



PBN Operational Approval Navigation Databases



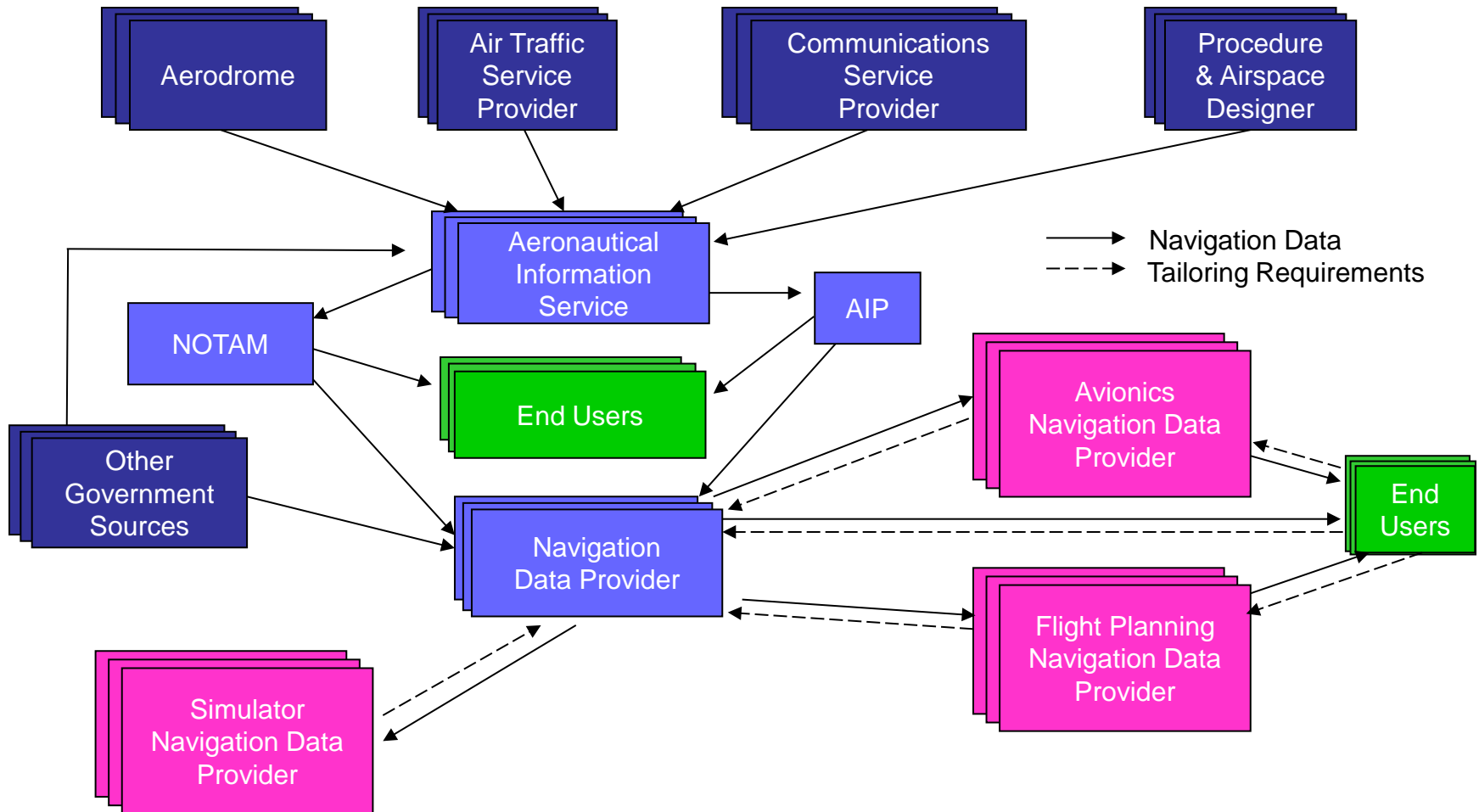
Requirement for Navigation Databases

- Most navigation specifications require a navigation database
- Exceptions are:
 - RNAV 10
 - RNAV 5
- Procedures for maintaining currency, checking for errors and reporting errors to the navigation database supplier must be documented
- Suppliers of the navigation data should hold an LoA

RNAV 10 and RNAV 5 Navspecs support legacy navigation systems (INS) which do not use an airborne nav database



