Opportunities and Barriers for Advancing the API Economy within the Automotive Industry

Fridolin Koch (B.Sc.), 01.10.2018, MA Thesis Kickoff

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Motivation

Communication

Payment

Search

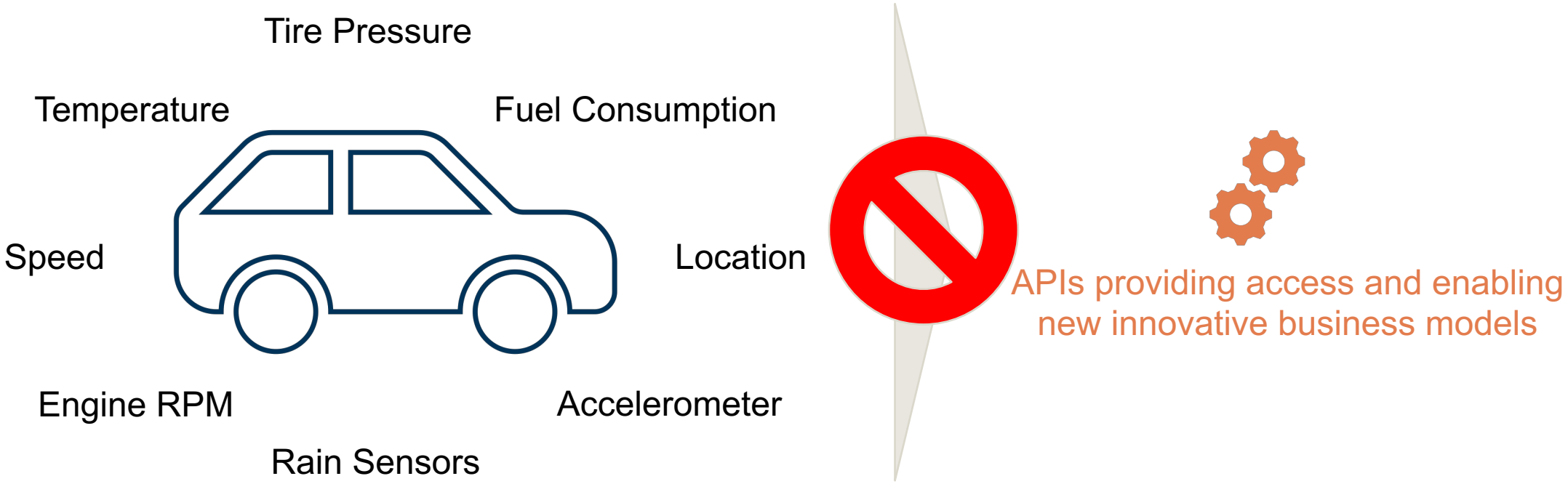
Shipping

What do this companies have in common?

→ Their core product is API based

Motivation

BUT: What about the Automotive Industry?



