限界上下文的实践意义

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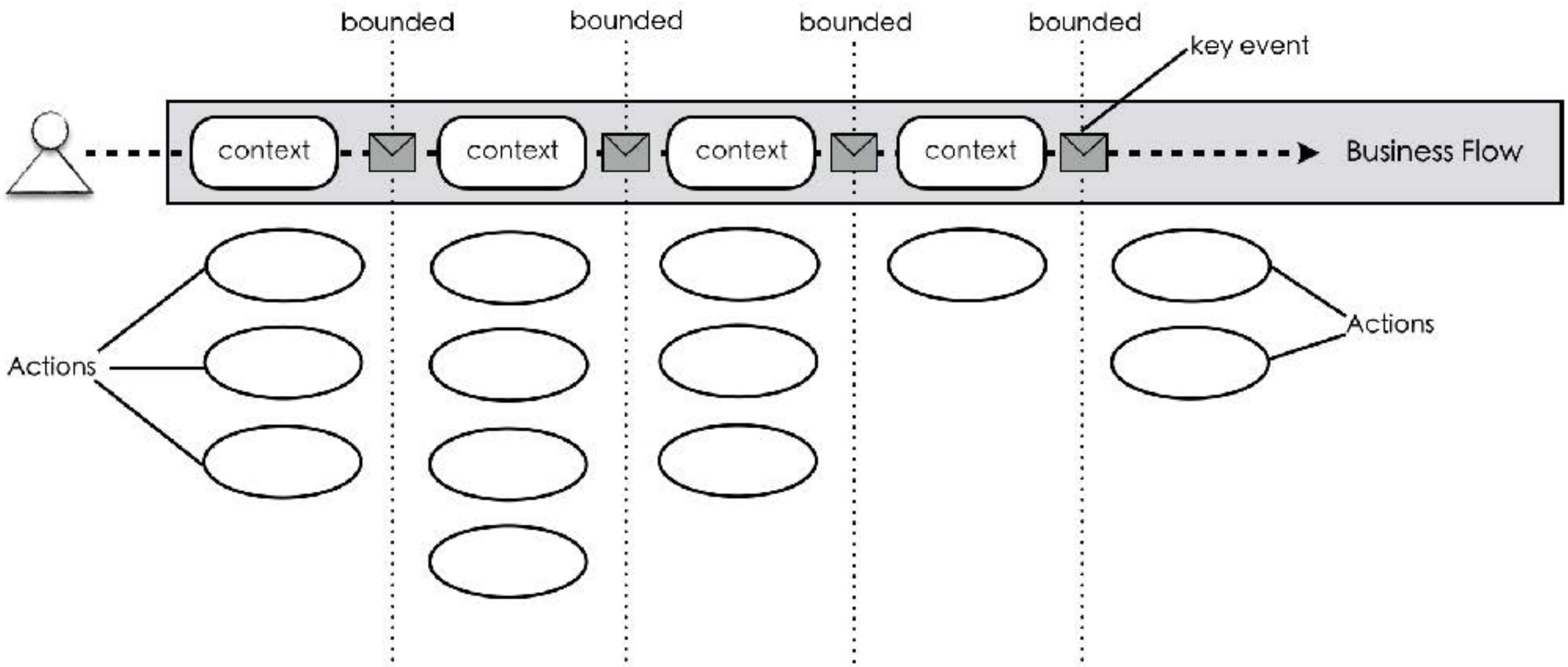
理解限界上下文的定义

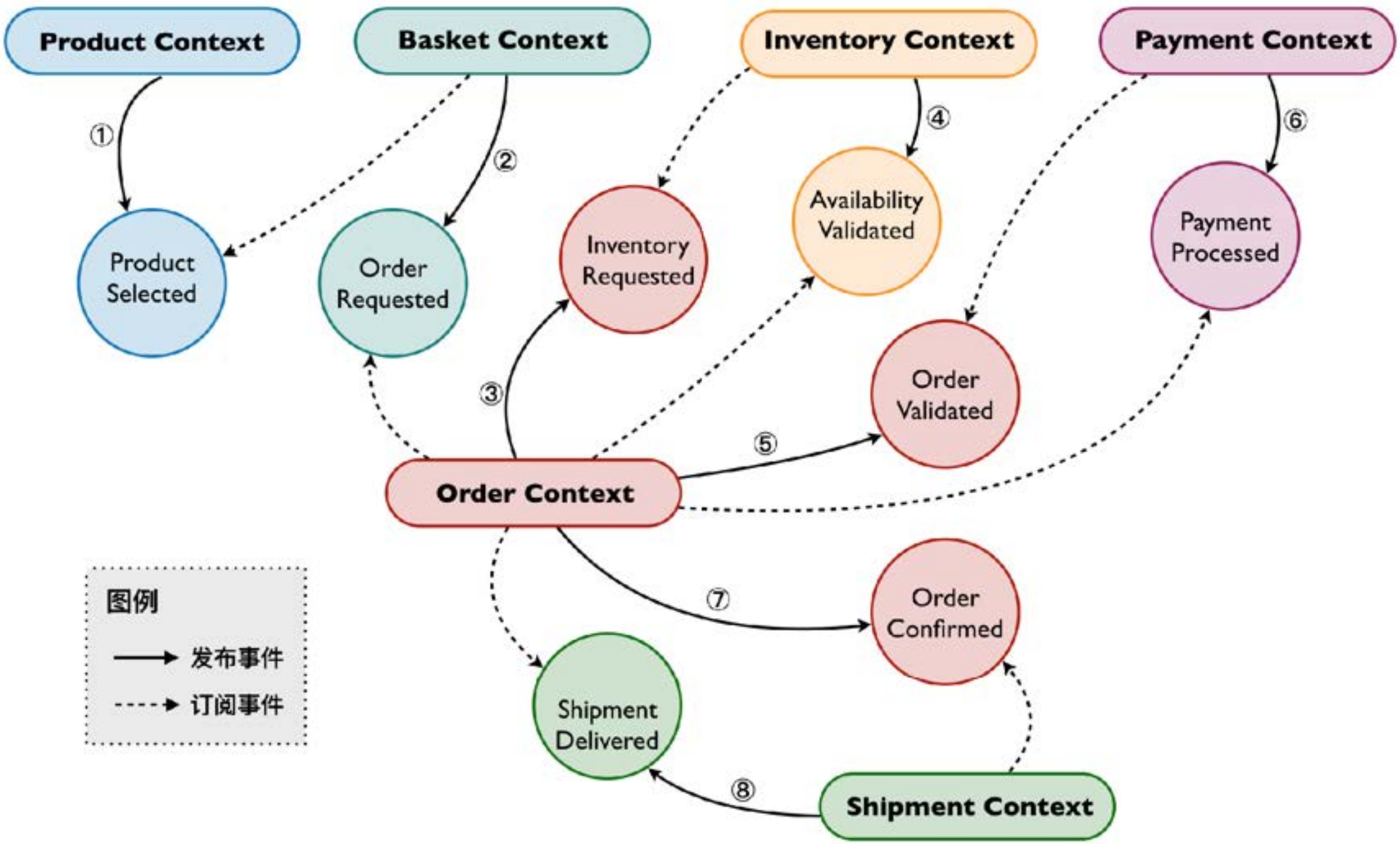
1. the definition of a word can be easily found in a dictionary.
the dictionary definition really doesn't give the true meaning of that
word. 3. The Bible contains certain words that have real impact when
we come to realize their true definition. 4. This definition comes to
life when we begin to think, speak and act based on what these words
really mean. (circa May 12 – June 16, 2013)
de•fin•i•tive

