Designers Lighting Forum

Light Reach Network

A Solar Framework for Philanthropy in Lighting

Nathalie Rozot & Jenny Werbell

March 7 2023

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Light Reach Network: A Solar Framework for Philanthropy in Lighting

Learning Objectives

At the end of the this course, participants will be able to:

1. Understand what light poverty is and how and why its implications are relevant to lighting design.
2. Understand how humanitarian projects work: players, processes and products.
3. Understand design as activism in the lighting industry.
4. Understand what philanthropy, social engagement and corporate responsibility can look like in the lighting industry

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- INTRODUCTION

1. WHAT IS LIGHT POVERTY
2. HUMANITARIAN DESIGN: PLAYERS, PRODUCTS & PROCESSES
3. LIGHT REACH NETWORK: A SOLAR FRAMEWORK FOR PHILANTHROPY IN LIGHTING

- CONCLUSION
- Q&A

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2006 2007

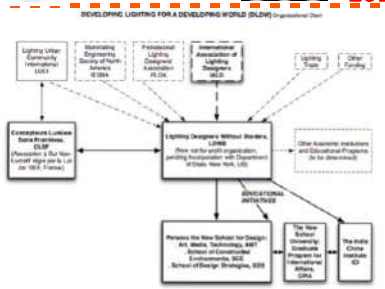
2010

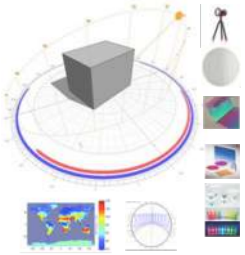
2011 2013

2015 2017

2018

2020 2021 2023





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- Introduction
1. **What is Light Poverty**
2. Humanitarian Design: Players, Products & Processes
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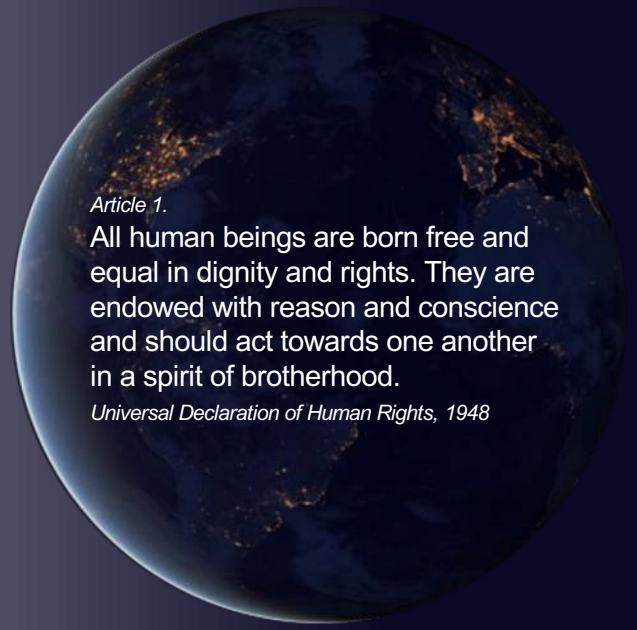
Light is a right



Article 1.

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Universal Declaration of Human Rights, 1948

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Lives in the dark matter

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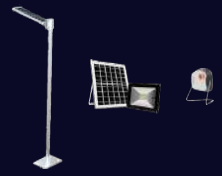
Light equity



