RESHAUS INFORMATION SYSTEM

A tailor-made innovative system for Residence Halls

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Category: Administrative, Assessment, Information Technology, Fundraising, Professional Development and related
EXECUTIVE SUMMARY

The Tecnológico de Monterrey is a Mexican private educational institution that was founded in 1943. At the present time it has campuses distributed throughout the country, and academic centers in Mexico and other Latin American countries; it also has international offices in North America, Europe, and Asia. Through its Virtual University it is present all over the world, by means of learning networks and advanced information technologies.

Reshaus Information System emerged in 2004 with the mission of contributing to grant reporting and accurate analysis of the Residence Life & Housing Department of Tecnológico de Monterrey Campus Monterrey. Initially were developed system by system, more as specific requirement reports than systems; then, in view of the interaction of these platforms it was decided to merge them into one main system.

Since the first prototypes of Reshaus 7 years ago to these days, the system has served as the main technological platform to a total of 120 administrative users per semester. Should be noted also, these personnel have been providing Residence Halls’ services to 19,600 students from the Tecnológico de Monterrey Campus Monterrey.

Hence consolidated Reshaus, which consists of 9 operational modules (Housing, Intelligence, Behavior Forecast, Solutions, Residence Life, Medical Attention, Finance, Strategic Information, and Scheduling) which interact to provide accurate and timely information for the decision making process of the Residence Halls’ management team. To emphasize the importance of having a unique integrated system is how it saw the need to develop an own brand identity, and it was decided the name of Reshaus for it.

Reshaus integrated key aspects to generate knowledge and wisdom, through exploring ideas, developing models, abhorring redundancy, utilizing precise language, regard efficiency, and foster inventions as a result of continuous improvement strategies.

This homemade and tailored ERP (Enterprise Resource Planning) system is innovative because of the importance about the interaction between technologies with cool facts. The platform has a modern design and it transmit a state-of-the-art sense to the users, especially to the resident assistants that use this system to feed the events and activities that they had planned at the beginning of the semester.

Because of Tecnológico de Monterrey have been working constantly to be the most important Hispanic University for the use, and support of information technologies; is that innovation is strategic for us. Considering that in Mexico we do not have this kind of IT system, is that Reshaus is unique, and offer different applications for the administrators.

Reshaus is one of the efforts of the institution to provide a unique way of safety sense, social environment, comfort, and community development; which favors to the residents make friends for life, and increase their ownership to continue in Tecnológico de Monterrey. By means of empowerment the staff with information, Reshaus leverages the institution service success.
PROGRAM DESCRIPTION

Positive impact on student learning, transitions, retention, and/or success

This program provides a platform for sharing accurate information in an innovative, customized, friendly, and tailor-made way, so that staff’s daily work as well as the students’ living and education experience is positively impacted. This unique system remarks the efforts to provide special communication and information technology services inside an eco-friendly sustainable culture that works as an exemplary role-model for the Residence Halls. The first challenge was digitalize the manual reports to an IT single platform, which make the information available, easy to find and merged.

Relevance to institutional mission

The mission of Tecnológico de Monterrey is focused on “to prepare upstanding, ethical individuals with a humanistic outlook, who are internationally competitive in their professional fields, and become committed to the economic, political, social, and cultural development of their communities and to the sustainable use of natural resources”.

Reshaus emphasizes the importance to use technological information tools to provide online tailor-made services which leverages the Tecnológico de Monterrey mission statement. Remarking this ideology, it is that students, and Residence Halls’ staff as the main stakeholders of the Reshaus, are encouraged to promote international competitiveness based on knowledge, innovation, technological consolidation, and sustainable development.

Demonstration of success in addressing student needs and/or critical campus issues

Housing Module contributes with the continuous improvement of the reservations, accommodations, and logistics services of the Tecnológico de Monterrey Campus Monterrey Residence Halls. By this platform, the detailed information of residents can be available in time. Right now the Communication and Information Technology Coordination of Residence Life & Housing Department is working to add new applications to do more friendly this module.

Intelligence Module allows the management team to access more detailed information of the resident. This development facilitates the search and quantification of data.

Behavior Forecast Module consolidates the information generated from prevention and security reports that are made by the guardians of Residential buildings to show trends in student behavior not only in Residence Halls, but also in Campus Monterrey facilities.

Solutions Module is a platform that serves to lift the Cable, Internet and Telephony service reports made by residents (2,775 cases since the module’s implementation), also contribute to the administration and is the settlement for the team involved. Nowadays the reports have been resolved 20% faster although it has increased the number of them.

