

# ISYG 100 :Application Engineering and Development

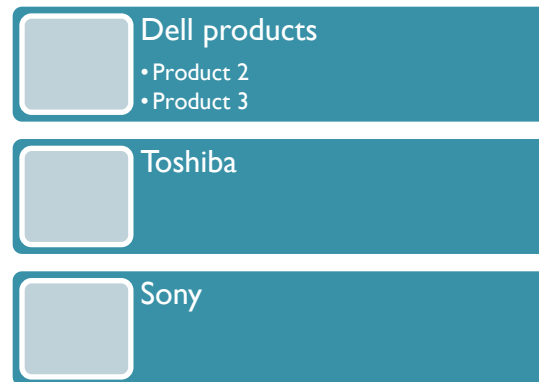
Lab 4 : How to implement Multi-Party Relationships?



# The problem

- Best Buy wants to build a web application to make it easy for their customers to browse and learn more about all their products

Combined product offerings



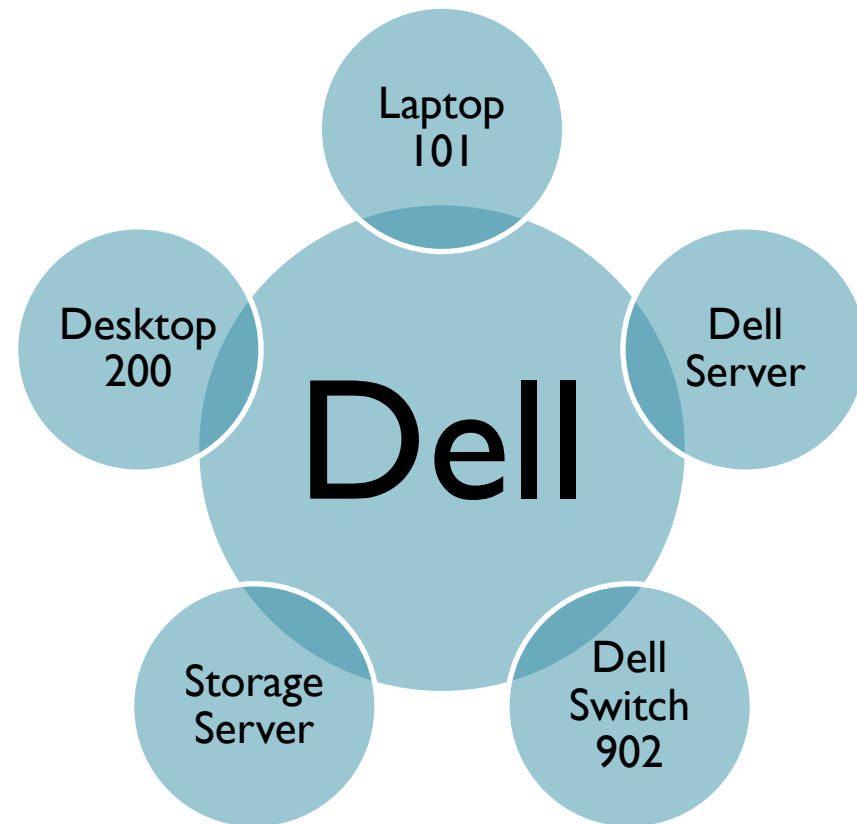


# Who are the players?

# Best Buy sells products from multiple suppliers



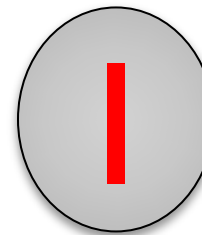
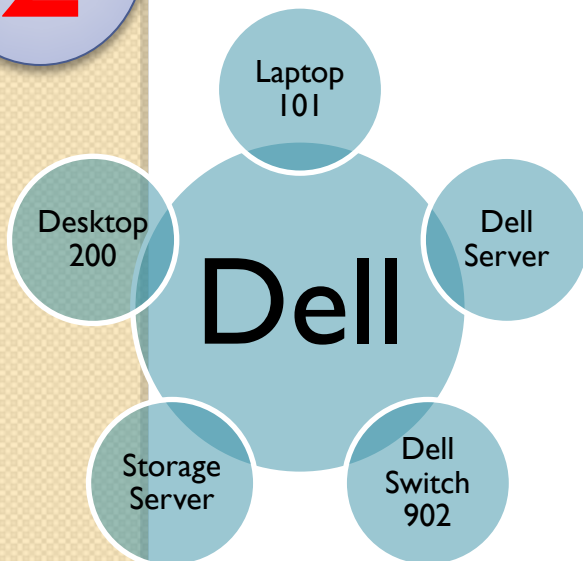
Best Buy wants each supplier to manage their own catalog of products



Best Buy will register each supplier first and from then on each supplier must keep its product catalog up to date.

