AMHS Implementation Workshop

Suggested Transition Process for AMHS Service

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Federal Aviation Administration

International Team – Points of Contact

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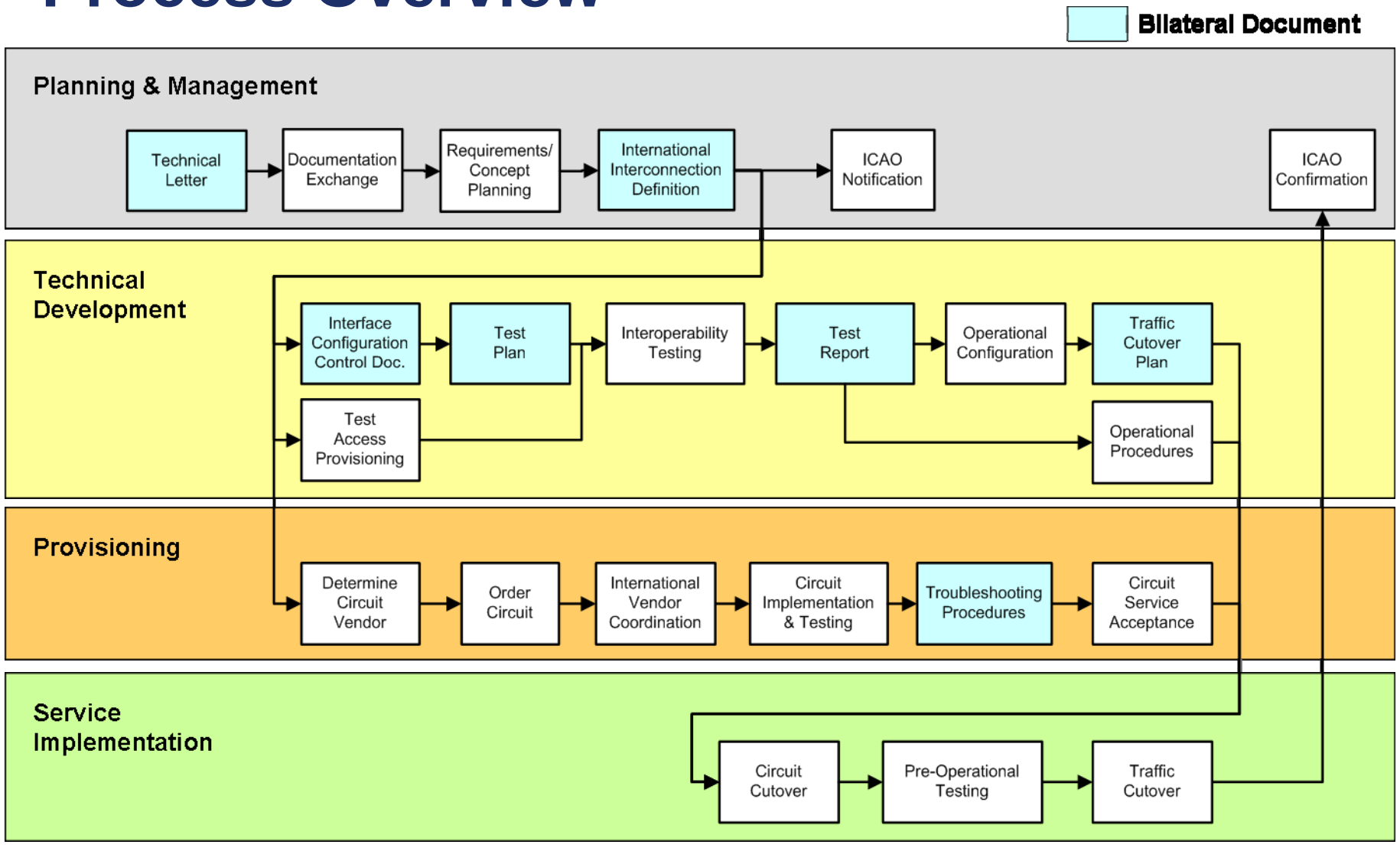
Purpose of a Transition Process

- ✓ Provide a well-defined set of activities that can be used to coordinate effort between international partners
- ✓ Allow planning and scheduling of people and resources
- ✓ Address all aspects of the cut-over exercise
- ✓ Provide and plan for an orderly procedure to maximise safety and mitigate risk

