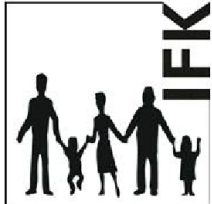
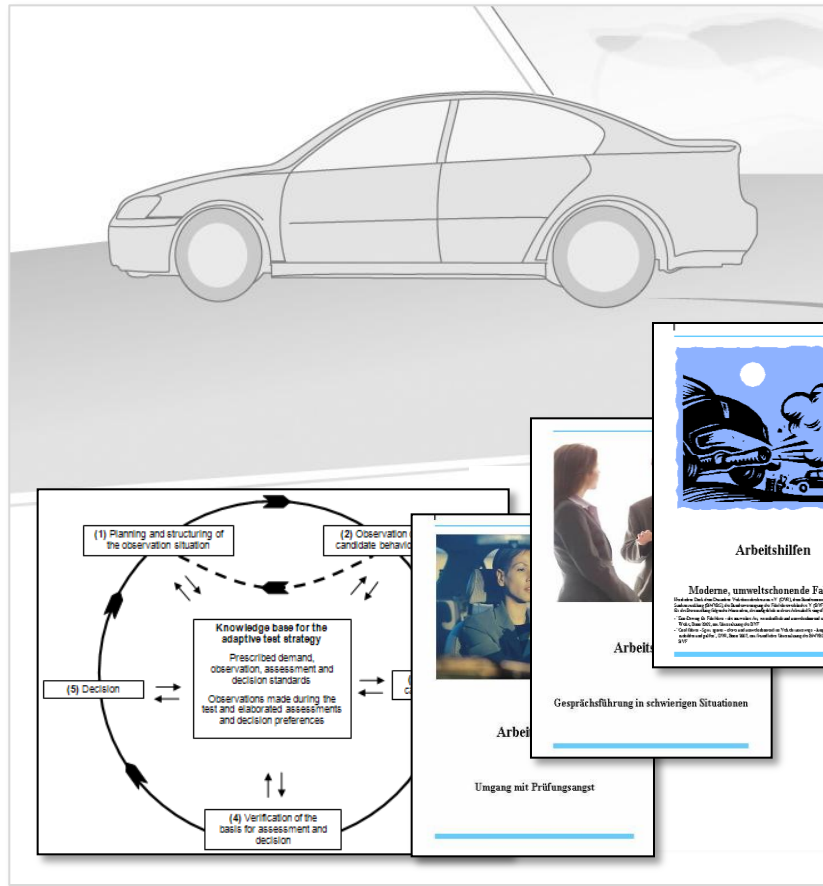


TÜV | DEKRA



42nd CIECA CONGRESS  
**ASSESSMENT FOR  
NOVICE DRIVER SAFETY**  
BUDAPEST JUNE 4 2010



**Bernd Weiße & Susann Mörl**

**Development of the Practical Driving Test in Germany**

42<sup>nd</sup> CIECA Congress, Budapest, June 4 2010

Our presentation covers the following topics:

