GO GREEN Initiative from Office Desk to Operational Practices in a Laboratory **Animal Research Facility** Edgar M. Pena, DVM, MVSc, Singapore Healthcare Judith M. Mercado, DVM SingHealth **DukeNUS** Management 2023 Zaw Min Tun, RALAT

Singapore Health Services Pte. Ltd.

Introduction

The inception of the very first "world earth day" in 1970 has since mobilized a billion individuals from almost 192 countries for initiatives to promote green planet (https://www.earthday.org/). Singapore's Ministry of Sustainability and the Environment has been a supporter of this global initiative and is leading the campaign in promoting green

community that encourages every local and resident's participation (<u>http://www.gogreen.sg</u>).

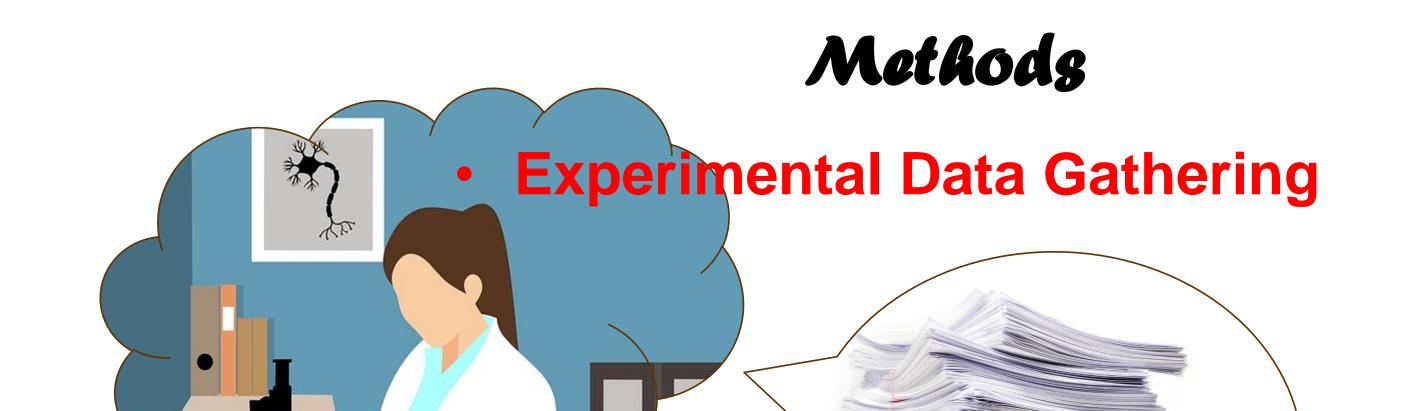


of

The recycling and reduced paper use are few of the usual environment friendly programs in an office setting. The laboratory animal research facility operation uses significant amount of paper for data recording, regulatory approvals and to document experimental procedures. An organized paper trail and documentation processes facilitates good conduct of experiment and contributes to higher cost recovery rate of research facility. Whilst documentation using papers are traditionally effective, every single sheet used is equivalent to a piece of tree pulp. It was estimated that a ream (500 sheets) of paper produced have utilized 5% of a standard pine tree size and this statement is closely related to a number environment driven organizations' claims i.e. Ribble-pack.com, Conservatee.org etc. on how much trees are used in global paper production for years.

Objectives of the Program

To establish a paperless office operation policy without compromising the workflow of laboratory animal research facility.

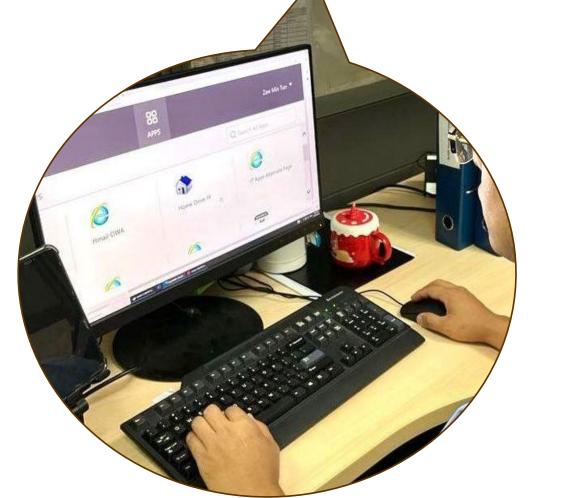


To create a faster, more efficient and secured sharing of experimental documents and research operation paper works.

