Earth Sciences Update
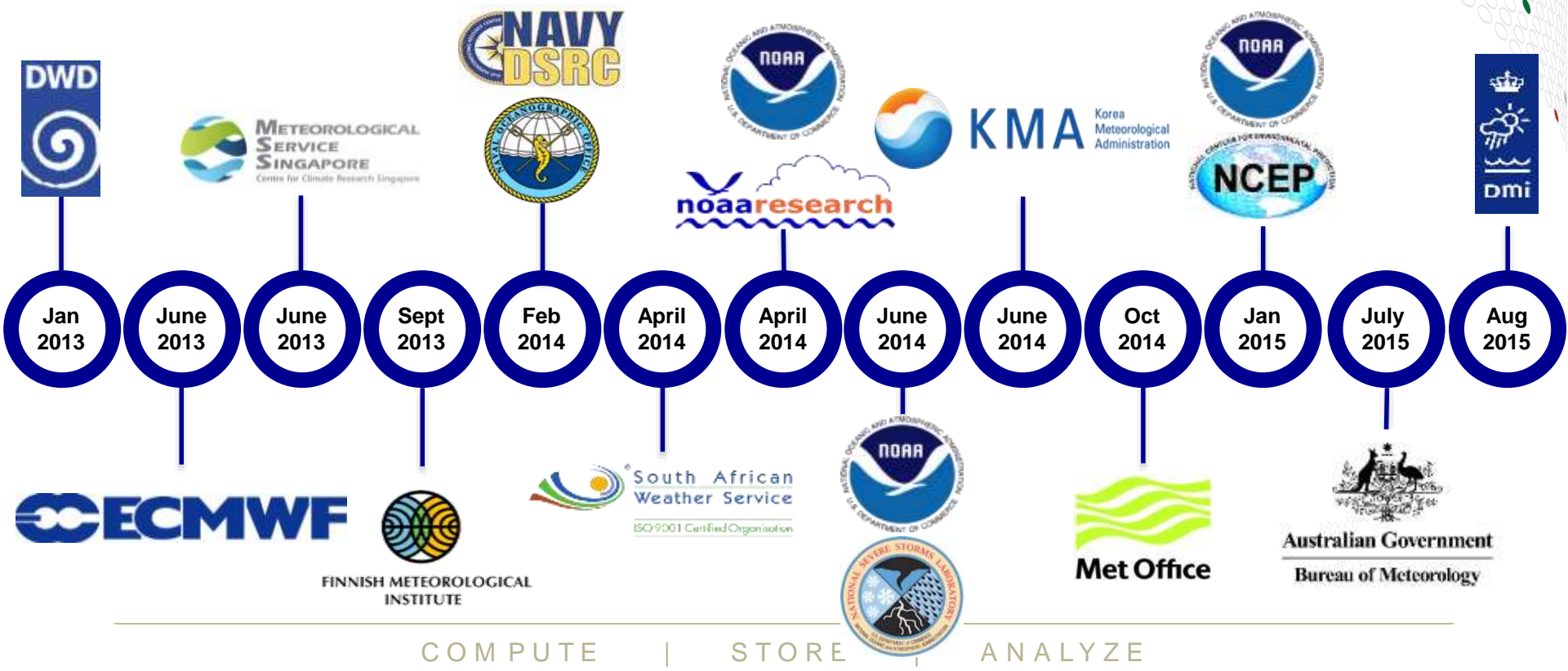
HPC User Forum

Cray Announcements in Weather, Climate and Oceanography over the Last Three Years

Timeline:

- **Jan 2013** — DWD
- **June 2013** — ECMWF
- **June 2013** — Meteorological Service Singapore (Centre for Climate Research Singapore)
- **Sept 2013** — Finnish Meteorological Institute
- **Feb 2014** — Navy DSRC / Naval Oceanographic Office
- **April 2014** — South African Weather Service (ISO 9001 Certified Organisation)
- **April 2014** — NOAA / noaaresearch
- **June 2014** — NOAA / National Severe Storms Laboratory
- **June 2014** — KMA Korea Meteorological Administration
- **Oct 2014** — Met Office
- **Jan 2015** — NOAA / NCEP
- **July 2015** — Australian Government Bureau of Meteorology
- **Aug 2015** — DMI

COMPUTE | STORE | ANALYZE

Eco-system Technologies

- Workflows supporting single core jobs
  - Developed to support pre/post processing

- Shifter - designed as a scalable method for deploying containers and user-defined images in an HPC environment
  - Developed at NERSC to improve flexibility and usability of its systems for increasingly data-intensive workloads

- Data Virtualization Service(DVS)
  - NCEP shared storage (Geo and multiple clusters)
  - NVRAM memory hierarchy support, shared libraries,

- Multi Level Security
  - Cray system passed accreditation