**WOMEN IN THE WORKPLACE**

Re-imagining Demographics in Tama New Town

**BACKGROUND**

Tama New Town was developed on a rigid patriarchal model of the bedroom community. In this model, the father commuted into the city to earn a living for the family, while the mother reared their children in a healthy, safe community and a natural setting. Now, Tama New Town is struggling. The demographic trends there are a reflection of trends in Japan at large, while the inflexible physical environment and aging building stock cannot address the shifting needs of its residents or attract new demographics.

By addressing the question of changes in society and the workplace with respect to women, a framework can be created to address the challenges Tama New Town faces today to create a thriving, sustainable community for years to come.

**PROJECT FRAMEWORK**

**Support Networks**

Case Study: Scandinavia
- One of the highest fertility rates in Europe (1.8)
- 75-80% of women work
- 54 weeks of maternity leave, as well as 6 weeks of paternity leave
- Government payment of about 4,000 Euros with birth of child
- State-subsidized day care is standard

Case Study: Italy
- Society prefers women to stay home after becoming mothers
- Only 50% of women work
- Little state-financed child care

**Applicability and Topics**

This research addresses four topics through the lens of areas in which significant changes just occur in order to support the movement of Women in the Workforce. Each of these 4 sub-topics are women into the workplace.

1. **Public Services**
2. **Urban Environments**
3. **Home-Work**
4. **Local Resources**

Women in the Workforce is a lens to address the questions of Tama New Town. Our model will not address only one type of women in the workforce. It will address single women, older women, married women, and mothers. By viewing social, economic, ecological, and spatial questions through this lens, a framework will be created that addresses not only the needs of women, but all demographics.

**Japanese Family Structures are changing. Japan is facing a population shortage. The percent increase in population from 1970-1980 is one of the lowest of all developed countries, and Japan is currently facing one of the largest population declines of any country from 2010-2050. This trend also affects Japan’s average age of the population, which is rising sharply.**

The labor force will soon be unable to support the growing aging population. A greater percentage of women will need to enter the workforce to compensate for this deficit.

The declining marriage and birthrate numbers in Japan have shifted traditional family demographics. The average household size has decreased from 2.55 to 3.43 over the last 25 years.

**Demographic Factors Relating To Working Women**

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URBAN ENVIRONMENTS
Land Use: Current zoning and FAR, Densities, and Mobility

PUBLIC SERVICES
Need for Public Service: Childcare and Elderly Care

Proximities: Current location models; distances, proximities

Wilhelm Klauser has studied the Tokyo convenience store in “Patterns of Proximity”. The diagrams above illustrate one with the flexibility of a model of amenities, rather than large, centralized re-
gions.

Differentiated zones of development. This creates a homogeneous landscape that lacks close amenities for residents.

After: Classrooms on the Second Floor
After: Elementary School
Before: Tatami and Bunk Accommodation

After: Training Center for Pottery
After: Exterior

Case Study, Japanese Convenience Stores

Case Study, Paris

New housing communities will be based on a neighborhood
model, creating more flexibility and mixed uses at a local
scale to create a community fabric.

Rather than design housing as a single homogeneous zone, densities of homes and dis-

proximity of amenities are essential to make the

city labor force more diverse.


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HOME-WORK

Through the lens of Women in the Workplace, an analysis of demographics at Tama New Town informs the layout, design, and development of the built environment.

At Tama New Town, critical infrastructure issues and critical services are to be linked.

Housing densities must adapt to changing needs and diversified populations. Changing household and family structures, and a reliance upon a public support system are conducive to diversified populations and housing types, and need to be considered to meet the future needs of Tama New Town through the principles of conservation, operation, and flexibility, at a human scale.

There is a need for new housing types and mixes. Building materials must be as serviceable and durable. The hefty carbon load imputed to brand-new structures the housing stock will require an investment in predominantly new structures for sustainability (in terms of durability and universal construction cannot be ignored. Meanwhile, the current housing stock at Tama New Town is largely unsuitable; it is not energy efficient and universal accessibility is severely limited. Thus, it is essential that the planning of the housing stock will require an investment in predominantly new structures that will be replaced as Tama New Town evolves over time and populations.

The home becomes a self-renewing entity that replicates the potential of technology and renewable resources. Users save valuable time and energy with embodied energy of which will not be wasted as Tama New Town evolves over time.

