

Macroliability

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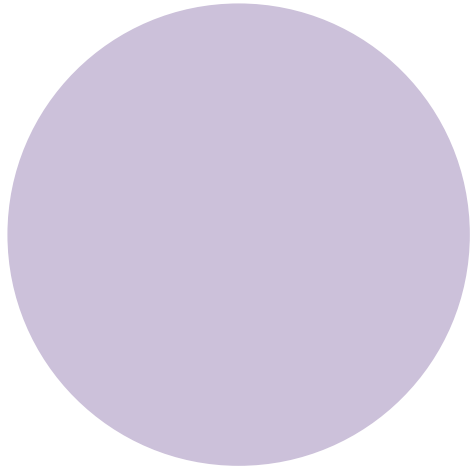
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Possible
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The charts that follow are not to scale.

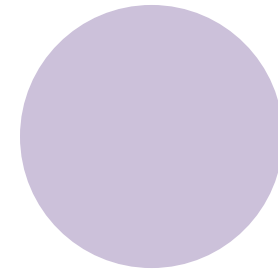


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Crashes without automation



Crashes with automation?

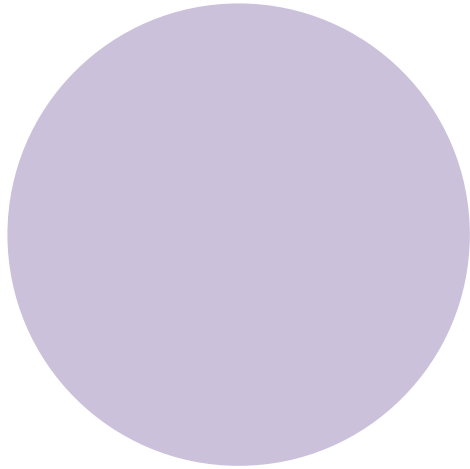


> 30,000 fatal crashes
1,600,000 injury crashes
5,500,000 police-reported crashes
11,000,000 total crashes (...)

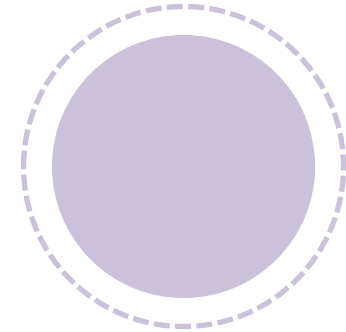
every year in the United States alone

This has yet to
be demonstrated
(notwithstanding frequent
claims to the contrary)

Crashes without automation



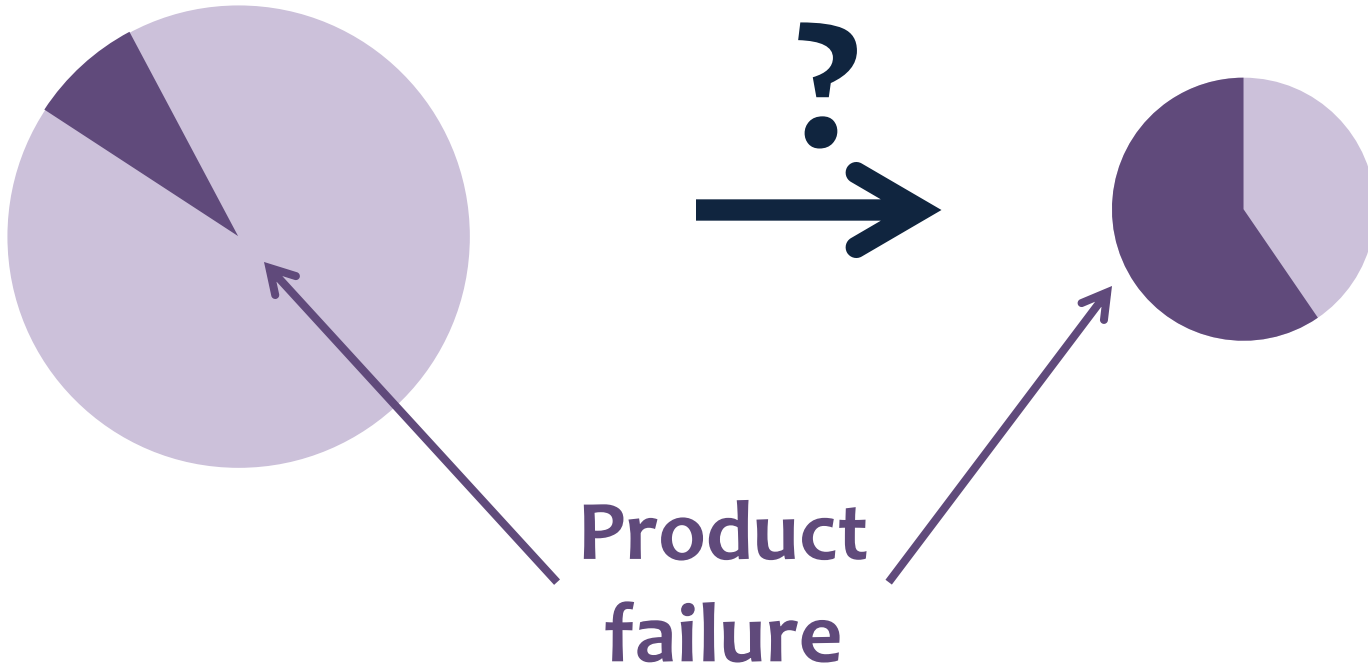
Crashes with automation?



