



MIS 3504

Digital Design
and
Innovation

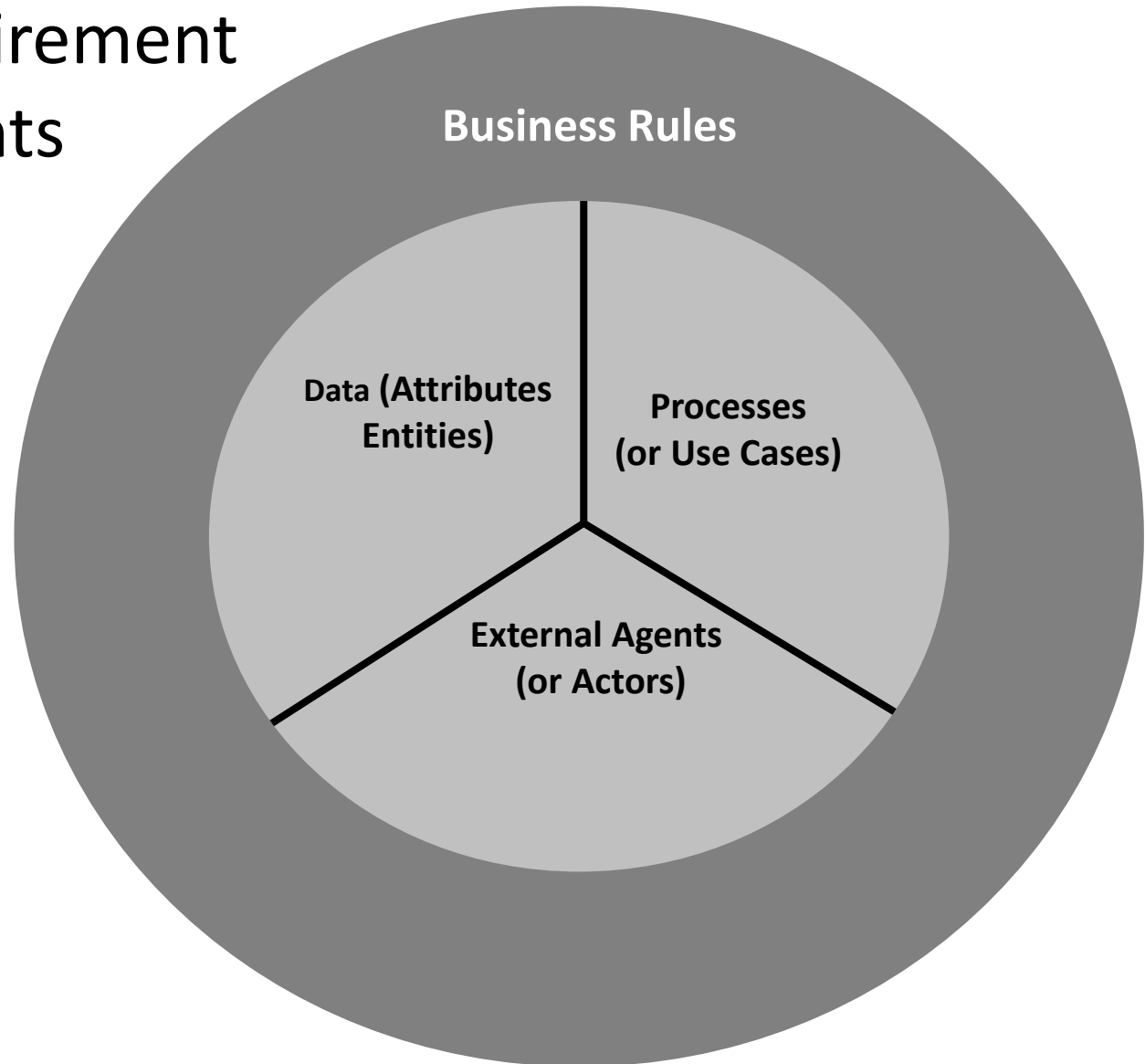
Business Rules

Week 7

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Photo: Installation by Jenny Holzer, US Pavillion, Venice Biennale 1990

