

Vocational Training at EADS/Airbus

A brief survey of the organisation of apprenticeship at the EADS-sites in four different countries with respect to the national education systems and the integration of AEROnet



Juergen Ledl, EADS, Munich, Germany

Juergen.Ledl@eads.com

Laureano Jiménez, University of Barcelona, Spain

Laure.Jimenez@ub.edu

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Content

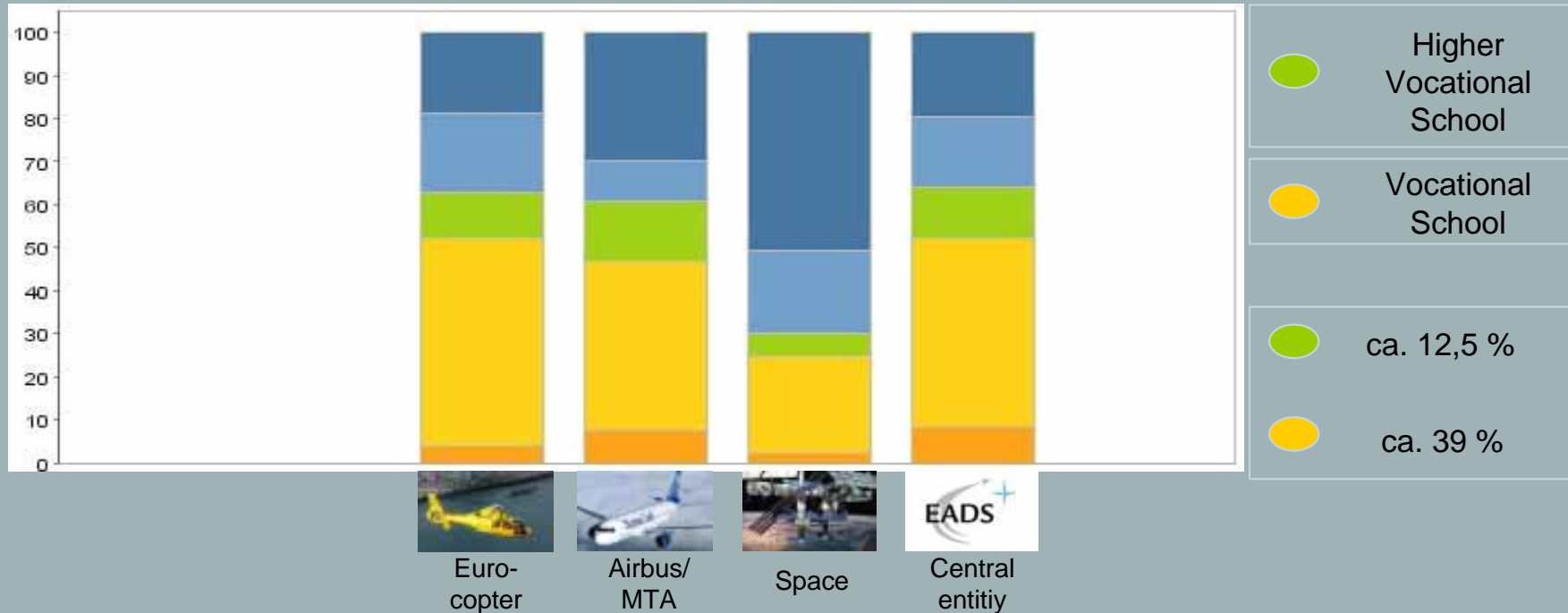
- What is **EADS / Airbus**?
- What relevance do **EADS / Airbus** have for the vocational training system in their countries?
- Survey of the **education systems** in the EADS-countries (Fr, Ge, SP, UK)
- Actual circumstances for **vocational training at EADS / Airbus**
- Integration of LEONARDO-da-VINCI-pilot-project **AEROnet**
- Possible consequences of the AEROnet-project

What is EADS / Airbus?

- The **European Aeronautic Defense and Space Company EADS N.V.** is Europe`s most important aerospace corporation with a current workforce of more than 115.000 people worldwide, half of them qualified on vocational patterns
- **Airbus** is the biggest division of EADS with \approx 57.000 employees; over the last years world`s largest producer of civil airplanes ahead of Boeing
- **EADS** was founded in 2000 as merger of French Aerospatiale Matra, German DaimlerChrysler Aerospace and Spanish CASA
- **Airbus S.A.S.** as 80% daughter of EADS, 20% held by British BAe Systems, is a brand incorporated under French law that assembles its high-tech products in the EADS-countries France, Germany and Spain as well as in the United Kingdom in a highly integrated cooperation process

What is EADS / Airbus?

- EADS/ Airbus has a **high percentage of employees with blue collar**, vocational career patterns – overall $\approx 50\%$

