

Chance, Strategy and Change: The Structure of Contingency in the Evolution of the Nokia Corporation, 1986–2015

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Introduction

- Chance has become an increasingly important issue in strategic management
 - Chance is hard to study since chance events typically emerge without any obvious design (de Rond & Thietart, 2007)
 - Earlier literature has mainly focused on the effects of chance on strategic outcomes
- We analyze **organizational processes related to chance**
- We focus on what Ermakoff (2015) calls the structure of contingency
- We analyze two periods of strategic change in the history of Nokia Corporation
 1. Process that led to the elimination of core businesses in early 1990s and decision to focus on mobile phones
 2. Process that led Nokia to sell its globally dominant core business of mobile phones to Microsoft in 2010s



Theoretical background

- Chance refers to an “event happening in the absence of any obvious design (or randomly), one ... of which the cause is unknown” (de Rond & Thietart, 2007: 535–536)
 - *Chance event is an occurrence that is unexpected, unanticipated, and unforeseen, a priori, to most members of the organization*
 - Chance is closely linked to luck and serendipity
- Chance and strategy
 - Majority of strategic management studies that discuss chance have focused on the effect of chance events on strategic outcomes such as firm growth, performance, or survival (Denrell et al., 2015)
 - Studies that focus on change and strategic choices
 - Chance events alter the feasibility of the firm’s current strategy (MacKay & Chia, 2013)
 - Chance events elicit new opportunities for strategic renewal (de Rond & Thietart, 2007)



Theoretical background

- We draw from historical sociology that addresses chance (Ermakoff 2015, 2019) and strategic management literature focusing on the role chance in strategic choices and conduct (de Rond & Thietart, 2007; MacKay & Chia, 2013)
- We draw especially from the concept of the **structure of contingency** (Ermakoff 2015) which refers to processes by which chance emerges and exerts its influence on agents' strategies, behavior, and choice
- Key concepts of our framework:
 - **Periods of collective indeterminacy** where different scenarios emerge but no decision is made because of conflicts of interest or mutual uncertainty
 - **Scenarios** that represent different options for strategic choice during collective indeterminacy
 - **Direct and indirect effects of chance** – chance events directly influence scenarios or indirectly set off event sequences that influence scenarios



Methodology – Context and data

- Research Context: Key Strategic Changes in the Nokia Corporation 1986-2015

1. Nokia’s transformation into a mobile telecom corporation during 1989-1992
2. Nokia’s decision to sell mobile phones to Microsoft in 2012-2013

Two decisions that came somewhat as a surprise

- Data collection

- We used three techniques that are commonly used in historical case studies (Kipping, Wadhvani, & Bucheli, 2014)
- Table 1 provides a summary of data sources

TABLE 1 Summary of Data Sources

Description	Sources	Dataset	Purpose
<i>Secondary sources</i>	Academic publications, biographies of former key executives, studies by former Nokia managers	2490 pages of material	Making sense of the events and their relationships, situating events in a timeline, and orienting archival work and interviews
	Media coverage and articles in professional magazines (e.g., Helsingin Sanomat, Talouselämä, Kauppalehti Optio, NET, Suomen Kuvalehti, Forum för Ekonomi och Teknik; Tekniikka ja Talous)	2343 pages of material	
	Annual reports, SEC filings and other official documentation	4797 pages of material	
<i>Archival data</i>	Data from Nokia corporate archives until the year 2000	8826 pages of material	Understanding past events as they happened, understanding personal viewpoints and reactions to events, and recording key decisions
<i>Interviews</i>	Interviews with former Nokia top managers, members of the board of directors, and key technology analysts	28 interviews, 702 double-spaced pages	Filling gaps in archival work, testing emergent theory on informants, and getting an insider perspective on the events



Methodology – Analysis (1/2)

Stage 1: Identifying periods of collective indeterminacy and alternative scenarios

- We wrote narratives to make sense of the events (Pentland, 1999) and bracketed periods where Nokia's top management lacked collective direction (Langley 1999)
- We identified alternative decision-making scenarios from documents and interviews pertaining to the period

Stage 2: Analyzing event sequences leading to alternative scenarios

- Event structure analysis (Corsano & Heise, 1990; Heise, 1989) to trace events leading to different scenarios
 1. Coding narratives into event chronologies and triangulating individual events (see appendix of the paper)
 2. Identifying chance events (see Tables 2 and 3)
 3. Analysis of event relations using the ETHNO program
 - The process generates a network of necessary antecedents
 - Includes iterative addition/removal of events to identify prerequisite events for the scenarios

Event structure analysis using ETHNO focuses on analyzing the event chronology forward, while answering a series of yes/no questions to determine which events are required for the current event to occur (Griffin 1993)



Methodology – Analysis (2/2)

Stage 3: Closure of scenarios

- Identifying events and event sequences that influenced the viability of scenarios
 - Focus on the closure of alternative scenarios and the eventual decision
 - Event structure analysis to trace how parallel events influenced the viability of scenarios
- Integration of the two event sequences to understand how scenarios emerged and how parallel events closed scenarios and influenced the final choice