2

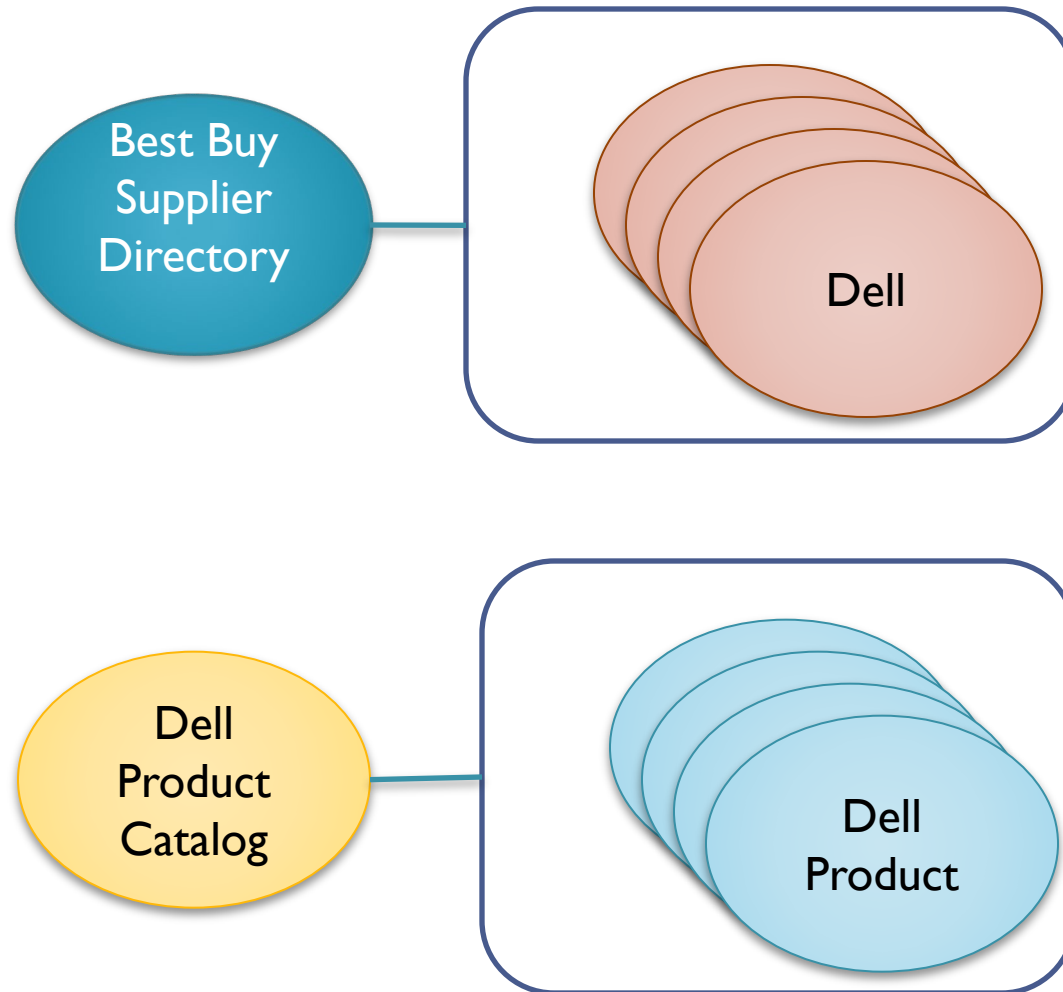
Manage Own Product Catalog



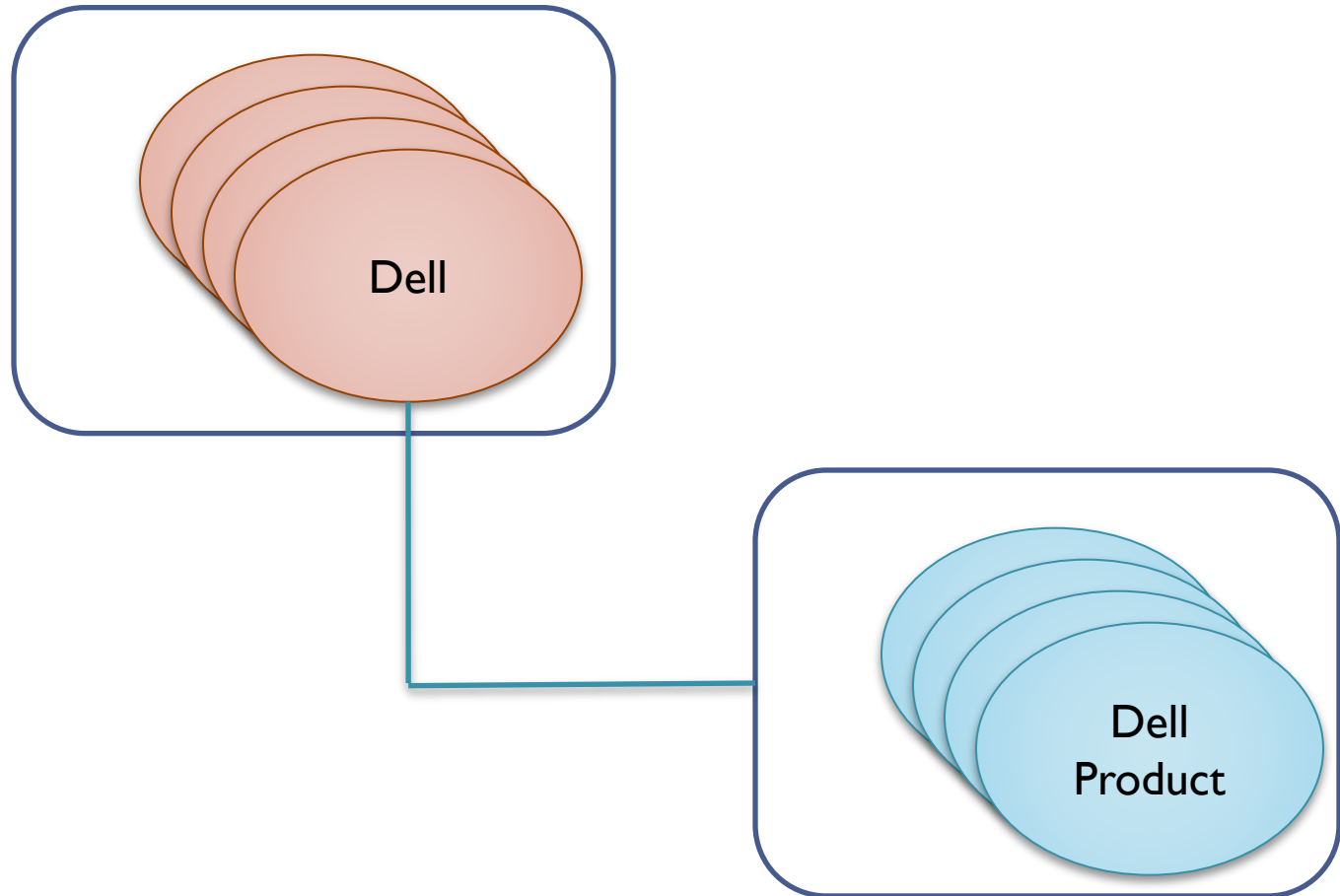
Register Suppliers



# What do we know so far?

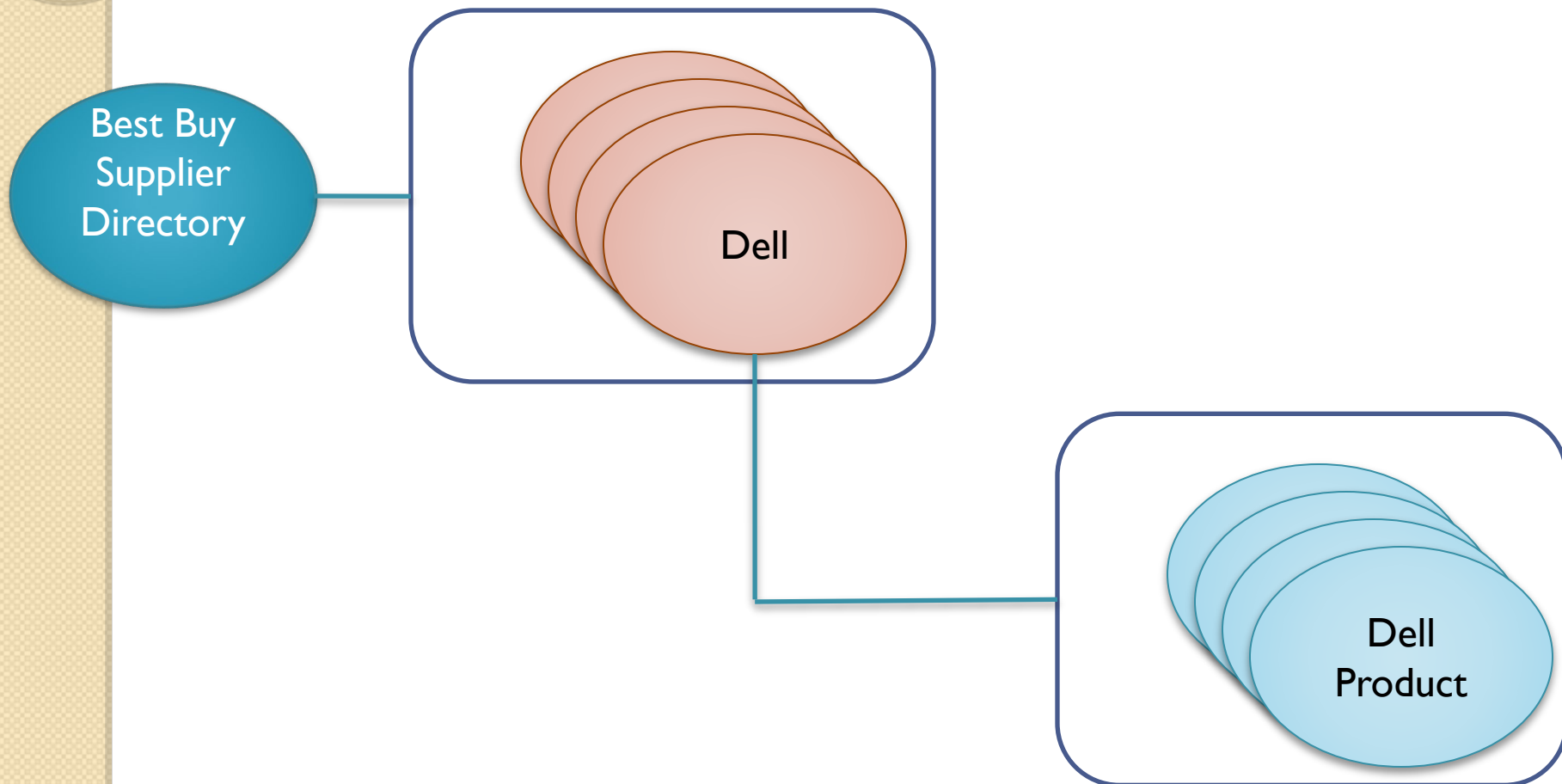


# Each supplier offers many products



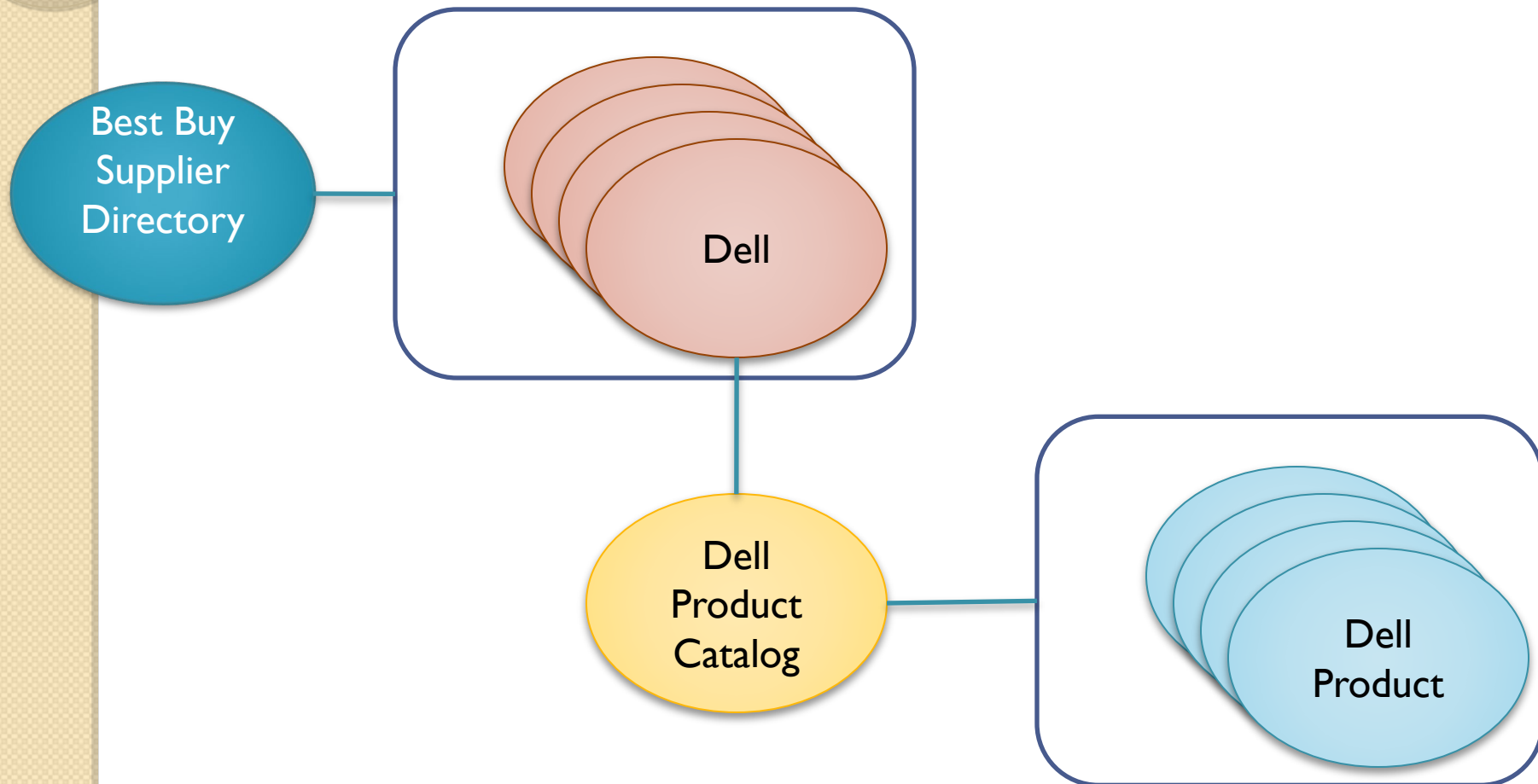