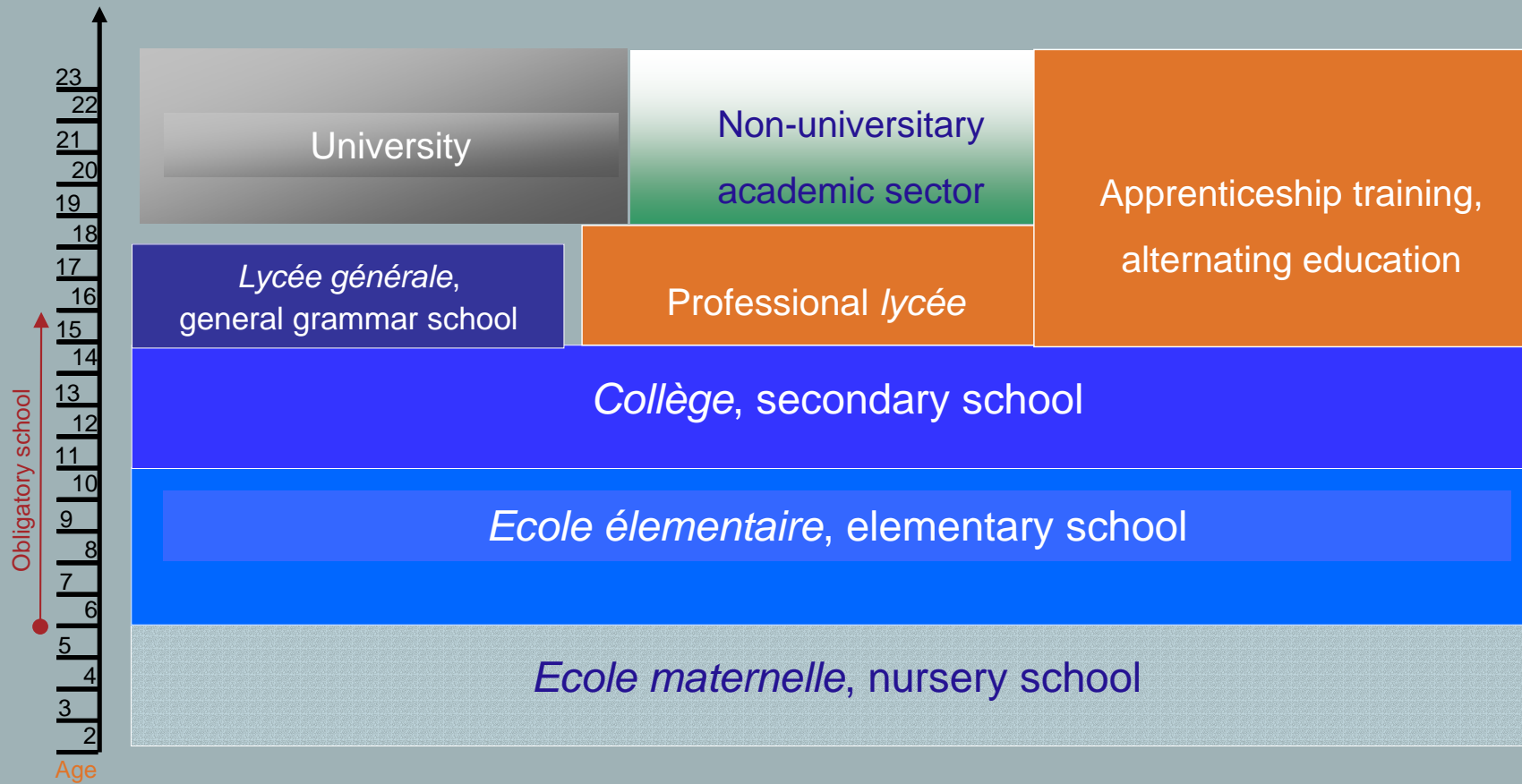


- To give at least one national example: the percentage of apprentices, relative to the workforce, in Germany 5%

What is EADS / Airbus?

- As the products are of highest technology and have to serve long-term security requirements of highest rank this implies **special quality implications on the vocational training** at EADS /Airbus
- Airplanes are no mass product, the market value is characterized as investment good with a long life-circle
- Furthermore civil airplanes are products where **security** has an essential importance. Whereas other products like bridges can be made save in an easy, obvious way using masses of material, this solution is excluded by nature in the assembly of airplanes. In modern times ceresin prizes, tough competition on the market and other reasons put pressure on the **weight requirements** of airplanes that sharpen this argument more and more
- As a consequence the materials used in this industries underlie a steady change and require special skills and competences of skilled workers in the branch. **This is the challenge for education and training!**

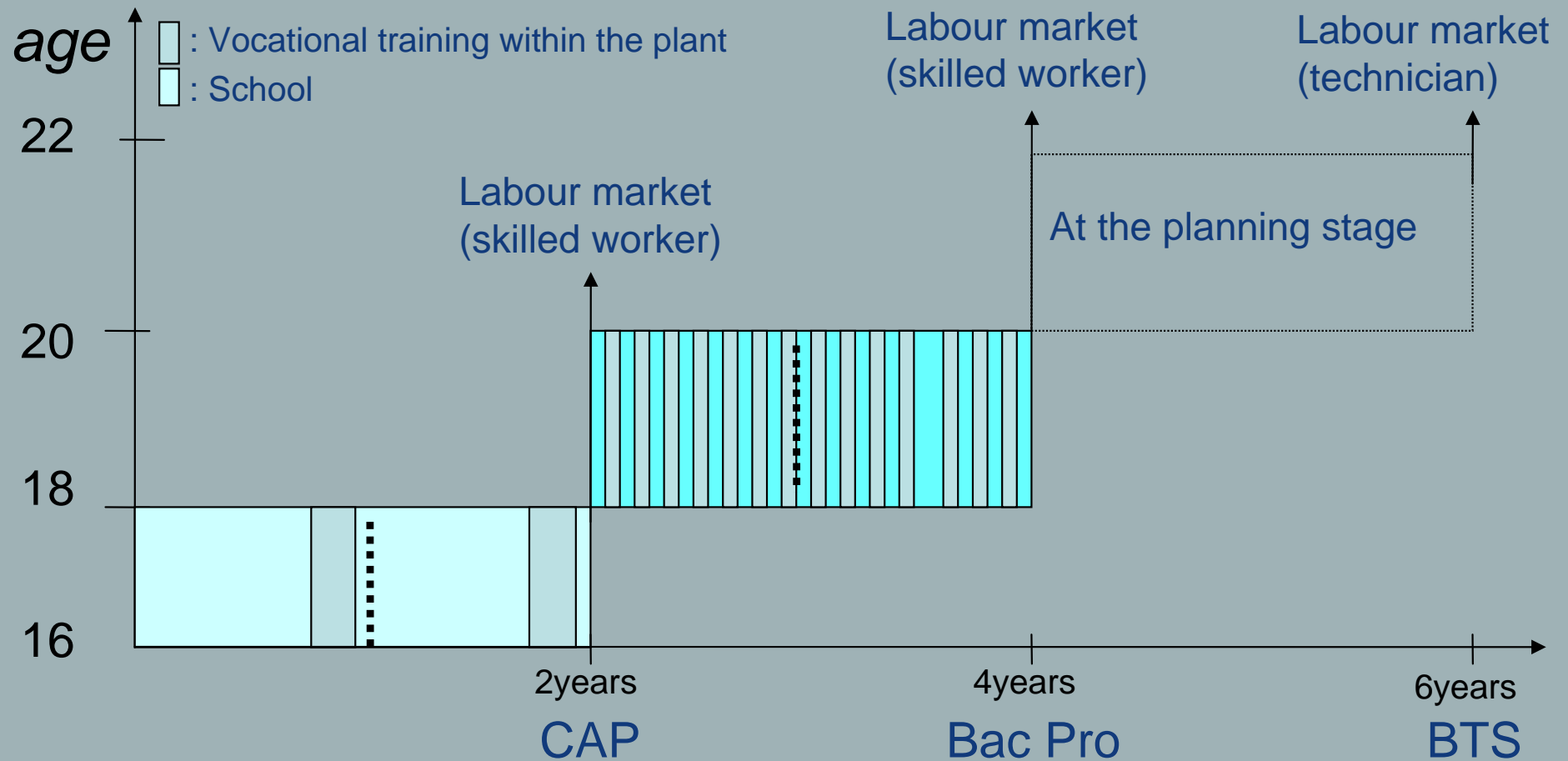
Survey of the education systems in the EADS-countries - Training in France



