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Strategic decision-making at platform transitions: The case of Nokia (2010–2011)

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Abstract

Research Summary: We develop new theory on incumbent firms' strategic decision-making and the associated emotional dynamics at platform transitions. Based on in-depth interviews with Nokia's senior leaders about their decision to adopt the Windows platform in 2011, we suggest that highly capable platform companies' entry into the established phone industry invalidated senior leaders' long-held core assumptions about the industry, triggering existential anxiety and stunting self-regulation. Distinct mechanisms then influenced senior leaders' emotions toward external platform options—myopic appraisals of firm competitiveness inside a platform (vs. platform competitiveness against other platforms), appraisals of changing firm boundaries, and emotional resonance of potential partners. These emotions contributed to emotional drift, with top managers ultimately favoring the emotionally attractive option. Our theorizing extends theory on platforms, strategy, and emotion.

Managerial Summary: This research provides fresh insights into how emotions play a crucial role in incumbent firms' strategic choices, especially in the context of evolving technology platforms and major industry shifts. Our research focused on Nokia's 2011 decision to adopt the Windows platform. We discovered that when new players, like platform companies, enter a market, they can unsettle longstanding beliefs, causing anxiety and decision-making challenges among top management. Specifically, we found that executives often focus too narrowly on their firm's ability to compete within a new platform rather than the platform's overall competitiveness. Additionally, changes in company boundaries and the emotional appeal of potential partners significantly influence these decisions. Executives' analyses emotionally drift such that they start favoring the emotionally attractive options.

KEYWORDS

emotions, platform strategy, platforms, strategic decision-making, strategy making

1 | INTRODUCTION

The widespread emergence of digital platforms has important strategic implications for incumbent firms that go beyond traditional strategy making at disruptions (Altman et al., 2022; Kretschmer et al., 2020; McIntyre et al., 2021). This is partly because "digital platforms and their associated ecosystems are fundamentally transforming the competitive landscape and boundaries of markets" (Cennamo et al., 2023). Scholars have studied incumbent firms' adoption of platforms in various industries, such as transportation (Garud et al., 2022), machine manufacturing (Stonig et al., 2022), the conduct of technological innovation (Lifshitz-Assaf, 2018), advertising, consulting, recruitment, and travel (Altman et al., 2022; Kretschmer et al., 2020).

While the research on platform transitions has made major advances, the understanding of the senior team emotional dynamics and their effects on strategic decision-making at these transitions is limited. Such transitions pose unique emotional challenges for incumbent senior teams for several reasons. First, as platforms *blur or transcend industry boundaries* (Adner, 2017), incumbent top managers' core assumptions, logics, and fundamental understandings about their industry (Walsh, 1995) become invalidated. As a consequence, top managers may experience cosmological episodes[1] that refer to periods when historically fundamental competitive assumptions about the industry and the company's positioning within it are no longer valid. When an incumbent's successful business is challenged by rivals from

[1]Weick (1993, p. 633) introduced the term cosmology episode to refer to situations when "people suddenly and deeply feel that the universe is no longer a rational, orderly system." Our definition and related theorizing are inspired by Weick's work and extend it to the strategy context and platform transitions.

outside who generate value in ways that transcend industry boundaries, incumbent top managers' fundamental beliefs are challenged. Such existential episodes trigger anxiety and other negative emotions, hindering thinking and adaptive action (Weick, 1993).

Second, as platform strategy requires firms to analyze both *firm competitiveness* within a potential platform and *platform competitiveness* against other platforms (Adner, 2021, 2022), top managers' emotions can become myopic. This happens if they give more weight to their own competitiveness within a given platform and fail to consider the viability of the platform itself (see also, Porac et al., 1989; Porac et al., 1995). For example, senior teams may feel positive emotions due to their relative strength inside a given platform, even if the platform is not competitive against other platforms—analogical to feeling good about being a big fish in a small pond (see also, Katila et al., 2022).

Third, *changing firm boundaries* generate emotional reactions among top managers due to the loss of control over key activities and associated identity threats. When platform partners perform core activities, the focal firm's top managers lose hierarchical power over those activities (e.g., Altman et al., 2022). This reduced control triggers negative emotions (Scherer & Moors, 2019). Furthermore, to the extent that the incumbent's identity has been tied to those activities, their relocation outside the firm's boundary triggers identity threats and associated negative emotions (Altman & Tripsas, 2015). Indeed, case studies provide some initial evidence that at least middle managers and engineers may perceive the loss of control during platform transitions as "downgrading" (Stonig et al., 2022, p. 14), feel their identity threatened and negative emotions (Lifshitz-Assaf, 2018), and experience "emotional problems" (Ozcan & Santos, 2015, p. 1496).

Fourth, the *pronounced role of partners* in platform strategy (Adner, 2017) generates emotions associated with potential partner firms that further complicate strategic decision-making. Rationally, top managers' emotions toward a potential partner firm and its leaders should not influence top managers' analysis of the economic and technological prospects of associated options. Yet, people often associate emotions caused by one object with another object (e.g., Russell & Barrett, 1999); hence, top managers' emotions toward a potential platform partner might shape how they perceive the associated strategic option. Thus, the emotional resonance of a potential partner firm—defined here as an alignment of the partner firm's communication and behaviors with the focal firm's feelings and desires (Giorgi, 2017; Kouamé et al., 2022; Raffaelli et al., 2019)—might influence a firm's strategic choices. Indeed, research conducted on task networks between individuals has found evidence of "affective primacy" where individuals prefer to work with individuals they like rather than the most competent individuals (Casciaro & Lobo, 2008, 2015). Furthermore, research conducted in other areas of inter-firm collaboration, such as smart cities (Zuzul, 2019), post-acquisition integration (Vuori et al., 2018), and stakeholder donations to philanthropic organizations (Kouamé et al., 2022), finds that top managers' emotions toward the partner firm and its key members significantly shape their behaviors and influence their decisions.

Overall, the potential emotional challenges triggered by these four mechanisms suggest that platform transitions[2] pose significant emotional challenges for senior teams. Based on what we

[2]We use the term "platform transition" to refer to both product-to-platform and platform-to-platform transitions. Product-to-platform transitions refer to situations in which a firm that has focused on making stand-alone products adopts or creates a platform (e.g., Stonig et al., 2022), and platform-to-platform transitions refer to situations in which a firm that has been using a platform adopts an alternative platform, which potentially has broader features and capabilities. Empirically, Nokia was somewhere in between these two ideal types, as its Symbian operating system had platform-like elements, but the company had acted much like a product company. The four distinguishing qualities of platform strategy that we describe in our introduction and theoretical background apply to both types of transitions.

know about the influence of emotions on strategic decision-making (Brundin et al., 2022; Elfenbein, 2023), however, it is difficult to predict how these emotions emerge and, in turn, shape strategic platform decision-making. We lack this understanding because there has been very little research on how incumbents transition into platforms in general (Altman et al., 2022) and even fewer studies focusing on top managers' emotional dynamics during platform transitions.

To extend theory on how emotions influence strategic platform decision-making, we studied these processes at Nokia between September 2010 and February 2011. Nokia's decision-making process was initiated as its leaders reluctantly realized that their historically dominant Symbian platform was not competitive with the entries of iPhone and Android platforms. Nokia's leaders recognized three platform options: Nokia's own MeeGo platform, Google's Android, and Microsoft's Windows. Over an emotionally turbulent five-month period, Nokia's senior team unenthusiastically rejected their MeeGo platform and chose Windows, even though external advisors recommended Android. In retrospect, joining the Microsoft platform was a strategic disaster for Nokia. We induce underlying mechanisms through which this platform transition triggered strong emotional dynamics among Nokia's senior team and shaped their strategic decision-making.

Our paper makes three contributions to research at the intersection of platforms, emotions, and strategic decision-making. First, we suggest how platform transitions generate a cosmological episode (Weick, 1993) for incumbent top managers in industries that have not faced significant platform competition before. These episodes trigger substantial anxiety and undermine decision-making. Second, we specify three mechanisms through which external platform options activate emotions among incumbent senior teams and influence their platform choice. Third, we detail how emotions generated by the cosmological episode and emotions toward platform options contribute to emotional drift: a decision process that starts as rational and analytical becomes more influenced by emotions and, ultimately, leads to an emotion infused decision. While our research is limited to Nokia's platform transition, these underlying mechanisms affecting a senior team's emotional drift may also be a more general phenomenon affecting senior teams during other existential changes.

2 | THEORETICAL BACKGROUND

2.1 | Platform strategy and transitions

Given the disruptive potential of digital platforms, incumbent firms must consider their approach to platforms: whether to ignore platforms and continue business as usual, create their own platform alone or in collaboration with other firms, or join someone else's platform (e.g., Adner, 2022; Chang & Sokol, 2022; Furr et al., 2022). Such decisions have multiple elements that go beyond the scope of traditional strategic decision-making. Scholars have created and used concepts such as "ecosystem-driven open adaptation" (Altman et al., 2022), "ecosystem strategy" (Adner, 2017), and "platform strategy" (Kretschmer et al., 2020) to highlight the unique features of platform-related strategy making and platform transitions. While the theorizing on platform strategy and transitions is conceptually diverse, there is increasing consensus over elements that make platform strategies unique.

The first distinguishing feature of platforms is that they blur or transcend industry boundaries, radically changing the set of competitors and value creation opportunities for incumbent firms (Adner, 2017; Jacobides et al., 2018). For example, incumbents in the watch industry now must compete against Apple and Samsung, with Apple Watch alone outselling the entire Swiss watch industry (Forbes, 2020). Often, there is a period of ambiguity associated with platform business models because the structure of interdependencies between multiple actors changes, causing stable industry boundaries to evaporate, and firms must rediscover and renegotiate the roles of different actors in the focal ecosystem (eventually, the roles may stabilize into new industry boundaries) (e.g., Adner, 2021). In contrast, traditional strategy making typically assumes a relatively clearly defined existing industry and considers competition within the industry (e.g., Balogun et al., 2015; Kaplan, 2008).

Second, even if firm leaders realize that old industry boundaries have blurred and platforms are important, they can fail to adapt if they choose an unsuccessful platform (Adner, 2021). Ideally, they should find a strong platform (the platform is competitive against other platforms) within which they can succeed (the firm is competitive within the platform). For example, a taxi driver must choose whether to work for a local taxi platform or Uber and consider how successful the platform itself is against other platforms (whether most customers prefer the local platform or Uber) and how much competition there is within the given platform (the focal driver's share of rides inside the platform). When industry boundaries are stable, firms typically do not need to consider the first question and can simply focus on their competitiveness within their industry (e.g., "How will I become better than the other taxis?"), which is analogous to considering their competitiveness within a single platform ecosystem. However, because network effects often cause winner-take-most dynamics (e.g., McIntyre & Srinivasan, 2017) and, hence, "in an unsuccessful ecosystem, there are only losers" (Adner, 2021, p. 149), failing to join a successful platform leads to financial losses (if the local taxi platform gets very few customers, drivers in that platform receive low revenue, regardless of their competitiveness within the platform).

Third, digital platforms have radical implications for firm boundaries. Traditionally, firms have hierarchical control over value-creation activities. However, in platform ecosystems, much of the value-creating activities occur outside firm boundaries without the focal firm having full control over them. Platforms have therefore been called "meta-organizations" (Gulati et al., 2012; Kretschmer et al., 2020) in which the central firm influences activities performed by other firms with a "translucent hand" rather than the visible hand of hierarchy (and more strongly than the invisible hand of markets) (Altman et al., 2022). For strategic decision-making, this means that besides considering what a focal firm wants to offer, it must consider more extensively which activities it will perform by itself versus leave to others and how it can attract capable firms to perform those activities.

