Maximizing ICT Provisions for Efficient Performance

Presentation at the 2012/2013 Induction
Programme for Academic
and Non-Academic Staff

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Agenda

- Preamble
  - Vision and Mission of Covenant
  - 1st Decade in Retrospect
  - Mandate for 2nd Decade: *1-of-**10**-in-**10***
- Definitions
- Maximizing ICT Provisions:
  - 1. As a subject
  - 2. As a support tool
  - 3. As an administrative tool
- Conclusion

Vision & Mission of CU

Vision:

To be a leading **World-Class** Christian Mission **University**, committed to raising a new generation of leaders in all fields of Human endeavour.

Mission:

To create knowledge and restore the dignity of the black man via a Human Development Total Man Concept driven curriculum **employing innovative**, **leading-edge teaching and learning methods**, research and professional services that promote integrated, life-applicable , life-transforming education, relevant to the context of Science, Technology and Human Capacity Building.

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1ˢᵗ Decade in Retrospect:

1. Full accreditation in ALL academic programmes
2. Over 69 Awards of Excellence
3. Numerous Linkages: Academic & Industrial
4. Disciplined, God-fearing, well-trained students
5. Established Employer Reputation
6. Graduates of CU excel in PG Studies Globally
7. High quality Faculty & Staff

▶ …

Mandate for 2nd Decade

Become one of the top ten Universities in the world in the next ten years.
(1-of-10-in-10)

- Most WCU have been around for centuries
- Studies suggest the younger the better, if :
  - Academic talent
  - Financial Resources
  - Responsible governance:
    - Autonomy
    - Academic freedom

Relatively new universities have the capacity for growing into top quality **research** institutions '*within the first 2 to 3 decades*' of their existence.

P.G. altbach, J. Salmi, "*The Road to Academic Excellence: The making of world-class research universities*" World Bank Report, eISBN: 978-0-8213-8806-8, Available at: **http://qr.net/wcu1**.

Ranking Parameters

- International Faculty (IF)
- International Students (IS)
- Citations Per Faculty (CPF)
- Faculty/Student Ratio (FSR)
- Academic Reputation (AR)
- Employer Reputation (ER)
- Peer Review (PR)

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ICT: *What is ...*

Information and Communication Technologies

▸ "Technologies that provide access to information through telecommunications. ... This includes the internet, wireless networks, cell phones, and other communication mediums." [a]

▸ *Technologies required for the effective communication of information.*

[a] http://www.techterms.com/definition/ict.

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Information:
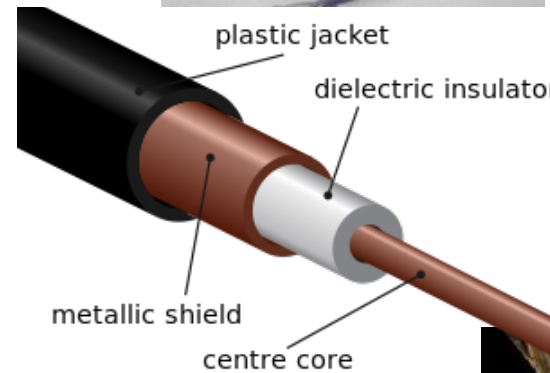
▶ Information – *Content:*

◦ **Text**: *.txt, .pdf, .docx, …*

◦ **Audio**: *.wav, .mp3, .aac, …*

◦ **Video**: *.wmv, .mpg, .mp4, …*

◦ **Hybrid**: *e.g. Scrolling text on video broadcast*

Communication:

Communication channel – *Conduit*:

