

Switching Mechanisms in Hybrid Job Design: A Case Study of a CEO in an Indonesian Household Equipment Manufacturing Company

Dewa Putu Yohanes Agata L Sandopart ^{1,*}

¹ Faculty of Economics, Institut Bisnis dan Informatika Kosgoro 1957, Indonesia

*Email Korespondensi: drdewaibik57@gmail.com

Sandopart, D. P. Y. A. L. (2026). Switching Mechanisms in Hybrid Job Design: A Case Study of a CEO in an Indonesian Household Equipment Manufacturing Company. *Varied Knowledge Journal*, 3(3), 183–193. <https://doi.org/10.71094/vkj.v3i4.184>

Diterima: 12-12-2025
Direvisi: 20-01-2026
Disetujui: 06-02-2026
Publish: 20-02-2026



Copyright © 2026, The Author(s). This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International.

Abstract : *This study aims to explore in depth the switching mechanisms implemented by a CEO of an Indonesian household equipment manufacturing company to balance the competing demands of standardization and flexibility in job design. A qualitative approach with an instrumental single-case study design was employed. Data were collected through in-depth interviews with the CEO, limited participant observation on the production floor over three days, and analysis of corporate documents. Data analysis utilized the Interpretative Phenomenological Analysis (IPA) framework. The research identified three primary switching mechanisms implemented: (1) a daily mode-switching protocol based on production line status, (2) a trigger-based escalation matrix for handling deviations, and (3) a post-mortem learning loop that integrates experiential learning into procedural updates. Findings indicate that successful switching implementation is critically dependent on systematic investment in developing worker capacity through cross-skilling and fostering a culture of psychological safety. The novelty of this research lies in being the first empirical study to document in detail the implementation of switching mechanisms within hybrid job design in the Indonesian manufacturing context.*

Keywords : *Switching Mechanisms, Hybrid Job Design, Standardization, Flexibility, Manufacturing Ceo, Case Study*

Abstrak : Penelitian ini bertujuan untuk mengeksplorasi secara mendalam mekanisme switching yang diterapkan oleh seorang CEO pada perusahaan manufaktur peralatan rumah tangga di Indonesia dalam menyeimbangkan tuntutan antara standarisasi dan fleksibilitas dalam desain pekerjaan. Penelitian ini menggunakan pendekatan kualitatif dengan desain studi kasus instrumental tunggal. Data dikumpulkan melalui wawancara mendalam dengan CEO, observasi partisipatif terbatas di lantai produksi selama tiga hari, serta analisis dokumen perusahaan. Analisis data menggunakan kerangka interpretative phenomenological analysis. Hasil penelitian mengidentifikasi tiga mekanisme switching utama, yaitu protokol pergantian mode harian berdasarkan kondisi lini produksi, matriks eskalasi berbasis pemicu untuk menangani deviasi, serta siklus pembelajaran pasca-kejadian yang mengintegrasikan pengalaman ke dalam pembaruan prosedur. Temuan menunjukkan bahwa keberhasilan implementasi switching sangat bergantung pada investasi sistematis dalam pengembangan kapasitas pekerja melalui cross-skilling serta penciptaan budaya psychological safety. Kebaruan penelitian ini terletak pada kontribusinya sebagai studi empiris pertama yang mendokumentasikan secara rinci implementasi mekanisme switching dalam desain pekerjaan hibrida pada konteks manufaktur di Indonesia.

Kata Kunci : Mekanisme Switching, Desain Pekerjaan Hibrida, Standarisasi, Fleksibilitas, CEO Manufaktur, Studi Kasus

INTRODUCTION

The dynamics of the contemporary business environment have compelled the global manufacturing sector to adapt at an unprecedented pace. Manufacturing firms face a paradoxical dual demand: on one hand, they are pressured to achieve operational efficiency through procedural standardization, while on the other, they must maintain sufficient flexibility to respond to

fluctuations in market demand and accelerating technological disruptions (Zhang & Xu, 2013). This condition creates a fundamental tension in job design—between the procedural certainty offered by standardization and the adaptive agility provided by flexibility. This tension is further exacerbated by findings that most organizations have yet to find an optimal configuration between standardization and flexibility in their job designs (Zero100, 2025). A study analyzing over 70,000 companies over 20 years revealed that only 0.6% had developed sophisticated multi-level structures, while traditional pyramid and hourglass models together account for less than 1% of actual organizational diversity.

