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

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Three Techs, Three aspects

1. Confusing New names for old things
2. Things older than you may think
3. New things slower than old

With 3 examples from dlt,ml,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 reprodicability 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, defibrilator 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 tech lessons

- Most tech is older than you think
  - Possibly even older than you are
- Beware of Mutton Dressed as Wolves
  - Or sheep in lamb's clothing
- Is it a Solution in search of a problem
  - Or are there fine boring pre-existing solutions
- If the new lamb appears slower than the old ram
  - It probably isn't just an engineering problem

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?
    - It probably isn’t just an engineering problem

Over hyped hype curve