IDDS 2017: Hogares Sostenibles Final Data Summary

2 Weeks | 45 Participants | 8 Prototypes

June 4th – 20th
Sololá, Guatemala

LINK 4

UVG UNIVERSIDAD DEL VALLE DE GUATEMALA

IDN International Development Innovation Network

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Who are the participants?

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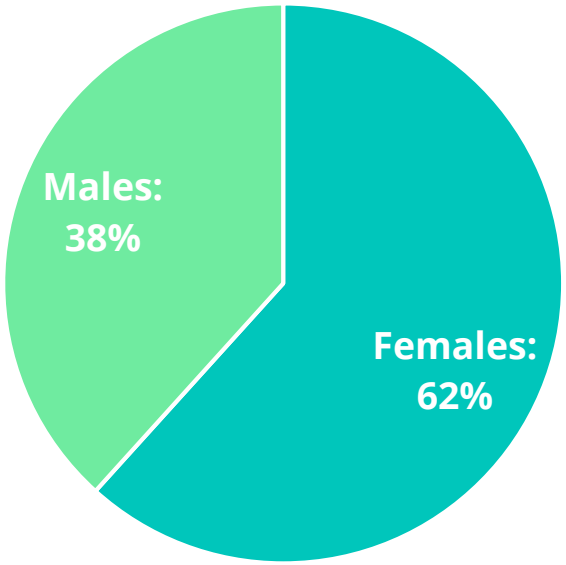
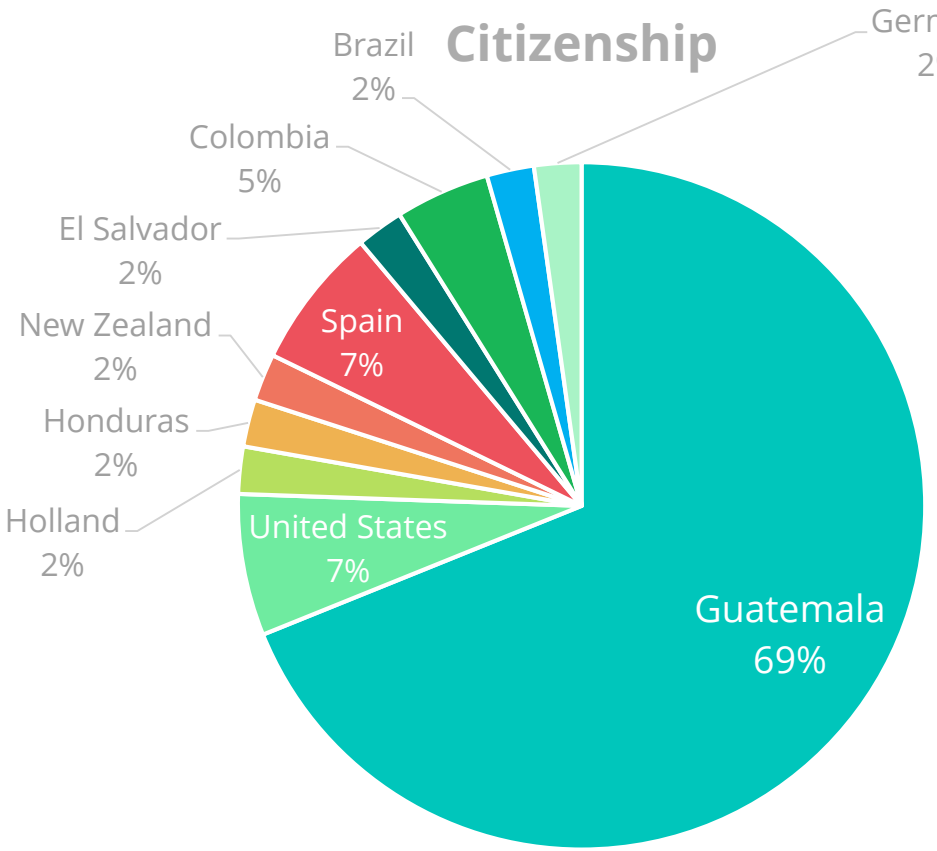
Who are the participants?

N = 45

Gender



Citizenship



Local
12

National
19

International
14

Who are the Participants?

What did they achieve at IDDS?

What will they do next?

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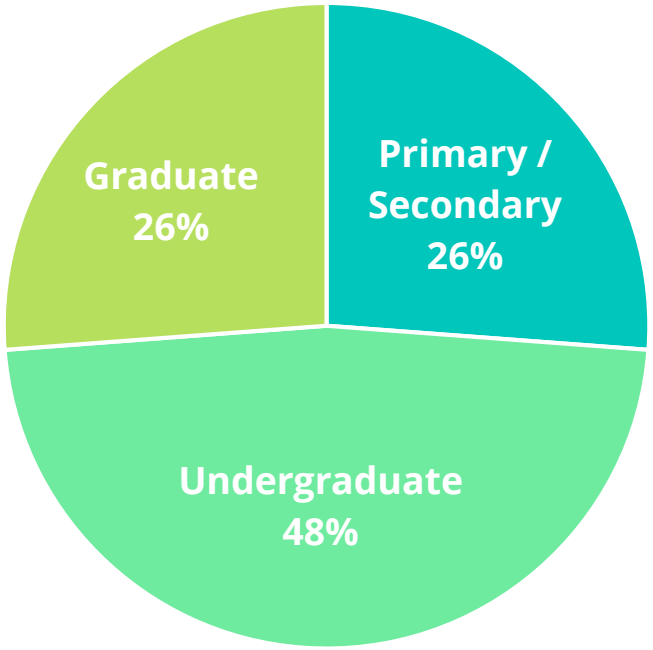
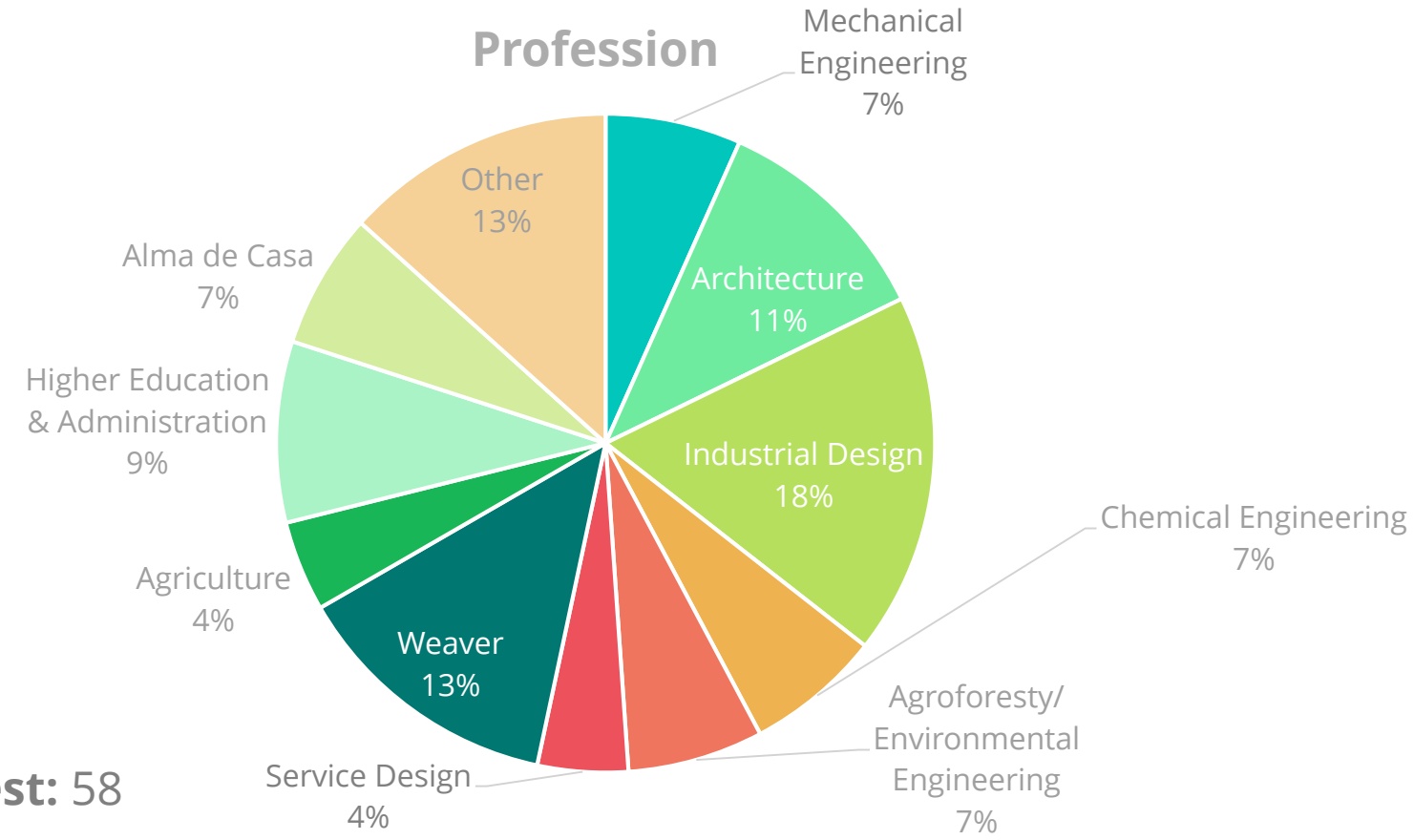
Who are the participants?

