Holistic Technology Assessment in Security: The Ethical Dimensions of Critical and Emerging Technologies

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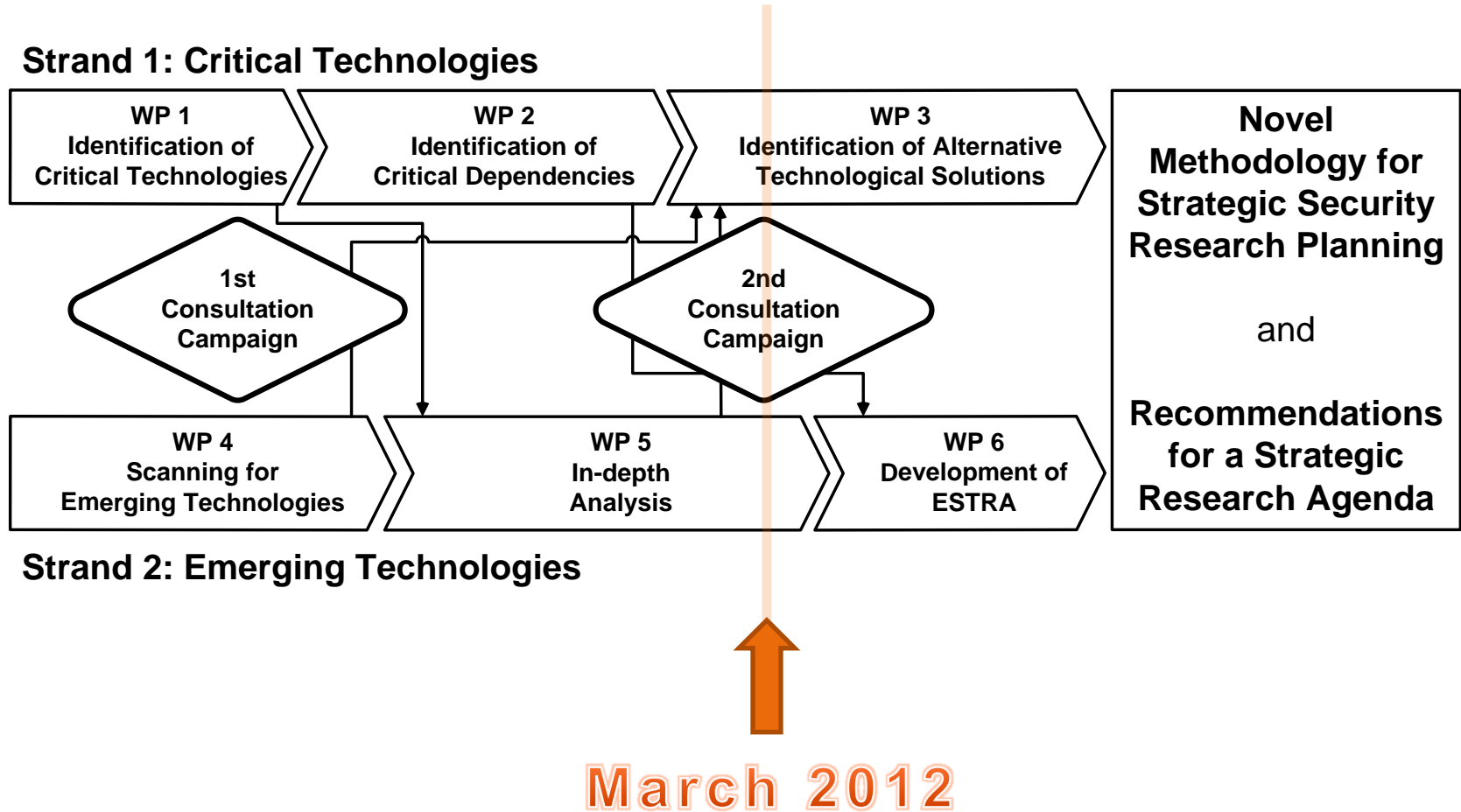
*Evaluation of critical and emerging technologies
for the elaboration of a security research agenda*

