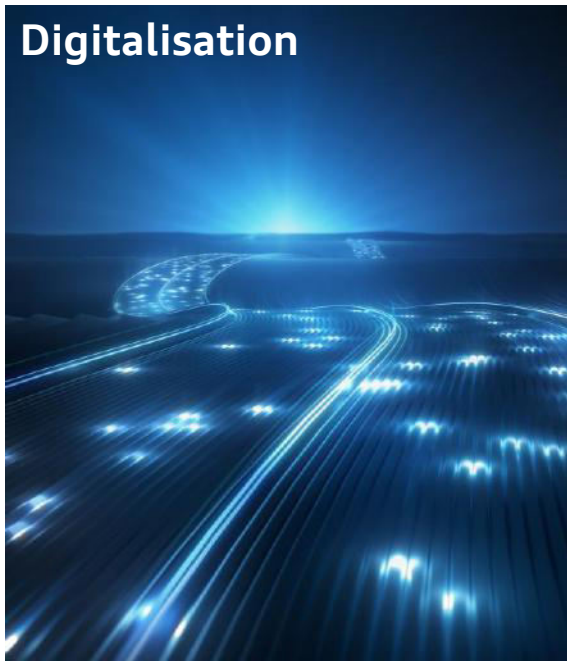


Autonomous Driving by Audi

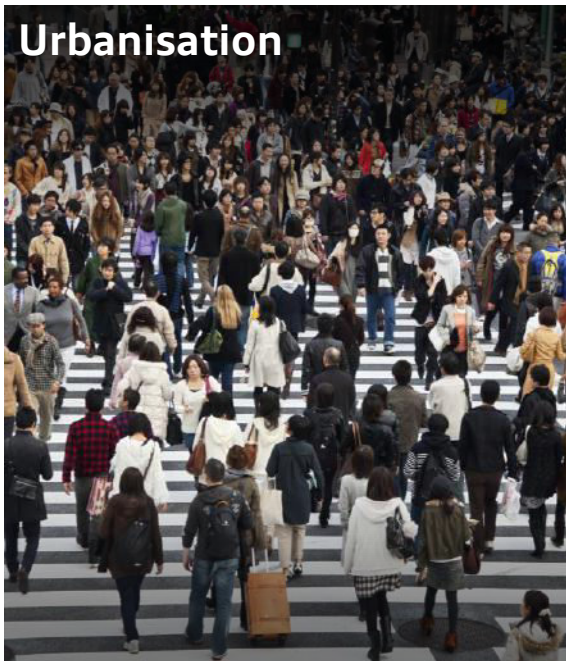
Dr. Miklós Kiss

Milestones in future mobility

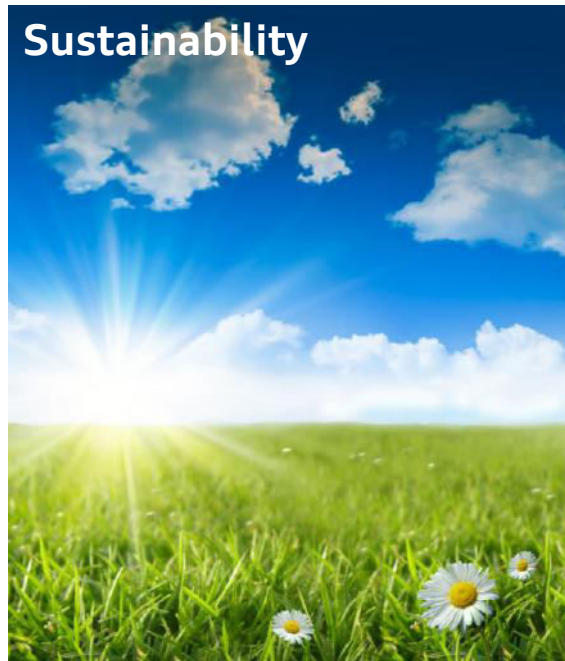
Digitalisation



Urbanisation



Sustainability



Piloted driving as an influence on megatrends

1 Enhanced safety



2 Eco-friendly driving



3 More comfort for the customer



4 Efficient use of the transportation infrastructure



Piloted
driving

Broad range of driver assistance functions already in production today

Standard features

- › Hold assist
- › Audi pre sense basic
- › Audi pre sense city
- › Park assist rear
- › Adjustable speed limiter
- › Cruise control system
- › Break recommendation function

