Ministerie van Economische Zaken

# Human Capital Cybersecurity
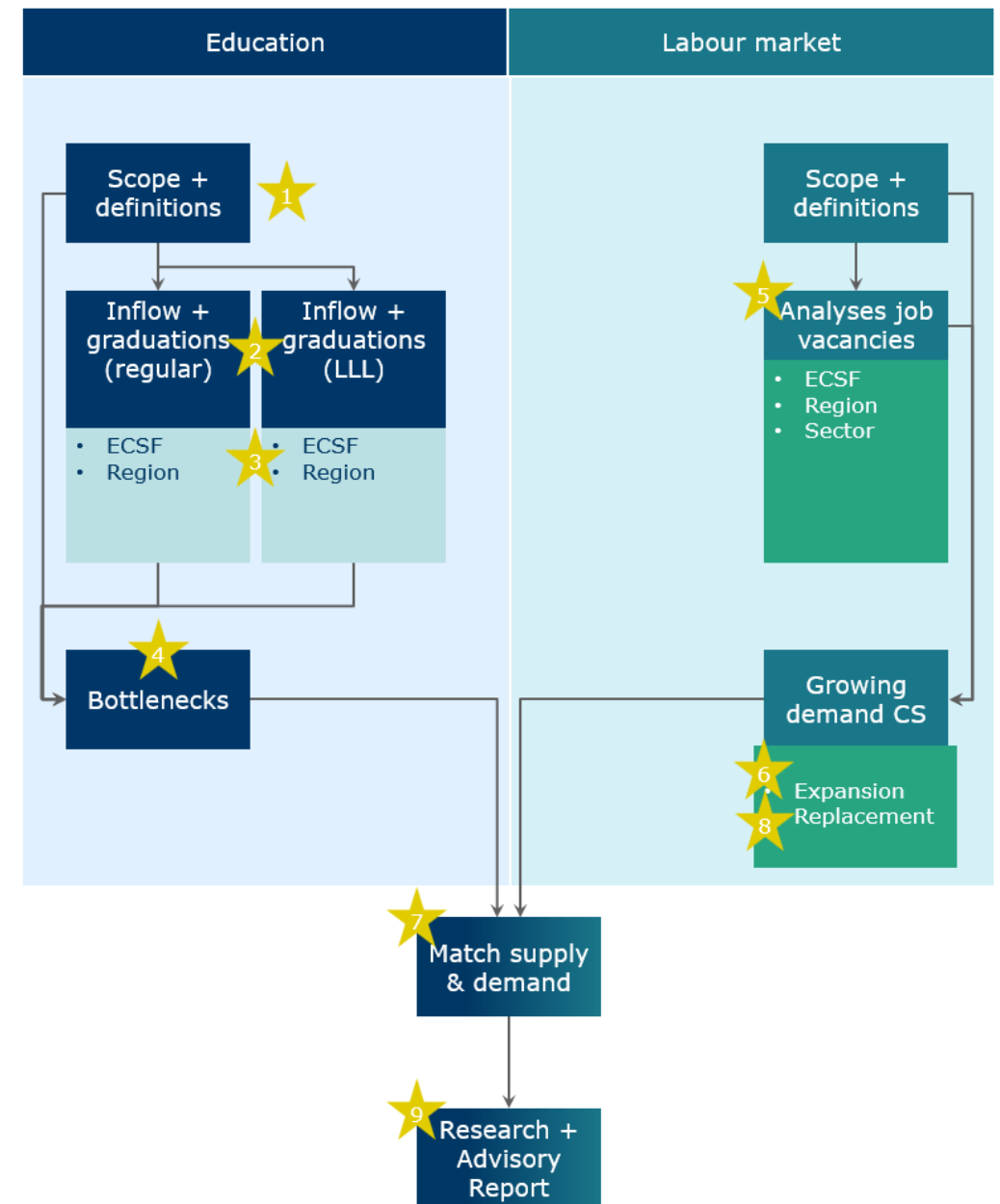