**Best Buy has many suppliers**  
**Each supplier offers many products**

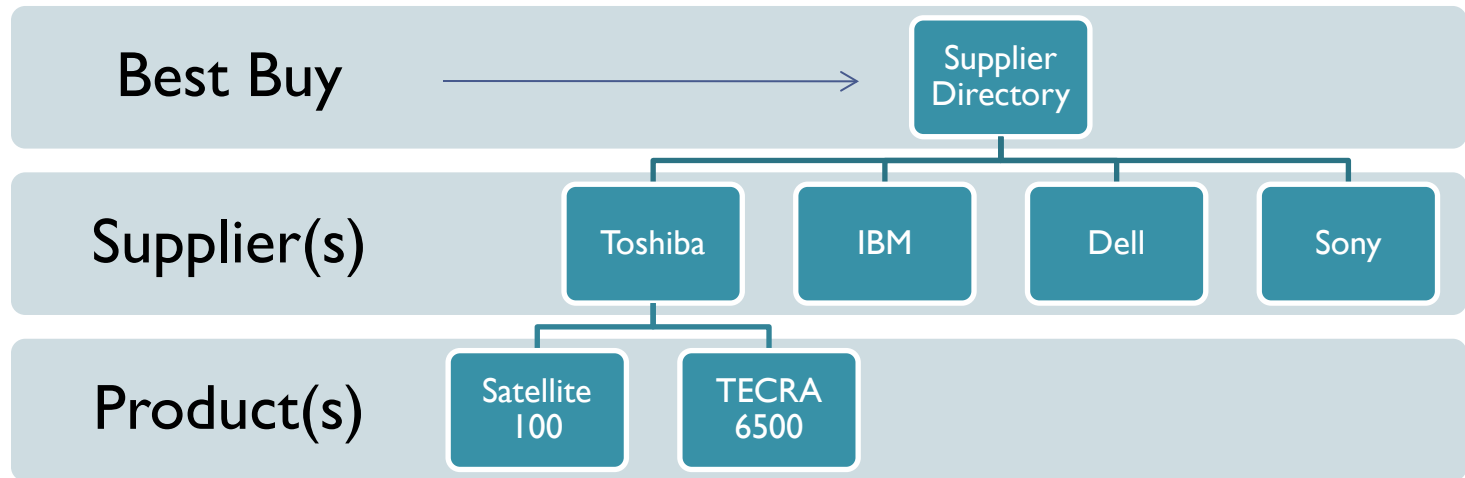


# Suppliers represented as a directory

## Products represented as a catalog



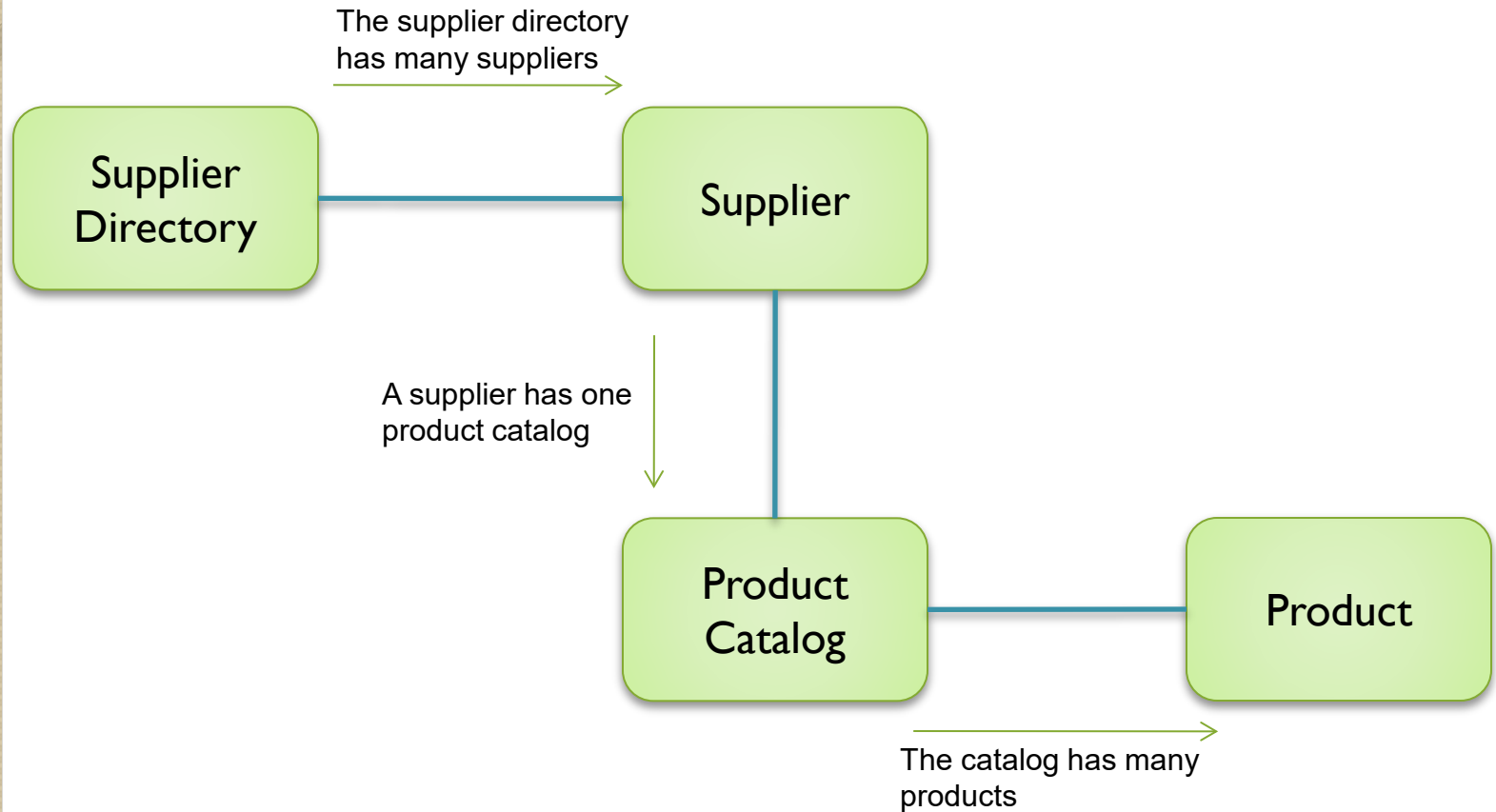
# Hierarchy Structure



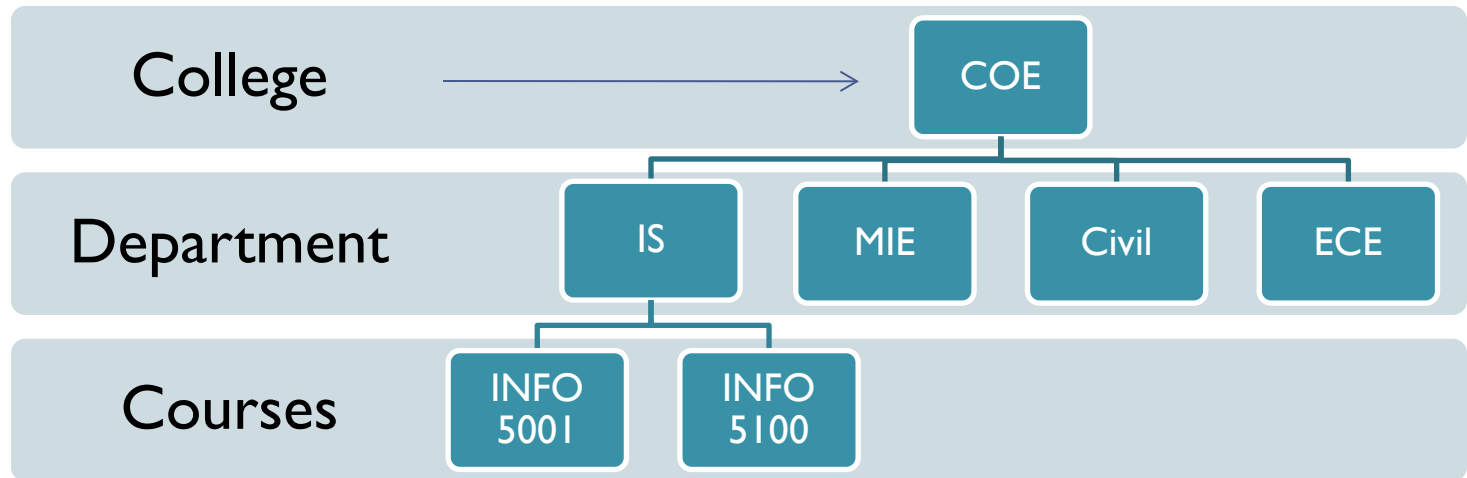
