Background

In April 2020, the NOAA Research Council requested that the NOAA Line Office Transition Managers Committee (LOTMC) provide quarterly updates on projects that have transitioned. Subsequently, the LOTMC developed an approach for collecting and reporting these data in a consistent manner while allowing for feedback and improvements to the process. The data were first collected as a pilot for Fiscal Year 2020, Quarter 3 (FY20 Q3) transitions. Fiscal Year 2020, Quarter 4 (FY20 Q4) built on the previous framework and added one new field to help inform reporting.

Methodology

The FY20 Q4 data collection spreadsheet followed a similar format to FY20 Q3. It included the following fields: _project name_, _what was transitioned_, _transition outputs, purpose of transition, type of transition_, _from where_, _to where_, _date completed_, _is it in NOAA Research and Development Database (NRDD)_, _NRDD project ID_, and _comments_. New field, _NOAA Science and Technology Focus Areas_, was added to provide further detail in the types of transition that are occurring throughout NOAA. Drop down options were added to the fields, _Type of Transition_ and _NOAA Science and Technology Focus Areas_, to aid field completion.

All data from FY20 Q4 were obtained by data collection spreadsheets and tasker requests sent out from the NOAA Line Office Transition Managers with a six week deadline. In addition, transitioned projects were queried on the NRDD using the same query method from FY20 Q3. No additional transitioned projects were found using this search method. Following the data collection period, the information from all Line Offices was compiled and analyzed.

FY20 Q4 Results (July 1 – September 30, 2020)

Sixteen transitioned projects were identified in the spreadsheet for FY20 Q4. Transition summary highlights include:

- 13 improvements for enhancing weather and climate forecasts
  - Three projects with modeling improvements for the Global Ensemble Forecasting System (GEFS)
  - Three projects with modeling improvements for tropical cyclone storm forecasts
  - Three projects with modeling improvements for the National Blend of Models (NBM)
  - Model improvement for predicting the geoelectric field
  - Model improvement for Gridpoint Statistical Interpolation (GSI)
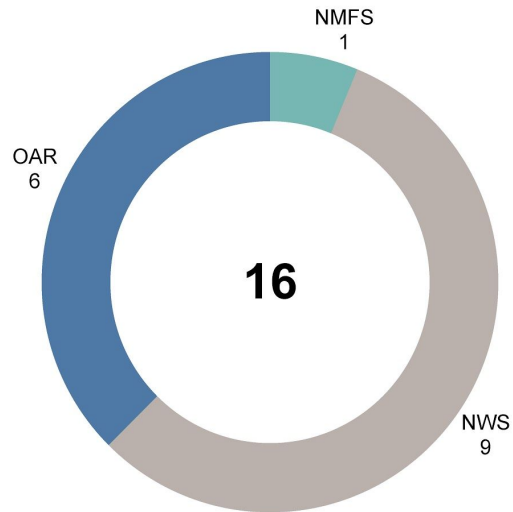
- ○ Tool for enhanced situational awareness and communication of winter storm severity
- ○ Improved predictive skill for flash floods and extreme precipitation using machine learning
- ● Two systems for ocean monitoring
  - ○ UxS to assess walleye pollock stock
  - ○ Added system on TAO moorings to improve near surface stratification modelling
- ● Environmental assessment of climate and pollution impacts on the Arctic

