

Official Statistics at the Crossroads:

Data Quality and Access in an Era of Heightened Privacy Risk

A JSM Invited Panel, sponsored by the Government Statistics Section, the Committee on National Statistics, and the Committee on Professional Ethics

Chair/Organizer: Michael Hawes (U.S. Census Bureau)

Panelists: John Abowd (U.S. Census Bureau)
Rochelle (Shelly) Martinez (Office of Management and Budget)
Michael Davern (NORC at the University of Chicago)
Constance (Connie) Citro (Committee on National Statistics)

Joint Statistical Meetings
Denver, CO
July 30, 2019

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The lay of the land

“It is the responsibility of Federal statistical agencies and recognized statistical units to produce and disseminate relevant and timely information; conduct credible, accurate, and objective statistical activities; and protect the trust of information providers by ensuring confidentiality and exclusive statistical use of their responses” -OMB Statistical Policy Directive No.1



Any opinions and viewpoints expressed in this presentation are the speaker's own, and do not necessarily represent the opinions or viewpoints of the U.S. Census Bureau.

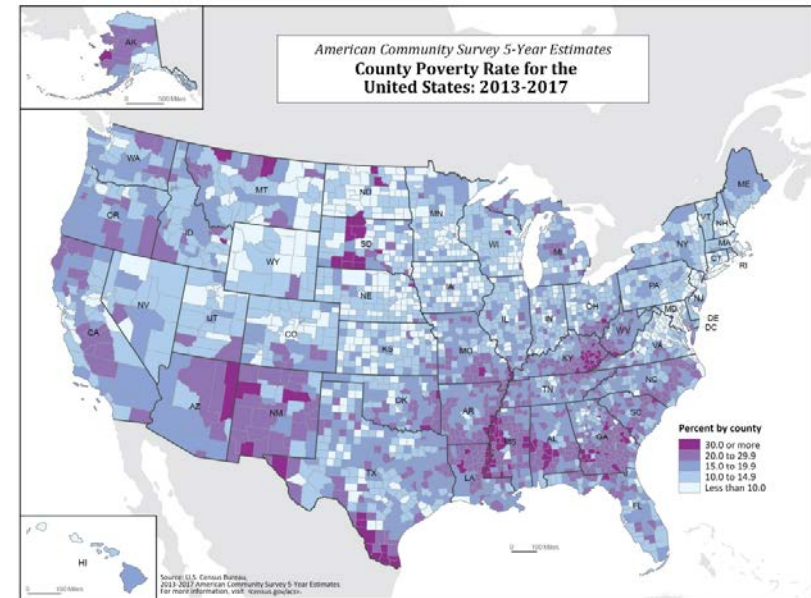
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The Emerging Privacy Challenge