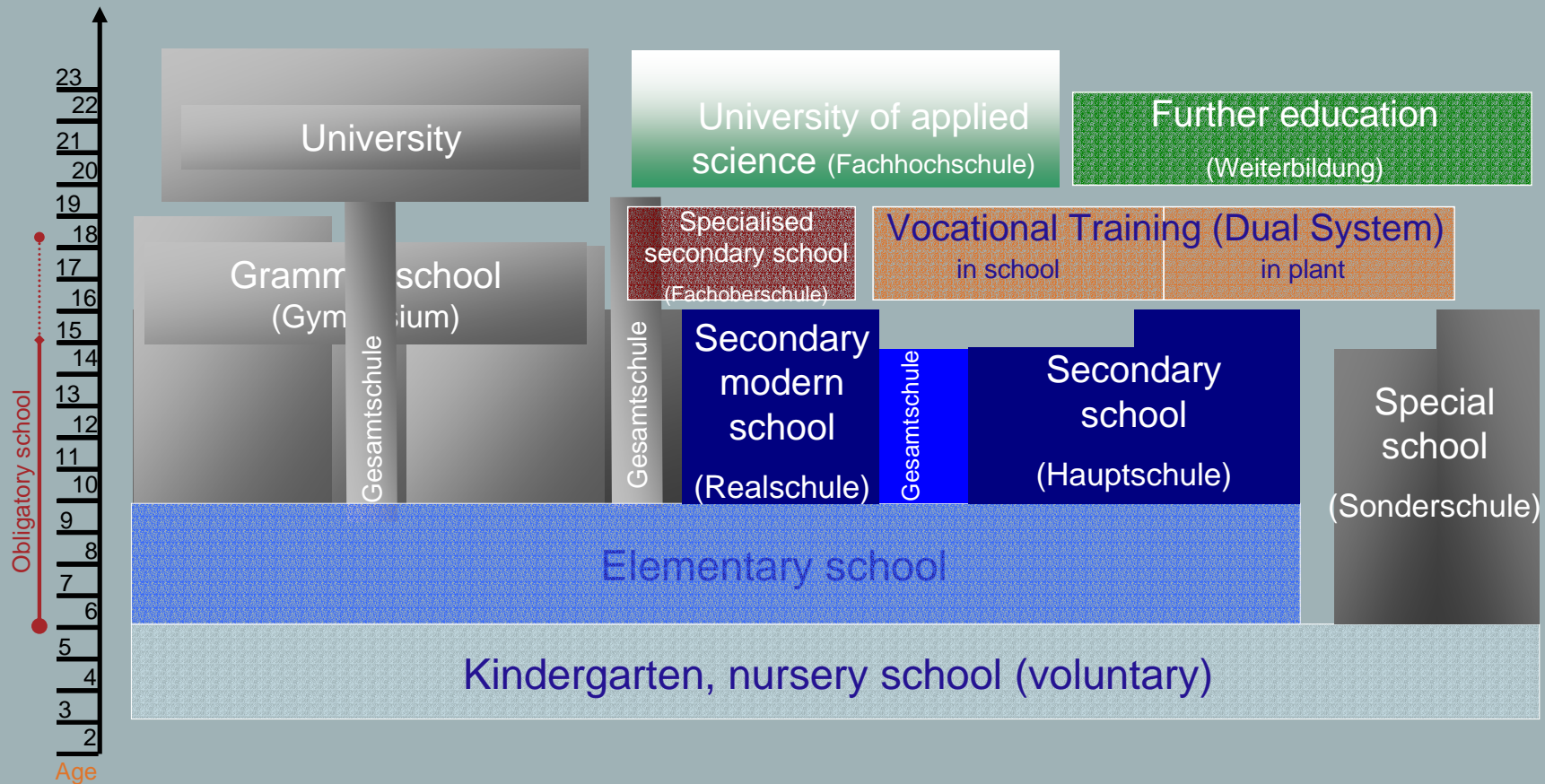
The orange square represents the professional training.;

