Automated Vehicle Liability

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Where our math works

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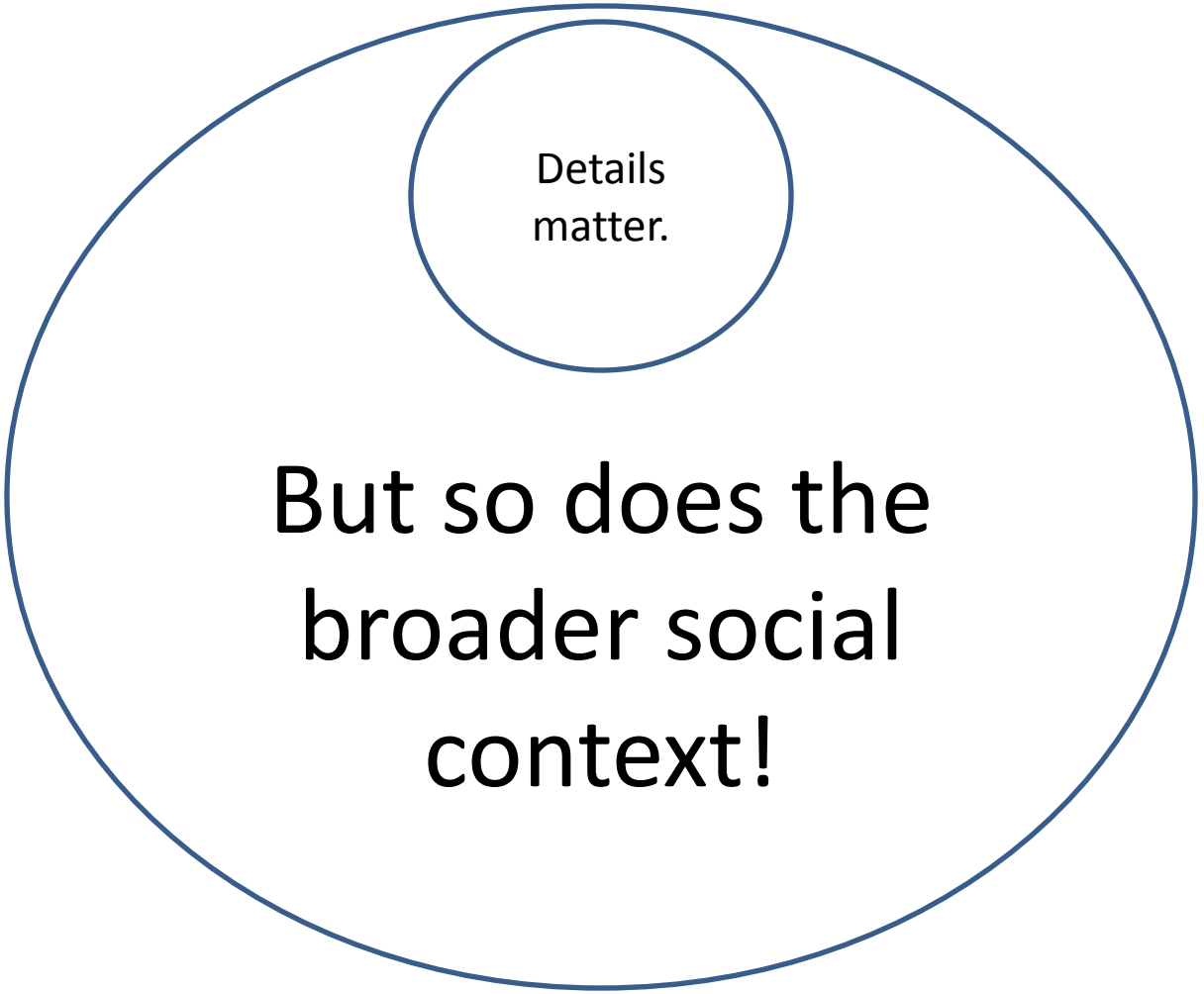
Speaking broadly

- Every US state has different law
  - Consisting of thousands of cases a year
    - Decided by hundreds of judges.
- Law evolves
  - And moves across state lines
    - Like cars.
- Since no change occurs in a vacuum
  - *Tomorrow's* vehicles
    - Will face (and shape) *tomorrow's* law.

