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**Master of Science in Computing and Data Analytics**

**Managing Info Tech & Systems**  
 **MCDA 5570**

**Project**

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**1 Company Research**

Blackberry ltd is a Waterloo-based technology company specialising in smartphone, enterprise software and Internet of Things. However, it’s market share and the scale of company are shrinking these years. Our aim of strategic analysis is to provide potential solutions to sustain the company’s long-term survival and even turn around to its former glory.

* 1. **History**

Blackberry ltd was originally Research in Motion (RIM), a software and computer science consulting company founded in 1984. Its invention of Inter@ctive Pager 900 led the company marching into hardware industry. The 911 attack in 2001 helped RIM build the reputation of a solid telecommunications provider and the company released its first Blackberry smartphone in 2002 as its hit product. In five years, RIM had acquired more than 30 percent of the smartphone market in America and second to Nokia globally. However, the company failed to follow the pace of touchscreen and application platform of Apple and Google Android, two companies that RIM didn’t view as competitors. RIM went through several layoffs and the resignations of leaders including Jim Balsillie, Mike Lazaridis and the former CEO Thorsten Heins who rebranded the company as Blackberry, the name of its best-known flagship product, in 2013. In the same year, John Chen, Silicon Valley executive, replaced Thorsten Heins as the chief executive of Blackberry. In recent years, Blackberry started to use a third-party operating system and outsource the hardware manufacturing to overseas partners. Now, the company shifted to software and secure communications and acquired several companies in enterprise mobile management and artificial intelligence.

**1.2 Current Product Lines**

Although Blackberry ltd moved from a smartphone maker to a software developer and licensor in 2018, it still produces smartphones in recent years and launched KEY2 LE in August 2018. The smartphone product line provides short-term return of investment and the cash flow the company need to invest into innovation and new technology.

The current focus of Blackberry is Blackberry Secure, a product platform that provides enterprises with a comprehensive mobile-native approach to security. It aims at a standard of security for enterprise-wide, endpoint-to-endpoint solutions. Blackberry also highlights the concept of “Enterprise of Thins” (EOT), connecting digital and physical things to the security technology such as applications, documents, smartphones, PCs, wearables, robots and cars, providing customized operating system.

Blackberry also developed a licensing, developer, partner and sales strategy both in hardware and software. It licenses handset operating system, applications and security technology to OEMs.

* 1. **Brand Vision**

The brand vision of Blackberry is “Protecting Our World, Securing Your Future”. The company is now trying build the reputation of security in the fast-changing hyper-connected world. It has already won the trust from the government of America and other countries as well as large enterprises such as TCL, Ford and Bosch.

1. **Market Research**

The IOT market which Blackberry ltd currently works on features a great market prospect. For now, however, this market is still a hard one for everyone. According to a Cisco’s survey, 60 percent of IOT initiatives stall at the Proof of Concept stage and only 26 percent of companies have had an IOT initiative which they deem as a success. In 2018, the total number of IOT units installed base is 11,197 million, of which 63% are consumer devices. The average number of connected devices per person is 5 and only 18% of world population have adopted IOT devices.

The potential of Cellular IOT market is promising. According to the prediction from Ericcson, the number of devices connecting to the existing cellular IOT network will expand at an annual rate of 19 percent until 2023, reaching more than 3.5 billion. Another prediction from Bain shows that the combined market of IOT will reach 520 billion US dollars at that time, more than double the spent in 2017.

Regionally, the market in North East Asia is and also will be more than the total amount of other regions. The IOT installed base there is predicted to grow from 6.3 million in 2016 to 1.25 billion in 2030. The most popular technologies related to this market is artificial intelligence, augmented reality and blockchain. According to the statistics and prediction of IOT spending, the top five industries are consumer, insurance, healthcare provider, government and construction.

Despite that predictors and industry leaders are positive of the rapid growth in IOT market in 10 years or even in 5 years, there are still customer barriers limiting the adoption of IOT solutions. The top three most significant barriers are security, integration and unclear ROI.

**3 SWOT Analysis**

**3.1 Strength**

**Security Technology**

Blackberry owns approximately 37500 patents in security technology, of which 26% are hardware related. Its pioneering strong encryption technology has been proven trust-worthy for more than 10 years and keeps upgrading and innovating. The newly launched encryption technology in October 2018 claimed to be quantum-resistant, racing ahead of security curve. Blackberry also gained more than 80 security certifications, making it the leading company in the industry.

**Global Reputation of Security**

Since the 911 attack in 2001, Blackberry had become the device provider of the US government. In 2014, Blackberry 10 had become the first mobile solution receiving Full Operational Capacity from US Defense Information Systems Agency. Now, it serves all G7 governments, 9/10 of the largest commercial banks and insurance companies and 8/10 of the largest healthcare and aerospace/defense companies, which cover three of the top five industries in IOT spending. It’s also a recognized market leader by multiple research and analysis companies.