Summary charts of these projects by Line Office, source and destination organizations, NOAA Science and Technology focus area, transition type, transition project outputs, and NRDD participation are displayed below.
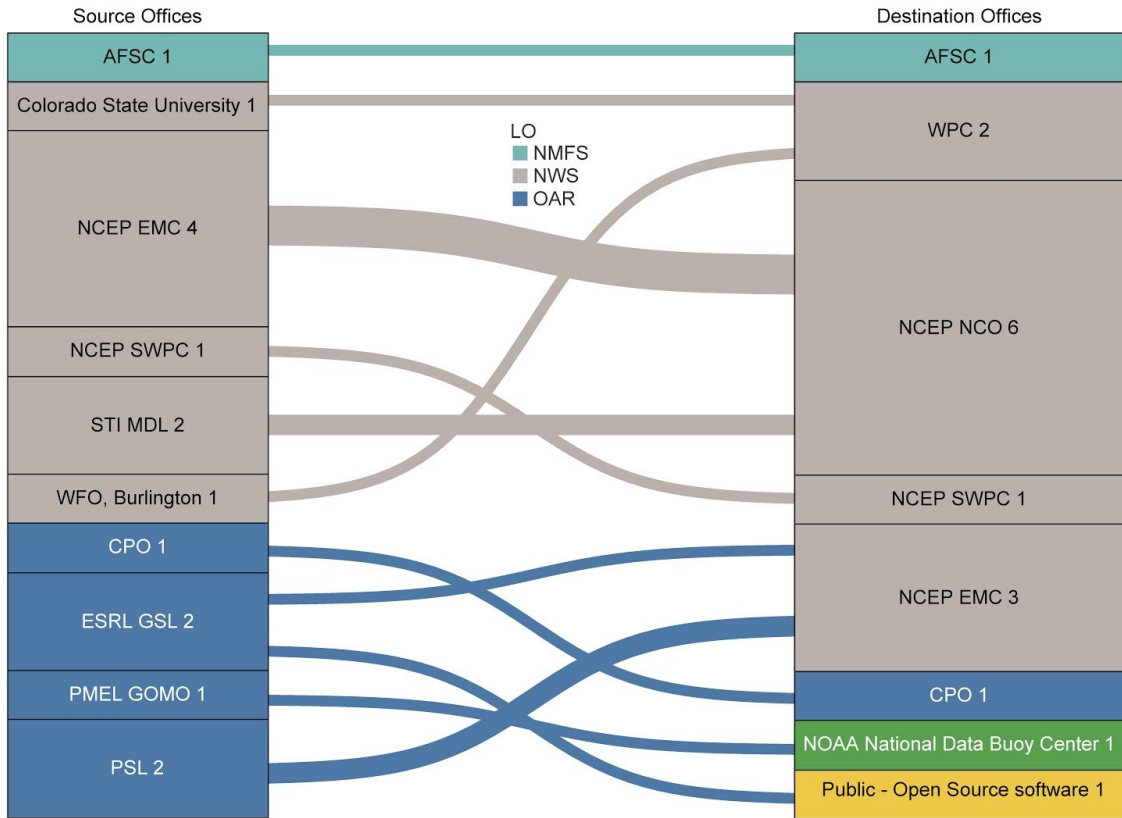
Number of Transitioned Projects by Line Office for FY20 Q4

