

UIX - URBAN INNOVATORS EXCHANGE

innovator survey

DATA DRIVEN DETROIT

agenda:

- **Research**
& Precedence
- **Demographic Survey**
& Data Summary
- **Network Survey**
& Future Network Analysis
- **Defining Impact**
So we can measure it



research & precedence

research & precedence

- Analyzing raw CMS data for 20 innovators
 - Presented on at UIX launch
- Reading through 60+ peer reviewed journal articles.
- Discussing analysis with local scholars

All to better understand best practices for surveying innovators and understanding impact.

research & precedence

Research & precedence led to the development of 2 surveys:

- Demographic Survey
- Network Survey

research & precedence

Why 2 Surveys?

- Social network analysis was a way to get at impact – network data was important.

research & precedence

Why 2 Surveys?

- It took too long to code the CMS data into something we could analyze for both demographics and networks.
 - ▣ The demographic data was highly varied and required significant cleaning.

research & precedence

Why 2 Surveys?

- Few affordable tools exist for constructing surveys to collect social network data.
 - We needed to collect network data through a face to face interview to save resources.
 - And we needed to collect demographics electronically to save time and improve accuracy.

research & precedence

Why 2 Surveys?

- The data from both surveys can and will later be linked and afford us a more powerful analysis.

research & precedence

Why 2 Surveys?

- Both surveys have inherent aspects built into them that will help us assess impact.



demographic survey & data summary

demographics & impact

Perception is key:

- How do innovators see themselves?
- Their projects?
- Detroit?

Understanding an innovator's perception and their plan's to scale will give us insight into impact.

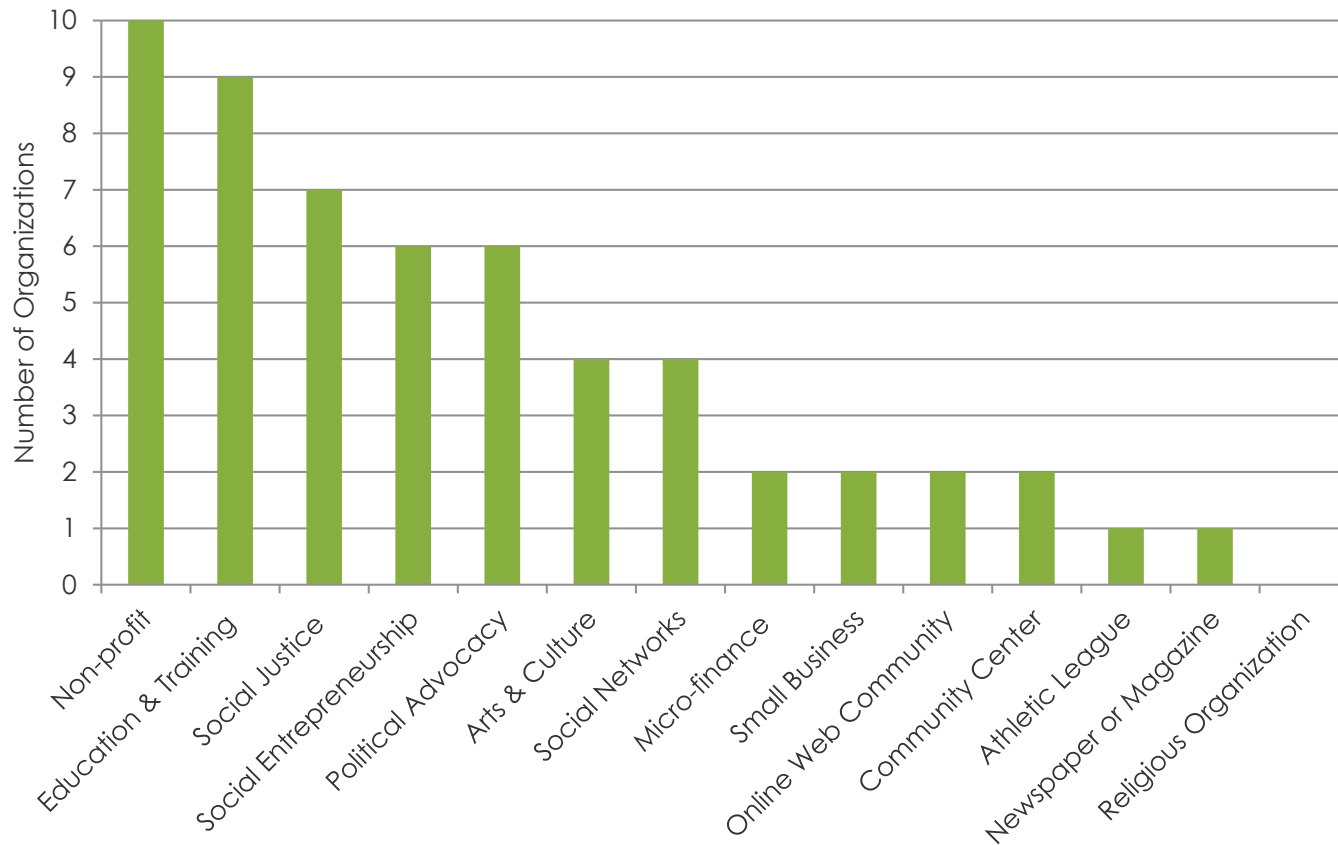
format & focus

- **57 Questions and 3 Sections**

- [1] Innovation – Projects, businesses, and organizations
- [2] Environment – Opinions on innovation and innovating in Detroit
- [3] Innovator – Demographics

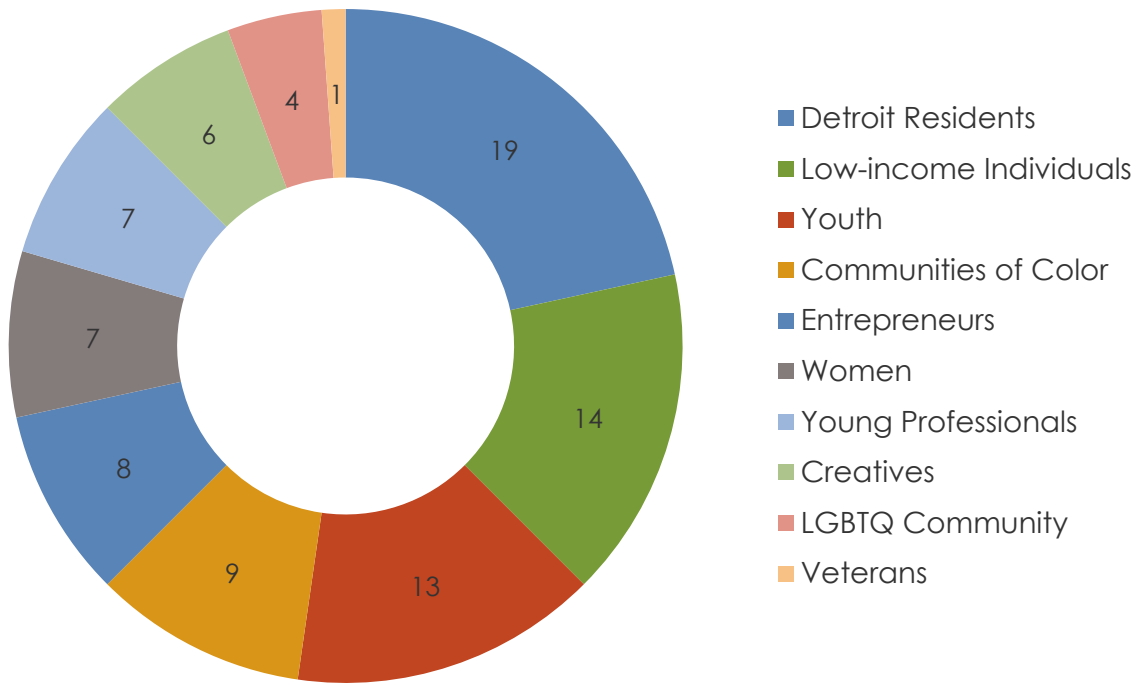
[1] innovation – type of project

- Which terms best describe your project, business or organization? Check ALL that apply.