▶ **Wired modes:**

  ◦ *Copper wire*

  ◦ *Twisted-pair cable,*

  ◦ *Coaxial cables,*

  ◦ *Optical Fibre*

plastic jacket

dielectric insulator

metallic shield

centre core
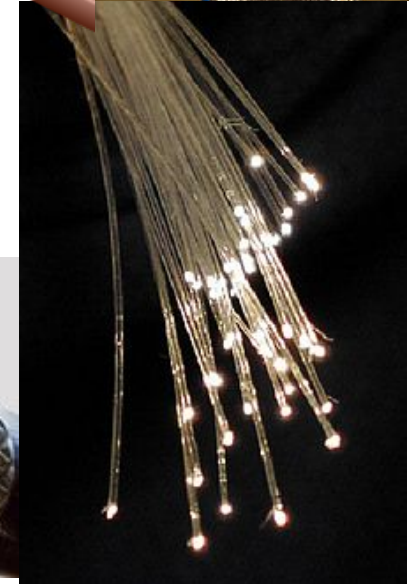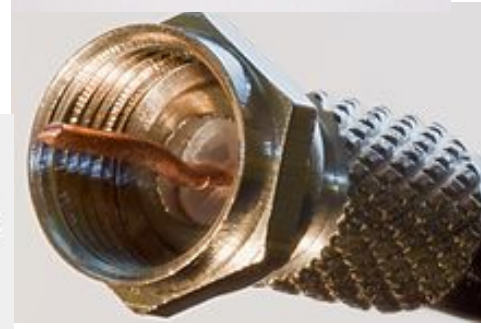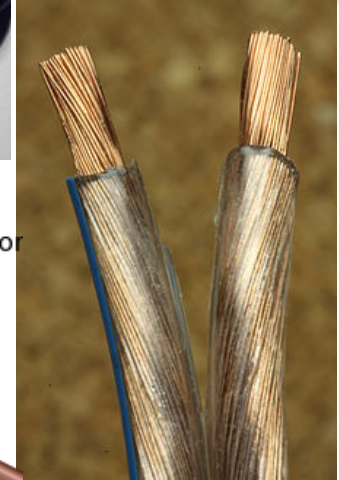
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Communication Technologies:

- **Wireless modes:**
  - *Radio Frequency communication*
  - *Microwave communication*
  - *Infrared communication*

Infrared	750 nm – 1 mm	400 THz – 300 GHz
Microwave	1 mm – 1 meter	300 GHz – 300 MHz
Radio	1 mm – 100,000 km	300 GHz – 3 Hz

- **Hybrid mode**:
  - *Combination of both wired and wireless modes.*
  - *e.g. using VSAT as last mile solution for optical fibre communication of signals received from a microwave link.*

Technologies

Means and Method of communicating desired content (information) over a suitable conduit (communication channel).

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Maximizing ICT Provisions:

In the CU context maximization of ICT provisions *viz-a-viz* her **vision** and *Mandate* ***1-of-10-in-10*** can occur in the following areas:

▸ As a subject in itself

▸ As a support tool for other subjects

▸ As an administrative tool

Maximizing ICT Provisions:

Maximizing ICT Provisions:

1. *As a subject*:

▸ For ICT-related courses in Covenant:
- ◦ Curriculum review in line with *WCU* best practices e.g. MIT.
- ◦ Adopt the *OCW* concept to increase visibility of courses
- ◦ Develop Audio/Video version of Courses
- ◦ Emphasize upload of supplementary resources
- ◦ Emulate other instructional paradigms common to the top 10 *WCUs*

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Maximizing ICT Provisions:

2. *As a support tool for subjects*:

▸ Computer-based Learning:

- E-Learning:
  - Computer-based training (PC-based)
  - Internet|Web-based training (IBT | WBT)
  - Online distance learning
  - Classroom 2.0 - *Multi-user virtual learning*
  - E-Learning 2.0 - *social learning using social software*
- E-Learning Tools:
  - *Blackboard Inc.™, Moodle™, |CU-proprietary sw*

Maximizing ICT Provisions:

E-Learning Services: *Blackboard Inc.$^{(tm)}$*:

- \>20 million users daily
- Has blended or fully online options
- Available on Six platforms:
  - Blackboard Learn,
  - Blackboard Collaborate,
  - Blackboard Mobile,
  - Blackboard Connect,
  - Blackboard Transact,
  - Blackboard Analytics.

Maximizing ICT Provisions:

E-Learning Services: *Moodle$^{(tm)}$*:

- Free and Open Source Course Management System.
- Provides blended learning opportunities
- Platforms for distance learning courses
- Plenty of support materials
- Available at: *http://moodle.org*

Maximizing ICT Provisions:

E-Learning Services:

CU *Courseware*$^{(tm)}$:

▸ Developed by CU Faculty|Students
▸ Totally FOSS-Based
▸ To be Licensed under (cc):
  ◦ Attribution
  ◦ Non-commercial
  ◦ Share Alike

Maximizing ICT Provisions:

3a. *As Administrative Tool*:

Office Automation: *e-Memo* etc.