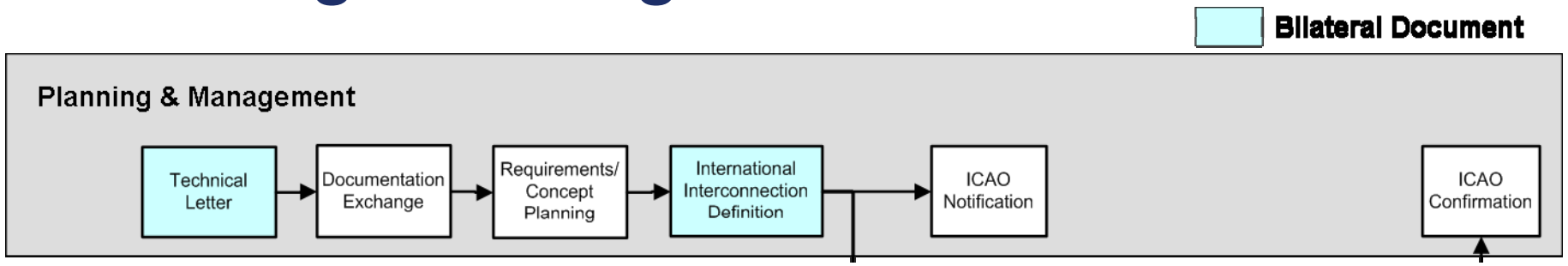
Lessons learned

- ✓ To note some observations from previous FAA activities that may assist States in their AMHS transition planning and execution

