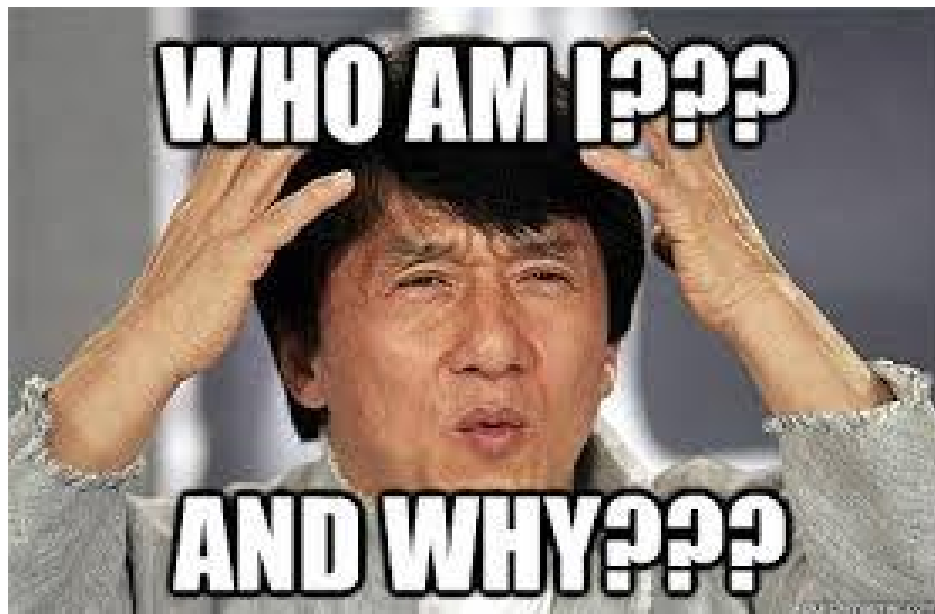




# Agile Architecture

## Altieres de Matos



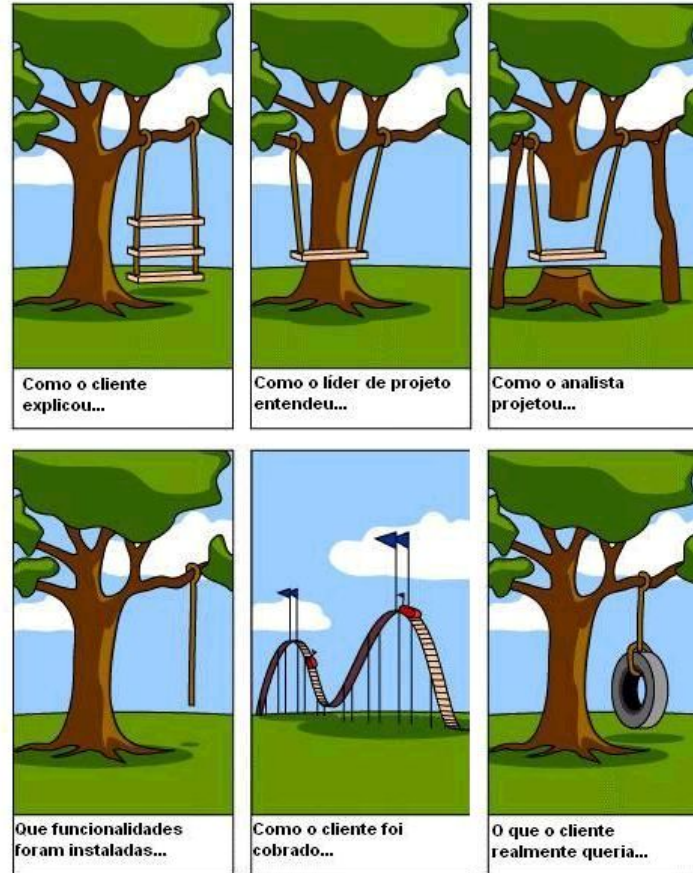
# Who am I? And Why?

- Bacharel em Sistemas de Informação (UNIPAR)
- Especialista em Desenvolvimento para Dispositivos Móveis (FCV)
- Especialista em Gerência de Projetos em TI (Quaseeeeeeeee) (FCV)
- Mestrando em Computação Aplicada (UTFPR)
- Oracle Certified Java Programmer
- Oracle Certified Web Component Developer
- Certified Scrum Master
- Certified Scrum Developer
- Certified Scrum Professional
- Analista de Sistemas na MATERA Systems
- Professor do curso de Ciências da Computação na Faculdade Alvorada
- Desenvolvedor desde 2008
- Professor desde 2011
- Agilista desde 2012
- Entusiasta Java e Agile
- Apaixonado pela profissão
- Blogueiro, zueiro e parceiro