Ministry of Economic Affairs
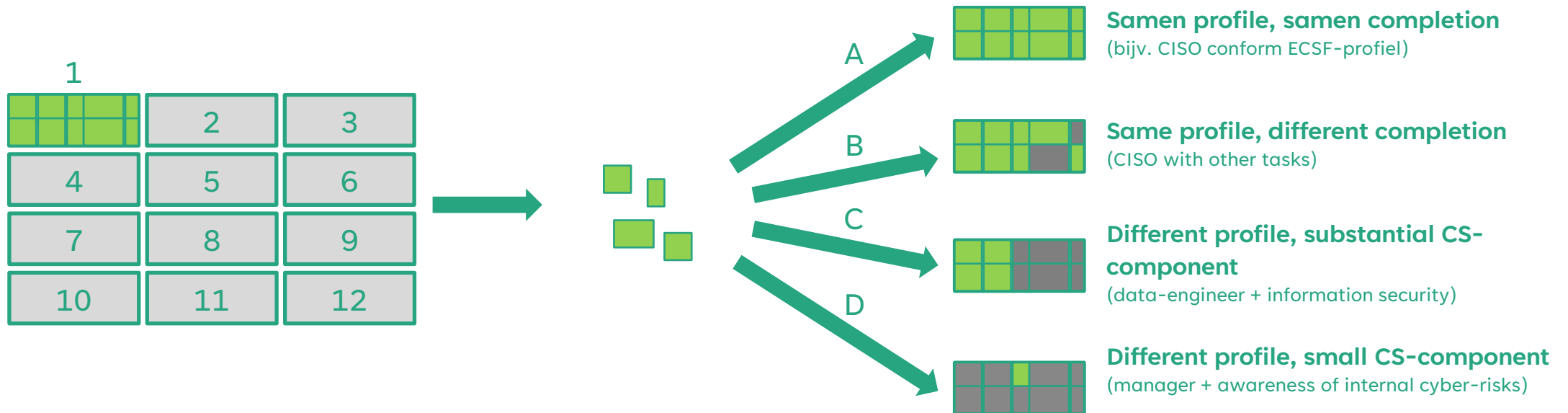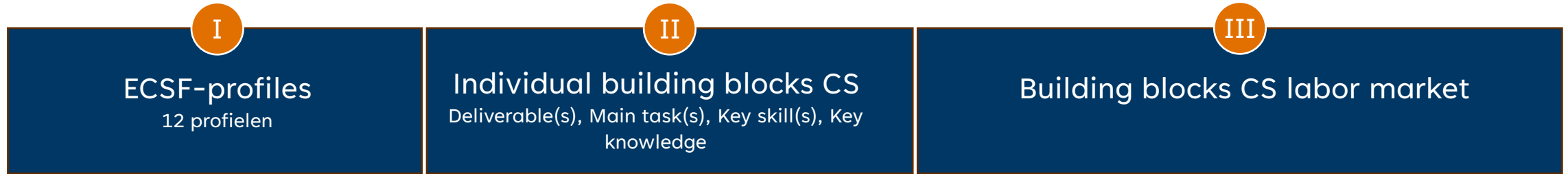NL

