



INTERNATIONAL PROSTHETIC HAND TEAM BUILDING ALLIANCE

Preamble

The Give a Hand®, Build a Hand® and Helping Hands Programs® provide a unique opportunity for organizations to engage in a meaningful cause while enhancing employee engagement. This initiative goes beyond traditional team-building activities, allowing participants to construct prosthetic hands for recipients with clinical needs (amputation, injury, or congenital). Through this process, participants experience the fulfilment of contributing to a life-changing mission.

The International Prosthetic Hand Team Building Alliance has been formed to provide robust governance and transparency for using prosthetic hands in team-building programmes worldwide.

This document outlines the codes of conduct, policies, procedures, and guiding principles that govern our operations. The LN4 Hand Project adheres to strict quality standards and transparent governance procedures. From development and production to recipient distribution, every step is designed to maintain the highest levels of quality, authenticity, and accountability. This documentation serves as a set of guidelines for the integrity of the LN4 prosthetic hand system.



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Description of the Prosthesis

The LN4 hand is a high-quality, clinically sound, FDA-approved prosthetic device that is designed with the specific needs of the developing world in mind.

Each kit contains 30 components made from durable injection-moulded plastic and metal. Programme participants assemble these components into a functional, mechanical hand prosthesis. The device then goes through a quality check with trained engineers before being distributed through our charity partner network.

The prosthesis is designed for use by both children and adults and is ambidextrous, fitting either the left or right arm. The LN4 hand is:

- **Robust and low-maintenance:** The hand is impact-resistant, washable, and designed to withstand everyday use.
- **Easy to use:** The fingers can be moved, fixed in place, and released with a simple tap.
- **Adjustable:** The holding arm and Velcro straps make it simple to wear the prosthesis independently.
- **Adaptable:** The device can be used by single or double amputees.



Development of the LN4 Prosthetic Hand

The LN4 prosthetic hand was developed through the collaborative efforts of Ernie Meadows, Michael Mendonça, and Maurice LeBlanc, an award-winning mechanical engineer specialising in assistive technology and upper-limb prosthetics.

The goal was to create a low-cost, lightweight, and highly functional prosthetic hand that maintains exacting quality standards at every stage of the production and distribution process.

To ensure quality and fitness for purpose, it requires specific criteria to ensure proper fit and functionality, including:

- **Residual limb requirements:** Approximately 14 cm of residual limb below the elbow
- **Arm condition:** No remaining fingers, thumb, or wrist to avoid interference with the cuff.
- **Arm health:** The arm must be fully healed with no open sores or bandages, and no pain when moderate pressure is applied to the wound area.

While exceptions exist, such as custom workarounds at specific clinics, these general criteria ensure optimal performance and user experience.



Charity 501 (c)(3) Designation

The Prosthetic Hand International Team Building Alliance is the only organization to partner directly with The LN4 Hand Project, which is a registered and accredited 501(c)(3) corporation with charitable status, as designated by the Federal Government and the IRS in the United States.

As a 501(c)(3) organization, The LN4 Hand Project is governed by robust guidelines that offer external oversight over its charitable operation, including published articles of Incorporation with a specific statement of purpose aligning with 501(c)(3) standards, a dissolution clause stating that assets will go to another 501(c)(3) if the organization dissolves, and a board of directors who oversee governance. Conflict of interest statements below cover this item.

LN4 income, donations, or assets cannot benefit private shareholders, board members or individuals. Transactions must be at fair market value — for instance, LN4 cannot pay a family member of the board a premium for services. Private inurement (e.g., over-market salaries, benefits in kind agreements) is strictly prohibited. LN4 must regularly file auditable documentation on their legal structure and organization, projections, evolving descriptions of activities and governance, and complete conflict of interest disclosures. The IRS reviews regularly for eligibility, structure, purpose, and compliance safeguards. Additionally, the organization has a set of additional policies which have been adopted by the Board of Directors and are also filed with Charity Navigator, a credible non-profit rating agency.



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LN4 is subject to ongoing oversight from both federal and state authorities to ensure that it operates in a legal, ethical, and compliant manner. LN4 files an annual return using Form 990, which offers complete transparency on the organization's finances, activities, governance practices, and executive compensation. Because Form 990s are publicly accessible, they inform the IRS and provide transparency to donors, grant-makers, and the public.

In addition to reviewing annual filings, the IRS also retains the authority to audit, without notice, The LN4 Hand Project. Beyond federal scrutiny including the FDA, state governments also play a role in LN4 oversight.