**Milestones of the development of the Practical Driving Test**

**TÜV | DEKRA arge tp 21 project on the optimisation of the practical test**

**BASt-project on the optimisation of the practical test**

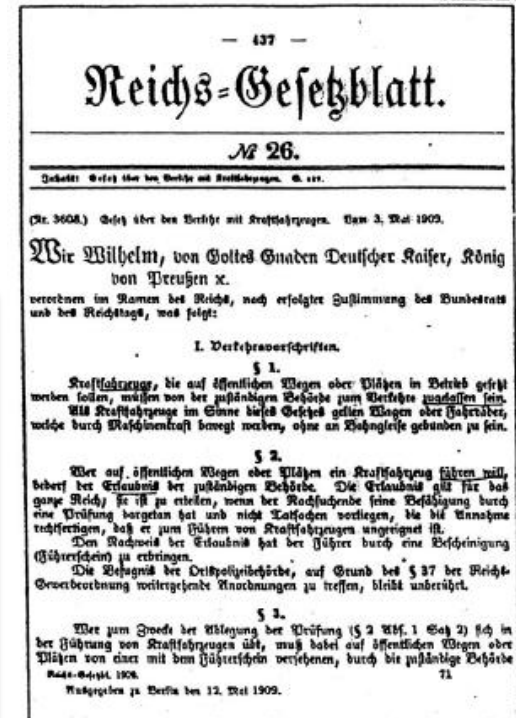
**Conclusions and prospects**

# Milestones of the development of the Practical Driving Test 1/2

➤ **Mai 3<sup>rd</sup> 1909:** Law on Motor Vehicle Traffic

➤ **1923:** First efforts to improve the quality of the Practical Driving Test as an result of the „**Ordinance on Motor Vehicle Traffic**”

- **First standardisation of the Practical Driving Test and its contents**
- **Differentiation of three test parts**



Quelle: Stadt- und Stiftsarchiv Aschaffenburg

➤ **Since the foundation of the Federal German Republic:**

- **Further development** by the Technischen Prüfstellen (Technical Inspection Centres), coordinated by their association VdTÜV e.V.

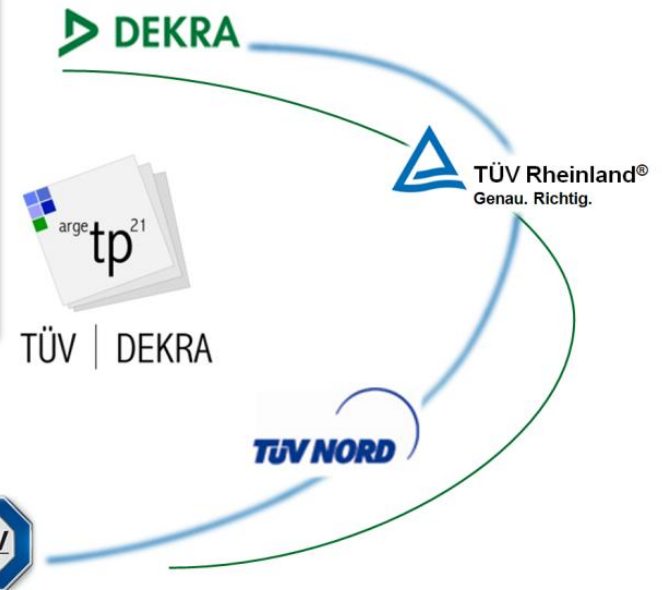
# Milestones of the development of the Practical Driving Test 2/2

## 1975 – 1985:

- **Reformation based on scientific research** (e.g. „Studienstelle für Kraftfahrzeug-Führerprüfungen“ in Köln)
- **Partial standardisation of requirements** for examiners: Introduction of driving tasks and criteria for assessment and decision

## 1999:

- **Foundation of TÜV | DEKRA arge tp 21** (Arbeitsgemeinschaft der Technischen Prüfstellen für den Kraftfahrzeugverkehr im 21. Jahrhundert in Dresden)



## 1999 - 2004:

- **BASt-Project „Optimisation of the driving test“**

## 2004 until now:

- Implementation of the **computer based theory test**
- **Science based evaluation** and **new item formats**

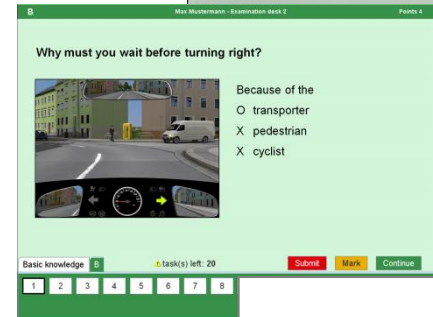
## 2005 - 2008: Research project on the

- **History of the driving test in Germany**

## 2005 until now: Research project on the

- **Optimisation of the Practical Driving Test**

Optimierung der  
Fahrerlaubnisprüfung



bast



Die Geschichte der  
Fahrerlaubnisprüfung in Deutschland

Dietmar Starzbecher, Karen Kammler  
& Jürgen Böningger (Hrsg.)