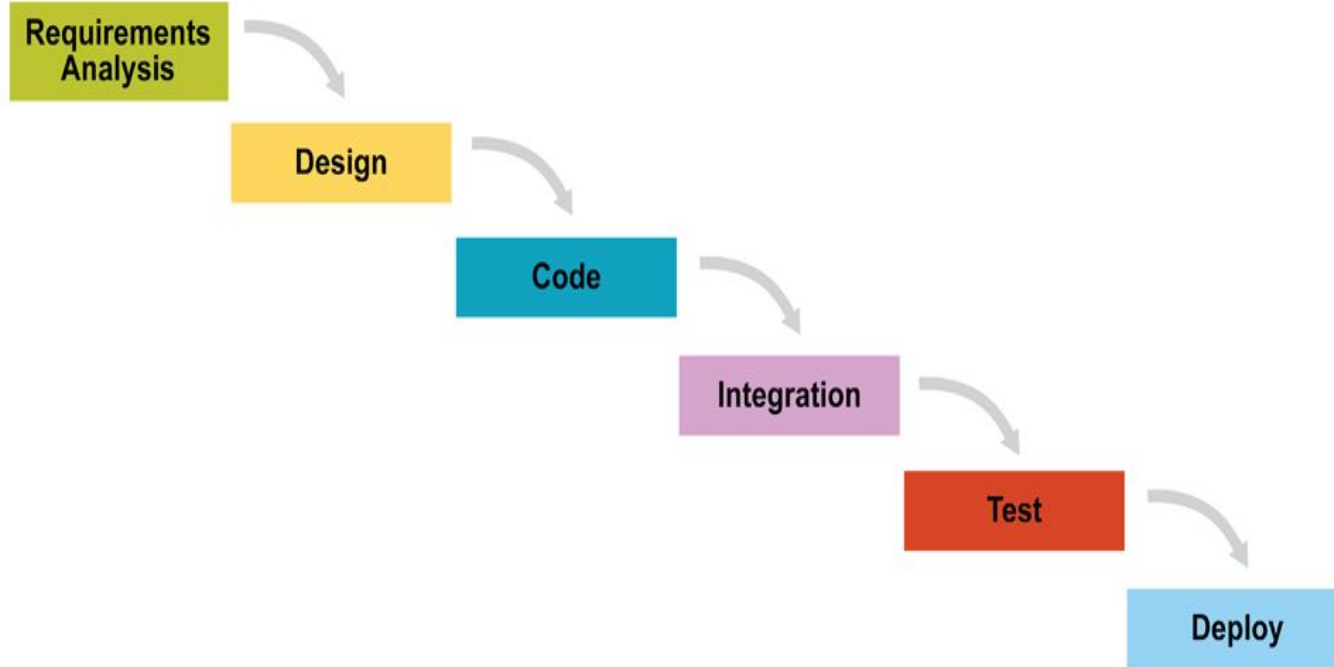
# Summary

- Software Crisis
- Waterfall
- Iteration
- Phase of the Agile
- Monolith vs Microservices
- Benefits Microservices
- Monolith to Microservices
- Patterns in Microservices
- Real Examples
- Tips
- About MATERA Systems

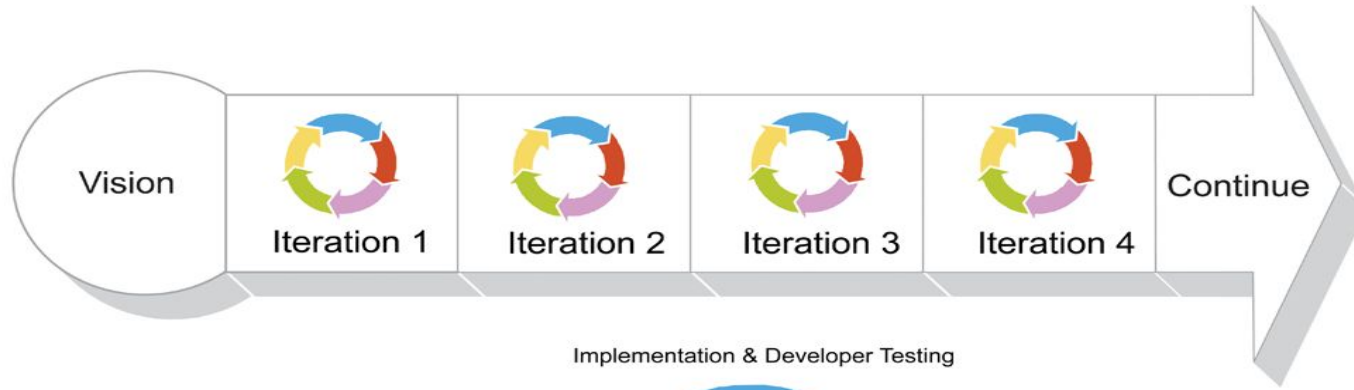
# Software Crisis



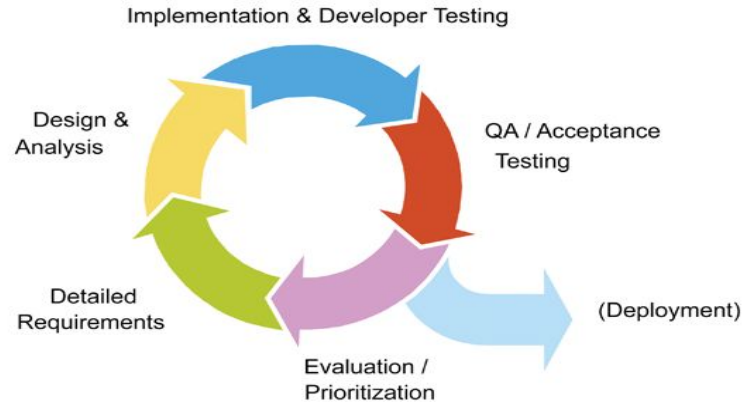
# Waterfall



# Iteration



## Iteration Detail





# Phase of the Agile Progression





# What are Microservices?



# What are Microservices?

Microservices involve an architectural approach that emphasizes the decomposition of applications into single purpose, highly cohesive and loosely coupled services managed by cross-functional teams, for delivering and maintaining complex software systems with the velocity and quality required by today's digital businesses.

Microservices are language-, platform-, and operating system-agnostic. They can be used to break down a big monolithic application (typically packaged as a single archive that is vertically scaled up or horizontally scaled out) into smaller and simpler services. Each microservice does one thing, and does it well, so the “micro” in microservices refers to the scope of the services' functionalities, not the number of Lines of Code (LOC).

Each microservice is generally built by a full-stack team, which reduces potential communication difficulties between disparate teams that could otherwise be problematic. [Reynolds, Vineet. 2016]

Who use Microservices?

