



Technical Assistance (TA) to NDWC, Project Initiation

8 December, 2005.
Bangkok, Thailand

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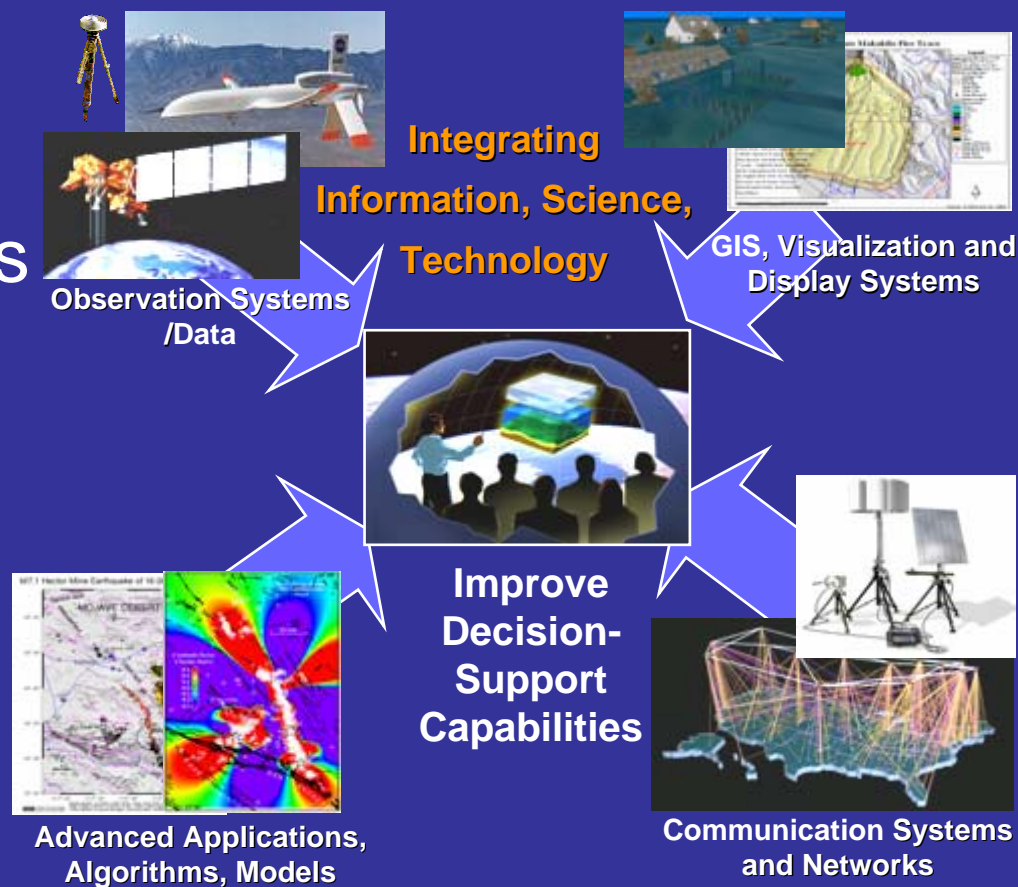
Common Goal

- To help strengthen Disaster Management capabilities to lessen disaster impacts and Save Lives and Protect Properties
- Meeting Objectives
 - Communicate the project scope
 - Involve the stakeholders from the beginning
 - Consult stakeholders on requirements
 - Coordinate and Integrate related activities



About Our Center ...

- Applied Science & Technology
- Information Products Supporting:
 - Policy & Decision Makers,
 - Disaster Managers
 - Humanitarian Assistant



