

Implementing a Framework for Data Security and Policy at a Large Public Sector Agency

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Who we are

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What we'll talk about

- Challenges faced by agencies today
- Data sharing imperatives
- Technical requirements
- Implementation approach
- Outcomes

Start with Why

Organizations have more data than ever

Missions are expanding while the workforce remains the same

Technology advancements and skills have empowered users

The **Potential** Consequences

We can't afford to get it wrong

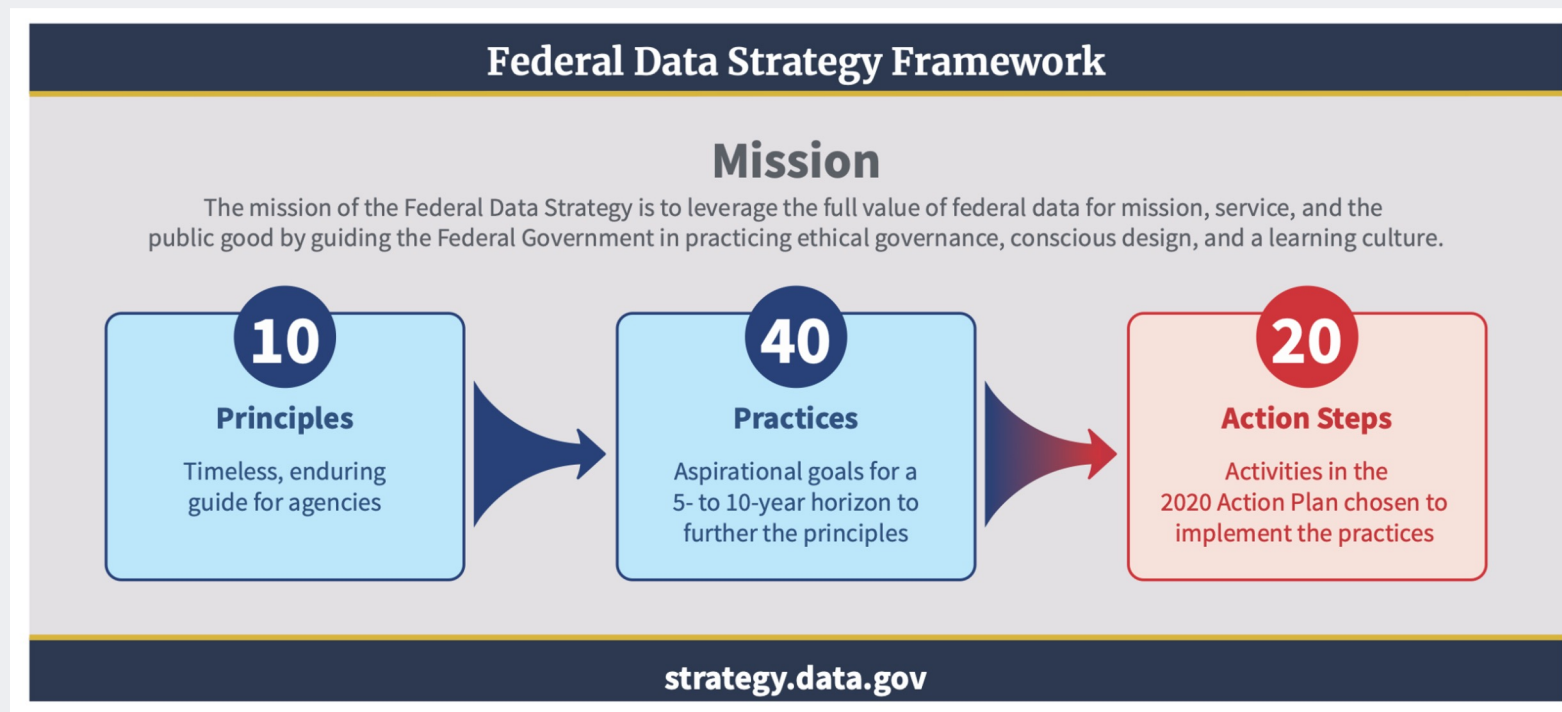
We could miss useful data or not get access in time

