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The Ear-Cut Theory: An Engineering Management Perspective on Preserving Organizational Identity and Technical Competence

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Abstract: This paper reframes the Ear-Cut Theory within the field of Engineering Management, highlighting its implications for operations, project management, organizational identity, and sustainable engineering practices. The theory warns against the organizational risk of consuming or eroding core technical strengths, resources, and culture in pursuit of short-term relief. In engineering organizations, this often manifests in the loss of skilled engineers, the dilution of technical knowledge, or the neglect of innovation capacity. Drawing on frameworks such as the Resource-Based View (RBV), Dynamic Capabilities, Organizational Identity Theory, and Systems Thinking, the study integrates leadership philosophy with engineering management practices. Comparative reflections from cement manufacturing, technology, airlines, and family-owned businesses illustrate how organizations either undermine or protect their technical and organizational "ear." The study emphasizes the role of engineering managers in safeguarding technical identity, preserving critical competencies, and balancing adaptation with resilience to ensure long-term competitiveness.

Furthermore, it proposes a conceptual framework and research agenda for exploring organizational resilience in engineering-intensive industries. This contributes to both academic theory and practical guidance for managers navigating turbulent environments.

Keywords: *Engineering Management, Project Management, Operations Strategy, Organizational Identity, Sustainable Engineering, Resource-Based View, Ear-Cut Theory Resilience, Knowledge Management.*

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I. INTRODUCTION

Engineering organizations today operate in volatile, uncertain, complex, and ambiguous (VUCA) environments. Leaders are confronted with the dual challenge of delivering immediate operational performance while simultaneously ensuring the long-term survival and competitiveness of their organizations. Economic crises, global supply chain disruptions, climate pressures, and technological disruptions increasingly force organizations into difficult trade-offs. In many cases, leaders resort to reactive measures such as downsizing engineers, reducing research and development (R&D) investments, or diluting technical identity in order to secure short-term financial stability. However, these measures often undermine long-term organizational resilience.

The Ear-Cut Theory, introduced as a metaphor for organizational self-destruction, provides a unique strategic lens to understand how such decisions can erode the foundations of engineering competitiveness. The metaphor is drawn from the imagery of a dog consuming its severed ear, mistaking it for expendable flesh, without recognizing its integral role in identity and functionality. Similarly, organizations may consume or sacrifice their technical talent, innovation capacity, or organizational culture in pursuit of short-term relief. This creates a paradox in which the very essence that sustains the organization is destroyed by the organization itself.

In the context of Engineering Management, this metaphor becomes highly relevant. The discipline concerns itself with optimizing operations, managing projects effectively, sustaining innovation, and aligning technical competencies with organizational strategy. The Ear-Cut Theory offers a warning: engineering organizations must avoid eroding the cultural, technical, and human foundations that define their competitive identity.

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This paper therefore applies the Ear-Cut Theory to the context of MSc in Engineering Management, aligning it with operations management, project sustainability, risk management, and innovation strategy. It expands the concept by embedding it within established theoretical foundations, presenting practical frameworks, and offering comparative case studies across industries such as cement, technology, airlines, and family businesses. By doing so, it contributes to both academic discourse and practical management insights.

II. PROBLEM STATEMENT

In engineering-intensive industries, short-term financial or market pressures often drive leaders toward reactive decision-making. Common responses include mass layoffs of technical staff, underfunding preventive maintenance programs, and reducing investments in innovation and R&D. While these actions provide immediate relief by lowering costs, they inadvertently undermine the long-term resilience and competitiveness of the organization. In particular, these measures erode tacit knowledge, weaken organizational culture, and diminish technical excellence all of which are difficult or impossible to rebuild once lost.

The central problem lies in leaders' failure to distinguish between expendable resources and critical technical competencies that define organizational identity. When identity-defining elements such as skilled engineers, innovation cultures, and preventive engineering systems are sacrificed, organizations enter a cycle of decline that is difficult to reverse. This phenomenon aligns with what the Ear-Cut Theory metaphorically describes: consuming one's own ear.

This paradox of self-destruction is particularly damaging in engineering organizations, where tacit knowledge, skilled engineers, and technical culture are central to operational excellence and competitive positioning. Without these, even organizations with advanced infrastructure and financial resources risk collapse.

➢ *Thus, the research problem addressed in this paper is:*

- How can engineering managers avoid organizational self-destruction when pressured to make short-term trade-offs?
- What frameworks can help them balance adaptation with the preservation of identity and resilience?

The Ear-Cut Theory provides a conceptual framework for addressing these challenges by guiding leaders to differentiate between expendable and non-expendable resources, and to act as guardians of organizational identity.