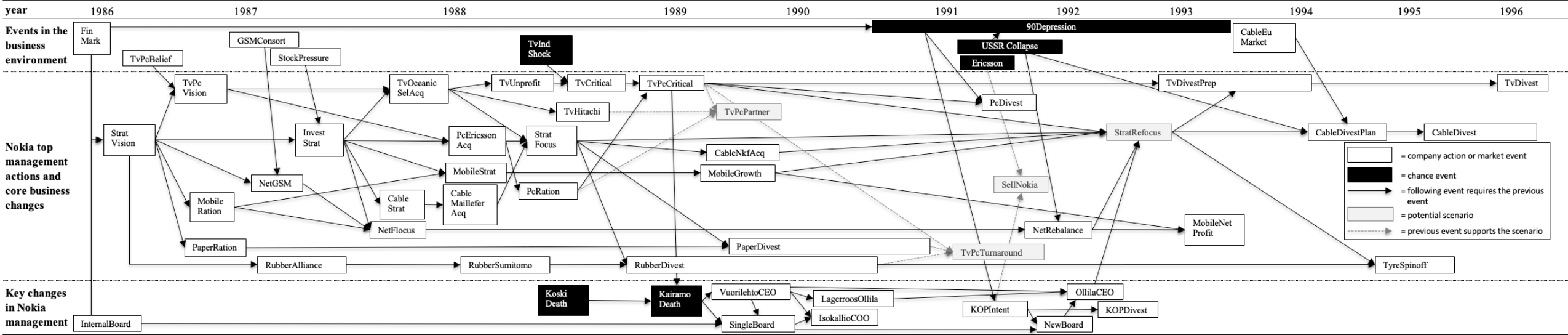
Stage 4: Analytical generalization and theory development.

- Comparison across event sequences
- Identification of how chance influenced different scenarios and how different coalitions of the top management supported and opposed scenarios
- Led to the discovery of how chance events and political dynamics produce strategic change



Nokia's transformation into a telecom company 1989-1992

During late 1980s Nokia made major investments in computer and TV businesses that eventually led to heavy losses and suicide of the CEO Kari Kairamo that left a power vacuum in Nokia



[White box] = company action or market event
 [Black box] = chance event
 [Arrow] = following event requires the previous event
 [Grey box] = potential scenario
 [Dashed arrow] = previous event supports the scenario

Short description of event codes (full description is presented in an Appendix):

