



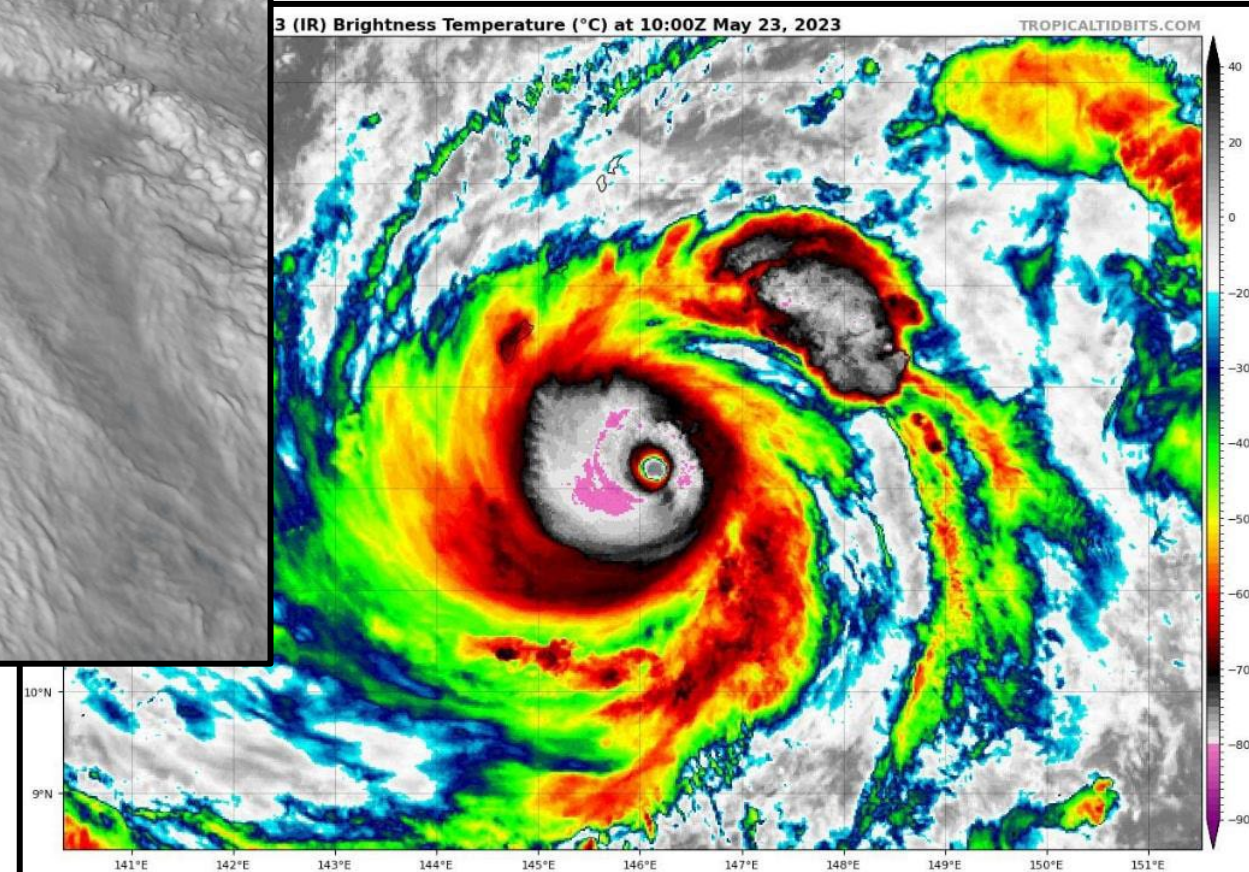
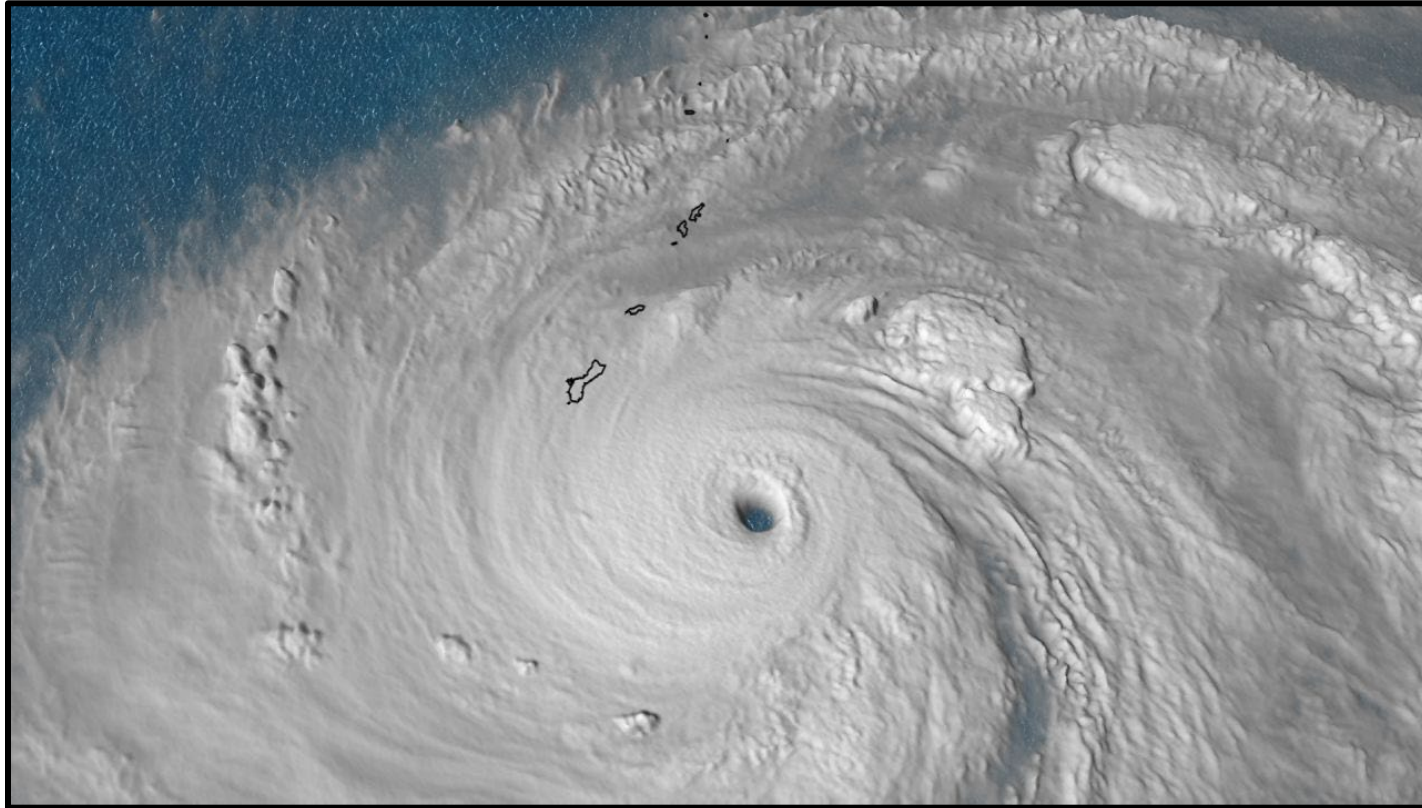
Typhoon Mawar: A Case Study in Federal Resilience Planning

