Tech fixes for procurement problems?

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BA project overview

"Digital technologies and public procurement. Gatekeeping and experimentation in digital public governance"

Two interrelated parts:

- **Procurement of digital technologies**
- **Adoption of tech in procurement (or procurement digitalisation)**
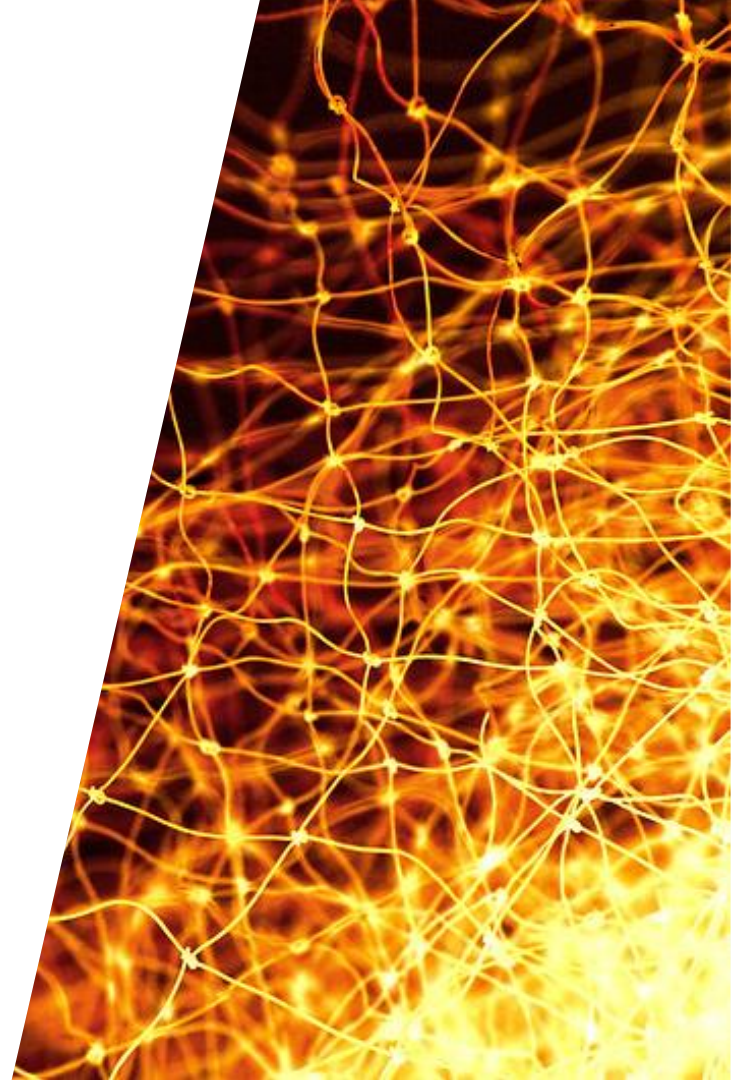
The British Academy

Goal

To present preliminary findings on procurement digitalisation

Focus on:

- **Tech 'policy irresistibility'**

- **'True' potential of tech in procurement**

- **Data and digital skills challenges**

- **Governance of tech risk-taking**

Tech 'policy irresistibility'

Procurement is an information-based activity (information intensity and complexity)

Digital technologies are in principle/theory suited to information-intensive activities

Hype and limited public sector capability can result in 'policy irresistibility'

This can lead to excessive experimentation and adoption with long-term impacts on (digital) public governance
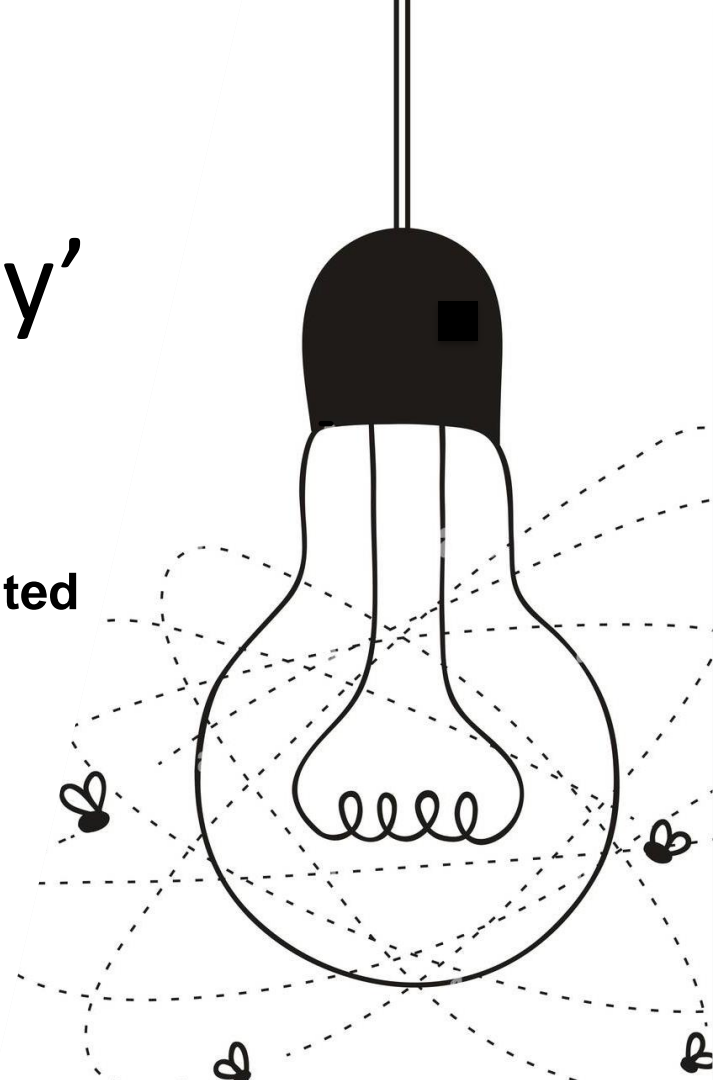
Realistic view on 'true' tech potential

