

Security KPI Prototype

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1. Task

Every day cyber security is gaining importance for example either through new threats or vulnerabilities that need to be monitored. SIX Group AG (SIX) is a key participant in the Swiss financial sector and is the operator of the Swiss stock exchange. Furthermore, SIX provides financial information and a variety of other connected activities to its customers. Therefore, they themselves require reliable reports as a foundation for reliable decision-making. The current reporting, including the implemented measurements and metrics, need to be revised and readdressed for accurate and up to date risk management in the future. The previously gathered results, which were collected during a previous WIPRO assignment, will therefore also be used in this project.

In this sense, SIX would like to improve its maturity level and security posture when regarding its reporting and measurements. Thus, a reliable prototype to create and maintain new and current measurements will be created and will focus on the cyber security department due to this being the scope of the project.

2. Solution concept

A waterfall model was used to develop the project. The established benchmarks that build upon one another ensure that each objective can be assessed individually. The first goal of this project was to reanalyse the research done previously to ensure that the best practices are being followed. This in turn allows the possibility to add further research with either new standards or other standards used in SIX that were found during this project. Using these, either the current recommendation can be extended to include what was found or in turn, completely reworked with the new knowledge gathered. Furthermore, using this knowledge a prototype can be created that encompasses the new or updated recommendations and further improve the maturity of the measurements in place. This prototype allows the current measurements, as well as the new recommended ones, to be adequately evaluated and therefore also corrected where needed.

3. Special Challenges

While researching and comparing results with what is currently in place did not provide any extra challenges, the creation of the prototype itself did. Due to only a vague specification, the result was mainly driven by the findings of the research. As the research could have gone either way, any preparation for the prototype was postponed until all research and evaluation of the findings was concluded. This proved to be the right decision as the research was changing what the previous recommendations were suggesting. In the end, it was possible to see what type of prototype would suit SIX while re-evaluating the current measurements with additional standards.

4. Results

To heighten the security posture of SIX, a prototype was created to help and simplify adding and re-evaluating measurements. This prototype allows the possibility of each measurement to be rated with a standardized scale and tool, while also enabling the possibility to sort each measurement into its own classification and field. An overview of the measurements can also be seen and further used for internal reports.

The measurements that are in the scope of this project were re-evaluated according to the recommendations made in the research aspect of this paper. There the ideas and recommendations from the WIPRO were re-analyzed with new and current standards, and in return gave an optimal setup to evaluate measurements.

5. Outlook

The created prototype allows for management and operations to see the current state of the measurements at any time and can change them where needed. The first step would be to implement the prototype and add in further measurements that both fit the setup and need a re-evaluation. These would then be continuously re-evaluated within a certain timeframe to ensure that the measurements do not get outdated. This would ideally continuously take place to ensure all measurements stay accurate and get updated where needed.

Additionally, the graphs created from the prototype can be changed to the current need of the company, which allows for optimal reporting no matter what the current demand is.