SECURITY DECISIONS
- introduction to DESSI

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In the years following the 9/11 attacks on the USA in 2001, several major terrorist attacks took place around the world. The attacks on Madrid in 2004 and London in 2005 firmly placed security and technology on Europe's agenda. This was primarily due to the huge investments being made in security technology, firstly at airports, and later spreading to other major sections of society, but also because these investments led to debate about the type of societal values that were being put to the test by security technology. In retrospect, many of these investments have come to be seen as only minor successes since the negative repercussions on society have overshadowed the intended increase in security.

These problems can arise when decision-makers fail to take into consideration the many different contexts in which the investments will play a part within society at large. Decisions concerning different security investments have previously mainly been based on financial assessments and the goal of enhanced security. It is time for security solutions to be evaluated based on much broader criteria, to ensure the safety of society, but also in order to take into account a broader spectrum of that society's values.

What can we do to ensure that security investments work as effectively as possible in society? Who should be involved when decisions are to be made? How should one proceed in order to make good decisions?

THE DESSI PROCESS

DESSI (Decision Support on Security Investment) is a process for decision support that takes into account the complexity of society and provides guidance on how this may be managed in practice. The process opens up the decision space, gathers contributions from several actors, and brings several perspectives into the decision-making process.

The idea behind DESSI is that decisions concerning security must be evaluated from a broader societal perspective than what was previously the norm. The project has defined seven key dimensions that should be taken into account upon the introduction of a security solution. By evaluating various alternative solutions in terms of these dimensions, one gains a broader understanding of the potential positive and negative effects a solution may have on society. This provides a foundation for a more robust decision, and improves the probability of the investment functioning well in society upon implementation.

PARTNERS IN DESSI

DESSI is developed by a project consortium of partners from Denmark, Austria, Norway and Germany, and is funded by the EU's 7th Framework Programme[1]. The project started in 2011 and concludes in 2013.

The project partners are:

- The Danish Board of Technology Foundation (coordinator)
  Copenhagen, Denmark
- Institute for Technology Assessment,
  Vienna, Austria
- Peace Research Institute Oslo
  Oslo, Norway
- The Norwegian Board of Technology
  Oslo, Norway
- Association for Sociological Research and Consulting
  Munich, Germany

[1] More information can be found at www.securitydecisions.org

TEST CASES

The DESSI process was tested in several European countries in autumn 2012 and spring 2013.

The first DESSI test case focused on security problems in an Austrian courthouse. Having problems with violent behavior among the clients, the courthouse assessed security solutions ranging from security checks at the entrance to a service center to welcome and inform the clients. DESSI ensured the involvement of employees as well as security experts during the process.

In Denmark, DESSI was tested in collaboration with a bus company that was trying to determine the best way to protect their drivers against violent attacks. The company already used security cameras as a reactive measure, but were looking for a pre-emptive solution. The two alternatives that were assessed in the DESSI process were a protective transparent box around the driver, and more education and training in conflict management and stress relief.

The last test of the DESSI process took place in Norway. Together with the two Norwegian DESSI partners, the Red Cross assessed whether drones could be used for conducting safer and more effective search and rescue operations in Norway.

A PROCESS FOR ROBUST DECISIONS

DESSI has developed a flexible process that involves a broad range of methods and actors. The objective is to involve several perspectives in the discussion, both in terms of the security problem and the alternative solutions.

The process is divided into three phases:

1: Security problem description

2: Identification and description of investment alternatives

3: Multi-criteria assessment of alternatives based on DESSI's dimensions

The three phases are completed via meetings or workshops, and one can choose the extent to which external participants are to be involved. The goal of selecting participants is to obtain several perspectives on both the security challenge and the alternative solutions. The DESSI project has developed a web tool that will guide you through the process.

PHASE 1: SECURITY PROBLEM DESCRIPTION

In the first phase of DESSI, the security challenge is described in as much detail as possible. The aim is to provide an overview of the needs to be satisfied by a potential investment and identify the groups who are or may be affected by the security problem.

By describing the security problem, the "problem owner" will be encouraged to reflect on the situation and gain a broader understanding of the problem at hand. Additionally, this description may be used later in the process in order to inform external participants in the process about the security problem.

Phase 1 is carried out by personnel from within the organisation. The web tool will guide you through the phase and ask you questions in order to get the description as detailed as possible.

