Networks Enhance Inarajan Village’s Sense of Place

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Executive Summary

This document studies how networks can be used to strengthen the long-term social, cultural, and economic vitality of Guam’s Inarajan Village. The document is broken down into three main parts: Overview, Assessment, and Conclusion.

Part 1: Overview

The Overview is meant to familiarize the reader with the larger systems in which Inarajan Village is located. These systems form the environment in which decisions must be made. The influences of the environment are often viewed relative to time, geography, or perception.

Four sections make up the Overview. The first section “Guam Overview” provides a general synopsis of the island’s geographic, economic, and demographic characteristics. The second section “Tourism on Guam” discusses the role of tourism, the habits of tourists, and current efforts to strengthen the tourism industry. The third section discusses the architectural and cultural significance of Inarajan Village. Finally, the fourth section provides a synopsis the Inarajan Historic Architectural District Revitalization Plan.

Part 2: Assessment

The Assessment addresses two topics:

1. Placemaking for Community Identity and

The second chapter analyzes the social network of the people involved in the Inarajan Historic Architectural District Revitalization Plan. The analysis uncovers trends and shortcoming within the network.

Part 3: Conclusion and Recommendations

This part addresses the main findings of this project, suggested future steps, and recommendations for Inarajan to make it there. It expands on the social network analysis of Inarajan and examples how the same analysis can be applied to multiple villages to build cohesion across the island.
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Part I:
Overview
Guam Overview

Overview

Guam is an unincorporated territory of the United States. Its location in the Mariana Archipelago in the western Pacific Ocean punctuated the frequently versed phrase of Guam: “Where America’s Day Begins.” This section provides an overview of general features of the island including geographic, demographic, and economic characteristics.

Climate

The island boasts a tropical climate with an average annual temperature of 81 degrees Fahrenheit and a range between 75 and 86 degrees Fahrenheit. The hottest months are May and June. Guam receives approximately 90 inches of rain annually, but the rain season occurs from July through October. Guam’s dry season runs from December through April.

Population

The last decennial census indicates that Guam’s population was 159,358 people in 2010, while previous censuses indicate that the population was 154,805 people in 2000 and 133,152 people in 1990. These data show that the population grew by 16.3 percent between 1990 and 2000, but only by 2.9 percent between 2000 and 2010. The slow growth for the latter decade can be attributed to slow economic growth and a high level of migration from Guam to Hawaii or the continental United States.

Guam had a population of 18,000 when it became an
Guam Overview

Unincorporated territory in 1898. A mixture of in-migration and a high birth rate helped bring Guam’s population to its current 159,358.

Economy

Employment

Guam’s unemployment rate is high. The most recent rate of 11.8 percent for March 2012 is slightly lower than March 2011’s 13.3 percent. Still, both are higher than 2009’s 9.3 percent rate. The total number of unemployed decreased from 9,970 in March 2011 to 8,060 in March 2012 because many had stopped looking for work (Santos and Hiles 2012). 52,410 people in March 2012 were not in the labor force compared to 44,770 people in March 2011. Only 10,550 people in March 2012 indicated that they were seeking work (Santos and Hiles 2012).

Income per capita/household

Guam’s mean household income dropped from $47,062 in 2005 to $45,786 in 2008, but increased to $49,263 in 2010. Per capita income decreased from $13,089 in 2008 to $12,864 in 2010. More people were making less in 2010 than they were in 2008 (Naholowaa and Hiles 2010). Income for military families living outside military housing refers only to the income of the dependents in the household and not to income gained through military service (Naholowaa and Hiles 2010).

Household size

The average household size increased from 3.5 persons per household to 3.8 persons per household in 2010 (Naholowaa and Hiles 2010). The increase in household size is consistent with interviews conducted in the summer of 2013. However, interviews also suggested that increases in household size were not distributed equally throughout the population. Households that occupied family members could become crowded to the point where members occasionally opted to sleep in the backyard than inside the house (Guam 2012).

Tourism

Visitors on Guam spent $772,297,000 in FY2006. That expenditure comes out to $1.35 billion after using a 1.75 multiplier. Tourism accounts for up to 60% of the government of Guam’s annual revenues. In addition, 35 percent of Guam’s employ-
ment stems from tourism either directly or indirectly (Guam Visitor’s Bureau 2007). Guam’s dependence on tourism makes it vulnerable to shocks in foreign economies (Guam Economic Development Authority; Bureau of Statistics and Plans; and University of Guam-Pacific Center for Economic Initiatives 2011, 54).

**Military**

The military plays a significant role in Guam’s economy through construction and engineering services. In addition, non-military employment opportunities also exist on the military installations on Guam in the field of maintenance and operation (Guam Economic Development Authority; Bureau of Statistics and Plans; and University of Guam-Pacific Center for Economic Initiatives 2011, 58).

The United States entered an agreement with Japan in 2006 to realign American military presence throughout Asia. The agreement proposes to relocate 8,000 military personnel from Okinawa, Japan to Guam (Guam Economic Development Authority; Bureau of Statistics and Plans; and University of Guam-Pacific Center for Economic Initiatives 2011, 58).

The transfer of military personnel has been continually postponed due to fiscal limitations in Japan and the United States. More recently, North Korean threats have re-imposed the need for United States and its alliances to show arms as deterrence to greater escalation towards war.

**Economic Development Strategy**

Guam’s 2011 Comprehensive Economic Development Strategy outlined and ranked the projects below to achieve the following broad economic objectives (Bureau of Statistics and Plans 2011, 5):

- Development a broad economic base
- Achieve full employment
- Establish greater employment opportunities
- Create higher wage and salary levels,
- Improve the island’s standard of living

Further discussion of Guam’s 2011 Comprehensive Economic Development Strategy will be discussed in the following section, *Tourism on Guam*.

**Conclusion**

Guam’s location makes the island highly susceptible to the economic ups and downs of the neighboring countries in Asia. The location also makes the island a geographically strategic base for United States military. In addition, the island’s status as an unincorporated territory in the Marianas Archipelago contributes to how the United States government treats it.

Although Guam’s population has grown significantly since it became a part of the United States, the indigenous population of Chamorro has since lost its ranking as the majority and villages outside the main tourist hub of Guam have faced large out-migration as villagers seek work. Household sizes have grown as more people chose to live together to make up for declining work opportunities and less individual income.
Overview

A familiarity with the tourism strategy that guides the entire island is vital to understanding how the smaller parts become one with the whole. This section dissects tourism on Guam by discussing facts and figures on the global perception of Guam, the tourists who frequent the island, and current efforts to improve the tourism industry.

Global Market Perception of Guam

Synovate conducted a Guam Tourism Survey from June to July of 2006 (Synovate, 2006). Highlights from the survey include:

- 84 percent of the 2,518 respondents have heard of Guam (Asia: 643, Europe: 1,029, and United States: 856)
- Awareness of Guam is significantly higher in the United States
- More than 50 percent of respondents agree that Guam has beautiful scenery, good beaches, and desirable diving
- Between 25 and 42 percent of respondents do not know Guam to be eco-friendly, good for hiking/trekking, or to be rich in culture/heritage

Country of origin for tourists

Japan outpaces all other countries easily at 73 percent of the total visitors traveling to Guam by air. Korea comes in at a distant second at 13 percent. Taiwan and the United States Mainland have been vying for third for the past three years. As of 2012, the United States mainland ranks as third for most civilian and military visitors (Guam Visitors Bureau, 2010, 2011, and 2012).