Joint Region Marianas, Guam



04/10/2024

Super Typhoon Mawar



... and Why is it Important to DoD?

- "Where America's Day Begins!"
- 3-hour flight / 4-day sail to allies and hotspots
- Navy owns 26% of Guam land
- 14% of population is military
- 20% of electrical use is military

Post-Mawar: Some DoD facilities' power/water was not restored for 30 days

=> not acceptable for mission critical outpost

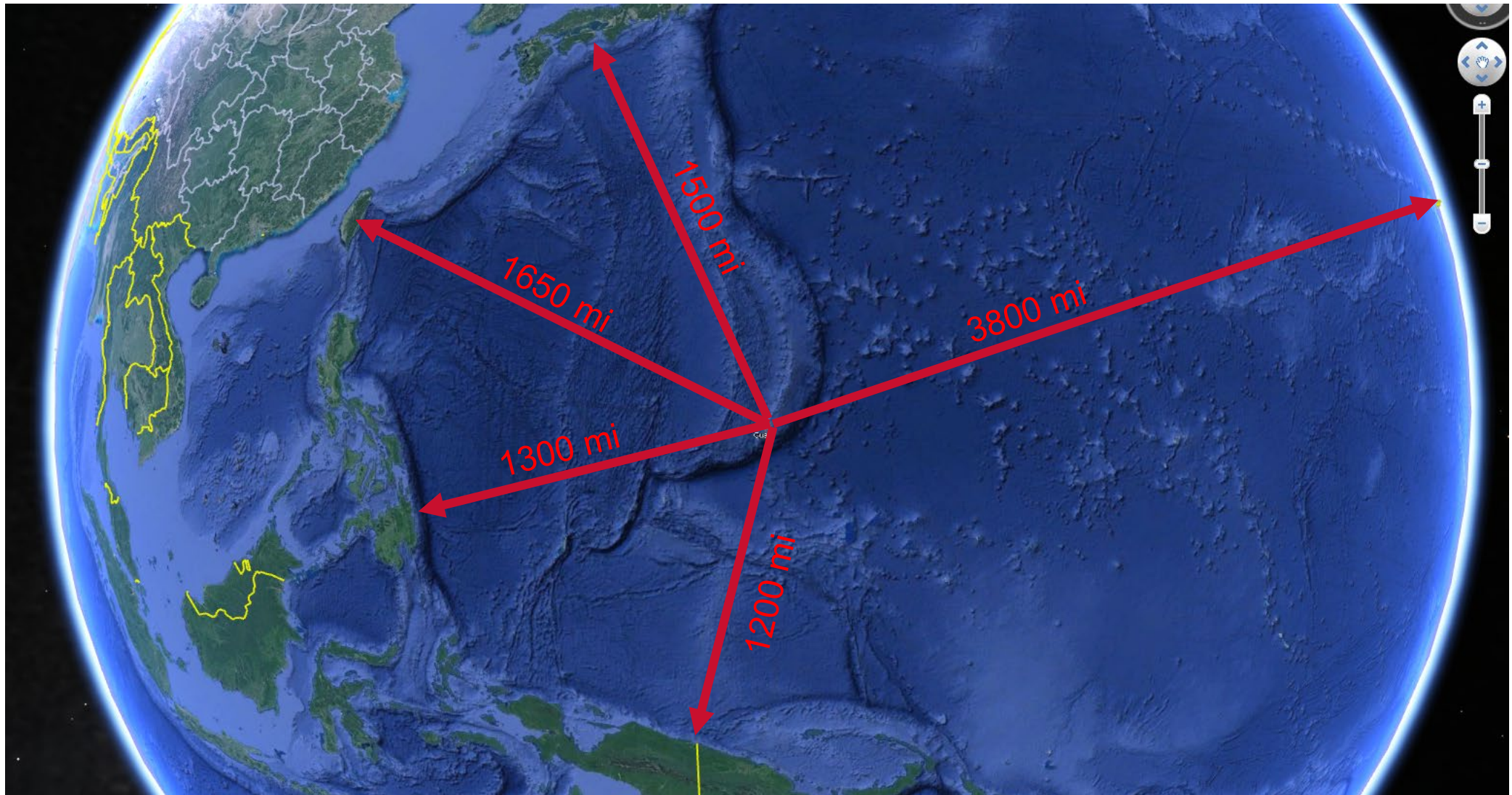


EVERYTHING, EVERYWHERE , ALL AT ONCE

- Civil
- Electrical
- Mechanical
- Architectural
- Fire Protection
- Structural
- Control Systems
- Physical Security
- Process
- Utilities
- Dams & Levees
- Geotechnical



Tyranny of Distance



AE Role and Responsibility

Started With Broad Guidance

Mobilize Team

Conduct Site Investigations, Gather Data, Meet with Stakeholders

Conduct “Charrette”

