1. About mSupply

Return to: ***mSupply User Guide Home Page*** *| | Next topic:* ***2. Setting Up mSupply: Technical Guide***

1.01. Introduction

Thank you for choosing mSupply. mSupply is now a family of software products, a team of trainers and consultants. Before you launch in (if you haven't already!), we suggest you plan to take the following steps.

- Get a feel for Open mSupply. If you're running a vertically integrated supply chain, Open mSupply will likely work well for you. It is open source (free of charge) and is the product that The mSupply Foundation is prioritising for development. As of February 2025, a proprietary Legacy mSupply Central server is still required at the core of an mSupply installation, but most stores in the supply chain below the 'central' store(s) can be Open mSupply. The plan is to develop all of the central server functionality in Open mSupply.
- Read the rest of this introduction.
- Read the setup, tutorial and licence chapters in this manual.

Please note that installation requires basic computer skills:

- You need to be able to locate a file using the “open” and “save” windows.
- If you are not sure, why not try, and email us if you get stuck.

mSupply is designed to handle the following tasks:

- Recording quotations received from various suppliers in a way that makes for easy comparison of true cost prices.
- Create tenders for suppliers to respond to.
- Ordering (Purchasing) of items from a particular supplier, using actual usage figures to calculate the required quantities.
- Entering of incoming goods into inventory.
- Manufacturing items. That is, building new items from raw materials in your stock.
- Tracking Accounts Payable and Accounts Receivable

- Issuing of invoices for customers, and recording the transaction against inventory.
- Customers are able to order on-line via the internet, and can view stock status and the status of their orders.
- Exporting purchase and invoice data for import into an accounting program.
- Reporting on transactions and other data in almost any manner you want!
- If you need help with installing mSupply please feel free to email us at support@msupply.org.nz

About this user guide

The latest and most authoritative version of this User Guide is located on-line at http://docs.msupply.org.nz/. You can export the chapter you're viewing in PDF format by clicking the **export:pdf** tab to the right. It may then be viewed off-line within Acrobat Reader or other PDF viewer. To obtain the whole user guide in PDF format, visit mSupply site

If you are reading a PDF version, it is likely that a more up-to-date version is available on-line.

The software is under constant development as new features and facilities are added. We strive to ensure that the user guide and the graphics that it contains reflect these developments, but occasionally you may find that there are differences between the program itself and the guide or its graphics, where the updating of the guide has not quite kept pace with the development of the software. These are usually of a minor nature, but should you have any difficulties, do please send us an e-mail with details of your problem.
It should also be noted that with the considerable range of preferences and user permissions, a particular user's window may have features included or omitted (according to their preferences and their permissions) when compared with the screenshots appearing in the guide.

As mSupply is compatible with both Windows OS and Apple Mac OS, there is a mix of screenshots in the manual taken from each operating system.

About us

Sustainable Solutions was established in 2001 with the primary aim of supplying and supporting mSupply software in developing countries. We are committed to producing software that enables excellence in health care delivery. We take pride in looking after people who choose to use our services.

We have offices in:

- Kathmandu, Nepal
- Auckland, New Zealand
- Dundee, United Kingdom
- Belfast, United Kingdom
- Melbourne, Australia

We can be contacted at:

- email:info@msupply.org.nz
- phone: +977 1 5548021 (Nepal) or +64 225 190 499 (New Zealand)

Please feel free to request more information.

Thanks

- This software grew out of necessity at the Medical Supply Department, Kathmandu, Nepal. We learnt a lot from Jaap Zijp's software “Bhandari”, and from the staff at MSD where *mSupply* was originally developed and tested.
- Ujwal Khatry has stuck with Sustainable Solutions for twenty years, including the startup period where our company name could well have been a misnomer.
- Jim Staples of 4D inc. http://www.4D.com kindly arranged an initial donation of the 4D development environment we use.
- Thanks to those people in the 4D tech mailing list who have helped for no benefit to themselves.
- John Ross, Pharmacist of Patan Hospital, Kathmandu, believed in the quality of mSupply enough to use it long before it was fully ready
- David Adams kindly donated his superb texts on 4D.
- The moderators of the E-Drug mailing list have been gracious in letting us use that list for occasional announcements.
- Juliet has always been supporting and more through the ups and downs of starting a new organisation.

Copyright

Licence Agreement and Costs

Commercial users or any user wanting multi-user functionality enabled must obtain a licence from Sustainable Solutions.

Please view our web site http://www.msupply.org.nz for up-to-date pricing.

A free version of mSupply is available for Non-commercial use

- You may use mSupply software in single user mode for free as long as it is used:
  - in an approved not-for-profit organisation
  - in a developing country.
- Sustainable Solutions shall be the sole arbiter of those qualifying for free use.
- All users (free and paid) must register with Sustainable Solutions to obtain a registration code. Information supplied will not be used for any purpose other than generation of registration code.
- Users who have obtained a free licence number are not eligible for free support.

Please contact us for quotes regarding customised versions and installation and training packages.