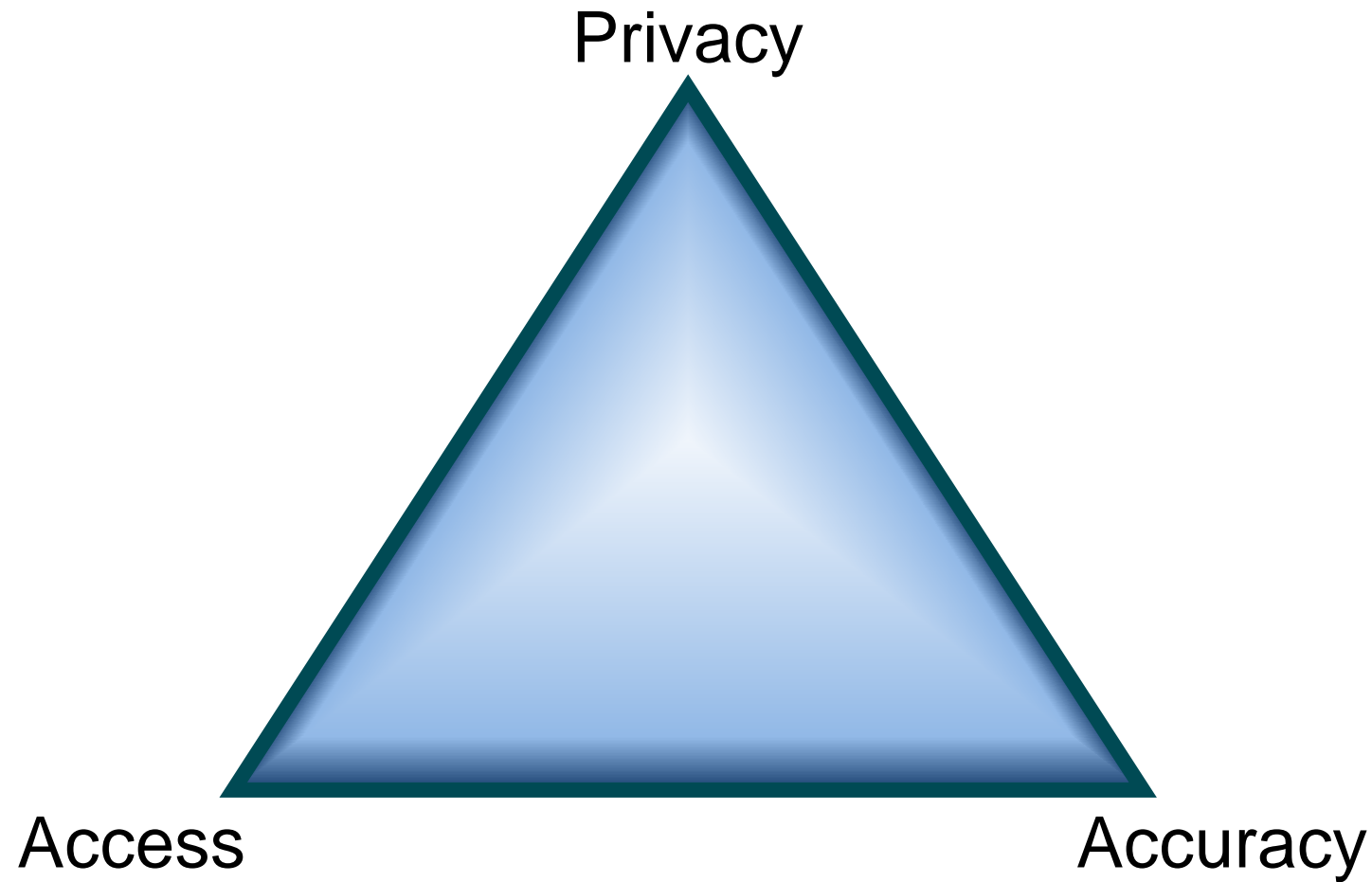
The Database Reconstruction Theorem

Publishing too many statistics from a confidential database, at too high a degree of accuracy, will expose the entire confidential database with near certainty. [Dinur and Nissim \(2003\)](#)



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POPULATION SCHEDULE

The “Trilemma of Official Statistics”