We could lose control of the copies

We could misuse or leak sensitive information

We could make mistakes or miss opportunities

Two competing imperatives



<https://strategy.data.gov/overview/>

How do agencies use or share data

Privacy Act

Privacy Impact Assessments

Interagency Memorandums of Agreement

Authorities to Operate

Foundations for Evidence-Based Policymaking Act

Foundations for Success

1. Data platform with adequate storage and compute resources
2. A process for establishing governance
3. A workforce with the appropriate skills and authority
4. Authoritative sources for Policy, Identity, and Metadata

The Shift to Decentralization

Distributed computing and the flexibility of the cloud has driven shifts from single, expensive, exquisite systems to decentralized, distributed and highly specialized capability.

- Scaling out rather than scaling up
- Separation of compute and storage
- Separation of policy from platform

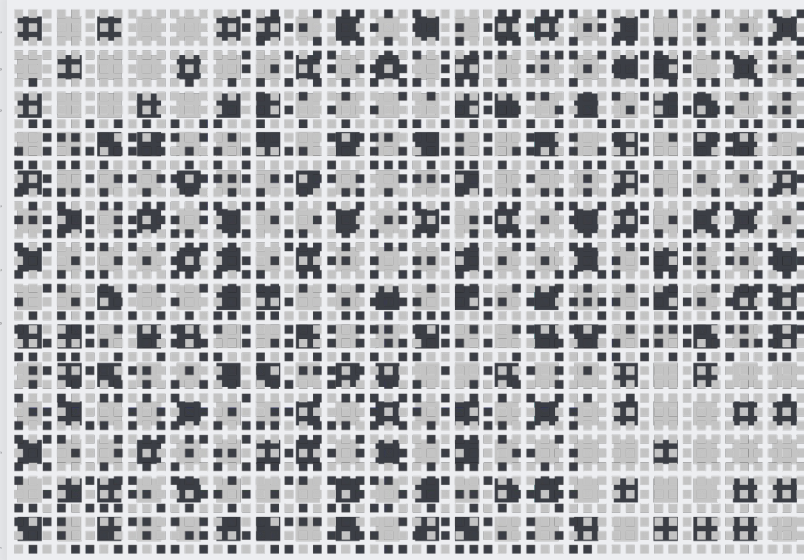
THE PROBLEM

Data policies are a roadblock to secure scaling

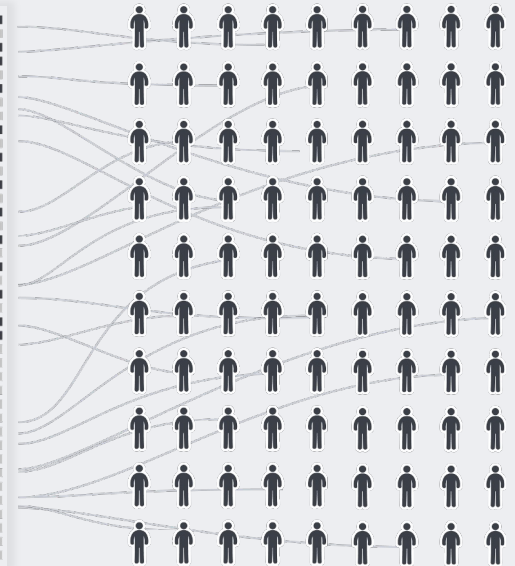
Explosion of
DATA SOURCES



Explosion of
POLICIES



Explosion of
DATA USERS



Warehouses /
Lakes / Exchanges

Users

THE SOLUTION

Separate data persistence from data policy

There are many places data is stored

Data is always in motion

GRANT statements in databases can't be maintained effectively at scale

And can't be enforced across persistence engines

And can't be dynamically tied to users' changing accesses

Achieving scale through dynamic ABAC

Technologies will adapt and eventually be replaced

Users will come, go, and change roles and responsibilities,

New data sources will become available while others change

Policy and laws will change

Without a dynamic system to enforce policy we will always be playing catch up, duplicating efforts, or operating at risk

What we accomplished

- Effective inter and intra agency data sharing
- Speed to add new data
- Clarity on who has access to what data
- Alignment between persistence engines and use cases

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Thank you

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