

A01

Course Introduction

Business Model Canvas [1]	The Lean Startup [2]
Customer Development [3]	Agile Development

**With cleaned-up terminology, and as
applied to commercial open source**

A02

Course Projects

Key Partners

**Key
Resources**

**Key
Activities**

**Value
Proposition**

Channels

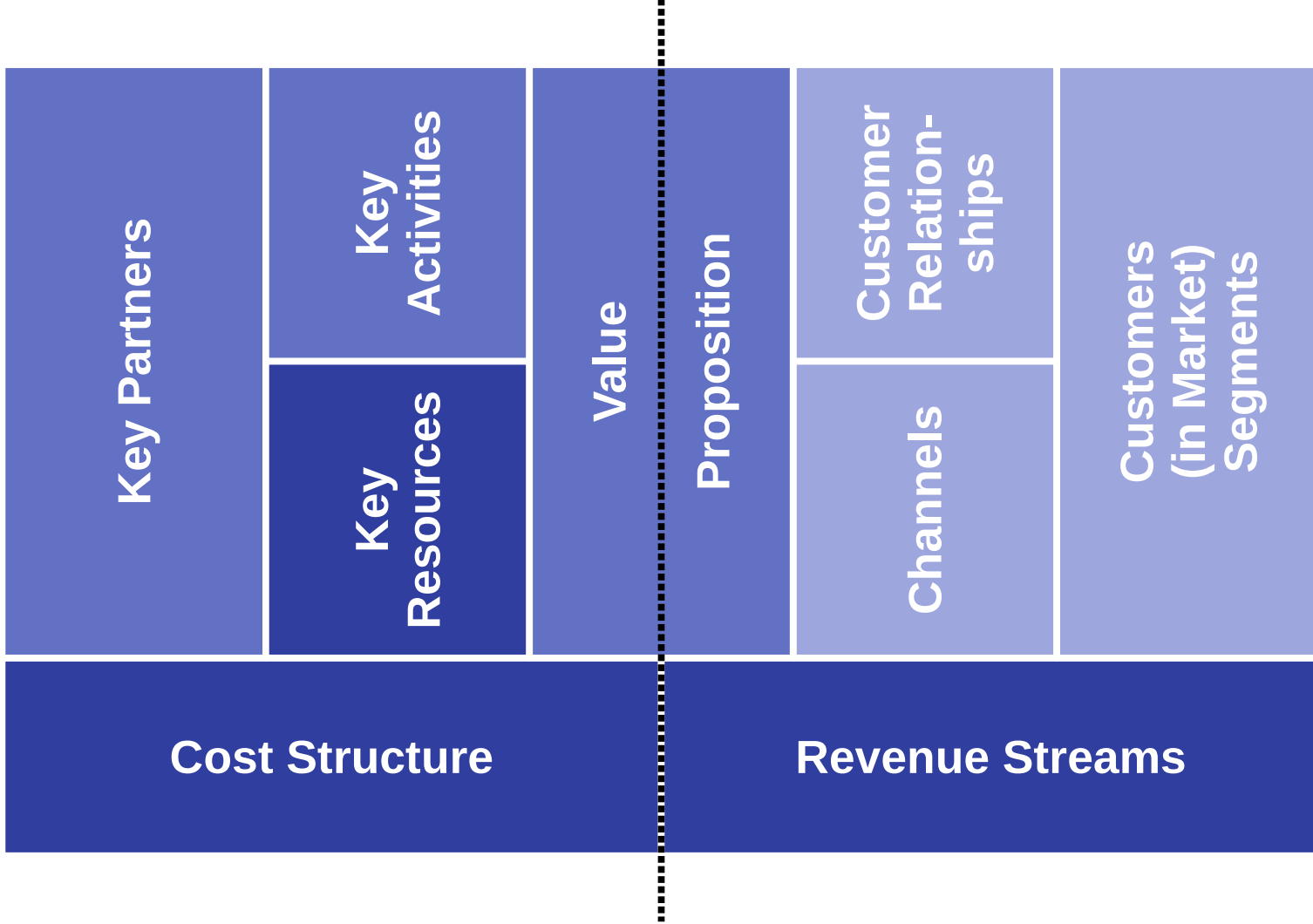
**Customer
Relation-
ships**

**Customers
(in Market)
Segments**

Cost Structure

Revenue Streams

Value Creation

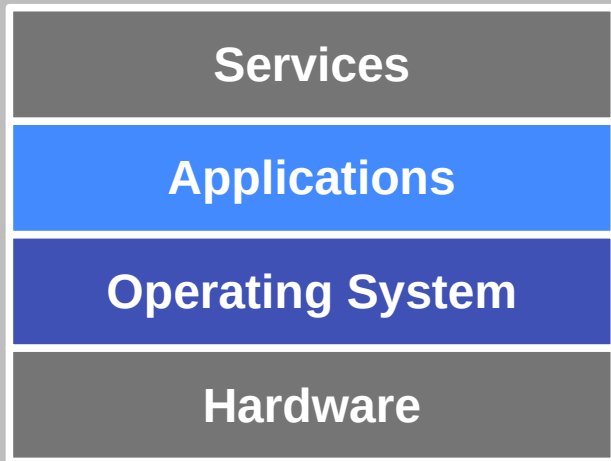


Value Capture

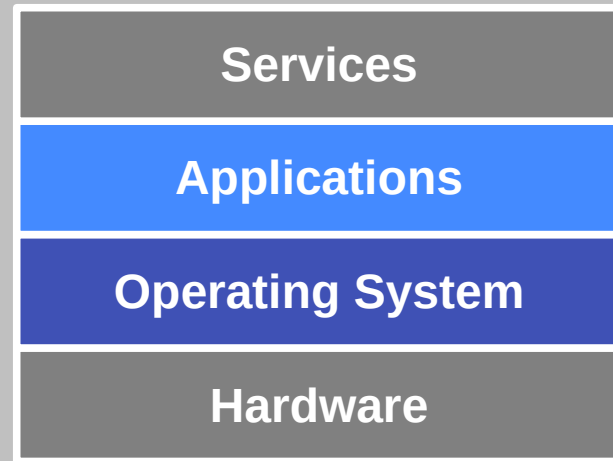
B01

The Software Industry

IBM



DEC



Services