NOAA Quarterly Transition Updates
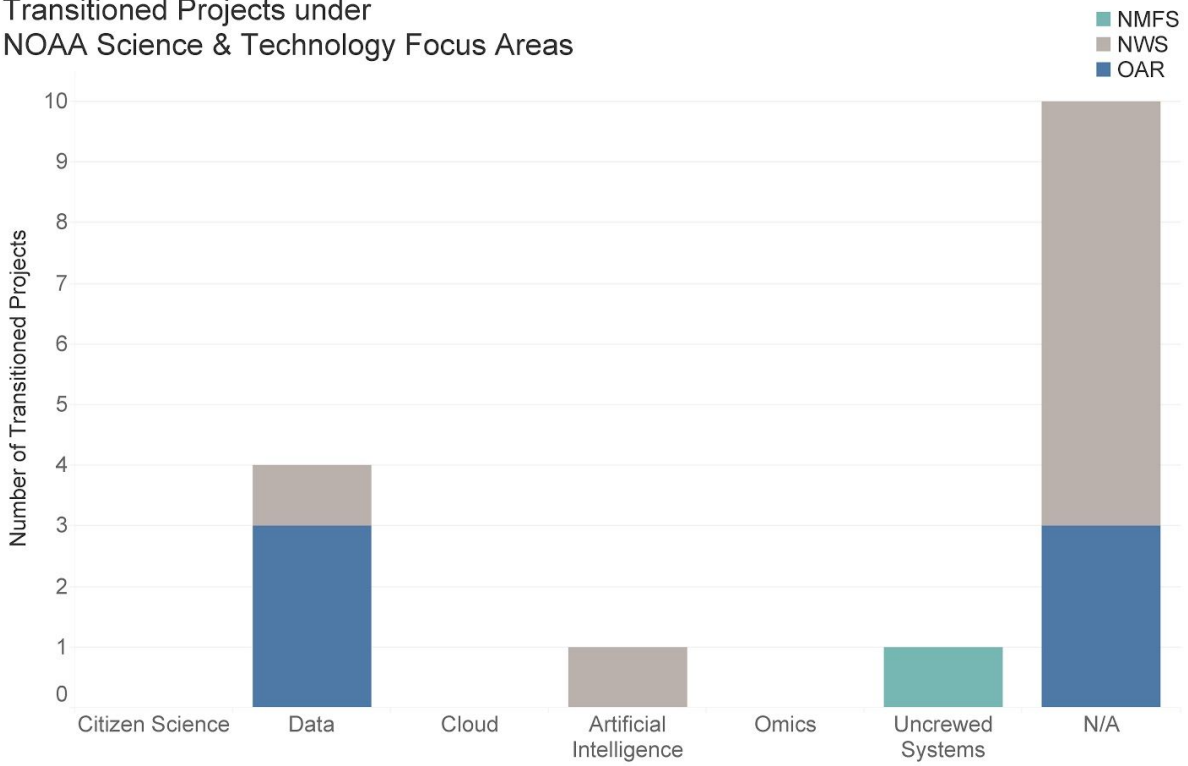## Fiscal Year 2020 Quarter 4 Summary

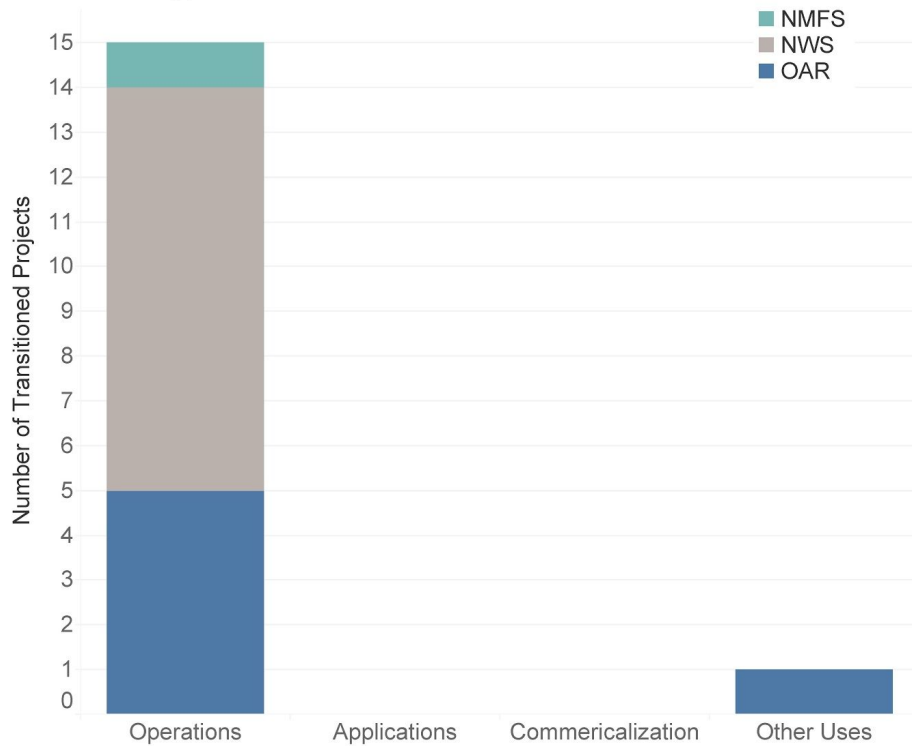### Source and Destination for FY20 Q4 Transitioned Projects