N = 45

Education Level



Profession



Average Age: 28 **Youngest:** 20 **Oldest:** 58

Who are the Participants? | What did they achieve at IDDS? | What will they do next?

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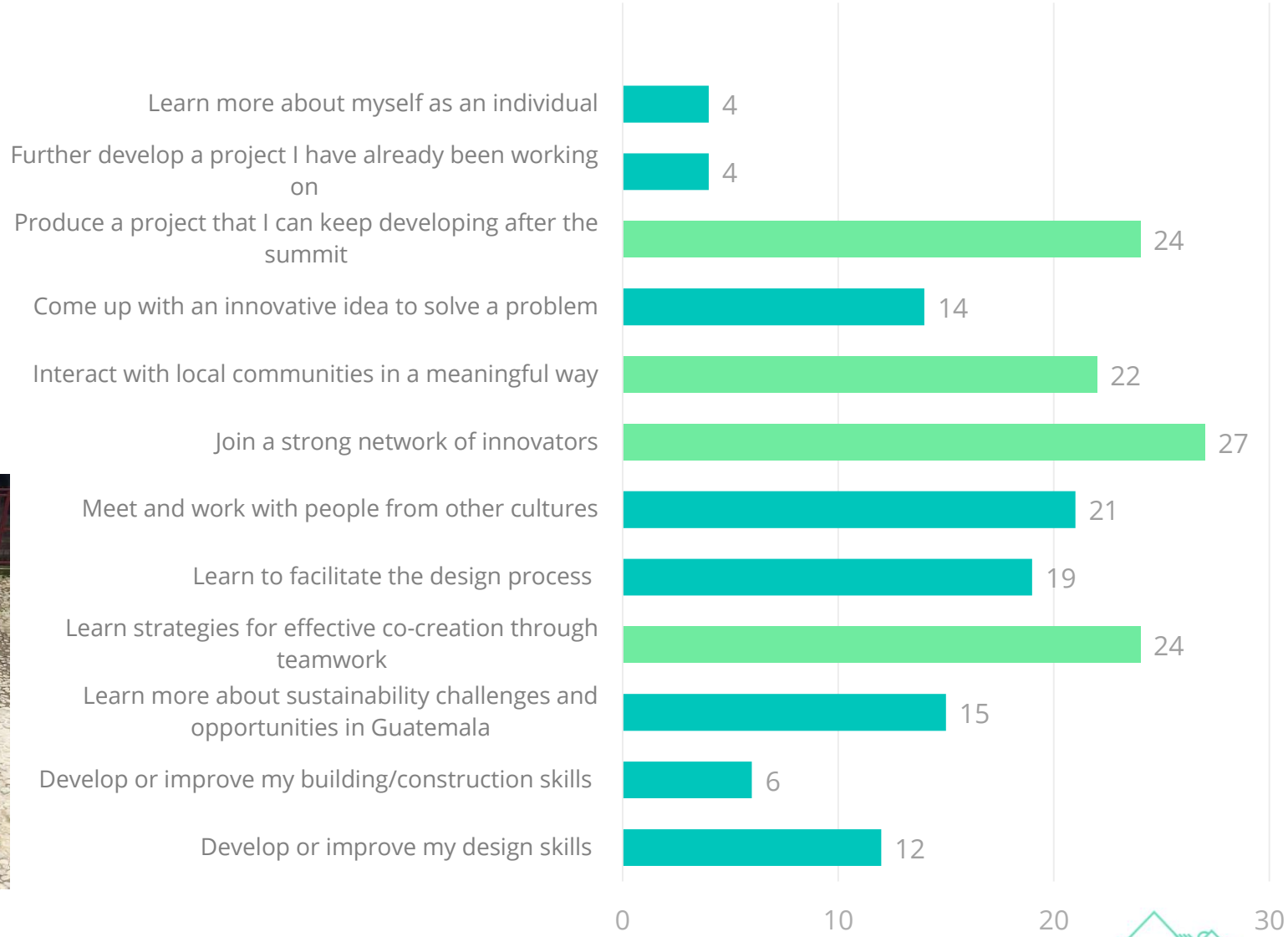
What are their short-term goals?

Between now and the end of IDDS, what do you MOST hope to accomplish?



