



# Closing the Gap

How Quality Management Drives Operational Success

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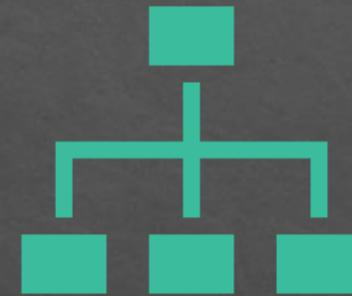
# The Industry Challenge



# The Construction-to-Operations Gap



This gap is where value is either preserved or lost, and it's the primary focus of our integrated quality management approach.



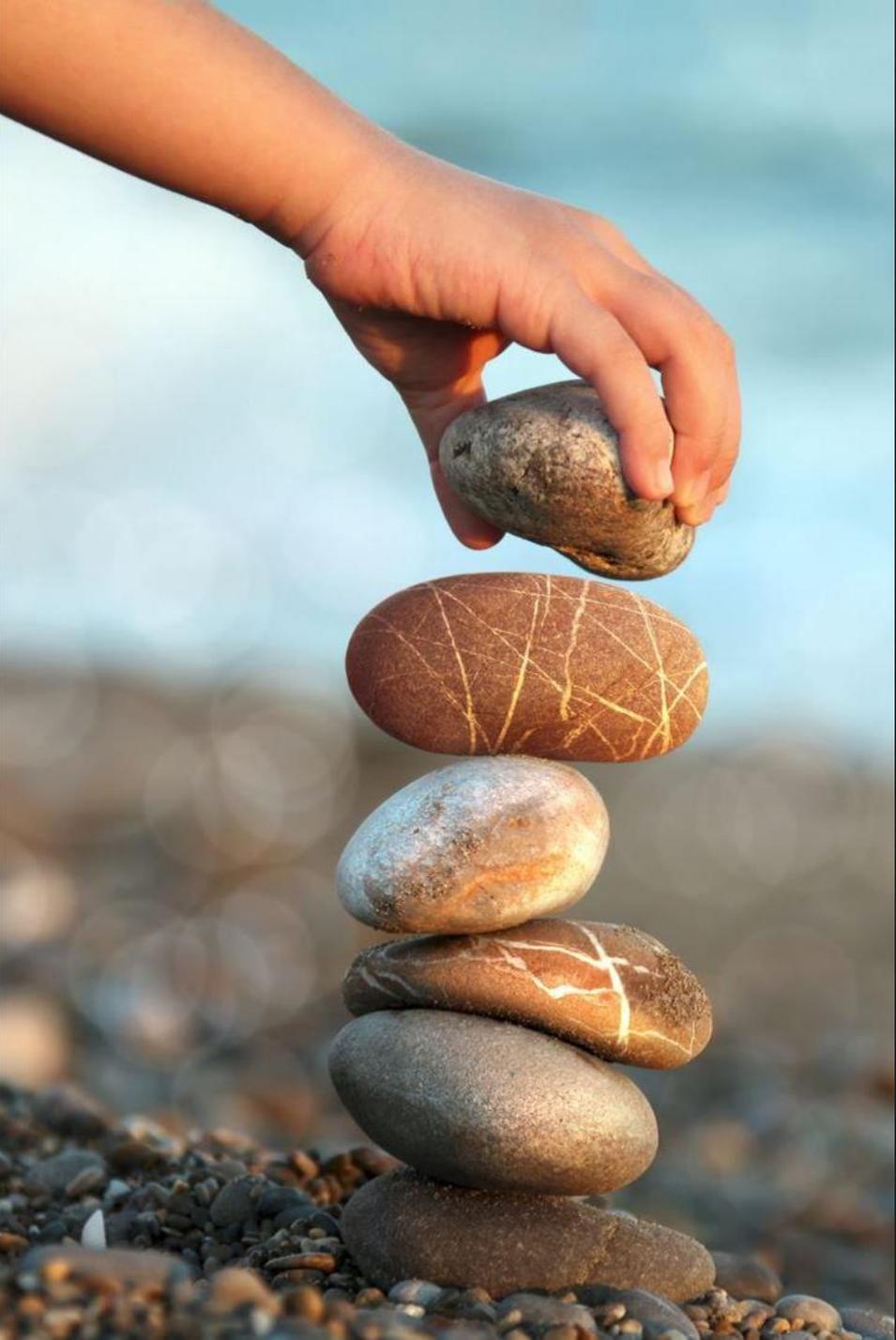
What happens between project completion and operational reality often determines success or failure.

