



# DRIVES Framework

**Deliverable 4.2.1 European Recognition Framework for Automotive – Pilot Mapping of ECQA**

**WP4 Skills Transferability, [www.project-drives.eu](http://www.project-drives.eu)**



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- This presentation serves as addition to main presentation focused on Framework introduction (Deliverable 4.2.1 European Recognition Framework for Automotive)
- ECQA ([www.ecqa.org](http://www.ecqa.org)) is the body mapped as pilot to DRIVES Framework

## 1. First fill-in of the DRIVES Framework with data from ECQA

- Integrating DRIVES WP3 Skills Sets into the DRIVES Framework (WP3 work on skill cards to be reflected in the framework and by that create best practice for ECQA plugin)
- For providers under ECQA certification body (based on exercise 1) – including providers that are not in DRIVES partnership – if the particular competences are not already in the framework

## 2. Plug-in of new trainings providers to established framework

- a. For new providers under any certification body, or non to fill in the offered trainings



# 1. First fill-in of the DRIVES Framework with data from ECQA

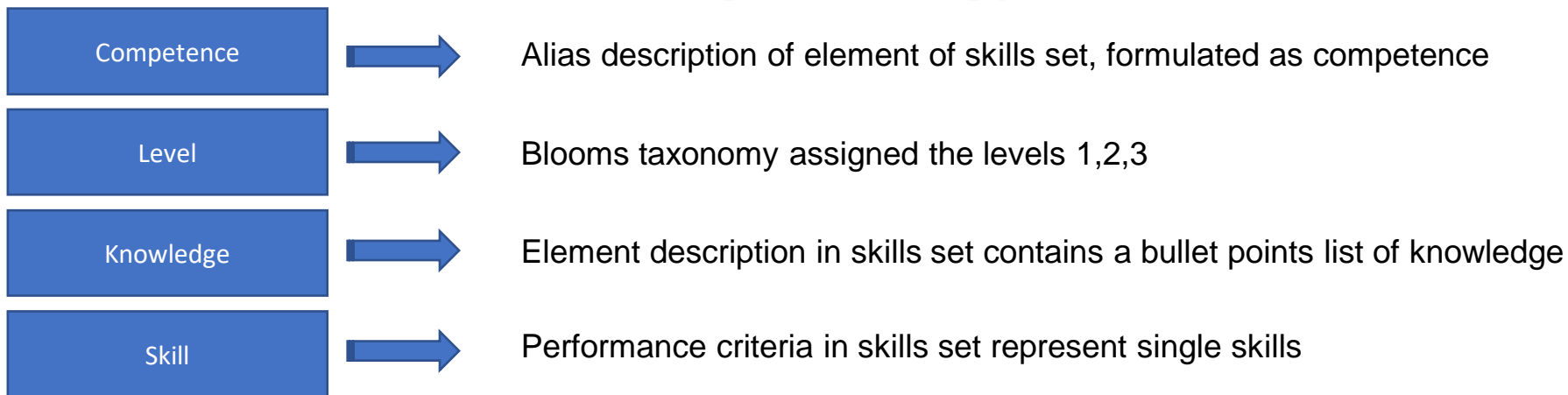


There exist several strategies how to first fill in the data to the DRIVES Framework from ECQA structure:

1. Mapping Strategy 1 - Consistency Model for Skills Sets
2. Mapping Strategy 2 - Integrating Knowledge and Skills in one
3. Mapping Strategy 3 – Simple Conversion Mechanism by Key Words

- We checked the level of detail and applied the same structuring principle

## Mapping Strategy



# 1. Mapping Strategy 1 - Consistency Model for Skills Sets

- This contains an example where the skills set description would be reviewed and the element description and performance criteria would be re-formulated to fit.
- Example – see next slides



# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

Basics in Functional Safety ISO26262

Hazard and Risk Analysis and Safety Goals

Functional Safety on Product Design and Cost

## Levels

2

2

2

## Knowledge

You know about the legal situation

You know about cases showing a high business impact

You know about the issue of complex mechatronic products and safety

You know the most important automotive safety norms and their main meaning.