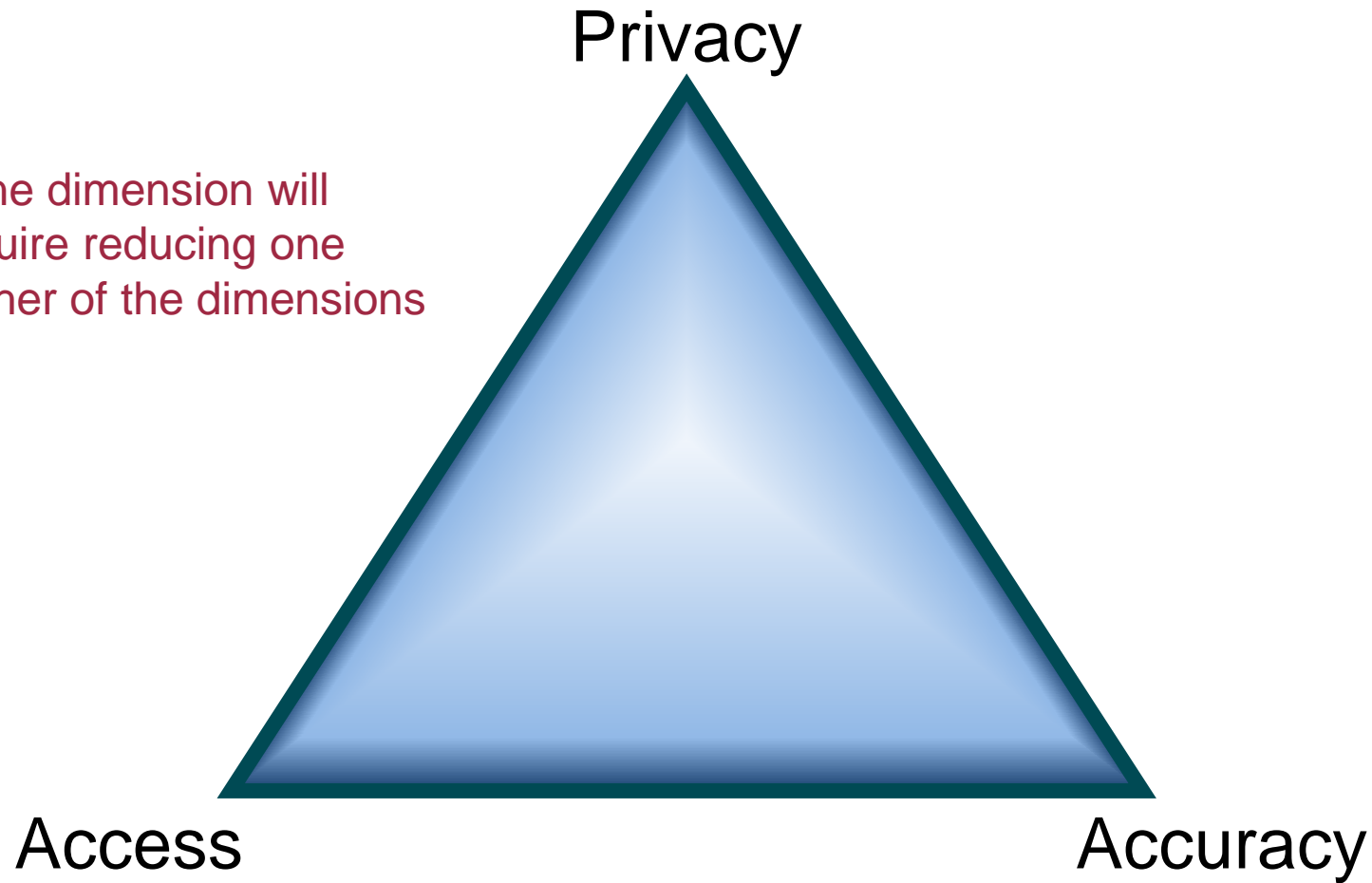


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The “Trilemma of Official Statistics”

Increasing one dimension will typically* require reducing one and/or the other of the dimensions

