environments and diverse stakeholder expectations (Lueg & Jebsen, 2024). The absence of a comprehensive Conceptual Framework that addresses these issues hinders HEIs from achieving their strategic goals effectively. Therefore, this study aims to develop a robust Conceptual Framework of SAP management tailored specifically for HEIs. The primary contribution of this research lies in its empirical, longitudinal evaluation of a digital strategic management lifecycle. By exploring the operational trajectories of academic units through periods of intense macro-environmental turbulence, this paper provides critical perspectives on the engineering of institutional resilience. Furthermore, responding directly to the call for methodological transparency in higher education governance, this study evaluates the structural limitations of quantitative metrification, incorporating a qualitative analysis of academic compliance, reporting bias, and the realities of metric-driven performance.

LITERATURE REVIEW

Strategic planning in HEIs has transitioned from a rigid, periodic bureaucratic exercise to a dynamic, continuous process of adaptation. Traditional models, heavily adapted from the private corporate sector, assumed a stable, predictable environment where long-term plans could be formulated and executed without major mid-cycle alterations. However, seminal work by Rowley and Sherman (2004) demonstrated that traditional, top-down planning mechanisms in HEIs frequently suffer from a severe alignment deficit. Because academic departments operate with high levels of operational autonomy, central strategic directives are often decoupled from frontline educational and research activities. To bridge this disconnection, Bryson (2018) encouraged for iterative, participatory planning models that emphasise continuous feedback and active stakeholder engagement. Rather than treating the strategic plan as a static document, modern HEIs must view strategic execution as an emergent process that evolves organically in response to real-time institutional and environmental feedback. This is closely aligned with the concept of *strategic agility* in public sector organisations, which highlights the capacity of an

institution to rapidly redeploy resources, re-align operational workflows, and modify strategic milestones in response to systemic shocks without losing sight of its core mission.

A fundamental principle of effective strategic execution in HEIs is the active engagement of internal stakeholders, particularly faculty members, administrative staff, and institutional leaders. Rooted in Freeman's (2010) Stakeholder Theory, strategic management frameworks must recognise that the legitimacy and sustainability of institutional strategies depend heavily on those who execute them. Centralised, highly authoritarian strategic directives often breed disengagement, passive resistance, and a culture of superficial compliance. Conversely, participatory and decentralised planning models foster a deep sense of ownership and shared accountability. Mintzberg (1994) argued that overly centralised planning mechanisms restrain institutional creativity and fail to capture localised operational realities. In the context of higher education, where academic disciplines possess highly distinct operational cultures and resource requirements, a collaborative, bottom-up approach to project formulation ensures that strategic initiatives are practically viable and academically rigorous. By integrating multi-layered stakeholder involvement into the project registration and reporting lifecycles, institutions can balance the need for top-down strategic alignment with the preservation of bottom-up academic autonomy.

One of the most critical aspects of strategic action plan management is the ability to monitor progress and adjust in real-time. Alexander (2000) notes that many HEIs struggle with the implementation of strategic plans due to inadequate systems for tracking progress and measuring performance. He advocates for the use of performance indicators and monitoring systems that provide ongoing feedback, enabling institutions to assess whether they are on track to meet their strategic objectives. Similarly, Miller et al. (2021) argue that continuous improvement must be an integral component of any strategic management system. Their research shows that institutions that implement mechanisms for regular review and adjustment of their strategic action plans are more successful in achieving long-term sustainability. This aligns with the broader literature on *strategic agility*, which stresses the need for HEIs to remain flexible and responsive in the face of changing circumstances (Teece, Peteraf, & Leih, 2016).

The integration of technology in strategic planning has become a growing area of interest in recent years. Digital platforms and data analytics tools offer HEIs new opportunities to track performance, assess outcomes, and engage stakeholders in the planning process (Rowley & Sherman, 2004). These tools enable real-time monitoring of key performance indicators, making it easier to assess the effectiveness of strategic initiatives and make necessary adjustments. Recent studies highlight the importance of data-driven decision-making in higher education. Teece et al. (2016) emphasise that digital transformation not only facilitates the management of strategic plans but also enables institutions to adapt their strategies based on real-time insights. This capacity for agility is crucial for universities in facing rapid technological, societal, and economic changes. Several models have been proposed in the literature to guide strategic action planning in HEIs which provides a comprehensive framework for the development, implementation, and evaluation of strategic plans in complex organisations. This framework is particularly relevant for HEIs, as it emphasises stakeholder involvement, goal alignment, and the use of data to inform decision-making.

