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PDII Tech Issues and Solutions
WRR 4 Hyatt Regency Collapse and Citicorp Building

1)

One technical reason is that the bolt was changed to carry twice the load, which failed when there was a large number of people dancing on the walkways. One non-technical reason is that this structure, which was already not up to code, was changed to carry twice the load in order to save the cost of threading the full length of the rods.

2)

One technical reason for the success of the building was the wind braces designed to protect the building from high winds. One non-technical explanation for the success was that when a problem was discovered with these wind braces (they had been bolted instead of welded,) the issue was actually addressed immediately and as quickly as possible, even at a cost of $8M. I would consider this a success, it simply had a bump in the road that was quickly addressed.

3)

In both cases, there were issues with the initial designs by the engineers (60% code strength and unaccounted-for wind directions,) which were then made worse by design changes that never went by the lead engineers (increased load on nut/bolt and bolted rather than welded). The large difference is that with Hyatt Regency, these errors were never fixed and it lead to disaster, while at Citicorp, the error was recognized and addressed immediately, leading to a successful project and possibly one of the safest buildings in the area.