Research Questions

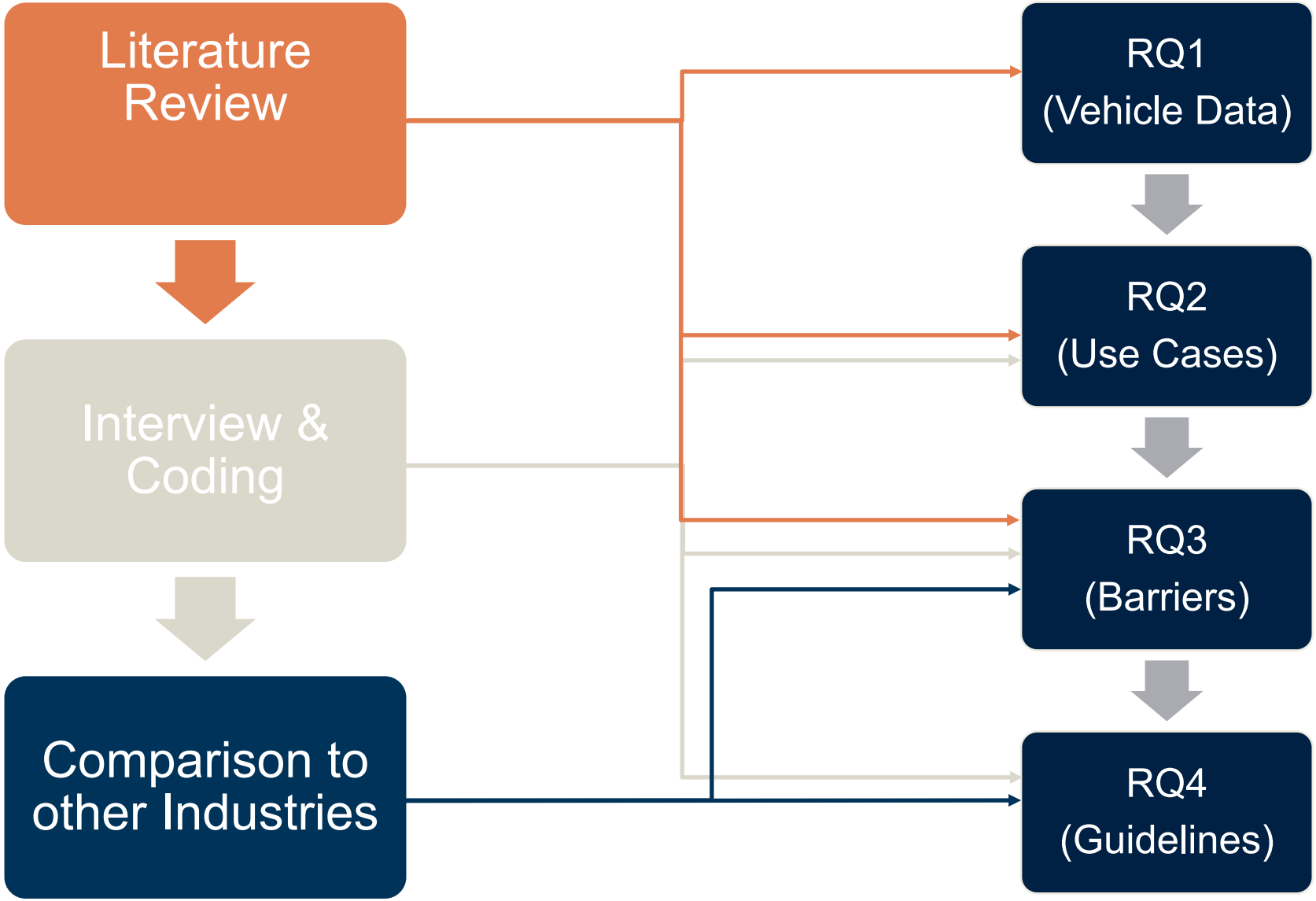
RQ1 What data is generated by modern vehicles?

RQ2 Which use cases and scenarios can be derived by providing large scale access to vehicle generated data through APIs?

