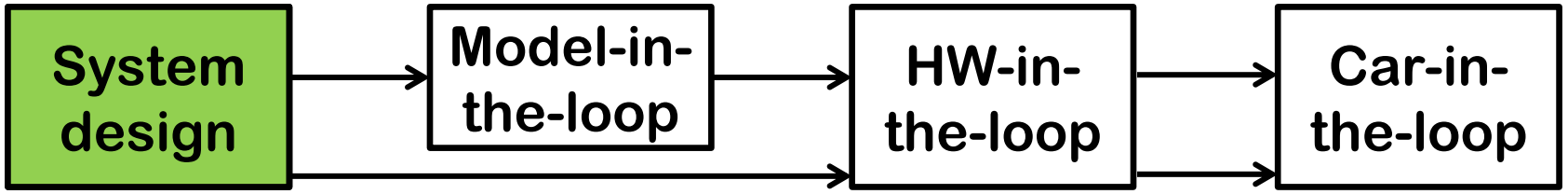
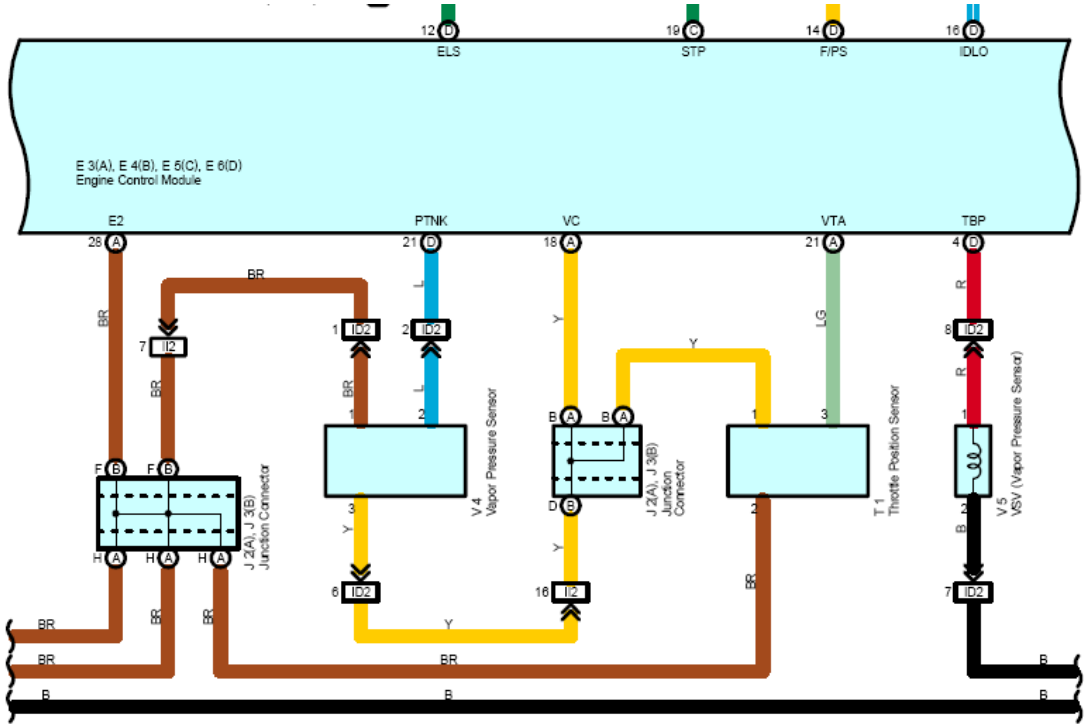
# Extending Agile Practices in Automotive MDE

Ulf Eliasson
Volvo Cars Corporation, Sweden
Håkan Burden
University of Gothenburg, Sweden