Demographics of Tourists

Unless otherwise stated, the data here focuses on tourists from Japan since they compose nearly three-quarters of all visitors to Guam.

- 1,496 respondents
- Average age of respondents is 31.6 years of age
- 61 percent of all visitors are single
- 39 percent of all visitors are married
- 52 percent of repeat visitors are married
- 38 percent of visitors are repeat visitors
- Repeat visitors have been to Guam an average of 3.0 times
- Almost half of repeat visitors have been to Guam within the last 2 years
• Median and average length of stay is 3.0 days

<table>
<thead>
<tr>
<th>Duration</th>
<th>Amount of Visitors</th>
</tr>
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<tbody>
<tr>
<td>1-2 Nights</td>
<td>10%</td>
</tr>
<tr>
<td>3 Nights</td>
<td>20%</td>
</tr>
<tr>
<td>4+ Nights</td>
<td>0%</td>
</tr>
</tbody>
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Figure 3. Repeat Visitors Last Trip
Source: QMark Research, 2012

- Free-time package tours comprised 69 percent of travel planning (QMark Research, 2012, p. 24)
- Beach, pleasure, and travel made up the top three reasons to travel for tourists from Japan
- Cocos island tied with Chamorro Night Market for the second most common optional (QMark Research, 2012, p. 59)
- 6 percent participate in gun tourism (QMark Research, 2012, p. 62) (Talmadge, 2013)

**Habits of Tourists**

Approximately 43 percent of all tourism spending is through retail on Guam. Shopping is therefore a major attraction for tourists and contributes to the local economy (Guam Economic Development Authority; Bureau of Statistics and Plans; and University of Guam-Pacific Center for Economic Initiatives, 2011). The level of spending conducted by a visitor directly correlates with how well their country of origin is doing economically.

**Transportation Options for Tourists**

Most full tour packages and airline and hotel packages provide transportation from the airport to lodging upon arrival and from lodging to the airport upon departure. The existing inventory of buses, mini-buses, and vans accommodate an average of 4,200 airport transfers per day throughout the year. In addition, there are a number of prepaid ground transportation (Guam Visitors Bureau, 2007).

Prepaid ground transportation statistics indicate the level of interest visitors will have with exploring the island. Trolleys, for example, are primarily situated near Pleasure Island and stop at common shopping destinations, hotels, and entertainment venues. Trolleys provide a safe, affordable means for most first-time travelers to see the mainstream attractions.

On the other hand, rental cars provide custom transportation for the more adventurous traveler who seeks to explore on his/her own.

“The tourists now are more independent: they’re going on the web to find things, and they’re looking for culture. They like the hotels, but they want to go out on their own, and they want to experience the culture. And we have that potential down [in Inarajan]” (Pacific Worlds and Associates, 2003).
Efforts to improve Guam’s tourism industry

There are a variety of efforts that exist to improve Guam’s tourism industry. This section provides a short overview of two: Guam’s 2011 Comprehensive Economic Development Strategy and the Guam Visitors Bureau.

Guam’s 2011 Comprehensive Economic Development Strategy (CEDS)

The 2011 Guam Comprehensive Economic Development Strategy (CEDS) was created to provide direction, focus, and priorities for local efforts and guide federal assistance and private investment in order to stabilize and improve the quality of life and economy of Guam. CEDS discusses Guam’s economic problems and possible methods to solve them by presenting community goals and suggesting programs to guide the island in that direction (Guam Economic Development Authority; et al., 2011).

CEDS was originally created to be a five-year plan from 2007-2011. The document highlights the following to be its guiding principles:

- Set a Strategic Direction – integrated structure
- Isolate Key Issues, Initiatives – Redirect Strategy
- Educate community about tourism’s economic impact – Support base
- Galvanize a Shared Vision – Brand image and value
- Continuity and bipartisan support – Sustaining long-term implementation

Much of the information within CEDS is still applicable. The strategies that have been implemented are long-term and must be built upon for maximum results. CEDS clearly acknowledges that widespread involvement is vital to achieve economic vitality for the island when it identifies the following groups as integral members in the process:

- Entire Island Community
- Executive branch
- Legislature
- Private sector partnerships
- Community support and engagement
- Fully integrated implementation structure

“Tourism development, management, marketing and promotion should be managed with an integrated structure (Guam Visitor’s Bureau, 2007).”
**Brand identity**

Guam lacks a common brand image across markets. A unified brand image that communicates the experience is more powerful (Guam Visitor’s Bureau, 2007, p. 36).

Tumon Bay is the primary feature of Guam that tourists see when they visit the island. Although Tumon Bay is important, it is not enough. There is an increasing interest in providing greater incentive for the visitor to explore outside the main tourist area. By giving people an experience, villages will gain recognition through word of mouth which is 12 to 15 times more powerful than any Advertising or PR Campaign (Guam Visitor’s Bureau, 2007, p. 31).

The Chamorro culture and create that experience. It has been identified as an attribute that will make Guam more attractive to visitors (Guam Visitor’s Bureau, 2007, p. 35).

**Destination Development and Improvements**

GVB (2007) suggests capital improvements and destination development in areas such as:

- Guam National Museum
- Community Event Center
- Multi-purpose event center
- Cultural and historic attractions
- Community parks and recreation areas
- Historic and natural site restoration and refurbishments
- Parks, marinas, and scenic overlook upgrades

GVB notes that destination development will require community support and a long-term, reliable funding source. Expensive projects such as the Guam National Museum need to be carefully examined before being granted approval. The Guam Pacific Daily News reported that there would not be any money for the upkeep of the museum after completing its construction (Daleno, 2013).

Guam has many attributes that already exist. Harnessing the island’s current strengths, or at least building off what is already available would likely be more cost-effective than constructing elaborate buildings or sites. The Island Capital Improvement Fund (Guam Visitor’s Bureau, 2007) exists for that reason and was created to develop the following areas:

1. Improve Village Communities with $3,125,000 to focus on:
   - Agana Pool
   - Agana Tennis Courts
   - Agat Beach
• Dededo Park
• Inarajan Pool
• Mangilao
• Pago Bay
• Piti Marine Park
• Tagachang Beach
• Yigo Baseball Field
• Ypao Beach Park

2. Fund cultural and historic destination development with $32,000,000 to focus on:

• Inarajan’s Gef Pago
• Umatac’s Magellan’s Landing
• Multi-purpose Event Center

3. Fund signage improvements with $825,000 to focus on:

• Village Signs
• Scenic Highway Signs
• Interpretative Signs

Figure 6. Umatac Community Mural
Source: (Certeza, 2013)

Conclusion

Tourism on Guam is an essential part of the island’s economy accounting for up to 60% of the government of Guam’s annual revenues. In addition, 35 percent of Guam’s employment stems from tourism either directly or indirectly (Guam Visitor’s Bureau 2007). It would be far-fetched to eliminate the tourism sector completely from Guam’s economy, so it is better to identify how Guam can improve upon itself in a manner that helps both the tourism industry and the residents of the island.