IBM

Accenture

Tata

Applications

Microsoft Word

GIMP

Twitter

Operating System

Windows

Linux

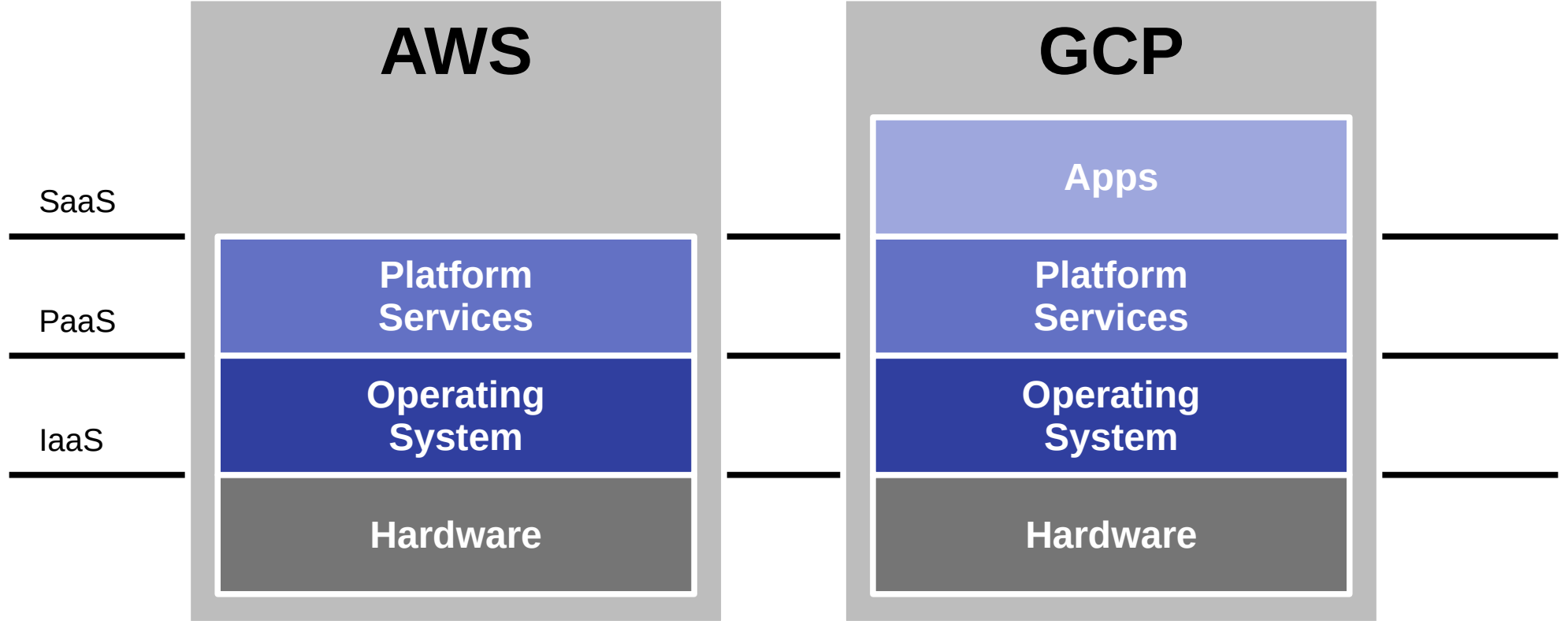
OS X

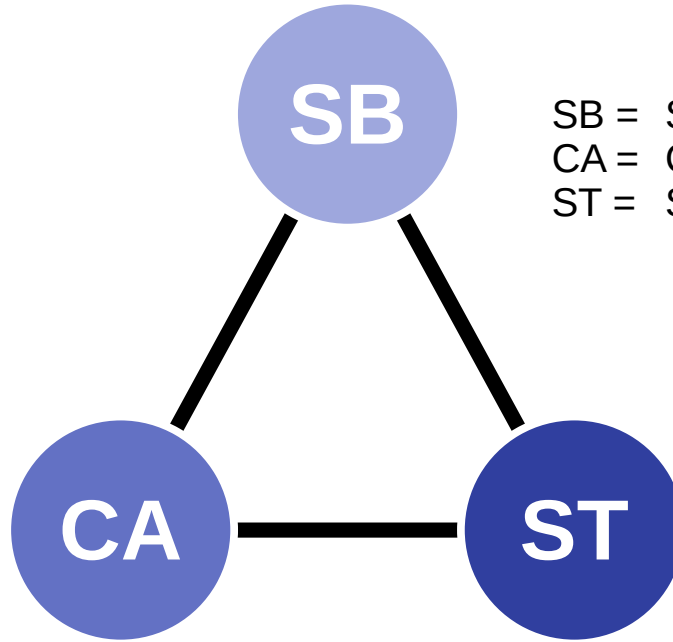
Hardware

IBM

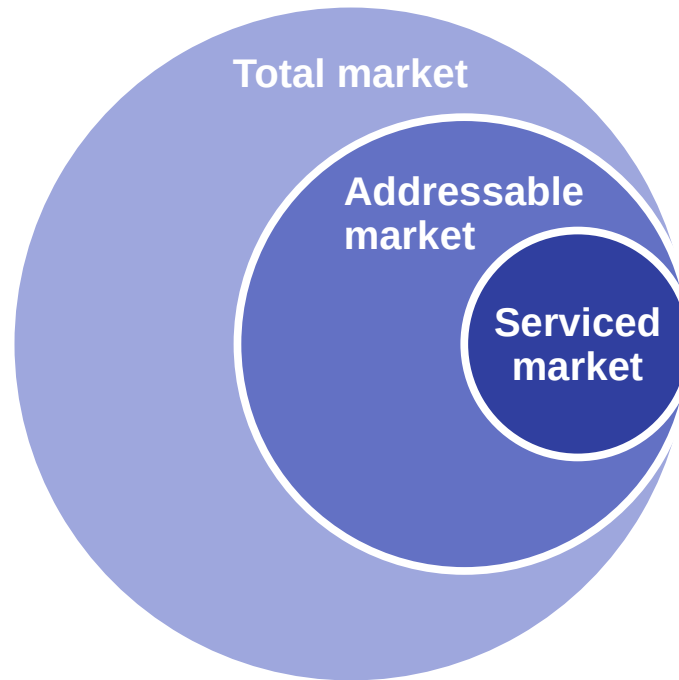
Dell

Samsung





SB = Standards body
CA = Certification agency
