

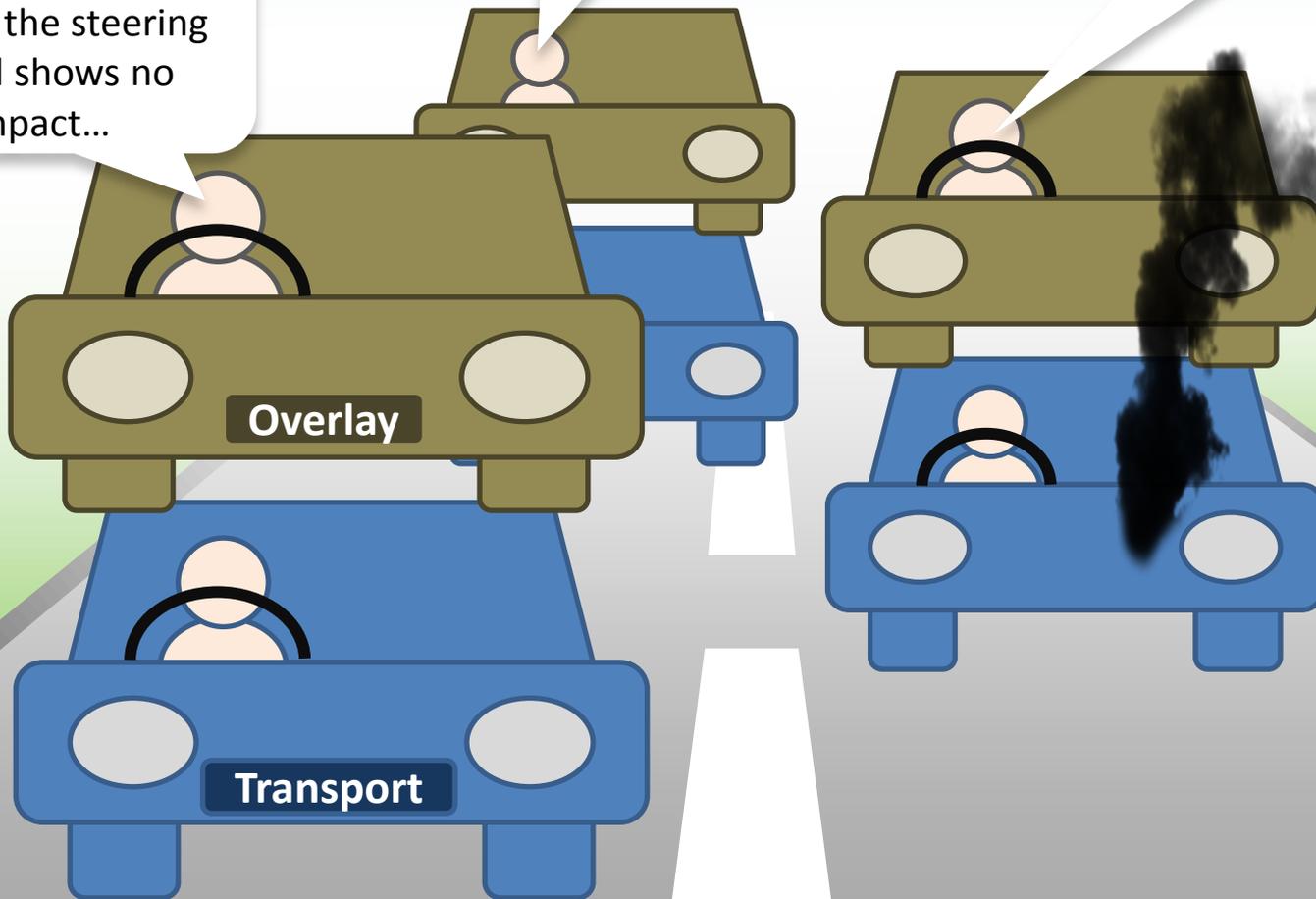
Use case:  
Correlation of  
Overlay and Transport Network

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How do I control where we're going? Turning the steering wheel shows no impact...

Great technology! I no longer need a driver's license

Help! I can see smoke, but my dashboard shows no warnings...



Overlay

Transport

# Overlay Networks:Key Requirements

- Independent Endpoint addressing and large number of tenants supported
  - ➔ *E.g. LISP  
(VXLAN for L2 tenant scale solution)*
- Per-flow troubleshooting
  - Analyze which path a particular flow took
  - Determine which path a particular flow would take
  - ➔ *E.g. Segment routing w/ IPv6;  
Record traversed segments in packet header (e.g. IPv6 extension hdr)*
- Topology-awareness in the overlay network
  - Traffic Engineering for Unicast and Multicast (traffic in the overlay should follow a specific path, e.g. latency optimized, ensure path-symmetry, ...)
  - ➔ *E.g. Segment routing w/ IPv6; Flow forwarding state in packet header to perform TE*
- Efficient and generic Network Transport/Fabric
  - No per-flow state kept in the Data-Center Fabric
  - Equal cost multipath load balancing
  - IPv6
  - ➔ *E.g. Segment routing w/ IPv6; Flow forwarding state in packet header*
  - ➔ *E.g. IPv6 transport network*

➔ Option: Combine SR and LISP: draft-brockners-lisp-sr-00 (could similarly be done for VXLAN)