

A "village within a village" or community

The Resilient Village Project

Note from author:

This project is designed to be Ukrainian owned and operated, eventually a business industry with global potential.

The author's work should change to roles such as:

- consultant/advisor
- instructor
- quality control supervisor
- liaison/spokesperson to the international English-speaking community.

Proposed by:

Email:

Phone:

WhatsApp, Telegram:

Leslie L Wilson

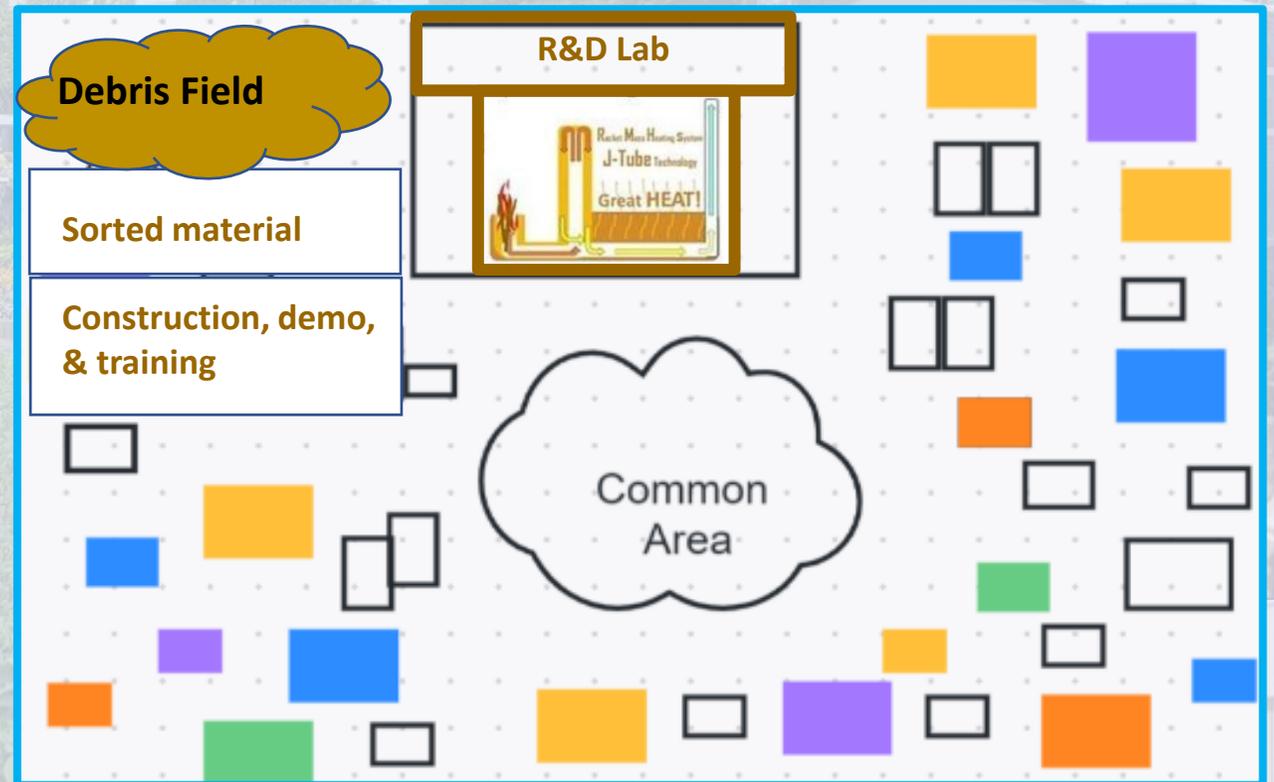
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Last updated: 4/19/2023

Awaiting Spring Update



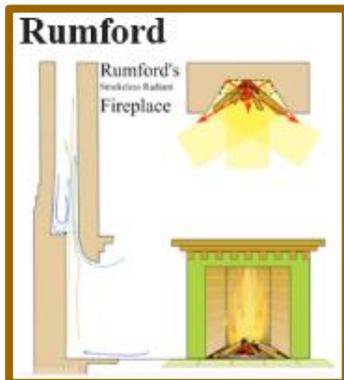


Criteria:

- **Portability**
- **Quick & simple construction**

Prototype Heating System Designs

To Be Developed for both Military and Civilian Uses
 Prototypes to be built in Kharkiv by mid February



Sample	Materials	Pros & Cons	Build Time
<p>Pocket Rocket</p> <p>Awaiting video from consultants <u>Ernie & Erica Wisner</u> Guide: http://homesteadlaboratory.blogspot.com/2014/01/pocket-rocket-stove.html Completed sample: https://www.youtube.com/watch?v=cBPZM13s_0E Permies' discussion board: https://permies.com/t/60015/Pocket-Rocket-materials-dimensions-questions</p>	<p>5-gallon metal bucket with lid Stove or similar pipe - diameter to fit 1 to 4 ratio length Mud or clay</p>	<p>Portable Can be constructed in freezing temperatures Fastest deployment One simple tool (tin snips, tire iron...) - Bad designs can cause failures Produces some smoke</p>	<p>30 minutes</p>
<p>Cube Rocket Movable Heat</p> <p>https://www.youtube.com/watch?v=ymdr-gAfZT0</p>	<p>Recycled ammunition holder Metal sheeting, hardware, appliance parts Exhaust extension pipes Heat Resistant adhesive Glass fiber rope Bolts, nuts, washers, corner brackets</p>	<p>No welding Recycles the many army ammunition holders and general metal & appliance rubble in frontlines lots of improvising possibilities for tools, materials Check out some great comments below video - Thermal adhesive likely needs to be purchased Some may not be applied in freezing temperatures Some workshop tools needed Produces some smoke</p>	<p>A few hours</p>
<p>Rumford</p> <p>Awaiting video from consultants <u>Ernie & Erica Wisner</u></p> <p>Professional version: https://www.youtube.com/watch?v=zu4gWITEJnY&t=135s</p>	<p>Shovel, digging tool Can be dug into wall metal sheeting or Raw stone or cob/clay for better burn surface</p>	<p>It's all about the angles Can be constructed in freezing weather Quick, easy build, small footprint, few supplies Strongly radiant + heat cone can be directed - Need the right location, angles must be precise Produces some smoke</p>	<p>A few hours depends on soil, material, team</p>

