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## Could the Blockchain End Bureaucracy?

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***Alexander Hitchcock is a researcher at Reform, a UK-based think tank where he has authored reports on healthcare, welfare and public procurement.***

*In this opinion piece, Hitchcock discusses how blockchain technology could be used to fight bureaucracy by enabling governments to make strategic cuts in their workforces.*

Bureaucracy, Ludwig von Mises [explained](#) in 1944, is “always applied with an opprobrious connotation”, and such connotations – that it is time-consuming, frustrating and costly – have stood the test of time.

If you wanted to ask a question about a self-assessment tax return in October, you’d have been waiting [47 minutes](#) to do it. In 2014-15, the public-sector wage bill was [£150bn](#).

New thinking can change this, however.

Blockchain – a distributed public ledger capable of recording transactions securely ([explained here](#)) – is a key means. Businesses are proselytizing the technology as able to remove back-office functions that eat into profit margins. Banks [believe](#) they can cut \$20bn from running costs. Government must likewise see it as a way to dramatically improve efficiency.

The UK Government has been making positive noises this year. In January, the Government’s chief scientific adviser [published](#) ‘Distributed Ledger Technology: Beyond Blockchain’, setting out a number of possible applications of the software concept.

In April, Cabinet Office Minister Matthew Hancock, explained that blockchain is being explored as a way to [streamline](#) the distribution of government grants and track aid spending to ensure it is spent correctly. The last Government [wanted](#) “blockchain brainstorming” to explore further options.

One overlooked application is in replacing administrative work in the civil service. This alone accounted for 170,000 staff at a cost of £3.25bn in 2014-15 (see graph).

Blockchain can replace some of these functions by recording transactions.

Governments across the globe have begun

experimenting with using the software to record property ownership. This is administratively light as it is automatically documented by the blockchain and it skips the current need for people to use central registers to access information.

The Government could use this approach to more efficiently spend Land Registry's £13m annual staffing [bill](#). Sweden [believes](#) this can be done while cutting the time it takes to complete real estate deals.

The real win, however, comes from streamlining the running of the biggest departments, which are most heavily weighted toward administration.

This can be done through the use of '[smart contracts](#)' on blockchain.

These contracts automatically carry out certain functions if pre-defined conditions have been met. Businesses could, for example, set-up real-time tax payments when they receive income – and automatically receive rebates where appropriate. Similarly individuals could set up automatic self-assessment returns, skipping the need to interact with HMRC officials.

Elsewhere, the Department for Work and Pensions could automatically pay and update social security in reaction to working status – a clear compliment to Universal Credit, which pays benefits dynamically, based, in part, on working hours.

Moving responsibility for paying taxes and distributing benefits onto the blockchain can allow these departments to reduce human administration. HMRC has an aim to become "diamond-shaped", which entails the cutting of over 14,000 jobs, assuming numbers of staff at other levels remain constant. This alone would reduce staff costs by £275m.

In 2015, DWP officials [mooted](#) reducing employee numbers by 30,000 – or 36%. Replacing 36% of officials would save £290m in staff costs – although in all likelihood the axe would fall more heavily on administrative jobs because of their potential automation.

These are ambitious aims. The history of labour-force change in the private sector [reveals](#) that for every lower-skilled job that is automated, as many as four are created.

Today's frugal public sector may stop such expansion.

But to understand blockchain's effects, government should follow the advice of its chief scientific adviser in distributed ledger technology and begin piloting its use. Only then might bureaucracy finally be consigned to the scrapheap of history.

*This article originally appeared on Reform's website and has been [republished](#) here with the author's permission.*

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