Census Bureau Modernization: A New Vision for an Enterprise Approach to Statistical Data

CNSTAT-National Academy of Sciences

May 16, 2022

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Team Acknowledgements:

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A New Statistical Frontier: Opportunities for Resiliency

- Declining response rates

- Increasing costs and demands for more timely and relevant data

- Data collection challenges

- A need for …
  - improved collaboration with stakeholders and partners
  - improved data quality
  - stronger computing power
  - proliferation of alternative unofficial data products, and new technologies
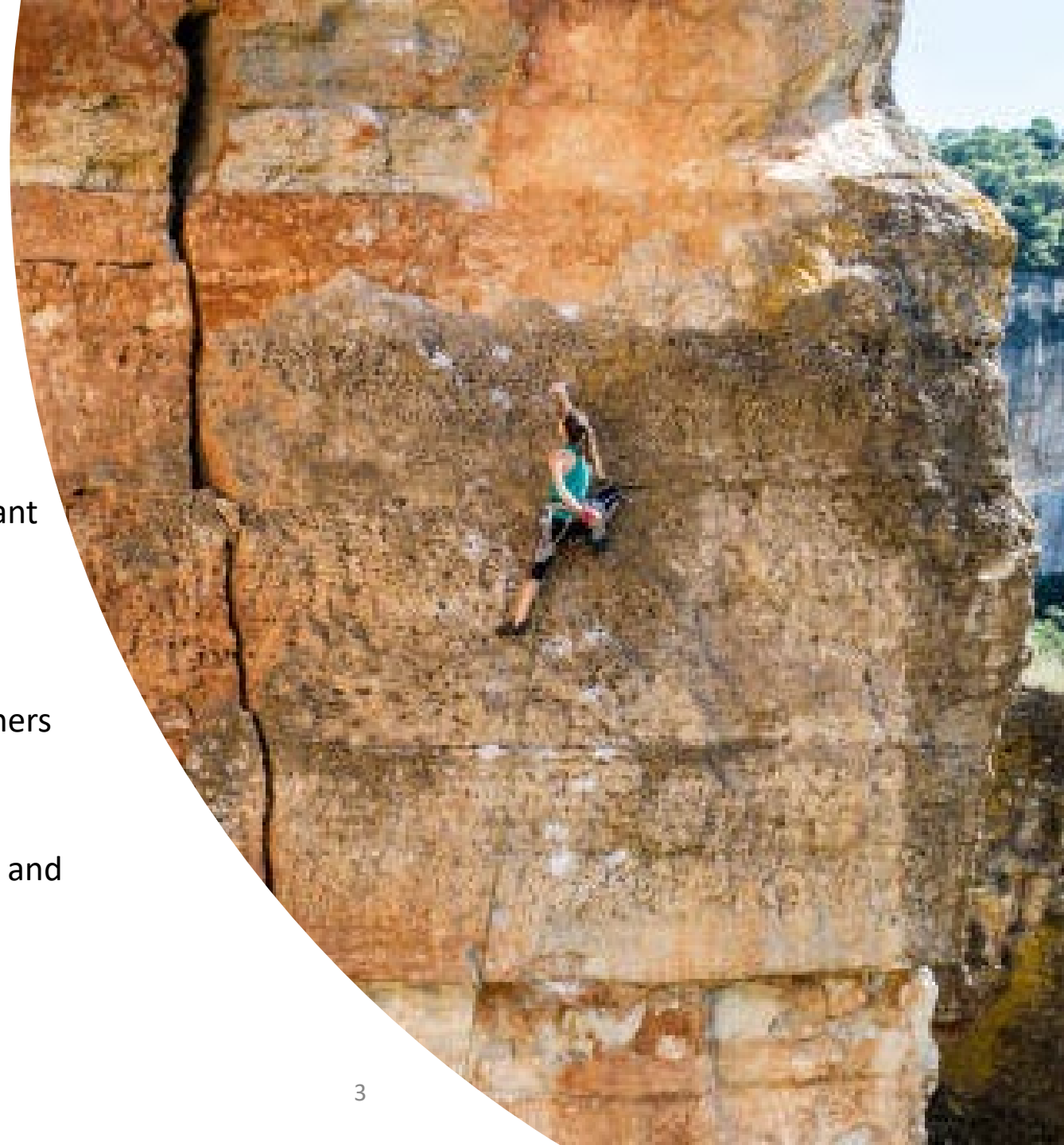
Transformation and Modernization:
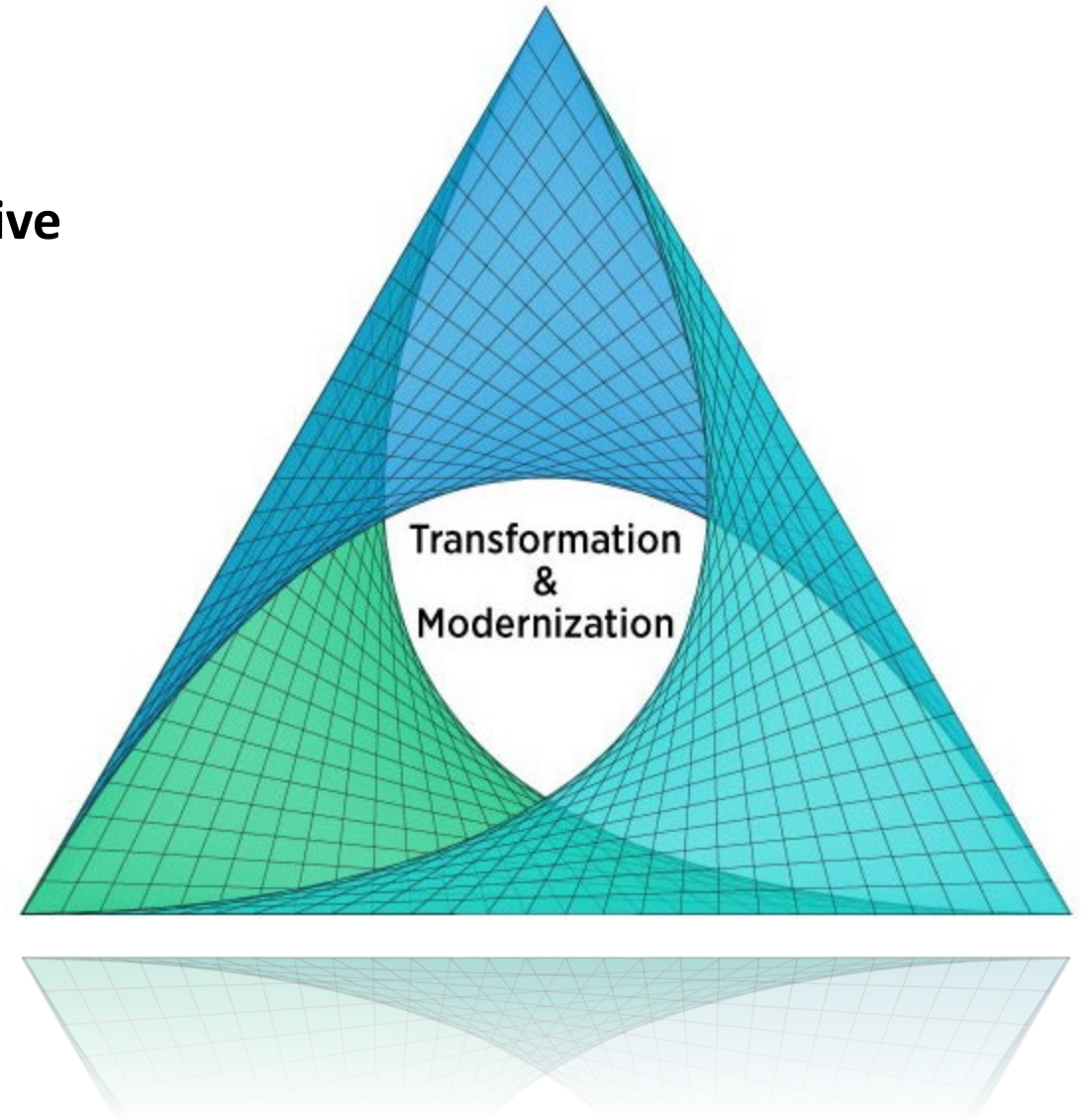Involves the Whole System to Change the Whole System

