

Procurement is a necessary, but alone, insufficient step to ensure proper rollout of refrigerators and safe storage of vaccines. There are a number of keys steps and measures to be taken in addition to procurement to afford vaccines safe storage. Both refrigerator manufacturers and procuring countries have a role to play in ensuring post procurement success.

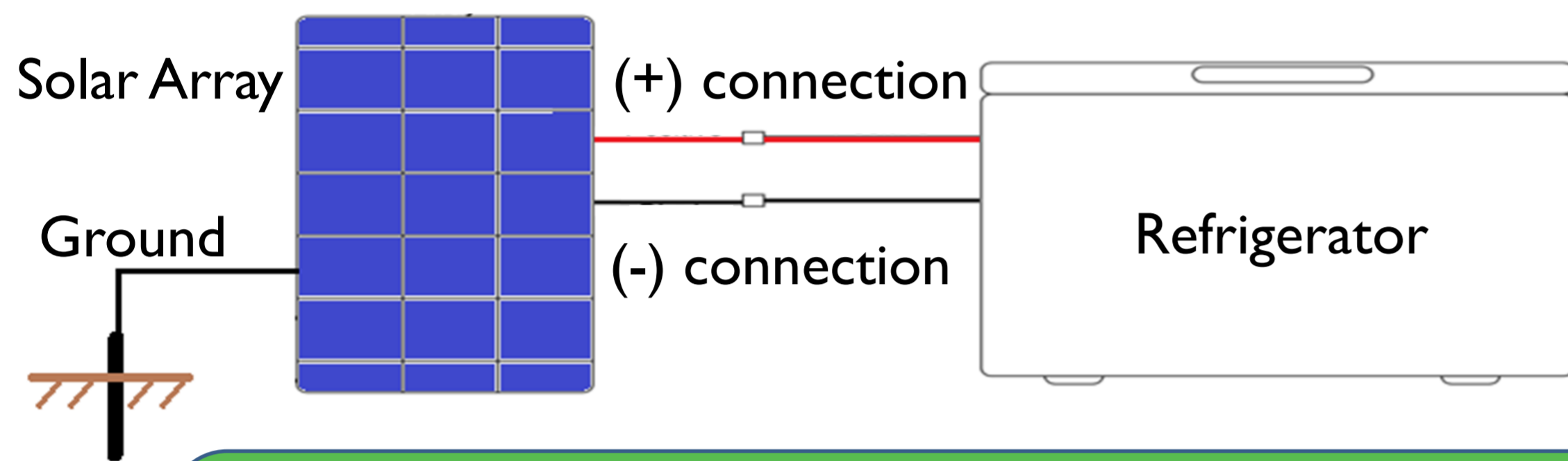
Manufacturers must observe standards and best practices when designing equipment, developing instructional material, delivering quality field training, supporting maintenance activities and receiving product feedback.

Countries must plan for equipment distribution, identify technicians to be trained and/or execute installation, allocate the resources required for installation & maintenance and provide feedback to manufacturers and global partners.

PRODUCT DESIGN

Manufacturers...

- Design to meet WHO PQS standards and future specifications in Target Product Profiles (TPPs) including:
- Simple installation and maintenance guidance
 - Plug & Play electrical connections
 - Elimination of intermediary system components
 - Minimize components likely requiring maintenance



PROCUREMENT

Manufacturers...

- Clearly state what equipment is included and what must be procured separately

Countries consider...

- Product selection based on healthcare site needs/constraints
- Generators for adequate power supply
- Voltage protection for mains powered units
- Spare part procurement



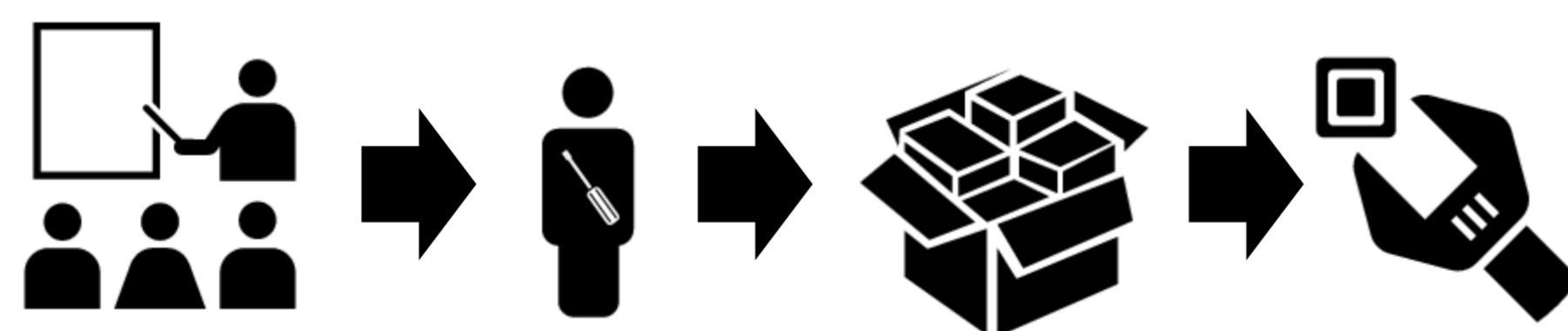
INSTALLATION & COMMISSIONING

Countries provide...