The fourth key feature is the importance of partners in platform strategies. For instance, Adner (2017) emphasizes "partner alignment as a critical strategic challenge that introduces a new dimension of consideration for traditional strategy." Firms must shift their focus from aligning goals and activities inside the firm to aligning them at the ecosystem level (Adner, 2021, chap 6). Partners are important in platform strategies because value is created by the platform ecosystem rather than an individual firm. Firms must consider which companies are willing to partner with them and, equally, with whom they are willing to partner (Dattée et al., 2018). For instance, while Microsoft CEO Steve Ballmer saw Apple and Salesforce as key enemies, Microsoft partnered with them when the new CEO, Satya Nadella, embraced platform ecosystem logic (Microsoft, 2014, 2019). When there is high uncertainty and multiple potential partners, strategy making and the associated negotiation processes are complex as firms simultaneously craft, evaluate, and negotiate options with different partners, each of whom also has their own agenda and goals. Hence, identifying and negotiating with potential partners are substantially more prominent in strategic platform decision-making than traditional strategy making.

In sum, platforms introduce distinct challenges to strategic decision-making—blurring industry boundaries, firm competitiveness within a platform versus platform competitiveness against other platforms, changing firm boundaries, and the prominent role of partners.

2.2 | Emotions and strategic decision-making

Conceptual and recent empirical research suggest that emotions can have an important role in strategic decision-making (Hodgkinson & Healey, 2011; Raffaelli et al., 2019; Vuori & Huy, 2022)—and by extension—in decisions that apply to platform transitions due to the associated high stakes and unique challenges of platform decision-making described above. However, as there is limited research on incumbents' transitioning toward platforms in general (see Altman et al., 2022 for a review), and most emotion-related strategy research has been conducted in traditional industry contexts (see Brundin et al., 2022, for a review), we have a limited understanding of how emotions emerge and influence strategic platform decision-making.

Strategic decision-makers—like all humans—experience emotions (Elfenbein, 2023). Emotions become long-lasting because the same event triggers emotions repeatedly until the situation is resolved (Izard, 2009). Emotions become shared at the group and organizational levels due to emotional contagion (Barsade, 2002), exposure to similar events (Vuori & Huy, 2016), and group and organizational identification (Huy, 2011). Emotions result from an appraisal process during which people evaluate whether and how a perceived or imagined event influences them or their organization (Lazarus, 1991; Scherer & Moors, 2019). If they perceive an impact, they experience emotional arousal. If the perceived impact is beneficial (harmful), the valence of the emotions is positive (negative). In addition, their interpretation of various additional qualities of the situation influences the specific emotion they experience. For example, if they perceive that they can fight successfully against a threat, they are more likely to feel anger than fear (Lazarus, 1991; Scherer & Moors, 2019). While we understand the appraisal process in general, existing research offers limited insight into senior teams' appraisals of the four distinguishing qualities of platform transitions and the emotions they experience as a result.

Emotions influence strategic decision-making because they influence cognitive processing and activate approach and avoidance tendencies, thus influencing how top managers attend to and interpret internal and external cues (Lerner et al., 2015; Vuori & Huy, 2022). Typically, top managers are drawn to options that trigger positive emotions and interpret such options more favorably (which can benefit opportunity seizing or lead to harmful, hubristic risk-taking) and seek to avoid threats that trigger anxiety or other strong negative emotions (which can lead to beneficial defensive actions or harmful attentional blind-spots or rigidity) (Hodgkinson & Healey, 2011; Hodgkinson & Wright, 2002; Vuori, 2024). Furthermore, group-level emotional states and moods, such as shared positive emotions and psychological safety, influence group interaction dynamics such that top managers consider and share more perspectives when they feel positive and safe (Veltrop et al., 2021; Vuori & Huy, 2016). Overall, emotions can both harm and benefit decision-making (Pham, 2007). However, while we understand these mechanisms on a general level, there is limited insight into how they influence strategic decision-making at platform transitions.

Emotions do not have a deterministic influence on choices. Senior leaders can regulate their emotions (Healey & Hodgkinson, 2017; Vuori & Huy, 2022). Emotion regulation refers to attempts to change one's own or other people's emotions to align with a desired emotion (Gross, 2014; Tamir, 2016; Troth et al., 2018; Zaki, 2020). Such self-regulation can also occur at the group or collective levels (Goldenberg et al., 2016). Top managers may seek to reduce feeling potentially harmful emotions during decision-making, limit the impact of those emotions on their decisions, or generate beneficial emotions. However, while self-regulation of emotions is possible, it is difficult: for example, Kahneman (2011, p. 131) notes that he is "not optimistic about the potential for personal control of biases." Furthermore, self-regulation is mentally consuming and, thus, a limited resource: if people self-regulate their emotions for a long time, they get exhausted, which reduces their capacity for self-regulation, and they become more vulnerable to emotional bias (Baumeister, 2002; Lian et al., 2017). Hence, it is important to understand how top managers' regulation of their emotions evolves during strategic platform decision-making.

In sum, top managers experience emotions during strategic decision-making, these emotions substantially influence the decision-making process and its outcomes, and it is possible, albeit difficult, to regulate emotions. However, these insights have been developed in the context of traditional firms and stable industry boundaries. We have a limited understanding of how top managers' emotions emerge and influence strategic decision-making at platform transitions.

3 | DATA AND METHODS

We examine Nokia's senior team's decision-making process between mid-September 2010 and mid-February 2011. During this period, Nokia was challenged by ecosystem skepticism of its historically dominant Symbian platform.[3] Nokia's senior leadership abandoned its Symbian platform in September–October 2010. They then considered three alternatives: (1) internally developed MeeGo, in which Nokia had recently started collaborating with Intel, (2) Windows, and (3) Android. They decided on Windows in early February 2011. This five-month strategic window was ideal for studying strategic platform decision-making processes because the decision was extremely important for Nokia.

Nokia built sustained dominance in the mobile phone industry between 1992 and 2007 (Appendix 1). Nokia's market share was consistently high in mobile phones (e.g., 38% in 2007) and first-generation smartphones (e.g., 49% in 2007) (Vuori & Huy, 2016, p. 16). Nokia built smartphones on its Symbian operating system between 2002 and 2010. Nokia was also developing a Linux-based operating system, MeeGo, to replace Symbian in the long term. Nokia built software services for its Symbian platform. It launched an application store in August 2008 (the iPhone AppStore opened on July 10, 2008). As Nokia's leaders believed in location-based services, they acquired a mapping business, Navteq, for 8.1 billion USD in 2008. Apple introduced the iPhone in 2007, and Google introduced the Android operating system in 2008. The application ecosystems around iPhone and Android developed rapidly. Furthermore, Android was a

[3]For simplicity, we use the terms operating system and platform interchangeably. However, to be precise, they are different technical concepts: operating system is the software that is running the hardware, such as a phone. An operating system can be a platform if it enables other applications to operate on it.

free operating system that any phone manufacturer could use. Several companies launched Android phones and rapidly took market share from Nokia (Engadget, 2010).

3.1 | Data collection

Our data consist of 97 interviews with 65 informants and various documents (Table 1). We interviewed members from several hierarchical levels, which enabled us to holistically understand the technological and factual as well as subjective and emotional elements of Nokia's platform decision-making process. This approach was beneficial in two ways: First, by interviewing many organization members, we learned key contextual and technological aspects of the decision process before interviewing top managers. Such background knowledge enabled us to go much deeper in our interviews with top managers and focus on the most crucial topics and puzzles (this was critical as top managers' availability for interviews was limited). Second, we could compare top managers' understanding of the company's situation to organization members' perspectives, which helped us both validate top managers' descriptions of the process and understand where top managers potentially had gaps in their understandings.

To form a contextually rich understanding of Nokia's strategic situation and decision process, we interviewed 46 Nokia middle managers. They helped us understand the technological and other complexities associated with the platform decision. They also helped us form an initial understanding of how the decision-making process unfolded. For example, informants told us about the challenges in the MeeGo organization and how Nokia's top management ultimately learned about them.

In parallel, we repeatedly interviewed 11 key informants, who were not in the top management team, such as board members, strategy directors, and external advisors who contributed to the decision-making process. They provided their perspectives on how Nokia's top managers' decision-making occurred. These perspectives included factual elements, such as which kinds of analyses were performed, as well as their interpretations of top managers' behaviors and actions.

Our data collection culminated in 18 in-depth interviews with eight central members of Nokia's top management team about the 2010–2011 period. In these interviews, we first asked them to describe the decision-making process in an open-ended way (Appendix 2). Such openness leads to more accurate recollection and description of events than more focused or leading questions and mitigates potential retrospective bias (Fisher et al., 2010; Miller et al., 1997; Vuori, 2018). We also asked for elaboration, explanations ("why"), and additional examples. When we interviewed the same informant multiple times, in later interviews, we asked for further elaboration and clarification on select themes and additional comments on events or details we had learned from other sources. As we had learned much about Nokia's situation in our other interviews, we did not need to ask clarifying questions related to terminology or basic technological and business issues. Rather, we could focus our follow-up questions on their subjective interpretations, emotions, and elements of the decision-making process. Our preparation made our informants more excited during the interviews, as they did not have to explain "basics" to us but could engage in in-depth reflections, which also increased rapport and openness.

Our in-depth interviews were partly enabled by the fact that after Nokia divested its phone business in 2013, executives could discuss the processes by which they made their post-Symbian decisions. We received access to their strategic decision process that would typically be kept

TABLE 1 Data sources.

Interviewed informants	Number of interviews	Year of interviews	How data were used?
Top management team ($N = 8$)	*18*	*2013–2022*	Firsthand accounts of the decision-making process and TMT perceptions and emotions
Top manager #1	1	2016	
Top manager #2	1	2016	
Top manager #3	4	2015–2021	
Top manager #4	1	2017	
Top manager #5	4	2013–2017	
Top manager #6	4	2013–2021	
Top manager #7	2	2016–2017	
Top manager #8	1	2022	
Other key informants ($N = 11$)	*24*	*2013–2018*	Firsthand accounts of key actors' involvement in the decision-making process. Triangulating perspectives on TMT emotions from actors who were close to TMT
Former top manager	5	2013–2015	
Internal ecosystem specialist, in TMT after our study period	2	2016–2017	
Board member #1	4	2014–2018	
Board member #2	1	2017	
Strategy director #1	3	2016–2018	
Strategy director #2	2	2016	
Relevant vice president #1	2	2016	
External advisors #1…4	5	2013–2022	"Involved outsider" view of TMT decision-making and emotions
Other informants for triangulation and contextualization ($N = 46$)	*55*	*2012–2018*	Factual description of events, results, company processes; organization members' perceptions as complementary perspectives to TMT perceptions of events, actions, prospects
Senior strategy and business middle managers (e.g., Senior Vice Presidents) ($N = 12$)	15	2013–2016, 2018	
Senior software middle managers ($N = 14$)	19	2013–2016	
Other middle managers ($N = 20$)	21	2012–2015	
All informants combined (*$N = 65$*)	97	2012–2022	

Documents	Number of documents	Publication years	How the documents were used
Books by Nokia insiders*	3	2013–2021	First-hand accounts of the decision-making process used as primary data and to triangulate interviews
Newspaper articles about Nokia**	>500	2007–2023	Factual description of events, results, competitors.

TABLE 1 (Continued)

Documents	Number of documents	Publication years	How the documents were used
Nokia annual reports, press releases, and other official communication	>30	2007–2011	Direct quotes from Nokia TMT as triangulating data of their perceptions and emotions
Books about Nokia***	6	2014–2017	
Academic articles about Nokia****	7	2014–2023	

*(Kallasvuo & Rossi, 2021; Ollila & Saukkomaa, 2013; Siilasmaa, 2018).
**Several Finnish and international newspapers and their websites; for example, Helsingin Sanomat, Kauppalehti, Wired, Engadget, New York Times, Wall Street Journal, Financial Times, Guardian.
***(Cord, 2014; Doz & Wilson, 2017; Linden, 2016; Nykänen & Salminen, 2014; Rusanen, 2013; Vilen & Rumpunen, 2014).
****(Aspara et al., 2023; Laamanen et al., 2016; Lamberg et al., 2014; Lamberg et al., 2021; Vuori & Huy, 2016, 2022; West & Wood, 2014).

confidential. Given that the decision process had occurred relatively recently, their recollections were rich and unlikely distorted by retrospective bias. The interviews were part of a more extensive, multi-year study where the first author had formed a trusting relationship with informants. Most interviews lasted about 60 min, and all lasted between 30 min and 2 hours. The interviews were voice recorded and transcribed, except for eight, for which we took careful notes.