Source: Eurydice

Survey of the education systems in the EADS-countries - Training within Airbus in France



Educational system in Germany



The orange square represents the Dual System of vocational training in Germany;

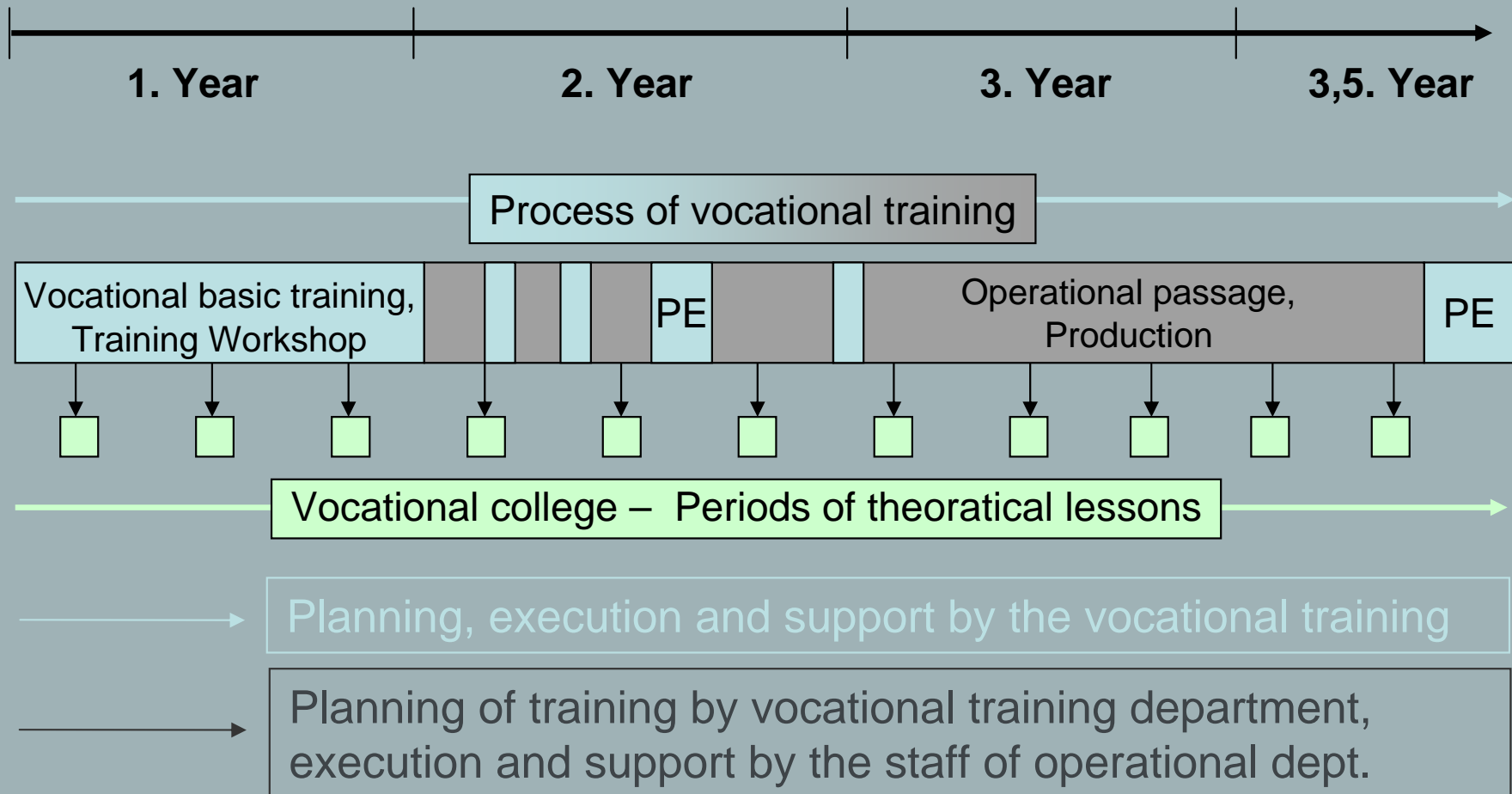
Source: Eurydice

Specific regulations concerning in-plant training

- *BBiG* governs fundamental matters like the rights and obligations of trainees and trainers
- They also govern the regulatory aspects of vocational training and the organisation of vocational training
- The Vocational Training Promotion Act (*Berufsbildungsförderungsgesetz*) of 1981 governs the planning and statistics of vocational training as well as the terms of reference and organisation of the Federal Institute for Vocational Training (*Bundesinstitut für Berufsbildung* - BIBB)
- The Protection of Young Persons at Work Act (*Jugendarbeitsschutzgesetz* – R6) lays down special provisions for the protection of young trainees