Laws as rules and as tools



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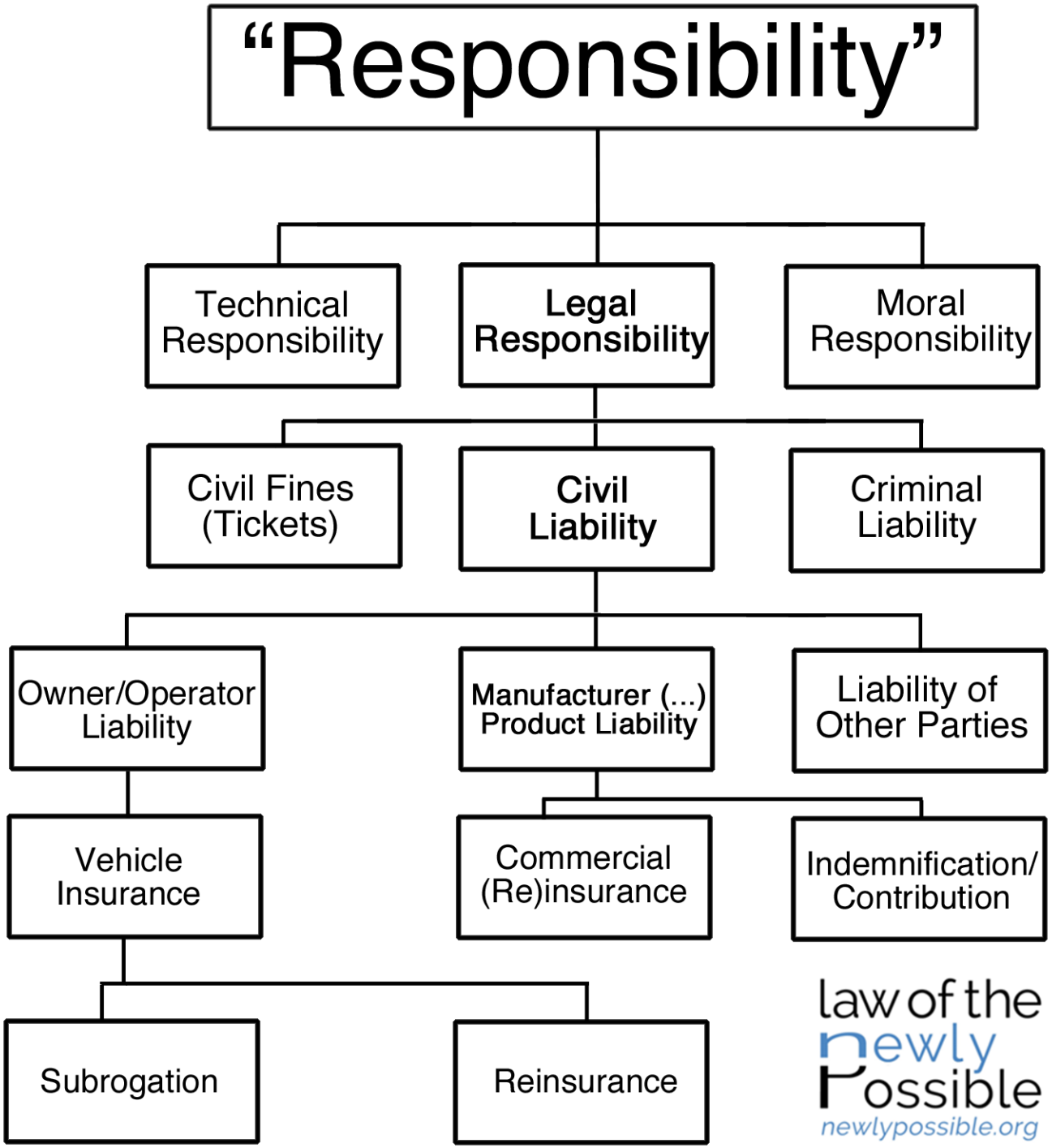
"Responsibility"
Technical Responsibility
Legal Responsibility
Moral Responsibility
Civil Fines (Tickets)
Civil Liability
Criminal Liability
Owner/Operator Liability
Manufacturer (...) Product Liability
Liability of Other Parties
Vehicle Insurance
Commercial (Re)insurance
Indemnification/ Contribution
Subrogation
Reinsurance
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~~"Who is liable…?"~~

