

WEBINAR HOST



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Dr. Suominen's research focuses on qualitative and quantitative assessment of innovation systems. Dr. Suominen has published work in several journals such as Technological Forecasting and Social Change, Journal of the Association for Information Science and Technology, Science and Public Policy, Scientometrics, Journal of Systems and Software, Futures, and foresight. Dr. Suominen has a Doctor of Science (Tech.) degree from the University of Turku and holds an Officers basic degree from the National Defence University of Finland.

MODULE 1 TEAM



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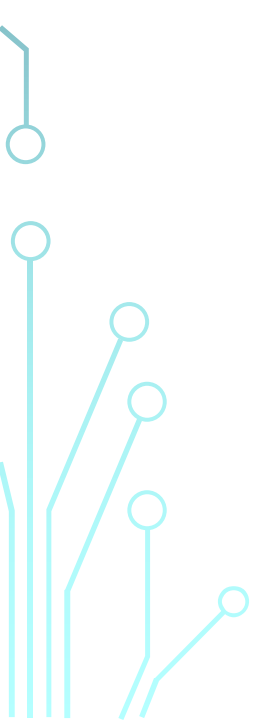
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Research Scientist @ VTT



OVERVIEW OF DUAL USE GUIDELINES

OUR UNDERSTANDING OF DUAL USE – CONTEXT

- The EU has a **strong knowledge base**, but is not capitalising enough on its R&D potential in terms of marketable goods and services.
 - EU has a well-identified risk of technology dependence in **strategic areas**, including defence, space, security and areas of high economic importance.
 - It is arguable that there is a **increasing relationship** between the civil and defence worlds.
 - The armed forces' and defence industry's dependence on technologies with a civilian origin is increasing, as is the tendency of the latter to diversify into civil companies.
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INTRODUCTION TO THE WORK

OUR UNDERSTANDING OF DUAL USE – DEFINITIONS

- We address **dual-use issues in enabling technologies research**
 - DUAL USE: products and technologies normally used for civilian purposes but which may have military applications.*
 - ENABLING TECHNOLOGIES: technologies that provide the basis for innovation in a wide range of industries. We can talk about Key Enabling Technologies (KETs)** , but also General Purpose Technologies (GPTs).

*<http://ec.europa.eu/trade/creating-opportunities/trade-topics/dual-use/>

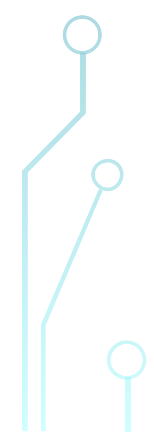
** https://ec.europa.eu/growth/industry/policy/key-enabling-technologies/description_pt





EUROPEAN UNION

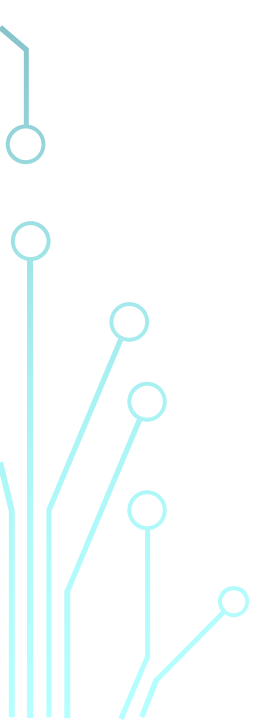
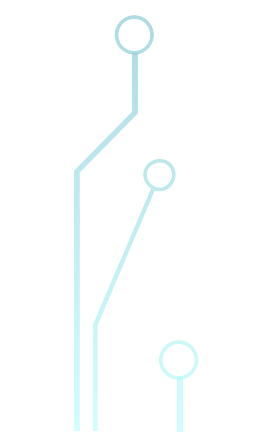
European Commission

