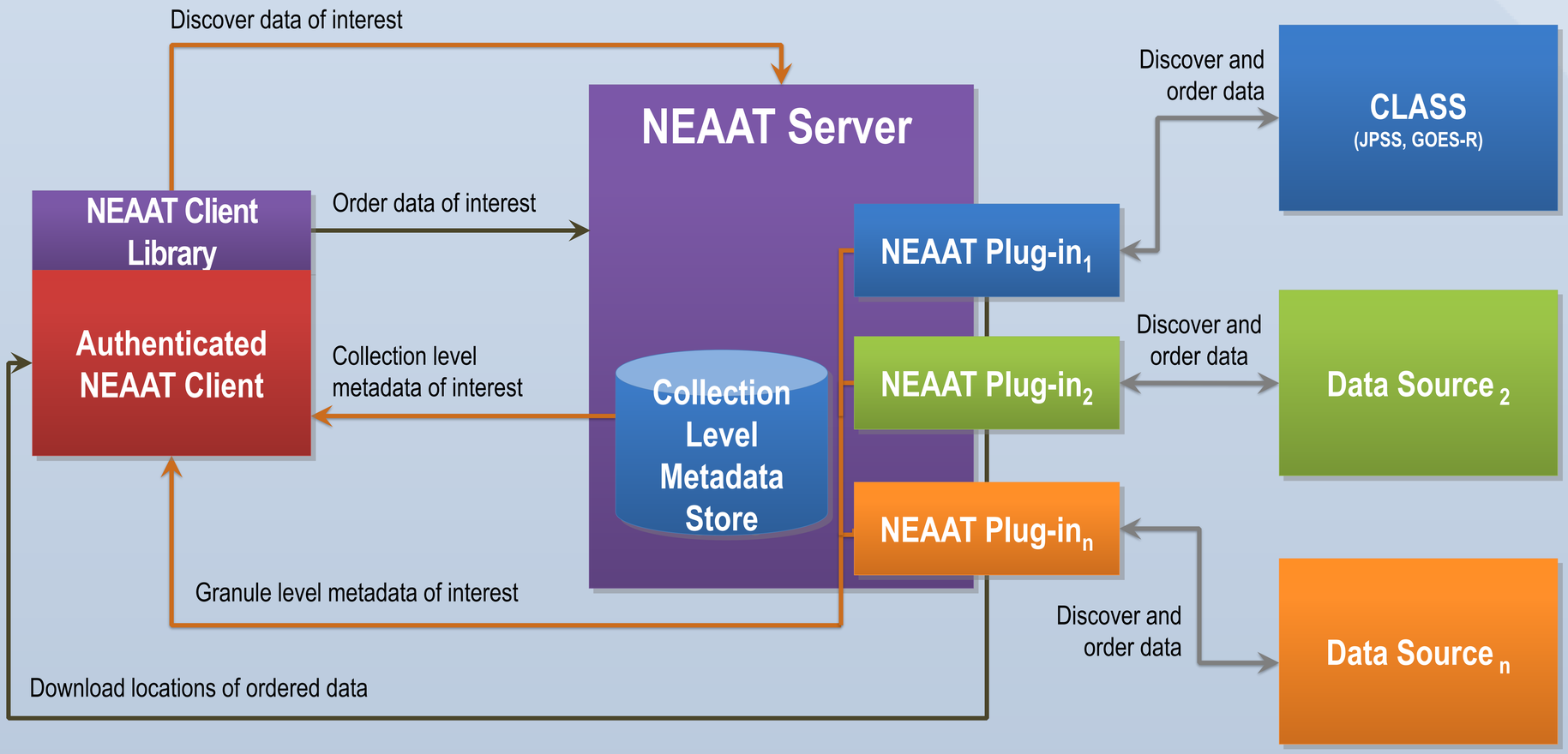
Comprehensive Large Array-Data Stewardship System (CLASS)

Accelerated Application Development (XAD) Process

NOAA/NESDIS/Office of Systems Development/Ground Systems Division/CLASS project

Accelerated Application Development (XAD) provides a process solution that is useful for rapid application development.