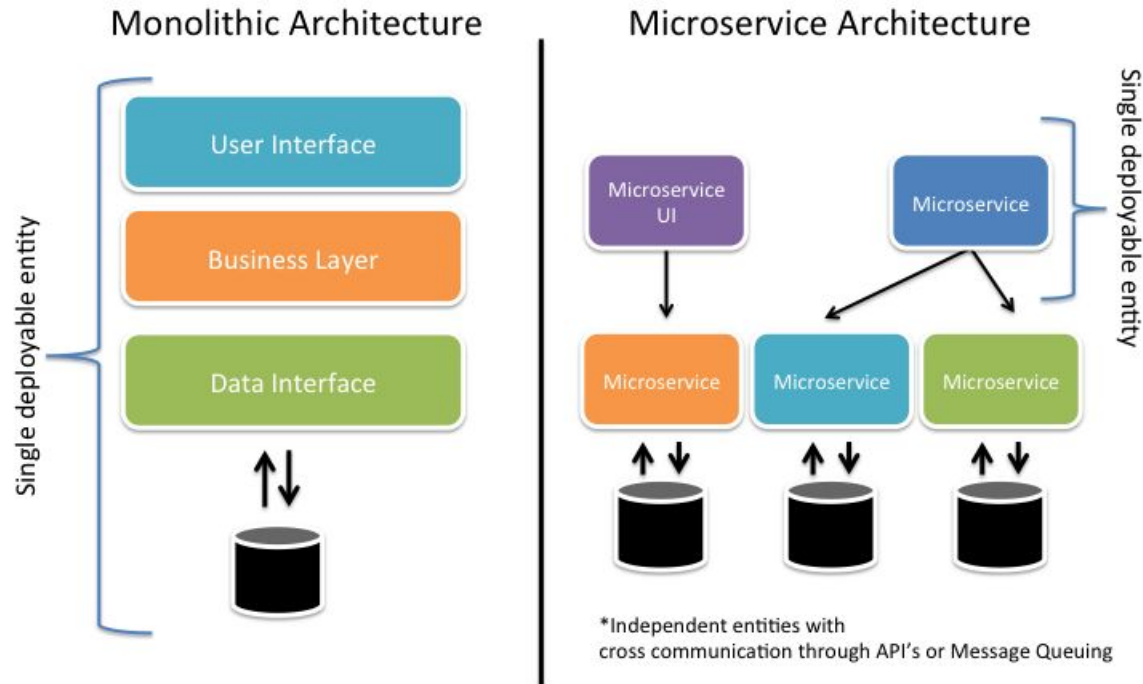
amazon.com<sup>®</sup>

ebay<sup>®</sup>

Google

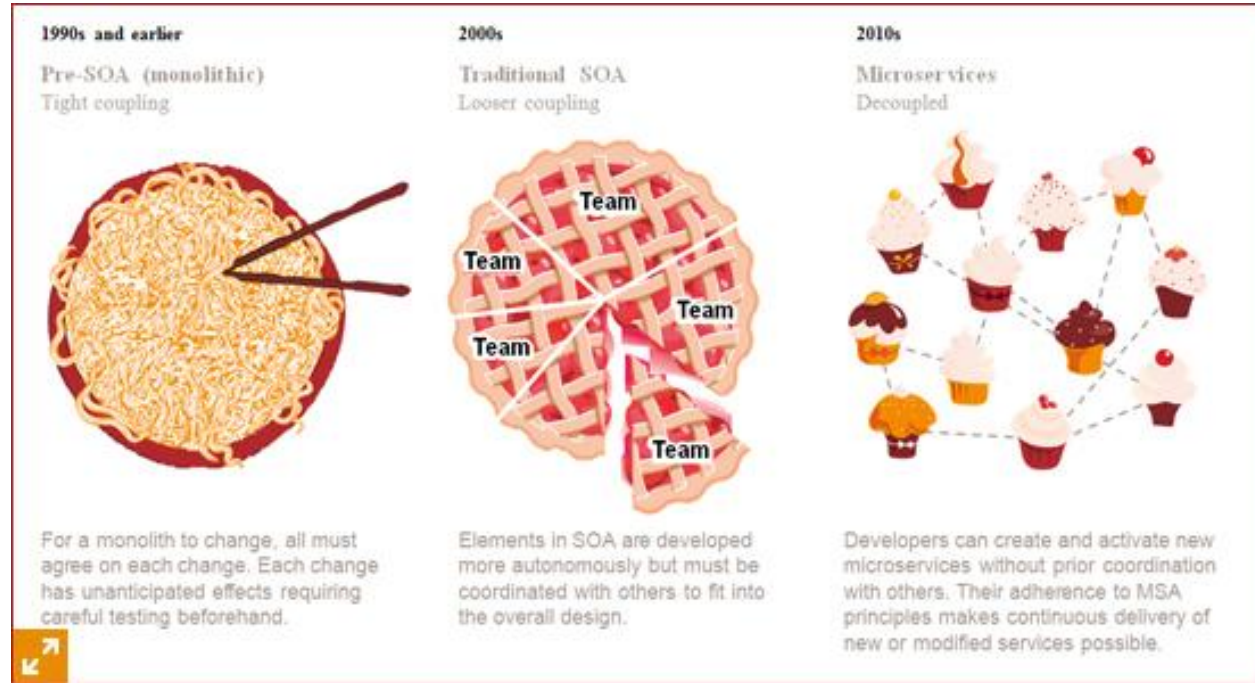


# Monolithic against Microservice



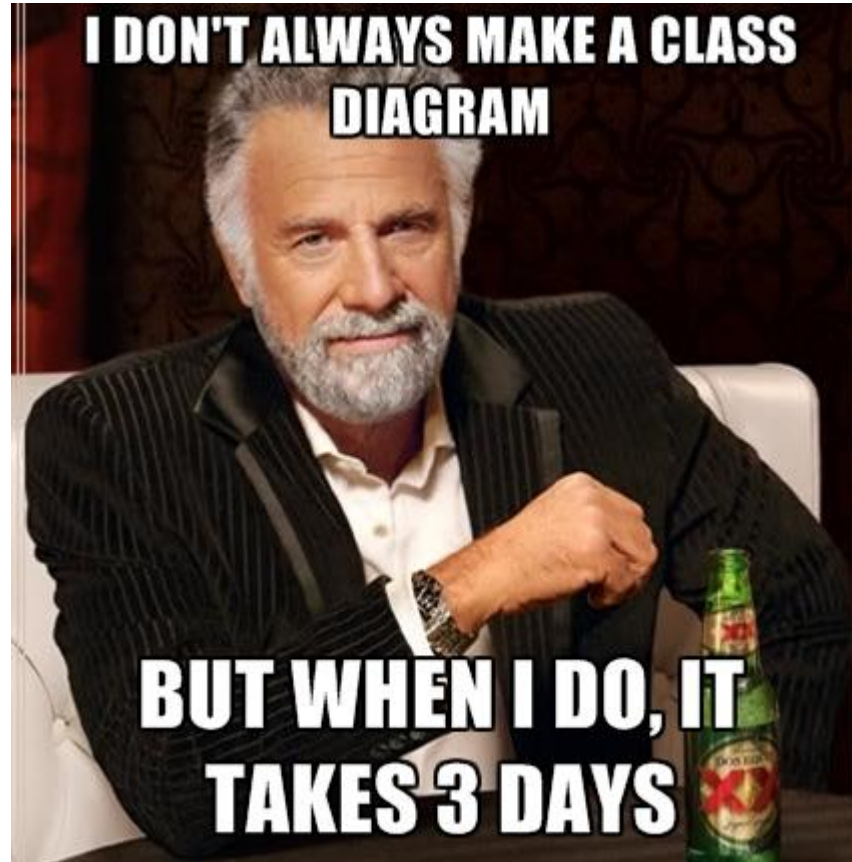
[www.continuousautomation.com](http://www.continuousautomation.com)