- **Liability is not an either/or proposition!**
  - *Multiple actors can be sued or prosecuted*
  - *Multiple defendants can be found liable*
  - *Injured actors can also be at fault*

- **Every crash presents a unique set of facts**

Common theories of product liability

- It broke.
- It was a bad design.
- You didn't tell me how (not) to use it.
- You didn't say what could go wrong.
- You enabled someone's bad behavior.
- You misled me.
- You promised more than it delivered.

…and that hurt me.

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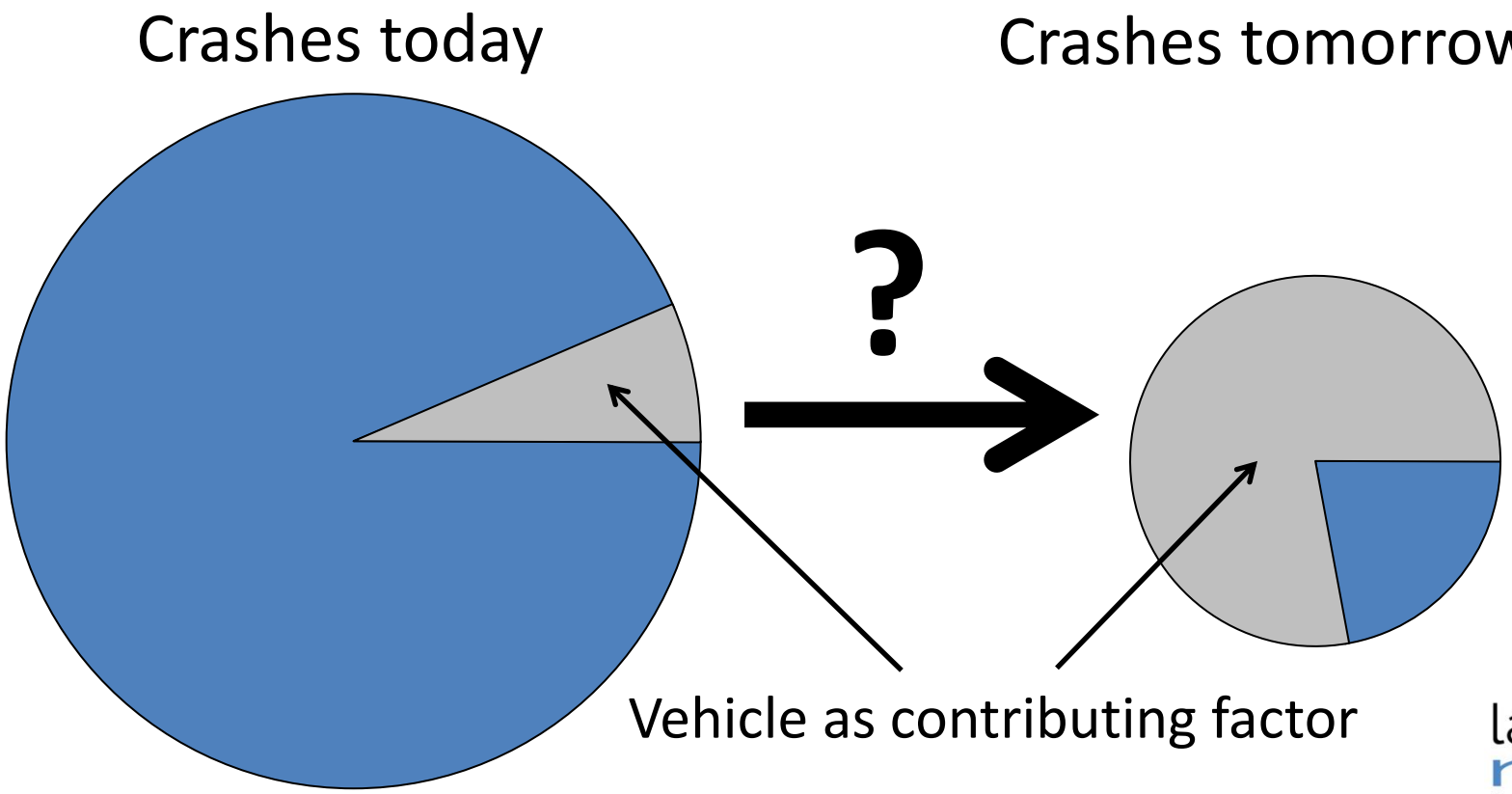
Key implications of automation