What is a higher level component?

What would be a lower level component?

# The Business Model



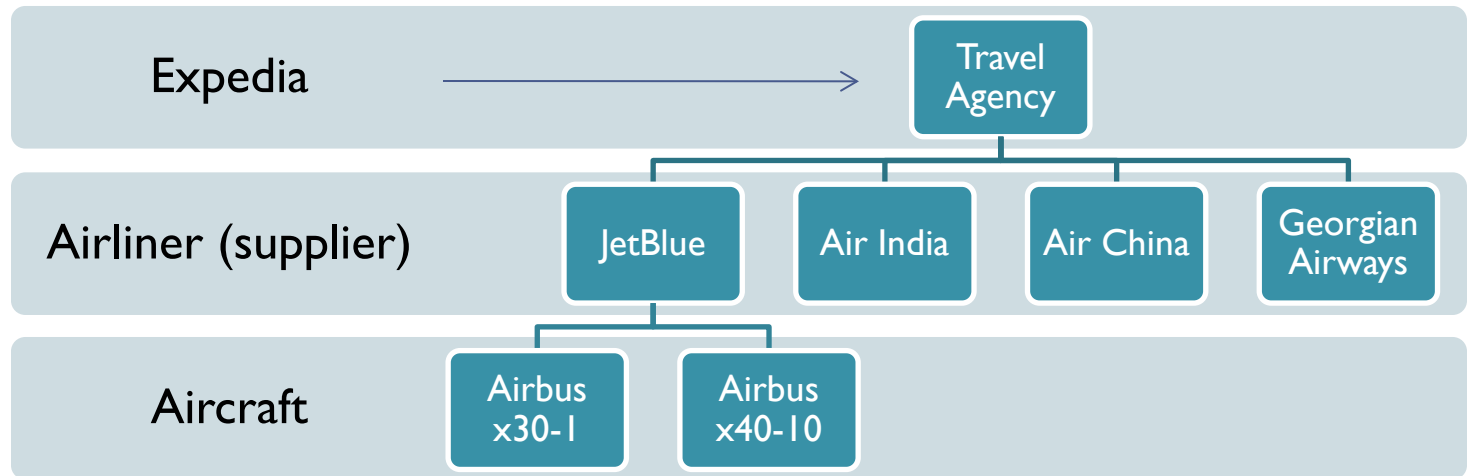
# Hierarchy Structure Example



What is a higher level component?

What would be a lower level component?

