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ESSENTIAL

***E**volving **S**ecurity **Sci**ence **E** through **N**etworked
Technologies, **I**nformation policy **A**nd **L**aw*

EJD

WP 5 - Training Programme (Training)

**LEAD PARTNER – P5 – “Mihai Viteazul” National
Intelligence Academy**

D5.14 - Fellows’ Handbook for Career

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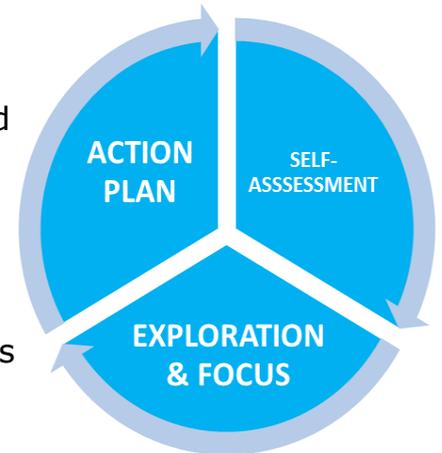
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Introduction

1. Aim of the Handbook

The Career Handbook provides guidelines and recommendations for effective career management, aiming to engage the target group in learning and practice experiences relevant in pursuing an academic career.

The Handbook has as starting premise the Career Development Process¹, seeking to fill the knowledge gaps and enable informed career decisions.



SELF-ASSESSMENT

- ✚ Define interests and functional or transferable skills related to the field of expertise (e.g. data, data protection, international law, intelligence analysis);

EXPLORATION & FOCUS

- ✚ Define skills and competencies required in academia, as well as other indicators of relevance in pursuing an academic career;
- ✚ Identify opportunities compatible with own goals;
- ✚ Gain knowledge of potential employer needs;

ACTION PLAN

- ✚ Participate in activities relevant to own field of expertise;
- ✚ Connect/ Networking;
- ✚ Exercise new skills;

Taking into account the principles of interdisciplinarity and mobility that laid the foundation of the ESSENTIAL project, the present Handbook provides a general normative framework and recommendations.

¹ The Career Development Process is a dynamic process with movement back and forth between stages.

2. Target group

The Career Handbook addresses doctoral students enrolled in the European Joint Doctorate ESSENTIAL as well as for any other young researchers working in the field of Security Science.

3. Structure

The Handbook follows the stages of the Career Development Process and provides indications and key readings from both scientific and non-scientific literature on:

Chapter 1 – SELF- ASSESSMENT

- Section 1 – Critical thinking and creativity
- Section 2 – Collaborative work
- Section 3 – Public speaking

Chapter 2 – EXPLORATION & FOCUS

- Section 1 – Requirements for an academic career
- Section 2 – Identify opportunities compatible with own goals and interests
- Section 3 – Documents
- Section 4 – Understanding your career trajectory

Chapter 3 – ACTION PLAN

- Section 1 – Research
- Section 2 – Publishing
- Section 3 – Teaching and supervision
- Section 4 – Connect/ build professional networks

Chapter 4 – POTENTIAL CAREER PATHS

- Section 1 – Building an academic career
- Section 2 – Aiming to become a security practitioner

Chapter 1 – SELF- ASSESSMENT

Section 1 – Critical thinking and creativity

Critical thinking skills provide the groundwork for delivering high-quality academic papers.

- Key readings
 - University of Leicester, What is critical writing?
<https://www2.le.ac.uk/offices/ld/resources/study-guides-pdfs/writing-skills-pdfs/critical-writing-v1%200.pdf>
 - The Open University, Critical reading techniques
<http://www2.open.ac.uk/students/skillsforstudy/critical-reading-techniques.php>
 - Richard Paul, Linda Elder, Critical thinking competency standards – a guide for educators,
<http://www.criticalthinking.org/resources/PDF/CT-competencies%202005.pdf>

Section 2 – Collaborative work

Collaborative work provides new opportunities for researchers to develop their skills, work within new scientific fields and apply methodologies across disciplines, thus generating impactful research products.

Within the academia, collaborative work is required and encouraged on different levels:

- ✚ Internal multidisciplinary research teams;
- ✚ Joint multidisciplinary research projects;
- ✚ Academia – Industry collaborations.

The benefits of co-producing knowledge are:

- ✚ Opportunities to develop leadership & communication skills;
- ✚ Increased opportunities for meaningful impact, creating opportunities for research-led actions;
- ✚ New applications for research methodologies;
- ✚ Stimulation of new interdisciplinary fields.