Process Overview

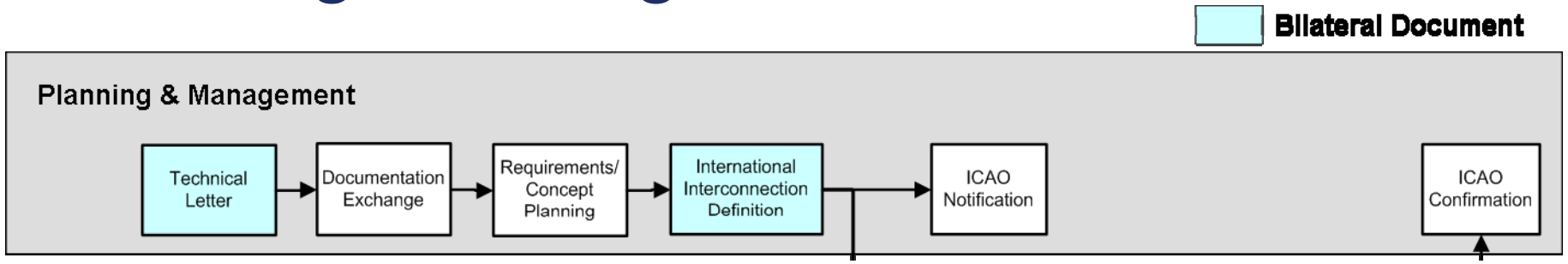


Planning & Management



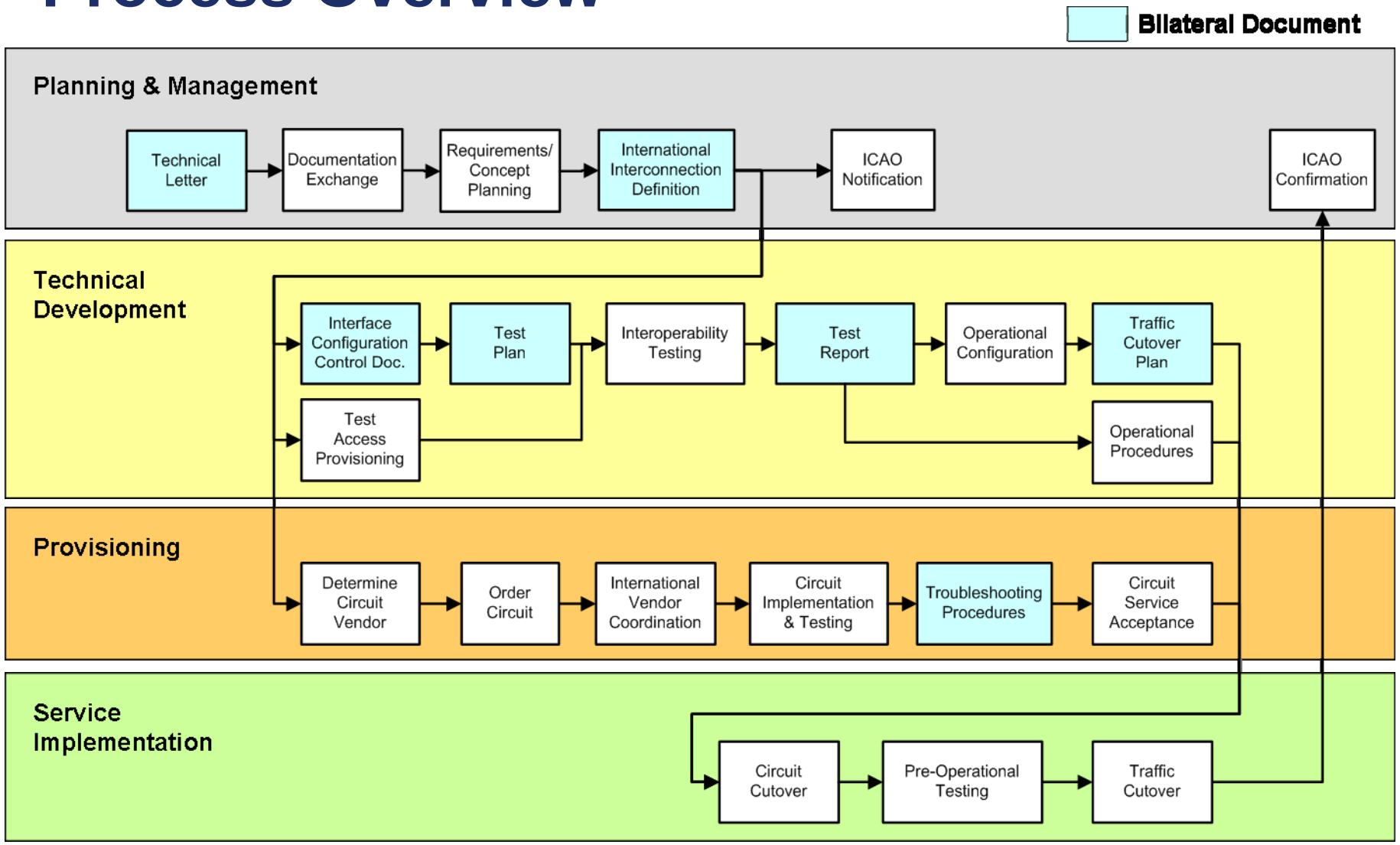
- ✓ **Technical Letter**
  - ➢ Declares a non-binding intent, at the Technical Level, to establish or change an international interconnection; signed by Technical Management from interconnecting parties based on an overarching International Agreement
- ✓ **Documentation Exchange**
  - ➢ Exchange of interface and other documentation
- ✓ **(Technical Interchange Meetings)**
  - ➢ Hold regular Project Status meetings
  - ➢ Lesson Learned: Establish a core team for the meetings