To implement sustainable recycling program of used papers and utilize the end product to promote and enhance the welfare of research animals (e.g. chickens).

To reduce the amount of manpower and resources being utilized for filing, utilization and disposal of paper documents.

Paperless documentation and secured data sharing



 Utilizing shredded paper as beddings for research animals

 Transporting safely animals to the Lab.



Results and Value to Lab Animal Research Facility Operation

The Go Green (paperless) program has started making transformational changes in the workflow after being implemented for less than a year:

- Review and approval of research project service reports were shortened from 3 days to 1 day and it facilitated faster submission of invoices for timely billing to principal investigators and facility users.
- A reduction of 2 (two) reams of A4 size paper consumption was recorded three months after the onset of implementation.
- Frequency of ordering office stationaries dropped and utilization of supplies lowered.
- Achieved sustainable utilization of recycled papers that were converted as day-old chicks comfort beddings and enrichment during transport and housing which will contributed to better human life saving translational research results.

→ → ▲ SEMC-Admin → Vet & Ops working files → NLARF Home Home Tools NLARF-1663-1505 × Name Name Animal Tissue Health Checklist Desktop Downloads Downloads Douments Feed Analysis Report Inter Project Transfer Pictures Monthly Orders Monthly Orders NLARF-1663-1505 × NLARF-1663-1505 × Nume Name Desktop Downloads Downloads Pictures Nume Downloads Pictures Nume Downloads Pictures Nume Downloads Pictures Nume Pictures Nume Downloads Pictures Pictures Pictures Nume Nume Pictures Pictures Pictures Pictures Pictures Pictures Pictures Pictures <	I 🖸 📙 🚽 I NLARF	NLARF-1663-15052023a.pdf - Adobe Acrobat Reader DC (32-bit)	
* Quick access Animal Tissue Health Checklist Project Ra * Downloads Dinking Water Test Result Project Ra * Downloads Dinking Water Test Result Status * Downloads Project Ra Status * Pictures Inter Project Transfer 24 * Monthly Orders Status Status * NLARF Acress Requeet File Valuators Int (Pentodartitione Sodium 300mg/mt) 0.20 /mt no.0 * NLARF Acress Requeet File NLARF Acress Requeet File NLARF Acress Requeet File NLARF Acress Requeet File * NLARF Project Management File ************************************	ile Home Share View	File Edit View Sign Window Help	
Cuick access Animal Tissue Health Checklist Desktop Downloads Dougs, Consumables and Materials-Orders Dinking Water Test Result Dinking Test Results (Disease Surveill NLARF Forcialysis Results (Disease Surveill NLARF Forcialysis Results (Disease Surveill NLARF Forcial Surveills Nucker Cortexted Test Nucker Controlled Drug Inventory NLARF Forcial Surveills Nucker Controlled Drug Inventory Nucker Robot Cest NLARF Forcial Surveills Nucker Controlled Drug Inventory Nucker Controlled Drug Inventory Nucker Force Report Report for Pl and for and on behalf of the institution, to authorise SEMC to issue invoices to the above Billing Address RCULA Hands-On Training Attendance List Report for Pl and fo	→ → ↑ 📙 « SEMC-Admin → Vet & Ops working files → NLARF	Home Tools NLARF-1663-1505 ×	
€ 150% ▼	 Quick access Desktop Downloads Documents Pictures Animal Tissue Health Checklist Drinking Water Test Result Drugs, Consumables and Materials -Orders Feed Analysis Report Inter Project Transfer Monthly Orders 	0 54 Compound Sodium Lactate INF, 500ml (Hartman's Solution) 06 55 Metacam 5mg Inj 11 56 Ranitidine 50mg/2ml Inj 20 57 Rimadyl 50mg Inj (Carprofen) 20 58 Atipamazole 20 59 Vitamin B (B-Complex Inj)	0.80 /bag nos 6.10 /ml nos 0.70 /amp nos 3.80 /ml nos 9.80 /ml nos 0.20 /ml nos