electricity poverty

light equity

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Due diligence

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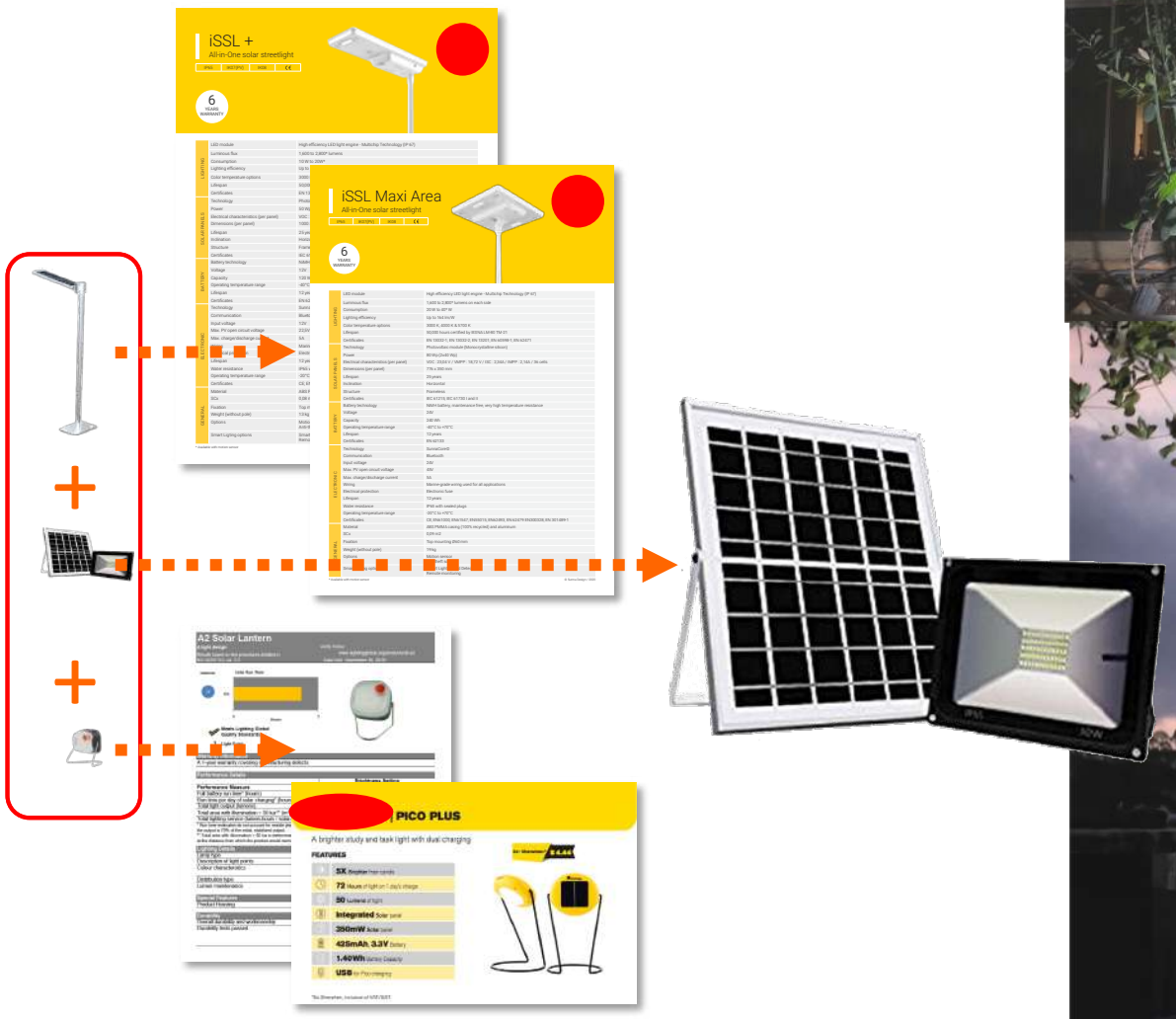
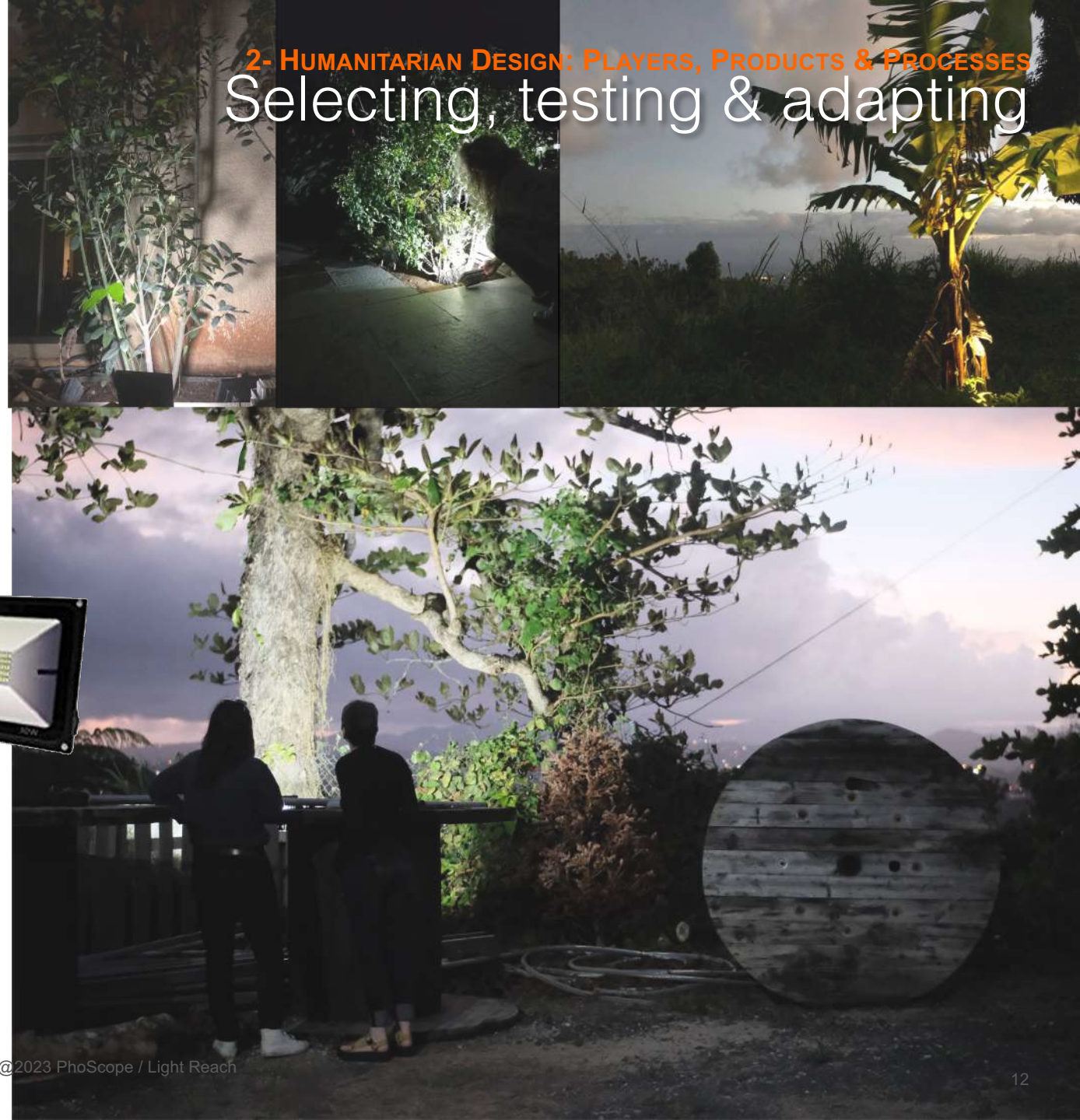
Selecting, testing & adapting





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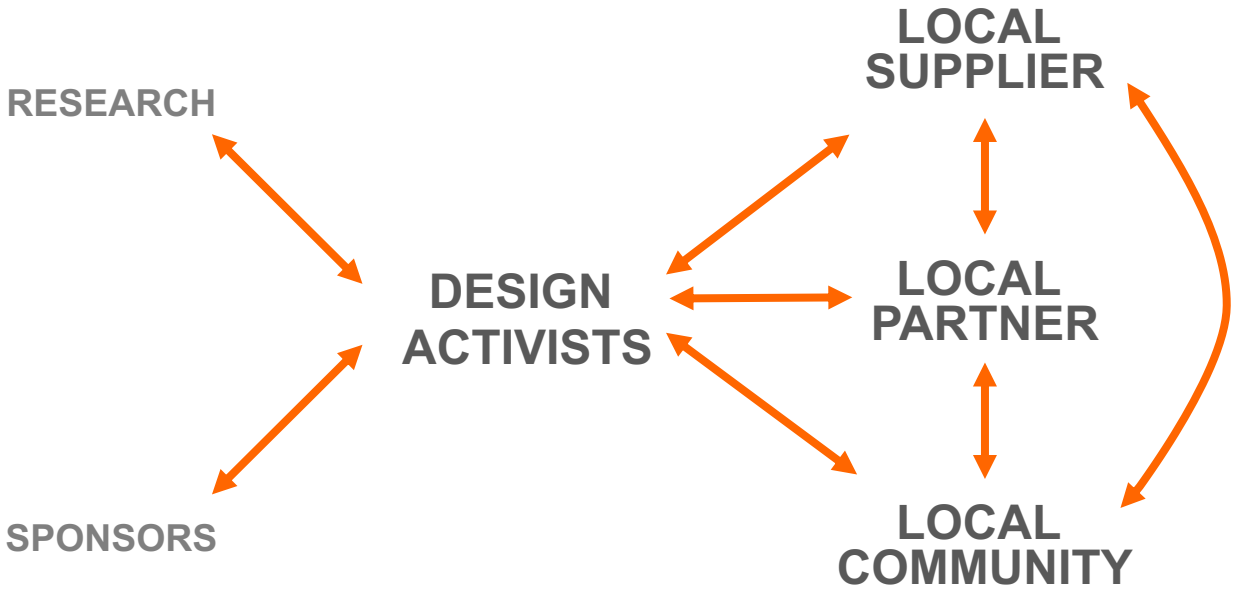
Strategizing & structuring



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What is Light Reach?