The home-zones.

-changing household and family structures

-house formats and family structures

-locational and expansion of community social services and facilities

-technology and renewable resources


domestic consumption of vegetables

Food self-sufficiency ratio in Japan and other countries

Food self-sufficiency ratio in Japan and other countries (on a calorie basis)

Domestic production and domestic consumption of vegetables

Value of imported food products and the share of processed food products

Source: Food Balance Sheet (MAFF); Food Balance Sheets (FAO).

Adjusting Infrastructure

Critical infrastructure issues will focus on the provision of essential services, particularly for the elderly population.

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Food self-sufficiency ratio in Japan and other countries

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Produce Local, Consume Local

Domestic production and domestic consumption of vegetables

Value of imported food products and the share of processed food products

Source: Food Balance Sheet (MAFF); Food Balance Sheets (FAO).

Local Jobs Don’t Need New Indus-

tries

There are many jobs currently being supported in the community, but those that will self-propel with the increase of working women include: elderly care, education, child care, local businesses, local government positions, home offices, and as a busi-

ness.

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Connie Chung, Cha-ly Koh, Laura Rushfeldt, Erica Weiss

Case Studies

Tage Housing Complex, Maine, Sweden

Undated Delivery (Rund-Ox, Vam-

dal, Sweden.

**WOMEN IN THE WORKPLACE**
Re-imagining Demographics in Tama New Town

**GROWTH SCENARIO**
Time-lapse development:

1. **current facilities**
2. **creating public service hubs**
3. **housing neighborhoods**
4. **encouraging mixed-use growth**
5. **boundaries and directed growth to prevent sprawl**

**EMPLOYMENT DEMOGRAPHICS**

A Sustainable Community through 2050

As the needs of Tama New Town shift with the constantly-evolving population, the shape of the built environment must respond by expanding in times of growth (or contracting due to shrinkage). What is not depicted here is the undeveloped land area, covered in the section “Land Boundary” elsewhere.

![Diagram showing growth scenario steps](image)

**Demographics**

<table>
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<th>Year</th>
<th>Total Population</th>
<th>Working</th>
<th>Non-Working</th>
<th>Working Women</th>
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<td>29%</td>
<td>71%</td>
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<td>2020</td>
<td>9,600</td>
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<td>53%</td>
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<tr>
<td>2050</td>
<td>13,000</td>
<td>64%</td>
<td>36%</td>
<td>3,300</td>
</tr>
</tbody>
</table>

**Lifestyle**

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SOCIAL SERVICE HUB MODEL

The central tenet of this new model is the social service hub. The hub is created by building up and re-purposing existing public facilities to create flexible, multi-purpose service centers within Nagayama. School properties have been chosen due to their pre-existing visibility and importance in the community as well as their available land for use and development.

By providing many public and social services in one place (school, day care, community centers, elder facilities, playgrounds, parks, and others) in a single conditioned area, activity and convenience will be greatly increased. The area will become a desirable hub for working women to live.

Research has been done into how to re-purpose and mix uses within existing school buildings, and also incorporate new construction. Although some open land must be retained for ball-fields and other school uses, there is currently an over-abundance of underutilized land that can be used to create a service hub.

Hub Demographic Parameters

The concept of the social service hub is to provide all the necessary amenities for a vibrant and complete lifestyle. The easy access of the support network allows women to function seamlessly between the workplace and the home. These amenities vary for different stages of a woman’s life. The key to maintaining a sustainable population in Nagayama is mixing the different demographic groups within the hub. Allocating one set of resources towards one user group is an inefficient use of resources because much of the time these resources are under- or non-utilized. Overlapping programs within the space based on user-group and time of day assures that resources are used efficiently and a sense of community is created between different residential demographic groups.

Social Service Hub Parameters

1. 50% Program Overlap
   50% of built space should accommodate more than one program or use group.

2. Proximity model
   User should be able to access spaces for all three use groups. This access should be from any point within the hub in less than a 2 minute walk.

3. Intimate Open Space scale
   Paths and plazas within the hub should maintain an intimate scale. These spaces should provide adequate space for a maximum of 50 people to gather.