Navigation Data Chain





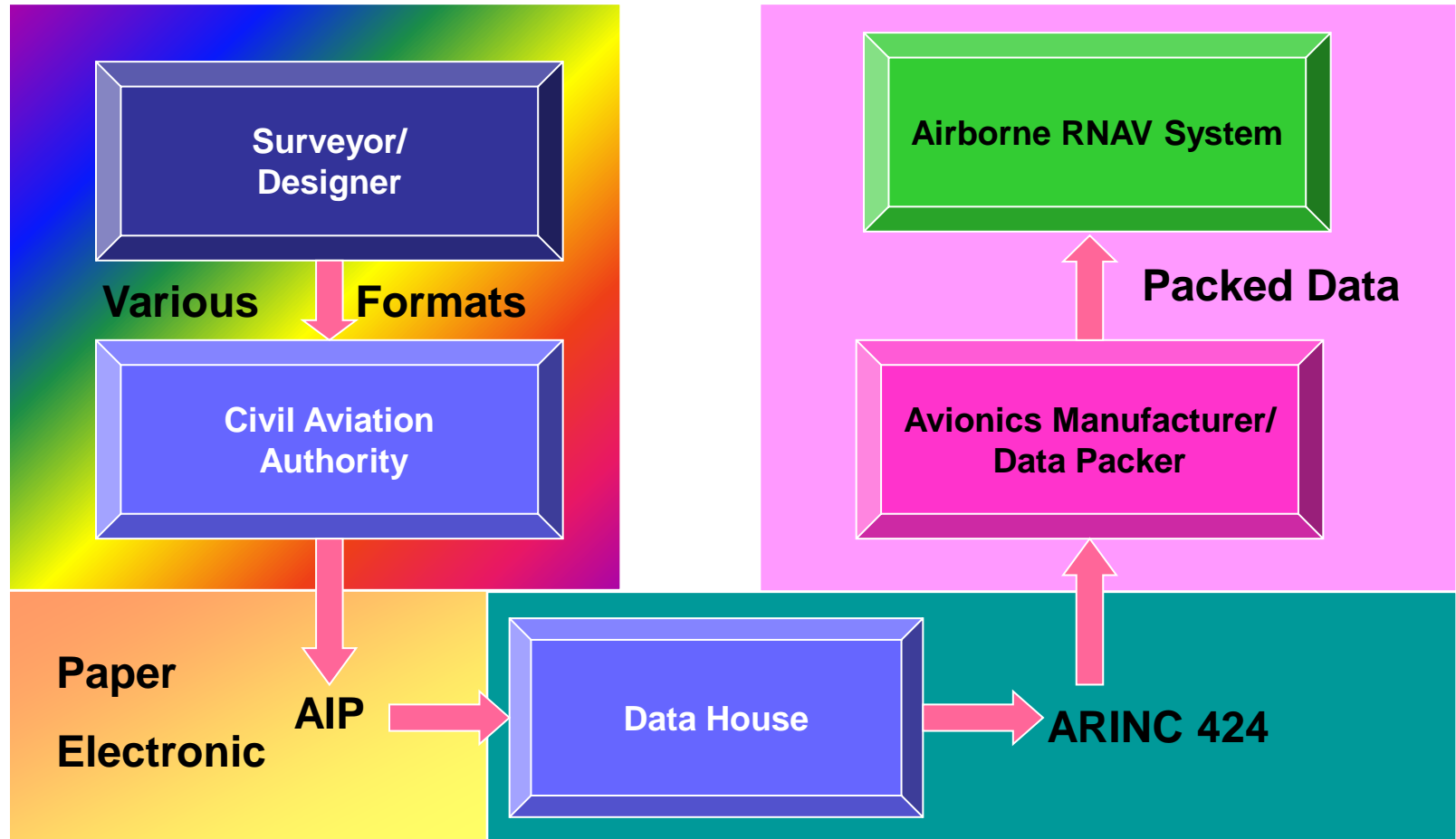
Navigation Data

- PBN is **dependent** on Nav Data
- Valid data is **critical** to flight safety
- Long chain from origin to aircraft
 - Opportunity for error/corruption at each stage
- Sound QA procedures need to be in place
- BUT operators responsible for managing their own safety
 - Procedures for checking, validating, managing data necessary

***Nav Database suppliers should have a QA process.
But QA cannot eliminate ALL errors! Operators must
have sound database management procedures***

