

# Security Engineering Question Sheet 7: Lectures 13, 14 and 15

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Here are a set of questions to help you think through the topics covered in lectures 13 to 15, on Safety and Security, Assurance and Sustainability, and Governance and Regulation.

1. Would suitable standards be able to solve the safety usability problems in medical devices seen in lectures? What might hinder such an intervention?
2. *“Driverless cars are already safer than humans, and so we should accelerate their deployment even though they make mistakes.”* To what extent do you agree with this statement? To what extent does it depend on the context (time of day, road type, traffic, etc.)?
3. Self-driving technology has seen widespread deployment in aeroplanes. Why might that context have different requirements from self-driving cars?
4. How might Facebook’s *“real-name policy”* help or harm a domestic-abuse victim?
5. Which of the development methodologies discussed in the lectures (Waterfall, Spiral, and Agile) is likely to support the greatest assurance of safety / security, and why?
6. What factors lead to growth or reduction in the amount of *“technical debt”* in a project? Describe methods of reducing the amount of technical debt in a development cycle.
7. SSL/TLS, the protocol used in HTTPS, was proven secure in 1998 (<https://www.cl.cam.ac.uk/~lp15/papers/Auth/tls.pdf>). So why have we seen attacks on it almost every year since?
8. *“The government could and should do more to stop the monopolies in the tech world.”* To what extent do you agree?
9. To what extent is the scanning of images in private communications such as email for child sex abuse material a slippery slope that could lead to more aggressive surveillance? How effective is it likely to be in its goals?