In the Indonesian context, this challenge has specific characteristics. The national manufacturing sector is undergoing transformation through the Making Indonesia 4.0 program; however, the gap between technology adoption policies and human resource readiness remains a significant hurdle. Arya (2025) from Cummins India demonstrates that the strategic decision to "delay" technology adoption for six months to ensure worker readiness through retraining and fostering a partnership culture between humans and machines actually yielded long-term implementation success. This lesson is relevant to the Indonesian context, which faces a similar dilemma.

The Job Characteristics Model (JCM) developed by Hackman and Oldham (1976) identifies five core job characteristics that determine workers' psychological experiences: skill variety, task identity, task significance, autonomy, and feedback. Among these, autonomy—directly relevant to the discussion of flexibility in job design—plays a central role in determining workers' internal motivation. The greater the autonomy granted, the greater the flexibility workers possess. Another important aspect of the JCM is the concept of growth need strength (GNS), defined as a worker's need for personal growth through job performance (Fried & Ferris, 1987). Workers with high GNS tend to seek jobs offering challenges and task variety, while those with low GNS prefer more routine work types. The implication for job design is that optimal job characteristics are not universal but rather depend on individual worker characteristics.

Contingency theory provides the perspective that there is no "one best way" to design organizations or jobs (Liker, Collins, & Hull, 1999). Instead, effective design depends on the fit between organizational characteristics and contextual factors such as environmental uncertainty, technology used, and business strategy. The concept of organizational ambidexterity, introduced by March (1991), distinguishes between exploration and exploitation. Exploration relates to search, variation, risk-taking, and innovation—characteristics requiring flexibility. Exploitation relates to refinement, efficiency, selection, and implementation—characteristics requiring standardization and procedural discipline. In the manufacturing context, Fang, Daniel, and Li (2021) developed the concept of Lean Construction (LC) ambidexterity, defined as the capability possessed by organizations or individuals to achieve lean goals while simultaneously possessing ambidextrous capabilities to solve conflicting and interdependent problems. Research at Fraunhofer IPK through the AmbiProd project (Ihnen & Busse, 2026) demonstrates that large companies can become more agile by implementing mechanisms for smooth transitions between standardized and flexible processes when deviations occur.

The paradoxical approach offers a different lens from contingency theory. While contingency theory assumes organizational effectiveness is achieved through alignment with environmental conditions, paradox theory acknowledges that organizations often face inherently contradictory yet equally legitimate demands that must be managed simultaneously (Peters & Lam, 2015). In the context of lean construction, Fang, Daniel, and Li (2021) identified several paradoxes institutionalized by the lean approach, including the paradoxical tension between standard operating procedures versus customized crafted solutions. Managing paradox does not mean eliminating it but rather harnessing its potential.

Job crafting, introduced by Wrzesniewski and Dutton (2001), refers to proactive actions by workers in altering the task, relational, and cognitive boundaries of their jobs. Research indicates that by proactively creating job demands and job resources, employees experience greater work

meaningfulness (Petrou, Bakker, & van den Heuvel, 2017; Tims, Derks, & Bakker, 2016). On the other hand, Jensen (2026) proposes that the mass customization revolution, having transformed customer-company relationships, should now be extended to Human Resource functions. Jensen emphasizes that "the unit of analysis needs to be the individual" and "deals need to be customized for individuals," requiring a shift in thinking about fairness from equality to equity.

This research focuses on the CEO's perspective for several logical reasons. First, the CEO holds the highest authority in determining the organization's performance architecture (Santo, 2026). Second, in the context of digital transformation and automation, the CEO's decisions regarding the pace of technology adoption directly impact job design on the production floor (Randall, 2026). Third, the CEO is the primary determinant of the balance between short-term pressures for efficiency and long-term investments in organizational capabilities (Egon Zehnder, 2024). This case study specifically highlights the experience of a CEO in an Indonesian household equipment manufacturing firm who successfully implemented switching mechanisms within hybrid job design. This company was selected based on several considerations: (1) it possesses significant production complexity with hundreds of product variants, (2) it has implemented limited automation systems while still retaining a central role for human workers, and (3) its CEO has experience navigating the standardization-flexibility tension over a tenure exceeding five years.

