America is in the midst of multiple crises, the magnitude of which is portrayed by the manifestation of our economic situation. We are in urgent need of durable, robust and sustainable communities. There is a dire housing crisis, an apocalyptic environmental crisis and a dissolving sense of connectivity and community. America is at a crossroads. Affordable green housing is sustainable, addressing environment, economy and equity. Strong urban residential sectors support well-funded education sectors by increasing available property taxes, creates an intrinsic sense of community, provides a concentrated work force, treads lightly on the Earth and mends the style community we are in such need for.

Climate change has been talked about over and over to the point that it almost becomes fatiguing. Even in our class, even among our most zealous colleagues, climate change is introduced in the following manner: “I know we’ve all heard what will happen if global warming continues…” or “I know we’ve heard this before…” The topic is brought up with more than a hint of bashfulness. Let’s be clear and honest with each other, what Al Gore showed us with “An Inconvenient Truth” is sugar-coated, the Intergovernmental Panel on Climate Change Reports are extremely conservative. They are based on linear models that are incapable of properly accounting for positive feedbacks. For example the IPCC reports estimated that the Arctic ice pack would completely disappear in the summer by the end of the century. It turns out the Arctic ice pack will completely disappear in the summer within the next couple years. The IPCC models didn’t properly account for the Albedo effect, one of the most simple and well
known positive feedbacks. The IPCC is also plagued by a stringent and tedious scientific process which makes it difficult to keep up with the latest science—papers must be submitted years before reports are made. The predictions of emissions increase were underestimated by the IPCC, numbers that we’re supposed to be the “worst-case” scenario. The truth is such. The IPCC underestimated emissions, feedbacks and severity related to climate change. We’ve warmed the Earth 0.8 degrees Celsius. If we stopped all emissions today the Earth would still warm 0.4 degrees Celsius. Jim Hansen says we definitely cannot go over 2 degrees Celsius of total warming. We cannot warm the Earth 1.3 degrees Celsius more. If we don’t cut emissions to this level, if we warm the Earth 3 degrees Celsius we fill “face billions of deaths,” according to Dan Miller. Since suburban life (auto transit, extravagant houses, large lots and consumer comatose) is so inextricably tied to emissions, our only sustainable option is to encourage energy efficient housing in or near an urban center. The affordable housing techniques of yesteryear, the “drive until we find cheap housing” mentality is not an option.

As seen on television, the United States is in the midst of an absolute housing disaster. Paying off mortgages or paying for rent consumes 30 percent of our income—we are burdened by the structures that are supposed to support and nurture us. A similar percentage is paid towards transportation—the car, an American sign of freedom, enslaves us. In more than half of the housing markets in the United States housing prices are rising faster than income creating great inequity. Affordable housing is the backbone of a community and by failing the masses, the lower-middle class and poor, we are dissolving our nation’s vitality.

The marriage of green housing and affordable housing births sustainable housing. This marriage may be reciprocally essential for the success of both movements. A solely green housing movement will alienate lower and middle class citizens, potentially derailing the political viability of any green movement. A solely affordable housing movement will produce swaths of suburban development with
no regard or foresight of environmental issues, ultimately these developments will contribute to the collapse of civilization.

For my project I wanted to focus on organizations in Ithaca so I could work with actual people in real world settings. Therefore, I had to research Ithaca’s housing situation extensively before really delving into the issues. Ithaca is upstate’s crown jewel... it is the exception to all of the rules. While Rochester, Syracuse and Buffalo are dying as their industrial centers are exported, as the remainder of the jobs are moved to suburbia and as property value drops Ithaca has a growing population, growing employment, rising property values and two academic institutions that provide vision and stability. As a result housing prices in the city are 40 to 60 percent higher than they are in the suburbs. The two academic institutions insure high concentration of students in the area so that Ithaca has a unique housing situation which puts student tenants versus non-student tenants. Comparatively, students are willing to pay higher prices for rental properties and care less about the long-term quality and care of a property. Therefore, renters may have a preference towards students as opposed to non-students even though this may seem counter intuitive. One incentive for favoring students is that renters can get away with passing down energy costs to tenants as opposed to increasing energy efficiency. So the housing market in Ithaca is already very competitive, inflating the market prices of housing and creating inequality.