III. OBJECTIVES OF THE EAR-CUTTING THEORY IN ENGINEERING MANAGEMENT

The Ear-Cutting Theory provides a framework for engineering managers to balance the need for adaptation with the preservation of identity. Specifically, its objectives include:

➢ *Preserve Core Engineering Identity and Competencies:*
Ensure that critical technical skills, engineering talent, and cultural identity are maintained during organizational change.

➢ *Balance Efficiency with Continuity:*
Achieve operational efficiency without undermining cultural and technical continuity, thereby enabling both short-term and long-term performance.

➢ *Prevent Excessive Compromise:*
Avoid decision-making that weakens engineering excellence or undermines tacit technical knowledge in pursuit of immediate gains.

➢ *Guide Principled Decision-Making:*
Provide engineering managers with ethical and strategic guidelines when navigating external pressures such as financial crises, market volatility, or stakeholder demands.

➢ *Foster Resilience and Sustainability:*
Cultivate organizational resilience by protecting human capital, preserving innovation capacity, and sustaining organizational culture.

➢ *Support Strategic Learning:*
Encourage leaders to reflect on past industry failures and integrate lessons into contemporary decision-making, thereby avoiding cycles of self-destruction.

Through these objectives, the Ear-Cutting Theory strengthens the capacity of engineering managers to preserve identity, build resilience, and ensure sustainable performance.

IV. LITERATURE REVIEW

The literature on leadership, strategy, and organizational identity provides the foundation for the Ear-Cutting Theory. While earlier studies have examined how organizations build and sustain competitive advantage, fewer have explicitly addressed the paradox of internal self-destruction where leaders undermine their own strengths. This review highlights key theoretical perspectives that contribute to the understanding and application of the Ear-Cut Theory.

➢ *Leadership and Organizational Identity in Engineering*

Leadership is critical in shaping both performance and identity in engineering organizations. Transformational leadership emphasizes vision, motivation, and organizational purpose, while authentic leadership stresses values, integrity, and resilience. In engineering contexts, organizational identity often rests on technical competence, innovation culture, and skilled human capital. Studies (Albert & Whetten, 1985; Schein, 2010) show that when leaders dilute technical identity through poor decision-making, they destabilize long-term competitiveness. The Ear-Cut Theory builds upon this by warning against leadership actions that undermine organizational identity.

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➢ *Resource-Based View (RBV)*

The RBV argues that unique, rare, and inimitable resources provide sustained competitive advantage (Barney, 1991). In engineering firms, these resources include tacit technical knowledge, intellectual property, process expertise, and specialized human capital. The Ear-Cut Theory extends RBV by framing the undervaluation or destruction of such resources as a form of organizational cannibalism that threatens long-term survival.

➢ *Dynamic Capabilities in Engineering Management*

Dynamic capabilities emphasize the ability of organizations to adapt and reconfigure technical resources in response to environmental change (Teece et al., 1997). However, excessive adaptation without safeguarding identity risks destabilization. Ear-Cut Theory stresses the importance of balancing adaptation with the preservation of core competencies, ensuring that flexibility does not undermine resilience.

➢ *Organizational Culture and Sustainability*

Organizational culture in engineering firms is built around technical excellence, innovation, safety, and collaboration (Schein, 2010). Research on sustainability emphasizes that resilience depends on protecting cultural and technical strengths during crises (Senge, 1990). Ear-Cut Theory integrates this perspective by cautioning against decisions that destabilize engineering culture in pursuit of cost reduction.

➢ *Knowledge Management and Tacit Expertise*

Knowledge management theory emphasizes the importance of codifying and transferring both explicit and tacit knowledge within organizations. In engineering contexts, tacit knowledge, skills gained through years of practice forms the backbone of technical excellence. When organizations dismiss experienced staff or neglect mentoring systems, they erode this knowledge base, reflecting the core problem of the Ear-Cut Theory.

➢ *Cases of Self-Destruction in Practice*

Industry failures such as Nokia, BlackBerry, and Enron highlight how loss of technical identity leads to collapse (Vuori & Huy, 2016). In engineering, decisions to downsize key staff or abandon preventive maintenance mirror this paradox. Conversely, resilient organizations such as Ethiopian Airlines illustrate how identity preservation fosters long-term survival. These cases provide empirical support for the theoretical underpinnings of the Ear-Cut Theory.

V. THEORETICAL FOUNDATIONS IN ENGINEERING MANAGEMENT

The Ear-Cut Theory is anchored in several key theoretical frameworks that together explain how organizations sustain or destroy themselves under pressure. This section explores these foundations in greater detail.