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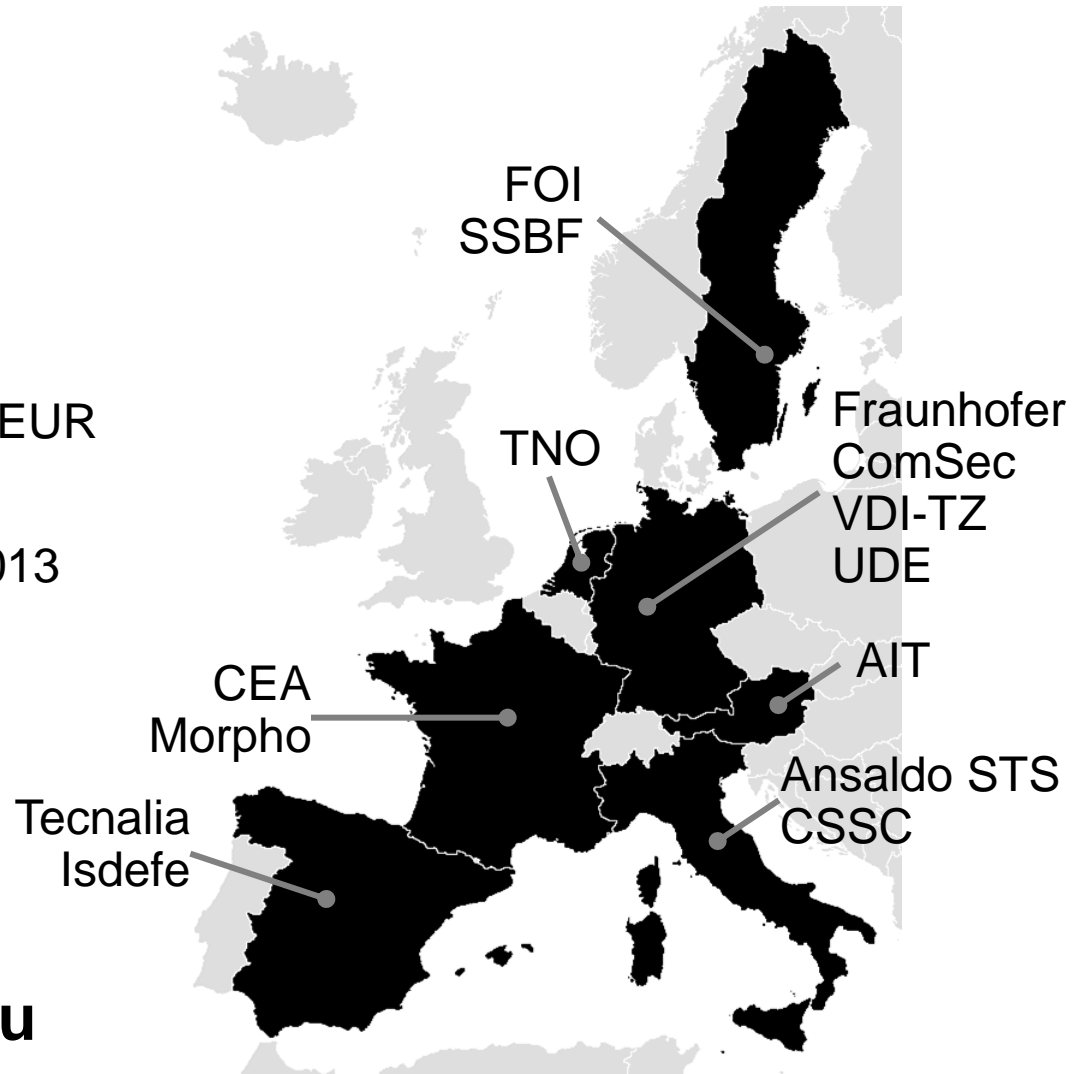
ETCETERA Project Overview

Strand 1: Critical Technologies

WP 1 Identification of Critical Technologies	WP 2 Identification of Critical Dependencies	WP 3 Identification of Alternative Technological Solutions

1st Consultation Campaign

2nd Consultation Campaign

WP 4 Scanning for Emerging Technologies	WP 5 In-depth Analysis	WP 6 Development of ESTRA