Planning & Management

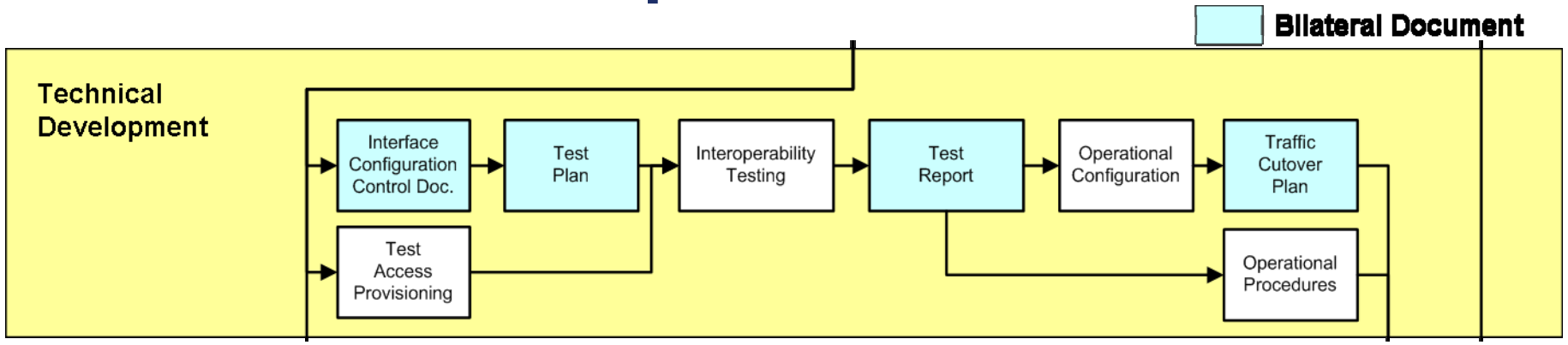


- ✓ **Requirements/Concept Planning**
  - ➢ Determine the operational interconnection architecture
  - ➢ Lesson learned: Define monitoring capabilities and expectations
- ✓ **International Interconnection Definition**
  - ➢ Document the interconnection architecture to allow parties to start telecommunications services procurement, and ICAO notification
- ✓ **ICAO Notification**
  - ➢ Notify ICAO of a planned new or changed connection

Process Overview

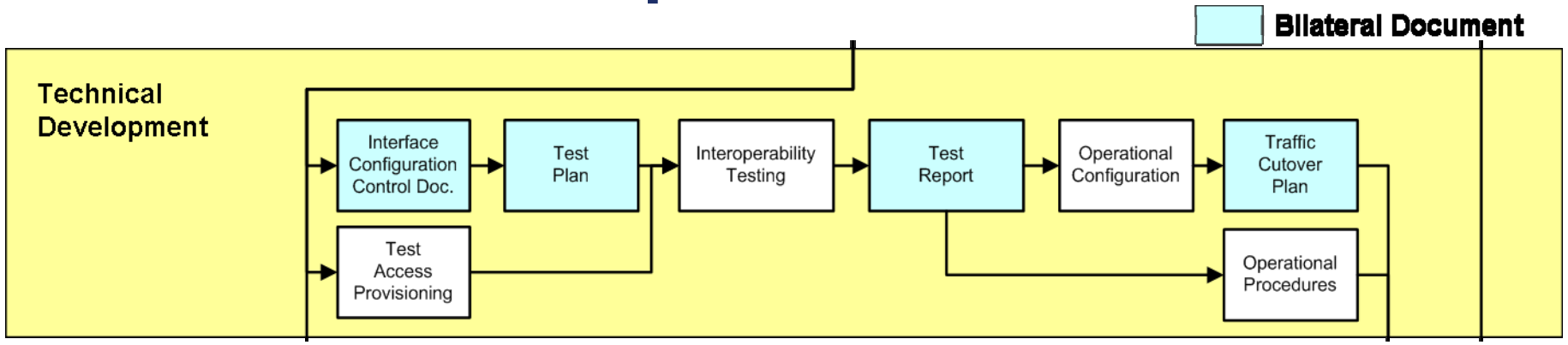


Technical Development



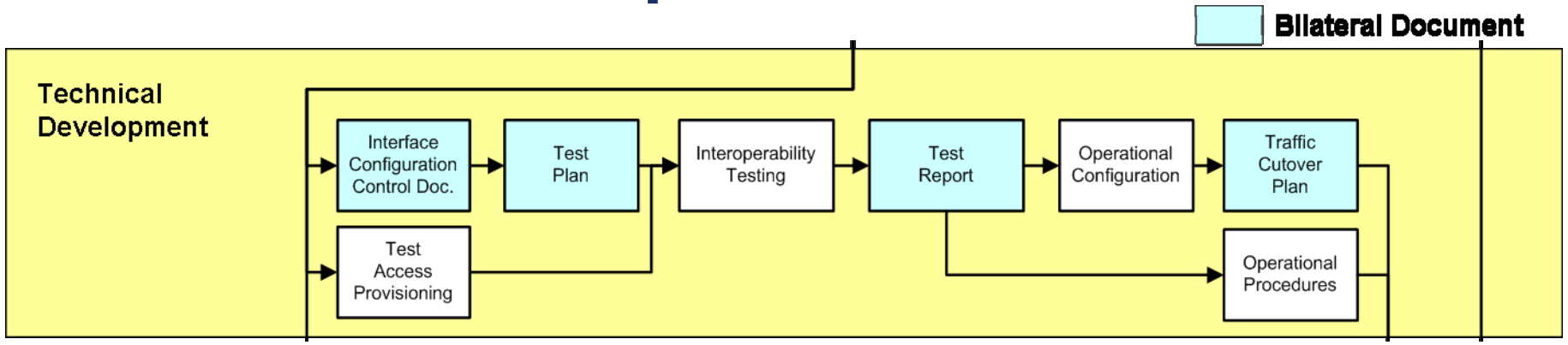
- ✓ **ICCD (Interface Configuration Control Document)**
  - ➢ Describe the agreed configuration values, parameters and options (excluding IP addresses) for all levels of the interconnection
- ✓ **Test Access Provisioning**
  - ➢ Configure and establish a test connection, usually via the Internet, for application to application interoperability testing