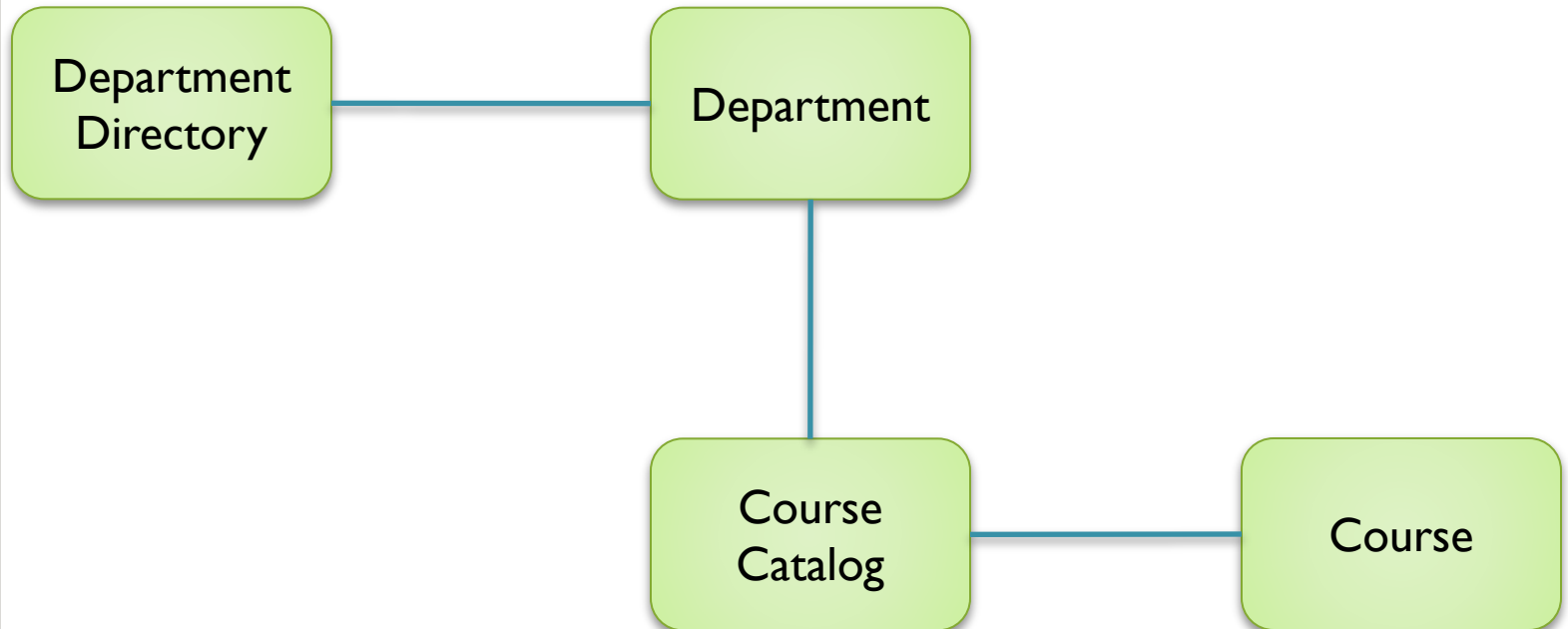
# Hierarchy Structure Example



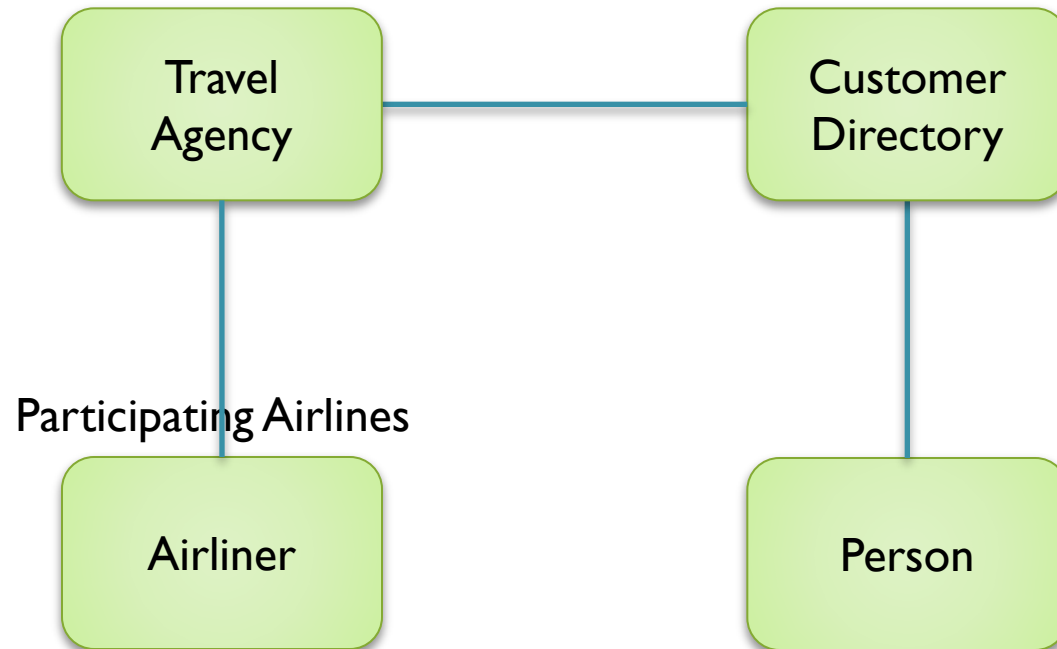
What is a higher level component?

What would be a lower level component?

