



# Data Mining Applications Revisited


# Data Mining (Recall)



- ▶ Includes:
  - ▶ Identifying valid, novel, potentially useful, and ultimately understandable patterns in data
  - ▶ Searching for relationships, patterns, and trends not known to exist or not visible
  - ▶ Providing answers to questions decision maker not thought to ask
- ▶ Requires:
  - ▶ Information technology
  - ▶ Statistics
  - ▶ Business knowledge

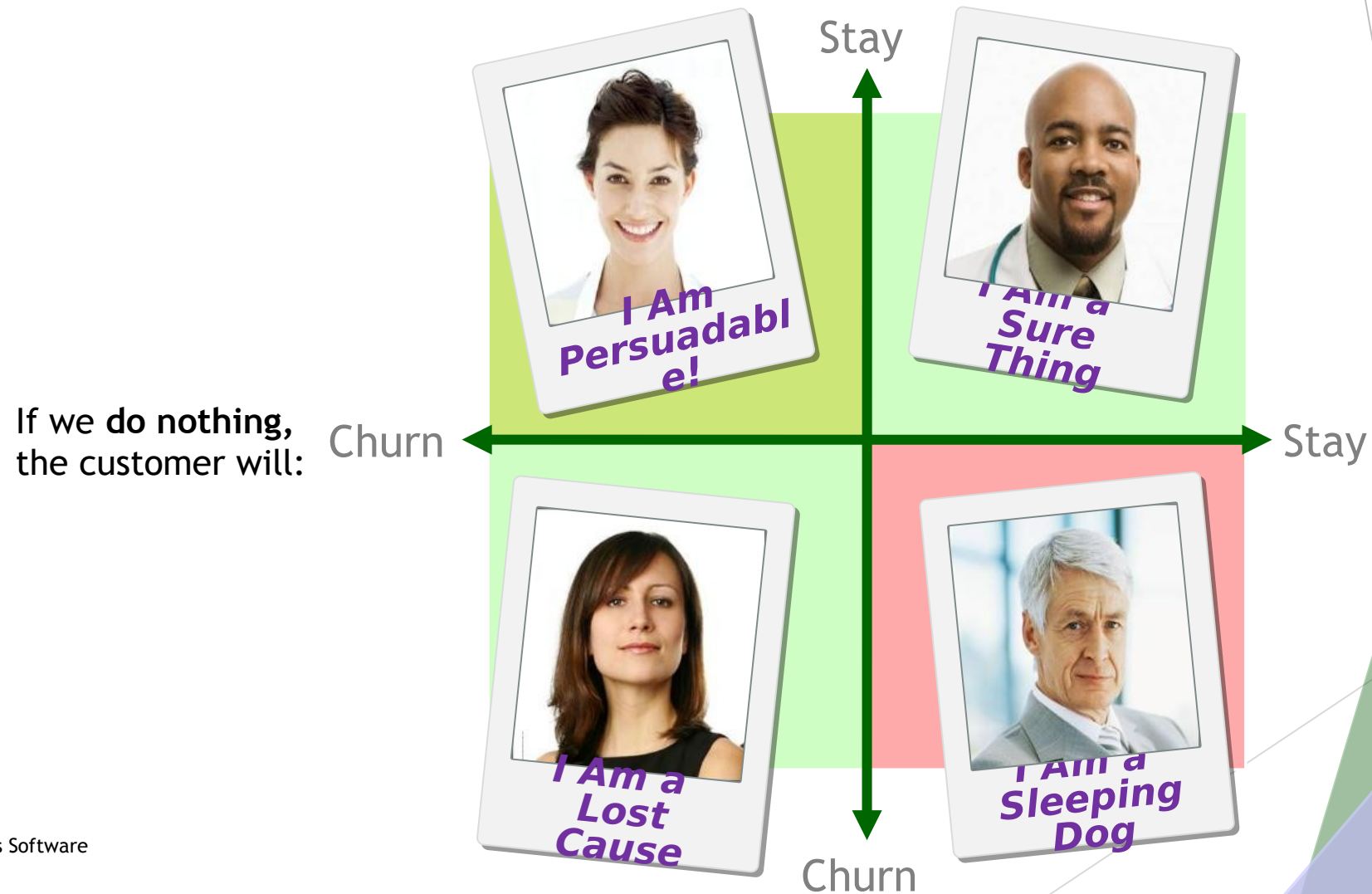


# Data Mining: Applications

- ▶ **Marketing and Promotion Targeting**
  - ▶ Prospects for e-mailing list
-  ▶ **Customer Segmentation**
  - ▶ Common characteristics of customers who buy same products
- ▶ **Market Basket Analysis**
  - ▶ Which products likely to be bought together
- ▶ **Customer Churn**
  - ▶ Which customers likely to leave
- ▶ **Fraud Detection**
  - ▶ Patterns of fraudulent transactions; compare current transactions
- ▶ **Collaborative Filtering**
  - ▶ Personalization based upon similar customers
- ▶ **Financial Modeling**
  - ▶ Trading systems based upon historical data
- ▶ **Hiring and Promotion**
  - ▶ Based upon employee characteristics

# Example: Predictive analytics (Herschel)

If we target, the customer will:



Managerial implications?