Core Requirement Components



Business Rules And Decision Trees

What is a Business Rule



Business Rule

- Describes a policy, guideline, standard or regulation upon which the business operates
- A statement that defines or constrains some aspect of the business
- It is intended to assert business structure, or to control or influence the behavior of the business.
 - From Business Analysis Body of Knowledge (BABOK)

What does a Business
Rule look like

TERM1 –FACT- TERM2



Business Rule **Format**

- Textual statement that defines the rule **exactly** and **unambiguously**
 - Each rule has a unique identifier (ex. BR125)
 - Usually documented or managed in a separate catalogue or table
-
- From Business Analysis Body of Knowledge (BABOK)

Business Rule **Examples**

- BR1 - Customer calls must be returned the same day.
- BR2 - Expected contract value is calculated as the probability of signing the contract times the total value of the contract.

Types of Business Rules

- Restriction – **must or must not happen**
An order must not have more than one ship-to address.
- Heuristics – **guidance on how to do something**
A customer is delinquent if their account is more than 30 days past due
- Inference – **given a condition, assume other conditions**
A generic version of a drug will be used if it exists.
- Timing – **activity based on elapsed time**
A thank you letter is generated five days after an order is shipped
- Triggers – **cause and effect relationship**
Open complaints are closed when a root cause description has been entered into the system.

- From Business Analysis Body of Knowledge (BABOK)

Why not **if/then**?

Using the if/then format may obscure the true subject of the business rule. The true subject should be at the start of each rule.

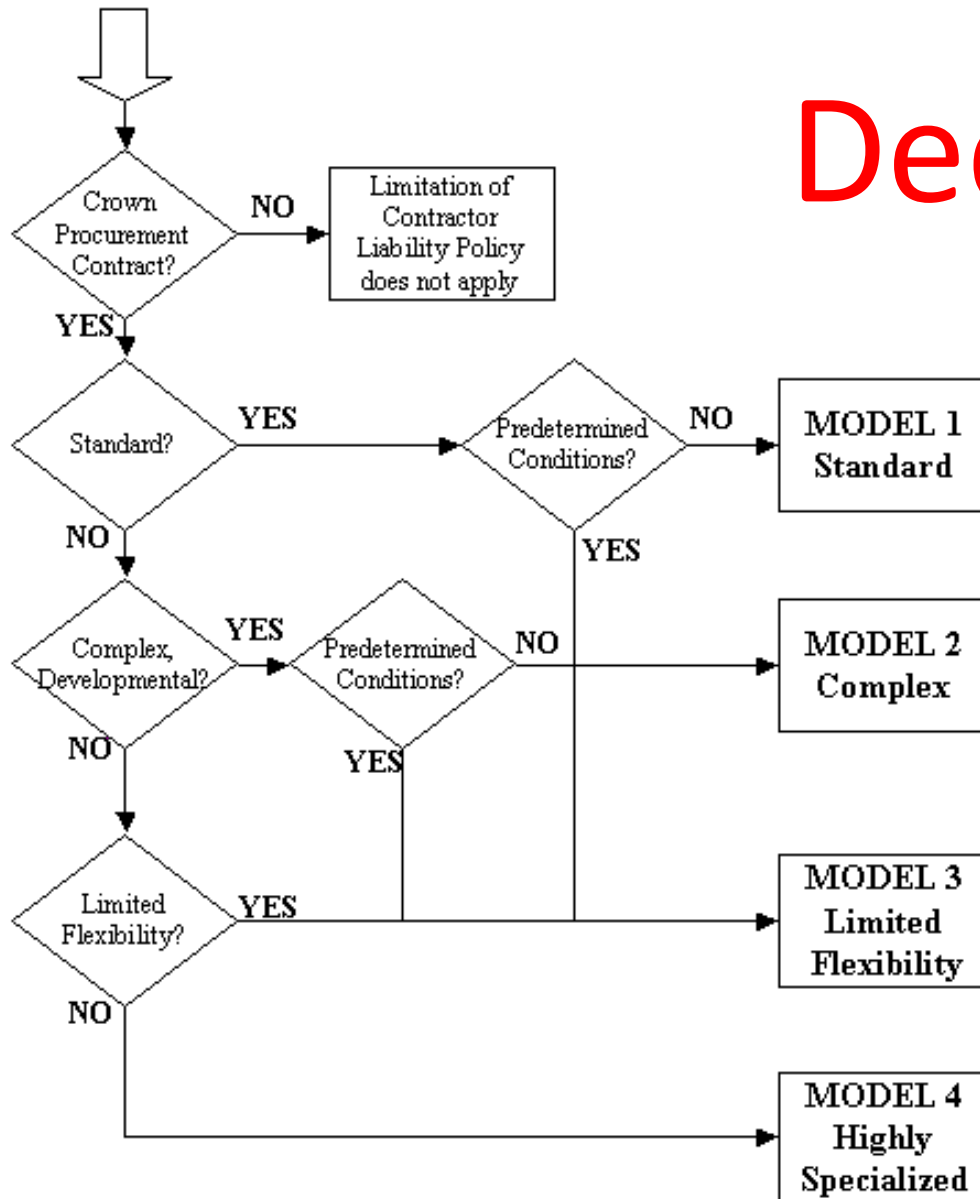
- If the order is shipped then send the notification
- Notification must be sent on a shipped order