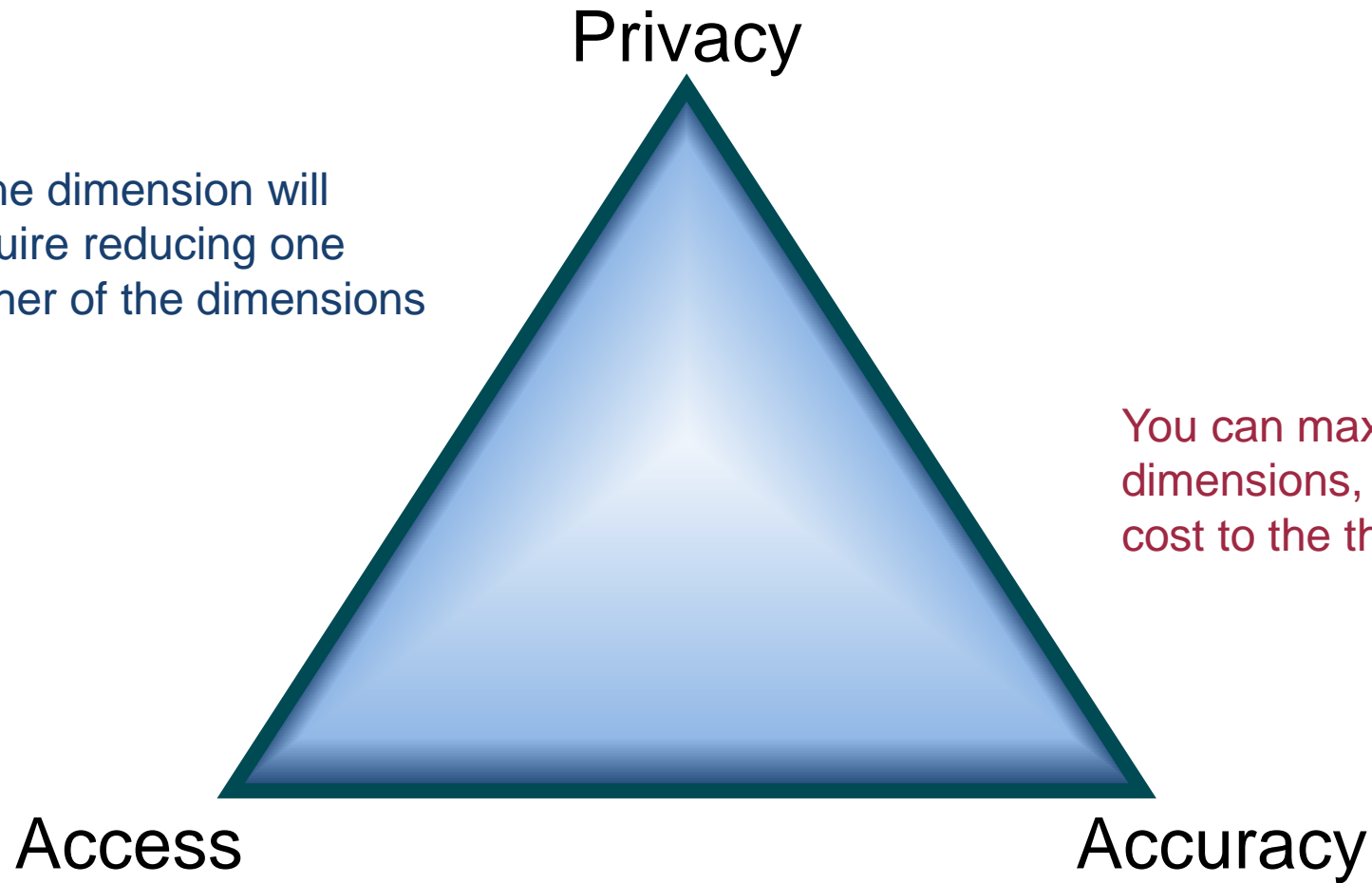


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The “Trilemma of Official Statistics”