45 Respondents

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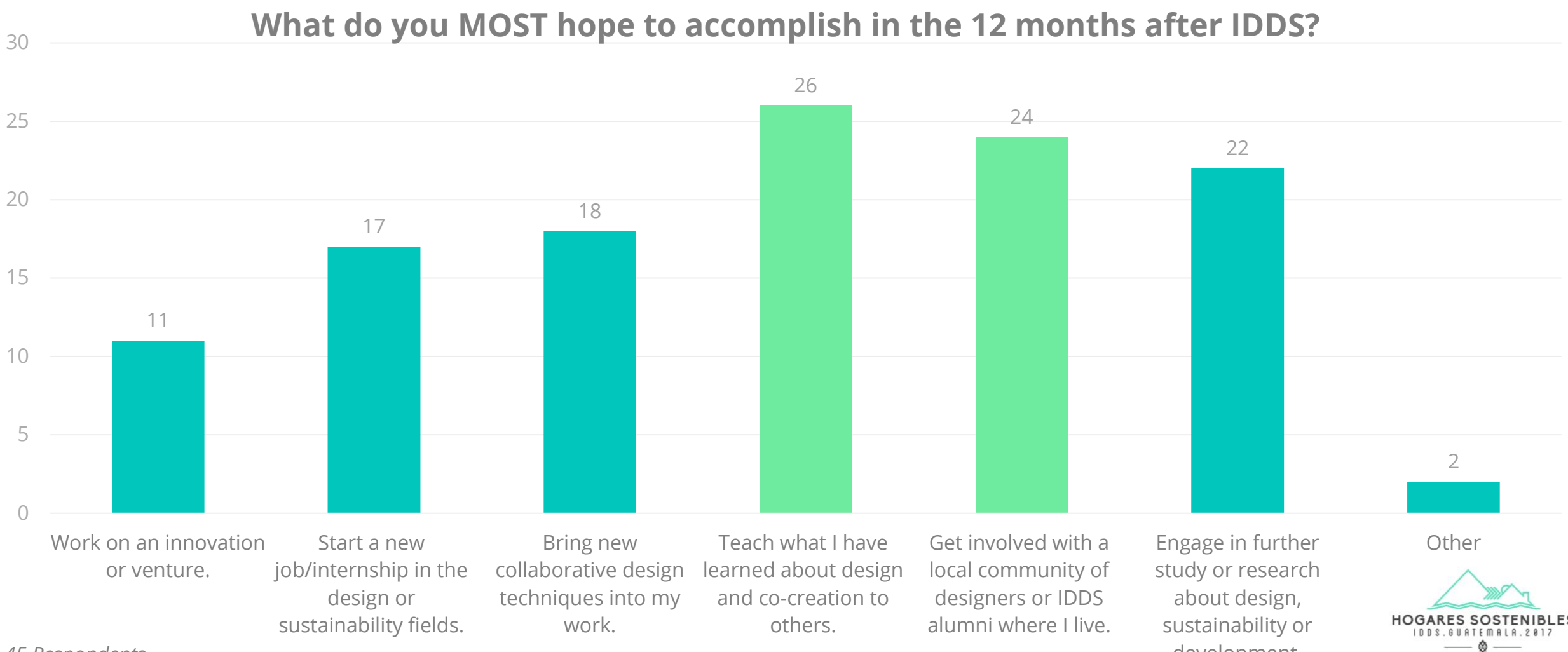
What are their long-term goals?



45 Respondents

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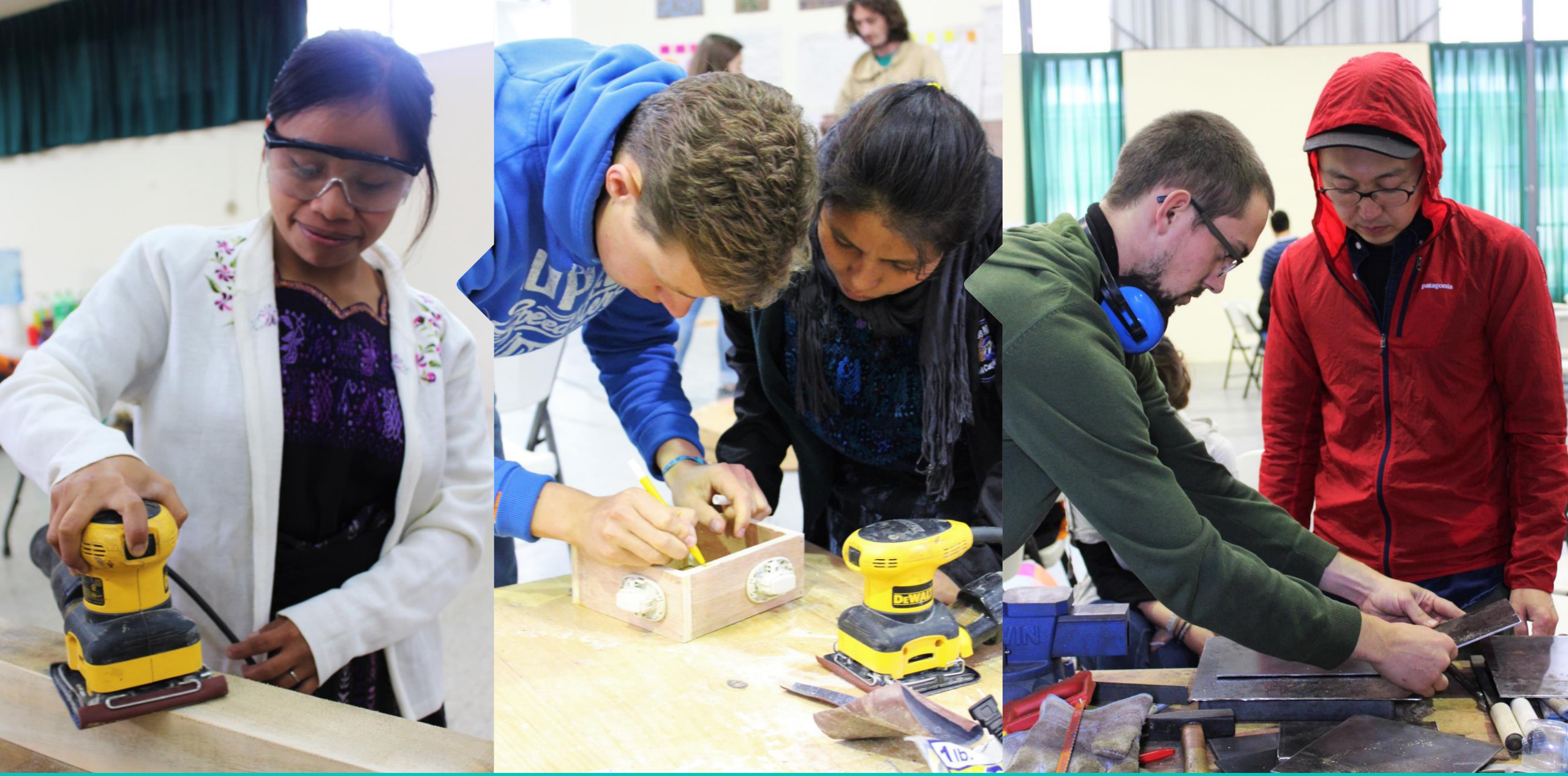
What were their favorite activities of IDDS?

1. Morning Circle
2. Build-Its
3. *Session:* Introduction to the Design Process



What did they create?: The Prototypes

Team Water: Nim’ Ya

Addressing the issue of insufficient water supply and unequal distribution of water in Santa Catarina, the Water team created a water catchment and storage system named “Nim’ Ya”.

Attaching to the roof of any home, Nim’ Ya uses a PVC tube to collect water run-off, which is later run through a series of filters before entering a large storage system. Through a faucet attached at the base of the storage barrel, water can be easily extracted without leaving the container open, preventing contamination of water.

Team Organic Waste: Ciclo Rotatario

Addressing a lack of efficient use of organic waste in Santa Catarina, the Organic Waste team developed “Ciclo Rotatario”, a rotating barrel that can be used to create compost from organic materials. Fit with a small drainage system as well, this prototype allows for ideal conditions for creating compost. Future plans include creating separate compartments which allow for several batches of compost to be created simultaneously.

The team also used educational posters to inform community members of what can and cannot be included in compost components.

Team Sanitation: Ecosan

Team Sanitation addressed a lack of sufficient sanitary conditions in many bathrooms throughout the community. A majority of homes in Santa Catarina (600 of 800) are not connected to the town's waste treatment plant, resulting in human waste either entering the nearby Lake Atitlán or contaminating household land.