Situational Awareness

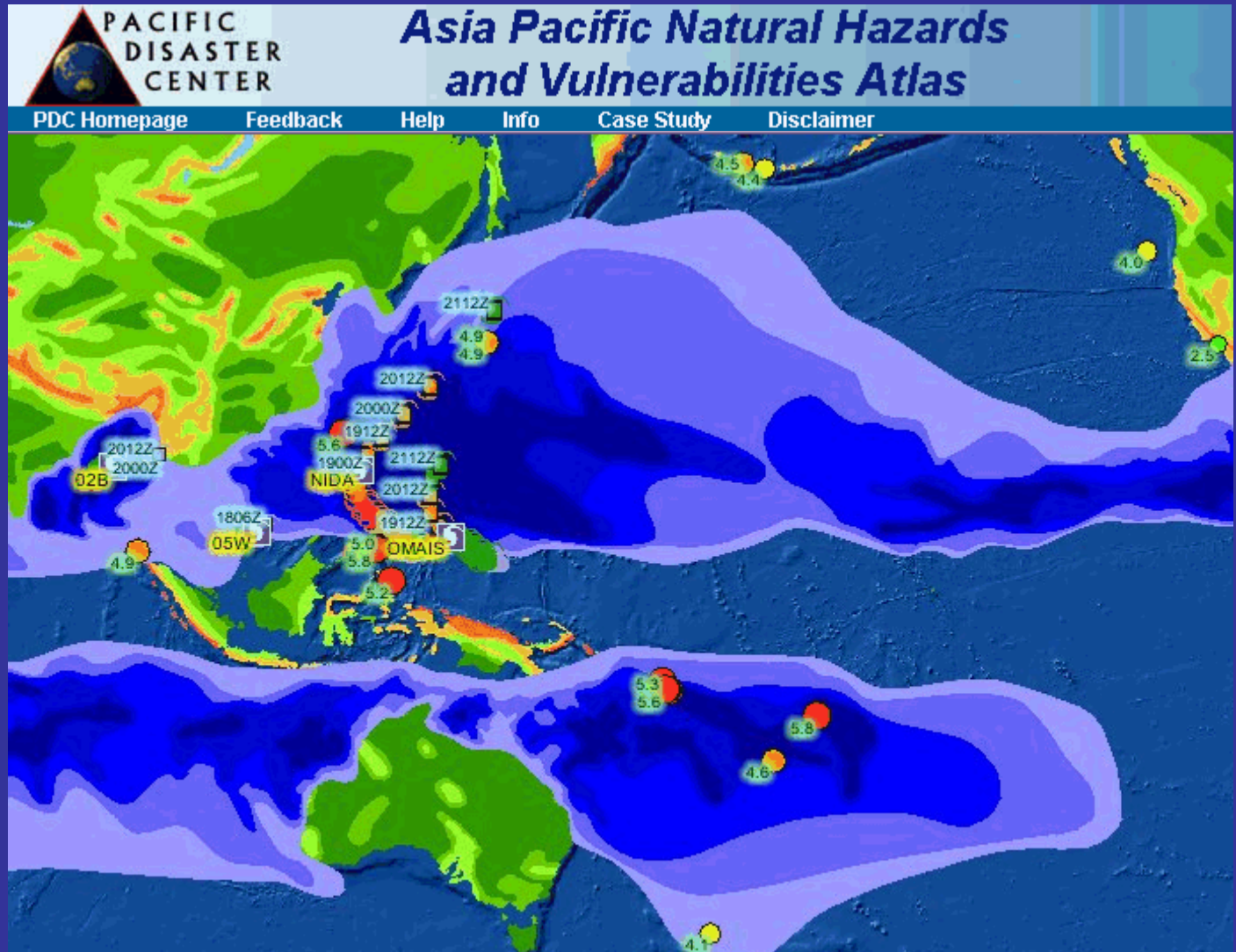
18 May, 2004

Intensity Zones
EQ & Storms

Satellite Images

Airports

Population
Density



Background

- Apr 2004, ASEAN Disaster Info Sharing & Communication Network (DISNet) – DDPM
- Dec 2004, Indian Ocean Tsunami - DDPM Support
 - GIS Support
 - Indian Ocean EQ Notification
- May 2005, NDWC Opening Ceremony
- Mar-Oct 2005, ASEAN ICT Assessment - DDPM
- Jun 2005, NDWC Honolulu NOAA/USTDA Workshop (led to IOTWS)
- Jul 2005, V.M. Plodprasop of NDWC visit to PDC
- Aug-Nov 2005, Concept Paper, USTDA Grant, Contract



Acknowledgments ...