Changes in recent versions

The mSupply version history is available here: http://msupply.org.nz/history

Previous: ***1. About mSupply*** | | *Next:* ***1.02. Why mSupply?***

1.02. Why mSupply?

This section outlines the approach and ethos of Sustainable Solutions as well as the main areas of functionality that mSupply covers.

People

- Our aim is to serve developing countries with solutions that provide real benefit.
- We are driven by a desire to serve, rather than by profit.
- That said, we are a profitable company with no debt and a commitment to stay in business for as long as we are needed.
- We have a balanced mix of expatriate and Nepali staff who work on mSupply.

Experience

- We've been working on mSupply since 1998, and full-time as Sustainable Solutions since 2001. In that time we've done hundreds of days of training, converted hundreds of thousands of records from other systems to mSupply, and installed mSupply in hundreds of locations.
- Our experience in Nepal, and in many other developing countries, gives us a unique perspective and understanding of the challenges and opportunities involved in working in similar environments.
- We know that a decision to install mSupply is a big one. We're committed for the long term. We're planning to be here decades from now.

Ease-of-use

- mSupply is very easy to install- 10 minutes and a whole department is up and running.
- mSupply uses an easy-to-use graphical interface that makes it a breeze to add purchase orders, patient prescriptions, tenders, etc.
- The system is also made with high-usage warehouses and busy pharmacy departments in mind. he system automates item purchases, receipts and sales for the warehouse administrator, and also provides features such as abbreviated directions entry for quick prescribing of medicines.

- There is always a balance between features and usability. While we know we don't always get it right, we try to make sure we don't add features that aren't really needed. Also, we make sure that features only needed by one client don't clutter up the interface for everyone.

Stability and reliability

- The initial mSupply server installations in 2002 have run since then without ever crashing.
- We have more than ten years of experience in keeping mSupply installations running in developing countries, so we know what it takes to make a reliable system. All multi-user mSupply systems we have installed are still running.
- mSupply includes an automated internet backup system, so backups are automatically transferred to a remote secure site.
- Server backups are automatic with configurable frequency.
- mSupply keeps a log of every action you make, and if there is a power failure then the log can be used to restore all unsaved data on the server.

Security

- We do not know of any instances of a security breach of an mSupply server
- There is a full password protected login and permissions system, allowing each user's access to functions to be controlled and recorded.
- A user log records all significant user interactions, allowing an audit of which user performed which actions.

Local or Cloud or both!

- mSupply can run in many different ways, depending on whether you want to run a local or cloud-based service:
  - Local server with client connecting over your local network
  - Cloud based server with clients connecting via a special application or a web browser (e.g. Citrix)
  - If you have several sites and want to manage them centrally, but the internet does not support a cloud-based service, then mSupply also supports running individual servers at mulitple locations that then synchronise their data back to a central server when communications are available.

mSupply mobile

- On Sept 2nd 2013 we officially released mSupply mobile. It allows you to run a small medical store using a tablet computer (iPad or Android or Windows). An internet connection is required, but users in developing countries are successfully using mSupply mobile over an EDGE (2g) mobile network.

As of mid 2016, the internet connection does not need to be there all the time! See Mobile (Android) user guide

- mSupply mobile can give stock visibility and automated replenishment for hundreds or thousands of stores connected to a single server, which may be hosted on your premises or be cloud-based.

Scalable

- The same data file can grow from being used in a single-user system to having hundreds of concurrent users with millions of transactions.

Customisation

- Many mSupply users have unique needs requiring some customisation of the standard mSupply software. mSupply allows customised versions that can still be easily upgraded as new releases are made. Often customisation is done at no extra cost if the client has a current up-to-date contract.

Specially designed for pharmaceuticals

- mSupply is built from the ground up to handle batches and expiry dates.
- There are multiple ways of classifying medicines, and mSupply supports ATC coding, WHO's EDL[1)] categories and the user's own custom categories.
- Many of the reports are specific to the needs of pharmaceutical distribution

Reporting

- The in-built reports have been developed since the beginning in response to user requests.
- Users can easily create their own custom reports and save them for use again. Saved reports are available from a menu in the custom report window.
- Items, Names, and transactions all have lots of spare fields that users can use to store custom data, and then use those fields in reports.
- mSupply dashboard allows managers in remote locations to log on with a web browser and view reports.

Mistake tolerance

- mSupply provides easy merging of duplicate items.
- Easy adjustment of inventory errors (but with a full audit trail!)
- Most fields allow entry by name or code, and allow partial entry of as much of the name or code as the user knows.
- Easily find transactions you've entered, by number, by customer/supplier name, by a list of recent transactions or by a custom search.
- If the user's hardware is powerful enough, fuzzy find searches allow finding data even if the search terms are incorrectly entered.

Backorders

- Items that you are unable to supply to customers are put onto backorder. A report of all backordered items is easily generated. When the stock for the backorder becomes available a customer invoice is automatically created awaiting your confirmation.

Web interface for customers

- mSupply allows customers to remotely log in via a web browser and place orders, view order status, stock status and transaction history. This system is in daily use.