The *Emergent Strategy* model by Mintzberg (1994) proposes for a more flexible approach, where strategies evolve organically based on feedback from ongoing actions and the changing environment. This model has gained relevance in recent years, as universities have increasingly recognised the need for strategic agility in response to external pressures. While existing models provide valuable insights, many fail to address the unique challenges facing HEIs in the 21st century, particularly the need for agility, stakeholder involvement, and data-driven decision-making (Bryson, 2018; Rowley & Sherman, 2004). Moreover, the rapid pace of technological change and the increasing complexity of higher education environments call for new models that can integrate digital tools and continuous feedback mechanisms (Miller, Cunningham, & Lehman, 2021). The literature highlights the importance of a flexible, stakeholder-driven, and data-informed approach to strategic action plan management in HEIs. Existing models provide a strong foundation, but they often lack the agility and technological integration necessary to address the evolving needs of HEIs. This study proposes a new Conceptual Framework that incorporates insights from strategic management, stakeholder theory, and digital transformation, offering a more adaptable and comprehensive framework for managing strategic action plans in HEIs.

METHODOLOGY

This study is positioned within a large public university in Malaysia operating under a strategic mandate focused on global renown and local relevance. To operationalise its strategic priorities, the institution deployed a university-wide digital project tracking system, a digital enterprise application configured to track, monitor, and validate strategic projects across the massive, multi-tiered structural footprint of the university. The developed Conceptual Framework consists of four phases – 1) identification of Gap, 2) development of the process flow for the system, 3) pilot testing and refinement, and 4) dissemination and knowledge sharing as shown in Figure 1.