Employee–Driven Initiative

Continuous Innovation

Business Ecosystem

Transformation
&
Modernization

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GUIDING PRINCIPLES

Transforming & Modernizing th

Increasing Efficiencies
- Enterprise operations
- Workforce & Public Burden

Improving Data & Methods
- New Data Sources
- New Methods
- Data Quality

Cultivating Diversity, Equity, Inclusion, & Accessibility
- Innovation & Critical Thinking
- Include Alternative Perspectives/Diverse Voices
- Use Equity Lens to Improve Policies/Practices

To Evolve into a 21st Century Data-C

| Keeping pace with new statistical methods & the growing availability of data | Remaining on the leading edge of the global statistical community | Advancing excellence through a culture of inclusion, innovation, & opportunity | The continuous evolution of methods, data acquisitions & dissemination | Helping planners & decision-makers solve difficult problems based on data | Delivering prompt, accurate, & actionable data products | Building greater awareness with the American public about the value & promise of our work |
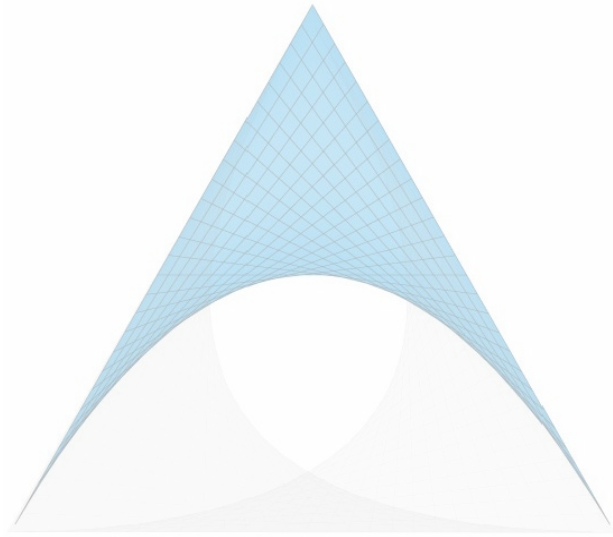
EMPLOYEE-DRIVEN INITIATIVE

Transformation and Modernization utilizes an employee-driven, high-engagement approach to evaluate and improve current processes, infrastructures, and mindsets

Human Capital
- Build a diverse and equitable culture to become a more innovative, agile, and collaborative organization.
- Build employee skills and provide them with the professional development and training needed.

Organizational Structure
- Identify and create roles, opportunities, and structures to support innovation and engagement
- Distribute across the agency.

Engagement

Elicit and understand customers' needs to
- Identify new products and services
- Improve customer experience
- Retain and expand partnerships
- Broaden awareness of the Census Bureau's impact to increase trust and confidence.

Data Management & Tech.
- Increase organizational knowledge sharing
- Identify opportunities to standardize and reduce duplication
- Understand software/tool needs
- Identify opportunities for innovation and partnership to support data collection, research, and innovation.