LIGHT REACH network

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A system

You
support
PhoScope

PhoScope
supports
volunteers

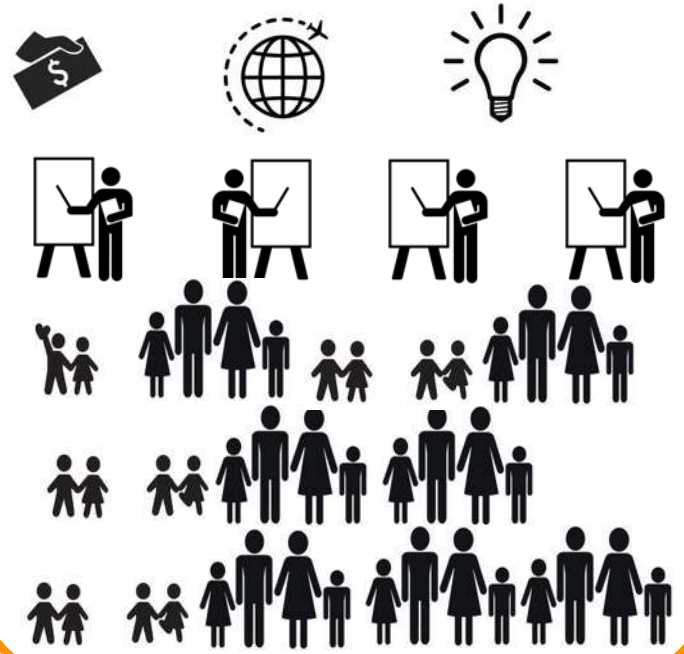
together
we support
communities

TRAINING + PROJECT PROGRAMS

VOLUNTEER TRAINING PROGRAM

PROJECT SUPPORT AND RESOURCES

PROJECT COORDINATION AND PROCUREMENT



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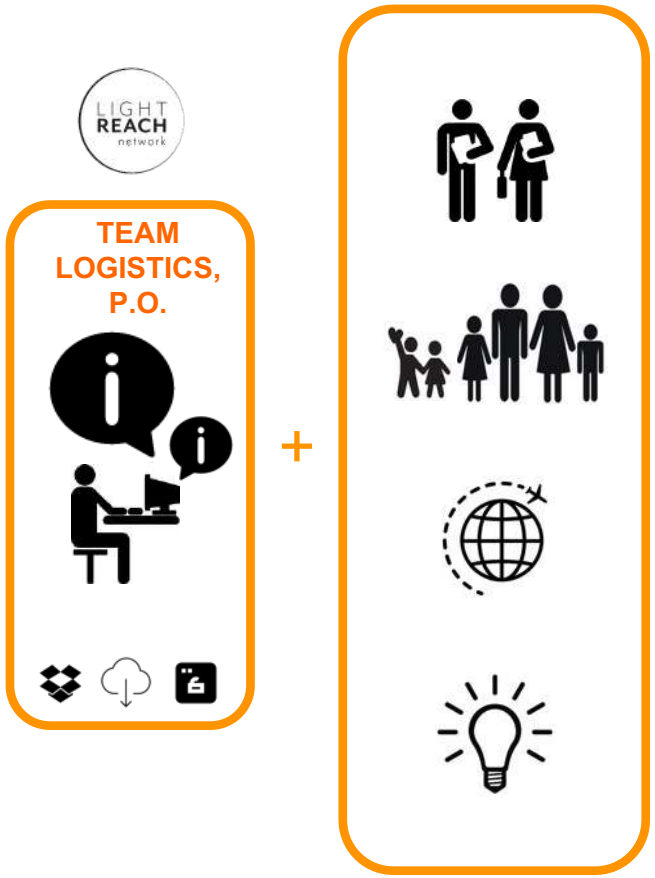
A multi-project program template



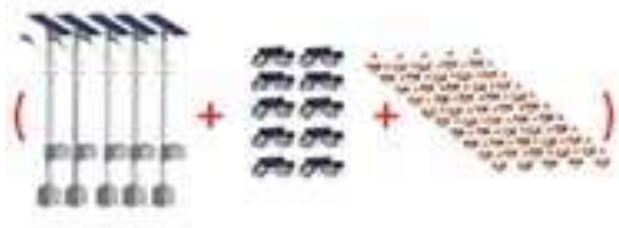
PROGRAM _____ PROJECT #_____

PEOPLE
- 2 volunteers
- 1 community organization
- Community constituents

PROCESS
- 10 days over 3 months (~ 2-3 trips x ~3–5 days)
- 2+ educational and creative workshops with communities' kids + adults
- Participatory design, layout and installation with community

SOLAR LIGHTS
- __ pole-mounted streetlights*
- __ stationary lights*
- __ portable lights*

** Note: quantities will vary per program*



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Volunteer training program

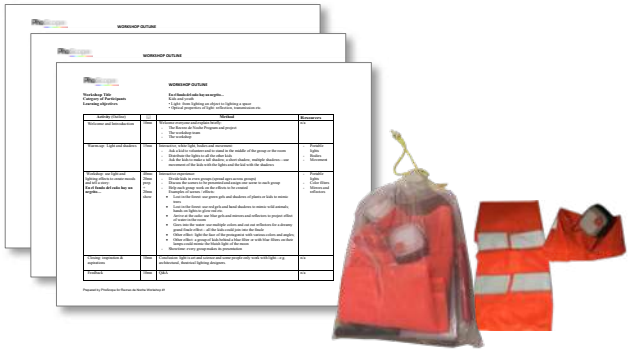
VOLUNTEER TRAINING PROGRAM

PHOSCOPE **EDUCATES** VOLUNTEERS IN JUST 2 SESSIONS:

- **Session 1**: PROJECT 1-2-3

- **Session 2**: LIGHTING WOKSHOPS 1-2-3

  - Project templates for each program
  - Handouts & guidelines
  - Workshop kits and outlines