➢ *Resource-Based View (RBV)*

The RBV emphasizes that sustained competitive advantage arises from resources that are valuable, rare, inimitable, and non-substitutable (VRIN). In engineering organizations, these include tacit technical knowledge, specialized process expertise, intellectual property, and organizational routines. When leaders sacrifice these resources for short-term gains, they erode the very elements that competitors cannot easily replicate. Ear-Cut Theory reframes RBV by illustrating how mismanaging or undervaluing core resources amounts to self-inflicted destruction. For instance, when cement companies downsize highly skilled kiln engineers, they lose irreplaceable expertise that machines alone cannot substitute.

➢ *Dynamic Capabilities*

.Dynamic Capabilities Theory (Teece et al., 1997) highlights the need for organizations to integrate, build, and reconfigure resources in rapidly changing environments. However, adaptation must be strategic, not reckless. Ear-Cut Theory adds a cautionary layer: excessive reconfiguration without recognizing what must be preserved destabilizes organizations. Engineering managers must strike a balance between flexibility and identity preservation. For example, in the technology industry, Nokia pursued adaptation by shifting to partnerships but abandoned its operating system identity, which ultimately led to its decline.

➢ *Organizational Identity Theory*

Organizational Identity Theory (Albert & Whetten, 1985) stresses that identity-defining features such as innovation, reliability, and technical talent must be protected. The Ear-Cut Theory extends this by emphasizing how leadership blind spots can erode identity. In engineering firms, abandoning preventive maintenance, neglecting innovation, or undervaluing human capital represents a direct attack on identity. The theory highlights that leaders must continually reinforce the organizational "ear" that distinguishes them from competitors.

➢ *Systems Thinking*

Systems Thinking (Senge, 1990) teaches that short-term fixes often generate long-term vulnerabilities. Downsizing engineers or deferring maintenance may temporarily reduce costs but increases system fragility. Ear-Cut Theory aligns with this view, emphasizing that engineering systems are interconnected, and decisions must consider systemic consequences. Organizations that fail to adopt this mind-set often misinterpret symptoms as expendable parts of the system, thereby consuming their own "ear."

➢ *Knowledge Management and Resilience*

Knowledge Management Theory stresses that the retention and transfer of tacit knowledge is central to organizational learning. The Ear-Cut Theory aligns with resilience theory by showing that organizations protecting knowledge systems (mentorship, training, codification) are more likely to survive shocks. Conversely, those that erode knowledge reservoirs become fragile and prone to collapse.

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VI. METHODOLOGY

This study adopts a conceptual research design, focusing on synthesizing literature and developing a theoretical framework rather than empirical testing. This approach is appropriate because the Ear-Cut Theory represents an emerging metaphor and requires conceptual elaboration before empirical validation.

