

How to tell when a tech is *not* ready for government

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Usually, obviously, when the government's not ready for tech...

- But more seriously,
 - Techno-optimists oversell readiness, e.g.
 - Internet (1980) v. web (1992) v.
 - Broadband access (2000) smart phone(2007)
 - Use of internet for hospital booking reminders
 - Use of babylon systems for triage...2018
 - Wellbeing/fitness data from accelerometer?
 - NHS supply (e.g. Pharma/dressings) chains?
- And that was supposed to be ***fast*** 😊

Ancient History

- Internet-
 - E-mail – available/negotiable
 - payment/funds txfer (paypal – Musk #1)
- Web –
 - Transparency:
 - Publishing transport, energy, crime data
- Cloud
 - Affordable compute/analytics
 - Late to the game

With examples from dlt,ml/ai,iot

1. Distributed Ledger Technology
2. Machine learning (and ai)
3. Internet of Things

dlt

- Do not mix up cryptocurrency and blockchain
- Immutable record of transactions
 - But so is a database
- Smart contracts
 - But so was e-commerce
- Why not gov? 3 essential requirements:
 - Decentralised - nope
 - No single point of trust - nope
 - Long term persistent - maybe

Dlt #2

- Ask someone peddling blockchain:
 - What transaction rate do you support (read/write)?
 - What is the latency per transaction commit?
 - Where's your open source/spec repo?

ML (AI)

- Do not mix up ml & ai
- ml is just
 - better stats with
 - bigger faster compute/storage
 - Please use, more!
- Already used in much gov
- But what of AI
 - Anything that isn't explainable
 - How would gov use black boxes, ever, pray?

ML(AI)#2

- Ask an AI peddler:
 - What's your interpretability model?
 - How did you de-bias your training data?
 - Where are your reproducibility results?

IoT

- Do not mix up internet (of things) and smart X
 - For X=home, car, city
- Most IoT systems are silos
 - CCTV, smart meter, fitness monitor/actuator
 - For good reasons
 - not just privacy
 - **Safety** is paramount (car brakes, defibrillator etc)
- What would gov do: regulate safety, please...
 - E.g. Liability, if don't match MUDs.
 - Require data minimisation

IoT#2

- Ask the IoT dealer:
 - Where are your product liability statements?
 - What are the published APIs for me to integrate with other IoT products?
 - What are your software update/supprt plans 6-10 years for now for any current product?

Generic gov tech lessons

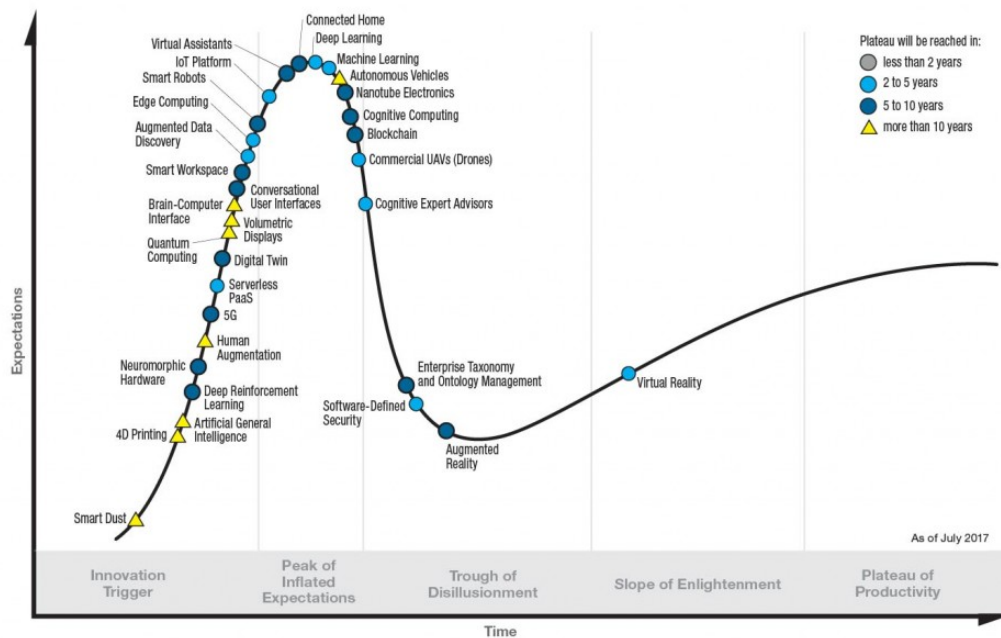
- Don't listen to academics
 - Massively too early
- Don't listen to industry
 - Massively too late
- Especially don't listen to consultants
 - Massively too expensive
- So who do you listen to?
 - All the above, with a pinch of salt.

QC&A

- Questions....?
 - Do not ask me about Quantum Computing
 - Ask the QC product vender:
 - What is the biggest number your device can reliably factorise?

Over hyped hype curve

Gartner **Hype Cycle** for Emerging Technologies, 2017



gartner.com/SmarterWithGartner

Source: Gartner (July 2017)
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