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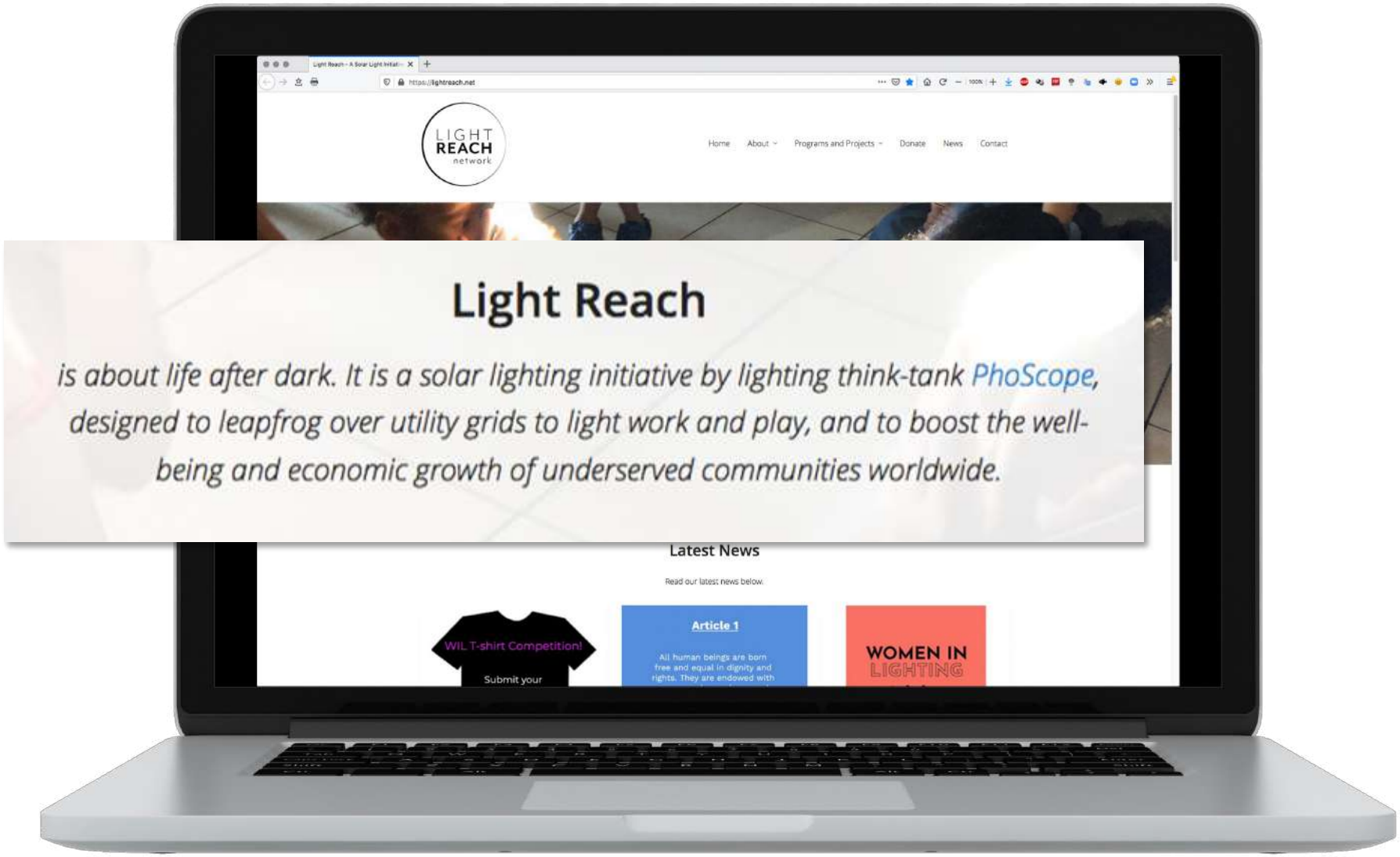
Social engagement at a global scale



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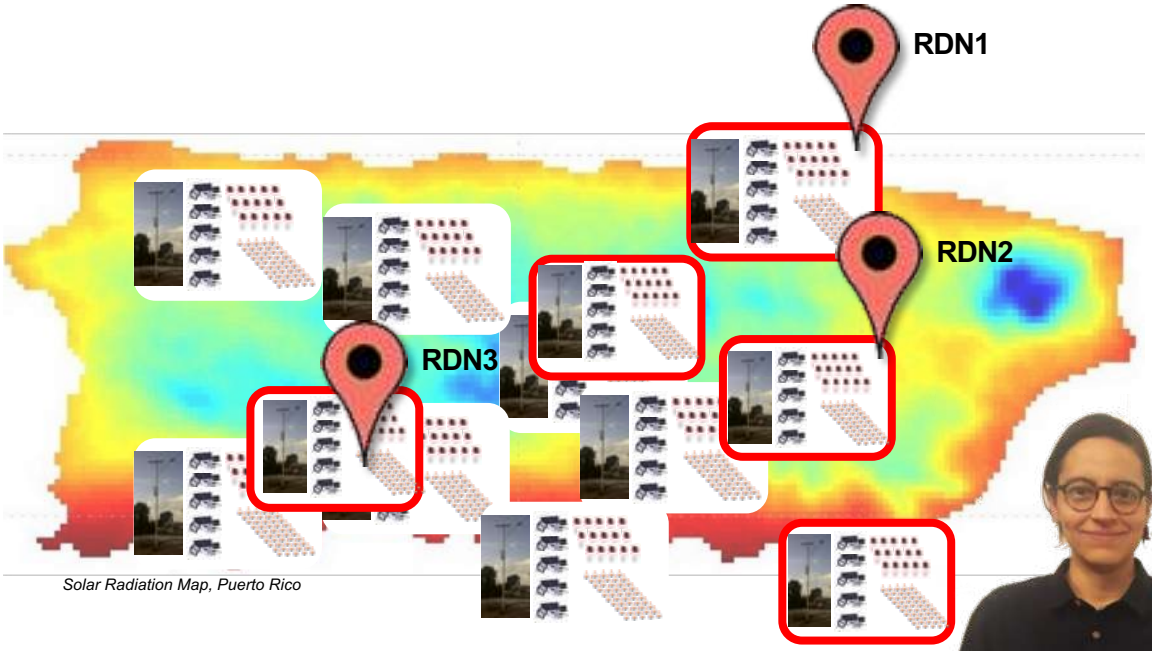
2018 - : Recreo de Noche (RDN)



Solar Radiation Map, Puerto Rico

Marien Velez, Lighting designer, Program Coordinator for Recreo de Noche (2018-9)

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IMPACT
Pilot Program

3 projects
6 volunteers
5 community workshops
137 donated solar fixtures

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2020 - : Light For Lebanon (LFL)

Manal Kahale,
Lighting Designer,
Partner for the
Light for Lebanon Program,
2020- present

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LFL0, LFL1, ~~LFL3~~, LFL2, LFL4, LFL5, ~~LFL6~~, LFL7, LFL8, LFL9, LFL10