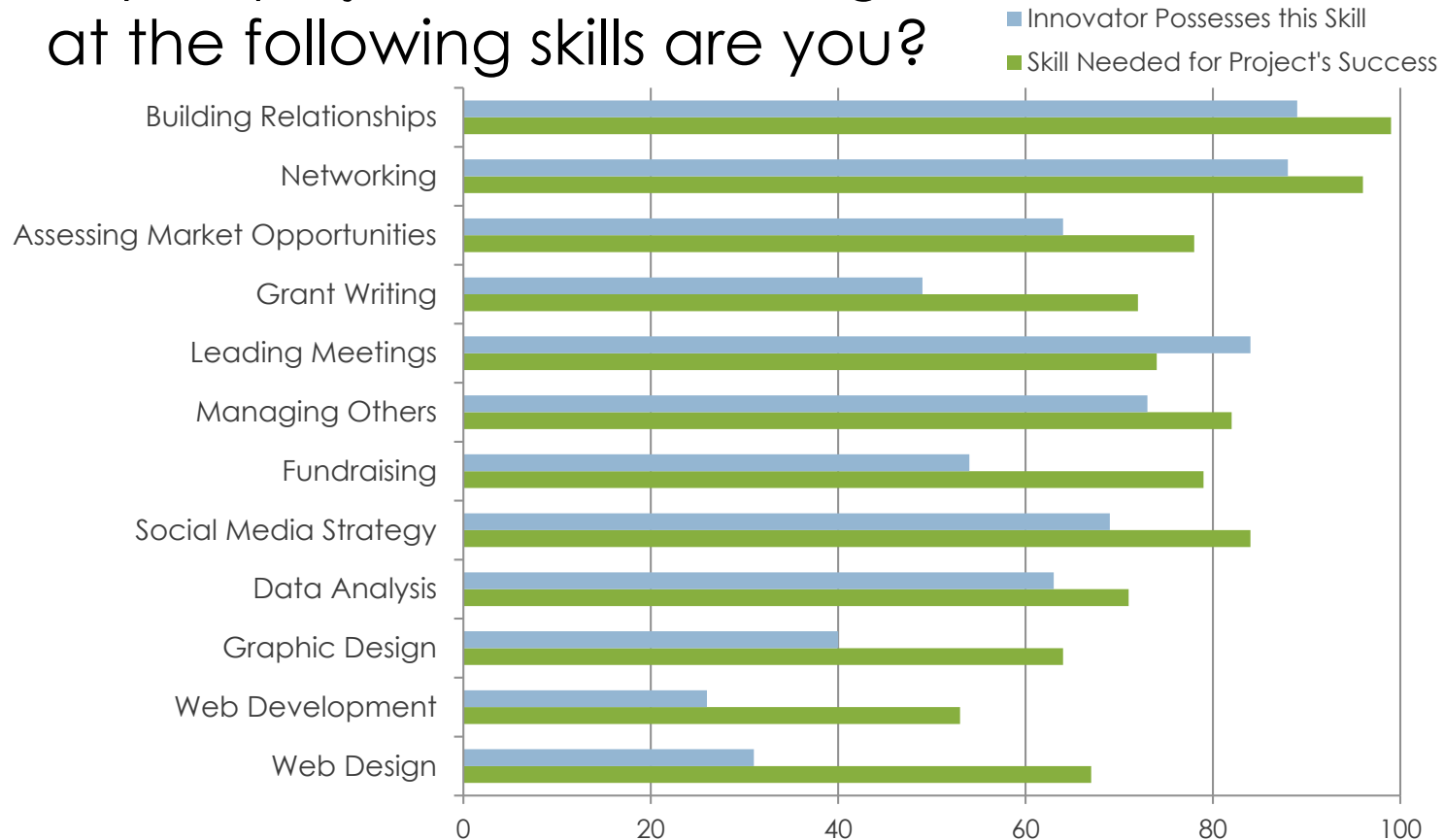
[1] innovation – targeted outreach

- Which groups do you specifically target in your project, business or organization's? Check ALL that apply.



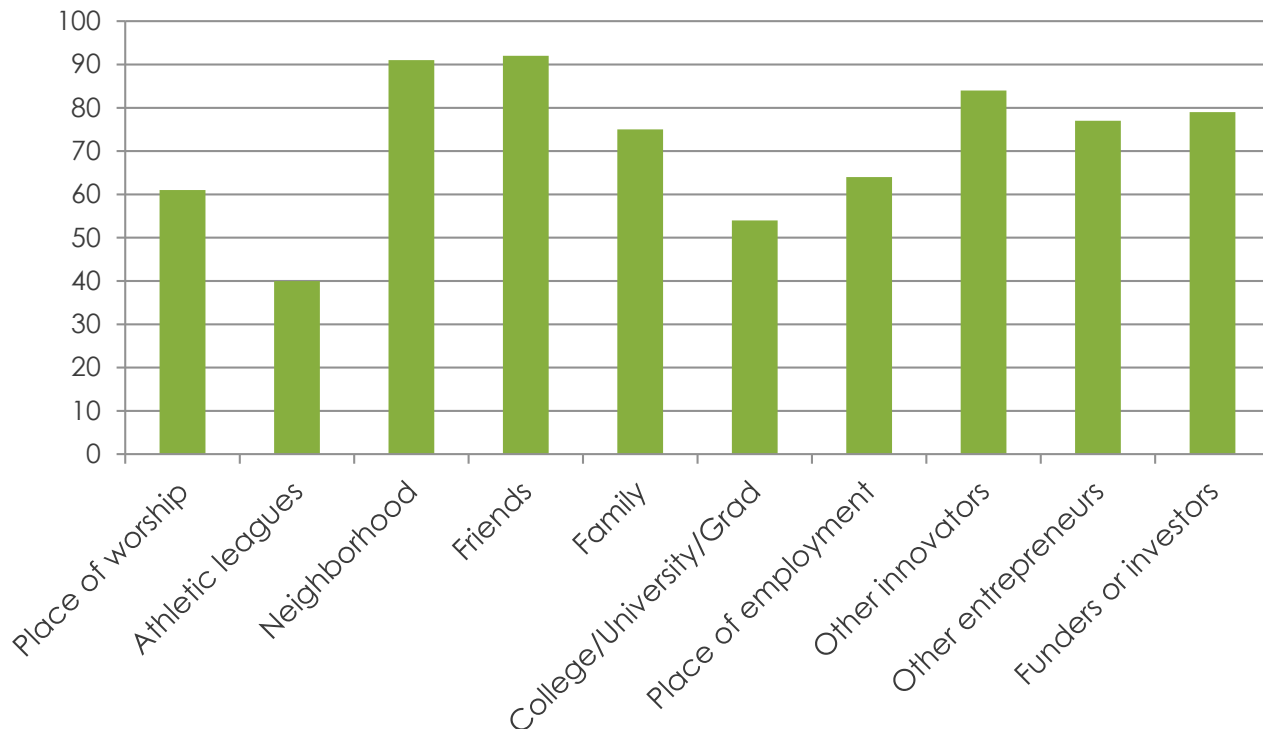
[1] innovation – skill sets

- How important are the following skill sets to the success of your project, business or organization? How adept at the following skills are you?