限界上下文的意义



Context是动态的业务流程被边界（Bounded）静态切分的产物

电商系统的购物流程

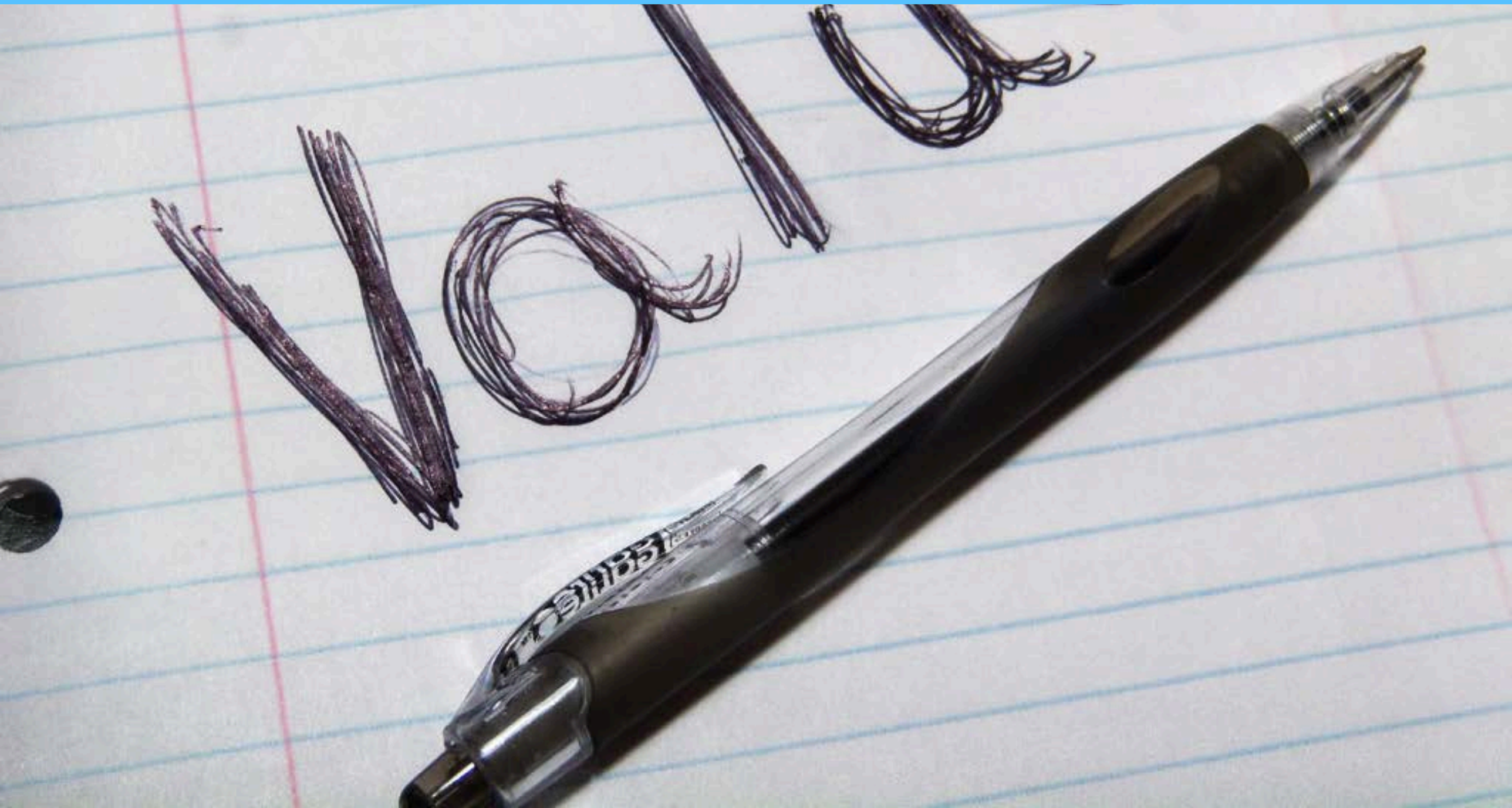

Product Context
Basket Context
Inventory Context
Payment Context
①
②
④
⑥
Product Selected
Order Requested
Inventory Requested
Availability Validated
Payment Processed
③
Order Validated
⑤
Order Context
⑦
Order Confirmed
Shipment Delivered
⑧
Shipment Context
图例
发布事件
订阅事件

上下文的切换

ID	Key Event	Source Context	Target Context
1	ProductSelected	Product Context	Basket Context
2	OrderRequested	Basket Context	Order Context
3	InventoryRequested	Order Context	Inventory Context
4	AvailabilityValidated	Inventory Context	Order Context
5	OrderValidated	Order Context	Payment Context
6	PaymentProcessed	Payment Context	Order Context
7	OrderConfirmed	Order Context	Shipment Context
8	ShipmentDelivered	Shipment Context	Order Context

