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13-16 June 2012

Optimization of Practical Driving License Test in Germany

Bernd Weiße, TÜV | DEKRA arge tp 21

cieca The International Commission for Driver Testing

TÜV SÜD

The practical driving license test optimization - Why?

High accident risk of novice drivers

↓

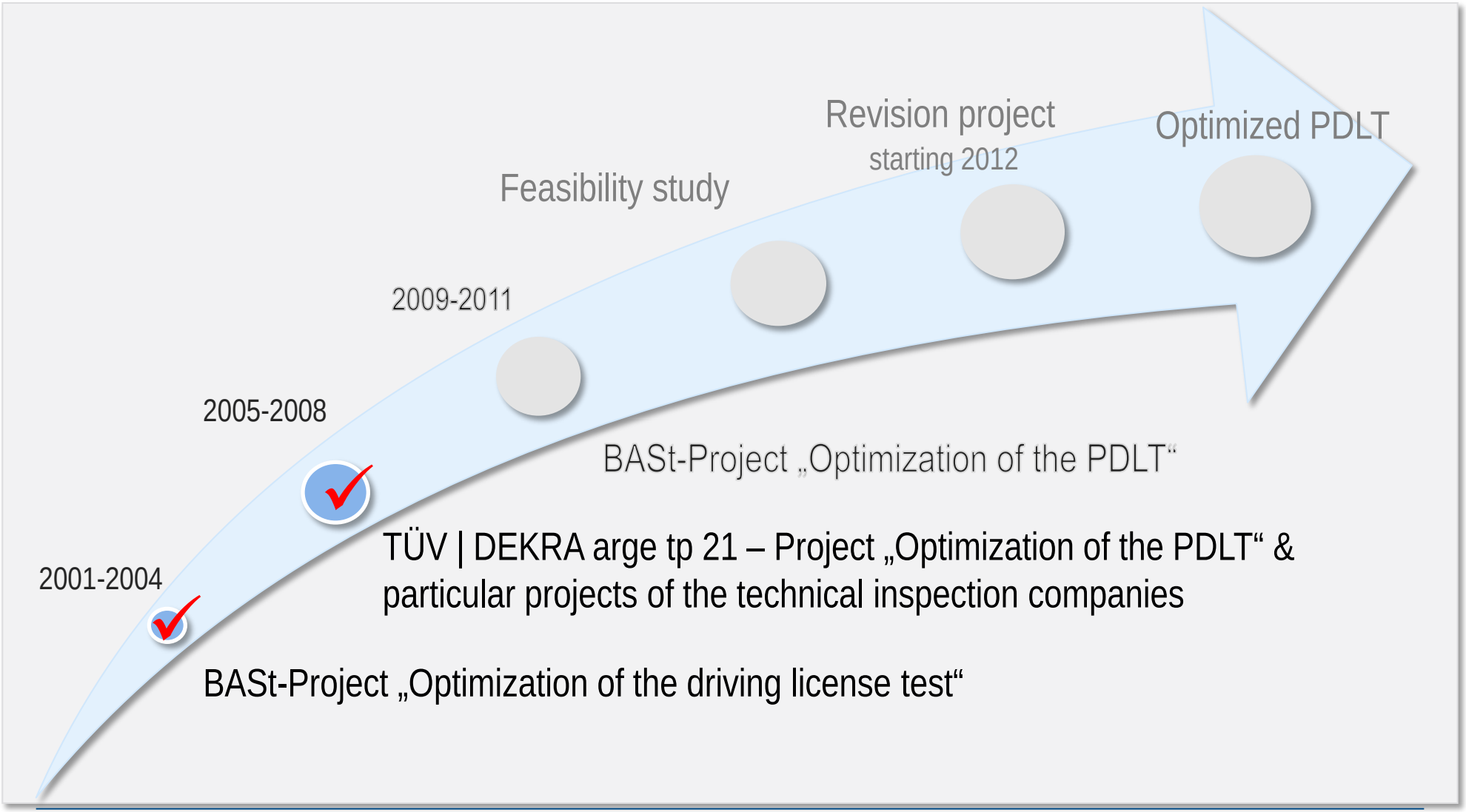
Optimization of all elements of the novice drivers preparation

↓

The **practical driving license test** (PDLT) **describes safety relevant competencies** for the novice driver preparation (steering function) and **prevents unprepared drivers** from accessing traffic (selection function).

PDLT has a high accident prevention potential.

Previous work on the optimization of the practical driving license test



TÜV | DEKRA arge tp 21 – Project „Optimization of the PDLT”

