The path to today's CSD/ESRL

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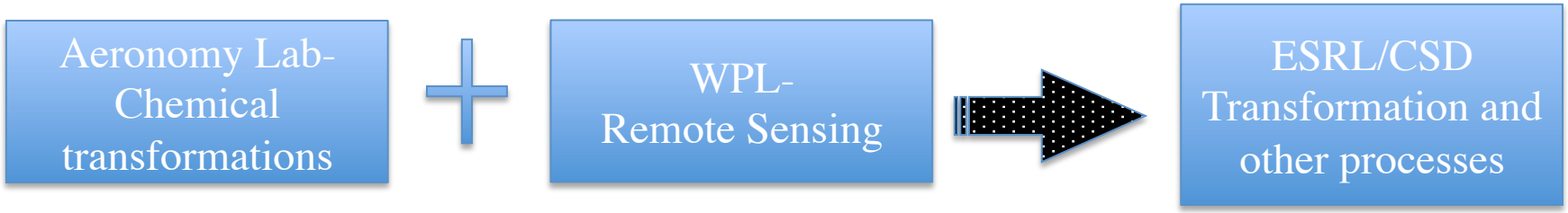
Origins of CSD/ESRL



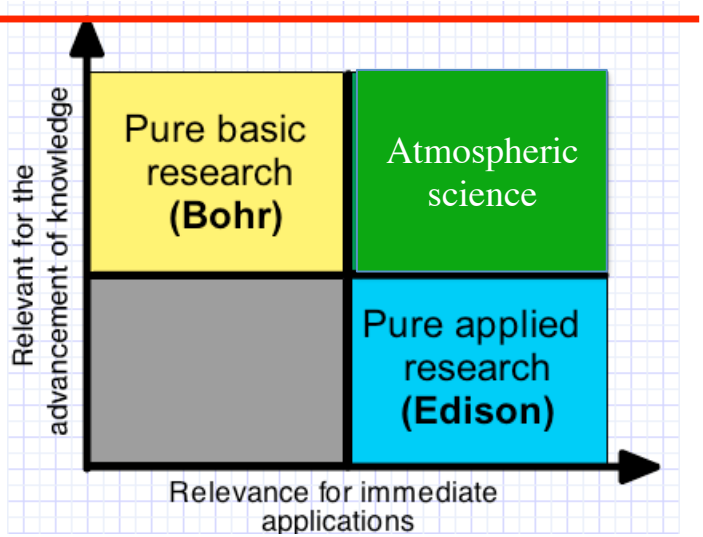
- Reorganizations are "disruptive" – used for positive transformations
- Internal reorganizations to augment, buttress, and expand capabilities
- Provide opportunities for scientific growth and scientist's growth

CSD/ESRL Science: Use inspired research

Use-inspired: with clear tangible outcomes

New science: not just using what is known

Integrated: emphasized interrelations between climate change, air quality, and stratos. ozone



GOALS: Provide information to support decision-making at different levels- national, regional, state, and international

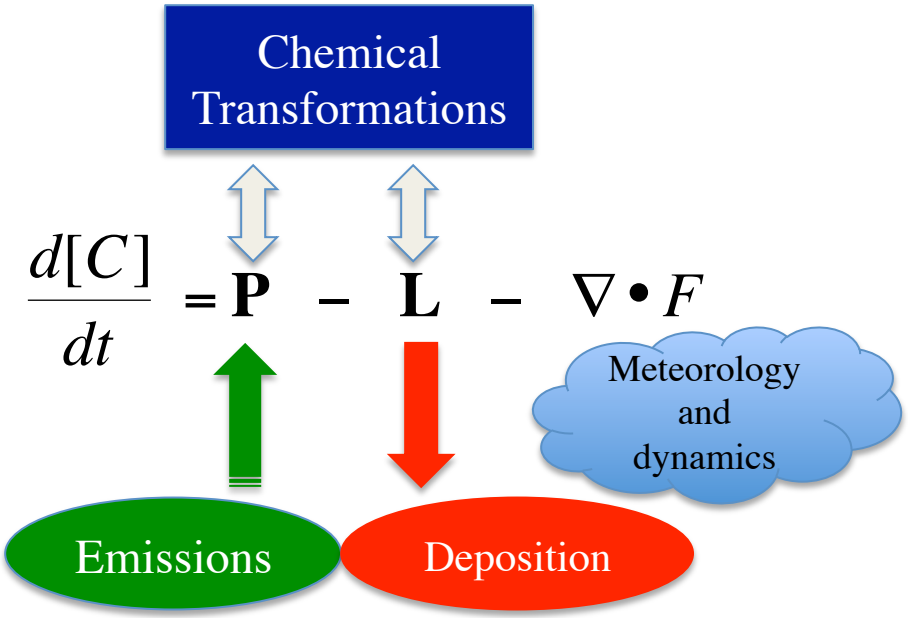
Approach:

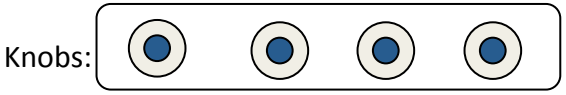
- Maintain core capabilities (USE INSPIRED)
- Be cognizant of, and anticipate, needs (USE)
- Focus on strengths… develop necessary strengths… partner with strength (PROVIDE RELEVANT INFORMATION WHEN NEEDED)

USERS AND ISSUES COME TO THOSE WITH CAPABILITIES AND UNDERSTANDING

Usable Information: Emissions and Beyond

- ✓ Key handle on environment
- ✓ Policy makers ask for it
- ✓ Is a major science issue





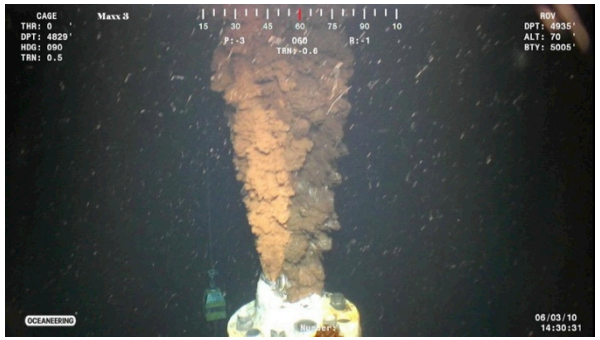
Useful, usable, information for science, policy, and management :

- ➢ Quantify– location and time specific
- ➢ Understand- Evaluate applicability to other places and times
- ➢ Evaluate species transport- For interpretation and use elsewhere
- ➢ Inventories- Usable information
- ➢ Future emission- scenario development and validation (science!)

Evolution of new capabilities

Emissions from Deepwater Horizon:

- Information for national need in time of crisis
- Science
- New capability



Emissions from oil and gas activities

Air quality assessments

Role of aerosols in climate and AQ

<u>Bottom line</u>:

CSD was formed and transformed to address nations needs by bringing together capabilities, developing new capabilities, and morphing as necessary.