▸ *CU FOSS Virtual Office*:
- Environment for organisations to perform similar features they would perform in an ideal office
- Platform for corporate bodies to collaborate with mobile workers
- Free software geared towards collaboration within organisations
- Can be *tweaked* to fit specific corporate needs
- Developed in CU by CU students.

Maximizing ICT Provisions:

Features of CU Virtual Office
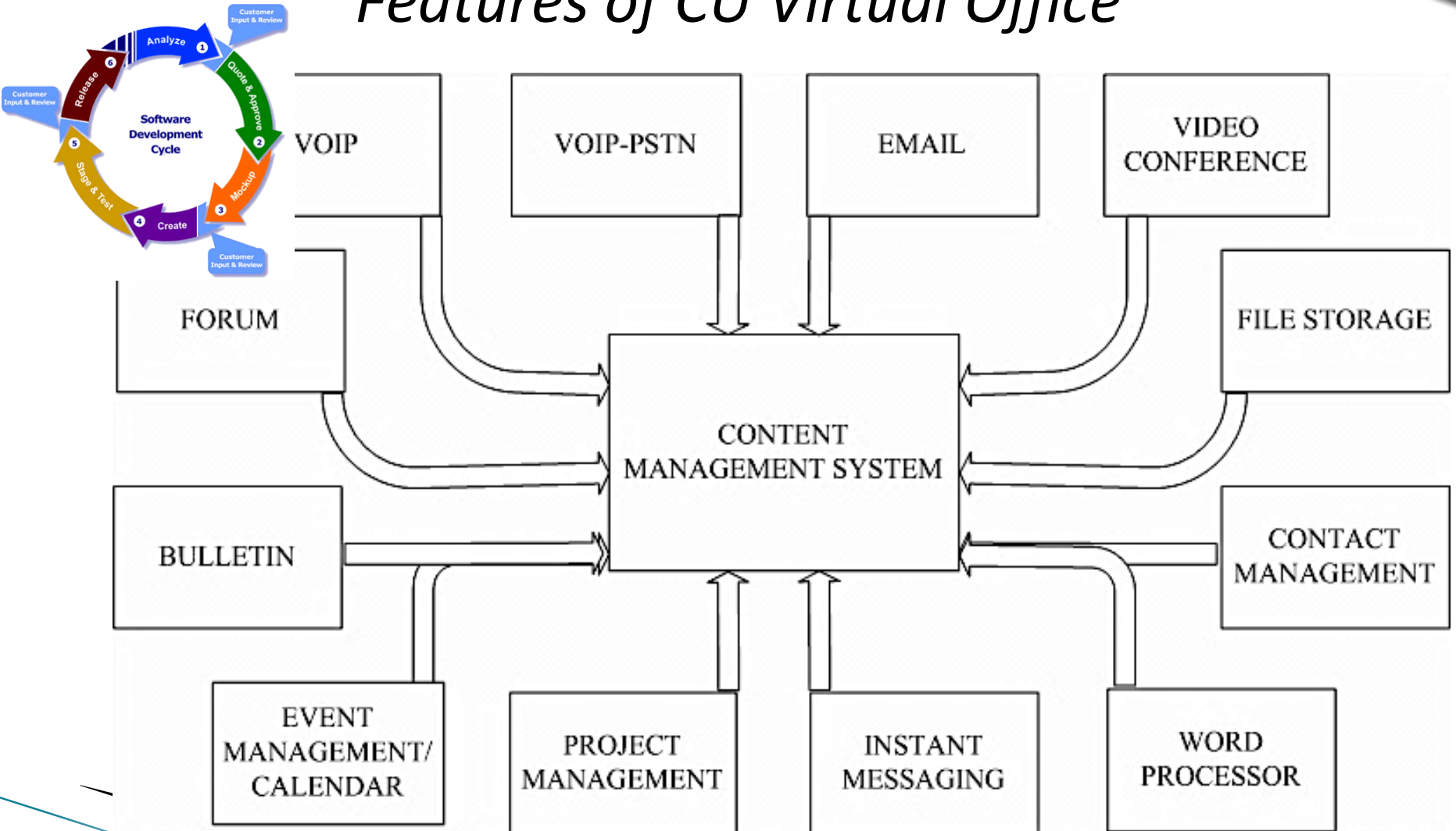
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Maximizing ICT Provisions:

FOSS Realisation of CU Virtual Office

http://drupal.org

Diagram nodes:

- VOIP PHONE(S) e.g. 3CX, X-Lite, Flash/Web Phone
- VOIP-PSTN (Oktell SIP-GSM Gateway)
- EMAIL (Roundcube / Mercury mail)
- VIDEO CONFERENCE (Big Blue Button)
- FORUM
- FILE STORAGE
- DRUPAL CMS
- BULLETIN
- CONTACT MANAGEMENT
- EVENT MANAGEMENT/ CALENDAR
- PROJECT MANAGEMENT (Project Pier)
- INSTANT MESSAGING
- REALTIME WORD PROCESSOR (Etherpad lite)
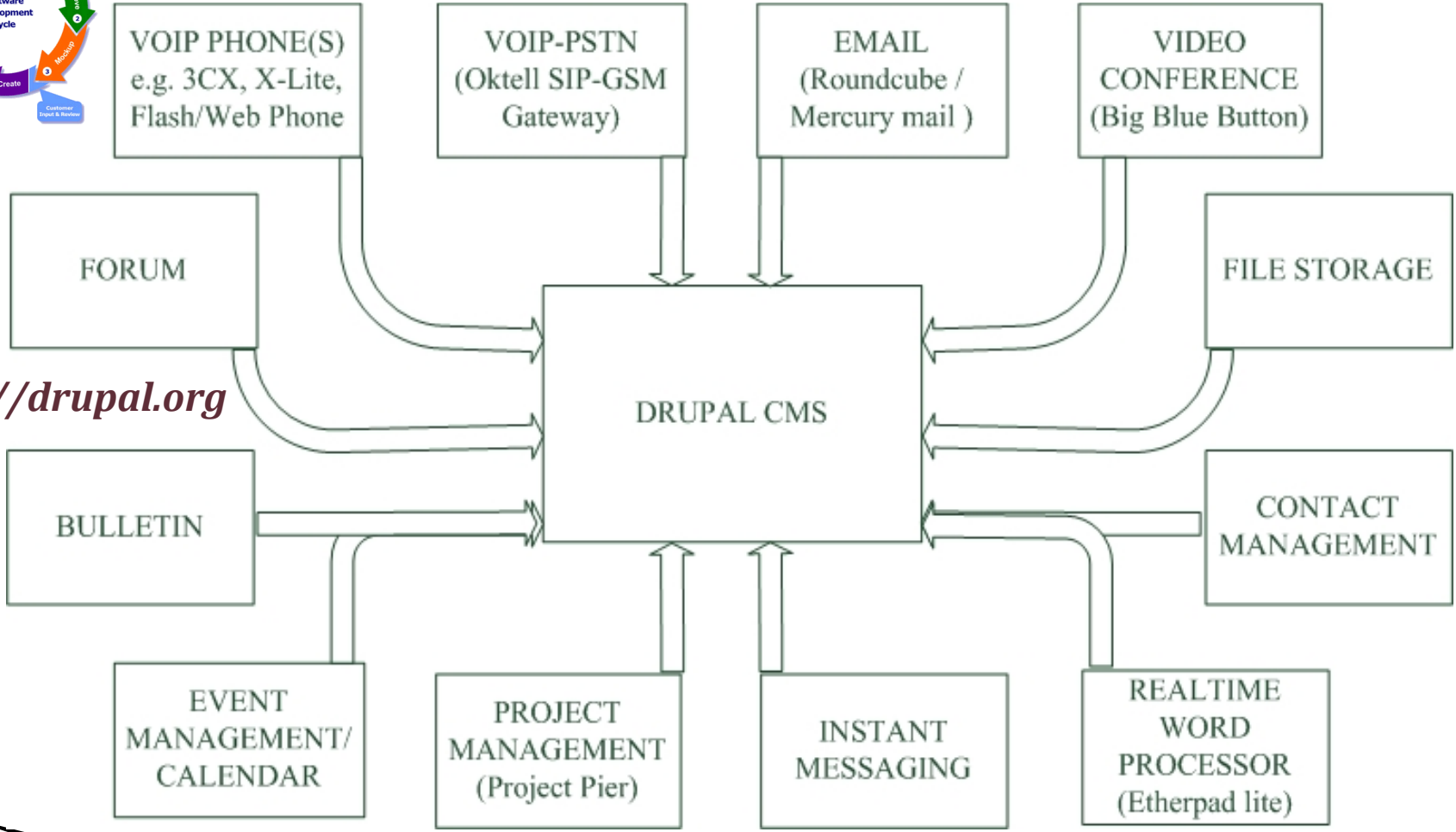
Maximizing ICT Provisions:

3b. *Cloud Computing*:

Google™, Dropbox™, Box™

- *Google Drive:*
  - *Currently used in the VC's Office*
  - *Google Doc: Text, Spreadsheet, etc*
- *Box | Dropbox:*
  - *For collaborative work*
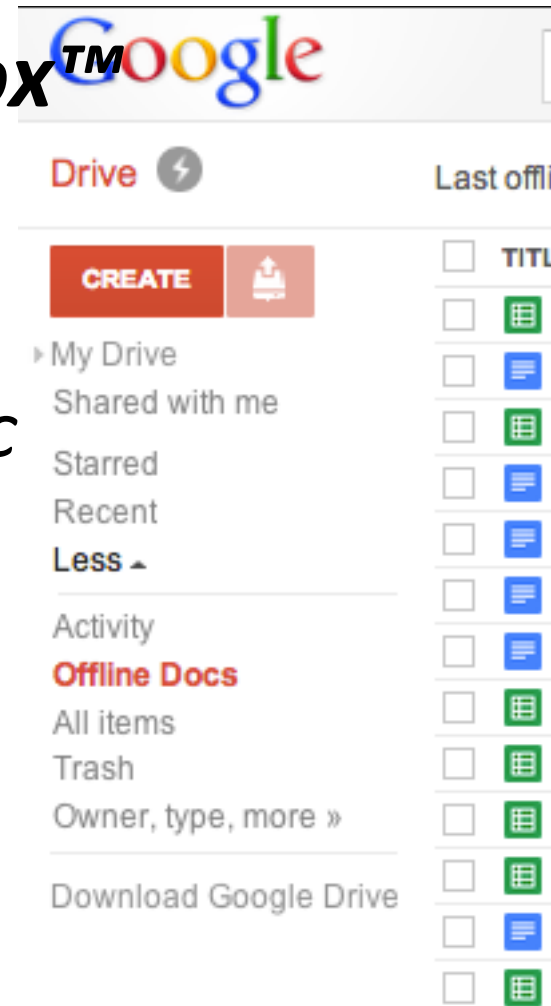 - *Document Storage*
  - *File Synchronization*

Google Drive

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Appendix:

SYSTEMS PROVISIONS

S/N	ITEMS	DESCRIPTION	LOCATIONS	QTY	STATUS
1	Desktop Systems	Computer Lab. Systems	Chemical Engrg Lab	25	Ok
2	Desktop Systems	"	ARCHITECTURE LAB	50	Ok
3	Desktop Systems	"	EIE	75	Ok
4	Desktop Systems	"	CDS	150	Ok
5	Desktop Systems	"	MECANICAL LAB	30	Ok
6	Desktop Systems	"	CST COMUTER LAB	250	Ok
7	Desktop Systems	"	CIVIL LAB	30	Ok
8	Desktop Systems	"	BUILDING LAB	20	Ok
9	Desktop Systems	"	ICT	76	Ok
10	Laptops/Desktops	Computer Lab. Systems/Office use	LIBRARY	80	Ok
11	Laptops	Training/Office use	CIS SOFTWARE ENGINEERING	39	Ok
12	Desktop Systems	Office Use	CHAPLE ESTIMATE	20	Ok
13	Desktop Systems	Office Use	EDS ESTIMATE	5	Ok

Appendix:

Summary of Systems Provision in CU:

14	Desktop Systems	Computer Lab. Systems	MATHEMATICS LAB	20	Ok
15	Desktop Systems	Computer Lab. Systems	PHYSICS LAB	100	Ok
16	Desktop Systems	Office Use	CST ESTIMATE	50	Ok
	TOTAL			**1017**	

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Conclusion:

Following the steps presented will help in Maximizing ICT provisions for efficient performance of Faculty, Staff, Students and Management of Covenant University.

Thank You!