



Applying Joint Development Strategies to Meet Unique Community Needs: The Pacific Island Experience

Amanda Bryant, MPH

Public Health Analyst

National Center for Immunization and Respiratory Diseases

Immunization Services Division

Immunization Information Systems Support Branch

Augustus Elias

IIS Coordinator

Department of Health & Social Affairs

Federated States of Micronesia National Government

Applying Joint Development Strategies to Meet Unique Community Needs: The Pacific Island Experience

□ Part 1:

- The Pacific Island region
- Unique attributes and challenges in the Pacific Island programs
- History of IIS development and the unified Maintenance/Support agreement
- User Group formation, governance, values
- Development cycle

□ Part 2:

- Impact of joint maintenance/support agreement and joint development activities on PI programs
- Short-term and long-term goals for Pacific Island programs
- Short-term and long-term goals for Pacific Island IIS community

Part I:
Pacific Island Region, Programs,
User Group & Joint Development
Approach

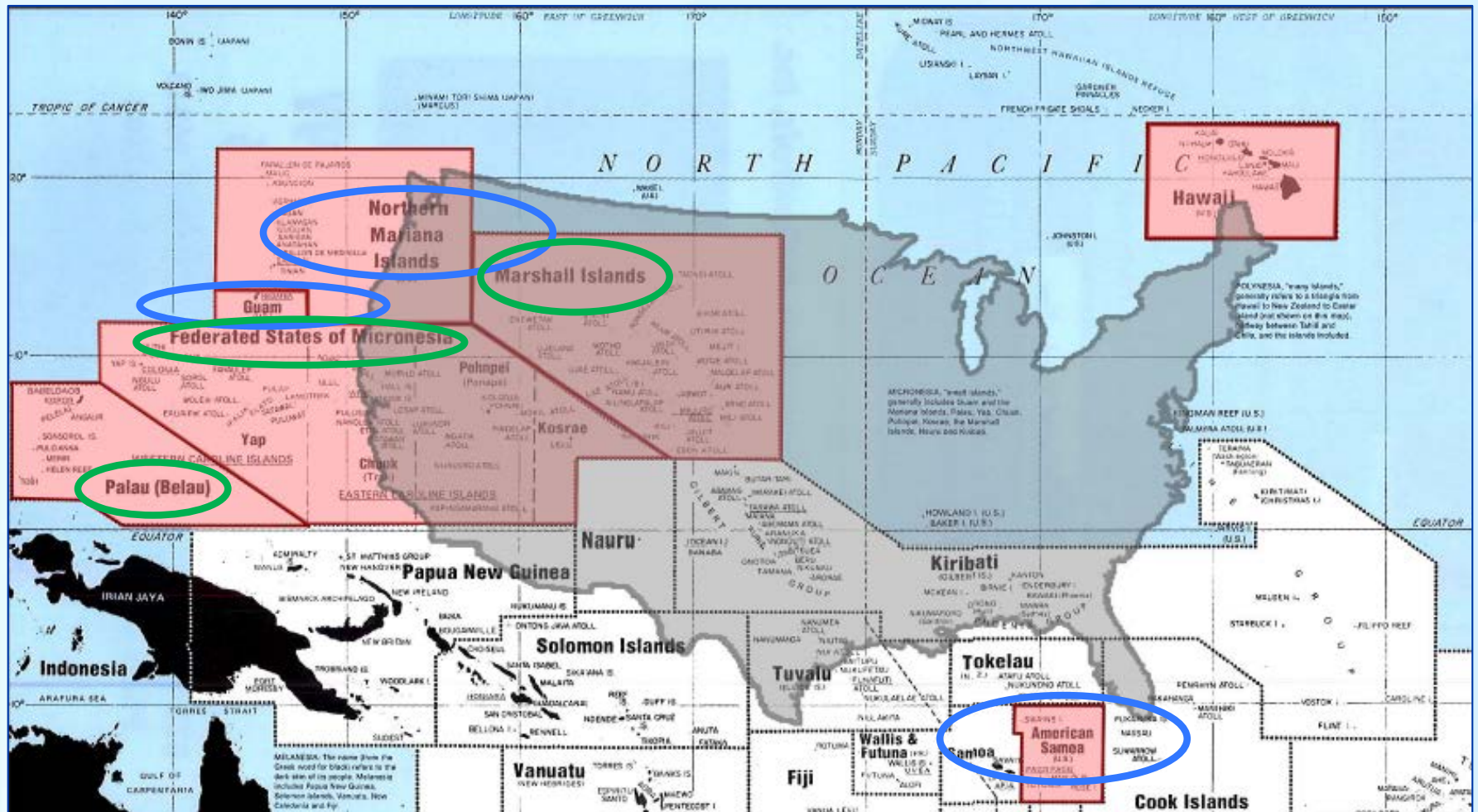
COUNTRIES AND AREAS OF THE WHO WESTERN PACIFIC REGION

Honolulu, HI to:
Majuro, RMI – 2,273 mi
Pago Pago, AS – 2,580 mi

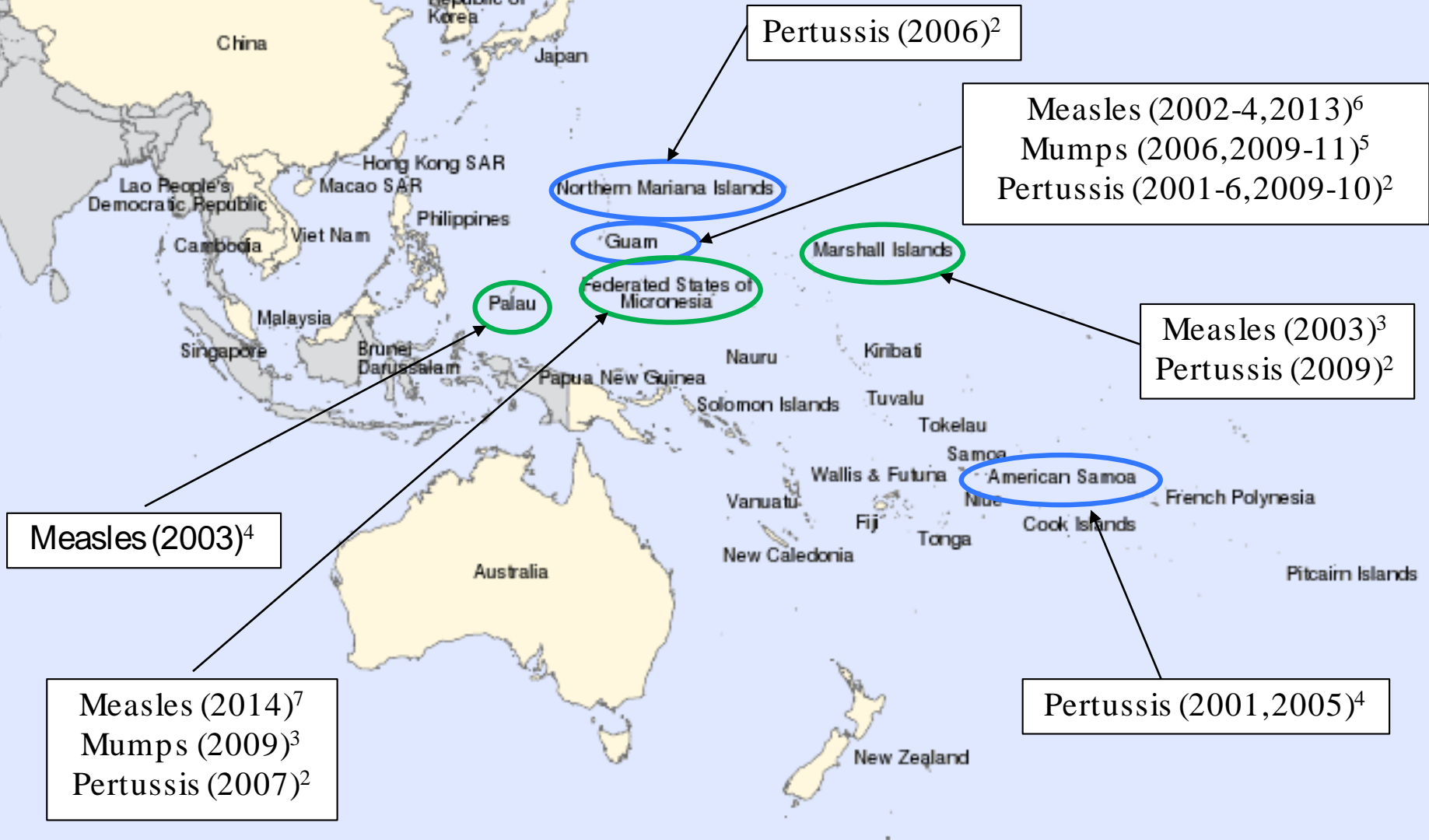
4,075 mi



Pacific Island Region Compared to U.S.