(Increase in
vehicle miles
traveled?)

Crashes without automation

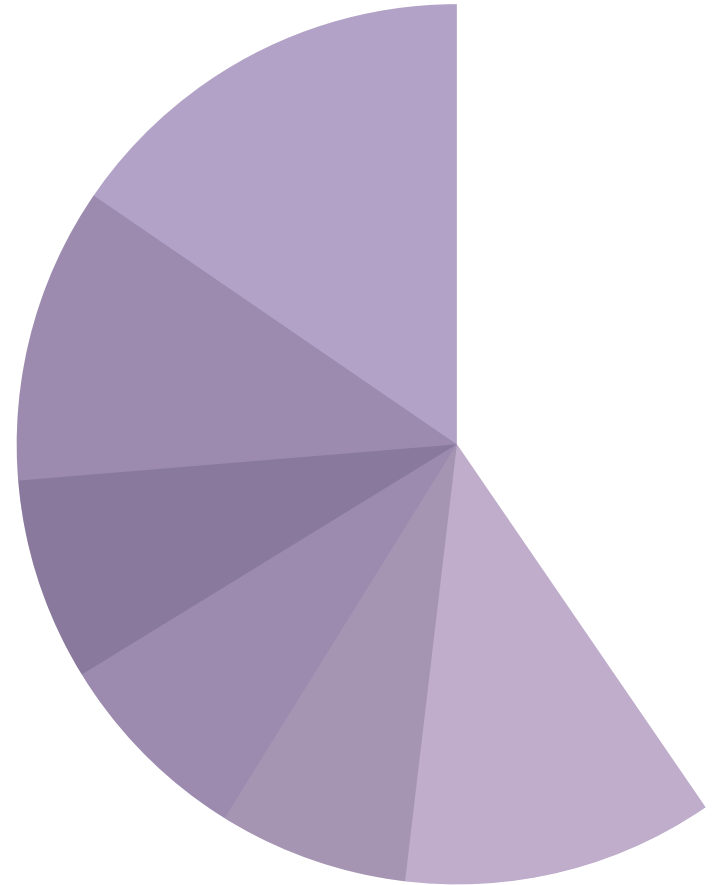
Crashes with automation?