Two large efforts are highlighted in this section: Guam’s 2011 Comprehensive Economic Development Strategy (CEDS) and the Guam Visitors Bureau. Both indicate the need to improve the communities within Guam through development and cultural projects, as well as the need to strengthen collaborative efforts between a variety of groups and parties.
Inarajan Village

Overview

Inarajan is a village located in the southeastern coast of Guam. Inarajan prides itself on its history and the warmth of its people. It is second to Hagatna as the most historic village on Guam (Joint Region Marianas, 2011). There are several points of historical and cultural interest within the village including Salaglula Pools, Tipogo Cemetery, St. Joseph’s Church, and Bear Rock.

Many of the structures in Inarajan are in need of repair. Inarajan’s Historic Architectural District Revitalization Plan details a portion of these structures, but many others such as Salaglula Pools just south of the district could also benefit.

Origin of the Inalåhan Name

The village’s original Chamorro name is Inalåhan, but the name was incorrectly recorded by the Spanish when they came to the island. The origin of the name Inalåhan is contested, but there are two stories commonly discussed. The first says that the name may refer to åla or the large woven coconut-leaf harvest baskets that were once well-known in the village. The second suggests the Inalåhan is derived from hålla, which means to pull something with a rope (Bebauta, 2009).

Chief Gadao

The village houses a number of legends that predate Spanish colonization. One of the most famous is about the encounter between Chief Gadao and Chief Mataquana. Villages on Guam took pride in the strength and courage of their chiefs. Mataquana, the chief of Tumon Village was considered to be amongst the strongest. One day he was told about the amazing strength of Chief Gadao of Inarajan. Mataquana went to Inarajan to challenge Gadao and happened across a small hut. He asked the occupant where he could find Gadao explaining that he wished to prove that he was the strongest chief of Guam.

Mataquana did not realize that he was talking to Gadao. Gadao acted surprised and said that he would introduce Mataquana to Gadao after he had time to rest and eat. During this time, Gadao shook a large coconut tree to harvest coconuts, broke the coconuts in half with his small finger, and wrung the coconuts with his bare hands to obtain coconut milk. Mataquana marveled at the man’s strength and feared that Gadao would be much
stronger. After Mataquana rested, he asked the man the way back home and boarded his canoe. As Mataquana paddled in one direction, Gadao paddled the opposite. The canoe soon split in half with each Chief rowing to their respective villages (Anderson, 1999).

Spanish History

The village was one of the Spanish’s main villages in the 1600s. The layout of the village was designed in the Spanish custom with the church as the central focus (Babauta, 2009). Saint Joseph’s Church represents Catholicism’s long history on Guam. The church is named after the village’s patron saint. It has been built multiple times, but still remains on its original site (Joint Region Marianas, 2011).

Father Jesus Baza Duenas, a local martyr and the second Chamorro to be ordained as a priest, is buried at Inarajan. Father Duenas is an example of resistance to the Japanese occupation of the island during World War II. He was tortured by the Japanese for information on the whereabouts of George Tweed, an American navy radioman, who had escaped capture by the Japanese with the help of Chamorros. Father Duenas was beheaded on July 12, 1944 (Forbes, 2009).

Current Participatory Interests Amongst Locals

The 2010 Star Report found that potential active participation in a cultural center or visitor attraction in a cultural center or visitor attraction is highest in the southern part of the island. 37.1 percent of those living in the southern area of Guam were interested in actively participating in a either a cultural center or visitor attraction in their village (QMark Research, 2010, p. 18).

Conclusion

Inarajan Village’s distance from the main tourist hub of Guam has contributed largely to the village being nearly untouched by change. This visual air adds to the historic and cultural character of the village. A lack of regular maintenance, however, takes away from it. St. Joseph’s Church provides an ongoing focal point for residents to gather and celebrate major events. The warmth of contact within the church continues throughout the narrow streets of the village while history and culture echo through the architecture and families that live there.
Inarajan Historic Architectural District Revitalization Plan

Overview

Inarajan is the last remaining example of the scale and character of villages during the early part of the 20th century (Cruz, 2011). Today, it is clearly distressed (Makio, 2011). The Inarajan Historic Architectural District Revitalization Plan (Revitalization Plan) seeks to improve Inarajan Village’s future by enhancing Inarajan’s Architectural District (District). The District is located on the southern edge of Inarajan Bay with a southern border that extends at the north end of Inarajan Elementary School and the Salaglula Pools.

The District has been listed in the National Register of Historic Places since 1974. The 1974 application identifies 66 historic structures and 78 contributing structures (American Institute of Architects Guam and Micronesia Chapter). Approximately 30 historic structures have been demolished in the past 30 years and others have fallen into disrepair.

The Plan’s Significance

The Plan is meant to be a holistic approach to sustain Inarajan’s future. It continues to be a work in progress with the help of the Guam Preservation Trust, the Historic Inalahan Foundation, Mayor Franklin Taitague, and the residents of Inarajan (Pacific News Center, 2011). The Plan’s immediate goal is to show residents a vision of what Inarajan could be, share a roadmap to get there, and motivate people to become a part of the restoration process (Pacific News Center, 2011).

The long-term goal of the Inarajan Revitalization Plan to the Guam Preservation Trust is to further prevent the current out migration of southern residents and the generation of small, local industries (Pacific News Center, 2011). It is meant to be a potential prototype for other southern villages finding themselves in the same situation as Inajarra (Pacific Worlds and Associates, 2003).

“You go to the village right now [and] you see that it’s distressed. [It] used to be a vital village with . . . bakeries . . ., mom and pop stores, barber shops, and all these other affiliated support multi-disciplined, multi-use activities going on. And we wanted to bring that back.” (Makio, 2011)
The Plan’s Goals

This section looks at the Preliminary Recommendations of the Inarajan Historic Architectural District Revitalization Plan at its 60 percent submittal mark. The 30 percent submittal was completed on July 2010 that included a general physical survey of the District structures and research of background information from government plans and precedents to the Revitalization Plan. A survey was distributed before the 30 percent submittal to gather the opinions of stakeholders. The purpose of the survey was to better understand the desires of the stakeholders. A stakeholder meeting was held on April 27, 2011 in which the Guam and Micronesia Chapter of the American Institute of Architects presented their recommendations for comment. Completion of the Revitalization Plan was scheduled for August 2011, but stakeholders voiced concern that more time should be allotted to further review the recommendations (American Institute of Architects Guam and Micronesia Chapter). The Plan is supposed to be conducted in phases over 15 years once recommendations are solidified (Pacific News Center, 2011).

There are three planning principles guiding the development objectives of the Preliminary Recommendations:

1. Enhance the District’s vitality and livelihood
2. Preserve and enhance the District’s historic significance and character
3. Improve the public realm of the District

Vitality and Livelihood

The District’s vitality has declined over the years due to a number of factors including residents and businesses moving away. Less human presence contributed to buildings falling into disarray as owners took less interest in maintenance.

Developing Business Networks

Certain businesses work well with the character of the village. The Revitalization Plan seeks to entice those businesses back and help the local people in Inarajan understand how they can take advantage of some of those business opportunities (Makio, 2011).

Businesses already exist and there is room to expand. For example, someone rents the kitchen at Gef Pa’go who sells malasadas every morning. They have a clientele who buy a dozen malasadas every morning and take them to work. It is conceivable to expand into specialty foods, corn tortillas, or even cakes through the use of the Chamorro oven at Gef Pa’go. Other possibilities that make use of the existing structures include a little bank, a little exercise gym, boutiques, snack places, and restaurants (Pacific Worlds and Associates, 2003).

