Background Report

Team Name：Rebel Scrum

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Introduction

With the advent of economic globalization and the information age in the 21st century, computer technology, communication technology and computer network technology have developed rapidly, and the ability and level of automated information processing has been continuously improved, and it has been widely used in various fields of people's social activities and life. It is hard to imagine how our society and life would be if there were no "computers" or "software." And the digital transformation for enterprises and school is imminent. The institution who has finish the digital transformation can stand out in the fierce competition. It’s the high time to utilize advanced network and information technology to integrate resources and build an advanced, efficient and practical higher education information infrastructure. If our school can catch the opportunity this time. QUB will take on more responsibilities and will attract more talent students.

Background to Digital Transformation

Nowadays, more and more enterprises and government departments are under the pressure of digital transformation. From the beginning of traditional IT and security to the new era, the environment has undergone tremendous changes. In this pressure, we must make a “Leaping Development” for school’s informationization to enhance the school's management and service capabilities as soon as possible.

IoT and Intelligent Buildings

The “single spark” of the Internet of Things is starting a prairie fire .UK has formed a basic and complete IoT industrial system, and some areas have formed a certain market scale. Internet of Things is an inevitable trend of IT development. The Internet of Things is not far away, it is by our side, it is not an illusion that is inaccessible and distant. So we must have the confidences to implement it.

Background Research

Review

After years of informatization construction, QUB has completed the establishment of a campus backbone network. Some application systems have been completed, and these informatization construction contents have achieved many good practical application effects in the Ashby Building, Computer Science Building, and also provided a good environment for the school's information construction. But after research, the existence information construction has the following problems:

1. There are “Information Isolated Island”. The systems and data of the Academic Affairs Office, the Finance Department, and the Personnel Department are independent. The department data cannot be effectively and timely interacted, resulting in loopholes in financial revenue and expenditure.

Freshman data cannot be synchronized to various departments in time, which makes it difficult to carry out effective work in various departments;

Changes in student status, personnel changes, lack of information exchange, resulting in financial revenue and expenditure loopholes;

The information of the student office and the logistics department is not uniform, and it is difficult for students to deal with unexpected situations;

2. Lack of campus information centralized application and display platform, independent application system leads to lack of collaborative work ability, and lack of ability to provide users with personalized information services. Re-management of light services, information services for teachers and students do not have a good application experience.

 When students enter the school: the registration process cannot be obtained in time, and the welcome scene is disordered;

 When students are at school: all kinds of application services need to fill in a lot of duplicate information, which is very complicated;

 When the student leaves school: I don’t know the approval of the school leaving procedure, and still need to go to each business department to line up and seal;

At the end of the year: At the end of the year, the summary is filled out. It is still necessary to go to each system to calculate the workload and scientific research. It cannot be obtained and generated through the system.

 ......

3. Individual departmental information systems (such as educational administration, library management, asset management, etc.) are difficult to stand on their own information sets, conduct comprehensive information inquiry and decision analysis of the entire school, and the benefits that each application system can exert are not Better use and mining.

The overall situation statistics of the whole school are not comprehensive, not timely and inaccurate;

The enrollment rate and employment rate are difficult to count, the teacher title is difficult to count, and the arrears statistics are difficult;

 The teacher commented on the bonus, and the workload and scientific research could not be counted;

 Student award loan assessment, no reference data;

The counselor lacks the overall information statistics of the class being managed, and masters the overall situation of the class “scholarship, loan, arrears, attendance, grades”;

Talk about the material provided plus overview of other sources

Table 1: Arbitrary Table – above the table

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Opportunities

Those you have identified and imagined.  Outline potential areas that could be addressed.

Data sources

Overview of what is available from where, what could be available and how it could be gathered

Possible features

Initial thoughts on features that could be incorporated within a potential solution

Benefits

1. The effect achieved for students
2. The effect achieved for the teacher
3. The effect achieved for the leader
4. References

A list of references to documents (books, papers, web pages etc.) which are referred to in the main body of the text. Use the IEEE citation style as detailed here <https://www.ieee.org/documents/ieeecitationref.pdf>. There is some guidance on referencing at <http://www.qub.ac.uk/cite2write/home.html>.

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<http://www.51lunwen.org/shlwzmex/lw201803261642497596.html>

* How to

Appendices

Anything that breaks up the flow, but keep in mind this is not marked. It may be referred to briefly by the assessor.