# Pre-SOA, Traditional SOA and Microservices

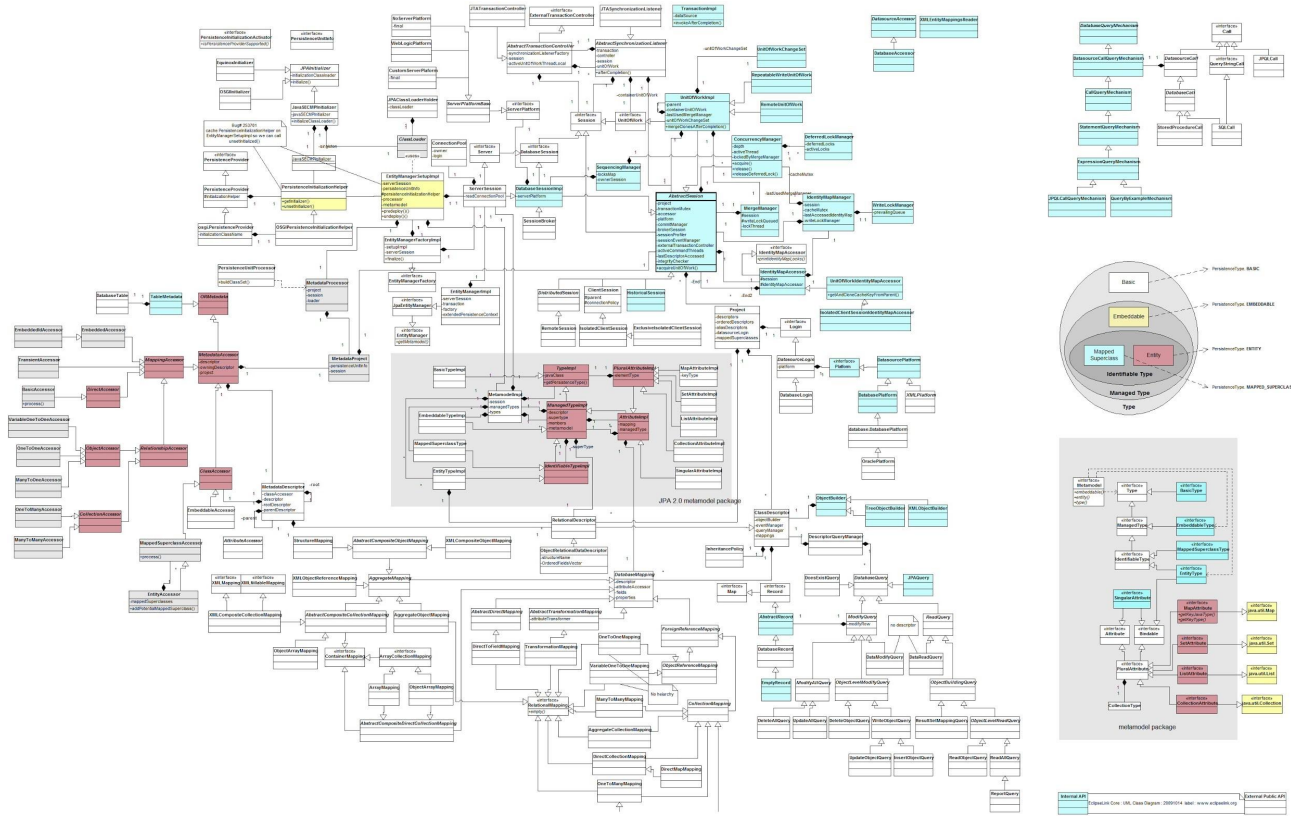




# Specification

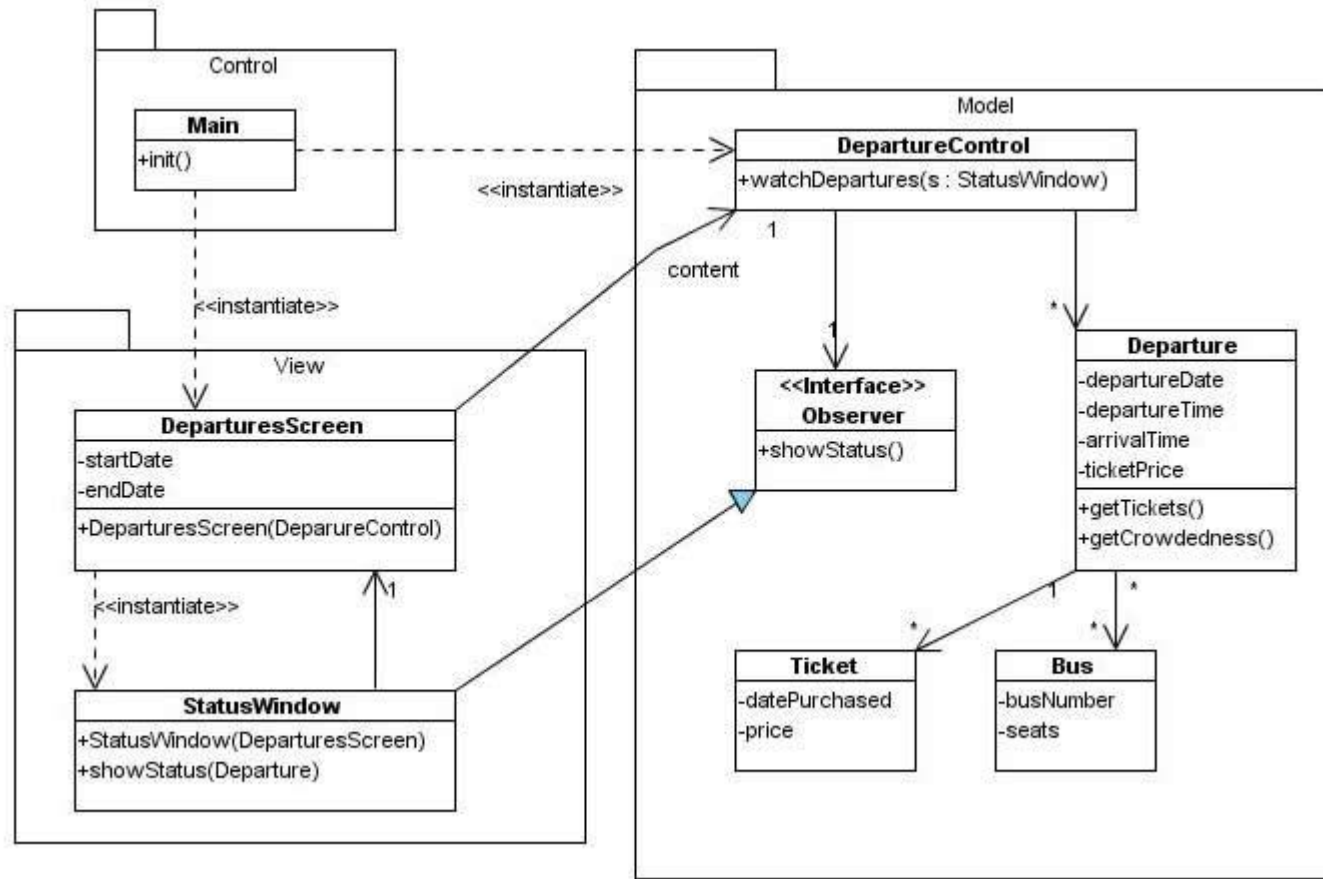


# A Monolith

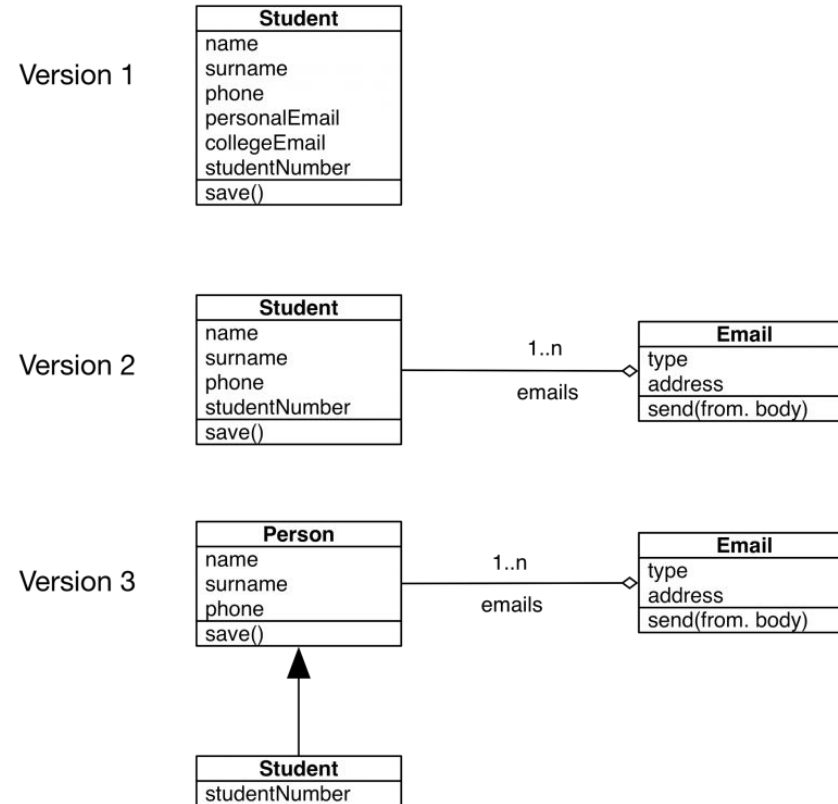