Define Project Scopes

Charrette Report

SELECT AND MOBILIZE TEAM

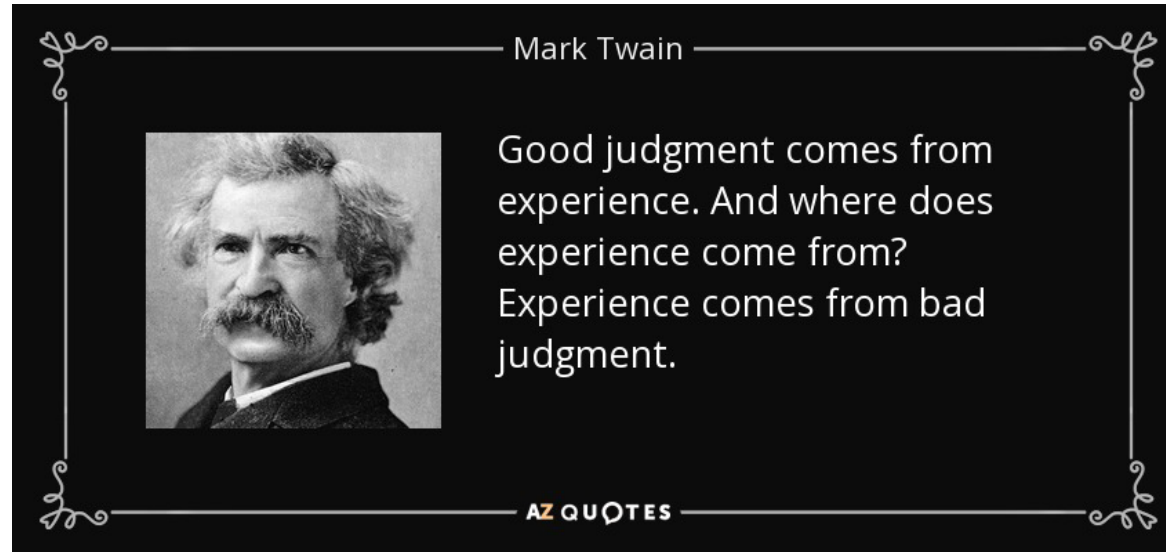
MOBILIZATION IN ONE WEEK!

- Team members included Subject Matter Experts AND personnel with a long history and broad knowledge of Guam facilities
- CAC Cards and those with existing Base Access really helps!
- Team members from CA, FL, HI, ID, KS, MN, MO, NC, SC, TX, UT, VA ... and Guam



CRITICAL TO HAVE THE RIGHT PEOPLE ON THE ISLAND

Dream Team Attributes



Experience and Judgement
Clear Communication
Data Integration
Risk Management

REACHBACK TEAM PROVIDES TECHNICAL MUSCLE

Stakeholder Schedule

We thought WE were busy ... but the client was busier!

	Sun, 7/9	Mon, 7/10		Tue, 7/11		Wed, 7/12		Thu, 7/13		Fri, 7/14		Sat, 7/15
		Priority 1	Priority 2	Priority 1	Priority 2	Priority 1	Priority 2	Priority 1	Priority 2	Priority 1	Priority 2	
0700-0900		Breakwater In-Brief		Fena & W/WW In-Brief		Cold Storage In-Brief	Breakwater Worksession	UH In-Brief	B Sec Peri (NBG) Worksession	HSC-25 Out-Brief	UH Worksession	
0930-1130												
1230-1430		HSC-25 In-Brief		B Sec Peri (NBG) In-Brief		B Sec Peri (Blaz) In-Brief	HSC-25 Worksession	Fena & W/WW Worksession	B Sec Peri (Blaz) Worksession	Breakwater Out-Brief	Cold Storage Worksession	
1500-1700												
	Sun, 7/16	Mon, 7/17		Tue, 7/18		Wed, 7/19		Thu, 7/20		Fri, 7/21		Sat, 7/22
0700-0900		Orote/Polaris/NAVMAG Power In-Brief		Cold Storage Out-Brief	B Sec Peri (Blaz) Out-Brief	Fena & W/WW Out-Brief		Orote/Polaris/NAVMAG Power Worksession 1		Orote/Polaris/NAVMAG Power Worksession 2		
0930-1130												
1230-1430		Outlying Power In-Brief		UH Out-Brief		B Sec Peri (NBG) Out-Brief		Outlying Power Worksession 1		Outlying Power Worksession 2		
1500-1700												
	Sun, 7/23	Mon, 7/24		Tue, 7/25		Wed, 7/26		Thu, 7/27		Fri, 7/28		Sat, 7/29
0700-0900		Orote/Polaris/NAVMAG Power Worksession 3		Orote/Polaris/NAVMAG Power Worksession 4		Orote/Polaris/NAVMAG Power Out-Brief						
0930-1130												
1230-1430		Outlying Power Worksession 3		Outlying Power Worksession 4		Outlying Power Out-Brief						
1500-1700												