Historic Significance and Character

The village itself has a distinct character articulated through the public realm and building characteristics. The public realm (e.g., the street and open spaces) has been essentially unaltered since 1974 while a fair amount of key building characteristics (e.g., massive stairs, balconies, porches, and the bodega) remain (American Institute...
of Architects Guam and Micronesia Chapter). The street and open spaces compose distinct features of the District. San Jose Street and St. Joseph’s Church are elements that date back to the Spanish missionary origins of Inarajan Village (American Institute of Architects Guam and Micronesia Chapter).

**Public Realm**

The public realm’s greatest concern is safety as the number of dilapidated buildings pose significant threats. These threats grow during festivals and large events when residents and tourists gather in large numbers on the street.

**Survey results from the Revitalization Plan**

A Stakeholder Survey was conducted as part of the Inarajan Historic Architectural District Revitalization Plan (Figure 6, Figure 9, Figure 10, and Figure 11) (American Institute of Architects Guam and Micronesia Chapter, 2013, p. 11). The results from the survey help identify village attributes that residents take pride in, but are not conclusive as the response rate was low (Pacific News Center, 2011). Still, the survey results provide some local insight on the direction that the village may wish to go and can help guide the future steps of the Revitalization Plan.

This assumption appears to be realistic as so many have moved out of the village in search of greater work opportunity (See “Guam Overview”). The survey also indicated that 85% of respondents believe that revitalization will benefit them if it generates tourism activities.

Figure 7 “Ways You Want to See Inarajan’s Heritage Acknowledged” indicates that there are a number of ways that locals would like to see Inarajan’s Heritage shown. Still, the figure works on the assumption that villagers want to see Inarajan’s heritage acknowledged at all. This assumption appears to be realistic as so many have moved out of the village in search of greater work opportunity (See “Guam Overview”). The survey also indicated that 85% of respondents believe that revitalization will benefit them if it generates tourism activities.

Figure 7 “Requested Improvements” indicates that preservation of historic homes and the recreation center is a priority. Village clean-ups and recreation also stand out as improvements of reasonable importance.

**Ways You Want to See Inarajan’s Heritage Acknowledged**

![Ways You Want to See Inarajan’s Heritage Acknowledged](source: American Institute of Architects Guam and Micronesia Chapter, 2013)
Select Survey Results from Inarajan Historic Architectural District Revitalization Plan

**Requested Improvements**

- Historic Home Preservation
- Recreation Center Preservation
- Village Clean-Up
- Less Burglary
- People
- Underground Power
- Sidewalks
- Gym
- Youth Programs
- Pride in Yard / House Appearance
- More Sports / Recreation
- Complete Overhaul
- Road
- Bus Stop
- Restaurants/Gift Shops w/Cultural Designs

**Active and Passive Recreation**

- Gef Pago
- Mayor’s Office
- Basketball Court
- Inarajan Pool
- Community Center
- Inarajan Bay: Paddling/Swimming
- Village Outskirts: Walking
- Picnics
- Sports
- May’s Retail Store (Teen Hang-Out)

**Residents’ Pride and Joy**

- Friends / Family
- Hospitality
- Religion / St. Joseph Church
- Village Fiesta
- Holiday Festivities
- Gef Pago
- Inarajan Pool / Bear Rock
- Gadao’s Baseball Team
- Culture, Customs, Traditions
- Respect
- Village Beautification
- Gadao’s Cave
- HIF
- Children’s Education / Future
- Nature
- No Answer

**Businesses and Services Needed Near Inarajan**

- Bank Services
- Medical Services
- Gym
- Community Center
- Grocery Store
- Supply Store / Hardware Store
- Eating Establishments
- Reliable Transportation System
- Bus Stop / Public Bus System
- Agana
- Up Town
- Laundry Mat
- Farmer’s Market / Local Produce
- Small Gift Shops
- None
- Not Applicable
- No Answer

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Figure 8. Requested Improvements
Source: American Institute of Architects Guam and Micronesia Chapter, Source: 2013

Figure 9. Active and Passive Recreation
Source: American Institute of Architects Guam and Micronesia Chapter, Source: 2013

Figure 10. Residents’ Pride and Joy
Source: American Institute of Architects Guam and Micronesia Chapter, Source: 2013

Figure 11. Businesses and Services Needed Near Inarajan
Source: American Institute of Architects Guam and Micronesia Chapter, Source: 2013
Gef Pago is clearly indicated to be the main activity in Inarajan (Figure 9). The community center is not indicated to have much active or passive activity. That fact combined with Figure 8 indicates that locals are seeking public gathering places. Ideal places will likely be air-conditioned buildings or safe, well-ventilated outdoor spaces with a roof.

Residents identified St. Joseph’s Church to be the highest point of pride for the village while Gef Pago and Inarajan Pool came in second.

**Issues**

Many structures exist in the District that are in poor condition and pose threats to safety. The owners of these structures and the land they are built on are often ambiguous. These uncertain ownerships create a significantly large roadblock that prevents the Revitalization Plan from moving forward (American Institute of Architects Guam and Micronesia Chapter).

**Conclusion**

The Revitalization Plan offers residents a vision to imagine and work towards. The Plan may be asking the residents to commit to a high level of change in a vision that has few immediate benefits to them. The small turnout at stakeholder meetings may have been partly caused by the lack of appeal (Cruz, 2011).

There is an underlying attitude in the Revitalization Plan that the only way for it to be successful is if several parties unite on a shared dream. While many of the goals in the Revitalization Plan are achievable, the main strategy of the Revitalization Plan appears to be based on an “if you build it, they will come” principle. The effectiveness of this guide in the market has declined considerably over the years and should be reconsidered.
Part II: Assessment
Community Identity and Placemaking

Overview

A community’s identity is formed by the physical attributes within its borders and the culture of the people who live there. Placemaking is a multi-faceted approach to the planning, design, and management of public spaces. It looks at the needs and aspirations of the people who utilize those spaces and creates a common vision based on those pieces (Schrempp, 2008).

General Types of Attractions

There are eight general types of attractions that a community can choose to highlight (Messer, 2012, p. 63):

*Art* – This subset of cultural features can create a distinctive atmosphere through the use and display of locally produced works, and performances.

*Built Attractions* – Examples include amusement parks, zoos, and theme resorts. They offer entertainment in a created environment. Also, don’t neglect “experience” attractions related to the local economy, such as farmers markets and tours of plants, mines, cheese factories, or wineries (Messer, 2012, p. 63).

*Business* – Your community’s businesses and local industries can be attractions for business travel. Visits to local corporations, convention centers, or legal offices can be extended to include other area highlights (Messer, 2012, p. 64).

*Events* – These are important attractions for many communities. Celebrations can be built around an unlimited number of themes, such as harvest time, foods, physical fitness, or music. Events can be the main draw or reinforce other attractions by introducing newcomers to your town and its offerings, fill slow times of the year, distribute visitors over a longer season, or offer a changing product that draws repeat visitors. Such attractions are often intended for both local people and tourists (Messer, 2012, p. 63).