Customer stock history / indent ordering

- mSupply supports a unique system of centralised supply where the distribution point submits current stock on hand figures, and mSupply calculate a rational quantity to supply, knowing the historic stock on hand, the ordering cycle, and the amount supplied during the previous cycle.
- mSupply also supports the simpler imprest system where the amount given to customers is based on a fixed level of stock, as is commonly done when supplying wards in hospitals.

Quantification

- mSupply uses a powerful ordering system that allows accurate real-time analysis of how much stock should be ordered, based on historic consumption, order lead time, the ordering frequency, desired “buffer” stock levels and current stock levels. Unmet demand from customers, backorders, and stock on order are also taken into account.
- This system has proven reliable, and requires little user intervention, unlike systems that require you to set minimum and maximum stock levels. mSupply still allows minimum stock to be set if really needed.

Procurement

- mSupply handles purchase orders in multiple currencies, and allows split deliveries.
- The goods receipt module allows full or partial receipt of each purchase order plus addition of stock not ordered.
- Ad hoc quotes from suppliers can also be handled.
- The quantification, tender management and purchase order systems all tie together so data flows from one to the other without requiring re-entry.

Tender management

- The Tender Management module provides detailed production and management of tenders including using mSupply data to determine quantification, printing invitation letters, comparing tender submissions and automatically producing Purchase Orders for the winning tender supplier.
- The Remote Tender Management Module provides posting of tenders by suppliers to https://tenders.msupply.org.nz secure web site. You download and automatically import

completed tenders to mSupply for easy comparison of supplier responses, choosing the winning supplier and creation of purchase orders.
- Supplier Registration functionality is planned to be developed as part of the Tender management module.

Dispensing

- mSupply integrates well into hospital pharmacies, providing easy breakdown of bulk packs for dispensing.
- Prescribers are recorded, and prescriber reports allow analysis of prescribing trends and costs.
- Drug interactions are handled, as is repeat dispensing.
- Patient history is recorded and easily accessible.
- Customisable abbreviations allow rapid entry of patient instructions on to printed labels.
- Medicine labels are produced using specialist label printers. Busy sites using mSupply produce hundreds of thousands of labels per year.

Multiple sites from one server

- mSupply is able to handle multiple virtual stores within a single data file. A common use for this is a hospital, where several stores may be present, but each needs to run independently.
- Stores can run in either dispensary or store mode, so one server can handle both a hospital pharmacy and a warehouse store simultaneously.
- Using Citrix and a DSL internet connection you can run a whole country's medical distribution system from a single server, greatly reducing infrastructure requirements while dramatically improving availability and reliability.

Stock control

- Because mSupply tracks each batch separately, full FEFO [2)] can be maintained for every item.
- There is a full audit trail for each stock line.
- Each stock line has a record of warehouse location, enabling easy warehouse management
- If stock lines have the same batch number, expiry and pack size, they can be split and combined.
- Stock lines can be re-packed to different pack sizes for convenience. Warehouses will find it easier to handle cartons with a pack size of, say, 12,000 tablets while dispensaries will be dispensing individual tablets, and so will want a pack size of 1.

Warehouse management

- Full Location management
    - mSupply allows volume based calculations of available storage, that is especially critical for cold chain items.
    - Volume information is used to provide either reports or a graphical depiction of how full each section of the warehouse is.
    - Alerts are given when placing purchase orders if there will not be enough space to hold the incoming goods.
- Basic bar-coding functionality is planned to be developed soon.

Vaccines monitoring

- mSupply allows recording of VVM[3] status for batches, and allows sorting available stock by VVM status rather than by expiry.

Mobile communications

- mSupply integrates with Frontline SMS to provide an interface for using SMS messaging to submit information such as stock levels and goods receipt confirmations to mSupply.

Hospital information system

- A simple hospital information system has been developed as part of mSupply. It is designed to provide a basic service to record critical data:
  - Recording a hospital's wards and beds.
  - Recording inpatient admissions (admitting a patient, assigning them to a ward and bed).
  - Recording ICD[4] 10 disease codes for each patient admission. You can assign multiple disease codes, and prioritise them (primary, secondary, etc..).
  - Moving patients to different wards/beds.
  - Recording discharge data (patient status at time of discharge)
  - Reporting on bed occupancy rates as a whole and by ward, and other useful statistics e.g. average length of stay, ICD10 statistics.
- The mSupply HIS is a cost effective alternative to large commercial installations.

Product / medicine registration

- mSupply's Registration module allows mSupply to manage registration of suppliers and their products on a per brand, dose, and form basis.
- mSupply will record and track the status of supplier's registrations and stores the documentation for easy retrieval.

No data lock-in

- All data in mSupply can be exported as industry-standard XML or as an SQL dump, allowing use by other systems as needed.
- A public API has been developed, allowing any system to retrieve and submit information from/to mSupply.

Cross-platform

- mSupply is available for Windows and Macintosh.
- We recommend Windows servers, but client computers can be either Windows or Macintosh.

Interaction with other systems

- mSupply can either query other systems or provide data in real time via XML web services and other industry standard connectors.
- mSupply provides automated seamless integration with Moneyworks accounting software and general export files which can be easily customisable for import to other systems.