Between 2004 and 2008 four subprojects with the following aims were carried out by TÜV | DEKRA on behalf of the German Technical Inspection Centres:

## **Subproject 1: Methodical foundations of the Practical Driving Test**

Further development of the methodical foundations with regard to modern road traffic and transportation science

## **Subproject 2: Customer satisfaction assessment system**

Opening new perspectives to evaluation and quality assurance

## **Subproject 3: Theoretical foundations of qualification and further training...**

Further development of the educational/psychological foundations for qualification and further training for examiners

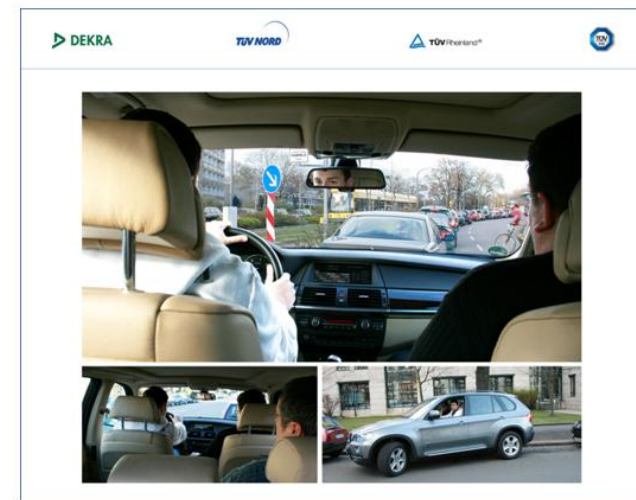
## **Subproject 4: Material for qualification and further training for examiners**

Development of a multi-media support system for the qualification and further training for examiners

# Subproject 1: Methodical foundations of the Practical Driving Test

## Development of the methodical foundations of the Practical Driving Test

- Test-psychological description of the driving test as a „work sample“
- Criteria for the evaluation of the methodical quality of the Practical Driving Test
- Analysis of test contents:
  - ↳ Recommendations for restructuring
    - Driving tasks
    - Observation categories
    - Criteria for assessment and test decision



### Optimisation of the Practical Driving Test

Methodical foundations and possibilities for further development

Dietmar Sturzbecher, Jürgen Bönninger & Mathias Rüdel  
(Eds.)



TÜV | DEKRA

**Report is now available in English! - Contact: [www.argetp21.de](http://www.argetp21.de)!**

## Subproject 2: Customer satisfaction assessment system

Development and testing of new methods for the assessment of customer satisfaction regarding the Technical Inspection Centres in the area of driver testing

- A customer survey system was developed to ensure high service quality.
- The set of methods for the assessment of customer satisfaction regarding the driving test consists of the following four modules:
  - „Questionary for driving instructors“,
  - „Questionary for test candidates“,
  - „Interview guideline and questionnaire for responsible regional authorities“,
  - „Interview guideline for responsible federal state authorities“.



### Methodensystem zur Erfassung der Zufriedenheit mit der Fahrerlaubnisprüfung

Dietmar Sturzbecher & Susann Mörl





Further development of the qualification and further training for examiners in the area of driver license testing

- Development of a structural model of competencies of examiners:
  - What are the requirements for driving test examiners and what competencies do they need to fulfil those requirements?
- Guidelines for the optimisation of the system for the qualification and further training of driving test examiners were developed within a cooperation of scientists and practical experts.