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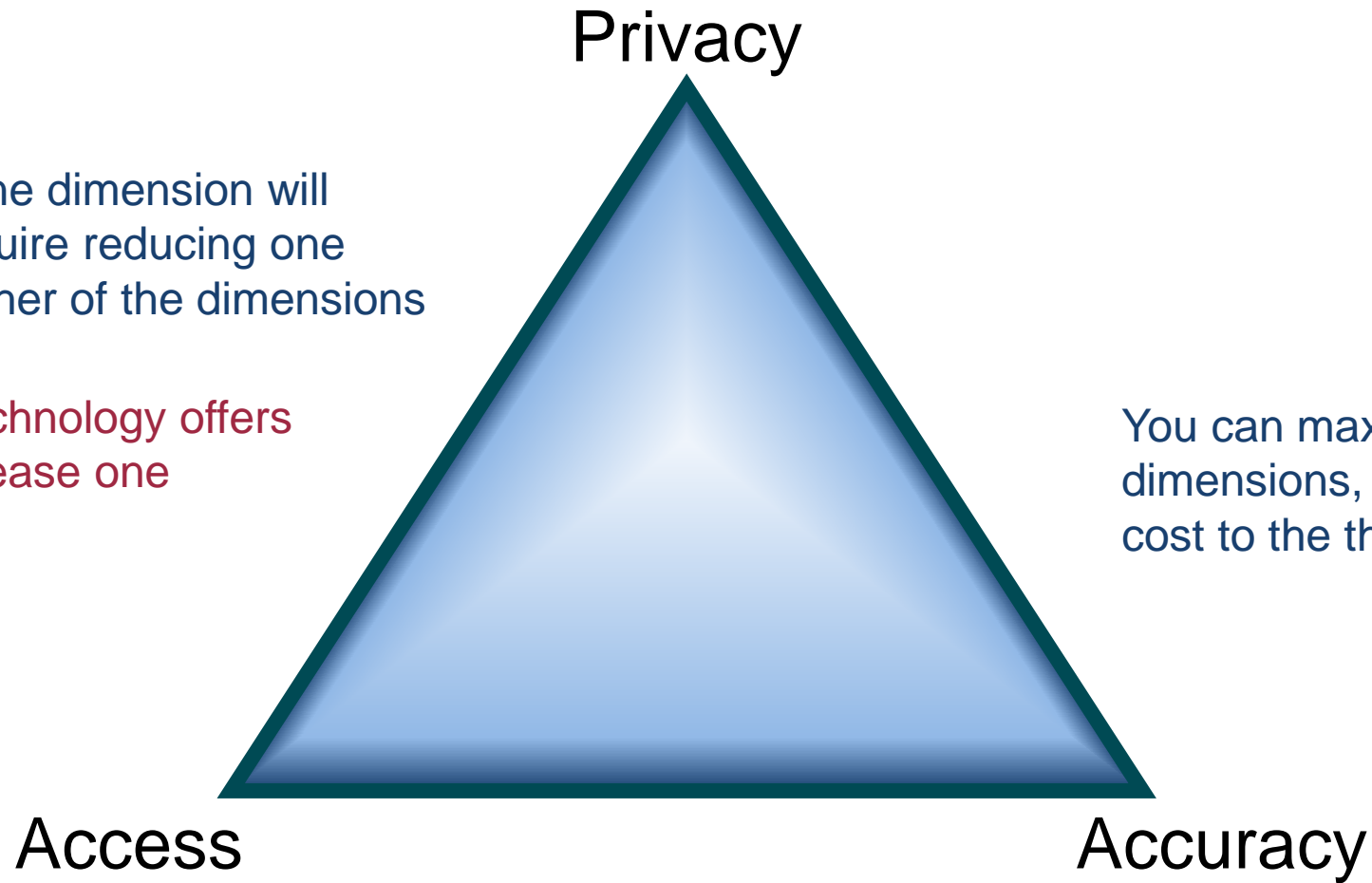


You can maximize on two dimensions, but only at profound cost to the third.

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The “Trilemma of Official Statistics”