Ecosan is a latrine that separates liquid and solid waste, allowing for the potential to use solid waste to create fertilizer. Additionally, Ecosan has a water catchment system that collects rainfall for hand washing in an enclosed container. This structure was coupled with an educational lesson and modeling station for children, teaching safe sanitary practices.

Team Food: Huertos Familiares

Team Food addressed a lack of proper nutrition in the community, along with an abundance of unused vertical space on home exteriors.

Using PVC pipes, “Huertos Familiares” is the creation of vertical home gardens that can be hung throughout the community. Growing nutritious and useful foods, families can increase their nutrient intake while easily growing from the comfort of their home. Team Food also created educational cards that came with the Huertos Familiares kit, that contain information regarding necessary amounts of food and water for the plant, as well as recipes and contained nutrients!

Team Energy: Quemador para Tuj

Team Energy created an alternative heating system for the temezcal, a traditional sauna-like structure that is used for bathing in Santa Catarina. Previously heated solely through open flame, temezcals contain smoke that can be dangerous and irritating to lungs and eyes. Through rocket-stove technology, “Quemador para Tuj” heats up more quickly, using less firewood and emitting close to zero smoke.

Additionally, the Energy team created an educational campaign promoting the use of LED lightbulbs. Although initially more expensive to purchase than incandescent bulbs, they are more efficient and result in lower monthly bills. Through this campaign and active selling of LED bulbs, the team hopes to decrease energy costs for families.

Team Plastic Waste: Natz' Uk

Team Plastic Waste found a creative way to recycle unwanted plastics. Currently in Santa Catarina, there is no waste separation, and all garbage (including plastics) is brought to a nearby dump.

"Natz' Uk" uses a metal mold that can be filled with cut strips of plastic bags. By placing the mold next to the household stove, recycled plastics inside reach temperatures high enough to melt. This plastic waste is then transformed into sturdy panels that can be connected to create furniture and more! Connectors either made of screws and plastic triangles or tubing and plastic bottle caps allow for easy fastening. Natz' Uk includes a guide, filled of ways to repurpose old household plastics, and instructions for creating a handheld PET bottle stripper!

Team Cookstoves #1: Briqueta Palopó

One of two Cookstoves teams addressed a need for an alternative fuel in Santa Catarina. Nearly all households in the community use firewood as their primary source of fuel, creating an unsustainable situation. Collecting firewood is a strenuous household chore for many in the community, requiring several hours per week on the mountainside. Damp conditions affect the quality of firewood, leading to some families turning to burning plastics to heat their stoves (having negative effects on both health and the environment).

Using candle wax, sawdust, corn husks, corn cobs and pine leaves, Briqueta Palopó serves as an alternative source of fuel that heats to the same temperature as firewood, and lasts even longer! These briquettes do not emit harmful toxins into the environment as do firewood, allowing for cleaner air and easier breathing conditions as well.

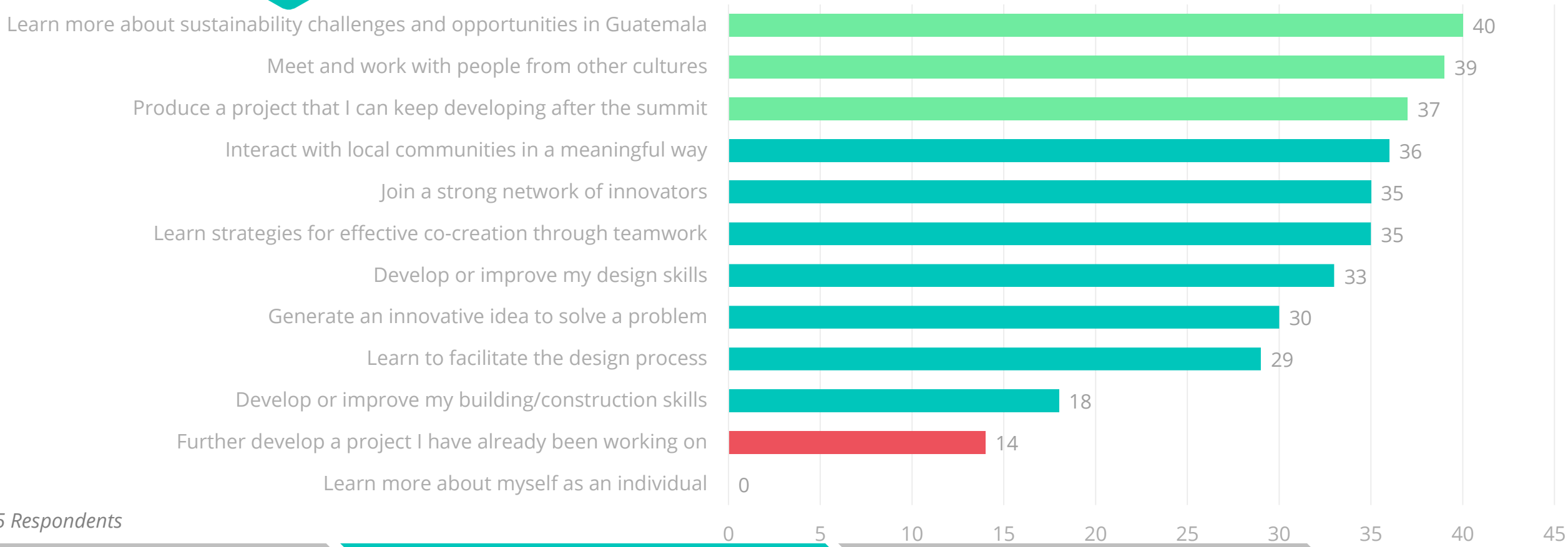
With hopes of creating a successful enterprise, community members from various teams are learning to create the briquettes, and hope to bring them to market both in Santa Catarina and in other communities around the lake.

Team Cookstoves #2:
Chaparra Redonda

A second Cookstoves team recreated the cookstove itself, using feedback and ideas of local community members. The round shape of “Chaparra Redonda” is not commonly found in the community, although it is a much preferred style for traditional cooking.

Using technology similar to that of a rocket stove, Chaparra Redonda allows for more efficient heating, and requires less fuel than other cookstoves. Using two separate heating compartments, users can choose whether to heat the entire stove, or just one portion, also allowing for more conscious fuel usage. Cookstove materials are also less absorbent of heat, allowing nearly all of the heat produced to be concentrated in the stovetop.

Achievements: Do you feel that you have accomplished any of the following? (Select all that apply)



45 Respondents

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Value of IDDS Hogares Sostenibles

What aspects of the IDDS Experience have been the most valuable to you?