Frontline Research & Development (R&D) Laboratory/Training Center/Showroom for Heating Systems

Rocket Heating Technology and Rumford Systems for Heating, Cooking, and Drying applications to meet the urgent needs of both military & civilians near the frontlines and liberated areas.

At the request of the Ukrainian army -- and with consulting help from one of the world's leading experts on fire science and Rocket heating technology, Ernie Wisner -- we are currently adapting this technology and Rumford systems especially for trench warfare.

In early February, operations moved to Kharkiv where a small prototype test site was established. The first prototypes have been developed and will now be written up with instructions for Do-It-Yourself (DIY) construction.

These will soon be available on the website:
RoadmapToLife.org
and our social media platform.

At that point, we will take the tech to the troops and civilians in greatest need of heat along the eastern front. Simultaneously, we train civilians who can share these life-saving techniques locally to develop needed systems for their own use.



1 Rumford system

Build time: 15 minutes

Materials: 20+ plain solid bricks (bricks with holes had to be used for most. Worked well on bottom layer for required air circulation. Enough firebrick available for hottest part of fire.

A fireproof base and solid back walls. Unless the walls are fireproof, leave a gap between the heating system and the wall of at least 15 cm.

Usage: quick emergency builds or long-time usage. Many materials can be used including just digging the proper angles into a dirt wall like in a dugout/trench.

Comments: Use twigs, thin pieces of wood, NOT big firewood logs.

Easily built from any fire-resistant material. High heat resistance needed near the actual fire source.

Excellent for quick heat/cook in a dugout. Only material needed is a shovel or digging tool since it could be dug into a corner. Cob (sand and clay with water added) to make the angled wall for the fire area.

2 Rocket cube

Build time: 5 minutes

Materials:

piece of metal screening or a few strips of a fireproof material to contain the firewood/starter combustibles above the air source beneath while allowing free airflow to the fire chamber.

20+ bricks – any kind since this isn't a permanent system

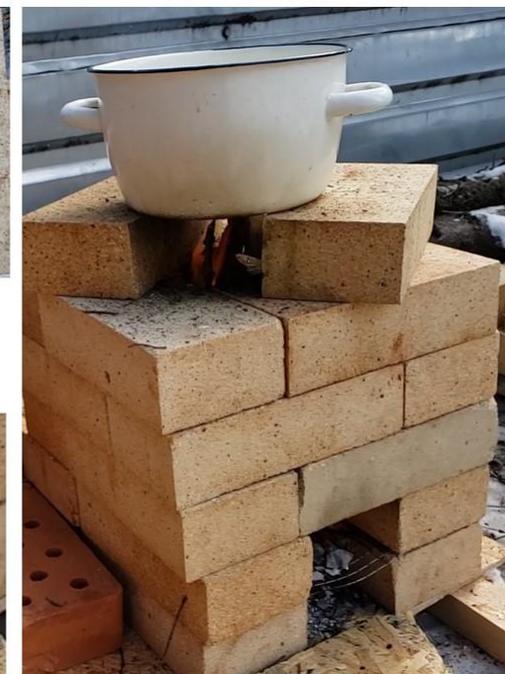
Usage:

Quick emergency builds can be easily assembled, Self-stoking Rocket design using small, burnable items (for firewood, use twigs, NOT big logs) taken apart, moved giving it some portability

Comments:

Use twigs, thin pieces of wood, NOT big firewood logs.

For cooking, add any kind of fireproof elevation over the vertical fire chamber to securely rest a cookpot on top.



3. Rocket Heat System (outdoor test model)

Build time: <1 hour for test burn model

Materials:

60 bricks – firebrick throughout unless short test burns

Fireproof base at least .5 meters beyond build perimeter

Outdoor use only. Exhaust ducting needed for indoors

Usage:

Self-stoking rocket design using small, burnable items (for firewood, use twigs, NOT big logs)

Comments:

- Use twigs, thin pieces of wood, NOT big firewood logs.
- Can be adapted many different ways for cooking, oven baking, water/sauna/hotub//greenhouse/drying uses and more.
- Meant for permanent installations.
- Add cob bench for thermal battery to store heat 1-4 days AFTER fire goes out. Can weigh several tons!
- With a cob bench this becomes a massive, permanent heat source and furniture in a house, work room, capable of heating a tiny house or large room.
- NEEDED: LOGISTICS PERSON familiar with how & where to secure salvaged/empty containers and other items as well as permission to work on missile debris sites. Metal barrels/other suitable tubing for heat riser. VERY DIFFICULT TO FIND METAL BARRELS/BUCKETS/TANKS.
- NEEDED: TRANSPORTATION for delivering materials to site while working in Kharkiv City. This problem resolved when we can start building centers on location of debris fields.