Based on the synthesis of literature, several research gaps can be identified. First, although ambidexterity theory has been adapted to the lean construction context, its application to job design in manufacturing remains limited. Second, most existing research employs quantitative approaches, which are less capable of capturing the complexity of CEO decision-making processes. Third, existing studies predominantly originate from developed country contexts, while the Indonesian manufacturing context remains underexplored. Fourth, no prior research has specifically documented the implementation of switching mechanisms in hybrid job design.

RESEARCH METHOD

This study employed a qualitative approach with an instrumental single-case study design. This design was chosen based on the research objective to explore the phenomenon of switching mechanisms in depth within a real-world, natural context (Yin, 2018). The single-case study design was selected because the phenomenon is revelatory—providing access to CEO practices previously undocumented in the literature.

The research was conducted at a household equipment manufacturing company located in an industrial area in West Java, Indonesia. The company has been operating for 15 years with 380 employees. Site selection criteria included: (1) the company had implemented limited automation while retaining a central role for human workers, (2) it had significant product variation (over 200 SKUs), (3) the CEO had held the position for at least 5 years, and (4) the CEO was willing to grant access for intensive data collection.

The primary participant was the company's CEO (coded CEO-M11 in the broader research project). In addition to the CEO, data were also collected from production managers (2 persons) and line supervisors (3 persons) for triangulation purposes.

Data collection employed three methods: In-depth Interviews: Three interview sessions were conducted with the CEO (totaling 4.5 hours). Interviews were semi-structured, focusing on the CEO's experience balancing standardization and flexibility, implemented switching mechanisms, and factors facilitating or hindering implementation. All interviews were recorded and transcribed verbatim.

Observation: Limited participant observation was conducted over three days on the production floor. Observation foci included: (1) morning briefing processes, (2) handling of non-routine situations (machine breakdowns, sudden order variations), (3) interactions between supervisors and operators, and (4) use of visual management boards.

Document Study: Analyzed documents included: (1) standard operating procedure (SOP) manuals, (2) job descriptions, (3) documented switching protocols, (4) production performance reports from the preceding 12 months, and (5) cross-skilling training materials.

Data analysis employed the Interpretative Phenomenological Analysis (IPA) approach developed by Smith, Flowers, and Larkin (2009). Analysis stages included: (1) repeated reading and initial noting, (2) identification of emergent themes, (3) searching for connections across themes, (4) repetition for each data source, (5) searching for patterns across data sources, and (6) interpretation and writing.

This research applied Lincoln and Guba's (1985) trustworthiness criteria: credibility through source triangulation and member checking, transferability through thick description, dependability through an audit trail, and confirmability through a reflexivity journal.

RESULTS AND DISCUSSION

Company and CEO Overview

The household equipment manufacturing company (coded PT HomeAppl Indo) produces various products such as fans, irons, blenders, rice cookers, and vacuum cleaners. The company faces typical household equipment manufacturing challenges: high volume with significant product variation (over 200 active SKUs), seasonal demand fluctuations (especially before holidays), and tight margin pressure from competition with imported products.

The CEO (initial R, age 52) has served for 5 years and has an industrial engineering background with 20 years of manufacturing experience. Prior to becoming CEO, he served as operations director at the same company for 7 years. Relevant leadership characteristics include: (1) a "hands-on" approach, performing gembu walks every morning, (2) a strong commitment to employee development, and (3) experience implementing ERP systems and limited automation.

Identified Switching Mechanisms

Data analysis identified three primary switching mechanisms implemented at PT HomeAppl Indo. These mechanisms work synergistically to enable the organization to transition between standard mode and flexible mode according to operational conditions.

Daily Mode-Switching Protocol

The first mechanism is a daily switching protocol based on production line status. Each morning before the shift begins, the production team (led by the supervisor with CEO attendance 2-3 times per week) conducts a briefing to determine the day's "operational mode."

CEO-M11 explained: "We have three operating modes: green (standard operation), yellow (flexible with boundaries), and red (fully flexible). Green mode is activated when orders are stable, all machines are normal, and materials are complete. Yellow mode is activated for moderate order variations or minor disruptions. Red mode is activated for emergencies or extreme variations. This mode determines how much autonomy is granted to line teams."