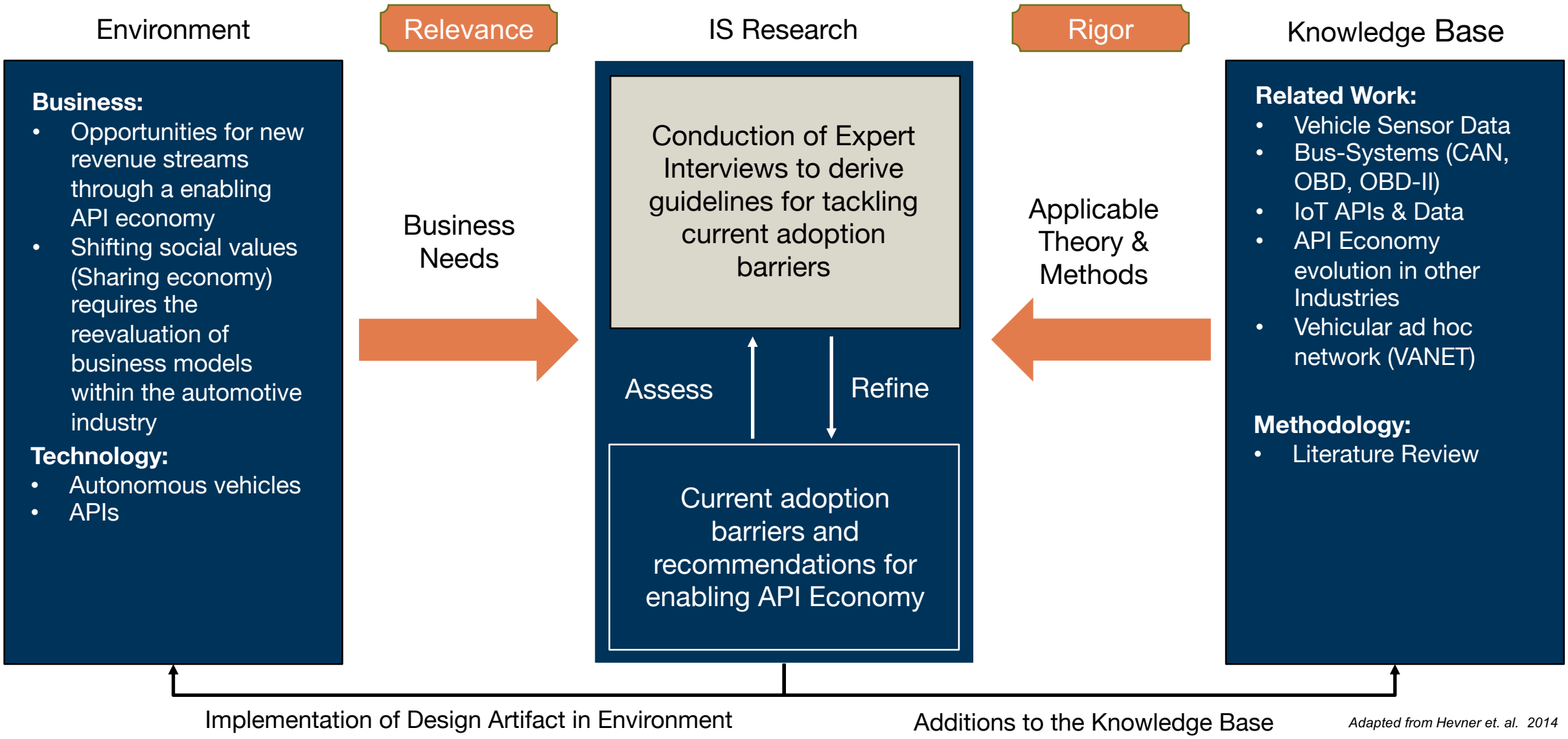
RQ3 What are barriers for use-cases and scenarios not being implemented?

RQ4 How could the advancing of API economy within the automotive industry be accelerated?