Parking assistance package

- › Surroundings camera
- › Park assist

Tour assistance package

- › Turn assist left
- › Adaptive cruise control
- › Audi active lane assist
- › Audi pre sense front
- › Obstacle avoidance assist
- › Camera-based traffic sign recognition
- › Predictive efficiency assistant
- › Traffic jam assist

City assistance package

- › Audi side assist
- › Exit warning
- › Audi pre sense rear
- › Park assist plus
- › Rear cross-traffic assist
- › Reversing camera

Additional options

- › Trailer assist
- › Main beam assist
- › MMI navigation plus with MMI touch
- › Night vision assistant



Evolutionary advanced development driver assistance & piloted functions



Current range of
driver assistance functions



Future
driver assistance functions



Intersection
assistant



Top View 3D



ACA



Maneuver
assist



Turn
assist

Piloted

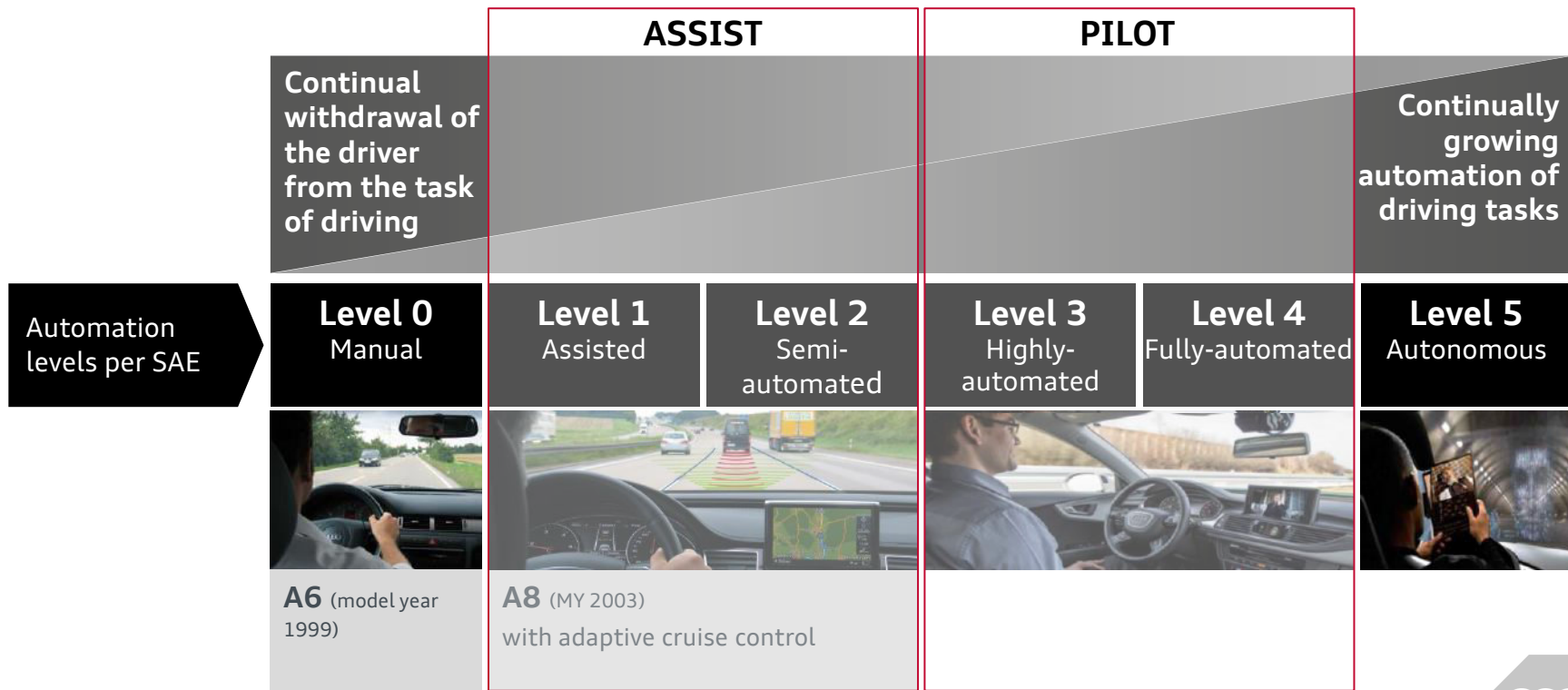
Assisted

Audi piloted driving





Each evolutionary stage will relieve the driver more



Level 1 and Level 2 Automatisaton distraction and controllability

**Statement of Principles, Criteria and
Verification Procedures on Driver
Interactions with Advanced In-
Vehicle Information and
Communication Systems**

Version 2.0

Driver Focus-Telematics Working Group

April 15, 2002

**Statement of Principle
Verification Procedures
Interactions with
Vehicle Information and
Communication Systems**

Included
2006 Updated Section

Driver Focus-Telematics

June 26

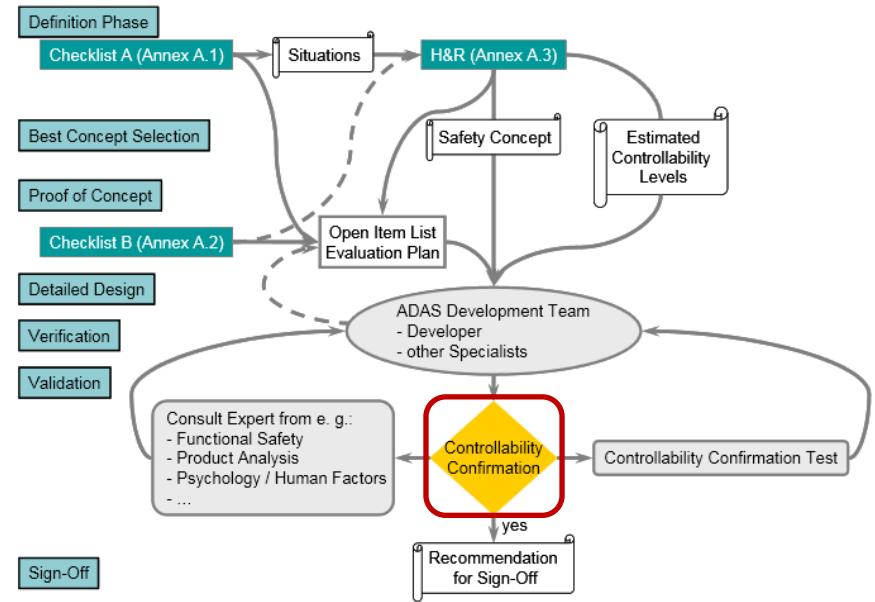
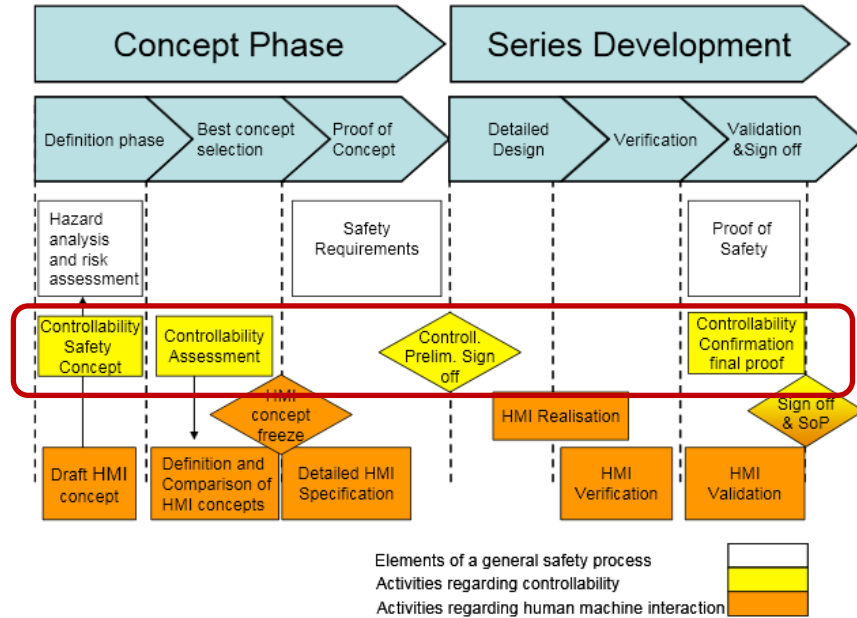