- Insourced technician cohort -OR- outsourced installation outfit to execute install
- Training facility and resources

Manufacturers provide...

- Adequate spare installation components (TPP)
- In-country technician training
- Model specific installation checklist
- Simple methods for verifying equipment functional
- Remote technical support



RECEIVING & TRANSPORT

Countries consider...

- Safe, secure storage locations
- Resource planning for equipment distribution to all levels of cold chain
- Stocking and distribution system for spare parts



Manufacturers consider...

- Equipment will be stored in hot, humid environments for extended periods of time (TPP)
- Means of easily moving units (e.g. handles)



USER TRAINING

Countries must...

- Instruct HCWs in taking ownership of CCE, proper operation and necessary PM activities

Manufacturers...

- Advise on required preventative maintenance (PM) activities
- Provide pictorial job aids, training videos, printed manuals (TPP)

PM TO-DO's

- Daily:** Wipe down surfaces
- Weekly:** Defrost unit
- Monthly:** Clean array



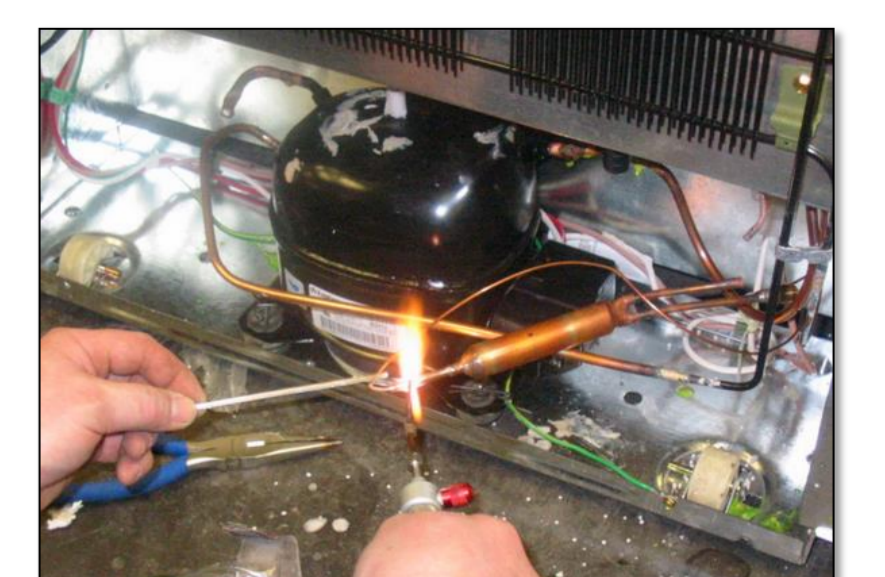
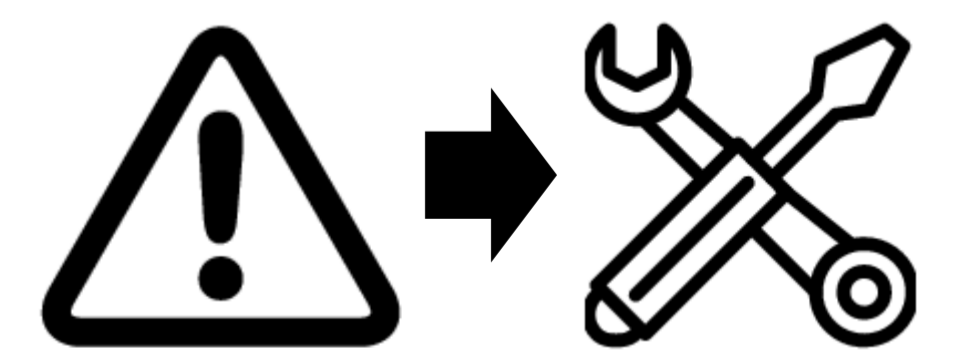
MAINTENANCE

Countries must...

- Facilitate quickly reactive maintenance support system
- Empower personnel with training and dedicated resources to maintain all CCE -OR- commit funding for outsourced maintenance
- Ensure spare parts are readily available

Manufacturers...

- Provide remote technical support
- Have a network of certified technicians available for field troubleshooting



CLOSING THE LOOP

Providing direct field feedback aids...

Manufacturers...

- Ensure problems with current equipment are fixed
- Improve future equipment in usability, performance and robustness

WHO PQS...

- Asses sufficiency of current product standards
- Improve future products through TPPs

USER FEEDBACK

Manufacturers...

- Provide easy reporting of the good AND bad through text, email and phone hotlines



Countries must...

- Report CCE issues to procurement agencies (UNICEF SD) and manufacturers