Structure Apprenticeship Bremen

Total: 3,5 Year Apprenticeship



PE = Preparation for examination

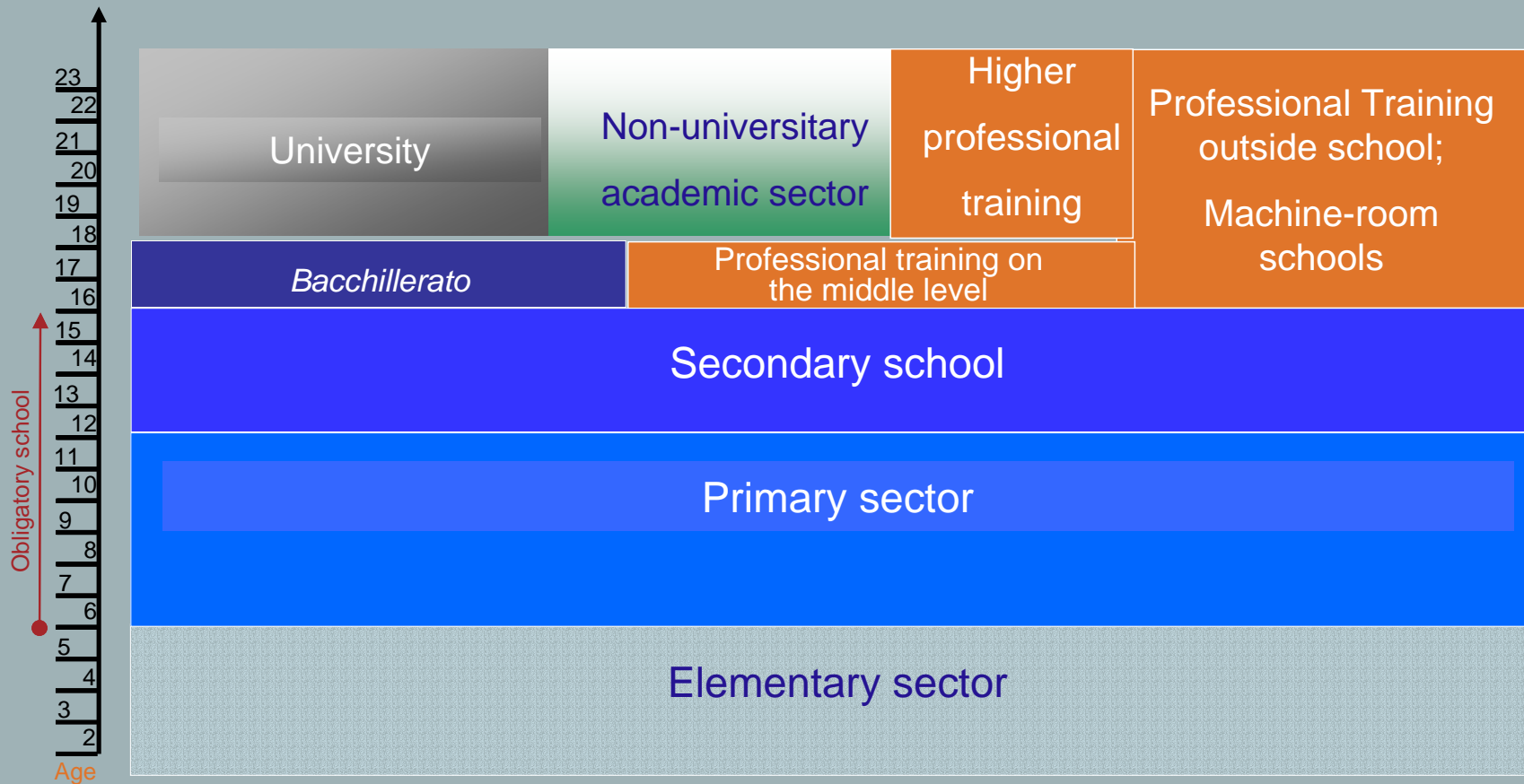
Professions in Bremen

Vocational Training Figures Bremen Site

dated: 01.09.2006

	1st year			2nd year			3rd year			4th year			Total		
	f	m	total	f	m	total	f	m	total	f	m	total	f	m	total
1. Education in management professions															
Management Assistant in Office Communications	2		2	1	1	2	2		2			0	5	1	6
Industrial Business Management Assistant	2		2	2		2	2		2			0	6	0	6
Total 1: Management professions	4	0	4	3	1	4	4	0	4	0	0	0	11	1	12
2. Education in industrial / technical professions															
Aircraft Mechanic - Manufacturing Technology	4	24	28	7	21	28	6	23	29	5	9	14	22	77	99
Mecanical Electrician	3	3	6	2	5	7		2	2				5	10	15
Industrial Mechanic	1	1	2		2	2							1	3	4
Mechanic - Lamination Technology CFK	1	4	5										1	4	5
Mechanic - Surface Technology	1	1	2		3	3	1	2	3			0	2	6	8
Material Tester	1	1	2				1	1	2				2	2	4
Technical Draughtsman								1	1				0	1	1
Total 2: Industrial / technical professions	11	34	45	9	31	40	8	29	37	5	9	14	33	103	136
3. Dual courses of studies															
Bachelor of Engineering Mechanical Engineering, FGM/ TZ	2	4	6	2	5	7	3		3				7	9	16
Bachelor of Engineering Mechanical Engineering-IT, FGM/ TZ			0		1	1		2	2				0	3	3
Bachelor of Engineering Mechanical Engineering Aviation			0					2	2				0	2	2
Bachelor of Engineering Mechanical Engineering CFK, ME CFK	1	3	4										1	3	4
Bachelor of Science Industrial Engineering with Business Studies	1	2	3		2	2		2	2	1	1	2	2	7	9
Bachelor of Science Business Administration	2		2	2		2				1	1	2	5	1	6
Bachelor of Engineering Information Technology			0			0			0		2	2	0	2	2
Total 3: Dual courses of studies	6	9	15	4	8	12	3	6	9	2	4	6	15	27	42
Summarized:	21	43	64	16	40	56	15	35	50	7	13	20	59	131	190