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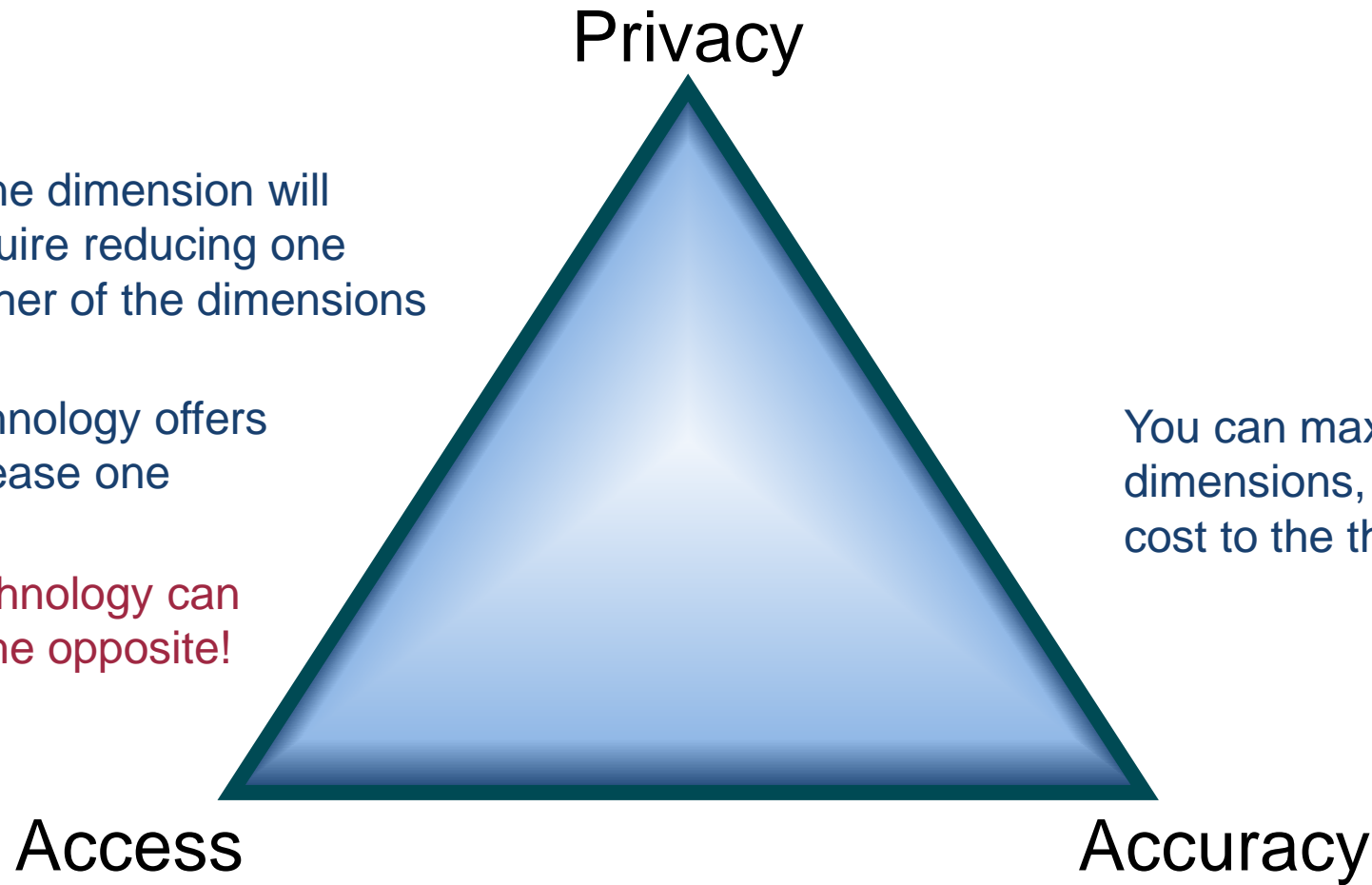
*n.b., occasionally, technology offers an opportunity to increase one dimension for free...

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The “Trilemma of Official Statistics”



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*nb, occasionally, technology offers an opportunity to increase one dimension for free...

...but technology can also do the opposite!

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Key Questions for the Panel

- How serious is this privacy risk?
- Can traditional statistical disclosure limitation methods mitigate this risk?
- How is the Federal Statistical System responding?
- What is the reaction from the data user community?
- How should agencies navigate the tradeoffs between privacy, accuracy, and access?
- What is the path forward?