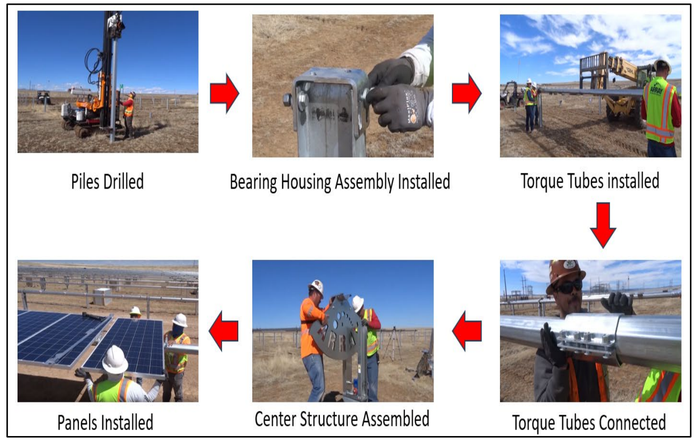
21st Century Utility Solar PV Farm Construction Automation

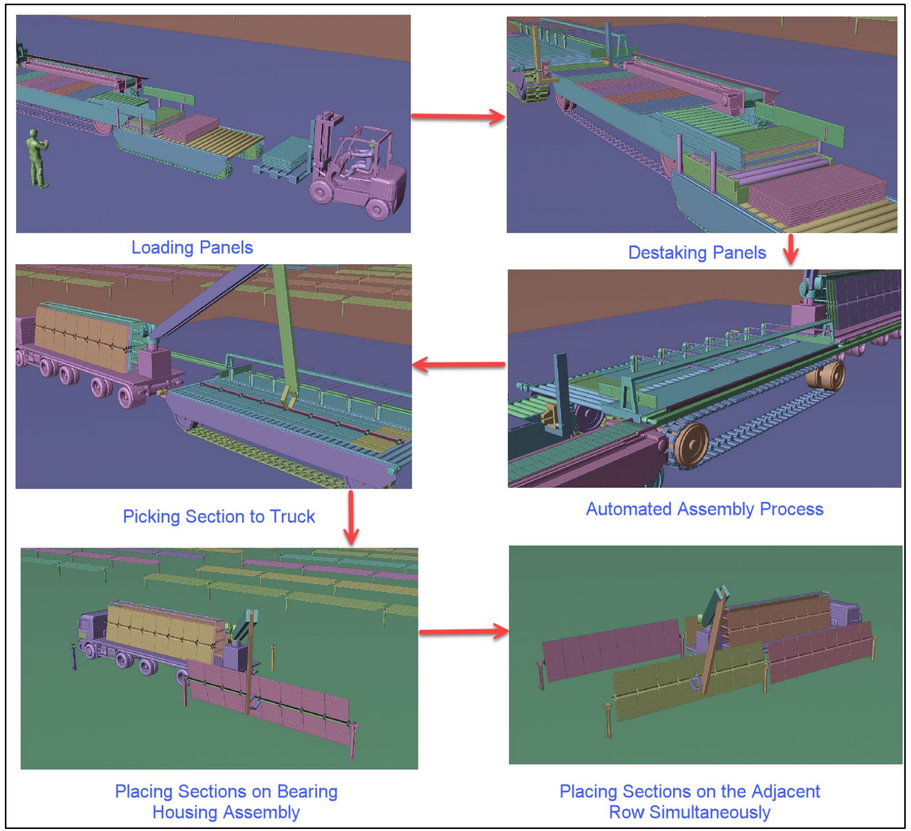
Now

Piles, torque tubes and PV panels are installed in that order over a vast geographical area. Panels are then wired together. This requires a large workforce and is a lossy construction process. Also, we don't know the output of a solar farm precisely ahead of time causing grid problems and sub-optimal operation.



Future

We re-designed the single axis tracker components to allow for fast modular construction automation on site. The construction automation has been fully designed. The trackers components have been fabricated and tested in a minimum viable product.



Benefits

1. Cut construction time by more than 65%.
2. Reduce tracker labor by more than 50%.
3. Reduce EPC pricing by 10%
4. Increase EPC availability
5. Pile remediation is eliminated as more error during installation is tolerated.
6. Innovative design that allows for 7° slope variations
7. Advanced stow mechanism that allow the row to be stowed at 85° for hail mitigation.