All of these features combine to make a very powerful medical inventory supply chain management system which has been tried and tested in dozens of locations around the world. We believe it has a unique set of features that no other product offers for managing medical supplies in developing countries

For full information, visit http://www.msupply.org.nz A demo version is available here

The home page for the documentation wiki is here

Previous: ***1.01. Introduction*** | | *Next:* ***1.03. Who uses mSupply?***

1.03. Who uses mSupply?

This list isn't exhaustive.

All sites are multi-user with the number of sites x number of concurrent users at each site in brackets unless denoted by **SU** (="Single User") after the name.

Our 3 largest users are:

Country	Total Sites	Desktop Sites	Mobile Sites
Myanmar	900	900	0
Côte d'Ivoire	1996	1200	796
Papua New Guinea	447	42	405

Open mSupply installations are in:

- Djibouti
- Timor-Leste
- Mali
- Sao Tome
- with Côte d'Ivoire, Niger, Chad, Republic of Congo all planned for 2025

Africa (16 countries)

Angola

- Went live at CECOMA (their CMS) in September 2023)

Côte d'Ivoire

- Designated national system
- Type of system: **WMS** & **ELMIS**
- As of December 2021: over 700 sites- mixture of desktop and mobile
- 30 sites with World Bank funding from 2021

Djibouti

- Went live at 14 sites May 2023

Democratic Republic of Congo

- Cordaid (3)

Gambia

- Gambia Central Medical Stores (14)

Ghana

- Central Medical Stores (5)
- Status 2015: CMS was destroyed in a fire in 2014, and the project has been on hold since then.

Niger

- 2 regional warehouses managed by Chemonics (SU) - 2020

Nigeria

- Six Government state stores (6 x 3)
- Ten Government stores managed by Axios (10 x 2)
    - Axios HQ, Abuja (4)
    - Axios uses mSupply synchronisation to connect sites that don't have full time internet access. This system has been in use since 2010, and continues to function well.
- FCMS Store, Lagos (5)
- Jigawa CMS
- From March 2016: 20 new users spread over 6 states (Kaduna, Katsina, Zamfara, Kano, Jigawa, Yobe)
- Private non-pharmaceutical supplier, Lagos (STIL)(SU)
- UNFPA warehouse, Lagos (5 users) - 2021

Liberia

- Axios: 1 site synchronising to a central server
- Liberia MoH: 11 sites being consolidated to a single mSupply installation Dec 2016
- using EPI module: yes

Malawi

- Orant Charities (SU). From 2017.
- Nkhoma Hospital Pharmacy Department. From 2015

Mali

- UNFPA Open mSupply pilot, December 2024 onwards

São Tomé and Principe

- Designated national system
- Type of system: **WMS** & **ELMIS**
- National supply chain system (10 users 2021, expanding to 40 users in 2022)

Sierra Leone

- Designated national system
- Type of system: **WMS** & **ELMIS**
- MRC (SU)
- Crown Agents Ebola Response and Free Health care distribution (20) - several stores around Freetown running from a single cloud server.
- National Pharmaceutical procurement unit (2017). Central server with 18 users, 13 regional sites, et al.
- LSHTM Ebovac (2017). Server with 5 users.

South Sudan

- Designated national system
- Type of system: **WMS** & **ELMIS** (expanding to ELMIS H2 2022)
- MoH Central Medical Stores (5 users)
    - Expanding to whole country in 2022
- UNDP Juba (5 users)

Zambia

- Churches Health Association (4 users)

Zanzibar

- ZILS (5 users)
  - this system employs an EDI interface to pick up orders sent to a dropbox folder from the Zanzibar LMIS system and incorporates it into mSupply
  - expanding to Pemba in 2022

Pacific (15 countries)

Cook Islands

- Desktop Sites (5) - 2018
- Mobile Sites (10) - 2018
- using EPI module: yes

Federated States of Micronesia (FSM)

- 7 users at CMS/main hospital - 2012

Kingdom of Tonga

- Central Pharmacy Medical Stores (3)
- Vaiola Hospital (4)
- Haapai Hospital (SU)
- Vava'u Hosptial (SU)
- 'Eua Hospital (SU)
- Mobile (11)
- National Covid 19 vaccination program run using mSupply mobile - 2021
- using EPI module: yes

Kiribati

- Designated national system
- Type of system: **WMS** & **ELMIS** & **Covid Vaccination Record**
- Tungaru Hospital (9)
- ~~3~~ 34 sites using mSupply mobile
- National Covid 19 vaccination program run using mSupply mobile
- using EPI module: yes

Marshall Islands

- Ministry of Health/Majuro Hospital (2)

Nauru

- Central Hospital and Stores (6 users)

Palau

- 3 sites including CMS- went live in 2022.