# A Service Oriented Architecture



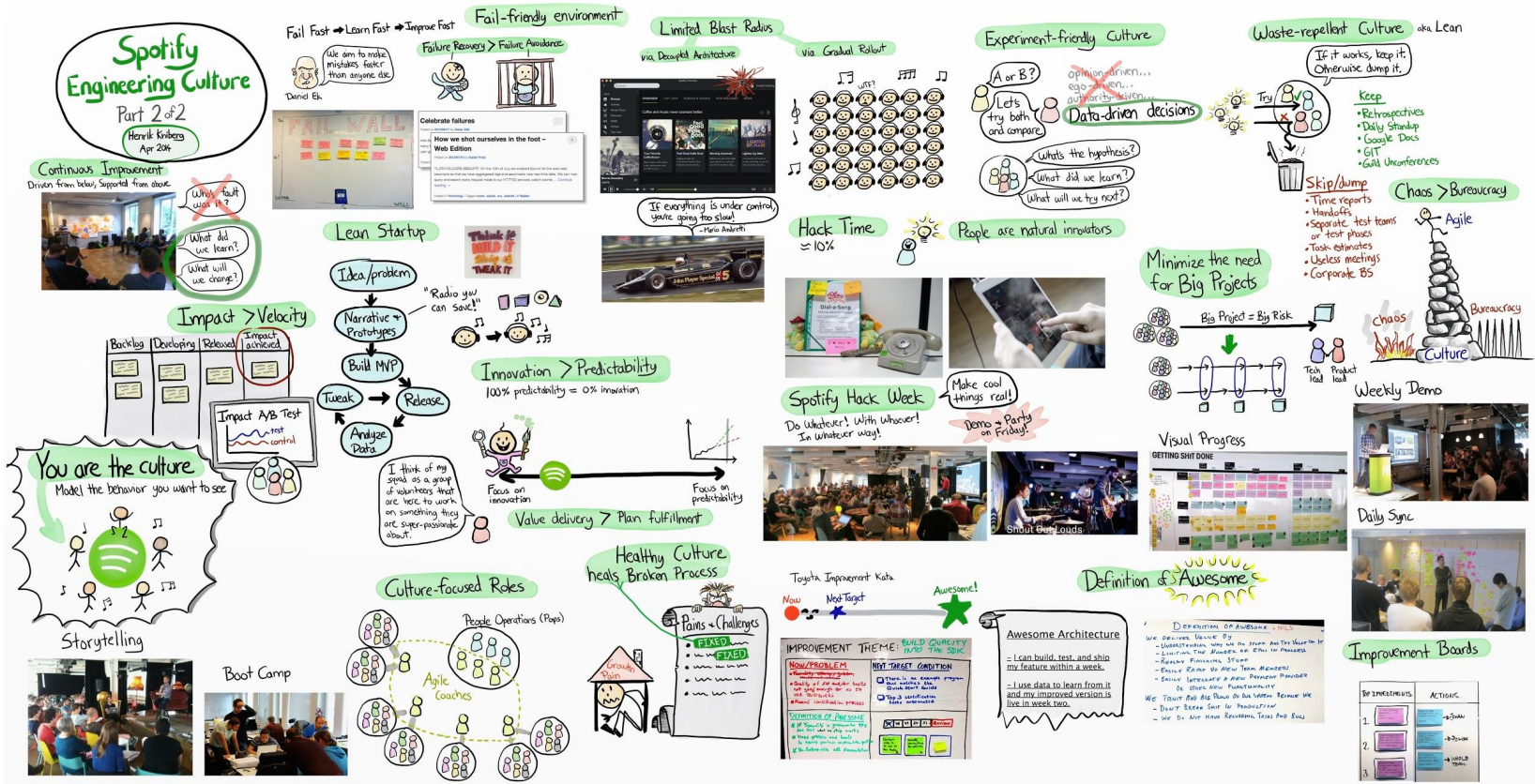
# A Microservice



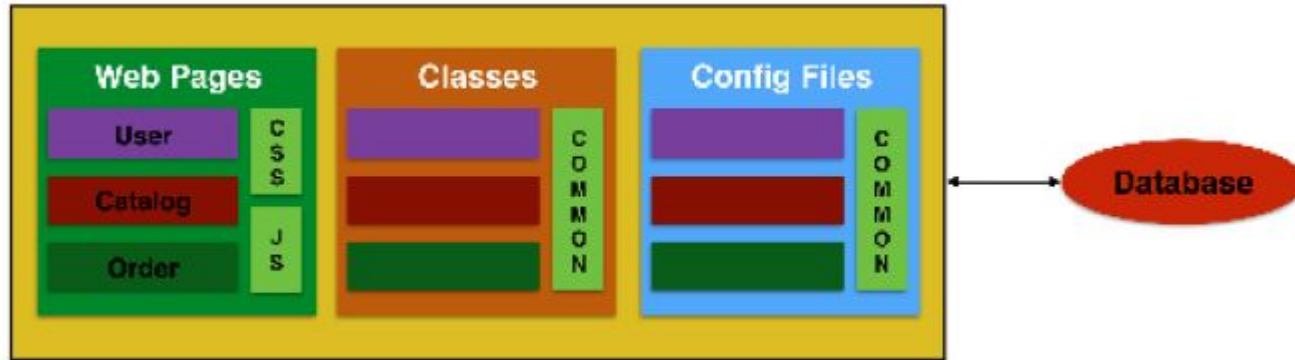
# Benefits of Microservices

- Independent Scaling
- Independent Upgrades
- Easy Maintenance
- Potential Heterogeneity and Polyglotism
- Fault and Resource Isolation
- Improved Communication Across Teams

