# Reverse engineering with innovative design helps the client to be competitive in the marketplace

A leading furniture manufacturer based out of North America

A furniture giant partnered with ITC Infotech's innovation team to develop furniture for small space and compete in modular furniture market

**7%** cost saving

**40%** savings through design optimization

ITC Infotech is a leading global technology services and solutions provider, led by Business and Technology Consulting. ITC Infotech provides business-friendly solutions to help clients succeed and be future-ready, by seamlessly bringing together digital expertise, strong industry specific alliances and deep domain expertise. The company provides technology solutions and services to enterprises across industries through a combination of traditional and newer business models, as a long-term sustainable partner.

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## CHALLENGE

- High design cost due to the unavailability of automated tool for creating main and sub-assemblies
- Lack of office workspace due to large envelope
- High material cost due to conventional design of chairs without innovation
- Legacy design with multiple configuration with no proper digitized files

## SOLUTION

- ITC Infotech followed the Reverse Engineering approach
- Each part was measured (based on the complexity of the part) by conventional methods, CMM and laser scanning
- With Lean and DfX approach preliminary design were modeled and analyzed for optimization across the 22 configurations
- Meticulously designed a common J bar, height adjustment and spider wheel mechanism for all the configurations
- Eliminated redundant main and sub level assemblies and created design automation to reduce the design lead time for the configurations

## RESULTS

- **7%** reduction on the Material cost
- **50%** reduction on the space utilization
- Overall, **40%** savings through design optimization