CLIENT COMMITMENT TO THE GOAL IS ESSENTIAL

Project Schedule

Building the Plane While Flying

June 2023

No.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
22					1	2	3
23	4	5	6	7	8	9	10
24	11	12	13	14	15	16	17
25	18	19	20	21	22	23	24
26	25	26	27	28	29	30	

NTP

July 2023

No.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26							1
27	2	3	4	5	6	7	8
28	9	10	11	12	13	14	15
29	16	17	18	19	20	21	22
30	23	24	25	26	27	28	29
31		31					

KICKOFF

DD1391 DUE,
PROJECT CLOSE

REPORT DUE

August 2023

No.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31			1	2	3	4	5
32	6	7	8	9	10	11	12
33	13	14	15	16	17	18	19
34	20	21	22	23	24	25	26
35	27	28	29	30	31		

MOBILIZED IN 11 DAYS, FOR 17 DAYS

WHY THE RUSH? THE NATIONAL SPOTLIGHT ONLY PAUSES BRIEFLY

Project Budget

100%-Effort-Based Budgeting

- Build the Team
 - On-site and “Reachback”
 - Senior Staffing
- Book 100% Effort for On-site Team
 - Reachback harder to budget
- Estimate Expenses
- Reasonable Contingency



CLIENT TRUST REQUIRED ... and proper controls

PLAN OF ACTION



Infrastructure Reset

- Evaluate existing system



Resiliency & Sustainability

- Perform a gap analysis between existing and desired system



Future Mission

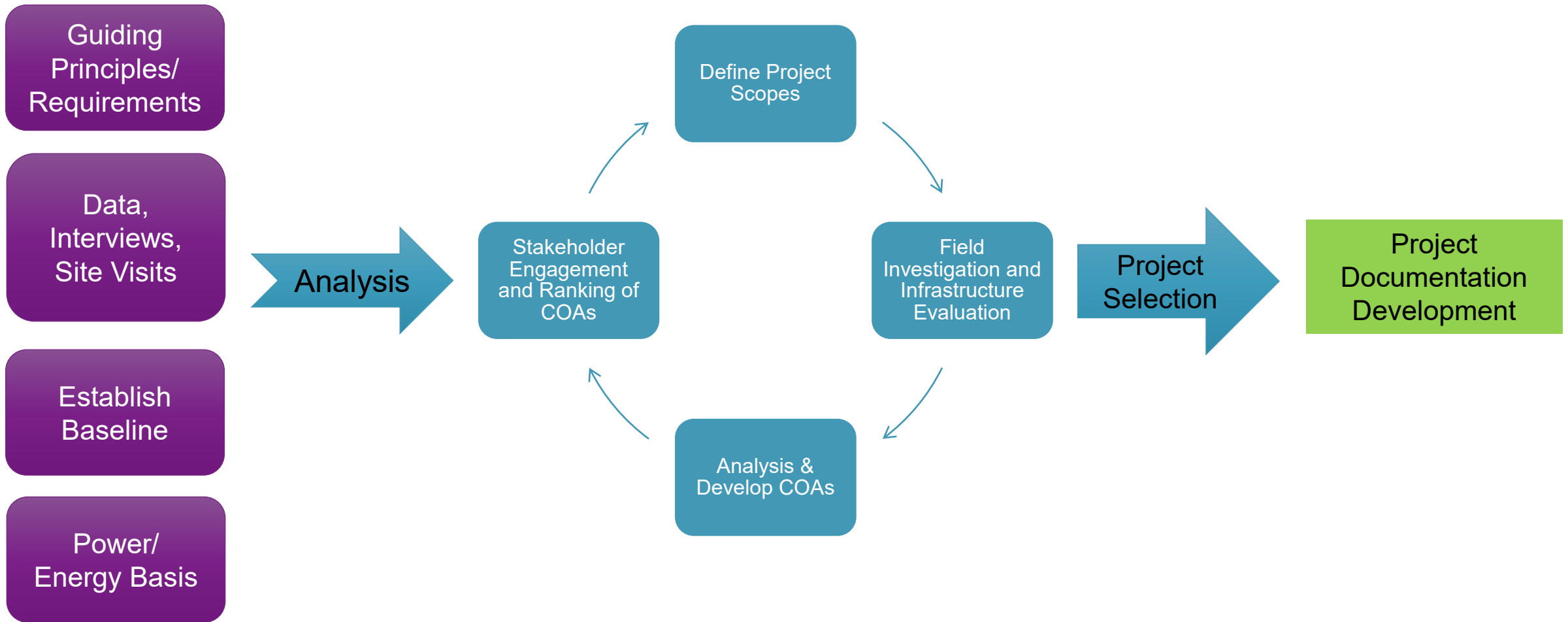
- Develop a series of projects that will bridge the gap in a restricted timeframe