# An Asset Manager's Perspective

## **My Background: 7 Years in Asset Management & BESS Operations**

- ◆ Hired quality manager who consistently outperformed our contractors on initial project
- ◆ Expanded partnership to 3 sites based on proven operational excellence
- ◆ Drove client retention through reliable project execution and delivery capabilities
- ◆ Established competitive advantage with quality-focused O&M approach





# The Realization

Quality Management  
Must  
Start During Construction

# A Collaborative Approach

- ◆ As a team, we saw the need for a partnership focused on **risk mitigation**.
- ◆ Focused on long-term asset documentation and tracking from commissioning through the project life.



# The C-to-O Continuity Model

## Construction Phase

- ▣ Quality oversight from foundation to completion.

## Commissioning

- ▣ Comprehensive systematic issue and resolution tracking.

## Operations

- ▣ Seamless transition with zero knowledge loss.





## Quality Mgmt During Construction

- ◆ **Documentation Protocols:** Create documentation that operations actually needs.
- ◆ **Rigorous Site Acceptance Testing:** Prevent operational surprises through commissioning tracking.
- ◆ **Defect Management:** Identify and resolve issues before handover.
- ◆ **Longevity Testing:** Ensure systems meet long-term extreme operational limitations.

# Commissioning: The Critical Bridge

- ◆ Commissioning to market operational requirement.
- ◆ This is where we **prove the asset is ready**.
- ◆ Comprehensive systems validation.
- ◆ Building operational knowledge **during** testing.
- ◆ Creating the **Operational Baseline**—the proof of performance.
- ◆ How long has the asset run successfully in it's market? Has it operated in the market successfully?



**REMS  
ENERGY**

Information Classification: General

# Transitioning to Operations

- ◆ **Seamless Handover:** Because you're handing off to yourself.
- ◆ **No Lost Knowledge:** Knowledge is preserved from day one.
- ◆ **Day 1 Readiness:** Operational from the moment of handover.
- ◆ **Lower learning curve** for the operational team.

# Real Results

What This Approach Delivers



# Operational Performance: A New Model

## Traditional Approach

- ◆ Delayed ramp to full revenue
- ◆ Increased exposure to warranty claims
- ◆ Higher initial downtime
- ◆ Risk of expensive post-completion retrofits

## Integrated C&C (Our Model)

- ◆ Faster ramp-to-full revenue (Maximizes ROI from Day 1)
- ◆ Reduced warranty work (Lowers long-term cost)
- ◆ Predictable performance (Ensures asset confidence)
- ◆ Operational readiness at handover (Avoids fixes)