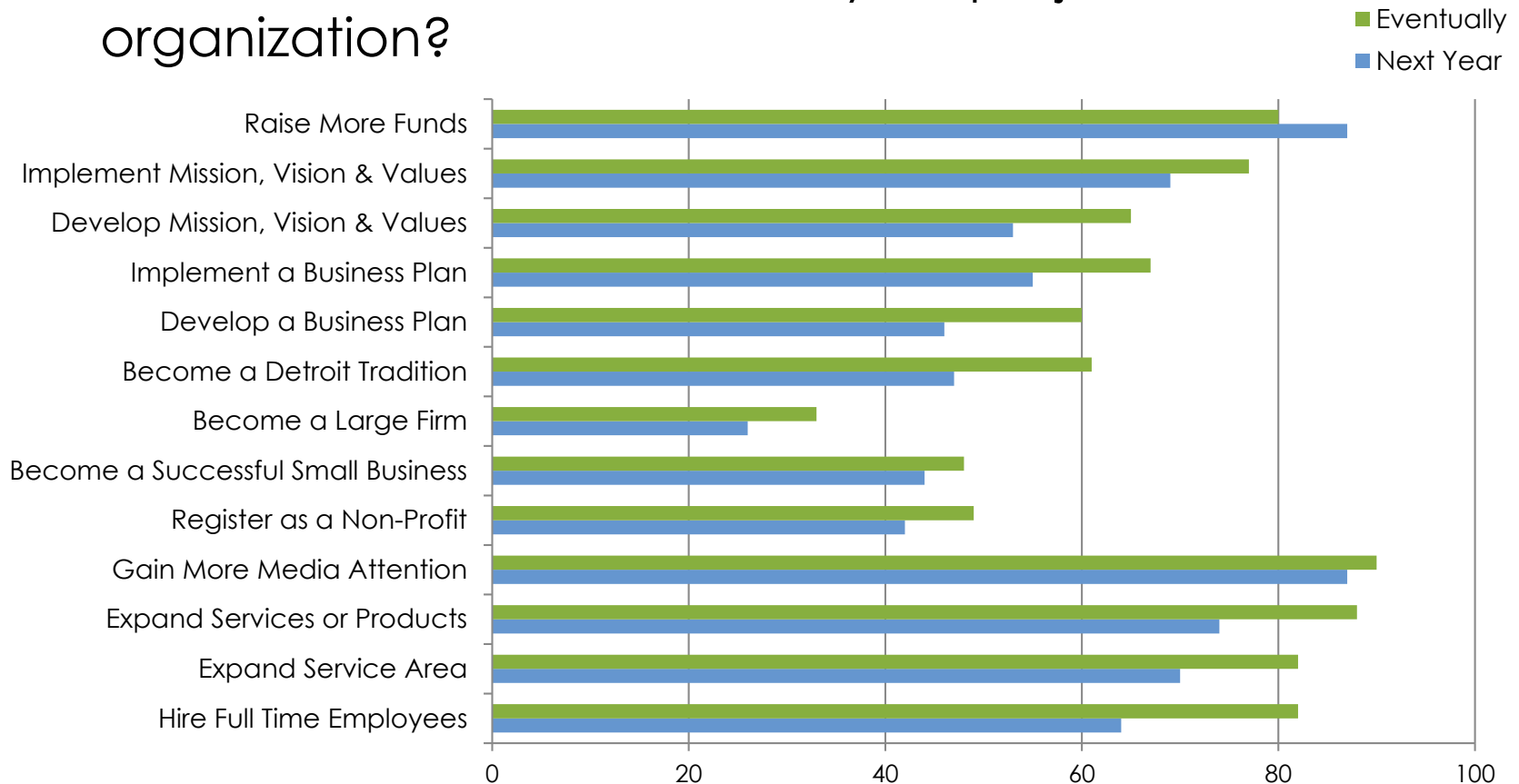
[1] innovation - network

- How important was your connection to the following institutions for the success of your project, business or organization?



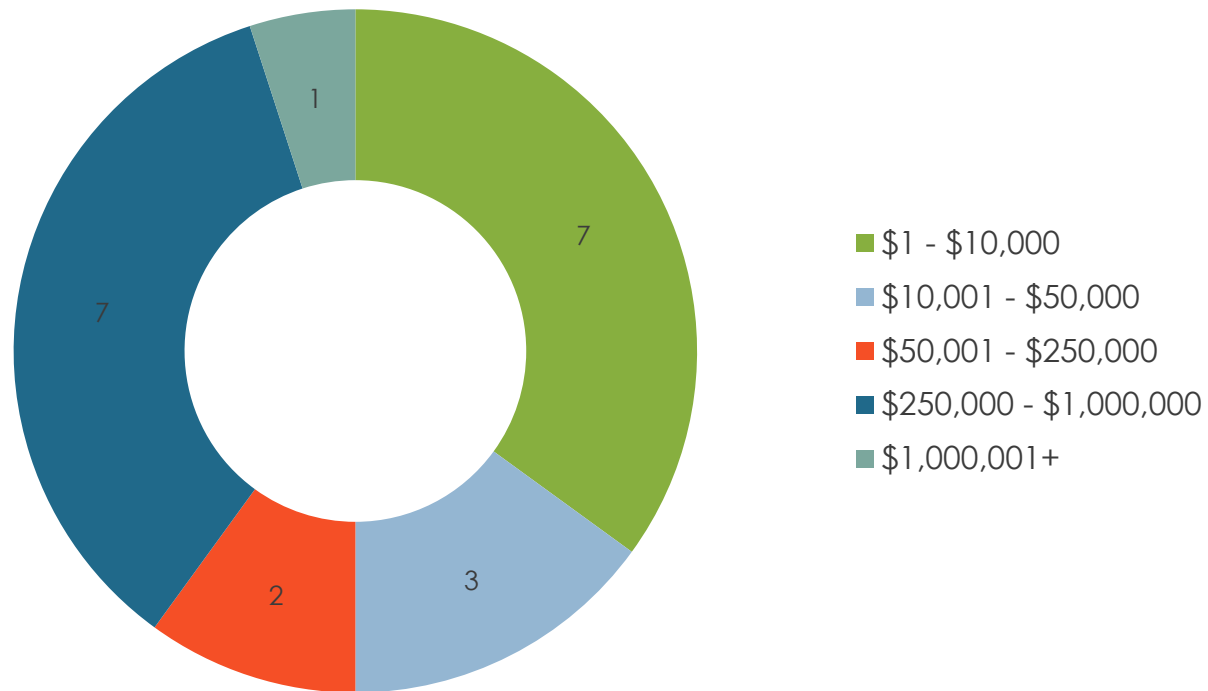
[1] innovation – short & long term future planning

- How likely is it that you will do the following IN THE NEXT YEAR or AT SOME POINT with your project, business or organization?



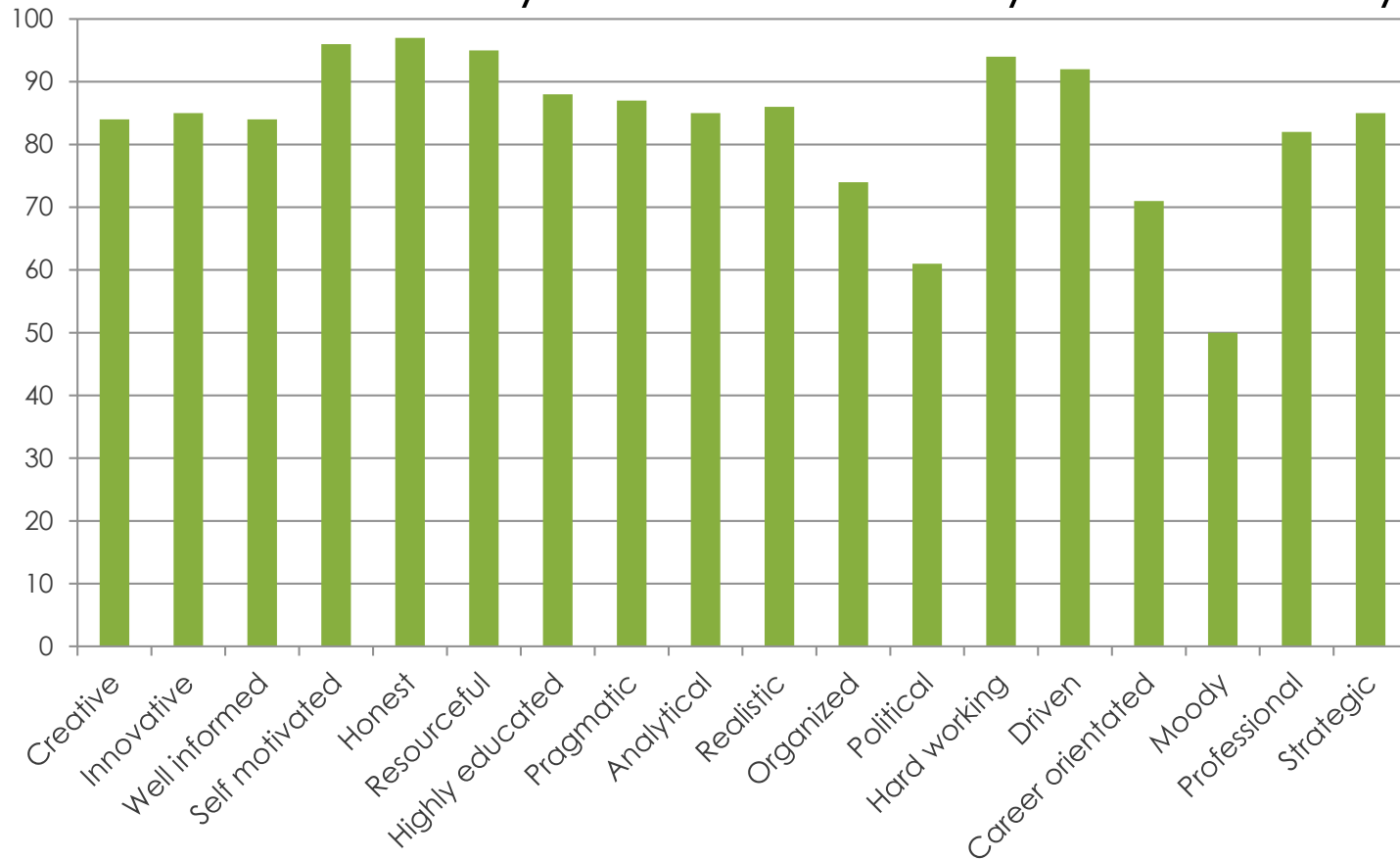
[1] innovation - funding

- What is the estimated amount of funds your project or organization has received to date?