We complemented the interview data with media material and other documentation. These sources included hundreds of news articles and journalistic books (e.g., Cord, 2014), academic articles and books (e.g., Doz & Wilson, 2017), and books by former CEOs and board members/chairs (Kallasvuo & Rossi, 2021; Ollila & Saukkomaa, 2013; Siilasmaa, 2018). Triangulating these multiple data sources allowed us to double-check claims informants made during the interviews.

3.2 | Data analysis

We started analyzing the data in parallel to our data collection (e.g., Gioia et al., 2013) but conducted most of the platform analytical work several years after most of the data had been collected.[4] As noted above, we iteratively developed a deeper and richer understanding of Nokia's decision-making process. This descriptive part of our analysis consisted of writing an increasingly detailed case narrative as well as several diagrams that included key events, activities, and decisions. These background data provided a backbone for our increasingly focused interviews and a foundation for more interpretative coding of our interview data.

We used open coding: We read the interview transcripts and marked first-order codes characterizing data segments (sentences and paragraphs). As we sought to generate theory that is relevant to strategic platform decision-making (rather than more a-contextual social-

[4]The rapid expansion of platform companies and advances in theory on platform strategy enabled us to analyze Nokia's decision from a new perspective and provided an opportunity to contribute the research on platform transitions. We therefore focused on this platform decision with extensive data collected earlier.

psychological theory), our coding focused on both subjective emotional dynamics ("psychology") and more factual technological and business dynamics ("strategy and platforms") (see also, Shao, 2024, p. 13). We produced over 2000 codes through such open coding. We kept initial codes close to the data to enable nuanced perceptions before abstracting them. The initial codes included specific themes such as "perceived Nokia would have a bigger role in Windows" and "rejected McKinsey advice."

For coding emotions, we used practices suggested in recent methodological (Kouamé & Liu, 2021; Vuori, 2018) and empirical papers (Pradies, 2023; Vuori & Huy, 2022). We inferred emotions from our informants' descriptions of specific events in the decision-making process. We attended to specific cues: descriptions of specific emotions (e.g., "fear"), emotion-like constructs (e.g., "quite a surprise and disappointment"), emotional charge related to issues (e.g., "a very emotional matter"), metaphorical descriptions of emotions (e.g., "everybody was crying over the decision"), and evaluative comments (e.g., "[…] a path to clear failure. That was troubling").

In parallel, we induced first-order codes into more abstract categories (Figure 1 and Appendix 3). For example, through an iterative process, we ultimately grouped first-order codes that described Nokia's leaders' reasons for emotionally liking or disliking the external platform options under second-order categories that described the associated appraisal and resulting emotion, such as "appraisals and emotions related to changing firm boundaries." We further categorized these second-order categories under the aggregate theme "appraisals and emotions toward external platform options."

As we iteratively developed these categorizations, we also considered the sequence of events (Langley, 1999). We used the case narrative and associated diagrams to track the sequence in which the different categories manifested in our empirical data. Hence, our data structure and ultimate conceptualization of the case represent not only a cross-sectional abstraction of the first-order codes but also a processual element, showing the sequences over which activities and emotions occurred. In particular, we untangle how more factual business- and technology-related factors intertwined with top managers' subjective perceptions and emotions, enabling us to explain how and why top managers came to experience emotions at this platform transition (rather than what emotions they experienced in general), and how those emotions influence their strategic platform decision-making (rather than more generic behaviors).

4 | FINDINGS

The entry of new platform competitors in the mobile phone industry had two implications: Nokia's performance declined, and the industry boundaries blurred as new competitors entered from outside the industry and offered novel services via their platforms. As Nokia's performance declined, its senior team had to consider alternatives to its historically dominant Symbian platform. Nokia's senior team strongly favored another internal platform, MeeGo, but learned through analyses that they should not choose this option. These developments were associated with cumulative emotional and cognitive strain in the senior team, consuming their mental capacity and stunting self-regulation. At the same time, having abandoned MeeGo, they had to choose between external platforms—Android and Windows. As they evaluated these two options, their emotional appraisals related to Nokia's competitiveness within a platform (vs. platform competitiveness against other platforms), changing firm boundaries, and the emotional resonance of the potential partner firms. These interrelated platform considerations

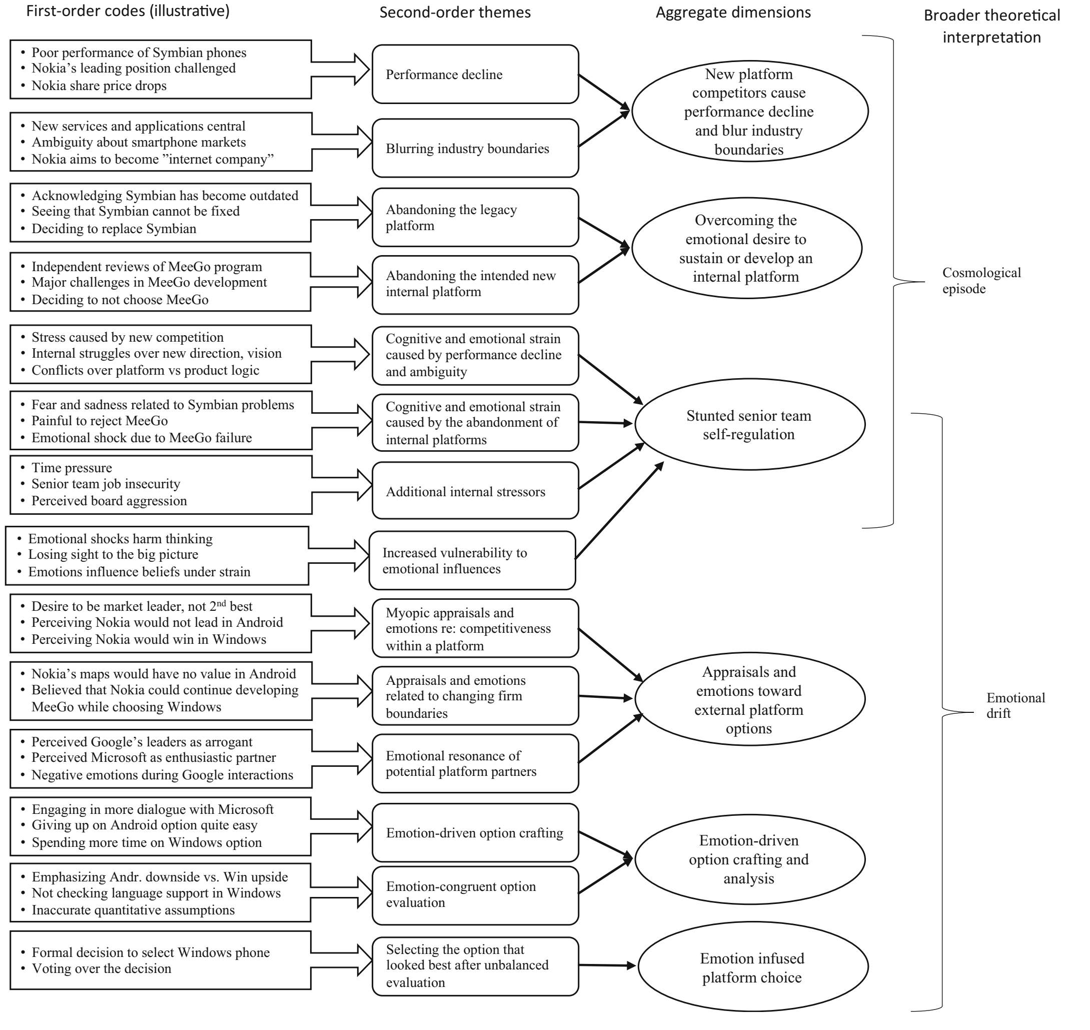

FIGURE 1 Data structure.

contributed to Nokia's senior team feeling more positive about Windows than Android. These emotions influenced their analyses such that they perceived Windows more favorably and ultimately chose the Windows platform, even though a deeply involved external advisor, McKinsey, recommended Android. This emotional drift in Nokia's senior team was, in retrospect, a strategic disaster for Nokia. We describe these dynamics following the data structure in Figure 1.

4.1 | New platform competitors cause performance decline and blur industry boundaries

The mobile phone industry changed radically when Apple and Google entered in 2007 and 2008. The industry had been dominated by specialized phone manufacturers, such as Nokia, Ericsson, and Motorola, whose expertise was more in hardware than software. Furthermore, traditionally, the phone was primarily used for making calls, whereas the new competitors' phones prioritized applications, images, and videos. Several informants described this massive change and its confusing implications. As a top manager reflected:

> It was a totally different business and a totally different environment where we were. And it happened in two years. 2007–2009, this revolutionalized totally, this market. It was not the same business anymore. Not just the market, but we were fundamentally in a different business area. [...] new things, new units, new technologies, which were substantially more complex than the rather simple mobile phone business where we had been until then [...] The whole industry changed and became really different. And this birth of the service platform and the integration of those new software layers to this environment, from there came so much complexity that was totally new.
>
> (Former top manager)

Despite the massive change in the industry, Nokia's financial performance remained relatively good in 2008–2009, as it increased its sales in new regions (e.g., Africa). Several informants described to us that these successes were used defensively in conversations about the new threats. These positive signals thus added ambiguity to the situation, as performance feedback was not uniformly negative:

> If sales went bad somewhere, the India card was always brought up. That "in Europe, [our performance] is going bad, OK, but in India, we are doing great!" So, the old portfolio, [top managers] tried to keep it alive internally by showing success stories from somewhere else, if there were problems somewhere.
>
> (Middle manager)

Nevertheless, Nokia's performance started declining as the new competitors' offerings were perceived as superior to Nokia's. In particular, Nokia's Symbian-based touch-screen devices, 5800, N97, and N8, underperformed. Its market share declined from 38% in 2007 to 29% in 2010. The company's market valuation halved from about $48B in January 2007 to $24B in August 2010.

These commercial failures, along with distrust in the CEO's vision, triggered the board to replace the CEO in September 2010. The new CEO, Stephen Elop, was recruited from Microsoft. His experience in the software business was a key reason he was chosen (e.g., Ollila & Saukkomaa, 2013). After the CEO change, one top manager resigned while the rest of the senior team remained. The new CEO committed to introducing a new strategy by Nokia's investor day on February 11, 2011.

4.2 | Overcoming the emotional desire to sustain or develop an internal platform

Nokia's leaders, including the new CEO, preferred to use the company's own platform. However, they learned that this might not be possible: First, leaders had to face the reality that their prevailing Symbian platform had become outdated. Second, after rigorous analyses, they also realized that their intended replacement for Symbian, the MeeGo platform, was unlikely to be competitive against the new platform competitors. These decisions were emotionally difficult.