Research Approach



Design Science

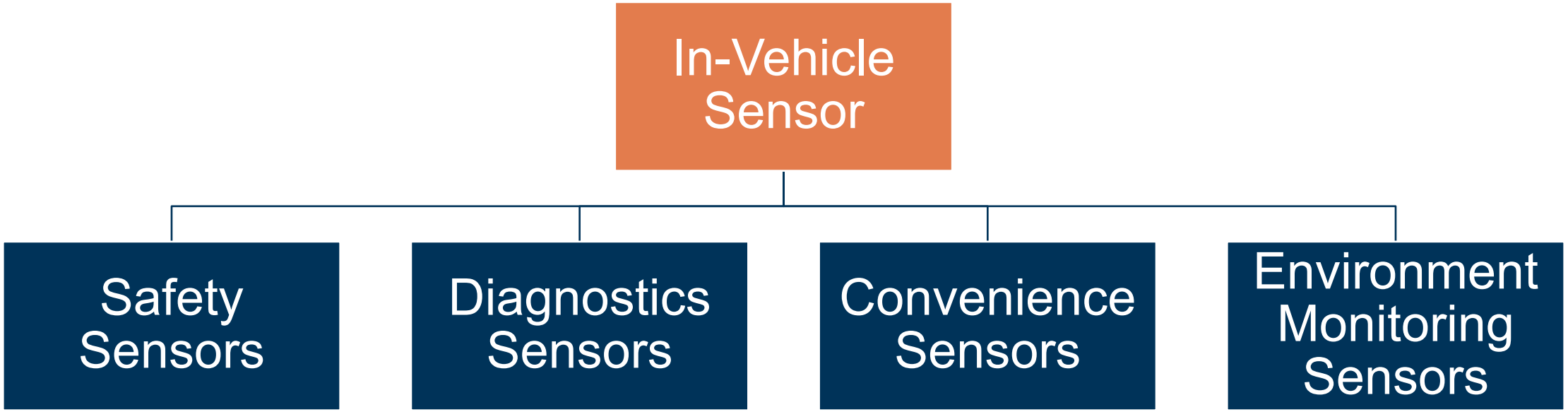


Adapted from Hevner et. al. 2014

Vehicle Generated Data

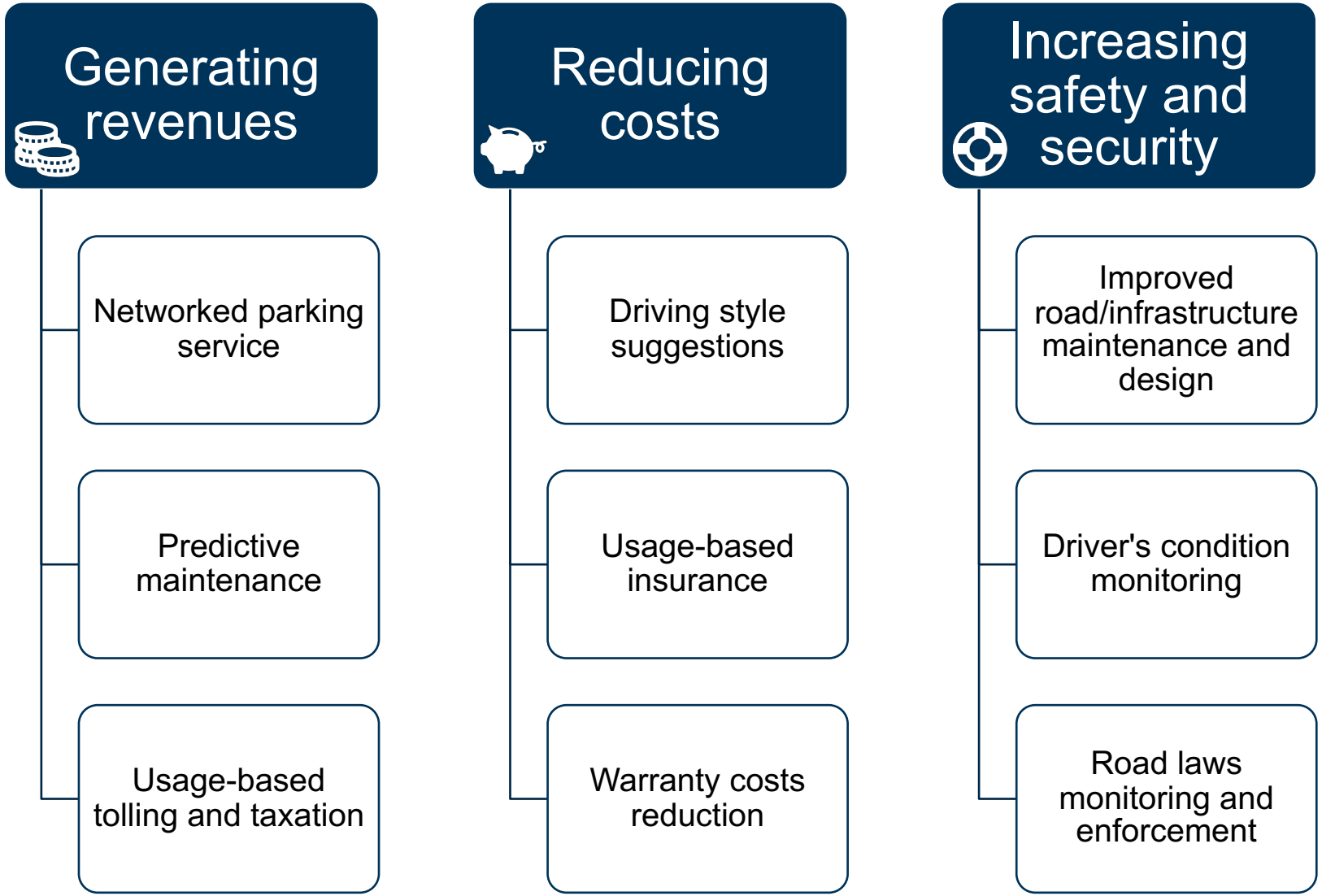
- Average number of sensors per vehicle is increasing
  - 24 in 2002
  - 40 in 2007 (Estimate)
  - 70 in 2013 (Prediction)
- Current (2007) luxury cars have over 100 sensor per vehicle [Fleming2008]