■ Thailand

- NDWC and other Gov Agencies (DDPM, TMD, Dept Mineral, Military, ...) have developed various technical capabilities

■ Regional and International

- US Gov (USAID, NOAA, USGS, USFS, USTDA, ...) and IOTWS program defined integrated regional framework and projects
- Other Gov have offered help and tech assistance
- International community (WMO, IOC, ...) has made significant contributions

Approach

- Remain coordinated and avoid duplication of effort
- Pursue integration and interoperability
- Help setup the infrastructure that can scale and extend for future needs
- Adjust the system to fit the processes
- Create a “common operating picture”

Project Overview

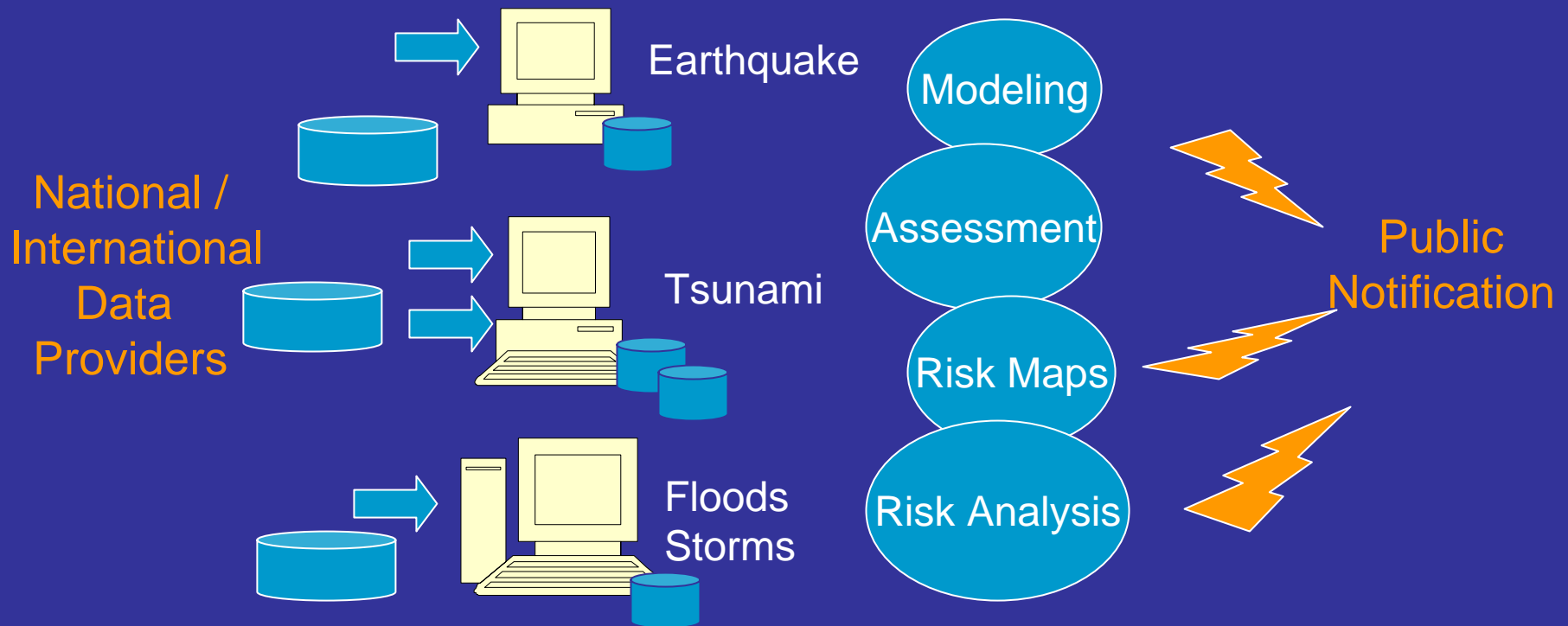
■ Project Goal & Objectives

- Technical Assistance to enhance NDWC capacity for multi-hazard early disaster warning via:
 - Integration of Technologies for analytical and “decision support” purposes
 - Enhancement of procedures with “sound practices”
 - Assist in development of Concepts of Operation
 - Process automation (data and alert processing)
 - Training and Education