The WEBSITE



**Ukraine:
Aid to a Nation at War**

#1 Priority:
Heating Independence
Living Off the Power Grid

Independent pro bono work takes me where disaster or vulnerable population skills are needed, where there is a niche I can fill, and I will be welcome without being a hindrance. That doesn't always mean all the pieces fall into place.
In Tajikistan last year, the fall of Afghanistan and loss of favor with the government closed the door to 11 years of work in-country and in America working with my Tajik partners.

Then Ukraine was invaded.

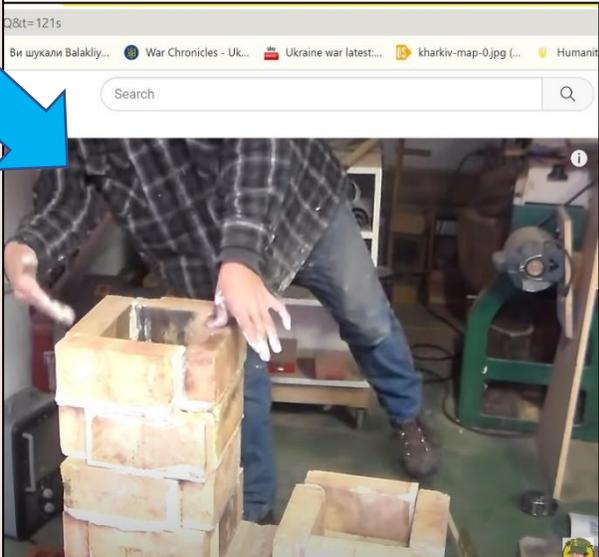
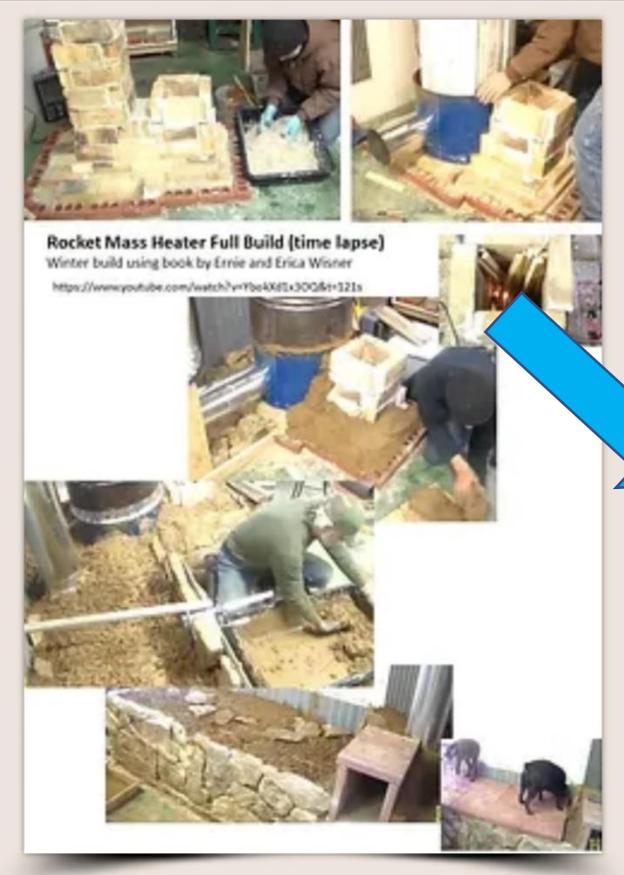
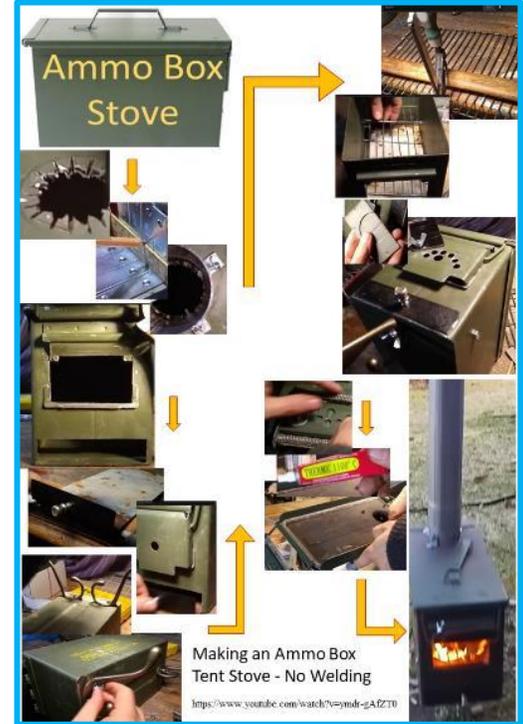
New opportunities to help where the need is the greatest opened. Since May, I've been volunteering with various groups while developing a long-term plan to aid the recovery and rebuilding of a nation I've grown to admire and love.

Click an image to download the PDF
in < English
or < Українська

RoadMapToLife.org

A compendium of off-grid survival skills and technologies to build resilience for both civilians and defenders. Designed to aid Ukraine, these skills have global applications to safeguard people everywhere.

Infographics, like those shown here, are clickable links to websites, YouTube videos, and PDFs for details on best of the web, Do-It-Yourself (DIY) projects, most using recycled materials readily available in war-torn areas. A few in Ukrainian or Russian. Other social media platforms being developed as time permits. For rapid dissemination, flyers and digital connections will be shared with NGOs, government and military traveling to areas in need.



