

# DEVOPS CULTURE AND MINDSET

## The Importance of Loosely Coupled Architecture Teams



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## Complexity in the Software Industry

**Architecture** term borrowed from building industry

Vendor software packages **add complexity**

This makes a **monolith**



## Learning Objectives

Define **loosely coupled architecture**

Explain why it's important



## Coupling in Software Architecture

Refers to **dependencies** between various **mechanisms** in a system

Coupling can be **tight** or **loose**

## Tightly Coupled Architectures

**Tightly Coupled:** components are heavily reliant on other components in the system

High level of **integration**

Changes to **one part** require changes to other components **throughout the system**



## Example of Tightly Coupled Architecture

Point of Sale system (POS) in retail

Tightly coupled architecture is a **limiting factor** during digital transformation



## Loosely Coupled Architecture

Components are appropriately **isolated**

Can modify and test **independently**

Still **collaborate** and **communicate**

Changes can be readily **implemented**



## Benefits of a Loosely Coupled Architecture

Able to **scale horizontally**

**Streamlines** testing

Allows for **speed** and **agility**





## Example from Nordstrom

Rewrote commerce stack in a **loosely coupled way**

**Isolated functionality** to deploy independently

Able to make **changes** more **frequently**

## Example from Starbucks

**Extracted functionality** out of POS

Moved it to the **cloud** and **APIs**

Loosely coupled approach **improved**  
loyalty **functionality**



## What I've Learned

Assign an **individual** to track and manage **dependencies**

Important to work to **reduce dependencies**



## **What DevOps is All About**

Better collaboration between teams through loosely coupled architecture

Ensure available communication bandwidth is not overwhelmed

Avoid fine-grained decision-making at implementation level

Free team to discuss higher-level shared goals and how to achieve them