*Family and Friends* – This category is the number one reason people travel in the United States. Residents thus become an important dynamic to community’s makeup. You can keep visitors in the area by providing both visitors and residents information about local attractions (Messer, 2012, p. 63).
Historic and Cultural Resources – Contributions made by previous generations are what distinguish one place from another; the human drama of history brings locations and events alive. Whatever your area’s past, sites can be preserved, restored, interpreted, and expanded to become part of a sightseeing circuit (Messer, 2012, p. 63).

Medical and Government – Travelers [attracted to this category] rely heavily on local hospitality services and amenities. By identifying and promoting other community attractions, you may expand their stay or encourage them to visit your community for leisure purposes (Messer, 2012, p. 64).

Natural and Scenic Significance – [This category offers a common] starting point when thinking about attractions. The landscape of a place, particularly topographic and aquatic features, sets the tone in creating options and constraints for visitors. It serves as a backdrop for tourist activities and is an important part of the product. (Messer, 2012, p. 62).

Additional Types

Outdoor recreational activities – These activities can include the use of motorized equipment (e.g., snowmobiling, power boating), self-propelled activities (e.g., bicycling, canoeing, cross-country skiing, pursuits that consume resources (e.g., hunting, fishing), or appreciative activities (e.g., birding, nature photography). Spending for such activities can range from minimal amounts to thousands of dollars (Messer, 2012, p. 62).

Cultural Heritage Tourism

The Travel Industry Association of America conducted a survey in 2003 regarding the popularity of cultural heritage tourism in America. The study found that historic and cultural travels had the following characteristics (Travel Industry Association of America, 2003)

Inarajan’s Tourism Attributes

TripAdvisor

Users of TripAdvisor in Japan and the United States recommended 46 places on Guam (TripAdvisor, 2013). Two locations were identified to be in or on the periphery of Inarajan: Gef Pago and Talofofo Falls Park. This publicly available information helps communities identify points of interest that visitors and/or residents consider important. While most points are commonly known, others may come as a surprise. In addition to identifying destinations, TripAdvisor also allows online respondents to rank their experience at each destination. Rankings have been discarded in this project because there are only a few points located in or near Inarajan.

Local Points of Interest

Multiple points of interest outside of those indicated on TripAdvisor exist and may provide supporting incentive for tourists to visit a main spot (Figure 12).
Walkable Points of Interest

Visitors like to explore the vicinity of destination points in hopes that they will find something on their own. This adventurous spirit reasonably assumes that local supporting features will be located near larger, more important points.

A 15-minute walk is an average estimate of how far a person is willing to walk before they choose to drive. A village can strengthen supporting features to enhance the main attraction by identifying the features within a 15-minute walk of the primary draw.

Findings

Inarajan offers many types of attractions within its village boundaries including: Gef Pago, multiple peaks, beaches, parks, churches, cemeteries, pools, and lookout points. This variety allows the village a choice in what it focuses as it polishes its identity. Popular spots provide an easy way to narrow down identity themes while resident surveys identify the areas in which locals are most passionate about.

Gadao’s Cave which was indicated in the survey of the Inarajan Historic Architectural District Revitalization Plan to be a third-tier point of pride and joy for locals (Figure 10) does not appear in Figure 13 or Figure 14.
Highlighting Gadao’s Cave or indicating where it is in relation to the most popular attraction could make Inarajan Village even more attractive to visitors. Inarajan can more strongly market itself to visitors while enhancing community features if it combines the village aspirations with what is already popular with travelers.
Social Network Analysis

Overview

Social network analysis looks at how society functions. It concentrates on the patterns of relations between individuals, organizations, and groups rather than focusing merely the individual and their attributes (Berkowitz, 1982) (Wellman, 1988) (Wasserman & Faust, 1994). Understanding relations helps explain the nature of social behavior within the network structure (Cheliotis, 2010). For example, the behavior and attitudes of network members may create clusters in which knowledge is shared more freely or isolation points in which integral members have limited access to key information. Network analysis allows the researcher to see connections from multiple perspectives including how relations are held together and how one relation can affect another further down the line (Barnes, 1972).

Terminology

A clear understanding of network analysis requires a familiarity with a few terms that help in breaking down the visualizations that frequently accompany analysis (Garton, Haythornthwaite, & Wellman, 1997).

Nodes, or vertices, represent individual actors or entities within a network (Aldhous, 2012). These actors can represent anything from points at which information is held or produced to gateways that determine where and how information flows.

Edges, or ties, represent the relationship between individuals (Aldhous, 2012). Relationships include friendship, work-related connections, and anything else the analysis chooses to use to identify a bond.

Degree is a simple count of the number of connections for each node. Networks with directed flows break down this term into two categories: in-degree (the number of incoming connections) and out-degree (the number of outgoing connections) (Aldhous, 2012).

Centrality aims to quantify a node’s importance or influence with a network through a number of metrics (Hansen, Shneiderman, & Smith, 2011) (Hannerman & Riddle, 2011).

Betweenness centrality is a type of centrality that describes how important a node is in bridging different parts of a network. It highlights nodes that, if removed, would cause a network to fall apart (Aldhous, 2012).

Closeness centrality is a type of centrality that measures how close a node is to all of the other
nodes in a network on average. It highlights nodes that connect to other nodes with a lower number of edges (Aldhous, 2012).

_Eigenvector centrality_ is a type of centrality that calculates not only a node’s own degree, but also the degrees of the nodes to which it connects (Aldhous, 2012).

**Types of Networks**

Networks may be considered from a number of perspectives. The method of analysis determines the type of network that will represent a system. This section discusses three general types of networks.

The _egocentric network_ focuses on one particular individual. The people whom this individual, or the “ego,” is connected to are called “alters.” This basic egocentric network is a “1-degree” ego network, defined as a network composed of an ego and his/her alters. If the same network were to also display which alters are connected to one another, the network would then become a “1.5-degree” network. It would become a “2-degree” network if the friends of friends were displayed as well. The associated sub-networks in such an expanded network are considered subgraphs. An egocentric network may extend as far out as the researcher wishes to permit. However, higher-degree networks (e.g. 2.5, 3, and so forth) become less focused and more difficult to follow (Hansen, Shneiderman, & Smith, 2011, p. 36).

A _full network_, or complete network, contains all individuals or entities of interest, as well as the connections amongst them. All individual egos are treated equally. Full networks are frequently derived from common social media systems such as Twitter and Facebook. Conducting a full network analysis is not always feasible and the results may be too convoluted to provide insight to a single task (Hansen, Shneiderman, & Smith, 2011, p. 36).

An analysis of a _partial network_ can be more insightful than an analysis of a full network. Partial networks are formed when constraints are placed on a full network. These limitations allow the analyst to focus in on a topic rather than an ego for study. Constraints may be based on geography, interests, time frames, and even comments or hash tags (Hansen, Shneiderman, & Smith, 2011, p. 36).

**Survey Design**

A survey was used in this project to identify the key players in the Inarajan Historic Architectural District Revitalization Plan. The purpose of the survey was to better understand how networks are formed, cultivated, and maintained in order to make planning processes more equitable, efficient, and well-rounded.