Observation on the first day showed green mode implementation: the fan assembly line operated with strict SOPs, supervisors conducted compliance checks every 2 hours, and operators followed predetermined task sequences. On the second day, a sudden order change occurred (a customer requested acceleration of 200 blender units with specific specifications), causing a shift to yellow mode. In this mode, line teams were authorized to reorganize assembly sequences and adjust work methods without supervisor approval.

This protocol is documented in the "Daily Mode Transition Matrix" (Table 1).

Table 1. Daily Mode Transition Matrix at PT HomeAppl Indo

Mode	Trigger Condition	Line Team Authority	Maximum Duration	Review Frequency
Green (Standard)	Stable: no disruptions, routine orders	None: 100% SOP compliance	Unlimited	Every 2 hours

Mode	Trigger Condition	Line Team Authority	Maximum Duration	Review Frequency
Yellow (Moderate)	Order variation <20% or minor disruption (<15 minutes)	Sequence and method adjustment, no supervisor approval needed	4 hours	Every 1 hour
Red (Emergency)	Order variation >20% or major disruption (machine down)	Rescheduling, workforce redeployment, deadline negotiation with customer	8 hours	Continuous (real-time)

Trigger-Based Escalation Matrix

The second mechanism is an escalation matrix that explicitly defines who has authority to make switching decisions based on the severity of the deviation. This matrix was created to avoid confusion in high-pressure situations.

CEO-M11 elaborated: "We learned that in crisis situations, people tend to wait for orders from superiors. This is fatal because time is lost. So we established clear rules: if a disruption is under 30 minutes and involves only one line, the supervisor has the authority to switch to yellow mode. If it exceeds that or involves multiple lines, it escalates to the production manager. If it impacts customer delivery commitments, it escalates to me."

This escalation matrix is documented in the "Switching Authority Matrix" (Table 2).

Table 2. Switching Authority Matrix at PT HomeAppl Indo

Deviation Level	Criteria	Decision Authority	Decision Boundaries
Level 1 (Minor)	Disruption ≤30 minutes, 1 line, no delivery impact	Line Supervisor	Switch to yellow mode, maximum 4 hours
Level 2 (Moderate)	Disruption 30 min-2 hours, multi-line, risk of delay	Production Manager	Switch to yellow or red mode, must be documented
Level 3 (Major)	Disruption >2 hours, impacts delivery commitment CEO	Production Manager	Switch to yellow or red mode, must be documented

Observation showed this matrix was implemented with high discipline. On the second research day, a machine disruption occurred on the blender line (Level 1). The supervisor immediately decided to switch to yellow mode without awaiting higher instruction. This action was resolved within 25 minutes, faster than the estimated time if normal escalation procedures had been followed.

Post-Mortem Learning Loop

The third mechanism is a post-incident learning loop ensuring that every switching experience is documented, evaluated, and integrated into procedural updates. This distinguishes PT HomeAppl Indo from other companies that perform reactive switching without systematic learning.

CEO-M11 explained: "Every time we perform switching—especially to red mode—we are required to hold a post-mortem meeting within 48 hours. We discuss: what was the trigger, was the switching decision appropriate, what could we have done to prevent a similar occurrence, and whether procedures need updating. The results are incorporated into SOP revisions or training programs."

Document analysis revealed that 23 post-mortem meetings were held in the preceding 12 months. Outputs from these meetings included: 8 SOP revisions, 3 new operator training modules, and 2 plant layout changes to reduce bottlenecks.

Prerequisites for Successful Switching Implementation

Data analysis identified two critical prerequisites enabling effective functioning of switching mechanisms: investment in human capacity development and creation of a psychological safety culture.

Cross-Skilling as a Foundation

CEO-M11 affirmed that it is impossible to grant flexibility and switching authority without ensuring workers possess the capacity to use that autonomy responsibly.

"Flexibility without competence is a disaster. That's why we invested significant resources in cross-skilling before granting autonomy. Now, our average operator masters 3-4 different workstations. When order variations or disruptions occur, they can move to stations that need them without waiting for instructions."