4.2.1 | Abandoning the legacy platform

Nokia had built its success in smartphones with its Symbian platform. Even though the platform had limitations, top managers had not entirely accepted its demise before Elop's entry:

> This is related to admitting things to yourself. So even if you understand on an intellectual level [that Symbian should be replaced], you still won't accept it. [You continued to feel that] it can't be so that you can't turn around Symbian.
>
> (Top manager #5)

In retrospect, Nokia's underperformance against Apple and Android in 2008–2010 was attributed to Symbian's fragmentation: nearly each new Nokia phone model required programmers to develop a new version of Symbian, causing duplicate work and complexities. In addition, Symbian's fragmentation alienated external developers from Nokia's platform, which reduced Nokia's chances to offer value to end users via complementary services. Nokia had enabled third-party applications in Symbian but

> External application developers complained that if you make an application for Nokia phones, it takes four times longer than for Android. And they also complained that Nokia has ten different kinds of Symbian phones, and [the application] must be adjusted to all of them.
>
> (Software middle manager)

While they had not fully acknowledged Symbian's problems before the entry of the new CEO, the difficulties in the development of the most important smartphones, N97 and N8, in 2009–2010, started creating unease: "the thought that Symbian is worthless became stronger during the first half of 2010" (Top manager #5). When the new CEO entered, he helped top managers and organization members see and accept Symbian's weakness. For example,

> [New CEO] came to the product development and opened his suitcase containing only Apple's products. Then he presented them, how good they are, and placed Nokia's products next to them. [...] We are lagging behind quite a lot now. This was how he woke the organization.
>
> (Product development manager)

The realization that Symbian needed to be replaced was quickly acknowledged:

> [After the CEO change, Symbian's weakness was admitted because there was] a rebound or a whiplash of built-up knowledge and frustration that had not been allowed to surface before.
>
> (Top manager #2)

4.2.2 | Abandoning the intended new internal platform

While grappling with the loss of Symbian, Nokia's senior team focused on its replacement. Most top managers initially felt that Nokia's internal option, MeeGo, would be the best. The CEO also favored MeeGo as the first option (multiple informants).

> We were considering different options, Android, Windows phone, continuing with MeeGo, [board asked top management in October 2010] "What do you think our decision will become?" [...] I said, "I sure hope it's about MeeGo. We have to keep the other options alive, but our internal option and owning our operating system is always the preferred solution." [...] It was hugely my preference to have an internal option.
>
> (Top manager #2)
>
> Our desire was so that probably everybody would have wanted to get something out of MeeGo (Top manager #3)

Driven by this desire, top managers focused on confirming that MeeGo would indeed provide a viable new strategic and technological core for Nokia. They considered Nokia's internal capabilities and the preferences of potential platform ecosystem partners and complementors. The CEO and the Chief Development Officer led independent internal assessments of the technological status of the MeeGo program. However, both concluded that MeeGo had less potential than they had expected:

> As we went through that process, it became clear that the MeeGo project had gone very badly out of control. [...] Technically, the critical realization was that our internal project, that the board had all faith in, would not deliver. It was just simply on a path to clear failure. That was troubling.
>
> (Top manager #2)
>
> [We learned that] there was a competence gap in the whole [MeeGo] area, a considerable one. Much more considerable than... than at least I had realized. (Top manager #5)

In addition to evaluating their internal capabilities, top managers interacted with potential platform partners. However, these discussions led to surprising disappointments:

> For us to be able to [choose MeeGo], we would have needed support from [mobile operators] [...]. To our surprise, we couldn't get any commitment from anywhere for MeeGo apart from kind words. That was actually quite a surprise and quite a disappointment as well.
>
> (Top manager #5)

There was also uncertainty about application developers' willingness to invest in a new platform:

> In the strategy process, it was understood that this is a game of ecosystems. Meaning that you have to get all of the developers to do this, right? You have to get all of the hundreds of thousands of applications into the ecosystems, and they have to be

> good. [...] We no longer had the option to start building an [application] ecosystem around MeeGo at that point.
>
> (Top manager #3)

The outcome of these discussions and the internal capability assessment was that Nokia's preferred platform choice, MeeGo, would be infeasible. Hence, Nokia's top management had to attend to the remaining options, Windows and Android. Before we describe how they analyzed those options, we describe the emotional toll caused by the blurring industry boundaries and rejection of their internal platform options, which were considered part of the company's core.

4.3 | Stunted senior team self-regulation

Blurring industry boundaries and Nokia's performance decline, as well as overcoming the emotional desire to sustain the internal platforms, generated cumulative cognitive and emotional strain for Nokia's top managers. Furthermore, the internal decision-making context contained additional stressors for top managers. These factors together stunted top managers' self-regulation and made them more vulnerable to emotional influences in subsequent analyses.

4.3.1 | Cognitive and emotional strain caused by performance decline and ambiguity

While Nokia's leaders recognized the entry of the new competitors, the strategic implications remained ambiguous (see also, Aspara et al., 2023). The CEO stated in 2008: "[Nokia aims to] act less like a traditional manufacturer, and more like an Internet company," and further elaborated that he saw Apple, Google, and Microsoft as Nokia's new competitors (Gigaom.com, 2008). However, a top manager also admitted to us that "of course, we were still trying to figure out what becoming an internet company would mean for Nokia." The ambiguity in the definition of the internet company was visible to company members, and this ambiguity generated frustration:

> Nokia is an "Internet company," but what does that mean, you know...when they started communicating that [vision], nobody really knew anything other than to repeat that mantra [...] I'd like to know what it's really about.
>
> (Strategy middle manager #1)

Organization members perceived that their leaders' confusion in the situation caused erratic behaviors:

> [Top managers] somehow understood that something was happening, that now they should somehow be more like hippies, and they started doing these surface things that were really ridiculous. [...] This, "internet company", it went to this kind of physical office layout renewal. [...] An insane amount of energy was spent on it. [...] it was bragged that now we are using the same architect as Google [...] [the CEO until 2010] colored his hair [...] he no longer wore tie [...] he understood that there is Steve Jobs, who is like this [...] he tried to construct such a role, but it

> was somehow comical.
>
> (Strategy director #4)

The CEO also described how he was confused about industry boundaries, and how this confusion activated fear and anxiety:

> I met with Steve Jobs [in early 2010] and thought we could not discuss since we are competitors. However, Jobs said he could speak to me since "you are not my competitor." I was surprised because I thought we were competitors. I asked him, "Can you explain?" He explained that Apple is a platform company. He continued that they have been building the platform for nearly 40 years. He did not say that they are a consumer electronics company or something like that, but a platform company. He almost said that iPhone is just one detail in that platform. It is iTunes, AppStore, and so on that create the platform, and the devices are just ways to access that platform. It was a scary moment; we are not even competitors. (CEO)[5]

This quote from the CEO, along with the extended confusion about the company's new vision as an internet company, suggests that top managers experienced the blurring industry boundaries as a cosmological episode (Weick, 1993). They felt that the whole industry was changing, their understanding of who their competitors were was suddenly ambiguous, and they had limited understanding of what they should do in the new situation. This triggered fear and anxiety among the company's leaders, as also illustrated by the CEO quote above. A middle manager also told us that "[CEO] was always stressed, for example, every time when you saw him in an elevator, he seemed really nervous."

The fear and anxiety were also visible in a comprehensive "organizational health" survey conducted by McKinsey at Nokia in 2009–2010. The results were among the worst they had ever measured in any company (multiple informants). These results reflected the extreme strategic ambiguity and stress the company members felt about the company's direction under the threat posed by the blurring industry boundaries and new platform competitors.

4.3.2 | Cognitive and emotional strain caused by the abandonment of internal platforms

Besides being anxious due to the cosmological episode caused by the blurring industry boundaries, top managers' anxiety was amplified and mental resources consumed by the double blow of having to reject both Symbian and MeeGo. Despite the retrospective obviousness of the need to replace Symbian, it was emotionally challenging for top managers to accept its demise. It required painful decisions:

> We had, in making Symbian, 6-7000 people; then competitors were making similar things with 500-700 people. […] You cannot just say that "now, everyone, stand up, take a count to ten, and those who get one will stay, and everyone else should leave [i.e., be fired]." […] [Nokia shutting down Symbian development] was the largest

[5]The person who served as the CEO from 2006 to 2010 describes the same conversation also in his autobiography (Kallasvuo & Rossi, 2021, p. 250), which is why we can lift the anonymity for this example.

> downsizing process in the European business history.
>
> (Top manager #5)
>
> The Symbian decision was exceptional in the sense that it was known that the business case was bad for abandoning it [i.e., short-term financial projections were negative], that building a new operating system was much too expensive, so nobody wanted to do it. But it was just seen that it just must be done. (Strategy director #1)

Then, after rejecting Symbian, they had to reject MeeGo just a few months later. Also this decision was emotionally painful and generated anger and sadness among Nokia's leaders:

> [Rejecting MeeGo] was the most painful decision for both the board and top management team [...]. Everybody would have wanted to believe in MeeGo. [...] Everybody was crying over the decision.
>
> (Top manager #3)
>
> Abandoning the MeeGo option [...] was a very emotional matter. It was our own thing, our own development belief. (Senior internal ecosystem specialist involved in the process)

The emotional difficulty of the decision also manifested as denial among some top managers:

> People didn't want to let go of MeeGo [even after] the final deal with Microsoft [to start using Windows had been made]. [...] It was probably part of this psychology that we didn't want to completely let go of [MeeGo].
>
> (Top manager #5)

Some top management team members described the decision as a shock:

> I arrived at the [TMT] meeting [...], the decision had been made that MeeGo was not going to be able to be a competitive offering and that we're going to have to look for alternatives. [...] it was a shock.
>
> (Top manager #8)
>
> [Chief Development Officer] called [CEO] and announced that he was ready to express an opinion [about MeeGo's potential]. [CEO] replied that he, too, had made up his mind. "Come to my office," he invited [Chief Development Officer]. "You'll find me under my desk curled up in a fetal ball." (Siilasmaa, 2018: Kindle location 1689)

The shock was not just disappointment about being unable to make a preferred decision. It was a more fundamental realization that the central assumptions about the company and its potential were flawed. These realizations generated strong negative emotions such as anxiety and dread:

> My perception [of Nokia's situation] changed quite a bit [during the first months after the appointment of the new CEO]. It changed from a company in decline needing some thoughtful change to a company that was in a much bigger crisis [...]. It was really in a terrible spot. When you're looking for the emotional perception for me, I went through a shift from this is troubled to this is life-threatening

> for the company. That it was so dramatic in terms of what was going on.
> (Top manager #2)
>
> The change [from own operating system to an external one] is massive in the operative sense, psychologically massive, suddenly if you move to an external operating system, whereas earlier we were [making our own operating system]. Especially because the company self-identified as a leading [company] that produced added value and didn't only manufacture devices. (Top manager #5)

These last quotes further illustrate how top managers experienced the blurring industry boundaries and Nokia's loss of internal platforms as a cosmological episode. Much of what they had believed to be true was suddenly false. This realization generated substantial anxiety. Furthermore, even though they were able to regulate their emotional desire to sustain Symbian and MeeGo and made "rational" or "analytical" decisions about abandoning them, these decisions were emotionally consuming. This context created suboptimal conditions for further regulating their emotions when deciding between Android and Windows.

4.3.3 | Additional internal stressors

The emotional toll of the cosmological episode was further amplified by additional internal stressors that generated fear and anxiety among top managers. In particular, three qualities of the internal decision-making context further stunted top managers' self-regulation.