<https://www.youtube.com/watch?v=YbokXd1x3OQ&t=121s>



Resilient Village

KEATTEEN ATTAGE

Innovation: from survival to rebuilding better for the future

Beyond Rocket Heating Systems:
Independence from the Public Grid
Tiny Homes, Sustainability, Permaculture,
Eco-Friendly Business Potential



It Takes a Village – Mighty Hubs of Tiny Homes

- **Permanent** - not temporary solutions
- **Minimalism** encouraged & taught in community
- **Off-the-grid** power, sewer, water, winter heat
- **Permaculture** methods for food, self-sufficiency
- **Income** source: convert easily to Airbnbs, rentals
- **Recycled** materials as primary building materials
- **Recycling** industry to boost the local economy



In Liberated Communities

- **Recycle** destruction in war-torn areas
- **Warm homes/centers with Rocket Mass Heating Systems**
- **Speed up recovery:** recycle-builds, DIY projects for all
- Build new businesses: **jobs & local economy growth**
- Grow green industries = **EU compliant & grant potential**
- Reduce or **eliminate** reliance on **massive infrastructure**





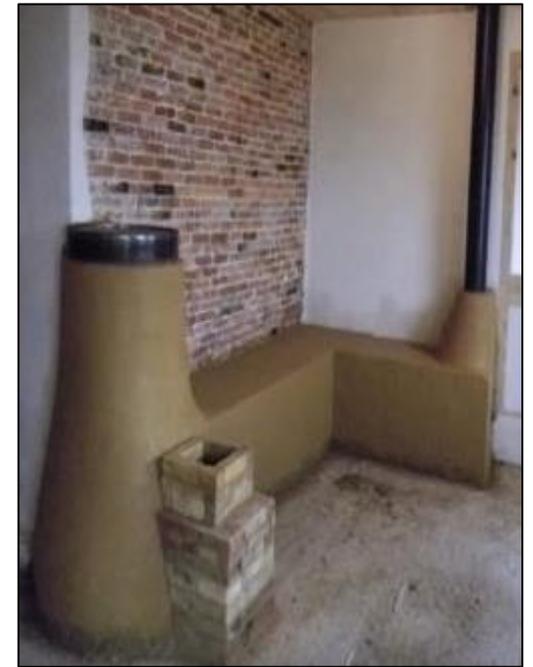
The Heart of a Resilient Village Center Starts with Heat

Developing a sense of community, watching out for the needs of all, is essential. This center--for all villagers and guests to visit and use--may contain dining, meeting, business incubator spaces as desired. Several RMH systems may be included in a large structure for cooking, drying, sleeping or sitting. A central hub similar to or combined with Invincibility Centers will be designed to bring off-grid warmth and functionality.



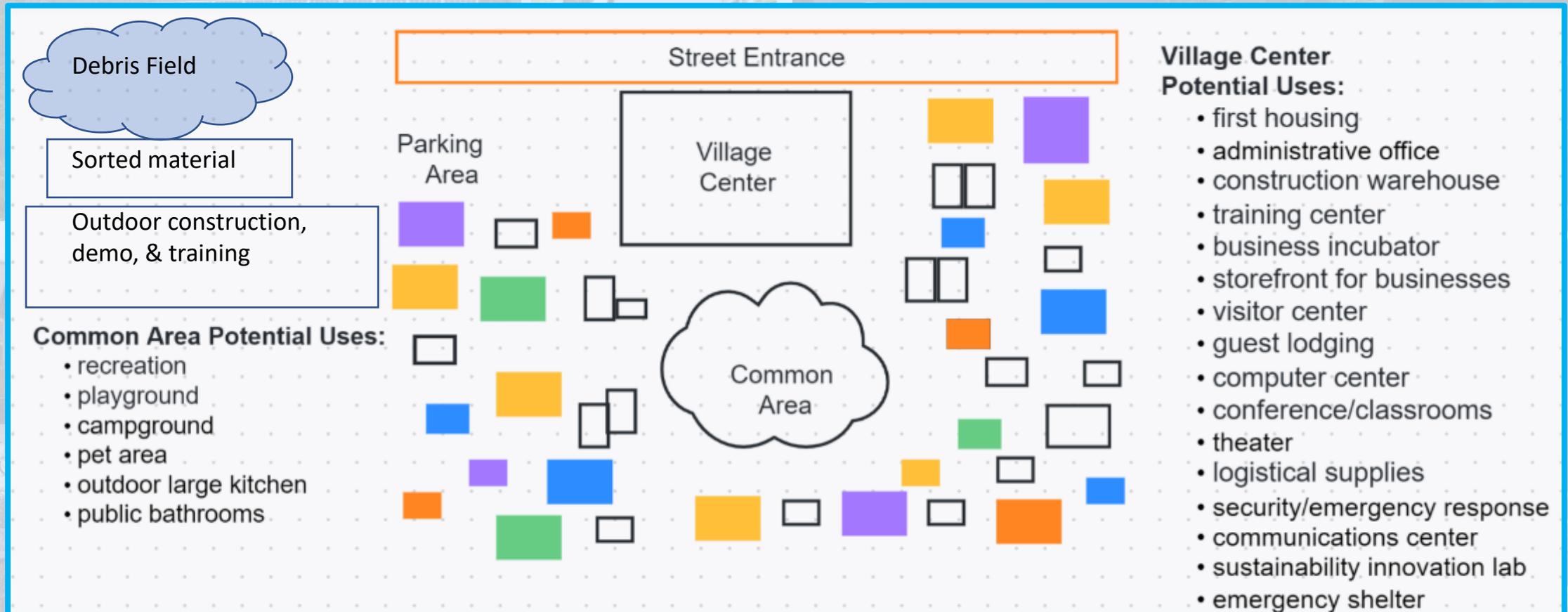
Serving as a Thermal Battery the cob bench can store heat for several days, radiating it out slowly,

AFTER THE FIRE GOES OUT!
These are examples of the many styles that RMH systems could be molded into very easily.