Novel Methodology for Strategic Security Research Planning

and

Recommendations for a Strategic Research Agenda

Strand 2: Emerging Technologies
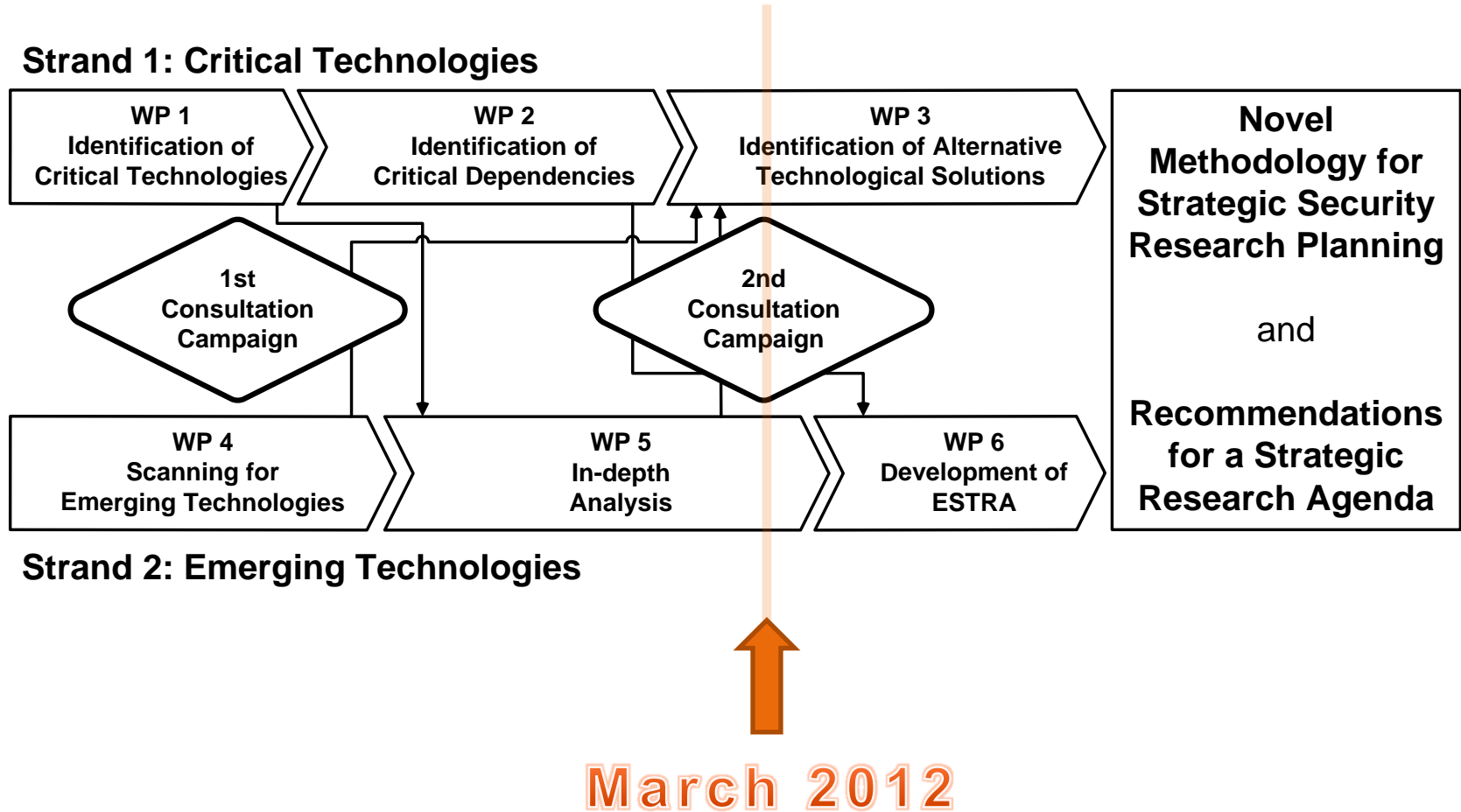
March 2012

ETCETERA: Project data at a glance

- 14 partners

- 7 EU member states

- Project volume: approx. 2 Mio EUR

- Funding period:
  October 2011 to September 2013

FOI
SSBF

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VDI-TZ
UDE

TNO

CEA
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ETCETERA: CSSC Role

Investigate and analyse **ethical**, **political**, **legal** and **societal** implications of emerging technologies + define **guidelines**

CRITICAL

WP 1
Identification of Critical Technologies

WP 2
Identification of Critical Dependencies

WP3
Identification of Alternative Tecnological Solutions

CSSC: Investigate any ethical impact the alternative solutions (especially surveillance technologies) proposed may have.