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## The Vintage 2021 Estimates "Blended Base"

- The decennial census typically forms the base for the population estimates

- Vintage 2021 estimates production faced unique challenges
  - Some 2020 Census detail needed for the estimates base was not available

- A "blended base" was created by controlling April 1, 2020 estimates from Vintage 2020 (based on the 2010 Census) to other Census data
  - 2020 Census: County resident population totals from PL 94-171 redistricting data
  - 2020 Demographic Analysis: National age (0-84, 85+) by sex distribution

- Benefits: consistent with 2020 Census totals for counties and higher levels of geography, somewhat adjusts for known Census coverage issues

- Limitation: heavily reliant on demographic detail from Vintage 2020
   (potential inaccuracies may be carried into the blended base)
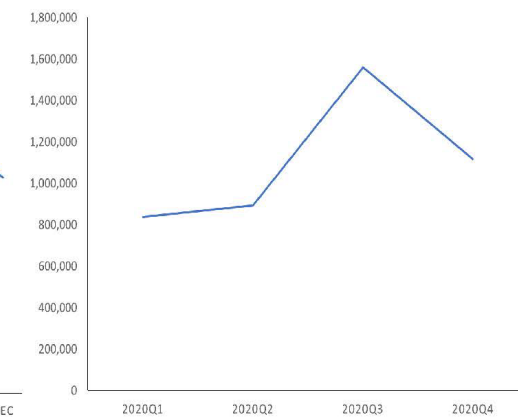
Business Formation Statistics

- Provides high frequency data on early-stage new business activity in the U.S.

- Includes weekly data on business applications and monthly data on business formations

- Fills a void for businesses, policy makers, regional planners, and researchers looking to assess the current state of early entrepreneurship

- Relies exclusively on administrative data as an alternative to direct survey collection

- Started as a quarterly release, but quickly moved to weekly during the pandemic
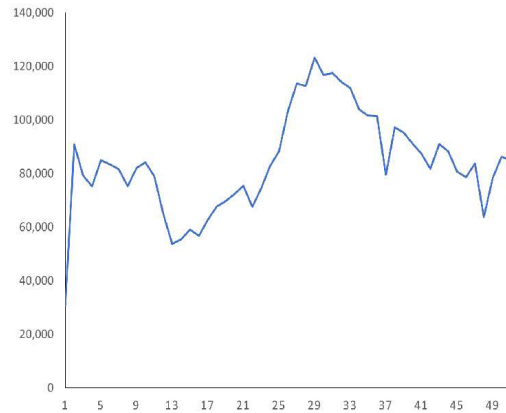
Weekly
timely detail to see near real-time pandemic affects
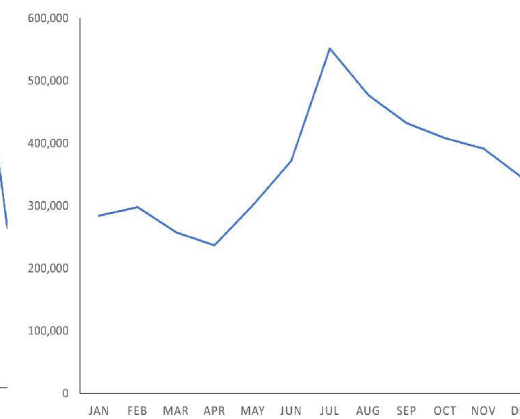
Monthly
Some affects – but not as pronounced

Quarterly
No visible affects

Source: Quarterly, Monthly, and Weekly Business Formation Statistics

BUSINESS ECOSYSTEM
Defined

An enterprise-wide suite of foundational systems designed to -

- Provide a cloud-centric data storage and computing platform for survey operations, concurrent and research analytics, data processing, product creation, product innovation, and archiving

- Provide foundational datasets (survey frames) that are linkable in nature, agile in structure, and accessible for production or research on a need-to-know basis

- Provide a suite of standard, efficient, modern, cost-effective, and scalable data collection and data ingest solutions that can support the full spectrum of Census Bureau operations – from the smallest survey, to the Decennial Census

- Disseminate our publicly available data products in a way that simplifies the means of data and metadata discovery and broadens the availability, utility, and ease of consumption for our data users