Papua New Guinea

National Department of Health

- Designated national system
- Type of system: **WMS** & **ELMIS**
- Central server (cloud hosted) with 12 client users
- 28 Sync server sites (Area medical stores (AMS), provincial hospitals) with 118 client users
- 13 Single-User desktop sync sites (district hospitals)
- 105 Mobile sites (Health centres)
- 300 Mobile sites (UNICEF) 2022
- using EPI module: yes

Burnett Institute

- 8 mobile sites (Strive project)

Solomon Islands

- Designated national system
- Type of system: **WMS** & **ELMIS**
- National Medical Stores (14 users + Web server + Tender module)
- National Referral Hospital (4)
- mSupply mobile- 50 Second Level Medical Stores (phased installation from October 2016)

Tokelau

- 3 sites covering country - 2018

Tuvalu

- Princess Margaret Hospital (2)

Vanuatu

- Designated national system
- Type of system: **WMS** & **ELMIS**
- Central Medical Stores (2)
- Vila Central Hospital Pharmacy and Store (3)
- Lenekel Hospital (2)

- Norsup Hospital (2)
- Luganville Hospital (2)
- using EPI module: yes

Fiji

- Designated national system
- Type of system: **WMS** & **ELMIS**
- National deployment to 230 sites started October 2020.
- Aspen Hospitals x 2

Samoa

- Nationwide deployment (approx 18 sites) started July 2020 - completed 2022
- Using mSupply Coldchain for monitoring fridges, including receiving Telegram alerts for breaches.

Niue

- Using mSupply for pharmacy store and all dispensing.
- Using mSupply Coldchain for monitoring fridges

Asia (3 countries)

India

- Meyer Free Clinic

Nepal

- INF (3 sites- SU)
- MSMT (SU)
- Patan Hospital (SU)
- Lal Gadh Hospital
- Gurkha Welfare scheme (26 sites, SU) Funders: DFID, GWT

Afghanistan

- Six NGOs responsible for medicine distribution in provinces synchronise data back to a management server in Kabul (July 2016). Includes automated generation of a multi-workbook Excel spreadsheet that includes macros that submit data to a Ministry of Health database.
- UNDP warehouse (2019- 5 users)
- CMS warehouse (2019- 5 users)
- AFIAT project: 70 sites
- UNCEF : starting to roll out as national system from May 2025

South-East Asia (4 countries)

Cambodia

- World Mate Emergency Hospital
- WMEH Warehouse

Laos

- Designated national system
- Type of system: **WMS** & **ELMIS**
- 186 sites (complete Nation implementation) using mSupply synchronisation

Myanmar

- Designated national system
- Type of system: **WMS** & **ELMIS**
- ~~31~~, no ~~42~~ ~~150~~ ~~362~~ 639 sites using synchronisation to connect to a cloud server, with plans to extend to 3000 sites over the next few years.
- Medical Action Myanmar (Dec 2017) - 25 mobile sites connecting to a cloud server running mSupply.
- UNICEF funded EPI program - approx 350 sites starting 2021
- using EPI module: yes
- Zenith TRI (2022 onwards): another ~40 sites on a separate system serving NGOs

Timor-Leste

Ministry of Health

- Designated national system
- Type of system: **WMS** & **ELMIS**
- Sites
    - SAMES (10)
    - Hospital Nacionale Guido Valedares (5)
    - Dili Central Medical Services (Mobile)
    - 100 mSupply mobile sites (expanding to over 300 in 2022)
    - National Laboratory, Dili & 5 regional laboaratory sites

Menzies Health

- Central laboratory
- 8 remote laboratory sites

Americas (3 countries)

Colombia

- Bogota warehouse supported by Chemonics (2022)
- Valle del Cauca regional warehouse
- Cundinamarca regional warehouse

Haiti

- National warehouse run by Chemonics (2021)
- National Logistics System (2023/24)

USA

- SafeNetRx (was Iowa Prescription drug corporation)
  - users: 2
  - Web server: clients from all over Iowa place orders using the mSupply web interface
  - SafeNetRx are the largest non-governmental supplier of free medicines in the USA.

Europe and the United Kingdom (1 country)

United Kingdom

- UK Microbiological Products supplier (Private company). Since 2012
- UK Med, suppliers of the UK-EMT (Emergency Medical team), responsible for the UK's international emergency medical response.

Previous: ***1.02. Why mSupply?*** | | *Next:* ***1.04. Which combination of mSupply products best suits your organisation?***

1.04. Which combination of mSupply products best suits your organisation?

Since its creation in 1998, mSupply has grown and multiplied as it has been applied to different challenges. The original Free-user (Windows or Mac based) application continues to be downloaded and used regularly. In fact, it comes packed with (almost) all the bells and whistles of some of our most sophisticated installations, but is only suitable for a small, 'single concurrent user' facility.

Comparison of the mSupply products

So which are the right mSupply products for your organisation?

Free-user

- PC or Mac application - Download here. The database resides on the computer that the application has been installed on. It can be used by only one user at any one time.
- Free! You still need to register mSupply with Sustainable Solutions, but we don't charge you for it - and we don't sell your contact details either!

Single-user

- Same as Free-user, but for users who wish to make use of Support[5)] and Up-to-Date (UTD)[6)]
- A software license needs to be procured, generally for about 1/3 of the price of a multi-user client, and then Support and UTD on top of that.