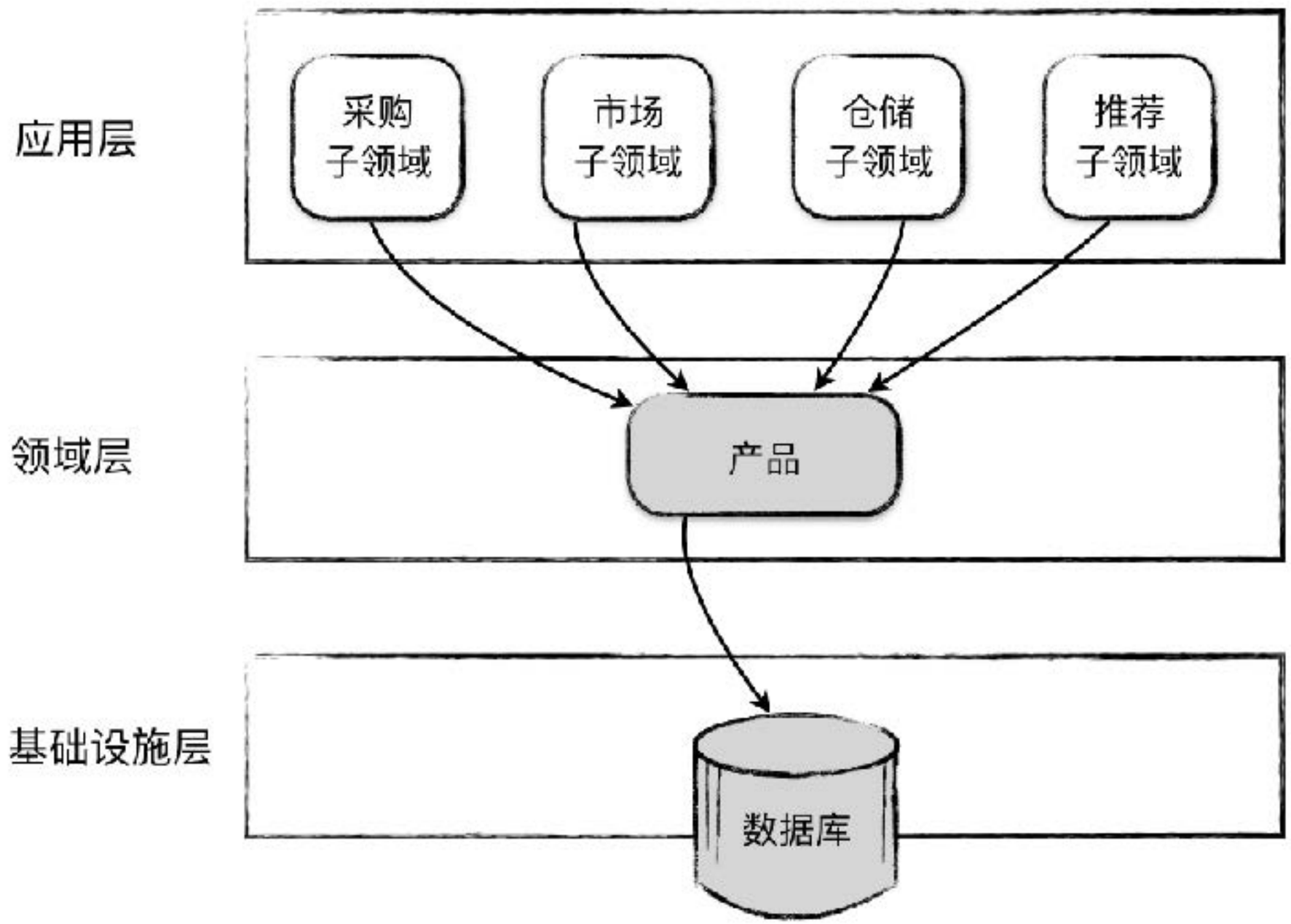
关键事件（key event）触发业务流程中上下文的切换

理解限界上下文的价值



限界上下文确定了业务边界

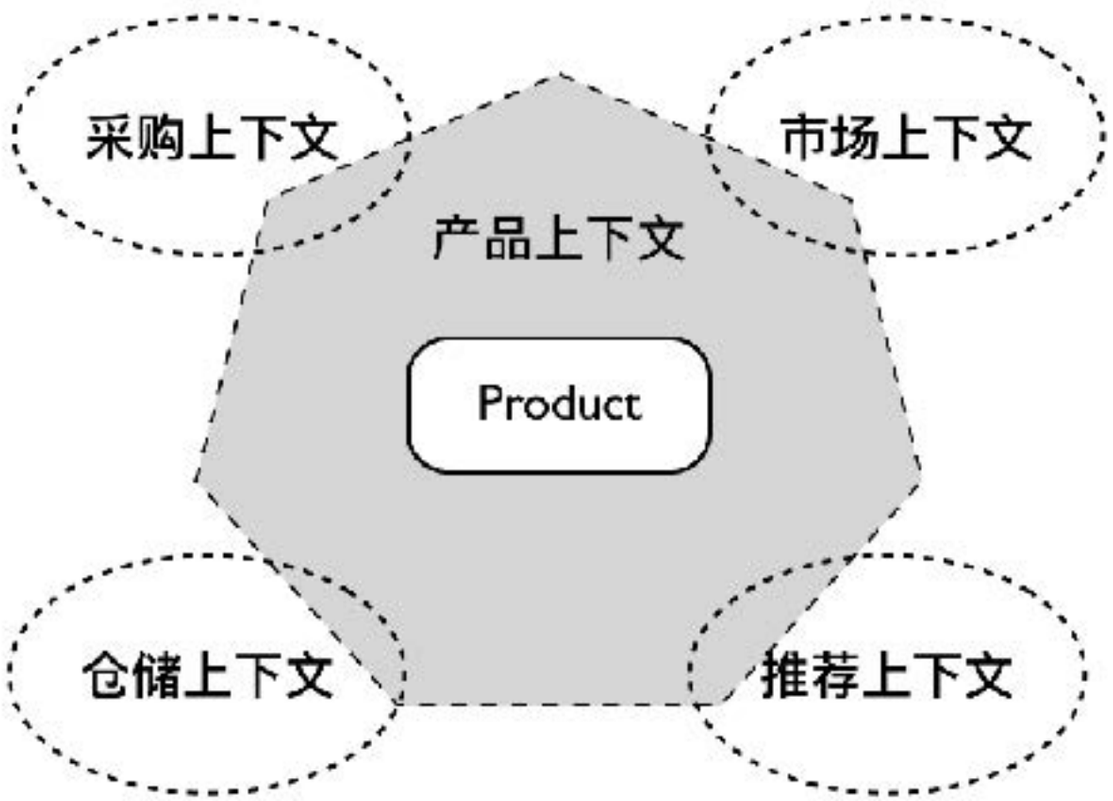
产品的概念

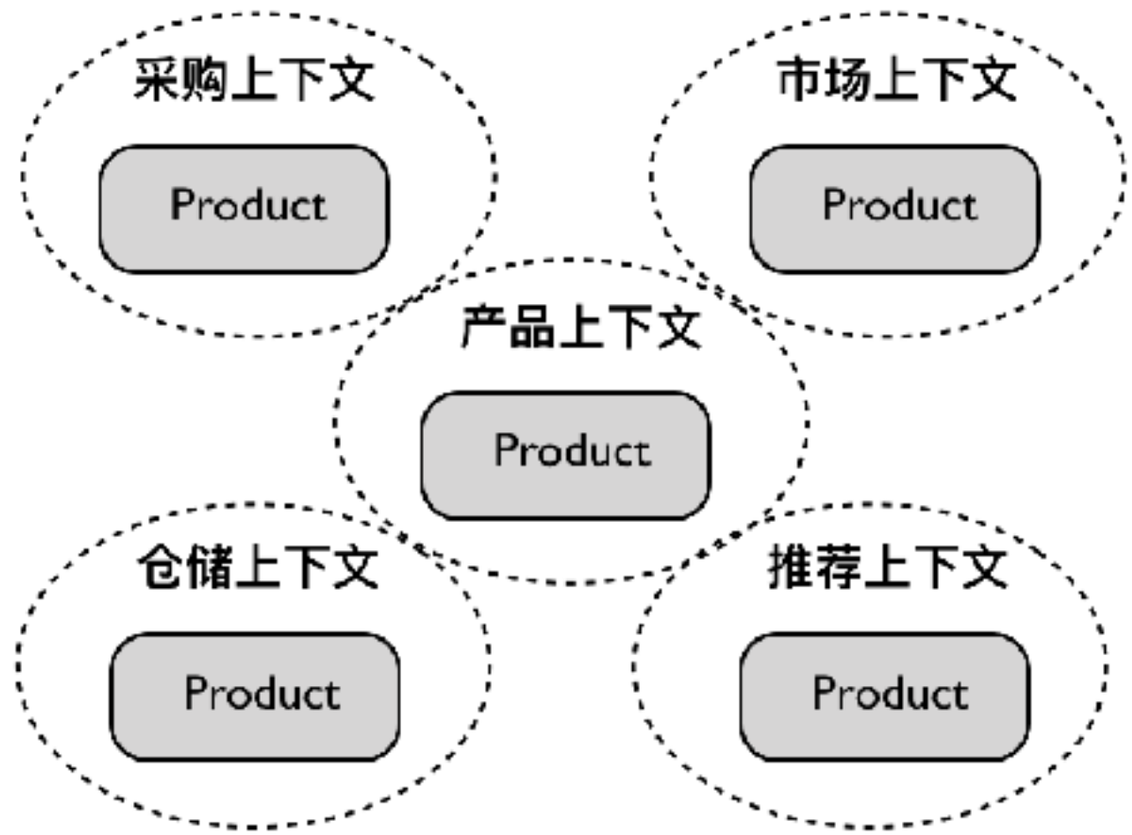


Product上帝类

```
1  public class Product {
2      private Identity id;
3      private String name;
4      private Category category;
5      private Preriod leadTime;
6      private int minimumOrderQuant;
7      private Weight weight;
8      private Volumn volumn;
9      private int quantity;
10     private long annualSales;
11     private long favoritePoints;
12     private long positiveComments;
13     private long negetiveComments;
14
15     public Price priceFor(CustomerType customerType) {}
16     public PurchaseOrder buyFrom(Supplier supplier) {}
17     public Location allocate() {}
18     public bool isFragile() {}
19     public Image[] loadImagesFrom(String filePath) {}
20     public Recommendations similar() {}
21 }
```