➢ *Conceptual Development Approach*

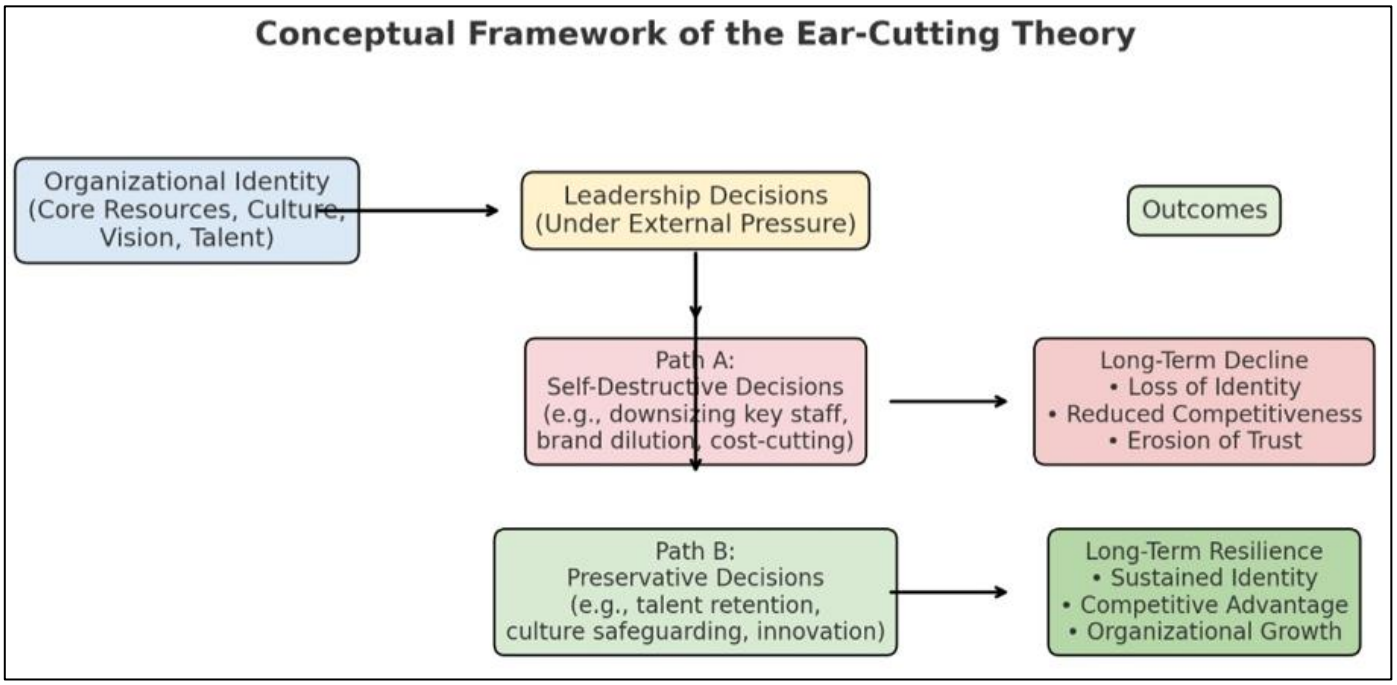

Fig 1 Conceptual Framework

It shows how leadership decisions under external pressure can follow two paths:

- Path A (Self-Destructive Decisions): Consuming identity → Long-term decline.
- Path B (Preservative Decisions): Safeguarding identity → Long-term resilience.

The Ear-Cutting Theory was developed through three main steps:

- *Theoretical Synthesis:-*

A review of frameworks such as the Resource-Based View (Barney, 1991), Dynamic Capabilities Theory (Teece et al., 1997), Organizational Identity Theory (Albert & Whetten, 1985), and Systems Thinking (Senge, 1990) provided the conceptual foundation. These were integrated with leadership and sustainability perspectives.

- *Metaphorical Framing:-*

The metaphor of a dog consuming its severed ear was adopted as a symbolic representation of organizational self-destruction. It provides a vivid and accessible way to illustrate the risk of eroding identity and undervaluing core resources.

- *Comparative Case Reflections:-*

Case reflections were drawn from cement manufacturing, technology, airlines, and family-owned businesses. These industries were chosen because they face frequent pressures to adapt and often struggle to balance short-term and long-term trade-offs.

➢ *Case Selection and Sources*

Cases were selected based on their relevance to the central paradox of the Ear-Cutting Theory: organizations either protecting or destroying their intrinsic strengths under pressure. The cases include:

- Cement industry experiences (based on the author's professional observations and secondary reports),
- Technology firms (Nokia and BlackBerry), widely studied as examples of lost competitiveness,
- Ethiopian Airlines, known for resilience and identity preservation, and
- Family businesses, which often struggle with balancing tradition and modernization.

The case reflections rely on secondary sources such as published research, corporate histories, industry reports, and public accounts (e.g., Lucas & Goh, 2009; Vuori & Huy, 2016; Tang et al., 2020). They are used to provide illustrative support for the theory rather than empirical proof.

➢ *Limitations of the Methodology*

As a conceptual study, this research does not employ surveys, interviews, or statistical testing. Its strength lies in theoretical integration and framework development. However, future studies should empirically test the Ear-Cut Theory through case-based research, longitudinal analysis, or

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cross-industry comparisons. Empirical validation will strengthen the theory's applicability and generalizability.

VII. CONCEPTUAL FOUNDATION OF THE EAR-CUT THEORY

The Ear-Cut Theory is conceptualized as a metaphor that symbolizes organizational cannibalism: the tendency of leaders to sacrifice critical elements of identity under short-term pressures. The metaphor of a dog consuming its severed ear captures the irrationality and danger of mistaking an essential organ for expendable flesh. In organizational terms, the "ear" represents technical expertise, innovation culture, tacit knowledge, and organizational identity.

The conceptual foundation emphasizes that leaders often fail to distinguish between expendable resources and identity-defining competencies. The consequence is long-term decline disguised as short-term relief. This section develops the theory into a conceptual model with defined principles, decision pathways, and strategic implications.

➢ *Decision Pathways in the Ear-Cut Framework*

Organizations under pressure face two broad decision pathways:

- *Path A: Self-Destructive Decisions (Consuming the Ear):*

✓ Downsizing critical staff.
✓ Abandoning preventive maintenance.
✓ Sacrificing innovation and R&D.
✓ Diluting cultural identity for temporary cost savings.