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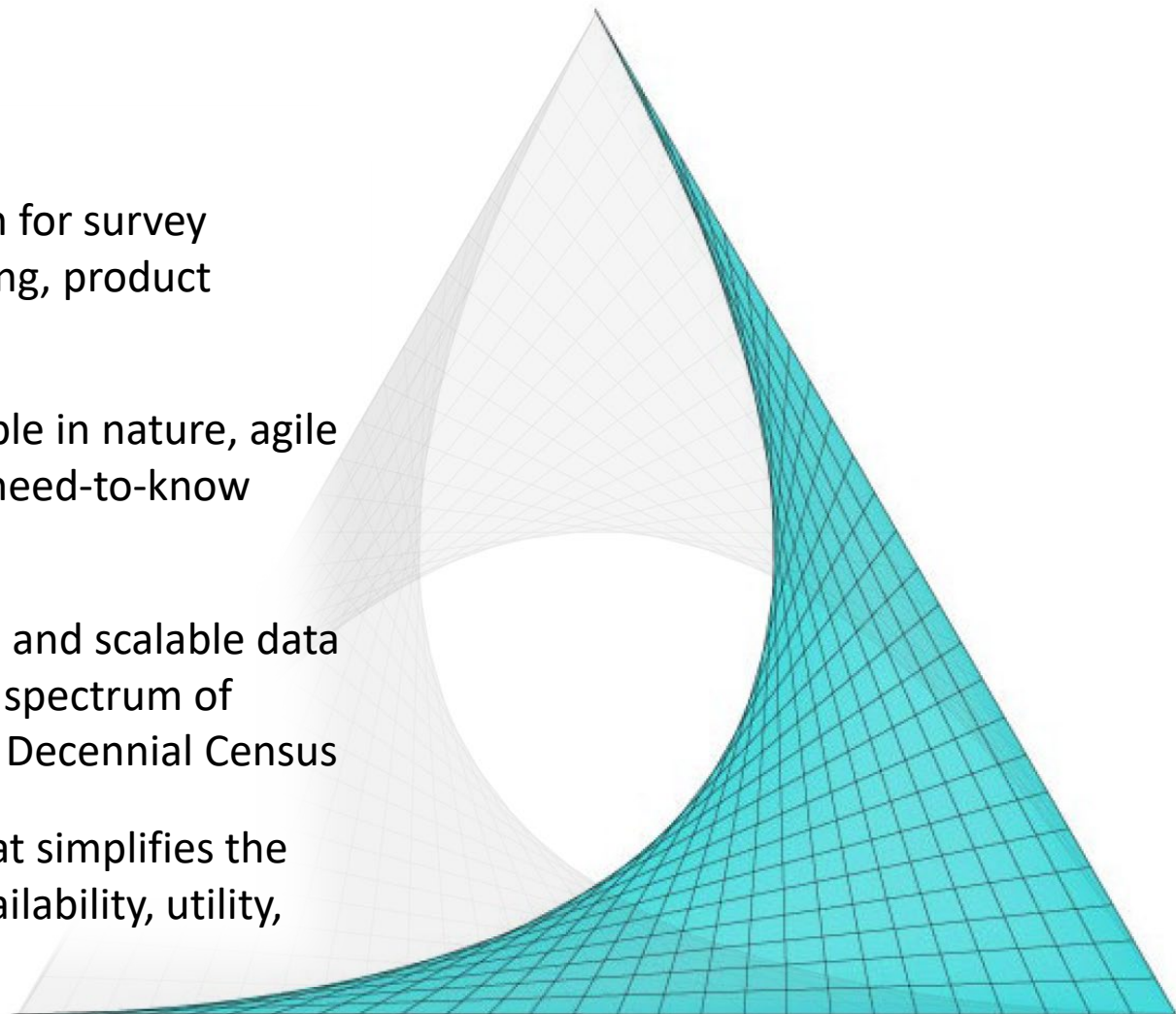
Frames

Vision: To create enterprise-wide frames <u>linkable in nature</u>, agile in structure, accessible for production or research on a need-to-know basis, and that adhere to technology usage, data management, and methodology best practices.