Coded Responses (44)

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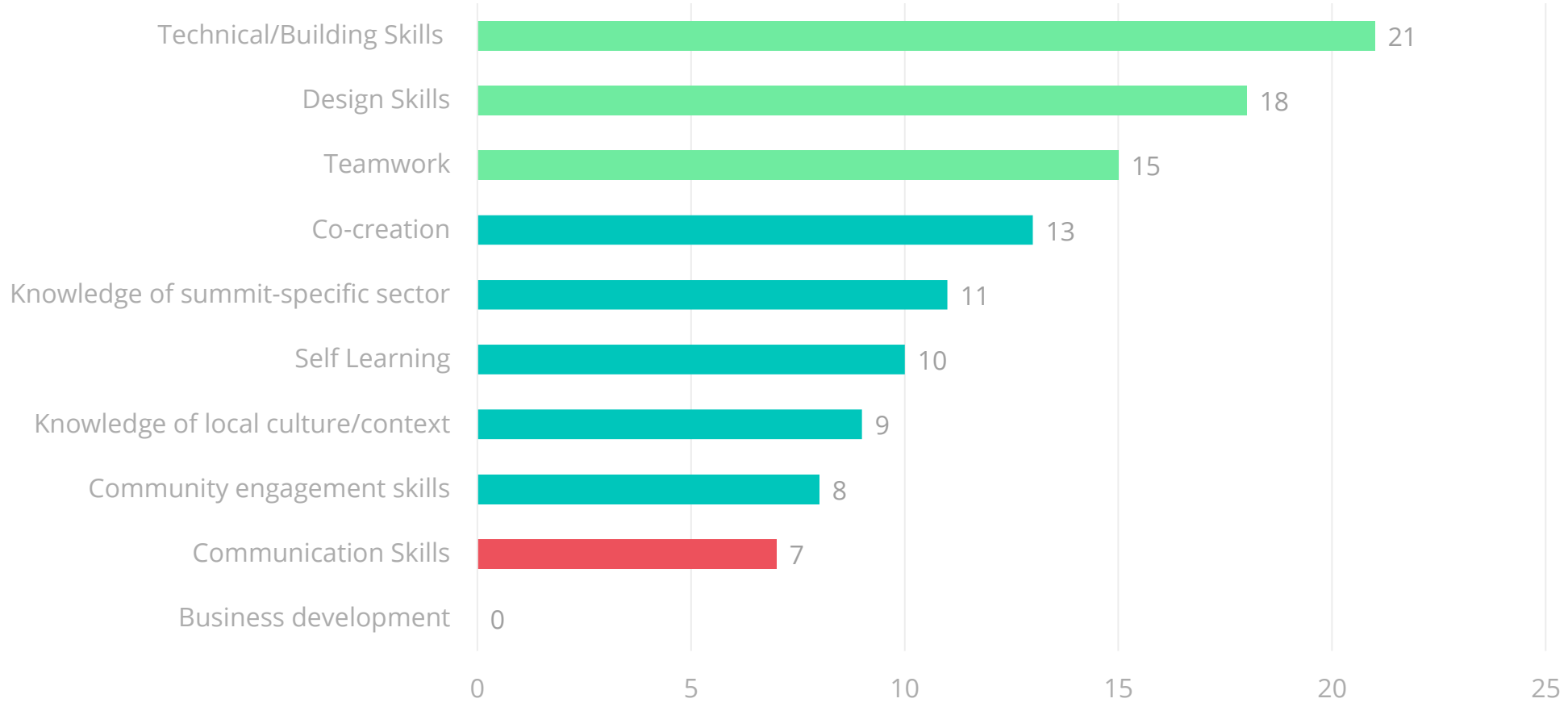
Growth in Knowledge & Skills

What skills an/or knowledge have you gained in the last two weeks?



Coded Responses (44)

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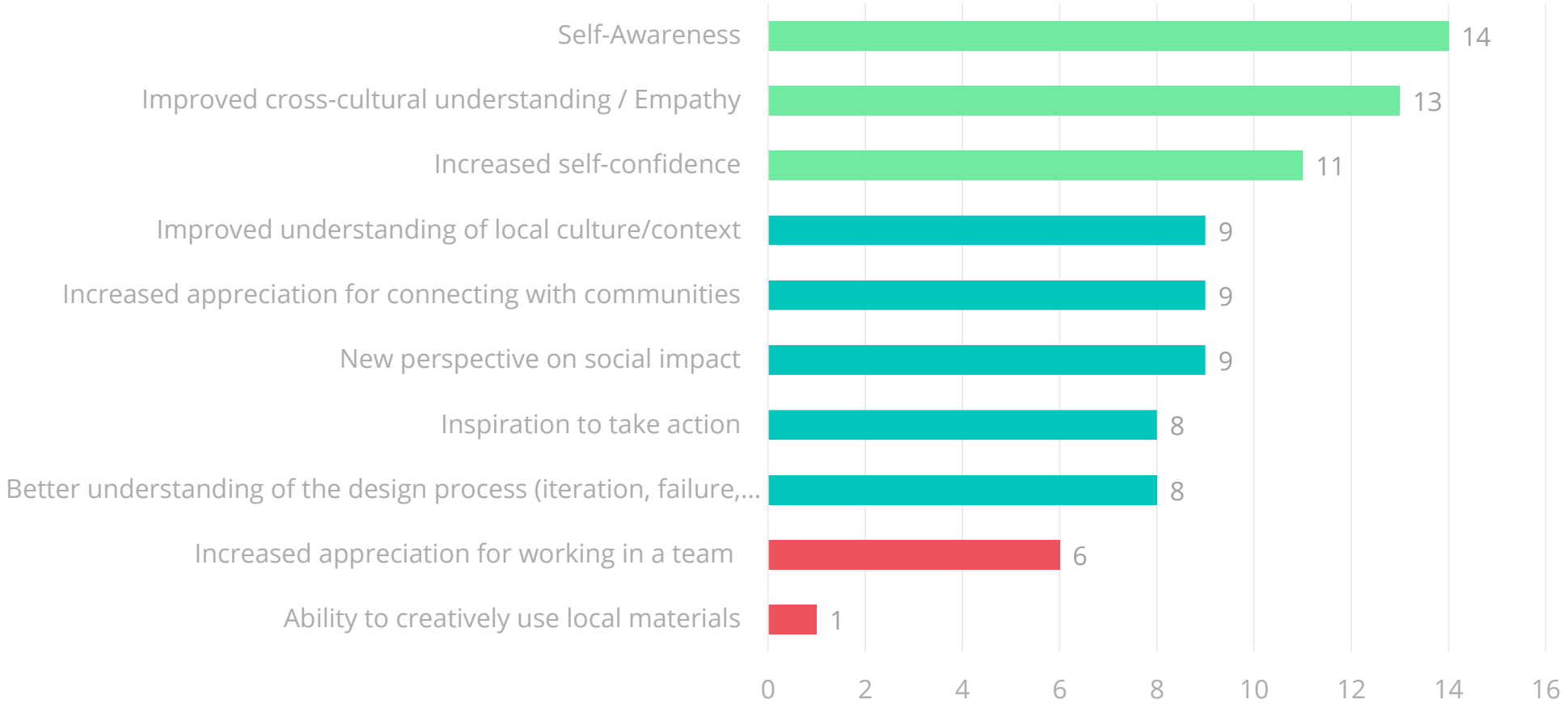
Changes in Attitudes & Perspectives

Have your attitudes or perspectives changed in any way in the last two weeks as a result of participating in IDDS?