# EPS - Electronic Propulsion Systems

# Existing Process



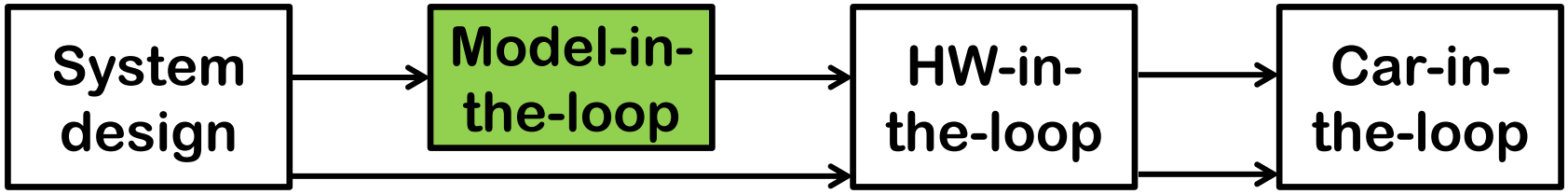



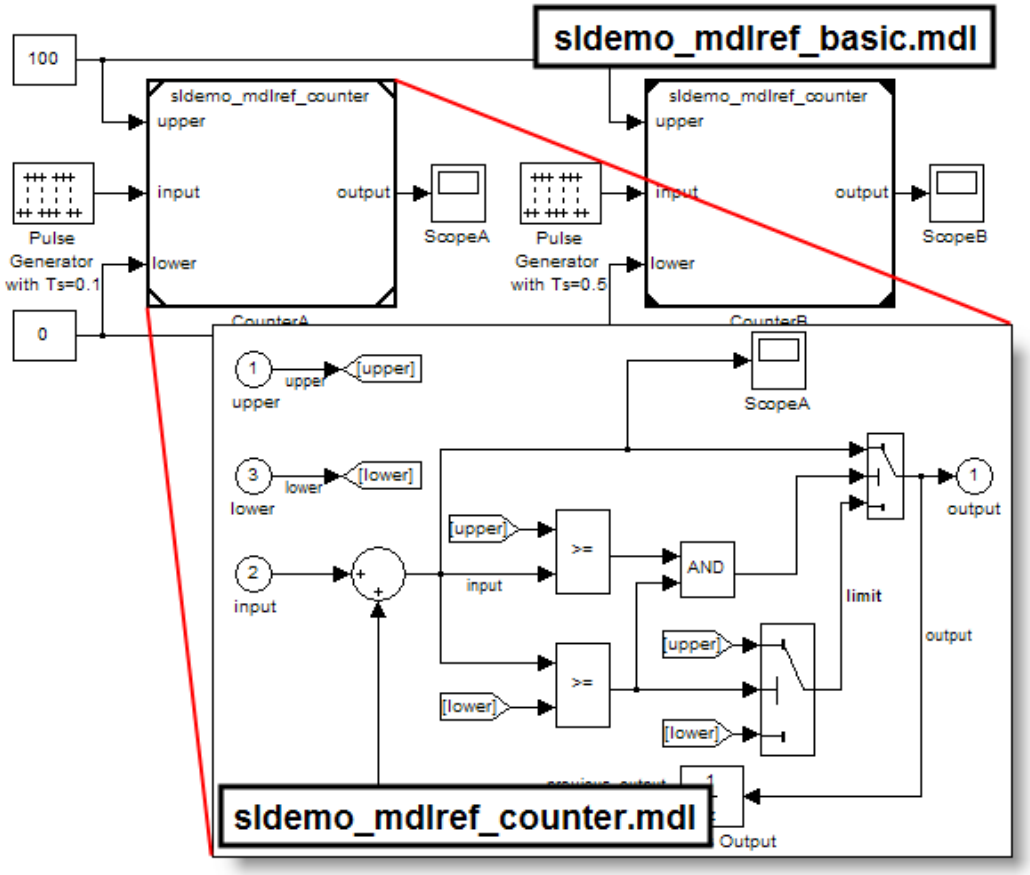

Signal database

Frequency : Hz

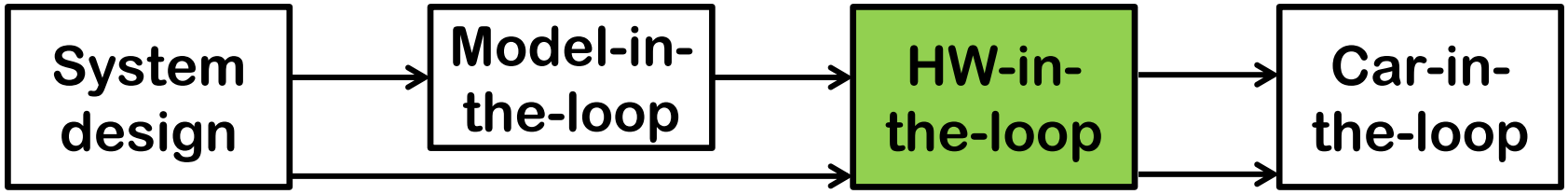
Memory : b

# Existing Process

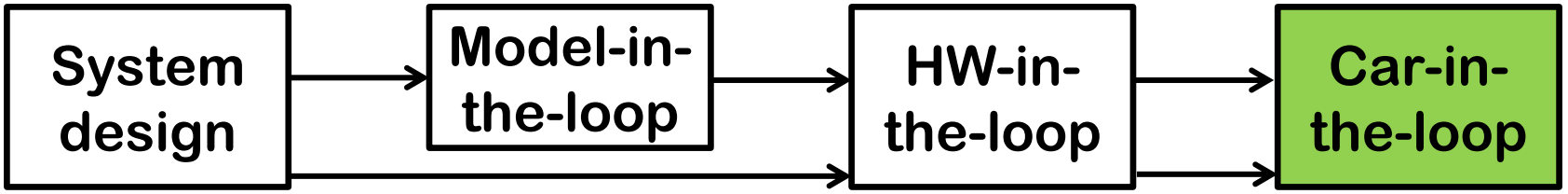


# Existing Process




# Existing Process




Overall a waterfall process

Pockets of agile MDE