Ambassador Network

Every person or organization that wishes to volunteer and support The LN4 Hand Project must go through a series of steps before joining the LN4 Ambassador Network. When a person/organization reaches out asking to become an LN4 Ambassador and/or Ambassador Organization, they are sent a standard inquiry response via email, which explains the following:

- The definition of an LN4 Ambassador (one who is willing to volunteer their time/talent/treasure to help LN4 promote, distribute, and/or fit LN4 prosthetic hands upon people in need)
- The LN4 Ambassador Portal sign-up process
- The option to immediately request one hand as a one-time request for someone they know who needs one

Here are the steps provided to interested parties to sign up for the LN4 Ambassador Portal:

1. Register to use Sports Engine (a free platform that hosts the LN4 Ambassador Portal): https://user.sportngin.com/users/sign_in
2. Once a Sports Engine account is created, then go to <https://www.Ln4hand.org/home> to access the LN4 Ambassador Portal homepage. On this homepage, select "Register as a New or Existing Ambassador" or "Register as an Ambassador Organization" if an organization is represented rather than an individual.
3. Complete the LN4 Ambassador Registration Form.



4. The registration is now complete. An email confirmation is then sent to the registered Ambassador and/or Ambassador Organization.

After one signs up with the LN4 Ambassador Portal, the LN4 Hand Project reviews and confirms their registration as an Ambassador/Ambassador Organization. They are assigned a Region within the Portal primarily for the Foundation's ease of filtering Ambassadors by regions.

If they are a new Level 1 LN4 Ambassador (meaning they've signed up yet haven't fitted hands before), they are sent a two-hand package that includes two LN4 hands with instructions for them to train their team, themselves, find recipients, and practice two fittings along with completing a simple 1 page recipient registration page for each recipient.

Once they do this, they will move to Level 2 and be eligible to request one box (25 hands). After Level 2, there are Level 3, Silver, Gold, and Platinum levels. If they are signed up as a Level 1 LN4 Ambassador Organization, the LN4 Hand Project coordinates a time with them to meet via an online meeting platform to learn more about their organization and share the process of fitting and requesting LN4 hands from the Foundation's perspective.

We do not conduct online meetings with individual Ambassadors when they sign up because they are a single volunteer, and vetting is not required at that level.



Fitting Clinic Requirements and SOPs

LN4 has produced videos instructing Ambassadors and Ambassador Organizations on properly fitting an LN4 prosthetic hand. You can find the videos on the website [here](#).

Our videos are the primary method for providing training on fitting a hand, and we direct people to them for most questions related to fittings. If we are aware of another Ambassador located near the person learning to fit a hand, we will also attempt to connect them via email to meet and learn from one another.

Typically, only LN4 Ambassador Organisations host hand-fitting events, where multiple recipients are fitted with prosthetic hands simultaneously, and instructions are provided on how to best host an event on the LN4 Ambassador Portal. For reference, please see the one-sheet describing how to host a hand-fitting event [here](#).

An LN4 Ambassador or Ambassador Organization can find many resources on identifying an ideal candidate for receiving a hand (length of residual limb remaining, healed wound, etc.), registration forms, how to fit a hand, above elbow prostheses information, request hands and find prosthetic leg partners on the Portal at this page.



Transparency and Governance on Distribution

When LN4 prosthetic hands are shipped to an Ambassador, an Ambassador Organisation, or to an individual hand recipient requesting one for themselves or someone they know, the Foundation always requests two pieces of information in return. The first is a one-page form specific to the person receiving the prosthetic hand. See the PDF "LN4 Hand Recipient Information" for reference. The Foundation requests that this simple form be returned to the Foundation for record-keeping and is kept private for internal record-keeping purposes only.

Clinicians, or ambassadors executing the fitting, may choose to take a photo at their discretion, depending on patient confidentiality.

Once this information is returned, the Foundation acknowledges it, and saves it to the hand recipient database file.

All hand shipments are saved in the LN4 Distribution Log. We record every hand shipped, given in-person, distributed at conferences or exhibit tables, or any other distribution function. For the purposes of record keeping, we log the date of distribution, destination, shipping destination, quantity of hands, type of hand (i.e., size and Above Elbow vs Below Elbow), hand contact person, and LN4 contact, as well as any other relevant notes. We also maintain a waitlist in a separate tab of this document, which tracks requests that have been made and not yet fulfilled.



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This process also fluctuates, because we try to meet the needs that the current inventory and logistics company can accommodate. Therefore, it is not as simple as first-requested, first-distributed. We consider the shipment volume, the difficulty of location for the shipment, customs wait times, and existing needs elsewhere. This document is an internal LN4 document.