- *Outcome:*

Short-term relief but long-term decline, reduced competitiveness, and organizational fragility.

- *Path B: Preservative Decisions (Protecting the Ear):*

✓ Retaining and developing engineers.
✓ Sustaining preventive maintenance and process reliability.
✓ Investing in training and R&D despite immediate costs.
✓ Preserving organizational culture and values.

- *Outcome:*

Resilience, sustained competitiveness, and long-term growth.

This dual-path framework positions the Ear-Cut Theory as both a diagnostic and prescriptive tool in Engineering Management.

➢ *Core Principles of the Ear-Cut Theory*

The Ear-Cut Theory rests on five interrelated principles that guide decision-making in engineering organizations:

- *Self-Awareness:*

Leaders must develop a deep understanding of organizational strengths, technical limitations, and systemic vulnerabilities. Without self-awareness, organizations are prone to consuming their own identity.

- *Identity and Vision Alignment:*

Engineering decisions should be aligned with long-term vision and identity rather than short-term pressures. Identity acts as a compass that guides adaptation without self-destruction.

- *Recognition of Strategic Blind Spots:*

Leaders often underestimate internal risks (loss of tacit knowledge, weakened culture) while overemphasizing external threats (competition, market shocks). Recognizing these blind spots is essential.

- *Value Recognition:*

Differentiating between expendable and essential technical assets is critical. Engineers, preventive systems, and innovation cultures are non-expendable "ears" that must be protected.

- *Guarding Against Self-Destruction:*

Engineering managers must actively resist the temptation to erode culture and competence during crises. Instead, they should reinforce resilience by safeguarding identity.

➢ *Conceptual Framework Model*

The conceptual model of the Ear-Cut Theory integrates the above principles into a systems-based framework:

- Inputs: Organizational pressures (financial crises, competition, external shocks).
- Leadership Lens: Self-awareness, identity alignment, recognition of blind spots.
- Decision Pathway: Path A (self-destruction) or Path B (preservation).
- Outputs: Long-term decline (Path A) vs. resilience and sustainable growth (Path B).

This framework illustrates how leadership decisions mediate between environmental pressures and organizational outcomes. It serves as a practical tool for engineering managers to assess risks and safeguard identity.

➢ *Visual Representation*

While this paper does not include graphical diagrams in its current form, the conceptual framework can be represented as a decision-tree model with two pathways (self-destruction vs. preservation). A future version of this study may incorporate diagrams to visually capture this decision logic.

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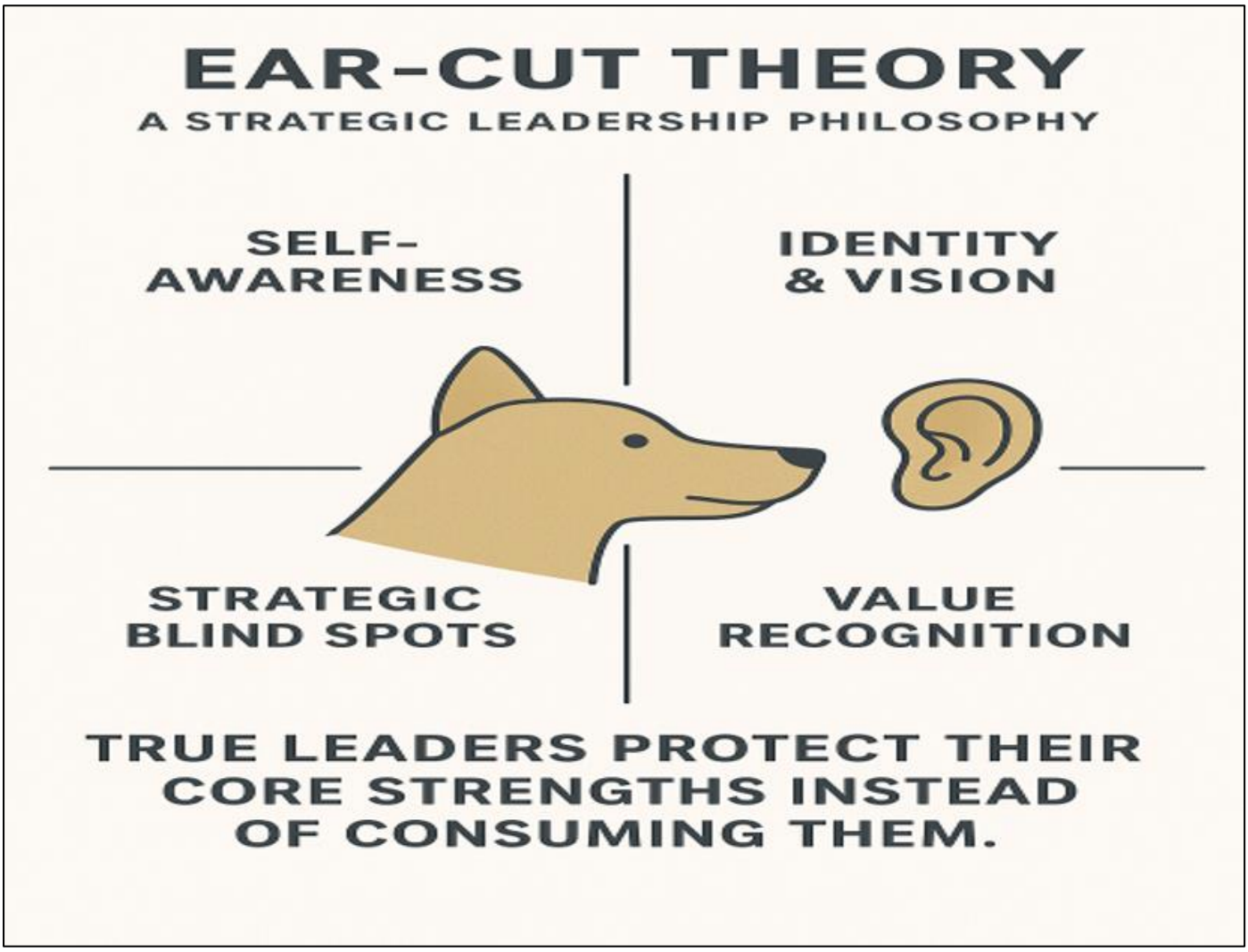

