

# Fit-For-Future Land Administration: Unlocking the Benefits of Sustainable, Cost-Effective Technologies

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## SUMMARY

Increasingly, effective Land Administration is considered a crucial enabler of global development goals. In their “Declaration on Fit-for-Purpose Land Administration,” the FIG & World Bank argue that security of tenure is an essential component that will underlie delivery of the SDGs as well as progress on other issues of global concern (e.g. global warming and rapid urbanisation). The authors of the report argue that significant improvements are possible “whether organised through advanced information systems or established through more basic fit-for-purpose approaches”. This paper argues, that no such distinction need be made: that advances in technology and systems architecture will lead to cost-effective Land Administration solutions that are fit-for-purpose today and sustainable well into the future. However, to unlock financial benefits, policy-makers must 1) ensure that long-term viability underpins implementation and 2) focus beyond infrastructure to the wider systems that support it.

Modern system architectures will enable jurisdictions to rely on secure ICT solutions that fit within budgets and adapt to meet future needs – a critical consideration since highly rigid systems may face burdensome post-implementation costs as usage increases or change is required. Here, Land Administration will benefit from the adoption of best-practices emerged to support web-scale technologies, such as Netflix, Facebook, and Uber.

Database technologies and systems architectures, based on those global platforms will reduce implementation timescales and costs. NoSQL databases and microservice architectures, for example, have been proven in web-scale social media and can offer improved performance, resilience, and simpler scalability. In addition, such platforms will be highly configurable and capable of responding swiftly to social, legislative, or other environmental

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changes.

A common approach to implementing Land Administration systems is to develop bespoke solutions to be maintained by in-country personnel: this style of “Big Bang” execution is often unsustainable for two primary reasons. First, a fully bespoke solution may be architecturally rigid and difficult to hand-over in such a way that managers are genuinely capable of developing (as opposed to simply maintaining) the system over time. This is exacerbated by the second reason: local experts move on and knowledge may be lost.

Advances in non-relational databases, systems architecture, and blockchain technologies will mark an important shift in the design of cost-effective and sustainable Land Administration solutions. Nations must take the time to create implementation plans and environments – especially the legal frameworks and human capacities – that fully exploit potential benefits to deliver maximum economic and social good.

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