The Five Safes Framework

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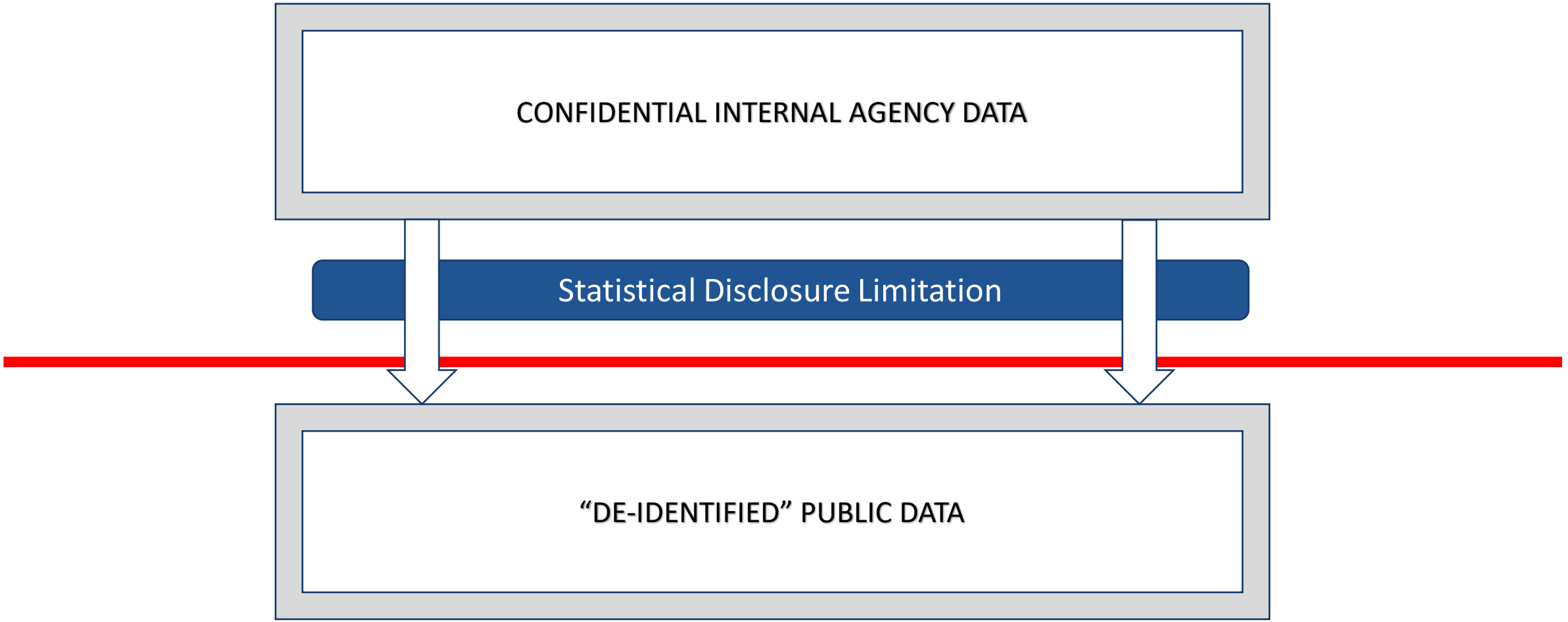
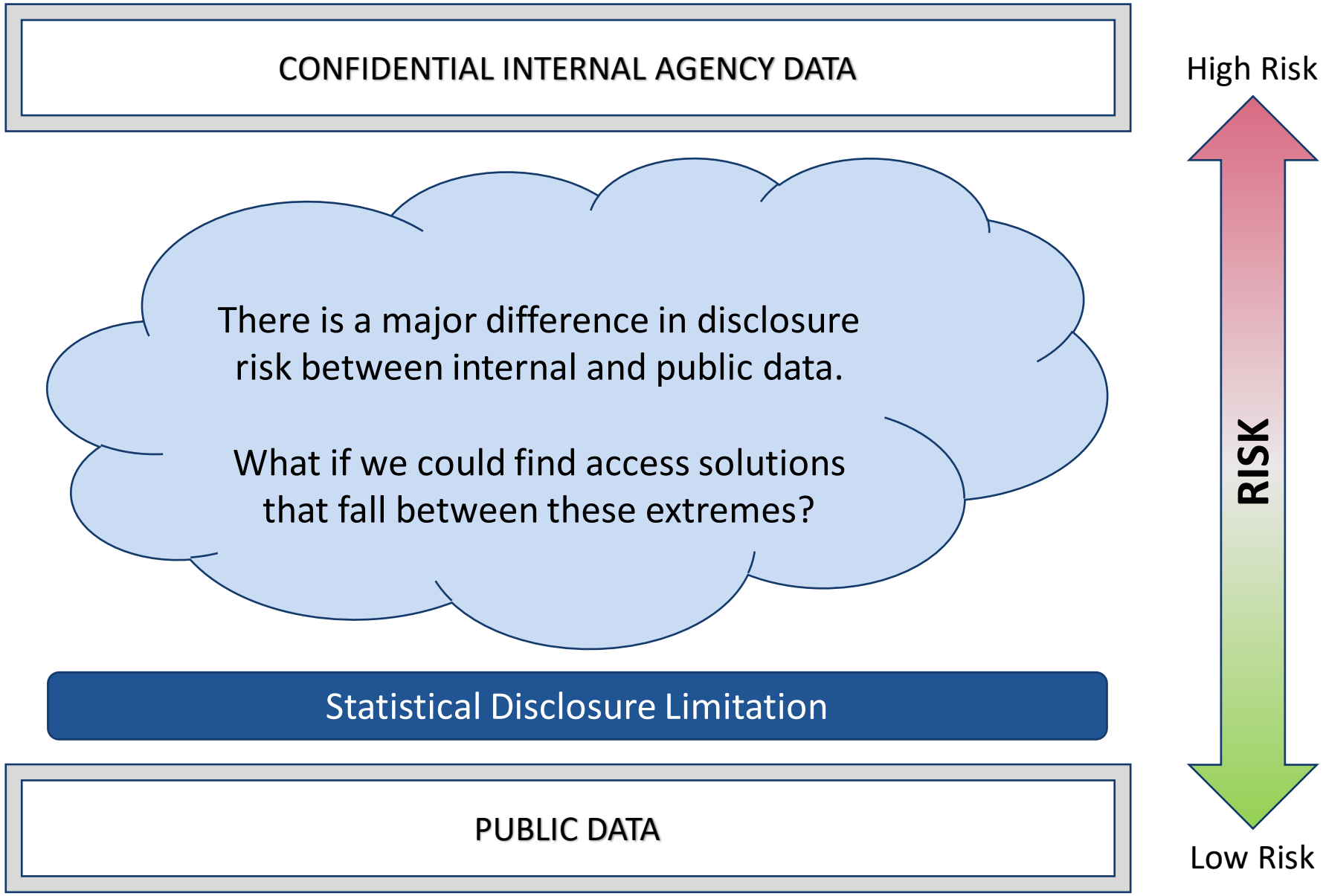
The Traditional Model of Data Access