CHALLENGES ARE OPPORTUNITIES IN WORK CLOTHES

Project Approach

JACK



APPROACH MAY REQUIRE ADJUSTMENTS

Guiding Principles

From Senior Leaders. NOT Requirements.

Mawar examples:

- Top Mission Priority is “XXX”
- “If you can see it, bury it”
- Simple, rugged, reliable, resilient
- Common equipment
- Plan for future growth
- “Accuracy over Precision”



CHECK DECISIONS AGAINST PRINCIPLES

Data Collection

Methods Used:

- **Guided** Site Visits
- **Interviews**
- RFI's

Daily Battle Rhythm:

- Morning: Meeting and Assignments
 - Safety
- Afternoon: Meeting and **Debrief**
- Evening: **Data Capture** and Tomorrow's **Plan**



THE SENIOR ADMINISTRATOR CONTROLS LIBERTY!

Establish Baseline

Where Should We Start?

Baseline = Existing + **Planned/Programmed**

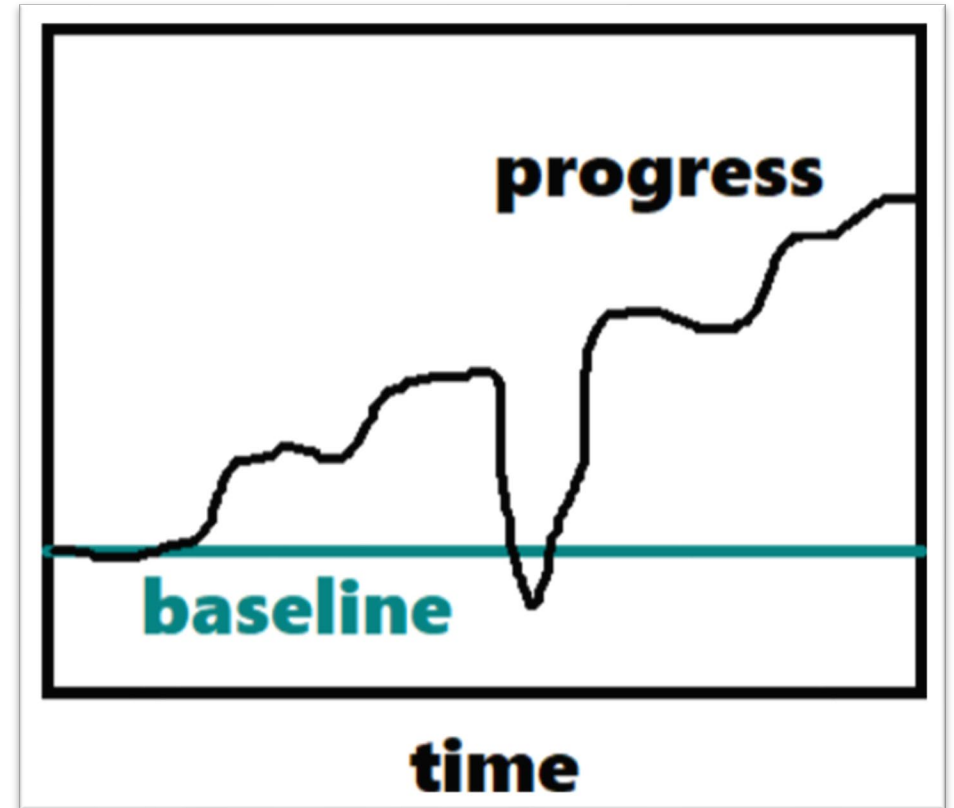
Existing Infrastructure:

Drawings, Site Visits

Planned/Programmed Projects:

Interviews with Planning Staffs

Documents



WHAT WOULD YOUR BASELINE BE?