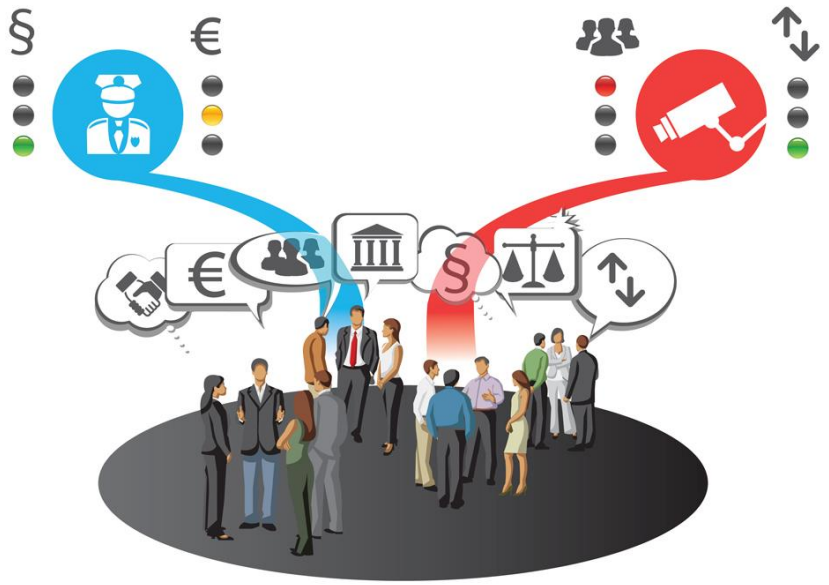
PHASE 2: SECURITY INVESTMENT AND ALTERNATIVES

During the second phase of the DESSI process, possible investment alternatives to the security problem are identified. One or more alternatives may be described.

This phase is conducted as a workshop to which persons from the organisations and external security experts may be invited. After an introduction to the security problem, the participants are divided into groups in which they then discuss the different solutions they think may work. The alternatives are registered into the web tool, describing its qualities, target groups, expected effects etc.

The groups present their alternatives in plenary, and during an open brainstorming session, try to classify, combine and specify the alternatives – until they arrive at the most relevant alternatives, which are then taken into the next stage of the process.

PHASE 3: MULTI-CRITERIA ASSESSMENT



In this last phase, the investment alternatives are weighed up against DESSI's dimensions and criteria. Phase 3 is conducted as a workshop in which participants from within the organisation and external experts take part. The participants are divided into groups each of which will address one or more dimensions and assess how the alternative solutions would work within them. If there is any lack of relevant expertise within the organisation, it may be a good idea to invite, for example, a legal practitioner to contribute expertise on the legal dimension, or an expert who can provide an evaluation of economic conditions in the economy dimension.

All groups use the web tool to rank the different alternatives. This will produce a scoring card of all alternatives and dimensions in the end.

After their discussions, the groups meet up for a plenary session during which the main points from the group discussions are presented together with the results from the web tool. If there are suggestions as to how the investment

alternatives may be adjusted and improved, these may be aired during this session.

WHAT IF-SCENARIOS

If desirable, DESSI offers the possibility of testing the investment alternatives against future scenarios. Using scenarios can help making decisions more robust, by provoke and test your thinking on the diverse future developments in relevant areas, such as the political environment, regulation, economy or technology.

Including scenarios in the process requires some additional information and discussion in all three phases. In the first and second phase, experts will be asked whether they see any trends or drivers that can fundamentally change or alter the security problem or the investment alternatives. If they do, a short description of these trends will be recorded in the DESSI tool. There is also a possibility of using DESSI's premade description of more generic societal trends.

In the third phase, the multi-criteria assessment workshop, the future scenarios will be presented to the participants as "wild cards". The aim is to see if the participants assess the investment alternatives differently with the scenario in mind.

DECISION-MAKING AFTER DESSI

This final phase will not produce a ranked list of alternative solutions, but an expansive description and ranking of how the different solutions will work within the dimensions and future scenarios.

Subsequently, the end user has to decide which solution is the best for the organisation. The decision is now built upon a broad societal foundation, thanks to the participation of several actors in the evaluation process.

A more comprehensive description of the dimensions and guiding questions is found in the following chapter.

