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APPENDICES

Appendix A – Questions Covered in Unstructured Interviews

1) What are the main business functionalities of your department which involves with IT?

2) Please explain the steps taking place in each function?

3) What are the new IT practices, policies and technologies have your department adopted recently?

4) What lead for you to adopt them?

5) Does your department maintaining policies when giving out services? What are they?

6) Does your department concern on moving toward Green?

7) If so, what steps have you taken in your department?

8) Does your organization have defined any policies in order to move towards Green? If yes, what are they?

Appendix B – Given Comments for the Initial End User Questionnaire

Initial Questionnaire:

Q1. What kind of electronic devices you are using to carry out your day to day office work?

Q2. What kind of a monitor you are using?

Q3. What is your normal office hours would be?

Q4. How many hours do you work with your electronic device during office hours (roughly) per day?

Q5. How many hours your computer/laptop will be idle per day?

Q6. Do you turn off your computer when leaving the office and during non working hours?

Q7. Do you turn off your monitor when leaving the office and during non working hours?

Q8. Have you switched on power management features in your computer?

Q9. What kind of a screensaver you are using?

Q10. After how many minutes have you activated your screensaver when your PC is idle?

Q11. How many printouts do you take per day (roughly)?

Q12. Please mention what kind of practices you follow when taking printouts:

Q13. How many photocopies do you take per day (roughly)?

Q14. Please mention what kind practices you follow when taking photocopies:

Q15. Are your official files/documents kept on computers or disks instead of printing documents for filing cabinets?

Q16. What are the methods you follow to share documents with your colleagues: Please rank them 1-4 (1-Highest priority, 4-Lowest priority)

Q17. Scrap paper turned into useful note pads?

Given Comments:

Question Number	Waruna Mudannayaka	Sisira Liyanage	Kapila Balasuriya	Dhananjaya Amarkoon	Sumith Subasinghe
Q1					
Q2		Only PC users deal with monitors. Reconstruct the question.			
Q3				Add exact shift hours according to the place you conduct the research	
Q4				Add 5 scale likert scale for the answer set	
Q5				Add 5 scale likert scale for the answer set	
Q6	Make it two questions.		Better to question whether the user switches off his/ her computer during office time when not working and at the end of the day separately.		Add 'Not all days' as another option.
Q7	Make it two questions.	Include Not Applicable (N/A) as another option	Better to question whether the user switches off his/ her monitor during office time when not working and at the end of the day separately.		Add 'Not all days' as another option.
Q8				Describe what are few power management feature, it will help to give more accurate answer.	
Q9					
Q10	Change the way question has asked-"When my computer is idle I activate my screen save after"	Include Not Applicable (N/A) as another option	Answers should be in a scale which covers 1 to 30 minutes		Add 'No Screen Saver' as another option.
Q11		Make it as average number of printouts you take per day and also it might depends on the work of the day		Add 5 scale likert scale for the answer set	Add 'Depends on work' as another option.
Q12	f. Not clear (that)				
Q13		Make it as average number of printouts you take per day and also it might depends on the work of the day			Add 'Depends on work' as another option.
Q14					
Q15				Replace 'files/documents' with 'softcopy'.	
Q16			Add File Sharing also as another option.	Check with availability option which they have already taken	
Q17	Not clear (note pads)	Not clear (note pads)		Question is not much clear	

Appendix C – Final End User Questionnaire

Questionnaire-End User Practices

Dear Participants,

I'm a post graduate student at the University of Moratuwa (MBA in IT). As a partial fulfillment of the MBA, a research is to be carried out on an area of interest. Therefore I've chosen your organization to carry out my research on "How IT Based Processes can Help to be More Environmental Friendly in a Business Environment" and questionnaire aims to gather required data for the analysis.

The information that you provide will be kept strictly confidential and will be used only for research purposes. If you have any queries regarding the questionnaire please do not hesitate to contact me via sajinie05@yahoo.com or +94773487883.