Fig 2 Visual Representation

VIII. IMPLICATIONS FOR ENGINEERING MANAGEMENT PRACTICE

The Ear-Cut Theory provides actionable insights for engineering managers. Its application spans several domains of engineering management practice:

➢ *Human Capital Management*

Engineers and technical staff are often viewed as cost centers, but the theory highlights their role as identity-defining resources. Managers should prioritize talent retention, mentorship, and continuous development. For example, investing in graduate engineer training programs ensures the preservation of tacit knowledge across generations.

➢ *Operations and Maintenance Strategy*

Preventive maintenance and process reliability are often sacrificed during cost-cutting exercises. Ear-Cut Theory warns that such decisions weaken systemic resilience. Engineering managers should safeguard maintenance budgets and adopt predictive maintenance technologies to sustain long-term efficiency.

➢ *Project Management*

In project contexts, cost and time pressures frequently encourage scope reductions that compromise quality and technical resilience. Applying the Ear-Cut framework encourages project managers to weigh short-term constraints against long-term sustainability. Decisions should prioritize enduring technical performance.

➢ *Innovation and R&D Strategy*

R&D investments are particularly vulnerable during downturns. Yet, reducing R&D undermines competitiveness. Ear-Cut Theory suggests that even modest sustained investment in innovation preserves identity and ensures adaptability. For instance, technology firms that maintained R&D during recessions often rebounded more quickly.

➢ *Organizational Culture and Sustainability*

Culture is an intangible but essential resource. Engineering organizations thrive when cultures of safety, innovation, and technical excellence are protected. The Ear-Cut Theory implies that leaders should reinforce cultural values during crises, framing them as sources of resilience rather than expendable luxuries

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IX. CASE REFLECTIONS IN ENGINEERING CONTEXTS

The Ear-Cut Theory is best illustrated through comparative case reflections, which show how organizations either consume or preserve their core identity under strategic pressure. These cases are drawn from cement manufacturing, the technology sector, the airline industry, and family-owned businesses. Each case highlights the consequences of either consuming the "ear" or preserving it.

➢ *Case 1: Self-Destruction in the Cement Industry – Kuyu Cement Factory*

Kuyu Cement Factory in Ethiopia faced escalating operational costs and increased competition from imported cement. In response, leadership implemented cost-cutting measures that included downsizing experienced process engineers. The assumption was that engineers could be replaced by automation and external contractors, thereby reducing labor costs. Initially, this decision provided short-term financial relief. However, the long-term consequences were severe:

- *Technical Breakdown:*
  Without seasoned engineers, the plant experienced frequent equipment failures, particularly in the kiln and milling processes.