ST = Standards trainer





 **Child**

 **Teenager**

 **Single adult**

 **Married no kids**

 **Parent**

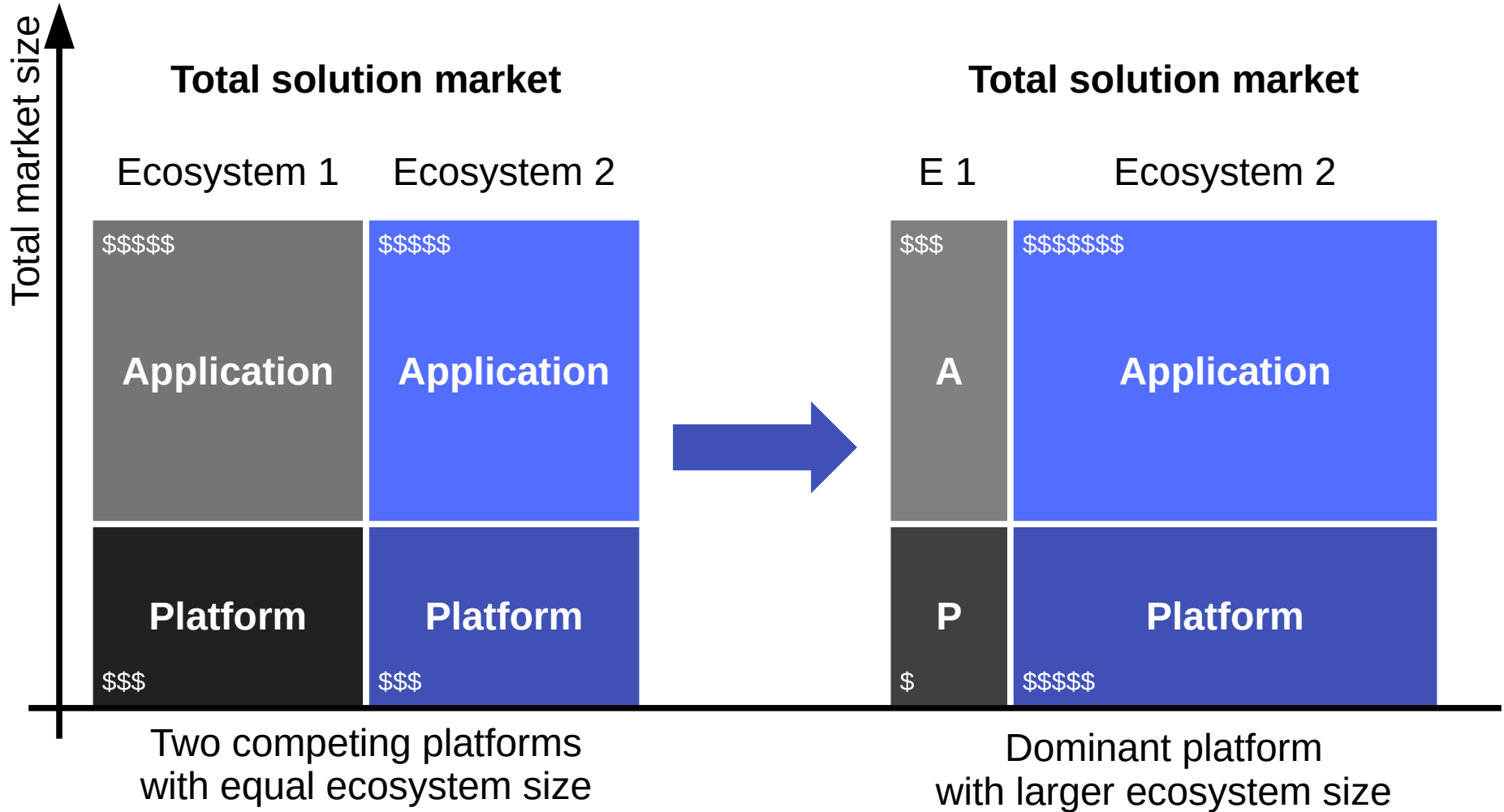
	<i>Healthcare</i>	<i>Banking</i>	<i>Insurance</i>	<i>Energy</i>	<i>Automotive</i>	<i>...</i>
CRM						
SRM						
ERP						
HRM						
...						

