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***Report cites culture of arrogance***

## **Critical errors led to Nortel's demise in a "black cloud" of customer dissatisfaction**

By Mark Henderson

The decline and ultimate dissolution of Nortel Networks Corp was caused by a litany of factors that resulted in an inflexible business model and a culture of arrogance that kept leading-edge technologies on the shelf while competitors grabbed market share in a rapidly changing business environment, concludes a new study.

An initial report stemming from the three-year study by Univ of Ottawa researchers says that, while Nortel possessed deep technological expertise, it lacked resilience and allowed a "black cloud" of customer dissatisfaction to grow until it overwhelmed the company. Nortel declared bankruptcy in 2009 and subsequently sold off its operating divisions and intellectual property.

Once one of the world's largest telecommunications equipment makers, Nortel was the darling of Canada's high-tech industry and the country's top corporate R&D spender with a soaring stock valuation. That seemingly impressive edifice was built on dangerously flawed foundations that crumbled as the telecommunications equipment sector became highly competitive in the early 2000s and the Internet transformed end user requirements.

It wasn't always that way. From the 1960s through to the 1990s, Nortel (formerly Northern Electric) was propelled forward by the ground breaking R&D emanating from its research arm Bell-Northern Research (BNR) which provided a steady stream of leading-edge technologies. When BNR was wound down and its R&D function was distributed to its business lines, the innovation tap was slowly turned off.

"Nortel's business model before the study period (1997-2009) clearly encouraged the development of extraordinary technology and products but in doing so inspired a sense of arrogance coupled with a lack of financial discipline," states the report. "Organizational changes in the 1990s allowed Nortel to grow to the top position in the global market. But this dramatic growth came at a significant cost. These organizational changes broke Nortel's innovation capability. They also had a negative impact on management's ability to sense what was happening both within and outside the organization. Structural changes, which increased the power of various divisions, also set up a state of affairs that fostered a more politically charged internal environment."

The U of O study traces the complex trail towards failure between 1997 and 2009 and produces more than 100 lessons learned, including 11 it considers key to understanding how a seemingly unstoppable high-tech behemoth was toppled.

The multidisciplinary research team — led by Jonathan Calof, professor at the Telfer School of Management— examined Nortel from the perspectives of technology and technology management, corporate governance, strategy, organization/performance management, competitive intelligence and customer/competitor/environmental analysis.

An initial report (executive summary and introduction) were released March 17th and will be followed in the coming weeks by several so-called lens reports that zero in on specific aspects of the Nortel operation.

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*“Nortel’s early success was based on a model of deep technological expertise that allowed the company to create entirely new markets as it did in leading the transition from analogue to digital (and) enabled Nortel to gain and maintain a first-mover advantage in many markets. While this model led to well-designed, reliable products, it also led to a culture of arrogance and even hubris combined with lax financial discipline.”*

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The release was attended by Jean Monty — Nortel’s CEO from 1993 to 1997 and chair and CEO of BCE from 1997 to 2002. Monty was an early supporter of the study and a catalyst for securing significant financial support for the project. Also in attendance was Peter Chapman, a senior manager in the Chief Technology Officer’s department at Nortel, who researched next generation Internet technologies for secure wired and wireless networks.

“The thing that kills you is not your R&D spend but the calendar — the clock — because you can’t catch up once you’ve lost leadership,” says Chapman, who participated in the study. “What Nortel should have done when it identified that Internet Protocol was going to be huge, it should have started developing products. They didn’t and then they needed it in a hurry. That’s when it started acquiring companies.”

During the 2000s, only one of Nortel’s top 15 officers had any technology background, impairing the company’s ability and willingness to “recognize and appreciate the strength of the in-house technology capability”. Chapman says the time when senior executives would “eat at the cafeteria and drink at the water cooler” slowly vanished as Nortel sales boomed and its centralized R&D facilities were divided along business lines. In FY00, Nortel’s R&D outlays hit an all-time high of \$5.9 billion.

“Management was totally disconnected. They became focused on financial restatements, cutting costs, managing deep down and they ... lost the ability to communicate with those who were looking to the future” says Chapman.

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*“A company once known for technology leadership focus and vigilant customer support was no longer trusted. Customers referred to this loss of trust as the ‘black cloud’ ... By 2006 key customers had concluded that the probability of Nortel surviving over the long term was low. The appointment of yet another CEO did not seem to do much to control the growing black cloud of doubt.”*

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As the company boomed through acquisition and its stock valuation soared to as high as \$124 per share, Nortel did not release any new products between 2002 and 2009 when the market and competitive environment were going through disruptive change. Technology leadership positions in 4G/LTE (long term evolution) and silicon chip technologies were not properly exploited, allowing aggressive competitors to pull ahead and capture market share.

