The IUPUI Enrollment Center: From Concept to Reality

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The IUPUI Enrollment Center Initiative was the result of a collaborative effort on the part of student services offices across the campus to take a student centered approach in the delivery of services. The mission of this new “virtual enrollment center” is to be the initial point of entry for prospective new and re-entering students. It provides information, services, and the necessary coordination to help students enroll in a wide range of courses and programs offered by IUPUI. This presentation will describe the evolution and implementation of the Enrollment Center Initiative. The concept was one outcome of a 18-month Total Quality Management process which included participants from academic and student support services offices. We will describe the progress to date, including some unexpected obstacles, and remaining goals to support the Enrollment Center project. Activities have included remodeling physical space to facilitate student service, cross training of current staff as well as the addition of new staff, and the establishment of a combined enrollment services phone room. Key to this effort has been the definition of business processes and business requirements to establish design specifications for needed systems development. Automated systems have been deployed via the web, IVR and kiosk. We will share examples of the ways that the Enrollment Center at IUPUI has contributed to increased commitment to improving the delivery of services to students across the Indiana University system.
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Profile of Indiana University Purdue University Indianapolis (IUPUI):
Indiana University-Purdue University Indianapolis (IUPUI), founded in 1969, has 19 schools offering over 180 undergraduate, graduate and professional degree programs. The schools that formed IUPUI came from both public and private traditions that had been well established prior to the 1969 merger of the Indiana University and Purdue University Indianapolis-based programs. IUPUI is a large urban campus serving a diverse population interested in degree programs as well as professional training and life-long learning opportunities. In addition to the degree programs, over 16,000 people take courses through the non-credit and certificate programs.

With a Fall 1997 enrollment of 27,036, IUPUI is the third largest university in Indiana and offers the most comprehensive set of academic programs in the state. Students attend credit classes on campus, at off-campus locations including area shopping centers and regional high schools, and via distance education opportunities. The IUPUI student body is a mix of recent high school graduates and returning adult students who reflect the diversity of a major metropolitan city. IUPUI is primarily a commuter campus and many students attend classes while balancing the demands of a work, family and community. A high percentage of our students are first-generation college-bound.

What is the IUPUI Enrollment Center?
The IUPUI Enrollment Center Initiative is very simply a new way of serving students. It represents an attitude and commitment to improving services to people who want to take advantage of educational opportunities available through IUPUI. The mission of this new “virtual enrollment center” is to be the initial point of entry for prospective new and re-entering students. It provides information, services, and the necessary coordination to help students enroll in a wide range of courses and programs offered by IUPUI. The Enrollment Center philosophy includes removing stumbling blocks, which may prevent students from successful admittance to IUPUI or enrollment in credit or non-credit programs. The Enrollment Center seeks to reduce the need for students to travel to campus or make several contacts to receive service or resolve problems. Two commonly asked questions about the Enrollment Center include:

Why do we need it?
IUPUI is a complex place with a number of programs and opportunities that people often don’t understand. By creating a single “front door” to the university where we can listen to what people want and need, we can do a better job of matching their educational objectives with programs we offer. By streamlining processes and procedures we can then do a better job of helping people through the enrollment process in a way that they feel positive and comfortable and ready to take advantage of what is available at IUPUI. We can also do a better job of making the necessary and appropriate transitional “hand offs” to the academic and student services support structures that will serve them as they continue as students at IUPUI.

Where is it?
The Enrollment Center is wherever students contact us—it can be through a telephone call, an e-mail inquiry, a letter, a walk-in appointment, a special outreach program at an area business or school or at a kiosk. By examining processes and developing integrated computer systems we will be able to better serve students regardless of where we interact with them.

The Evolution of the IUPUI Enrollment Center Initiative:
The Enrollment Center Initiative was one result of an 18-month Total Quality Management (TQM) effort which began in 1995 with the formation of the Student Enrollment Support Services (SESS) unit. The SESS group is comprised of representatives from 8 academic and student support services offices, including Admissions, Bursar, Financial Aid, Registrar, Student Affairs, Testing, the Office of Information Management and Institutional Research and Undergraduate Education Center. During the TQM process, five action teams were formed to address a number of student issues. The Entry Process Team surveyed students and conducted student and staff focus groups. The results of the surveys indicated that students were often confused and intimidated by the
institutional structure. The wide range of educational programs resulted in a number of separate “front doors” at IUPUI. Often prospective students had to first understand the structure of the campus before they could get the information they needed to decide to apply let alone enroll. Students reported that they were often “bounced” from one office to another and the single biggest complaint was the “run-around” which was required to obtain information, resolve problems and get enrolled. The Enrollment Center was designed to be a welcoming “foyer” or single front door that would help link students to the appropriate programs in a friendly and understandable manner.