COUNTRIES AND AREAS OF THE WHO WESTERN PACIFIC REGION

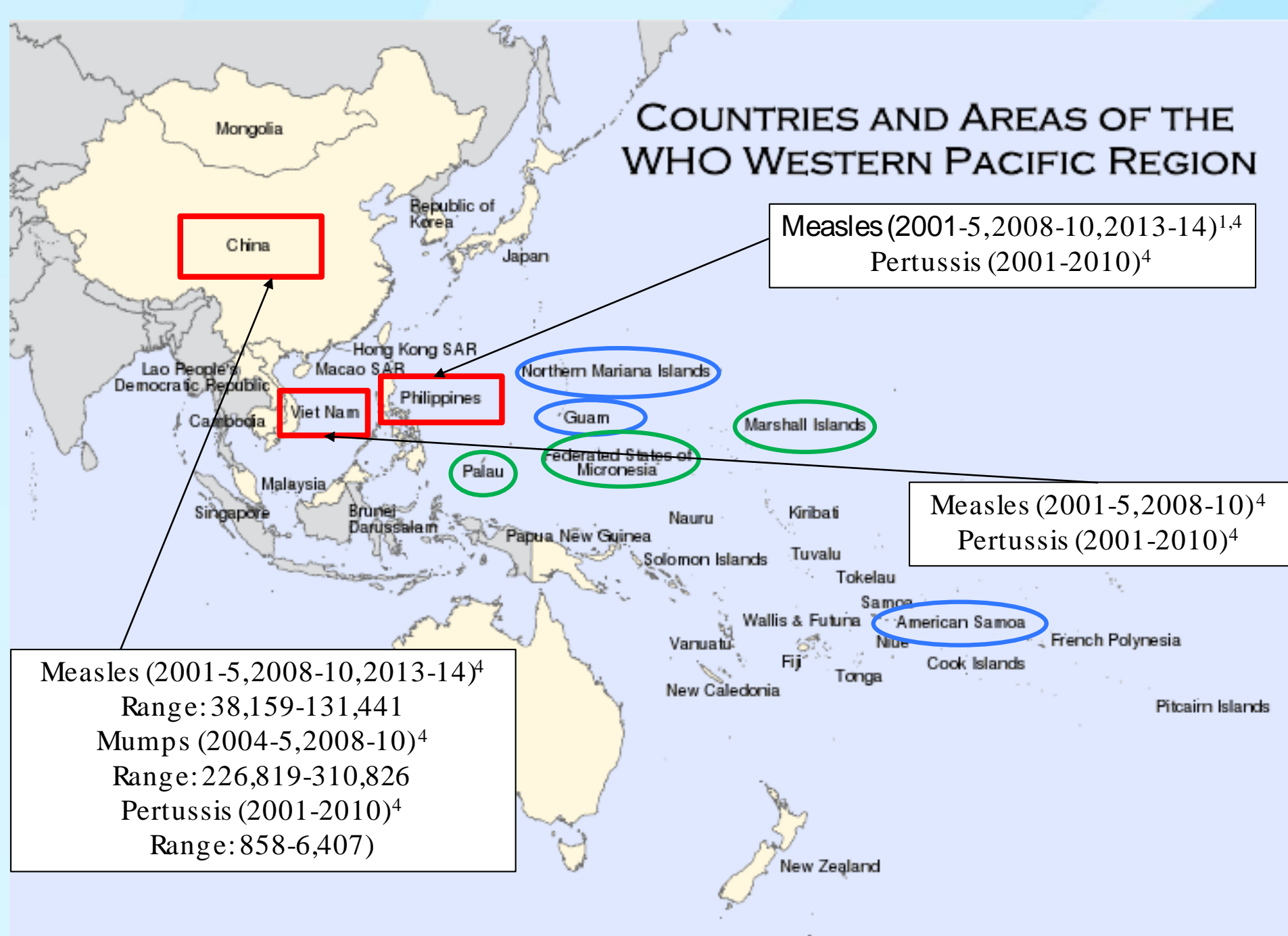


COUNTRIES AND AREAS OF THE WHO WESTERN PACIFIC REGION

Measles (2001-5, 2008-10, 2013-14)^{1,4}
Pertussis (2001-2010)⁴

Measles (2001-5, 2008-10)⁴
Pertussis (2001-2010)⁴

Measles (2001-5, 2008-10, 2013-14)⁴
Range: 38,159-131,441
Mumps (2004-5, 2008-10)⁴
Range: 226,819-310,826
Pertussis (2001-2010)⁴
Range: 858-6,407)



Pacific Island Immunization Programs

- ❑ Public health delivers most of the immunization services in their jurisdictions
- ❑ Immunization coverage estimates difficult using customary methods
- ❑ Lack of electronic vital records systems
 - Children enrolled in IIS by birthing hospital, immunization program staff
- ❑ Varying immunization schedules
 - Bacillus Calmette-Guerin (BCG) , Varicella, HPV

Pacific Island Immunization Programs

- ❑ Widespread populations create access issues
 - Frequency of campaigns targeted to isolated islands/populations is less than ideal



Pacific Island Immunization Programs

- ❑ VFC implemented in 3 of 6 Pacific Island programs
- ❑ International partners
 - WHO, UNICEF
- ❑ Unique reporting requirements
 - WHO Joint Reporting Form, Compact Impact Report
- ❑ Infrastructure & capacity challenges
 - Power, Internet
 - IT support

History of IIS Development in the Pacific Islands

- ❑ Initial deployment in 2007 of Envision's WebIZ product
- ❑ Joint M/S Agreement for one year, after which each jurisdiction maintained own M/S Agreement contract
 - Different periods of performance across Islands
 - Less than ideal renewal timelines
- ❑ Routine upgrade schedules fell out of synch
- ❑ Disparate software versions implemented across the Islands
 - Maintenance and support increasingly difficult to provide
 - Common enhancements difficult to implement
- ❑ Unified M/S Agreement implemented September 2014
- ❑ Envision's business model supports joint development