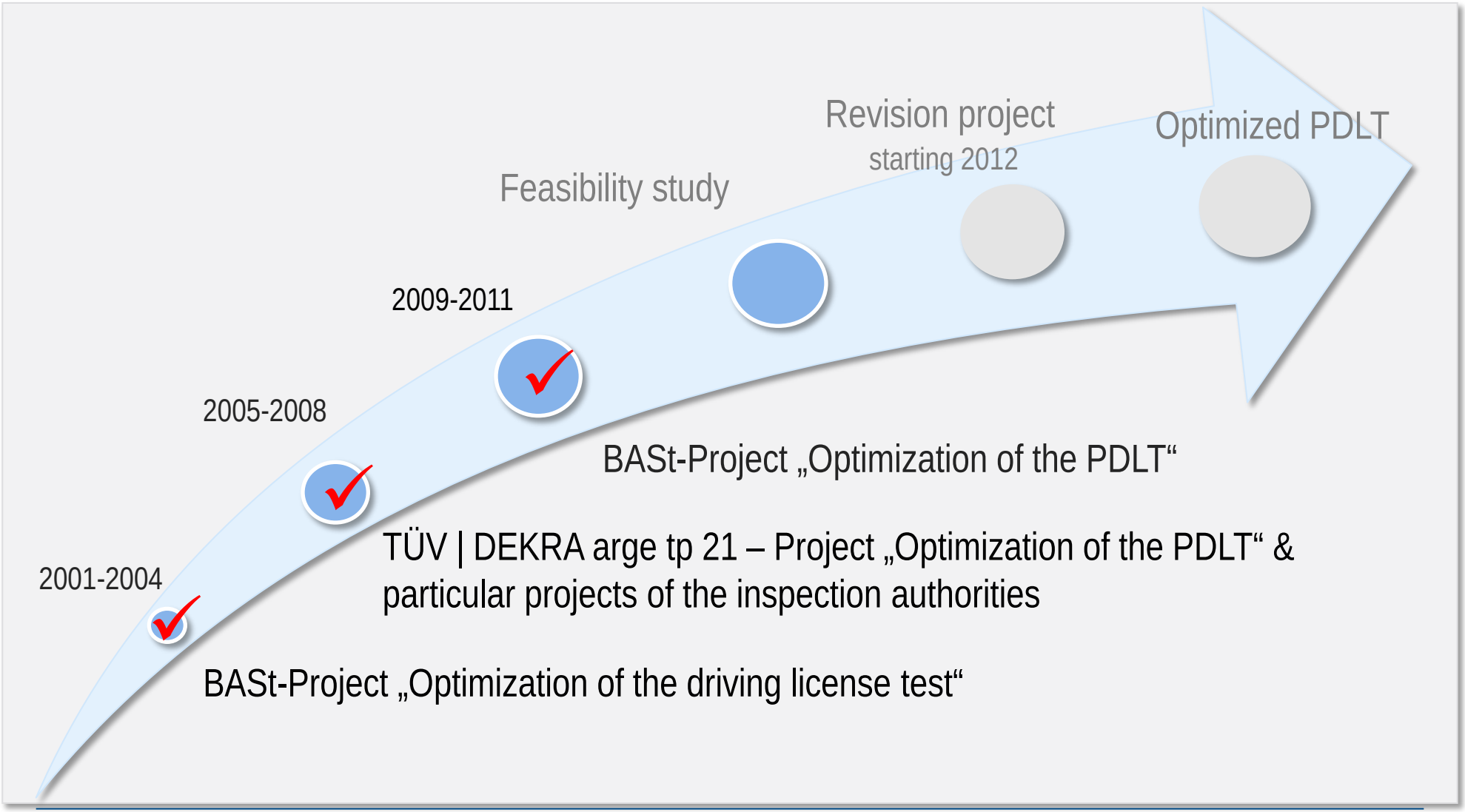
Subproject 1: **Methodical foundations** of the Practical Driving Test
Further development of the methodical foundations with regard to modern road traffic and transportation science

Subproject 2: Theoretical foundations of **qualification and further training...**
Further development of the educational/psychological foundations for qualification and further training for examiners

Subproject 3: **Material for qualification** and further training for examiners
Development of a mutli-media support system for the qualification and further training for examiners. E.g. on test anxiety, driver assistant system etc.

Subproject 4: **Customer satisfaction assessment** system
Opening new perspectives to evaluation and quality assurance

Previous work on the optimization of the practical driving license test



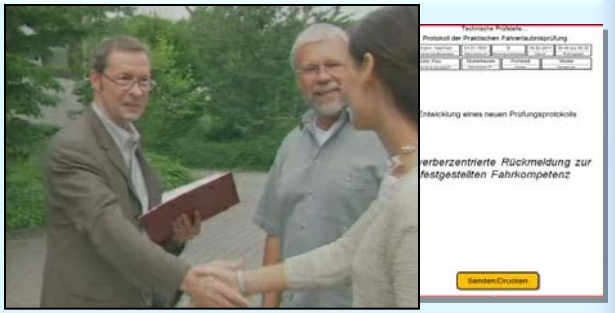
The practical driving license test optimization - aims

Optimization of test operating

Process	Documentation	Assessment
o Complete o Law compliant o Adaptive	o Uniform o Explicit (QM) o Differentiated	o Competencies o Support for justification

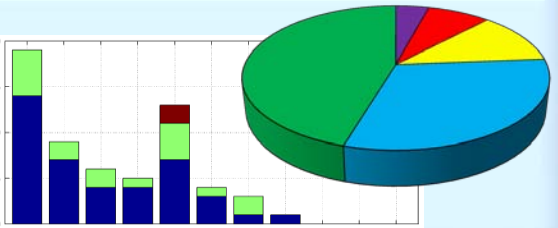
Improved feedback systems to the involved (candidate, driving instructor)

Positive and negative behaviour in special situations & assessment of driving competence



Scientific evaluation of the test system (constant optimization)

Output-controlled optimization of novice drivers preparation (education & testing)



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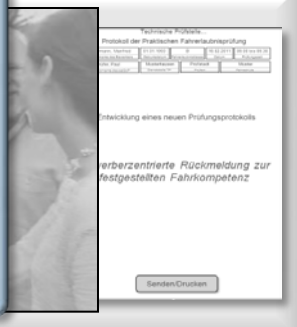
Positive and neg

How can it be achieved?



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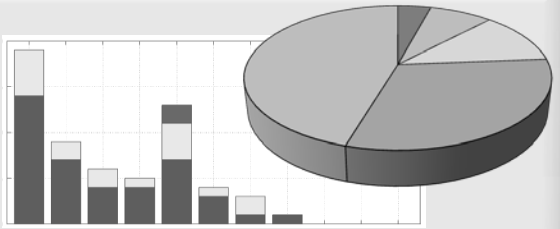

Development of an electronic test protocol

An important element of the optimized PDLT is a new

electronic test protocol

(e-test protocol)

Beobachtungs -kategorien / Fahraufgaben	Traffic observation	Vehicle positioning	Speed adaption	Communication	Car handling
Changing lanes					
Pedestrains / Bus stops					
Crossroads					
Rail crossings / Tram					
Roundabout traffic					
Overtaking / Passing					
Cyclist					
Curve / Passage connecting					
Basic driving tasks					

Observation categories

Driving tasks

Basic principle:

The observed behavior is allocated to a driving task (class of traffic situations) and observation category (class of behavior across situations).

Beobachtungs-kategorien / Fahraufgaben	Traffic observation	Vehicle positioning	Speed adaption	Communication	Car handling
Changing lanes					
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Basic driving tasks					

Observation categories = cross-situational requirements to the novice driver

Driving tasks = situation-specific requirements to the novice driver and „standard"-requirement profile to test locations

Fahraufgabenkatalog für die optimierte Praktische Fahrerlaubnisprüfung

Erarbeitet von der Arbeitsgruppe „Fahraufgabenbeschreibung"
im Rahmen des BASt- Projekts
„Optimierung der Praktischen Fahrerlaubnisprüfung"

IFK

(Stand: 11.08.2011)

Beobachtungs -kategorien / Fahraufgaben	Traffic observation	Vehicle positioning	Speed adaption	Communication	Car handling
Changing lanes					
Pedestrains / Bus stops					
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Cyclist					
Curve / Passage connecting					
Basic driving tasks					

Of course it is NOT necessary to fill all the cells of the matrix!