The survey began with a handful of response candidates. The people who were subsequently considered to be key players in the success of the Revitalization Plan of Inarajan Village were each indicated by either the first respondents or those they indicated. The survey uses partial network analysis to gain insight into the relationships that provide the backbone to the Revitalization Plan by no means provides a complete picture of the relationship structures within the network that will determine the success of the network.
Figure 15. Social Network of Inarajan Historic Architectural District Revitalization Plan

Source: [Cruz, 2013]
**Results**

A visual representation of the results can be seen in Figure 15. The people who have the highest level of centrality are located near the middle; those with a higher betweenness factor have a larger diameter; and those with a higher Eigenvector are darker. Two people in the figure stand out: Dr. Judy Flores and Rick Meno.

**Section 1 and 2: Basic Information**

Section 1 asks the survey respondent to provide basic self-identifying information. Section 2 asks the survey respondent to indicate people that they believe are vital in the long-term success of the Inarajan Village Revitalization Plan.

**Section 3: Relationships**

This section of the survey was broken up into seven parts to identify the main type of professional connection between the correspondent and a person they identified as both important to their professional network, as well as the long-term success of the Inarajan Revitalization Plan.

**Problem-solving relationships**

This sub-section identifies people who provide information that helps solve problems or seize opportunities in the Revitalization Plan for Inarajan Village, as well as the level of benefit they provide to the respondent in the information that they provide. The level of benefit is ranked from one to five in which a one ranks as “No Benefit,” a three ranks as “Average Benefit,” and five ranks “Essential Benefit.”

It is practical to assume that the people indicated in this section would be ranked as aver-
age benefit to essential benefit to a problem-solving relationship. Therefore, the most curious cases were those that ranked lower than a three. While no one was valued as having “No Benefit,” there was a handful that ranked at a two or “Little Benefit.” These people tended to have fewer connections than those who held higher rankings.

**Inarajan-specific expertise**

This sub-section identifies people who provide information specific to Inarajan Village and the level of benefit that the indicated person provides to the respondent. The level of benefit is ranked from one to five in which a one ranks as “No Benefit,” a three ranks as “Average Benefit,” and five ranks “Essential Benefit.”

Rankings of fives and threes stood out. It appears that it was more common to have people with “Essential Expertise” or “Average Expertise” than any other rank. Those who ranked low tended to have higher values in other areas such as political support or access to influential people.

**Political support**

This sub-section identifies people who provide political influence that garners further project support to the respondent. The level of benefit is ranked from one to five in which a one ranks as “No Benefit,” a three ranks as “Average Benefit,” and five ranks “Essential Benefit.”

Political support was not limited to people in political positions. Many people ranked at five were in non-profit and private sectors as well.
Access to non-governmental decision makers and influential people within Inarajan

This sub-section identifies people who provide access to non-governmental decision makers and influential people within Inarajan to the respondent. The level of benefit is ranked from one to five in which a one ranks as “No Benefit,” a three ranks as “Average Benefit,” and five ranks “Essential Benefit.”

Judy Flores, Rick Meno, and Franklin Taitague were among those indicated multiple times at a level of five. It is possible that they hold a high rank because they personally maintain strong influence in the village. Those who ranked lower tend to be supporting members.

Creativity and new perspective when problem solving

This sub-section identifies people who provide creativity and new perspective when problem solving to the respondent. The level of benefit is ranked from one to five in which a one ranks as “No Benefit,” a three ranks as “Average Benefit,” and five ranks “Essential Benefit.”

New perspective is not directly correlated to frequency of interaction or lack thereof. There appears to be some correlation between the level of creativity and new perspective to the quality of the relationship’s problem-solving attribute.

Career advice and developmental feedback to make me more effective at work

This sub-section identifies people who provide career advice and developmental feedback to make the respondent more effective at work. The level of benefit is ranked from one to five in which a one ranks as “No Benefit,” a three ranks as “Average Benefit,” and five ranks “Essential Benefit.”
Career advice and developmental feedback does not appear to correlate with the frequency of interaction. There does appear to be slight overlap between the effectiveness of career advice with the level of experience of the indicated person.

Personal support and motivation

This sub-section identifies people who provide personal support and an ear to let the respondent vent and keep focused. The level of benefit is ranked from one to five in which a one ranks as “No Benefit,” a three ranks as “Average Benefit,” and five ranks “Essential Benefit.”

Personal support does not appear to be a major factor in defining how cohesive the network is. The number of people indicated to offer levels of benefit that ranked between one and four was high and fairly distributed. Still, there is a high number of level fives so the many within the network do offer support from time to time.

Section 4: Scales and flow

This section is divided into four parts to determine weights of connections inside the social network.

Frequency of interaction

This sub-section identifies how frequently the respondent currently interacts with indicated people on any project at work or at home. A one denotes that the indicated person is never interacted with, a two denotes that the indicated person is interacted with a frequency of two to three times per year, a three denotes that the indicated person is interacted with a frequency of two to three times per year, a three denotes that the indicated person is interacted with a frequency of about every other month, a four denotes that the indicated person is interacted with a frequency of one to two times per month, and a five indicates that the
indicated person is interacted with a frequency of every week.

Frequency of interaction is highly inconsistent amongst correspondents. Some never interact with those they indicated on the survey. This low level of interaction could be in part to disconnected groups or work purposes.

Compatibility

This sub-section identifies the professional compatibility between a respondent and his/her indicated person. A one denotes that the respondent prefers not to work with the indicated person, a two denotes that the respondent considers himself/herself to work with others better than the indicated person, a three denotes that the respondent works with the indicated person as well as with others, a four denotes that the respondent works better with the indicated person better than others, and a five indicates that the respondent considers himself/herself to work extremely well with the indicated person.

Most respondents indicated a high level of professional compatibility with the key stakeholders they listed on the survey. There are few people who appear to be integral to the process and difficult to work at the same time.

Information flow

This sub-section identifies the direction that day-to-day, ground-level information about Inarajan Village flows between the respondent and the indicated person. A one denotes that the indicated person almost exclusively provides the respondent with information, whereas the respondent rarely provides any information; a two denotes that the indicated person primarily provides the respondent with information; a three denotes that the indicated person and the respondent provide each other with equivalent amounts of information; a four indicates that the respondent primarily provides the indicated person with infor-
and a five indicates that the respondent almost exclusively provides the indicated person with information whereas the indicated person rarely provides any information.

The majority of respondents felt that they equally shared information with those that they indicated on their survey. This was one of the few results that formed an almost perfect bell curve. Information flow does not appear to correlate with the frequency of interaction.

Hierarchy

This sub-section identifies the primary direction that instructions or directives flow between indicated persons and the respondent. A one denotes that the indicated person almost exclusively directs the respondent with instructions, whereas the respondent rarely directs the indicated person; a two denotes that the indicated person primarily directs the respondent with instruction; a three denotes that the indicated person and the respondent provide each other with equivalent amounts of direction; a four indicates that the respondent primarily directs the indicated person with instructions; and a five indicates that the respondent almost exclusively directs the indicated person with instructions, whereas the indicated person rarely directs the respondent.

The majority of respondents felt that they were on equal level of instruction or directives flow with those they indicated on their survey. There are fewer people as you go further away from a level of three. It is rare for a respondent to indicate that they feel that they are of a much higher rank in this regard. Respondents indicate that they are at the fairly accessible level of four even if they do provide instructions. It is more common for respondents to be discrepant when they are receiving instructions.
Findings

Enough people were reached through the survey to hit a point in which potential respondents began replying to survey requests with statements suggesting they did not believe they were vital to Revitalization Plan. This result may also be due in part to humility or a lack of confidence in the potential respondent as was seen in interviews conducted in the summer of 2012. This characteristic in conjunction with a belief that effective efforts are scarce may lead to limited community feedback.