Key readings

- Aijaz A. Shaikh, A brief guide to research collaboration for the young scholar,
<https://www.elsevier.com/connect/a-brief-guide-to-research-collaboration-for-the-young-scholar>
- Jobs.ac.uk, Making academic collaboration work,
<https://www.jobs.ac.uk/media/pdf/careers/resources/making-academic-collaboration-work.pdf>

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- Business Horizon Quarterly, Industry, academia and government collaboration – a game changer for U.S. economic future <https://www.uschamberfoundation.org/sites/default/files/article/foundation/IndustryAcademia.pdf>
 - J. Sylvian Katz, Ben R. Martin, What is research collaboration?, <https://pdfs.semanticscholar.org/2463/e5529e639545975e1359ecc1533ccd97bcc2.pdf>

Section 3 – Public speaking

The role of an academic – to teach and/or deliver research products – provides various opportunities for public speaking e.g. present lectures, disseminate research results.

Key readings

- ✚ Monash association of debaters, Introduction to Public Speaking <http://www.monashdebaters.com/downloads/publicspeaking/Introduction%20to%20Public%20Speaking%20Guide.pdf>
- ✚ Linda J. Webster, Introduction to Public Speaking
- ✚ Steven A. Beebe, Public Speaking Handbook (5th edition)

Chapter 2 – EXPLORATION & FOCUS

Section 1 – Requirements for an academic career

Academia is a rigorous career path, but reaps many rewards. The first step towards becoming a professional in the academic field is the defense of the PhD thesis. In further pursuing an academic career, one has to take into account that several criteria (such as publication, getting involved in research projects and teaching) must be met. The indicators that have to be reached to be eligible for a given research position vary depending on the national legislation, university requirements and position sought.

Key readings

- ✚ Emily Lenning, Sara Brightman, Susan Caringella, A guide to surviving a career in academia – navigating the rites of passage

Section 2 – Identify opportunities compatible with own goals and interests

This section refers to (1) tips and tools useful in the process of job search and (2) tips and recommendations for interviews.

Key readings

- ✚ *, 10 Job search trick that will change everything you've been doing, <https://www.themuse.com/advice/10-job-search-tricks-that-will-change-everything-youve-been-doing>
- ✚ *, Six essential tools for job searching, <https://www.asrt.org/main/careers/job-search-resources/six-essential-tools-for-job-searching>
- ✚ *, 2018's most innovative job search tools, <https://www.livecareer.com/career/advice/jobs/2018s-innovative-job-search-tools>
- ✚ *, 20 tips for great job interviews, https://www.experisjobs.us/exp_us/en/career-advice/20-tips-job-interviews.htm
- ✚ *, The ultimate interview guide: 30 prep tips for job interview success <https://www.themuse.com/advice/the-ultimate-interview-guide-30-prep-tips-for-job-interview-success>

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- * , 12 surprising job interview tips, <https://www.forbes.com/sites/jonyoushaei/2014/10/20/12-surprising-job-interview-tips/#49436a0a50f4>

Section 3 - Documents

While there is no standard comprehensive list of required documents, in pursuing an academic career the following list of documents must be prepared and up-to-date:

Academic CV having the following sections:

- ✚ Identifying information
- ✚ Education history
- ✚ Areas of research interest, specialization or competence
- ✚ Experience and skills gained – usually divided into categories such as research experience, teaching experience, industry experience and professional experience.
- ✚ Fellowship, awards, honours
- ✚ Membership or professional affiliations
- ✚ Languages
- ✚ Publications and Presentations

Research statement – should include current and future research, along with your collaborations. Make sure to emphasize the common interest, goals and added-value your research interests and experience can add to the organization.

- ✚ Teaching statement – should include information about teaching experience, skills in the field (e.g. pedagogy courses graduated), and the list of classes you would teach and/or develop.
- ✚ Cover letter/ Statement of interest

Key readings

- ✚ PROSPECTS, How to write a CV, <https://www.prospects.ac.uk/careers-advice/cvs-and-cover-letters/how-to-write-a-cv>

Section 4 – Understanding you career trajectory

Key readings:

- ✚ Ashe-Edmunds, Sam, “What is a Career Trajectory?”. Available at <https://work.chron.com/career-trajectory-14143.html>.
- ✚ Cao, Jing and Thomas, Desiree, “When Developing a Career Path, What are the Key Elements to Include?”, Cornell University ILR School, Spring 2013. Available at <https://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1042&context=student>.