Only relevant events will be documented.

Beobachtungs -kategorien / Fahraufgaben	Traffic observation	Vehicle positioning	Speed adaption	Communication	Car handling
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Basic driving tasks					

Individual events (situations):

- Above-average performance
- *[Expectation-conform behaviour]*
- Simple error / Significant error

Competence-related assessments (each driving task & observation category):

- Not adequate / adequate / good / very good

Beobachtungs -kategorien / Fahraufgaben	Traffic observation	Vehicle positioning	Speed adaption	Communication	Car handling	Summary assessment driving tasks
Changing lanes	1					Adequate
Pedestrains / Bus stops			1			Very good
Crossroads						Good
Rail crossings / Tram						Not occurred
Roundabout traffic					1	Adequate
Overtaking / Passing	1					Adequate
Cyclist						Not occurred
Curve / Passage connecting		1				Good
Basic driving tasks						Good
Summary assessment observation categories	Adequate	Good	Very good	Good	Good	

The practical driving license test optimization - aims

Optimization of test operating

Process	Documentation	Assessment
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Improved feedb
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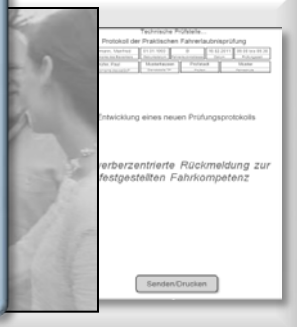
What are the advantages?



Scientific evaluation of the test system (constant optimization)

Output-controlled optimization of novice drivers preparation
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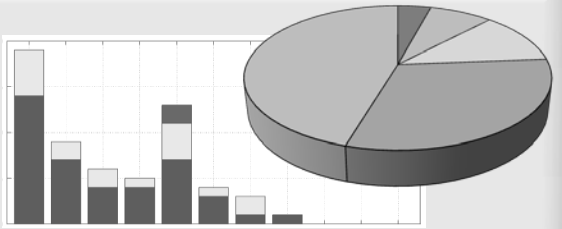

The practical driving license test optimization - aims

- Optimization of test operating

Process	Documentation	Assessment
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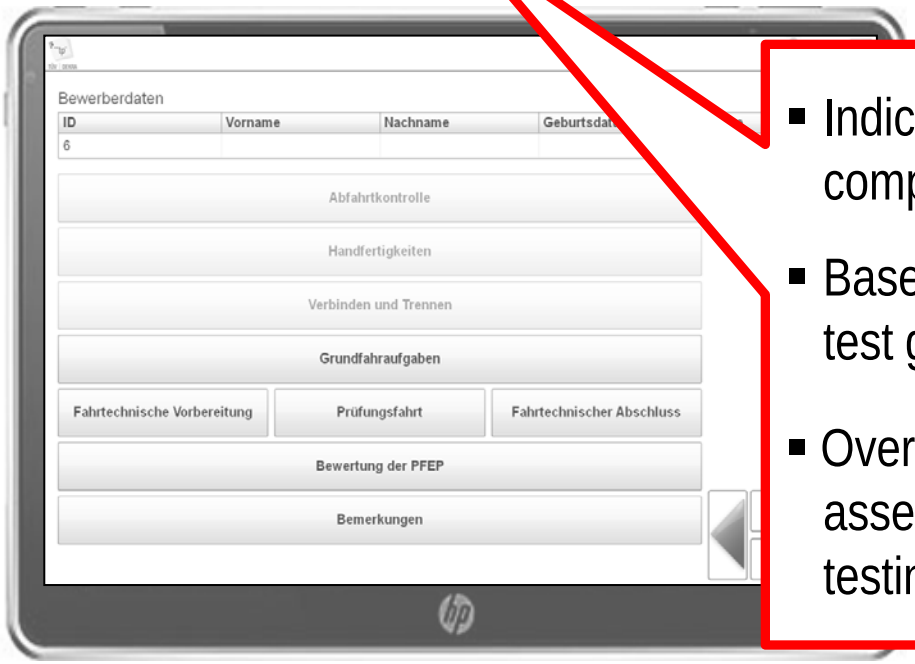

- Indication for missing testing elements before completion of PDLT
- Based on german driving license regulation and test guideline
- Overview of the performed test elements and assessments at any time (planning of the progress of testing)

The practical driving license test optimization - aims

- Optimization of test operating

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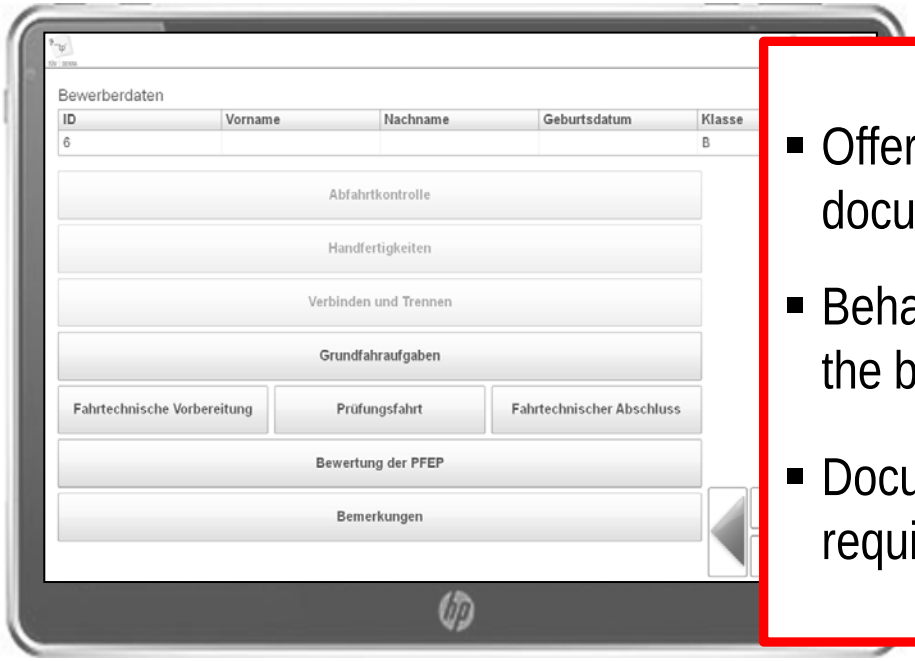

- Offered behaviour descriptions provide uniform documentation language (driving task catalogue)
- Behaviour will always be documented along with the basic situation (driving task)
- Documentation in accordance with explicit requirement profile