Different classification approaches



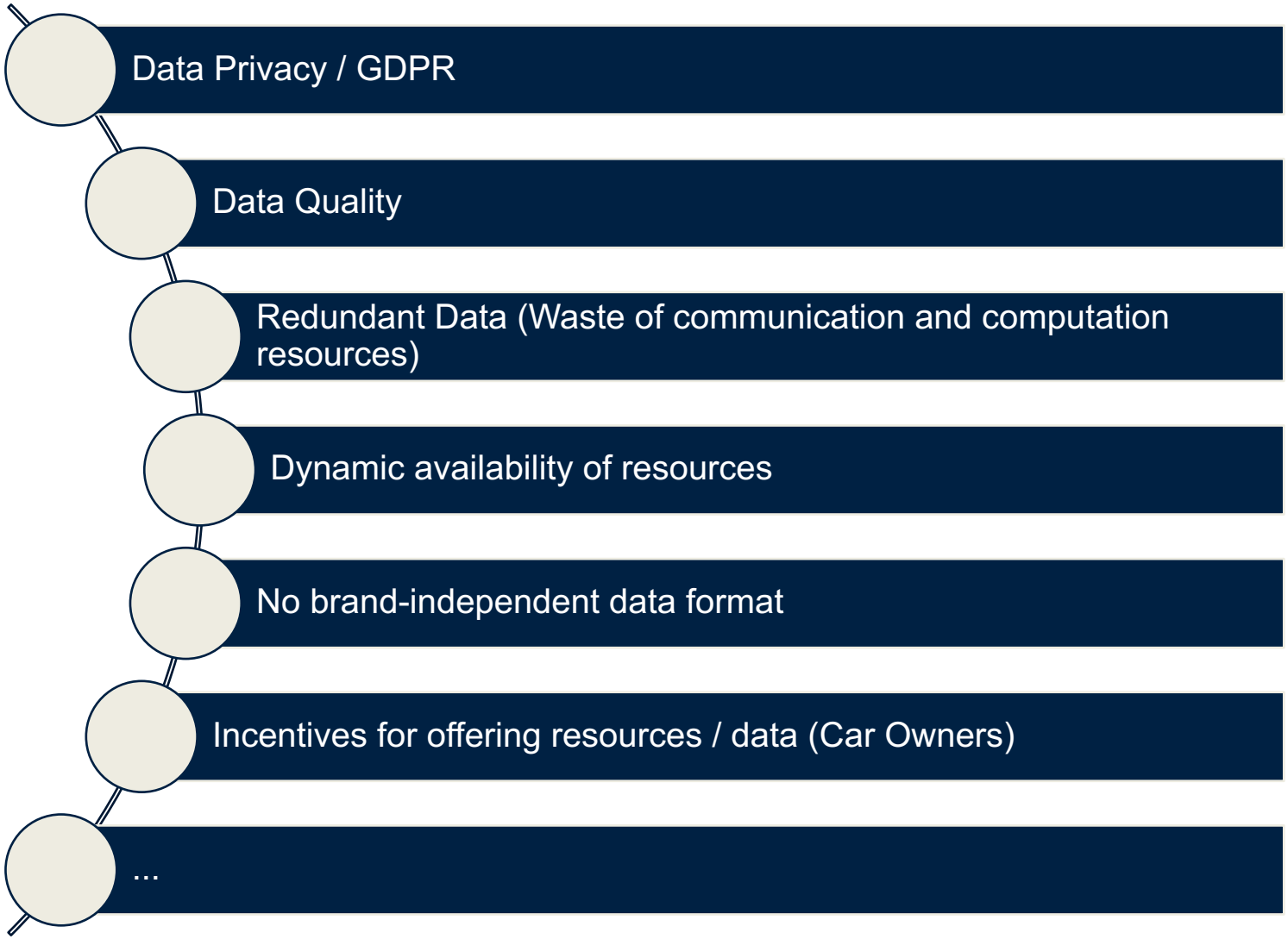
Adapted from Abdelhamid et al. 2014

Use-Case Scenarios



