A Marketplace Matrix:

Evaluating Values to Achieve Cultural Integration

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In developing the program and conceptual plan for a new architectural project, it is necessary to first resolve the overarching values and goals that define the project. This evaluation in the form of a matrix is suggested by Hershberger (19) as a crucial step in the development of an architectural program. The advantage of such a matrix is that it clearly separates values from goals and facts in an attempt to derive a clear definition of the problem. Below, such a matrix is presented for the development of a marketplace. Several crucial elements to this matrix have been extracted, analyzed and developed as a means of creating a rich program.

The purpose of this particular study is to develop an effective program for a new marketplace in the Kreutzberg neighborhood of Berlin, Germany. Core objectives for the project can be derived directly from the matrix and applied to the design process. This eventually leads to myriad programmatic and architectural decisions. The emphasis on place-making through cultural integration is found in all of the values and goals. Following are several examples of this process, using elements from the matrix.

Example 1: Human – Social

The Kreutzberg Marketplace is intended as a hub of social activity that will bring together people of different cultures. The acts of commerce and consumption are overlaid by tradition and ritual. These ideas are at the core of the values for this project. Extraction of goals from these values is direct. The value of social integration is used "to catalyze the permeability of cultural barriers in social structure." Because the urban marketplace is a focal point for social interaction, this goal can now be translated into programmatic elements.

The emphasis on "cultural traditions, food, and events" suggests specific areas for these activities. Such areas might include a formal and informal performance spaces, market stalls of various sizes, and a banquet or dining hall. The emphasis on food also suggests incorporation of not only prepared foods and raw food materials, but perhaps a demonstration of the harvesting and preparation of those foods. This could include an

Programming Matrix

Kreutzberg Marketplace, Berlin

		Values	Goals	Facts
Human	Functional	Effectively integrated commerce, housing, public space that will engage the public street life	To provide an inviting and engaging center for commerce and public life.	The Marketplace must provide housing for 500 people, operational facilities for market vendors, public spaces, and amenities for market visitors.
	Social	Embracing cultural traditions, food, events, and encouraging cross-cultural interaction.	To catalyze the permeability of cultural barriers in social structure.	The Urban Marketplace is a focalpoint for social interaction
	Physical	Spaces that are equally inviting to diverse physical abilities and cultural understandings of circulation.	To create spaces that support navigation for physically impaired, as well as the movement of goods within and at the boundaries of the market.	Market will be used by children, adults and elderly, as well as handicapped, and people of different languages and origins.
Site	Climate	Connecting people to their environment. Using the climate as a resource.	To design building form and systems in response to sun orientation, prevailing winds, and heating/cooling requirements.	It rains 34-72 mm each month. max/min temps are 23/-3 deg C. Sun orientation is N/S at 52.47 N.
	Context	Closely integrating surrounding neighborhood and natural features into design philosophies.	To relate to local history and cultural traditions. To encourage the retention of immigrant groups in the area and their cultural richness.	The site is in the Kreutzberg neighborhood adjacent to the Spree river, located 4 blocks from Gorlitzer park and the U-bahn metro station.
	Resources	Utilizing diverse resources in different aspects of design (climate, river, wind, light, shadow, and human energies.)	To harness these resources to create an energy efficient, human efficient building with aesthetic and formal connections to the natural world.	The adjacent Spree river is available as an source for energy, transportation, leisure, and aesthetic funciton. People provide an important source of energy and heat.
	Waste	Waste disposal is a vital building system, and a potential resource	To integrate an efficient, environmentally friendly, clean, orderly waste disposal system	A Marketplace can create up to 1000 kilos of waste per day. Amount will fluctuate with market activity.
	Transport	Support of public transport, bikes and walking reflect an emphasis on personal integration and connection to city and environment.	To encourage use of available local transportation systems such as metro, water taxi, bus and bikes while accommodating deliveries.	25 bike racks per 100 visitors. 1000's currently commute via water taxi. The Kreutzberg station is 3 blocks away. 10 bus routes run directly on Schlesische Strasse, on the site.