"Linkable in Nature," meaning -

- Each frame will include the necessary unique identifiers and keys for frame-to-frame linking. For example:
  - Location information (i.e., address and/or longitude/latitude) will be available on each person, job, and business record.
  - A person record may have linkage information to a job.
  - A job record may have linkage information to a business.
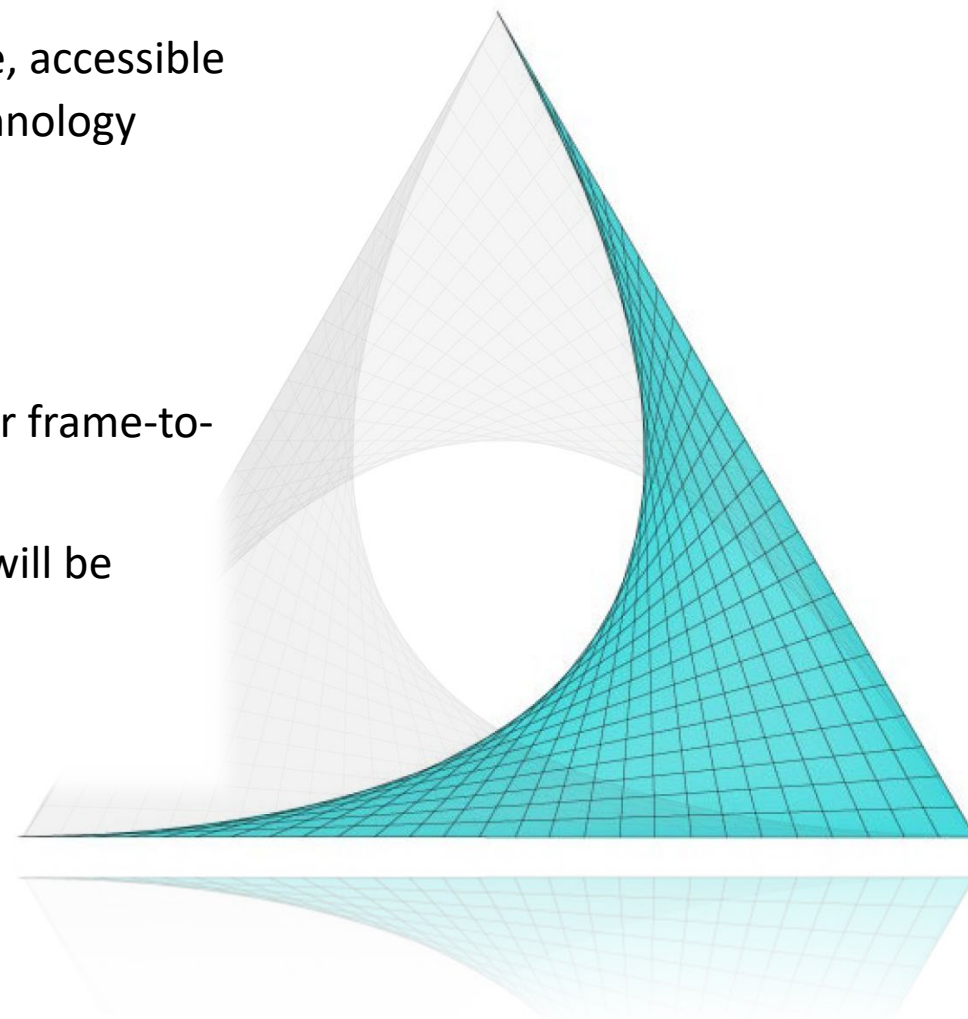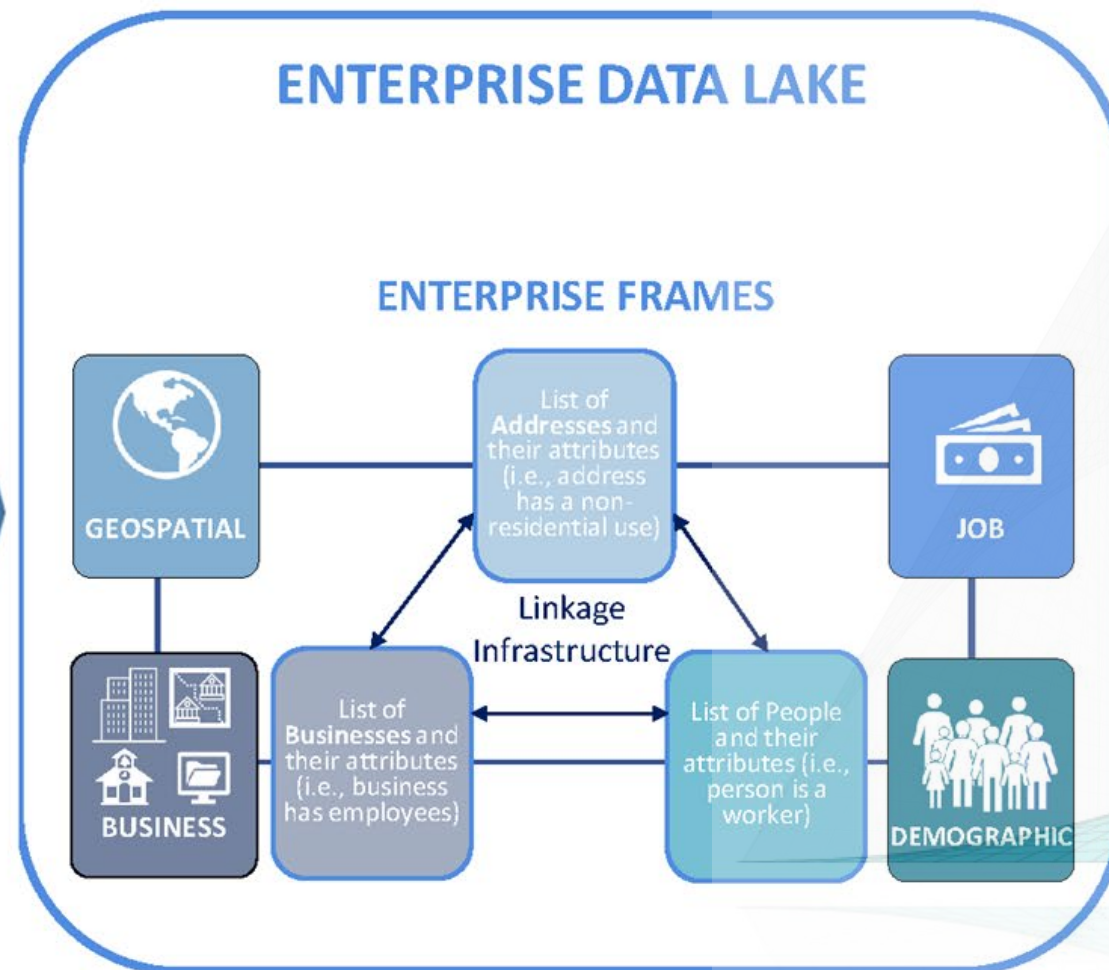
Frames

Where We're Going

Transformation and Modernization is underway as we develop and deploy advances to

- Foster a culture that embraces diversity, equity, inclusion, and accessibility to help spur opportunity, innovation and excellence,

- Reach new end users,

- Provide more timely and relevant data products,

- Use new techniques to produce new products without increasing burden, and

- Align our tools, processes, and products towards our vision for the future