Time pressure

Partly due to top managers' emotional desire to choose the MeeGo platform, they had focused their time and efforts on validating this option, which consumed most of the time the senior team had before its deadline to announce a new strategy at Nokia investor day. Hence, they had little time for scrutinizing their interpretations with comprehensive data:

> [During the intense period], there had been analysis or work that had been done in a very short space of time, potentially maybe not able to get all of the information, or at least not all the correct information, given the short space of time
> (Top manager #8)

Senior team job insecurity

As the decision-making process occurred just after the CEO change, top managers experienced uncertainty about their future roles in the company. Top managers expected that the CEO would change his team after the platform decision. They felt job insecurity and fear:

> Most of the management team was sitting there waiting to see what [CEO's] next play was in terms of organization structure. […] an environment of nervousness as to when is he going to start killing the management team and bring in his own people.
> (Top manager #8)
>
> An organization had not yet been formed around [CEO], and there were no established roles, so everybody was thinking, "Who will [the CEO] replace?" (Strategy director #1)

Perceived board aggression. Top managers also perceived that some key members of the board of directors felt and displayed strong negative emotions in the situation, creating additional pressures:

> There was a bit of emotion [in the board of directors], or possibly more than a bit. But there was perhaps fear as well. [Chairman] has such a strong personality; he has his own strong opinions.
>
> (Top manager #3)
>
> [Chairman of the board] was very [challenging to deal with], you had to prove a negative with [the Chairman] because he did not have a good history with Microsoft, and I think he was quite skeptical about that [Microsoft collaboration] as well. (Top manager #7)

4.3.4 | Increased vulnerability to emotional influences

As top managers' self-regulation became stunted, they became more vulnerable to emotional influences. For example, a board member illustrated how the shock associated with MeeGo's rejection made it difficult to think rationally:

> [None of the board members] had suspected that things were as bad as they were when [CEO] dropped the bomb: MeeGo was a bust. [...] The air went out of the boardroom. Without Symbian or MeeGo, Nokia didn't have anything to carry the company forward. I was so stunned by the news that I could hardly think straight. Looking around at the others, I could see they felt the same way.
>
> (Siilasmaa, 2018: Kindle location 1689)

Top managers also elaborated on how the resulting pressures made it difficult to be comprehensive in the decision-making process:

> If you impose huge time pressure, overload people with work, and reach decisions during meetings held at night, decision-makers lose sight of the big picture [...] It was impossible to complete the [strategy-formulation] process sensibly because the time span was too short.
>
> (Top manager #6)

Top managers' job insecurity and perception that the CEO favored Windows also increased their vulnerability to emotional influences. Some top managers avoided challenging the CEO's views on the Windows option, even if they had doubts. They therefore evaluated the Windows option less critically:

> If you think about a process where you get a new CEO who says, "We'll make a new strategy, and then based on this strategy, we'll decide what our organization will look like, and here's the timespan, here's four months." So, it's crystal clear that the process might be biased [in a specific] direction because of what these subordinates believe that the boss might want to do at that point.
>
> (Top manager #6)

> [Perceived job insecurity] certainly had an impact on the way that we challenged the CEO around Microsoft. I think that had the team been a little bit more secure, if the team had felt more secure, there would have been a lot more challenging around the decision around Microsoft. (Top manager #8)

In addition, perceived board aggression caused top managers to feel pressure not to express disagreements in front of the board. They could have leveraged board members' and their consulting firm's expertise during the process, which could have provided a sanity check and thus regulated potential emotional bias. However, due to these pressures, they were unwilling to do so:

> [Our dialogue with the board] felt a bit political. What are the board's feelings? How do we influence them? "Oh, [a board member] is going to be influential; what does he think?" so it was a little bit crazy that way.
>
> (Top manager #1)

Overall, top managers' self-regulation became stunned, which increased their vulnerability to emotional influences during the decision-making process. Informants described how emotional preferences entered their debates under such circumstances:

> These decisions are so complicated that you don't have perfect information about everything. And you have beliefs. And both your rational side and your emotional side affect your beliefs. [...] What we were really talking about was our beliefs. Not so much, "I'm annoyed; it makes me angry." But I said, "I don't believe in this. I don't believe we will succeed this way, with this platform or this business model." And then I had rational arguments, but only in part. And the rest came from some much more profound, even emotional beliefs.
>
> (Senior internal ecosystem expert involved in the process)

4.4 | Appraisals and emotions toward external platform options

After Nokia's senior team rejected Symbian and MeeGo, they were emotionally exhausted and under substantial time pressure. They recognized two options: (1) Microsoft's Windows (4.2% market share in 2010 and 8.7% in 2009) or (2) Google's Android (22.7% in 2010 and 3.9% in 2009) (cnet.com, 2011). They conducted an analytical process to evaluate these options, heavily assisted by McKinsey. Nokia's leaders perceived Windows as emotionally more appealing than Android for three reasons: (1) myopic appraisals and emotions related to Nokia's competitiveness within a platform (vs. the platform's competitiveness against other platforms), (2) appraisals and emotions related to changing firm boundaries, and (3) emotional resonance of potential partner firms. These emotions, in turn, influenced their perceptions of the two options.[6] In this section, we describe how the qualities of the two options influenced their appraisals, triggering

[6]In addition to the three factors related to emotional attractiveness, short-term financial gains favored the Windows-option (related to direct payments from Microsoft as well as Nokia's chances to monetize its patent portfolio). As the impact of short-term gains is well understood and their amount was modest compared to the overall impact of the platform decision, we do not elaborate on their role in the decision-making process.

emotions that favored Windows over Android. In the next section, we describe how these emotions influenced their analytical process.

4.4.1 | Myopic appraisals and emotions related to firm competitiveness within a platform (vs. platform competitiveness against other platforms)

Nokia had been the unquestionable market leader in mobile phones for 15 years. This leading position had become central for Nokia's leaders: "Our ambition was to be the biggest. Our ambition wasn't to be Sony Ericsson." (Top manager #3). Top managers wanted to hold on to their leadership position:

> There's a lot of nostalgia for the old dominance, and quite frankly, you didn't ask me about the time leading up to 2010, but I think that was part of the problem as well. [...] People were just used to having their way and always winning.
>
> (Top manager #1)

When they considered joining the Android platform, top managers perceived they might lose the leading position (i.e., they would not be the largest company in the Android ecosystem). They appraised this as a loss, and it made them feel uncomfortable (a combination of anger, anxiety, fear, and sadness):

> There was a bias toward wanting to be a market leader. The question is do you want to be someone who leads and can change things? We believed that with Windows, you could influence the game; instead of playing with the same Legos [Android] as everyone else. It's more than... Now it is easy to see that; well, one should have seen it. But the whole Android rose only in 2009, in one year before 2010. So, why could not a new ecosystem do the same?
>
> (Top manager #5)
>
> I think that [joining Android] was just so far outside the psychological makeup of the company. It would never occur to someone to come in and present a case for being the third-best [by being one of many Android providers] [...] We were so used to being the ones in charge, the ones in control [which was believed to be impossible with Android]. (Top manager #7)

In contrast, Nokia's leaders perceived that collaboration with Microsoft would allow Nokia to maintain a leading position (i.e., they would be the largest company in the Windows ecosystem). This was appraised as a gain, which generated hope and increased the emotional appeal of the Windows option:

> We wanted to believe more in the Windows Phone because we believed that we could own 80 percent of the Windows Phone ecosystem. So, in a way, do the same thing that happened with Samsung and Android. Samsung took all of the profits out of the Android ecosystem. We believed that we could achieve the same role in the Windows Phone ecosystem so that we are the biggest and we get the profits.
>
> (Top manager #3)

These quotes illustrate how Nokia's managers' appraisals focused primarily on their chances of winning within a single ecosystem (Nokia vs. other companies within the Windows platform) rather than the platform's competitiveness against other platforms (whether the Windows platform or the Android platform would dominate the market). As they perceived that they would win within the Windows platform, their appraisals triggered emotions that favored the Windows option.

4.4.2 | Appraisals and emotions related to changing firm boundaries

A central aspect of Nokia's corporate identity had been its dominance and control over activities. For example, it had a reputation for being really tough toward its suppliers. As our informants describe, this control over the activities was important for Nokia's leaders:

> As a company, inherently, we wanted to use our own offering [...] we wanted to have control. The last thing we wanted to do was give that away to Google or Microsoft.
>
> (Top manager #8)

As Nokia's leaders compared Windows and Android options, they appraised how much of the complementary services and activities they could sustain inside their firm's boundary and control. They perceived that they would have to let go of important activities and assets if they joined the Android ecosystem. This generated loss-related appraisals and negative emotions such as anger, anxiety, fear, and sadness. In contrast, they perceived that in the Windows ecosystem, they could maintain more activities and assets inside Nokia, which generated more opportunity-related appraisals and positive emotions such as hope, joy, and pride. The two most important activities were the operating system and navigation services; corresponding Nokia assets were the MeeGo platform and Nokia's mapping and navigation software.

Nokia had been building the MeeGo platform for several years. Top managers perceived that adopting the Windows platform would enable them to continue developing MeeGo in parallel and, perhaps, return to using it later on. In this way, while the operating system development occurred temporally outside the firm boundary (Microsoft developing Windows), Nokia could also sustain the same activity (MeeGo development) and have the chance to regain full control (relaunch of MeeGo):

> In the Windows Phone thing, at least my impression is that, we were negotiating for such a possibility for MeeGo, which was entirely real. It was, in my opinion, a skillfully negotiated financial option for correctly using MeeGo. [...] it was a real option to use [MeeGo] and develop it. Then the fact that we didn't do it, it was maybe more of a passive decision than an active one.
>
> (Top manager #5)
>
> As we made the decision [to partner with Microsoft], at least I didn't have the sense that we were walking away from making our own platforms. It was positioned as temporary: "Let's get through this tight spot, and then when our stuff [MeeGo] is ready, it can complement Windows and the portfolio." Maybe that was just naiveté on my part, but it also meant that we didn't have [deep] emotional conversations. I don't think everybody in the room really knew that this meant we were getting out

> of the platform business [running Nokia's own platform]. I didn't realize it then. (Top manager #1)

In contrast, Nokia leaders perceived that if Nokia chose Android, the Android ecosystem would become the dominant ecosystem in the mobile phone business. This would permanently destroy Nokia's chance of relaunching MeeGo successfully later on, essentially preventing Nokia from keeping operating system development inside the firm boundary:

> It was not that Nokia was an independent actor. If we had chosen Android, it would have become the only dominant operating system for smartphones forever. Like Windows became dominant in PCs. Remember, we would have become a hardware vendor. Then the question is how easy it would be for Google to manage us down. The only differentiating factor is price/cost. Do you really want to be that?
>
> (Top manager #5)

Nokia's second major asset was a mapping business, which it had acquired for $ 8.1 billion in October 2007 (cnet.com, 2007). However, on November 28, 2007, less than 2 months after Nokia had announced the acquisition, Google Maps for Mobile 2.0 was released. Google's mapping application was free for users and included turn-by-turn navigation. Hence, it dramatically reduced the competitive advantage Nokia could get with its own mapping and navigation application. If Nokia had chosen Android as its platform in 2011, its leaders would essentially have had to acknowledge that their mapping application offered no additional value compared to Google Maps—meaning that all navigation-related activities would shift from inside Nokia's boundary to the outside:

> The downside of Google, at least the perception of the downside of Google, was that, of course, they were the leaders in location, and Nokia aspired to be the leader in location; and it was felt that if we aligned with Google, we could not realize those dreams. That was kind of the negative with them.
>
> (Top manager #1)

In contrast, because Microsoft lacked a mapping service, collaboration with Microsoft would enable Nokia's top managers to continue having the navigation service inside the firm boundary:

> If you believe that the map business and the worth of maps, in the Android world, the map isn't a part of it at all because Google has their own maps, and you would have had to throw it away at that point. So, it wasn't only a decision on the operating system, but you also looked at all of the other things, and now maybe the maps were the biggest thing. At that point, many in the Nokia management still had the strong impression that the maps were a really important element of information in the future, and they wanted to be involved in that game, which then led to, in a way, Microsoft enabled that cooperation, and we did cooperate so that Microsoft started using the HERE maps.
>
> (Strategy director #1)

In sum, Nokia's top managers appraised changing firm boundaries related to the two options. With Windows, Nokia could maintain a larger portion of activities inside the firm than with Android. These appraisals of firm boundaries consequently triggered emotions that favored Windows.