Pacific Islands User Group Charter

- ❑ Adopted January 2015
- ❑ Mission: improve collective knowledge and expertise of WebIZ and optimize it for each Pacific Island jurisdiction by:
 - Establishing a community forum for open communication and exchange among each Pacific Island jurisdiction and CDC,
 - Implementing the same WebIZ version universally
 - Developing standardized immunization and WebIZ policies and procedures, and
 - Pooling collective resources and leveraging them for WebIZ activities
- ❑ “This coordinated approach will support the sharing of best practices and lessons learned, help us achieve data-driven outcomes and consequently improve our immunization services.”

How Will the User Group Measure Success?

- ❑ “A fully functioning IIS in each jurisdiction that supports its immunization program activities and provides accurate data for use in program activities, such as targeted immunization interventions”
- ❑ Successful implementation of cross-jurisdictional User Access Agreements and data lookup

Pacific Islands IIS User Group Governance

Pacific Islands

Immunization
Program & IIS
Goals

Identification of
system
requirements,
individual &
collective

Voting

Prioritization

CDC/ISD

Facilitation

Planning

Consensus
Building

Iz Program &
IIS Expertise

Funding

GSA Contract
Management

Envision

Maintenance &
Technical
Support

Product
Development &
Rollout

Training

Usability Best
Practices

Transparency

Communication

Collaboration

Pacific Islands IIS Joint Development Cycle

2016									
	JAN/FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT/NOV/DEC
v16.4	Development					Upgrade & Annual Training		UAT	
v17.4		Propose	Vote	Specs & cost		GSA contract mod	Develop CY2017 CoAg app & budget		Development
2017									
v17.4	Development					Upgrade & Annual Training		UAT	
v18.4		Propose	Vote	Specs & cost		GSA Contract mod	Develop CY2018 CoAg app & budget		Development

