RURAL DECLINE: PRESERVING COMMUNITY

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Problem Statement

How can architecture aid in the preservation and revitalization of rural communities?
Designers must communicate with community members to understand solutions that are best for each unique problem. Sustainable architecture addresses these issues by rethinking responses to the inevitable socio-economic and cultural changes.

Unifying Idea
Project Justification

As urban areas continue to sprawl, they attract people, young and old, with promises of employment and opportunity. Rural communities are important to the heritage and history of our nation, not to mention our currently struggling economy. As a society and nation we must become aware of the advantages of rural communities and the opportunities for preservation and revitalization.
Typology

The typology for this thesis will be a renovation and addition to a historical building, into a small technology/ business incubator. The structure will also function as an entrepreneurial education facility for high school and college age students.
Dramatic socioeconomic changes have occurred in rural America over the past 25 years. Shifting populations, job losses, declining education and healthcare systems, and weakening of community structures have caused the quality of life to deteriorate in many rural communities.
What do rural communities have to offer a changing population and culture, and what strategies can be developed to revitalize an “outdated” community?
Rural Economies

- the service sector contains the most job growth
- the overall age of the nation’s population is increasing
- new jobs are mostly produced by small businesses
- the effects of the global economy on rural economies
Entrepreneur

“One who organizes, manages, and assumes the risk of a business or enterprise”
Possibly You!
Business Incubation

- distance from important resources
- lack of financing
- inadequate facility and lack of space
- workflow inexperience
- lack of industry base and network
- lack of community involvement
Guidelines

- facility layout to encourage tenant interaction
- adequate commons areas
- flexible spaces
- materials
- security/public versus private
- an attractive/creative work environment

How can design encourage higher productivity, lower operating costs, creative activities? Can architecture make the indirect (not directly design related) factors easier to achieve?
The incubator maintains close ties with the community and its resource base; The incubator urges the community to come inside to see how it works; Incubator staff are “movers and shakers” in Early and have sufficient business experience to help companies grow.
Site

This area of the Midwest is often referred to as the dairy belt, or grain belt. My proposed location within the region is primarily rural, made up of small communities and farmland.

Springfield is a city of about 2300 residents located in brown county. There are two state universities located approximately 60 miles east and west. The main employers in Springfield are Acme Brick Co. and Sanborn Mfg.
The specific site is an abandoned creamery and its surrounding lots. It is important to the restoration of a historic building, and also the revitalization of the downtown.
1...2...3 Buildings?
Process

LET US BEGIN...

DAIRY
PROCESS
BUTTER
CHURN

DUELING
UNISON

PUBLIC
PRIVATE

REVITALIZE
JOIN
CONNECT
MESH

STORY

PAST
PRESENT
FUTURE

INDUSTRY
COMMUNITY
BEGINNING

PEOPLE
ECONOMY
GROW
SITE

MASS PRODUCTION

Two

CREAM TO BUTTER

MORPH
CHANGE

INNOVATIVE
CREATIVE

SUSTAINABLE

STILL

WHY ARE THESE PLACES IMPORTANT

3
Beginning Ideas

- conservative design
- keep alley
- Impossible to know what types of ventures will occupy the spaces

Transform

- community
- spaces
Existing Structures. Sketch Work. What to do.

Claudio Pissiere.
North Light: Mentoring. Confidence in Entrepreneurs.

Disconnect.

Drawing: that it is possible to move forward and succeed in a rural atmosphere.
Structure
Final Design
1. Reception
2. Lobby/Entrance
3. Vestibule
4. Light Mfg
5. Heavy Mfg
6. Conference Rooms
7. Restrooms
8. Mechanical
9. Offices
10. Workroom/Mail
11. Data Room
12. Loading Dock
13. Laboratories
14. Break Room
15. Kitchen
SERVICE SPACE: Located in the existing structure, these spaces are designated mainly to business ventures that require small-large offices. The interior offers superior flexibility through a large open floor plan that can be strategically divided by pull-down fabric walls.
COMMUNAL SPACE: Acts as a common meeting ground for all ventures housed in the structure. The architecture defines itself as a transition point between existing and new, and really becomes the heart of the incubator community. Programmatically this is where renters can take a break, hold a meeting, and most importantly converse with one another about problems, break throughs, etc; Inevitably increasing incubator synergy.
LABORATORY SPACE: A unique space housed under four free-standing shells clad in zahner paneling. Each shell has the ability to provide a different environment for its inhabitants. The main form was originally derived from a butter churn, which was then transformed to maximize glare-free north light. Each shell can be split into three smaller parts by insulated fabric walls. The varying structure heights allow for different spatial experiences and can accommodate renters with differing height requirements.
MANUFACTURING SPACE: A unique set of bays that slowly build in height to emphasize the feeling of success, and to accommodate renters with differing height requirements. Like the lab spaces, the manufacturing spaces have the ability to be split by fabric dividers into five different sized areas. Each area has unique amenities, i.e. (tower crane), and a personalized environment. Large folding glass doors open the spaces to the outdoors, providing passive ventilation and invaluable northern light.
The chosen site is currently an abandoned creamery building surrounded by open gravel lots. The image is a visualization of a deck that bridges the gap between the proposed incubator and an adjacent bar. There is an assumed connection between successful business and a nearby place to celebrate. The deck was designed to be subtle and unobtrusive to the site and also the view of the outdoor community space from main street. I see the outdoor spaces as a place for the community to gather for lunch, special events, etc. Along the south side of the new structure is a circulation corridor enclosed by glass on the south side and a heavy masonry wall on the north. In the winter the wall will collect heat and distribute it to the manufacturing space; reducing energy consumption.
The water retention system transforms a standard bulk bin into a cistern-like structure. A unique gutter system was developed to capture rain water from the back side of each shell form. The sloping shells take advantage of southern exposure by using integrated PV panels to convert sunlight into energy.
IMAGES L TO R: A large green roof provides shelter for the majority of the manufacturing spaces, reusing rainwater and reducing building energy consumption. Water drained from the roof feeds the retention pond. Folding fabric walls divided the interior, allowing for flexible, well insulated spaces. The walls are made of an opaque aerogel fabric, which allows diffused light to be emitted throughout the structure.
What Does All of This Mean?

Thank You for Coming!