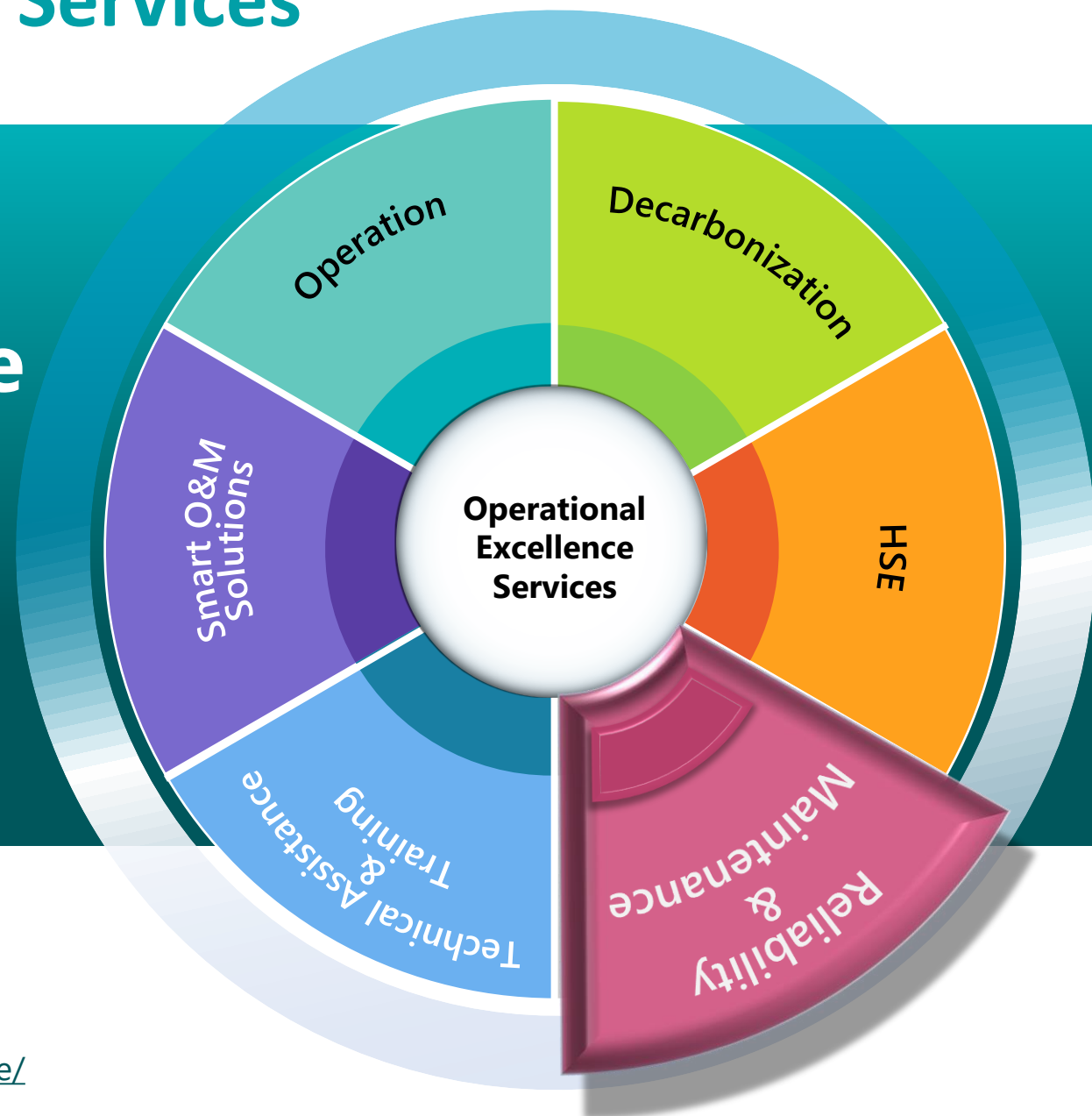




Operational Excellence Services

Reliability & Maintenance Plant Diagnosis and Lifetime Improvement Service



Contact Us

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Access to Our Homepage

 <https://www.jgc.com/en/business/epc/operation-maintenance/service/>

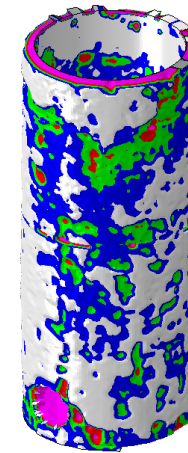
Do you have any of these issues?