- Decisions shift from driver to designer
- Consumer expectations increase
- Economics of crash litigation change
- Companies get closer to their systems
- Data management becomes more complex

- Upshot: *Uncertainty!*

Decisions shift from driver to designer

Manufacturers likely to bear a
greater *share* of total crash costs



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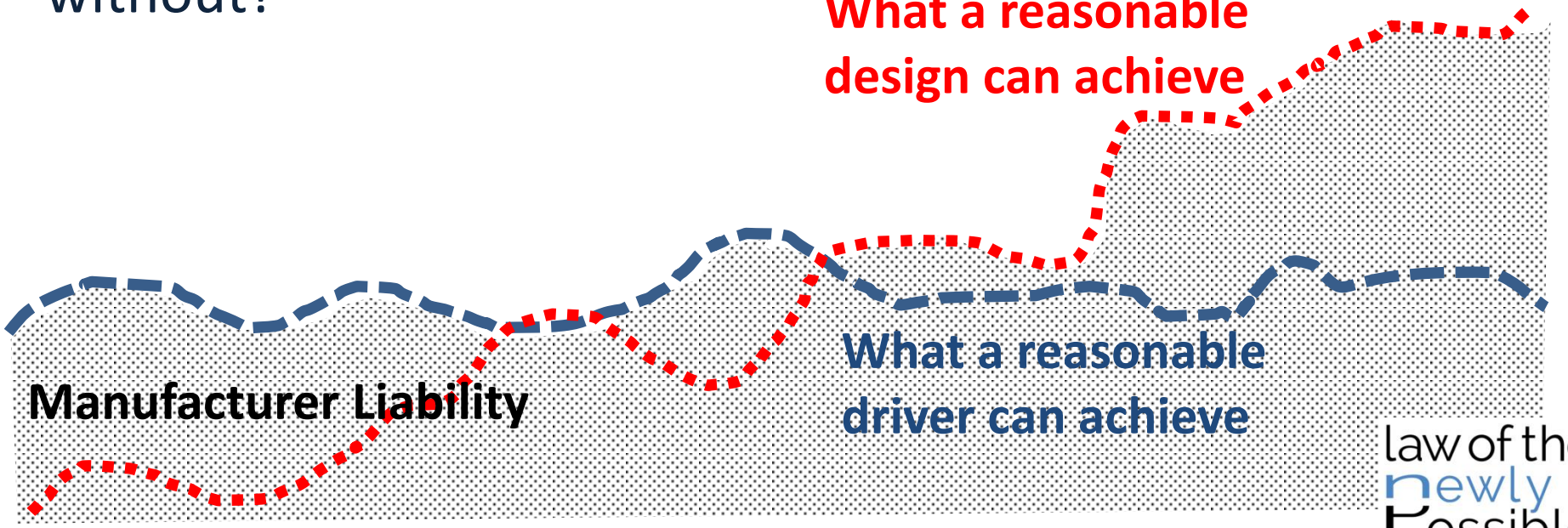
Was it a bad design?

- Did the automation system perform as a reasonable consumer would expect?
- OR: Could a reasonable change to the automation system have made the vehicle safer?
- *NOT:* Is the vehicle safer with the automation system than without?



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Consumer expectations increase

One view: "The driverless car goes everywhere, never crashes, and lets me sleep in the back."

If not:

- It was a bad design?
- You misled me?
- You promised more than it delivered?