Unfortunately, development and/or redevelopment within the city is nearly maxed out—at least under current conditions. There are many barriers to further urban development, some within the realm of political control and some within the realm of institutional control. The rising prices in the city limits are making it more difficult to develop or redevelop properties within city limits. If you’re a non-profit organization working to rehabilitate or build new houses, you are already taking a loss on the final selling price of the house—taking additional losses usually isn’t a sustainable business model. If you’re a
government the same applies, it would be hard to explain to tax payers why you picked a site for development that was twice as expensive in the city if you could have picked a site in the suburbs. Since the city has done such a great job at revitalizing it is near its capacity for new and rehabilitated housing developments. The available land that could be used for development is tied up in a multitude of places. The suburbs and insufficient alternative transportation within Tompkins County creates a need for parking lots and parking garages which tie up a significant portion of potentially developable land. Cornell University also owns acres upon acres of land that is used for agricultural research, among other things, that is off limits for development. Outdated infrastructure is also a barrier to development. For example septic systems require at least an acre of property. Thus leaving infrastructure as is is analogous to promoting large lot unsustainable development, municipal water and sewer systems are required to allow smaller lot sustainable development.

Two years ago Tompkins County Planning Department hired a firm to analyze the housing situation in the county. The conclusion was that in the next 10 years Ithaca would need 4,000 new housing units. 2,500 of these housing units needed to be affordable housing units. The goal is currently 250 houses per year to prevent inequality and community degradation. Some would call for government action at the federal level, call for subsidized housing projects. Unfortunately, government housing projects require heavy subsidies and great scale to become economical. Subsidies amount to nearly 100,000 dollars per unit and Ithaca has no room for large scale community projects. The government is ill equipped to directly deal with housing matters, it can only improve upon policies to cater towards sustainable developers.

The primary organization that has been consistently and properly providing affordable and green housing is Ithaca Neighborhood Housing Services, a non-profit based in Ithaca. Their mission statement is “to improve Ithaca’s neighborhoods and create affordable housing.” Ithaca Neighborhood
Housing Services provides a multitude of services throughout the whole housing continuum: from buying to renting to renovating and repairing. Ithaca is truly grateful for such an active and assertive housing service. As for buying a home INHS provides nationally certified homebuyer education programs which are open to all and are very inexpensive... the most expensive course is 45 dollars for 12 hours of class time. Three programs INHS offers is a four hour fast-track first time homebuyer education program and a more comprehensive six class program which goes over the entire buying process including managing family and personal finance, managing credit, finding a good lender, inspecting your potential home and dealing with a realtor. INHS also is willing to hold these on-site at your workplace for no charge. I've personally spoken to many graduates of this class. Buying a home can be intimidating and it can be embarrassing (even for adults) when you don’t know which kinds of questions to ask. By keeping the charge low, meetings open to everyone and really advocating homebuyer education INHS is informing the persons who most need information to purchase and maintain properties to reinforce the backbone of the city. INHS also makes low interest, low cost loans available to first time home owners by partnering with local banking partners. Applicants must be below pre-determined salaries to qualify. In essence, INHS pays for a portion of the loan that the homeowner would typically have to pay... INHS pays their local banking partners and the savings is passed along to the homeowner. INHS also builds new homes, 7 of which are on the market right at this moment, all of which are energy star and LEED Green Rated. INHS also rents out apartment spaces, office spaces and community spaces adopting a role as a parent-renter providing counseling and transition programs for apartments. Once persons have successfully purchased and are maintaining their homes... INHS helps insure that these homes stay energy efficiency and well kept by providing home renovation loans, project management programs and mini-repair programs. Using monies from state and federal programs INHS provides loans between 1,000 and 50,000 dollars at an interest rate between 1 percent and 8 percent for home repair projects such as adding insulation, repairing roofs, replacing furnaces or exterior painting. INHS’s project
management program utilizes the 50+ years of experience of INHS’s staff in order to help homeowners successfully complete renovation projects. To date, this project management program has assisted renovations in over 500 homes. This program begins with a thorough inspection of said house resulting in a series of considerations and costs for improvement. INHS will then provide detailed and specific drawings of renovations to be made in order to get contractors and home owners on the same page. They also will help you find a reliable and affordable contractor and periodically check up on the contractor’s progress to insure quality and expediency. If you need a smaller repair but are handicapped, elderly or make below 23,000 dollars per year, INHS will come to your home and make the repair (fixing a step, installing a lock or hand rail) free of charge, you just have to pay for the materials used—no labor cost what so ever. To say the least INHS is a very helpful conduit for any housing issue in Ithaca and they are a strong force in the fight against inequity and inefficiency in Ithaca’s housing market.