		Values	Goals	Facts
Cultural	Historical	Addressing the cultural and political struggles of Berlin.	To recognize the tragedies and triumphs endured in this part of Berlin. To address the Berlin wall as an element of the site.	Traditionally a neighborhood for Turkish immigrants, the area is now experiencing a transformation and gentrification as these rich cultural groups are displaced.
	Economic	Spurning economic growth in the region and providing economic opportunities for local citizens.	To create a successful commercial center that will grow over time.	A market of this size is expected to gross 10M euros a year. This requires an administrative component to organize and support the economic operations.
Aesthetic	Form	Creating a civic presence and focal point with contemporary design theories and historical cues.	To create a coherent formal language that will unify the experience of the market while offering something new to Berlin.	Berliners have embraced the contemporary, explorative forms that are commonplace in the new structures of Berlin, signifying a challenge and opportunity to use form as a means of putting the market on the map.
	Space	Strongly hierarchical spaces that create a quality of experience that mimics the great markets of the world.	To create a lofty, classically open market space, as well as a variety of sub-spaces to support market activities.	A large open space for vendors allows for rearrangement of stalls, shared daylighting, and a communal atmosphere. Smaller spaces can be used to enhance the personal connections.
	Order	The use of order to create a series of experiences and way-finding.	To organize market spaces and a circulation that creates a moving experience whether entering from the river or the street.	The edges of the site, from river to street, will guide a necessary architectural order.
Temporal	Growth	Encouraging growth of businesses and local economies across socio-economic lines.	To provide facilities that will support a steady growth in the number of vendors and visitors to the market, as well as local economies.	Vendors/visitors at start = 30/500 day, 5 years = 50/800 day, 10 years = 60/100 day.
	Change	The ability of a place to adapt to changing economy, politics, and local needs.	To provide facilities that will support frequent changes in venue and venue size across the market.	restaurants can be expected to change every 5 years. Other businesses will last 5-100 years. Space requirements for many businesses will change over time.
	Permanence	The market is an institution that has existed for thousands of years, and will exist for thousands more. This tradition and cultural necessity defines the purpose of a marketplace, and its permanence in society.	To create a building with a civic presence that will represent the unification of cultures and support market commerce for over 100 years.	No market yet exists in this part of Berlin, suggesting that a permanent project such as this, if successful, could last for hundreds of years, just as the surrounding buildings have.

urban demonstration garden, culinary school, and/or culinary cultural center. Each of these spaces must necessarily relate back to the social values, goals and facts.

Example 2: Site – Climate

The connection of values to goals with regards to climate is made by incorporating sustainable building systems that connect people to their environment. By using the climate as a resource, sustainable strategies can be incorporated that emphasize low energy use, low waste consumption, and a healthy building for its occupants. The applicable facts in this case are the climate data that apply to the region. Sun angle and overcast sky data will help us derive daylighting statistics, such as shading and glazing requirements. Precipitation data is necessary to determine a strategy for managing stormwater, and to approach rain as a resource by incorporating catchments. Such catchments could be used for cleaning, running toilets, irrigation of landscaping and gardens, and even consumption if filtered. The use of rainwater for these existing requirements will address the value of connecting people to their environment, if this connection is made apparent with the architecture. Similarly, wind data can be used to determine the potential for energy production via wind turbines, and for natural ventilation strategies.

The values of connecting people to their environment and using the climate as a resource are also related to the previous example, with the importance of food, food harvesting, and appreciation of the cultural systems that bring food to our table. Climate and food production have their own relationship which could be demonstrated with seasonal changes. An example would be rainwater catchment for irrigation of an urban demonstration garden. Similarly, landscaping can be used to complement the seasonal climate, such as deciduous trees for sunshading, garden soil as thermal mass for temperature buffering, and water features for air cooling. Each of these strategies attempts to use the climate as a resource and to make the building richer by connecting people to their environment.

Example 3: Aesthetic – Form

As stated in the matrix, the marketplace is an opportunity to create a strong civic presence and focal point in a part of Berlin that is perhaps less of a destination, currently. This will, in turn, benefit the local neighborhood economy and strengthen interaction amongst Berliners from all over (cultural permeability.) These values are directly affected by the restrictions and opportunities of the site. Surrounding building massing, adjacent river, adjacent streets, and local typologies are all important influences on building form. Historically, this civic presence has been addressed in the marketplace by incorporating lofty spaces, often open to the sky or covered by massive glazing. These historical "traditions" of the marketplace provide a guide for the overall form, but Berlin's advancements in contemporary architecture demand a modern interpretation.

The form for the Kreutzberg Marketplace should thus incorporate the following ideas: a lofty "traditional" market space with a modern interpretation, appropriately separated housing and cultural center components, a response to other major programmatic elements such as exterior landscaping, urban garden, a connection to the river, a response to environmental conditions, and a coherent formal language that both connects to the surrounding neighborhood and sets the building apart from what already exists in Berlin.

The creation of a programming matrix has resulted in a more formal definition of the problem. In this case, our "problem" is in designing a marketplace specific to the Kreutzberg neighborhood of Berlin. This definition incorporates the values that root the project in cultural integration. From this process, programmatic ideas were generated that can all be traced back to the overarching values of the project. The examples of social, climatic and formal conditions are quintessential problems in the design process. As such they can have a profound effect on the outcome of such a large scale socially-oriented architecture. This process will eventually result in a holistically designed, coherent project that effectively relates programmatic elements to a strong project vision.

Bibliography

Hershberger, Robert. <u>Architectural Programming & Predesign Manager</u>. McGraw-Hill Professional Publishing. 1999.

Morrison, Kathryn A. <u>English shops and shopping : an architectural history</u>. New Haven, Yale University Press, c2003

Chung, Inaba, Koolhaas and Leong, ed. <u>Harvard Design School Guide to Shopping</u>. Cambridge, MA. Taschen. 2001.