ICMEM

The 10th International Conference on Management in Emerging Markets

New Product Development as a Strategic Renewal Mechanism for Sustainable Business: A Two-Pillar Audit Framework Integrating Internal Capability and Consumer Adoption

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***Abstract*—*Positive FMCG value growth can coexist with slower category momentum, contracting volume, and weaker purchase frequency. This paper argues that sustainable growth therefore depends not only on responsible intent, but on a firm's repeatable ability to renew its portfolio with offers that consumers can understand, afford, adopt, and continue buying. The study develops and content-validates a two-pillar New Product Development (NPD) audit framework for FMCG. Pausits' innovation-audit model provides the parent architecture: innovation capacity captures repeatable organizational capability, while innovation success captures consumer and market response. The capacity pillar is operationalized through NPD best-practice dimensions and the success pillar through a consumer-adoption funnel. Commercial outcomes remain external evidence to avoid circularity. Thirty senior FMCG and innovation practitioners, all reporting more than 15 years of experience, evaluated six criteria. Of 180 criterion-level judgments, 176 were Valid, two Partially Valid, and two Not Valid, yielding a 97.8% support rate. The contribution is a transparent management system that separates capability, adoption, and alignment gaps so managers can identify the binding constraint before allocating further resources or scaling an NPD. Firm-level scores, causal tests, and final typology-specific weights are outside this framework paper. The framework is strengthened with an S-NPD lens that embeds environmental, social, and economic criteria across the NPD process and reads Consumer Adoption as a journey from awareness to sustained use; these theory-led refinements extend, but were not separately tested in, the reported expert validation.*

Keywords*—*new product development, sustainable business, innovation audit, internal capability, consumer adoption, sustainable NPD.

I. INTRODUCTION

Long-term business sustainability is not secured by short-term sales growth alone. In this paper, sustainable growth means the ability to remain relevant, create responsible consumer value, and preserve sufficient economic viability to continue renewing the business. This distinction matters in Indonesian FMCG because headline market growth has slowed and category outcomes have diverged. The relevant business question is therefore not whether the market still grows, but whether an NPD creates enough consumer value to preserve usage, repeat purchase, and commercially viable demand.

Worldpanel by Numerator's Indonesia FMCG Outlook 2026 reports that total FMCG value growth slowed to 2% in 2025 from 7% a year earlier. The slowdown was uneven: Beauty grew about 10% and Personal Care 3%, while Baby and Diapers was flat and Home Care contracted 1% [18]. The pattern shows that growth is increasingly selective. Categories that give consumers a credible reason to upgrade can expand, while mature categories cannot depend on general market momentum.

Indonesia Home Care data make the sustainability problem more concrete. Worldpanel data for YTD October 2025 show value down 2%, volume and units down 3%, and shopping frequency down 4%, even as price per volume increased 2% [19]. NielsenIQ's Indonesia Top 86 FMCG view for Q3 2025 similarly reports that value growth remained mainly price-led while unit growth stayed flat [20]. These sources do not measure environmental attitudes, and this paper does not present them as such. They establish the local business-sustainability tension: an NPD cannot create durable value if it raises price without protecting affordability, functional performance, consumption, and repeat purchase.

Strategic renewal explains why firms must update the sources of value that determine their long-term outlook [1]. Dynamic-capabilities theory explains how firms sense change, seize opportunities, and reconfigure resources [2]. At portfolio level, NPD converts those capabilities into product, formulation, packaging, price, channel, and commercialization choices. March's exploration–exploitation logic explains why firms must defend today's core business while building adjacent growth options [3]. However, launch, sales, profit, market share, and distribution are lagging results. They remain essential, but they cannot determine whether weak performance came from strategy, research, process, organizational climate, commercialization, consumer adoption, or the

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alignment among them [6], [7]. The managerial problem is therefore diagnostic: where does value conversion break, and which constraint deserves the next investment?