Adapted from McKinsey&Company 2016

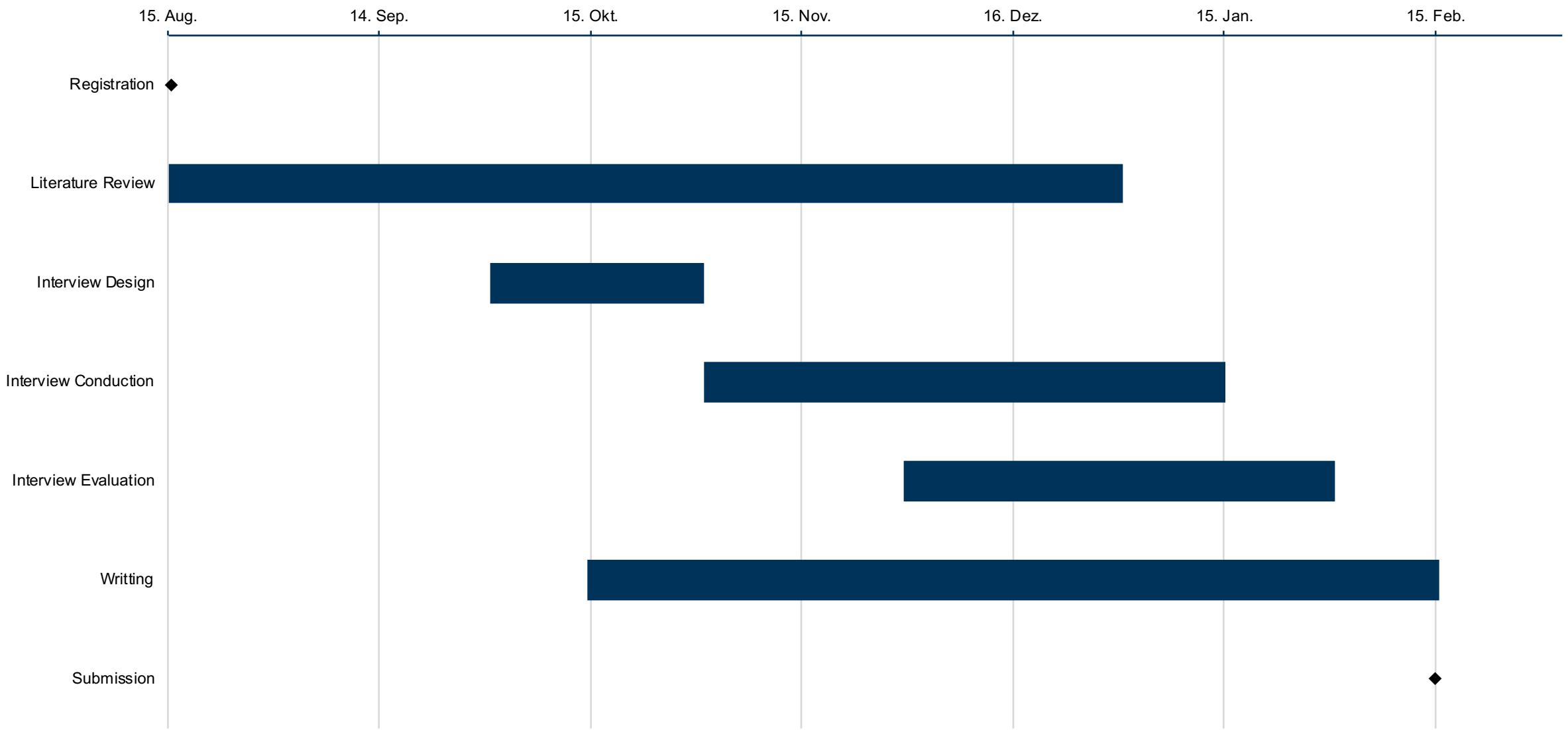
Barriers



Derive Guidelines for Advancing API Economy

VDA 2016