The cross-skilling program at PT HomeAppl Indo includes: (1) structured training for new operators lasting 3 months, (2) scheduled rotation programs every 6 months, (3) internal certification for each workstation mastered, and (4) financial incentives for each additional certification. Document data showed that 92% of operators have at least 2 certifications, and 67% have 3 or more.

Psychological Safety and Blameless Culture

The second prerequisite is a culture of psychological safety where workers feel safe reporting errors or deviations without fear of punishment.

CEO-M11 explained his philosophy: "If workers are afraid to report problems for fear of being blamed, problems will escalate into crises. We instill a culture that mistakes are data, not sins. What matters is that we learn and improve the system, not punish individuals. But this does not mean there are no consequences—there is a difference between an 'honest mistake' and 'negligence'."

Observation during the morning briefing confirmed this culture. A supervisor reported that an operator had made a machine setting error resulting in 5 defective product units. The CEO did not become angry but instead asked: "What caused this error? Was the instruction unclear? Was the operator inadequately trained? Was he fatigued?" The discussion then focused on procedural improvement, not individual punishment.

Impact of Switching Mechanism Implementation

Data analysis demonstrated that implementation of switching mechanisms has positively impacted various performance metrics.

Table 3. Impact of Switching Implementation (12-Month Comparison)

Metric	Baseline (before switching)	After 12 Months	Change
Downtime (minutes/day)	47	28	-40.4%
Average disruption response time (minutes)	35	18	-48.6%
Customer satisfaction (on-time SKU)	86%	94%	+8%
Worker turnover	24% per year	15% per year	-37.5%
Number of workplace safety incidents	12 per year	7 per year	-41.7%

CEO-M11 interpreted this data: "The 40% downtime reduction is significant. This isn't just because we respond faster, but also because we prevent many problems from the start. When operators have autonomy to make small adjustments before they become big problems, that saves a lot of time."

Interestingly, worker turnover decreased dramatically even though demands on workers increased (they must master multiple skills and make decisions under pressure). The CEO explained this is because workers feel valued and have a clear growth path.

Discussion

Confirmation of Findings with Existing Theory

This study's findings confirm several theoretical propositions from existing literature. First, the finding regarding the unavoidable paradox between standardization and flexibility supports Fang, Daniel, and Li's (2021) perspective on paradoxical tensions in lean construction. As CEO-M11 acknowledged, "I have never felt I have found perfect balance—I have only learned to keep balancing." This acknowledgment reflects what Peters and Lam (2015) term a paradox mindset—

the ability of individuals and organizations to accept inherently ineliminable tension as a natural part of managing complex organizations. In the manufacturing context, acceptance of this paradox is crucial because the pressure for short-term efficiency often conflicts with long-term flexibility investment needs (Young, Anderson, & Young, 1995).

Second, the finding regarding task-segmented design (differentiating job design based on task routineness) supports the Job Characteristics Model (Hackman & Oldham, 1976) and contingency theory (Liker, Collins, & Hull, 1999). PT HomeAppl Indo explicitly distinguishes treatment of routine tasks (strict standardization) versus non-routine tasks (high flexibility). This finding enriches the literature by demonstrating that contingency operates not only between different job roles but can also operate intra-role—within the same job position, an operator may experience standardization for certain tasks and flexibility for others. This aligns with te Kaat and Korsgaard's (2024) finding that in low-usability automation contexts, workers craft differently for routine tasks versus those requiring problem-solving.

Third, the finding regarding the importance of developing human capacity before granting autonomy extends job crafting theory (Wrzesniewski & Dutton, 2001). This study demonstrates that productive job crafting requires an adequate competency foundation; without it, autonomy becomes counterproductive. This finding also aligns with Tims, Derks, and Bakker's (2016) results showing that effective job crafting critically depends on optimal person-job fit. When workers have competencies matching flexible job demands, they tend to craft in ways that increase work meaningfulness; conversely, competency mismatch produces maladaptive crafting behaviors (Petrou, Bakker, & van den Heuvel, 2017).