- The need to explore synergies in the development of dual use applications with a clear security dimension or other dual use technologies.
 - Existing guidelines align with three different aspects of dual-use: economic growth, export control and ethical research.
 - Dual-use has also been addressed by the European Commission in recent studies and publications:
 - “European Textbook on Ethics in Research (2010)”
 - “EU funding for Dual Use: A practical guide to accessing EU funds for European Regional Authorities and SMEs” (2014);
 - “*Data and information collection for EU dual-use export control policy review (2015)*”
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EUROPEAN UNION

European Defence Agency guidelines

- *The EDA focuses particularly on creating a pathway for SMEs financing*
 - *Report highlights in this are*
 - *Handbook for defence-related SMEs (2016); Publicly-available guide containing relevant information for SMEs already involved or interested in the defence area*
 - *European Funding Gateway (2019); Publicly-available guidance material focused on the different types EU funding options for defence related research and innovation*
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SUMMARY OF NATIONAL CASES

FROM THE 154 DOCUMENTS 63 INVOLVED THE CASE COUNTRIES

KEY THEMES

France, Netherlands, UK, Finland, Poland, Sweden and Belgium: Focus on export control with Research ethics
Germany: Wider focus on innovation, export control, research

TO WHOM

Three main groups:
Companies, Researchers and
Trade officials

WITH WHAT EFFECT

Help researchers to comply
and identify situations of dual
use

Enable company compliance
with export regulation





UNIVERSITIES & RESEARCH INSTITUTES

CENTRAL THEMES

- *Provides guidance on ethics and dual use issues*
 - High ethical standards and procedures increase the quality of research.*
 - Outlines dual use impact on research.**
- *How to comply with dual use regulation*
 - *Event summary highlighted the need for tailored education for academics on export control****
 - Fraunhofer has established an export control system to protect Fraunhofer as a globally networked organization from conflicts with German or European foreign policy or security policy interests.

*https://ec.europa.eu/research/science-society/document_library/pdf_06/textbook-on-ethics-report_en.pdf

**<http://www.codex.vr.se/en/teknat4.shtml>

***<https://www.fdfa.be/sites/default/files/atoms/files/>

Summary%20report%20Dual-Use%20Export%20controls%20%20Academia%20%28Brussels%20-%202021%20November%202018%29.pdf

****<https://www.fraunhofer.de/en/about-fraunhofer/corporate-responsibility/research-and-development/ethics-and-scientific-responsibility.html>



SUMMARY OF UNIVERSITIES & RESEARCH INSTITUTES

WITH WHAT EFFECT

Research ethics: Responsible research and ethical issues in research

Research and licensing: an export control issue.

Research funding: highlighting potential dual use synergies

WITH WHAT EFFECT

Researchers

Funding bodies, universities (administration) and companies

WITH WHAT EFFECT

Awareness raising



FINAL NOTE

DISCUSSION ON THE ECONOMIC IMPACT OF DUAL USE IS SCARCE

The Economics of European Defense Industrial Policy in The Emergence of EU Defense Research Policy: From Innovation to Militarization. Springer 2018.

Hartley, Keith

Assessing the innovation capability of EU companies in developing dual use technologies. 2018.


JRC; CAVIGGIOLI Federico, DE MARCO Antonio, SCELLATO Giuseppe

Dual-use trade figures and how they combine. 2015.

JRC, C. Versino

Research & Technology and dual use technologies in the framework of the programme “Horizon 2020”. Which synergies between the civil sector and the defence industry? SERA26, 2014

INSTITUT DES HAUTES ÉTUDES DE DÉFENSE
NATIONALE





FINAL NOTE

DEFINITION/CLARIFICATION OF DUAL USE IS STILL WORK IN PROGRESS

“Addresses the need for a better definition of dual use concept and suggests three necessary moves for addressing the issue of security in life sciences”

<https://link.springer.com/article/10.1007/s11019-013-9542-9>

Aiming to raise awareness for the need of having a common understanding of the current regulation for dual-use research

<http://science.sciencemag.org/content/sci/343/6169/368.2.full.pdf>

Calls for revisiting the definition of what is dual use

<https://strategictraderesearch.org/wp-content/uploads/2017/09/Is-there-a-Common-Understanding-of-Dual-use-The-Case-of-Cryptography.pdf>