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- ✚ Clark, Dorie, "How to Explain Your Career Transition", Published April 23, 2013 in Harvard Business Review. Available at <https://hbr.org/2013/04/how-to-explain-your-career-tra>
 - ✚ Fallon, Nicole, "Navigating Your Career Path: How to Map It Out", 2015. Available at <https://www.businessnewsdaily.com/8651-career-path-planning.html>
 - ✚ Heathfield, Susan, "How Do I Make a Career Path Plan?", Published on March 09, 2018. Available at <https://www.thebalancecareers.com/career-pathing-1918080>



Chapter 3 – ACTION PLAN

Section 1 – Research

Researchers must stay abreast of relevant current events, public opinions and political developments, but also with data, research studies, reports and surveys on matters related to their field of work. They must be comfortable using a wide range of tools and methodologies, so as to ensure a thorough, evidence-based understanding of the topic subject to analysis. Moreover, given the flow of information available, researchers must be able to analyse, select and integrate large volumes of data into relevant research products.

Research funding aims to enable (1) the development of new ideas and technologies and (2) advance research in various fields, such as natural sciences, new technologies and structural research within higher education institutions.

The process of applying for a funding grant is a lengthy and complex one, and in writing up the research proposal, one must take into account several aspects:

- ✚ Compatibility between the research goals defined in the proposal and the specific priorities of the funding line.
- ✚ The degree of novelty and/or innovation of the proposal;
- ✚ The potential impact of the proposal & effective evaluation mechanisms;
- ✚ The competence of the researcher to carry out the activities included in the proposal (in terms of areas of expertise, experience, resources available etc.)
- ✚ The sustainability of the proposal.

Steps to be pursued:

(1) identify funding opportunities, evaluate them and choose in accordance with his needs and research objectives; (2) write up the proposal respecting the templates and requests imposed by the funding authority; if the proposal is evaluated positively and the funding is granted, (3) the researcher must start the implementation of the project.

Key readings

- ✚ Funding opportunities, https://ec.europa.eu/info/funding-tenders/funding-opportunities/find-calls-funding-topic_en
- ✚ Project management methodologies made simple, <https://thedigitalprojectmanager.com/project-management-methodologies-made-simple/>
- ✚ PM2 project management methodology, <https://publications.europa.eu/en/publication-detail/-/publication/0e3b4e84-b6cc-11e6-9e3c-01aa75ed71a1>
- ✚ Project management in controlled environments (PRINCE) methodology <https://www.prince2.com/eur/prince2-methodology>

Section 2 – Publishing

The general criteria for publication of scientific papers are:

- ✚ Report original scientific research;
- ✚ The main results and conclusions must not have been published or submitted elsewhere;
- ✚ Present results of outstanding scientific importance;

This section covers (1) how to choose a journal for publication, providing key readings on identifying and evaluating impact factors and (2) how to build and maintain reputation management in academia in relation with unethical practices in authorship.

Key readings

- ✚ Publishing: Criteria for Selecting Journals, <https://libguides.cdu.edu.au/Publishing>
- ✚ ISBN, DOI, ISSN – a quick guide to publication identifiers <https://www.enago.com/academy/isbn-doi-issn-a-quick-guide-to-publication-identifiers/>
- ✚ Journal Impact Factor, <http://ipscience-help.thomsonreuters.com/inCites2Live/indicatorsGroup/aboutHandbook/usingCitationIndicatorsWisely/jif.html>
- ✚ Measuring your impact: impact factor, citation analysis, and other metrics, <https://researchguides.uic.edu/if/impact>
- ✚ Reputation management theory versus practice https://www.researchgate.net/profile/Gary_Davies4/publication/233665443_Reputation_Management_Theory_Versus_Practice/links/57a1eca908aeef8f311d9029/Reputation-Management-Theory-Versus-Practice.pdf
- ✚ Employees: the key link to corporate reputation management <https://www.sciencedirect.com/science/article/pii/S0007681305001412> -
- ✚ R. Reuben, The Use of Social Media in Higher Education for Marketing and Communications: A Guide for Professionals in Higher Education, URL:<http://doteduguru.com/wpcontent/uploads/2008/08/social-media-in-highereducation>.
- ✚ Taken out of context, <http://www.danah.org/papers/TakenOutOfContext.pdf>
- ✚ Author Profiling and Reputation Dimensions for Online Reputation Management <http://ceur-ws.org/Vol-1180/CLEF2014wn-Rep-AmigoEt2014.pdf>
- ✚ Ten simple rules for building and maintaining a scientific reputation, <https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1002108>
- ✚ Unethical practices in authorship of scientific papers <http://www.hunter.cuny.edu/genderequity/repository/files/gep-workshop-materials/UnethicalPractices.pdf>