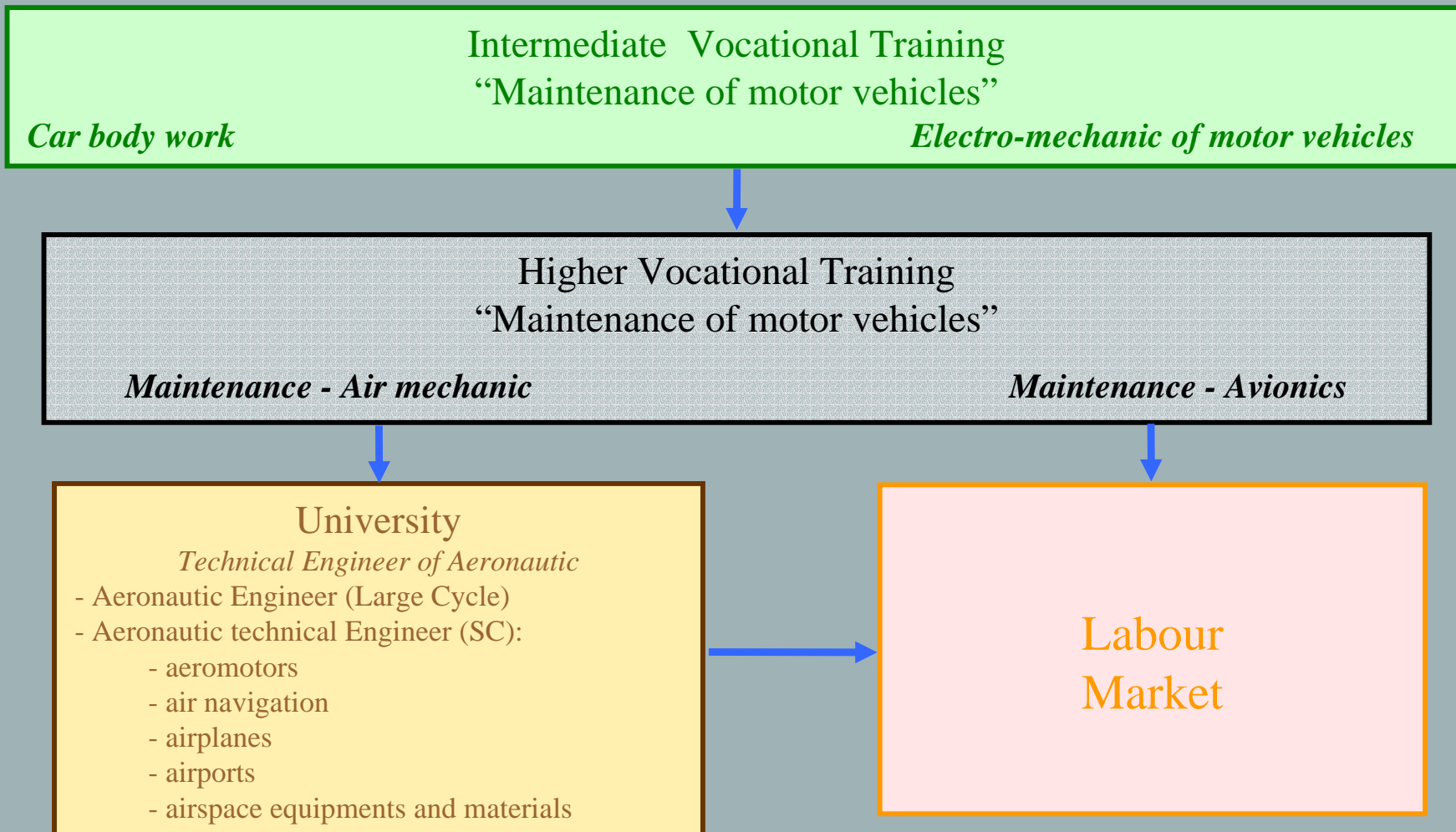
Survey of the education systems in the EADS-countries – Spain



The orange square represents the professional training.;

Source: Eurydice

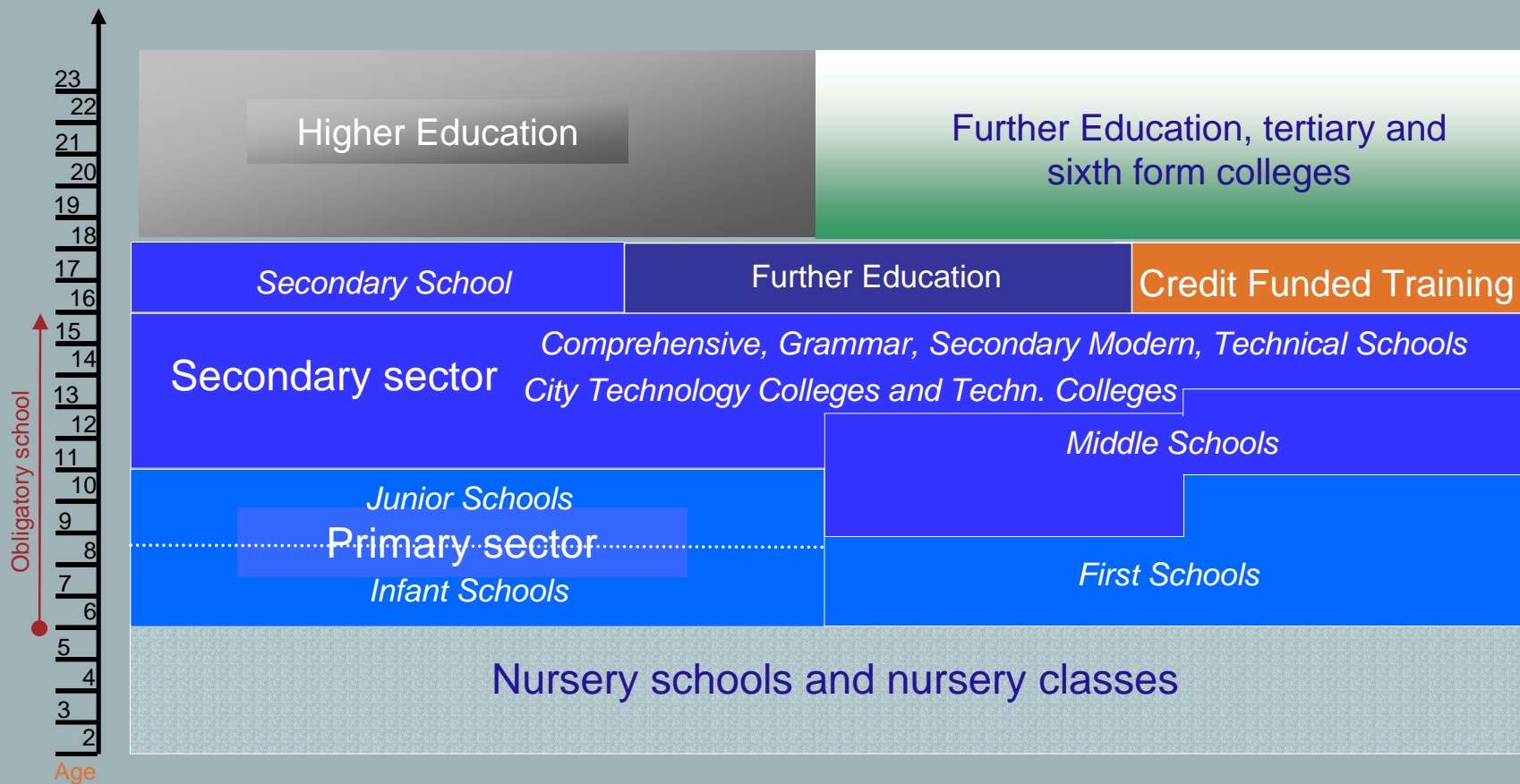
Survey of the education systems in the EADS-countries – aircraft professions in Spain