Abdelhamd 2015
AutoMat Project

Timeline



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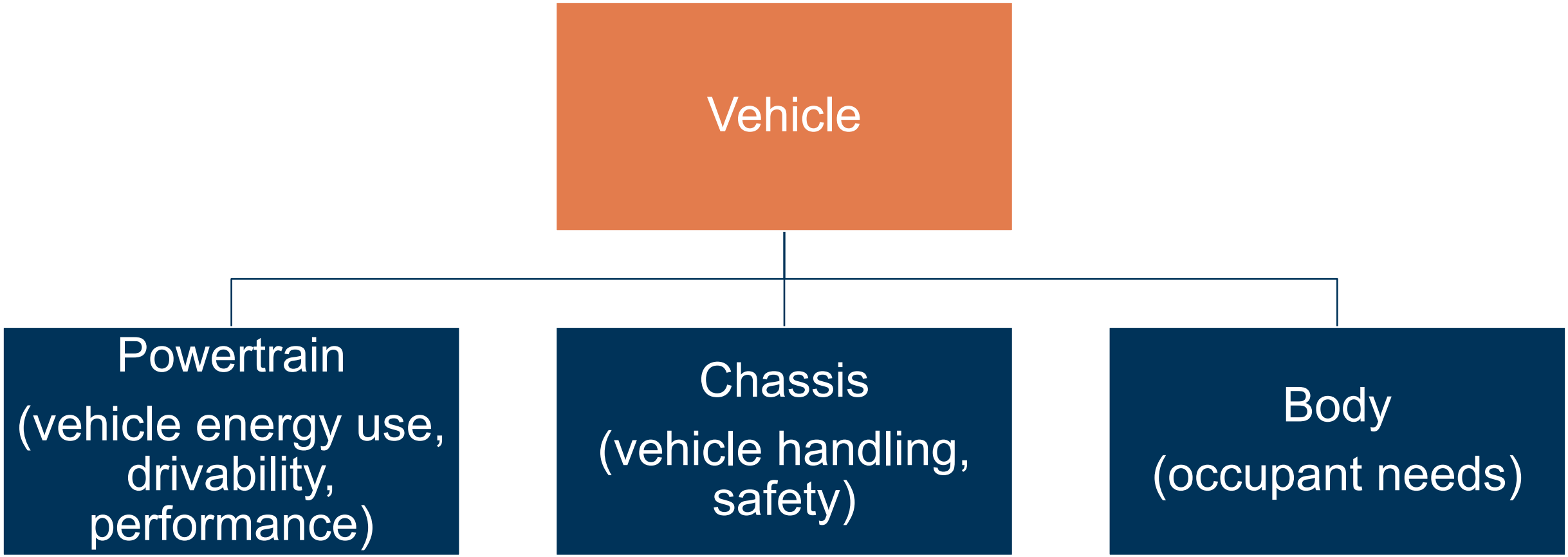
Backup