The practical driving license test optimization - aims

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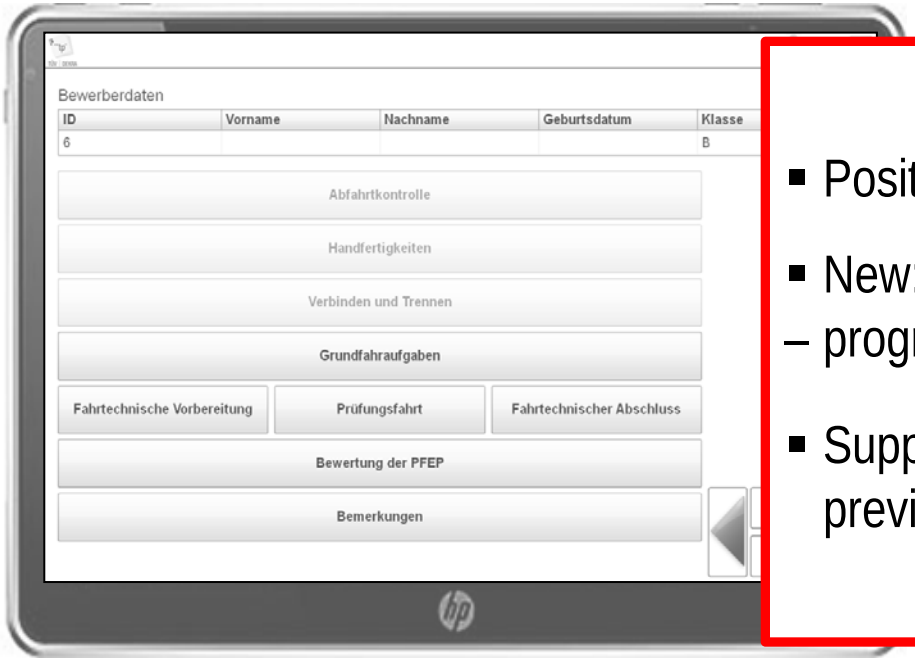
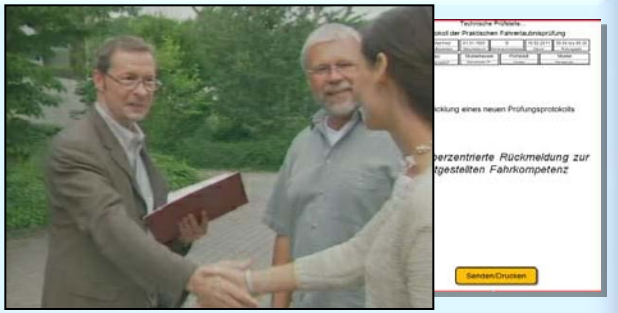


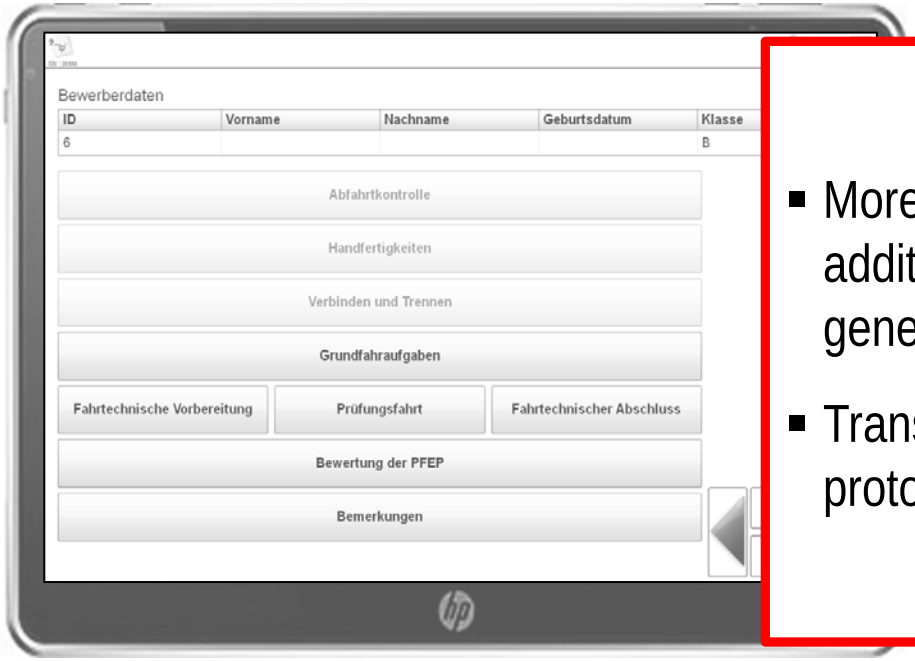
- Positive & negative individual events (as before)
- New: final **competence-related assessments** (explicit)
  – program supported (overview)
- Support for feedback (automatically generated from previous entries made)

The practical driving license test optimization - aims

- Improved **feedback systems** to the involved (candidate, driving instructor)

Positive and negative behaviour in special situations & assessment of driving competence