Economics of crash litigation change

- Manufacturers may:
  - Face a slightly different rule of liability than drivers
  - Be less sympathetic than individual drivers
  - Have deeper pockets
    - Approximate value of a statistical life = $9,000,000
    - Min. vehicle insurance required in Mich. = $20,000
- Plaintiffs (and defendants) may face higher litigation costs

Companies get closer to their systems

- Increasing proximity
  - Remote monitoring
  - Over-the-air updates
  - Subscriptions/terms of use

- Increasing obligations?
  - It was a bad design (and you didn't fix it)
  - You didn't say what could go wrong (and you could have)
  - You enabled someone's bad behavior (and you could have stopped it)

- Not exclusive to automation!

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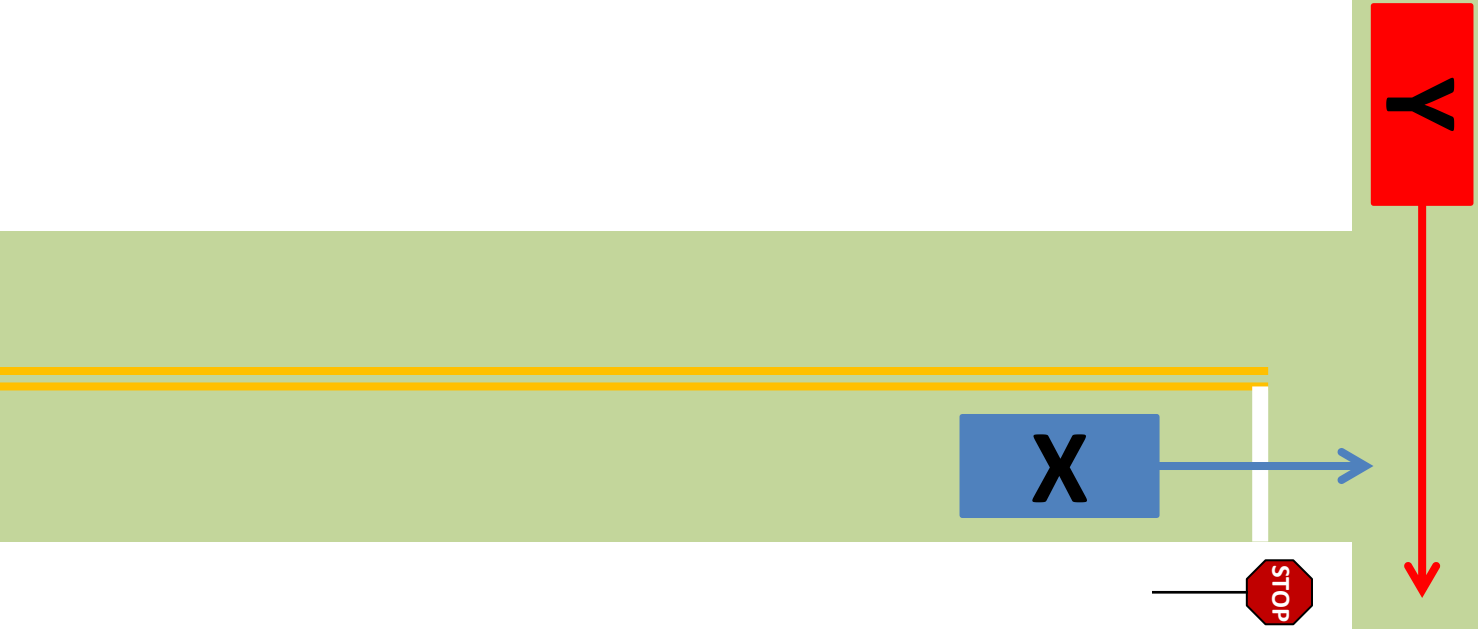
Data management becomes more complex

- Automation uses and produces information
- Parties *and nonparties* to a lawsuit may be required to produce relevant information
- "any designated documents or electronically stored information—including writings, drawings, graphs, charts, photographs, sound recordings, images, and other data or data compilations—stored in any medium from which information can be obtained…."