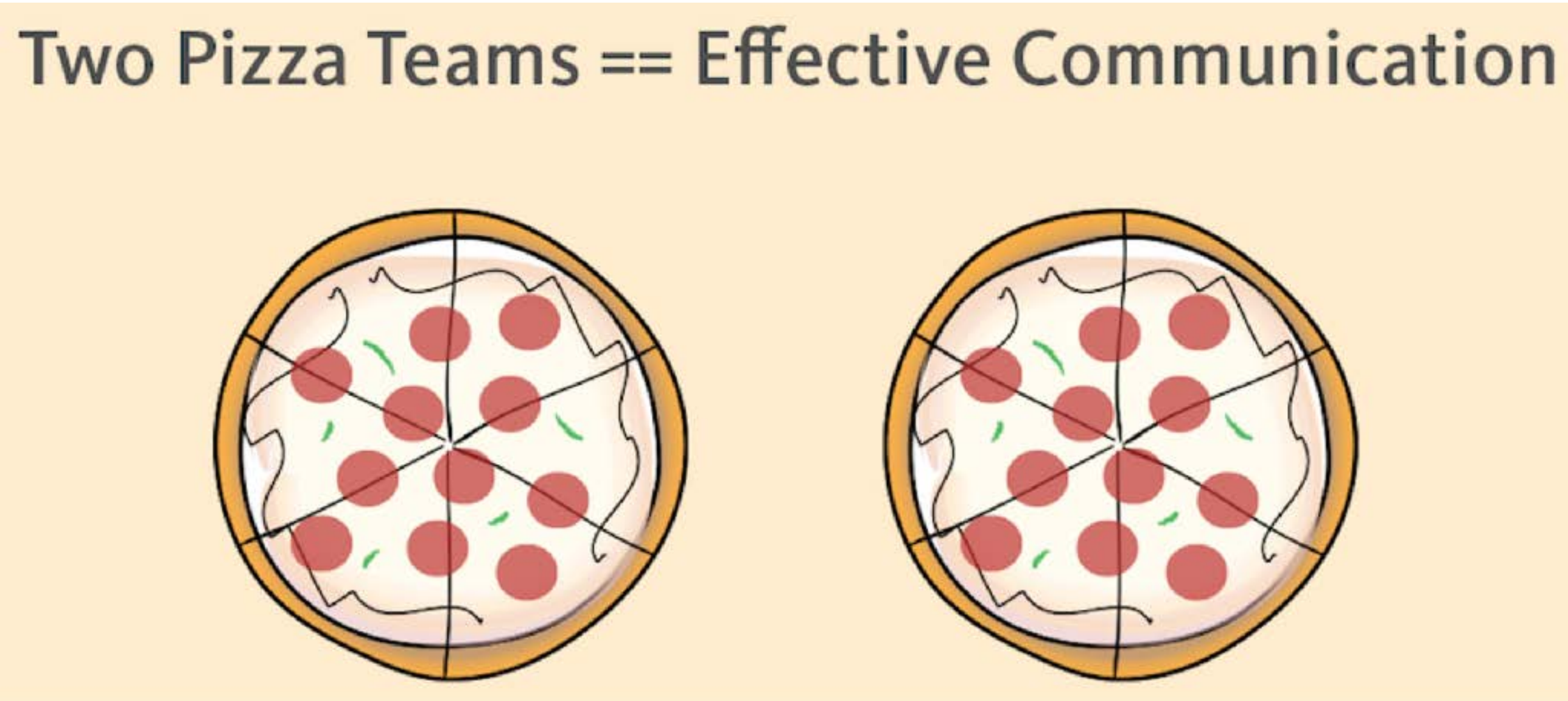
限界上下文确定了业务概念





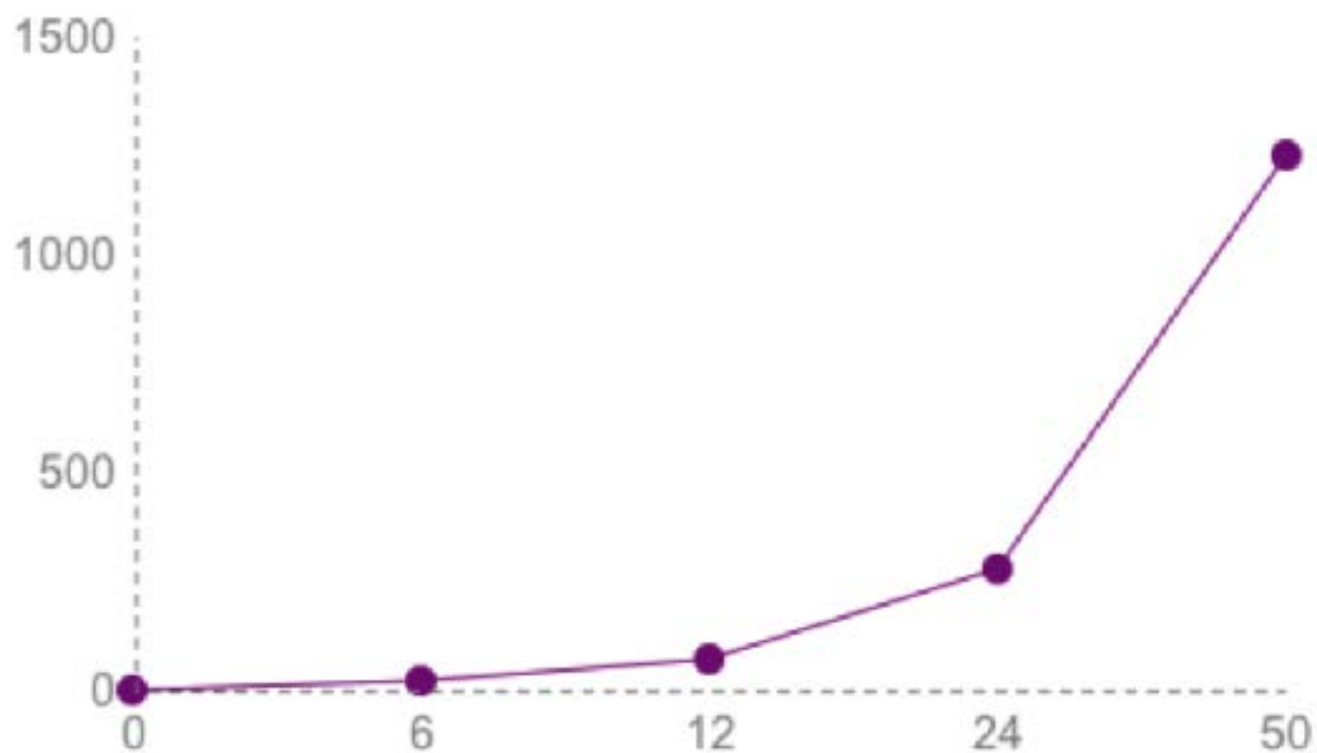
限界上下文确定了工作边界

2PTs规则

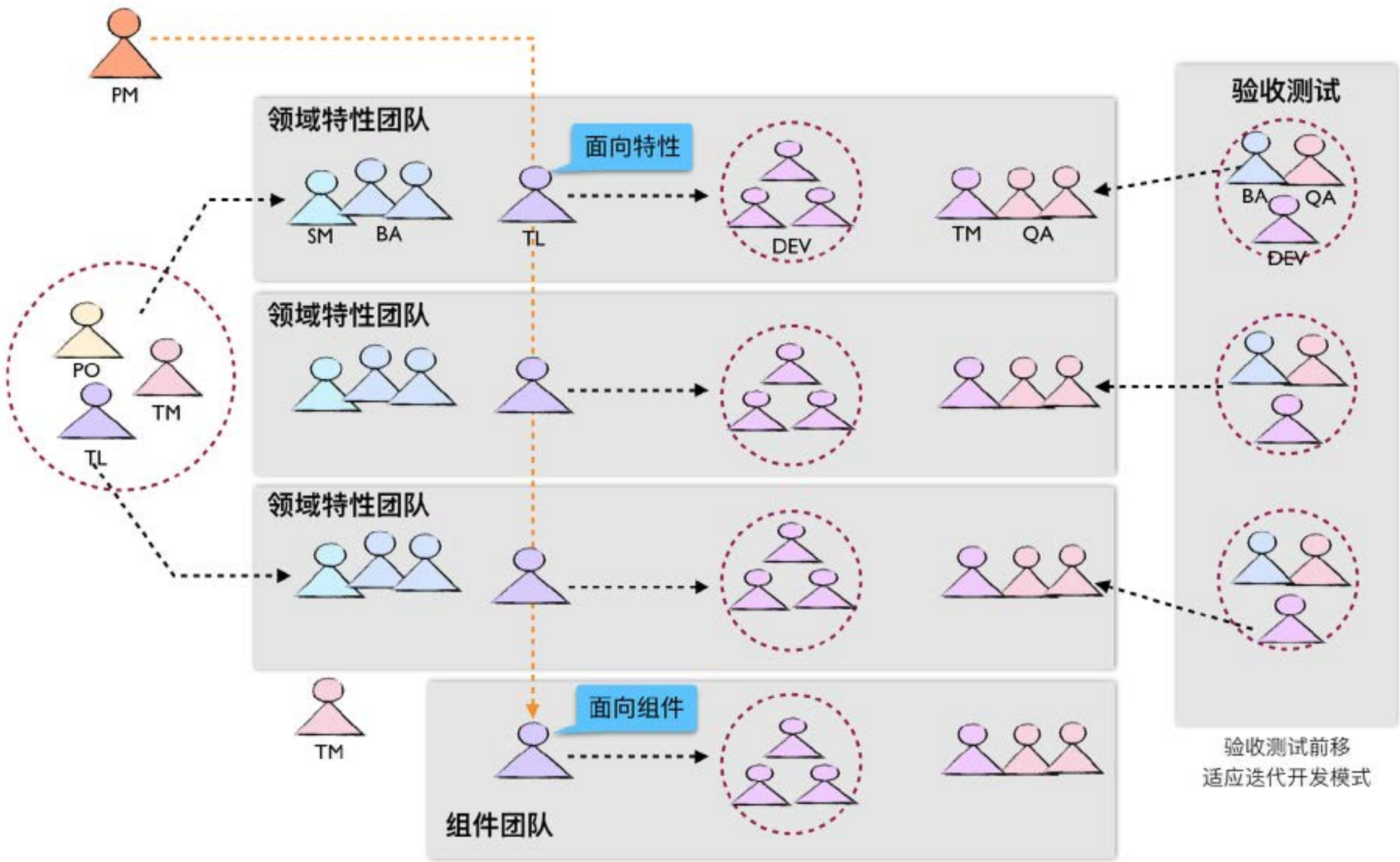


2PTs规则的数学依据

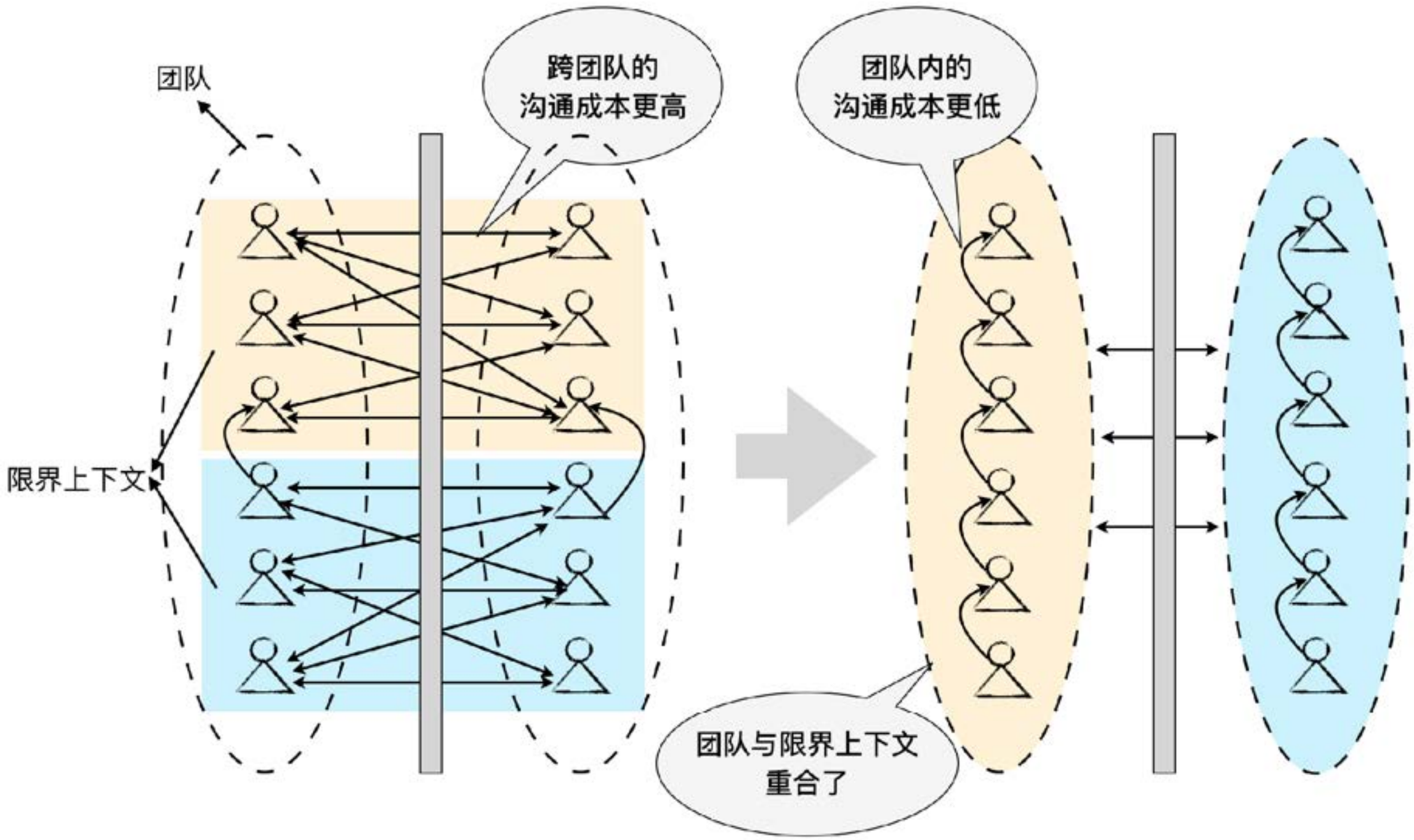