Preventive and Active Safety Applications
Integrated Project
Contract number FP6-507075
eSafety for road and air transport



**Code of Practice
for the
Design and Evaluation
of ADAS**

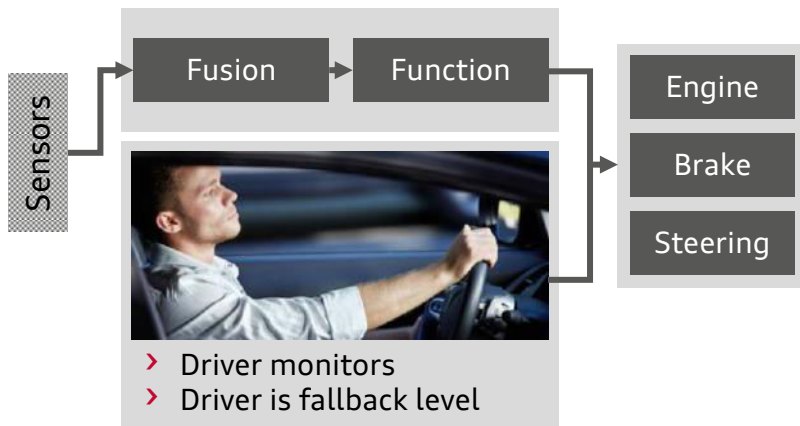
Level 1 und Level 2 Automatisierung – Response CoP



Aus: Response Code of Practise, 2009

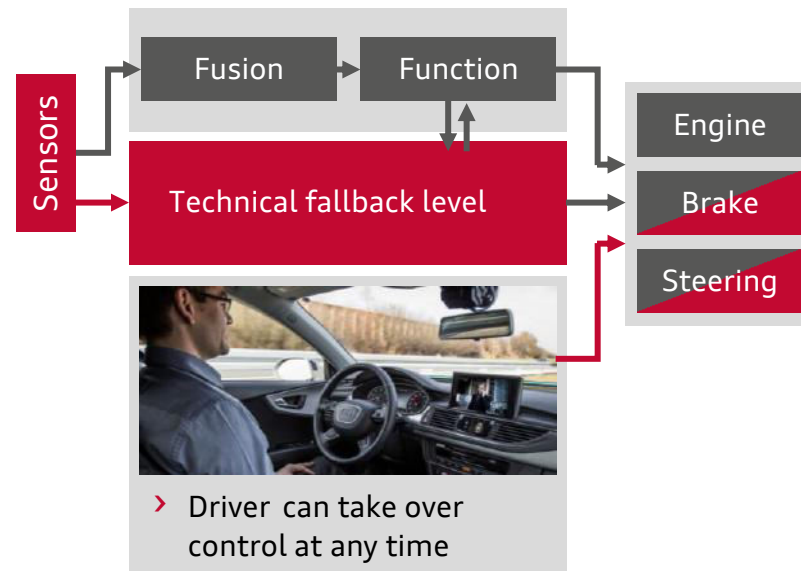
Level 3: technical measures

Assisted driving



» In critical situations, immediate driver reaction is required

Piloted driving



» No immediate driver reaction required

Level 3 - Interface between driver and vehicle



Level 3 - cooperative driving means interacting with others



Smooth accelerating and braking



Intelligent lane changes



Maintaining distances (lateral)