Coded Responses (44)

Changes in Confidence Levels

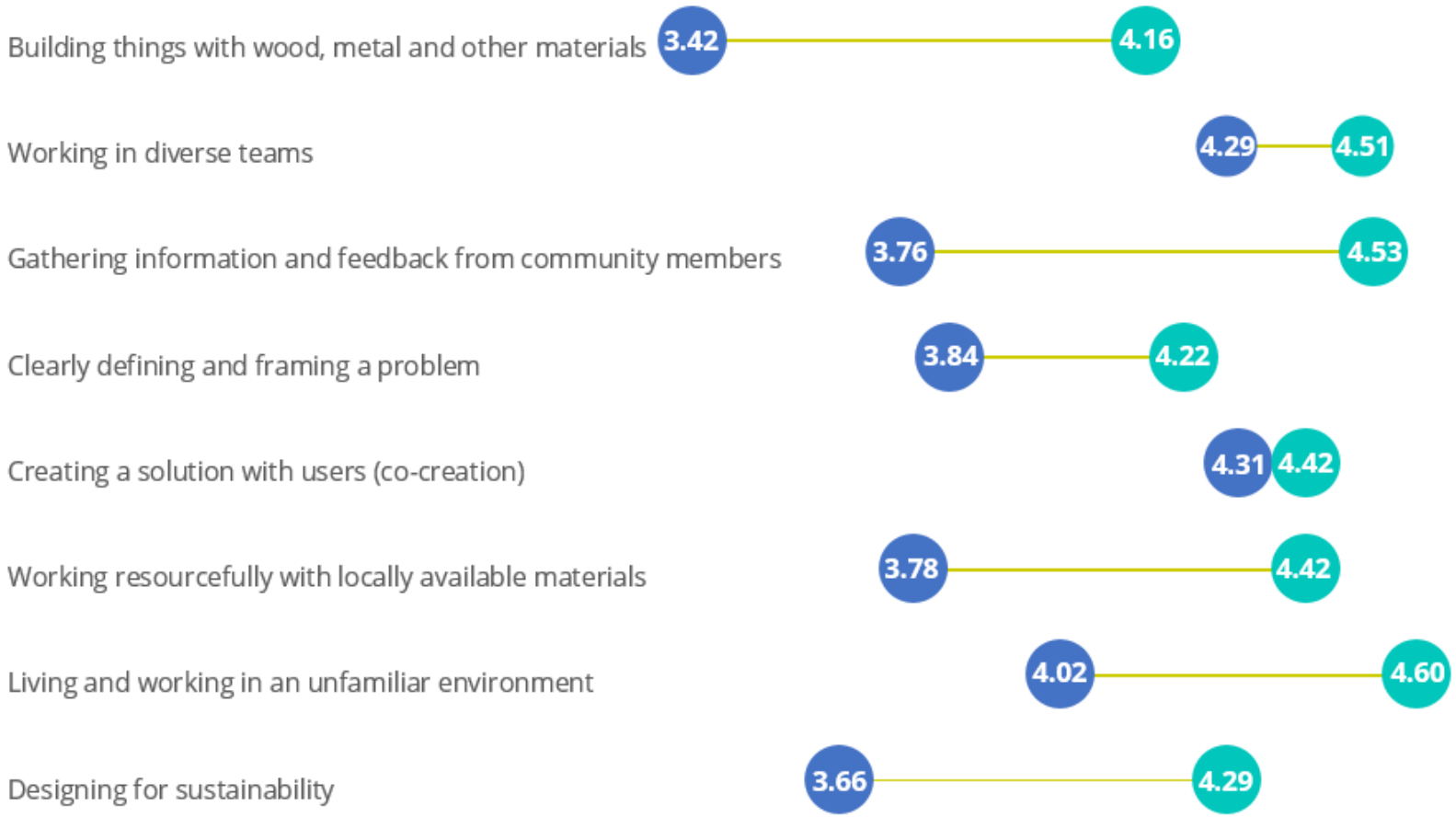
How confident do you feel doing the following activities? (before vs. after IDDS)

Who saw the most growth?

Local	National	International
#1	#2	#3

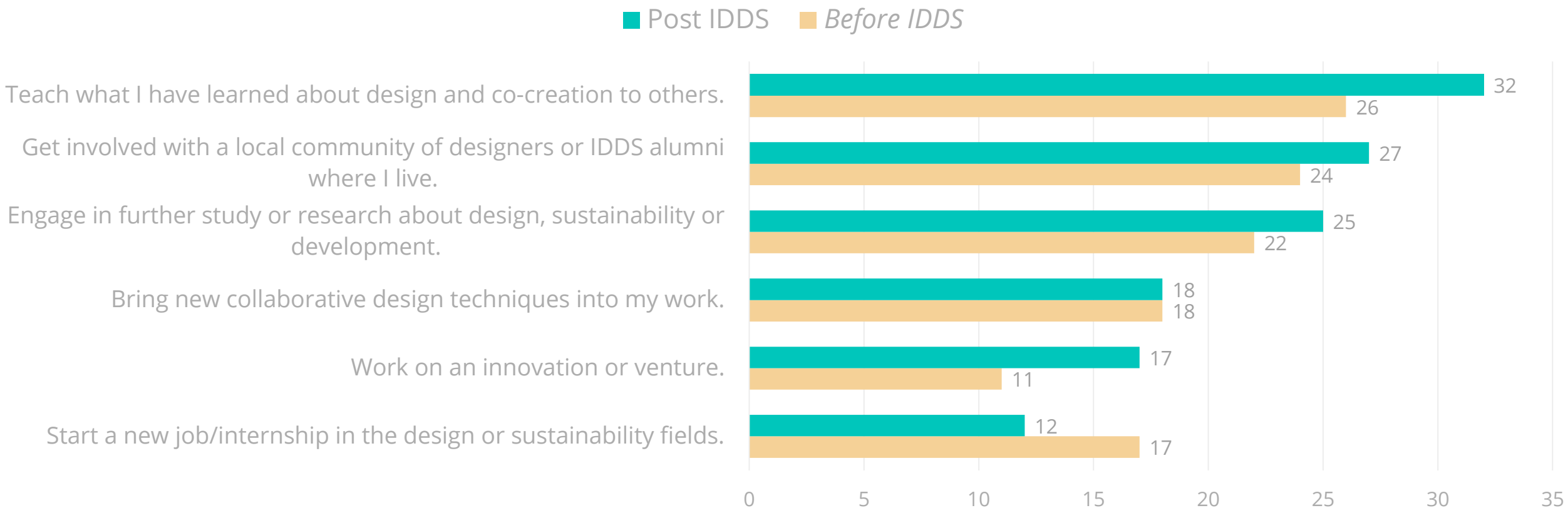
Due to starting higher confidence levels amongst international participants

Scale of 1-5, *1 = Uncomfortable, 5 = Very Comfortable*
45 Respondents



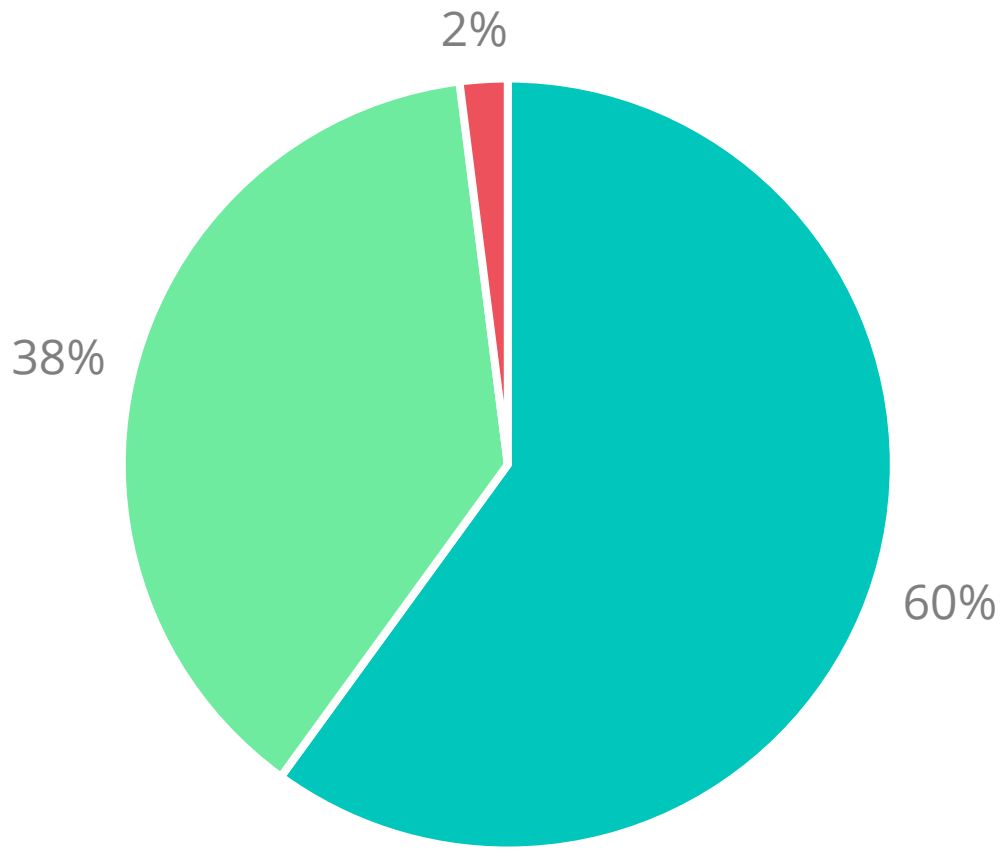
What will they do next?