Survey of the education systems in the EADS-countries – training within Airbus in Spain

- Until 1991 former CASA had Apprentices Schools, being closed that year
- On the Official Education System in Spain there is no Vocational Training dedicated to Aeronautic Assembly or Composites.
- Until 2003 there were no shop floor workers hired or trained in Airbus Spain. From that moment onwards, more than 400 workers were hired
- As a consequence of that, a training programme had to be developed to give the necessary knowledge to that workers before their first day in the shop floor
- This means a three-months lasting training on-the-job of already skilled or trained workers from other professions as the mentioned maintenance sector

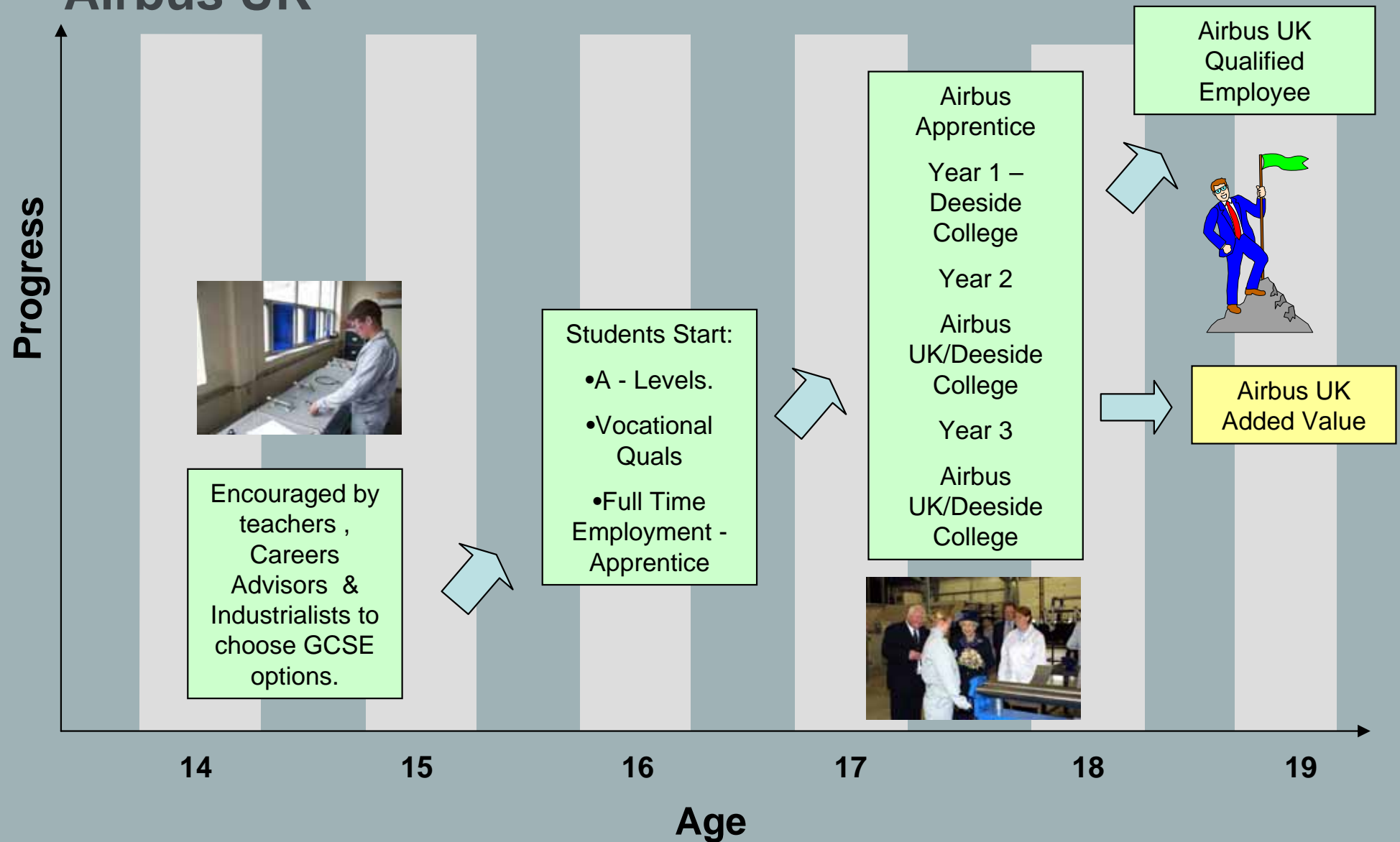
Survey of the education systems in the EADS-countries – training in the United Kingdom