4.4.3 | Emotional resonance of potential platform partners

Android and Windows were not just technical platform choices that top managers analyzed. Rather, these two options were associated with the companies behind them. Nokia's interactions with them evolved such that Nokia's leaders started feeling positive emotions during negotiations with Microsoft and negative ones with Google. Microsoft's leaders seemed to communicate what Nokia's leaders wanted to hear and behaved enthusiastically, which resonated with Nokia's leaders, whereas Google's leaders' communication and behaviors did not:

> Some of it is psychological, of course, in the sense that Microsoft was very willing to sell and offered a lot, and Google was willing to give us the same as [it was giving] everybody else and like the rules said, there's no reason why we would prevent you from using this. [...] You can download it from the internet just like everybody else [...] And I'm not exaggerating a lot here, with the difference between these two negotiation partners. [...] Microsoft was prepared to do their all to prove [that Nokia can dominate the phone business with Windows], both financially and with everything else, whereas Google's approach was that you're alright to use Android, but you get nothing from us. No special treatment at all. That was a kind of hard spot.
>
> (Top manager #5)

A significant factor contributing to these emotional reactions was that Microsoft's leaders showed enthusiasm and eagerness to work with Nokia, whereas Google's leaders seemed indifferent toward Nokia or even arrogant. These partners' contrasting emotions influenced Nokia's leaders' emotions:

> Microsoft did a lot to consume our attention by being so eager. Versus Google, who were a little bit ardent, "Sure, we'll meet with you if you want us to meet with you. Yep, we're definitely interested and would like to talk to you about it." Um, but not really that eager.
>
> (Top manager #7)
>
> There was the emotional thinking that we thought, "this [Windows] will be the thing that saves us." They want to work with us, so let's work with them; this is really cool because Google was like, "nice that you come along, but we're not doing anyone any favors; everybody works under the same rules." And then, on the other hand, Microsoft was like, "no worries, we'll make different rules for you," so it was a tempting option. (Strategy director #1)

A further factor contributing to emotions toward the potential partners was the CEO's background at Microsoft. Even though top managers perceived that the CEO tried to be objective in the decision-making process, they also perceived that he felt positive about Microsoft:

> [CEO] did try to be really objective in this process. Maybe [CEO] had a pretty strong Windows perspective. [...] probably partly because of his background with Windows. It was human, in a way.
>
> (Top manager #3)

The CEO's perceived positive emotions toward Microsoft made his management team members feel similar emotions. As one of our informants described:

> There was definitely a buy-in, internally, to the Microsoft option [already during the decision process]. And that was driven, in part, by [CEO].
>
> (Top manager #7)

In sum, Nokia's leaders felt more positive emotions toward Microsoft than Google. These emotions reflected both their interactions with them and Nokia's CEO's background at Microsoft.

4.5 | Emotion-driven option crafting and analysis

The appraisals described above generated emotions that favored Windows over Android. As top managers' self-regulation was stunted, these emotions influenced how they approached the two options. They spent more time negotiating with Microsoft than Google and evaluated the Windows option less critically than the Android option.

4.5.1 | Emotion-driven option crafting

Nokia's senior leaders shaped their options through active negotiations with Google and Microsoft. The emotional appeal of the Windows option triggered more active dialogue with Microsoft than with Google:

> There was a lot more momentum happening on the Microsoft side. [...] It's probably fair to say the bias, certainly from senior leaders, like [top manager] and [top manager], was more for Microsoft.
>
> (Top manager #7)
>
> When [Windows] started to look like it was more interesting, and psychologically there was more enthusiasm for that option, it's not so easy for the people who were very deeply involved in it to see the whole situation clearly in that moment. That doesn't mean that we acted hastily, but it just often happened that [we focused more on Windows]. (Top manager #4)

In contrast, Nokia's efforts to negotiate with Google remained modest:

> Nokia gave up quite easily on Google based on Google's initial lack of enthusiasm. We did leave some stones unturned [...] it was like, "Okay, if this doesn't work, then let's take the other option [Windows]." We didn't have the will to explore a sufficient number of iterations with the same option [working with Google] before

> accepting that this option [did not work].
>
> (Board member #2)
>
> Did we exhaust every avenue [in analyzing the Google option and negotiating with Google]? No, no, I don't think so. (Top manager #7)

In this way, Nokia's senior team spent more time crafting the Windows option:

> All outsiders thought that the Windows Phone would not succeed. Rationally, you can think about things like this, but then, if you are sitting there and you have to make the choice between do I really try to make something that might succeed happen, or will I take the path of commoditization with Android where it's more likely that we will get some sort of success, but a big success is extremely unlikely. [...] The rational one leads to, "Well, I don't believe in the Windows thing, so this is doomed to failure," whereas if you yourself believe that the Windows thing might have a chance, then you might become the third player [third ecosystem], which is then a much better solution than competing in the Android world with the Chinese [companies].
>
> (Strategy director #1)

4.5.2 | Emotion-congruent option evaluation

Besides dedicating more effort to negotiations with Microsoft, Nokia leaders interpreted information in a way that favored selecting Windows. They evaluated the Windows option less critically than the Android option. They recognized the downside of the Android option during the process:

> The assumption was that we would never be the biggest in the Android ecosystem, at least within the next maybe five years. And that there [revenues] would be divided more evenly [than in the Windows ecosystem]. This was what made a huge difference in the figures. If you are not the biggest.
>
> (Top manager #3)
>
> And then, again, we have to remember the Koreans and the Chinese have always been really fast and efficient in productizing around some other software. So, getting into the Android game three years late and saying you're going to beat the total market leader in that platform wouldn't have been easy either. (Top manager #4)

But they failed to recognize several technological limitations of the Windows operating system:

> The evaluation of the Microsoft product was cursory. [...] One nasty surprise was the language support. It turned out Microsoft only supported ten languages. That's ridiculous when Nokia was trying to sell in 180 countries, but it was one example of something that nobody checked.
>
> (Top manager #1)
>
> We believed that it's possible to produce very low-end phones with Windows, which turned out to be a false assumption. There were other technical features as

well that people were just surprised weren't there. [...] The level of due diligence on the Microsoft product was quite poor. (Top manager #6)

In addition, quantitative sales predictions were highly optimistic and not thoroughly scrutinized:

> There was McKinsey, and there was a tremendous amount of material [but] how did we get those basic assumptions [...] at least in those board meetings where I was present, we didn't talk about them. [...] We took it at face value, the whole roadmap. [...] So you're not intellectually quantifying the impact of the risk, but you merely write it down. If you quantified the real impact of that risk, that might even lead to you concluding that if this is realized, the impact is so massive that we shouldn't choose this path.
>
> (Top manager #6)

Most critically, Nokia's leaders grossly over-estimated their ability to retain customers, i.e., how many current Nokia Symbian users would convert to using Nokia's Windows Phones:

> The most significant assumption that was wrong was that Nokia's brand loyalty would be that strong. [...] the owner of a Nokia phone was going to buy a Nokia phone again with a probability of x, it was always between 60 and 80. So even if you calculated and said okay, even if it would go down to 40, we have calculated enough risk. And when it fell far under those figures, so simply, the transition effort from the Symbian phone to the Windows phone was much more significant, with transferring the contacts and all that, we just didn't do enough technical work in hindsight.
>
> (Top manager #4)

4.6 | Emotion infused platform choice

Nokia's top management team voted in early February 2011 to select Windows, even though McKinsey recommended Android:

> I vividly remember the day when we made the decision because [CEO] went around the whole of the [TMT meeting participants]. It was almost unanimous in the end. [...] The only person that voted against [selecting Windows] was the McKinsey guys.
>
> (Top manager #7)
>
> I'm not saying that anybody was lying; I don't believe anybody did; I think everybody genuinely voted, but again if I look back and say, what did we do wrong? I think the due diligence was wrong. (Top manager #8)

Overall, while the final stages of the decision process—comparing Android and Windows—were heavily influenced by emotions, the roots of this emotional influence occurred much earlier: The cosmological episode triggered by blurring industry boundaries and the loss of the Symbian platform consumed top managers' mental capacity. Further, their emotional desire to

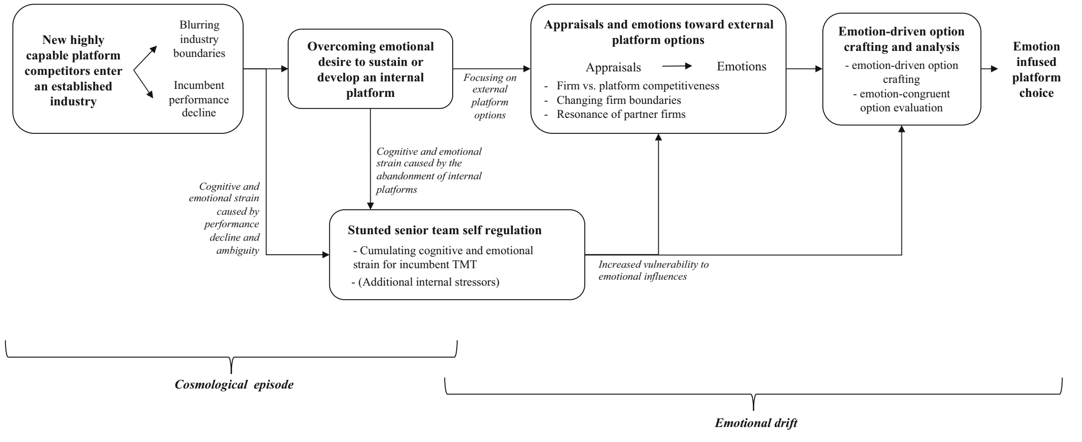

FIGURE 2 Emotional dynamics of incumbent firms' strategic decision-making at platform transitions in an established industry.

sustain the MeeGo platform focused their efforts on validating this option, taking time away from analyzing alternatives. The eventual abandonment of MeeGo triggered additional painful emotions that further consumed top managers' mental capacity. During this process, top managers became more vulnerable to experiencing emotions related to three qualities of their platform options: winning within a platform rather than across ecosystems, sustaining activities inside Nokia's boundary, and emotional resonance of partner firms' leaders. The resulting emotions caused their analytical process to emotionally drift, such that it started favoring Windows and, ultimately, culminated in an emotion infused platform choice (driven by a combination of analytical considerations and emotional dynamics).

5 | DISCUSSION

5.1 | Emergent theoretical model

In Figure 2, we induce an analytically generalizable model of incumbent firms' senior team emotional dynamics at platform transitions in industries that have not faced significant platform competition before. At platform transitions, entries of highly capable platform competitors blur industry boundaries, change the basis of competition, and cause, in turn, incumbent performance to decline. These transitions are experienced by incumbent senior teams as cosmological episodes—historically fundamental competitive assumptions are no longer valid. The associated ambiguity and performance decline trigger profound incumbent senior team cognitive and emotional strain. The cognitive and emotional strain is further amplified if incumbent leaders overcome their emotional desire to sustain or develop an internal platform.[7] These cumulative cognitive and emotional strains consume top managers' mental capacity and stunt

[7]The model assumes the senior team overcomes the desire to sustain its internal platform and focuses, in turn, on external platforms. However, if this does not happen, and the senior team remains focused on internal options, the emotional drift related to the evaluation of external options does not occur. A continued focus on internal efforts is escalation of commitment to the status quo and associated threat rigidity dynamics (e.g., Gilbert, 2005; Staw, 1981).

their self-regulation. Furthermore, additional internal stressors within the company can further erode this self-regulation capacity. Consequently, when the senior team eventually starts evaluating external platform options, they are vulnerable to emotional influences. As they evaluate external platform options, they appraise and experience emotions related to three qualities of the platform options: firm competitiveness within a platform versus platform competitiveness against other platforms, changing firm boundaries, and the resonance of partner firms. The resulting emotions may favor a subset of the external platforms and contribute to emotion-driven option crafting and analysis, during which top managers' attention and evaluations drift to favor the emotionally appealing option(s). The consequence of such emotional drift is an emotion infused platform choice, in which emotions substantially influence the choice, alongside analytical considerations.

5.2 | Theoretical contributions

Our paper makes three contributions to research at the intersection of platforms, emotions, and strategic decision-making.

5.2.1 | Platform transitions as cosmological episodes

Our findings and theorizing suggest that platform transitions generate cosmological episodes for incumbent top managers in industries that have not faced significant platform competition before. Such cosmological episodes are characterized by the collapse of core assumptions and by the associated loss of meaning and structure required for understanding what is going on and what the firm should do next (Weick, 1993). These cosmological episodes trigger substantial anxiety as top managers see that their firm is under a major threat, and they have no clear idea of how to understand or cope with it (e.g., Lazarus, 1991).

Platform transitions generate more radical changes in industries than those typically considered in strategy research. For instance, Adner (2021, p. 9) notes that "classic disruptors changed how the game was played, but they did not change the game itself." As such, cosmological episodes are particularly likely to occur in platform transitions. While previous research on platforms has studied some transition processes (e.g., Khanagha et al., 2022; Stonig et al., 2022), these studies have not detailed the actual decision-making processes associated with the transitions, let alone top managers' emotions during the processes (Altman et al., 2022). Our findings extend the research on platforms by showing how platform transitions generate strong emotional turmoil among incumbent top managers due to the strategic ambiguity associated with cosmological episodes. This turmoil is mentally consuming and undermines top managers' ability to form an understanding of the new competitive logic.