Thank you very much for your cooperation. Your contribution is greatly appreciated

Sajinie Fernando

MBA IT (2010/2011)

University of Moratuwa

Sri Lanka

1) What kind of electronic devices you are using to carry out your day to day office work?

    a. Personal Computers (PC)   ☐

    b. Laptop computers   ☐

    c. Netbook computers   ☐

    d. Smart phones   ☐

    e. Personal Digital Assistants (PDA)   ☐

    f. Other: _____   ☐

2) If you are using a monitor/s in the office, please mention what kind of monitor/s you are using? Otherwise; please go to the next question.

    a. CRT   ☐

    b. LCD   ☐

    c. LED LCD   ☐

3) What is your normal office hours would be?

    a. 8.30am - 5.00pm   ○

    b. 9 am - 6 pm   ○

    c. Other: _____   ○

4) How many hours do you work with your electronic device approximately during office hours per day?

Electronic Device	Less than 4	4 to 6	7 to 9	10 to 12	More than 12
a. PC	○			○	○
b. Laptop computers	○	○	○	○	○
c. Netbook computers	○	○	○	○	○
d. Smart phones	○	○	○	○	○
e. PDA	○	○	○	○	○
f. Other : _____	○	○	○	○	○

5) How many hours your PC/laptop will be idle per day?

    a. Less than 1 hour   ○

    b. 1 – 2 hours   ○

    c. 3 – 4 hours   ○

    d. 5 – 6 hours   ○

e. More than 6 hours   ○

6) Do you turn off your **computer** (PC, Laptop) when leaving the office and during
    non working hours?

Option	Yes	No	Sometimes
a. When leaving the seat during office hours	○	○	○
b. When leaving the office after working hours	○	○	○
c. During non working hours (holidays)	○	○	○

7) Do you turn off your **monitor** when leaving the office and during non working
    hours?

Option	Yes	No	Sometimes	Not Applicable
a. When leaving the seat during office hours	○	○	○	○
b. When leaving the office after working hours	○	○	○	○
c. During non working hours (holidays)	○	○	○	○

8) Have you switched on power management features (eg: enabled maximum battery life time, turn off hard disk when idle and etc) in your computer?

    a. Yes   ○

    b. No   ○

    c. No idea   ○

9) What kind of a screensaver you are using?

    a. Blank screen saver   ○

    b. Screen saver with moving images   ○

    c. No screen saver   ○

    d. Other: _____   ○

10) After how many minutes have you activated your screensaver when your PC is idle?

    a. 1 – 3 minutes   ○

    b. 4 – 6 minutes   ○

    c. 7 – 9 minutes   ○

    d. 10 – 12 minutes   ○

    e. After 12 minutes   ○

    f. Not Applicable   ○

11) How many printouts (average) do you take per day?

    a. None   ○

    b. 1 to 5   ○

    c. 6 to 10   ○

    d. 11 to 15   ○

    e. More than 15   ○

12) Please mention what kind of practices do you follow when taking printouts:

a.	Without putting test prints, try to make all the modifications and changes within the screen itself and put the printout when document has no mistakes	☐
b.	Take the printout and make the modifications and re-print.	☐
c.	Setting printer to print both sides of the paper whenever possible.	☐
d.	Always print one side of the paper	☐
e.	Make smaller paper margins and font sizes to reduce the consumption of papers	☐
f.	Just take the printout out of the orginal document	☐
g.	Other: _____ ___	☐

13) How many photocopies (average) do you take per day?

a. None   ○
b. 1 to 5   ○
c. 6 to 10   ○
d. 11 to 15   ○
e. More than 10 ○

14) Please mention what kind practices do you follow when taking photocopies:

a. Take photocopy of both sides of the paper whenever possible   ○
b. Always take photocopy on one side of the paper   ○
c. It depends on the requirement   ○
d. Other_____   ○

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15) Are your official files/documents (softcopy) kept on computers or disks instead of printing documents for filing cabinets?

    a. Yes   ◯

    b. No   ◯

    c. Sometimes   ◯

16) What are the methods you follow to share documents with your collegues: Please rank them 1-5 (1-Highest priority, 5-Lowest priority)

    a. E-mail   _____

    b. Share point   _____

    c. Paper based documents   _____

    d. File Sharing   _____

    e. Other_____   _____

17) Is scrap paper turned into useful rough sheets?

    a. Yes   ◯

    b. No   ◯

    c. Sometimes   ◯

Appendix D – Given Comments for the Structured Interview Questions

Initial Questionnaire:

Procurement

Q1. How many paper does your organization consumes per month?