Vehicle Generated Data I

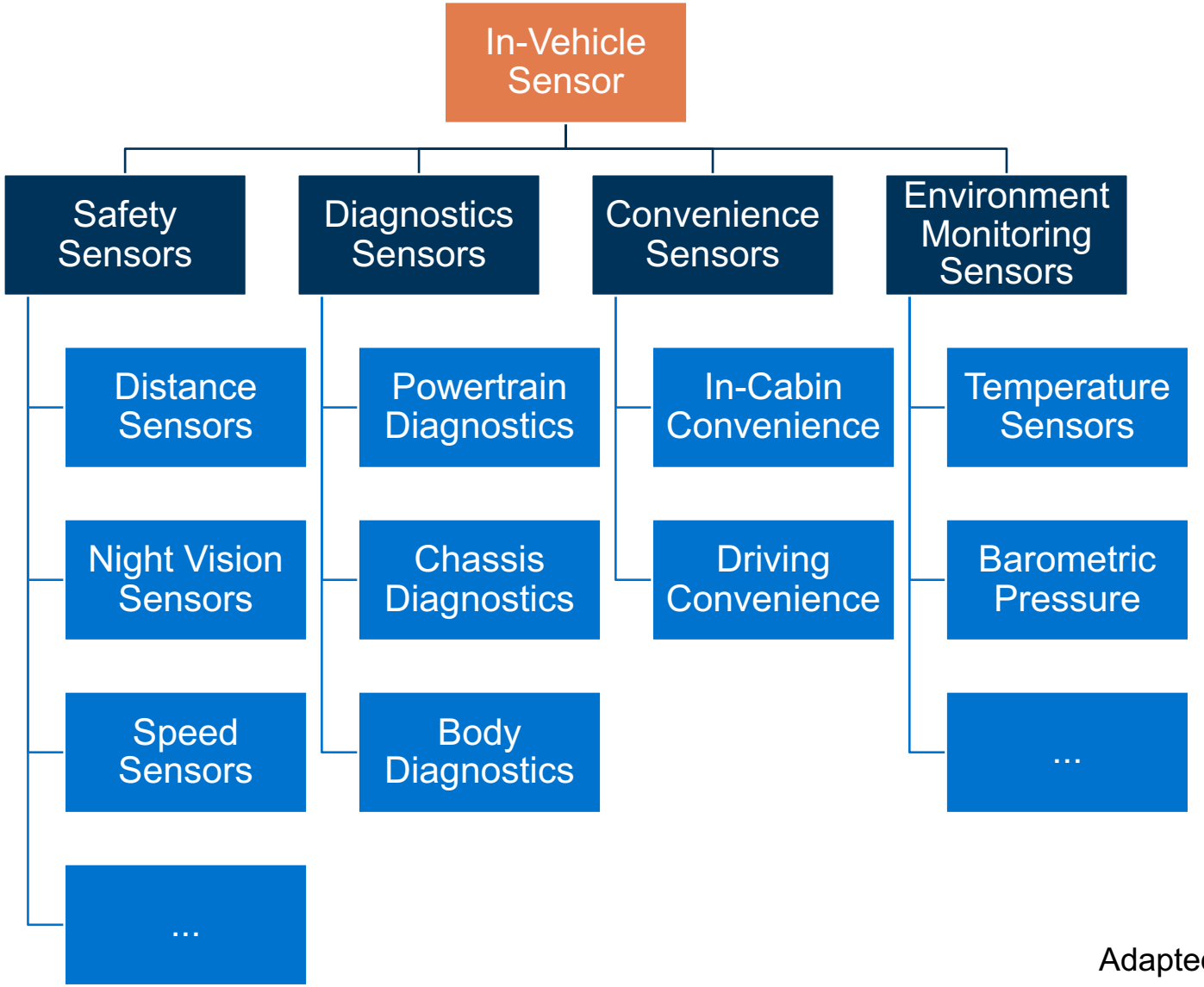
Different classification approaches



Fleming 2001

Vehicle Generated Data II

Different classification approaches



Adapted from Abdelhamid et al. 2014