DIMENSIONS AND CRITERIA

The most important element of DESSI is the assessment of investment alternatives in the context of several societal dimensions. In the past, the overarching objective of enhancing security within a given economic framework has overshadowed other aspects of the investment. In order to open up the decision-making process, DESSI has defined seven dimensions ranging from economic impacts and legal framework to social and political implications. These dimensions are organized according to the areas of social life, which are actually or potentially impacted and regarded as crucial in assessing the relative success of a security investment. The dimensions are defined in detail in the DESSI project's reports "Dimensions in Security Investments[2]" and "System of Criteria[3]". By assessing different solutions in relation to the seven dimensions, one cultivates a broader and more robust basis for the decision.

In the DESSI web tool the criteria are formulated as questions that the participants use to rate the relevant investment alternative in the different dimensions. These rating are fed into the final matrix that shows the overall assessment of the investment alternatives.

[2] http://securitydecisions.org/download/8/
[3] http://securitydecisions.org/download/9/

1: SECURITY GAIN/LOSS

Security may be defined by the absence of danger – that is, a situation in which the desired state is not threatened or disturbed in any way. One can distinguish between objective and subjective security. Objective security refers to the probability of danger, while subjective security describes feeling safe or the absence of fear.

The concept of security can be difficult to measure. To discover whether an investment has had an effect, one can attempt to identify a change. This change may be physical (the measure has changed the physical environment), psychological (the people involved feel safer), or discursive (for example, media debate on the security challenge dies down after the measure is introduced). Security measures can impact actors in different ways. It is therefore important to keep in mind that something which increases security for one person may make another person less secure.

CRITERIA

- Will there be a measurable improvement of security?
- Will people feel more secure?
- Will the investment help to prevent future incidents?
- Some events cannot be prevented or anticipated. Is the investment good at enhancing the capability to recover from an incident?
- Are decisionmakers free to take a rational decision on the investment?
- Is the investment free from discrimination with regards to who are secured and who are not?

2: FUNDAMENTAL RIGHTS AND ETHICS

The use of security technology can lead to increased infringement of individual rights and ethical norms. Whereas fundamental rights seem clearly formulat-

ed, the interpretation of those rights can divert. Additionally are certain security issues often difficult to solve, so that boundaries between legality and infringement upon rights seem blurred, paving the way for “state exceptions”.

While fundamental rights are stated, ethics are more dynamic and more dependent on culture and context. Ethical norms may change over time and new ethical observations may be applicable due to the development of society. Fundamental rights and ethical considerations are extremely important with regard to new security technology, not least because they may be integral to many sensitive issues addressed in public debates.

A general challenge in terms of the relationship between security measures and fundamental and individual rights is that the average person is not necessarily aware of his/her own rights and associated implications. In addition to this, if they have no information about where and how security technology functions in society, it will be difficult for them to react to any ethical or legal deviations.

CRITERIA

- Does the security investment respect private zones, the right to private data etc.?
- Does the investment respect fundamental rights like freedom of thought, conscience, religion or expression?
- Is the investment free from discrimination effects?
- Is the security investment, its functions and effects easy to understand and clearly communicated?
- Does the security investment foster trust and confidence between people?
- Is the security investment suitable, necessary and in balance with the problem (proportionality)?

3: LEGAL FRAMEWORK

The debate surrounding the legal regulation of security investments and measures covers a broad spectrum of issues. The interaction and mutual ef-

fects between law and technology are complex and the question whether law can regulate technology-at-use is highly controversial.

Legal aspects have to be considered at the EU-level, the national level, at the level of non-state regulations and finally the interference of different legal and regulatory regimes has to be considered as well.

Another challenge is posed by rapid advancements in technology and the ways in which the law relates to new technology. What should be seen as infringements of fundamental rights, and how can the principles of a constitutional state be upheld when encountering new technologies?

CRITERIA

- Does any involved processing of personal data conform with data protection regulations?
- Is the responsibility for the proper functioning of the security investment clearly in place?
- Is the security investment resistant to use that goes beyond its original approved purpose?
- Does the security investment conform with labour protection laws, regulating e.g. the exposure of employees to hazardous conditions at their work places?
- Does the security investment conform with environmental protection laws?
- Does existing regulation sufficiently cover the use and effects of the security investment?