We need to take a hard look at the enabling requirements and the realistic potential functionalities of the different digital technologies in the highly-regulated context of procurement governance

Focus on:

- **Robotic Process Automation**

- **Machine Learning**

- **Blockchain, Smart Contracts and Internet of Things**

RPA

The possibility to automate (parts of) the procurement process depends on being able to detail and code it

This excludes automation where discretion or open-ended criteria are concerned

Trade-off between automation and rigidity, so automation most likely for information gathering and cross-checks
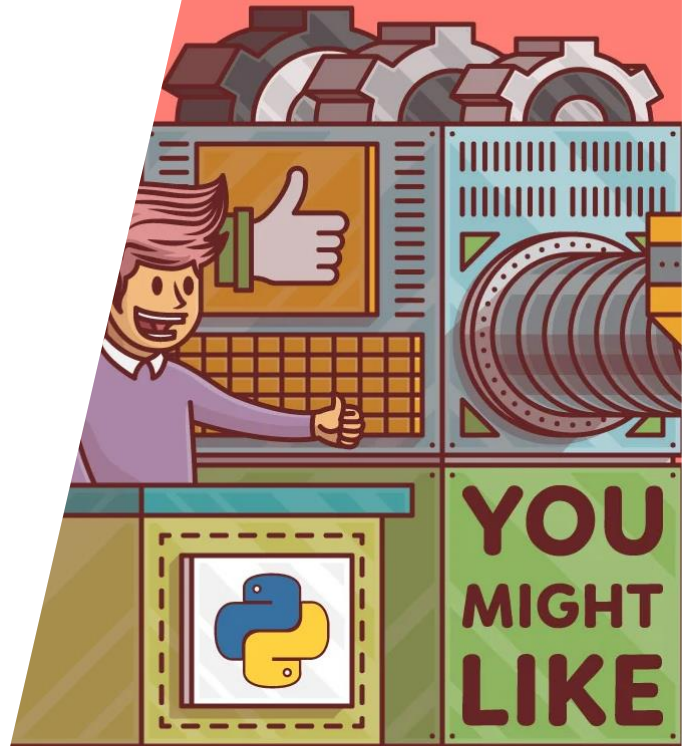
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ML

There are multiple ML potential applications, including 'smart' automation

Of particular interest:

- **Recommender systems**
  (collective filtering vs content analysis)

- **Chatbots**
  (FAQ closed-domain; expert systems)

- **Automated screens or red flags**
  ('intermediate' level; explainability)

- *Automated tender processing (robot-robot tendering)*

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Blockchain, Smart Contracts and IoT

Most governance advantages would result from decentralisation, but the public sector is extremely unlikely to adopt that type of (permissionless, public) blockchain

Smart contracts have limited potential other than as a form of (limited) information exchange automation