Define Power/Energy Basis

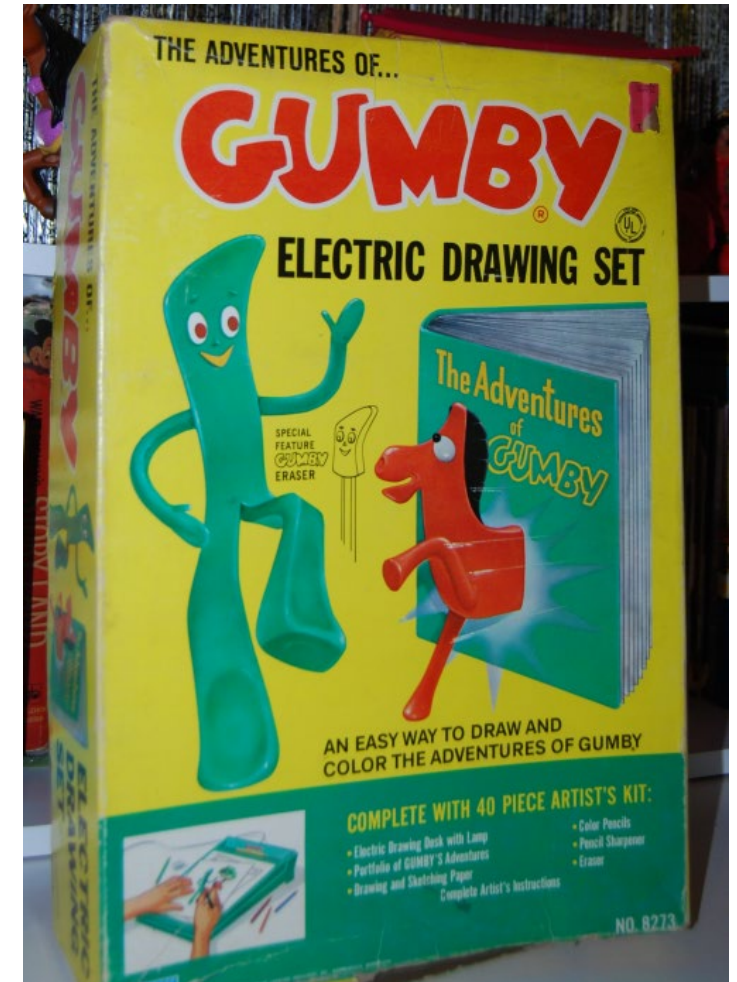
Where Do We Want to Be?

Basis = Existing + **Proposed**

Existing Uses Data

Planned Uses Forecasts:

- Planning Documents
- Interviewed Planners
- Engaged Other Recovery Teams (water/wastewater, housing, etc)
- **Best Engineering Judgement**



REMAIN FLUID, BECAUSE FLEXIBLE IS TOO RIGID

Administration and Logistics

The Underpinning of Success and Professionalism

- Expedited data handling in the field, while maintaining professionalism
- Rapidly assess and acquire needed resources
- Hybrid meetings:
 - Greatest challenge
 - Greatest asset



DON'T BE A BURDEN, BE A HELP

Key Takeaways

CRITICAL TO HAVE THE RIGHT PEOPLE ON THE ISLAND

REACHBACK TEAM PROVIDES TECHNICAL MUSCLE

CLIENT COMMITMENT TO THE GOAL IS ESSENTIAL

WHY THE RUSH? THE NATIONAL SPOTLIGHT ONLY PAUSES BRIEFLY

CLIENT TRUST REQUIRED ... and proper controls

APPROACH MAY REQUIRE ADJUSTMENTS

CHECK DECISIONS AGAINST PRINCIPLES

CHALLENGES ARE OPPORTUNITIES IN WORK CLOTHES

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