Current Development Status

- ❑ **1st group training March 2015**
 - Identification of first list of enhancement requests
- ❑ **5 of 6 Islands on a common version of WebIZ**
- ❑ **1st group of enhancements selected by User Group are in development, pending v16.4 release this summer**
 - Reporting filters and output
 - Compact Impact Report
 - Security
 - School module enrollment
- ❑ **Group training v16.4 July 2016**

Translating Challenges Into Requirements

- ❑ **Coverage analysis**
 - Match all local immunization program recommendations
 - Support appropriate population segmentation to evaluate coverage (i.e., outer islands vs. more populated areas)
- ❑ **Program-specific reports for partners, data quality**
- ❑ **Remote, asynchronous data capture**
- ❑ **Cross-jurisdictional data lookup**
- ❑ **Inter- and intra-jurisdictional interoperability**



Part II:
Impact of Joint Development
Activities, Short & Long Term Goals

Pacific Island Community Experience – Impact of Joint Development

❑ Improved performance

- Supports justification for equipment, upgrades
- Increase in pace of IIS development

❑ Increased efficiency

- Reduced cost, less waste paying for development of an enhancement that someone else was also doing
- GSA contract provides stability, reduces contract management tasks within program
- Affords opportunity to perform UAT as a group, reducing time

Pacific Island Community Experience – Impact of Joint Development

- ❑ **Increased knowledge of IIS development and operations**
 - More regular and frequent contact with IISSB, Envision
 - More current information from IISSB, AIRA workgroups
 - Provides reality checks – what is realistic, what is not
 - Joint training in Guam enabled higher number of participants

- ❑ **Strengthening partnerships**
 - Better understanding of needs/status of other jurisdictions and their IIS
 - Finding common ground, developing group identity
 - Building trust across jurisdictions, supports data sharing

Pacific Island IIS Community Short-Term Goals

- ❑ Complete upgrades to common version**
- ❑ Data quality**
- ❑ Implement cross-jurisdictional data sharing**
 - Pacific Island Health Officer's Association (PIHOA) has charged the User Group to implement**
- ❑ Use IISdata as source for immunization coverage assessments**
- ❑ Implement electronic vital records, electronic birth certificates**
- ❑ Interoperability assessments**

Pacific Island IIS Community Long-Term Goals

- ❑ Inter-jurisdictional data exchange
- ❑ As User Group matures, take on facilitation, planning, and consensus-building roles
- ❑ Local IISCoordinator
 - Support user group
 - Document requirements
 - Help identify qualified staff for open positions

References

1. Jaymalin, M. (2014). DOH: Measles Outbreak in MM. The Philippine Star. Accessed April 25, 2014. <http://www.philstar.com/headlines/2014/01/06/1275567/doh-measles-outbreak-mm>
2. World Health Organization. "Global Health Observatory Data Repository (Western Pacific Region)." Selected infectious diseases: Pertussis data by country. http://apps.who.int/gho/data/node.main-wpro.WHS3_43?lang=en/
3. Hyde, T. B., et al. (2006). "Measles outbreak in the Republic of the Marshall Islands, 2003." *Int J Epidemiol* 35(2): 299-306. <http://www.ncbi.nlm.nih.gov/pubmed/16299123/>
4. World Health Organization. "Health Information and Intelligence Platform (HIIP)." Selected Indicator by country and years. <http://hiip.wpro.who.int/portal/DataAnalytics/>
5. Nelson, G. E., et al. (2013). "Epidemiology of a mumps outbreak in a highly vaccinated island population and use of a third dose of measles-mumps-rubella vaccine for outbreak control--Guam 2009 to 2010." *Pediatr Infect Dis J* 32(4): 374-380. <http://www.ncbi.nlm.nih.gov/pubmed/23099425/>
6. Pacific Daily News. Public Health confirms a cases of measles on Guam. March 28, 2014. <http://www.guampdn.com/article/20140328/NEWS01/140328005/Public-Health-confirms-case-measles-Guam/>
7. CDC (2015). Measles Outbreak Associated with Vaccine Failure in Adults—Federated States of Micronesia, February–August 2014. *Morbidity and Mortality Weekly Report*, October 2, 2015 / 64(38);1088-1093.



Thank You!

Amanda Bryant, zmr1@cdc.gov

Augustus Elias, aelias@smhealth.fm

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.