Q2. Do you use recycling paper/print ink cartridges in your organization?

Q3. If so, no of units of each recycling components per year?

Q4. How many units of IT components do you purchase per year (roughly)?

Q5. When purchasing IT components (Storages, Servers, Laptops, PCs, Printers, Photocopy machines and etc), do you consider about Green seal approvals?

Q6. If so, what are the Green seal approvals you consider for each product? (Computers, monitors, servers, air conditioners and etc)

Q7. When purchasing IT equipments, do you encourage your IT suppliers to demonstrate the environmental credentials of their company and the products you're buying?

Q8. How many IT equipments do you dispose per year?

Q9. What are the mechanisms you used to dispose the equipments?

Q10. What is rate of CD/DVD usage of your organization per month?

Procurement					
Question Number	Waruna Mudannayaka	Sisira Liyanage	Kapila Balasuriya	Dhananjaya Amarkoon	Sumith Subasinghe
Q1					
Q2					
Q3					
Q4			Replace the word 'components' with 'devices'. Add UPS also into the device list.		
Q5					Describe what is this Green seal approvals
Q6	Better to mention what is green seal				
Q7					
Q8					
Q9					

Information Technology

Q1. Are any signs posted around the office as reminders to turn electronic devices (PCs, Laptops, monitors, printers, scanners and etc) off?

Q2. Are the computers in the office set to go into sleep mode when they are not used for a period of several minutes?

Q3. Is wireless internet connection possible at your office?

Q4. What system configurations do you maintain in end user computing?

Q5. How many storage devices, servers, network switches/routers, tape libraries, UPSes, and air conditioners does your data center consist with?

Q6. How much their power consumption is?

Q7. Do you use virtualization in data center and what extend? If Yes; How many?

Q8. What is the level of resource usage of your servers in your data center?

Q9. Do you think you're taking optimum usage out of available storage space?

Q10. Do you follow any performance tune up in your application, OS, Database etc...?

Q11. Have you followed efficient cooling methods like liquid cooled racks, active and passive rear door cooling units, pumped refrigerant-based systems, direct-to-chip or board cooling and etc. in your data center?

Q12. Do you follow airflow standards (hot/cold aisle layout, distribute power across racks and etc) in data center?

Q13. How many hours do you usually use UPS in your data center per month (roughly)?

Q14. What is the temperature (range) you maintain in your data center air conditioners?

Q15. What is rate of CD/DVD usage of the IT department per month?

Q16. How many processes automated (computerized) per year?

Q17. Have your organization adopted methods like telecommuting, teleconferencing, videoconferencing and telepresence whenever possible instead of travelling?

Information Technology					
Question Number	Waruna Mudannayaka	Sisira Liyanage	Kapila Balasuriya	Dhananjaya Amarkoon	Sumith Subasinghe
Q1					
Q2					
Q3					
Q4	Question is too broad				
Q5					
Q6					
Q7					
Q8					
Q9					
Q10					
Q11					
Q12					
Q13	Can't say since at night you don't know whether there was powercut or not. Question is valid if there is an alert system or monitoring software.		Instead of asking as hours you use the UPS, ask hours you use UPS power.		
Q14					
Q15					
Q16		Not a valid question to ask. Define what kind of process automation you are refering to.			
Q17					

Appendix E – Final Structured Interview Questionnaire

Structured Interviews

Procurement

1) How many paper does your organization consumes per month?

    a. Less than 10 bundles   ◯

    b. 10-20 bundles   ◯

    c. 30-40 bundles   ◯

    d. More than 40 bundles   ◯

2) Do you use recycling paper/print ink cartridges in your organization?

    a. Yes   ◯

    b. No   ◯

    c. Sometimes   ◯

3) If so, no of units of each recycling components per year?

Type	No. of Units
Paper	
Print ink cartridges	

4) How many units of IT components do you purchase per year (roughly)?