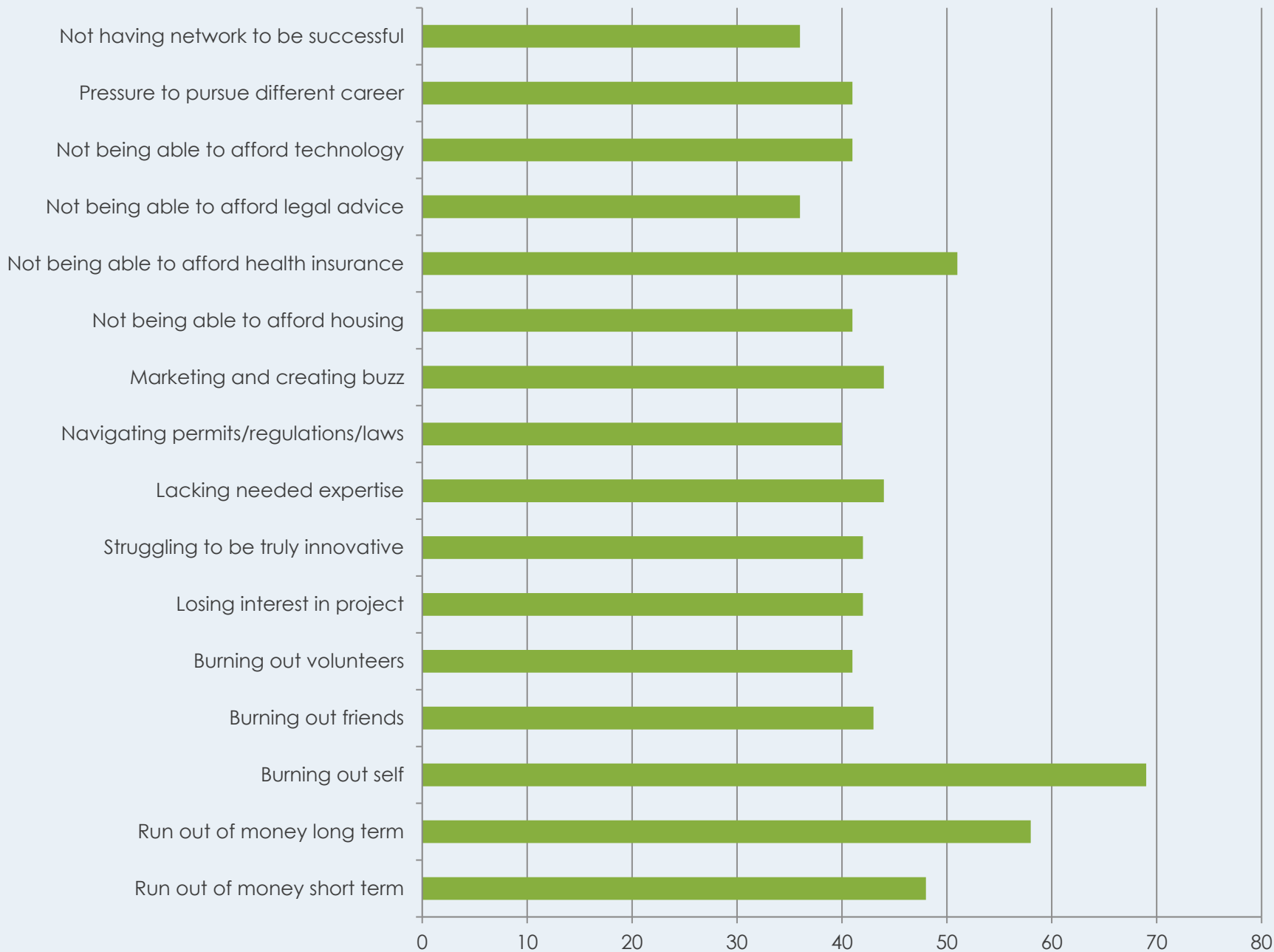
[2] environment - characteristics

- There are many opinions on what characterizes an innovator. How do you characterize yourself? Are you...



[2] innovator – common concerns

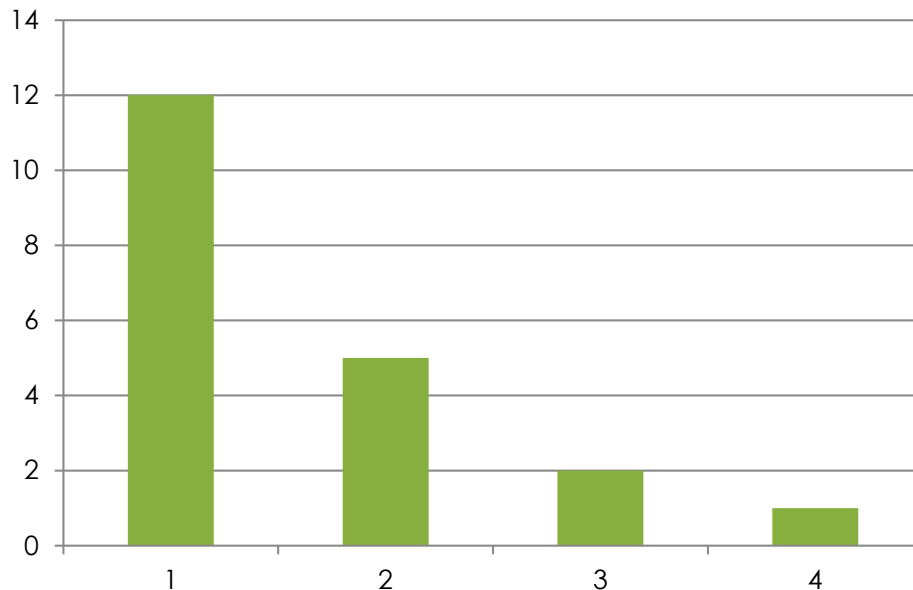
- There are many common issues that challenge innovators. How concerned are you about the following affecting your project, business or organization?



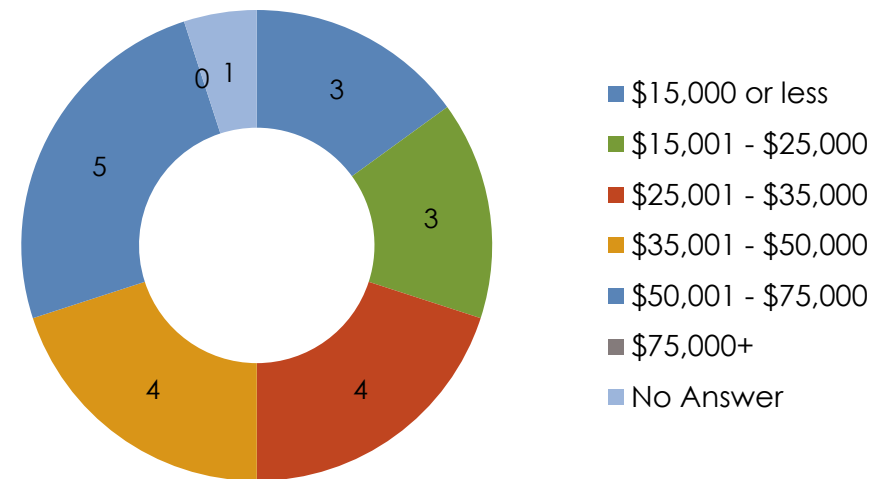
[3] innovator - employment

- How many paid jobs do you currently have? How much did you make last year total on all your paid employment?