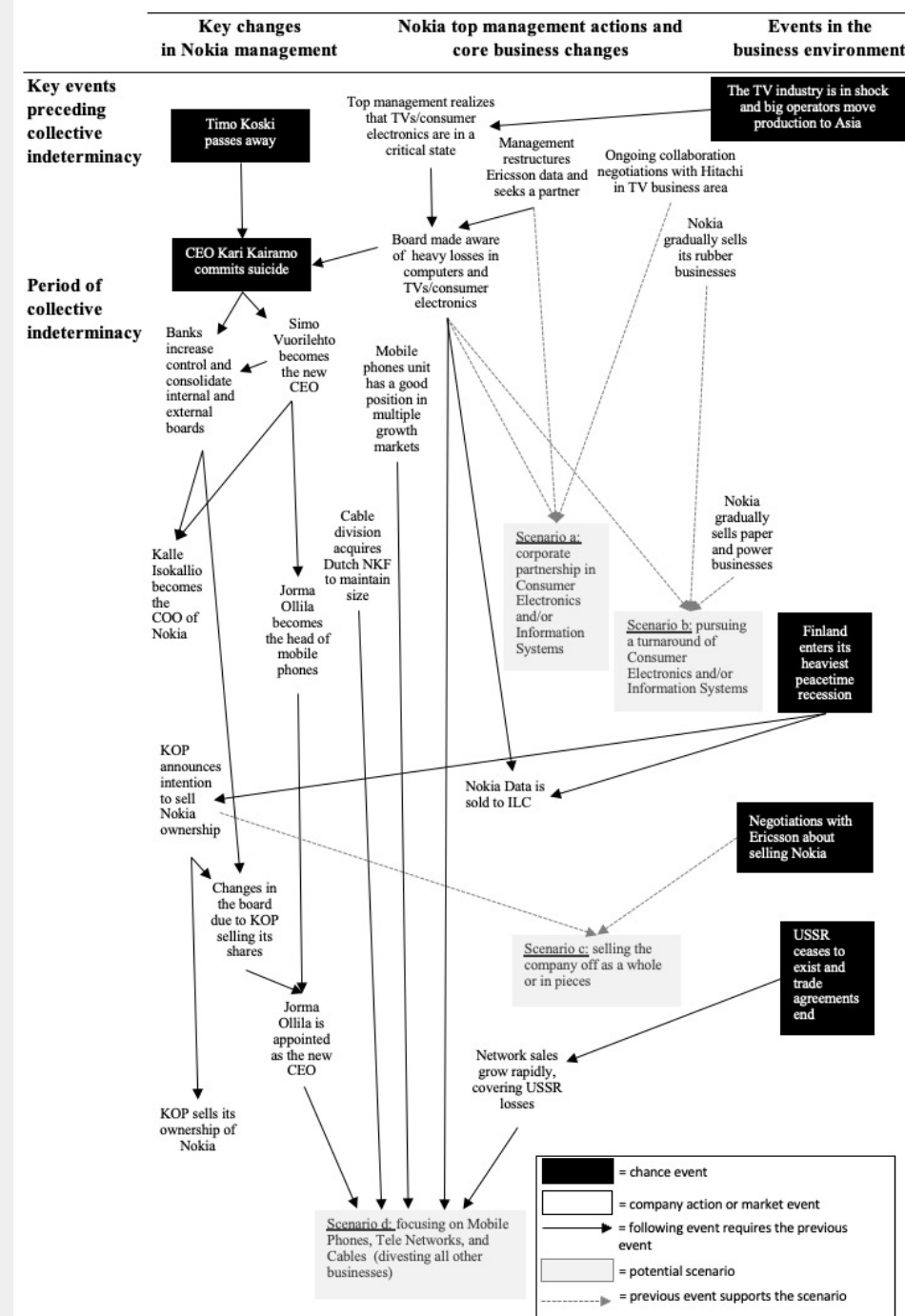
FinMark	The Finnish financial markets are deregulated	TvOceanicSelAcq	TV division acquires Oceanic and SEL	KairamoDeath	CEO Kari Kairamo commits suicide	Ericsson	Negotiations with Ericsson on selling the company
InternalBoard	Administrative council formed, while internal board runs the company	CableMailleferAcq	Cable division acquires Maillefer	VuorilehtoCEO	Simo Vuorilehto becomes the new CEO	SellNokia	Scenario: Nokia is sold whole or in smaller pieces
StratVision	Concern vision outlines strong growth, mainly from acquisitions	MobileStrat	Mobile phone unit assumes risky growth strategy	TvPcPartner	Scenario: Nokia seeks partnership in TV and/or PC area	NetRebalance	Network sales grow rapidly and cover USSR losses
TvPcBelief	Widespread belief that TV and computer will be frontrunners	PcEricssonAcq	Nokia acquires Ericsson data	SingleBoard	Banks consolidate internal and external boards	NewBoard	Changes on the board due to KOP selling its shares
TvPcVision	Vision that televisions and computers will dominate tech development	RubberSumitomo	Collaboration with Sumitomo initiated	MobileGrowth	Mobile phone unit has a good position in multiple growth markets	OllilaCEO	Jorma Ollila is appointed as the new CEO
PaperRation	Paper and power business is directed towards internal rationalization	StratFocus	TVs, IS, and Cables are core businesses	CableNkfAcq	Cable division acquires Dutch NKF to maintain size	KOPDivest	KOP sells its ownership of Nokia
MobileRation	Mobile phone undergoes rationalization, networks moved out of the unit	TvUnprofit	TV division unprofitable and cost-cuttings stall	PaperDivest	Nokia gradually sells paper and power businesses	StratRefocus	Scenario: Refocus to mobile phones, networks, and cables
GSMConsort	European consortium settles on GSM as the new standard	PcRation	Nokia management restructures Ericsson data	IsokallioCOO	Kalle Isokallio becomes the COO of Nokia	TvDivestPrep	Consumer electronics under preparation for sale
NetGSM	Network development is focused on GSM, other projects are scrapped	TVHitachi	Negotiations on collaboration with Hitachi	LagerroosOllila	Vuorilehto fires Lagerroos and makes Ollila head of mobile phones	MobileNetProfit	Mobile phones and networks start to cover TV losses
RubberAlliance	Rubber division focuses on alliance strategy to build collaborations	TvIndShock	The whole TV industry faces a shock	90Depression	Finland enters its heaviest peacetime recession	CableEuMarket	EU market opening floods the market with products
StockPressure	Listing on London Stock Exchange brings growth pressures	KoskiDeath	Timo H.A. Koski suddenly passes away	TvPcTurnaround	Scenario: turnaround of TV and/or PC area is attempted	CableDivestPlan	Top management decides to sell off the cable business
InvestStrat	Investment focused on accelerating short-term gains in growth areas	TvCritical	TV business in critical state due to heavy losses	PcDivest	Nokia Data is sold to ILC	TyreSpinoff	Nokia tyres spin off as a separate company
NetFocus	Mgmt buys full ownership and restructures the unit	RubberDivest	Nokia gradually sells its rubber businesses	KOPIntent	KOP announces their intention to sell their ownership of Nokia	CableDivest	Cable business is sold to international investors
CableStrat	Strategy to attain market leadership in cable machines	TvPcCritical	Heavy losses in computer and TV businesses	USSRCollapse	USSR ceases to exist and trade agreements end	TvDivest	Nokia sells off the TV business to Semi-Tech