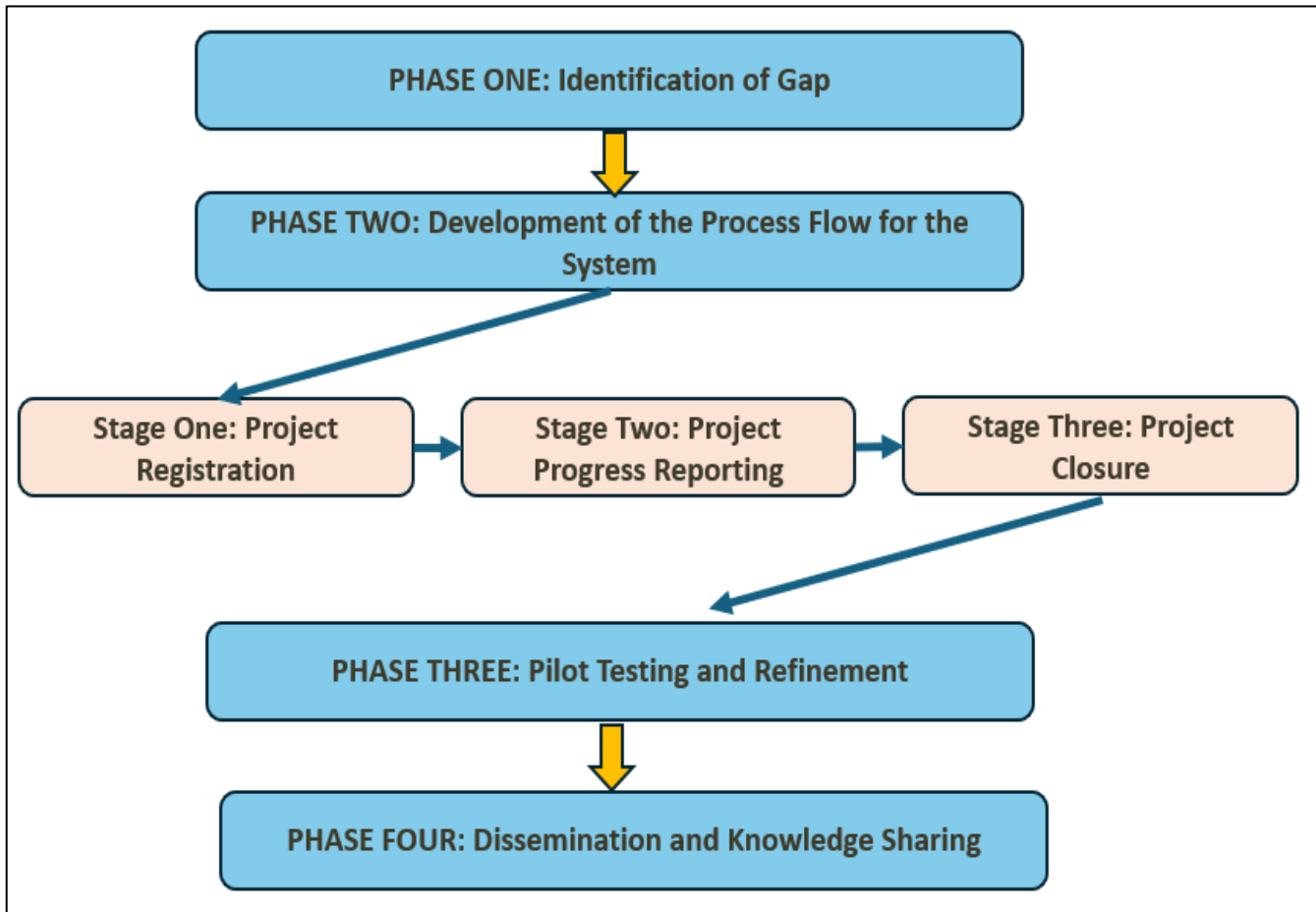


Figure 1: Conceptual Framework in Designing a System for SAP Management in HEIs

The central monitoring system tracks of the university involve various organizational tiers. To evaluate the operational dynamics of the academic core under a unified steering logic, this study selectively isolates and analyses the performance data of the academic faculties. The resulting dataset covers strategic projects managed within the 25 core academic faculties. These projects are strategically mapped across Performance Indicators (PIs) and Key Initiatives (KIs) linked directly to national higher education goals. Executive portfolios, regional branch campuses, and independent research centres of excellence were deliberately excluded from this dataset to eliminate non-academic operational noise and maintain strict disciplinary comparability across the academic core. The project completion rate of each academic unit is calculated dynamically based on a weighted milestone completion formula. Let C_f represent the overall strategic project completion percentage for a given faculty, f in a specific fiscal year:

$$C_f = \frac{1}{N} \sum_{p=1}^N \left(\sum_{m=1}^{M_p} w_{pm} \cdot P_{pm} \right)$$

where N represents the total number of registered strategic projects for the faculty, M_p represents the total number of defined milestones for project p , w_{pm} is the relative weight assigned to milestone, m of project, p such that $\sum_{m=1}^{M_p} w_{pm} = 1.0$, and P_{pm} is the verified percentage of completion for milestone, m , ranging from 0% to 100%. Crucially, C_f measures the operational execution of planned activities rather than the external KPI results themselves.

The digital tracking platform operates a system-enforced workflow divided into three sequential lifecycle phases: Project Registration, Progress Reporting, and Project Closure. Role-based access permissions ensure clear accountability and data integrity throughout the strategic cycle. The criteria and structural roles of the key personnel involved are consolidated in Table 1.