Relatedly, the research on industry transitions has studied technological discontinuities. These transitions may not be as emotionally complex as platform transitions. Platform transitions involve simultaneous changes in firm boundaries, set of partners, and competitive field (within a platform and against other platforms). In contrast, in traditional industry transitions, architectural and/or discontinuous technical change or shifts in dominant designs are discrete technical transitions that primarily have product-class competency implications (Anderson & Tushman, 1990; Henderson & Clark, 1990). For example, the analog to digital transition in imaging (Tripsas & Gavetti, 2000), traditional to lean manufacturing in DRAMs (Burgelman &

Grove, 2007), bias ply to radial tires (Sull, 1999), mechanical to quarts in watches (Raffaelli, 2019), and from internal combustion to electric engines (Secinaro et al., 2020) are all discrete, competency-related, technological transitions. While such changes may have emotional impacts on senior team members, they do not fundamentally change the underlying nature of the industry.

Our findings also contribute to the research on strategy and emotions by suggesting that the emotional turmoil generated by a cosmological episode is likely to be long-lasting and more overwhelming than emotions typically experienced by strategic leaders (e.g., Balogun et al., 2015; Brundin et al., 2022; Hodgkinson & Healey, 2011, 2022). Prior research has recognized that top managers experience emotions and that these emotions shape their thinking and interaction (Liu & Maitlis, 2014; Vuori & Huy, 2022), but not the kind of paralyzing and all-consuming emotions that emerged from our data. This contribution is important because it invites scholars to view executive emotions as a broader phenomenon tightly intertwined with incumbent fate.

5.2.2 | Platform-related mechanisms triggering emotions during option evaluation

We explicated three mechanisms influencing top managers' emotions toward external platform options. We theorized how appraisals related to firm competitiveness within a platform (vs. the competitiveness of the platform against other platforms) generate myopic emotions, how appraisals related to changing firm boundaries generate emotions that favor platforms that enable the focal firm to keep more activities inside the firm boundary (regardless of whether they add value to customers), and how partner firm emotional resonance influences top managers' emotions toward the associated platform option. Understanding these mechanisms is important because the emotions they generate substantially shape top managers' strategic platform decisions.

Platform research has recognized these qualities of platforms and argued that their consideration is important for platform success. However, while it has been recognized that it can be difficult for top managers to consider the new logic of platforms in their strategy making (e.g., Adner, 2021), scholars have not recognized the associated emotional complications. Forming a new platform strategy is not just a cognitive challenge for top managers but also an emotional one. By explicating the mechanisms that activate emotions in the platform strategy context, our findings increase understanding of how emotions influence platform-related choices. Thus, our theorizing extends research on platform strategy and transitions by suggesting key emotional mechanisms that make top managers favor one platform over another.

The mechanisms we recognize also contribute to the research on emotions and strategy by providing a more nuanced explanation of why top managers feel distinct emotions toward different strategic options. In so doing, our paper advances emotion theory that is specific to strategic management and helps understand why and how emotions emerge during strategic decision-making. This contribution has two sub-points: First, we highlight how and why top managers experience different emotions toward different strategic options, whereas prior research has often focused on the aggregate emotional state of a top management team, such as those based on traits (e.g., Delgado-García & De La Fuente-Sabaté, 2010; Van Knippenberg et al., 2010) or contextual factors, such as psychological safety (Veltrop et al., 2021) or issue urgency (Liu & Maitlis, 2014). Recognizing that top managers feel differently toward different options is important because these emotions make them approach or avoid the different options in different ways, whereas aggregate emotional states influence their generic processing tendencies. As strategic decision-making is fundamentally about making choices between options, differences in emotions toward different options must be taken into account to fully explain the impact of emotions.

Second, we specify appraisal patterns that are closely tied to the substance of strategic decisions and reflect typical features of platform decisions to explain how and why specific emotions toward specific options emerge. These mechanisms work to bridge strategy substance and emotion theory, enabling scholars to understand strategic decision-makers' emotions in a more nuanced way than what more general psychological theory would. In particular, the mechanisms go beyond the somewhat generic notion (derived from psychological theory) that options that are seen as beneficial for the firm trigger positive emotions whereas harmful options trigger negative emotions (e.g., Hodgkinson & Healey, 2011; Vuori & Huy, 2022). The three mechanisms and the associated appraisals that tie top managers' emotions to the qualities of platform options thus contribute to the research on emotions and strategy by providing a more nuanced understanding of how top managers come to emotionally favor some options over others.

5.2.3 | Emotional drift during strategic decision-making

Our third contribution is showing how the impact of emotions on strategic decision-making-evolves. Emotions did not have a continuous impact on Nokia's strategic decision-making. Instead, their decision-making process drifted toward being more emotional: Nokia's decision to abandon MeeGo countered the emotional bias favoring MeeGo. However, the emotional toll of this decision made top managers vulnerable to emotional influences. Their subsequent behaviors and analyses were shaped by their emotions, ultimately influencing their decision to collaborate with Microsoft. This temporal pattern differs from prior studies which assume that the relationship between a specific emotion and decision-making remains the same over time (e.g., Hodgkinson & Healey, 2011; Liu & Maitlis, 2014; Raffaelli et al., 2019; Vuori & Huy, 2016). We showed how the same top managers, who rationally controlled their emotions at one point in time, became strongly influenced by their emotions later. This degenerative pattern also differs from recent research, which has shown that after top managers realize that their emotions have influenced them, they learn to control them (Vuori & Huy, 2022). Where prior research has shown emotional learning, our findings suggest degeneration. This degeneration is rooted in the emotional toll caused by a cosmological episode and associated painful decisions.

Our findings and theorizing also elaborate on how emotions influence decision outcomes. Prior research has focused on emotions experienced in the actual decision-making situation. For example, in lab experiments, subjects are induced to experience some emotions and then asked to make a decision (e.g., Delgado-García & De La Fuente-Sabaté, 2010; Van Knippenberg et al., 2010), and conceptual work in strategy has drawn directly from such experiments (e.g., Hodgkinson & Healey, 2011). In contrast to suggesting that top managers' emotions during the final decision point determined the decision, our findings suggest that the processes of emotion-driven option crafting and analysis, which took several weeks, had a bigger impact. Top managers' emotions shaped their behaviors and interpretations multiple times, causing their judgment to drift toward favoring Windows.

More generally, such emotional drift can be more difficult to recognize and manage than overt emotions and associated biases during an actual decision point. Hence, research and theory should put more emphasis on emotions that shape patterns occurring before actual decision points. Such a focus on the processual and cumulating effects of emotions on strategic decision-making is consistent with temporally informed research on strategy implementation. This work has shown that change recipients' negative emotions tend to amplify over time and influence their receptiveness to organizational change (Balogun et al., 2015; Huy et al., 2014; Vuori et al., 2018).

5.3 | Limitations and boundary conditions

This research is obviously limited in its focus on Nokia at a critical point in its evolution. However, we do benefit from our unique access to a senior team grappling with a platform transition. With this idiosyncratic setting, our findings reveal novel mechanisms related to the emotional dynamics of strategic platform decision-making. While similar mechanisms could occur in other incumbents going through platform transitions, it remains for subsequent research to explore these dynamics. For example, the new capabilities provided by open innovation or Generative AI may render various firms' core capabilities and associated ecosystems irrelevant—analogical to Android and iPhone making Nokia's platforms outdated—and trigger cosmological episodes for these incumbents.

A significant question for future research is when external changes are likely to trigger cosmological episodes in firms. In Nokia's case, the change was radical in multiple ways, as the emergence of digital platforms simultaneously changed various aspects of the phone industry and its boundaries. In addition to changing a core capability (platform software), there was a change in complementary assets (efficient manufacturing and logistics became less important), new relationships with complementors (application developers became more important), and completely new competitors (Google and Apple, instead of traditional phone makers). Furthermore, adopting an external platform was emotionally difficult for Nokia's leaders because Nokia was already developing its new internal platform (MeeGo), which amplified the anxiety triggered by the cosmological episode. This suggests that, when facing several simultaneous external changes, firms that have heavily invested in a future core capability that is suddenly replaced by the new external solution are more likely to experience cosmological episodes than firms that have not.

Furthermore, we have theorized how emotions influenced the strategic decision-making process that ended with Nokia choosing the Windows platform. In so doing, we have focused on mechanisms through which emotions infused into the analytical decision-making process. Our intention is not to argue that emotions were the only factor that influenced the final decision but to show how emotional drift occurred and became significant. Future research should investigate under which conditions emotional drift is particularly strong and how senior teams can reduce its potentially biasing effects.

Finally, the Windows platform was, ex post, not successful. However, we cannot establish if Nokia would have been better off by choosing Android. Furthermore, there is no empirical certainty about why the Windows platform failed. In any event, our findings reveal novel mechanisms related to emotional dynamics of strategic platform decision-making independent of the actual decision outcomes.

5.4 | Managerial implications

Incumbents in various industries will face new platform competitors. Their leaders should anticipate cosmological episodes as the industry boundaries melt away and value gets created in unexpected ways. Proactive incumbents can exert agency and drive platform transitions. They can proactively deal with boundary conditions and associated control issues (e.g., Adner, 2022). For others, developing new sensemaking and emotional capabilities is crucial, as they rapidly reconstruct a new understanding of the changing playing field and find feasible new directions for their firm. The emotional capabilities likely include both emotion regulation, such that they can continue thinking despite being overwhelmed, and emotional recovery. Partnering with boards, shaping senior teams, and using trusted external advisors to understand these cosmological episodes may also be helpful. Such partnering can be helpful, though, only if incumbent senior teams admit these external allies into their decision-making processes.

The new sensemaking and emotion regulation capabilities could build on the three mechanisms through which external platform options trigger emotions. Top managers could recognize that they are likely to focus too much on their competitiveness inside a potential platform, on keeping activities inside firm boundaries, and on working with firms whom they like. When comparing their options, they should explicitly challenge their emotional preferences along these dimensions and mitigate against potential bias. They could reframe their thinking and aim to co-create a successful platform together with others—and learn to cherish the success of the platform, not just their own firm.

6 | CONCLUSION

Strategic platform decisions trigger emotions via previously under-investigated mechanisms. When platforms undermine incumbents' performance and blur industry boundaries in industries that have not faced significant platform competition before, incumbent top managers experience a cosmological episode and associated overwhelming anxiety. When they consider external platform options, their appraisals generate emotions that favor options that enable them to win inside a platform (regardless of platform success) and maintain activities inside the firm's boundary, and they prefer to work with firms they emotionally like. Even if top managers were able to overcome some emotional biases during strategic platform decision-making, over time, the cumulative emotional toll of the cosmological episode and emotions toward different options likely contribute to emotional drift, such that top managers' option crafting and evaluation becomes more influenced by their emotions. If left unchecked, this emotional drift can have catastrophic effects on firm outcomes.

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DATA AVAILABILITY STATEMENT

Research data are not shared due to privacy restrictions.