Theoretical Contribution: The Concept of "Thermostatic Job Design"

This research provides a theoretical contribution through introducing the concept of "thermostatic job design" as an extension of organizational ambidexterity frameworks (March, 1991; Fang, Daniel, & Li, 2021). This concept emerged from the observation that PT HomeAppl Indo does not have a static optimal point between standardization and flexibility; rather, it possesses the capacity to continuously adjust based on changing conditions. The thermostat metaphor was chosen because a thermostat does not maintain temperature by remaining static but by continuously comparing actual temperature to target temperature and activating heating or cooling mechanisms as needed (Ihnen & Busse, 2026).

The fundamental difference between thermostatic job design and conventional job design models lies in assumptions about environmental stability. Conventional models, including the Job Characteristics Model (Hackman & Oldham, 1976) and contingency theory (Liker et al., 1999), assume the organizational environment is sufficiently stable that an optimal design can be determined and then statically implemented. However, in an era of disruption characterized by accelerating technological change and demand volatility (World Economic Forum, 2025), this assumption is increasingly unrealistic. Thermostatic job design offers an alternative by viewing job design as a continuously adjusted process, not a one-time product.

Furthermore, the concept of thermostatic job design integrates three mechanisms identified by Santos (2026) as key components of adaptive operational systems: sensing (ability to detect deviations), seesaw (ability to make adjustments), and learning (ability to improve future adjustment accuracy). In PT HomeAppl Indo's context, the daily mode-switching protocol functions as a sensing mechanism, the trigger-based escalation matrix as a seesaw mechanism, and the post-mortem learning loop as a learning mechanism. The integration of these three mechanisms distinguishes thermostatic job design from more general dynamic capabilities concepts (Teece, 2007) due to its specific focus on the individual job design level.

Managerial Implications

This study offers several managerial implications for manufacturing leaders in managing the tension between standardization and flexibility.

Overcoming the False Dichotomy between Standardization and Flexibility

The first practical implication is that manufacturing CEOs need not choose between standardization and flexibility dichotomously. Findings from PT HomeAppl Indo show that structured switching mechanisms enable organizations to simultaneously obtain benefits from both. This aligns with Randall's (2026) findings at Hitachi Industrial Equipment Systems, that flexibility is possible even on the production floor when designed with the proper system.

However, this research also provides an important caution: switching mechanisms will not function if designed carelessly. Three critical elements must exist: (1) clarity about trigger conditions (when to switch), (2) clarity about decision authority (who has authority to switch), and (3) clarity about switching duration and boundaries. Without these three elements, switching will become a source of confusion and conflict, not a solution to paradoxical tension (Peters & Lam, 2015).

CEO-M11 emphasized the importance of documenting and socializing switching mechanisms: "We don't just create protocols; we train them repeatedly. Every new operator must go through switching simulations before being allowed to work on the line." This approach recalls the principle of standard work for senior leaders described by Ballé, Bennett, and Handlinger (2014), where even practices that appear "flexible" must have standard elements to ensure consistency and organizational learning.

Investing in Cross-Skilling as a Non-Negotiable Prerequisite

The second practical implication is that investment in human capacity development (especially cross-skilling) is not an optional cost but a non-negotiable prerequisite for granting autonomy. PT HomeAppl Indo invested an average of 120 training hours per operator per year—far above the industry average (approximately 40-60 hours). CEO-M11 justified this investment: "This is not a cost; this is an investment. Every rupiah we spend on training returns 3-5 times in reduced downtime and quality improvement."

This finding explicitly supports Arya's (2025) statement from Cummins India that the "true test for manufacturing CEOs won't be how many robots they deploy, but how many careers they catalyze." In practice, this means that before implementing automation or granting greater flexibility, CEOs must ensure workers have the capacity to use that autonomy responsibly. As te Kaat and Korsgaard (2024) found, when automated systems are poorly designed and workers lack adequate training, the result is not increased productivity but increased maladaptive crafting behaviors that actually harm the system.

Gavin Yi of Yijin Hardware applied a similar principle by creating dual career pathways for technical and managerial talent, ensuring that technical workers are not forced to become managers merely to receive career recognition (HRD Asia, 2025). Yi emphasized that "technical excellence should carry its own dignity and rewards." At PT HomeAppl Indo, this principle was implemented through the certification system and financial incentives for each additional skill mastered by operators.

Organizational Culture as a Conditioning Factor

The third practical implication is that organizational culture—particularly psychological safety and the definition of fairness as equity—is a conditioning factor determining whether switching mechanisms can function. This finding aligns with Jensen's (2026) argument that mass customization in HR requires a shift from equality (treating everyone the same) to equity (considering individual circumstances).