4. Spatial overlaps
   Space can overlap uses in 3 ways:
   1. Spaces that are shared within one building simultaneously.
   2. Spaces that stack vertically.
   3. Spaces that change in use over the course of the day or week.

5. 30% Unbuilt space
   30% of space in the hub is reserved unbuilt for outdoor gathering spaces, school yards, small-scale gardening, and other similar uses. This makes effective use of space surrounding the buildings, by keeping the space functional while controlling the density and scale of the hub.

6. Access to transit
   Social Service hubs will have integrated transit at both the district and local scale. Bus Rapid Transit stations will be incorporated into each hub at a frequency of 1 per 3500 residents. Micro-mobility stations of both motorized and non-motorized shared vehicles will be incorporated at a frequency of 1 per 350 residents.

Analysis of program use groups to determine potential spatial overlaps

Analysis of program use times to determine potential spatial overlaps

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SEIKISUI HOUSE
WOMEN IN THE WORKPLACE
Re-imagining Demographics in Tama New Town

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NEIGHBORHOOD MODEL

With the strong catalyst being placed as a seed of growth in Nagayama, various other land uses and development will result from the strong concentration of a strong Public Service Hub. This growth will penetrate into the existing housing, transforming the current housing, retail and other land use types in the area. While the growth will be bounded and guided by the land reserve strategies, string parameters are also needed to ensure strong and sustainable communities that will continue to attract new residents to Nagayama.

The following are six important rules that will guide the growth of the development in time. To form a strong community, the built environment needs to provide the opportunities for residents to interact with each other by sight, sound, smell, taste or touch. It is through this lens that building community by actively strengthening the basic units of “neighborhood” (in the Japanese definition). The circle at left is defined by the orientation of front doors or back doors of the units, generating opportunities for neighbors to interact. This contrasts greatly with today’s layout in highly compartmentalized apartment buildings.

Proximity to different land uses:
1 minute city
Urban Living occurs as one lives in the city. The city becomes the home where one sleeps, eats, bathroom, works and entertains. Diverse land uses are crucial to extend space consumption of the urbanite outside of his or her home. Working women, with higher purchasing power will consume more of the city and less of her home. Community Centers are then formed in ramen shops, where community residents stop hot meals, in community gardens, where residents grow tomatoes locally. In onsens, where old and young share stories at the baths. This shared consumption is the basis of community building.

Building a strong community:
Zero age barrier
Japan’s problem of an shrinking population can be defined as a reversal of the support pyramid from a greater number of young people supporting a small number of old people, to that of a few young people supporting more seniors. Instead, the support system can be continuous, with the old supporting the young and the young supporting the old. Strong human relationships across age groups need to be formed to realize this support system, with families needing to be close to single people and children to interact frequently with seniors. This can be established by locating different floor plans or housing types in close proximity to achieve diversity of neighbors and residents.

Interaction across levels:
human scale city
The scale of the development should be presented at a “human scale” where the buildings do not intimidate the residents and where interaction is possible across levels. The mixed density is defined by the varying street widths, open space, and gap between buildings. The goal is to increase organic and interesting urban fabric and intricacy in traditional Japanese urban areas such as the streets of Kyoto.

Conservation of assets
Tama New Town, when it was built, was beautifully landscaped to create a comforting environment for its residents. 40 years later, these full grown trees are all at their prime. Full grown trees and greenery are strong assets to Tama New Town and should be preserved if they are healthy and valuable for the community.

To that end, considering the large number of empty parking lots and the large footprint of buildings, there should be a high percentage (50%) of greenfield versus greenfield (30%) development on these sites, where greenfield is the existing landscape in the area.

Flexible dwelling:
Home that acts your age
The plan attracts an influx of working women but hopes to eventually evolve to a highly mixed demographic; of single working male and females, elderly, children, teenagers and even immigrants. To survive dramatic waves of demographic changes, the housing units will be designed to be flexible and easily modifiable to allow the unit to accommodate different users with different needs over time.
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NEIGHBORHOOD GROWTH ILLUSTRATION

2008
Existing housing

2010
Generating mixed-use, mixed-density transformations
Commercial lots (restaurants, retail, private education)
Back offices, working space

2020
Building towards a sustainable community through the 8 rules of urban growth

2050
A flexible change of uses sensitive to demographic changes may incorporate different housing types or different mixed-use compositions
Change from retail to public services to elder growth

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LAND RESERVE PARAMETERS

1. Green from the inside, out
A stringent planning process can maintain a structure settlement. As the community grows around its newly planned facilities growth will need to be carefully controlled in order to prevent sprawl. A strict set of parameters and guidelines can control growth in a specific way. This can also be done by defining the boundaries of town growth with local resources such as programmed green space, agriculture, and energy production.