## Skills

The student understands the critical legal paragraphs to be taken into account in case of functional safety.

The student understands the risk in business and the impact safety critical cases can have.

The student understands the issue of complex mechatronic products and safety.

The student understands which most important norms need to be considered for the homologation of cars in case of functional safety.





# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

Basics in Functional Safety ISO26262

Hazard and Risk Analysis and Safety Goals

Functional Safety on Product Design and Cost

## Levels

2

2

2

## Knowledge

You know about Hazard and Risk Analysis (HARA) at vehicle level.

You know about Automotive Safety Integrity Level (ASIL) and Safety Goals.

You know the typical content of a Functional Safety Concept .

## Skills

The student can perform a HARA (Hazard and Risk Analysis).

The student is able to derive an ASIL and safety goal using the HARA.

The student understands the the impact of an ASIL on the Processes.

The student understands how in general a Functional Safety Concept is derived.



# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

Basics in Functional Safety ISO26262

Hazard and Risk Analysis and Safety Goals

Functional Safety on Product Design and Cost

## Levels

2

2

2

## Knowledge

You know functional safety cost factors.

You know functional safety related product design patterns.

You know functional safety related roles in an organisation.

## Skills

The student is able to consider cost drivers for functional safety in planning safety projects on a general level.

The student understands basic design patterns required to achieve functional safety integrity levels.

The student can define the role of a safety manager in companies.



## 2. Mapping Strategy 2 - Integrating Knowledge and Skills in one

- This contains an example where are skills and knowledge not separated.
- Example – see next slides



# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

Basics in Functional  
Safety ISO26262

Hazard and Risk Analysis  
and Safety Goals

Functional Safety on  
Product Design and Cost

## Levels

2

2

2

## Knowledge & Skills

The student understands the critical legal paragraphs to be taken into account in case of functional safety.

The student understands the risk in business and the impact safety critical cases can have.

The student understands the issue of complex mechatronic products and safety.

The student understands which most important norms need to be considered for the homologation of cars in case of functional safety.



# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

## Levels

Basics in Functional Safety ISO26262	2
Hazard and Risk Analysis and Safety Goals	2
Functional Safety on Product Design and Cost	2

## Knowledge & Skills

The student can perform a HARA (Hazard and Risk Analysis).

The student is able to derive an ASIL and safety goal using the HARA.

The student understands the the impact of an ASIL on the Processes.

The student understands how in general a Functional Safety Concept is derived.



# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

## Levels

Basics in Functional Safety ISO26262	2
Hazard and Risk Analysis and Safety Goals	2
Functional Safety on Product Design and Cost	2

## Knowledge & Skills

The student is able to consider cost drivers for functional safety in planning safety projects on a general level.

The student understands basic design patterns required to achieve functional safety integrity levels.

The student can define the role of a safety manager in companies.



## 3. Mapping Strategy 3 – Simple Conversion Mechanism by Key Words

- This would be the most simple conversion algorithm.
- Proposal of assumption that a performance criteria in ECQA has a certain language and if it says “knows” it is knowledge and if it uses another term, it is a skill.
- In this case the skills set does not need to be reworked, the conversion is simple.
- Example – see next slides



# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

Basics in Functional Safety ISO26262

Hazard and Risk Analysis and Safety Goals

Functional Safety on Product Design and Cost

## Levels

2

2

2

## Knowledge

The student knows about cases showing a high business impact.

## Skills

The student understands the critical legal paragraphs to be taken into account in case of functional safety.

The student understands which most important norms need to be considered for the homologation of cars in case of functional safety.

The student understands the issue of complex mechatronic products and safety.





# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

Basics in Functional  
Safety ISO26262

Hazard and Risk Analysis  
and Safety Goals

Functional Safety on  
Product Design and Cost

## Levels

2

2

2

## Knowledge

The student knows how a HARA is performed.