INHS does such an excellent job—but how does it manage to fund all of these projects, is this really an efficient allocation of resources? INHS is such a successful non-profit because of its philosophy on funding, which is essentially to strive for sustainable funding sources. Paul Mazzarella explained to me that INHS costs are separated into capital costs and operating costs, each with their own unique sources of funding. Capital costs are considered costs incurred giving out loans, renovating homes or constructing homes. The source of this funding is often from federal or state grant programs. However, unlike some non-profits, instead of passing the specific grant down to the consumer in a form of a grant, INHS uses the concept of a revolving loan fund. A revolving loan fund is defined as “A fund established for a certain purpose, such as making loans, with the stipulation that repayments to the fund may be used anew for the same purpose.” So INHS provides loans to new homeowners and renovators at a certain interest rate, any money INHS earns from that loan goes back into the revolving loan fund to finance further loans. In this manner, INHS has been able to accumulate 7 million dollars of capital to be
used for loans, construction and renovation. The other portion of INHS’s costs are operating costs such as salaries and office operations and supplies. The source of this financing comes from a mixture of federal and state grants for non-profit operations needs and fundraisers ran by INHS members and local businesses. With their sustainable economic model, INHS has become a robust and well-funded non-profit.

The specific focus of my project was on INHS’s house recycling program, which has taken over one hundred homes within Ithaca and renovated them. I was particularly interested in this aspect of INHS because instead of building new structures with new materials, new land and more energy needs, INHS takes already existing homes and revitalizes the city... concentrating on the greatness of existing assets as opposed to constructing entirely new ones. These renovations are not modest. Renovations may entail brand new plumbing, electric and heating, new roofs, new bathrooms and baths or new interiors and exteriors. Renovated homes are 42 percent more energy efficient than the existing non-INHS homes on the market. An honest effort is made to use recyclable materials like cellulose-based insulation, inert gas windows and concrete-recycled fiber siding. In order to illustrate INHS’s commitment to green building, 9 residential renovations in the past year had been LEED Gold certified... two were built by INHS in Ithaca. The process through which INHS executes house renovation is as such. INHS will acquire property through a variety of ways (INHS has purchased homes, persons have made donations to INHS) INHS will work up a contract of specific construction plans and put the contract out to bid to an external contractor, the contractor will come and build the house and INHS will find an eligible applicant for the house. INHS almost always initially takes a loss of profit since it’s committed to providing the house at an affordable price. Often times there is a salary limit cap for the potential resident, saying you cannot make over X number of dollars per year if you’d like to live in this home. All potential residents must have graduated the comprehensive buying program. The House Recycling Program has been the predominant source of house-renovations in Ithaca since its inception in 1977.
The program has done such a good job that it is in part responsible for the rising housing prices in the city, and has essentially nipped itself in the butt, making it more expensive to purchase and renovate properties within city limits. Thus, INHS’s focus has shifted slightly towards new green and affordable construction properties closer to the city (not quite suburbia) but not directly located in the city.