Services

Applications

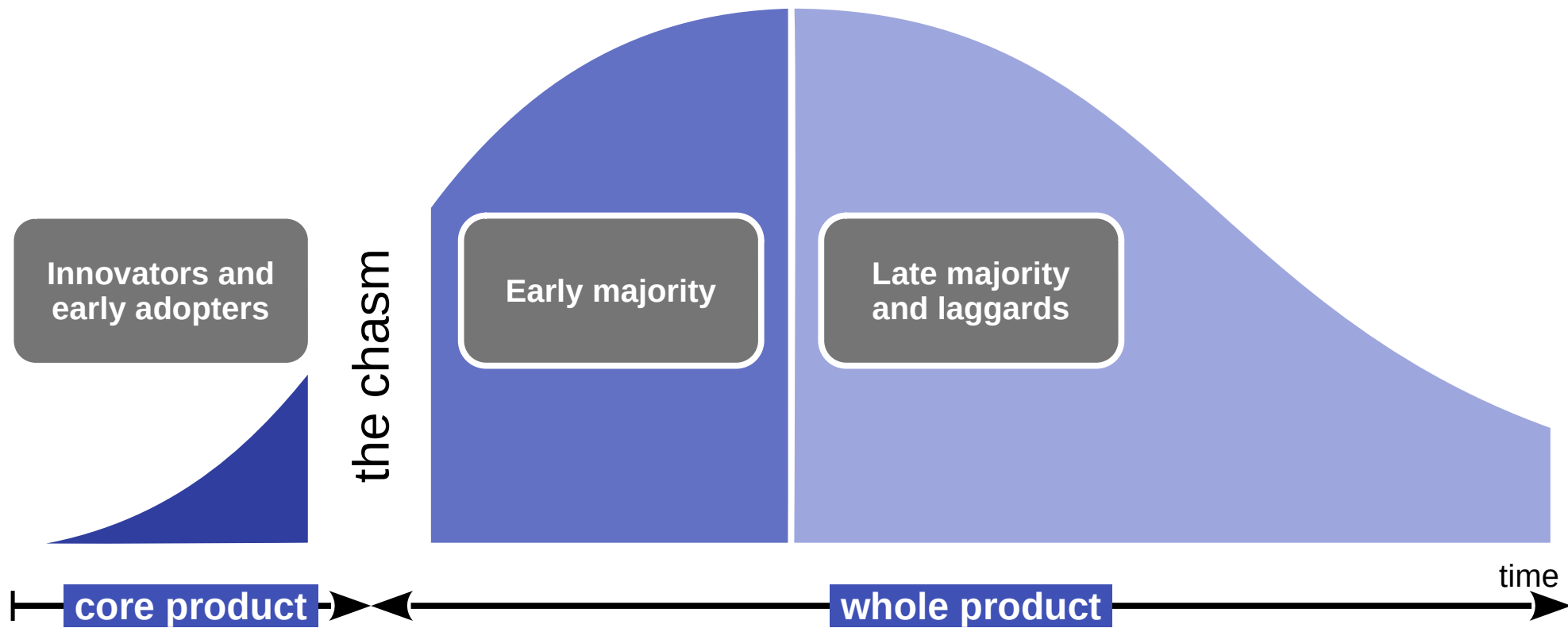
Operating System

Hardware



B02

Software Products



Whole product

Basic product

Core product (intellectual property)

Software

- Core software
- Additional software (extensions + plug-ins, tools and utilities, integrations)

Complementary materials

- Documentation
- Training materials

Self-help services

- Forums, mailing lists
- Help and chat agents
- On-line tutorials

Pricing of usage rights

- Quantity: User, machine, time, ...
- Duration: Perpetual, time-limited, ...
- Structured: Initial license fee, regular subscription fee

Guarantees (“insurance”)

- Fitness for use
- Certification

Pricing of guarantees

- By damage: Loss of business, fines received
- Structured: Levels / bands, formula

Support services

- Hot-line support
- On-site servicing

Pricing of support services (SLAs)

- By availability: Incident-based, 9x5, 24x7
- By quality: First-level, second-level, third-level

