

Table of Contents

Acknowledgments xv

CHAPTER 1

Cybersecurity: The Sunscreen of the Information Technology World 1

1.1. Cybersecurity: Don't Get Burned! 1

1.2. A Gap in Cybersecurity Education 3

1.3. So Why Should You Care? 4

1.4. Who Is Peter the Salesman? 4

1.5. What Will You Learn in this Book? 6

References 7

CHAPTER 2

Cybersecurity Advice from the Angel and the Devil 9

2.1. Peter the Salesman Meets the Angel and the Devil 9

CHAPTER 3

Securing Your Communications: E-mail, Web, and Phone 15

3.1. Introduction 15

3.2. "Left of Bang" Cybersecurity Awareness 16

| | | |
|-------------|-------------------------------------|------------------|
| 3.3. | Communication Dos and Don'ts | <u>18</u> |
| 3.4. | E-mail | <u>19</u> |
| 3.4.1. | Limitations of E-mail Security | <u>19</u> |
| 3.4.2. | Secure E-mail | <u>20</u> |
| 3.4.3. | Phishing and Spear Phishing | <u>21</u> |
| 3.5. | Web Safety | <u>21</u> |
| 3.5.1. | Cloud Security | <u>21</u> |
| 3.5.2. | Web Security | <u>22</u> |
| 3.5.3. | Web Tracking | <u>22</u> |
| 3.5.4. | Bad Sites and Links | <u>23</u> |
| 3.6. | Phone | <u>23</u> |
| 3.6.1. | Recommended Phones | <u>23</u> |
| 3.6.2. | Secure Phones "As Seen on TV" | <u>24</u> |
| 3.6.3. | Voice, Text, and Messaging | <u>24</u> |
| 3.6.4. | Cars, Events, and Overseas Travel | <u>25</u> |
| 3.6.5. | PACE Communications | <u>25</u> |
| 3.7. | Post Quantum Cryptography | <u>26</u> |
| 3.8. | Conclusions | <u>26</u> |
| | References | <u>27</u> |

CHAPTER 4

| | | |
|-------------|--|------------------|
| | Protect Your Financial Transactions Now! Cybersecurity and Finance for the Entrepreneur | <u>31</u> |
| 4.1. | Introduction | <u>31</u> |
| 4.2. | A Little Background on Data Breaches that an Entrepreneur Should Consider | <u>32</u> |
| 4.3. | How to Keep Your Finances Safe | <u>34</u> |
| 4.3.1. | Identity and Access Management (IAM) | <u>34</u> |
| 4.3.2. | Data Encryption | <u>35</u> |
| 4.3.3. | Business Continuity (Backup and Restore!) | <u>35</u> |

| | | |
|--------|---|-----------|
| 4.4. | The Cloud, Data, and Software-as-a-Service | <u>36</u> |
| 4.4.1. | API Security | <u>38</u> |
| 4.5. | Credit Card Processing Compliance and Standards | <u>39</u> |
| 4.6. | Conclusions | <u>41</u> |
| | References | <u>41</u> |

CHAPTER 5

| | | |
|--------|--|-----------|
| | Who Needs a VPN? | <u>43</u> |
| 5.1. | Introduction | <u>43</u> |
| 5.2. | What Is a VPN? | <u>43</u> |
| 5.3. | But No One Is Spying on Me | <u>47</u> |
| 5.4. | Do I Need to Use a VPN When Surfing the Internet? | <u>51</u> |
| 5.4.1. | Wow! It Is Hopeless! | <u>52</u> |
| 5.4.2. | Threats to VPN Traffic Are Everywhere! | <u>52</u> |
| 5.5. | What Features Matter Most in a Modern VPN Service? | <u>53</u> |
| 5.6. | It Is 2023, What VPN Fits the Bill? | <u>54</u> |
| 5.7. | Conclusions | <u>55</u> |
| | References | <u>57</u> |

CHAPTER 6

| | | |
|------|---------------------------------|-----------|
| | Securing Your IoT Devices | <u>59</u> |
| 6.1. | Introduction | <u>59</u> |
| 6.2. | Reduce Your Attack Surface | <u>60</u> |
| 6.3. | Keep Your Devices Updated | <u>61</u> |
| 6.4. | Cutting Out the “Middle Man” | <u>63</u> |
| 6.5. | Practice Good IoT Cyber Hygiene | <u>66</u> |

| | |
|-------------------------|------------------|
| 6.6. Conclusions | <u>69</u> |
| Reference | <u>70</u> |

CHAPTER 7

| | |
|--|------------------|
| Product Security for Entrepreneurs Selling Digital Products or Services | <u>71</u> |
| 7.1. Introduction | <u>71</u> |
| 7.2. Flaws in Digital Products Can Be Expensive | <u>72</u> |
| 7.3. Shifting Security Earlier | <u>73</u> |
| 7.4. A Basic Security Approach | <u>75</u> |
| 7.5. Threat Modeling | <u>77</u> |
| 7.6. Testing | <u>81</u> |
| 7.7. Sustainment | <u>85</u> |
| 7.8. Conclusions | <u>89</u> |
| References | <u>90</u> |