Table 1: Criteria and Operational Roles of Key Personnel in the Project Monitoring

Operational Position	Target Institutional Profile	Primary Administrative Role	System-Enforced Permissions and Boundaries
Person in charge (PIC)	Strategic and Transformation Coordinator of Faculty	Represents the strategic office, gathers initial project details, coordinates departmental objectives, and prepares briefs.	Restricted to initial project setup and brief drafting, cannot assign Project Directors or authorise budgets.
Project Director (PD)	Head of Department or Deputy Dean	Accountable for overall project management, milestone setting, mapping to university KPIs, and budget management.	Authorised to assign Project Managers and Team Members, must formally submit the registered project to the Approver.
Project Manager (PM)	Core Academic or Administrative Staff Member	Responsible for day-to-day operations, tracking task execution, compiling status updates, and logging milestone completion.	Authorised to input completion percentages and risk metrics, cannot alter the core budget or project mapping.
Team Member (TM)	Selected Faculty Member or Researcher	Executes specific allocated subtasks, manages direct project activities, and provides progress evidence to the PM.	Permissions limited to editing assigned subtasks and uploading primary activity evidence.
Approver (APR)	Faculty Dean	Conducts final high-level evaluation of the registered project against regulatory, institutional, and strategic criteria.	Possesses sole system authority to approve the project for execution or reject it back to the PD for amendment.

Following the initial project design and registration, the strategic lifecycle progresses through a structured sequence of actions and system-enforced validation checks. Table 2 details the operational steps, primary personnel, and system outputs associated with each of the three main phases of the strategic workflow.

Table 2: Workflow of the Three Project Phases

Workflow Phase	Operational Steps and Actions	Primary Roles	System-Enforced Outputs and Deliverables
Stage 1: Project Registration	1. Enter brief project scope and title. 2. Formally assign Project Director and Approver.	Person in Charge (PIC), Project Director (PD), Approver (APR)	• Formal system approval or rejection with amendment notes.

	3. Detail objectives, duration, and map to university KPIs and budget. 4. Formally assign PM and TM roles. 5. Submit to APR for formal evaluation.		Automated generation of appointment letters emailed to PD, PM, and TM.
Stage 2: Progress Reporting	1. Register sub-project risk profiles, milestones, and assign sub-project owners. 2. Execute assigned subtasks and log updates. 3. Input verified completion percentages for each milestone. 4. Monitor overall project completion trajectory.	Team Member (TM), Project Manager (PM), Project Director (PD)	- Real-time update of faculty completion metrics. - Automated data feed to central Power BI dashboard for institutional monitoring.
Stage 3: Project Closure	1. Verify that all objectives have been met and progress has been fully updated. 2. Upload definitive activity evidence and reports into the system. 3. Review closure documents, budgets, and performance metrics. 4. Formally execute system closure.	Project Manager (PM), Approver (APR)	- Final compliance and outcome reports archived. - Project formally closed in the organisation's central project management database.

Prior to full institutional deployment, the conceptual framework was subjected to pilot testing over a one-year window. All key personnel were required to participate in a User Acceptance Test (UAT) to assess system usability and identify workflow bottlenecks. Selected departments mimicked the model within their localised strategic plans, providing empirical feedback that was used to refine the user interface, simplify progress reporting fields, and optimise the automated notification triggers. This work ensured that the platform was sufficiently flexible to accommodate diverse departmental sizes and missions while maintaining a structured alignment with the overarching transformation objectives of the university.

This study outlines the institutional data sources that feed the central strategic action plan monitoring system to validate the completion of strategic project milestones. It is critical to distinguish between *project completion* (executing the planned tasks of a registered project) and *KPI achievement* (the macro-level outcome results). While the projects are strategically designed to influence key areas such as graduate employability and publication output, this paper focuses on the execution and completion rates of the projects themselves.

To eliminate reporting bias, prevent metric manipulation, and address concerns regarding the realism of the reported project completion rates, the digital tracking system operates a rigid, three-tier validation and reconciliation protocol. This architecture ensures that no milestone can be brought to a *completed* state without multi-layered administrative and database verification. The validation sequence is structured as follows:

- System-Enforced Relational Logic (Tier 1):** The database schema restricts manually entered progress updates. For example, a Project Manager cannot update a milestone to 100% completion unless the relational databases verify that the connected primary records such as a submitted manuscript or a processed payment receipt, have been logged in the respective source system.
- First-Line Administrative Verification (Tier 2):** Once a project team uploads physical or digital evidence of milestone completion, the Departmental Approver must formally review and verify the

authenticity and quality of the uploaded documentation. The project cannot progress to the next phase without this explicit, role-based sign-off in the system.