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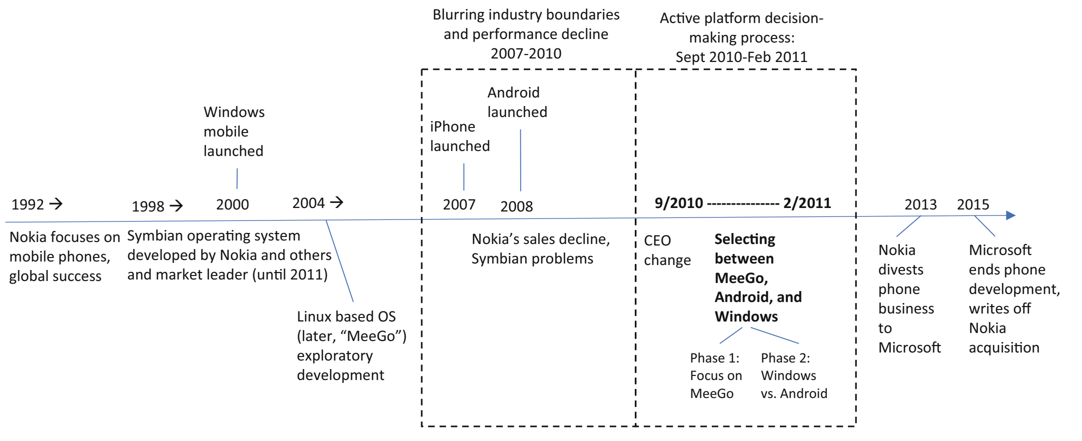
APPENDIX 1: CASE TIMELINE



APPENDIX 2: ILLUSTRATIVE INTERVIEW PROTOCOL

- Could you please describe how you reacted to the news about the iPhone?
- Can you describe the strategy making process after iPhone's entry?
- Elaborating questions such as:
  - Can you please provide an example?
  - Why did you think/do like that?
- Could you please describe the decision-making process that started after Elop's entry to Nokia?
- Elaborating questions such as:
  - What were some of the key elements of the process?
  - Why did you [take that specific action or think about it like that?]
  - How did you consider the risks associated with each option?
  - Did everyone agree or where there different perspectives?
  - How was the board of directors involved in the process?
  - How did you reach the final decision?
- [questions about the 2012–2013 decision-making process that led to the divestment of the phone business—this part of the interview is outside the scope of this study]
- How would you compare the 2012–2013 decision-making process that led to the divestment of the phone business to the decision-making process that led to the selection of Windows in 2011?
- Elaborating questions such as:
  - You said that [xxx]. Can you provide an example?
  - What do you think caused [a specific difference] in the processes?
  - How do you think [a specific difference] influenced the process?

APPENDIX 3: ADDITIONAL DATA

Aggregate dimension/second-order theme	Illustrative interview quotes and other data
New platform competitors cause performance decline and blur industry boundaries	
Performance decline	Trustedreviews.com review on N97 smartphone, which was announced on Dec 2008 and launched in Jun 2009: "the touch version of Symbian feels as if it is running to catch up with the best of the competition and lagging some way behind." https://www.trustedreviews.com/reviews/nokia-n97 Techradar.com review on N8 smartphone, which was announced on Apr 2010 and released on Sept 2010, shows how Symbian lacked in quality: "Nokia's reputation as a leader in the smartphone market has been under increasing pressure in recent years, as a string of 'high end' handsets have failed to capture the minds and wallets of the phone-buying public [...] Symbian has been used by the Finns for umpteen years, and hasn't gone through a huge amount of development in that time. [...] [while the new version of Symbian] certainly fixes the foibles from older iterations of the UI it doesn't quite pack the pizzazz of other smartphone interfaces on the market." https://www.techradar.com/reviews/phones/mobile-phones/nokia-n8-692448/review
Blurring industry boundaries	Without a thorough grasp of platform software, ecosystems, and applications, Nokia's senior management team lacked a strategic understanding of where the industry was heading [in 2007]. (Doz & Wilson, 2017, p. 116) I worked on a project called map horizontalization [in 2009] [...] thinking about whether we should offer Nokia maps for the iPhone and Android [...] There was a very strong reason for it, the map service was seen as an information platform [...] from the services point of view, it's clear that you should have it as many platforms as possible [...] if you look at it from the smart phone point of view, the argument is that we have the world's best maps, we can bundle that with our phone and sell it for more money so it's [providing Nokia maps services on Android and iPhone] out of the question. That was the internal struggle going on. (Strategy middle manager #2)
Overcoming the emotional desire to sustain an internal platform	
Abandoning the legacy platform	Symbian was way past its best-before day [when the new CEO started in September 2010], in desperately bad shape. The whole company knew that; everybody was talking about it [when the new CEO started]. [People had not openly spoken about it before] because of the forces coming from certain senior leaders, you weren't allowed to say it or do something about it. (Top manager #2)

Aggregate dimension/second-order theme	Illustrative interview quotes and other data
	[Nokia announced in June 2010 that it will stop using Symbian in its N-Series high-end smartphones after the release N8 smartphone (which was ultimately released in Sept 2010)] https://www.is.fi/taloussanomat/art-2000001677071.html Symbian's lack of competitiveness was already known [when the new CEO started], so we understood that if we were going to be competitive in the smartphone offerings, we were going to need to find an alternative. (Top manager #8)
Abandoning the new intended internal platform	When [new CEO] came in, there was a desire to do a deep dive on strategy and what our best options were. [...] [EVP] came back with an analysis that said it [launching MeeGo successfully] would be very difficult and we would probably be late and not competitive. (Top manager #1) A delegation went out to talk with the customers, to talk with other [phone companies] [...] Then, just, unfortunately, the process ended up so that nobody supported MeeGo. We would have been entirely alone with that. Even though it would have been, like we believed, by far the best solution, of course. (Top manager #3) [Nokia] appears to be moving its focus away from Meego, evident in the announced exit of Alberto Torres, who was responsible for responsible for developing solutions and devices based on the MeeGo platform. (Forbes, 2011-02-11) https://www.forbes.com/sites/parmyolson/2011/02/11/nokia-and-microsoft-announce-strategic-partnership/?sh=1d8e58be2e9e
Stunted senior team self-regulation	
Cognitive and emotional strain caused by performance decline and ambiguity	One thing is that [the CEO until 2010] told [...] that now he understands the true essence of the business at the moment. He had just had a meeting with Google's or Facebook's young CEO [...] in Silicon Valley, as they had sat face to face. The 25-year-old guy had sat opposite to him, in loose jeans and very laid-back presence. And started to throw ideas to him, and he had thought, while tightening his tie, that maybe, I don't know, he had to transform. [laughter] (Finance director) You were no longer in a single business [in 2007–2010], because there was no single business that would've been the mobile phone business reaching from those 15 euro cell phones all the way to Vertu [luxury phones with prices over 10.000 USD]. [...] there was a lot of internal... certain kind of confrontation and the sort of... friction and tension. [...] caused in part exactly because we had these different businesses, which in a sense were not... it wasn't admitted, or they were not allowed to be different businesses. And to have different drivers and all that. Instead, when you're trying to stuff all of these into the same vehicle, you'll start

Aggregate dimension/second-order theme	Illustrative interview quotes and other data
	to hear some noise. (Vice President working close to the CEO)
Cognitive and emotional strain caused by the abandonment of internal platforms	Our fundamental interest was to have our own offering, so then suddenly to say that the two offerings we had, Symbian and MeeGo, that neither one was going to be able to satisfy our needs, that was a shock. (Top manager #8) It ultimately came down to some presentation. I think, disappointingly, the MeeGo option was kind of taken off the table right away based on [EVP's] analysis that we were not going to be competitive, which I think ended up being a mistake. (Top manager #1)
Challenging internal context	*Time pressure*: [During the intense period], there had been analysis or work that had been done in a very short space of time, potentially maybe not able to get all of the information, or at least not all the correct information, given the short space of time, and then we were back again kind of making decisions, again, just literally a few days later. (Top manager #8) *Senior team job insecurity*: There was a high level of sensitivity within the [TMT] [...] waiting for him to kind of make some decisions where he would start to sack the management team. So everyone was a little bit hesitant; not everybody was going to be so open, and put themselves out there completely, because there was this general kind of (Top manager #8) *Perceived board aggression*: The chairman was characterized as a "short-tempered, raging, and angry" person by several former Nokia leaders in a newspaper article in 2015: https://www.kauppalehti.fi/uutiset/jorma-ollila-akkipikainen-meuhkaava-pitkavihainen-mies/c7ad3bdb-823d-35b4-a533-664b34d559c7
Increased vulnerability to emotional influences	In hindsight, the whole decision was too big to be made so quickly. That's the biggest mistake that was made. But I didn't say anything at that time either. I didn't say, "We need a timeout." (Top manager #4) Of course, it's crystal clear that no management team would [express disagreement] in front of the board [laughs] because individuals who disagree wouldn't even be invited to the meeting. Or, if they were expressing strong disagreements, they most likely wouldn't be invited to subsequent meetings. (Top manager #6)
Appraisals and emotions toward external platform options	
Myopic appraisals and emotions related to firm competitiveness within a platform	With the Windows ecosystem, we felt that we could [...] be an orchestrator, a very strong partner to Microsoft, to create something that was not only Microsoft's but also ours. [...] there was this perception that we would be a bigger, stronger player of [Windows ecosystem] than ultimately it ended up being. (Top manager #8)

Aggregate dimension/second-order theme	Illustrative interview quotes and other data
	On the Microsoft side the dynamics were very different [from the Google side]. All manufacturers except Nokia had gone to Android. Microsoft was willing to put billions of dollars of investment in and you can see that refereed in announcements at the time. We were their lead provider, they had to do features that we needed done. (Top manager #2) And then, again, we have to remember, the Koreans and the Chinese have always been really fast and efficient in productizing around some other software. So, getting into the Android game, 3 years late, and saying you're going to beat the total market leader in that platform, that wouldn't have been easy either. (Top manager #4)
Appraisals and emotions related to changing firm boundaries	We decided on Windows because, at that point, Nokia's and Microsoft's assets were very much complementary. For example, Microsoft didn't have maps, and Nokia had HERE, and so on. So, they fit well together. (Top manager #4) Everybody felt that this [the deal with Microsoft] was a temporary arrangement. We had signed a 10-year contract, but we had […] put in these breakpoints so that we wouldn't lose control over our destiny. Most of us who'd been there for a while were very hopeful that we could manage our way out of the situation. (Top manager #7) There is a higher level, a second level of discussion, I like to call that the strategic chessboard where you're taking a step back and saying, "Okay, we own a phone business […], and we own this mapping and navigation business […]. You start to think through, and you have to think through," "If we make this decision with the phone, […] What do we do with Navteq that ultimately became HERE [Nokia's mapping business]? What value do they have?" (Top manager #2)
Emotional resonance of potential platform partners	It was, of course, obvious that [CEO] had good contacts with Microsoft. And that might have been the case. … it's possible he had a bias toward Microsoft, and usually, the CEO, of course, should have a vision. (Top manager #4) We felt that we would just become a minion to Android, and Google would then be the puppet master, and we would just be doing everything that they want. (Top manager #8) Our conversations with Google, with [Google's top manager] in particular, his basic message to us was, "You will end up going Android sometime or other. The numbers are already clear; Android has won the war. It's already over." […] as arrogant as that sounds, he was largely right [in retrospect]. (Top manager #2)

Aggregate dimension/second-order theme	Illustrative interview quotes and other data
Emotion-driven option crafting and analysis	
Emotion-driven option crafting	We had done our homework [...]. But the momentum never really got going with Google [...] I remember getting a little frustrated at one point because [the person leading Android analyses inside Nokia] had not involved anybody from my team [even though we could have contributed substantially]. (Top manager #7) The Microsoft option got quite a bit more weighting in our consideration. (Top manager #2)
Emotion-congruent option evaluation	It was a surprise, for example, that the Windows platform didn't support an external memory card. Here in the Western world, it doesn't matter [...], but in India, the phone is your only computer; it makes a huge difference. So those things came up. (Top manager #4) We were asked to do the analysis on Google. And when we did the analysis on Google, we presented it, but there's always a bias, right? You know, you can sway very objective data until it's compelling. I think when the management and [top manager] and [top manager] were biased toward Microsoft [this happened]. (Top manager #7)
Emotion infused platform choice	
Selecting the option that looked best after emotion-driven process	[Nokia announced on February 11, 2011, that it will form an exclusive partnership with Microsoft and start producing Windows phones.] https://www.wired.com/2011/02/microsoft-and-nokia-team-up-to-build-windows-phones/ With one exception, they all [top managers] voted for Microsoft. [...] The one person who disagreed was the McKinsey consultant. (Siilasmaa, 2018: Kindle location 1786)