Recognising the intentions of other road users



Allowing merging



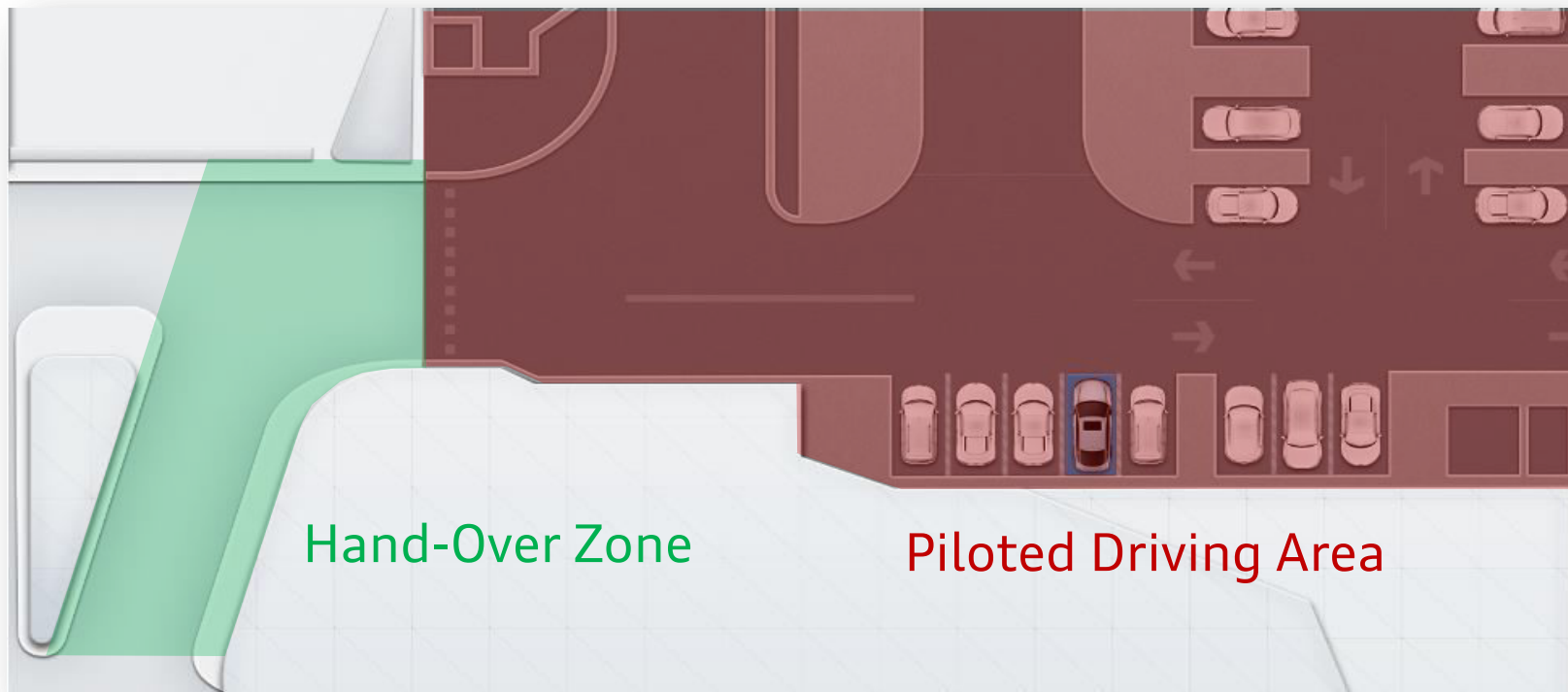
Route guidance
with high proportion of route driven by piloted driving