DEKRA TÜV NORD TÜV Rheinland

**Prüfkompetenz**

Gestalten  
Entscheiden  
Bewerten

aaSoF

Anforderungen an den Sachverständigen

§

**Weiterentwicklung der  
Professionalisierung der Sachverständigen  
auf dem Gebiet der Fahrerlaubnisprüfung**

Peter S. Dietrich & Dietmar Sturzbecher

ARGE tp 21

TÜV | DEKRA

# Subproject 4: Material for qualification and further training for examiners

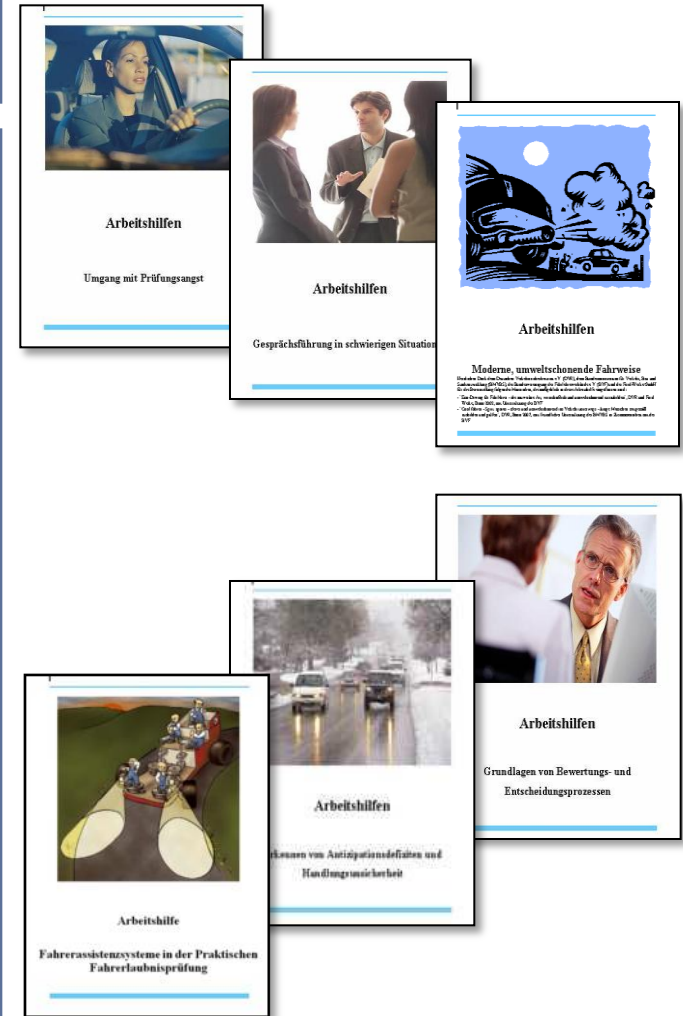
## Development of working aids for the driving license examiners

### ➤ Current working aids cover the following topics

- „Handling of test anxiety“
- „Conversation techniques in critical situations“
- „Modern and eco-friendly driving“
- „Detection and anticipation of action uncertainties“
- „Basics of assessment and decision processes“
- „Influence of driver assistance systems on the driving test“

➤ These working aids are available in a compact version and in a comprehensive version at the Expert-Information-System of TÜV | DEKRA arge tp 21.

➤ The working aids are incorporated into the qualification and further training for examiners.



## Further development of the Practical Driving Test

**The four sub-projects were important milestones and the starting points for further development of the Practical Driving Test with the following aims:**

Subproject 1: Methodical foundation of the Practical Driving Test +

Subproject 2: Customer satisfaction assessment system =

**... adaptation of the Practical Driving Test to a new test paradigm and implementation of new evaluation methods.**

Subproject 3: Theoretical foundations of qualification and further training... +

Subproject 4: Material for qualification and further training for examiners =

**... development of a curriculum based system for qualification and further training including corresponding materials for teaching and learning.**

## Further development of the methodical foundations (1)

### **1977 – The scientist Bernhard Hampel<sup>†</sup> founded the Practical Driving Test (PDT) as a „Test“ according to the Classical Test Theory.**

- Efforts for standardisation of requirements (driving tasks, test locations)
- Development of assessment criteria
- Early findings and insights are:
  - The requirements of the PDT cannot be standardised completely.
  - Therefore the quality criteria of the Classical Test Theory (reliability, validity, objectivity) are only limited adoptable.
  - However the test requirements, test equity and objectivity should not be disregarded as quality requirements.

### **2008 – Paradigm change**

- Prof. Dietmar Sturzbecher (university of Potsdam) has developed the test psychological foundations of the PDT further according to its methodical specifics and basic conditions.
- Ever since the PDT will be considered as a criterion-referenced examination process; from a test-psychological perspective the PDT represents ...
  - ... a „Work Sample“,
  - ... a „Systematic Behaviour Observation“ and
  - ... a „Circular Examination Process with an Adaptive Test Strategy“.