Nokia's transformation into a telecom company 1989-1992

The top management experienced collective indeterminacy and several alternative scenarios emerged over time:

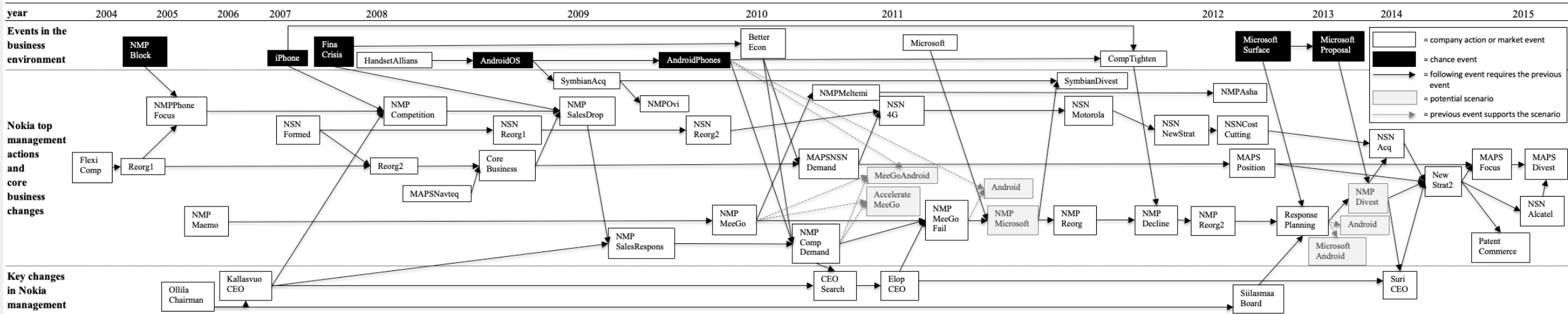
1. Entering a corporate partnership in Consumer Electronics and/or Information Systems
 - Ongoing collaboration negotiations with Hitachi
2. Pursuing a turnaround of Consumer Electronics and/or Information Systems
 - A do-it-yourself alternative to the first scenario
3. Selling the company off as a whole or in pieces
 - This was negotiated with Ericsson when the opportunity emerged
4. Focusing on Mobile Phones, Tele Networks, and Cables (divesting all other businesses)
 - Initially this seemed very unlikely to happen





Nokia's decision to sell mobile phones to Microsoft in 2012-2013

During 2007-2010 Nokia focused on Symbian that was becoming rapidly outdated and they missed the emergence of ecosystems. In 2010 it was realized that cost-cutting initiatives by CEO Kallasvuo had not addressed the main problems and new direction was needed



Short description of event codes (full description is presented in an Appendix):