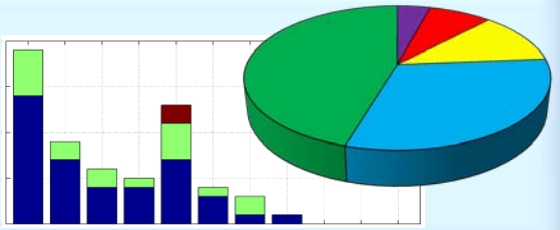


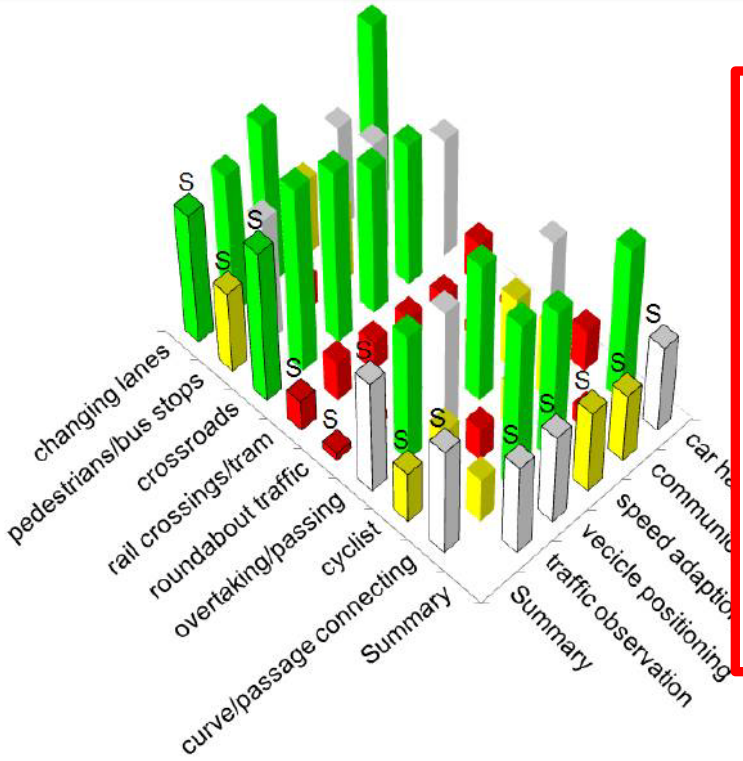
- More comprehensive feedback provided without additional effort after PFEP (automatically generated)
- Transfer of individual notes (e-test protocol) to written protocols not needed

The practical driving license test optimization - aims

- Scientific evaluation of the test system (constant optimization)

Output-controlled optimization of novice drivers preparation (education & testing)





- Following the proven model of TFEP: provides data for a scientific evaluation of test contents (e.g. driving tasks)
- In addition, identification of noticeable competence deficits of candidates for specific optimization of the preparation for novice drivers

The practical driving license test optimization - aims

Optimization of test operating

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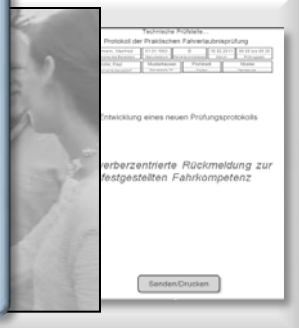
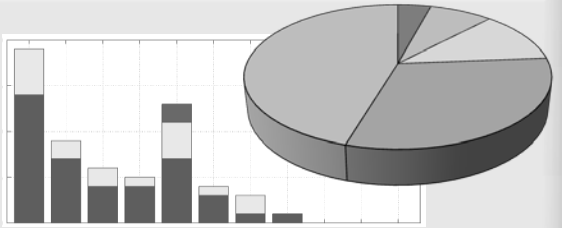


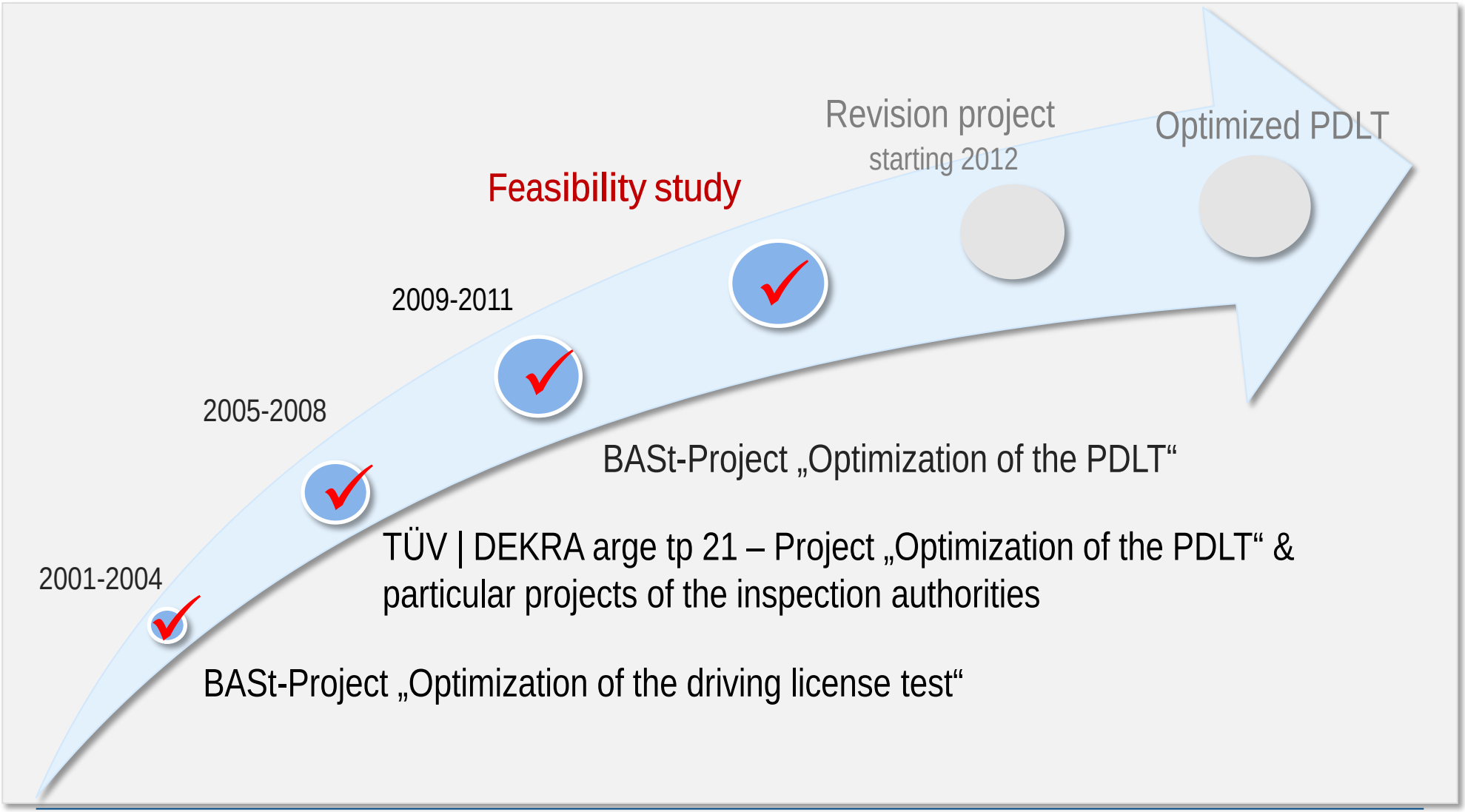
Is it feasible?