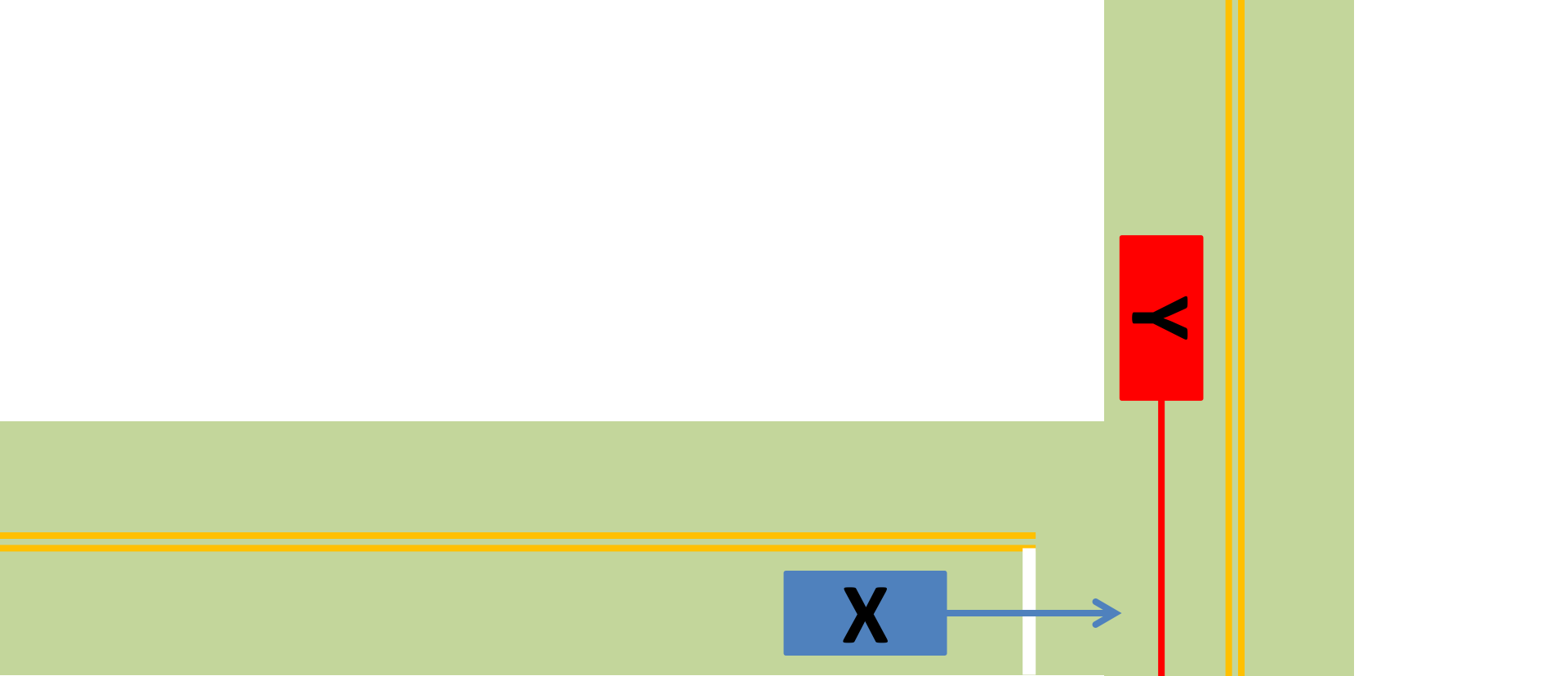


Crashes with automation: Some types of product failure

The automated driving system ...

- ... performed worse than a human
- ... performed worse than a better system
- ... interacted poorly with the user
- ... interacted poorly with other systems
- ... used bad data
- ... supplied bad data
- ... facilitated a security breach
- ... degraded ungracefully





