Corpus-based studies of grammar have greatly increased our understanding of language use. As a field, however, corpus linguistics has been less successful in moving beyond description to taking action. Many corpus studies claim important implications for communication-related problems, but even within language education, the studies often do not result in any changes in teaching or learning. Applications are even rarer outside of language education. In this presentation, I consider why corpus linguistics hasn't had more impact and discuss ways to increase the application power of corpus methods. Using an example from engineering education in the United States, I describe a project that has conducted several kinds of corpus-based grammar analyses and then applied the findings to materials that improve the preparation of students to work as professional engineers. More corpus analyses are then used to analyze the effectiveness of the materials. In tracing the process from corpus data to application, I discuss an extra methodological step, which requires collaboration with disciplinary experts. Although sometimes challenging, this collaboration increases the depth of our understanding of the grammar of specialized registers and allows for more concrete applications.