Number of Paid Jobs

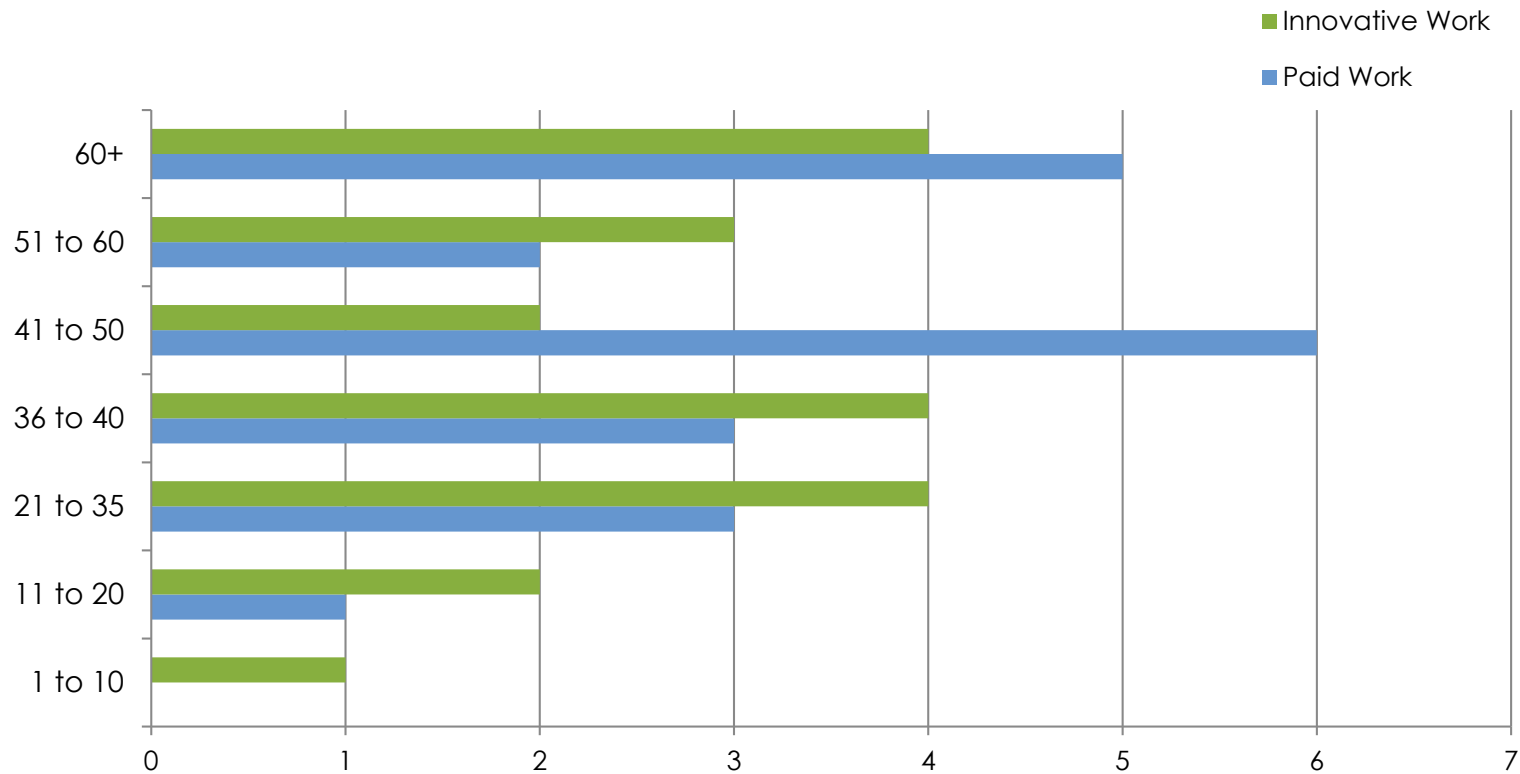


Innovator's Income Last Year



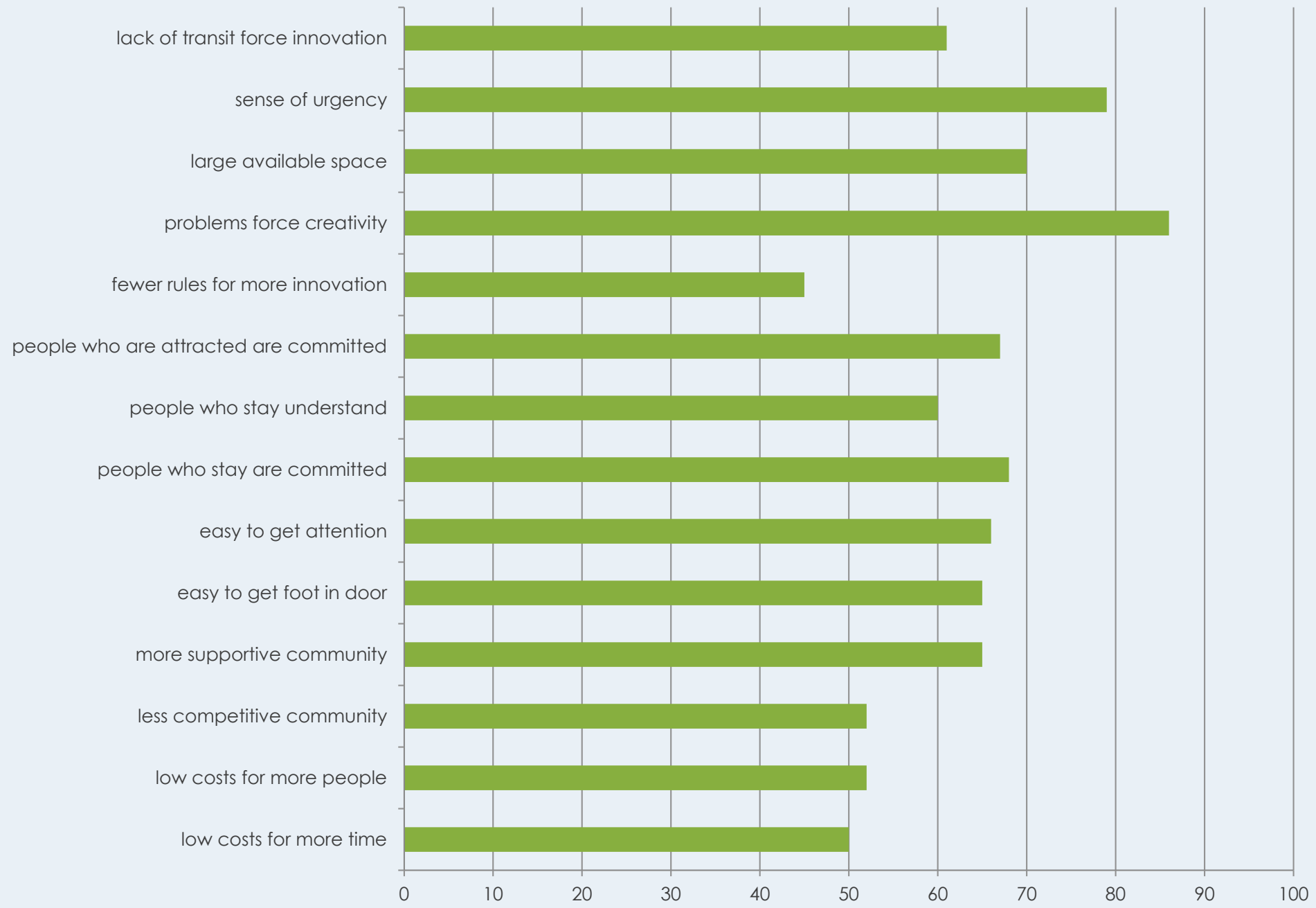
[3] innovator - employment

- How many hours per week on average do you work for your project, business or organization? How many total paid hours do you work in an average week?



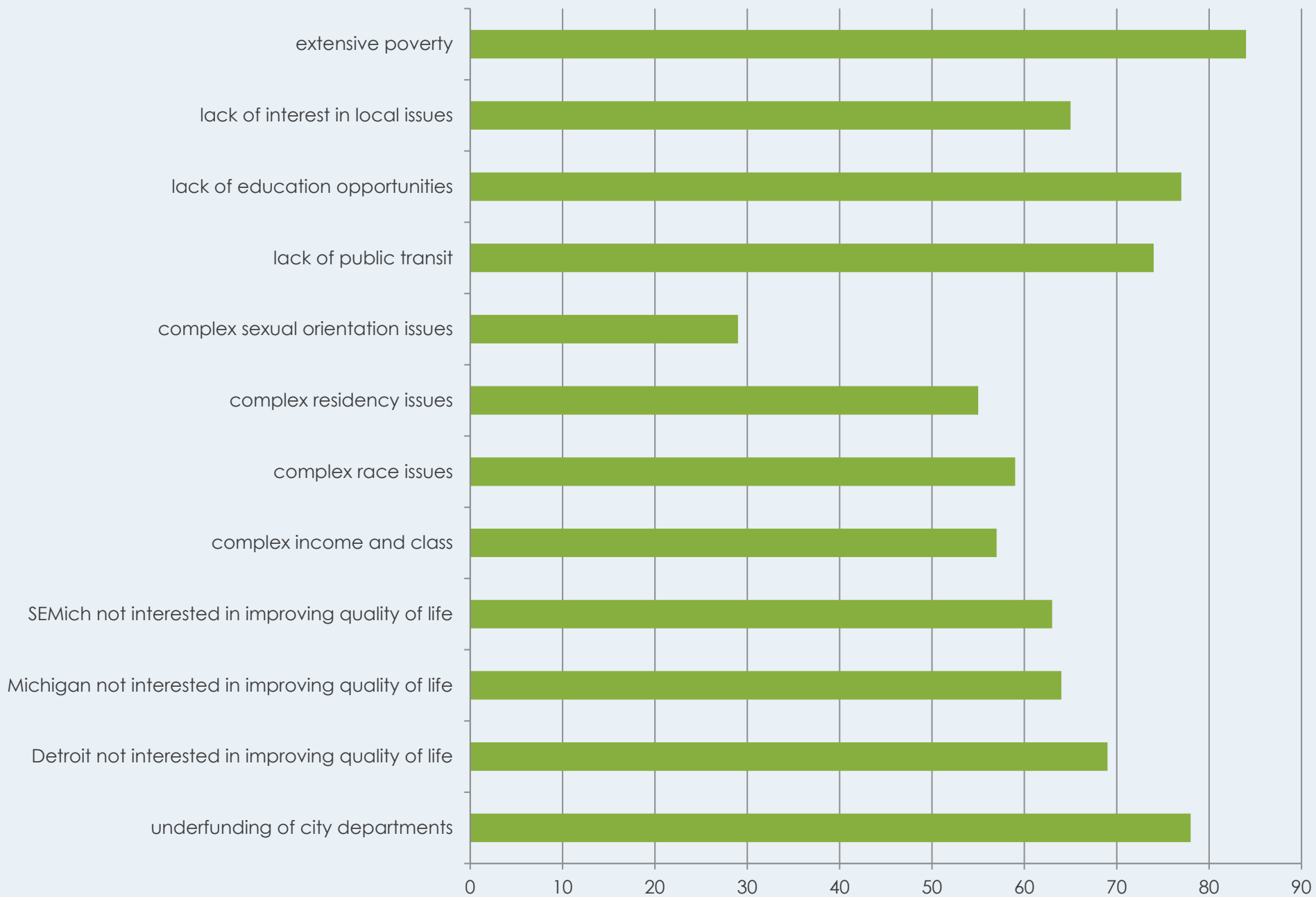
[2] innovator – detroit is conducive

- There are many opinions why people feel Detroit creates an environment that is conducive to innovative work. How accurately do these opinions describe your own feelings about the environment in Detroit?