Crash example



Key implications

- Decisions shift from driver to designer
- Consumer expectations increase
- Economics of litigation change
- Companies get closer to their systems
- Data management becomes more complex

- Upshot: *Uncertainty!*

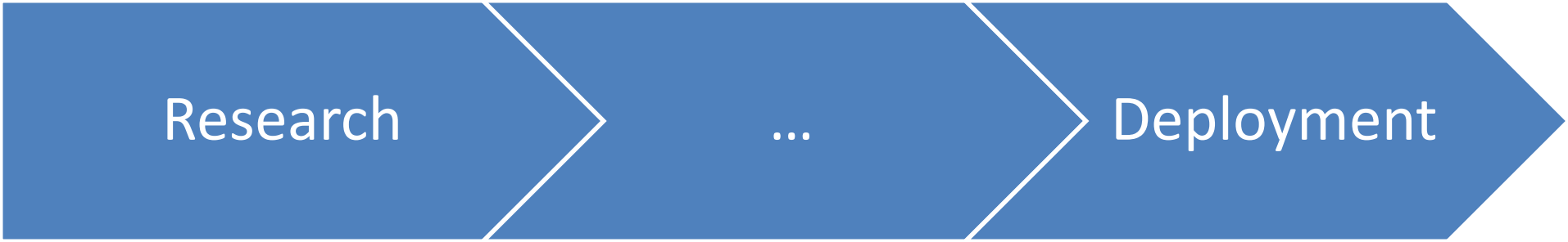
Upshot: Uncertainty!

- Automation may shift a greater share of total crash costs to automakers
- If these costs were predictable, they could simply be passed onto consumers (as happens today)

- BUT: Technical, legal, and reputational uncertainty makes predicting these costs difficult
- This uncertainty *may* lead to delays or higher prices

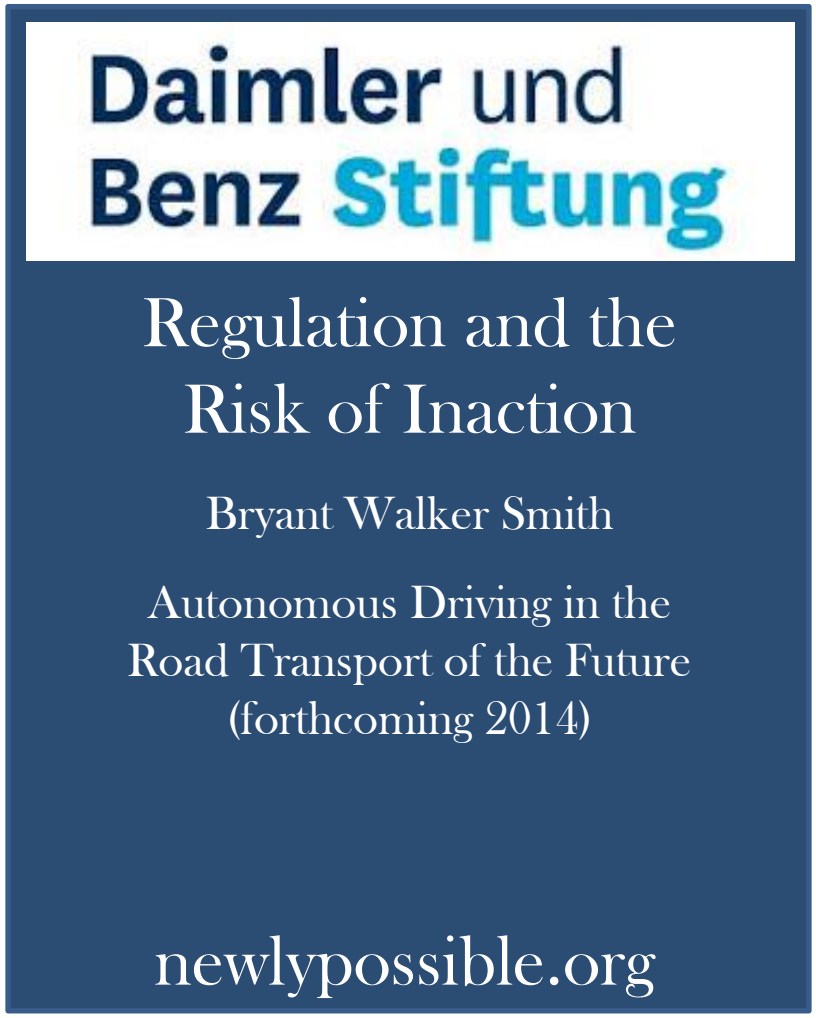
- **Nonetheless, uncertainty is common.**