CONFIDENTIAL INTERNAL AGENCY DATA
There is a major difference in disclosure risk between internal and public data.
What if we could find access solutions that fall between these extremes?
Statistical Disclosure Limitation
PUBLIC DATA
High Risk
RISK
Low Risk

THE FIVE SAFES FRAMEWORK

Safe Data

Safe Projects

Safe People

Safe Settings

Safe Outputs

Federal Committee on Statistical Methodology (2022)
Data Protection Toolkit: Report and Resources on Statistical Disclosure Limitation Methodology and Tiered Data Access (formerly "Statistical Policy Working Paper #22"), rev. 2022.01 (11/28/2022)

The Five Safes Framework was originally developed by Felix Ritchie to describe the UK Office of National Statistics' Virtual Microdata Laboratory. For more information see: Ritchie, F. Secure access to confidential microdata: four years of the Virtual Microdata Laboratory. *Econ Lab Market Rev* **2**, 29–34 (2008). https://doi.org/10.1057/elmr.2008.73

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Safe Data

Disclosure risk during access is reduced through the use of statistical disclosure limitation techniques (e.g., data minimization, or removal of direct identifiers).

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Safe Projects

Approved projects are valuable, legally permissible, and appropriate (to the agency's mission).

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Safe People

Researchers meet established access criteria, training requirements, and trust levels for access.