*Fadime Keçe*

# Growing demand of cyber professionals

› National and EU wide growing demand in cyber talent

› Understanding the demand of labour market and the 'supply' of education in depth is needed to develop and implement the right actions.

# Cybersecurity education and labour market research

› Education vs Labour market demands

› ECSF

› (mis) match suply & demand

# How did we analyse the labour market demand?

| I | II | III |
|---|---|---|
| **ECSF-profiles** <br> 12 profielen | **Individual building blocks CS** <br> Deliverable(s), Main task(s), Key skill(s), Key knowledge | **Building blocks CS labor market** |

1

| 1 | 2 | 3 |
|---|---|---|
| 4 | 5 | 6 |
| 7 | 8 | 9 |
| 10 | 11 | 12 |

A **Samen profile, samen completion**
(bijv. CISO conform ECSF-profiel)

B **Same profile, different completion**
(CISO with other tasks)

C **Different profile, substantial CS-component**
(data-engineer + information security)
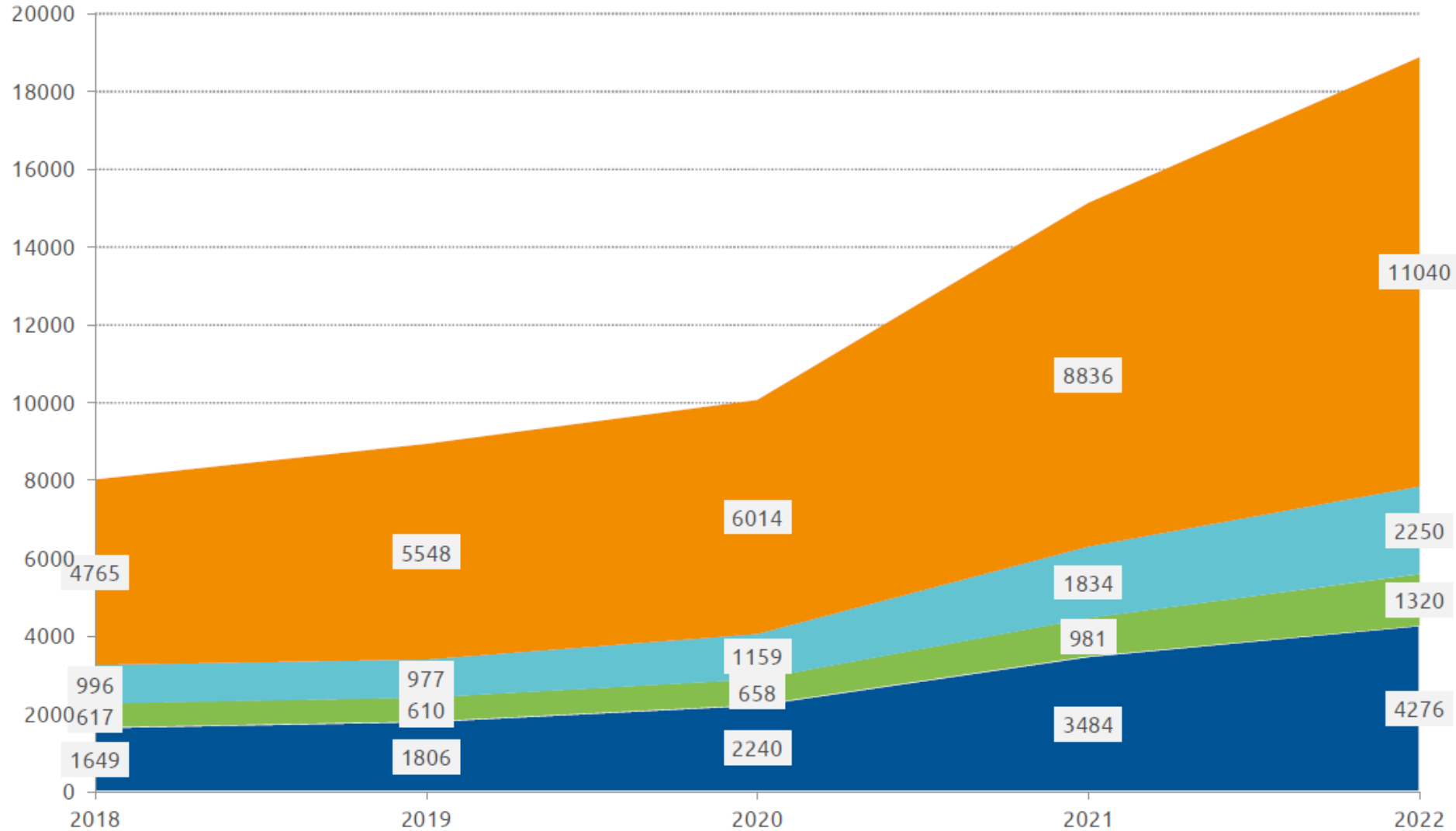
D **Different profile, small CS-component**
(manager + awareness of internal cyber-risks)

# Outcomes: job vacancies

# Outcomes: (mis) match labour market & education

**Labour market**

**Education**

| Multitude of profiles in which different (CS) expertises are required | **1** Diversity in CS-expertise | Multitude of courses with its own (specific) focus |

**+**

| Multitude of parties that should be working with CS in different ways | **2** Diversity in target groups | Connection education-labor market is versatile |

**+**

| Introduction of NIS2 en CRA, development and use of AI | **3** Rapid developments (technical and legal) | Education must quickly adapt to developments |

Scope of 'CS-expertise' is big and changes rapidly

Requires commitment from many Parties to cover scope

Coordination is needed for a good match between supply and demand

Common language is necessary for effective coordination: shared image of 'the demand' and 'the supply'