What is a Decision
Tree?



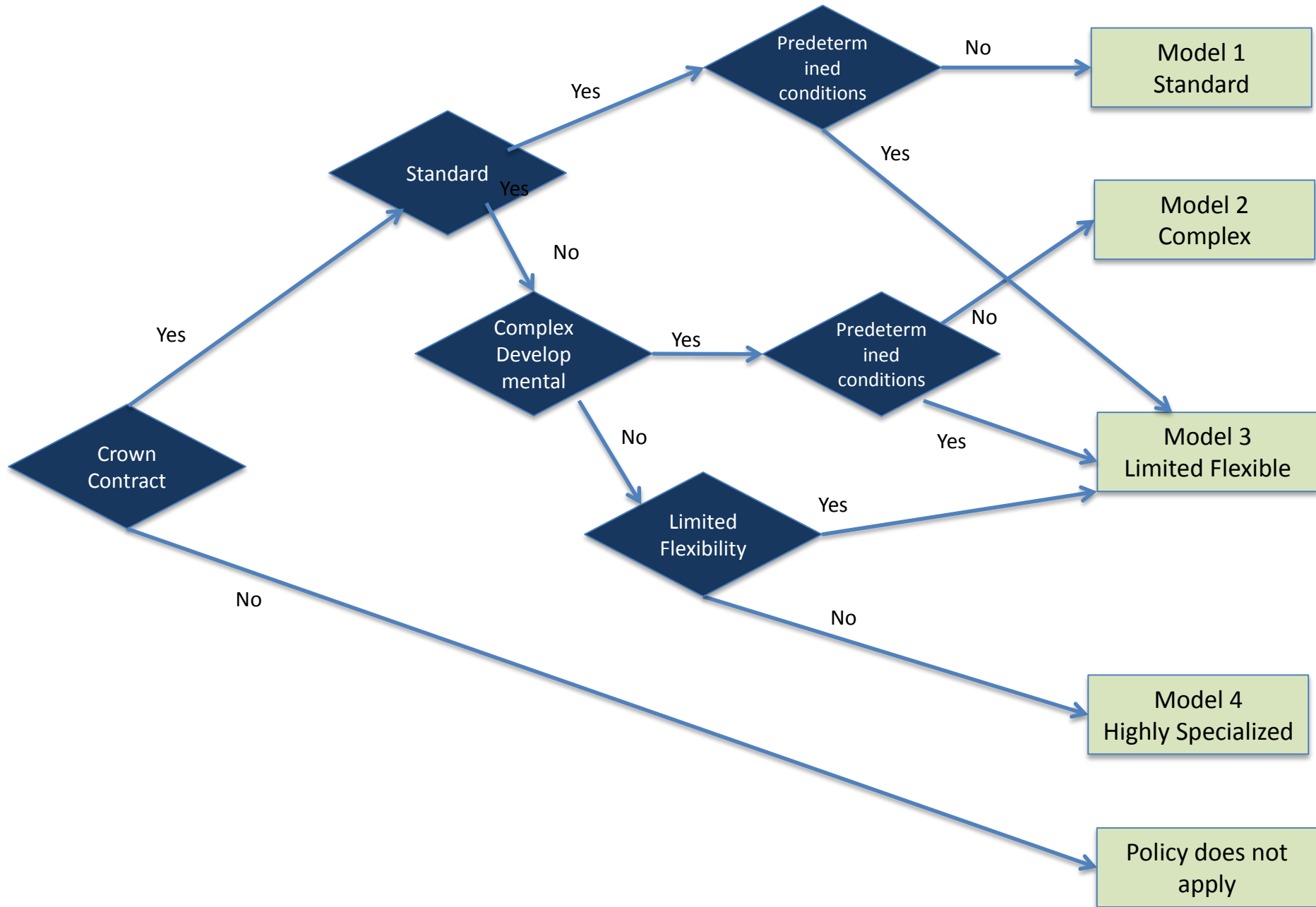
Decision Tree
Limitation of Contractor Liability