IoT oracles would enhance functionality in limited (off-chain) settings

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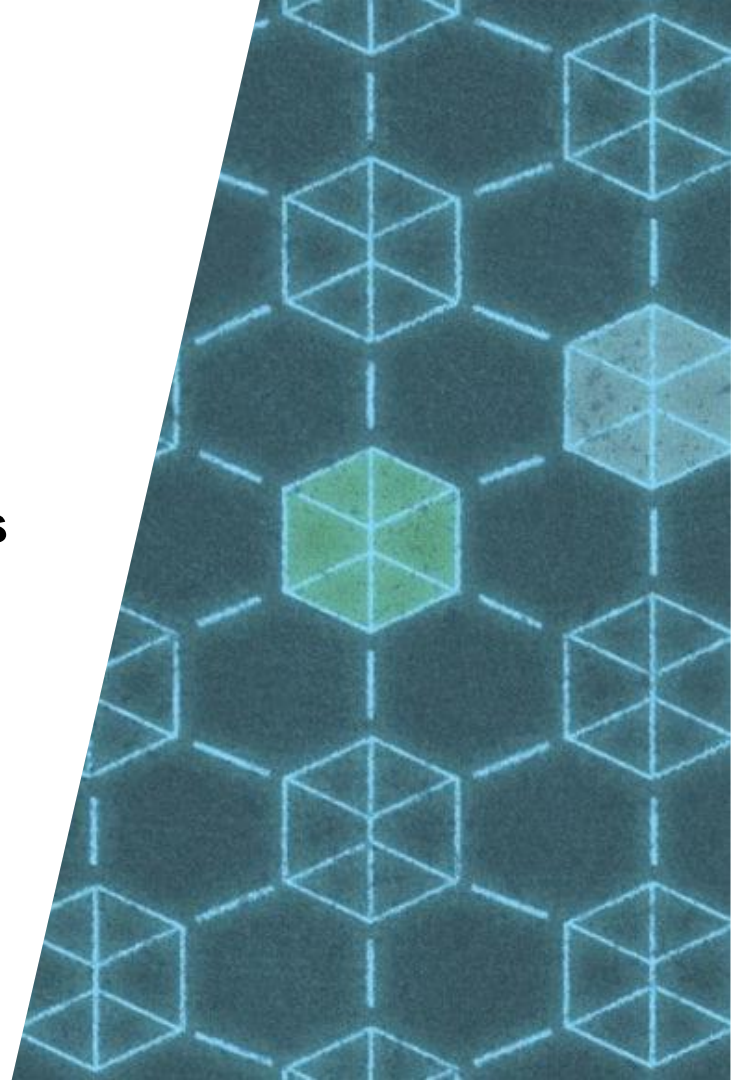
Tech feasibility boundary (plus: no data, no fun)

The potential functionality is much more limited that could have been expected, and primarily limited to information-intensive aspects of procurement, but not to those related to information complexity

Crucially, all technologies are data-dependent

Limited advances in (open) big data generation are single biggest constraint

'New' governance risks & challenges

In addition to the 'traditional' procurement governance challenges, and 'tech-supported' forms of new challenges (eg algorithmic corruption or collusion), there are new governance implications for the rollout of procurement digitalisation:

- Data challenges
- Algorithmic and technological challenges
- Systemic challenges (eg cyber security)
- Digital skills challenges

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Data challenges

Data capture (at source)

Data curation

Data governance

- **Increasing set of obligations, even for 'tech-passive' public buyers**

- **'Open by default' a no-go in some jurisdictions (eg EU)**

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Digital skills challenges

There is a growing gap in the public sector's digital capability

This is a meta-risk because it compounds other risks (-> unknown unknowns)

Short-term fixes to boost capability generate further long-term capability erosion plus additional governance challenges (eg organisational conflicts of interest)

Increasing awareness of the issue, but significant practical difficulties to sorting it

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Tech risk-taking in procurement digitalisation

So far, mostly unregulated

Limited guidance and emerging model based on self-regulation and *undefined* self-assessment, ultimately generating suboptimal 'second party' assurance

Need for external oversight ('third party') —my proposal is for institutionalised oversight ('AIPSA' / EU AI Office)

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Policy implications

Facilitating procurement digitalisation requires:

- Accelerating the implementation of a single state-of-the-art data standard
- Establishing a robust multi-tiered information management system
- Investing in in-house digital capability and reducing dependency on outsourcing
- Establishing a robust process of technological scrutiny of new tech projects
- Clarifying the regulatory framework and generating meaningful minimum impact assessment requirements—which in my view need to be subjected to external approval

Resources

https://www.howtocrackanut.com/digital-procurement-governance

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Thank you for your attention & stay in touch
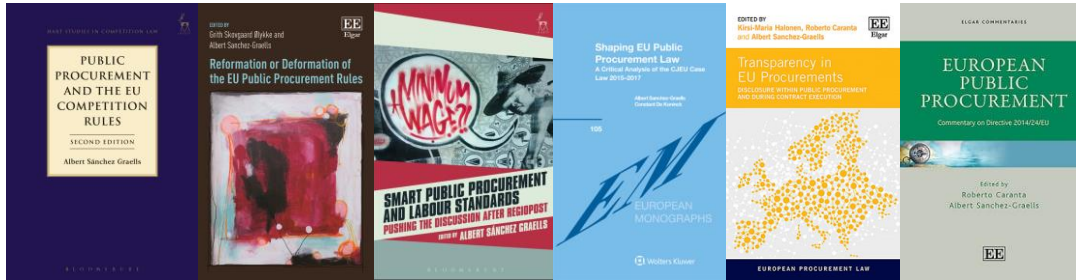
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