

FMEA Interview Documentation – Intuitive Surgical Simulated Case

Interviewee: Max Ream, Head of Information Security

Date/Time: July 5, 2022, 6-8PM

Interviewers: Roaring Lion Consulting Team

Risk Category: Operational – Technology (Cybersecurity Risk)

Risk: Highly sophisticated hackers and techniques continue to emerge and pose greater threats to our products, systems, and creditability in robotic surgery market.

Scenario: 1-A (credible worst-case)

Scenario Description: We encounter a major attack to our technology infrastructure and unauthorized persons successfully bypass our security measures in place and hack into our connected products, systems, or service. The security breach remains undetected for a month. As a result, patients' personal identification information, company confidential or proprietary information, and confidential information we hold on behalf of third parties get comprised. We are exposed to loss of sales, government investigations, litigations, and damaged reputation.

Likelihood: 10% likelihood

Impact(s):

1. The credible worst-case scenario results in increasing SG&A expenses above baseline by \$800m in year 1 through year 3 related to establishing more secure systems, conducting investigations, paying government fines, dealing with legal and compliance implications of the cyber-attacks.

2. Due to the reputational damage, there would be revenue loss from both product and service segments. The revenue impact for all business segments would decrease below baseline by:

- a. 10% in Y1
- b. 7% in Y2
- c. 5% in Y3
- d. 2% in Y4

The revenue decrease below baseline will last the next four years and slowly recover back to normal level in year 5.

3. During the next three years, additional investment to the sales team would be made to ensure the current clients' issues are addressed and maintain our name brand. This will increase sales expenses by

- a. 7% in Y1
- b. 5% in Y2
- c. 3% in Y3
- d. 1% in Y4 and after

4. During next five years, the cyber incident management support team will be expanded by 3% and roll back to the baseline level in year 6.

5. There will also be a one-time cost of \$900M to hire a brand image consulting firm to help Intuitive Surgical work on its external and internal corporate image (can apportion over a three year period) to offset the reputational harm caused by the data breach incident, which has seen massive news coverage.

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Risk: Highly sophisticated hackers and techniques continue to emerge and pose greater threats to our products, systems, and creditability in robotic surgery market.

Scenario: 1-B (moderately pessimistic)

Scenario Description: Less severe version of credible worst-case scenario. We encounter a major attack to our technology infrastructure and unauthorized persons successfully bypass **certain** security measures in place and hack into **some** of our connected products, systems, or service. We detect the security breach in a short period of time (5 days). As a result, patients' personal identification information, company confidential or proprietary information, and confidential information we hold on behalf of third parties get comprised. We are exposed to loss of sales, government investigations, litigations, and damaged reputation.

Likelihood: 15%

Impact(s):

1. The moderately pessimistic scenario results in increasing SG&A expenses above baseline by \$500m in year 1 through year 3 related to establishing more secure systems, conducting investigations, paying government fines, dealing with legal and compliance implications of the cyber-attacks.
2. Due to the reputational damage, there would be revenue loss from product and service segments. The revenue for all business segments would decrease below baseline by:
 - a. 5% in Y1
 - b. 4% in Y2
 - c. 3% in Y3

The revenue decrease below baseline will last the next three years and slowly recover back to normal level in year 4.
3. During the next three years, additional investment to the sales team would be made to ensure the current clients' issues are addressed and maintain our name brand. This will increase sales expenses by
 - a. 5% in Y1
 - b. 4% in Y2
 - c. 5% in Y3
4. During the next three years, the cyber incident management support team will be expanded by 2% and roll back to the baseline level in year 4.
5. There will also be a one-time cost of \$500M to hire a brand image consulting firm to help Intuitive Surgical work on its external and internal corporate image (can apportion over a three-year period) to offset the reputational harm caused by the data breach incident, which has seen massive news coverage.