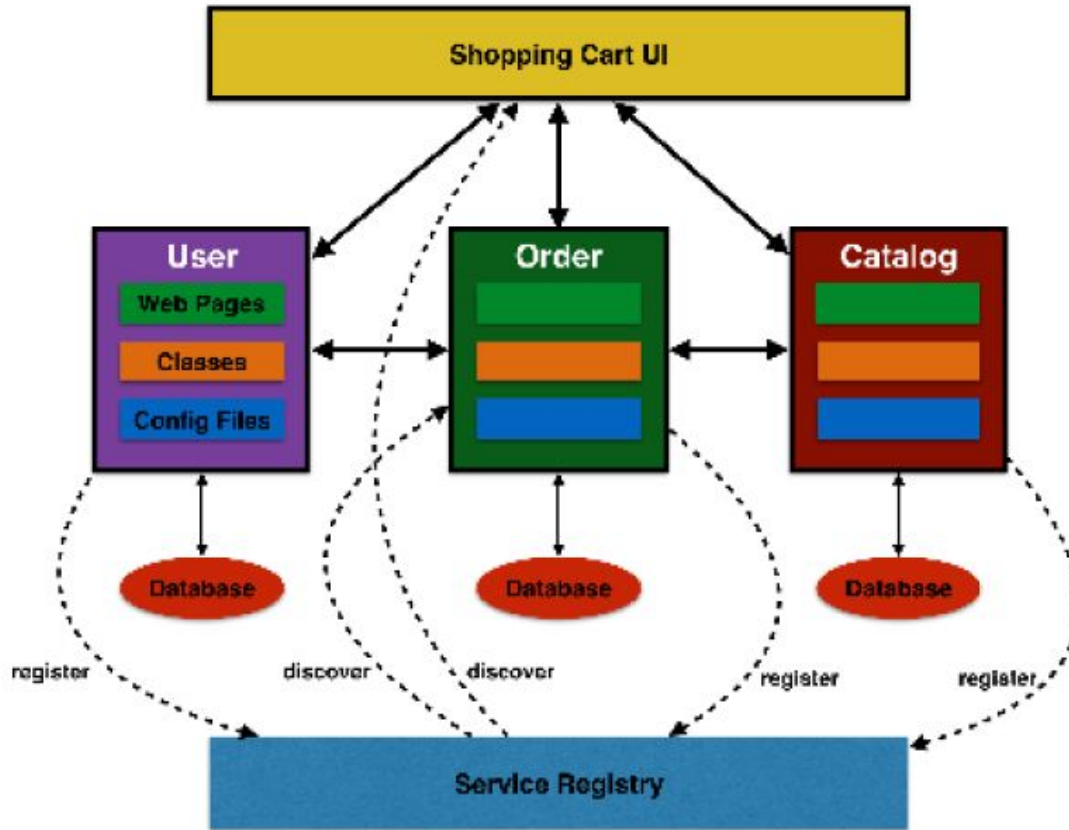
# Benefits of Microservices



# Refactoring a Monolith to Microservices



# Refactoring a Monolith to Microservices





# Refactoring a Monolith to Microservices

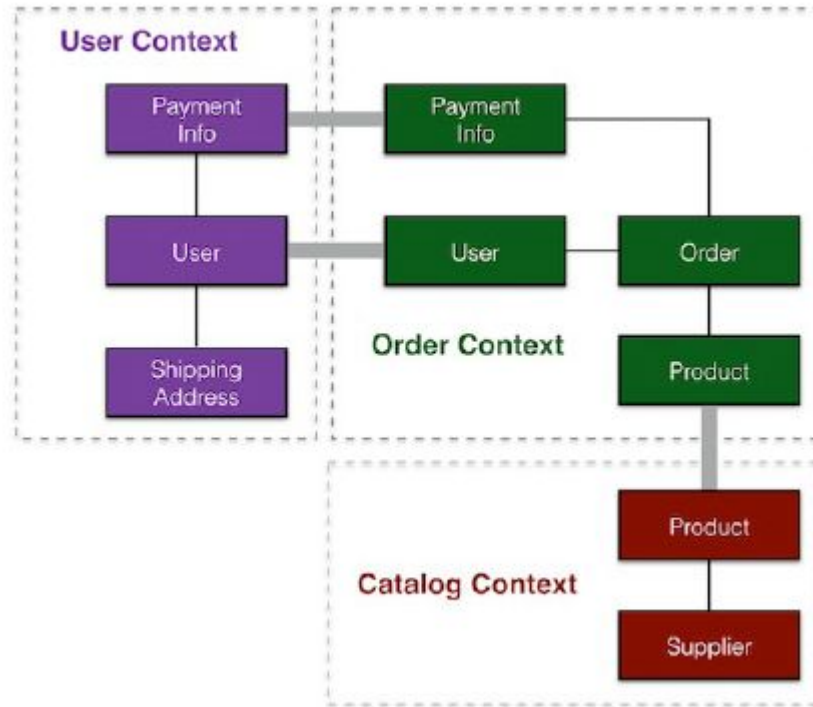




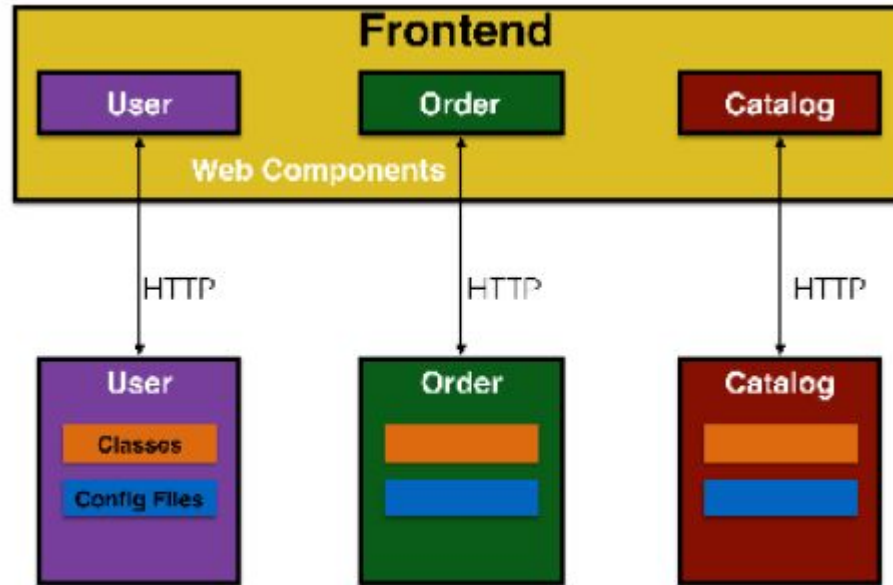
# Refactoring a Monolith to Microservices