During the TQM sessions, a shared mission was developed in recognition of the need of the SESS offices to act in collaboration and cooperation to better serve the needs of the IUPUI students, faculty, and staff. This required adopting a commitment to put the student at the center of our processes, rather than the requirements of individual offices or operational systems. The Enrollment Center was designed and implemented by representatives of the SESS group, primarily at the Associate Director level. The effort was developed with the support and guidance of the directors of the SESS group and with strong support from senior campus leadership including the Executive Vice Chancellor and the Dean of Faculties. A 12-member Enrollment Center Working Group was formed which included representatives from the 8 offices as well as University Information Technology Services (UITS). As interest grew in the project system wide, a representative from the Office of Student Information and Fiscal Affairs was added to the group.

First Steps: Defining the Enrollment Center:
In order to implement the Enrollment Center vision, several activities have taken place. Business processes were defined and used as the basis for the design and development of automated systems to support the Enrollment Center. Cross-functional relationships were established among student services units. Physical space was remodeled in order to create a more open and accessible area for students in the Enrollment Center. Communications links were formed and strengthened on campus and in the community. A standard for a campus kiosk was developed and kiosks were deployed at locations on campus and at remote locations.

Business Profile:
The Enrollment Center Working Group, in partnership with University Information Technology Services (UITS), engaged Proforma Corporation, a consulting company which specializes in business process engineering, to conduct a series of facilitated workshops to develop a “Business Model” for the Enrollment Center. The objectives of the sessions were to:
- Define the scope of the Enrollment Center’s responsibility
- Define the Enrollment Center business functions sufficiently to identify ways that automated systems could be developed to support Enrollment Center functions
- Identify ways to streamline the overall enrollment process at IUPUI
- Identify ways to substantially reduce referrals

The participants in the sessions included business experts from the offices of Admissions, Financial Aid, Registrar, Bursar, University College, Continuing Studies, and the Community Learning Network. Observers from UITS also attended the sessions but did not participate in discussions since the focus of the sessions was to gather information from the business experts. The sessions were documented using Proforma’s business modeling tool, Provision Workbench. The results of each session were published and reviewed.

The “Business Profile” session identified the mission statement, business objectives, organizations and roles, business functions, and a brief overview of business events and processes. A series of “Business Requirements” workshops resulted in the detailed definition of business objects, events and processes. The “Visual Design” workshop provided guidelines for the structure and physical implementation of automated systems to support the identified business processes. Each session also identified issues for resolution, recommendations and system considerations.

Although the development of the Business Profile and Business Requirements document required a significant investment of time from the participating business experts and UITS staff and a large expenditure of financial resources, the resulting document serves as a valuable tool in the continuing effort to implement the business functions defined. Because the document also identifies areas that are outside the scope of the Enrollment Center,
areas where integration and hand-offs should occur are easily identified. The document has been distributed widely on the IUPUI campus and other campuses in the Indiana University system and has aroused interest in the innovations taking place at the Enrollment Center.

Setting Objectives:
As a part of the effort to articulate the necessary business functions, the working group identified the key Business Objectives of the Enrollment Center.

- Reduce the time from initial application to orientation by reducing the delay in getting students into testing and orientation.
- Improve turn-around time in processing applications by anticipating problems and stumbling blocks.
- Improve information provided students by giving them more personalized information services.
- Relate prospective students’ interest to possible IUPUI programs
- Reduce confusion about the enrollment process for students, faculty and staff.
- Reduce the number of students who give up or drop out of the process
- Increase the number of students who are successfully packaged for maximum financial aid.
- Eliminate run-around and referrals by streamlining processes.
- Eliminate the need for unnecessary travel, or repeated calls, for students to have their needs met.
- Increase the number of former students returning to take classes by making it simple and pain-free to come back.
- Increase the understanding of processes available to students after initial enrollment including touch-tone registration, pay by credit card, and the financial aid automated phone system.
- Increase the number of visiting students who understand the steps required to enroll in courses.
- Handle student problems quickly by acting as an advocate for the student.
- Refer students, if necessary, only to offices and personnel who can provide ready answers.
- Keep up to date with all publications from all schools, departments and programs.