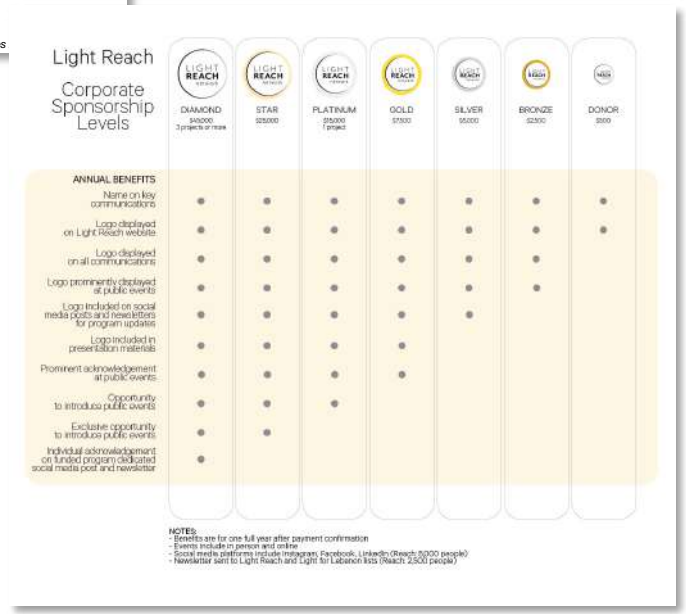
EXPENSES	Quantity	Unit Cost	Cost	TOTAL
LIGHTING EQUIPMENT *				***$358,552***
Portable lights	15,000	$8	$119,302	
Solar floodlights	1,500	$80	$119,250	
Solar Streetlights	150	$800	$119,999	
INSTALLATION COSTS **	1	10%	$34,098	***$34,098***
TOTAL LIGHTING AND ACCESSORIES				***$392,650***
OPERATIONAL COSTS				
ADMINISTRATION FEE ***	1	10%	$39,265	***$39,265***
TEAM COMPENSATION ****				***$31,500***
TOTAL OPERATIONAL COSTS				***$70,765***
TOTAL EXPENSES				**$463,415**
Contingency	1	3%		**$11,585**
TOTAL PROGRAM				**$475,000**

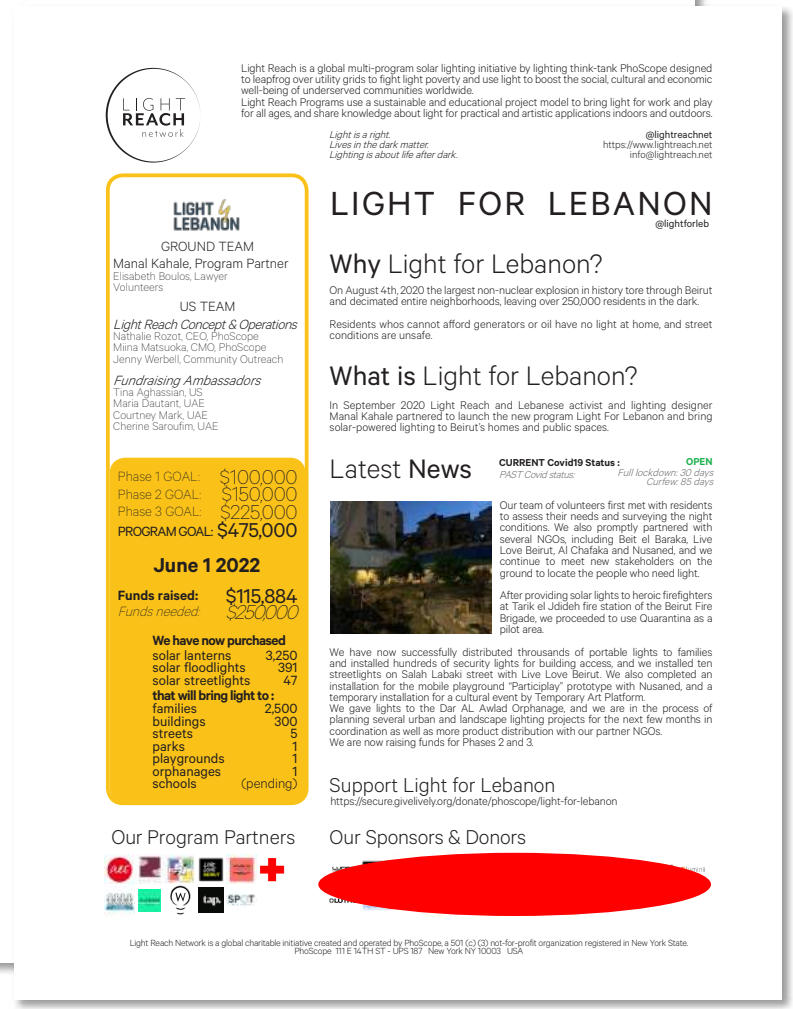
** Unit costs show average total costs based on several fixture types, and include optical and other accessories as well as shipping costs and customs and other fees*

*** Installation costs include mounting equipment and logistics*

**** PhoScope administrates all of the program's accounts*

***** Includes stipends for lead team and volunteers as well as fees and stipends for professional services*





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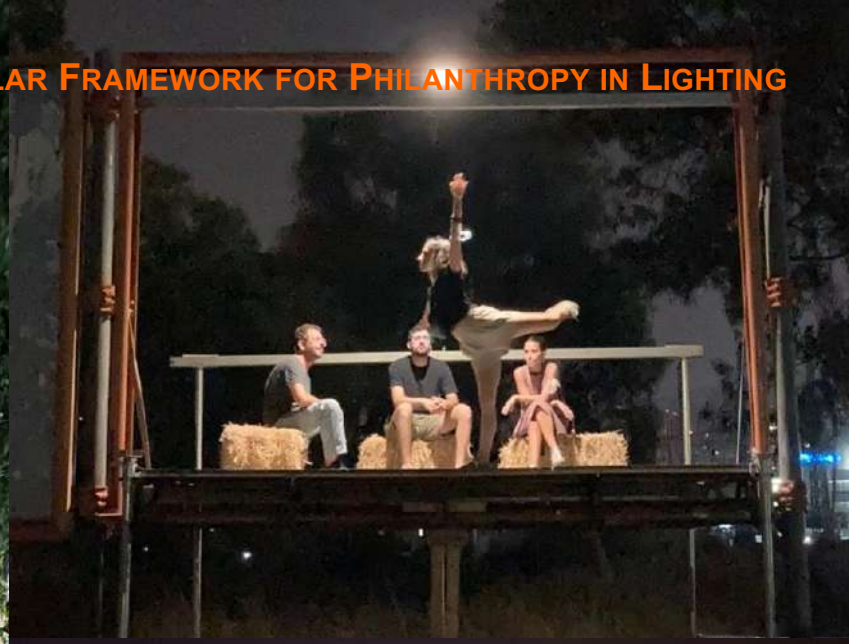
3 - Light Reach Network: A Solar Framework for Philanthropy in Lighting

1	**Christmas boxes** • *Distribution*		
2	**Gemayzeh** • *Distribution*		
3	**Salah Labaki Road** • *Installation*		
4	**MarMikhael** • *Distribution*		
5	**Quarantina** • *Distribution* • *Installation*		
6	**Fire Department** • *Distribution* • *Installation*		
7	**Geitawi** • *Distribution*		
8	**Laziza Park** • *Installation*		
9	**Karm El Zeitoun** • *Distribution* • *Installation*		
10	**Mobile Playground** • *Installation*		
11	**Bourj Hammoud** • *Distribution*		
12	**Beirut River** • *Installation*		
	CURRENT		
13	**Gholam Historic Building** • *Installation*		
14	**Jesuite Community Park** • *Installation*		
	BEYOND BEIRUT		
A	**Dar Al Awlad** • *Distribution* • *Installation*		
B	**Forsa Schools (113)** • *Distribution* • *Installation*		