# Why Owners Choose This Model

## Risk Reduction

- ◆ Problems are prevented, not just fixed. Protects asset value

## Cost Savings

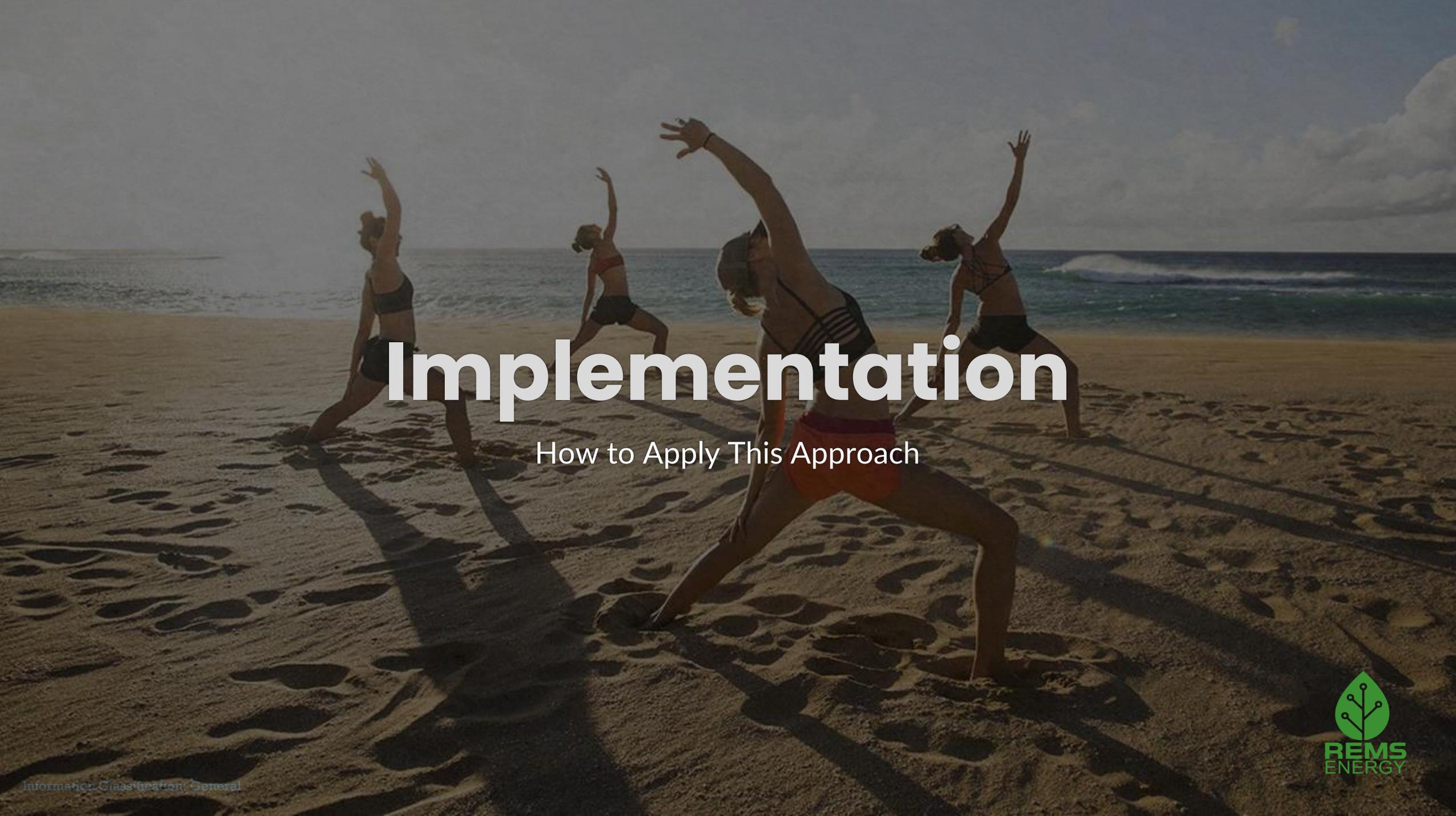
- ◆ Avoid expensive retrofits and warranty work.

## Faster ROI

- ◆ Revenue from Day 1 instead of months of ramp-up.

## Asset Confidence

- ◆ A known, validated performance baseline.

A group of four women in athletic wear are performing a yoga pose on a sandy beach at sunset. They are in a wide-legged stance with one arm raised and bent at the elbow, and the other arm reaching down. The background shows the ocean with waves and a cloudy sky. The scene is dimly lit, suggesting late afternoon or early evening.

# Implementation

How to Apply This Approach





# Key Quality Checkpoints

- ◆ Material receipt and inspection protocols
- ◆ Installation verification at critical milestones
- ◆ System integration testing before commissioning
- ◆ Documentation review and completion tracking
- ◆ Defect identification and resolution workflow

# Essential Handover Deliverables

## Documentation Package

- ❑ Correct complete as-builts, equipment manuals, test records & certifications, full history of parts and commissioning steps per unit.