This paper responds by developing and content-validating an integrated two-pillar NPD audit for FMCG. The framework situates NPD within sustainable-growth and strategic-renewal logic, then operationalizes Pausits' capacity–success model through internal capability and consumer adoption [9]. It makes the audit flow explicit: renewal need, portfolio response, capacity assessment, adoption assessment, integration, diagnosis, and improvement. The paper reports the framework and content-validity evidence; it does not present company benchmarks, causal effects, or final numerical weights comparing core and adjacent NPD.

II. LITERATURE REVIEW

A. Why NPD Matters for Sustainable Business

Strategic renewal is the process of refreshing or replacing organizational attributes that materially affect long-term prospects [1]. Dynamic capabilities enable renewal by helping firms sense change, seize opportunities, and transform their resource base [2]. The Indonesian evidence in [18]–[20] illustrates why renewal cannot be inferred from headline value growth alone: total FMCG can remain positive while mature categories, volume, units, and purchase frequency weaken. Sustainable growth therefore requires both market relevance and the organizational discipline to convert renewal intent into viable offerings.

NPD is one recurring product–market mechanism through which renewal becomes actionable. It translates market, consumer, technology, and sustainability signals into choices about benefits, formulation, packaging, price architecture, channel readiness, and activation. In the Indonesian context evidenced in [18]–[20], the commercial test is whether the offer creates a meaningful reason to upgrade while preserving product performance, consumer economics, and repeat use. An offer that consumers value but the organization cannot deliver repeatedly will not scale; an offer the organization can deliver but consumers do not adopt will not renew the business.

March's exploration–exploitation theory explains why firms need current and future sources of value [3]. Exploitation strengthens established knowledge and performance, whereas exploration searches for new possibilities. Excessive exploitation can improve short-term efficiency while weakening long-term adaptation. Within the proposed framework, core NPD protects current relevance and cash flow, whereas adjacent NPD creates options for future demand. The framework does not prescribe a universal allocation between them; it provides a shared audit architecture whose criterion weights may be calibrated by innovation type.

NPD is therefore not sustainable merely because it is new or carries a responsible claim. It becomes a mechanism for sustainable growth when the firm can repeatedly convert a renewal need into an offering that consumers adopt and that generates viable commercial evidence. This operating definition links responsible value creation, resilience, consumer adoption, and economic continuity without treating them as interchangeable outcomes. Sustainable NPD (S-NPD) makes that logic operational by embedding environmental, social, and economic criteria from portfolio strategy and opportunity definition through design, business case, development, launch, and post-launch learning [21]-[23].

B. Why NPD Requires an Audit

NPD is uncertain, resource-intensive, and cross-functional. Financial and market outcomes are necessary to judge business impact, but they are insufficient for diagnosis. Griffin and Page show that NPD success requires multiple measures at project, program, and firm levels [6]. Chiesa et al. distinguish a performance audit, which reviews achieved outcomes, from a process audit, which investigates whether the practices required for innovation are present and why performance gaps occur [7]. The distinction is capital-relevant: when management cannot identify whether the binding constraint is capability, commercialization, adoption, or alignment, the next investment risks funding activity rather than removing the constraint.

Adams et al. show that innovation measurement is dispersed across inputs, strategy, culture, portfolio, project management, and commercialization [8]. Pausits defines innovation auditing as a contextual, systemic, and adaptable assessment built around innovation capacity and innovation success [9]. Barczak and Kahn translate NPD best-practice research into dimensions suitable for continuous improvement [4]. Accordingly, the audit is designed not to produce a standalone league table, but to identify the evidence gap, decompose it to a criterion or funnel stage, assign management ownership, and feed the next portfolio or NPD gate decision.

C. Pausits' Two-Pillar Innovation Audit as the Parent Architecture

This study uses Pausits [9] as the main theoretical structure. The capacity pillar covers the company's internal ability, management system, and repeatable practices needed for innovation, while the success pillar captures the results of that capability as seen from outside. Barczak and Kahn's NPD best-practice dimensions put the capacity side into practice [4]: Strategy, Research, Commercialization, Process, Project Climate, Company Culture, and Metrics and Performance Measurement. The Metrics dimension is shown by the audit index itself, not scored as a separate capability area.