EMERGING

WP 4
Identification of Emerging Technologies

WP 5
In-depth Analysis
CSSC:
- **EU relevant legal and policy framework on ET;**
- **reports and surveys on perceptions of ET by EU public opinion;**
- **regulatory and policy gaps;**
- **"ethical helpdesk"**

WP 6
Development of ESTRA
CSSC: recommendation/guidelines on policy options for making ET consistent with EU CFREU and other relevant documents

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The "Ethical HelpDesk" Tool
http://www.cssc.eu/ethical-helpdesk.php

- Providing partners with basic information on ethics and fundamental rights + framework questions raising awareness of ethical and fundamental rights implications generated by technologies with security implications

- Informing partners about topics and recent trends in the ethical debate on emerging technologies for security;

- Receiving and collecting questions, concerns, requests about relevant ethical and fundamental rights issues from partners and providing them with targeted responses;

- Receiving and collecting suggestions and comments about ethical and fundamental rights issues linked to the project from partners and discussing such issues with them;

- Carrying out the Ethical monitoring of the project.

Framework Questions Raising Awareness of Ethical and Fundamental Rights Implications Generated by Emerging Technologies with Security Implications (I)

Are the development and proposed use of a certain emerging technology with security implications likely to generate ethical issues *i.e.* affect ethical principles and values?

Could the development and proposed use of such technology respect or even promote ethical principles and values – human dignity, equality, justice, fairness, tolerance, … –
Or
Could they jeopardize them by entailing:

- Humiliation (degradation towards one's self-respect or dignity):
    - *Dehumanization i.e. deprive individuals of human qualities;*
    - *Causing experiences of shame;*
- Discrimination (racial, ethnic, religious, cultural, political, sexual, age, educational or social grounds):
    - *Prejudicial treatment of an individual based on his/her membership in a certain group or category;*
    - *Disadvantageous treatment against selected groups.*
- Stigmatisation (setting a person or a group apart from the others);
- Isolation;
- Injustice;
- …

If the development and proposed use of a certain emerging technology with security implications are likely to entail a negative ethical impact, how could such impact be prevented or at least minimised?

By technological design**;** by operating procedures; by personnel training; by a combination of the above; ….

Framework Questions Raising Awareness of Ethical and Fundamental Rights Implications Generated by Emerging Technologies with Security Implications (II)

Could the proposed use of a certain emerging technology with security implications require the free and informed consent of those individuals to be involved in or affected by such a use?

Could a certain emerging technology with security implications be used to cause unwarranted harm or disadvantage to individuals or groups?

Could it be susceptible of military use?

What fundamental rights are likely to be affected by the development and proposed use of a certain emerging technology with security implications (check list *supra)*?

What could be the impact of such technology on those rights?

Would it be beneficial (promotion) or negative (limitation) or even both depending on the right concerned?

Are the rights in question absolute rights or may they be subjected to limitations or restrictions and under which conditions (*i.e.* necessity and proportionality)?

To what extent could the development and proposed use of a certain emerging technology with security implications be able to modify individuals' behavior and in which manner?

Could it improve individual participation in society?
Could it generate anticipatory conformity among individuals?
Self-censorship?
Self-policing?
…

Framework Questions Raising Awareness of Ethical and Fundamental Rights Implications Generated by Emerging Technologies with Security Implications (III)

What kind of impact are the development and proposed use of a certain emerging technology with security implications likely to generate on the society?

Would the emerging technology be made widely available or could it be restricted to specific categories on individuals or groups?
Could it promote societal welfare, safety and/or economic growth?
Would the technology be equitable in its treatment of all group in society *i.e.* could the benefits (increased welfare, economic growth or other) generated by such emerging technology be shared among all the individuals of a given community or only by selected groups (powerful or vulnerable)?
Would the emerging technology be able to change power relations among individuals in a given community?

Would the development and proposed use of a certain emerging technology with security implications be environmentally sustainable?

Anticipatory thinking…

…may help to mitigate possible negative effects, where possible by technological design.

Ethics and Fundamental Rights by design should be the driving principle.

Emerging Technologies with Security Implications: 2 case studies

Homomorphic Encryption

Small-Scale Energy Harvesting Technologies

Contact and Acknowledgements

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