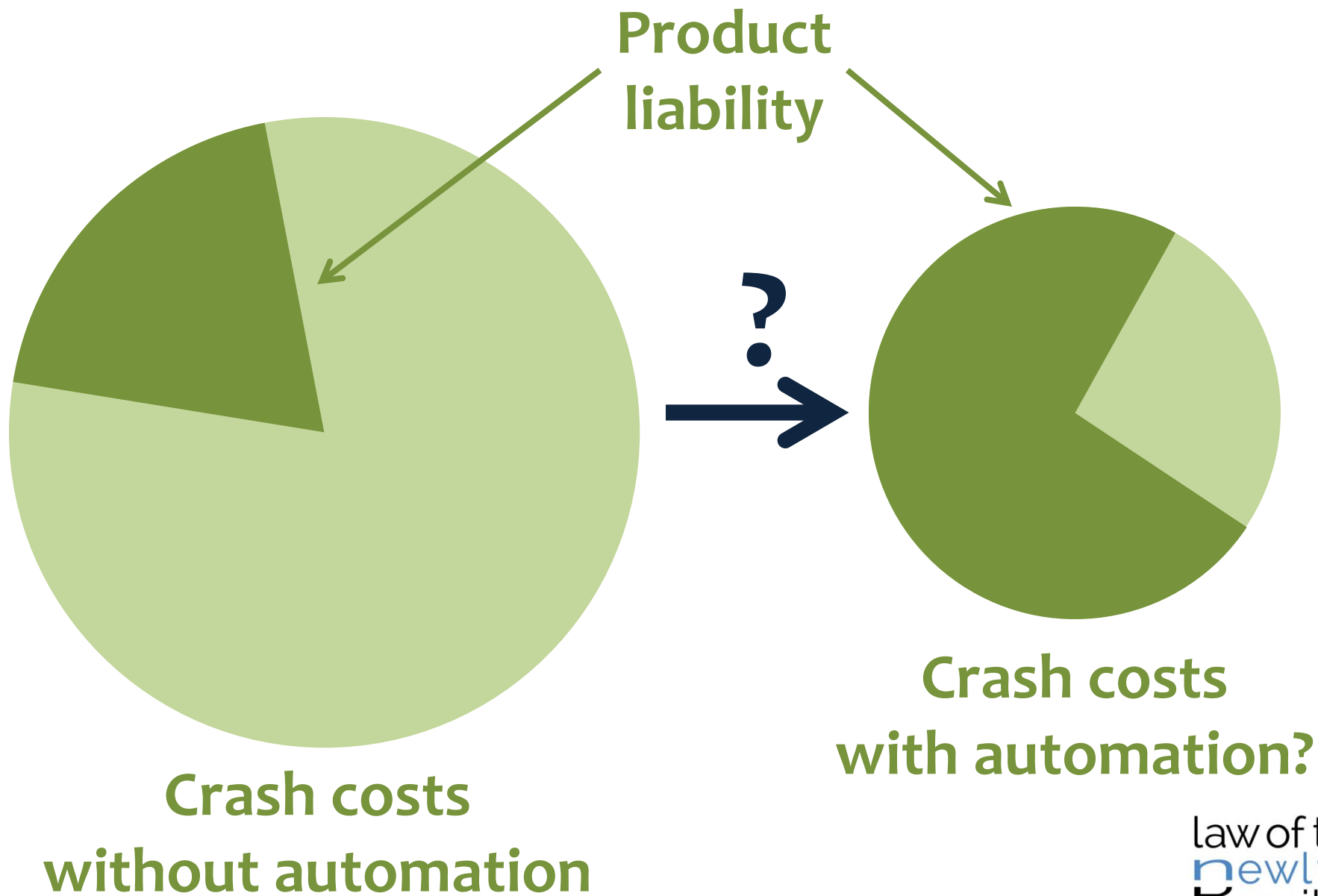
- X runs a stop sign, striking and injuring Y.
- X is likely liable to Y.
- If Y is in an automated vehicle, its manufacturer may also be liable to Y (if its vehicle could have anticipated and avoided the crash).