The success pillar is put into practice using consumer-adoption theory. Barczak and Kahn and the adoption models are not treated as separate frameworks; rather, they are NPD-specific ways to apply Pausits' two pillars. Commercialization links the two sides. Research, launch planning, channel readiness, sales alignment, and activation are part of capacity, while awareness, consideration, trial, repeat purchase, and commercial consequence belong to success. This single main structure connects what the company can deliver repeatedly with how consumers react in the market.

D. Consumer Adoption and the Remaining Research Gap

Lavidge and Steiner [11] describe a hierarchy where consumers move through cognitive, affective, and behavioral stages. Rogers [12] also models adoption as a process of knowledge, persuasion, decision, implementation, and confirmation. Combined for FMCG, these theories support a four-stage operational funnel: awareness, consideration, first purchase, and loyalty

shown through repeat purchase or recommendation. Each stage marks a different consumer response. Consideration depends on relevance and perceived value [13]; trial needs availability, manageable perceived risk, and a clear reason to buy; continued adoption relies on product experience and how well it fits into daily routines. Evidence from new consumer packaged goods also shows that awareness, distribution, novelty, and value affect trial [14]. For this audit, adoption is therefore treated as a dynamic journey—awareness, consideration, trial, adoption, and sustained use—shaped by environmental, social, and economic value and by price, availability, trust, and incentives [24]-[26].

The remaining gap is architectural and managerial. Capability studies explain readiness, adoption studies explain consumer response, and commercial measures record delayed outcomes, but these evidence streams are rarely combined under one auditable NPD parent model. A capability-only score may look strong before consumers respond. An adoption-only result cannot show whether success is repeatable or scalable. A sales-only result cannot reveal the binding constraint. The proposed framework addresses this gap by separating capacity and adoption evidence, reconnecting them transparently, and requiring the integrated result to be interpreted through its decomposed pillar and criterion profiles.

Table I.
Expert Panel Profile (N = 30)
Source: Authors' expert survey / study dataset.

Attribute	Category	n (%)
Position	Head / General Manager	15 (50.0)
	C-level / Board / Director	8 (26.7)
	VP / Senior Executive	4 (13.3)
	Manager / Senior Manager	2 (6.7)
	Consultant / Advisor	1 (3.3)
Expert class	Functional	16 (53.3)
	Strategic	13 (43.3)
	Academic	1 (3.3)
Experience	More than 15 years	30 (100.0)

III. METHODOLOGY

A. Framework and Audit-Flow Development

The study used a framework-development design combining structured literature review, theoretical mapping, expert content judgment, and transparent composite construction. The audit flow contains six linked steps: (1) establish the renewal need created by market and consumer change; (2) define the NPD portfolio response across core and adjacent innovation; (3) assess repeatable internal capability; (4) assess consumer adoption; (5) integrate the Internal Capability Index (ICI) and Consumer Adoption Index (CAI); and (6) interpret capability, adoption, and alignment gaps to define the next NPD action. The sequence follows the process–performance logic of Chiesa et al. [7] and the capacity–success architecture of Pausits [9].

Mapping was conducted in two directions. The top-down step moved from sustainable growth, to strategic renewal, to NPD, to Pausits' capacity and success pillars, and finally to NPD-specific measures. The bottom-up step required every item to resolve to one criterion, one pillar, one evidence source, and one management question. Source provenance was treated as a design rule: external market statistics retain their geography and year; author-survey data are labeled as primary data; literature-based interpretations are cited; and methodological assumptions are disclosed rather than presented as empirical facts. The S-NPD lens is applied at each stage: strategy sets the sustainability intent; research and process translate it into requirements; project climate and culture enable execution; commercialization tests price, availability, trust, and incentives; and post-launch learning checks sustained use.

B. Expert Panel and Content Validation

The candidate criteria were reviewed through an online expert instrument. The reported validation dataset comprises 30 practitioners, each with more than 15 years of professional experience in FMCG or innovation-related roles. The panel included strategic experts involved in portfolio, investment, or go/no-go decisions; functional experts from marketing, insights, R&D, operations, sales, and related disciplines; and one academic expert. Table I reports the final panel. These figures are authors' primary survey data, not an external industry estimate.

