# Areas of Volatility

## Areas to Manage

* Catalogs
* Carts
* Orders
* Buyers
* Sellers
* Remittance

## Domain Definitions

* Who
  + Sellers
  + Buyers
  + Provider
* What
  + Shopping carts
  + Skus
  + Orders
  + Remittance
* How
  + Searching
  + Coupon Discounts
  + Volume Discounts
  + Shipping
  + Sales Tax
  + Returns
* Where
  + Database
  + Third party providers

## Areas of Volatility

Key considerations for containing changes

* Volatility decreases top-down
* Reusability increases top-down
* System must respond to changes in requirements
  + Live system
  + Respond quickly
* Trick is in containing the change
  + Minimize the impact
* Change to use case means change to workflow
  + Isolated in Manager implementation
  + Minimal impact to underlying services
* Bulk of effort in system goes into…
  + Engines
  + Resource access
  + Resource
  + Clients and UI
  + Utilities and infrastructure
* Reuse effort across use cases
  + and their inherent volatility
* Areas of change can be functional but not domain functional

### At the same time across customers

* Shipping Costs
  + Method for determining shipping costs
  + Methods for shipping the products
  + Shipping Calculation Engine
* Tax Calculation
  + Tax Calculations and remittance based upon different buyer locations
  + Tax Calculation Engine
* Remittance method
  + Different methods and frequency for making payments to Buyers
  + Remittance Manager
* Volume Discounts
  + Varying algorithms for how to determine volume discounts
  + Volume Discounts Calculation Engine
* Coupons
  + Varying algorithms for how to determine the validity, criteria and amount of a coupon discount
  + Coupon Engine
* Returns
  + Rules and procedures for how each Buyer will want to handle returns processing
  + Returns Manager
* Promotions and Specials
  + Rules and calculations for determine what promotions to show
  + Promotions Engine
* Catalog
  + Which products to show and promote
  + Which promotions and specials to advertise
  + Catalog Manager
* Fulfillment
  + Shipping methods
  + Digital vs physical goods
  + Internal vs external
  + Order Manager

### At the same customer over time

* Notifications
  + All the different ways and types of communication flowing out of the system
  + Same customer over time
  + Notification Manager
* Payments
  + Different methods to accept for order payment
  + Payments Accessor

## Database Entity Collections / Areas of Data to Manage / Bounded Contexts

<http://martinfowler.com/bliki/BoundedContext.html>

* Customers
* Shopping Carts
* Orders
* Catalogs
* Sellers
* Skus
* Coupons
* Returns
* Shipping
* Volume Discounts?

# Unique Call Chains (MVP)

* Authenticate a user
* Configure shipping options
* Configure volume discounts
* Return a list of products
* Configure coupons
* Edit/View the shopping cart
* Fulfill an order
* Process a remittance
* Process a return
* Send an order notification
* Submit an order
* View an order
* View sales data
* View shipping options