- LFL

IMPACT

Purchased
Distributing & installing

3,250 portable solar lanterns
391 solar floodlights
47 solar streetlights

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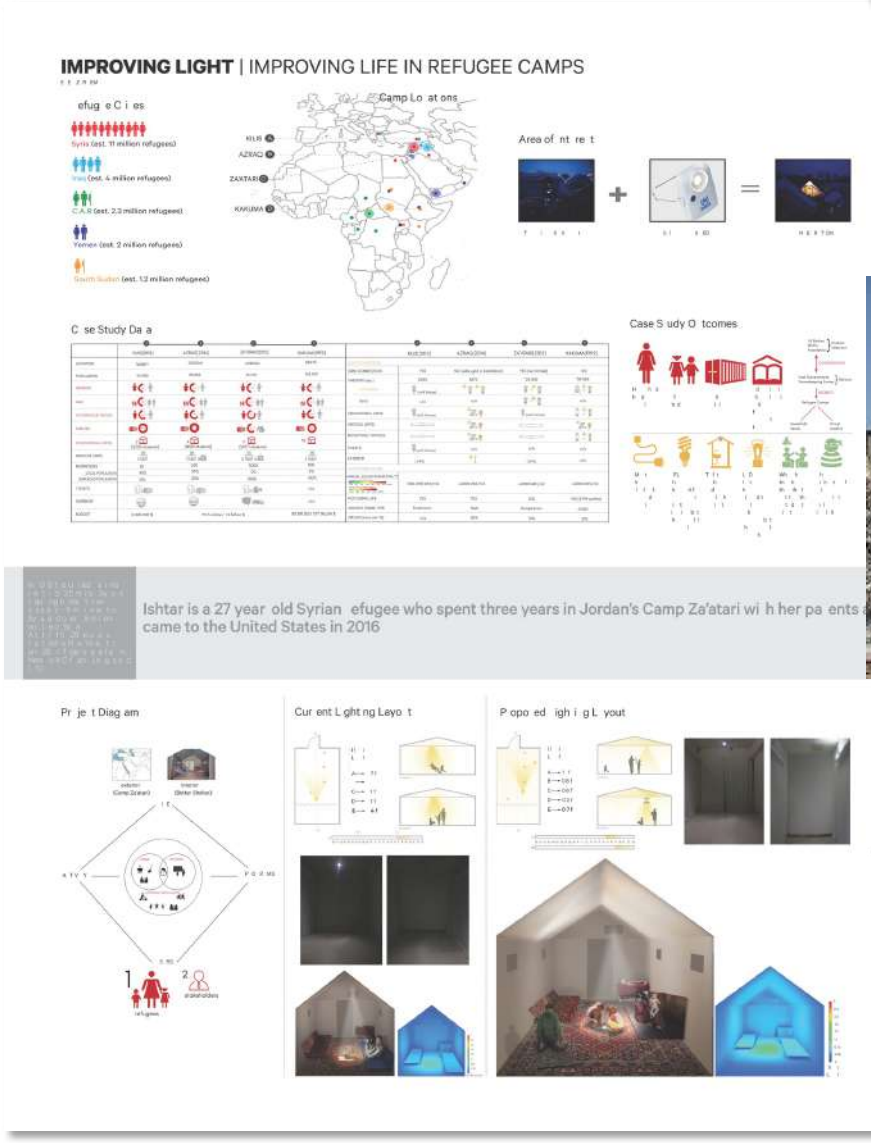
Next steps: new PROGRAMS?



Ece Ozerdem,
Lighting Designer,
Light for Turkey?

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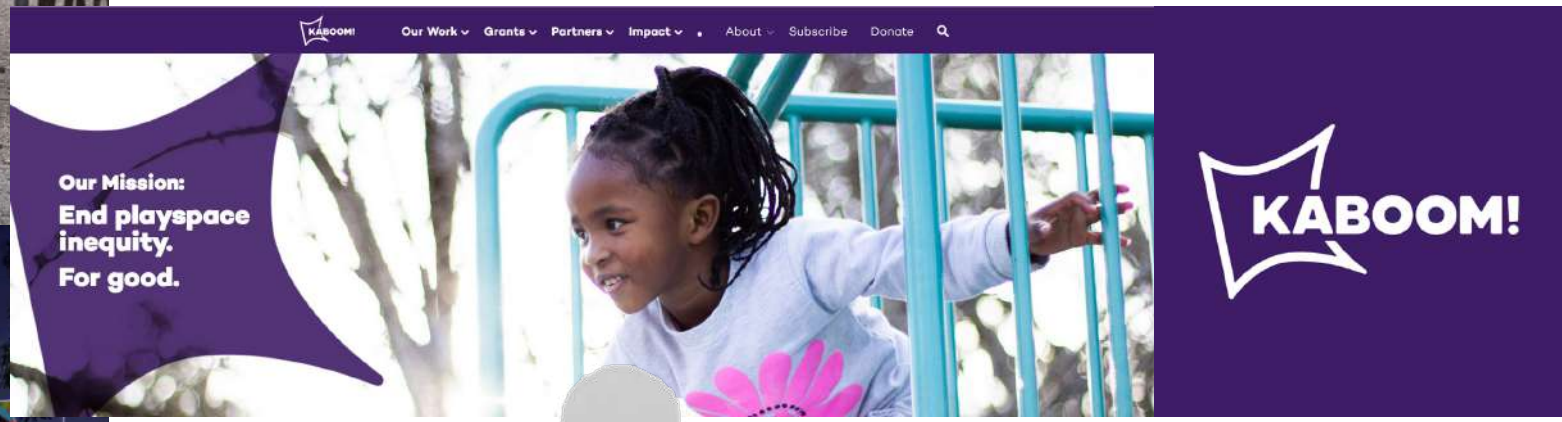
Next steps: new PROGRAMS?