- ✚ Staying out of trouble: apparent plagiarism and academic survival, <https://www.sciencedirect.com/science/article/abs/pii/S1060374398900030>
- ✚ Borrowing others' words: text, ownership, memory and plagiarism https://www.researchgate.net/profile/Alastair_Pennycook/publication/245588504_Borrowing_Others%27_Words_Text_Ownership_Memory_and_Plagiarism/links/55ffe00308aeba1d9f841366.pdf

Section 3 – Teaching and supervision

Key readings

- ✚ Bruce Joyce, Marsha Weil, Emily Calhoun, Models of Teaching, <https://digitalcommons.georgiasouthern.edu/ct2-library/96/>
- ✚ Learning and teaching – research – based methods, http://catalogue.pearsoned.co.uk/assets/hip/gb/hip_gb_pearsonhighered/preview/0132179342.pdf

Section 4 – Connect/ build professional networks

Connect/ build professional networks refers to building relationships and making connections to others who may provide you with advice, information, further contacts and collaboration opportunities.

Recommendations:

- ✚ Create or update your profile on professional networking sites (e.g. LinkedIn).
- ✚ Review your social media public profiles for appropriate content.
- ✚ Maintain your resume up-to-date.
- ✚ Attend events/ join groups on topics of interest and create connections.
- ✚ Reach out and communicate in a professional manner.
- ✚ Create a database of all your contacts made for future reference.

Key readings

- ✚ 10 ways to make your LinkedIn profile stand out, <https://www.topresume.com/career-advice/10-ways-to-create-a-winning-linkedin-profile>
- ✚ How to create a killer linkedin profile that will get you noticed <https://www.linkedin.com/pulse/how-create-killer-linkedin-profile-get-you-noticed-bernard-marr>

Chapter 4 – POSSIBLE CAREER PATHS

Section 1 – Building an Academic Career

Key readings:

- ✚ Blaxter, Academic Career Handbook, 1998, Open University Press
- ✚ Burge, Gary, Mapping Your Academic Career: Charting the Course of a Professor's Life, 2015, IVP Academic; Annotated edition
- ✚ Golden, Serena, "Behind the Academic Curtain", 2013. Available at <https://www.insidehighered.com/news/2013/11/20/new-book-how-navigate-entire-academic-career>
- ✚ Greeson, Johanna, "From PhD to Professor: Advice for Landing Your First Academic Position". Available at <https://www.themuse.com/advice/from-phd-to-professor-advice-for-landing-your-first-academic-position>
- ✚ Jobs.ac.uk, "A Practical Guide to Planning an Academic or Research Career". Available at <https://www.jobs.ac.uk/media/pdf/careers/resources/a-practical-guide-to-planning-an-academic-or-research-career.pdf>
- ✚ Vick, Julia Miller, Furlong, Jennifer S., The Academic Job Search Handbook, 2008, University of Pennsylvania Press

Section 2 – Aiming to become a security practitioner

Key readings

- ✚ *, "4 Cybersecurity Career Paths (And the Training to Get You There)". Published July 19 2018. Available at <https://www.newhorizons.com/resources/article/articleid/41/title/4-cybersecurity-career-paths-and-the-training-to-get-you-there>
- ✚ *, "Career Paths of Police Officers" available at https://uk.sagepub.com/sites/default/files/upm-binaries/50820_ch_5.pdf
- ✚ Association of Former Intelligence Officers, "Intelligence as a Career. Is It Right for You and Are You Right For It?". Published January 2013. Available at https://www.afio.com/publications/AFIO_2013_Careers_Booklet.pdf
- ✚ Burton, Matthew, "So you want to be an intelligence analyst". Published on October 10 2013. Available at <http://matthewburton.org/become-an-intelligence-analyst/>
- ✚ Grey Campus, "How to Become a Cyber Security Expert (Career Path)". Published on December 7 2017. Available at <https://www.careeraddict.com/cyber-security-expert>
- ✚ Pruitt-Mentle, Davina, "Turning Cybersecurity Awareness into a Cybersecurity Career". Published on October 26, 2017. Available at <https://www.nist.gov/blogs/taking-measure/turning-cybersecurity-awareness-cybersecurity-career>

Useful resources

For cybersecurity careers

 <https://www.cybersecurityeducation.org/careers/>