# Other patterns

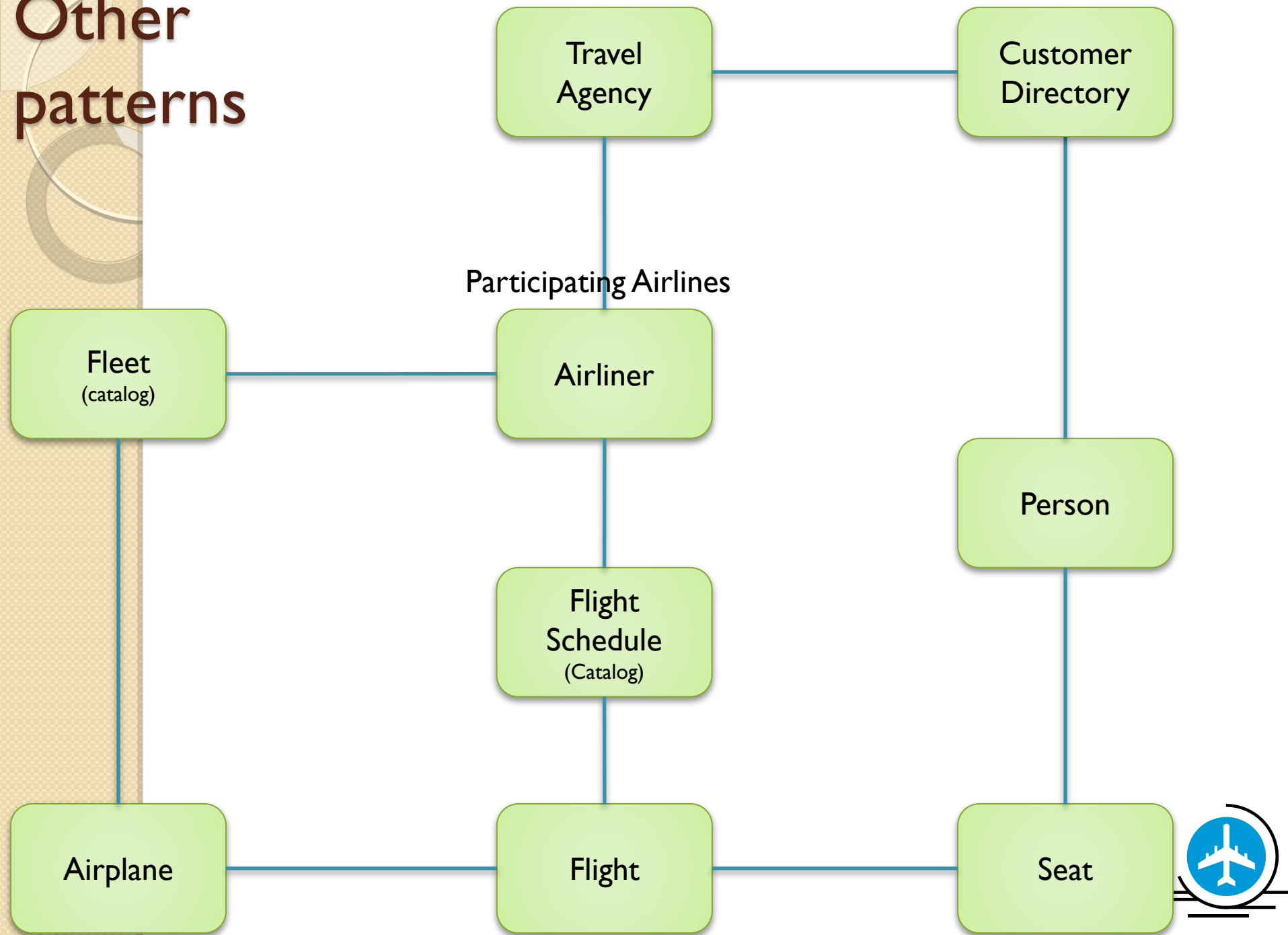


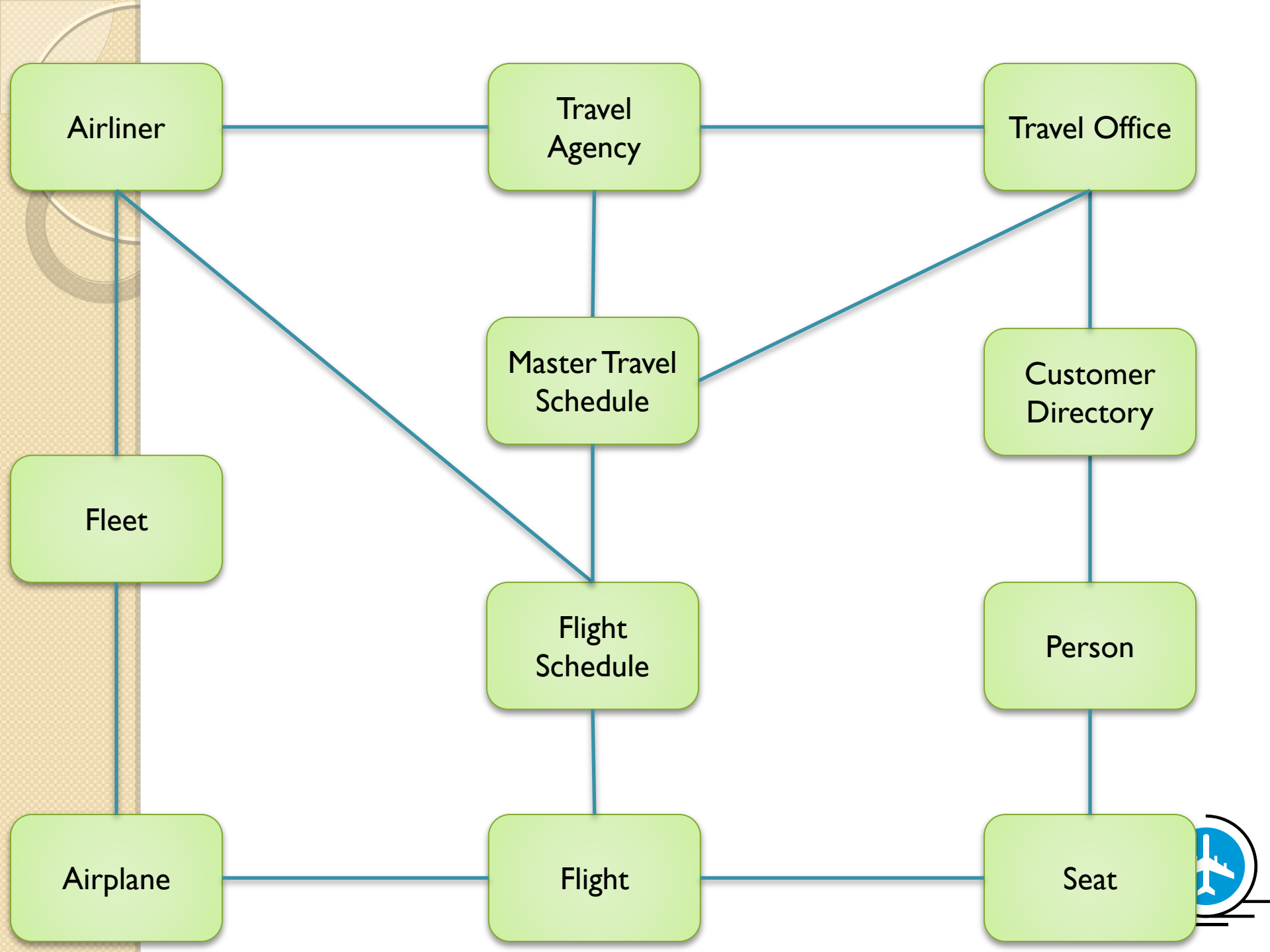
# Other patterns

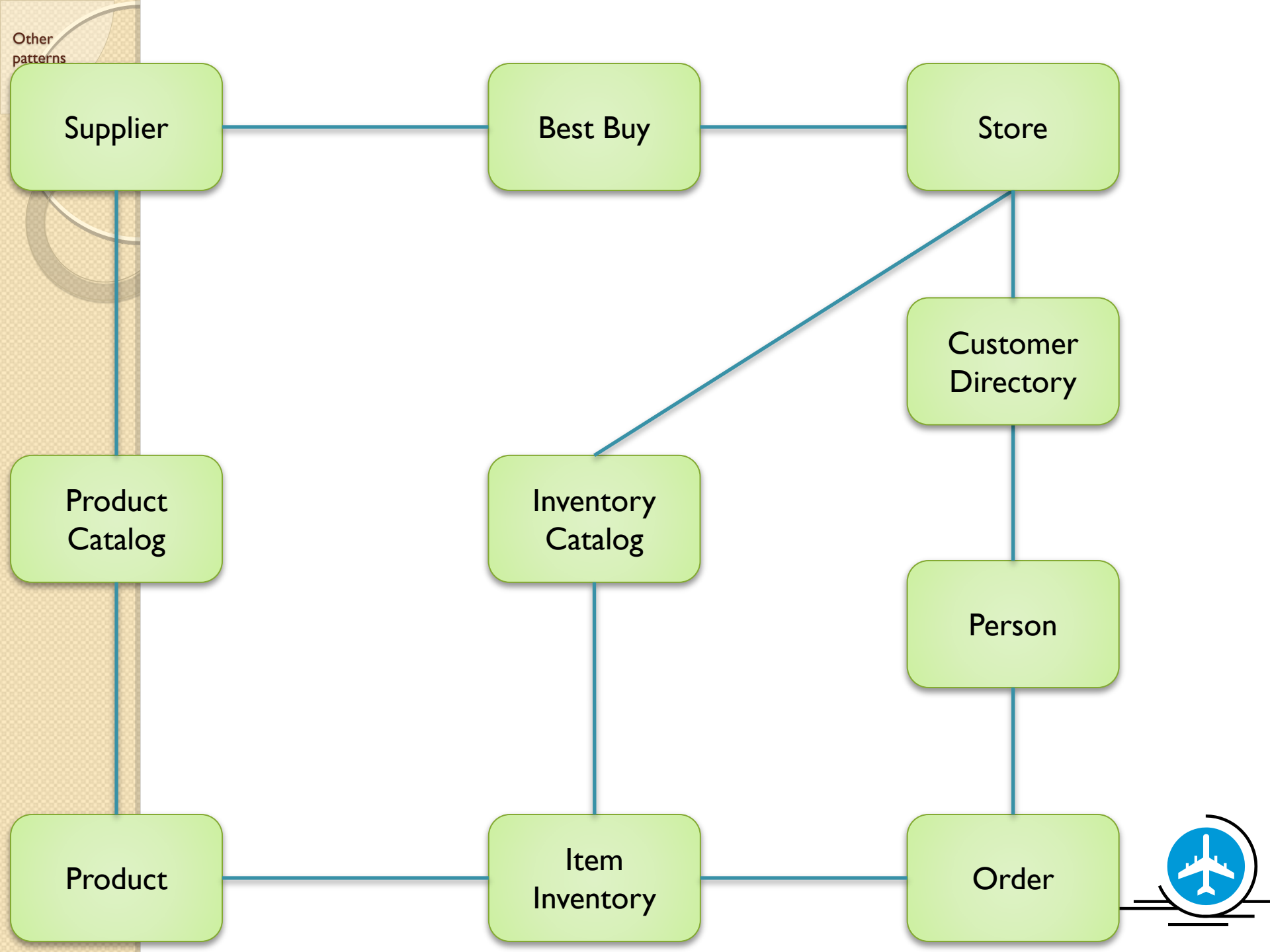




# Other patterns







# DIGITAL DISRUPTION

has already happened



World's largest  
taxi company  
**owns no taxis**

► UBER



Largest  
accommodation provider  
**owns no real estate**

► AIRBNB



Largest  
phone companies  
**own no telco infra**

► SKYPE / WECHAT



World's most  
valuable retailer has  
**no inventory**

► ALIBABA



Most popular  
media owner  
**creates no content**

► FACEBOOK



Fastest growing  
banks have  
**no actual money**

► SOCIETY ONE




World's largest  
movie house owns  
**no cinemas**

► NETFLIX



Largest  
software vendors  
**don't write the apps**

► APPLE / GOOGLE

- 
- Crew
  - Airplane crew
  - Departure time
  - Destination
  - Next Maintenance date
  - Model and serial numbers
  - Seat status
  - Find flight to location (e.g., London)
  - Passenger Capacity
  - Fuel Capacity
  - Find cheap flight to London (on Xmas eve please)
  - Schedule a tour around the world (including a 2 day stop in Disneyland)
  - From destination
  - All the company's airplanes that need maintenance soon
  - Cancel my travel plan
  - Who are the top 10 best travellers
  - Create promotion for an exotics trip to South Africa