Source Offices | Destination Offices

LO
- NMFS
- NWS
- OAR

Source Offices:
- AFSC 1
- Colorado State University 1
- NCEP EMC 4
- NCEP SWPC 1
- STI MDL 2
- WFO, Burlington 1
- CPO 1
- ESRL GSL 2
- PMEL GOMO 1
- PSL 2

Destination Offices:
- AFSC 1
- WPC 2
- NCEP NCO 6
- NCEP SWPC 1
- NCEP EMC 3
- CPO 1
- NOAA National Data Buoy Center 1
- Public - Open Source software 1

NOAA Quarterly Transition Updates
Fiscal Year 2020 Quarter 4 Summary

Transitioned Projects under
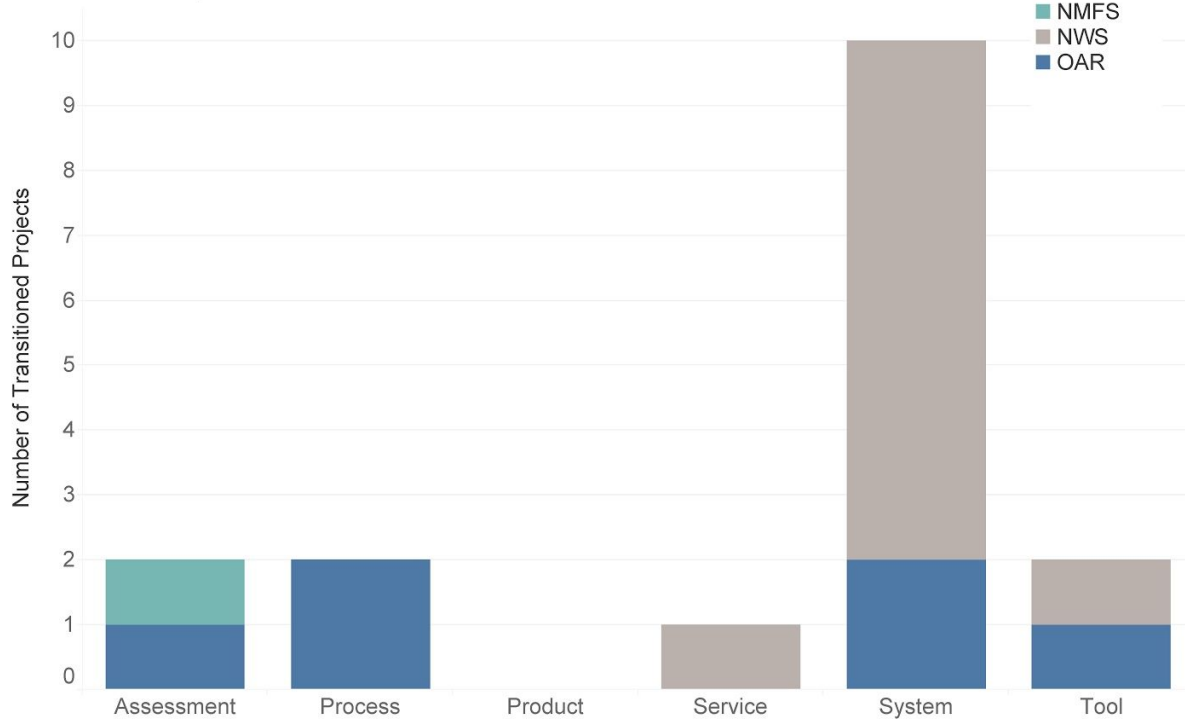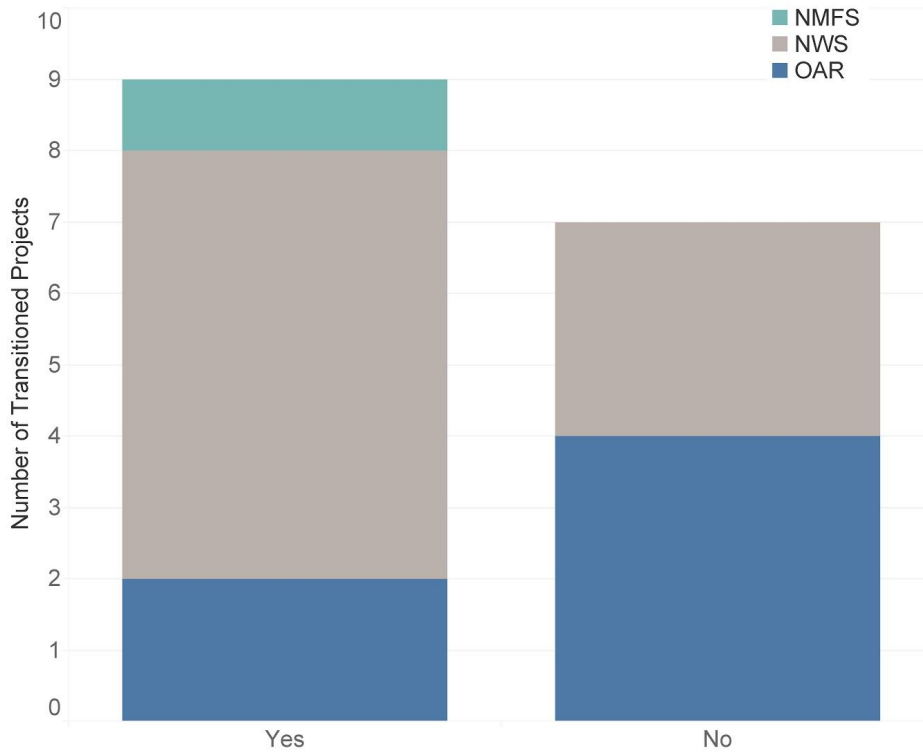### NOAA Science & Technology Focus Areas