Technical Development



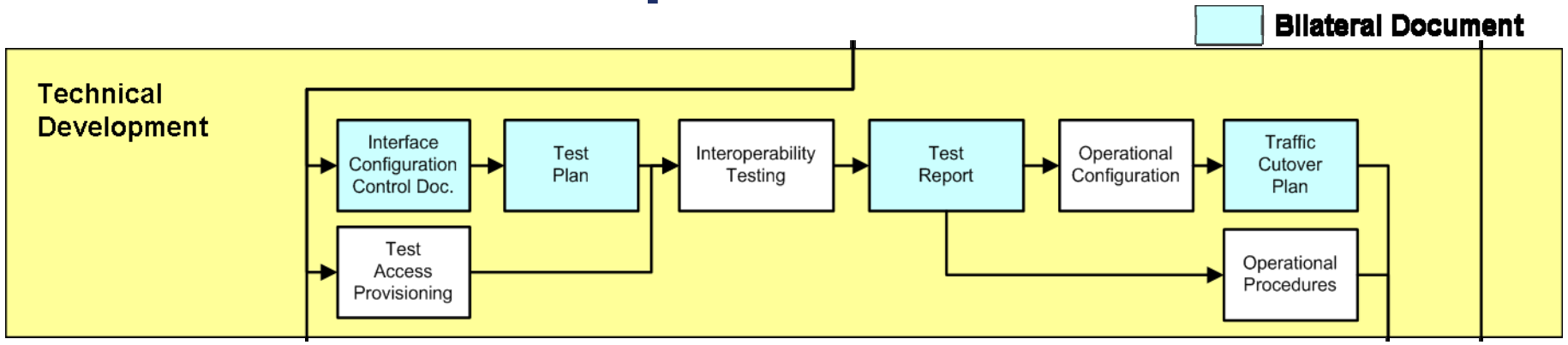
- ✓ **Test Plan**
  - ➢ Document the agreed interoperability tests
  - ➢ Lesson learned: Use the EUR-AMHS Manual Appendix E as the basis for interoperability tests (EUR Doc 020)
  - ➢ Lesson learned: Use realistic test data – as close to live as possible
- ✓ **Interoperability Testing**
  - ➢ Execute the agreed interoperability Test Plan
  - ➢ Testing with the WJHTC NADIN/AMHS Test Bed within the FTI National Test Bed (FNTB) with a test Enterprise Security Gateway