Residence Life Module had processed 3,280 events according to the Residence Life & Housing Department Wellness Wheel (Occupational, Spiritual, Emotional, Environmental, Physical, Social, and Intellectual categories). This platform also contributes to the optimal management of student locations.
Medical Attention Module reports the number of consultations made throughout the semester both students and employees of Tecnológico de Monterrey Campus Monterrey.

Finance Module makes clear the management of financial resources in areas that handle shipping and receiving of payments, also monitors the information required to generate historical trends on accounting data to feed easy and clearly the SAP, and Banner systems of the Vice Presidency for Human Resources and Information Technology.

Strategic Information Module is a strategic tool that has the key technology indicators to evaluate trends to make decisions. Since the introduction of this module has increased efficiency in the resolution of the strategic plan of the semester.

Scheduling Module is the development that is responsible for the administration of websites, sending newsletters, and other user applications.

Importance to one or more program areas included in this category

The backbone to have chosen this category is the fact that Reshaus is an information system, as a part of the Information Technology area. In addition, the Administrative area is central to the operation of the platform, because any innovation in the system change the processes and the procedures to work in the Residence Halls. By the other hand, Professional Development area is clearly served by Reshaus, because our personnel is constantly trained to use this low-cost and versatile platform and to give a better service to the residents by using it.

Collaboration with academic affairs and other departments

As a part of the Student Affairs Direction, the Communication and Information Technology Coordination of Residence Life & Housing Department, had developed several projects and agreements with the Medical Services, Campus Operations, Accounting, Computing Services, Financial Support, Administrative and Information Processes, and Academic departments of Tecnológico de Monterrey Campus Monterrey.

Mainly, Reshaus has been developed with the constant support of regular students of the Academic Department; especially from the School of Electronics and Information Technology; also, some data extraction that is vital for the operation of the system is provided by the Administrative and Information Processes Department.

Originality and creativity

Reshaus is the first of its kind in Mexico, and probably in Latin America; for that reason it is constantly in innovation that allows encouraging creativity and originality. This system is unique because provides security, excellent performance, real time speed information, smart tools, and a top of the mind satisfactory student measurement controls as: medical profile, student affairs activities, academic ratings, and some other indicators.
Effective use of technology and other resources

The optimum use of our resources is achieved, mostly, through the usage of the technology, to which we have a strong link with the information systems of the Vice Presidency for Human Resources and Information Technology. In fact, Reshaus share a lot of data with those systems, as SAP and Banner. Technology is the backbone of this program; the system was developed in web-based databases using PHP, and now, Reshaus is migrating some of its platforms to the language .NET to be interlinked with other systems of the Institute.

Innovative practical use of research and/or assessment and linking to learning outcomes

Reshaus is a multifaceted ERP used by the administrators of Residence Halls, and by around 40 resident assistants per semester; these students, as a great work team, have been proposing improvements to the Reshaus Residence Life Module. As a learning outcome, our leaders knew the way to use this system as a technological ally. They have been registered most of the 3,280 events annotated in the platform. Similarly, secretaries, receptionists, and other employees learned to use Reshaus in their recruitment training process.

Evidence of sustainability

Reshaus remarks the efforts to provide the best services inside a quality and eco-friendly culture that works as an example role-model to the Residence Life & Housing community. This system promote the culture of recycling, of protect the environment, of work to the sustainable development, improve the management processes, give efficiency and efficacy to the service solutions, and to be at the top of the communication and information technological programs. Having strategic information permanently encourages take accurate decisions for students. Also, makes faster and easier the interaction with Campus Monterrey’s IT platforms.

Quality of program description and submission recognition

Reshaus, in the past has not identity as a unique main system, but was a conjunction of different singular information systems; some of them won the Student Affairs Department’s continuous improvement award. The Events System (now Residence Life Module) had a second place in 2007, the Management System (now Housing Module) had a second place in 2008, the Indicators System (now Strategic Module) had a first place in 2008, the Optimization System (now Solutions Module) had a third place in 2009, and the Control Access System (now Intelligence Module) had a second place in 2009.
ASSESSMENT DATA

Reshaus has impacted in the staff empowerment, ecology, and quality of service presents in the daily interactions among the members of our community and environment. The information in the modules leverages the decision-making, and resource allocation; creating a more effective operation and better planning. It also changed the paper based processes to promote the environmental care. In Mexico, Reshaus is the unique Information System oriented to the Residence Halls management.