**\$1 trillion/year
(NHTSA)**

**Crash costs
without automation**

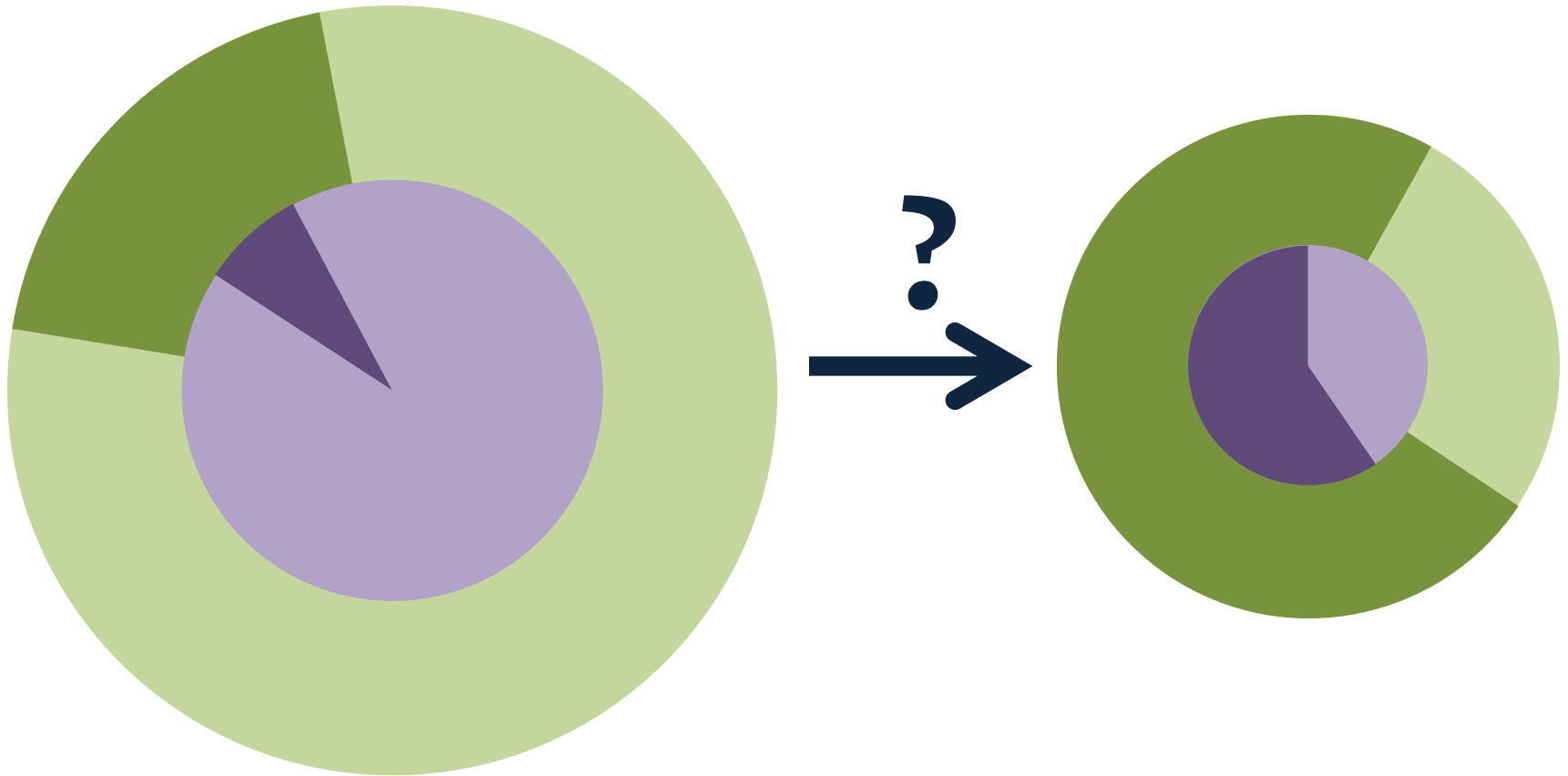


**Crash costs
with automation?**



Without automation

With automation?

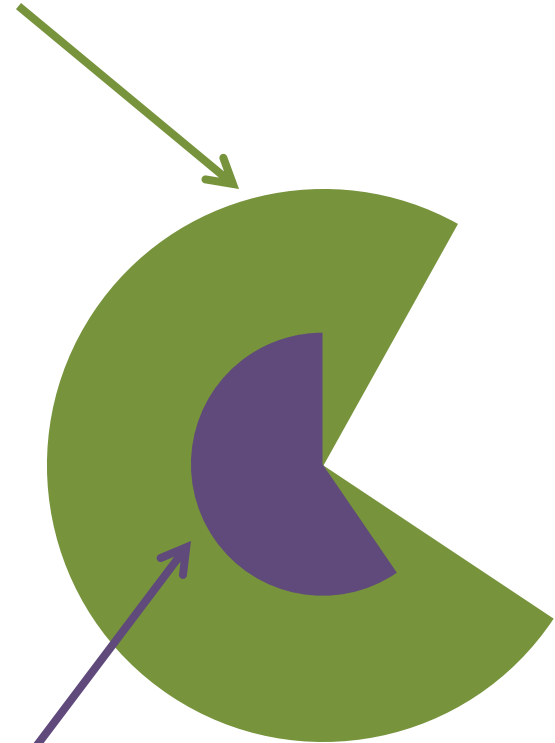


**Product
liability**

**Compared to individual drivers,
manufacturers ...**

- ... may face higher jury awards**
- ... may be more likely to be solvent**
- ... may pay more through J&S liability**