CHAPTER 8

| | |
|---|-------------------|
| Strategic Startup in the Modern Age: Cybersecurity for Entrepreneurial Leaders | <u>93</u> |
| 8.1. Introduction | <u>93</u> |
| 8.2. Modern Entrepreneurial Strategies | <u>95</u> |
| 8.2.1. Effectuation | <u>96</u> |
| 8.2.2. Design Thinking | <u>96</u> |
| 8.2.3. Systems Thinking | <u>97</u> |
| 8.2.4. Entrepreneurial Thinking | <u>98</u> |
| 8.3. Modern Entrepreneurial Tools | <u>99</u> |
| 8.3.1. Business Model Canvas | <u>99</u> |
| 8.3.2. Lean Startup | <u>100</u> |
| 8.3.3. Customer Development | <u>100</u> |

| | | |
|-------------|--|-------------------|
| 8.4. | Modern Entrepreneurial Networking | <u>101</u> |
| 8.4.1. | Entrepreneurial Ecosystems | <u>101</u> |
| 8.4.2. | Ecosystem Builders | <u>102</u> |
| 8.5. | Value of Entrepreneurial Strategies, Tools, and Networking in the Digital Age | <u>103</u> |
| | References | <u>105</u> |

CHAPTER 9

| | | |
|-------------|--|-------------------|
| | Cyber Law for Entrepreneurs | <u>107</u> |
| 9.1. | Introduction | <u>107</u> |
| 9.2. | Federal Laws, Executive Orders, and Regulations | <u>108</u> |
| 9.2.1. | Federal Laws and Regulations | <u>108</u> |
| 9.2.2. | Executive Orders | <u>113</u> |
| 9.3. | State Laws, Regulations, and Executive Orders | <u>115</u> |
| 9.3.1. | Data Breach Laws | <u>115</u> |
| 9.3.2. | Minimum Standard and Reasonable Data Security Measure Laws | <u>118</u> |
| 9.4. | European Union and International Requirements | <u>121</u> |
| 9.5. | Practical Considerations: How Cyber Law Can Directly Impact Your Business | <u>123</u> |
| 9.5.1. | General Recommendations | <u>123</u> |
| 9.5.2. | Cybersecurity Terms in Contracts | <u>124</u> |
| 9.6. | Conclusion | <u>124</u> |

CHAPTER 10

| | | |
|--------------|--|-------------------|
| | Cyber Economics: How Much to Spend on Cybersecurity | <u>127</u> |
| 10.1. | Introduction | <u>127</u> |
| 10.2. | Value of Your Product or Service | <u>128</u> |

| | |
|--|-------------------|
| 10.3. Cybersecurity as a Cost Center versus a Profit Center | <u>130</u> |
| 10.4. How Much to Spend: Common Economic Measures of Cybersecurity Spending | <u>132</u> |
| 10.4.1. Return on Investment (ROI) | <u>132</u> |
| 10.4.2. Risk-Based Return on Investment for Cost Center Spending | <u>134</u> |
| 10.4.3. Delayed Net Present Value and Catastrophic Cybersecurity Incidents | <u>139</u> |
| 10.5. Estimating Costs, Benefits, and Other Information | <u>144</u> |
| 10.6. Conclusions | <u>145</u> |

CHAPTER 11

| | |
|--|-------------------|
| Cyber Insurance for Entrepreneurs | <u>147</u> |
| 11.1. Introduction | <u>147</u> |
| 11.2. What Is Cyber Insurance? | <u>151</u> |
| 11.3. When and How Do I Buy Cyber Insurance? | <u>152</u> |
| 11.3.1. When Should I Buy Cyber Insurance? | <u>152</u> |
| 11.3.2. How Do I Get Cyber Insurance and Who Should I Contact? | <u>153</u> |
| 11.3.3. How Do I Apply for Cyber Insurance? | <u>153</u> |
| 11.4. What Are Some Controls That Would Be Important? | <u>155</u> |
| 11.4.1. Network Security Vulnerabilities | <u>155</u> |
| 11.4.2. Email Security | <u>155</u> |
| 11.4.3. Internal Security Controls | <u>156</u> |
| 11.4.4. Backup and Recovery | <u>157</u> |
| 11.4.5. Phishing | <u>158</u> |
| 11.5. What Are Some Important Contractual Aspects to Know about the Insurance Policy? | <u>160</u> |
| 11.6. What Are Some Important Parts of the Insurance Policy to Pay Attention To? | <u>160</u> |

| | |
|---|-------------------|
| 11.7. First- and Third-Party Insuring Agreements | <u>162</u> |
| 11.7.1. First Party | <u>162</u> |
| 11.7.2. Third Party | <u>165</u> |
| 11.8. Conclusions | <u>167</u> |
| References | <u>168</u> |
| Disclaimer | <u>168</u> |

CHAPTER 12

| | |
|---|-------------------|
| Cyber Resilience for Entrepreneurs | <u>169</u> |
| 12.1. Protection versus Performance | <u>169</u> |
| 12.2. Introducing Resilience | <u>170</u> |
| 12.3. Holistic Approach | <u>173</u> |
| 12.4. Resilience as a Cycle | <u>175</u> |
| 12.5. Design Principles | <u>178</u> |
| 12.6. Taking Action | <u>180</u> |
| 12.7. Conclusions | <u>182</u> |

CHAPTER 13

| | |
|--|-------------------|
| Cybersecurity for Entrepreneurs... and Beyond | <u>183</u> |
| 13.1. So What Have We Learned in this Book? | <u>183</u> |
| 13.2. Epilogue: Peter Looks toward the Future | <u>186</u> |
| About the Authors | <u>189</u> |
| About the Illustrator | <u>205</u> |
| Index | <u>207</u> |