*For this assignment, you are to seek out a business and analyze capacity management strategies. You can take any or a combination of the following approaches to answer the questions: (i) choose a business process that you can observe and collect information, (ii) contact someone involved in and knowledgeable about the process (e.g., process manager), (iii) conduct an online search (e.g., company website, articles, reports). Please briefly include your references as part of your answers.

In your calculations in the presence of variability, you can assume inter-arrival and processing times are exponentially distributed, although you should feel free to calculate coefficients of variation for inter-arrival and processing times if you have enough data. If there is seasonality in demand (low, medium, high demand periods), you can focus on the high demand time periods.

• If there is no significant variability in customer arrivals and their processing:

How is the variability in the process minimized/eliminated? What are the resource pools in the process? Is there a product mix? Are there any set-ups? If so, what is the batch size? Are there multiple flows? What is the effective capacity for the process (e.g., customers per hour, products per day)? How highly utilized is the capacity? What is the bottleneck that limits the flow rate? Is this a demand or capacity-constrained process? What can be done to improve the process capacity?

• If there is variability and customers are patient:

What are the main sources of variability? How are waiting lines managed? Have any steps been taken to reduce demand or processing time variability? Can you use the queue length formula to calculate the average waiting time of customers? If you can, do your calculations correspond to what you have observed? What strategies are adopted or can be adopted by the business to better manage customer waiting and queue length/s?

• If there is variability and customers are impatient:

What are the main sources of variability? Have any steps been taken to reduce lost customer demand? In order to estimate lost demand, can you use the Erlang Loss Model? If you can, do your calculations correspond to what you have observed? What strategies are adopted or can be adopted by the business to better capture customer demand and improve its revenues?*