

Cyber Security Assignment

National Cyber Security Strategy 2022

1 Introduction

The assignment has its starting point in the description of the fictive country Atlantis, which is described in a later section.

At the seminars you have practiced to work on cyber security policies, threat models, assessments and incident response for organizations and companies. Now, during this assignment you are going to practice how to manage cyber security on a higher level, namely the national level. You are going to focus on the national level by investigating how the cyber security of a country is most often regulated and by creating such a regulation yourselves. Your task for this assignment will be to create a Cyber Security Strategy for a certain country.

The purpose of this assignment is to let you think about cyber security on a higher level (the national level). You will learn how to think about the national security of a country based on its properties, its geographical position, neighboring countries, internet infrastructure, digital society, education, military and more.

Furthermore, the purpose of this assignment is to learn how to:

- ⤴ Be able to clearly define and describe a country's cyber security vision
- ⤴ Adequately identify cyber security artefacts of a nation
- ⤴ Correctly define and analyze requirements, objectives, and cyber security infrastructure of a nation from a given scenario.
- ⤴ Accurately and correctly write a national cyber security strategy
- ⤴ Present a national cyber security strategy

2 Scenario

Atlantis is a rather small EU country located close to the Mediterranean Sea in Southern Europe. It has around 15 million inhabitants and a somewhat high unemployment rate. In more detail, the country has the following properties:

- ⤴ Government: Democracy, with a president and a prime minister. Democratic elections every fourth year (analogue voting system).
- ⤴ Inhabitants: 15 million
- ⤴ Currency: Own currency
- ⤴ (Natural) resources: Gold, steel, coal.
- ⤴ Geographical position: In Europe. Unstable outside the country's borders. No internal conflicts. The country is not involved in any international conflict either. 3/4 part of the country has neighbors around it, 1/4 of the country faces the Mediterranean Sea.
- ⤴ Infrastructure: Big harbor area for import and export. 2 international airport. Roads and railways.
- ⤴ Neighbor countries: No neighbors are in war, but there are strategic NATO bases close, and a superpower nation is not too distant from the country.
- ⤴ Military and defense: No mandatory military service. Professional army of 10000 officers, 10000 contract soldiers, 5000 civil employees.
- ⤴ Justice system: Judge chosen by the parliament
- ⤴ Corruption: There has been a tradition of corruption previously, but since the last four years it has decreased.

- ⤴ Crime: Smuggling of weapons and drugs is the biggest problem in Atlantis.
- ⤴ Health care: Free health care. No digital journal system yet - though one is being tested and evaluated at one of the major hospitals in the capital.
- ⤴ Police: Customs, border police, and coast guard are the major types of police. International cooperation with Europol and Interpol.
- ⤴ Internet service providers: Except for the government owned ISP, there are three other operators.
- ⤴ Internet connections: Two internet exchange (IX) points from the Mediterranean Sea and from the neighbor country in East. 4G is well spread. 5G is new in the capital and the plan is to expand it throughout the country. Most people on the countryside still use ADSL for connecting to the internet.
- ⤴ Power and energy: Power supply is managed by two nuclear power plant (some of it is exported to its neighbor country in west and north), coal, and some wind power.
- ⤴ International interests: Refugees from North Africa, Middle East, and Eastern Europe
- ⤴ Censorship: No internet censorship
- ⤴ EU citizenship: Yes, since 2015
- ⤴ Civil defense: Current state is stable; however, this could quickly change due to political reasons and conflicts. There is a civil contingency agency in the country.
- ⤴ Education: Moderate. Most of the citizens finish high school. Many choose to study abroad, though there are two national universities and three university colleges.
- ⤴ Unemployment: Somewhat high. There are some dis-satisfied citizens in the country.

3 Task Description

You have been asked, as a cyber security expert, to create a National Cyber Security Strategy (NCSS) for Atlantis. In order to complete this task, you shall use **the ITU Guide** on how to make a NCSS. You should also look at existing strategies, for examples the ones listed on the **ENISAs** web site. You may look at existing national strategies and follow their example but always use proper citation if you use any material that is not yours. The finished report should be around 5 pages or 2500 words, not including first page, table of contents and references.

From the scenario presented above, write a NCSS that includes the following points. Please note that you must make your own assumptions about the country in order to come up with an adequate NCSS, since every detail might not be specified in the scenario description:

- ⤴ Define vision, set high level objectives (no more than 5) to be accomplished in a specific time frame (5-10 years).
- ⤴ Define business sectors and services that are in the scope of the strategy.
- ⤴ Determine specific objectives for the strategy.
- ⤴ Prioritize objectives in terms of impact to the society, for example in areas of economy, military, internet governance, IT infrastructure, health care, and citizens.
- ⤴ In addition, your hand-in file must
 - be around 5 pages or 2500 words, not including first page, table of contents and references.
 - include correct citations - using a standardized reference system (IEEE or Harvard APA for example).
 - be submitted at the latest at 23.55 on May 16th to the Hand-in box for group assignment in iLearn.
 - be submitted by all group members; this means that all group members must click the submit button in iLearn2 when handing in.
 - be in .pdf format and must have the file name in form of: GroupXX_Assignment.pdf.

On the 18th of May there is a mandatory presentation seminar where the assignment will be presented. The presentation should be prepared in advance as a power point file and submitted to the Hand-in box for presentation in iLearn, the deadline is 12 noon on May 18th. The presentation must be 10 minutes, so the group needs to plan in order to present the most relevant parts of the proposed National Cyber Security

Strategy.

Please note that all hand-ins will be run through a plagiarism tool (Urkund) in order to check the hand-ins for unaccounted citations. By handing in your assignment documents in iLearn2, you thereby agree to the plagiarism check to be done. Read more about plagiarism and consequences of detected plagiarism at: <http://dsv.su.se/en/education/study-information/regulations>

4 Grading Criteria

The following grading criteria apply for this assignment for CYBER course students (2.5 ECTS):

- A: The student presents a complete cyber security policy that is based on an excellent analysis of the given scenario and is presented in comprehensive, structured, correct and relevant way.
- B: The student presents a complete cyber security policy that is based on a very good analysis of the given scenario and is presented in comprehensive and relevant way.
- C: The student presents a complete cyber security policy that is based on a good analysis of the given scenario and is presented in comprehensive and relevant way.
- D: The student presents a complete cyber security policy that is based on a satisfactory analysis of the given scenario and is presented in comprehensive and relevant way.
- E: The student presents a complete cyber security policy that is based on a sufficient analysis of the given scenario and is presented in comprehensive and relevant way.
- Fx: The student presents an incomplete cyber security policy that is not based on a sufficient analysis of the given scenario and is not presented in comprehensive and relevant way.
- F: The student presents an incomplete cyber security policy that is not based on a sufficient analysis of the given scenario and is not presented in comprehensive and relevant way.

5 Useful Resources

In addition to the course literature, the following resources might be of use. Feel free to use these and to find your own. Keep in mind to use proper citations when quoting and provide references used.

- ✦ <https://www.enisa.europa.eu/topics/national-cyber-security-strategies/ncss-map>
- ✦ <https://www.sans.org/security-resources/policies/>
- ✦ <https://www.enisa.europa.eu/publications/definition-of-cybersecurity>

6 Supervision

Use the Supervision forum in iLearn.