Validation preceded weighting. Each expert first classified every candidate criterion as Valid, Partially Valid, or Not Valid and could explain the judgment or propose a missing dimension. Only after this content check did the instrument request importance ratings, including paired assessments for core and adjacent innovation. This order is methodologically important: a framework should not assign precise weights to a construct that experts have not first accepted as relevant and sufficiently specified.

The paired core-adjacent ratings were designed for a Wilcoxon signed-rank test at alpha = 0.05 because the same experts evaluated both innovation types and normality was not assumed [16]. Numerical criterion weights and test results are deliberately outside the scope of this framework paper. Scale treatment follows the pragmatic use of ordered rating scales for group comparison and transparent aggregation rather than causal estimation [17].

C. Composite Construction

The framework uses a transparent normalization–weighting–aggregation sequence consistent with the OECD/JRC handbook on composite indicators [15]. Let I(j,t) denote the panel's mean importance rating for criterion j and innovation type t, where t is core or adjacent. The normalized criterion weight is:

$w(j,t) = I(j,t) / \sum_k I(k,t)$, $\sum_j w(j,t) = 1$.

For the capacity pillar, a mean capability rating v(c,j) on a 1-5 scale is normalized to the common interval [0,1] as $s(c,j) = [v(c,j) - 1] / 4$. The Internal Capability Index for firm c and type t is then the weighted mean of the capacity criteria:

$ICI(c,t) = \sum_{j \in \text{capacity}} w(j,t) * s(c,j)$.

For the success pillar, each consumer is classified by the highest funnel stage reached. If pA, pC, pT, and pL are the proportions whose highest stages are awareness, consideration, trial, and loyalty, respectively, the Consumer Adoption Index is:

CAI = 0.25 pA + 0.50 pC + 0.75 pT + 1.00 pL.

The two sub-indices are integrated through an inter-pillar weight lambda:

NPD_SAI = lambda * ICI + (1 - lambda) * CAI.

The 0.25 increments in the CAI are a transparent design convention that preserves funnel order; they are not empirically estimated marginal effects. The inter-pillar weight lambda is derived from average criterion importance on each side rather than the sum because the pillars contain unequal numbers of criteria. A sum would mechanically favor the pillar with more criteria. Linear additive aggregation is used for auditability, but it permits partial compensation. Therefore, the total index must always be read together with ICI, CAI, criterion profiles, and funnel conversion. Sensitivity analysis is required before the index is used for high-stakes ranking or resource allocation.

IV. FINDINGS AND DISCUSSION

A. Theoretical Rationale and Pausits-Based Audit Flow

The first finding is a connected business and theoretical sequence. Indonesia-only FMCG evidence shows why renewal is needed: total growth slowed to 2%, sector outcomes diverged, and Home Care value, volume, units, and shopping frequency contracted [18], [19]. NielsenIQ further shows that national FMCG value growth remained price-led while unit growth stayed flat [20]. Strategic renewal explains the need to refresh sources of value; NPD provides a portfolio mechanism through core and adjacent innovation; and the two-pillar audit tests whether that intent becomes repeatable capability and market proof. The audit is cyclical because diagnosis must feed the next investment and gate decision.

Table II.
Pausits-To-Npd Capacity-Pillar Mapping
Source: Authors' mapping based on [4], [9].