- **Institutional Transformation Audit (Tier 3):** The central transformation office acts as an independent auditing body. Strategic planning officers conduct quarterly random-sample audits of registered strategic projects. Leveraging interactive Power BI dashboards, the office analyses statistical anomalies, identifies outlier faculties, and flags projects exhibiting rapid, mathematically suspicious progress jumps for manual review.

The completed framework was disseminated through academic presentations, publications, and workshops with institutional administrators. This phase aimed to share the model with a broader audience and facilitate its adoption across different institutions. The framework was also presented to strategic planners and administrators, enabling them to explore its application and further refine their strategic management practices. The suggested timeline for the construction of the framework is one year, as illustrated in Table 3, which outlines a structured and phased approach to ensure the comprehensive development and validation of the model.

Table 3: Suggested Timeline for Model Construction

Phase / Month	1	2	3	4	5	6	7	8	9	10	11	12
1: Identification of Gap												
2: Development of the Conceptual Framework												
3: Pilot Testing and Refinement												
4: Dissemination and Knowledge Sharing												

This timeline includes three phases, beginning with gap identification, development of the Conceptual Framework, pilot testing and refinement, and dissemination and knowledge sharing. Each phase is allocated a specific duration within the overall one-year period to ensure that sufficient time is dedicated to gathering insights, engaging with stakeholders, and refining the model for practical application in HEIs.

RESULTS AND DISCUSSION

The empirical implementation of the digital tracking system yielded substantial longitudinal datasets tracking the strategic execution and project completion behaviours of the 25 academic faculties. Rather than demonstrating a flat, static trajectory of compliance, the five-year planning horizon (2021–2025) reveals a dynamic progression characterised by early-stage operational fragmentation, mid-cycle structural hysteresis, and late-cycle macro-structural convergence in project completion. The overall project completion by 25 faculties is shown in Figure 2, representing the yearly performance percentages across the five-year planning horizon. To provide an aggregated diagnostic evaluation of these structural patterns, the average five-year project completion percentage across the respective faculty groups is mapped in Figure 3.

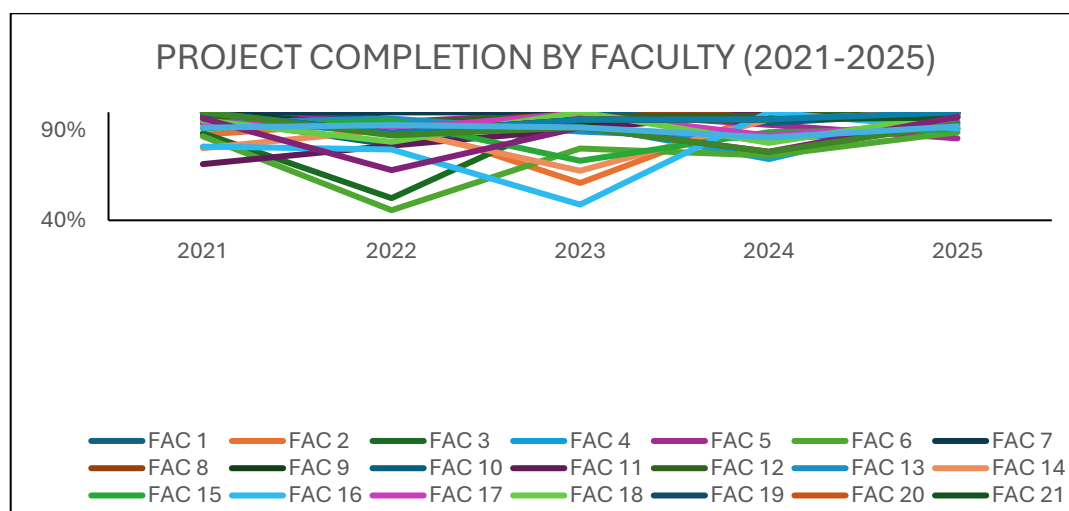


Figure 2 Project completion percentage by faculty (2021-2025)