Multi-user (Server / client)

- For situations where more than one user needs to access the database at one time. The database is hosted on a file server and mSupply server software is installed on that hardware. Users have access to this data through mSupply client software installed on client PCs that communicate to the server through a Local Access Network (LAN). Remote users can access the server through Remote Desktop Protocol (RDP) or similar.
- A software license needs to be procured for each concurrent client. Support and UTD is optional, but highly recommended. Most of our customers are very happy to pay for these services.

Synchronised Multi-user

- If the internet connection to remote users in a Multi-user configuration is inadequate, then synchronisation allows a Primary - Satellite configuration to be deployed. 'Satellite' multi-user servers are installed at remote sites where users operate mSupply on their local store without worrying about the internet connection. In the background, these 'satellite' servers will synchronise their local store data with a 'Primary' server when the internet connection becomes adequate.
- A software license needs to be procured for each concurrent client for each server. The Synchronisation server Module and Web Server Module are required on the central server.

Synchronised Single-user (Single-user sync)

- There are situations where the remote sites (with poor internet access) are just single-operator stores needing to manage and report their stock using the fully featured mSupply client. Procuring the minimum multi-user satellite server configuration for each of these sites would be expensive. A solution has been developed that entails installing single-user client machines (normally laptops) at these remote locations and then synchronising them to the primary server

much like the Synchronised Multi-user configuration.
- Lower cost than conventional synchronised multi-user as the single-user client license is less costly than multi-user client licenses. The Synchronisation server Module and Web Server Module are required on the central server.

mSupply Mobile (Android)

- mSupply Mobile is similar to Synchronised Single-user (Single-user sync), but the users operate with mSupply Mobile (client) software on Android tablets. This app has a reduced feature set, but is more than adequate for most Last-Mile needs. Local stock details are synchronised back to the Central server, and can be monitored and reported on there.
- Being Open Source software, mSupply Mobile has zero license fees. The Synchronisation server Module and Web Server Module are required on the central server.

Open mSupply

- Open mSupply is the multi-platform mSupply software that has been under development by the mSupply Foundation since 2020. Open mSupply has all of the flexibility of all of the other versions of mSupply with the benefit of being Open source.
- Being Open Source software, mSupply Mobile has zero license fees. The Synchronisation server Module and Web Server Module are required on the central server.

Comparison table

The key differences between the configurations basically comes down to how the user(s) interact with the database. We hope this table helps in making that decision.

Product / configuration	Description	Software price implications - refer Pricing
Free-user	PC or Mac application - Download here. The database resides on the computer that the application has been installed on. It can be used by only one user at any one time.	Free! You still need to register mSupply with Sustainable Solutions, but we don't charge you for it - and we don't sell your contact details either!
Single-user	Same as Free-user, but for users who wish to make use of Support[7] and Up-to-Date (UTD)[8]	A software license needs to be procured, generally for about 1/3 of the price of a multi-user client, and then Support and UTD on top of that.
Multi-user (Server / client)	For situations where more than one user needs to access the database at one time. The database is hosted on a file server and mSupply server software is installed on that hardware. Users have access to this data through mSupply client software installed on client PCs that communicate to the server through a Local Access Network (LAN). Remote users can access the server through Remote Desktop Protocol (RDP) or similar.	A software license needs to be procured for each concurrent client. Support and UTD is optional, but highly recommended. Most of our customers are very happy to pay for these services.

Product / configuration	Description	Software price implications - refer Pricing
Synchronised Multi-user	If the internet connection to remote users in a Multi-user configuration is inadequate, then synchronisation allows a Primary - Satellite configuration to be deployed. 'Satellite' multi-user servers are installed at remote sites where users operate mSupply on their local store without worrying about the internet connection. In the background, these 'satellite' servers will synchronise their local store data with a 'Primary' server when the internet connection becomes adequate.	A software license needs to be procured for each concurrent client for each server. The Synchronisation server Module and Web Server Module are required on the central server.
Synchronised Single-user\\ (Single-user sync)	There are situations where the remote sites (with poor internet access) are just single-operator stores needing to manage and report their stock using the fully featured mSupply client. Procuring the minimum multi-user satellite server configuration for each of these sites would be expensive. A solution has been developed that entails installing single-user clients machines (normally laptops) at these remote locations and then synchronising them to the primary server much like the Synchronised Multi-user configuration.	Lower cost than conventional synchronised multi-user as the single-user client license is less costly than multi-user client licenses. The Synchronisation server Module and Web Server Module are required on the central server.
mSupply Mobile	mSupply Mobile is Open Source software that is similar to the synchronised Single-user configuration, but the users operates the software app on an Android tablets. This app has a reduced feature set, but is more than adequate for most Last-Mile needs. Local stock details are synchronised back to the Central server, and can be monitored and reported on there.	Pricing is even lower than for Synchronised Single-User. This *was* the way forward for the medical supply chain in small and remote facilities - until Open mSupply (see below) took that honour! The Synchronisation server Module and Web Server Module are required on the central server.
Open mSupply	Open mSupply is the Open Source software multi-platform mSupply software that has been under development by the mSupply Foundation since 2020. Open mSupply has all of the flexibility of all of the other versions of mSupply with the benefit of being Open source. Local stock details are synchronised back to the Central server, and can be monitored and reported on there.	Pricing for smaller facilities (single-user stores) is the same as mSupply Mobile. We see this as the way forward for the medical supply chain in both small and remote facilities and in large multi-user facilities. The Synchronisation server Module and Web Server Module are required on the central server.
mSupply Customer Web Interface	Allows staff of Customers in your mSupply system order stock on-line. It runs on a browser on any device: tablet, smartphone, net-book, desktop computer etc. It's a little hard to see why this should be chosen over Open mSupply, as the costs are very similar, without the benefit of being able to operate a store...	Depends on your situation - contact us. The Web Server Module is required on the central server.

