

# DRIVING BEHAVIOUR ERRORS – OT HIDDEN GEMS

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# WHAT TO EXPECT?



- Terminology and Context
- Michon's Model of Driving Behaviours
- Driving Behaviours
- Driving Behaviour Errors

# Terminology

- **Driving ability/competence** – having sufficient physical and mental abilities to drive a vehicle
- **Driving skills** – practised abilities
- **Driving habits** – personal, employment, leisure
- **Driving performance** – ability to engage in the activity
- **Driving manoeuvres** – actions on the road, e.g., right/left turn, negotiating controlled/uncontrolled intersections, low/high speed of travelling, etc.

# What does OT assess?

## **Fitness to drive**

# Terminology

**Fitness to drive** – having adequate physical, visual and cognitive function and resources to drive smoothly and cautiously while compensating adequately for functional impairments, in real time traffic (*Brouwer & Ponds, 1994*)

# Safe driving

Medical fitness to drive

Fitness to drive

Driving competence

# How do we assess Fitness to drive?

- Comprehensive driving evaluation
  - Clinical assessments
  - On-road assessment
  - Driving simulator
  - Feedback
  - Report/letter

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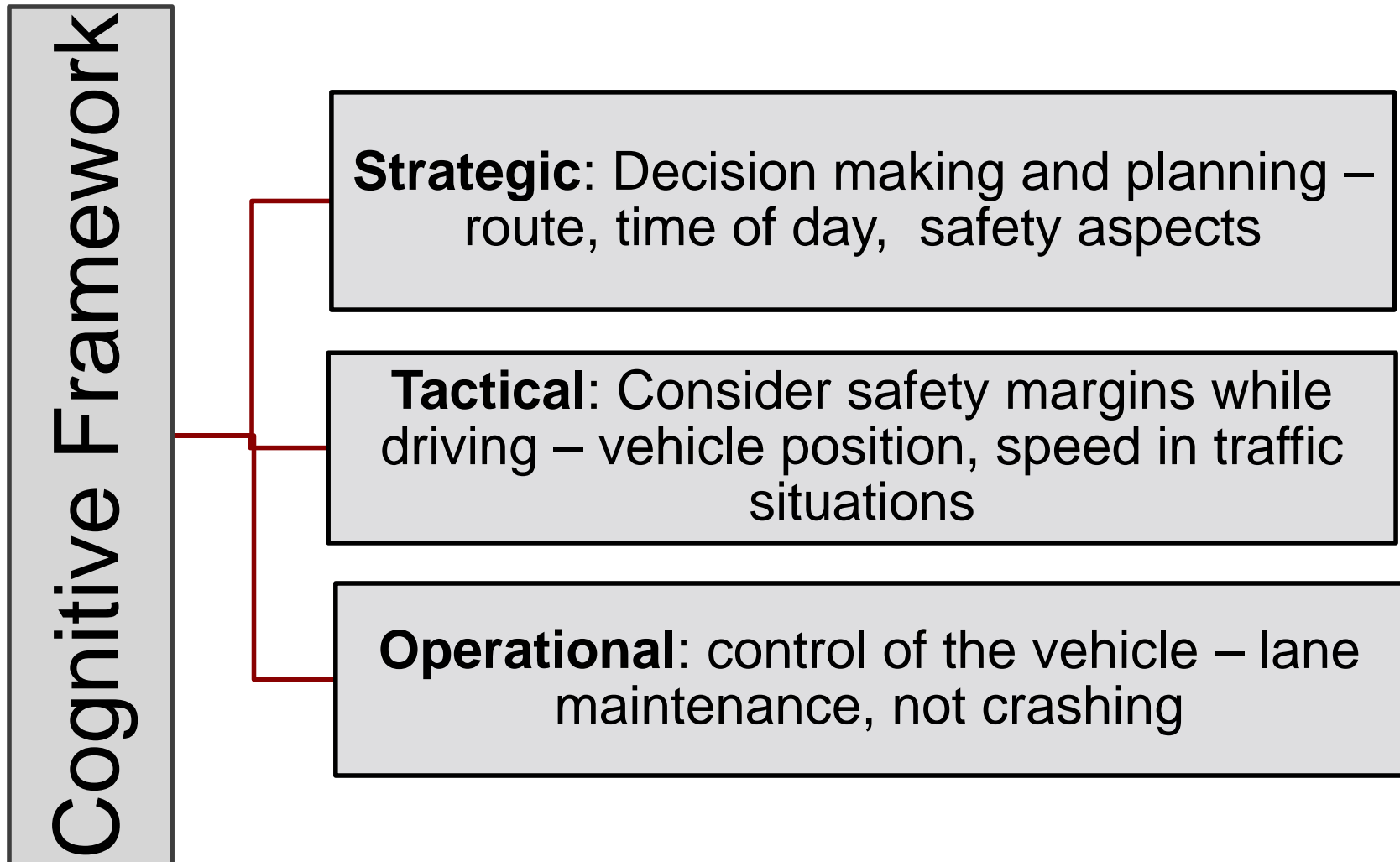


# On-road Assessment (ORA)

- **Criterion standard for evaluating fitness to drive** (*Odenheimer et al., 1994; Hunt et al., 1997; Justiss et al., 2006*)
- 2 Levels – Closed-road and On-road
- Closed-road – without traffic – safe venue for preparation for on-road – usually parking lot
- On-road assessment – realistic environment and contextual factors (weather and traffic) for driving



# Michon's Model of Driving Behaviours





# Eight Driving Behaviours

- **Visual scanning** – observing environment
- **Speeding** – keep appropriate speed
- **Lane maintenance** – lateral position in lane
- **Vehicle position** – ant/post position in lane
- **Signalling** – appropriate use of signals
- **Gap acceptance** – judging safe gaps in traffic
- **Yielding** – appropriate yielding
- **Adjustment to stimuli** – recognise and respond appropriately to stimuli

*(Justiss et al. 2006; Barco et al. 2010)*

# Eight Driving Behaviour Errors

- **Visual scanning** – visual aspects; selective or divided attention
- **Speeding** – muscle strength/coordination; insight
- **Lane maintenance** – upper limb function; alternating attention/neglect
- **Vehicle position** – proprioception; planning/mental flexibility
- **Signalling** – muscle strength; procedural memory
- **Gap acceptance** – initiation/coordination; figure-ground perception/judgment
- **Yielding** – coordination/physical control; reasoning
- **Adjustment to stimuli** – reaction speed; planning/anticipating

*(Justiss et al. 2006; Barco et al. 2010)*

Thank you