The Enrollment Center Working Group adopted a working definition of students who will be served by the Enrollment Center. Most continuing students should have the knowledge and experience to perform ongoing registration, obtain financial aid and plan course work without the specialized assistance provided by the Enrollment Center. The Enrollment Center expects to serve the following types of students: Beginning student, Transfer student, Intercampus Transfer students, Returning student, Visiting student, Adult Non-Degree Student, Graduate Non-Degree Student, Distance Education Student, Non-Credit/Certificate, Confused Continuing, Graduate/Professional. See Appendix A for a detailed description of each student type.

Determining Business Functions:
The "Business Profile" also identified business functions which the student can perform themselves using automated tools such as web pages and touch-tone systems. These functions include:

- Schedule Appointments: Students will be able to schedule, reschedule, and cancel appointments with various IUPUI organizational units for campus tours, orientation, placement tests, and information sessions such as pre-admission counseling.
- Submit Enrollment Application: Students will be able to submit enrollment applications electronically.
- Request Application Status: Students will be able to determine the status of their enrollment application at IUPUI and determine where they are in the enrollment process, the next appropriate steps, and any missing information that IUPUI may be waiting for to make an enrollment decision.
- Request Documents: Students will be able to request documents such as admissions and financial aid applications.
- Maintain Base Student Information: Students will be able to maintain information the university keeps such as name, address, telephone number and employer information.
- Submit General Questions: Students will be able to review questions and answers to general questions such as, “How do I apply for admission?”
• View Academic Services Calendar: Students will be able to access and view the academic services calendar.
• View Course Information: Students will be able to access and view course information including programs, courses, course descriptions, and prerequisites. Additional information provided includes degrees offered by the academic units, majors, concentrations, and certificate programs.
• View Fee Information: Students will be able to access and view all university fees including tuition rates, lab fees, locker rental fees, athletic development fees, etc.
• View Schedule of Classes: Students will be able to view the schedule of class sections offered for any semester for which the schedule has been published.
• View Individual Student Class Schedule: A student will be able to view a list of the classes for which he or she is registered.

Enrollment Center staff and service providers at off-campus locations will have the ability to perform all of the functions listed above on behalf of the student. In addition, Enrollment Center staff and other authorized personnel can perform the following business functions:
• Assist students with the completion and submission of federal financial aid forms.
• Enroll a student by making an admission decision and guiding the student through the next steps including scheduling placement tests and scheduling orientation.
• Maintain front-line communication with the University by conducting information sharing sessions and preparing publications.
• Process Admissions application fee payments
• Research specific student inquiries and respond to the student.
• Refer students to the appropriate university organization and insure that student needs are met.
• Evaluate the effectiveness of the Enrollment Center by seeking feedback from students, faculty and staff. The time from initial contact to admissions decision will receive special emphasis.

Identifying Business Information:
The business information required by Enrollment Center functions was also identified during the business modeling sessions. An analysis of the information requirements indicates that information needed by the Enrollment Center encompasses the information traditionally maintained across student services areas. The Enrollment Center staff will need to access information including:
Admissions requirements, financial aid eligibility requirements
Appointment schedules for testing and orientation
Admissions and Financial Aid applications
Advising information
Campus calendar
Class schedules and locations, course descriptions, school bulletins
Program information including degree and non-degree
Contacts who request information or materials
Fee information
Campus maps, campus tour schedules
Student Transcripts
Credit Articulation
Checklist and Encumbrance
Procedural information for Admissions, Financial Aid, Registration and Fee Payment
Next Steps:
**Design, Develop and Implement Automated Systems to Support the Enrollment Center:**
As the first step toward establishing the functional requirements for automated systems to support Enrollment Center functions, the technical staff analyzed the Business Profile and Business Requirements completed by the Enrollment Center Working Group and Proforma. The analysis resulted in the conclusion that the Enrollment Center application would not require many new automated processes to perform student services functions. Instead, a new way of presenting existing data from various legacy systems to students and staff comprised a major portion of the requirements. Legacy data is available via mainframe based Indiana University Student Information Systems which are maintained on the Bloomington campus. These systems are CICS/VSAM based and meet the student processing needs of the University, but lack the open architecture that would make integrated access easier. In addition, the Enrollment Center application requires data from several systems including Contact and Admissions, Financial Aid, Bursar and Registrar. Another significant requirement for the Enrollment Center application was an infrastructure to support appointment scheduling and referrals or hand-offs.