**Operational Advantage**

Blackberry ltd has successfully shifted from hardware company to a software company, reshaping its revenue structure. The percentage of software revenue grew from 24% to 81% from 2016 to 2018 and during the same period of time, the operating margin of the whole company grew from -5% to 8%.

**Innovation and Transient Advantage**

Blackberry ltd invests 23% of total revenue into research and development and holds 18 major development center in 7 countries, ensuring a ground of an ongoing systematic process of innovation and new profitable opportunities. As a result, the company is more likely to constantly develop transient advantages over its rivals in the industry. The company also made rapid acquisitions of different technology companies even including one of its biggest rival. The fresh blood also helped with innovation and gaining transient advantages.

**Experience in Hardware Development and Operating Systems**

The former glory of pagers and smartphones help Blackberry gain rich experience in hardware development and related operating systems. It also has mature process in developing automatic vehicles and related operating systems, providing the company with potential return to hardware and even IOT industry.

**Leadership Advantage**

Despite the failure of former leaders, including the leadership who didn’t view Apple and Google Android as competitors and didn’t want changes, the new CEO John Chen did make the company profitable again. John Chen, with a reputation of turnaround artist, has already made several aggressive and effective moves to save the company, including outsourcing all the manufacturing to partners and visiting the White House to keep on building the reputation of security.

**3.2 Weakness**

**Small Smartphone Market Share**

Having lost the competition with Apple, Samsung and Google Android, Blackberry already lost most of its market share in smartphones. It’s hard to compete with nowadays’ smartphones companies and platforms.

**Cash Flow**

As mentioned before, the smartphone product line provides the company with short-term ROI. However, the market share and revenue are shrinking gradually, and the company seems living in “buying time”. The financial condition may not ensure long-term and intensive research and development.

**Customized Enterprise Operating System**

Blackberry offers enterprises with secure and complicated operating systems to manage endpoints and transfer information. However, the customizing and integrating took a considerably long time and great effort. This product line cannot achieve a short-term ROI.

**3.3 Opportunities**

**Promising Market in IOT**

The company shifted its focus to Enterprise of Things (EOT), and the market prospect is promising and bright. As mentioned in market research, the market may grow ten times in 5-10 years. Besides, there is still not IOT platforms even close to an industry standard and the market is still an everyone’s game.

**Trade War and HUAWEI Ban**

The trade war and Huawei ban raised the concern of cyber security, which can be beneficial to reputed Blackberry ltd. Also, the preference of governments on local enterprises can help with the growth and development of Blackberry.

**Privacy Leakage and Barriers to IOT**

There are constantly news and articles about leakage of personal privacy, which arouse huge concerns to the internet and IOT industry. Even popular social medias like Facebook and large finance organizations like Desjardins was reported to leak personal data recently. The fear to privacy leakage has become a significant barrier to IOT and other internet-related industries especially in individual consumer market.

**3.4 Threats**

**Security Centers of Internet Giants**

Large enterprises including Google, Microsoft and Alibaba have their own security centers and can be strong competitors of Blackberry. There are also well-known enterprise software companies occupying huge amount of market share.

**IOT Platforms and Producers**

There are tons of large companies and startups investing in IOT technology of different fields, of which some are both developing hardware and software. The accumulated experience and knowledge in automatic vehicle industry can help Blackberry compete with others. However, those with mature product lines are big threats to the diffusion of Blackberry IOT platform.

**4 Strategy Analysis**

**4.1 Strategy Statement**

**What will we do?**

We suggest Blackberry to march into individual consumer market of IOT.

**How will we do it?**

We can develop a systematic process to provide consumer level services and products.

**Why are we doing it?**

We have the technology to expand into more profitable market and build the brand reputation.

**Combined Strategy Statement**

We suggest Blackberry to develop a systematic process to provide consumer level services and products to march into individual consumer market of IOT, in order to expand into more profitable market and build the brand reputation.

**4.2 Competitive Advantage**

Blackberry ltd has over 20 years’ implementation of developing and providing security technology, enabling it to have a great chance of breaking the barrier to IOT market. Besides, the reputation built in last 15 years can also help the brand win the trust from individual customers. Despite the failure in smartphone market, the company can shift from smartphone producer to security-related device producer, taking full advantage of the past experience. The wide alignment of hardware manufacturing partners and licensed software companies can be the ground of the new strategy, sharing the risks by licensing newly-launched attempts in consumer level IOT products and helping with brand exposure and reputation.

**4.3 Organization Strategy**

Blackberry ltd needs to expand its brand vision with individual consumers and sell the concept of cyber security to customers with IOT products including services, software and hardware. The hardware product line can take place of its shrinking smartphone product line to gain short-term ROI. By combining all three kinds of products, Blackberry gain great competitive advantage in ROI platforms. It can also help with expanding the overall consumer market, making the pie bigger rather than competing fiercely with rivals. At the same time, it will still focus on enterprise and government customers and continually build the brand reputation. Developing business and making greater alignment can help company set up standards in IOT industry. Once the standards set, the company will be almost impossible to close down and highly promising to thrive.

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