

Investigation of Logistics Advantages of a Regular Container Service in the Port of Guaymas

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July 2008

<http://celdi.asu.edu/>

Background

- Industries along the Phoenix-Hermosillo corridor may not be getting an efficient container service for their import/export operations with the Far East countries
- The ports of Long Beach/LA are commonly used to send/receive containers
- Alternative ports include Guaymas and Ensenada
- However, there's still no formal containers operation at the Port of Guaymas and there is no container terminal
- Logistics Capacity Study of the Guaymas-Tucson Corridor, Arizona State University, 2006
 - Current Capacity of 175k TEUs/yr
 - Could start as a regional port and feeder

Objectives

- Determine under what scenarios the companies of Sonora would benefit with a regular container service in the Port of Guaymas started a regular container service
 - A supply chain analysis for representative companies will be performed
- Extrapolate the potential demand that companies in Sonora might have of the Port of Guaymas based on the results from the previous analysis
 - Use similar companies, similar operations, etc; to have a good estimate
- Use the study as a marketing tool for the Guaymas Port and the region

Specific Goals

- Identify the advantages a container terminal at Guaymas would represent for the region, for companies in Sonora and for companies in the Port's influence zone
- Show specific improvements in terms of cost and lead time reduction for raw material and FGs of participant companies
- Extrapolate the results of the participating companies to all others inside the influence zone of the Port with similar operations, to have a real estimate of potential volume to be moved through Guaymas
- With this information, the Port Authority, Shipping Lines, Terminal Operators, Freight Forwarders, Customers, etc; would have grounds to make decisions and promote the establishment of the container service at Guaymas

Activities

1. Identify representative products for targeted companies
2. Identify relevant logistics networks, service levels and performance metrics
3. Map supply chain activities with particular emphasis on transportation decisions
4. Historical analysis of performance metrics
5. Identify current and most likely containers routes, infrastructure and associated levels of service
6. Assessment of the impact of a container service in Guaymas on performance metrics of the Company (e.g. total landed cost)
7. Estimate potential demand for the port of Guaymas based on the results of extrapolation

Activity 1

Identify Representative Products

- The following information will be requested from participating companies:
 - Pareto Analysis of Active P/Ns per cost, volume and weight
 - ID of P/Ns coming from Asia and/or by sea
 - ID current transportation strategies, costs, lead time, etc
 - Historic information on volumes and costs (e.g. transportation, importation, etc)
- From this information, the P/Ns to be used for the analysis will be selected
 - Most likely we'll base the analysis in ten representative P/Ns, but it will depend on information available

Activity 2

Identify Logistics, Service & Metrics

- Identify current logistics networks (e.g. mode of transportation, routes, suppliers, etc)
- Identify service levels from current suppliers for each part (e.g. lead time, costs, variance, etc)
- Identify performance metrics used to evaluate logistics within each company, e.g.:
 - Landed Cost
 - Inventory Levels
 - Transportation Cost
 - On time deliveries
 - Etc

Activity 3

Map SC and Transportation Activities

- Analyze and map the supply chain activities with special emphasis on transportation and logistics decisions
 - How are decisions made and based in what information
 - What are the available options for each specific case
- Develop the needed analytical and simulation models

Activity 4

Analysis on Historical Performance

- Gather historical data on transportation of raw material and FGs:
 - Volumes
 - Routes
 - Lead Times
 - Costs
- The information must be in terms of the metrics used by each company to obtain a baseline for comparison

Activity 5

ID Routes, Infrastructure and Service

- In the case of material being transported by sea find and analyze the following information:
 - What routes are being used
 - What stops each route has
 - What infrastructure is available during the process
 - What are the levels of service provided in each case
 - What are the transportation lead time ranges
- Also analyze other optional routes to be used

Activity 6

Impact of a Container Service in Guaymas

- Establish potential route(s) to include the Port of Guaymas
 - Must be most-likely routes to be used if the container terminal was activated
- Simulate the use of this new routes with the information of each company
- Analyze results based on the performance metrics of each company
 - Paying special attention to the total landed cost