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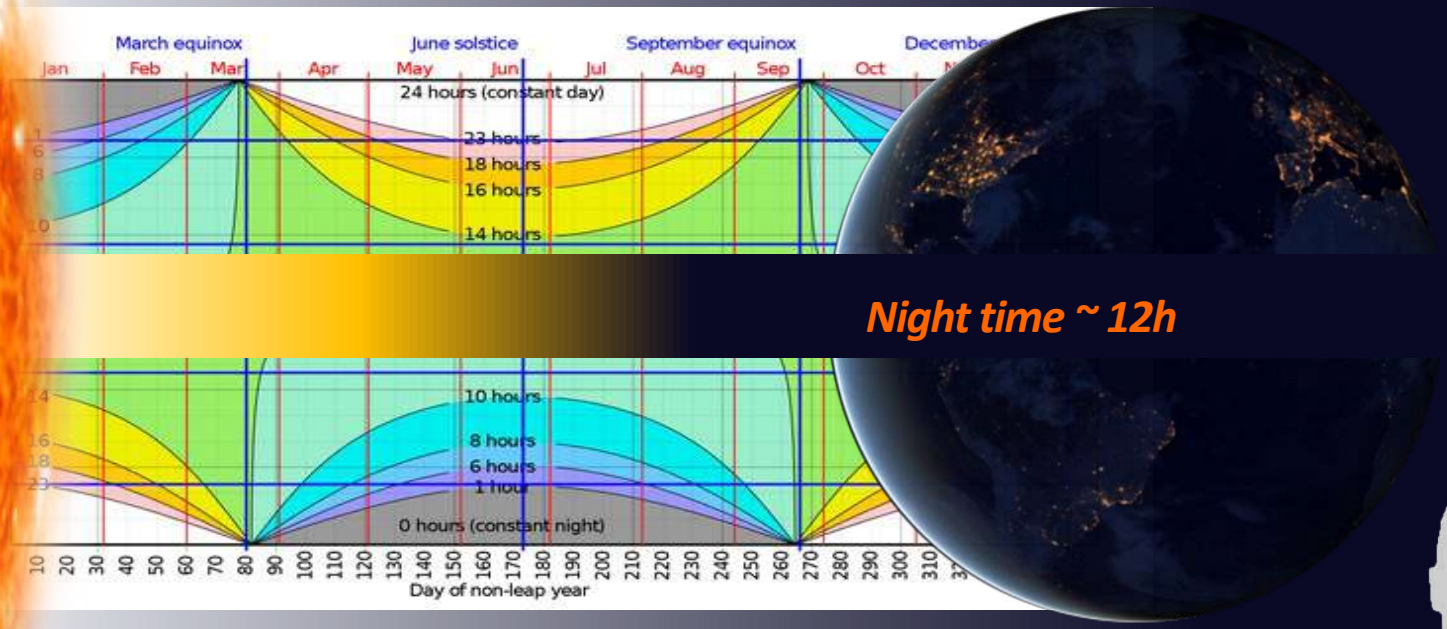
Next steps: new PROGRAMS?



Night time ~ 12h

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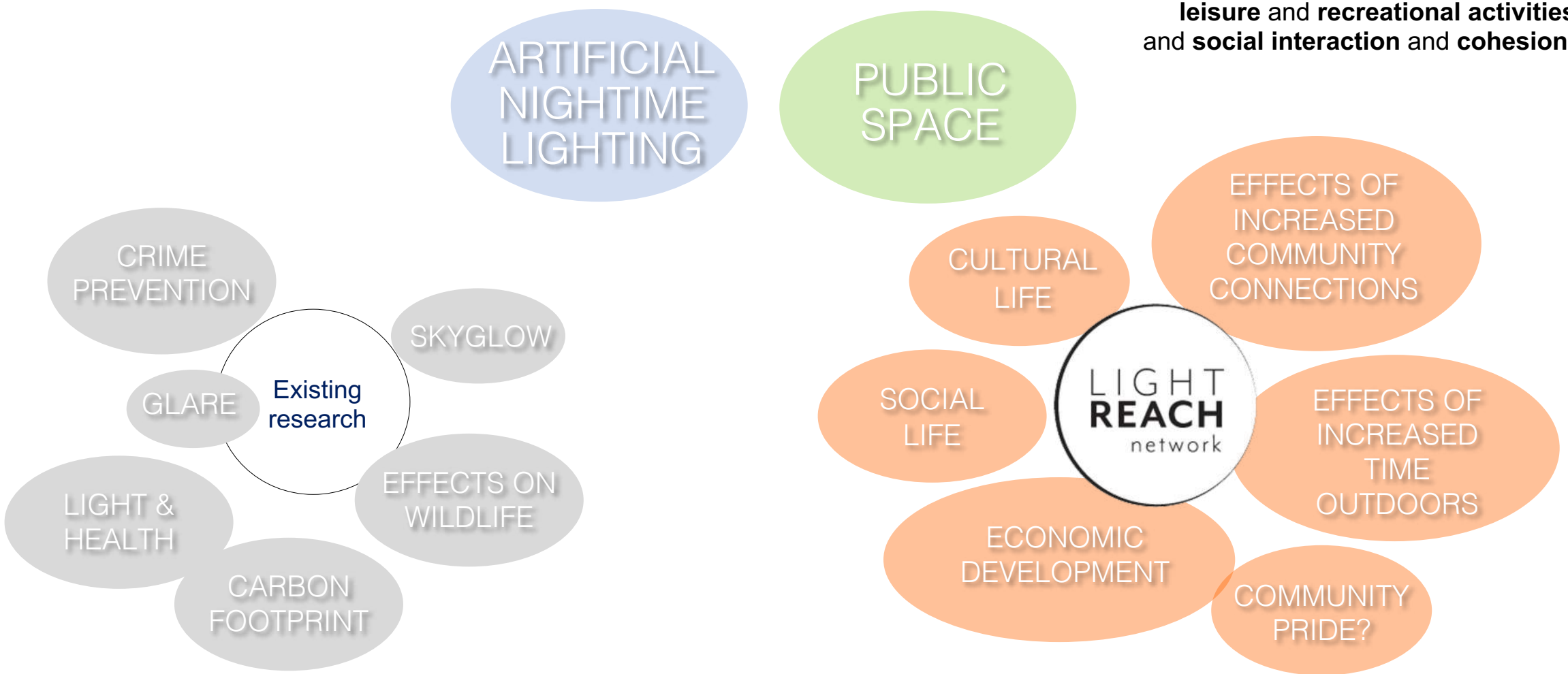
Next Steps: RESEARCH?

"(Artificial **nighttime lighting**) doubtless has **profound benefits** for human **wellbeing** in increasing **opportunities** for **economically productive activity, leisure** and **recreational activities,** and **social interaction** and **cohesion**."



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Next Steps: RESEARCH?

HOW DOES

LIGHTING

PUBLIC

SPACE

BENEFIT

COMMUNITIES?

Artistic expression
Capacity Building
Civic Participation
Community **Engagement**
Community **Resilience**
Cultural Activities
Displacement Prevention
Economic **Opportunities**
Entrepreneurism
Mental **Health**
Physical Health
Physical Activities
Place Making
Play
Pride
Social **Justice**
Social Life
Solar Technologies
STEM Education
Sustainable Practices
Well-being

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Next Steps: RESEARCH?