“Nortel entered the 2000s with low resilience to market change — notwithstanding the strong innovation capability at the research and product development levels in the company,” states the

report. “Unfortunately, restructuring (e.g., the disbanding of BNR) worked against innovation and obstructed the development of a coherent vision of the future.”

The result was a growing chorus of negative customer opinion which, by 2006, manifested in a severe drop in sales. Customers interviewed for the report said poor company performance and communication, lack of reliability and slow, often shoddy technology development allowed the black cloud to “grow to an overwhelming and critical size”.

“By 2008 ... the uncertainty surrounding the company led to the loss of new access/wireless-technology sales from major customers such as British Telecom, T-Mobile, Vodafone and Verizon,” states the report. “Despite having top-flight staff, great research in LTE award-winning products in enterprise and optical and a great patent portfolio, the company was in trouble — the black cloud had become overwhelming.”

### **Killing the goose that laid the golden eggs**

For John Tyson, a 35-year veteran of BNR/Nortel and former head of its advanced technology department, the company’s failure was a gradual process obscured by the phenomenal success of its R&D activities. Particularly devastating was — as the report notes — the “reduction in the role of the intelligence team (and) elimination of the design/interpretive centre and other strategic-planning functions”.

“That was me. From 1995 to 2000 there was no strategic planning function and when I retired it was not replaced. With BNR, they killed the goose that laid the golden eggs,” says Tyson, who held the concurrent titles of VP Design Interpretive and VP Advanced Technology Strategy.

Tyson says one of the most influential decisions underpinning Nortel’s rapid rise was made by Donald Chisholm in 1972. Then president of BNR, Chisholm created the so-called capability fund, created by allocating 15% of the annual R&D fund for research.

“It was part of the R&D budget over which no executive had control over,” he says. “It was a critical success factor in making sure that the ‘R’ in R&D was protected and was a headquarter function.”

That success factor was undercut in the 1990s under Jean Monty’s leadership when Nortel’s corporate structure was changed to create profitable business lines so that R&D no longer reported to the president. Tyson says that Monty — who was CEO of Nortel between 1993 to 1997 and the chair and CEO of BCE Inc (Nortel’s one-time parent) from 1997 to 2002 — had good intentions but likely did not recognize the implications of decentralizing the company’s R&D function

“He held R&D in high regard as a safe source of supply for the company (but) the brains were cut off from the head,” says Tyson. “By 2000, Nortel was in palliative care — a fool’s folly. Key executives had already left. We had great technology but no commercialization. The market was oversaturated and demand was shrinking, putting pressure on cost reduction. Did it defer the future and cut back on R&D? Absolutely ... The separation of R&D from operations is mission critical and was critical in the success of BNR and Nortel.”

The report also notes that the ability of Nortel’s board of directors to provide leadership was inhibited by a lack of timely and appropriate information and its composition — most of its members were from “outside the telecommunications ecosystem”.

“From 2001 to 2006, Nortel’s board and senior management were more focused on dealing with restatements, investigations, crisis management and reputational management,” states the report

“They ignored the fundamental requirement to satisfy customers’ needs and commercialize new products.

## **Why Nortel Failed**

- 1) Acquisition of companies without the processes or culture necessary to integrate them.
- 2) Lacked appropriate depth and Capability to gather reliable external and internal information to make timely and informed decisions following the restructuring and dismantling of BNR.
- 3) Nortel had a centralized cooperative structure that enabled product development and commercialization. Yet in restructuring for growth it lost this advantage.
- 4) From 1997 and 2006, R&D staff felt that management rarely listened to Nortel engineers, and when they did they did not appear to understand.
- 5) In winding up BNR after 2000, Nortel lost the ability to see and understand longer-term needs and lost its understanding of the current and medium-term needs of customers.
- 6) Business results were unstable from the mid-1990s through to 2009. Lack of a sound business model and resulting financial weakness left company vulnerable to external shocks and an increasingly competitive environment.
- 7) Internal information systems could not provide management and the board with appropriate and timely information. Most board members were from outside the telecommunications ecosystem.
- 8) Starting in 2002, customers began examining Nortel’s financial statements and core business model and found a company in a very weak financial position. This discovery initiated the formation of the ‘black cloud’.
- 9) Nortel’s sense of pride created inflexibility and escalated into hubris, making it difficult to adsorb acquisitions, respond quickly to market needs and accept and understand what customers wanted.
- 10) From 2001 to 2006, Nortel’s board and senior management were more focused on financial restatement, investigations, crisis management and reputational management, ignoring the fundamental requirement to satisfy customer needs and commercialize new products.
- 11) With low resilience and a growing black cloud, Nortel could have retrenched by selling non-core business units. By 2006 and beyond this may have been the only course of action which could have saved company.

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