Summary of Ambassador/Distribution Organizations & Partners

LN4 has a large LN4 Ambassador and Ambassador Organization Network. The Ellen Meadows Prosthetic Hand Foundation was established in 2005, resulting in nearly 20 years of volunteer efforts that have distributed over 86,000 prosthetic hands in 100 countries.

Existing and recent LN4 Ambassadors are listed on the LN4 Ambassador Portal. The Portal went live in 2020 and has been a useful resource to store all our current Ambassador and Ambassador Organizations' information. This is an emerging (and ever-growing) database that covers the growing number of individuals and organizations involved in the network. It should not be considered complete or exhaustive, as it's being added to all the time.

Our Portal figures are the LN4 Ambassadors, who are aware of the Portal and have agreed to sign up. We are always trying to get more of our volunteers to sign up, as it provides LN4 with an easy, consolidated place to quickly access our team when there are updates, news, and hand-request follow-up information.

With hundreds of registered LN4 Ambassadors and 100+ registered Ambassador Organizations in our Ambassador Network, we are so thankful for each of them and their willingness to serve.

As part of The LN4 Hand Project's mission, we appreciate every individual willing to serve as an LN4 Ambassador, yet focus more attention on partnering



with Ambassador Organizations as they are able to scale more efficiently and reach more remote populations of people in need. A single organization may represent hundreds of people. We have worked hard to build more organization partnerships as it is a core strategy formed by the LN4 Board of Directors to create "hubs" worldwide, led by Ambassador Organizations, who could distribute hands more directly to their regional areas and reduce dependency on the California Headquarters.

The LN4 Ambassador and Ambassador Organization list is a private list and belongs to the Foundation. Some examples of the LN4 Ambassador Organizations include Rotary Clubs, doctors' offices/clinics, faith-based groups, community groups that also distribute other medical devices (hearing aids, wheelchairs, etc.), prosthetic leg clinics (who are now receiving hands, so they can give those at their same clinic in case there is a need), disability-focused groups, government sectors (not common yet a few government groups have allowed us to partner in some of their areas related to disabilities – Colombia and Philippines are two examples), private businesses, and finally schools.

Post-fitting record keeping and data handling (Troubleshooting/ Lessons Learned/ Continuous Improvement)

LN4 works diligently to prepare LN4 Ambassadors and Ambassador Organizations to fit LN4 hands properly. As part of this process, we reiterate that they can communicate with us on any issue or question related to the LN4 hands. Therefore, we do not have a formalized process for hearing back from Ambassadors post-fitting on how it went, yet we regularly hear from many of



them throughout the year. They are excited to share with us the projects they are working on, and we continually build trusted relationships with them. When we hear back, it is usually related to a specific fitting-related question.

LN4 keeps records of hand distribution, location, sizes (Regular and Large), and information received back from a hand recipient or Ambassador/Ambassador Organization. LN4 stores this information internally. Odyssey Teams and LN4 are constantly working to learn from our experiences, both positive and negative. One example is that Odyssey Teams held training sessions for the Quality Check team to ensure certain screws were extra tight, etc., when issues arose with certain types of hands. An example like this would also highlight the importance of continuous improvement. The LN4 2.0 prosthetic hand is another area of continuous improvement in its mid-development stage.



Monthly Reports on the Geography of Distribution

At the end of each month, Odyssey Teams' and LN4 leadership receive the LN4 Monthly Distribution Report detailing the quantity and geographic destination for each of the LN4 hands sent that month. At the bottom of each report, a total for the month and the Foundation are provided. Odyssey Teams shares with relevant partners and distributors.

All monthly distribution reports can be viewed [here](#).

Charity Governance (Board, File Accounts, TGA Registration)

The EMPHF Board President and founder is Michael Mendonca. LN4 has maintained its FDA Registration as a Class 1 Medical Device Mechanical Hand under Regulation Number 890.3420. LN4 is not the registered manufacturer of the LN4 prosthetic hand but works with partners to do so. Please see the FDA Registration for more information. LN4 has also kept active and current with the IRS 501(c)3 standing.

The LN4 Board can provide more specific file accounts upon request. LN4 is not registered with the Therapeutic Goods Administration (TGA) in Australia. We are registered with the United States Food and Drug Administration (US FDA) and pay a substantial fee, as required, to maintain that registration.