2. Appropriate distribution of program uses
In order to properly sustain the population both physically and environmentally, the ideal proportion of land must be allocated to each type of land reserve. If too much land is given to playgrounds, for instance, there will not be enough land on which to produce food or provide walking paths.

3. Consider the return on land investments
Some land uses will be more beneficial to the community than others. The most valuable land use is that which is environmentally and physically beneficial. Land uses contained in this category will be the most stable and will likely anchor the physical growth limits of the community.

4. Integration of resources
Current green space allotments are fragmented, varied, and misaligned. The quantity of land reserves is vast, but its proximities prevent it from being optimized and often utilized. Proper land use adjacencies would allow for an overlapping of uses and thus, a more efficient use of often limited resources.

5. Where necessary, modify the landscape to meet your needs
If the current condition of the land is not inline with the community plan, alterations may be necessary. Steep terrain can be bridged, stepped, or razed to suit new planning guidelines. In some instances land that was manually re-structured to create its current state, could potentially be returned to its natural condition to create a more natural landscape.

Land Reserve Type: Proportional Allotments

- open space
- environmental impact/ benefits
- impermanence/ permanence
- energy production
- food crops
- orchard
- game fields
- playground
- paths/ trails
- nature restoration
- treatment wetlands
- ceremonial space

Land Reserve Type: Impact vs. Return

- open space
- environmental impact/ benefits
- impermanence/ permanence
- energy production
- food crops
- orchard
- game fields
- playground
- paths/ trails
- nature restoration
- treatment wetlands
- ceremonial space

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LAND RESERVE ILLUSTRATIONS

A combination of the current conditions in Tama New Town can be overlaid to determine an appropriate place from which to jump-start the new distribution of community beneficial land resources. By examining the current green spaces, whether government sanctioned, abandoned, or residual, as well as the areas of inadequate housing and the current topography, an initial diagram of potential spaces is identified. This initial mapping is meant only as a suggestion of prime spaces and must be considered in relation to the potential facility and neighborhood growth maps.

IDEALIZED LAND RESERVE CONDITIONS

Current Condition

Improved Condition
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TRANSIT

Time-lapse development

1. Current rapid mobility (none)
2. BRT stations connect hubs using existing infrastructure. Micro-mobility stations introduced at BRT stations.
5. Further integration of network with the addition of each new hub.
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COMPOSITE ILLUSTRATION

Location Key

New Site Condition

Land Reserves

Housing Neighborhoods

Social Service Hub

Transit Model

Current Site Condition

INITIAL ROUTE

FUTURE ROUTE

OFFICE

BIGBOXRETAIL

RETAILATTACHEDTORESIDENCE

COMMUNITYRESOURCE

CLOSEDFACILITY

HEALTHFACILITIES

MIXEDUSECOMPLEXRETAIL

CONVENIENCERETAIL

LIGHTINDUSTRY

HEAVYINDUSTRY

UNIVERISITY

PUBLICSCHOOL

DAYCAREPRE

SCHOOLKINDERGARTEN

#OMMERCIAL

#INDUSTRIAL

#COMMUNITY&ACILITIES

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LIVING IN THE NEW COMMUNITY

Working Mother
- Agendas children to school
- Family dinner

Single Working Women
- Going to work
- Shopping with friends

Seniors
- Grocery shopping
- Ballroom dancing

Working Father
- Going to work
- Soccer for children

Newly Married Couple
- Morning on the terrace
- Rooftop romantic dinner

A SUSTAINABLE COMMUNITY

SOCIAL SERVICE HUB

<table>
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<tr>
<th>Rule</th>
<th>Promoting Density and Mixing Uses</th>
<th>Preserving All Natural Resources</th>
<th>Planning for a Socially Sustainable Future</th>
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<td>Access to Transit</td>
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NEIGHBORHOOD GROWTH

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<tr>
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LAND RESERVES

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