A "village within a village" or urban community

Sample Resilient Village Layout



Needed: A location close to a rubble field with resilient residents nearby willing to help and learn survival skills

Initial site: from damaged large building to small farm with room to expand

First work starts near debris field. Eventually, a village center building (new or repaired) is hub for Research & Development (R&D) Center to include whatever other services the village wants to add over time. new tiny homes or renovated housing creates resilient community of villagers working for common good. Eventually the Village could have multiple community centers serving different purposes. Most of these would be for income-generating businesses to make the village financially self-sustaining.



We empower communities into a lifestyle of service with the homeless.

COMMUNITY FIRST! VILLAGE

"I have never been happier anywhere else! I don't want to live or work anywhere else. This is my favorite place in the world!"

MEET JASON & SARRINA



Inspiration for Concept: A Successful Village for the Homeless in America

<https://mlf.org/>

<https://www.youtube.com/watch?v=lfe7WbktJYM>



Off-Grid Electricity

Researching and Developing Innovations

- Permaculture energy storage
- DIY battery systems
- passive solar
- Wind power
- Water wheel
- micro-hydro systems
- Earth Battery P-MFC
- Micro-CHP



Direct partnering with permaculture experts around the globe.

Possibilities for Self-Reliant Sustainability

Off-Grid Septic Systems

<https://esetio.com.au/blog/the-pros-and-cons-of-a-composting-toilet>
<https://off-grid-home.com/guide-to-off-grid-wastewater/>

Compost Toilet Designs

Camping Toilet

Glass-less Windows for Winter Warmth

Septic systems use a combination of proven technology and nature to treat household waste from kitchen sinks, showers, and bathrooms.

The septic system has two components:

- A septic tank: a tank, water-tight, concrete, fiberglass, or polyethylene container that separates solids and floatable matter, grease, and oil from liquid waste. The effluent then is stratified with the tank. Pumps or gravity then move the effluent through sand, constructed wetlands, soil, or another medium to remove pathogens, nitrogen, and other contaminants. If it is positioned, the waste enters perforated pipes that slowly release the waste into the ground.
- A chamber: a covered, air-tight, un-aerated soil. The soil soaks, breaks, then disperses the wastewater into the soil, which further filters it from harmful bacteria (bacteria destructor of human fecal contamination), nutrients, and viruses. It then becomes groundwater.

The Composting Toilet Materials list: Users: The EarthHero.com Basic Tank - 11kg solids

Urban Infrastructure INDEPENDENCE!

Training and experimenting in:

- Off-the-grid living
- Permaculture & sustainability
- minimalist lifestyle

Recycle destruction!

Our First Priority: Winter Heat

Work is currently underway to implement this personalized, off-grid solution in a liberated small town without power.

Developed material is now being circulated and is available on our website:

RoadMaptoLife.org

Spread the word!

Information Material on Off-Grid Heating Now Available in English & Ukrainian

Water Harvesting and Purification Systems

Off-Grid Heating & Cooking for homeowners or military on the move!

Use metal cans make great portable stoves!

Even use empty ammo cans! Video and plans © Justin Veas
<https://www.youtube.com/watch?v=rg-4vTVBkQ>
<https://defiantmetal.com/collections/project-plans>

Rubble Wanted!

Cost? almost \$0 - \$300 for simple designs

Rocket Mass Heating (RMH) Systems

Proven Rocket Stove Technology + Heat-Retaining Biomass - Adobe Cob Maintains heat 12-48 hours AFTER fire goes out!

- 25-80% less wood/combustibles (kindling size!) than wood stoves
- For homeowners or troops in the trenches
- Uses: cooking, baking, drying, or heating
- Independence from power grid
- Recycle from war's destruction
- Modify to meet your needs
- Business potential
- Easy to build

Some Online Resources

Images are from links below

- <https://www.youtube.com/watch?v=Spm9GDSWc>
- <https://www.youtube.com/watch?v=A-8K7Z476k>
- <https://www.youtube.com/watch?v=faCt8B679g>
- <https://www.youtube.com/watch?v=s2DKR8Mg>
- <https://www.youtube.com/watch?v=rg-4vTVBkQ>
- <https://naturebionics.org/permaculture-rocket-mass-heater-basics.htm>

Now in Europe!

ROMANIA: <https://shades.org/?v=rocket/>
 KOSOVO: <https://3peas.design/building-a-rocket-stove-mass-heater/>
 PORTUGAL: Training center!
<https://www.permanentenergy.org/learn-with-us/courses/build-rocket-mass-heater-experiment-hall-2022>

The Best Book: <https://www.amazon.com/Rocket-Heater-Diapers-Guide-Step-by-Step/dp/0865718237>

Heat flows from A to G - cool and clean exhaust

BICYCLE WHEEL WIND TURBINE

How to Build Your Own
for
Generating Electricity

Simply Make Your Own Electricity

Generating & Storing Electricity

with Simple, Rugged, Readily-Available Material

NRGcycle.com

<https://www.youtube.com/watch?v=2tfIMaWLLpE>

Apr 2, 2014

A way to build your own wind turbine for generating electricity using a bicycle wheel simply and with easily available parts. more... <http://NRGcycle.com/> (plans) Have fun reinventing the wheel.