[2] innovator – detroit is a barrier

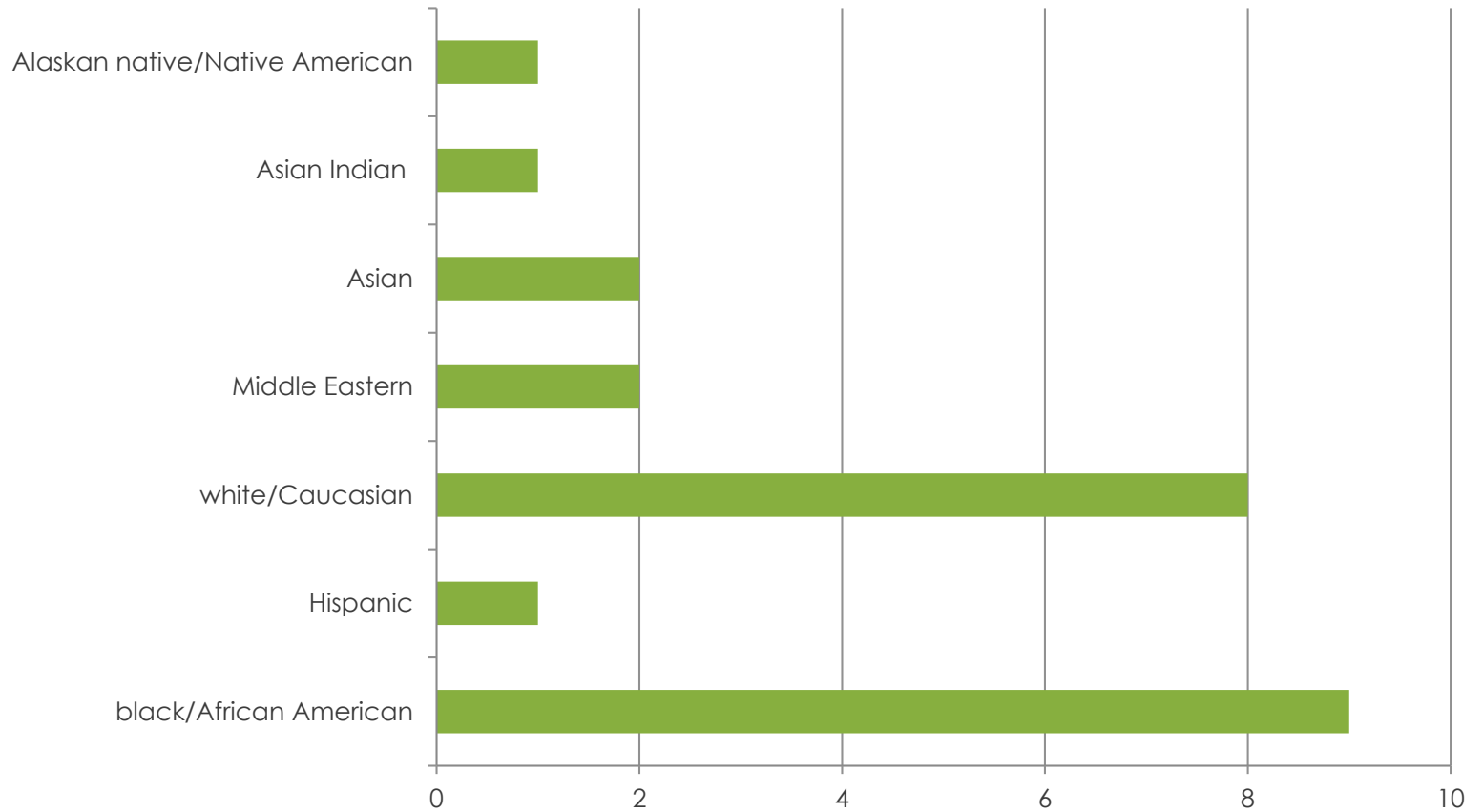
- There are many opinions as to why Detroit can also be a barrier to innovation. How accurately do these opinions describe your own feelings about the environment in Detroit.



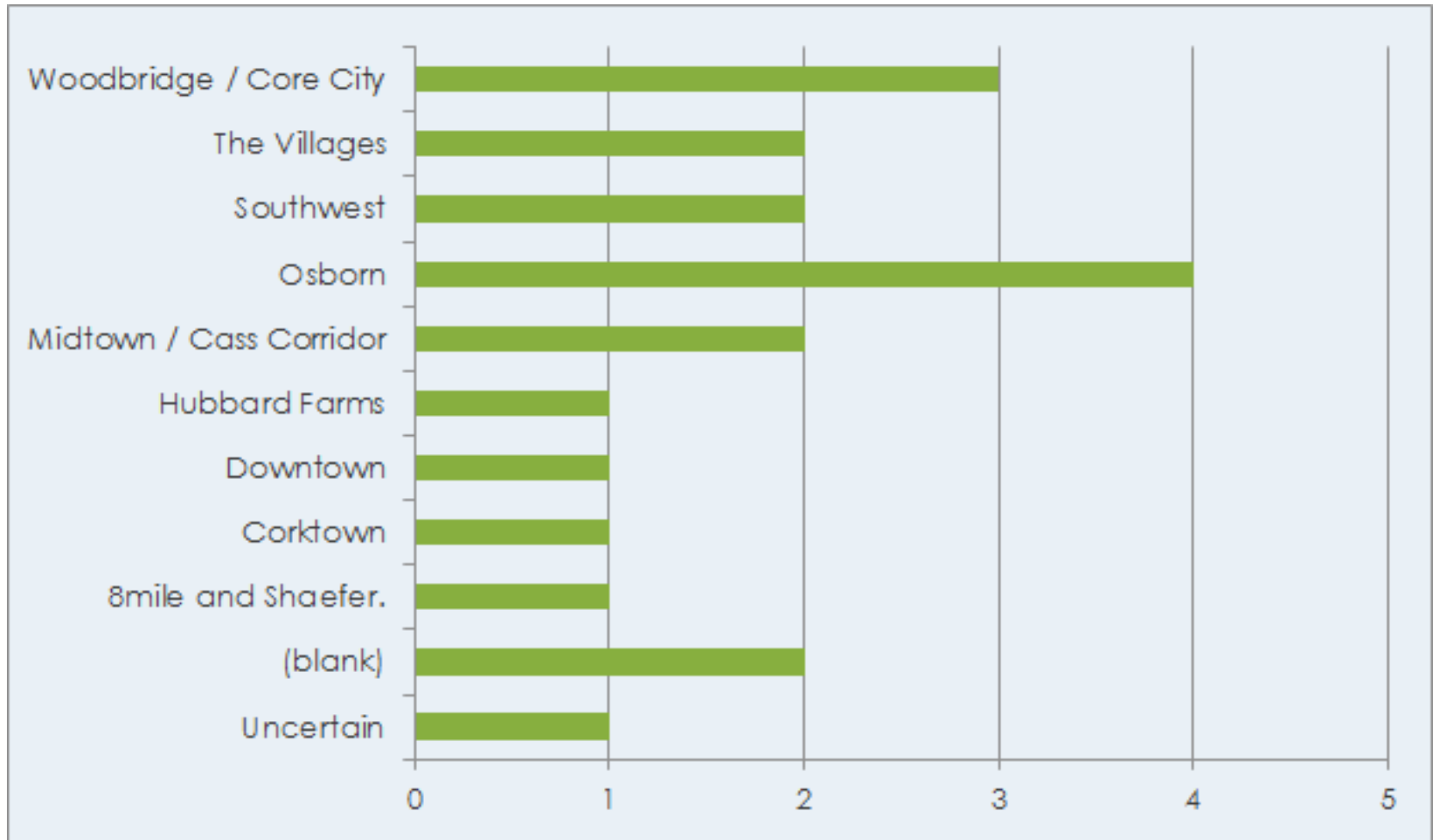
diversity matrix – quick check

- Model D has committed to identifying a diverse group of innovators. They are focused on the following:
 - ▣ Race/ethnicity
 - ▣ Geography/neighborhood
 - ▣ Age
 - ▣ Sex
 - ▣ Sexual Orientation