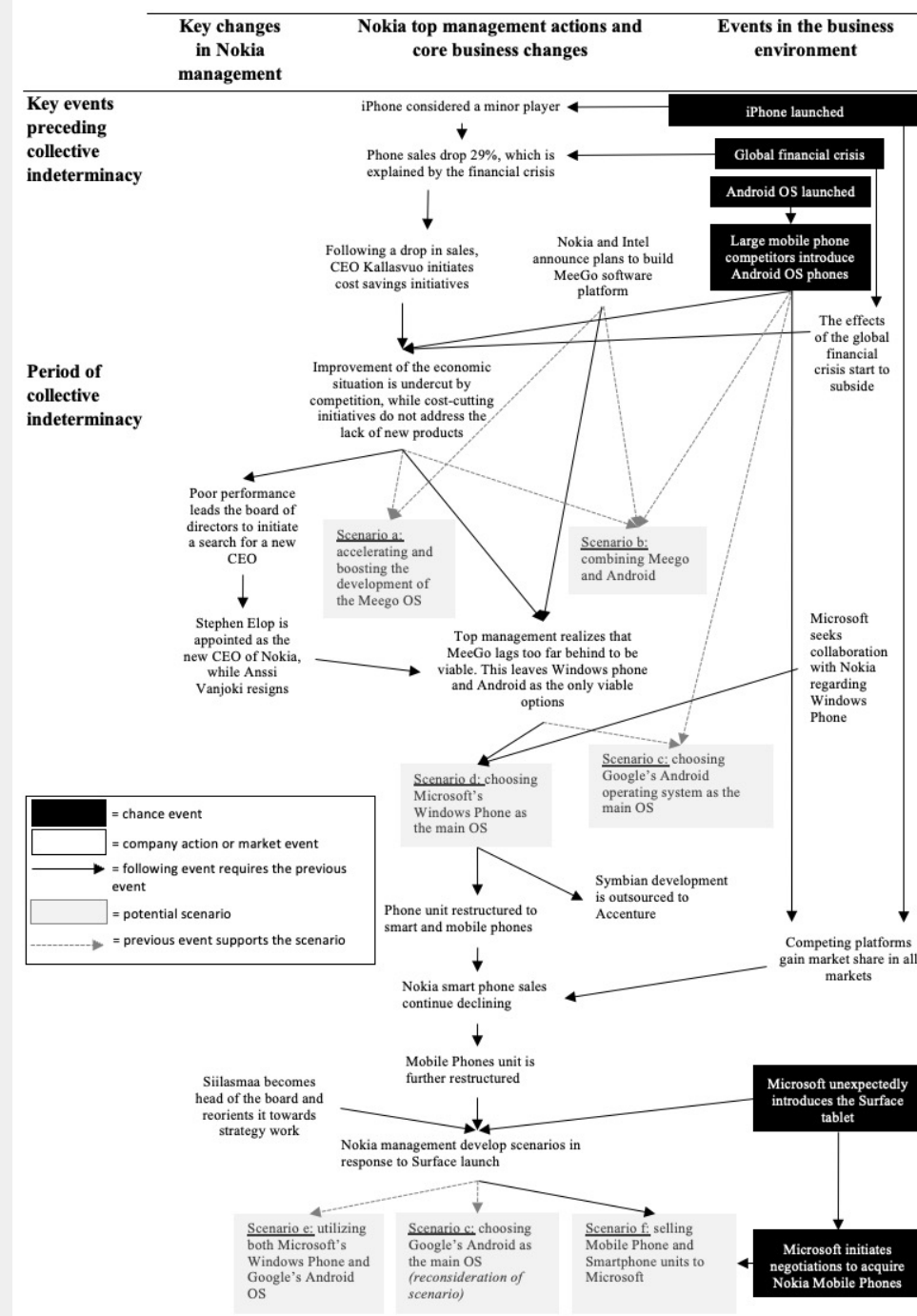
FlexiComp	Management emphasize flexibility and internal competition	AndroidOS	Google announces Android OS	AccelerateMeeGo	Scenario: Nokia accelerates MeeGo development	NMPAsha	ASHA becomes the successor of Meltemi in the low-end category
Reorg1	Reorganization: Mobile Phones, Multimedia, Enterprise, Network	NSNReorg1	NSN is reorganized to reap synergy benefits and cut costs	MeeGoAndroid	Scenario: Nokia combines MeeGo and Android	SiilasmaaBoard	Siilasmaa becomes head of the board and reorients it towards strategy work
NMPBlock	Operators cut down orders from Nokia as a retaliation	SymbianAcq	Nokia acquires the full ownership of Symbian	ElopCEO	Stephen Elop starts as the new CEO of Nokia	MAPSPosition	HERE strengthens its position, especially in the automotive industry
NMPPhoneFocus	Mobile phones prioritized over OS development and services scaled back	NMPSalesDrop	Phone sales drop 29%, which is explained by financial crisis	Microsoft	Microsoft seeks collaboration with Nokia	MicrosoftSurface	Microsoft unexpectedly introduces the Surface tablet
NMPMaemo	Nokia initiates the development of MAEMO OS	NMPSalesRespons	Management responds to demand drop by cutting costs	NMPMeeGoFail	MeeGo lags too far behind to be viable	ResponsePlanning	Nokia management develops scenarios in response to Surface launch
OllilaChairman	Ollila steps down as CEO and focuses on being chairman of the board	NMPOvi	Nokia opens the OVI store (to share Symbian products)	Android	Scenario: Nokia chooses Android as the main OS	MicrosoftAndroid	Scenario: Nokia decides to use both Microsoft and Android OS
KallasvuoCEO	Kallasvuo becomes the new CEO	AndroidPhones	Large competitors introduce Android phones	NMPMicrosoft	Scenario: Nokia chooses Microsoft as the main OS	MicrosoftProposal	Microsoft initiates negotiations to acquire Nokia Mobile Phones
iPhone	Apple enters the mobile phone market with iPhone	NSNReorg2	NSN reorganized to cut costs and match customer needs	NMPReorg	Phone unit structured to smart and mobile phones	NMPDivest	Scenario: The Mobile Phones unit is sold to Microsoft
NSNformed	Nokia and Siemens form NSN	SymbianDivest	Nokia and Intel start developing the MeeGo OS	SymbianDivest	Symbian development is outsourced to Accenture	NSNAcq	Nokia acquires full ownership of NSN
FinaCrisis	Global financial crisis begins	NMPMeltemi	Remaining parts of MAEMO continue as MELTEMI OS	NSNMotorola	NSN acquires Motorola Solutions	SuriCEO	Rajeev Suri becomes the CEO of Nokia
HandsetAllians	Google forms the Open Handset Alliance	BetterEcon	General economic situation begins to improve	CompTighten	Competing platforms gain market share in all markets	NewStrat2	New strategy focused on networks, HERE and technology
Reorg2	Nokia is reorganized into Devices & Services and NSN units	MAPSNSNDemand	Demand for NAVTEQ and NSN offerings increase	NMPDecline	Nokia smart phone sales continue declining	MAPSFocus	HERE focuses on corporate clients, especially the automotive industry
NMPCompetition	iPhone is considered a minor player, own market share is emphasized	NMPCompDemand	Competition undercuts enhanced phone demand	NSNNewStrat	NSN focus on wireless broadband and restructuring	PatentCommerce	Nokia technologies begins commercializing its patent portfolio
MAPSNavigateq	Nokia acquires NAVTEQ	CEOSearch	Board initiates the search for a new CEO	NMPReorg2	Mobile Phones unit is further restructured	NSNAlcatel	Nokia acquires Alcatel Lucent, which positions it as a network giant
CoreBusiness	The core business areas are defined as: NMP, NSN, NAVTEQ	NSN4G	NSN enhances position in 4G	NSNCostCutting	NSN cost-cutting initiatives to lower costs heavily	MAPSDivest	HERE is sold to a group of German car manufacturers