Overview of the NEAAT Architecture

NEAAT provides an API to the CLASS system that allows programmatic access (discovery, searching, ordering) to the data stored in CLASS. These data include data from existing satellites such as POES, GOES, and Jason-2, and will include data from future satellites including NPP, JPSS, and GOES-R.

The NEAAT architecture is based on the three high-level elements necessary for an access API:

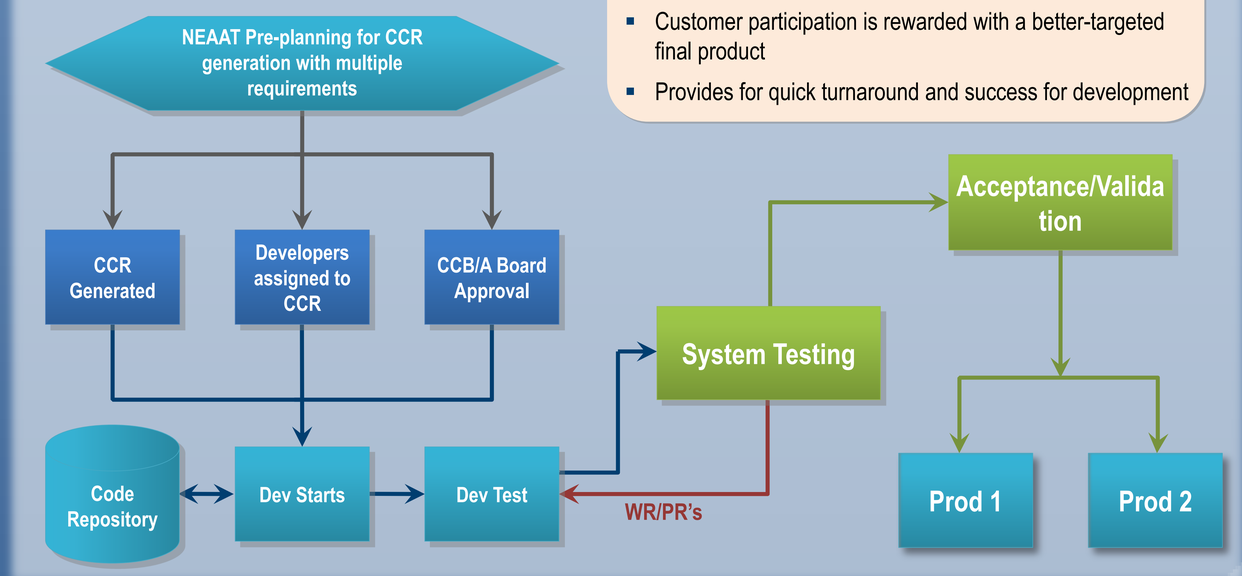
- Searching for appropriate data sets
- Ordering data
- Providing a framework for service integration

The diagram provides a high-level overview of the NEAAT architecture. This includes:

- Clients with access to a library of standard tools
- Server that stores a structured set of collection-level metadata that is searchable by clients
- Plug-ins that provide standard access to data sources
- Access to the data in CLASS and additional data sources (e.g., other NOAA data archives)

Process Highlights:

- XAD allows user requirements to be developed and tested in a quick-turnaround cycle
- A single multi-requirement CCR is generated to reduce change processing time
- XAD is test driven creating a shortened feedback loop allowing for refactoring with a high degree of confidence
- XAD focuses on creating a working system as quickly as possible while maintaining a software baseline that requires careful planning and execution
- Several iterations of a problem solution are allowed in the XAD process rather than understanding and resolving the problem in one pass
- Each iteration produces a more complete understanding of the problem and a more complete solution
- The XAD process allows use of productive strategies and tools and unconventional approaches in the development environment and life cycle
- Frequent planning keeps the NEAAT team focused on the most pressing customer requirements



Benefits:

- Joins business and project technical experts together into a high-performance team
- Customer participation is rewarded with a better-targeted final product
- Provides for quick turnaround and success for development

Acronyms:

API	Application Programming Interface
CCB	Configuration Control Board
CCR	Configuration Control Request
CLASS	Comprehensive Large Array-data Stewardship System
NEAAT	NOAA Enterprise Archive Access Tool
PR	Problem Report
WR	Work Request

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