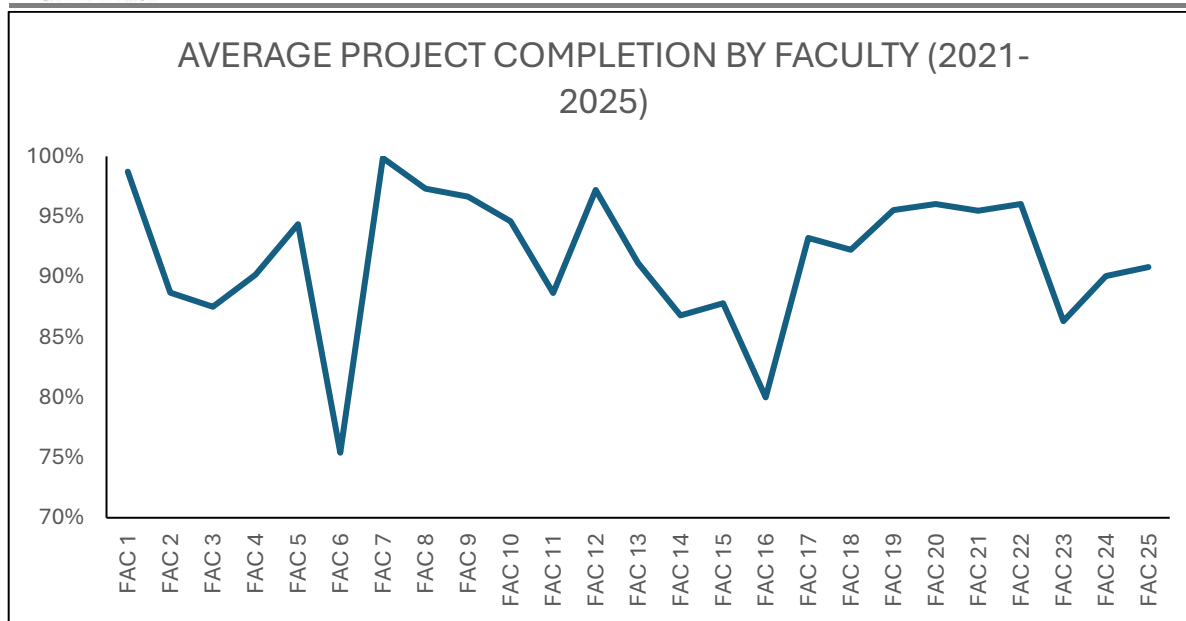


Figure 3 Average project completion percentage by faculty (2021-2025)

During the initial implementation window (2021–2022), academic faculties exhibited significant baseline friction and a wide statistical dispersion in project completion rates. This early fragmentation highlights the fact that decentralised academic structures possess unequal baseline capacities to absorb sudden macro-environmental shocks and operational adjustments. The automated reporting platform documented that these structural vulnerabilities are deeply tied to the disciplinary nature and material infrastructure dependencies of the respective faculties. Highly lab-dependent clinical sectors, engineering fields, and disciplines dependent on advanced empirical machinery experienced severe performance volatility, with project completion metrics dropping into critical zones which is below 60%, between 2022 and 2023.

These specialised fields require physical space, localised data collection, and physical laboratory tracking, resulting in immediate project execution delays when macro-environmental constraints limit physical operations. Conversely, soft sciences, text-based professional tracks, and humanities clusters exhibited a highly robust level of operational elasticity. Because their project workflows could easily be migrated into hybrid and cloud-based formats, these structures maintained stable, upwardly linear completion rates from the inception of the cycle, demonstrating a natural immunity to physical environmental constraints.

Furthermore, the longitudinal data captured a secondary wave of late-cycle bottlenecks occurring in 2023 and 2024, where several highly specialised science branches experienced a sharp, sudden project completion contraction. From an organisational management perspective, this anomaly represents a classic structural hysteresis, revealing the sudden exhaustion of temporary administrative extensions. Project milestones that were granted provisional flexibility during the early years of disruption ultimately collided with rigid, unyielding deadlines in 2024. When these delayed milestones accumulated alongside newly mandated postgraduate enrolment and institutional sustainability indicators from the central ministry, they created an operational bottleneck that temporarily suppressed overall completion rates.