Nokia's decision to sell mobile phones to Microsoft in 2012-2013

The top management experienced collective indeterminacy on how to rectify the situation and six scenarios emerged over time:

1. Accelerating and boosting the development of MeeGo
 - Conceived by Vanjoki when tasked by the board to draw new strategy
2. Combining MeeGo and Android operating systems
 - Conceived adjacent to the first scenario
3. Choosing Google Android as the main operating system
 - Considered first in conjunction with scenario four, then five and six
4. Choosing Microsoft's Windows Phone as the main operating system
 - Intermediate outcome which was compromised by Microsoft Surface
5. Utilizing both Microsoft's Windows Phone and Google Android
 - Scenario developed in response to Microsoft Surface launch
6. Selling Mobile Phone and Smartphone units to Microsoft
 - Scenario developed in response to Microsoft Surface launch

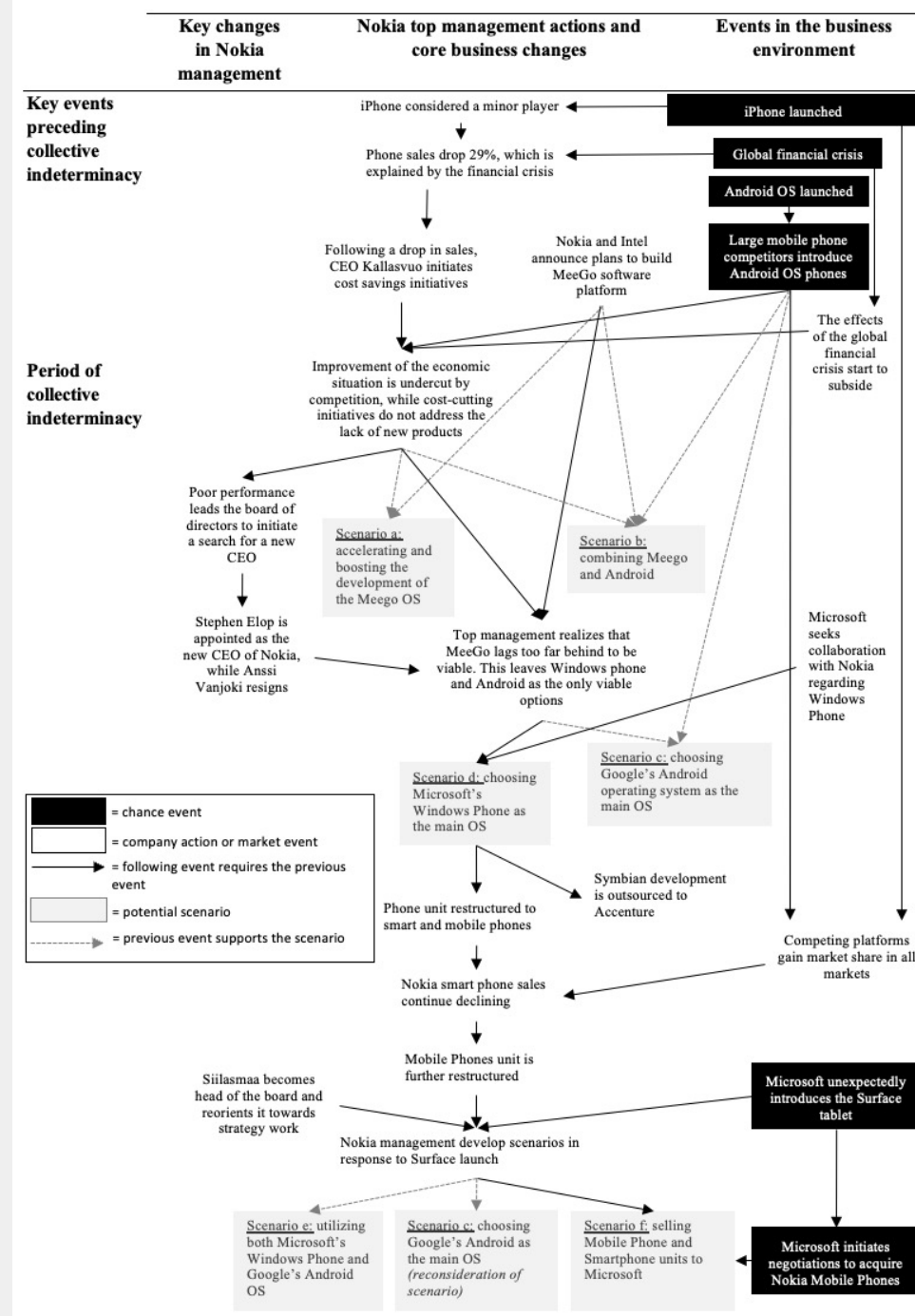




Nokia's decision to sell mobile phones to Microsoft in 2012-2013

Closure of scenarios:

1. Accelerating and boosting the development of MeeGo
 - Appointment of Elop and the exit of Vanjoki eliminated MeeGo
2. Combining MeeGo and Android
 - Elop convinced the board to choose Windows phone, eliminating Android as an option
3. Choosing Google Android as the main operating system
4. Choosing Microsoft's Windows Phone as the main operating system
 - Elop convinced the board to choose Windows phone, eliminating Android as an option
5. Utilizing both Microsoft's Windows Phone and Google Android
6. Selling Mobile Phone and Smartphone units to Microsoft
 - Microsoft initiated acquisition discussions that led to the decision to sell which rendered other scenarios irrelevant
 - Selling mobile phones was reinforced when Siilasmaa replaced Ollila as the head of the board of directors





Explaining strategic change through chance and political dynamics

How Chance Influenced Nokia's Strategic Change

- The initiation of each period was influenced by chance events which means that chance created indeterminacy
- The emergence and elimination of all scenarios were either directly or indirectly influenced by chance events

The Role of Political Dynamics in Nokia's Strategic Change

- To understand the role of political dynamics, we draw from literature on coalition politics (Cyert & March, 1992; March, 1962; Ocasio, 1994)
- Contestation among coalitions also creates indeterminacy that emerges from conflicting preferences
- Coalitions both translated chance events into scenarios that served their own interests and opposed scenarios that were seen as unfavourable to them

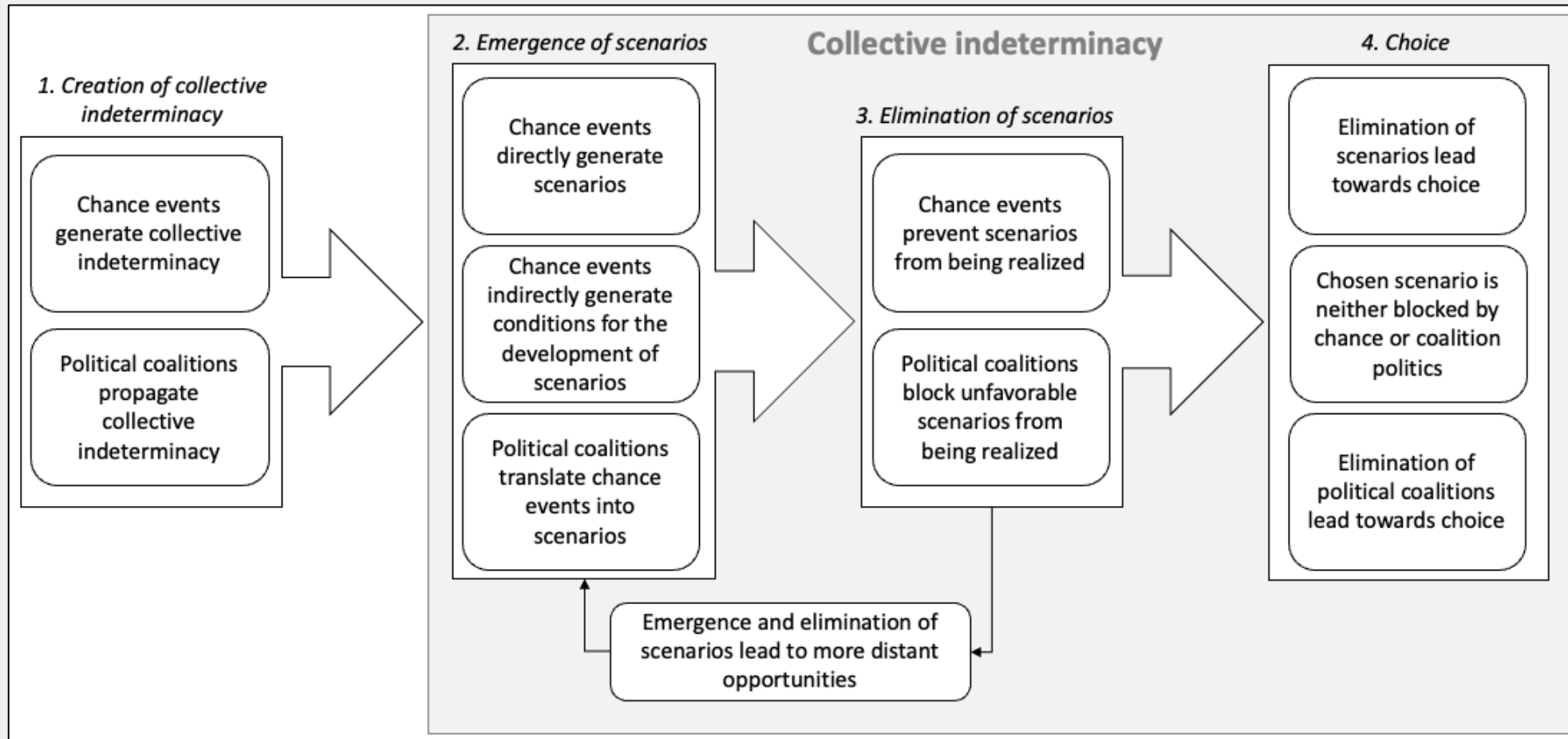
Nokia's future was largely defined by the interplay of chance and political dynamics