IT Component	No. of Units
Storages	
Servers	
Personal computers	
Monitors	

Laptop computers	
Netbook computers	
Printers	
Photocopy Machines	
Scanners	

5) When purchasing IT components (Storages, Servers, Laptops, PCs, Printers, Photocopy machines and etc), do you consider about Green seal approvals?

       a. Yes   ○

       b. No   ○

       c. Sometimes   ○

6) If so, what are the Green seal approvals you consider for each product? (Computers, monitors, servers, air conditioners and etc)

IT Component	Name of the Green Seal
Servers	
Personal computers	
Monitors	
Printers	
Photocopy Machines	
Scanners	
Air conditioners	

7) When purchasing IT equipments, do you encourage your IT suppliers to demonstrate the environmental credentials of their company and the products you're buying?

   a. Yes   ○
   b. No   ○
   c. Sometimes   ○

8) How many IT equipments do you dispose per year?

IT Component	No. of Units
Storages	
Servers	
Personal computers	
Monitors	
Laptop computers	
Netbook computers	
Printers	
Photocopy Machines	
Scanners	

9) What are the mechanisms you used to dispose the equipments?

IT Component	Mechanism
Storages	
Servers	
Personal computers	
Monitors	
Laptop computers	

Netbook computers	
Printers	
Photocopy Machines	
Scanners	

10) What is rate of CD/DVD usage of your organization per month?

Information Technology

1) Are any signs posted around the office as reminders to turn electronic devices (PCs, Laptops, monitors, printers, scanners and etc) off?

    a. Yes   ○

    b. No

2) Are the computers in the office set to go into sleep mode when they are not used for a period of several minutes?

    a. Yes   ○

    b. No   ○

    c. Sometimes   ○

3) Is wireless internet connection possible at your office?

    a. Yes   ○

    b. No   ○

    c. Sometimes   ○

4) What system configurations do you maintain in end user computing?

    _____

5) Do you use virtualization in data center and what extend?

       a. Yes   ○

       b. No   ○

If Yes;

IT Component	Number
Virtual Servers	
Virtual Storages	

6) What is the level of resource usage of your servers in your data center?

       a. Less than 20%   ○

       b. 20%-40%   ○

       c. 41%-60%   ○

       d. 61%-80%   ○

       e. Above 80%   ○

7) Do you think you're taking optimum usage out of available storage space?

       a. Yes   ○

       b. No   ○

       c. No Idea   ○

8) Do you follow any performance tune up in your application, OS, Database etc...?

       a. Yes   ○

       b. No   ○

       c. Sometimes   ○

9) Have you followed efficient cooling methods like liquid cooled racks, active and passive rear door cooling units, pumped refrigerant-based systems, direct-to-chip or board cooling and etc. in your data center?

    a. Yes   ○

    b. No   ○

If Yes;

_____

10) Do you follow airflow standards (hot/cold aisle layout, distribute power across racks and etc) in data center?

    a. Yes   ○

    b. No   ○

If Yes;

_____

11) What is the temperature (range) you maintain in your data center air conditioners?

    a. Less than 10 Celsius   ○

    b. 10-14 Celsius   ○

    c. 15-19 Celsius   ○

    d. 20-24 Celsius   ○

    e. More than 24 Celsius   ○

12) What is rate of CD/DVD usage of the IT department per month?

    a. Less than 10   ○

    b. 10-20   ○

    c. 30-40   ○

    d. More than 40   ○

13) How many processes automated (computerized) per year?

    a. Less than 5   ○

    b. 5-8   ○

    c. 9-12   ○

    d. 13-16   ○

    e. More than 16   ○

14) Have your organization adopted methods like telecommuting, teleconferencing, videoconferencing and telepresence whenever possible instead of travelling?

    a. Yes   ○

    b. No   ○

    c. Sometimes   ○

15) What kind of printers do you mainly use in your organization?

Printer Type: One Side Printers/ Duplex Printers/ Other

If Other:

16) Do you use multifunctional systems instead of stand-alone printers, copiers, fax machines and scanners?

    a. Yes   ○

    b. No   ○

If Yes, How many?

_____

17) Have you limit the number of photocopies/printouts taking by users?

    a. Yes   ○

    b. No   ○