Quality Assurance in the Build Process

At the heart of our prosthetic hand team-building experience is a commitment to quality, dignity, and impact. Every device assembled is destined to transform the life of a real recipient, which is why our quality assurance (QA) process is comprehensive, rigorous, and designed with both technical precision and human purpose in mind.

Oversight by Experts

The entire QA protocol is overseen by experienced technicians at Odyssey Teams, who have designed, tested, and refined this QA process over thousands of builds worldwide. Their oversight ensures consistency across builds, regardless of the participants' experience level in assembling them.

Pre-Build Material Control

Before the build begins, all prosthetic hand kits are pre-checked for completeness and fitness for purpose. Each kit contains 30 components and a comprehensive build guide.

Component-Level Inspection

During the build, each team follows a step-by-step guide designed to reduce variability and ensure mechanical reliability. At each significant milestone, a quality facilitator inspects key elements:



- **Pins and Springs:** All pins are checked for proper seating, correct orientation, and appropriate friction fit. Springs must operate within the specified range of tension to ensure functional finger flexion without excessive resistance.
- **Ratcheting System:** The ratcheting mechanism, which controls the opening and closing grip function, is tested for smoothness, accuracy, and ability to maintain tension over repeated cycles. Any skipping, jamming, or loose grip automatically flags the unit for technician attention.
- **Screw and Fastener Tightness:** All screws, bolts, and pins are torqued to recommended tightness without over-threading, ensuring mechanical integrity while preserving component lifespan.

Functional and Movement Testing

Once assembly is complete, each prosthetic hand undergoes a set of structured movement tests:

- **Flexion and Extension:** Each finger must move independently and in coordination with the others. Range of motion is assessed to confirm functionality within agreed tolerance levels.



- **Grip Strength and Hold:** Using a test object, the hand is evaluated for grip reliability, stability, and load-bearing potential. The ratchet must lock effectively without slippage.
- **Durability Simulation:** Hands are manually stress-tested through simulated tasks such as lifting, twisting, and repeated opening and closing. The goal is to detect any signs of mechanical weakness or early wear.

Fit and Comfort Checks

Each hand is designed to be universally adjustable, and we test for:

- **Strap Security:** The Velcro and buckle systems are checked for hold and adjustability to suit a range of limb sizes.
- **Padding and Skin Safety:** Contact surfaces are examined for smoothness, the absence of sharp edges, and comfort during use.
- **Ambidextrous Suitability:** Devices are checked for proper assembly as either the left or right hand, depending on the recipient's need.

Final Sign-Off and Documentation

Once all mechanical, movement, and safety checks are complete, each unit is signed off by a trained quality technician at Odyssey Teams.



Maintenance and Instructional Support

Along with the device, each recipient receives a set of care and usage instructions designed for ease of understanding. These materials are pictorial and text-based, often translated into the recipient's language. They cover:

- How to adjust and wear the hand
- How to clean and store the device
- Troubleshooting common issues
- Contact details for further support if needed

Continuous Improvement

Feedback loops are built into the QA process. Odyssey Teams regularly collect recipient experience and usage reports from hand users and frontline partners in the field. These insights inform ongoing design improvements, material upgrades, and refinement of the QA checklist.



Transparency and Governance

LN4 maintains detailed records and implements a robust governance system to ensure transparency and accountability.

Recipient Information and Documentation

1. **Recipient Information Form:** Each recipient completes a one-page form specific to them.
2. **Recipient Photo:** Ambassadors submit a photo of the recipients wearing the LN4 prosthetic hand and holding the accompanying Hand Sponsor card. This image serves as a visual acknowledgment for donors, reinforcing the impact of their contributions.
3. **Data Management:** All recipient and distribution data is stored internally.

Distribution Log

Every distribution is logged to track key details, including:

- Date of distribution
- Final and shipping destination
- Quantity of hands shipped
- Hand type (Above Elbow vs. Below Elbow, Regular and Large)
- Contact details of the receiving Ambassador and LN4 personnel



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A waitlist is also maintained for unfulfilled requests. While requests are not processed on a strict first-come, first-served basis, considerations include inventory availability, location, and customs procedures. This system allows for equitable and efficient distribution of prosthetic hands.

Governance and Oversight

The LN4 Board of Directors oversees all governance activities to ensure transparency, quality, and accountability. Sharing internal documents, such as the Distribution Log, requires Board approval to maintain data privacy and protect stakeholder interests.

Appendices:

- [IRS Documentation for The LN4 Hand Project](#)
- [Smithsonian Institution registration](#)
- [Monthly distribution reports folder](#)
- [US FDA Approval Documentation](#)
- [Financial Documentation](#)