C&A System Boundaries and Interconnections

This document will assist C&A teams identify their certification and accreditation boundaries. C&A requires clearly identified boundary definitions to create security test and evaluation plans. The ST&E plans assist evaluators review the components of a system and judge the adequacy of the security controls protecting the components. Completing this document is not required, but it is a useful tool that C&A teams can use to define C&A boundaries.

The first section of this document is the System Boundary Diagram, which is a high level illustration identifying the system interconnections and facilities for your system. Each major application should develop a diagram to define its C&A boundary. The diagram is divided into four quadrants, each representing a category of system interconnection.

- Quadrant 1 – Interconnected systems within the FSA organization
- Quadrant 2 – Interconnected systems within the Department of Education, but outside FSA
- Quadrant 3 – Interconnected systems external to the Department
- Quadrant 4 – Support facilities and subsystems (Development and Production, call centers, data entry, etc,)

Quadrant I identifies all systems within FSA with which your system exchanges information by listing each system name it its own box. In Quadrant II, identify the systems that the system exchanges information with that are within Department of Education, but not FSA systems. For each box, list the system name of the other system, the Office responsible for that system (OCIO, etc.) and the main location where that system is housed. Quadrant III focuses on the information exchanges that are made with your system and systems that are outside of the Department of Education, like with IRS or Lenders. For each of these boxes, list their system name, the agency responsible for the system, and the location where the main system is hosted. Quadrant IV is for the facilities related to your system. List each facility, including production and development. The next page is an example of a System Boundary Diagram.

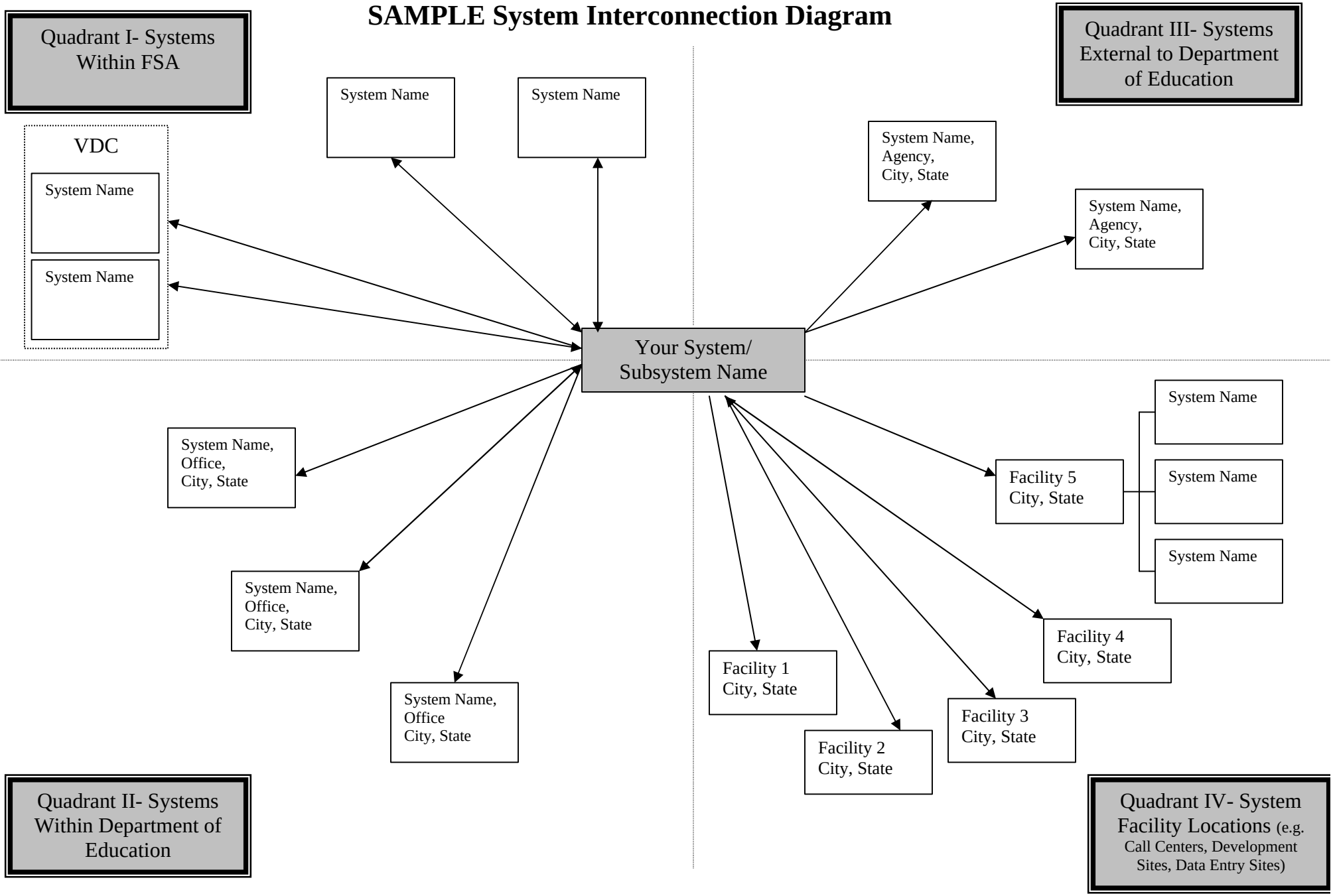
The second part to this document is the System Interconnection Information Table, which builds upon the System Boundary Diagram. The System Interconnection Information Table goes into further granularity regarding the interconnections of the system, based upon the information from Quadrants I, II, and III in the System Boundary Diagram. The first three lines in the table are examples, using DLXS as the main system. The first line is an example of a system interconnection within FSA, or one of the boxes from Quadrant I. The second example is based upon a box from Quadrant II and the third line is an example based upon Quadrant III.