4: SOCIAL IMPLICATIONS

The purpose of a security investment is to raise security or to minimise risk. Both may be achieved by influencing the behaviour of groups or individuals. In order to be able to influence the behaviour it is often necessary to observe actual or to anticipate future behaviour of people. In order to do so, it is supposed to be necessary to gain insights into people's thoughts and beliefs. Such

security investments however, often induce unintended repercussions on people's behaviour and thinking.

Security investments can have ramifications for many social situations, whether they affect the individual citizen, organisations, cities or society as a whole. The consequences for individuals can have a direct and immediate effect, while at the societal level the impact may be more indirect and take effect over time. It is therefore important to see social conditions from a broad, long-term perspective when assessing alternative solutions.

CRITERIA

- Does the security investment have positive effects on the labour market?
- Does the investment lead to greater social equality?
- Is involvement and social contact encouraged by the investment?
- What are the effects on the health of individials or the population?
- Is citizens' participation in cultural activities, or their access to cultural resources influenced?
- Does the security investment impact the international relations of individuals or social groups?

5: ACCEPTABILITY

When planning to implement a security solution, it is important to investigate the extent to which there is an acceptance of the solution among the individuals and groups that will be affected. Acceptance is important for the solution to be able to work as planned. Any risk involved in the security challenge or the planned solution should be communicated to all relevant parties.

The extent to which one accepts or does not accept risk depends on the relationship between the ideal of absolute security – the needs the solution is supposed to satisfy – and factors such as effectiveness, area of application and economic considerations. This relationship may be affected by both social and technological development. At the same time, individual events may also influence how one assesses risk. The disaster at the nuclear plant in Fukushima in 2011 changed many people's views of the risks associated with such plants.

This means one should evaluate and determine the acceptable level of risk for each individual security solution. Something which was accepted ten years ago will perhaps not be accepted today – or vice versa.

CRITERIA

- Does the security investment introduce new risks, and if so, are these acceptable?
- Is there enough knowledge about the security investment to make a rational decision?
- Is the security investment based on state of the art knowledge in the field?
- Will people affected be part of the decision-making process?
- Are risks and benefits distributed fairly?
- Can the security investment be implemented so that it is not very likely that social groups/NGOs may oppose the measure in public?

6: POLITICAL SIGNIFICANCE

Implementation of a security investment can have political implications. What are the consequences for groups of citizens and political institutions in terms of public debate, democratic deliberation and participation, everyday life, political decision-making and media coverage? When dealing with the goal of increased security, investments intended to protect democracy can end up undermining core democratic values such as equality, political tolerance, openness and the rule of law.

Debate surrounding security investments can be depoliticised when citizens and decision-makers lose the opportunity to influence decisions on security. By making security a subject that requires expert knowledge, the understanding of citizens is undermined, as well as the citizen's opportunity to make choices about the introduction of security investments. It is important to acknowledge that the average citizen also has important knowledge about how security solutions work in society.

CRITERIA

- Does the security investment improve the relation between state and citizens?
- Does the security investment improve democratic participation and means of exercising political rights?
- Is the security investment protected against political misuse of taking control over society or specific societal groups?
- Does the security investment allow for value questions to be resolved by lay-people?
- Is it possible to have an open public debate about the security investment?

7: ECONOMY

How should enhanced security be funded? Which budgets should be increased and which should be tightened? Governmental and public institutions are key in relation to security investments at the societal level – guidelines are set via legislation and system of government and they are also significant actors in terms of demand for security services.

Many private companies are also important; both as bidders and customers. Private actors who are pivotal in terms of infrastructure are particularly important, e.g. electricity suppliers, freight companies and health providers.

In order to make a security investment as predictable as possible, it is important to have information not only about the costs associated with procurement and implementation, but also about expenses related to future operation and the non-monetary costs that may relate to the investment.

CRITERIA

- Can you provide or assess the costs dedicated to the envisaged security investment? If yes, please provide details.

- Can you provide or assess the annual running costs of the envisaged security investment? If yes, please provide details.
- Can you provide or assess all other costs - including non monetarian - than presented before? If yes please provide details.
- Are there any other benefits - monetary or non-monetary - for the investor besides the security gain of the security investment? If yes please provide details.
- Are there any positive or negative effects caused by the security investment that affect non-involved third parties (externalities)? If so, do the positive outweigh the negative?
- Does the investment induce positive macroeconomic effects?