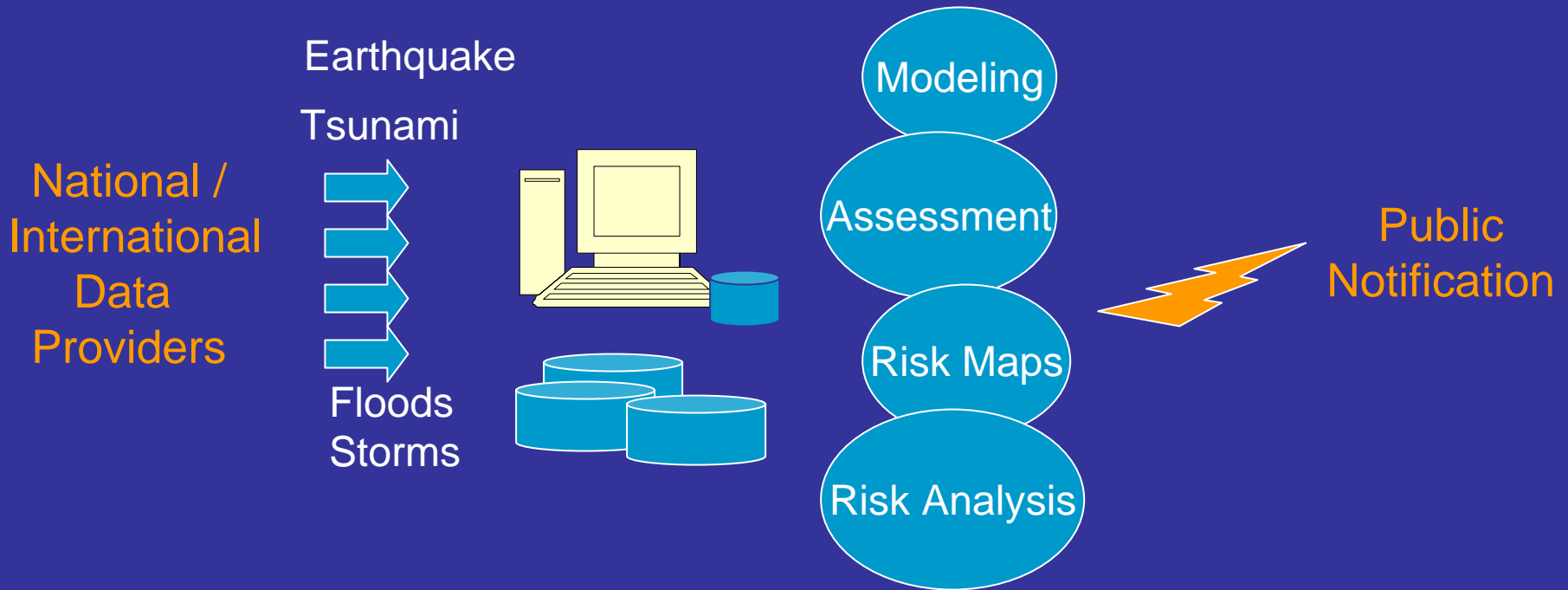
TA Partners

- PDC (Disaster Mgmt and Integrated DSS Architecture)
- Sun Microsystems (Hardware)
- ESRI (GIS Software)
- Lockheed Martin Information Tech (Implementation and Integration)

Integration (Components)...



Integrated



Common Operating Picture

HURRICANE DAVID FORECAST/ADVISORY NUMBER 15
NATIONAL WEATHER SERVICE MIAMI FL EP0402
0000Z WED AUG 29 1979

HURRICANE CENTER LOCATED NEAR **13.7N 58.0W AT 29/0000Z**
POSITION ACCURATE WITHIN 30 NM

PRESENT MOVEMENT TOWARD THE WEST-NORTHWEST OR 285 DEGREES AT 11
KT

ESTIMATED MINIMUM CENTRAL PRESSURE 942 MB
MAX SUSTAINED WINDS 120 KT WITH GUSTS 135 KT.
WINDS AND SEAS VARY GREATLY IN EACH QUADRANT. RM
MILES ARE THE LARGEST RADII EXPECTED ANYWHERE IN

REPEAT...CENTER LOCATED NEAR 13.7N 58.0W AT 29/0000Z
AT 28/2300Z CENTER WAS LOCATED NEAR 13.7N 57.0W

FORECAST VALID 29/0600Z 14.2N 59.2W
MAX WIND 120 KT...GUSTS 135 KT.
64 KT... 39NE 39SE 39SW 39NW.
45 KT... 45NE 45SE 45SW 45NW.
34 KT... 139NE 139SE 139SW 139NW.

FORECAST VALID 29/1200Z 14.8N 60.3W
MAX WIND 125 KT...GUSTS 140 KT.
64 KT... 40NE 40SE 40SW 40NW.
50 KT... 50NE 50SE 50SW 50NW.
34 KT... 130NE 130SE 130SW 130NW.

FORECAST VALID 29/1800Z 15.3N 61.6W
MAX WIND 125 KT...GUSTS 140 KT.
64 KT... 40NE 40SE 40SW 40NW.
50 KT... 50NE 50SE 50SW 50NW.
34 KT... 130NE 130SE 130SW 130NW.

