We have so many options for what the Digital Technology Committee can recommend for the Residential Internet Access project that I worry sometimes we'll be paralyzed by choice. A further challenge is trying to navigate this space without a firm understanding of what the different costs may be. I feel like I have a rough, back-of-the-envelope notion of what some of our options may cost, but certainly not for everything. Overall, I'm struggling with how serious I should entertain any of the ideas that pop into my head while I'm imagining possibilities.

Trying to step back and work from what we know: The budget language calls for a "pilot project" to expand Internet access to low-income families and neighborhoods, with a particular focus on infrastructure. Reading between the lines, the Common Council wants project(s) that align with or are done in conjunction with the Madison School District, which just completed a Technology Plan.

The City's going to borrow $150,000 to pay for this project. $150K is a lot of money, but at the same time it's not much money at all.

We face two questions:
1. What project should we recommend?
2. Where should whatever we recommend be put?

I'm going to work under the basic assumption that we don't have to answer those two questions perfectly. "Pretty Good" answers are acceptable, and what we really want to avoid are bad answers. If at the end we have a couple of really great ideas, we don't have to stress over being sure we've got the absolute best - any will do.

How do we answer these questions? Let's start with the "what project" - here are a few things that I'll be thinking about with this project:
- Should we be looking at a project that maximizes the number of people it serves, or should we focus on providing more comprehensive service to perhaps fewer people?
- What's the lifetime of the infrastructure we may fund? Additional Fiber Optic runs will still be useful 10 years from now; network electronics might last 5 years; laptops, tables, MiFi devices will be lucky if they last 3 years.
- How "pilot"-ish should this project be? Should we consider how scale-up should work when we consider our ideas?
- Are we interested in doing any sort of "technology demonstration" or do we stick with what we know works?
- Do we worry about how to evaluate this project, or do we just trust that increased access leads to numerous beneficial outcomes? If we do try to evaluate it, how and over what timeframe? Citizen Surveys after 1 year? Academic success after 1 year? 5 years? Other changes in neighborhood indicators?
- How long are we willing to wait until citizens can start using our project? Pulling fiber can take a while, buying laptops can be quick.

The other question is the "Where":
- Is the school district staging their programs across different schools, and should we try to focus on schools where the district is moving first?
- What raw data might we want to use to decide where to put the project? Existing levels of service? (Maybe from Census data, or from the State Cartographer's Broadband map - http://broadbandmap.sco.wisc.edu/) School demographics for income levels? Other lagging indicators like crime or public health?
- What other institutions might be involved? Libraries? Neighborhood Centers?
- This is sort of a hybrid of the "What" and "Where" question, but do we focus on projects that have additional components or ways to increase its efficacy? For example, do we only engage people who are or will be working with Neighborhood Resource Teams or programs through area nonprofits like the Boys and Girls Club?

Let me try to look at a specific idea with my framework. I'm not going to use every question, but I like the idea:
https://www.newschallenge.org/challenge/2014/submissions/check-out-the-internet-libraries-lending-internet-access

"The goal of this project is to expand the reach and benefits of free access to the Internet provided by The New York Public Library (NYPL) to underserved youth and communities by allowing them to borrow portable MiFi Hotspot devices from their local libraries for a sustained period of time. This service would substantially expand the Internet access that is currently available only when libraries are physically open; with this effort, patrons would bring the Internet into their homes, 24 hours a day."

We could adapt this to Madison by buying MiFi devices for the library, and perhaps by using some or most of our funds to subsidize cell tower leases or to buy additional wireless network hardware to work out a deal with a carrier to provide low-cost access for those MiFi devices.

This project doesn't serve a fixed population, with the tradeoff that it doesn't provide permanent access to the people it serves. It's not great access - WiFi in apartment buildings would have better bandwidth, but at the same time it's easy to start with and to move around. Any backend hardware we acquire would likely live a while. The MiFi devices might need replacement sooner, but they're cheaper. This is not a technology demonstration project, MiFi is known to work, and there's an obvious scale-up plan to go to a reasonable number of potential users. It's unclear if we can work out an operating funding plan to make it happen.

It somewhat sidesteps the question of "where" - access comes from the library, where in the city the devices are used is less important. We could target specific libraries to carry them, which would be a proxy for where, or we could go through the school district in place of the library. (It's not entirely clear how the library could limit this checkout to lower-income or otherwise disadvantaged families of students)