After IDDS: Now that you've completed IDDS, what are your primary goals in the next 12 months?



How do you plan to continue working on your IDDS project in the future?

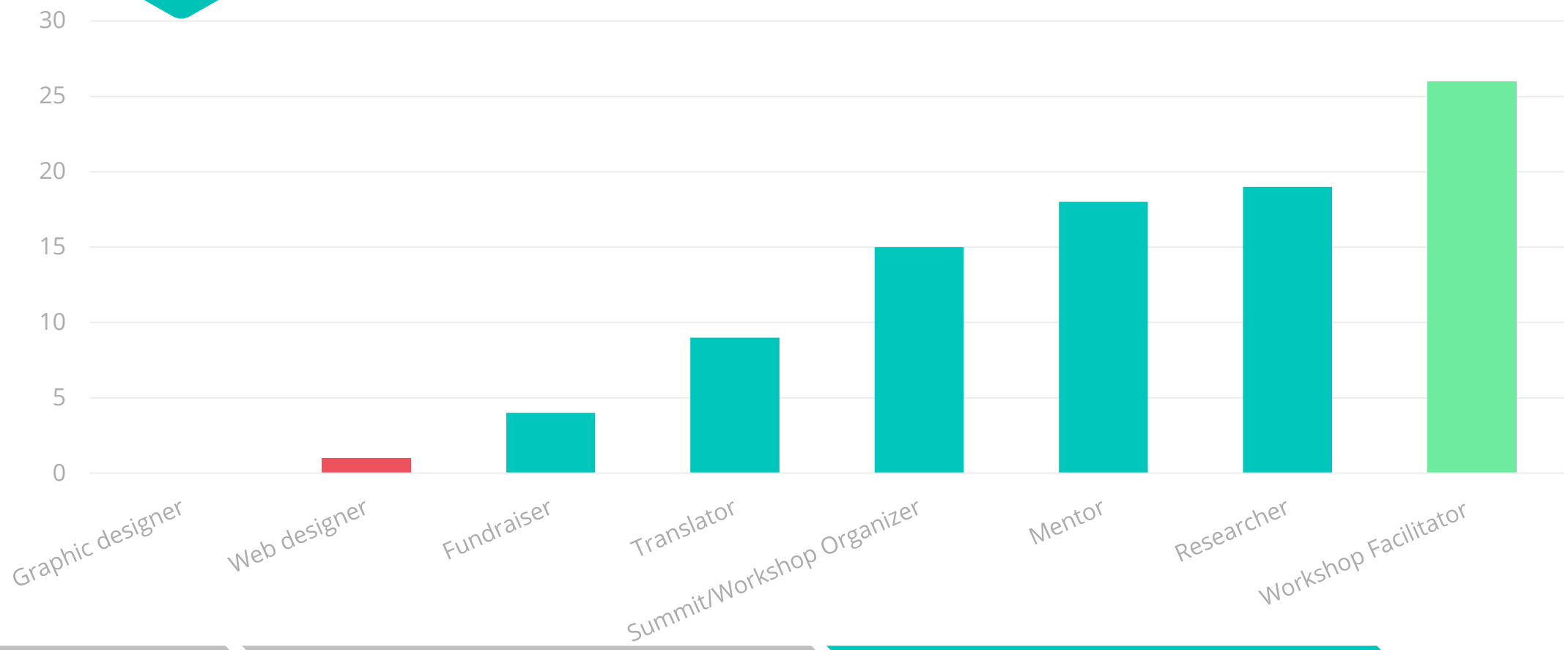
- I plan to actively continue developing the project.
- I will stay in touch to check up on progress, but I will not work on it actively.
- I have no plans to continue with this project after IDDS.



45 Respondents

Interest in Continued Engagement with Guatemala IDIN Chapter

N = 42



Who are the Participants?

What did they achieve at IDDS?

What will they do next?

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How can we improve IDDS?

Top Responses (Coded)

Curriculum

1. Fully Utilize/Explain Design Book

Projects

1. Provide More Support for Continuity/Next Steps
2. Include More Time to Prototype/Iterate Designs

Community

1. Address Language Barrier
2. Clarify IDDS Role in Community
3. Improve Community Member Integration

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Since the summit…

Participant Follow-Up & Informing Next Steps for Link4

June 26th – Aug 4th

Household Survey | 184 Respondents

What did we find?

Top Priority Themes

Cooking
39.1%

Women ranked cooking #1 with 41.7% of responses.

Men ranked cooking #2 with 19% of responses.

Energy
7.6%

Women ranked energy #4 with 8% of responses.

Men ranked energy tied at #5 with 4.8% of responses.

Water
23.4%

Women ranked water #2 with 22.1% of responses.

Men ranked water #1 with 33.3% of responses.

Food
6.5%

Women ranked food #5 with 7.4% of responses.

Men ranked food tied in last with 0% of responses.

Firewood Alternative
11.4%

Women ranked alternative fuel #3 , 12.3% of responses.

Men ranked fuel tied at #5, with 4.8% of responses.

Hygiene & Bathrooms
4.9%

Women ranked hygiene /bathrooms #6 , 3.6% of responses.

Men ranked hygiene tied at #3, 14.3% of responses.

Organic Waste
2.7%

Women ranked organic waste tied at #8 with 1.8%.

Men ranked organic waste #4 with 9.5%.

Plastic Waste
3.3%

Women ranked plastic waste tied at #8 with 1.8%.