Technical Development



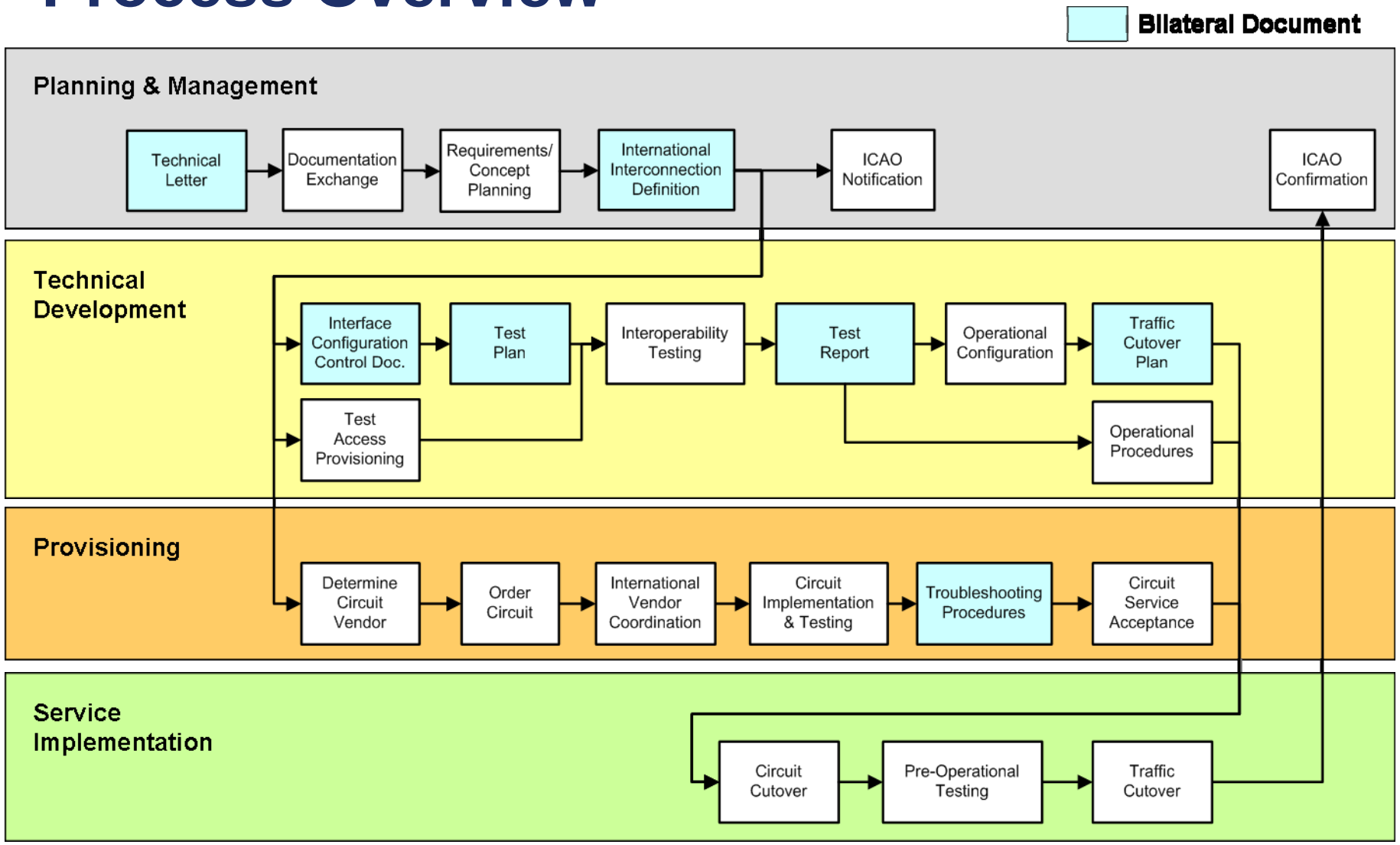
- ✓ **Test Report**
  - ➢ Document the results of interoperability testing; must be considered successful before proceeding
- ✓ **Operational Configuration**
  - ➢ Configure operational equipment
  - ➢ Lesson learned: Test as much of the operational configuration as possible prior to traffic cutover

Technical Development

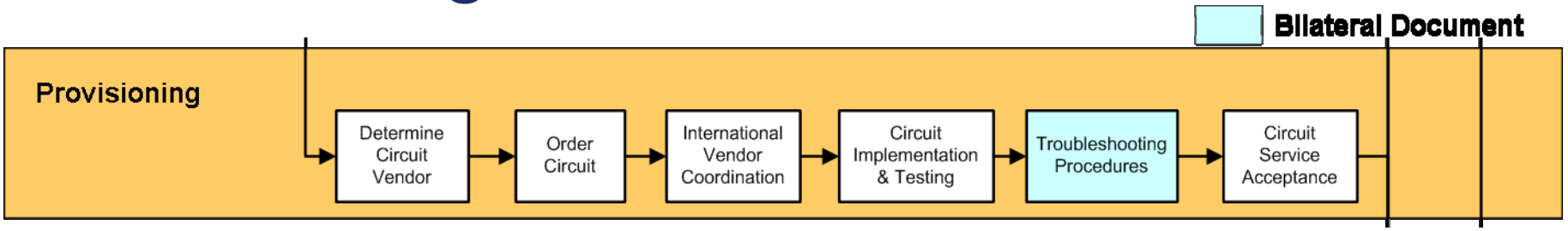


- ✓ **Traffic Cutover Plan**
  - Describes the series of steps to test and implement live traffic on the interconnection
  - Lesson learned: A well-defined cutover plan can avoid confusion and maintain orderly execution with maximum efficiency
  - Lesson learned: Plan to cut-over traffic incrementally to minimize potential impact in the event of a problem
  - Lesson learned: Pre-define fallback procedures
- ✓ **Operational Procedures**
  - Configure monitoring and management procedures for the new link