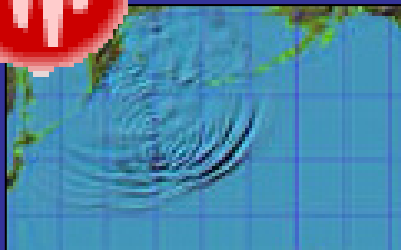
REQUEST FOR 3 HOURLY SHIP REPORTS WITHIN 300 MILE


EXTENDED OUTLOOK...USE FOR GUIDANCE ONLY...ERRORS MAY BE LARGE

OUTLOOK VALID 30/0000Z 15.6N 62.8W
MAX WIND 130 KT...GUSTS 145 KT.
64 KT... 50NE 50SE 50SW 50NW.
60 KT... 60NE 60SE 60SW 60NW.
34 KT... 140NE 140SE 140SW 140NW.



Example ...



 **Pacific Tsunami Warning Center**

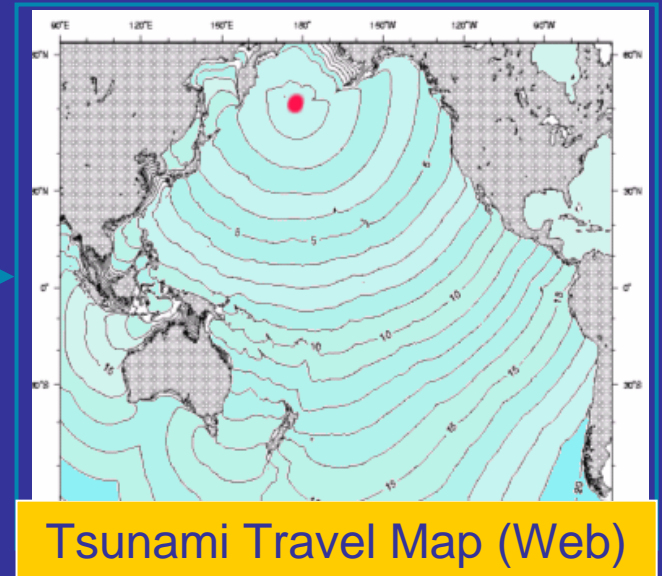
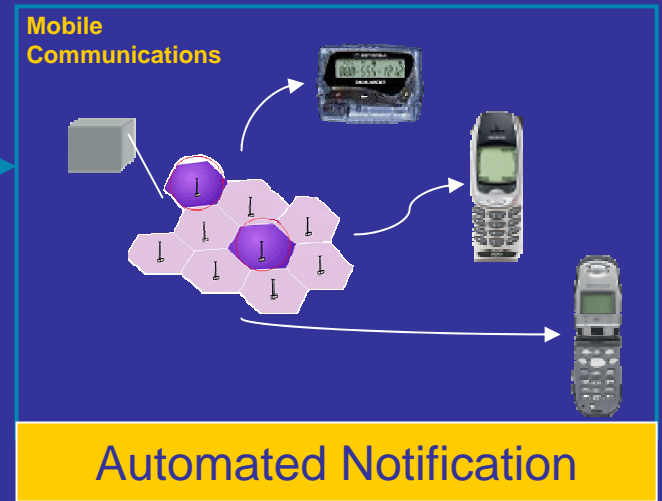
TO: CIVIL DEFENSE IN THE STATE OF HAWAII

SUBJECT: TSUNAMI INFORMATION BULLETIN

THIS BULLETIN IS FOR INFORMATION ONLY. NO ACTION REQUIRED.

AN EARTHQUAKE HAS OCCURRED WITH THE FOLLOWING PRELIMINARY PARAMETERS:

ORIGIN TIME - 06:36 AM HST, 17 MAR 2003
COORDINATES - 51.1 NORTH, 177.9 EAST
LOCATION - RAT ISLANDS, ALEUTIAN ISLANDS
MAGNITUDE - 6.9 (MOMENT)





Asia Pacific Natural Hazards and Vulnerabilities Atlas

Atlas Edition:

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Tools

- [Legend/Layers](#)
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- [Zoom In](#)
- [Zoom Out](#)
- [Full Extent](#)
- [Zoom Active](#)
- [Zoom Last](#)
- [Pan](#)
- [Identify](#)
- [Identify All](#)
- [Query](#)
- [Measure](#)
- [Set Units](#)
- [Select Box](#)
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Legend