- **What means „Work Sample“?**

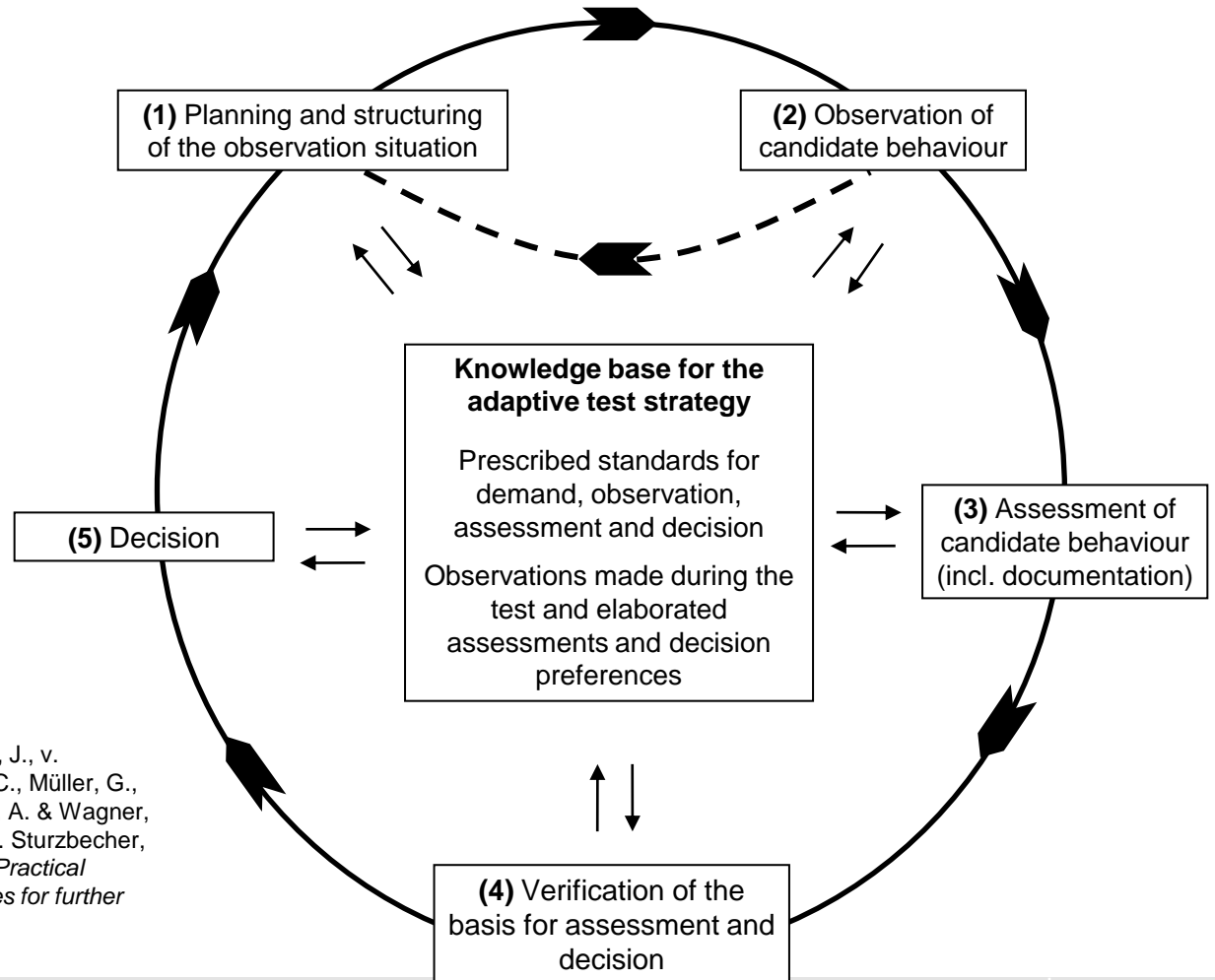
- In personnel or aptitude assessment: The future “Working Tasks” of probands will be simulated by determination of examination tasks.
- In the PDT: The requirements of the modern traffic are simulated in the PDT by determination of driving tasks.
- The driving tasks are obliged to be representative concerning their frequency of occurrence in traffic and their importance for road safety.