Decision Tree



From the Treasury Board of Canada
<http://www.tbs-sct.gc.ca/cmp/doc/locltm-mflrm/locltm-mflrm1-eng.aspx>

Decision Tree



You are working with the local gas company to analyze what it costs to serve customers and why they are losing money on an increasing percentage of customers. You have identified a potential problem:

PGWC seems to be turning on gas for a number of customers in November, only to have them turn it off in April. The company incurs the “Turn on” charge as well as the “Shut off” charge for only six months of revenue. The company is supposed to assess this risk up front and demand payment of a fee, any unpaid invoices, and a deposit for those customers who are apt to fall behind in their payments or shut off their service. You need to understand what this policy is and how its being applied to see if they need to change it, enforce it, or look elsewhere for the real problem.

You ask Gayle Gellippi, Customer Service Manager to explain the deposit policy to you. This is what you hear.

“We look at how likely a customer is to become delinquent or shut off and charge accordingly, its really simple. It costs \$150 to “Turn on” a gas connection. We check all our customers’ credit ratings to see how good it is. We also look at their history with us (i.e. have they been a customer before). Of course, if they owe us any money, we insist that they pay us before we reconnect them. If the customer has new construction and three or more gas appliances in their house, we waive the “Turn on” fee and charge no deposit. If their credit rating is poor we charge a deposit of \$200 in addition to the “Turn On” fee. When we look at their history, if they have connected/disconnected many times, then we double the deposit to \$400. Customers with good credit but with only a few appliances pay just the initial fee.”

Using the information provided,

- Identify the set of business rules that PGWC is using to decide what to charge a customer when they create a new account.
- Draw a Decision Tree of how PGWC should link these business rules to decide what to charge.
- Write a list of questions that you want to ask Gayle when you go back to her with your draft rules to check if they are correct.