Which are the challenges and possibilities for extending agile practices?

# Method

Challenges:

- 2 independent sets of interviews  8 + 8
- Engineers at EPS
- Independent analysis of each set
- Comparing analyses

# Method

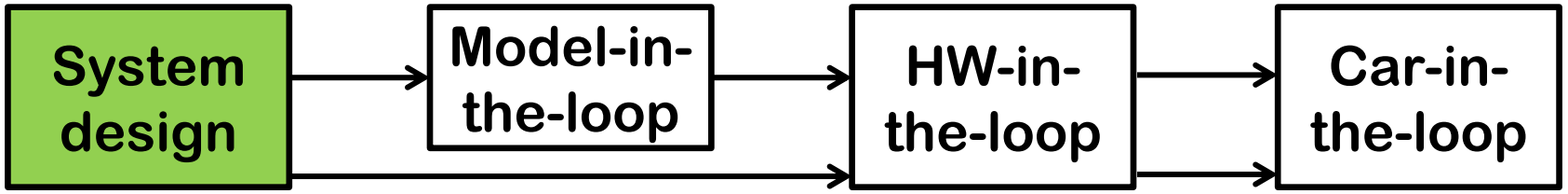
Challenges:

- 2 independent sets of interviews  8 + 8
- Engineers at EPS
- Independent analysis of each set
- Comparing analyses

Possibilities:

- 1 follow-up interview
- System architect

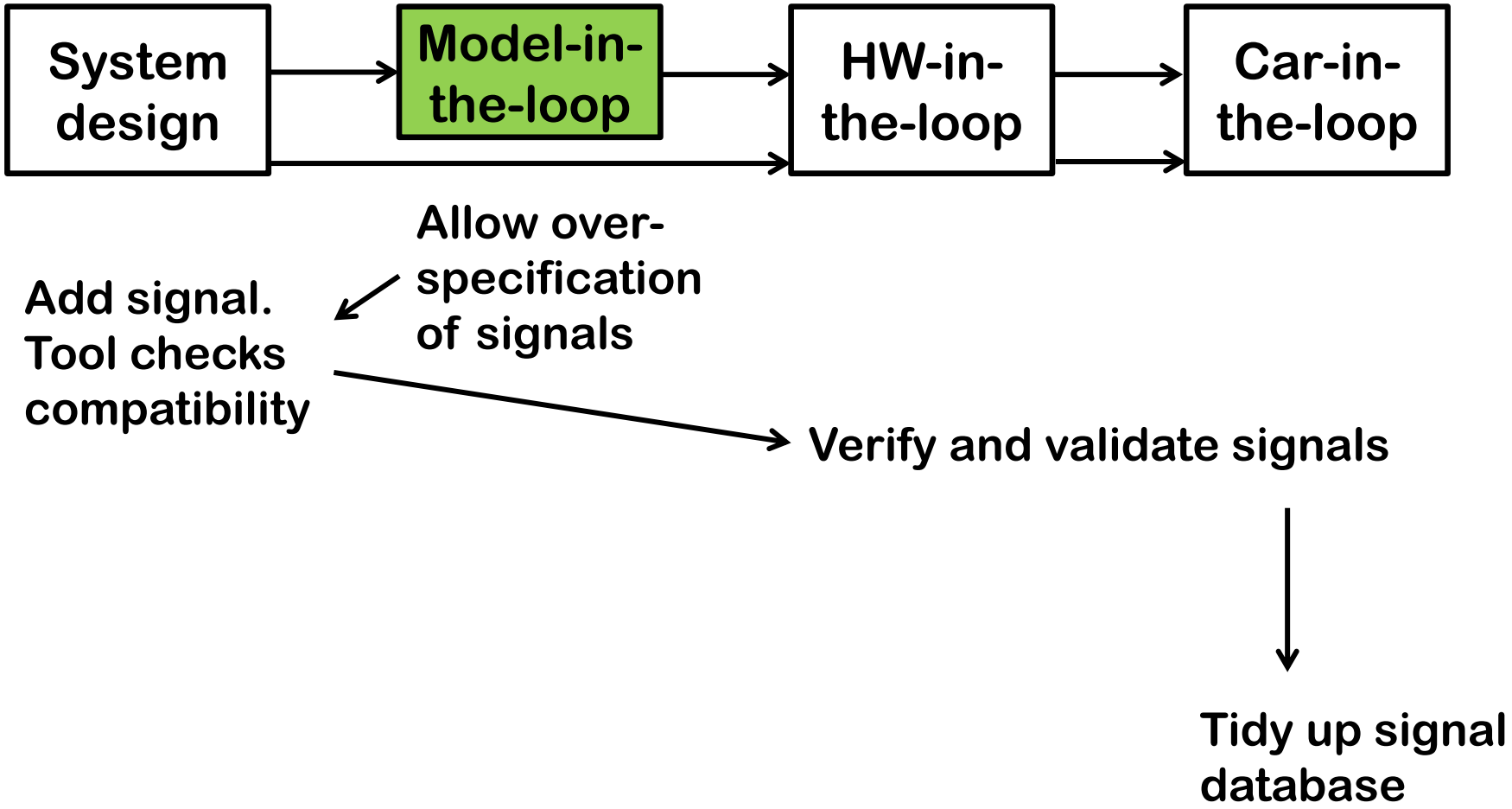
# Challenges: Freezing




Just in case:

- Define extra signals
- Include some extra bits of memory

# Possibilities: Agile MDE



# Conclusion & Future work

System design is not in conflict with agile MDE,
it is the waterfall process

MDE enables agile development

- Model-in-the-loop
- Hardware-in-the-loop
- Car-in-the-loop

Next step is to implement the necessary tool changes