If it seems unlikely (and amazing) that a non-profit has become so sustainable and successful I would agree. It seems even more unlikely envisioning this model before its inception. However, a community decision was made when INHS was being created to keep it non-profit as opposed to a branch of the government in order to steer clear of political pressures towards development. This was largely a citizen-led coalition that supported this non-profit in the first place. In Ithaca, perhaps in general, and especially as I listen to more and more of the project presentations, it seems that citizen action is often the most effective and intelligent engine of change. However, for all INHS’s greatness it is not enough... at capacity Ithaca is adding 50 affordable housing units per year. And although INHS creates a very large portion of these, houses we can call “green and affordable” not all of them are also green. We’re still failing 200 families per year!

However, do not lose hope! There is a new business model working in conjunction with INHS called Community Building Works, and it is hoping to ramp us so that by 2012 they will be constructing 20 houses per year. Community Building Works reduces costs incurred by INHS by a very significant amount by using the power of volunteers. INHS still uses the same method of contracting and acquiring properties and applicant process, but contracts to CBW instead of a typical contractor. CBW is on the job site five days a week eight hours a day with crews of six volunteers. Jack Jensen, the founder of CBW took out his retirement fund to start this company and is a phenomenal person. He patiently and enthusiastically teaches volunteers how to nail in siding and dry wall with a big smile. Volunteers are usually Ithaca High School students or Cornell University students. CBW is currently renovating its first
house at 106 Westfield drive and is 2 months ahead of INHS’s schedule, but 2 weeks behind Jack’s schedule! Jack Says 5 out of 6 volunteers show up every day. Jack’s first project has similar if not better energy efficiency standards and materials usage standards than INHS’s renovated projects. Jack’s model is exciting, money-saving, volunteer-based, is sustainable and is working!

The future of the non-profit affordable and green housing just may be with Jack’s model. Jack is planning to build a new 20 unit affordable and green building housing community at Farm Pond Circle similar to Eco Village but with less commitment towards community-living. Jack has already reforested much of the purchased lot and is beginning to break ground with his project.

INHS and CBW are doing a great job and if we could rally for government to remove the aforementioned barriers of development both of these organizations could do even better jobs. Government could also implement restrictive zoning processes on a local level to discourage suburban development. An exciting opportunity for further revitalization of the city may occur when public rapid transit (perhaps Podcars) becomes prominent in the city and parking spaces become not only eyesores, but practically useless, tearing down a parking lot to put up green and affordable renting or housing complexes would be an incredibly symbolic sustainable practice.

The reality is that Ithaca will likely have suburban expansion, even with CBW and INHS working at full capacity we’re leaving 130 families without affordable housing. We will either lose these citizens to other cities or they will move out to the expanding suburbs where housing is cheaper. The community and government must work together to responsibly develop these suburbs. Energy efficiency for the homes, recycled material reuse and alternative transportation methods would be huge steps that could be taken, but would these practices raise the prices letting inequity reign? Government subsidies to contractors practicing these sustainable techniques seems like a viable option to induce more “green” housing.
I’d like to thank Jack Jensen, Paul Mazzarella, Scott Reynolds and Cornell’s Cooperative Extension for putting on events and being so helpful. Paul Mazzarella invited me to conduct a phone interview with him, which lasted over an hour. He gave me very useful information especially about the funding practices of INHS, history of INHS and the process in which they require existing housing in order to renovate. Scott Reynolds gave me energy efficiency and materials use information. Jack Jensen spoke at Civic Dialogue in Action, which was partly funded by Cornell Cooperative Extension, and was very inspiring and down to Earth. I volunteered under him at the site on 106 Westfield Circle. He drives home an important point that we can’t get anything done in one night, in one lecture or one classroom that we must all roll up our sleeves and do real work to make change. Jack provides us all an option to do so.