**Select an Architecture:**
Based on the initial review of the Business Requirements, a decision was made to deliver the application via the web. The decision was based on the need to make the application available to students and staff in the Enrollment Center, in other locations on campus, and at remote sites. Once the “thin client” architecture was selected the Enrollment Center application development effort appeared stalled for several months. The technical staff conducted a search for possible application architectures and development tools. No clear direction for a new application architecture emerged after several months of investigation. The need to integrate a new system into the application support infrastructure and the support costs of adding a totally new architecture were prohibitive. The market seemed flooded with new tools but each tool required development expertise, additional hardware and support. At the same time the search for an architecture occurred, current Student Information Systems were analyzed to map the location of data elements identified in the Business Requirements and preliminary prototypes of screens were developed.

About the time that the Enrollment Center project was getting started, another development effort was taking place at the system level. This project, called Insite, (Indiana Student Information Transaction Environment), created an application which allowed current students to see their own information including grades, financial aid, transcripts, class schedules and course descriptions via the web using Student ID and PIN authentication process. This system was developed in-house and leveraged the existing application architecture. The system was well received by students but since it was based on student PIN authentication, it was not available for staff or the general public. These features were planned as further enhancements.

**Combined Development Effort:**
The Enrollment Center Project had received attention from other Admissions offices and system level administrators and the desire emerged to make the functionality of the Enrollment Center available throughout the IU system. Several areas of overlap between the Enrollment Center requirements and future plans for Insite were noted and the projects were combined. Funding was approved to select the highest priority items from each project and deliver them in a combined project. The items under development and scheduled for delivery this fiscal year include Service Provider Enrollment Tracking screens, Student Application Credentials Tracking (admissions status via web and IVR for students), Public version of the Schedule of Classes on the web, Financial Aid Certification, Web based rosters services for faculty, and Student Account Balances for Touch Tone Payment. Additional deliverables for the fiscal year include a scheduling and group collaboration infrastructure, an Electronic Admissions application, and more web-based services to provide information from administrative systems.

**Short Term “Hits”:**
In order to provide some immediate application support while the larger projects were designed and developed, some short-term solutions were also delivered. The Enrollment Center and IUPUI Admissions Office needed a flexible and expandable contact management system because the existing system wide mainframe contact did not meet the needs of the urban campus. The “Enrollment Center Prospect System” was developed to allow customized tracking of student contacts and their requests for materials such as view books and applications. The contact system generates files of requested materials daily, which are downloaded to a mailing service where
customized letters and packets are prepared and mailed. Web pages for Enrollment Center staff were also developed and contain “Frequently Asked Questions” and serve as a means of cross-training and cross-functional service to students.

**Web-based Kiosks:**
The Enrollment Center Working Group identified the need for a tool to provide students and prospective students with information in a self-service format. University Information Technology Services (UITS) formed a kiosk prototype development project team. The technical team made decisions concerning hardware and software and resolved issues including security, ease of use, ease of modification to kiosk content, remote reboot and accessibility. The final product consists of an Intel-based, Pentium processor, 17 inch display with touch screen option, track-ball, web browser-based closed network interface, customized web pages, local multimedia archive for motion video and a self-contained cabinet. Internet access is confined to limited web sites. A camera was also installed to reduce potential vandalism of the equipment.

When the prototype was completed, UITS staff worked with the Enrollment Center Working Group to select locations for kiosks and tailor the content of the kiosk to each location. The Enrollment Center kiosk provides enrollment information, links to student services area home pages, links to information about schools and departments, and links to current student’s personal information. Kiosks located in the Community Learning Network Service Center in Glendale Mall, provides information about Community Learning Network’s programs, links to campus information, student personal information and links to student e-mail. Kiosks are planned for the Student Center and these will contain campus, school and degree information, links to student activities and links to student services offices.

The development of kiosks to provide students with information in a self-service format received favorable attention from students, campus administrators, other institutions and even state legislators. A new version of the web browser enables students to access their own personal academic information in a secure fashion via the kiosk and supports the latest web development technologies.

**Establish Communication Links:**
During the TQM process, the campus operators were surveyed as one way to determine what questions occur most frequently. The operators reported that they sometimes lacked the necessary information to direct calls effectively. The Enrollment Center Working Group determined that a way to communicate with the “front-line” of the campus was needed. The front-line includes campus operators, representatives from student services areas and academic units who are the first point of contact for students. Now, as a result, just prior to the beginning of each term, meetings are coordinated by the Enrollment Center staff as a means to provide updates and critical information to the front-line representatives. A front-line e-mail list and listserv has been established so that new information can be shared across campus quickly. The Enrollment Center has also established a series of web pages to provide a central repository of information and the answers to frequently asked questions from the Enrollment Center, student services offices and academic units. The combined phone room will use the IUPUI Help Desk incident tracking system to track calls, referrals and the need for follow-up activities. The system will provide base line data for assessment activities.