Activity 7

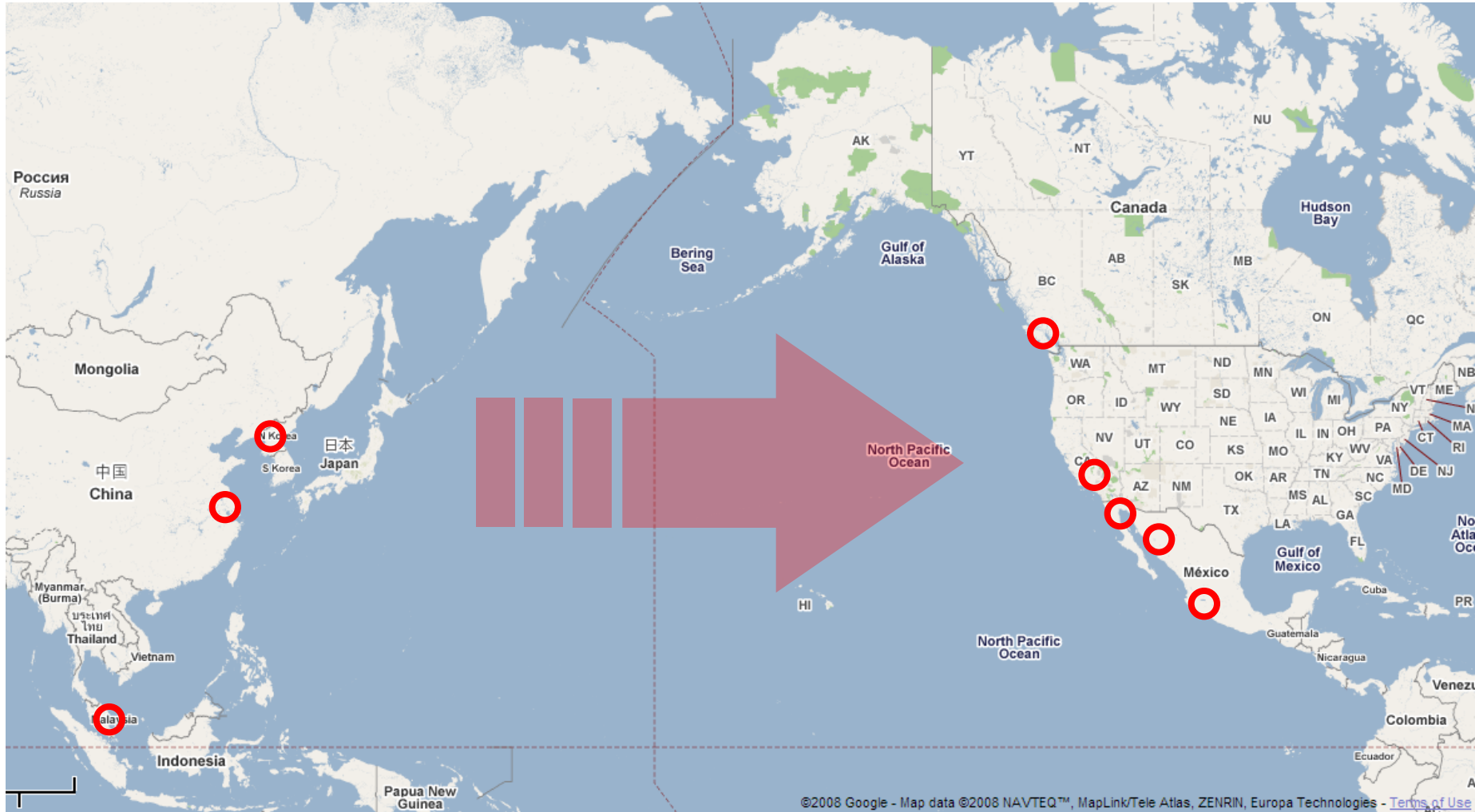
Extrapolation of Results

- Once the results for the participating companies are obtained, summarize them in terms of potential volume to be transported through Guaymas
- Use this information to extrapolate the results to other manufacturing companies in the influence zone of the Port
- Make a real estimation of potential demand to be moved through Guaymas
 - Local companies
 - State-wide companies
 - Influence zone companies