Product / configuration	Description	Software price implications - refer Pricing
FrontlineSMS integration	mSupply has the ability to integrate with a FrontlineSMS installation. This allows a customer to send their current stock levels to mSupply using an SMS (text) message from any mobile phone. This is particularly useful if, for example, you are a mobile or remote health post or dispensary which doesn't have internet access and only needs to send in information about a few items at a time.	SMS module is required on the central server.

Other modules

Other modules are available for addition to the basic mSupply application:

Module	Comments	Software price implications - refer Pricing
FrontlineSMS	Allows users to send their current stock levels to mSupply using an SMS (text) message from any mobile phone - even with only 2G reception!. This can then be used by mSupply to determine how much stock to send to the facility.	Equal to the price of **1** client license.
Product (drug) Registration	Allows integration of product registration (control of what products can be supplied by authorising particular suppliers and products) by recording and tracking the status of supplier's registrations and storing the documentation for easy retrieval.	Equal to the price of **2** client licenses.
Web Server Module	Allows you to access mSupply data on the server from any networked computer that has internet access. This module is a prerequisite for several other modules.	Equal to the price of **2** client licenses.
Synchronisation server Module	Maintains data integrity between a central mSupply server and 'satellite' mSupply servers. It therefore only applies to situations where there is a multi-mSupply server setup. Requires the Web Server.	Equal to the price of **2** client licenses.
Tender Management	Allows execution of a full tender process including publishing of the tender through a web site, and so allowing tenderers to submit tenders on-line. Requires the Web Server.	Equal to the price of **1** client license.

A note about costs...

Software costs

When procuring software, an obvious question is what does it cost. We try to be as up-front as possible about what mSupply software costs. Even so, it's complicated. As you can see above, the mSupply ecosystem is complex and each component has different costs. For a start, we've tried to document the software costs on our pricing page. The amounts that you might pay for mSupply software can be divided into three components:

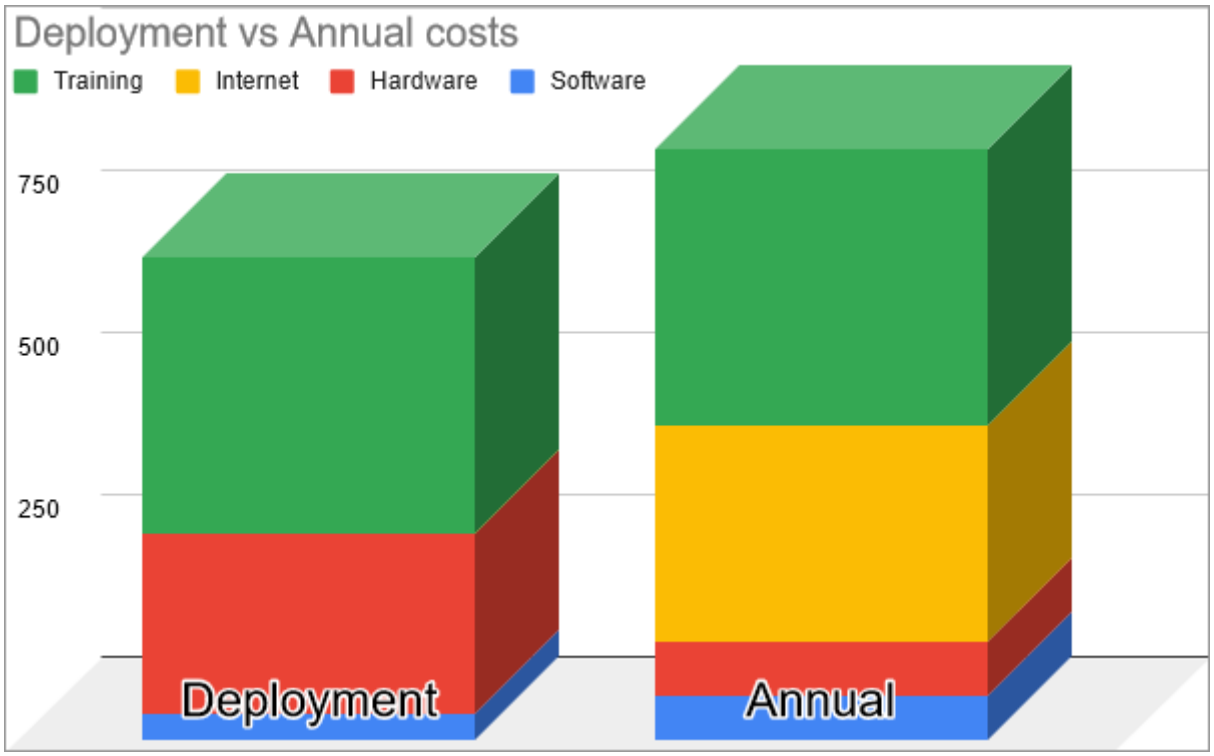
- **License costs** Thanks to the generous support of many donor agencies over the decades of mSupply's existence, only the mSupply products built on the (very good!) 4D database engine incur a license fee, up-front, lasting forever - refer Pricing. Not all of the 4D based mSupply products have a license fee; Free-user is … free  .
  mSupply Mobile and Open mSupply are both Open Source software, and so are **FREE** of licence fees.
- **Installation costs** mSupply systems need to be configured to the needs of the supply chain system. In principle, software and hardware configuration can be done by system administrators in the host organisation. However, in most cases, the mSupply Foundation is engaged to assist with software and hardware configuration. This is often done initially by one or more consultants travelling to the country for a number of weeks. The costs of this will normally be in the tens of thousands of dollars. Once a country has an mSupply system up and running, additional stores and sites can normally be added at much lower costs, with indicative prices below. For large implementations, local configuration capacity needs to be developed, and the mSupply Foundation is very keen to train local system administrative configuration capacity.
  - Configure a store, not including storage locations and complex user profiles: USD 100
  - Configure hardware:
    - Tablet: USD 25
    - Single-user PC: USD 100
    - Server: USD 200
- **Maintenance costs** As with any technology systems, there are ongoing maintenance costs including keeping software up-to-date[9)] and providing support. This support could be provided by system administrators in the host organisation. However, in most cases, it has been found to be more effective to engage the mSupply Foundation to provide support, at least in part. For large implementations, local support capacity needs to be developed, and the mSupply Foundation is very keen to train local system administrative support capacity.
  - For mSupply products that have a license fee, Up-to-date and support is charged as detailed here.
  - For Open source products, support is charged as detailed here.

