

External requirements:

Driver (accelerator pedal)
Auxiliaries (air conditioning, ...)
Cruise control
Gearbox
Vehicle dynamics (TC...)

Internal requirements and boundary conditions:

Start management
Idle governor
Active surge damper
Engine speed limitation
Engine protection
Smoke limitation ²⁾
Engine operating mode

Coordination of
torque
requirements

Translation of
torque
requirements to
the available
actuators

Injection pump (p_{Rail}) ¹⁾

Injection strategy

EGR-valve

Boost pressure actuator

Cam phasing ³⁾

Ignition timing ³⁾

Intake-manifold switchover

Blank-out pattern ³⁾

Throttle

1) Functions for SI-engine

2) Functions for Diesel engine

3) Functions for Otto-engine