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Preconditioning the New Nuclear Build Organisation for Success

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Incorporating Lessons Learned

- Lessons learned are lessons forgotten unless they are interwoven into every step of the process to form a fully-integrated nuclear new-build project organisational approach for safe and quality nuclear power plant (NPP) installations:
 - By the owner/Nuclear Steam System Supply (NSSS) original equipment manufacturer/architect/engineer (A/E)
 - Throughout engineering, procurement and construction (EPC) processes, procedures and training

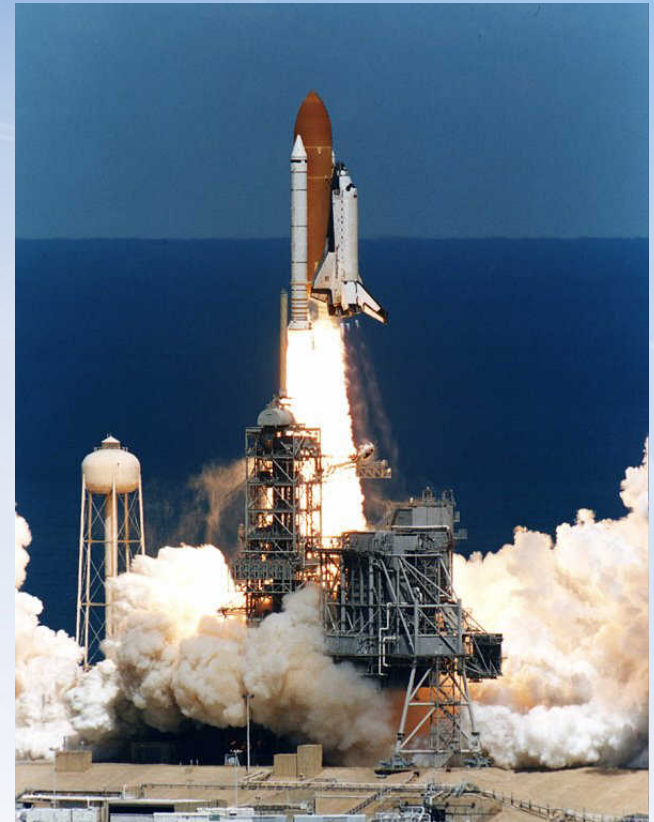


Photo credit: NASA

Three Major Themes

1. Take the time to select and train key project team leadership positions
2. Take the time to “do it right the first time” by learning from past lessons
3. Structure project team leadership from the beginning into **one** fully-integrated and co-located organisation of utility and contractor personnel focused on common issues and the **right** things



Photo credit: NASA

Key Team Selection — First Step

- Key individuals of the integrated team should not be just appointed by management
- “Best athletes” must be selected based on collective managements’ consensual ratings of each individual and by a team assessment specifically examining three areas, such as:
 - Business skills
 - Technical skills
 - Interpersonal skills, etc.



Photo credit: NASA

Do It Right the First Time

- Winning teams condition by practicing proven techniques and processes, and preparing for all anticipated game conditions
- **If we take more time** in team preparations than ever before, practice predicts the team's real game capabilities and expected performance



Photo credit: NASA

“Walk the Talk”

- Execution must be studied, planned and managed by the right people properly selected:
 - With honed skills
 - Practicing as a team
 - Measuring progress against basic fundamentals
- The effectiveness of nuclear new build projects lies more in the preparation than the doing
- “More important than any plan are the construction team’s understanding, commitment and follow-through of the plan”
 - *J.O. Stull*



Sanmen Basemat Rebar

One Integrated & Co-Located Team Organisation

1. Effective utility/Owner project leadership:
 - a. organisation, responsibilities and accountability
 - b. Open communication at all levels
 - c. Integrated project schedule ownership
 - d. Clear and common priorities
2. Project planning and schedule focus
3. Proactive risk management/mitigation program
4. Attention to details and documentation



Sanmen First Nuclear Concrete

Integrated Management Team

- There must be one integrated management team
 - Owner
 - NSSS supplier
 - A/E EPC provider
- Management team must collect disparate companies' concerns and manage priorities normally taking precedence over the project's paramount priorities



Sanmen Nuclear Island & Auxiliary Base



Sanmen CA-20 Structural Module

Integrated Management Team (cont.)

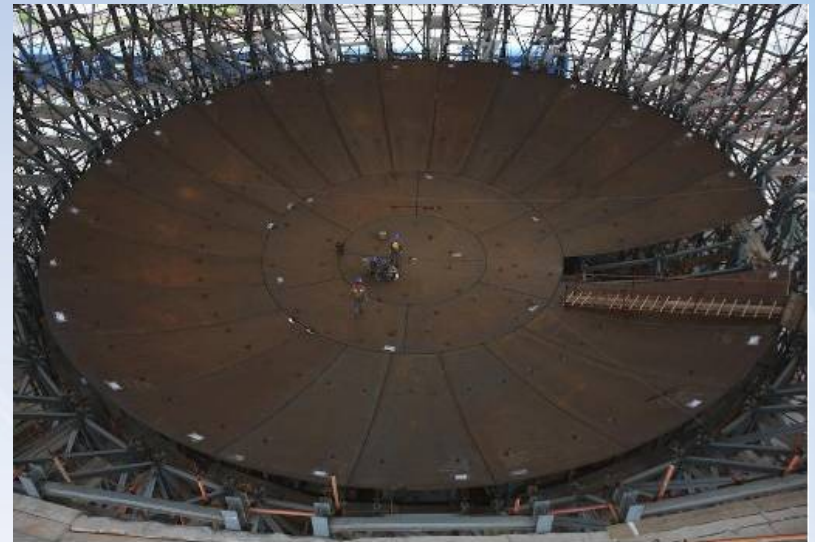
- To make daily progress, only **one co-located** team can be “busy about the right things”
- To force integration, **one** single, co-located mega-project key management team is initially, if not ultimately, required



Sanmen CA-20 Structural Module

Conclusion

- All these things must be done to create a Nuclear Safety Culture for construction that:
 - Is upheld in a high-performance, totally-integrated management team
 - Has an open, inclusive atmosphere for all individuals
 - Makes people want to come to work together for all the right reasons, for shared accomplishment
 - Recognizes that obligation to the team is first and foremost



CV Bottom Head Prefab