- *Reduced Efficiency:*
  Kiln fuel consumption increased due to poor process control, raising production costs.

- *Quality Decline:*
  Cement consistency suffered, leading to market complaints and loss of customer trust.

- *Escalating Maintenance Costs:*
  With less preventive maintenance, unplanned shutdowns became frequent, offsetting initial savings.

This case demonstrates the essence of the Ear-Cut Theory: the organization consumed its own "ear" by discarding its skilled human capital, mistaking it for expendable cost. The loss of tacit knowledge and technical identity resulted in long-term decline.

➢ *Case 2: Strategic Preservation in the Cement Industry – National Cement Share Company*

National Cement Share Company faced similar financial strain caused by fluctuating raw material costs and competitive pressures. External consultants advised reducing technical staff as part of cost rationalization. Instead, leadership chose a preservative path:

- *Retaining Core Engineers:*
  Skilled process engineers were retained and offered continuous training.

- *Preventive Maintenance Investment:*
  The company increased maintenance budgets to ensure equipment longevity.

- *Gradual Technology Upgrades:*
  Management invested in energy-efficient grinding technologies and digital process monitoring.

- *Cultural Continuity:*
  Leadership emphasized the company's technical excellence and innovation culture as identity-defining features.

Though costly in the short term, these decisions preserved organizational knowledge and identity. Over time, efficiency improved, product quality stabilized, and competitiveness strengthened. This case illustrates Path B of the Ear-Cut Theory: safeguarding the "ear" led to long-term resilience and sustainable growth.

➢ *Case 3: Technology Sector – Nokia and BlackBerry*

Both Nokia and BlackBerry were once global leaders in mobile technology. Their decline illustrates how abandoning organizational identity can lead to collapse:

- *Nokia:*
  Once known for its reliable hardware and user-friendly design, Nokia abandoned its proprietary Symbian system and pursued poorly executed partnerships. By neglecting its distinct identity in favor of chasing short-term smartphone market trends, it lost differentiation and market leadership.

- *BlackBerry:*
  BlackBerry's core strength was secure mobile communication. However, leadership delayed adaptation to touchscreen technology and diluted its identity by diversifying into consumer entertainment devices. As a result, the company lost its enterprise niche while failing to capture new markets.

Both firms exemplify self-destruction by consuming their "ears." Instead of leveraging identity-defining strengths, they pursued reactive adaptations that undermined their core values. Scholars argue that their decline demonstrates the risk of excessive adaptation without identity preservation (Vuori & Huy, 2016).

➢ *Case 4: Airline Industry – Ethiopian Airlines*

Ethiopian Airlines provides a contrasting example of resilience through identity preservation. Despite facing crises such as global competition, fluctuating fuel prices, and reputational damage following the Boeing 737 MAX accident, the airline safeguarded its identity:

- *Staff Development:*
  Continued investment in pilot training and aviation academy programs.

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- *Technological Upgrades:*
  Adoption of modern fleets and digital systems while retaining operational reliability.

- *National Pride and Cultural Identity:*
  Positioned itself as Africa's flagship carrier, emphasizing cultural continuity.

- *Long-Term Strategy:*
  Management resisted short-term cost-cutting that would undermine technical and cultural identity.

As a result, Ethiopian Airlines expanded its market share, becoming Africa's leading airline. This case shows that resilience stems from protecting the "ear" cultural pride, skilled professionals, and technical reliability even during crises.

➢ *Case 5: Family-Owned Businesses*

Family-owned businesses often face generational tensions between tradition and modernization. Research suggests that when these firms abandon heritage values in pursuit of immediate profit, they lose identity and competitiveness (Zellweger et al., 2013). For example:

Firms that abandoned family governance traditions in favor of rapid expansion often collapsed within one or two generations.

Conversely, businesses that retained governance principles, embedded family values, and integrated gradual modernization demonstrated resilience across decades (Miller & Le Breton-Miller, 2005).

The Ear-Cut Theory applies here by showing that family values, governance structures, and cultural heritage are part of the organizational "ear." Discarding them leads to decline, while preserving them ensures sustainability.

➢ *Case 6: Lessons from Toyota – Lean Resilience*

Toyota's approach to Lean manufacturing demonstrates how preserving core identity creates resilience. During financial downturns, Toyota resisted mass layoffs, instead reassigning workers to training or kaizen improvement projects. By preserving its workforce identity and continuous improvement culture, Toyota recovered more quickly than competitors. This case illustrates the principle that the "ear" human capital and improvement culture must be safeguarded.