$$N(link) = \frac{n(n-1)}{2}$$



特性团队

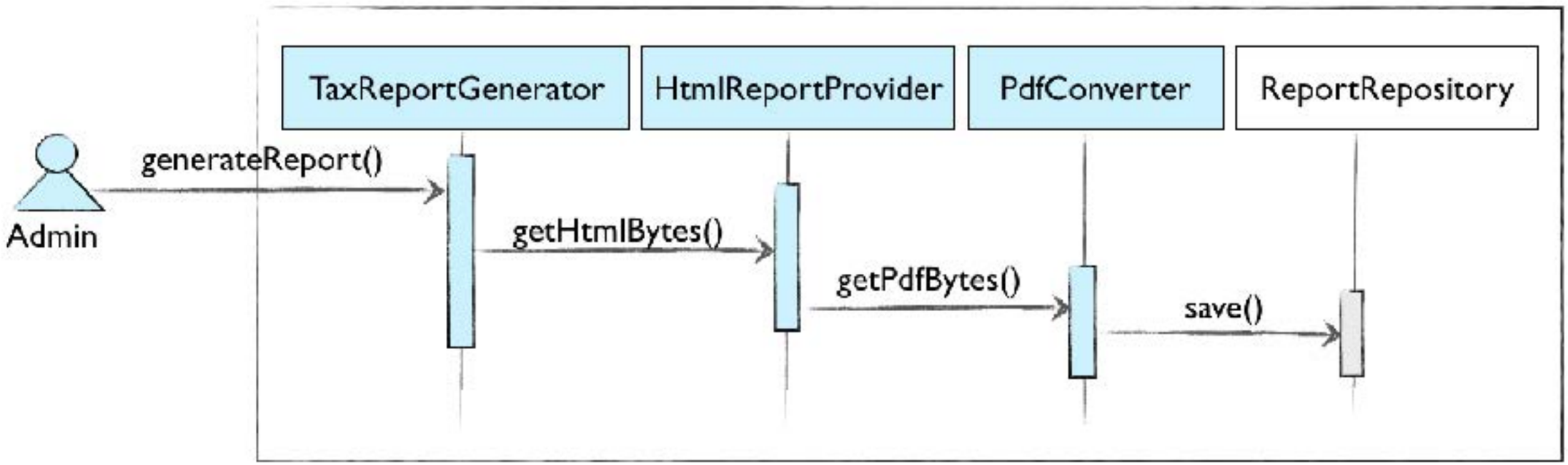

PM
领域特性团队
面向特性
SM
BA
TL
DEV
TM
QA
验收测试
BA
QA
DEV
领域特性团队
PO
TM
TL
领域特性团队
TM
面向组件
组件团队
验收测试前移
适应迭代开发模式