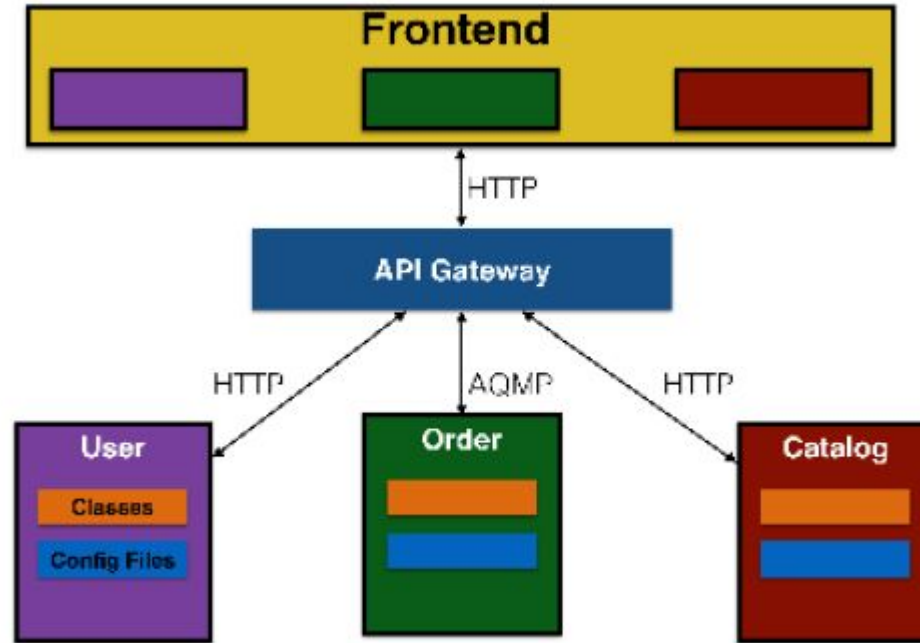
# Patterns in Microservices



# Patterns in Microservices



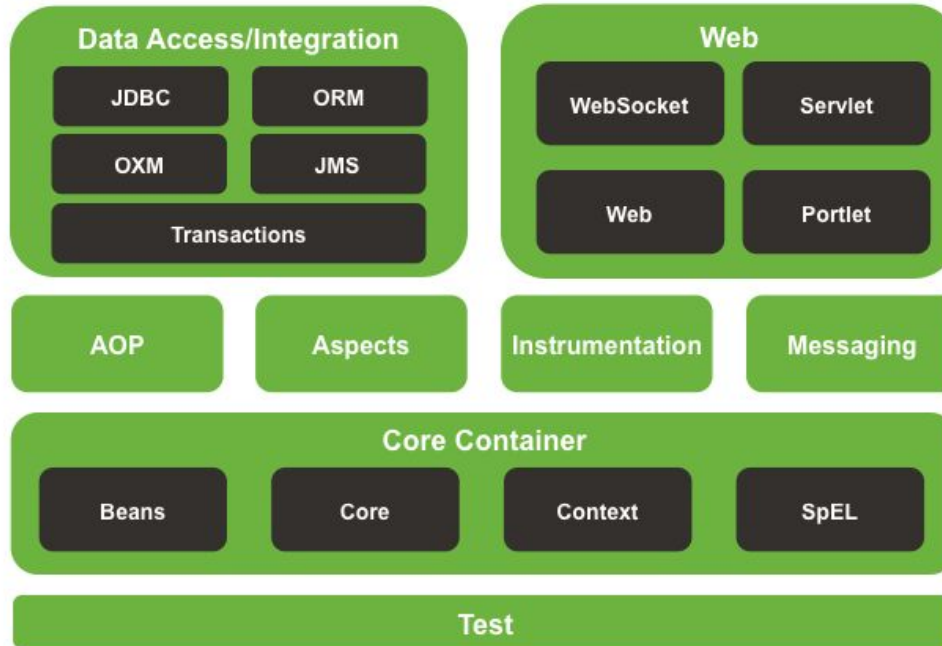
# Patterns in Microservices



# Spring Framework



## Spring Framework Runtime



# Real Examples

- Model
- Domain
- POJO (Plain Old Java Object)
- DTO (Data Transfer Object)
- DAO (Data Access Object)
- Repository
- Service
- Business
- Application
- MVC
- MVC2
- Controller
- Web
- Web Service
- Many others

## Real Examples





If advice was good, didn't get along, if sold. (In HUE BR)



- Cloud
- BigData
- DevOps
- Container
- Microservices
- Continuous Delivery
- Continuous Deployment

## How to learn MicroServices? (In HUE BR)



## Tip #1 (In HUE BR)



## Tip #2 (In HUE BR)





# Tip #3 (In HUE BR)



Daniel's  
@thedaniels



- nível de ingles
- alto
- traduza livre
- free
- forme uma frase
- o tempo passou e eu sou free calado

View translation

Reply Retweet Favorite More

RETWEETS 9 FAVORITES 4



Igor Massami  
@Oigaum

- nível de inglês?
- alto
- traduza "sentir"
- feel
- agora formule uma frase
- Um feel de cabelo no meu paletóoooo
- contratado

View translation

Reply Retweet Favorite More

RETWEETS 88 FAVORITES 38



eddy  
@eusarcasticu



- Nível de inglês?
- Alto
- Traduza 'imagem de verdade'
- True pic
- Forme uma frase
- Nós true pic mas não cai
- Contratado

View translation

Reply Retweet Favorite More



FAVORITES 576



Byte Que Eu Gosto  
@bqeg



- nível de inglês?
- alto
- traduza "too much"
- muito, demais
- formule uma frase
- detesto molho de too much

View translation

Reply Retweet Favorite More

RETWEETS 65 FAVORITES 26



# A MATERA Systems

Atuação desde 1987

Empresa S.A. desde 2007

Soluções instaladas em cerca de 90 instituições financeiras

Uma das pioneiras em exportação de software

Faturamento consolidado do Grupo MATERA em 2016: R\$ 70m



**Entre as  
melhores  
desde 2008**



Cerca de 400 profissionais distribuídos em SP, RJ, Campinas, Maringá e EUA

# Parcerias

## Parceiros de Tecnologia



## Parceiros de Negócio





# Soluções abrangentes para grandes mercados



## Serviços

- Gerenciamento de Infraestrutura de Aplicações
- Desenvolvimento e Manutenção de Sistemas
- Migração de Aplicativos para a Nuvem
- Desenvolvimento Offshore
- DBA Oracle / SQL Server
- Consultoria WebSphere MQ
- Consultoria Linux

# Alguns Clientes - Mercado Financeiro



# Alguns Clientes – Mercado Corporativo



## Alguns Clientes – Mercado de Instituições de Pagamento



# Alguns Clientes – Solução para Gestão de Riscos

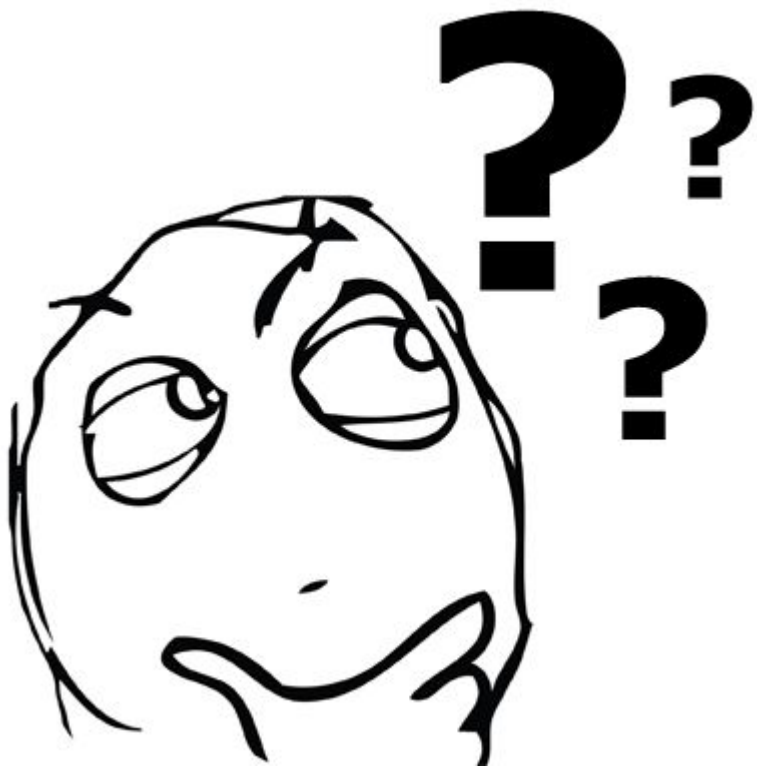


# MATERA Systems









Anotem meus contatos ;)  
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@altitdb  
<https://www.fb.com/altitdb>  
[www.matera.com](http://www.matera.com)