Table 1 Case Reflections of the Ear-Cut Theory in Practice

Aspects	Case 1: Self-Destruction (Kuyu Cement, Nokia, BlackBerry)	Case 2: Strategic Preservation (National Cement, Ethiopian Airlines, Family Firms, Toyota)
Leadership Decision	Downsized engineers / abandoned core identity	Retained core staff / safeguarded culture and identity
Short-Term Impact	Cost savings, temporary relief	Higher costs, but stability maintained
Long-Term Impact	Reduced efficiency, brand decline, loss of trust	Improved resilience, sustained competitiveness
Outcome	Loss of competitiveness; erosion of organizational identity	Sustainable growth; preservation of organizational essence
Application of Ear-Cut Theory	Mistook "ear" as expendable resource	Recognized "ear" as essential to identity

X. DISCUSSION

➢ *The Comparative Case Reflections Highlight Several Insights:*

- Short-Term Gains, Long-Term Losses: Organizations that eroded their technical identity (e.g., Derba Cement, Nokia, BlackBerry) initially achieved financial relief but ultimately suffered from loss of competitiveness, brand trust, and technical excellence.
- Identity Preservation as a Source of Resilience: Firms such as National Cement, Ethiopian Airlines, and Toyota demonstrate that protecting identity, even at a cost, enables long-term sustainability and adaptability.
- Engineering Managers as Guardians of Identity: Leaders must assume responsibility for safeguarding tacit knowledge, human capital, and organizational culture. Their decisions often determine whether the organization thrives or collapses.
- Complementing Existing Theories: The Ear-Cut Theory extends the Resource-Based View, Dynamic Capabilities, and Systems Thinking by highlighting not just how resources and capabilities sustain advantage, but also how their undervaluation or destruction accelerates decline.

The discussion underscores that resilience in engineering management is not merely about reacting to crises. It requires proactive identity preservation, informed decision-making, and a systemic appreciation of the interconnectedness between culture, people, and operations.

XI. CONCLUSION

The Ear-Cut Theory provides an innovative framework for understanding organizational self-destruction in engineering management. By using the metaphor of a dog consuming its own severed ear, it captures the paradox of leaders mistaking essential identity-defining resources for expendable costs. The theory emphasizes that engineers, innovation culture, preventive maintenance, and organizational values represent the "ear" of engineering firms—resources that must be protected at all costs.

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The comparative case reflections reveal that organizations which safeguard their identity are better positioned to weather crises, sustain competitiveness, and achieve long-term growth. Conversely, those that sacrifice identity for short-term relief often enter a downward spiral of inefficiency, quality decline, and reputational damage.

For engineering managers, the core lesson is clear: identity preservation must be integrated into strategic decision-making. Leaders must act not only as operators and problem-solvers but as guardians of organizational essence. Preserving the "ear" is not a luxury it is a necessity for survival.

FUTURE RESEARCH DIRECTIONS

While this paper provides a conceptual foundation, further empirical research is necessary to validate and refine the Ear-Cut Theory. Future studies could explore:

- *Empirical Case Studies:*
  In-depth analysis of engineering organizations across cement, oil and gas, energy, and technology sectors to test how identity preservation correlates with resilience.

- *Longitudinal Studies:*
  Tracking organizations over time to measure the long-term impact of self-destructive versus preservative decisions.

- *Cross-Industry Comparisons:*
  Examining how different industries manage trade-offs between short-term pressures and long-term identity preservation.

- *Quantitative Surveys:*
  Collecting data from engineering managers to understand perceptions of identity preservation and its impact on operational outcomes.

- *Policy and Education Implications:*
  Exploring how governments, industry associations, and universities can encourage identity preservation through training, regulation, and curriculum design.

- *Integration with Sustainability Research:*
  Investigating how the Ear-Cut Theory aligns with global sustainability goals, particularly in industries with high environmental impact.

CONTRIBUTIONS OF THE STUDY

This paper contributes to the academic and practical fields of Engineering Management in three ways:

- *Theoretical Contribution:*
  Introduces the Ear-Cut Theory as a novel conceptual framework for understanding organizational self-destruction.

- *Practical Contribution:*
  Provides engineering managers with actionable principles for safeguarding identity, human capital, and technical culture.

- *Policy and Educational Contribution:*
  Offers insights for developing curricula, leadership training, and industry policies aimed at strengthening resilience.

- *Final Note:*
  By advancing the Ear-Cut Theory, this study contributes to a deeper understanding of sustainable leadership and the preservation of organizational identity in an era of uncertainty. It reminds engineering managers that what seems expendable today may in fact be the cornerstone of tomorrow's resilience.

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