康威定律



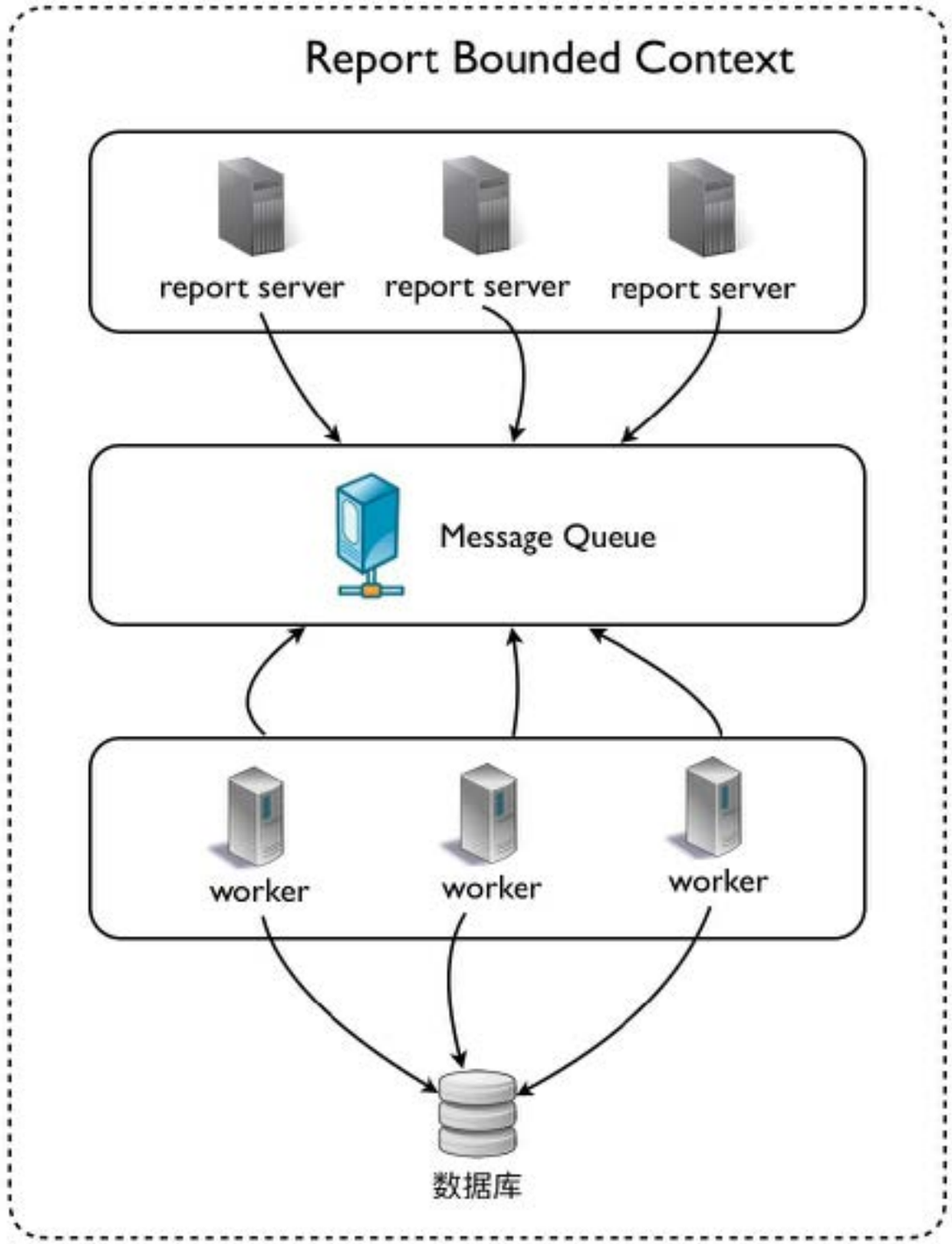
限界上下文确定了应用边界

生成报告文件的技术风险

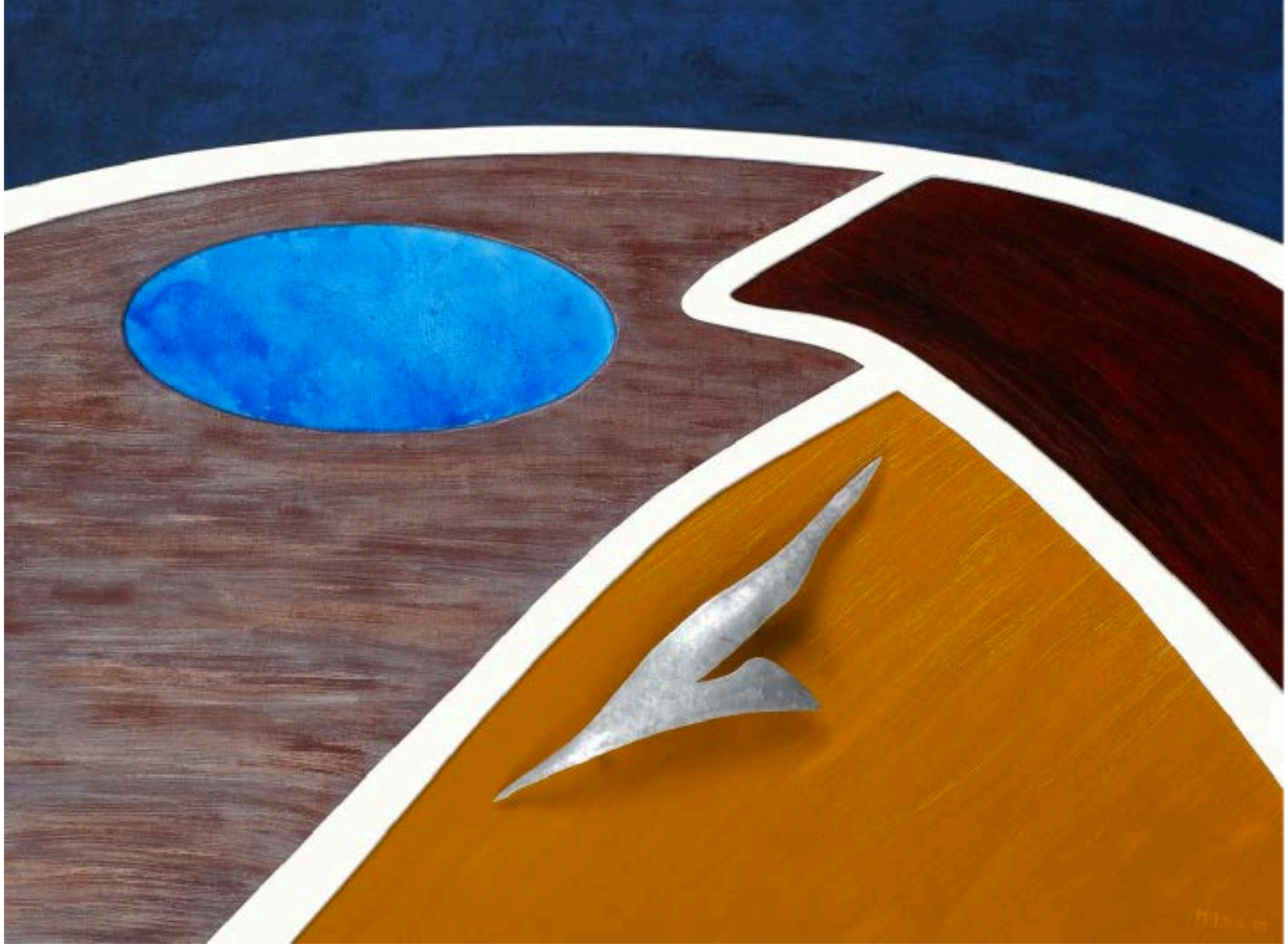



```
public void generateReports(String calendarReportName) {
    Byte[]  bytes = provider.getHtmlBytes(calendarReportName);
    Byte[] pdfBytes = converter.getPdfBytes(bytes, provider.getTitle());
    repository.save(new TaxReport(pdfBytes));
}
```