**Product
failure**



Product liability tomorrow



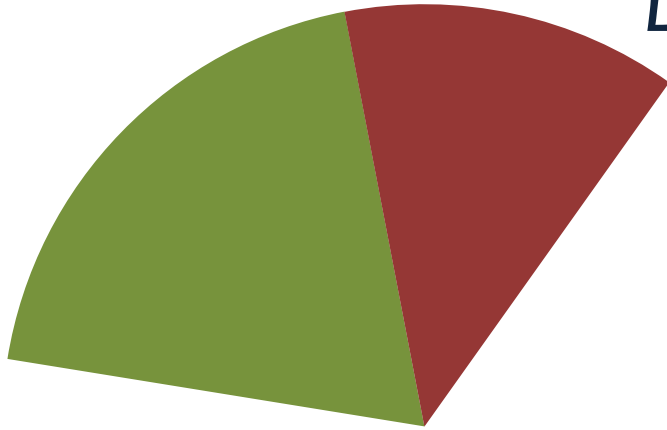
**Product liability
without automation**



**Product liability
with automation?**

Product liability tomorrow

*Lack of automation
as the defect*

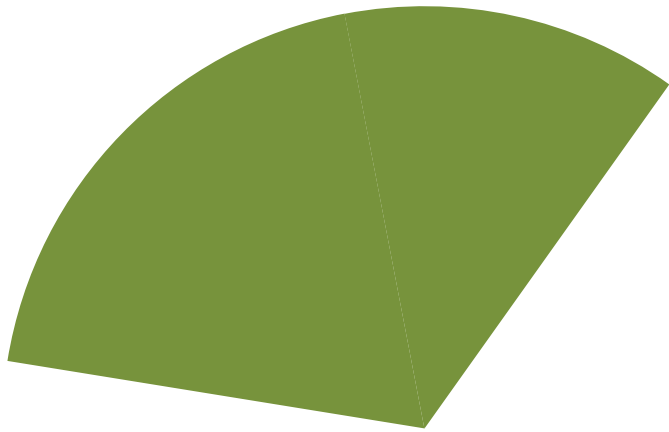


**Product liability
without automation**

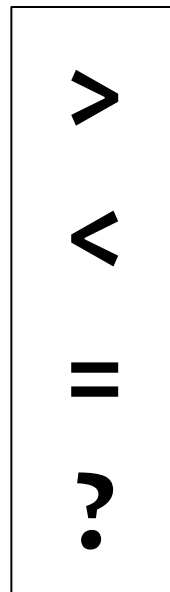


**Product liability
with automation?**

Product liability tomorrow: *A bigger slice of a smaller pie (of liability)?*



**Product liability
without automation**



**Product liability
with automation?**

Who cares?

- People who are injured in crashes
(*Compensation* rationale of product liability)
- People who could be injured in crashes
(*Safety* rationale of product liability)

Who might care?

Developers	Consumers	Society
Liability uncertainty?	Slower deployment?	Slower adoption?
Liability exposure?	Higher cost?	Slower adoption?

Is this testable?

“The prospect of liability for catastrophic accidents resulting from a failure of AVCS will **likely deter** entities from becoming involved with AVCS and **impede its development** unless the federal government adopts some or all of the legislative [limits on liability].”

*Advanced Vehicle Control Systems:
Potential Tort Liability for Developers
(prepared for FHWA in 1993)*

So what happened?

- 1993 report's recommendations were *not* adopted
- Automakers released many of the technologies
- Many companies investing heavily in R&D
- Several have “accepted” current liability regime

Others also “accept” liability



<https://upload.wikimedia.org/wikipedia/commons/5/59/DHL-BX08KLD.jpg>

What could *and should* happen?



THE
GEORGETOWN
LAW JOURNAL

Proximity-Driven Liability
102 Geo. L.J. 1777 (2014)



How Governments Can
Promote Automated Driving

Daimler und
Benz **Stiftung**

Regulation and the
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