# **DP201 - Designing an Azure Data Platform Solution**

## Lab 1 – Azure Architecture Considerations

Use the table below to document the security, performance, scalability, availability, recoverability, and efficiency and operations requirements as identified from the AdventureWorks case study.

Below are some examples of the requirements that could be identified.

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| Exercise # | Requirement | Requirement type |
|  |  | Security,  Scalability,  Performance,  Availability,  Recoverability,  Automation  Or  Operations |
| 1 | Internal access only to application Databases | Security |
| 1 | When sharing Sensor Data to 3rd party companies consent must be given by the individual owner of the bike and the company should only be able to see that consented data | Security |
|  | This location data of the individual could be very sensitive in the hands of the wrong person so must be heavily secured.   * First party and 3rd party applications can have access the information of the bicycle computer that must be secure and for the integration into mobile applications and real time display of location and bike ride sharing information. | Security |
| 1 | As the company is operating in the EU it will need to be GDPR Compliant. This will include taking precautions like encryption of data across any solutions created.   * Berlin, Germany * Barcelona, Spain * Paris, France | Security |
| 1 | It is stated that in the Analysis Solution we should havily consider restricting access to the data to only those who need it.   * **Your team should ensure that access to the data is restricted.** | Security |
| 1 | Chats stored in the Data Lake and through streaming services could potentially contain sensitive data nd so must be very well secured. | Security |
| 1 | Due to the mixed nature of Chat history it may be useful to do some Redacting / Data Masking on these chats. | Security |
| 2 | Increased demand for bikes in November and December as compared to other arts of the year (Scale Up!) | Scalability |
| 2 | Need a beefy and powerful Analytics solution to handle workloads the current on prem warehouse cannot in a timely manner. | Performance |
| 2 | Chat bot functionality needs to be as near real time as possible   * Finally, given its global expansion, the customer service / presales chat bot needs to respond to requests for data in near real-time regardless of where the customer is located. | Performance |
| 2 | Chatbot functionality and history must be available globally at a very low latency | Performance / Scalability |
| 2 | Tracking of Fradulent claims happening on Customer Service interactions in near real time.   * As a result, they would like to implement a system that can help the agents **track in real-time** who could be making a fraudulent claim. | Performance |
| 2 | Real time display of Bicycle Location so will need to be a quick data stream   * First party and 3rd party applications can have access the information of the bicycle computer that must be secure and for the integration into mobile applications and real time display of location and bike ride sharing information. | Performance |
| 3 | All services need to have a high level of availability   * Finally, all services that are proposed should have a comprehensive business continuity that meets the corporate objective of minimizes restore times when recovering the data for a given service. | Availability |
| 3 | All services should have a high level on Continuity and so good RPO and RTO objectives | Recoverability |
| 4 | All services and analysis should run automatically especially due to the global nature of the business | Automation |
| 4 | To allow us to respond to issues and keep improving on Busines Continuity there should be strong monitoring in any solutions created.   * Finally, all services that are proposed should have a comprehensive business continuity that meets the corporate objective of minimizes restore times when recovering the data for a given service. | Operations |
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