定义单独的Report上下文

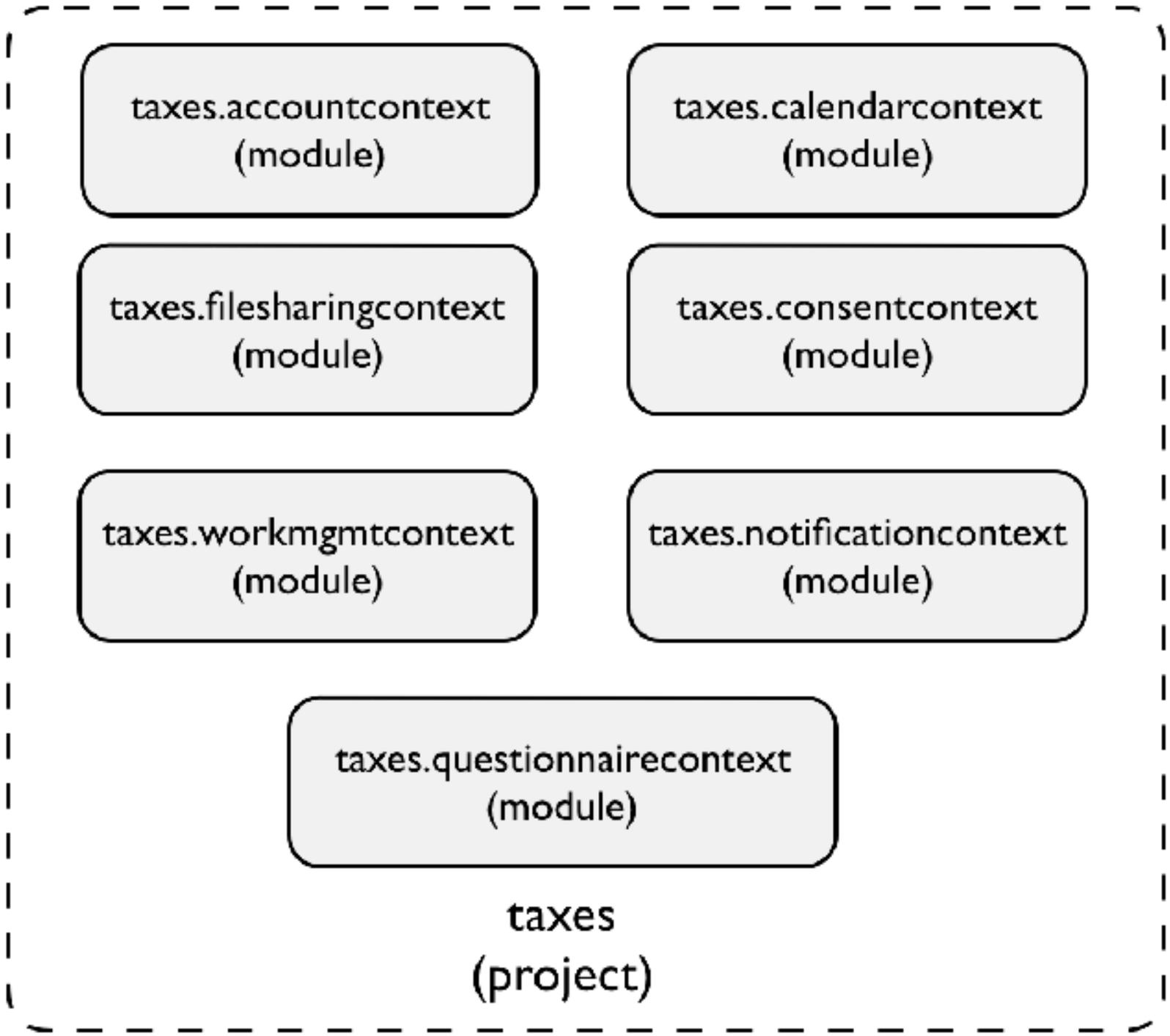


限界上下文的边界



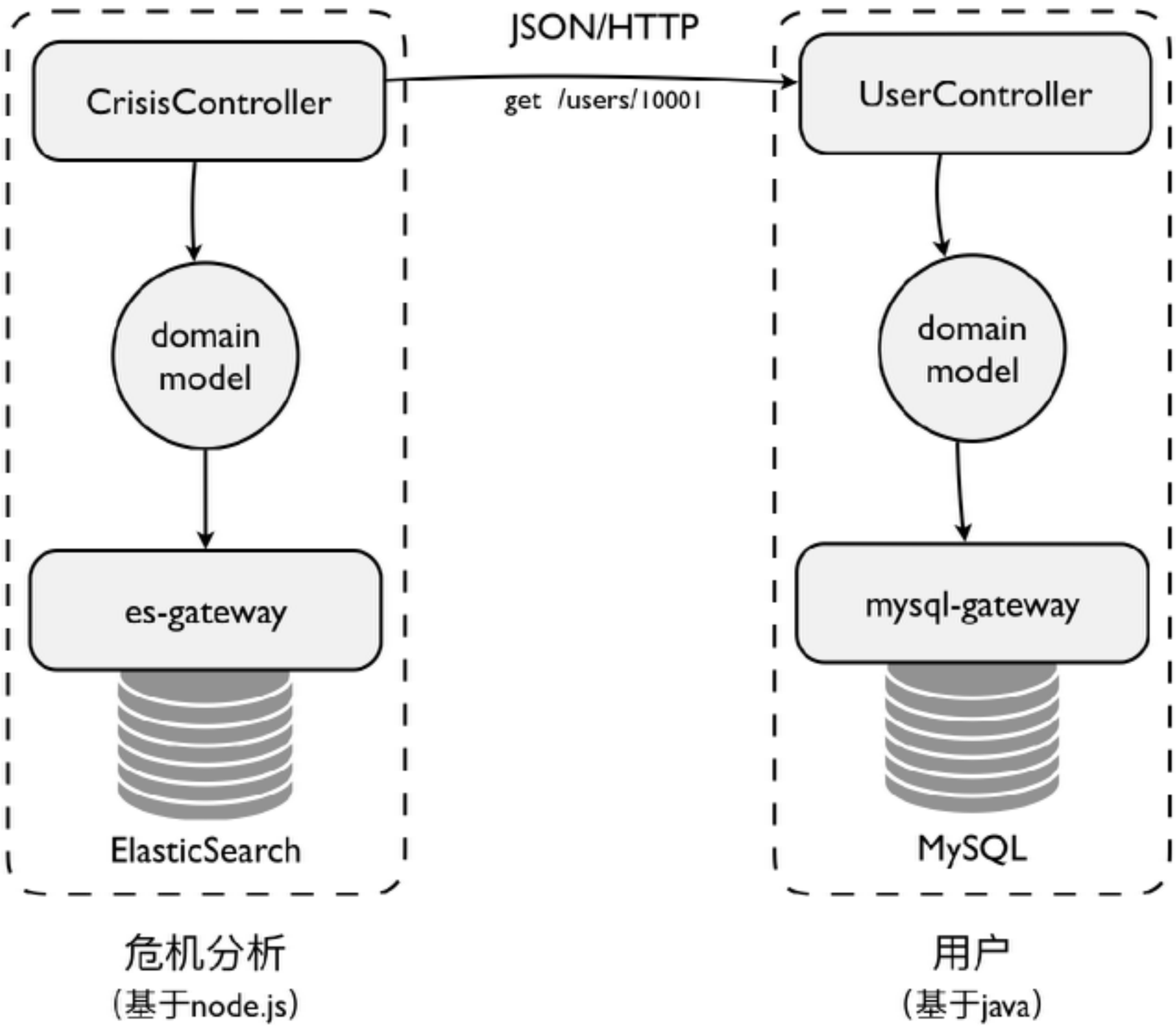
逻辑边界

模块级别的逻辑边界


taxes.accountcontext
(module)
taxes.calendarcontext
(module)
taxes.filesharingcontext
(module)
taxes.consentcontext
(module)
taxes.workmgmtcontext
(module)
taxes.notificationcontext
(module)
taxes.questionnairecontext
(module)
taxes
(project)