Process Overview

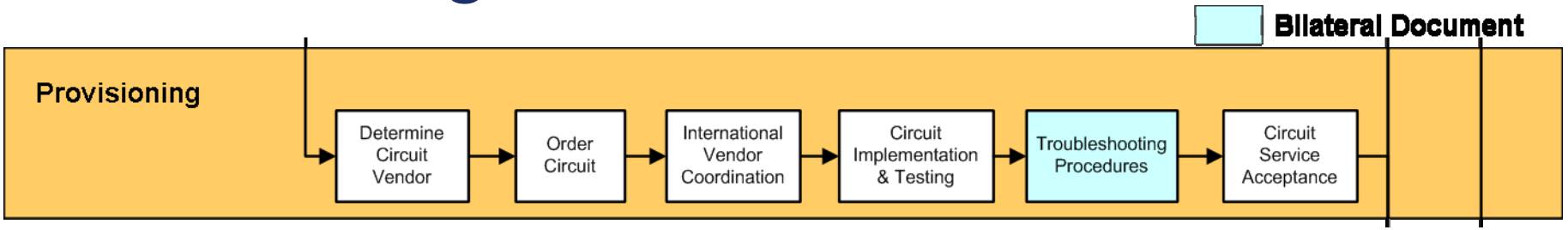


Provisioning



- ✓ **Determine Circuit Vendor**
  - ➢ Based on the International Interconnection Definition submit RFPs to telecommunications vendor(s)
- ✓ **Order Circuit**
  - ➢ Choose the vendor and order the circuit
- ✓ **International Vendor Coordination**
  - ➢ Ensure that the chosen vendor is in communication with the International partner's vendor to implement connectivity
  - ➢ Lesson learned: Hold a teleconference with telecommunication vendors and International partners to establish POCs and ensure implementation coordination

Provisioning



- ✓ **Circuit Implementation & Testing**
  - ➢ Performed by telecommunications vendor(s)
- ✓ **Troubleshooting Procedures**
  - ➢ In concert with telecommunications vendors describe procedures and responsibilities for troubleshooting circuit faults
  - ➢ Lesson learned: Document Points of Contact (POC) information
- ✓ **Circuit Service Acceptance**
  - ➢ Accept the circuit from the telecommunications vendor
  - ➢ Test any agreed IP monitoring (e.g. 'pings' of external firewall equipment)
  - ➢ No application connection is made at this stage