- ☹ **Mechanical damage occurred!**
Can we continue operation? Should we replace?
- ☹ **What is the root cause?**
- ☹ **Which improvement plan is the most efficient?**

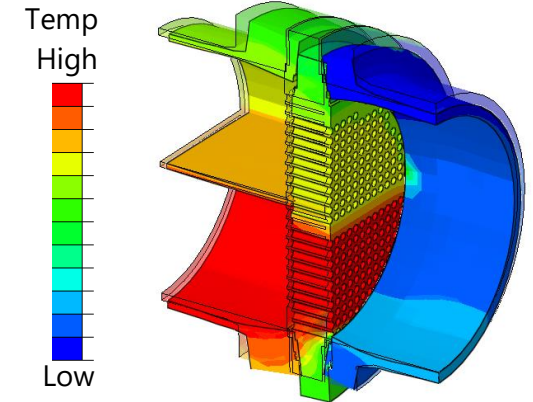
PLANT PLUSSM Solution

- JGC's simulation-based engineering service
- Investigate the root cause of the mechanical damage
- Diagnose whether a damaged equipment can continue operation or should be reinforced, revamped partially, replaced totally
 - Leads to reduced cost of repair/revamp
- Propose effective improvement/reinforcement plan

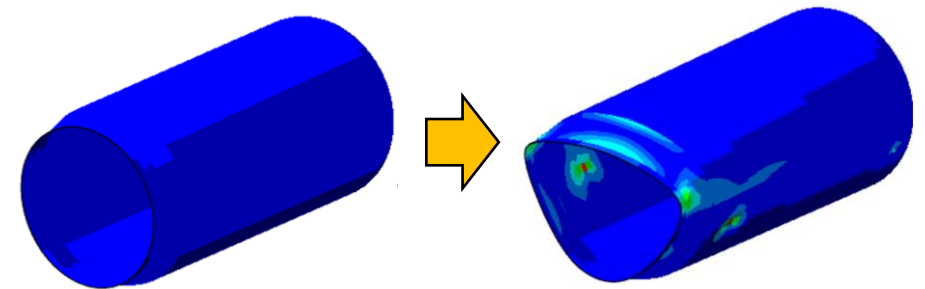
Examples of Finite Element Analysis (FEA)



(1) External Corrosion
Analysis Model by Laser Scanning

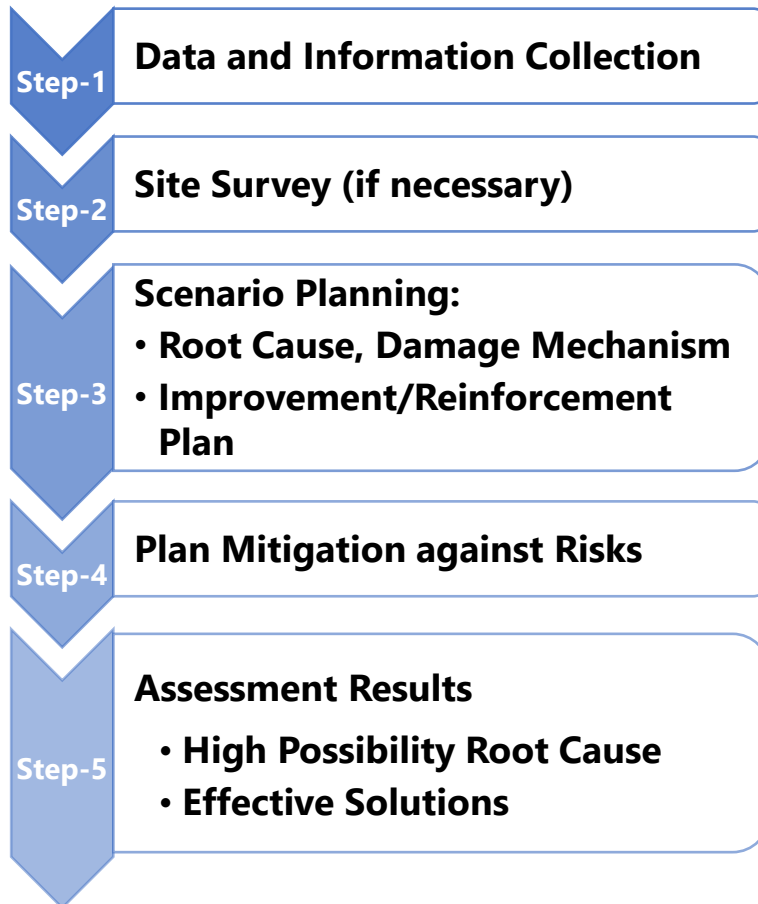


(2) Flange Deformation
due to Temperature Distribution

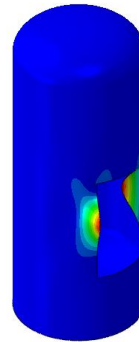


(3) Creep Deformation of Vessel during PWHT

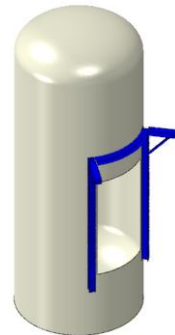
Workflow & Result



Example: Large opening discovered during Turnaround



Assessed buckling risk for vessel with large hole



Proposed reinforcement plan

Our Strengths

- Diagnosing from various perspectives such as international design codes, fitness-for-service codes, post construction codes, guidelines often used in the plant industry, and JGC's own company standards
- Providing quantitative and easy-to-understand study results and countermeasures using structural analysis techniques such as finite element analysis (FEA)

Our Experiences

1000

Plant Diagnoses

Structural analysis technology, computational fluid dynamics technology and noise assessment/control technology for 1,000+ diagnoses

50+

Years

Simulation-based engineering service for plant diagnosis and lifetime improvement