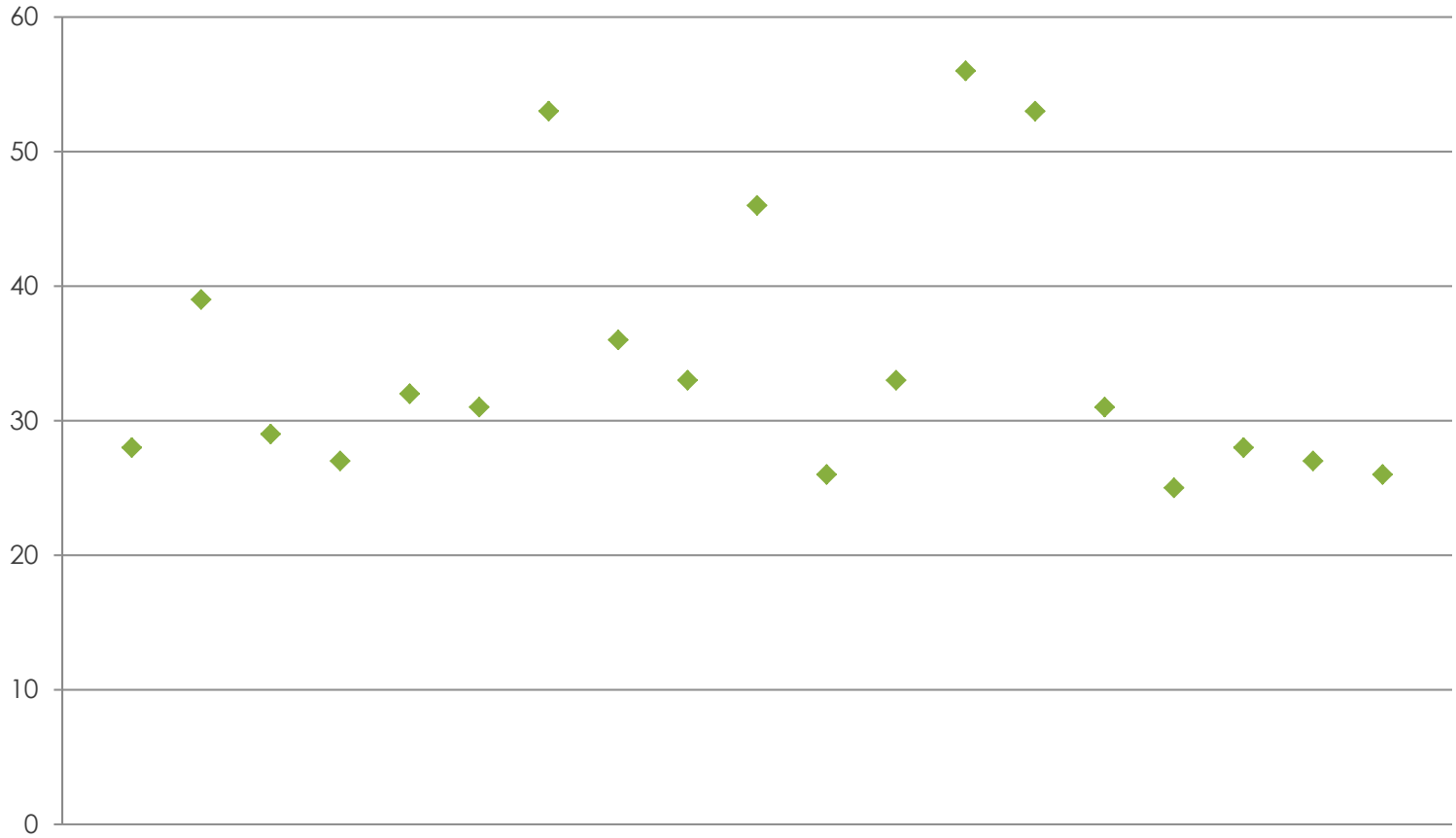
race / ethnicity



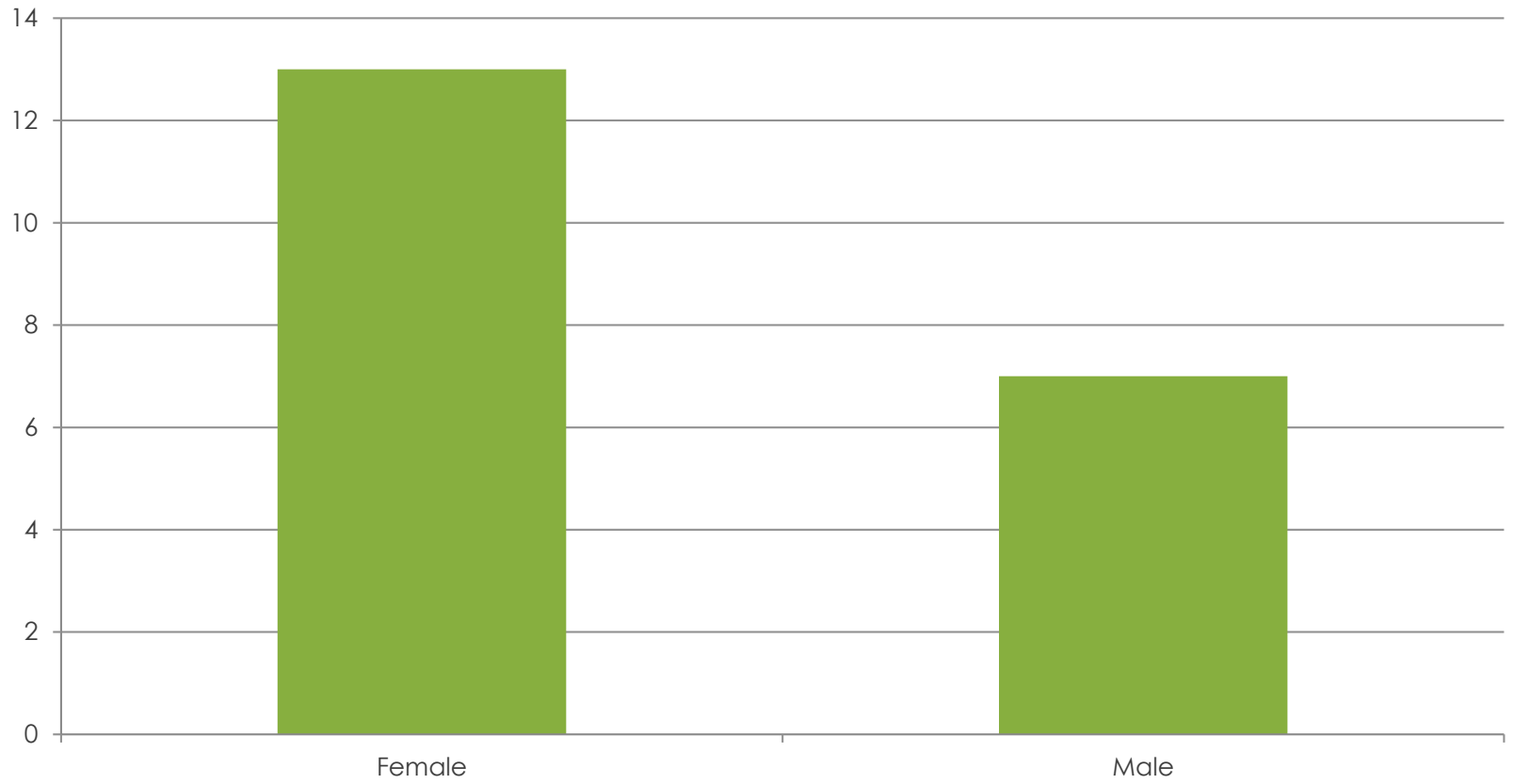
geography / neighborhood



age



sex



orientation





network survey & future network analysis

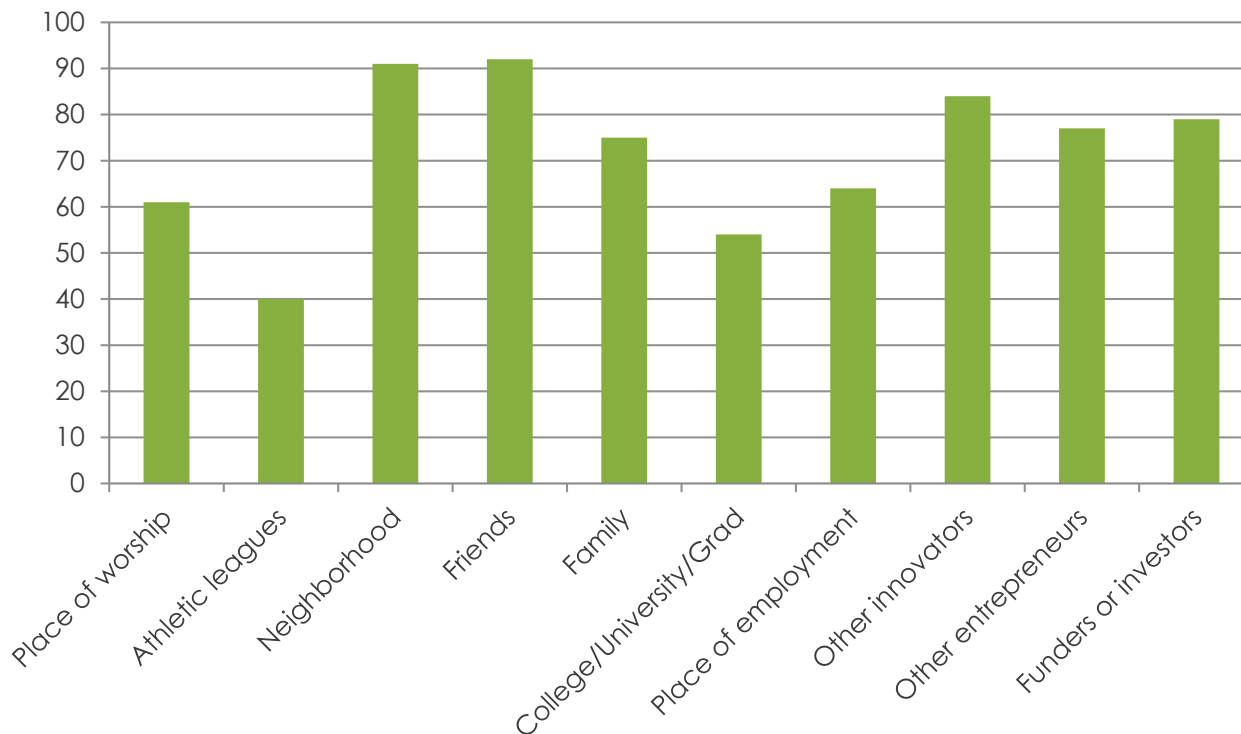
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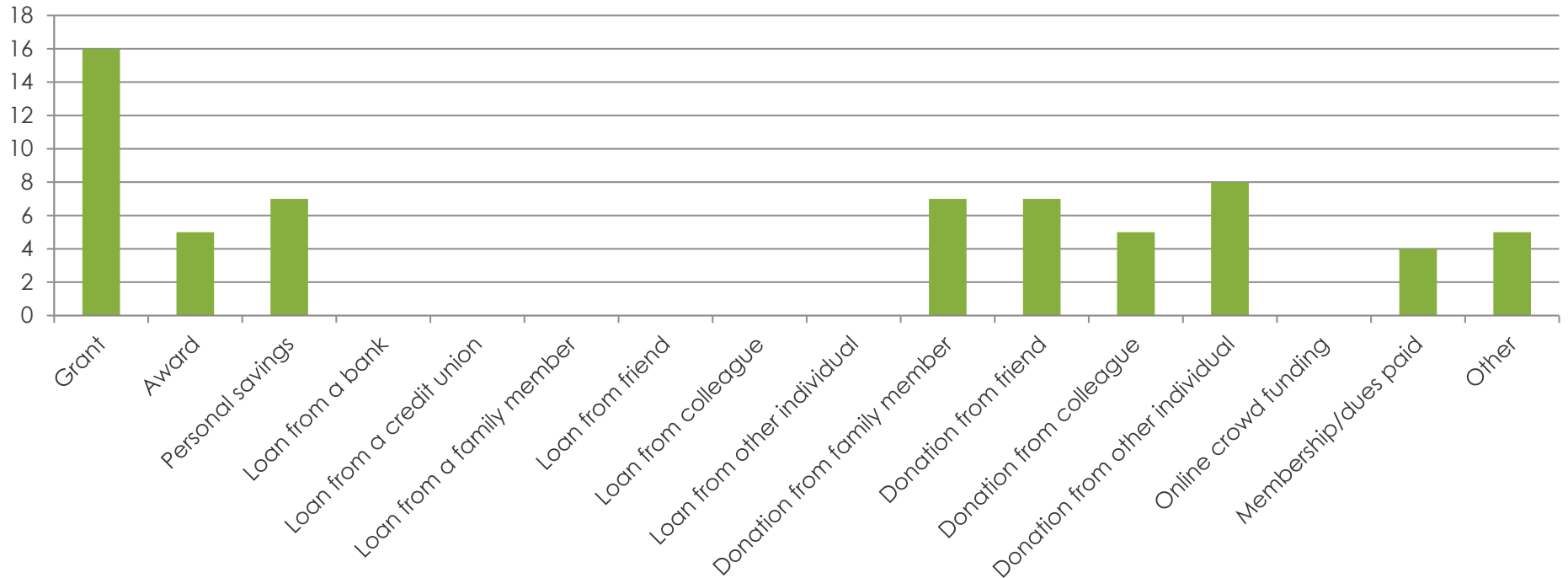
[3] innovator - network

- How important was your connection to the following institutions for the success of your project business or organization?



[3] innovator - funding

- Which funding types have you used for your project, business or organization? (Check all that apply)



network & impact

Relationships are key:

- How do networks contribute to successful innovation? Finding funding?
- What types of connections are most important?
- What roles do financial and non-financial support networks play?

Understanding how relationships affect innovation will give us insight into impact.

social network theory

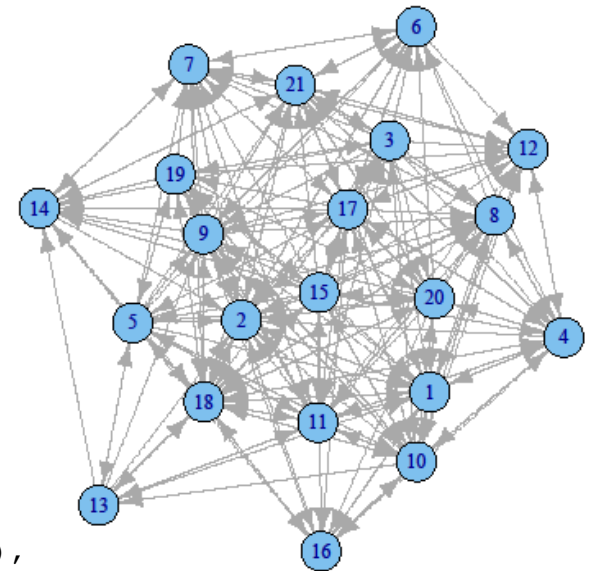
- Social networks consist of actors (nodes) and the ties between them (edges)
- In-degree and out-degree – how many ties are directed to a node and directed out from a node?
- Density, reciprocity, and transitivity – calculate the average strength of ties across all possible ties, network stability using reciprocal/symmetric ties, and equality, hierarchy, exclusion within networks.

network analysis with r

- Research center at Stanford has developed code to do network analysis in R.

```
krack_full <- graph.data.frame(krack_full_nonzero_edges)
summary(krack_full)
IGRAPH DN-- 21 232 --
attr: name (v/c), advice_tie (e/n), friendship_tie (e/n),
      reports_to_tie (e/n)

for (i in V(krack_full)) {
  for (j in names(attributes)) {
    krack_full <- set.vertex.attribute(krack_full, j, index=i,
    attributes[i+1,j])
  }
}
summary(krack_full)
IGRAPH DN-- 21 232 --
attr: name (v/c), AGE (v/n), TENURE (v/n), LEVEL (v/n), DEPT (v/n),