Level 4 Parking Garage Pilot without a driver in the car



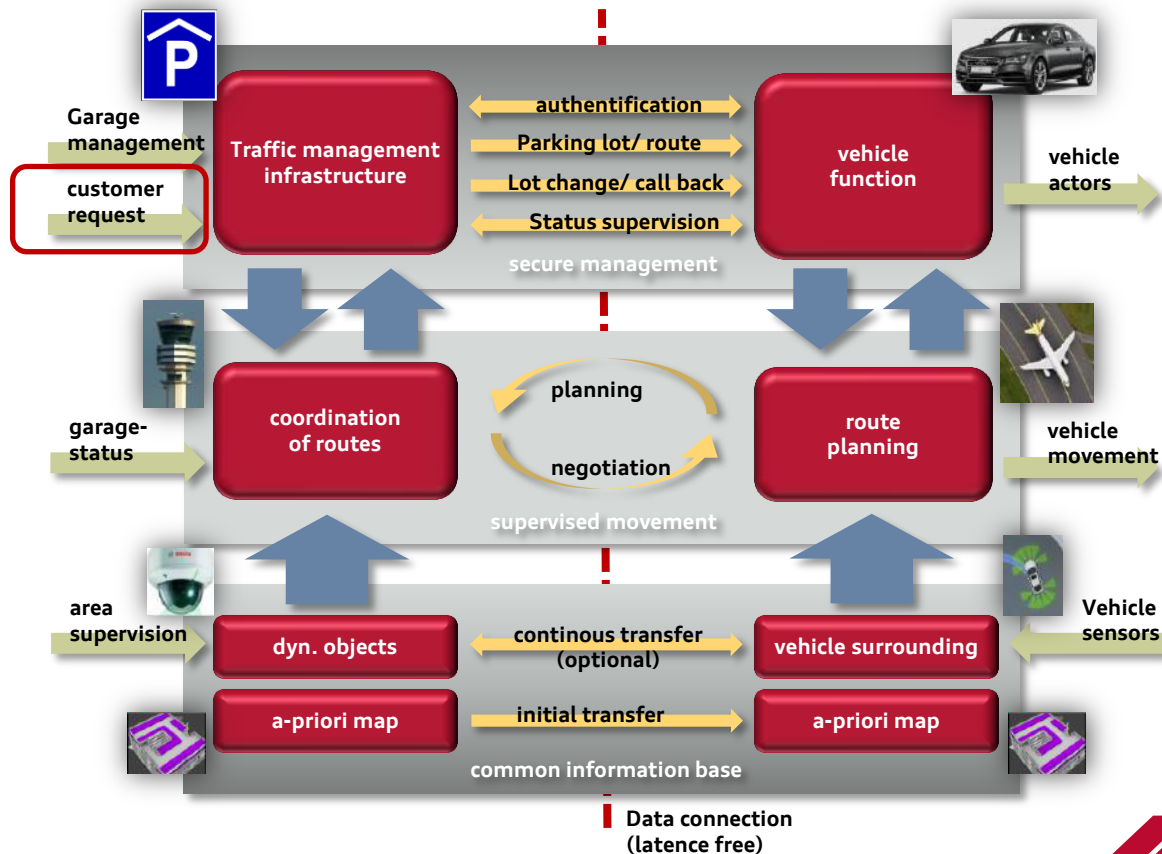
Level 4: Piloted Parking within a Parking Garage



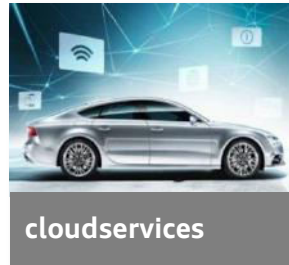
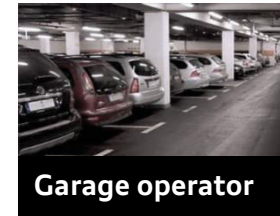
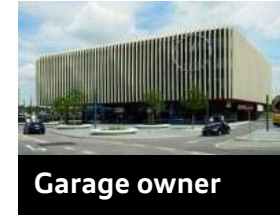
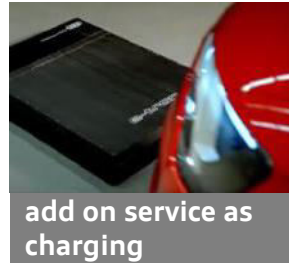
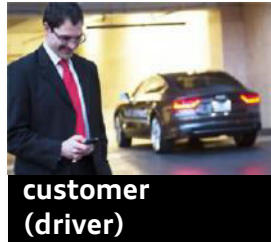
Source: AUDI AG

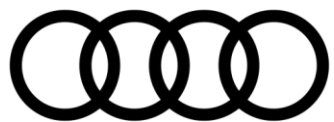


Level 4: role of the driver/customer



Level 4: PHP Stakeholder – who wants to interact?





Thank you very much!