Despite these intense systemic shocks, the framework successfully facilitated a sharp, institutional *V-shaped* recovery in project completion across all monitored tiers. By the conclusion of the 2025 cycle, a compelling trend of structural convergence was evident, as evidenced by near-perfect project completion rates across all academic faculties. Highly optimised fields and language tracks concluded the cycle at perfect 100% marks, while the lagging and highly volatile clinical tracking entities successfully executed dramatic *V-shaped* recoveries to close near or within the optimal project completion thresholds. This universal convergence is the direct result of the unyielding, automated three-stage project lifecycle architecture managed by the system. The active progress reporting module allowed central administrators and strategic coordinators to continuously isolate risky projects, execute agile mid-course resource reallocations, and approve standardised alternative hybrid workflows to ensure project closure.

The emergence of a 100% project completion rate across multiple faculties by the conclusion of the 2025 cycle demands a critical, scholarly deconstruction. Under the principles of Goodhart's Law which posits that *when a measure becomes a target, it ceases to be a good measure*, the performance metrics logged in any digital governance system must be evaluated for over-optimisation, reporting bias, and symbolic compliance. In a high-stakes institutional environment where departmental funding, leadership evaluations, and internal performance ranking systems are directly tied to documented completion scores, the pressure to demonstrate complete strategic execution is immense.

In this context, a recorded 100% completion rate in the project tracking system represents an *engineered compliance convergence* rather than an unmediated reflection of flawless, organic KPI achievement. The qualitative feedback loop integrated into this study revealed that this perfect compliance was achieved through active, continuous milestone re-scoping and administrative adjustments. When physical, high-cost, or macro-environmentally restricted milestones became unviable, project directors and managers leveraged the built-in flexibility of the system to renegotiate project parameters. For instance, highly volatile international outreach initiatives were re-scoped into virtual or hybrid symposiums, and complex laboratory-based testing milestones were restructured into theoretical design or patent filing targets. While this flexibility successfully preserved administrative momentum and prevented catastrophic project abandonment, it simultaneously illustrates how the metric itself became a site of intense negotiation and strategic adaptation, occasionally decoupling the logged system metric from its original material objective.

Crucially, the qualitative feedback loop revealed a clear disconnect while many faculties successfully registered a 100% project completion score by executing all planned milestones or procedural compliance, this did not automatically translate into the achievement of their high-level macro KPI targets or material performance. For instance, a faculty may have fully completed a registered project designed to run intensive graduate employability workshops, achieving 100% project completion in the tracking system yet still missed the mandated target rate of the university due to prevailing market contractions. This separation highlights the fact that while project completion is highly controllable and auditable, the ultimate KPI outcome remains subject to complex, non-linear socio-economic variables.

To enrich the quantitative metrics with practical realities, the qualitative branch of this mixed-methods study captured significant insights regarding implementation challenges and staff sentiment in executing these projects. Feedback from the academic deans, project directors, and faculty-level strategic coordinators revealed a profound dichotomy between the polished, continuous upward trends displayed on executive Power BI dashboards and the material experiences of frontline staff. The qualitative feedback highlighted three critical areas of concern:

- **Technical Debt and Administrative Overload:** Academic staff reported that the continuous logging of milestone data, evidence assembly, and manual updates in the monitoring system created a *tick-box mentality*. Staff frequently felt that administrative energy was drained away from actual research and teaching to feed the digital tracking portal.
- **Metric Fatigue and Staff Burnout:** The unrelenting focus on quantitative completion targets, coupled with rigid quarterly monitoring cycles, induced severe metric fatigue. Frontline academics expressed frustration that complex, long-term educational innovations were undervalued if they could not be easily translated into immediate, numeric milestones.
- **Strategies of Metric Accommodation:** To secure high departmental ratings, some units admitted to scaling down the original ambitions of their projects during the registration phase, registering highly achievable, low-risk milestones to guarantee a perfect 100% completion rate in the database.