      advice_tie (e/n), friendship_tie (e/n), reports_to_tie (e/n)
```



power of networks

What do networks tell us?

- Innovators (or nodes) have characteristics! But so do their relationships to other innovators and organizations.
- We can analyze the ties between organizations based on each organizations' annual estimated funding, geographic scope, targeted outreach, year started, number of employees, etc.

demographics, networks & impact

Questions we will be able to ask the data when we combine demographics and network data:

- Does a wider geographic scope correlate to more sources of financial income?
- Do projects with a single targeted outreach (eg LGBTQ community) correlate to fewer, but stronger ties?

timeline

- Network data will come from the CMS data gathered by Tunde in face to face interviews.
 - ▣ It will have to be further coded in such a way to work with the open source software available to do network analysis.
 - ▣ Coding and analysis have currently been shelved until next year, because of time constraints.



defining impact
so we can measure it

defining impact

- How do we define impact when social innovation tends to be so informal?
 - ▣ Perception is important to innovation, but perception will only get you so far.

How do we scale? How do we sustain? How do we support?

sustaining impact

- My goal is to get a strong grasp of how innovators perceive themselves and their projects and how their support networks contribute to their success.
- With this information, I want to be able to offer data-driven recommendations to the funding community on how to strategically support innovation in the interest of sustaining and scaling it.

further research

How could we get closer to defining impact:

- Placing UIX data in context to other economic and business data
- Develop network data for area non-profits based on their 990's and annual reports.
- Trending over time