Every module in Reshaus is connected avoiding the island information effect; the information is interwoven to speak the strategic message the module aims to share with the specific user.

The Reshaus customization facilitates the adoption of the innovation by the staff; along of the design and implementation processes, the development team has matched the person’s work profile, tasks goals and methods with the Reshaus best practices. This homemade low cost system is developed using open source tools, which represents important money saves and freedom from providers.

The Intelligence Module concentrates the profiles of about 2,000 residents each year. This is where staff gets knowledge of each person in an electronic file: resident’s name, age, telephone, email, address, contacts, parents, careers, building preferences, room assignments, and academic information. When in the past the resident’s information was stored in paper cards that were updated every semester, nowadays the electronic file saves money, time, and space because of the ease of the updating, and storing tasks the system delivers. The courses of action of the internal stakeholders are enriched with the use of a centralized data source, searching tools, and the customized views of the residents’ information.

Behavior Forecast Module enables an early alert approach which is based in up-to-date reports made by the guardians of Residences’ buildings. All along the time the Reshaus has been constructed, the employees were trained to fill up and check the online module, whose information has allowed managing not only several risk situations from residents’ behavior, but also infrastructure improvements, which impacts the wealth of our customers. There is near 3,200 situations documented, that are used to complete profiles and leverage decision making processes. Also the access control to the Residences’ buildings is managed; there are about 2,000 fingerprints registered and updated every year.

Strategic Information Module leads the planning of the operations made during the semester. In contrast with the past, the employees get knowledge about what needs to be done or improved; in other words, our staff is informed about their efforts’ results over the strategy. This is where the staff checks the actuality of the projects, and redirects the courses of action to accomplish objectives, which impact the customer satisfaction. This module is about indicators state, designed to measure the efficiency, and to show the outcomes, and efforts of the different actors who contribute to reach every goal.
Solutions Module tracks the fixes and improvements of the technological services delivered to the residents; since 2007 it have been attended almost 3,000 reports. Before this module, the issues with Cable, Internet, and Telephony were deficiently documented; hence the solutions were not as fast as it should be in order to contribute with the customer satisfaction. Solutions Module revolutionized the solving of problems, it provides information and organization for IT staff, improves the mending processes with a single reporting platform where knowledge is shared and put into action. With this module our call center employees are able to solve situations during the reporting, and it is remarkable that most of the reports are solved by our IT staff in less than a day. In 2007 the 53% of reports were solved in the first 24 hours, in 2008 were 53%, in 2009 the 66%, and in 2010 almost 70%; should be noted that each year has increased the number of reports not devalue the quality and speed of service.

Residence Life Module records every Residence Life activities that are made by Resident Assistants to strengthen the wellness of the residents. It improves the authorization and feedback workflow between the resident assistants, and staff. This module with about 3,280 events worked, supports the development of RA’s job to generate community with the residents by means of the events organization. The module aims an electronic register of the goal, budget, dates, location, and attendees scope prior to the event; after its realization, the information is updated and complemented with the total amounts of expenses, attendees, and a SWOT approach, all of these is used to learn, benchmark, and improve the next activities. The statistics present in this module are used to evaluate the RA’s and to forecast the activities that need to be done to assure the growth of the community according to the aspects of the Wellness Wheel.

Medical Attention Module takes information from the Residences Hall’s electronic application to develop the medical electronic file for the residents. The data collected is about the general health state of our residents, in order to get more knowledge for the future medical consultations received in the Campus medical facility.

Finance Module reports, monitors, and makes trends using the information about monetary themes. In this module the staff finds the information of the departmental and residents accounts, so it can be learned the financial moves that need to be made. Here it is the tracking of the resident’s payments inside the Residences Halls, and in the other hand it is the tracking of the payments made to suppliers. The connection with the institutional SAP and Banner systems is made by means of the documentation processes inside the Finance Module.

Reshaus encourages the formation of an environment where the continuous improvement culture is the main goal for every member of the community. It recognizes the value of the real-time, accurate, and strategic information to take actions, but also it engages the team with the goals of the institution, and the delivery of high quality services to our community.

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ANNEXES

Picture No. 1. – Reshaus Information System portal (http://reshaus.mty.itesm.mx).

Picture No. 2. - Nine modules stage at Reshaus (http://reshaus.mty.itesm.mx/menu.php).