The orange square represents the professional training.;

Source: Eurydice

Survey of the education systems – Training at Airbus UK



Actual circumstances for vocational training at EADS / Airbus

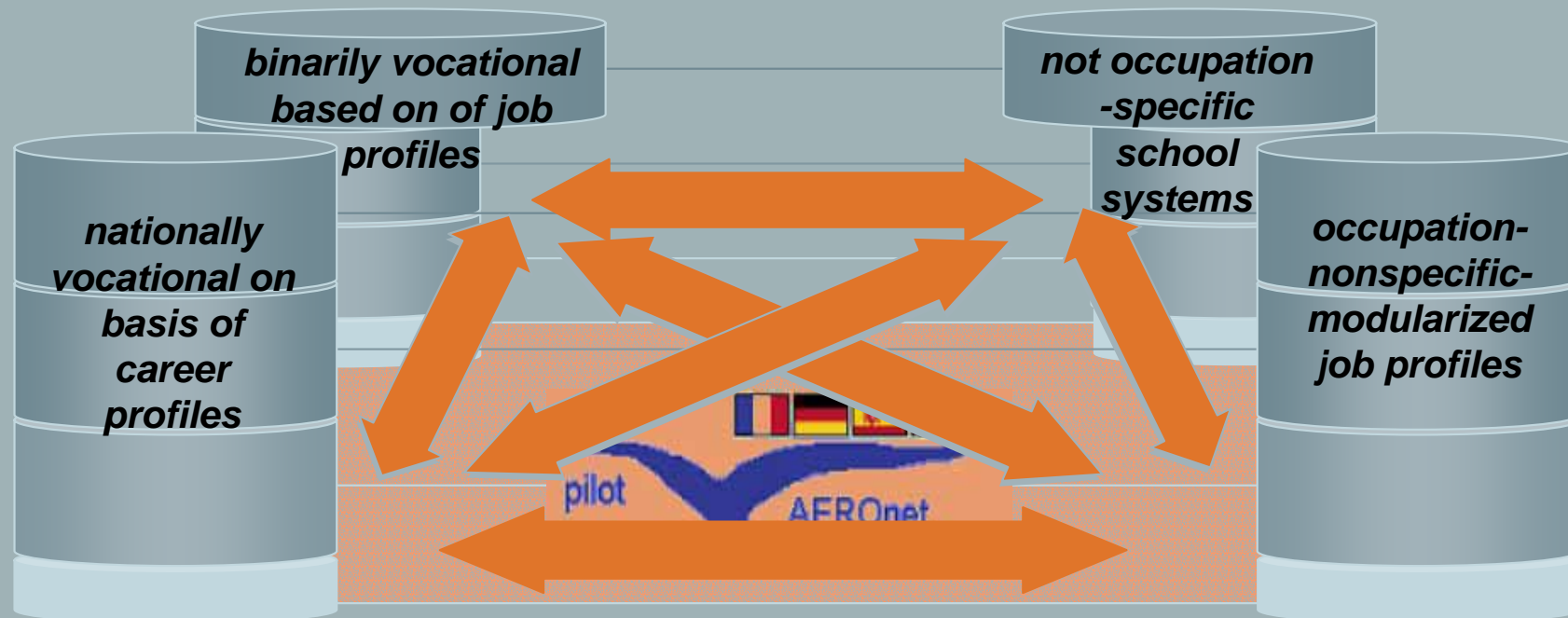
- As globalised products like civil airplanes underlie a process of immense harmonisation in production processes and in the special Airbus-case are already assembled in **transnational teams**
- It is of an extraordinary interest to document **best-practice of training** in the relevant countries and to optimise interfaces between the national was of training and vocational education
- Especially **mechanical and electronically work and its organisation has become similar in the member countries**, most teams are even formed transnational and intercultural
- Driven by this natural harmonisation process of labour and production organisation there is a need for compatible interfaces between the national patterns of qualification

Actual circumstances for vocational training at EADS / Airbus – ICP

- Consequently Airbus runs already for several years an intercultural programme (ICP)
- This **ICP Programme** consists of four steps, well coordinated and allocated in time, where apprentices from the different EADS-countries are trained in intercultural differences, sent in the partner countries and finally work also for a longer period – completely integrated – in a plant abroad
- In this context one can already understand **the importance of interfaces between the different training systems** and curricula as for the mentioned period an apprentice has to be integrated in the system and organisation of the partner plant / country
- The **exchange during the vocational training period is not even very proactive**, it reflects the actual transnational organisation of work-processes

Actual circumstances for vocational training at EADS / Airbus

- The four EADS-countries represent four different conceptions of education and training systems:



Integration of AEROnet

- In the framework of the LEONARDO-da-VINCI-pilot-project “AEROnet” a group of experts and training executives of EADS/Airbus try to **documents the ways of training and gain of competencies / skills in the four countries**
- A network of these experts and executives has already been installed
- During 2006 and 2007 **experienced workers are asked to describe the typical professional tasks of skilled electrical and mechanical work on aircrafts**
- On basis of the resulting **lists of typical professional tasks (TPTs)** it will be examined by the experts involved in the project what is the interface group and **percentage of TPTs and which are similar in the countries**

Integration of AEROnet

- An initial thesis for the project was the **hypothesis that there is an universalisation of requirements driven by the globalisation of production technologies and convergence of used material**
- Once there is found a **core group/ amount of TPT** over the four EADS-countries this hypothesis can be evaluated and related to the different patterns of vocational education
- The method of evaluation tasks enable the scientific documentation to be enriched by a component that respects the contribution of the different vocational education systems to the professional requirements documented by the expert workers

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Thank you for Attention



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