The student knows the impact of an ASIL on the processes.

The student knows about how in general a Functional Safety Concept is derived.

## Skills

The student understands how an ASIL (Automotive Safety Integrity Level) is determined.



# Framework Mapping – Functional Safety Manager Corporate Level (Basic)

## Competences

Basics in Functional Safety ISO26262

Hazard and Risk Analysis and Safety Goals

Functional Safety on Product Design and Cost

## Levels

2

2

2

## Knowledge

The student knows basic design patterns required to achieve functional safety integrity levels.

The student knows how typically the role of a safety manager is defined in companies.

## Skills

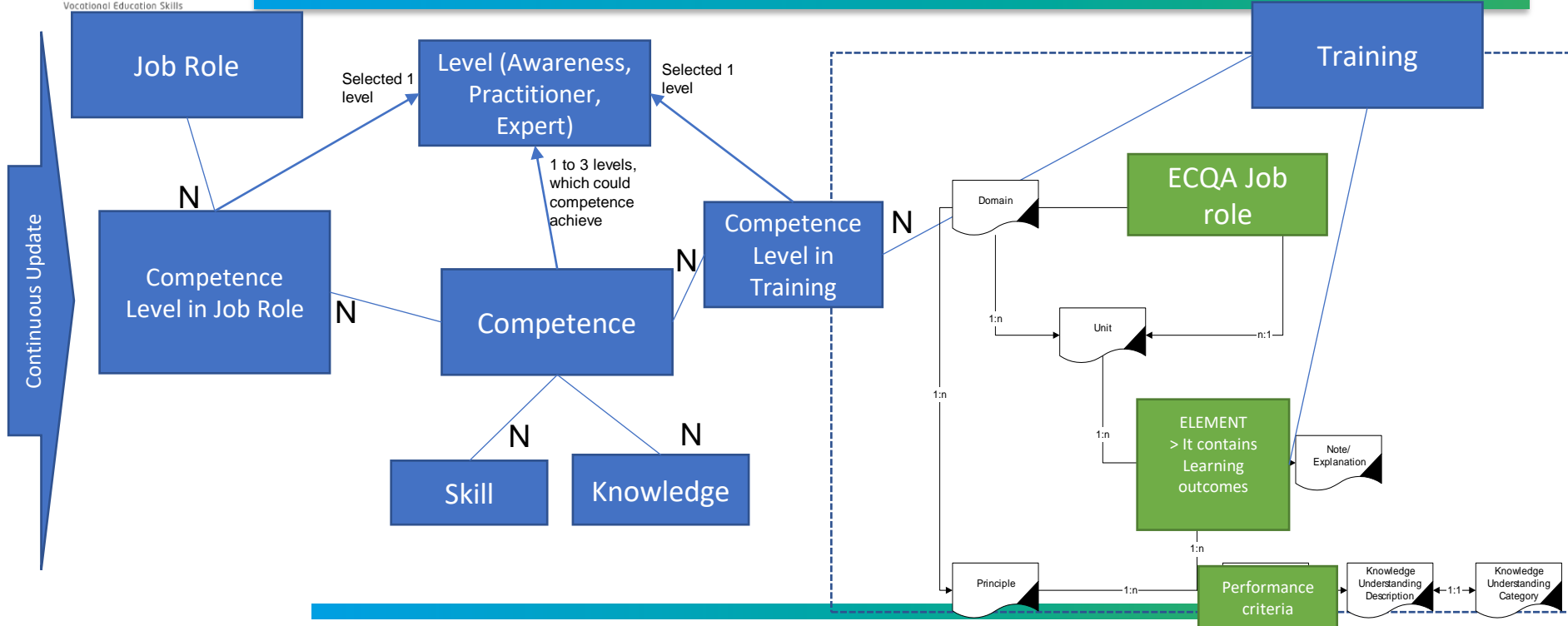
The student understands cost drivers for functional safety in general.



