Managing IT Resources

ITWS 4310

Fall 2018

Week 11 Assignments

1. Monday November 5, 2018
   1. **Read** “Leadership Forum: Machine Learning 101” included in the HBS Press Coursepack
   2. **Read** “What’s Driving the Machine Learning Explosion” included in the HBS PressCoursepack
   3. **Read** the Current Events Articles posted to LMS
   4. **Work on Term Project**
2. Thursday November 8, 2018
   1. **Read** the Current Events Articles posted to LMS
   2. **Work on Term Project**
   3. Read and be prepared to discuss Chapter 18 in the Gallaugher Text, the Google Case.
   4. Study Google at <https://www.google.com> and Alphabet at <https://abc.xyz>
   5. Study Alphabet/Google (GOOG.O) financials and the “Internet Services” industry and the “Technology Sector” financials at [www.reuters.com/finance](http://www.reuters.com/finance) or other financial information resource ([www.google.com/finance](http://www.google.com/finance) perhaps?).
   6. Be prepared to discuss in class the following Case Study questions:
      1. What is the history of Alphabet/Google?
      2. In what businesses does Alphabet/Google compete?
      3. Who are Alphabet/Google’s competitors?
      4. What are major Alphabet/Google “Competitive Advantages”?
      5. As the “Search” industry matures, what are major “Risks” to Alphabet/Google’s current high stock price?
      6. How is Alphabet/Google using “Data and Analytics”, “Machine Learning” and “Artificial Intelligence” to create and maintain “Competitive Advantage”?
      7. How are competitors using “Data and Analytics”, “Machine Learning” and “Artificial Intelligence” to gain “Competitive Advantage” over Alphabet/Google?
      8. How do the Market Capitalization (recent value), Revenue (most recent year), Revenue Growth Rates (5 yr. growth rate), Gross Profit Margins (5 yr. avg.), Net Profit Margins (5 yr. avg.) and Stock Price Comparison for the Last 5 Years compare for Alphabet/Google, Facebook, Microsoft, Baidu, and Amazon? See Financial Results at [www.reuters.com/finance](http://www.reuters.com/finance) and previous cases in this course.
   7. **Write a one to two page response to the following questions and submit it to the assignment link on LMS prior to class on November 8 (before 10am – hard deadline).**
      1. Alphabet/Google is competing with many of the largest and most successful companies in the world. Although Alphabet/Google is doing well now, they face a number of significant Technology, Market, and Social “Risks”. Write one short paragraph for each of the following “Risks”:
      2. Considering “Machine Learning”, discuss how Alphabet/Google could succumb to this “Technology Risk”. Name the “Competitor” and the “Technology Domain” (search, driverless cars or others) that might weaken Alphabet/Google, the “Probability” that it would occur, and the “Impact” (change in Market Capitalization over 1 year) if it did occur. How would you recommend that Google/Alphabet “Mitigate” this “Risk”?
      3. Considering “International Market Competition”, discuss how Alphabet/Google could succumb to this “Market Risk”. Name the “Country” and “Competitor” that might weaken Alphabet/Google, the “Probability” that it would occur, and the “Impact” (change in Market Capitalization over 1 year) if it did occur. How would you recommend that Google/Alphabet “Mitigate” this “Risk”?
      4. Considering one “Social Issue” (privacy, government regulation, intellectual property, brand or others), discuss how Alphabet/Google could succumb to this “Social Risk”. Name the “Country/Region”, “Competitor”, and “Social Issue” that might weaken Alphabet/Google, the “Probability” that it would occur, and the “Impact” (change in Market Capitalization over 1 year) if it occurred. How would you recommend that Google/Alphabet “Mitigate” this “Risk”?
         1. Use both qualitative and quantitative arguments from the Case, the Gallaugher Text, class discussions, and Web research to support your answers.
         2. Use information from the case and outside research to support your answer to the question.
         3. Use concepts from the text to formulate your answer as needed.
         4. Incorporate your knowledge of the industry and the competitive situation. Show insight.
         5. Use professional English language, spelling, grammar, and referencing. Use the MLA citation format or equivalent. See RPI’s Center for Communications Practices at <http://www.ccp.rpi.edu/resources/> and the associated MLA citation page at <https://owl.english.purdue.edu/owl/resource/747/01/>.