Exercise: PGWC Case

1. Write out the business rules
2. Link them in a decision tree

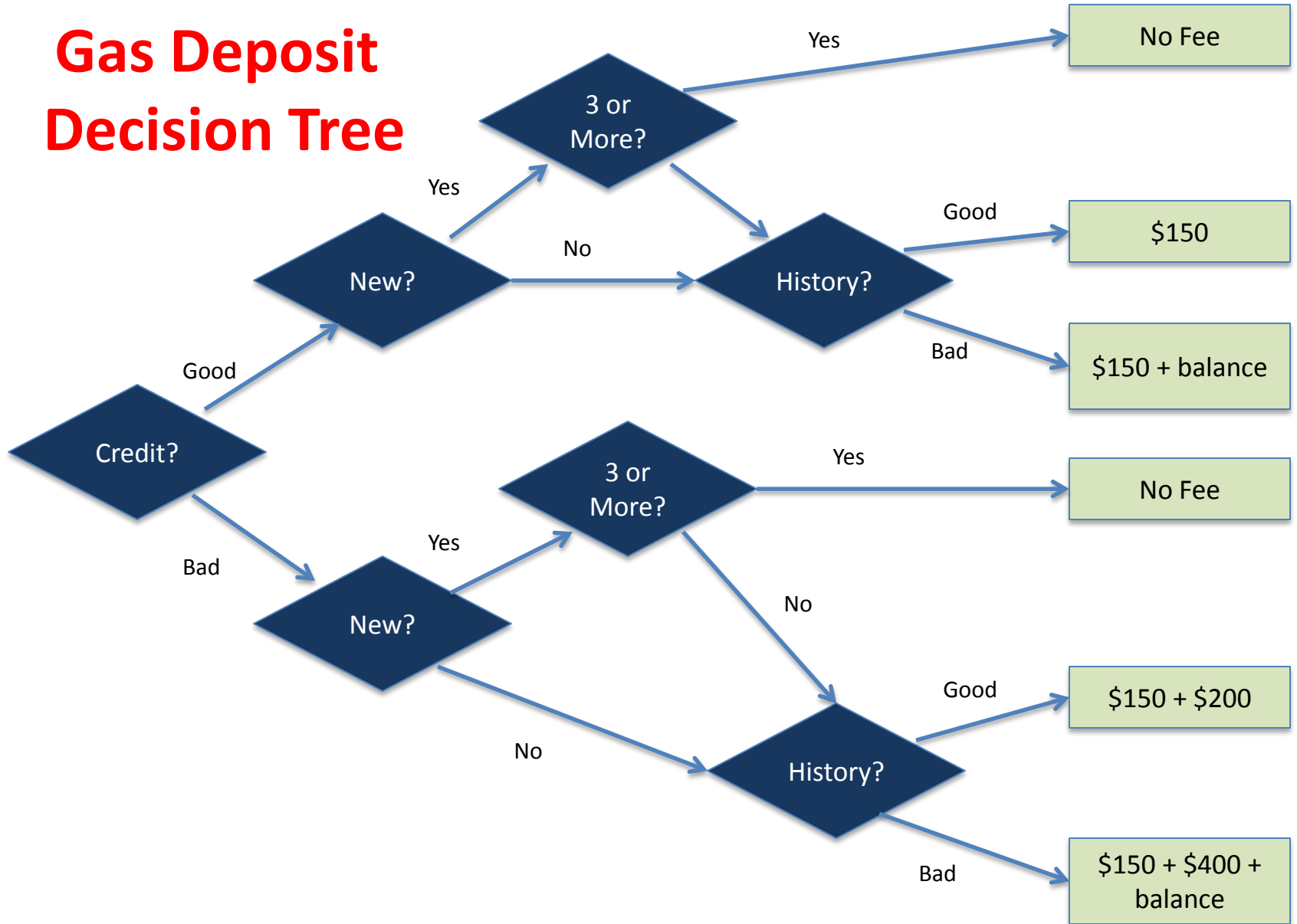
Gas Deposit Business Rules

- A customer with a good credit score is not charged a deposit.
- A customer wanting gas service pays a \$150 “turn on” fee.
- A customer with a balance must pay that balance, in full, before “turn on”.
- A customer with new construction and 3 gas appliances has all fees waived.
- A customer with a poor connect/disconnect history must be charged a deposit of \$400.
- A customer with poor credit score must be charged a \$200 deposit.