## Operational Baseline

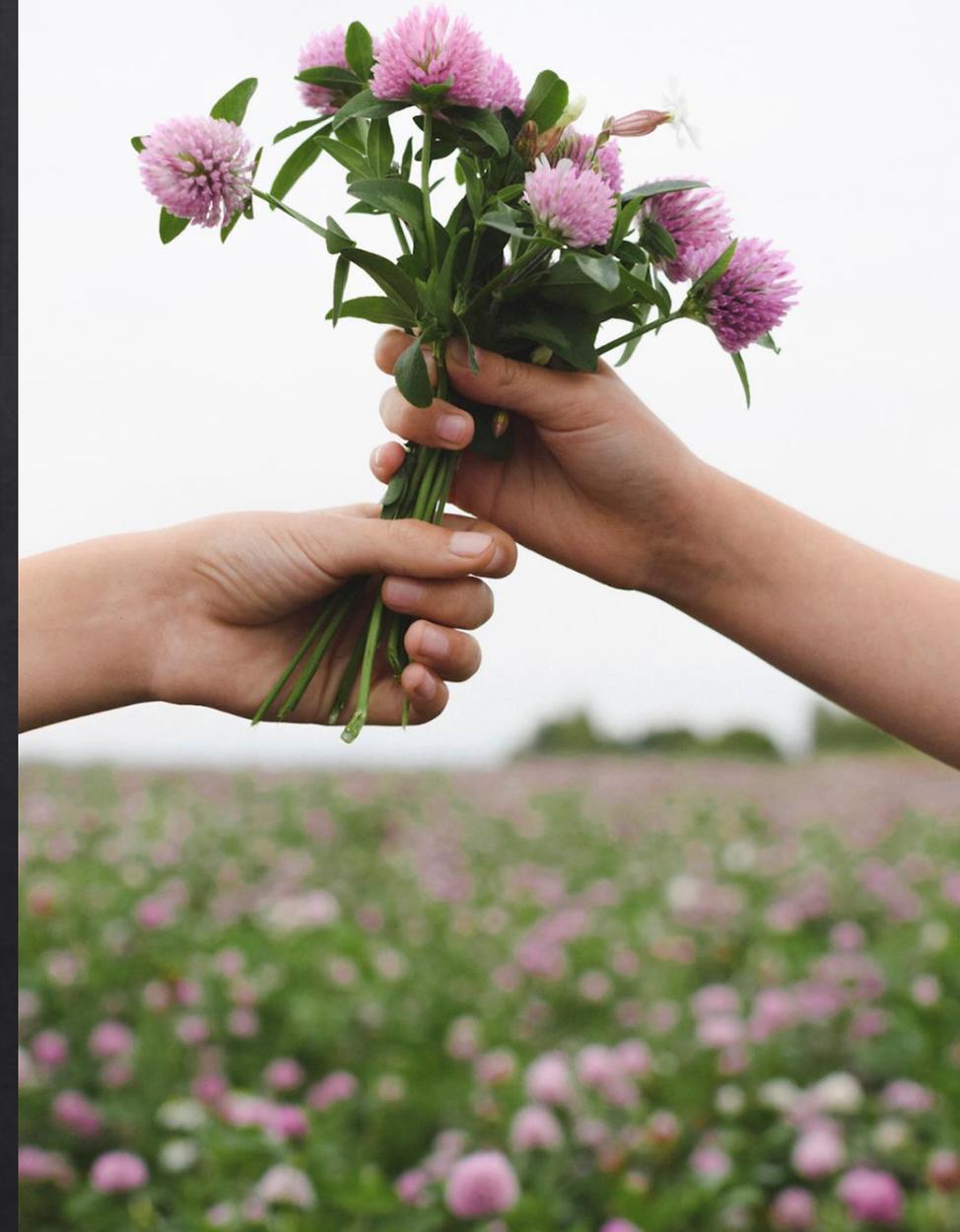
- ❑ Technical performance benchmarks, system operating parameters & warranty docs.

## System Documentation

- ❑ System operations guides & maintenance procedures.

## Equipment Training

- ❑ Corrective and Preventative maintenance



# Structure Contracts for Continuity

- ◆ Engage OEM's with C&C Management early in the project lifecycle.
- ◆ Structure contracts to enable a seamless transition from construction to operations.
- ◆ Define clear deliverables that bridge the construction and operations phases.
- ◆ Include performance guarantees that extend beyond Commercial Operation Date (COD).



# Red Flags to Watch For

- ◆ Incomplete documentation at handover
- ◆ Testing shortcuts or skipped procedures
- ◆ Unresolved punch list items affecting ops
- ◆ Lack of operational knowledge transfer
- ◆ No performance baseline established

# The Foundation

Operations Success Starts  
in Construction.

Quality management... is  
the foundation of reliable,  
profitable operations.



# The ROI of Quality Management

## Lower Risk

- ◆ Better understanding of issues from commissioning, developing into warranty claims.

## Lower Cost

- ◆ Avoid expensive fixes and performance retrofits.

## Higher Value

- ◆ Maximize asset performance and revenue from Day 1.

# Thank You

Questions?

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