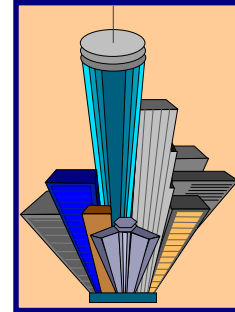# EXSYS Case Study

Commercial Loan Approval Predictor

A knowledge automation system has been developed for banks that specializes in loans over $30,000,000. Such loans are typically for major construction projects and the source of funds is almost always federal money with extensive regulations.

Before such a loan is issued, a lengthy and expensive study must be performed. On the average, the study can take 6 months, 3200 pages, and $250,000 to complete. The bank as part of issuing the loan recovers the cost of the study. However, the $250,000 is recovered ONLY if the bank issues the loan. The investment in the study is lost if the loan is not issued. Consequently, there is a great deal of pressure to issue the loan, even if the situation is not as secure as desired.

To solve this problem, a knowledge automation system was developed to predict if the full study will result in a loan that will or should be issued. The system divides loans into three categories - likely to be issued, unlikely to be issued and gray area. The loans that are unlikely to be issued can be dropped prior to investing resources in the full study, resulting in great savings. The loans likely to be issued can be pursued with confidence that the costs will be recovered. The predictor recommendations on the gray area loans are examined by the bank loan experts to determine if they should proceed with the full study.

In addition to predicting loan study outcome, the knowledge automation system recommends the best source of funding for the potential loan - either Ginnie Mae, Fannie Mae, Freddie Mac or private funds - by evaluating the many requirements associated with each loan. Wide ranges of development techniques were used, including knowledge acquisition phase and decision modeling to establish probability factors during rule generation.