**Other system wide initiatives which lend support to the Enrollment Center effort:**
Projects including the Enrollment Center at IUPUI and the development of the Insite web-based application for student self-service, have contributed to an increased awareness across the system of how student services can be provided in a customer centered manner. The Proforma Business Modeling Methodology was used to define business processes for the system wide Financial Aid, Admissions/Contact systems. One result of these projects will be a combined specification for a new integrated system to provide student services. Projects to define business requirements for the Bursars and academic advising have also begun. The need to provide students with information and services in self-service formats such as web, kiosk and IVR and in a 24 x 7 time frame has become a goal of the for the technology organizations who support student services applications.
Benchmarking for Best Practices:
In addition to the assessment efforts identified through the business functions, representatives of the IUPUI working group including student services and the technology organizations joined a consortium of universities sponsored by the State Higher Education Executive Officers (SHEEO) and the American Productivity and Quality Center (APQC). This group conducted a study entitled “Benchmarking Best Practices in Electronic Student Services”. Best practice partners, who were selected from higher education and business, provided an in-depth look at best ways that student and customer services can be provided electronically. The findings of the study confirmed the vision for the Enrollment Center and provided valuable insight into ways that the Enrollment Center and student services offices can continue to improve.

Conclusions:
The Enrollment Center has become a model for taking a student centered approach by concentrating on the business functions needed to serve students. Once these business functions were defined and agreed across multiple student services offices, it was possible to identify stumbling blocks related to the enrollment process. It was first necessary to address confusing and sometimes conflicting policies and procedures before moving on to systems development efforts.

The successful efforts to define the business functions and processes required to support the needs of students have contributed to making the Enrollment Center a reality. Although some of the defined application needs could not be addressed in an integrated system specifically targeted for the Enrollment Center, the most critical needs for access to information for students and staff have been addressed.

The Enrollment Center continues to train staff to proactively guide and serve students through the enrollment process. The Enrollment Center continues to strengthen connections with schools and departments to further streamline the enrollment process. The Enrollment Center Initiative at IUPUI served as one critical catalyst for the Indiana University system wide effort to analyze the current state of Student Information Systems.
## Appendix A

Students who are served by the Enrollment Center

<table>
<thead>
<tr>
<th>Student Type</th>
<th>General Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Student</td>
<td>A prospective student who has no prior undergraduate experience.</td>
</tr>
<tr>
<td>Transfer Student</td>
<td>A prospective student who is transferring from or has previously attended another post-secondary educational institution.</td>
</tr>
<tr>
<td>Intercampus Transfer Student</td>
<td>A prospective student who is currently enrolled, or has attended, another IU campus and wishes to attend IUPUI.</td>
</tr>
<tr>
<td>Returning Student</td>
<td>A prospective student who has previously attended IUPUI.</td>
</tr>
<tr>
<td>Visiting Student</td>
<td>A prospective student who is pursuing a degree from another non-IU post-secondary institution and wants to enroll in credit classes at IUPUI.</td>
</tr>
<tr>
<td>Adult Non-Degree Student</td>
<td>A prospective student who does not wish to pursue a degree program, but wishes to enroll in classes at IUPUI.</td>
</tr>
<tr>
<td>Graduate Non-Degree Student</td>
<td>A prospective student who has attained a baccalaureate degree, is not seeking and undergraduate degree, and wants to enroll in classes at IUPUI.</td>
</tr>
<tr>
<td>Distance Education Student</td>
<td>A prospective student who does not want to take classes on campus.</td>
</tr>
<tr>
<td>Non-Credit/Certificate Student</td>
<td>A prospective student who wants to take non-credit or certificate classes through the School of Continuing Studies.</td>
</tr>
<tr>
<td>Confused Continuing Student</td>
<td>Any student who is currently enrolled at IUPUI and is confused about the “next steps” in the enrollment process at IUPUI.</td>
</tr>
<tr>
<td>Graduate/Professional Student</td>
<td>A prospective student who wishes to take a class and has relevant experience, either through an advanced degree or significant professional exposure, in an academic area that may allow the student to forego prerequisite classes.</td>
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Table From: IUPUI Enrollment Center Business Profile, Proforma Corporation