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Safe Settings

Physical security, data access controls, and infrastructure requirements reduce the risk of unauthorized access or disclosure.

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Safe Output

Released data have agency-approved disclosure limitation methods applied.

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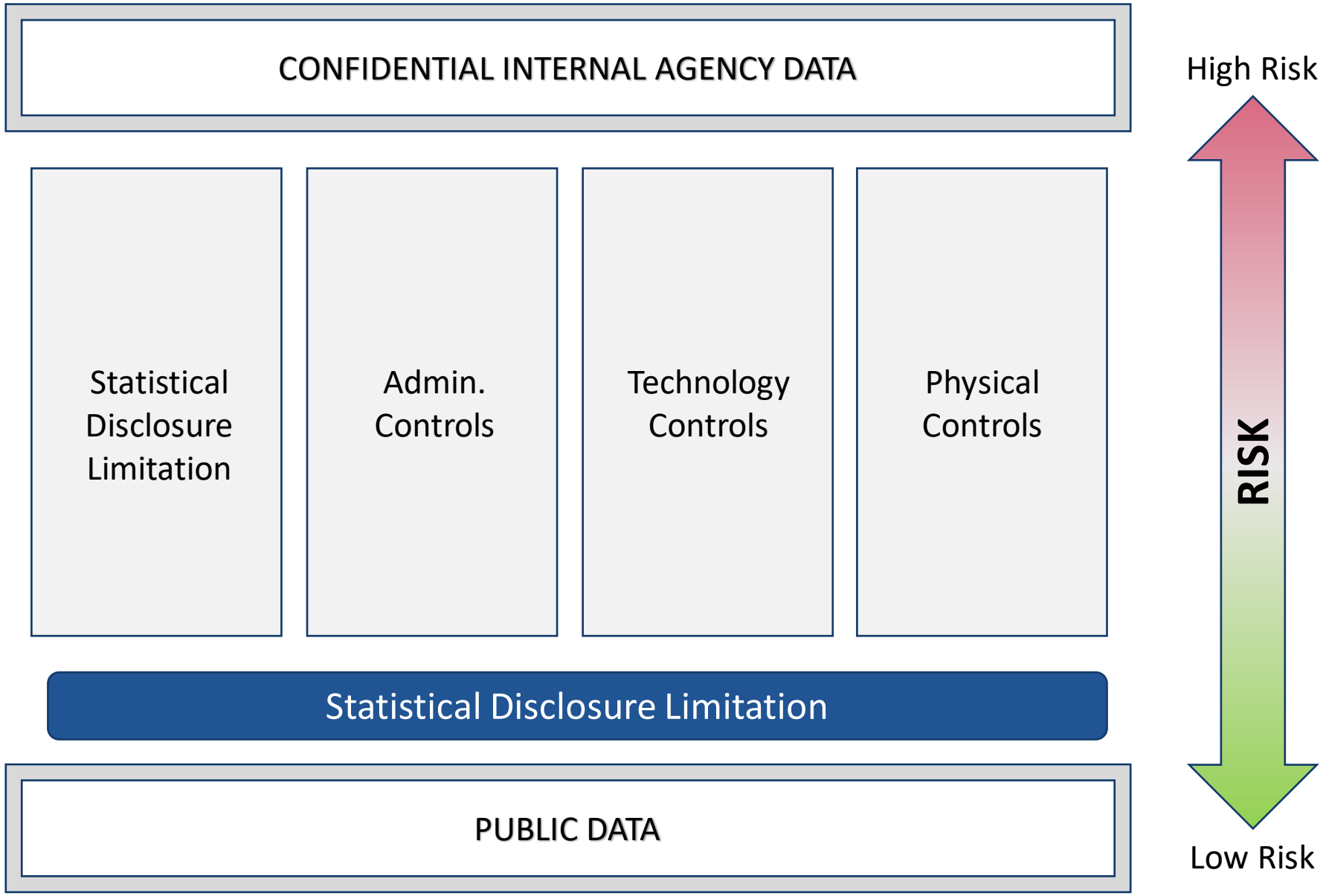