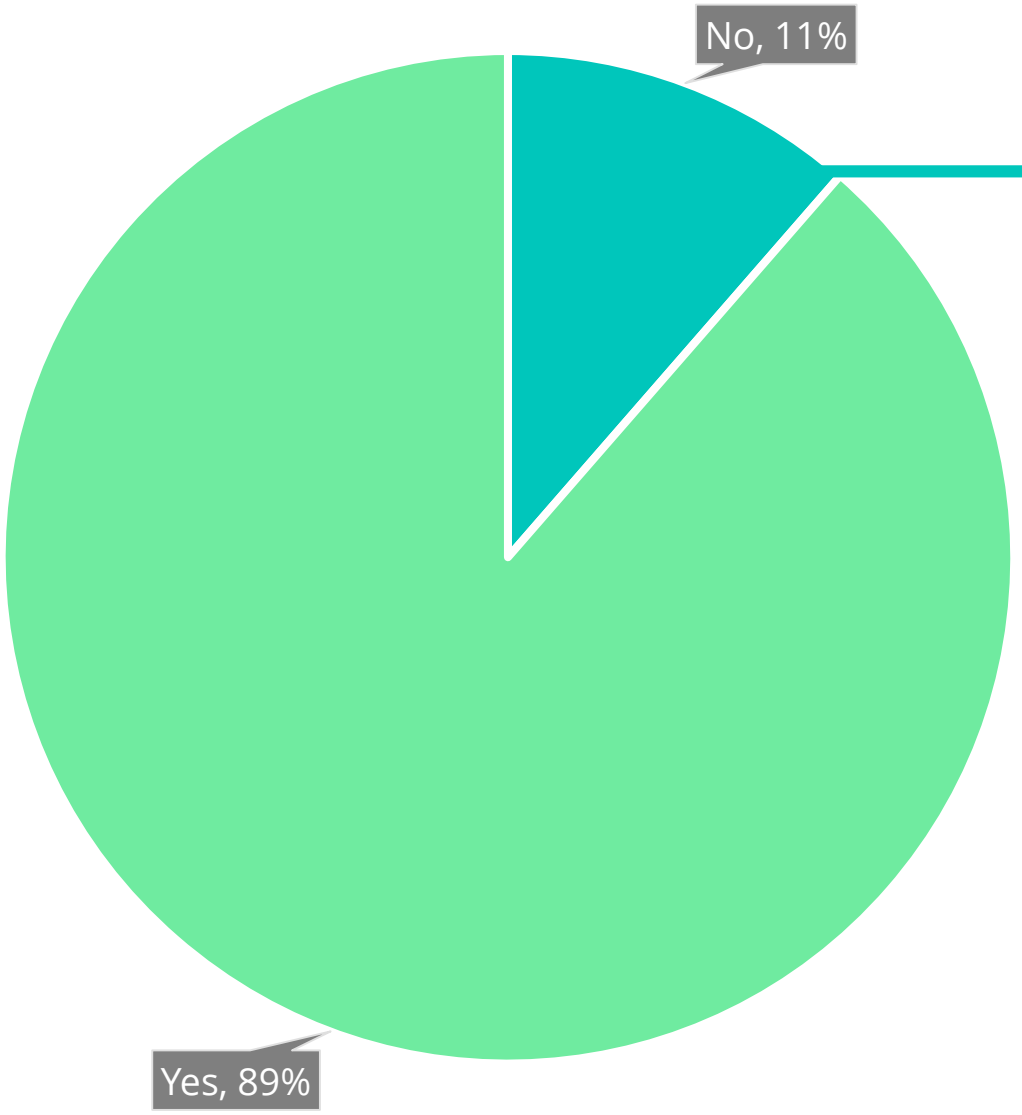
Men ranked plastic waste tied at #3 with 14.3%.

Temezcal
1.1%

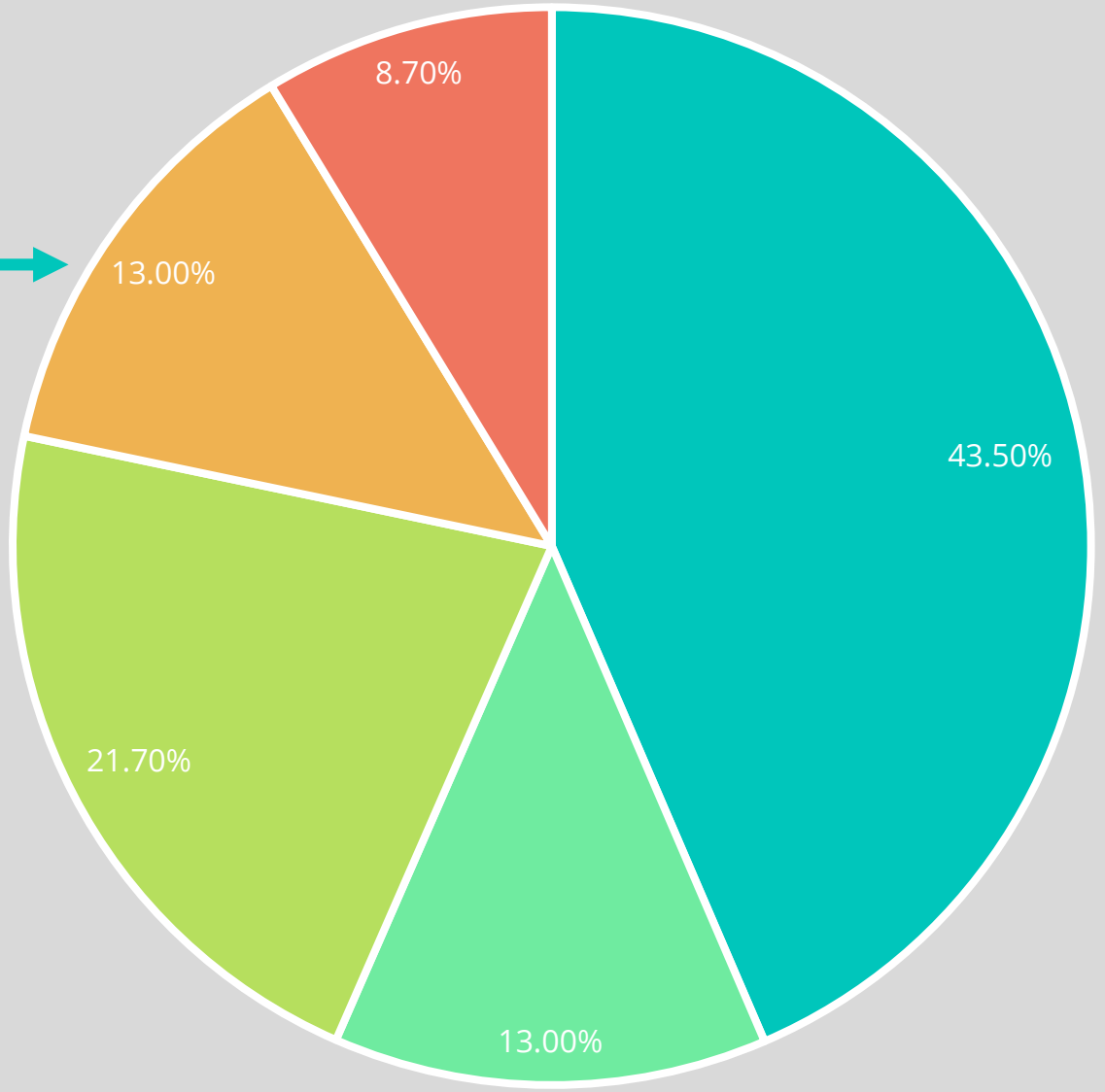
Women ranked temezcal last with 1.2% of responses.

Men ranked temezcal tied in last with 0% of responses.

Are you interested in becoming involved with the Hogares Sostenibles initiative?



If “No”, Why Not?



Desired Skills: *What type of things would you like to learn?*

Woodworking
16.0%
of respondents

Painting
20.2%
of respondents

Electronics
12.3%
of respondents

Ceramics
37.4%
of respondents

Gardening
33.1%
of respondents

Welding & Metalwork
4.3%
of respondents

Cooking
68.7%
of respondents

Including bakery goods such as bread & cake

163 Respondents
Individuals were able to select all that applied to their interests.

Spotted!

Local

Innovations

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Learn more at
www.idin.org

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