Landcover

- Water
- Evergreen Needleleaf Forest
- Evergreen Broadleaf Forest
- Deciduous Needleleaf Forest
- Deciduous Broadleaf Forest
- Mixed Forest
- Closed Shrubland
- Open Shrubland
- Wooded Savanna
- Savanna
- Grassland
- Permanent Wetland
- Cropland
- Urban
- Crop / Natural Vegetation
- Snow / Ice
- Barren / Sparse Vegetation
- Unclassified

Recent Earthquakes

- Less than 4.0
- 4.0-4.5
- 4.5-5.0
- Greater than 5.0

Active Volcanoes

- (5) Significant or explosive eruption expected
- (4) Hazardous local eruption
- (3) Significant local eruption
- (2) Erupting; may erupt
- (1) Restless; may erupt

Current Storm Positions

Recent Earthquakes

Rec	DATE	DEPTH	MAGNITUDE	LOCATION
1	04-Dec-2005 14:09:24	30 km	5	NIAS REGION



- Operational
 - Active Events
 - Automated Storm Track
 - Messages
 - Today's Weather
 - Tsunami Model
 - Astronomical Tides
 - Tide Gauge Data
 - Fire Management Maps
- Informational
 - Product History
 - PDC Public Web
- Administrative
 - Administration
 - Change Password
 - Information
 - Feedback
 - FAQ
 - SCD Paging

Starting time: HST
 Starting time: UTC
 Location: longitude
 Magnitude: 7.3

Arrival Time is in

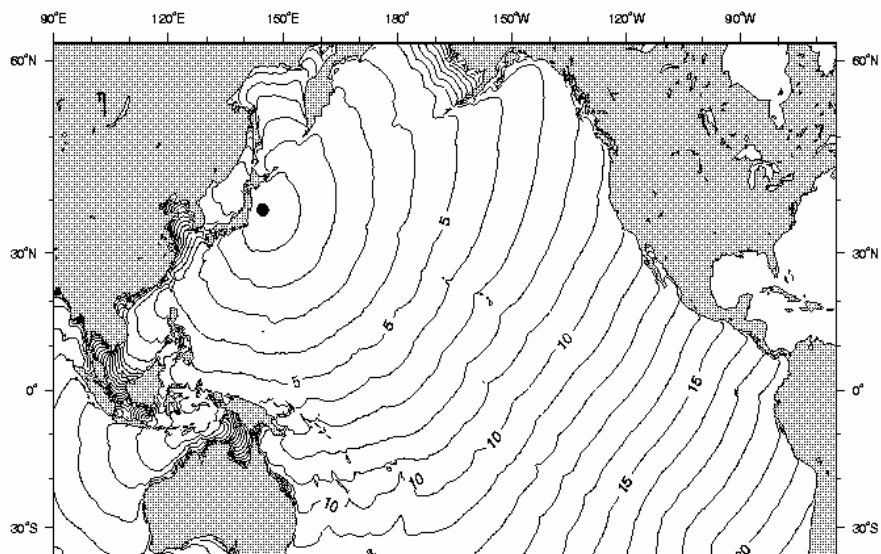
Longitude	Latitude
141.750E	39.
145.570E	43.
138.230E	34.
132.970E	32.
163.000E	56.
156.000E	50.
127.670E	26.
166.618E	19.
166.621E	19.
144.652E	13.
174.103E	52.
138.128E	9.
151.845E	7.
171.000W	48.000N
171.000W	48.000N
176.632W	51.863N
176.632W	51.863N
158.218E	7.000N
177.356W	28.207N
177.351W	28.201N
134.464E	7.332N