Transition Types for FY20 Q4

NOAA Quarterly Transition Updates
Fiscal Year 2020 Quarter 4 Summary

Transition Outputs FY20 Q4

Projects in NRDD?

Considerations for Future Quarterly Transition Updates

As shown in the graphs above, not all NOAA Line Offices were represented in the FY20 Q4 tasker. Compared to FY20 Q3, FY20 Q4 data collection improved on missing fields but many of the filled fields were inconsistent. These inconsistencies are often spelling variations or multiple entries in one field (eg. transitioned projects that fit in more than one transition type). To remedy the inconsistencies, _date completed_ and _is it in NRDD_ fields are changed to drop down options. For existing fields with drop down options, _transition outputs_ and _type of transition_ fields, a "multiple entry" option will be added to allow more flexibility to future data collection spreadsheets.

LOTMC identified that transition updates are missing funding sources. Adding this field will highlight and credit the programs that provide resources to these transitioned projects. Data on funding sources will be collected for future transition updates via an additional field in the data collection spreadsheet.

Several transitioned projects were not archived in the NRDD, and those that were archived in the NRDD had inconsistent information that made querying these projects difficult. Cross-validation was done with NRDD and did not result in any transitioned projects. Future consideration is needed to increase NRDD participation for transitioned projects. Additionally, we will seek guidance from NRDD administrators on how to address query information that identifies transitioned projects.

Next Steps

This document will be included in the meeting materials to the NOAA Research Council at their next council meeting in December. A subset of the FY20 Q4 transition projects will be highlighted at a later time in early 2021. The planned date to start collecting FY21 Q1 will be December 30, 2020.