Some systems have the main system and then additional subsystems, which will result in more than one System Boundary Diagram. However, all of the systems and subsystems can be inputted into one System Interconnection Table, if you wish. In this situation, it is recommended that for the first system, all of the interconnections (Quadrants I-III) are listed and then leave a blank line or two for separation, and then repeat the process for the next subsystem.

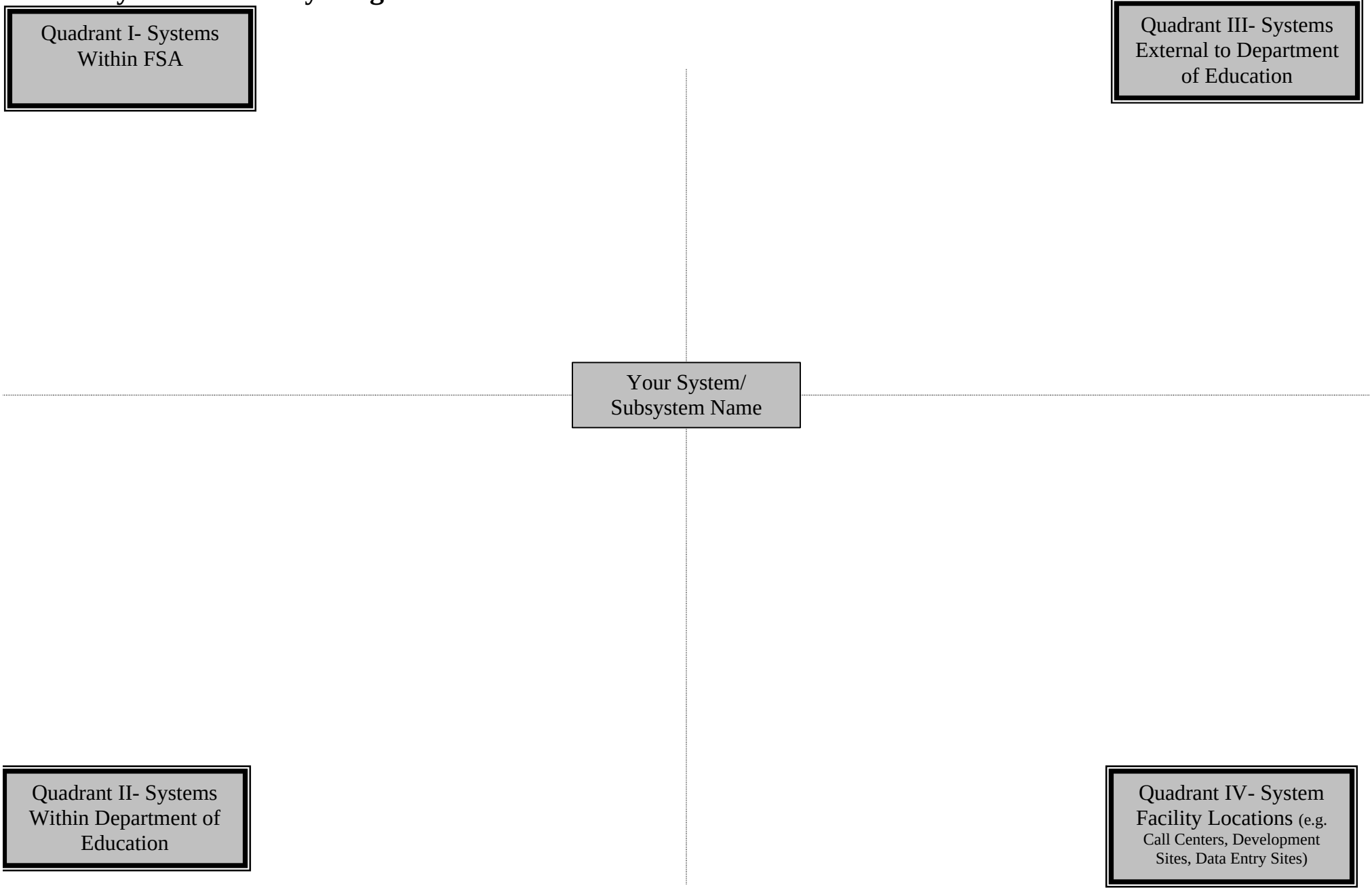
The information for Quadrant IV will be used for a different document, the C&A System Inventory File. The C&A System Inventory File will go into further granularity regarding the hardware and software contained at the individual site facilities.

Some of the information for this document can be found in the System Security Plan, the system Trading Partner Agreements or MOUs, and the Inventory Worksheets. Again, this worksheet is not required for C&A, but will be useful in the C&A process.

SAMPLE System Interconnection Diagram



System Boundary Diagram for



System Interconnection Information Table

Your System/ Subsystem Name	Interconnected System Name and number	Agency/ Office Responsible for Interconnected System	Data Being Exchanged (Privacy Act, Financial, etc.)	Flow of Data (Data to another system, receiving data from other system, data flows both directions)	Confidentiality Level (from Inventory Worksheet)	Transfer Protocol (http, FTP, etc.)
DLXS	Loan Origination	FSA	Privacy Act	Push		FTP
DLXS	Graduate Admission	Dept of Ed	Privacy Act	Push/Pull		http
DLXS	Wage Garnishment	IRS	Privacy Act	Push		FTP