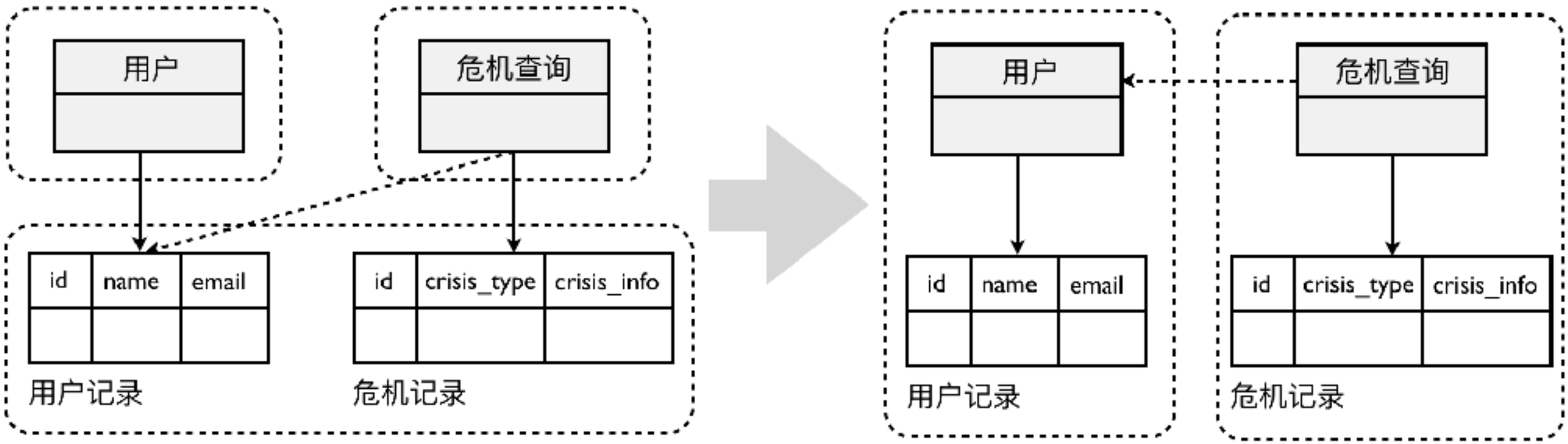
物理边界

危机分析系统的物理边界



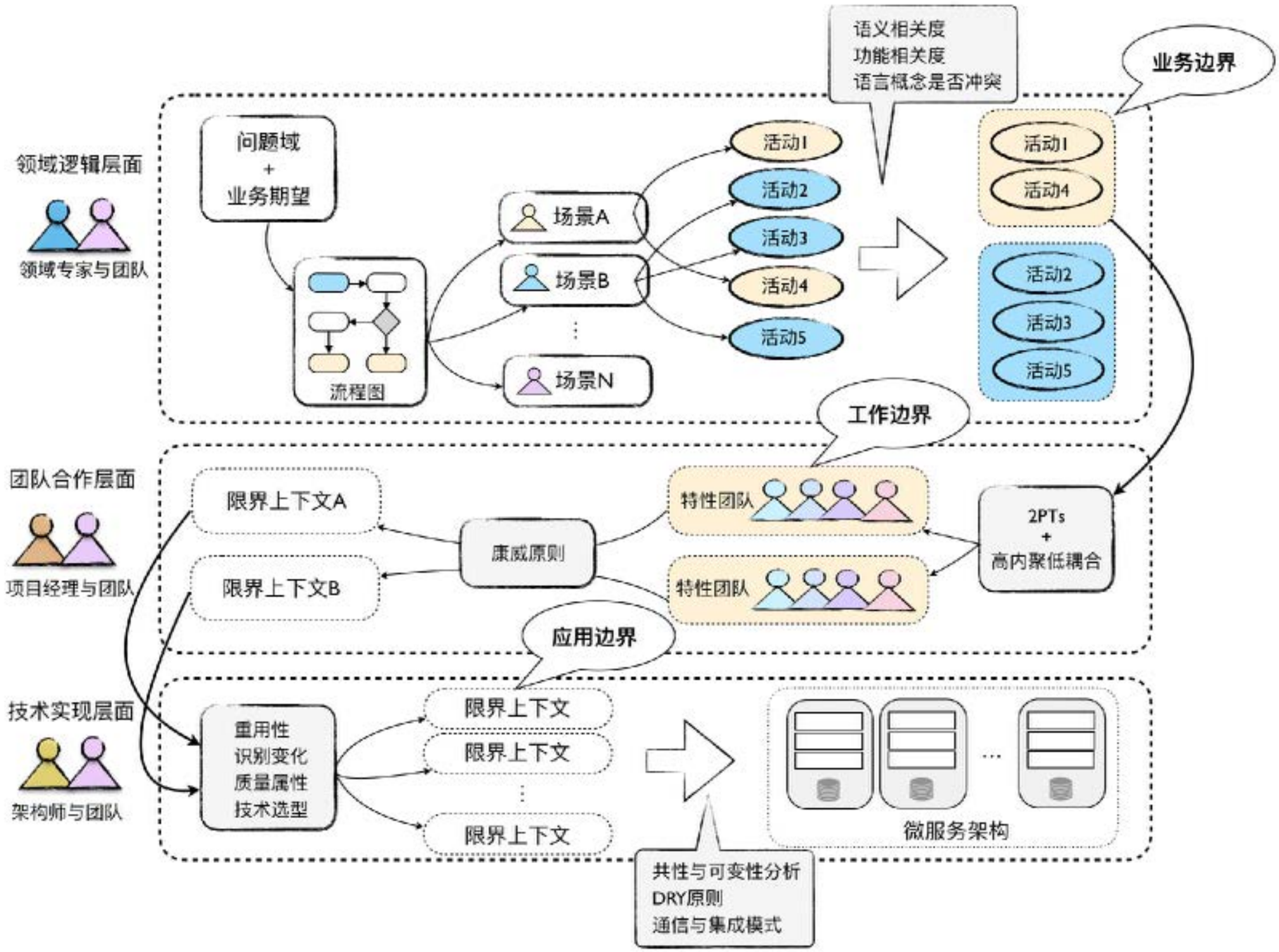
数据库共享

切断数据库的耦合


用户
危机查询
id
name
email
id
crisis_type
crisis_info
用户记录
危机记录
用户
危机查询
id
name
email
id
crisis_type
crisis_info
用户记录
危机记录

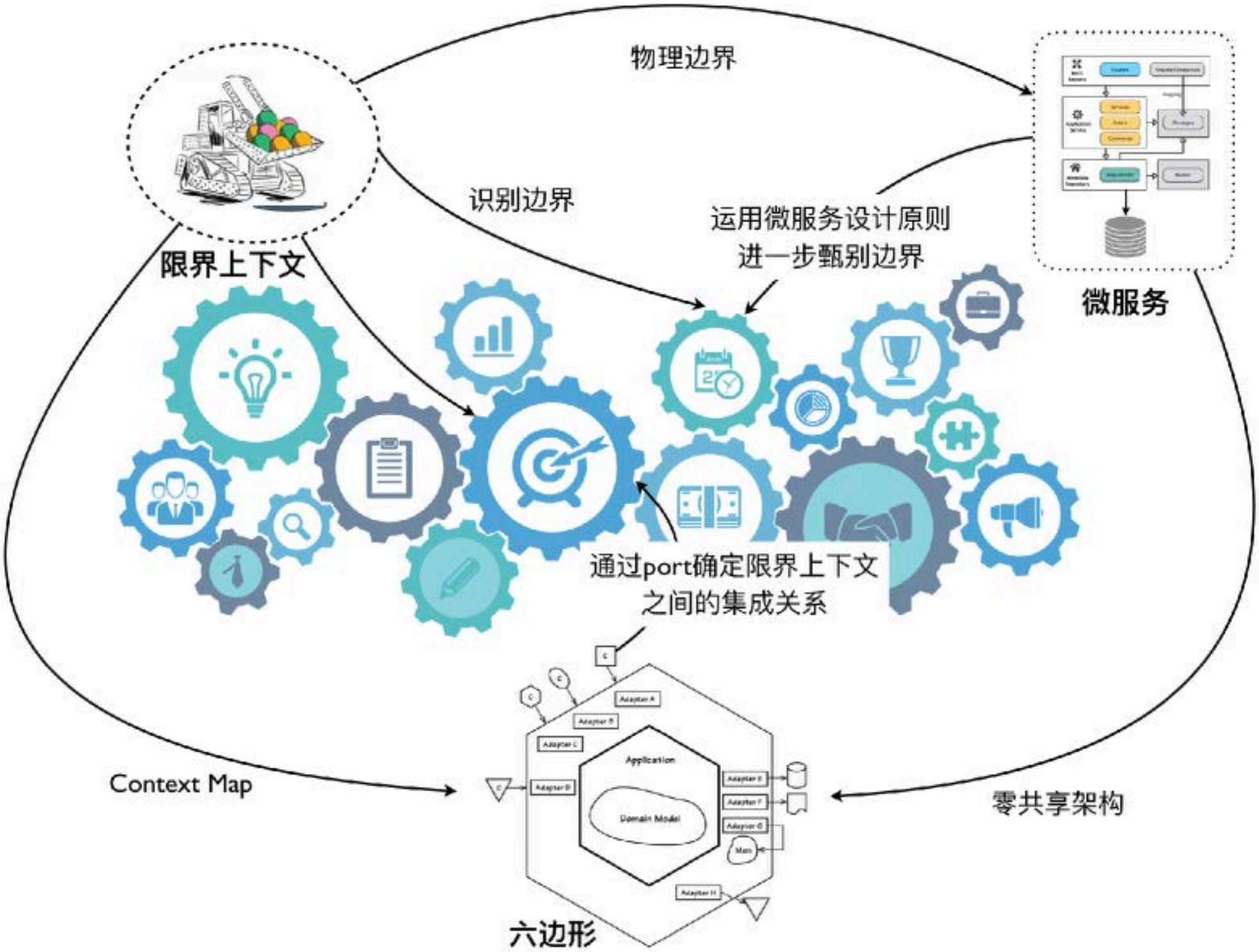
识别限界上下文

识别上下文的方法


语义相关度
功能相关度
语言概念是否冲突
业务边界
领域逻辑层面
领域专家与团队
问题域
+
业务期望
流程图
场景A
场景B
场景N
活动1
活动2
活动3
活动4
活动5
活动1
活动4
活动2
活动3
活动5
工作边界
团队合作层面
项目经理与团队
限界上下文A
限界上下文B
康威原则
特性团队
特性团队
2PTs
+
高内聚低耦合
应用边界
技术实现层面
架构师与团队
重用性
识别变化
质量属性
技术选型
限界上下文
限界上下文
限界上下文
微服务架构
共性与可变性分析
DRY原则
通信与集成模式

六边形 限界上下文 微服务

三者之间的关系


物理边界
识别边界
运用微服务设计原则
进一步甄别边界
限界上下文
微服务
通过port确定限界上下文
之间的集成关系
Context Map
零共享架构
六边形

Thanks, Bro