"…However, whilst commonly asserted, robust empirical evidence demonstrating that this is actually the case, and under what circumstances, is largely wanting (Jakle 2001; Mills 2005; Koslofsky 2011)
Clear opportunities to address this knowledge gap exist with ongoing schemes to introduce artificial nighttime lighting to communities in the developing world that have previously lacked such infrastructure"

Gaston, K., Gaston, S., Bennie, J., Hopkins, J. 2015. Benefits and costs of artificial nighttime lighting of the environment. Environmental Reviews 23(1):14-23. DOI:10.1139/er-2014-0041

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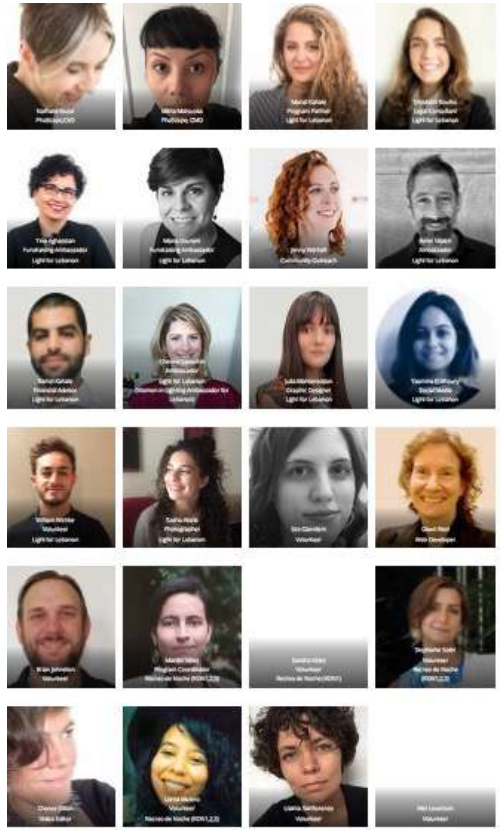
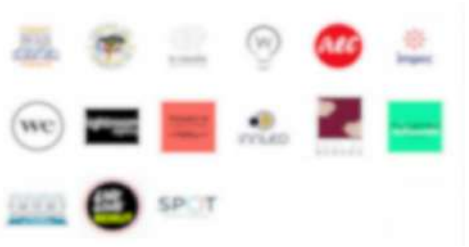
Light Reach Network, a global team effort



Volunteers do the work,

partners facilitate it,



and funders make it possible.

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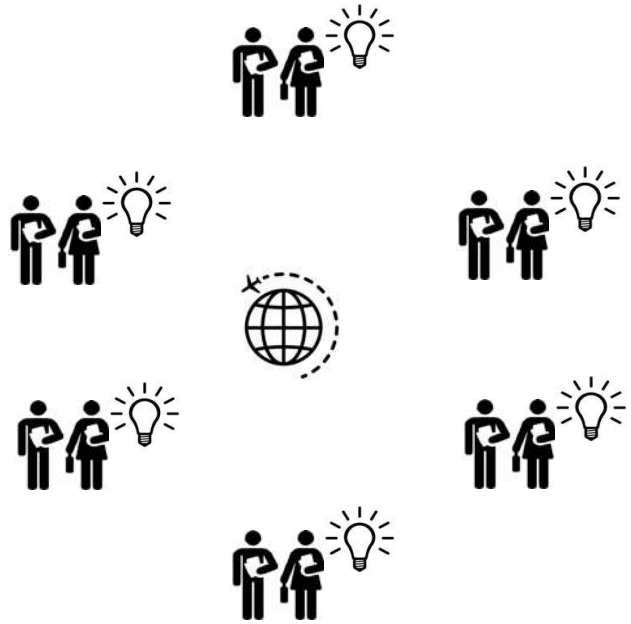
How can you support?

Architecture for Humanity
Architectural Outreach
Architects Sans Frontiers (ASF)
Build Abroad
Builders Without Borders
buildOn
Building Trust International
Caribbean Volunteer Expeditions
Design Corps
Design that Matters
Engineering For Change
Engineering Good
Engineers Without Borders
Green Life Volunteers
Fair Planet
Grid Alternatives Habitat for Humanity
Habitat for Humanity International
Impact Design Hub
Indigo Volunteers
Inhabitat
Long Way Home
Moving Worlds
Open Architecture Collaborative
Public Architecture 1% Solution
Rebuilding Together
Red Feather Development Group
Renewable Energy Alliance
Shelter For Life International
Shelter Global
Volunteer Forever

1,684 lighting design practices
~ 5,000 lighting suppliers

LIGHT REACH network

We need to
• scale-up social engagement in lighting
• procure light to those who need it
• empower by sharing knowledge of the art and science of light



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How can you support?

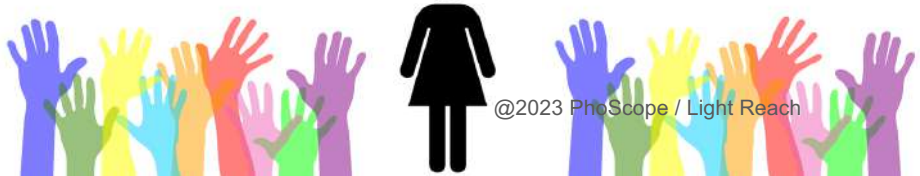
IN-KIND CONTRIBUTIONS

Direct
- Participate in an existing project
- Propose, launch & lead a new program

If you are a PERSON
- a student
- an EP
- an employee

- in a design firm, a manufacturing company, a sales agency

Indirect
- Research
- Other professional services:
  - Marketing
  - Social media
  - Photography
  - Videography
  - Graphic desigr
  - Web design



CASH CONTRIBUTIONS

Direct
- Donate $ https://lightreach.net/donate/
- Non cash assets info@lightreach.net
  - Donor Funds (e.g. Fidelity, Schwab)
  - Legacy planning (bequests)
  - Miles

Indirect
- Fundraise, organize or host a fundraiser
- Become a fundraising ambassador
- Promote
  - Social network
  - Professional network
  - Personal network
- Ask for donations in lieu of gifts (e.g. birthday)
- ASK YOUR COMPANY TO HELP:
  - Inquire about their CSR
  - Ask them to sponsor
  - Ask them for matching grants etc.

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How can you support?

IN-KIND CONTRIBUTIONS

Direct
- Adopt Social Corporate policies

Indirect
- Promote your support
  - Social network
  - Professional events

If you are a COMPANY
- a design firm
- a manufacturing company
- a sales agency
- a distributor

LIGHT REACH network

?

CASH CONTRIBUTIONS

Direct
- Become a sponsor https://lightreach.net/donate/
- Give non cash assets info@lightreach.net
  - Donor Funds (e.g. Fidelity, Schwab)
  - Legacy planning (bequests)
  - Miles
- Make donations in lieu of gifts (e.g. holiday baskets)
- Dedicate % of your sales or revenue
- Match your employee donations

Indirect
- Fundraise, organize or host a fundraiser
- Sponsor employees who volunteer
- Ask for donations in lieu of gifts (e.g. holiday baskets)

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CONCLUSION

Light Reach Network, a growing initiative

@lightforleb
@lightreachnet

https://lightreach.net/

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