# Implementation

# Approach

## 1. Manage a supplier database

- Add a supplier
- Update a supplier
- Remove/Disable a supplier

## 2. Manage product catalog

- Add product
- Remove product
- Update a product

# Manage Suppliers Use Case

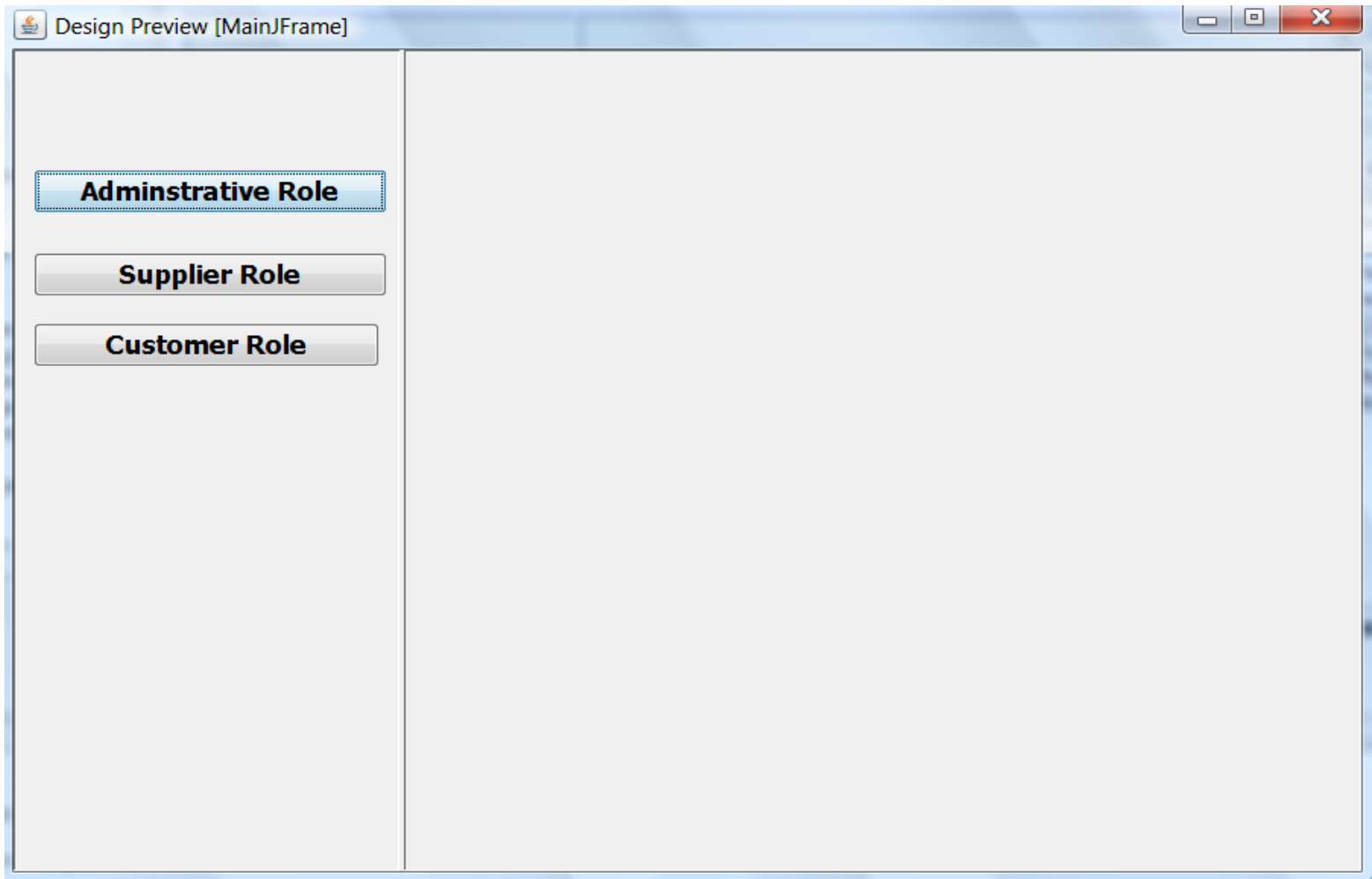
- System displays admin work area identifying the admin name
- System offers two options: view or browse supplier directory
- User chooses to view or browse supplier directory
- System displays supplier directory
- User chooses to:
  - Add a supplier and returns to previous screen
  - To view a supplier in detail
    - Upon viewing a supplier, the user might choose to update the supplier information



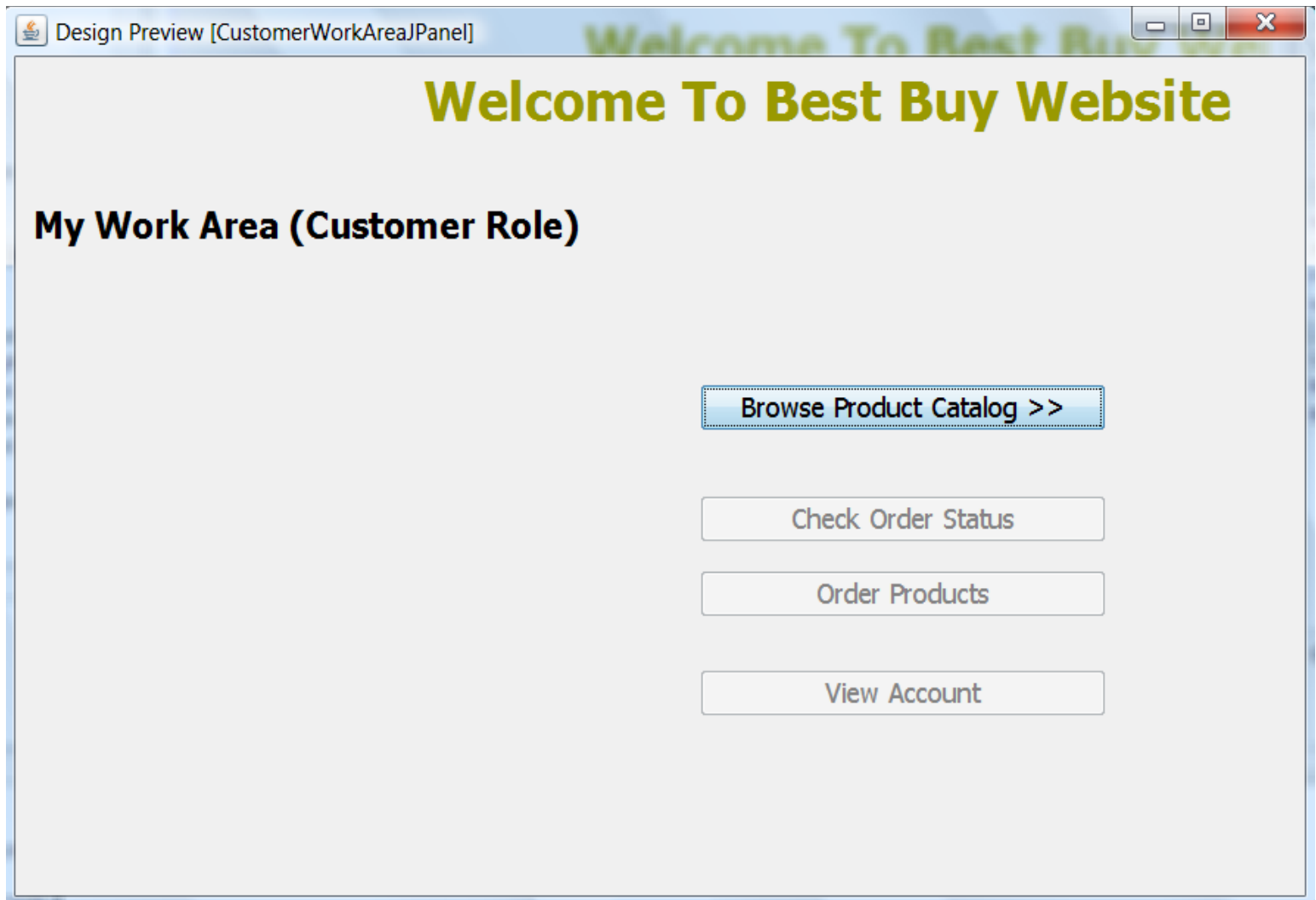
# Supplier Use Case

- Supplier logs in using supplier name
- System checks if the supplier is valid and if successful displays supplier work area identifying the supplier name
- Supplier chooses to view or browse product catalog
- System displays product catalog
- User chooses to:
  - Adds a product and returns to previous screen
    - User adds a product and returns to previous screen
  - To view a product in detail
    - Upon viewing a product, the user might choose to update it

# Input: SupplierDirectory



# Input: SupplierDirectory



# Input: SupplierDirectory

Design Preview [BrowseProducts]

## Welcome To Best Buy Website

### Browse Products

Supplier

Supplier Product Catalog

Product Id	Name	Price	Availability

<< Back

View Product Detail

# What is the input to this screen?

Design Preview [ViewSupplierProductDetailJPanel]