At PT HomeAppl Indo, a culture of psychological safety was built through several concrete practices. First, the CEO actively modeled desired behavior by not blaming honest mistakes. Second, the company had a "blameless post-mortem" policy where the focus of post-incident discussion was system improvement, not individual punishment. Third, there was an anonymous reporting channel allowing workers to report problems without fear of retaliation. These practices build what Edmondson (1999, in Jensen, 2026) calls psychological safety—the belief that the environment is safe for taking interpersonal risks.

However, CEO-M11 also acknowledged that building this culture was a long and difficult process: "It took 2-3 years to change middle managers' mindsets. Initially they were skeptical—'if we don't punish mistakes, employees will become careless.' But after seeing data that incident numbers actually decreased, they started believing." This culture transformation requires consistency and role modeling from the top of the organization, as Peters and Lam (2015) found in their study of innovative policy adoption across different organizational levels.

Systematic Learning Loops

The fourth practical implication is that switching mechanisms must include a systematic learning loop. Without learning, switching remains merely reactive and does not improve the organization's long-term capacity. PT HomeAppl Indo implemented post-mortem meetings within 48 hours after each significant switching event, with a structured agenda: (1) what happened, (2) why it happened, (3) what was done, (4) what worked, (5) what did not work, and (6) what should change.

Outputs from these post-mortem meetings were integrated into procedural updates. In the preceding 12 months, PT HomeAppl Indo made 8 SOP revisions, created 3 new training modules, and made 2 plant layout changes based on learning from switching events. This approach reflects what Ihnen and Busse (2026) call a continuous improvement loop in the AmbiProd project at Fraunhofer IPK. The difference is that AmbiProd was still at the prototype stage, while PT HomeAppl Indo has implemented it operationally.

What is interesting about this learning loop is that learning is not only reactive (after incidents) but also proactive. CEO-M11 explained: "We also conduct 'dry run' switching—simulating disruption scenarios without actually disrupting production. It's like a fire drill, but for switching." This practice allows the organization to test and refine switching mechanisms without risking actual operations, an approach aligning with organizational learning concepts (March, 1991).

CONCLUSION

This research explores in depth the implementation of switching mechanisms in hybrid job design within an Indonesian household equipment manufacturing company. The findings identify three primary mechanisms: a daily mode-switching protocol, a trigger-based escalation matrix, and a post-mortem learning loop. The study shows that effective implementation depends on two key conditions, namely systematic investment in cross-skilling and the development of a psychological safety culture that enables employees to adapt and respond without fear.

The study also introduces the concept of thermostatic job design as an extension of organizational ambidexterity frameworks. This concept positions job design as a dynamic system that continuously recalibrates itself based on environmental feedback, rather than as a fixed structure. It highlights the need for organizations to build adaptive capacity at the job level to respond to uncertainty and operational complexity.

Several limitations need to be considered. The use of a single-case study design limits the generalizability of the findings across different organizational contexts, as mechanisms that work in one company may not be directly transferable to firms with different scales, sectors, or levels of automation. The study relies primarily on one key informant, the CEO, although triangulation was conducted with managers, supervisors, and internal documents; broader inclusion of line workers could provide a more grounded perspective on how switching mechanisms operate in daily practice. In addition, the short observation period of three days may not fully capture the range of switching situations, particularly rare or crisis conditions that could reveal additional dynamics.

REFERENCES

Arya, S. (2025). *True test for manufacturing CEOs: How many careers they catalyze*. Cummins India Leadership Insights.