And all the other costs

Software is *never* the largest component of deployment and operational costs. Local circumstances can vary dramatically, but in one a typical developing country with in excess of 500 mSuppy stores, the experience has been that *after* the expensive initial deployment, deployment and operational costs have been:

Cost type	Deployment	Annual operation
License	0% (Open source)	0% (Open source)

Cost type	Deployment	Annual operation
Configuration / Support	5.6%	7.6%
Hardware	37.3%	9.1%
Internet	0%	36.6%
Training	57.1%	46.6%



Note that in this particular country, the annual costs of a the cheapest commercially available cellular internet connection *exceeded* the capital cost of the 10“ Android tablets.

Key conclusions:

- Training is the highest cost (rightly so!)
- Provision should be made for hardware depreciation (devices do break, get stolen, etc.)
- **Software costs are normally < 10% of the costs (capital and operational)**

Referring to the server machine vs. server software

We need two servers!!!???

The ICT industry is plagued by the practice of using the same term to refer to software, hardware or both combined! As it relates to mSupply in multi-user environments, there is often confusion over two of these:

- The term '**Server**' can refer to:
  - The mSupply server computer **software** which runs the mSupply database,
  - The hardware which the mSupply server **software** is installed on, *and*;

    - Both the hardware and the software acting together. This is possibly the most common usage. When we say something like “send to the server” we mean send data to the server software operating on the server hardware.

The server hardware can actually be a cloud hosted 'service' rather than physical hardware that you own and try to manage. Sometimes the server hardware is referred to as a **'file server'**, and this can help to avoid confusion. In any case, for any multi-user mSupply installation, including mSupply mobile, *both* server software and server hardware are needed, and both of them cost money.

- Similarly, the term **'Client'** can refer to:
    - The mSupply client computer **software** which accesses the mSupply server (software) database on the server (hardware),
    - The **hardware** which this client software operates on, *and*;
    - Both the hardware and the software acting together.

Sometimes the client hardware is referred to as a **'client PC'** (Mac or Windows) and this can help to avoid confusion. Again, for any multi-user mSupply installation, including mSupply mobile, both client software and client hardware are needed. For mSupply mobile, the client hardware is an Android Tablet - refer Mobile (Android) user guide v2.0 - featuring offline operation.

We are a software company, so when we use these terms, we will almost certainly be referring to our software, but sometimes not. The context normally helps, but please forgive us if we fail to distinguish between these meanings!

Previous: ***1.03. Who uses mSupply?*** | | *Next:* ***1.05. Terms, definitions and conventions used in this user guide***

1) Essential Drug List

2) First Expiry, First Out

3) Vaccine vial monitor

4) International Classification of Diseases

5) 7) Remote support - almost 24/7. We aim to provide a first response within 2 hrs

6) 8) Gives you access to the latest software updates, including assistance with upgrading if needed.

9) only applicable for mSupply products that have a license fee