Case
Review:

1. How did it go?
2. What confused you?
3. What does your list of business rules look like?

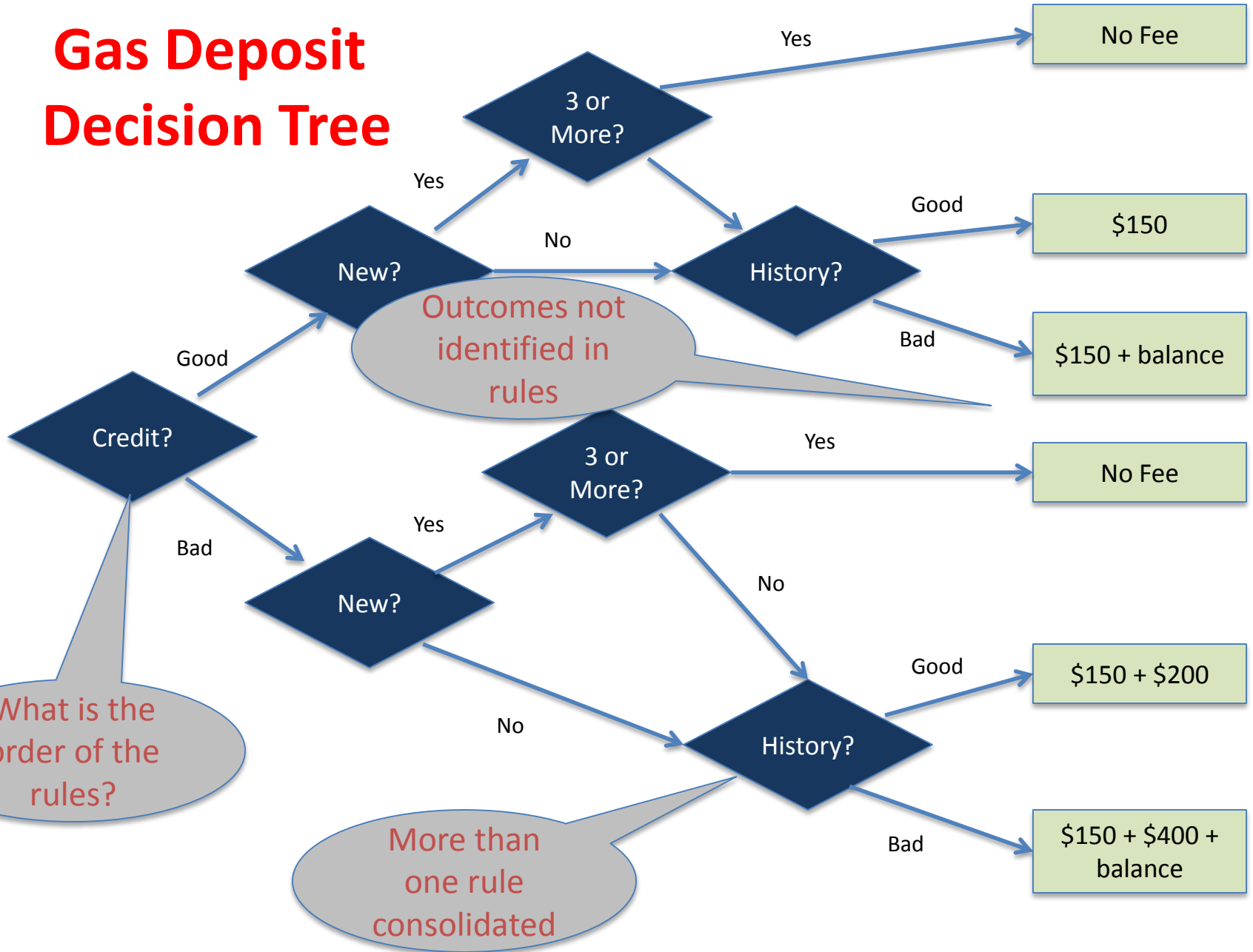
Gas Deposit Decision Tree



Case Review:

1. How did it go?
2. What confused you?
3. What does your list of business rules look like?
4. What follow-up questions do you have?
5. What problems or opportunities should you be looking for?

Gas Deposit Decision Tree



Business Rule Evaluation

1. How well do the business rules describe the client's behavior?
2. How completely do they cover the client's situation?
3. Does they accurately reflect what rules the client is using?
4. Is it an appropriate tool for the client's situation?

Individual Challenge:

Mortgage Program Case Study
Due Class 8, March 26, 2013

[Mortgage Program Case link](#)
[Business Rule Template](#)