## View Product Detail

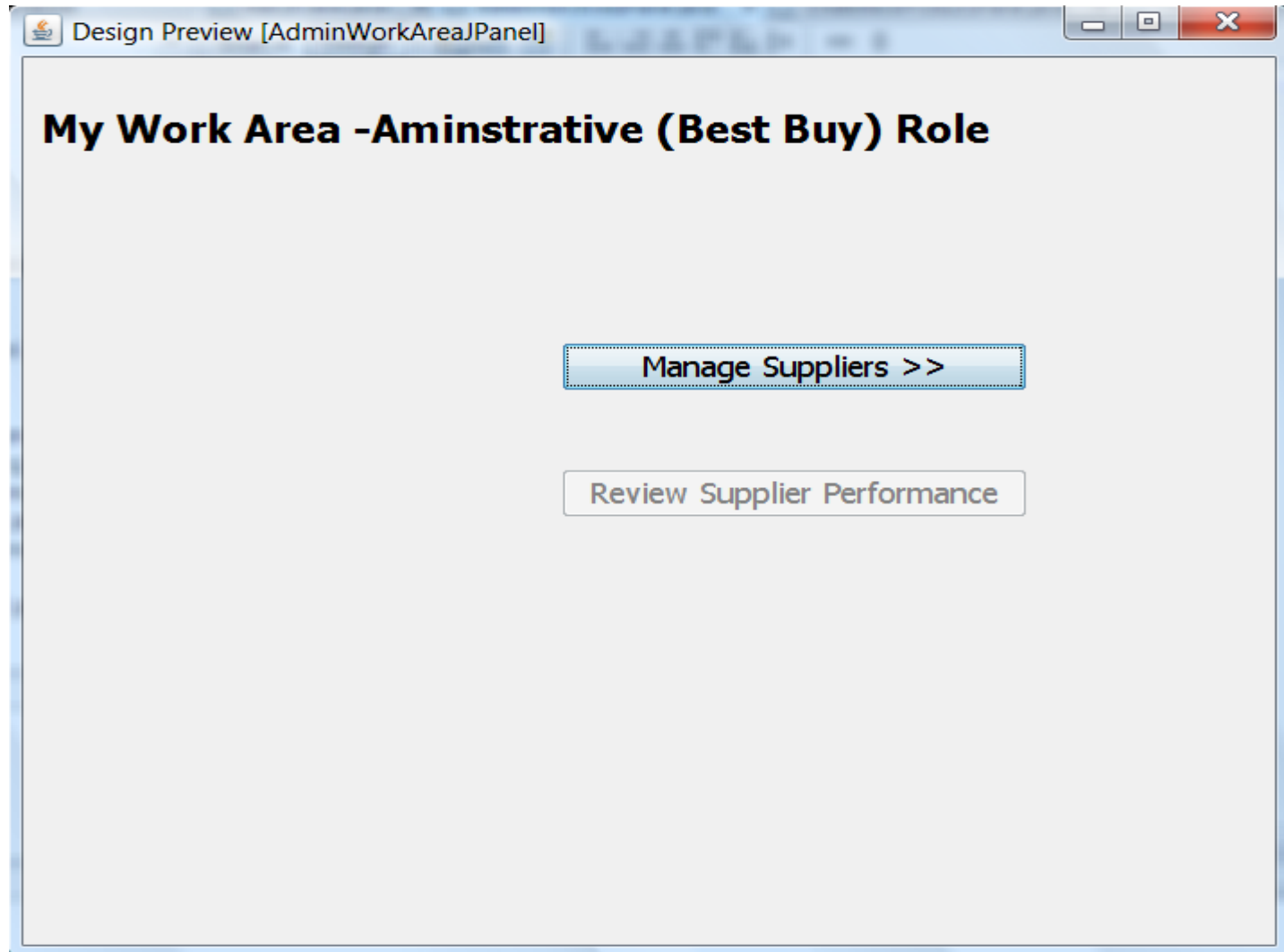
Product Name:

Product Price:

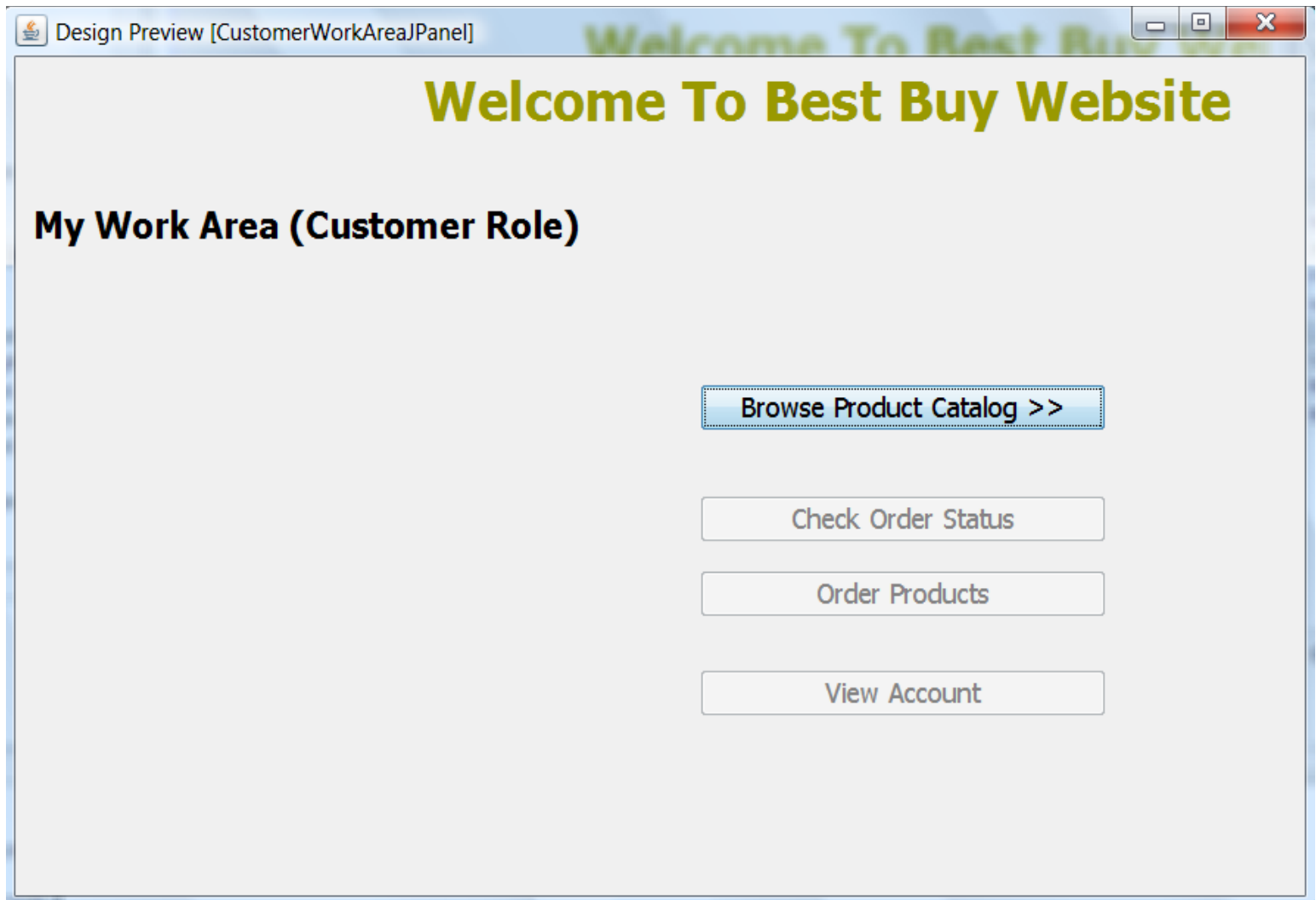
Product Availability:

Supplier

# Input: SupplierDirectory



# Input: SupplierDirectory



# Input: SupplierDirectory

Design Preview [BrowseProducts]

## Welcome To Best Buy Website

### Browse Products

Supplier

Supplier Product Catalog

Product Id	Name	Price	Availability

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View Product Detail



# What is the input to this screen?

Design Preview [ViewSupplierProductDetailJPanel]

## View Product Detail

Product Name:

Product Price:

Product Availability:

Supplier

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