- **What means „Systematic Behaviour Observation“?** The methodical quality of the PDT is determined by...

- (1) ... the structuring of the observation situation by the examiner (driving tasks, test locations – “What has the examinee to do?”),
- (2) ... the collection of observation data (observation categories, documentation – “Whereon has the examiner to look?”),
- (3) ... the evaluation method (assessment criteria and decision criteria – “How makes the examiner his decision?”).

## Further development of the methodical foundations (3)

- **What means „Circular Examination Process with an Adaptive Test Strategy“?**  
→ The process of examination and decision making consists of five steps and makes five elementary action demands on the examiner:



Sturzbecher, D., Biedinger, J., Böhne, A., Bönninger, J., v. Bressensdorf, G., Glowalla, P., Kaup, M., Kleutges, C., Müller, G., Müller, R., Petzholtz, W., Radermacher, R., Schmidt, A. & Wagner, W. (2008). The practical driving test at present. In: D. Sturzbecher, J. Bönninger & M. Rüdell (Eds.). *Optimisation of the Practical Driving Test - Methodical foundations and possibilities for further development*. Dresden: TÜV | DEKRA arge tp 21.

## Further development of the methodical foundations (5)

So far the described foundations were taken on and further elaborated in a BASt-project (Federal Highway Research Institute); first advisements for an evaluation concept of the PDT were added.

### Until the end of 2010 ...

➤ ... a concept for the „Manual to the Driver Licensing System (Practice)“ will be submitted and contains proposals to the following points:

- Catalogue for driving tasks (in discussion)
- Observation categories (e.g. „Vehicle control“, „Traffic observation“, „Speed adaptation“, „Vehicle positioning“)
- Assessment criteria (four-point scale, referring to driving tasks)
- Decision criteria
- Test documentation respectively electronically test report



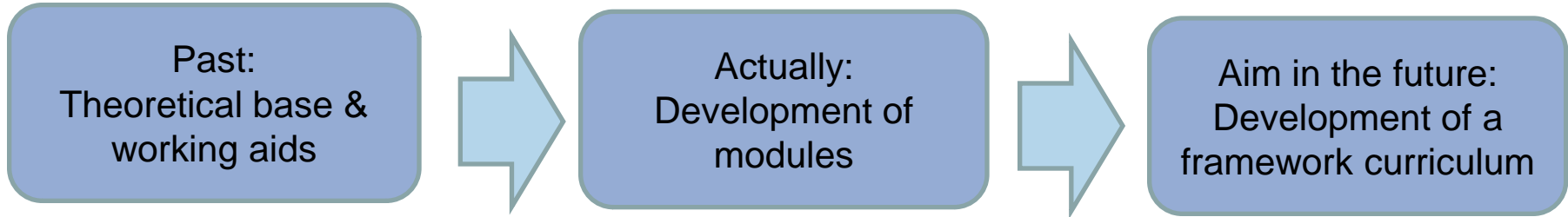
Handbuch zum  
Fahrerlaubnisprüfungssystem  
(Praxis)

Entwurfsfassung  
Stand 20.04.2010

### 2011 ...

- The proving of the new electronically test report
- Development and proving of an evaluation concept; this concept will consist of:
  - Psychometric-instrumentally evaluation studies
  - Statistics of test realisation
  - Internal audits
  - Customer surveys

# Further development of qualification and further training for examiners (1)

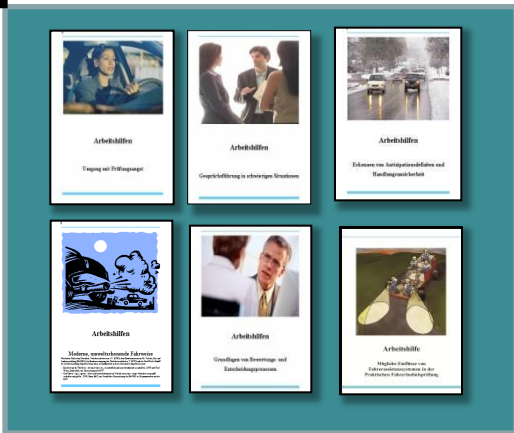


1. module (2010)  
„Observing, Assessing, Decision-making in the Practical Driving Test“

2. module (2011)  
„Driving Assistant Systems in the Practical Driving Test“

3. module  
...