# Recommendations & next steps

## Coordinated approach:
- Integration with the existing Human Capital Agenda ICT
- Coordinated plan of action to define **meaningful** and **actionable** next steps for all recommendations.
- Set up task force Human Capital Cybersecurity
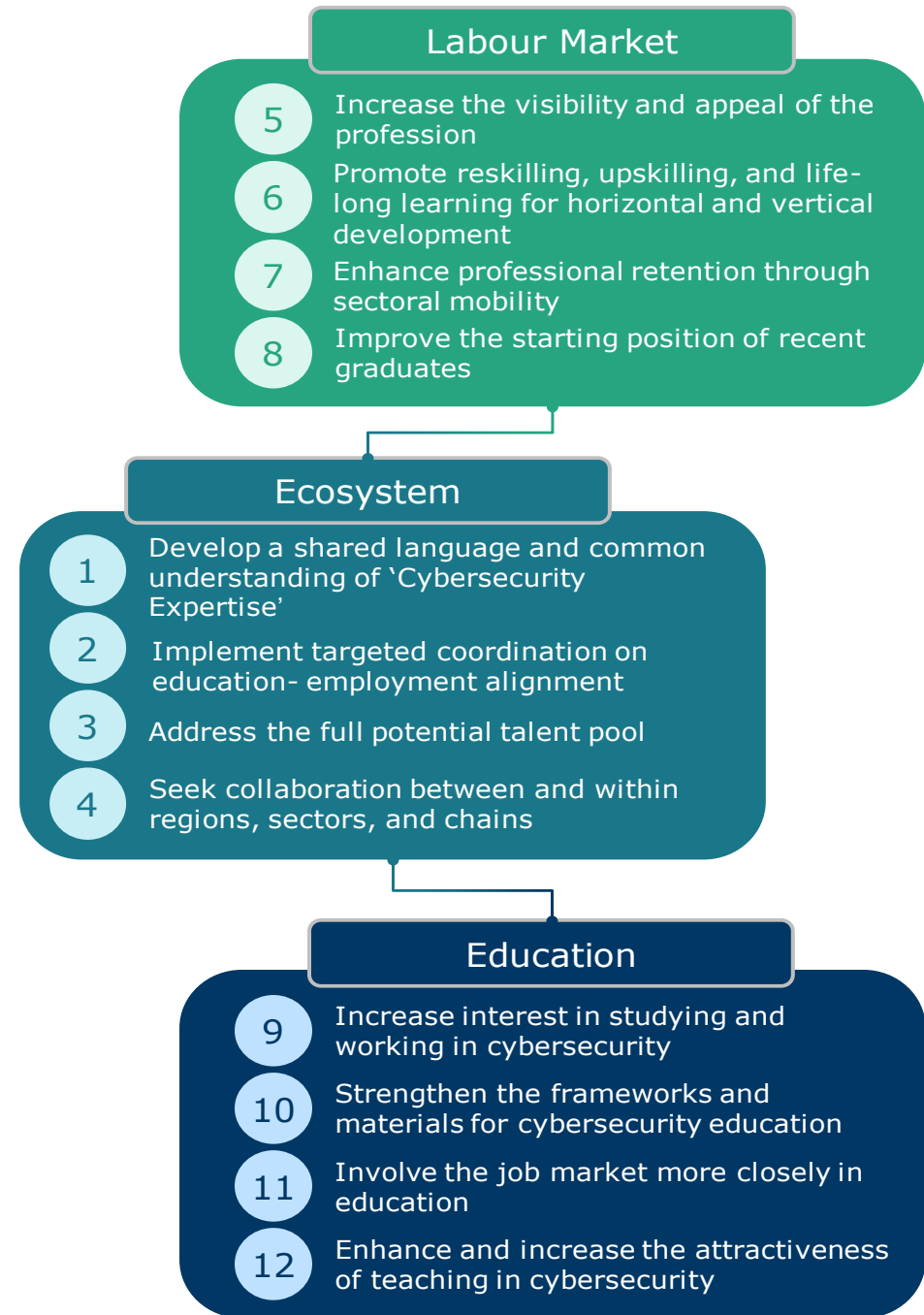  - Representation from Education, Research, Government & Labour Market.

## Fixing the basics
- Provide more **insight** into the cybersecurity talent gap and best practices (initiatives)

## Support building partnerships (knowledge institutions & organizations)
- Exploring instruments to support building partnerships with the goal to match education better with the needs of businesses

**These are first next steps. Together with the Task Force and the broader CS ecosystem within NL concrete actions (initiatives) will be formulated and implemented in upcoming years.**

**Labour Market**

5 — Increase the visibility and appeal of the profession

6 — Promote reskilling, upskilling, and life-long learning for horizontal and vertical development

7 — Enhance professional retention through sectoral mobility

8 — Improve the starting position of recent graduates

**Ecosystem**

1 — Develop a shared language and common understanding of 'Cybersecurity Expertise'

2 — Implement targeted coordination on education- employment alignment

3 — Address the full potential talent pool

4 — Seek collaboration between and within regions, sectors, and chains

**Education**

9 — Increase interest in studying and working in cybersecurity

10 — Strengthen the frameworks and materials for cybersecurity education

11 — Involve the job market more closely in education

12 — Enhance and increase the attractiveness of teaching in cybersecurity

# Thank you for your attention

Are the best practices from your country you would like to share? Lets inspire each other!