Religious figures were scarcely identified amongst the respondents as integral to the long-term success of the Revitalization Plan despite St. Joseph’s Church being identified as a major point in pride for locals (Figure 10). Phone interviews with volunteers at the church also ended with a limited willingness to take on additional responsibility.

This network analysis found that residents were hardly indicated at all. Most people who were indicated to be key players in the Revitalization Plan were affiliated with a government or private organization with a direct connection with the future development of Inarajan Village.

It is possible that those who did respond to the interview do indeed have a personal stake in addition to merely a professional one, but many do not make Inarajan their home. Instead it appears that it is the personal ties that respondents have with each other outside of their profession and the relatively laterally leveled nature of the network’s hierarchy and information flow that form the potential for the network to succeed into the future.
Part III:
Conclusion
Conclusion and Recommendations

A familiarity with the trends that are occurring throughout the island and their causes help identify the best means to support Inarajan into the future. Tourism is amongst the most fundamental industries of the island. Merely attempting to meet the needs of the visitor is not enough to provide a quality experience; the resident must become involved as well. The resident must be engaged in the decision-making process and have his/her opinion acknowledged if this is to happen.

**Improve the Revitalization Plan’s Network**

This project’s social network analysis of the Revitalization Plan displays the extent to which the public’s participation is limited. No representatives of the church or volunteer groups affiliated with the church were clearly identified through the survey despite numerous counts of vocal input stating that the church was a vital part of the community. In addition, organizations such as the United States Small Business Association and the University of Guam’s business development program were only peripherally acknowledged in the network. Representatives of those organizations felt that they had a minor role in the long-term success of the Revitalization Plan of Inarajan. Showing these organizations how they fit into the Revitalization Plan will strengthen the Revitalization Plan’s ability to progress.

**Future Steps: Village Network Analysis**

A clear understanding of how individual villages connect with each other throughout the island is integral to strengthening the networks with each respective village. In addition, seeing other villages rally behind a shared goal would help further garner local support to existing aspirations of the same suit.

An in-depth analysis of a village network is beyond the scope of this project as it would require additional surveys and placemaking analysis for multiple villages. An overview of the potential of a village network analysis can still be had with earlier information.

TripAdvisor identifies 46 destination points throughout Guam (Figure 16). Walkable distances centered around each destination point can be mapped out as well (Figure 17). The points offer potential routing markers. The point in Inarajan is clearly in line with points along to the west and east along the main road of Guam. Points are also
Conclusion and Recommendations

Figure 16. TripAdvisor’s 46 Indicated Tourist Destinations
Source: (TripAdvisor, 2013)

Figure 17. 15-Minute Walk Radii around TripAdvisor’s 46 Indicated Tourist Destinations
Source: (TripAdvisor, 2013)
evidently clustered near the central tourist area of Guam. The benefit of being disconnected from the main areas of tourists is the opportunity for Inarajan to stay true to its character and the chance for the adventurous tourist to truly explore.

Inarajan should target Merizo and Umatac as its first partners in route creation since they together comprise the three southern villages of Guam (Pacific Worlds and Associates, 2003). Multiple stories already exist within each village. Tying them together in a manner that allows the adventuring tourist to discover them for himself/herself would create an experience that stands apart from beaches and shopping.

**Targeted Tourism, Specialization, and Market Segmentation**

Communities often think that everyone is a potential visitor when they begin using tourism as an economic tool. A generalized marketing strategy will not work in today’s market. Each person in the U.S. is bombarded with over 3,000 targeted advertisements every day (Committee on Communications, 2006). Those in Japan are likely to face a similar amount of advertisements each day as well.

It is impossible to offer everything to all visitors. It is also unwise to extend resources further than is replenishable. Potential visitors can be broken down into smaller, more uniform groups through market segmentation. Sending the right message to the right group increases an advertisement’s cost-effectiveness. Developing profiles of the main visitor types who are already visiting the village and combining them with an analysis of local attractions and services can help identify additional market segments to target (Messer, 2012, p. 88).

Examples of current market groups that can be further segmented include shopping and sightseeing. Shopping was indicated to be the most popular among Japanese tourists as 57 percent partook in the activity. Sightseeing ranked as the second most popular activity at a participation rate of 36 percent (QMark Research, 2012, p. 62).

**Target Market**

Most bus tours to the southern section of Guam have been cancelled as high gas prices deemed them cost-ineffective to tour companies (Guam, 2012). Visitors will therefore likely travel to Inarajan on their own efforts via car rentals. However, in order for visitors to travel on their own accord, they must have an adventurous spirit and feel relatively safe on such an undertaking. The level of courage and curiosity needed to pursue such a trip is more common with repeat visitors to Guam who have gained the necessary familiarity with the island from their previous excursions. Repeat visitors are generally characterized as older, educated, and traveling without young children (QMark Research, 2012).

Market segments may further include car renters and those partaking in certain tours. The 18 percent of tourists (QMark Research, 2012, p. 36) who rent cars tend to desire the freedom to explore the island on their own. Tours that include Gef Pago, Cocos Island, or a Boonie Stomp offer businesses in and near Inarajan potential piggy-back marketing opportunities. Free-time package
tours comprise of 69 percent of travel planning (QMark Research, 2012, p. 24) and offer the participant more freedom in how they spend their time.

Potential visitors can stem from both nonresidents and residents. Enticing residents to visit Inarajan may have a snowball effect by making the village more appealing to foreign visitors. For example, local cultural dance groups can be allowed to practice in view of visitors

**Attract Specific Market Segments**

Marketing techniques go beyond the scope of this project, but there are simple upgrades that Inarajan can implement to make the village more attractive. Many of these options work better if the villages around Inarajan create a cohesive strategy that ties their strengths together.

Possible strategies:

- Stamps for routes or bucket list with accompanying GVB Passports such as Stamp Rallies (スタムプラリー) and History Trai (歴史巡り)
- Introduce geo-caching and treasure hunting so travelers can experience a safe form of adventure and exploration
- Have treasure hunters find a location where they have to interact with a local for a “prize” such as a stamp or an ice cream.
- Clean up minimarts or at least give them recognizable signage for tourists.
- Provide pamphlets at rental car and tour agent counters regarding routes and specific destinations
- Connect with the University of Guam and Small Business Association to create mentorships and training seminars for small businesses.
- Make local activities more visible by taking down walls around practice areas or providing incentives for groups to practice openly.

**Closing**

The trends that affect the whole island also affect individual villages and the people within them. In order to positively react to the dips and rises to the market, villages need to work together. Social network analysis can help identify how people and groups are connected. These networks begin with individuals and organizations, but must expand to fit the need of larger regional interests. Only when multiple levels of participants are involved will the system function optimally.
Appendix A: Survey
Introduction and Letter to Ask Consent for Participation in this Survey

Hello. My name is Yuki Cruz. I am a graduate student in the Master of Urban Planning Program at the University of Illinois in Urbana-Champaign.