Scientific evaluation of the test system (constant optimization)

Output-controlled optimization of novice drivers preparation (education & testing)



Optimization of the practical driving license test



Feasibility study

Aims of the feasibility study

(1) Development the prototype of an electronic-test protocol

(2) Testing, if a practicable electronic documentation and assessment of the PFEP is generally feasible

Feasibility study – method

The e-test protocol was tested in four steps by 25 examiners

1. Testing in 5 simulated tests
2. Repeated testing in 5 simulated tests
3. Testing in 10 real practical driving license tests
4. Repeated testing in 20 real practical driving license tests

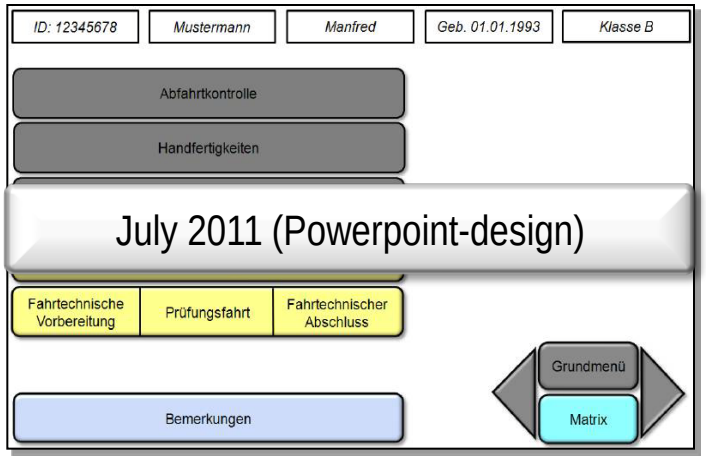
Development of the e-test protocol based on the latest available results

Feasibility study – development software & revision contents

Aug 2011 (basis to feasibility study)

Feasibility study

Jan 2012 (revised basis to revision project)



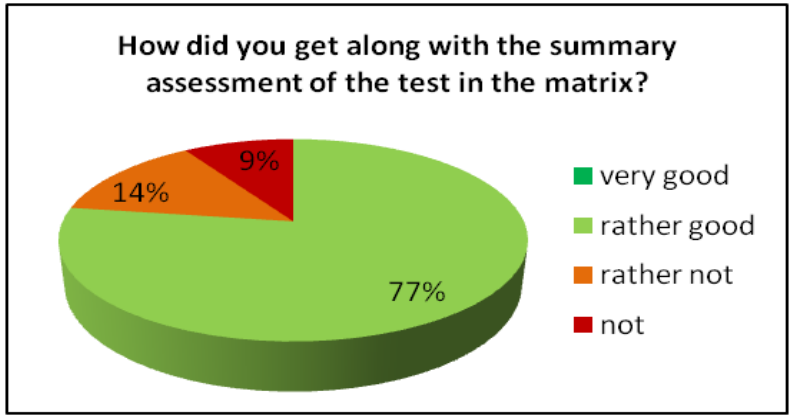
July 2011 (Powerpoint-design)

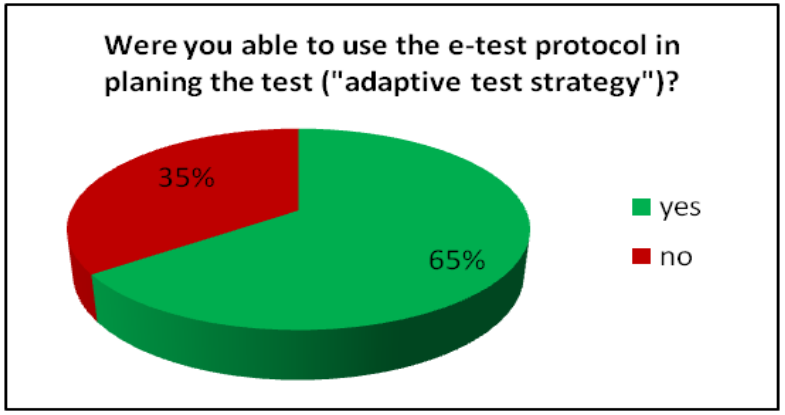
Feasibility study

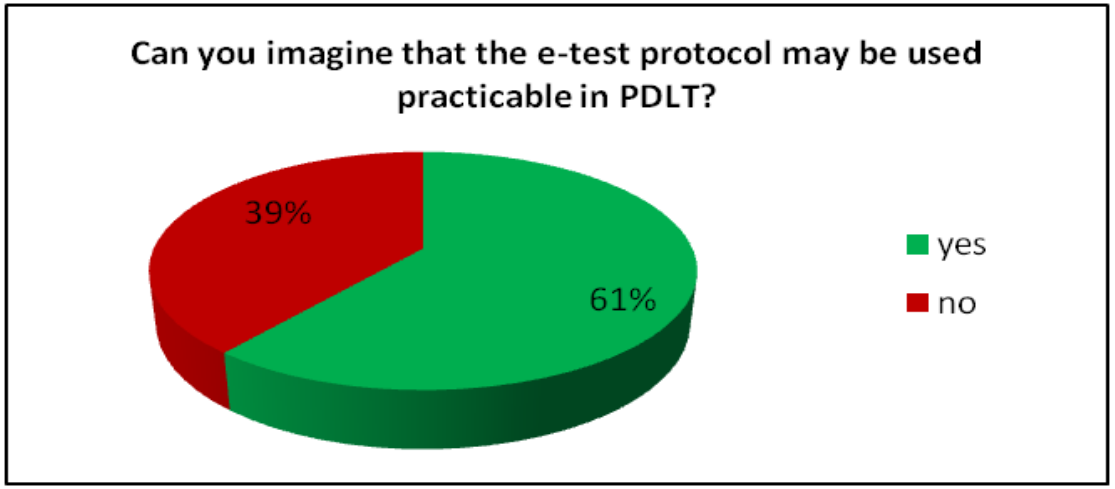
February 2012 (Prototyp)

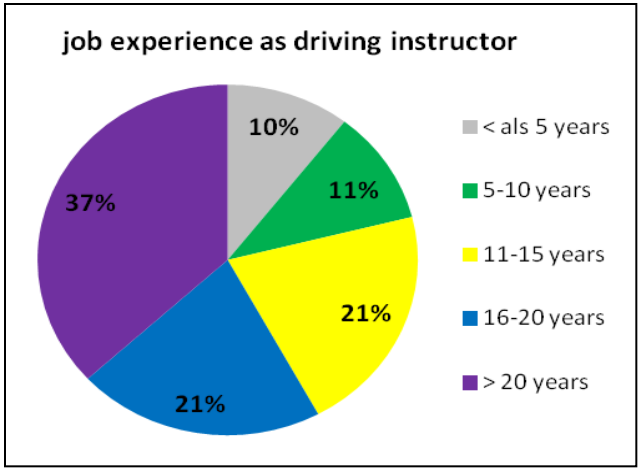
Feasibility study – results (300 simulated & 560 real PDLT)