Pausits capacity area	NPD operational dimension
Innovation strategy; portfolio management	Strategy
Knowledge management	Research
Project management: efficiency, tools, communication	Process
People/resources; project collaboration	Project Climate
Organization and culture	Company Culture
Market research, marketing, and sales	Commercialization
Performance measures	Metrics and Performance Measurement

B. Six Audit Criteria within Pausits' Two-Pillar Architecture

The second finding is a six-criterion structure shared across Pausits' two audit pillars. Four criteria populate capacity and two populate success. Together, they indicate whether NPD is strategically directed, supported by repeatable organizational capability, translated into market value, and adopted by consumers. The criteria also give the audit diagnostic detail because the overall index can be traced back to the criterion or adoption stage requiring attention. The instrument labels used during validation were translated into final audit labels to reduce overlap and clarify each criterion's theoretical position. Table III presents the structure. Internal Innovation Capability became Company Culture and Project Climate; NPD Process Capability became Process and Research; External Innovation Management became Commercialization; Strategic Fit with Brand or Portfolio became Strategy; Consumer Adoption / Market Response and Commercial / Business Performance retained their meaning as the consumer adoption funnel and commercial outcome.

Table III.
Six Criteria Within Pausits' Two-Pillar Audit
Source: Authors' synthesis based on [4], [9], [11]–[14].

Audit criterion	Pausits pillar	Role in sustainable business
Company Culture & Project Climate	Capacity	Repeatable learning and collaboration
Process & Research	Capacity	Consumer insight and validated development
Commercialization	Capacity	Launch readiness and market activation
Strategy	Capacity	Long-term portfolio renewal and scale
Consumer adoption funnel	Success	Dynamic journey from awareness to sustained use; environmental, social, and economic value; price, availability, trust, and incentives
Commercial outcome	Success	Business continuity outcome; tracked separately

Commercial outcome remains in the framework because business continuity and capital discipline require evidence of value creation. It is tracked separately rather than scored inside the composite because confidential financial data are not consistently available and because including sales or profit inside an index intended to diagnose those outcomes would create circularity. Consumer adoption therefore serves as market-response evidence, while commercial performance provides an external validation layer for whether portfolio renewal creates viable business value.

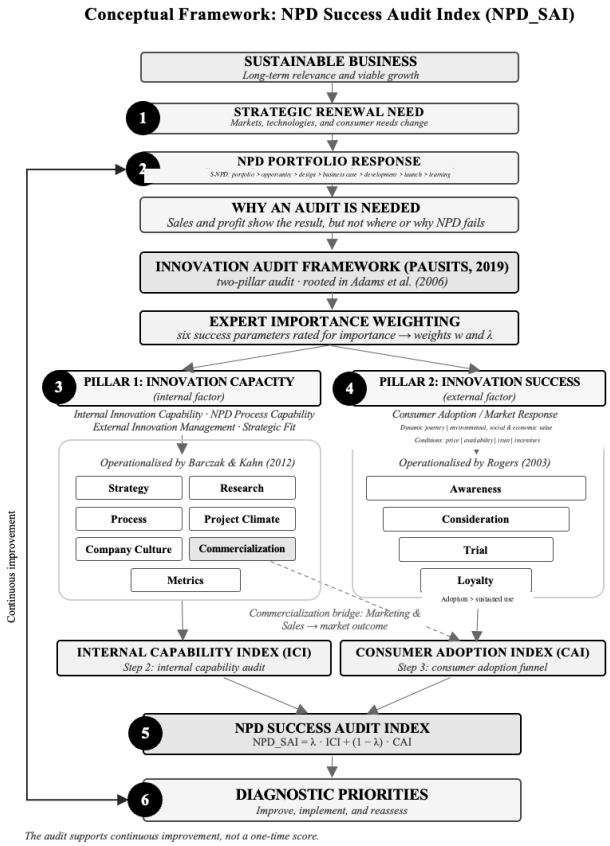

Fig. 1. Theoretical rationale and two-pillar audit flow, with S-NPD stage integration and an expanded Consumer Adoption lens. Source: Authors' synthesis based on [1]-[15], [21]-[26], with Indonesia market context from [18]-[20].

C. Content-Validity Evidence

The final expert panel provided strong criterion-level support for the proposed structure. Of 180 categorical judgments, 176 were Valid, two Partially Valid, and two Not Valid, producing a 97.8% support rate. No criterion received more than one response outside Valid. This evidence supports content relevance within the senior Indonesian FMCG panel; it is not a test of causal validity, predictive validity, or cross-market generalizability. Written comments mainly requested item-level refinement—such as clearer manufacturing readiness, product superiority, adoption barriers, and post-launch learning—rather than replacement of the six criteria. The 97.8% rate applies only to the six original criteria; the S-NPD stage markers and nested adoption sub-dimensions are theory-led refinements requiring separate empirical validation.