I am conducting research to better understand how networks are formed, cultivated, and maintained in order to make planning processes more equitable, efficient, and well-rounded. I am focusing on the Revitalization Plan for Inarajan Village as a case study to determine plausible social and spatial network developments for the purpose of achieving that goal.

You have been identified as an important member of the social network needed for the Revitalization Plan to be successful. The following survey asks you to identify up to ten people you believe to also be in that network and how they are connected to you through relational questions. By completing this fifteen minute survey, you will help paint a picture of how key actors in the long-term success of Inarajan Village are connected to one another and potentially how to strengthen their ties within the network.

Your decision to participate or decline participation in all or part of this study is completely voluntary and you have the right to terminate your participation at any time. The information you provide will remain confidential and anonymous unless you provide explicit consent to release it. If you have questions about this project, you may contact me at 510-967-4386 or ycruz5@illinois.edu.

I will send you a copy of my final write-up in May. It will contain not only my findings and recommendations gathered from this social network analysis, but also my findings from the related spatial network analysis that I am conducting using geographic information system mapping.

Thank you so much for your time. Your contribution in this survey will help my research tremendously.

Best regards,

Yuki Cruz
Master of Urban Planning Candidate, 2013
University of Illinois at Urbana-Champaign
ycruz5@illinois.edu | 510.967.4386

Survey Outline

1. Your name, organization, and title
2. Key people of the Revitalization Plan of Inarajan Village (name, organization, and title)
3. Relationships to key people
   3.1. Information that helps me solve problems or seize opportunities in Inarajan Village
   3.2. Information specific to Inarajan Village
   3.3. Political support
   3.4. Access to non-governmental decision makers and influential people within Inarajan Village
   3.5. Creativity and new perspective when problem solving
   3.6. Career advice and developmental feedback to make me more effective at work
   3.7. Personal support and an ear to let me vent to keep me focused
4. Scales and flow
   4.1. Frequency of interaction
   4.2. Compatibility
   4.3. Information flow
   4.4. Hierarchy
5. Conclusion
Indication of Consent
Before beginning this survey, please initial below to certify that you have read and understood the above consent form, are 18 years old or older, and are willing to voluntarily take part in the study.

Initial here: _______________________

Survey

Section 1: Your name, organization, and title
This information will be used for research organizational purposes

1. What is your name? ________________________________________________________________

2. What is the name of your organization? _____________________________________________

3. What is your title/position in your organization? _____________________________________
Section 2: Key people of the Revitalization Plan of Inarajan Village

Please identify up to 10 people who are important in your professional network and whom you believe to be vital in the long-term success of the Inarajan Village Revitalization Plan.

These can be people who provide you with information to do your work, help you think about complex problems in your work, or provide advice or personal support helpful in your career. These do not have to be people you communicate with regularly. These contacts will be used to better understand how communication is currently made and how it can be improved. The information here will not be shared publicly without your authorization.

1. Name: ______________________________________________ Title: _____________________
   Organization: ___________________________________________________________________

2. Name: ______________________________________________ Title: _____________________
   Organization: ___________________________________________________________________

3. Name: ______________________________________________ Title: _____________________
   Organization: ___________________________________________________________________

4. Name: ______________________________________________ Title: _____________________
   Organization: ___________________________________________________________________

5. Name: ______________________________________________ Title: _____________________
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   Organization: ___________________________________________________________________

8. Name: ______________________________________________ Title: _____________________
   Organization: ___________________________________________________________________

9. Name: ______________________________________________ Title: _____________________
   Organization: ___________________________________________________________________

10. Name: ______________________________________________ Title: _____________________
    Organization: ___________________________________________________________________
Section 3: Relationships to key people
This section is broken up into seven parts to identify the main type of professional connection between you and the indicated person.

3.1 Please indicate the expected level of benefit provided by each person to you on this project for:

“Information that helps me solve problems or seize opportunities in the Revitalization Plan for Inarajan Village”

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<th>Level of Benefit</th>
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<th>3: Average</th>
<th>5: Essential</th>
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3.2 Please indicate the expected level of benefit provided by each person to you on this project for:

“Information specific to Inarajan Village”

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<th>5: Essential</th>
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</table>
3.3 Please indicate the expected level of benefit provided by each person to you on this project for:

"Political influence that garners further project support"

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<th>1: None</th>
<th>3: Average</th>
<th>5: Essential</th>
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3.4 Please indicate the expected level of benefit provided by each person to you on this project for:

"Access to non-governmental decision makers and influential people within Inarajan"

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3.5 Please indicate the expected level of benefit provided by each person to you on this project for:

“Creativity and new perspective when problem solving”

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3.6 Please indicate the expected level of benefit provided by each person to you on this project for:

“Career advice and developmental feedback to make me more effective at work”

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3.7 Please indicate the expected level of benefit provided by each person to you on this project for:

"Personal support and an ear to let me vent to keep me focused"

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Section 4: Scales and Flow
This section is divided into four parts to determine weights of connections inside the social network.

4.1 Frequency of Interaction
Please indicate how frequently you currently interact with the following people (on any project at work or at home).

Frequency scale
1. Never
2. 2-3 times per year
3. Every other month
4. 1-2 times per month
5. Every week

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4.2 Compatibility

Please indicate how well you and each of the following people work together.

**Professional compatibility scale**

1. I prefer not to work with him/her
2. I work with others better than him/her
3. I work with him/her about as well as with others
4. I work better with him/her than others
5. We work extremely well together
4.3: Information flow
Please indicate the direction that day-to-day, ground-level information about Inarajan Village flows between each of the following people and you.

**Direction of information flow**
1. He/she almost exclusively provides me with information, whereas I rarely provide any information
2. He/she primarily provides me with information
3. We provide each other with equivalent amounts of information
4. I primarily provide him/her with information
5. I almost exclusively provide him/her with information, whereas he/she rarely provides any information

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### 4.4 Hierarchy

Please indicate the primary direction that instructions or directives flow between each of the following people and you.

**Direction of instruction flow**

1. He/she almost exclusively directs me with instructions, whereas I rarely direct
2. He/she primarily directs me with instructions
3. We provide each other with equivalent amounts of direction
4. I primarily direct him/her with instructions
5. I almost exclusively direct him/her with instructions, whereas he/she rarely direct

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Section 5: Conclusion

Thank you so much for helping my research by filling out this survey! If it is okay with you, I would like to further the depth of my research by contacting the people that you have provided in this survey. I would also like to let them know that you consider them an important part of the process of Inarajan’s Revitalization Plan by saying that you referred me to them. All other information that you provided in this survey describing your professional connection to them will remain confidential.

May I contact the people on this list to help me further my research analysis?  
Yes ☐  No ☐

If yes, please either fill out the following sheet with their contact information or return this survey and allow me to send you a partially filled contact sheet to fill out later.

May I use your name when I contact the people you listed?  
Yes ☐  No ☐

May I contact you at a later date with follow-up questions?  
Yes ☐  No ☐

Is there anything that you would like to add or comment on?
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Appendix B:

Works Cited


Certeza, J. Humåtak Community Mural. Photos of Joseph Certeza’s Art on Facebook. Umatac Village, Umatac.


Cruz, C. (2011, October 27). Vice President of American Institute of Architects, Guam and Micronesia Chapter. (J. Tyquiengco, Inter-


Guam, L. r. (2012, Summer). (Y. Cruz, Interviewer)


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