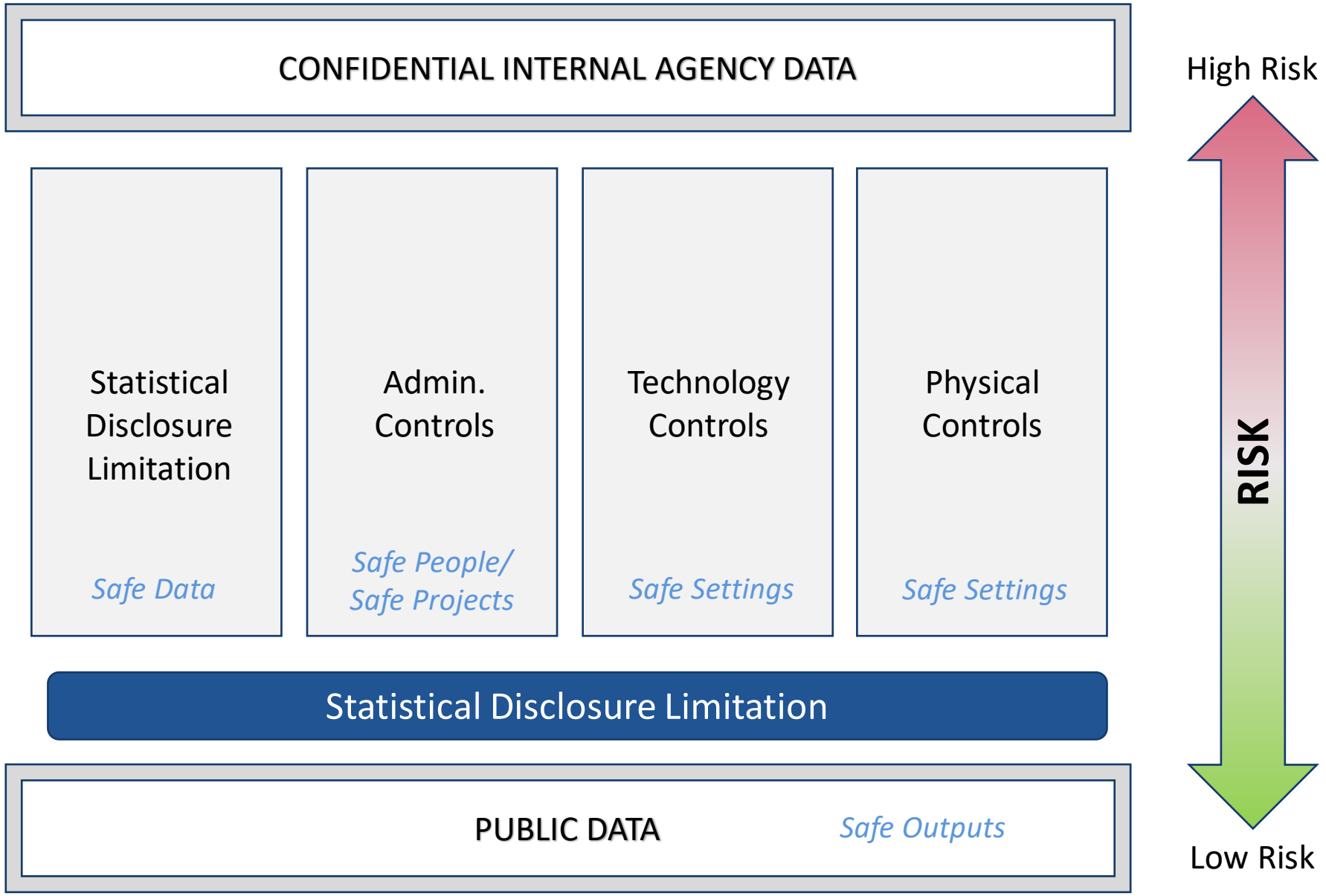
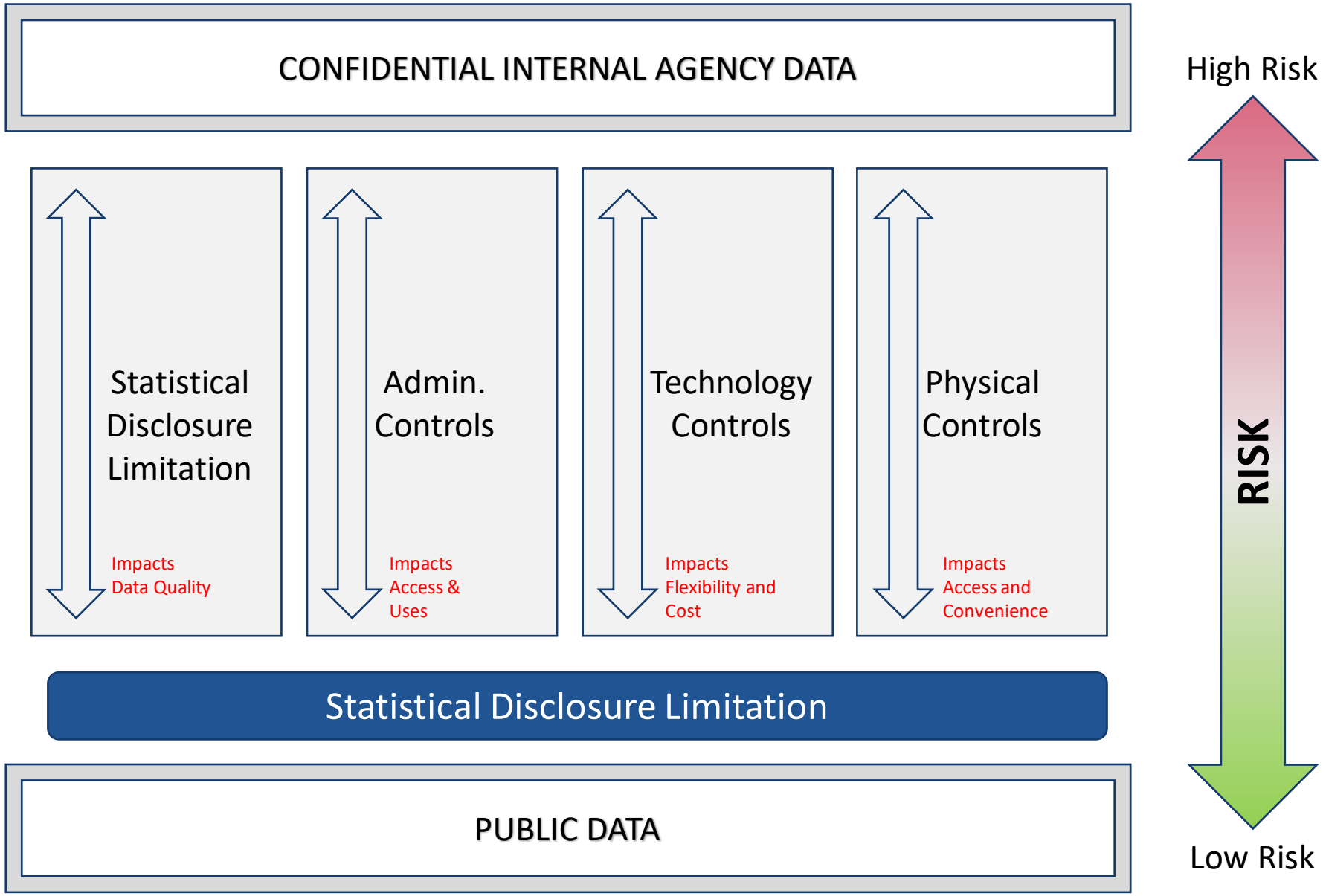
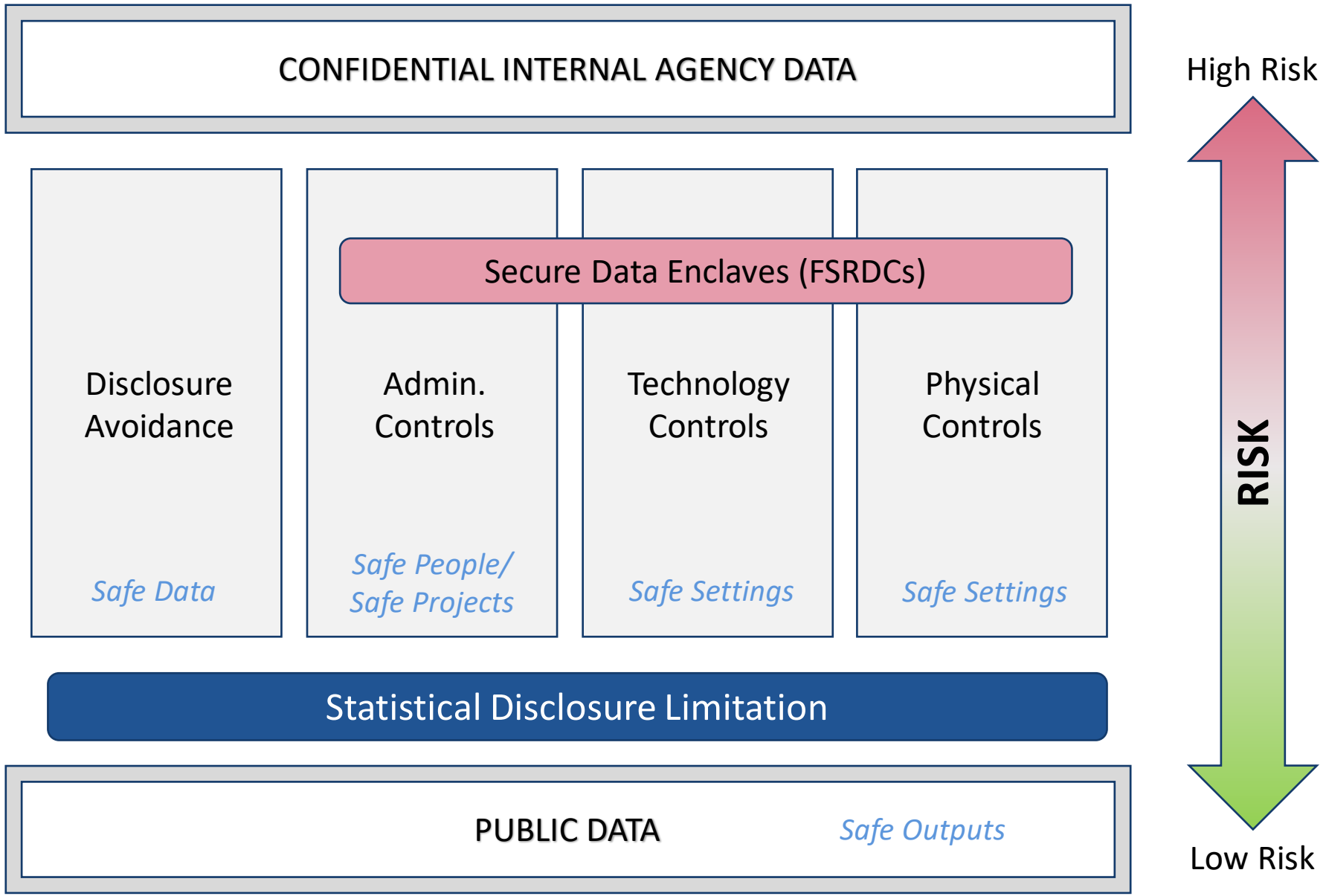
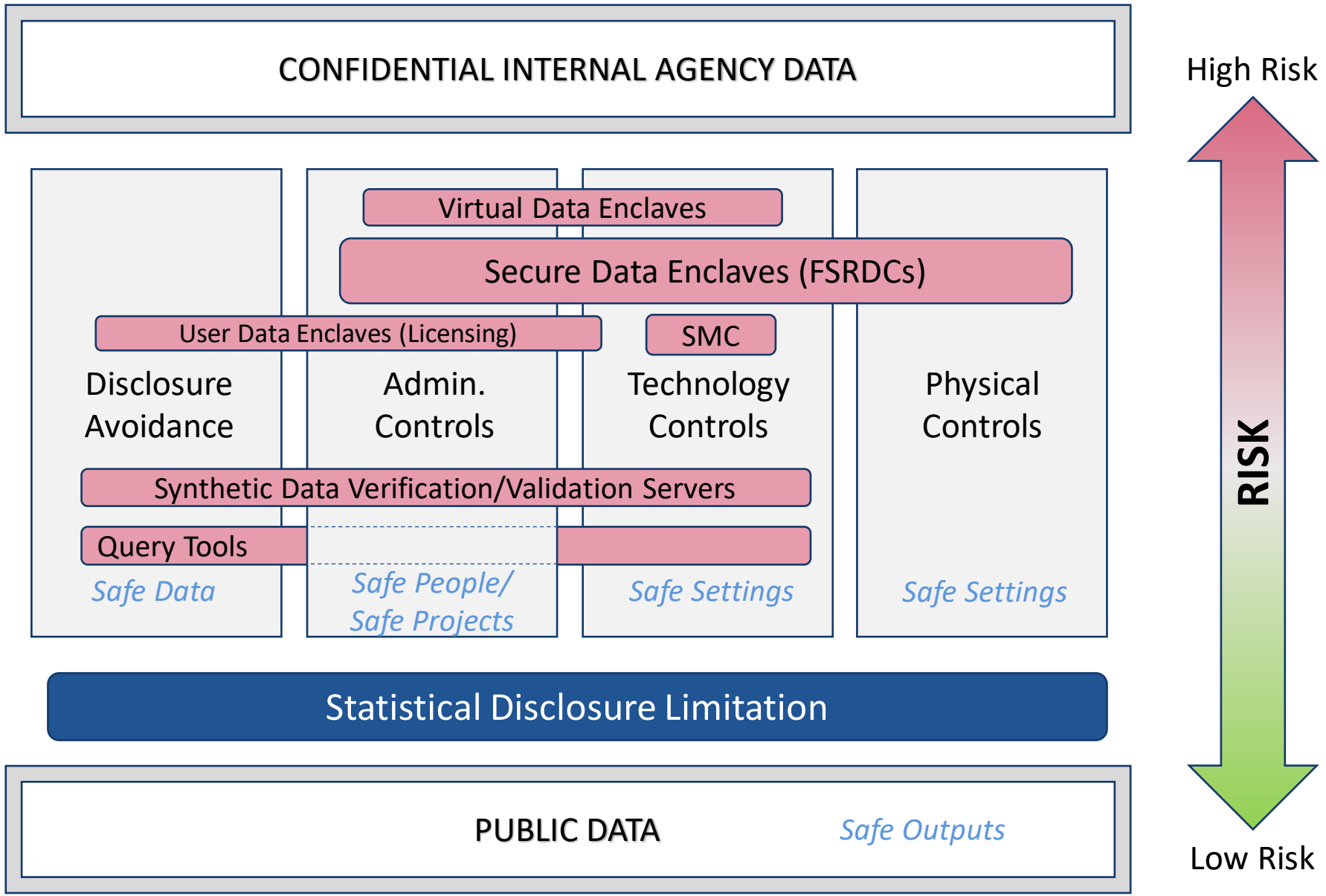