Summary results







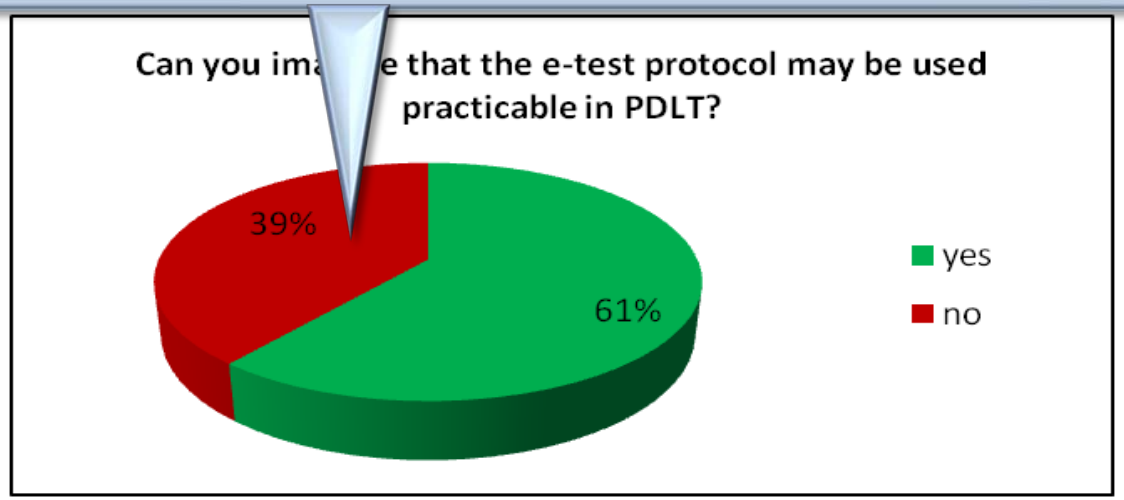


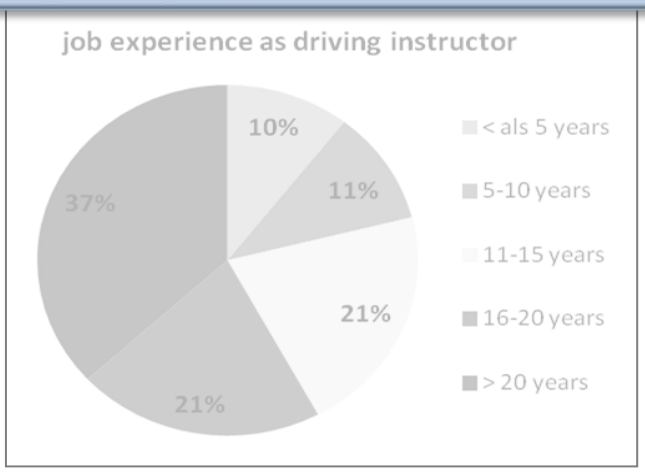
Feasibility study – results (300 simulated & 560 real PDLT)

Generally positive vote

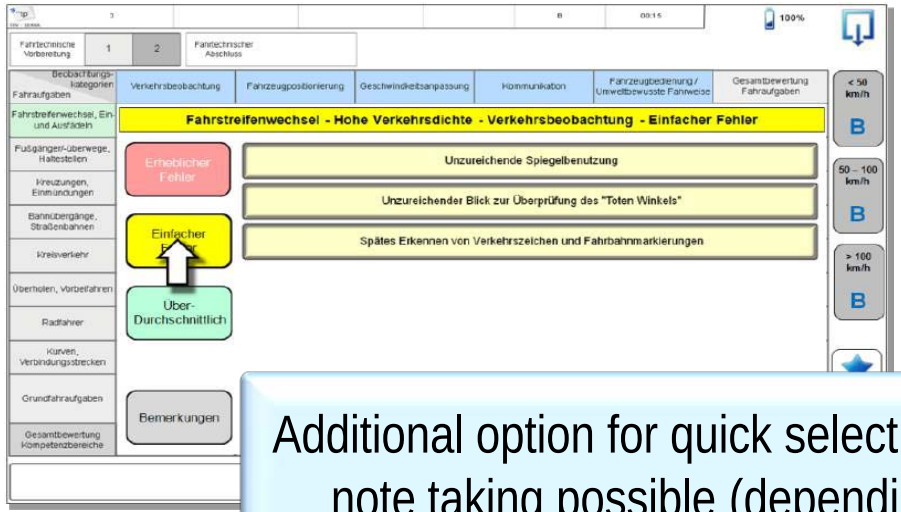
The first tests show potential for optimization of the e-test protocol.

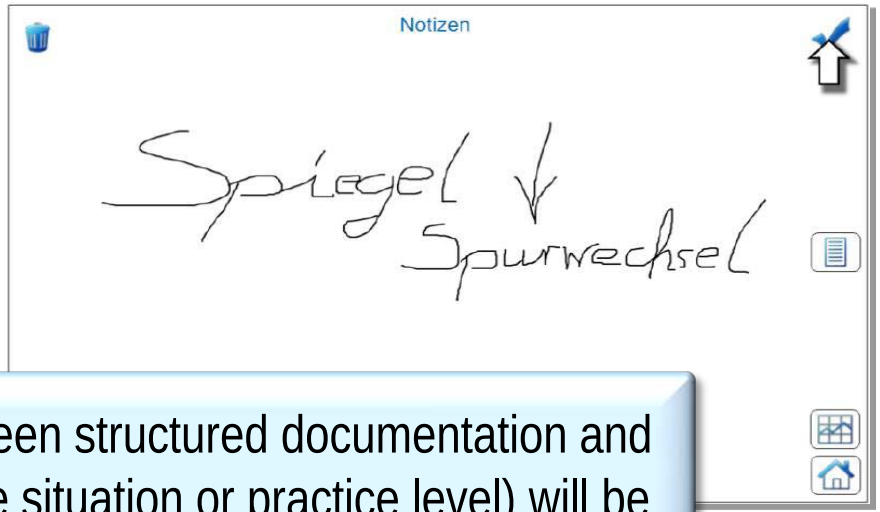
For example: The documentation of rare events or many events in a short time is (still) difficult





Revision of the e-Test protocol





Additional option for quick selection between structured documentation and note taking possible (depending on the situation or practice level) will be implemented

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Process	Documentation	Assessment
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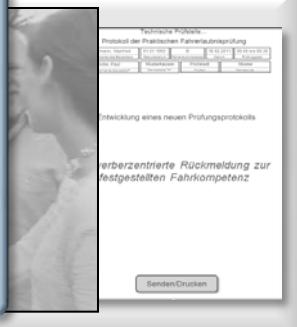
Positive and neg

How do we put it into practice?