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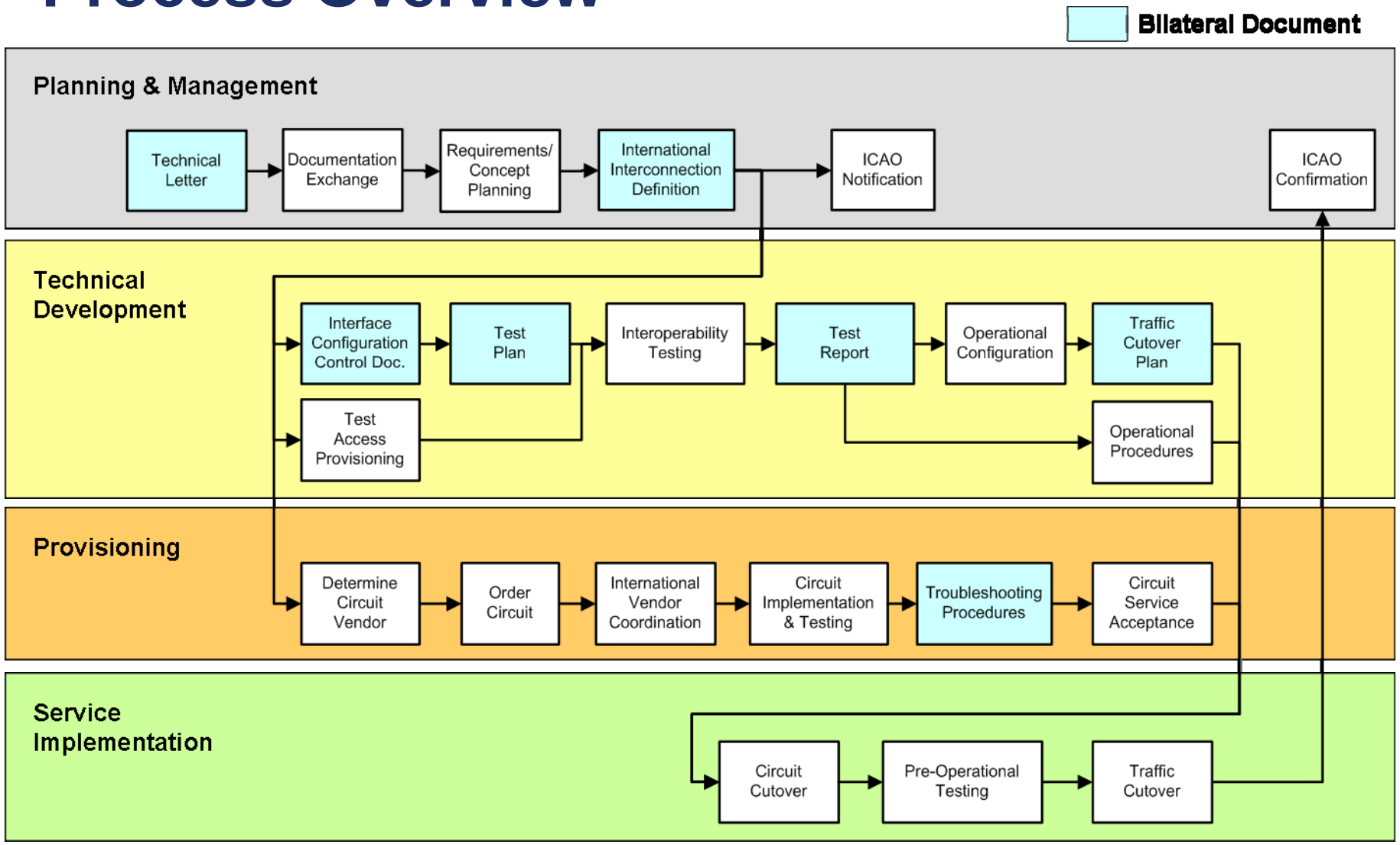
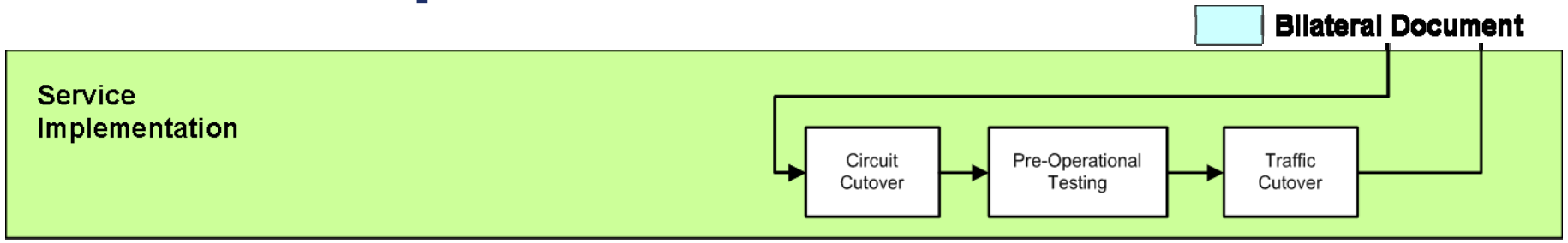


Service Implementation



- ✓ **Circuit Cutover**
  - ➢ Providing interoperability testing is successful, this permits test connection between AMHS applications - no live traffic
- ✓ **Pre-Operational Testing**
  - ➢ Exchange test messages between AMHS applications as described in the Traffic Cutover Plan
- ✓ **Traffic Cutover**
  - ➢ Execute the Traffic Cutover Plan for live AMHS traffic
  - ➢ Lesson learned: Maintain a fallback AFTN circuit for some period
- ✓ **ICAO Confirmation**
  - ➢ Notify ICAO of a new or changed service

Process Overview