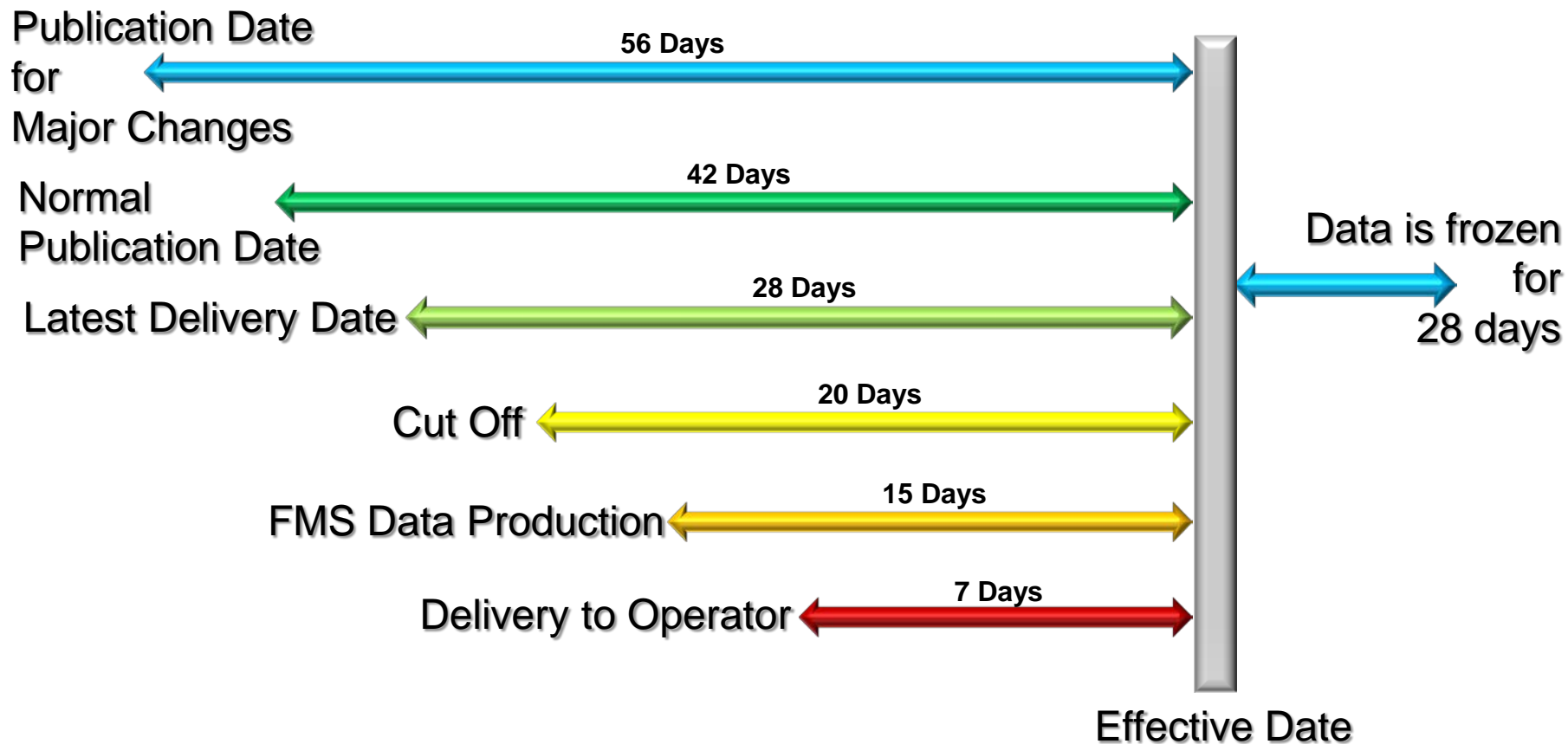


Navigation Data Formats





Delivery Schedule





Actions on delivery

- Packed navigation databases delivered to operator at least one week prior to the AIRAC effective date.
- Operator should have procedures in place to ensure:
 - correct version of database is loaded on aircraft
 - any database errors/omissions reported by the suppliers addressed expeditiously by flight crew briefing/removal of procedures etc.
 - any database errors/omissions identified by the operator reported back to supplier
 - version of the loaded navigation database checked for validity by the flight crew prior to departure



Nav Database Management

- Specific procedures required for RNP AR APCH
 - Responsible database manager
 - Documented process for accepting, verifying, and loading
 - Documented process under configuration control
 - Electronic nav database comparison required
 - Initial
 - 28 day cycle
- Similar database management procedures recommended for other operations

***RNP AR APCH enables operations with reduced navigation tolerances and are more sensitive to nav data errors
BUT nav data errors can occur on ALL operations and the magnitude is not related to the type of operation***



Maintenance Program

- Part of standard maintenance requirements
- Usually documented in Maintenance Manual
- Includes navigation database management



QUESTIONS?