CONFIDENTIAL INTERNAL AGENCY DATA
Statistical Disclosure Limitation
Admin. Controls
Technology Controls
Physical Controls
Statistical Disclosure Limitation
PUBLIC DATA
High Risk
RISK
Low Risk


CONFIDENTIAL INTERNAL AGENCY DATA
High Risk
RISK
Statistical Disclosure Limitation
Safe Data
Admin. Controls
Safe People/ Safe Projects
Technology Controls
Safe Settings
Physical Controls
Safe Settings
Statistical Disclosure Limitation
PUBLIC DATA
Safe Outputs
Low Risk


CONFIDENTIAL INTERNAL AGENCY DATA
Statistical Disclosure Limitation
Impacts Data Quality
Admin. Controls
Impacts Access & Uses
Technology Controls
Impacts Flexibility and Cost
Physical Controls
Impacts Access and Convenience
Statistical Disclosure Limitation
PUBLIC DATA
High Risk
RISK
Low Risk


CONFIDENTIAL INTERNAL AGENCY DATA
Secure Data Enclaves (FSRDCs)
Disclosure Avoidance
Safe Data
Admin. Controls
Safe People/ Safe Projects
Technology Controls
Safe Settings
Physical Controls
Safe Settings
Statistical Disclosure Limitation
PUBLIC DATA
Safe Outputs
High Risk
RISK
Low Risk


CONFIDENTIAL INTERNAL AGENCY DATA
Virtual Data Enclaves
Secure Data Enclaves (FSRDCs)
User Data Enclaves (Licensing)
SMC
Disclosure Avoidance
Admin. Controls
Technology Controls
Physical Controls
Synthetic Data Verification/Validation Servers
Query Tools
Safe Data
Safe People/ Safe Projects
Safe Settings
Safe Settings
Statistical Disclosure Limitation
PUBLIC DATA
Safe Outputs
High Risk
RISK
Low Risk

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