Volunteers Needed!

Over the next one year, we expect full scale deployment of ERP services in the Institute. Before deploying these services, they must be thoroughly tested and improved until users are satisfied with the user experience and correct functionality. This is a time-consuming task and we need a large number of volunteers to help us with this task. We require faculty volunteers, student volunteers, admin staff volunteers, and project staff volunteers. Those of you who wish to volunteer your time may please send mail to Mr. Amit K. Chakraborty, amitc@iisc.ac.in

Internet and Networking Infrastructure and Services

Single sign-on for all IT applications is being implemented. It has now been implemented for WiFi services, VPN connection, and for online course feedback. Eduroam services have been implemented. A detailed plan has been drawn up for procuring equipment for a modern networked campus. The equipment is being procured through NICSI, a subsidiary of NIC and a Govt. of India company.

Welcome to Issue No. 3 of TERABYTES!

DIGITS (Digital Campus and IT Services) Office is a unit set up by the Institute to conceive, plan, and create a best-in-class information technology (IT) and networking system, and implement agile IT and networking services for operational excellence in the Institute. The first issue of TERABYTES was published in October 2017. The second issue was published in April 2018. This is the third issue. During April 2018 – September 2018, the activities of DIGITS have resulted in the following outcomes.

Project ISTAR

Project ISTAR (Implementing SAP S/4 HANA for Transforming Administration and Research) for ERP implementation commenced on February 15, 2018. The ERP licenses are being provided by SAP and the cloud services for implementing the solution are being provided by a company Ctrl-S. The implementation is being carried out by Wipro. During June – August 2018, the project has made adequate progress and reached the scheduled milestones. Project ISTAR is being executed in two waves:

- **WAVE 1** modules: Finance & Accounts; CSSP; HR & Payroll; Stores & Procurement
- **WAVE 2** modules: Academics; CCMD; Hostel & Mess Management.

WAVE 1 is scheduled to go live by January 2019 and Wave 2 is scheduled to go live in May 2019.

**Business Blueprint (BBP) Documents:** An important aspect of the project is preparation of Business Blueprint Documents for all the seven modules above. By the first week of August 2018, preparation of all the seven BBP documents was completed and signed off by the respective Business Process Owners (BPOs).

**Realisation Phase:** The currently ongoing phase is the Realisation Phase which is focusing on the modules of Wave 1.

**ISTAR Progress Monitoring:** Project ISTAR is being monitored by the Operations Committee with the Registrar as Chair and the Financial Controller as Co-Chair. The overall project is reviewed every month by the Executive Committee with DD (A&F) as Chair and DC-EECS Division as Co-Chair.
Eduroam Service

DIGITS is happy to announce that the TINA team has successfully enabled the Eduroam service in the IISc Campus. Eduroam (education roaming) is the secure, worldwide roaming wireless network developed for the international research and education community. All that you have to do is to use your IISc Email ID and password to connect to Eduroam when you visit any institute that is Eduroam-enabled. Also visitors/guests can use their institute Wi-Fi credentials to connect to Eduroam while they are visiting IISc. To know more about Eduroam, you may visit the webpages below:

https://www.eduroam.org
http://www.eduroam.ernet.in

Note: Eduroam SSID (Service Set Identifier) is hidden and not visible in those departments having old generation access points, as these access points have the capability of visibly broadcasting only one SSID (iisclwan). You can still connect to Eduroam by manually adding Eduroam to your laptop/mobile/tab.

Maintenance of Current and Legacy Systems

Since it would take another year or more for a fully operational implementation of a new ERP system at the Institute, there is a need to maintain the current IT and network services in a stable way.

User Acceptance Testing (UAT)

UAT is a vitally important step for successful implementation of any application as this enables the institute to test key business scenarios and processes in the ERP system and certify the system with respect to the requirements that were agreed upon before the go live phase. UAT assumes special importance in the context of the ISTAR project as any potential issue related to the configuration, training, or system scope in the test environment can be highlighted prior to the all-important go live date. The implementors of ERP carry out extensive Unit Tests and System Integration Tests before UAT. However, no amount of these tests can guarantee that the software will work when integrated into the operational pattern of the organization. Operational features that cannot be accounted for in earlier phases of testing can only be discovered during UAT. Failure to carry out UAT effectively will result in (a) unnecessary additional work on system developers (b) time delays in implementation (c) poor quality of implementation, and (d) cost over runs.

ERP implementation UAT is effectively like “parallel running” in that users can test and compare the results of testing from the new ERP System and old legacy systems for correctness. The key difference is that UAT uses key scenario testing for relatively short periods of time and is therefore less time consuming compared to the traditional ERP system “parallel run” which involves double entry of all processes.

For Wave 1, the UAT will be conducted during November-December 2018. During the UAT, it is imperative to provide immediate feedback to the project team so that the required changes can be made and the system can be re-configured and re-tested as and when required.

Data Migration to SAP ERP

Data migration is a critical activity with a systematic and phased approach for transferring data between (multiple) systems based on a specific migration methodology. An end-to-end data migration exposes the full data landscape of an organization in a unique way. Going through the migration process as such can reveal many unknowns in organizational data and data relationships and enables mapping of the full organizational data landscape. In addition, data migration supports the identification of data owners and would be a solid start for setting up data governance within IISc. Needless to say, data migrations are always complex in their nature. It is of vital importance to design internal controls that provide assurance regarding completeness and accuracy of the data selected for migration.
DIGITS has commissioned the services of a team from an IT services company Integra Micro Systems since September 2016 for this purpose. This team is helping DIGITS to run the existing operations in a more reliable and robust way, and in implementing additional applications. Integra Micro systems is now fully maintaining the following applications in cooperation with DIGITS: Admissions; Post-admissions Academic operations; Stores & Purchase; CSSP; Health Centre; Hostel & Mess Management; and IISc website.