Managing Partner:
EAST-WEST
CENTER

Estimated Tsunami Travel Times

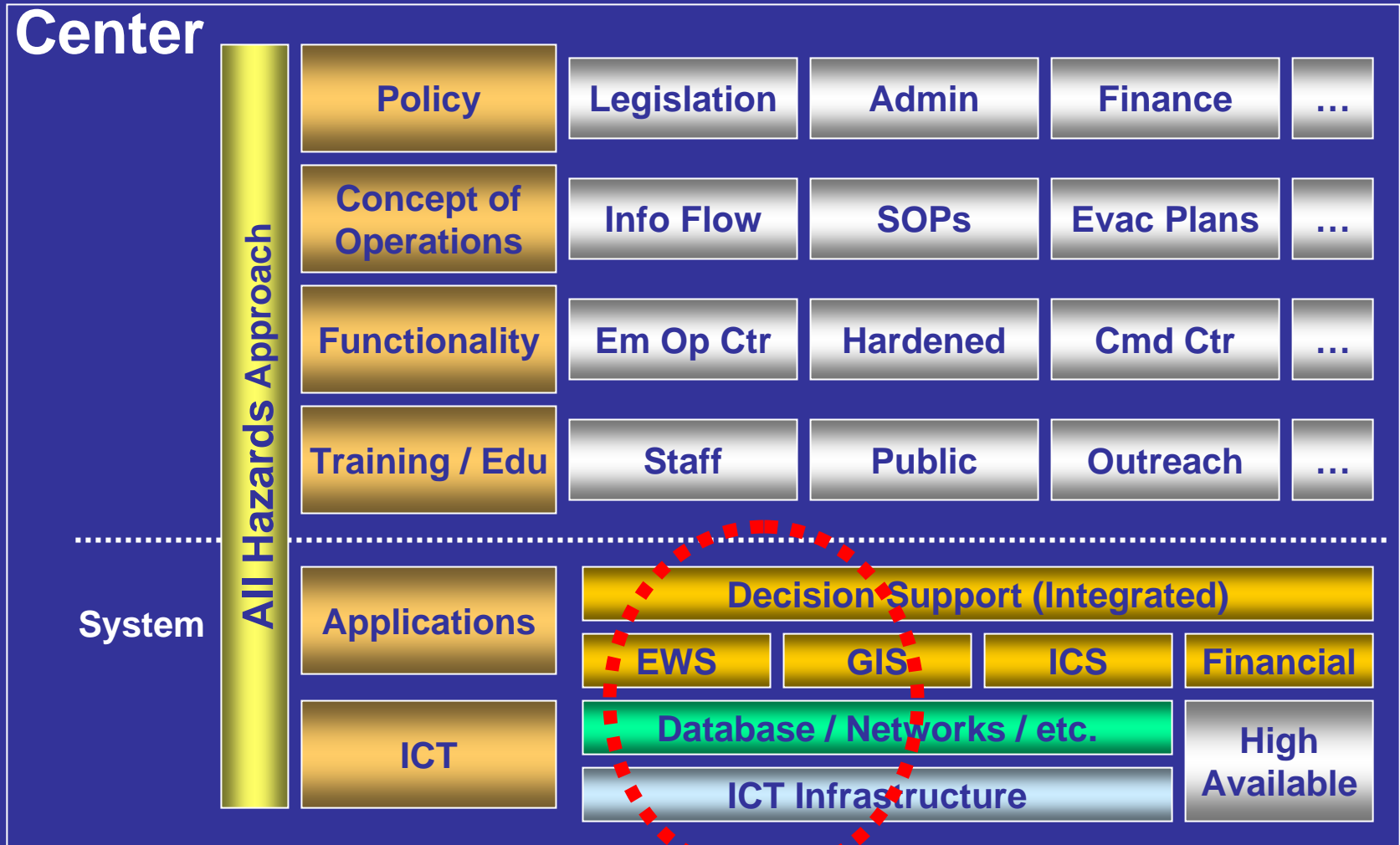
Latitude 38.2 NORTH Longitude 144.8 EAST HST 11/14/2005 11:39



- Operational
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Longitude	Latitude	Date	Time	Station	Count
171.000W	48.000N	2005/11/14	16:03:05	DART_Unimak	0011 1
171.000W	48.000N	2005/11/14	16:03:05	DART_Unimak	0012 1
176.632W	51.863N	2005/11/14	16:03:51	Adak	0023 1
176.632W	51.863N	2005/11/14	16:03:51	Adak	0032 1
158.218E	7.000N	2005/11/14	16:04:56	Pohnpei	0101 3
177.356W	28.207N	2005/11/14	16:06:45	Midway	0039 1
177.351W	28.201N	2005/11/14	16:06:48	Midway	0000 1
134.464E	7.332N	2005/11/14	16:16:50	Malakal, Koror	0003 1