TABLE IV.
Expert Content-Judgment Distribution (N = 30)
Source: Authors' expert survey / study dataset.

Candidate criterion	Valid	Partial	Not
Internal Innovation Capability	30	0	0
NPD Process Capability	29	1	0
External Innovation Management	30	0	0
Consumer Adoption / Market Response	29	0	1
Commercial / Business Performance	29	0	1
Strategic Fit with Brand / Portfolio	29	1	0
Total judgments	176	2	2

D. Interpretation and Reusability

Figure 1 shows why the audit is needed and how it should be used. Market, consumer, and sustainability pressures create the renewal need, but neither launch count, a responsible claim, nor headline value growth establishes successful renewal. The two-pillar assessment separates internal capability from consumer adoption; the composite reconnects them; and decomposition identifies whether the principal constraint lies in strategy, process and research, culture and climate, commercialization, or the consumer funnel. The result becomes decision-useful only when the diagnosed gap is translated into an owner, a gate criterion, and a resource choice.

The practical improvement over sales-only or claim-only assessment is capital discipline. During portfolio review, pre-launch readiness, or post-launch evaluation, management can ask: What renewal need is being addressed? What role should the NPD play? Can the organization deliver it repeatedly? Where does consumer conversion stop? Is the problem capability, adoption, or alignment? What must change before scaling? The framework does not replace business judgment; it makes the evidence and assumptions behind that judgment visible.

The framework remains diagnostic rather than causal. A low result identifies where evidence is weak but does not prove that one criterion caused the outcome. Linear aggregation permits compensation, the adoption-stage increments are design assumptions, and criterion weights are context-specific. Accordingly, decisions should rely on the decomposed profile, supporting evidence, sensitivity tests, and external commercial outcomes—not the total score alone.

V. CONCLUSION

This paper strengthens the business basis for treating NPD as a strategic renewal mechanism for sustainable growth. In Indonesian FMCG, total value growth slowed sharply, category outcomes diverged, and Home Care lost value, volume, units, and purchase frequency [18], [19]. NielsenIQ shows that aggregate growth remained price-led while units stayed flat [20]. The implication is sharp: sustainability intent creates no durable business value unless the organization can convert it into an affordable, high-performing offer that protects consumption, earns repeat purchase, and produces viable commercial evidence.

The two-pillar audit translates that implication into a management system. Innovation capacity captures the controllable ability to develop and commercialize NPD; innovation success captures consumer response; commercial outcomes remain a separate proof layer. The framework's value is not the elegance of one score, but the ability to identify a capability, adoption, or alignment constraint before the next resource decision. Its limits are explicit: the panel is concentrated in Indonesian FMCG;

content support is not predictive validation; criterion weights are context-specific; the pillars use different evidence sources; and linear aggregation allows compensation. Future research should test sensitivity, predictive validity, typology-specific weights, and whether stronger capacity–adoption alignment corresponds with more resilient commercial outcomes across emerging markets. The added S-NPD stage lens and deeper adoption diagnosis help managers see whether a sustainability proposition is executable, credible, affordable, available, and capable of progressing from trial to sustained use.

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APPENDIX A — EXTERNAL EVIDENCE PROVENANCE
[27] Indonesia FY2025 Worldpanel market evidence; used for total and sector growth, not as an NPD success rate.
[28] Indonesia National Worldpanel Home Care evidence; used for value, volume, unit, and frequency direction.
[29] Indonesia Top 86 FMCG NielsenIQ evidence; used to distinguish price-led value growth from unit growth. All market statistics used in the paper are Indonesia-specific and drawn from the thesis materials. Authors' expert survey / study dataset: n=30; six criteria; 180 judgments; 176 Valid, 2 Partially Valid, and 2 Not Valid.