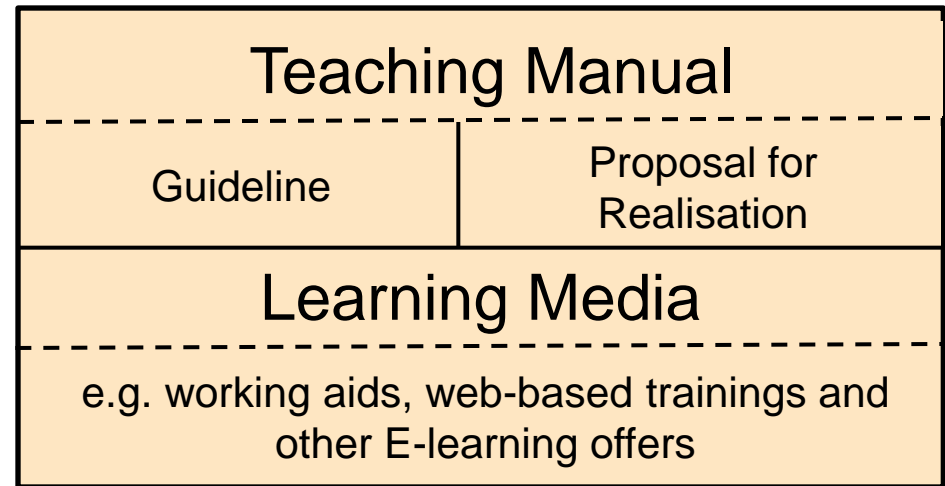
„Foundations of the Framework Curriculum“ (2010)



	Framework curriculum for the qualification and further training for examiners		
	Domain TDT	Domain PDT	
Application Competencies	module	module	
	module	module	
	module	module	
	module	module	
Basic Competencies	module	module	module
		module	module
	module	module	module



- **What means „Modules“?**
  - Modules are defined in accordance to the contents of a domain and they structure it; every module consists of a „Teaching Manual“ and „Learning Media“.



- **The “Teaching Manual” consists of a „Guideline“ and a „Proposal for Realisation“:**
  - The “Guideline” serves as an orientation concept for the instructors of qualification and further training to organise their teaching in one module; it describes the framework for the design of a course.
  - The „Proposal for Realisation“ includes exemplary incitation's for didactic planning and methodical design of courses.
  - Furthermore the essential “Teaching Media” for designing the course are listed.
- **In the „Overview of Learning Media“ the existing module specific learning media are presented. They will be given to the participants for the individual and self-directed learning.**

# Further development of qualification and further training for examiners (3)

## What means „Framework Curriculum“? – Examples in discussion

	Offers	TDT	PDT
<b>Application-modules</b>	Methodology, contents and realisation of the theoretical test (Knowledge test, innovative task formats, Hazard Perception Test ...)	X	
	Methodology, contents and realisation of the PDT (PDT as working sample, adaptive testing strategy ...)		X
	Documentation of the Practical Driving Test (test report, PDA, ...) ...		X
<b>Basicmodules</b>	<b>Traffic field</b>		
	Road traffic design (infrastructure)	X	X
	Accident analysis and accident prevention	X	X
	Eco-driving ...	X	X
	<b>Vehicle engineering</b>		
	Vehicle ergonomics	X	X
	Driver assistant systems und accident avoidance systems ...	X	X
	<b>Human</b>		
	Fitness to drive	X	X
	Driving competence acquirement	X	X
	Communication technology	X	X
	Test anxiety ...	X	X
	<b>Comprehensive knowledge</b>		
	Regulatory framework (StVO, PrüfRiLi, Fahrlehrerrecht ...)	X	X
	Aspects of health science	X	X
Quality Management and Public Relations ...	X	X	



*Thank you for your attention!*