Uncertainty is common



- Despite uncertainty, developers have introduced advanced driver assistance systems
- Despite uncertainty, developers are researching driving automation systems
- If uncertainty deters deployment of these systems, developers can demonstrate this

Managing this uncertainty



Public sector strategies

- Rationalize insurance
- Force information-sharing
- Support simplification
- Raise the playing field

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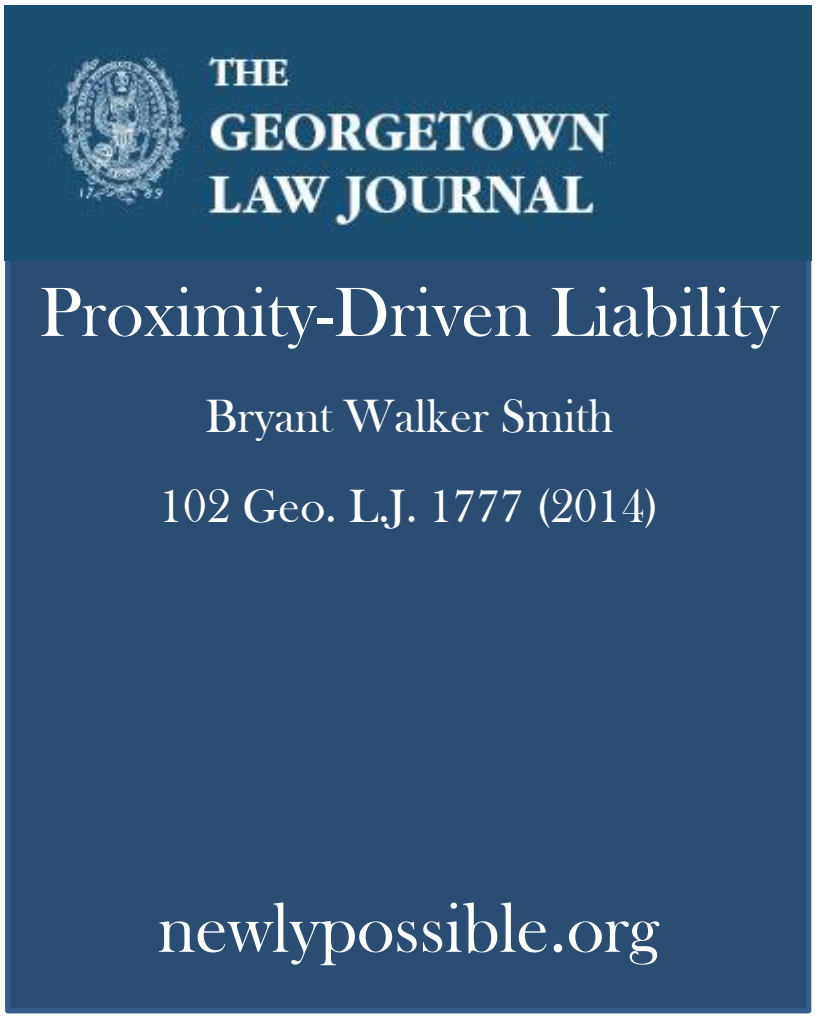
Managing this uncertainty



Private sector strategies

- Manage expectations
- Enforce private repose
- Manage risk dynamically
- Embrace service models

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Product liability *is* manageable

http://upload.wikimedia.org/wikipedia/commons/5/59/DHL-BX08KLD.jpg

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Additional Materials

1. *A Legal Perspective on Three Misconceptions in Vehicle Automation* addresses three key myths that pervade both popular and expert discussions
2. *Lawyers and Engineers Should Speak the Same Robot Language* identifies concepts and terms that are essential for coherent regulation
3. *Regulation and the Risk of Inaction* proposes public sector strategies for managing the risks of both automated and conventional vehicles
4. *Proximity-Driven Liability* argues that manufacturers will play an expanded role in ensuring the safe use of their vehicles
5. *Automated Vehicles Are Probably Legal in the United States* provides model statutory language to clarify the legal status of AVs
6. *Vehicle Automation Policy* (forthcoming) identifies strategies for states and municipalities to encourage deployment of automated vehicles
7. Various blog posts discuss other relevant issues

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