**Application Maintenance**

Maintenance in IISc falls into the following broad categories –

1. Bug fixes / Emergency fixes – These fixes are made to systems running in Production and are the outcome of incorrect functioning of the software.

2. Software changes due to environment changes – These changes are the outcome of software changes in different parts of the system. For instance, a decision to use Active Directory for identity management has resulted in multiple applications being changed to conform to this standard.

3. Software changes to enhance functionality – These changes form the largest category of changes. Software needs to be enhanced to cope with functionality changes due to a change in the underlying process or due to greater automation. The accepted principle is always to isolate modules of the application needing changes and leave the other modules untouched. Most of the changes that are being implemented in existing applications today by Integra Micro fall into this category.

4. The final maintenance category relates to preventive maintenance. This involves code optimization, rewriting and updating documentation.

**Expectations from the ISTAR Project**

We are aware that expectations from the ISTAR project are very high indeed. There is a general hope that all transactions in the Institute will become completely paperless and will take zero or negligible time by December 2019. Though these are dream goals, DIGITS would like to set the expectations right. ISTAR will not altogether eliminate paper. It will minimize the use of paper to only those transactions where use of paper or signatures is a statutory requirement. It is to be noted that operational excellence is achieved through a combination of the following:

(a) Well defined, nimble business processes
(b) Change of mindset and investment of initial effort in users to shun inefficient legacy processes and adjust to the best processes available in the ERP system
(c) Cooperating with the implementing team to carry out thorough user acceptance testing (UAT)
(d) Prompt compliance with any sign-off or approval requirement that online implementation will require (for example, in the case of online course registration, if the course instructors or student advisors do not promptly approve the requests of the students, the online system gets stuck and may lead to automatic approvals beyond the deadline).

**Myths and Truths about an ERP system**

**Myth:** We will need less people since we are automating

**Truth:** The tasks needed to perform the new processes normally get distributed to an existing employee who then wears multiple hats until IISc figures out they need organizational changes and more full-time personnel.

**Myth:** We will eliminate manual processes by automating them in the ERP

**Truth:** Many processes will be automated. However, because of certain statutory requirements, auditors will point out several places that still need manual controls.

**Myth:** ERP Training will develop end-user acceptance

**Truth:** Organizations and employees naturally resist changes in process, workflow and individual responsibilities. Training is necessary but insufficient by itself to achieving end-user acceptance.

**Myth:** We can outsource our ERP support

**Truth:** Outsourcing a portion of ERP support makes good sense, but it is a risk not to have internal resources to manage business needs and oversee the outsourced vendor.
An Advisory on Passwords

Several cases have been reported by IISc users who have received blackmail emails sent by unethical hackers demanding money in the form of bitcoins. These are a part of organized cyber scams perpetrated by these hackers. More such emails can be expected to be received in the coming days and weeks. There is absolutely nothing to be worried about these, but here is a list of do’s and don’t’s when you receive such emails:

1. Do not reply to the emails; just ignore them.
2. Do not pay up any money or bitcoins
3. The emails usually start with your user ID and a password that you were using several years back. Please check out https://haveibeenpwned.com/ to find out if the passwords you are using for various IDs have been breached.
4. Please change all your passwords if you get these emails; in any case, once every few months, change your passwords to long, extremely strong ones. This is a best practice.
5. Don’t open attachments in emails received from people that you don’t know.
6. It will help if you send an email to junk@office365.microsoft.com and phish@office365.microsoft.com by dragging and dropping it the received rogue email. It will help the mail system to build up rules that will automatically exterminate these emails.
7. It is a best practice not to forward your emails to open cloud email platforms such as Gmail.

DIGITS

October 09, 2018

Request

Fast and effective deployment of IT applications invariably involves adjusting our processes to suit the workflow programmed in the IT application. While configuration and customization are possible, we need to strike a lovely balance between degree of customization and retention of legacy workflows. The DIGITS team sincerely urges the understanding and cooperation of all users in the interest of timely implementation and deployment of new IT applications and the ERP system.

Enhancements to IT Services and new IT Services

DIGITS, with the help of its staff and outsourced team, launched the online course registration and grading module in January 2018. During March-May 2018, the application had to be stabilized due to several operational difficulties. The stabilized version of this module was successfully used for the course registration in August 2018 for the Aug-Dec. 2018 courses. The application has performed much better than Version 1 and is being continuously improved. During June-August 2018, DIGITS, with the help of its staff and outsourced team, has developed and tested two online portals: portal for recruitment of non-teaching staff and portal for faculty recruitment. The portal for recruitment of non-teaching staff, after extensive user acceptance testing, is set to go live in the first week of October 2018.

New Building

DIGITS had been allotted the building space hitherto occupied by the F & A Section which has moved to a newly created facility (Old Aerospace Building). Refurbishing work has been completed and the new building was inaugurated on August 10, 2018. The DIGITS staff members are now operating out of the new premises.

Please provide Feedback and Suggestions:

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