# ECQA Mapping Overview

DRIVES FRAMEWORK

Internal training structure following  
ECQA structure



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## 2. Plug-in of new training providers to established framework



# Plug-in of new training and education

- By training and education institution
  - Selects existing competences and its levels from the DRIVES Framework DB – those which are achieved by the training
  - If the competence is not found – possibility to propose new competence (skills and knowledge) to the framework
    - Same approval process as for continuous update (“community approach”)

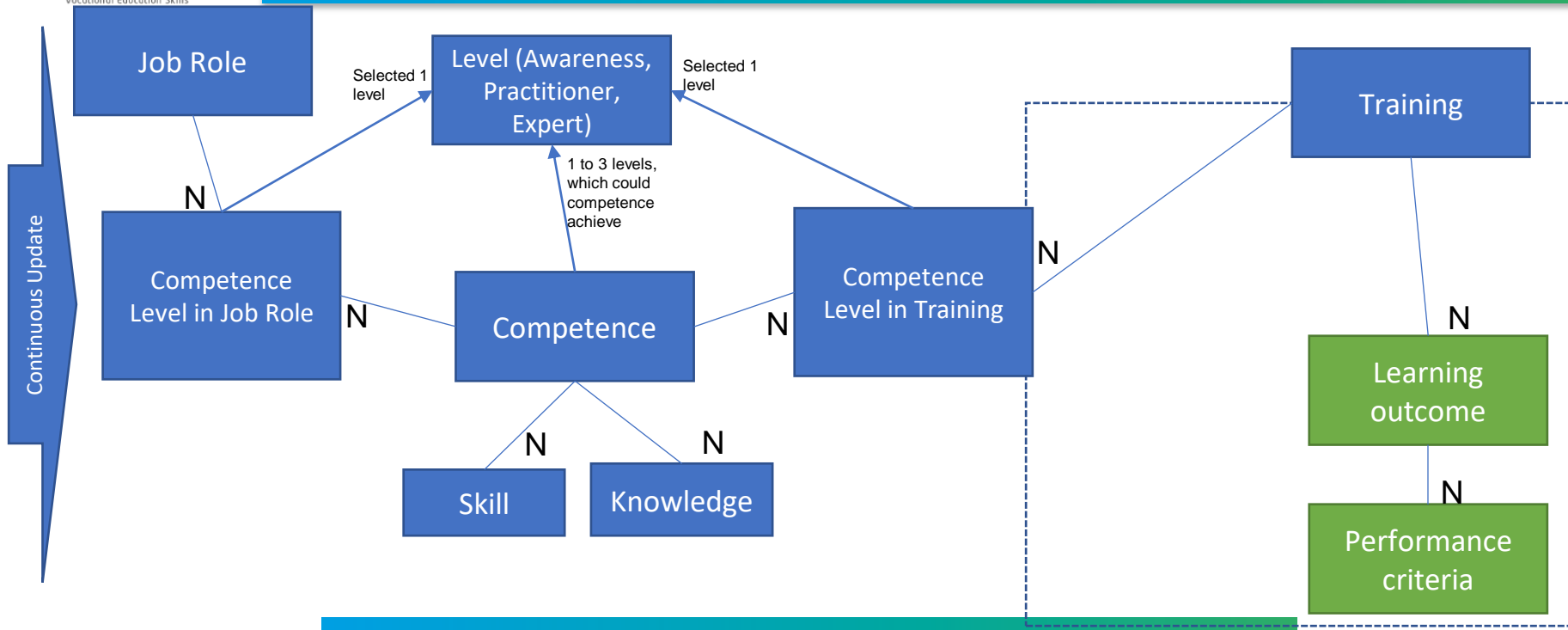
**For more info see the main presentation**



# Plug-in Concept

DRIVES FRAMEWORK

Internal training structure following certification structure, etc.





# Thank you for your attention

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# Project Deliverable Title





# Project Deliverable Title (1)

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