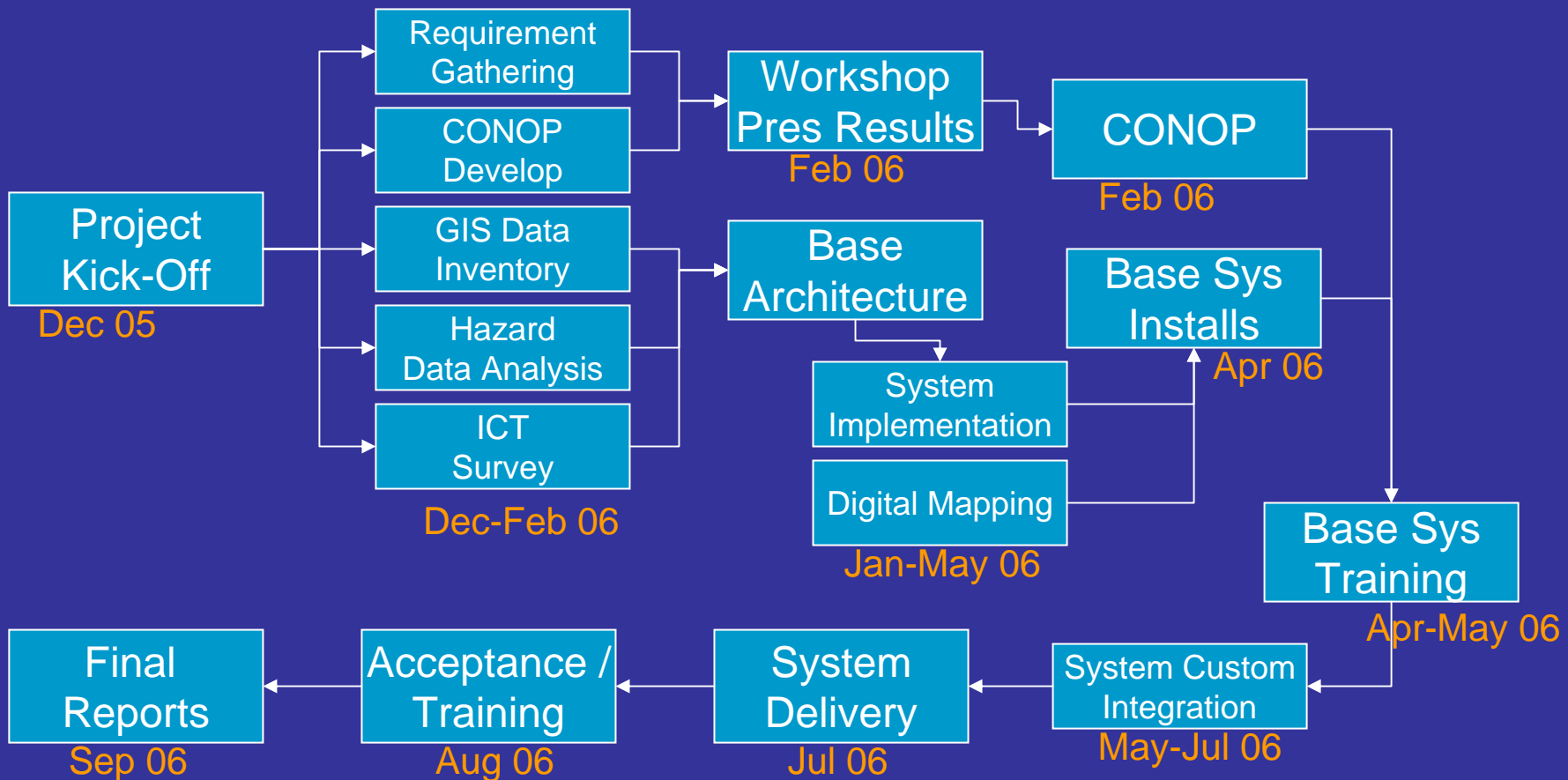
Project Scope



Project Deliverables

- **ICT Gap Analysis Report**: Analysis from its Information & Communication Technologies assessment and recommend an approach.
- **Proposed Architecture**: Propose a systems architecture based on the requirements and analysis.
- **Cost Estimates**: Cost estimates for the proposed architecture and strategic ICT infrastructure investments.
- **Concept of Operations (CONOPS) in Relation to the Decision Support System**: Review the existing and help enhance CONOPS and describe how it relates to the Decision Support system.
- **Business Continuity Plan**: Business Continuity Plan for the Grantee and the installed systems.
- **Training**: Develop basic training materials and conduct "train-the-trainer" sessions.
- **Integrated Decision Support (Web Collaboration and GIS)**: Integrate and deploy GIS-based modeling and Risk & Vulnerability systems.

Major Milestones & Timelines



Thank You

- Aloha & Mahalo
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