**Hands on challenge**

You have just been hired as lead consultant for a new emerging home improvement store called “Tool Time.” The store specializes in home improvement supplies and has recently expanded nationally to compete with Home Depot and Lowes.

You have been provided with a vast amount of data sources on Lowes and Home Depot including store locations by county, and Census 2000 and 2010 data. On your first day on the job you must provide a strategic plan to identify how your competitors first choose their store locations. Once you have reverse engineered their strategy, you must develop one for Tool Time and select the next 5 store locations.

Home Depot and Lowes have similar store sizes, inventory and slight variations in their customer base. Typically, the stores are 120,000 square feet with a 20,000-square foot joining garden center. Inventory between the stores is quite similar with minor varieties here and there. Through your research and insight from your new colleagues at Tool Time, they have determined that customer demographics are the most important in making strategic decisions on store locations.

The customers for Home Depot and Lowes are split into the following categories:

1. *Contractors* involved in the construction and repairs of homes. This group comes to the store to buy home construction supplies, raw materials and tools
2. *DIY consumers* are homeowners or renters that live in a dwelling and come to the stores to buy materials and request consulting on their projects from the store staff
3. *Finished product* consumers –are those that come to the store to purchase goods that have been completed by the manufacturer but may need installation assistance like refrigerators, light fixtures, washer and dryers, etc.

Unfortunately, you do not have raw data on the above 3 customer categories. However, the next best data points which relate to these customers are free and available to you – Census Data. The census data provides a broad but telling story of each county in the United States. Many businesses use this data for market research. The types of customers that Home Depot and Lowes are targeting can be gleaned from this census and store location data. A data dictionary of this data can be referenced in the appendix section.

* The HDLData is a compilation of a web scrapper to obtain recent Home Depot and Lowes stores across all 50 states. The store location data was merged with 2000 and 2010 Census data and identifies the demographics of the store locations.
* While there are similarities in the stores of what they sell (home improvement merchandise) there is a unique strategy for each of the stores target market.
* Throughout today’s class we will reverse engineer this strategy and predict where the stores will end up next.
* Data Dictionary
  + Areaname – city / town name
  + County – zipcode
  + State
  + Lcount – count of Lowes stores in the town/city
  + Hdcount – count of Home Depot in the town/city
  + Pop\_2000 – population in 2000
  + Pop\_2010 – population in 2010
  + Income\_2000 – avg income in 2000
  + Income\_2010 – avg income in 2010
  + pct\_U18\_2000 – percent under 18 in 2000
  + pct\_U18\_2010 – percent under 18 in 2010
  + Pct\_college\_2000 – percent in college per town in 2000
  + Pct\_college\_2010 – percent in college per town in 2010
  + Ownhome\_2000 – percent owned home in 2000
  + Ownhome\_2010 – percent owned home in 2010
  + Density\_2000 – percent density per town in 2000
  + Density\_2010 – percent density per town in 2010
  + Pct\_white\_2000 – percent of Caucasian in town in 2000
  + Pct\_white\_2010 – percent of Caucasian in town in 2010
  + Pct\_black\_2000 – percent African American in 2000

Pct\_black\_2010 – percent African American in 2010