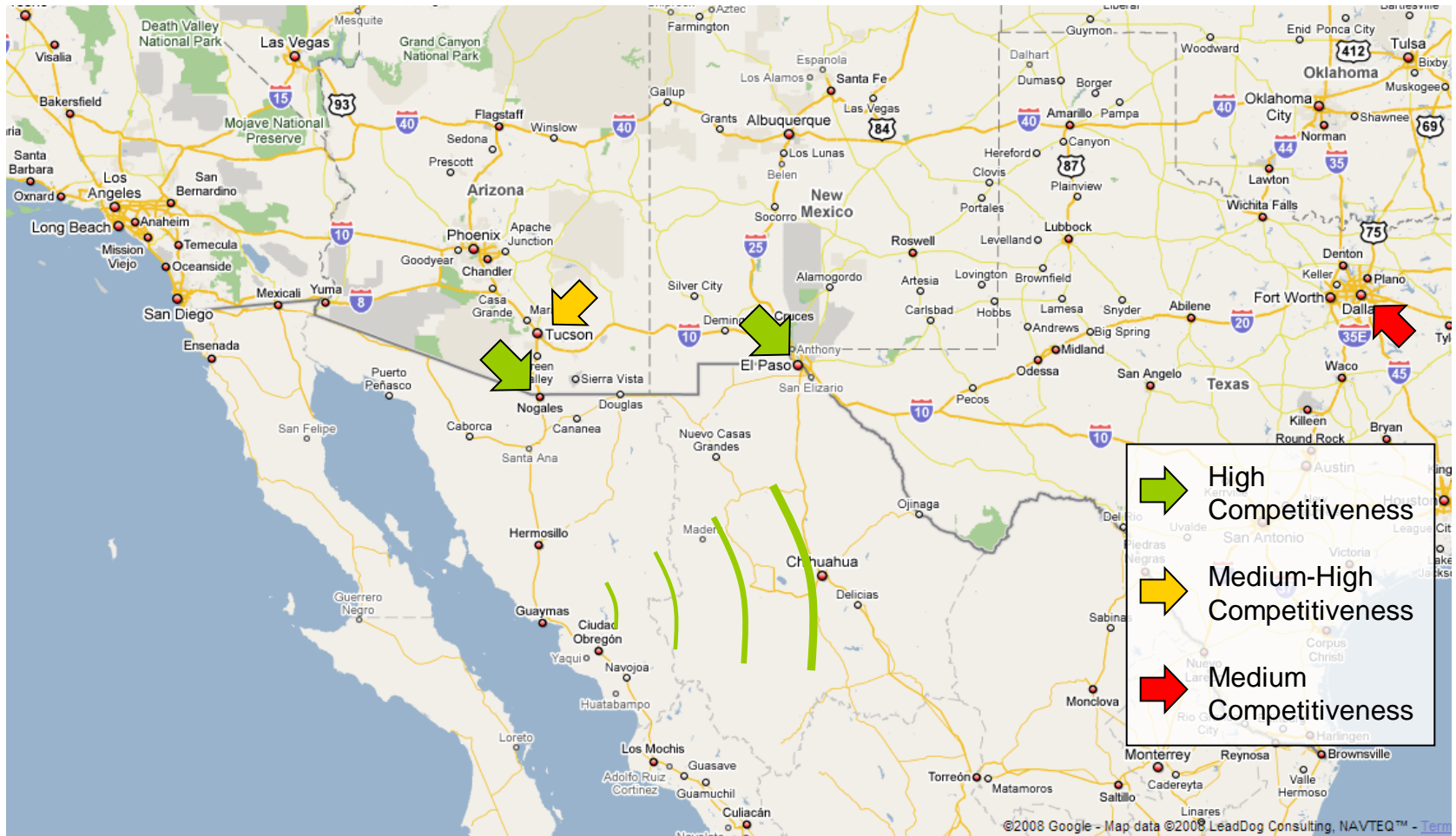
Expected Participation from Industry

- Each company must establish a person responsible for the project within their staff:
 - Must be familiar with the project to provide support
 - Must be able to pull necessary data and information
 - This person will ensure that the assumptions made are verified
- There will be a mid-term meeting with each company with verification and validation purposes, and to make any necessary adjustments on time
- If NDAs will be needed, please provide those at your earliest convenience

Map: Pacific Ocean



Influence Zone (vs. LB/LA and Manzanillo)



Examples of Maritime Routes

Port of Ensenada



BERNARDO MERCADO
 Insurgentes Sur 1898, piso 20
 Col. Florida, 01030 México, D. F.
 Tel: (55) 5010 7780 / 01800 560 8636
 Fax: 01555 010 7727
 E-mail: bernardo.mercado@csavmexico.com
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Rutas Marítimas Norte Sur



Navigation Times

Distance (Nautical Miles)					
Port	Long Beach	Ensenada	Mazatlan	Manzanillo	Guaymas
Long Beach	0	139	1,006	1,206	1,150
Ensenada	139	0	893	1,069	1,026
Mazatlan	1,006	893	0	293	385
Manzanillo	1,206	1,069	293	0	656
Guaymas	1,150	1,026	385	656	0
Time (Hours)					
Port	Long Beach	Ensenada	Mazatlan	Manzanillo	Guaymas
Long Beach	--	6 – 10	41 – 68	49 – 81	46 – 77
Ensenada	6 – 10	--	36 – 60	43 – 72	42 – 69
Mazatlan	41 – 68	36 – 60	--	12 – 20	16 – 26
Manzanillo	49 – 81	43 – 72	12 – 20	--	27 – 44
Guaymas	46 – 77	42 – 69	16 – 26	27 – 44	--

Conclusions

- This project will require the full involvement of Industry
- The results will include the assessment of current logistics practices of the participating companies and the assessment of the market and characteristics of a potential regular container service in Guaymas