Samples of Other
Off-Grid Technologies
for future R&D
as needs dictate

Tiny Homes for Free from Rubble

For safe interim housing with potential for contractor or tourism housing in the future using platforms like Airbnb.

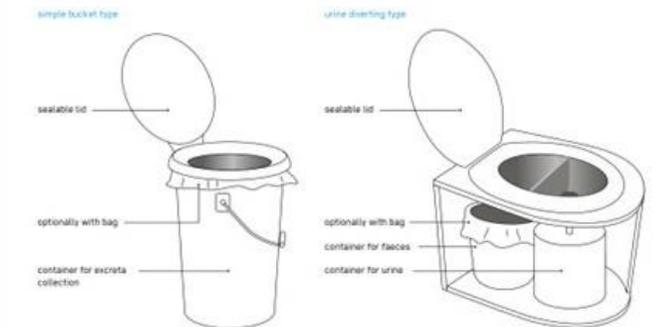
Sanitation Technologies in Emergencies

“Together with the Global WASH Cluster partners and under the leadership of German WASH Network, Eawag and the Sustainable Sanitation Alliance, the creation of this publication has been an amazing collaborative effort with contributions from a multitude of international sector experts and organisations – striving to present the whole spectrum of sanitation technologies and systems, being as unbiased to single technical solutions as possible. “

Sample pages:

Container-Based Toilet

Phase of Emergency	Application Level / Scale	Management Level	Objectives / Key Features
<ul style="list-style-type: none"> ●● Acute Response ● Stabilisation ● Recovery 	<ul style="list-style-type: none"> ●● Household ● Neighbourhood ● City 	<ul style="list-style-type: none"> ● Household ● Shared ●● Public 	Excreta containment, Increased privacy, Increased flexibility
Space Required	Technical Complexity	Inputs / Outputs	
<ul style="list-style-type: none"> ● Little 	<ul style="list-style-type: none"> ● Low 	<ul style="list-style-type: none"> ●● Faeces, ●● Urine, ●● Dry Cleaning Materials, ●● Anal Cleansing Water! 	



A Container-Based Toilet is an on-site sanitation solution, available in a variety of forms that work on the principle of containing the excreta. Faeces and urine are collected and stored in separate containers. Urine-diverting toilets divert urine. Distribution of the Container-Based Toilets can be done quickly and by hand.



Resilient Village

KE211E01 A111906

**Resilience Begins with Each Citizen
Partnering & Communications:
Critical at All Levels, at All Times**

Who Builds Community Resilience? EVERYONE!

Beyond war:

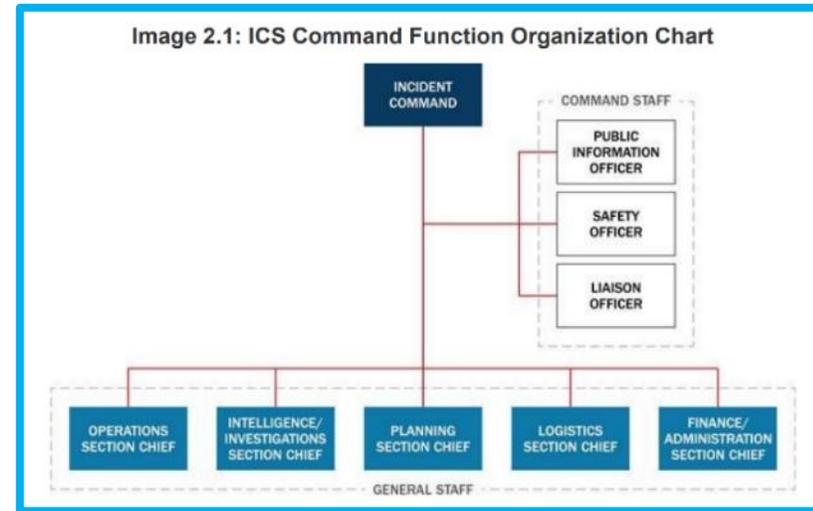
To respond to natural as well as man-made disasters Ukraine needs a flexible framework for civilian response that meshes at all levels:

- Civilians - often first on the scene
- Local, regional, state government
- CSOs and community entities

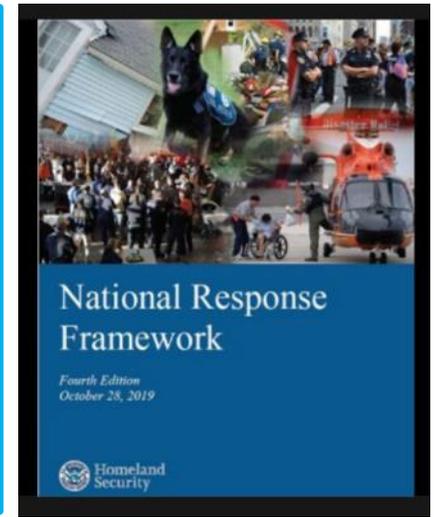
Pillars on a Strong Foundation

Examples from America's
Civilian Volunteer Force

- Situational awareness + continual vigilance: Detect changes & adapt before problems develop
- Community over individuality: Personal responsibility + cooperative effort, no one left behind
- Communication is key : **Communication** ↔ **Communication** All emergency responders interrelated
- Examples from America: CERT, CitizenCorps, VOAD, United Way, NGOs/CSOs at all levels of society



Emergencies, disasters, large events in America come under the Incident Command System (ICS) All major responder agencies know & work within this flexible structure. Much of this training is FREE online! Potential to access trainers, build networks.