These qualitative findings prove that while digital monitoring architectures are essential for institutional steering, they risk breeding symbolic compliance and metric gaming if they are not balanced by qualitative evaluations of academic value and staff wellbeing.

CONCLUSION

The development of a Conceptual Framework in Designing a System for SAP Management in HEIs offers a comprehensive and adaptable model to address the evolving operational needs of academic faculties in a dynamic and competitive global environment. While the constraints of existing strategic models present inherent limitations, this framework integrates key elements of strategic alignment, stakeholder engagement, continuous project tracking, and digital integration to provide a robust tool for enhancing strategic execution. By combining empirical insights and validation, the framework is both theoretically grounded and practically applicable to the academic core, emphasising the importance of agility, collaboration, and iterative refinement.

Crucially, the system supports the creation of actionable and sustainable project workflows, decoupling procedural project completion rates from ultimate macro-level KPI achievements. This separation aligns with Goodhart's Law, demonstrating that while faculties can achieve near-perfect completion of planned tactical milestones, the ultimate achievement of macro-level KPIs remains subject to complex, non-linear socio-economic variables. Pilot testing and qualitative feedback have confirmed the framework's utility, underscoring its potential to safeguard administrative momentum and drive resilient project execution. In conclusion, this Conceptual Framework provides a vital pathway for HEIs seeking to design and refine their systems for tracking strategic project delivery, enabling academic faculties to systematically navigate operational disruptions and maintain institutional progress.

FUTURE RECOMMENDATIONS

Based on the longitudinal empirical findings of the 2021–2025 strategic cycle, several crucial institutional pathways are recommended to enhance future strategic planning in HEIs. University leadership should formalise a biennial mid-term re-alignment mechanism that dynamically reallocates fiscal and human capital to academic faculties experiencing post-crisis project backlog strains, thereby transitioning the governance model from rigid compliance auditing to supportive, agile intervention. To complement this mechanism and mitigate the uneven operational capacities across academic disciplines exposed during external disruptions, faculties especially lab-dependent and research-heavy fields should be governed by an elastic milestone framework. Under this approach, the project tracking system should be configured to automatically adjust metric weights based on departmental resource dependencies, introducing mandatory late-cycle re-salvaging windows to prevent catastrophic project delivery failure when macro-environmental constraints limit physical operations. Centralised administrations must establish an Institutional Faculty Support and Digital Equity Fund to standardise technological infrastructures across all academic faculties before centralising digital mandates. This targeted support ensures that humanities, soft sciences, and newly established or under-resourced academic divisions possess the necessary hardware, software licences, and digital training to engage seamlessly with the central tracking system, eliminating the implementation lag and operational friction documented in resource-constrained departments during the early years of the strategic cycle. Furthermore, institutions must systematically codify the lean, project-based management blueprints of top-performing clusters to serve as an operational mentoring toolkit for struggling academic divisions. To further evolve the underlying digital monitoring platform, future configurations should integrate predictive analytics, machine learning algorithms, and natural language processing to generate early-warning alerts for at-risk projects during active reporting lifecycles. By analysing historical progress rates, validation lags, and project-specific risk registers in real-time, the platform can automatically identify milestones that are statistically likely to miss their deadlines, allowing institutional transformation offices to deploy preventive interventions and ensure strategic goals are consistently met. Future research should prioritise empirical validation through large-scale, multi-institutional and cross-national studies to strengthen the generalisable nature of the proposed strategic project tracking framework across diverse higher education systems. Additionally, in-depth qualitative case studies examining the localised contextual factors and organisational resistance that influence faculty-level SAP implementation and project completion rates will yield valuable insights into best governance practices. Further refinement of strategic governance models should also explore the integration of AI-driven predictive analytics and mixed-methods qualitative evaluation tools to examine the outcome-performance gap, specifically why projects are fully completed but high-level KPI targets are missed, thereby supporting more comprehensive, responsive, and forward-looking decision-making in HEIs to foster long-term institutional resilience.

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