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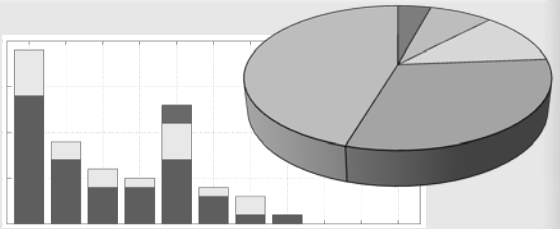
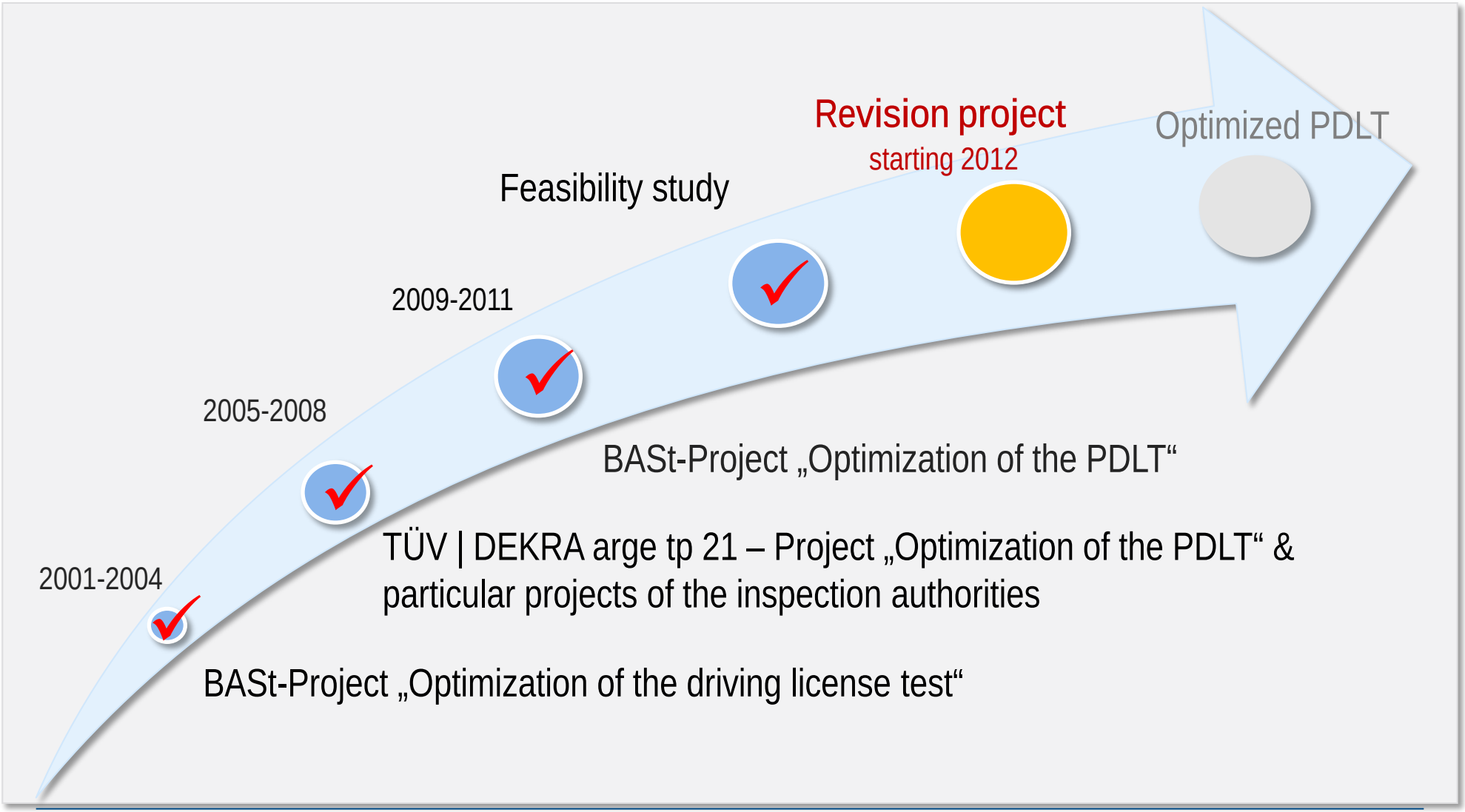


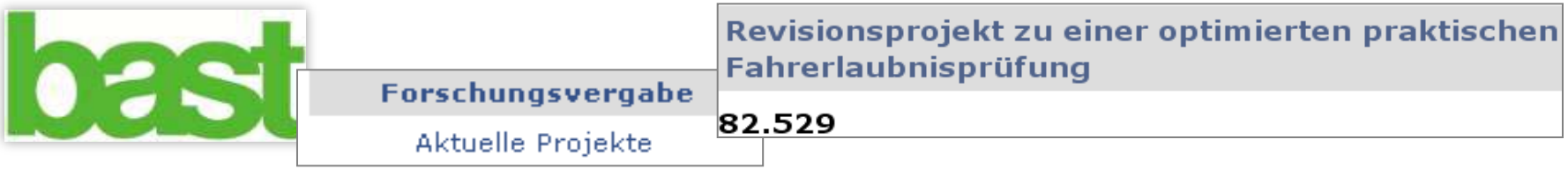
Optimization of the practical driving license test



Upcoming work to optimization of PDLT

Revision-project (2012-2014)

- Development and testing
  - The conditions for implementation of e-test protocol in the PDLT
  - An improved feedback system
  - The process for the continuous evaluation
- Concretization of process of optimized PDLT



Regional pilot projects could encourage the implementation of the optimized PDLT

(The planned approach corresponds to procedures applied during the development and implementation of the optimized theoretical driving license test.)

Handbook of the driving license test system (practice)

Handbuch zum
Fahrerlaubnisprüfungssystem
(Praxis)

Entwurfsfassung
Stand 27.01.2011

- Draft of a handbook of the driving license test system (practice) describes the procedures and processes of optimized PDLT
- Will be reviewed after the revision project and may then submitted to the authorities

Thank you…