NCEI Customer Engagement Initiatives to Guide Opportunities for Innovation

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Topics

- About NOAA NCEI and Information Services
- Examples of Engagement Progress
- Looking Ahead
• NOAA cooperative research institute, located with the NOAA NCEI in Asheville, NC

• Hosted by NC State University for the University of North Carolina System, under the NCSU Office of Research, Innovation and Economic Development

• Team of 35+ experts in various aspects of environmental data and information services

• Support innovative and interdisciplinary research to operations activities in NOAA and NCEI mission goals
NOAA NCEI

- Responsible for hosting and providing access to one of the most significant archives on Earth, with comprehensive oceanic, atmospheric, and geophysical data
- From the depths of the ocean to the surface of the sun and from million-year-old sediment records to near real-time satellite images
- Nation’s leading authority for environmental information
Archive U.S. and International Climate Data

Data spans stone-age to space-age... and across the globe
Serving Wide Range of Users

Federal Government
State/Local Government
Consulting Meteorologist
Agriculture
Infrastructure
Utilities
Research
Media
University
Insurance
Engineering
Individual
Legal
Private Business
NCEI is investing in improving capacity to document customer interactions

The dynamic engagement and services model provides a quantitative basis for understanding and supporting the NCEI value for the Nation, its economy and public services.
NCEI Engagement Team Efforts

- Customer analytics and information
- Value of the Data - Success Story updates
- Unique data usage vignettes from customer service requests
- Customer feedback and new requirements
- Key engagement events
- Upcoming Products and Tools
Top 10 Sectors identified - include PST, Other Services and Public Administration as largest user groups

- Professional, Scientific, & Technical Services (PST)
- Other Services
- Public Administration
- Educational Services
- All Other
- Finance & Insurance
- Construction
- Foreign - 2%
- Manufacturing - 1%
- Information - 1%
Customer Insights

**Top 10 Products identified** - include LCD, GHCN- Daily, and ISD

- Local Climatological Data (LCD)
- Global Historical Climatological Data (GHCN) - Daily
- Integrated Surface Data (ISD)
- Service Record Retention System (SRRS)
- Global Summary of the Month (GSOM)
- Cooperative Observation Data (COOP)
- Storm Events Database - 2%
- Normals - 2%
- Radar Level III - 2%
- All Other
Documenting How NCEI Provides Socio-Economic Benefits

- Businesses: Economic Vitality
- Communities: Quality of Life
- Infrastructure: Security and Resilience
- Energy: Production, Conservation, Use
- Environment: Agricultural and Biodiversity
Approach to Our Analysis
At a Glance

- NOAA National Centers for Environmental Information (NCEI) offers relevant climate and weather data from NOAA satellite, radar, and in situ observing systems that support a range of transactions in the finance and insurance sector.

- The performance of U.S. financial and insurance markets, a $1.5 trillion economic sector, is influenced by climate and weather events including hurricanes, tornadoes, floods, and extreme heat and cold.

- The financial sector relies on NCEI’s climate and weather data and information to determine insurance premiums and payouts for losses due to extreme events and to inform investment decisions.

Applications

- Catastrophe Models, Insurance, and Reinsurance
- Energy Trading
- Support improvements in access for NCEI’s data and product holdings
  - Data Stewardship Maturity Matrix
  - NOAA’s Big Data Project

- Support innovative research to improve the quality of *in situ* and satellite observations and share the information regarding the Earth’s climate

- Support interagency activities for global, national and regional assessments of climate change
  - USGCRP Climate Science Special
  - Vol. 1 of 4th National Climate Assessment:
    - USGCRP 4th National Climate Assessment is scheduled for release in late 2018

- Prepare the next generation of climate scientists, engineers and technicians

https://ncics.org/data/noaa-big-data-project/
Summary and Looking Ahead

• Improving methods to document uses, applications, requirements and value of environmental information across select sectors, formally and informally

• Building internal capacity at the moment

• As well – we conduct interdisciplinary outreach activities to reach K-12 and other general public outreach
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• Websites
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  - [www.NCEI.noaa.gov](http://www.NCEI.noaa.gov)
  - [www.NCEI.noaa.gov/customer-support](http://www.NCEI.noaa.gov/customer-support)
  - [www.NCEI.noaa.gov/data-access](http://www.NCEI.noaa.gov/data-access)
  - [www.NCEI.noaa.gov/contact](http://www.NCEI.noaa.gov/contact)
  - [www.NCEI.noaa.gov/success](http://www.NCEI.noaa.gov/success)
NCEI Environmental Data Archive Volume
Increasing Data Volumes from Station, Model, Radar, and Satellite Sources

2017 Total: 30.8 Petabytes

30 PB = Storage in a stack of smart phones 18 Eiffel Towers high (1,063 feet)

Due to increase in satellite and model data