In 1992, the University of California, Riverside (UCR) implemented a commercially supplied student information system (SIS)—Information Associates’ IA+, also known as SIS+. SIS+ was technically sophisticated for its time and allowed UCR to respond to the needs of a rapidly growing campus.

Times have changed and SIS+ is showing its age. As campus users—students, faculty, and staff—have become more numerous and their demands more sophisticated, they have also expanded their definitions of the types of information they require. The definition of acceptable “wait times” to obtain information has changed as well, becoming ever shorter. In order to utilize resources most effectively, users need and want to obtain data directly; they cannot rely on central campus offices to relay information to them. At a projected size of 25,000 students, the need to provide for SIS “self service” at all levels (students, staff, and faculty) is increasingly predominant. Looking forward, it is clear that the time has come for the campus to upgrade SIS+. The campus now seeks to determine which strategy—make or buy—will most effectively allow it to meet projected needs. As a result, a SIS Planning Group has been formed to evaluate alternatives and will present its formal findings to senior campus management in January of 2003.

To determine the appropriate strategy, the campus has reviewed its functional needs and presents them in detail in the “New System Requirements” section of this website (please visit http://www.cnc.ucr.edu/sis/index.php?content=new_sys_req/index.html). However, it is also important to note that the current SIS has numerous strengths that allow UCR to register, admit, disburse financial aid to, and support a student population in excess of 15,000. A high level discussion of the most critical unmet needs, as well as an overview of the strengths of the existing SIS, are as follows:

**Critical Unmet Needs:**

**Inability to Retrieve Data**

Currently, data can only be extracted from SIS+ by a few specialized users and programmers with knowledge of a relatively little known and complicated reporting language (FOCUS). A report as simple as a list of current students in a major cannot be run by anyone other than these technical staff. This inability to easily obtain data prevents many of our departments from fully analyzing current campus needs or
projecting future ones. The lack of a simple-to-use query tool and a robust reporting engine are the most commonly reported inadequacies of SIS+.

**Difficulty Modifying the System**

SIS+ uses a proprietary, non-relational database IBM file structure known as VSAM. Moreover, the entire system is built on 3270 screens and COBOL code. Rapid Application Development (RAD) tools or third party SQL query engines / application development tools are not available for SIS+. As a result, the campus frequently can respond only to those changes that are mandated by law or needs that have reached a crisis level. An improved system must have as its foundation a modern relational database—Oracle or DB2. This will provide for maximum scalability and flexibility, allowing the campus to more easily respond to changes in size and user needs.

**Limited User Interface**

The current interface is unfriendly and difficult for all but constant users of the system to navigate. Additionally, as services and systems other than SIS, such as Blackboard and campus e-mail, have been developed, multiple sign-ons and passwords have proliferated. Users (including faculty and students) must navigate numerous systems in order to accomplish their daily tasks. This leads to increased frustration and decreased productivity. An improved system must provide a portal environment that allows for single sign-on to multiple campus systems and it must be customizable to the individual needs of users.

**Strengths of UCR’s Existing SIS**

The need to improve the current student information system is evident. In devising its planning strategies, however, it is critical that the campus not lose sight of the many things SIS+ does well. SIS+ has strong core functionalities in the areas of admissions, financial aid, student business services, and student records and these functionalities must not be compromised. A discussion of these key strengths follows:

**Integrated Information**

SIS+ maintains core bio-demographic, academic, and financial information and this data is shared between modules, allowing for non-repetitive data entry and dynamic updating.

**Robust Admissions Module**

UCR’s current SIS stores and tracks applicant data in order to facilitate admissions decisions.

**Robust Financial Aid and Student Billing Services Modules**
The current SIS performs financial need analysis and determines financial aid award eligibility. SIS+ also performs fund management (including management of work study) and disbursement at both the student and account level. The system also provides for the billing and collection of student and non-student accounts, such as sundry debtor (A/R) and contract billing (SIS further allows for application of credits within a customer’s account).

Very importantly, SIS+ incorporates a hierarchical accounting strategy (this is especially important concerning the application of payments to outstanding fees) and carries forward the offsetting Full Accounting Unit (FAU).

**Robust Student Records Module**

SIS+ provides for matriculation management, student registration, transcript generation, classroom scheduling, degree audit, and articulation of transfer work.

**Quick Response Rate**

SIS+ responds to user input quickly.