- Ballé, M., Bennett, D., & Handler, P. (2014). What's senior leaders' standard work in a lean enterprise? *Planet Lean*. <https://www.planet-lean.com/articles/standard-work-senior-leadership>
- Deloitte. (2024). *India CEO Outlook 2024*. Deloitte Touche Tohmatsu India LLP.
- Egon Zehnder. (2024). *The evolution of the manufacturing CEO*. Egon Zehnder & Manufacturers Alliance Foundation.
- Fang, Y., Daniel, E. I., & Li, S. (2021). Conceptual framework for lean construction ambidexterity in project-based organisations. *Construction Management and Economics*, 39(10), 824-838. <https://doi.org/10.1080/01446193.2021.1978516>
- Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40(2), 287-322. <https://doi.org/10.1111/j.1744-6570.1987.tb00605.x>
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16(2), 250-279. [https://doi.org/10.1016/0030-5073\(76\)90016-7](https://doi.org/10.1016/0030-5073(76)90016-7)
- HRD Asia. (2025, October 9). 'People development is not a department's job. It's the company's top priority'. *HRD America*. <https://www.hcamag.com/asia/specialisation/employee-engagement/people-development-is-not-a-departments-job-its-the-companys-top-priority/552554>
- Ihnen, D., & Busse, D. (2026). Stable and agile all at once. *Fraunhofer IPK Research*. <https://www.ipk.fraunhofer.de/en/expertise-and-technologies/industry-trends/manufacturing-systems-and-production-control/stable-and-agile-all-at-once.html>
- Jensen, D. (2026). It's time for mass customization to reach HR. *Smith Business Insight, Queen's University*. <https://smith.queensu.ca/insight/content/Its-Time-for-Mass-Customization-to-Reach-HR.php>
- Liker, J. K., Collins, P. D., & Hull, F. M. (1999). Flexibility and standardization: Test of a contingency model of product design-manufacturing integration. *Journal of Product Innovation Management*, 16(3), 248-267. <https://doi.org/10.1111/1540-5885.1630248>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87. <https://doi.org/10.1287/orsc.2.1.71>
- Peters, P., & Lam, W. (2015). Can employability do the trick? Revealing paradoxical tensions and responses in the process of adopting innovative employability-enhancing policies and practices in organizations. *German Journal of Human Resource Management*, 29(3-4), 235-257. <https://doi.org/10.1177/239700221558729>
- Petrou, P., Bakker, A. B., & van den Heuvel, M. (2017). Weekly job crafting and leisure crafting: Implications for meaning-making and work engagement. *Journal of Occupational and Organizational Psychology*, 90(2), 129-152. <https://doi.org/10.1111/joop.12160>
- Randall, J. (2026). Not your father's factory: Flexibility, even on the shop floor. *Hitachi Industrial Equipment Systems Insights*. https://insights.hitachi-ies.com/_ct/17770118
- Santo, J. (2026). Lessons from executive leaders: Build systems that drive operational excellence. *Ease.io Blog*. <https://www.ease.io/blog/lessons-from-executive-leaders/>
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Sage Publications.
- te Kaat, V., & Korsgaard, D. (2024). Job crafting to improve low-usability automation: Sustainability through human work interaction designs. In A. Bramwell-Dicks, A. Evans, M. Winckler, H. Petrie, & J. Abdelnour-Nocera (Eds.), *Design for equality and justice: INTERACT 2023 IFIP TC 13 workshops* (pp. 377-387). Springer. https://doi.org/10.1007/978-3-031-61688-4_36

- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350. <https://doi.org/10.1002/smj.640>
- Tims, M., Derks, D., & Bakker, A. B. (2016). Job crafting and its relationships with person-job fit and meaningfulness: A three-wave study. *Journal of Vocational Behavior*, 92, 44-53. <https://doi.org/10.1016/j.jvb.2015.11.007>
- World Economic Forum. (2025). *The Future of Jobs Report 2025*. WEF. https://reports.weforum.org/docs/WEF_Future_of_Jobs_Report_2025.pdf
- Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26(2), 179-201. <https://doi.org/10.5465/amr.2001.4378011>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.
- Young, S. M., Anderson, S. W., & Young, S. (1995). Assessing the organizational fit of a just-in-time manufacturing system: Testing selection, interaction and systems models of contingency theory. *Accounting, Organizations and Society*, 20(7-8), 665-684. [https://doi.org/10.1016/0361-3682\(95\)00022-2](https://doi.org/10.1016/0361-3682(95)00022-2)
- Zero100. (2025). The org shape of the future isn't flat or tall - and it calls for a new type of leadership. *Zero100 Research*.
- Zhang, M., & Xu, Q. (2013). The impact of new product & operations technological practices on organization structure. *International Journal of Production Economics*, 145(2), 497-509. <https://doi.org/10.1016/j.ijpe.2013.04.023>