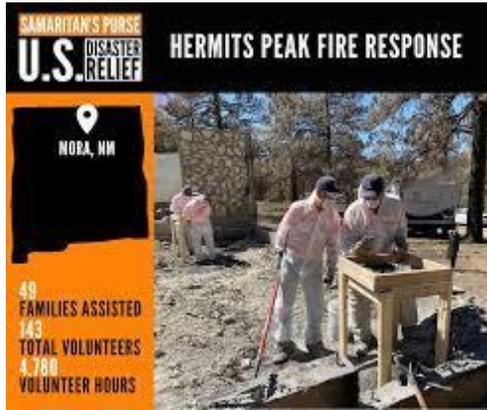
Civilian Pillars for Disaster Response:

Country

Community

Citizenry

Responsive Government + Community Resilience + Pro-Active Citizens



National VOAD is a coalition of 70+ national organizations (faith-based, community-based and other NGOs) plus 56 State/Territory VOADs, which represent Local/Regional VOADs and hundreds of other organizations throughout the country.



In partnership with the US federal government. FEMA website: The Community Emergency Response Team (CERT) program educates volunteers about disaster preparedness for the hazards that may occur where they live. CERT trains volunteers in basic disaster response skills, such as:

- Fire safety
- Light search and rescue
- Team organization
- Disaster medical operations



211 is a 24/7 phone number - a lifeline to anyone with personal needs. Operated by America's umbrella for all major nonprofits, 211 tracks most services available to people in need locally.

Examples from Volunteerism In America and around the World

A small sample of the many nonprofits active in all areas of disaster response
The author worked with most of these featured.

Aga Khan Development Network



An avalanche occurred recently in Zingerya, a remote village in the Badakhshan province. In response, the Aga Khan Agency for Habitat has trained over 702 Community Emergency Response Teams and 187 Avalanche Preparedness Teams comprising over 19,000 volunteers in order to encourage villagers to be self-reliant and prepared.

TR - begun by military veterans to use their skills to heal, not fight:





Resilient Villages

Project Expansion Needs

Needs for Project Expansion

Personnel & Translation

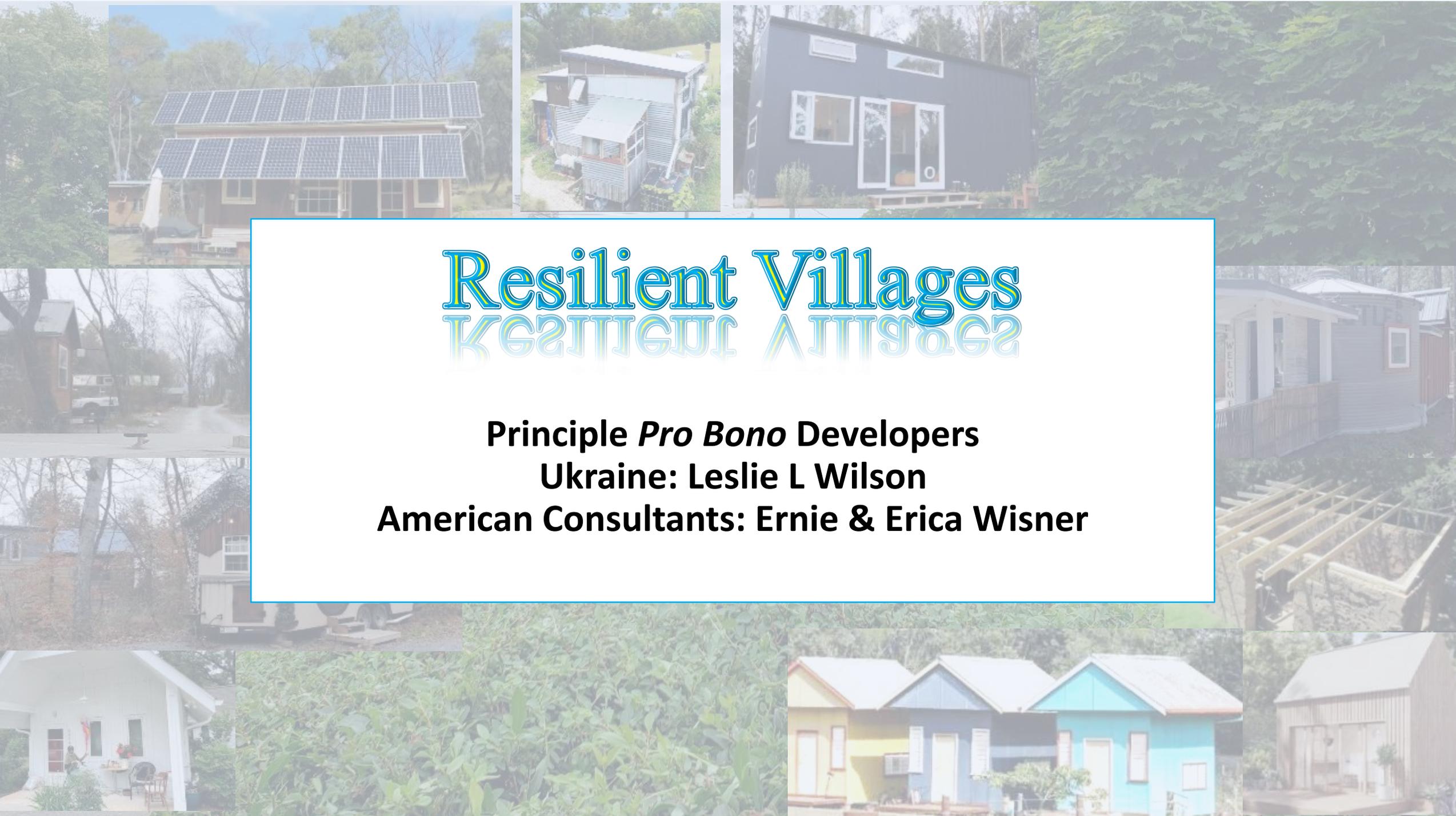
- It's important to work with the villagers as much as possible. However, a translator who could ideally serve in other roles to understand the project better will likely be needed at various times. Key roles that would also be useful: videographer, operations manager, logistics specialist, frontline driver with vehicle.
- Translator/IT specialist for website development, media platform, dissemination of information. These translations are critical early in the project to spread the information around the nation quickly.

