

**Panel**

**Blockchain applications in government**

Carter, Lemuria; Ubacht, Jolien

**DOI**

[10.1145/3209281.3209329](https://doi.org/10.1145/3209281.3209329)

**Publication date**

2018

**Document Version**

Final published version

**Published in**

Proceedings of the 19th Annual International Conference on Digital Government Research

**Citation (APA)**

Carter, L., & Ubacht, J. (2018). Panel: Blockchain applications in government. In C. C. Hinnant, & A. Zuiderwijk (Eds.), *Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age, DG.O 2018* Article a126 Association for Computing Machinery (ACM). <https://doi.org/10.1145/3209281.3209329>

**Important note**

To cite this publication, please use the final published version (if applicable).  
Please check the document version above.

**Copyright**

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

**Takedown policy**

Please contact us and provide details if you believe this document breaches copyrights.  
We will remove access to the work immediately and investigate your claim.

# Panel: Blockchain Applications in Government

Lemuria Carter  
Virginia Tech  
USA

Jolien Ubacht  
Delft University of Technology  
Netherlands

## ABSTRACT

In the past few years, researchers and practitioners have highlighted the potential of Blockchain (BC) and distributed ledger technology to revolutionize government processes. Blockchain technology enables distributed power and embedded security. As such, Blockchain is regarded as an innovative, general purpose technology, offering new ways of organization in many domains, including e-government for transactions and information exchange. However, due to its very characteristics of peer to peer information exchange, its distributed nature, the still developing technology, the involvement of new actors, roles, etc., the implementation of blockchain applications raise issues that need governance attention. BC initiatives have implications for citizen trust, privacy, inclusion and participation. Governmental organizations need a thorough understanding of the BC design principles, the possible applications in the domain of e-government and the exploration of governance mechanisms to deal with the limitations and challenges of the BC technology when used in a myriad of sectors, ranging from the financial and business sector to the social domains of healthcare and education. In this panel we explore the impact of block chain technology on all levels of government and create an awareness of effects or applications in society that raise governance issues.

## CSS CONCEPTS

• **Applied computing** -> E-government;

## KEYWORDS

Blockchain, Blockchain applications, Smart Contracts, Distributed Ledger, Distributed Computing, Peer-to-peer Information Exchange

## ACM Reference Format

L. Carter, J. Ubacht 2018. *Panel: Blockchain Applications in Government*. In Proceedings of 19th Annual International Conference on Digital Government Research (dg.o'18), Anneke Zuiderwijk and Charles C. Hinnant (Eds.). ACM, New York, NY, USA, 2 pages.

## 1 INTRODUCTION

Blockchain as a technology is covered widely in academic research, so is the actual application of blockchain technology for cryptocurrencies such as bitcoin. However, the actual use of blockchain based applications in governmental processes is rather uncovered in academic publications as of yet. One of the underlying reasons for this

---

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the Owner/Author.

dg.o'18, May 30-June 1, 2018, Delft, Netherlands

© 2018 Copyright is held by the owner/author(s).

ACM ISBN 978-1-4503-6526-0/18/05.

<https://doi.org/10.1145/3209281.3209329>

shortage in academic coverage is the opaqueness of the technology itself and the limited number of case studies that shows its potential to revolutionize the ways in which it can be applied for more efficient, transparent and secure public processes. Blockchain applications can be used for simple or more complex transactions in government to business and to citizen processes. Smart contracts can be developed to execute these processes automatically [1]. However, critical assessments of the added value of using blockchain technologies for e-government and discussions on its consequences show that blockchain is not a panacea for combatting fraud, corruption, inefficiencies etc. On the contrary, some scholars argue that blockchain is hyped and they question whether blockchain functionalities surpass that of conventional distributed databases. Also the embeddedness in existing institutional frameworks is questioned [2].

## 2 PANEL DESCRIPTION

In this panel we start with an introduction into the basics of blockchain technology, its potential for government and why it matters. To show its usefulness we present case studies of blockchain applications in e-government and other domains. In addition, we look closer into the benefits and implications of this distributed ledger technology for information sharing. Subsequently, by means of a panel discussion and input from the audience we will critically assess the potential of blockchain applications for e-government processes. This panel intends to give space for a more in-depth discussion and is complementary to the track on Blockchain and Transformational Government which is chaired by Sven Ølnes, Lemuria Carter, Jolien Ubacht, and Ramzi El-Haddadeh.

## 3 PANEL FORMAT

The invited speakers will present an introduction to the panel theme from their perspective. The first introductory presentation on blockchain technology will be about 20 minutes, followed by shorter presentations by the other invited speakers (10 minutes). A moderated discussion with the speakers will follow (possibly based on propositions) (15 minutes). The audience is explicitly invited to join this discussion or ask questions to the speakers.

## 4 SPEAKERS

**David Allesie MSc**, Gartner Consulting., Associate Consultant, david.allesie@gartner.com

**Prof.dr.ir. Marijn Janssen**, Full Professor in ICT & Governance, Delft University of Technology, m.f.w.h.a.janssen@tudelft.nl

**Richard Morris**, State of Illinois, Blockchain Strategy Lead, richard.morris@illinois.gov

## REFERENCES

- [1] Svein Ølnes, Jolien Ubacht, and Marijn Janssen. 2017. Blockchain in government: Benefits and implications of distributed ledger technology for information sharing. *Government Information Quarterly* xxxx (2017), 1–10. DOI: <http://dx.doi.org/10.1016/j.giq.2017.09.007>
- [2] Clare Sullivan and Eric Burger. 2017. E-residency and blockchain. *Computer Law & Security Review* 33, 4 (2017), 470–481. DOI: <http://dx.doi.org/10.1016/j.clsr.2017.03.016>