Explaining strategic change through chance and political dynamics

FIGURE 3

The Interplay of Chance and Politics in Strategic Change





Discussion

Uncovering the Dynamics of Chance and Politics in Strategic Change

- We suggest that the indirect influence of chance is the predominant influence of chance on strategic change since individual chance events often provide numerous avenues for developing a response
- Our findings show that chance events are actively used by different organizational coalitions to generate and shape opportunities for change – chance is actively managed and used

Advancing the Processual View of Chance

- Chance becomes embedded in the strategy process through collective indeterminacy and the emergence and elimination of alternative scenarios
 - Chance becomes a characteristic of the process
- This view of chance also makes it possible to study chance, as we can understand the elements of which chance is composed, and how these elements function over time



Further notes about the coding

TABLE OA1
Events Coding in Nokia's First Strategic Change Episode

Year	In situ data	Retrospective data	ETHNO code	Event description	Prerequisite events	Logic of prerequisite events
1991	Nokia Telecommunications Vision 1999, 19.3.1991, Nokia Archive	<p>Interview with a former member of Nokia's board of directors 1</p> <p>Interview with a former member of Nokia's top management team 2</p> <p>Häikiö, 2001b: 49-50, 58-60</p> <p>Ollila & Saukkomaa, 2013: 184, 190</p>	StratRefocus	Scenario: Strategic focus shifts to mobile phones, networks and cables, while other business areas are to be divested	StratFocus TvPcCritical CableNkfAcq MobileGrowth NetRebalance OllilaCEO	Following the failed strategic focus on computers and consumer electronics (StratFocus, TvPcCritical), the new CEO Jorma Ollila (OllilaCEO) outlines that Nokia should orient itself towards becoming a telecom company by focusing on the successful cable (CableNkfAcq), mobile phone (MobileGrowth), and network (NetRebalance) business areas. The initial plan was developed by Ollila during his time as the head of the mobile phone business area and concretized with Olli-Pekka Kallasvuo when he was appointed as the new CEO



Further notes about the finding chance from the data

TABLE 2 Chance Events in the First Period

Chance events (ESA code in parentheses)	Chain of evidence	Exemplar quotes before the event	Exemplar quotes after the event
The whole TV industry faces a shock (TvIndShock)	When the European TV industry faced a shock and large producers started moving production to Asia, Nokia's financial figures in consumer electronics collapsed in April 1988. The change in the competitive landscape was totally unanticipated by Kairamo and other members of the board, and subsequently Nokia's growth strategy lost its credibility.	"One of the major market achievements last year was that Salora-Luxor rose to become the largest seller of color TVs in the Nordics." (Review from the CEO of Nokia, annual general meeting 25.3.1987)	"The operating income of consumer electronics is -89 million FIM which is -35 million FIM below budget and -91 million FIM lower than 1988. The budget difference is caused by both lower sales than predicted and lower gross margins." (Nokia interim report January–April 1989, Nokia Archives, ELKA)
Timo H.A. Koski suddenly passes away (KoskiDeath)			"Timo Koski passed away in London last Friday evening broken by a cerebral thrombosis. On Wednesday he was in good health and leaving for Helsinki on Finnair afternoon flight. When the plane rolled onto the tarmac, Timo had a sudden bout of illness." (Letter from CEO Kairamo to the board, cited from Häikiö, 2001a: 257)
CEO Kari Kairamo commits suicide (KairamoDeath)	Kairamo had actively managed several partnership negotiations with Volvo, Hitachi, and Olivetti and had given no signs of either resigning or of his troubled state of mind, despite increasing dissatisfaction among major owners. Accordingly, the suicide was relatively unexpected and the organization was ill prepared to its consequences.	"Looking at my own work situation now, having resigned from TKL's presidency and, I believe, will be resigning from ERT in March 1989. Given our enormous growth and many new problems, I try to use my own capacity from today, and especially next year, more and more for purely Nokia matters." (Nokia's governance model, letter from Kairamo to Vuorilehto, 29.10.1988, Nokia Archives, ELKA)	"and then they [the major owners] were in quite a panic after Kari's suicide and then when the numbers dropped. (Interview with a former member of Nokia's top management team 1)



Questions?