Funding

There are no funds to pay salaries. While we currently have a small volunteer team with money to purchase prototypes and supplies for initial work, the workers required as the project grows beyond the current work must be addressed as soon as possible. Also, the work listed above will likely not be volunteer efforts or donations. A source of income for taking the project to the next level.

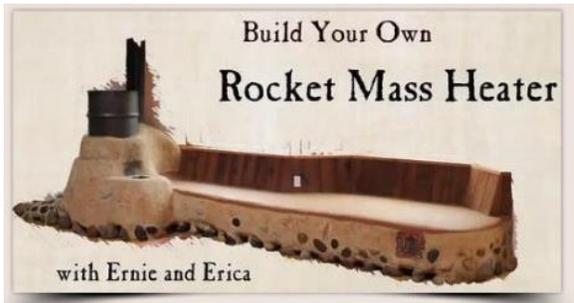
Business Development

Investors are needed to expand the scope of this project, especially to develop the Resilient Village concept for the rebuilding of the nation and EU compliance for the foreseeable future. As we complete the prototype phase by mid February, business personnel (administrative, financial, etc.) will be needed to expand operations. The extent of the army's role at this point is unknown.



Resilient Villages

Principle *Pro Bono* Developers
Ukraine: Leslie L Wilson
American Consultants: Ernie & Erica Wisner



Ernie has also given permission for a Ukrainian version of their highly respected handbook *The Rocket Mass Heater Builder's Guide* to be translated into Ukrainian, adapting this innovative technology even more for the current global needs.



Ernie, along with his wife Erica, are providing personal consultation pro bono to insure the success of the RMH systems and related innovative, off-grid technologies being developed for the citizens and military of Ukraine. A US army veteran with combat experience in trench warfare, Ernie is adapting designs especially for use in the current combat situations as we work with the Ukrainian army to provide warmth and safety in dugouts and trenches along the frontlines.

Ernie and Erica Wisner are a couple from Tonasket, Washington, United States, best known for their innovative [rocket mass heater](#) designs. They are often referred to as the worldwide leaders and trainers in rocket stove technology. They have made over 700 rocket stoves all over the world.

Ernie and Erica now spend their time touring the world teaching workshops on how to build these energy-efficient, natural heaters.^[2] They are also working to design and build a stove that will get an Underwriters Laboratory ([UL \(safety organization\)](#)) listing, which would eliminate insurance issues. The Wisners helped write the building code for Portland.^[1]

The Wisners have written two books, *The Art of Fire* and *The Rocket Mass Heater Builder's Guide*. In 2017, both were instructors for an [Appropriate Technology](#) Course hosted by Paul Wheaton. The course was recorded and is available as a streaming video.^[5]

About the Author and Potential Roles



Since 2005, Leslie L Wilson’s careers, passion, and volunteer work have centered around emergency management, vulnerable population assistance, disaster response and recovery. Nearly 10,000 hours of field work began with the American Red Cross, soon becoming Disaster Response Coordinator in the Washington DC region. Later she deployed for months at a time, with 12- to 48- hour notice, as a reservist for the Federal Emergency Management Agency (FEMA) responding to many large-scale national disasters. She’s volunteered with nearly a dozen humanitarian organizations for post-disaster household emergency needs, housing repair & rebuilds, shelter work & management, logistics, Billy Graham chaplain, and volunteer EMT with county Fire & Rescue, among other roles. For over a decade, Ms. Wilson was an unofficial spokesperson and liaison for rural interests in Tajikistan. A visionary with practical skills rooted in permaculture, forged in disaster response, and tempered by her emergency management background, Ms. Wilson’s hope is to remain in Ukraine, to help make these resilience plans a successful reality spanning the many years of recovery ahead.

Potential roles:

- Planning, quality control, construction, liaison work
- Social media platform development
- Communications:
 - Spokesperson
 - English translation editing
 - Grant proposals, crowd sourcing
 - Freelance writing: travel, lifestyle, emergency management, permaculture, current events
- Teaching /facilitating training:
 - Volunteer development/management
 - Free conversational English classes on “Resilient Village” skills at locations as they develop
 - Proponent at large for community-level emergency management, permaculture, sustainable living, recycling, home education

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Professional Profile: [linkedin.com/in/llwilsonservices](https://www.linkedin.com/in/llwilsonservices)
Website: RoadMapToLife.org

CV, Photo Bio, Media Portfolio available upon request



Мультимедіа RoadmapToLife.org WhatsApp

Леслі Л. Вілсон
Спеціаліст з ліквідації наслідків стихійних лих

Leslie L. Wilson currently bases her work out of Kharkiv Oblast, traveling wherever needed throughout Ukraine.