Training

- In-house training
- Off-site training

Pricing of training

- Fixed fee
- Per participating person

Consulting

- Technical implementation services
- Strategic solution consulting

Pricing of consulting

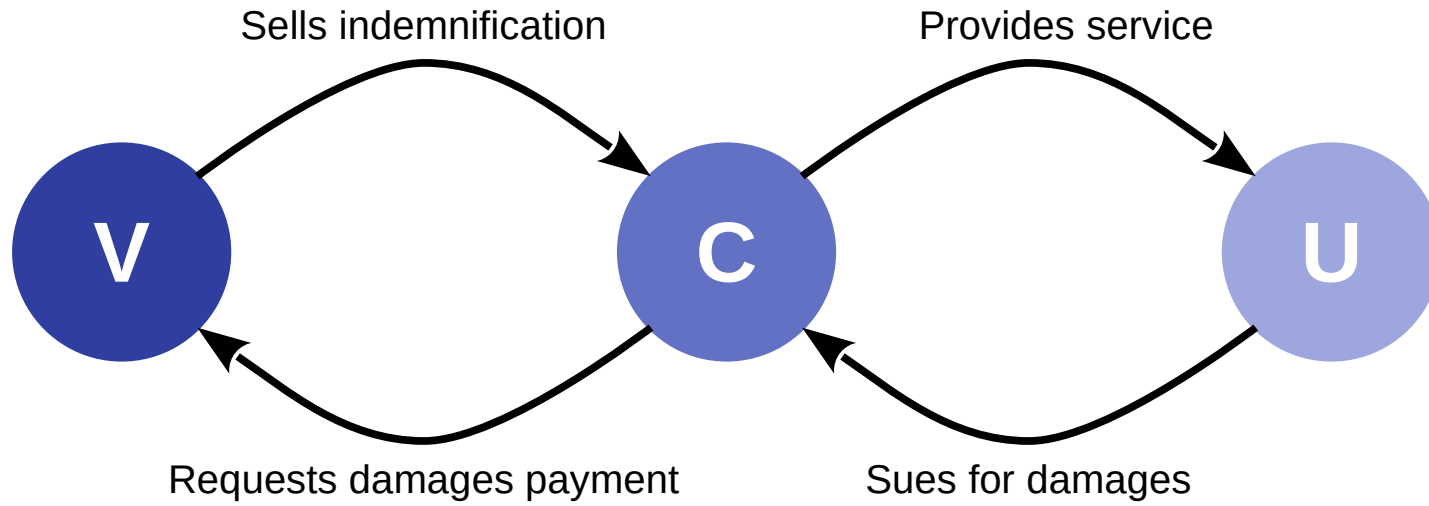
- Fixed fee
- Time and materials

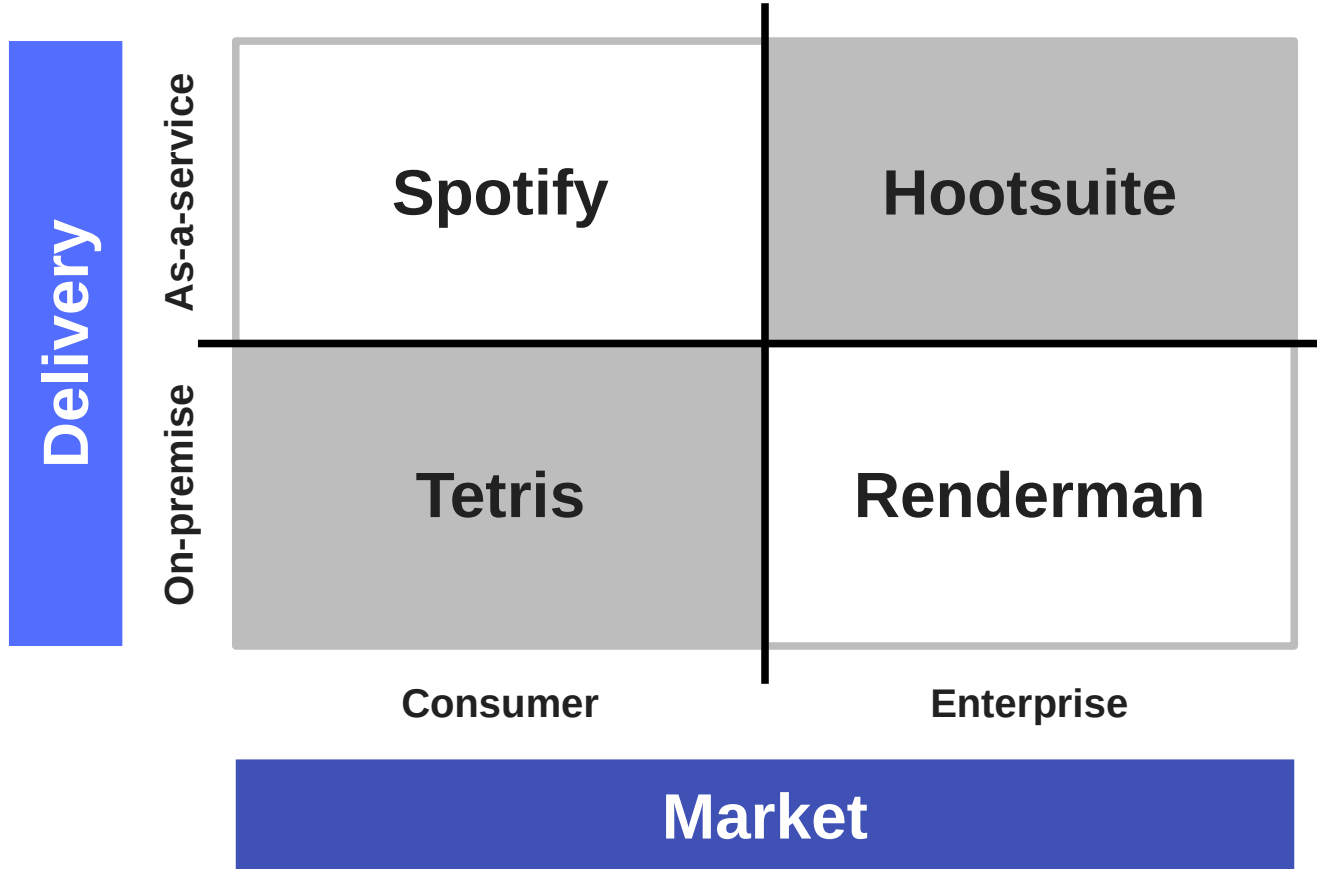
Operations

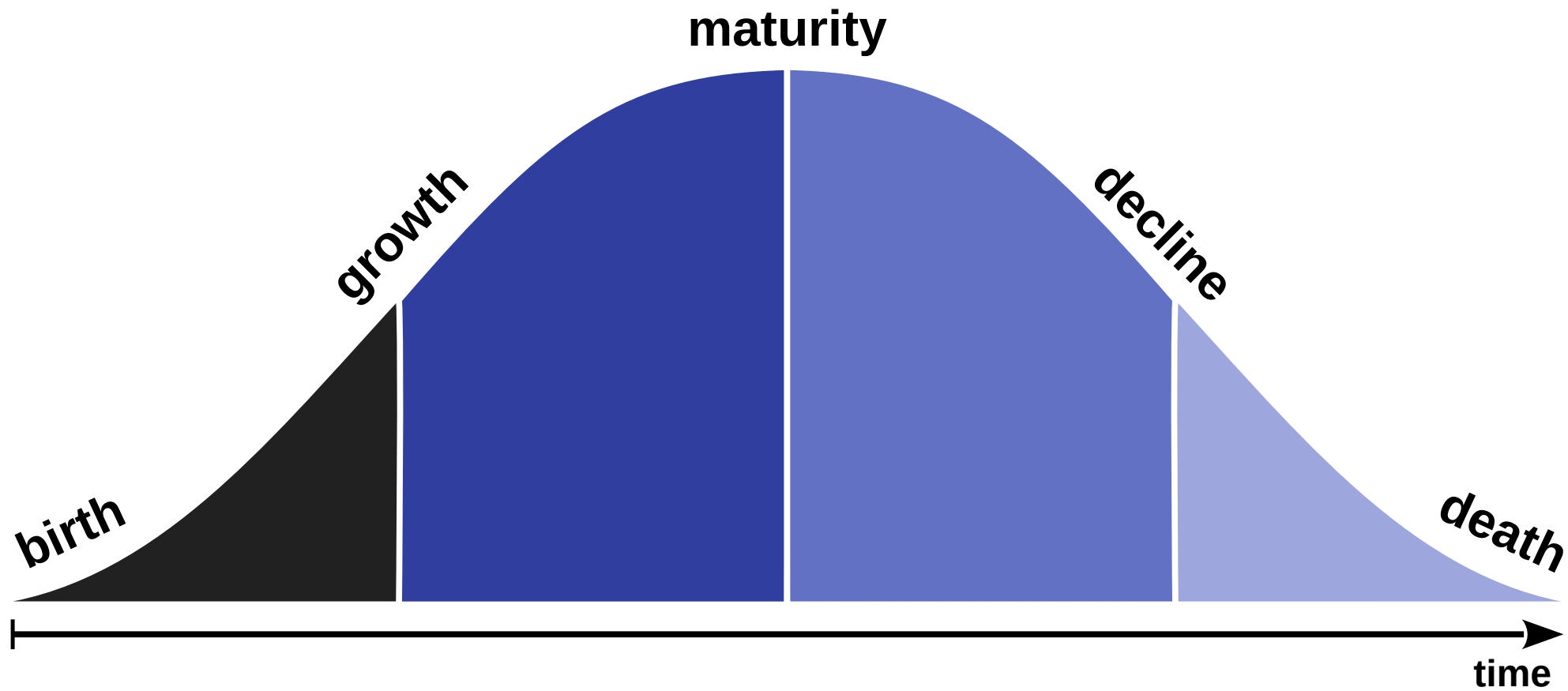
- Provision of SaaS (managed service)

Pricing of operations

- Quantity: Users, resources, ...
- Duration: Always time-limited
- Structured: Set-up, subscription

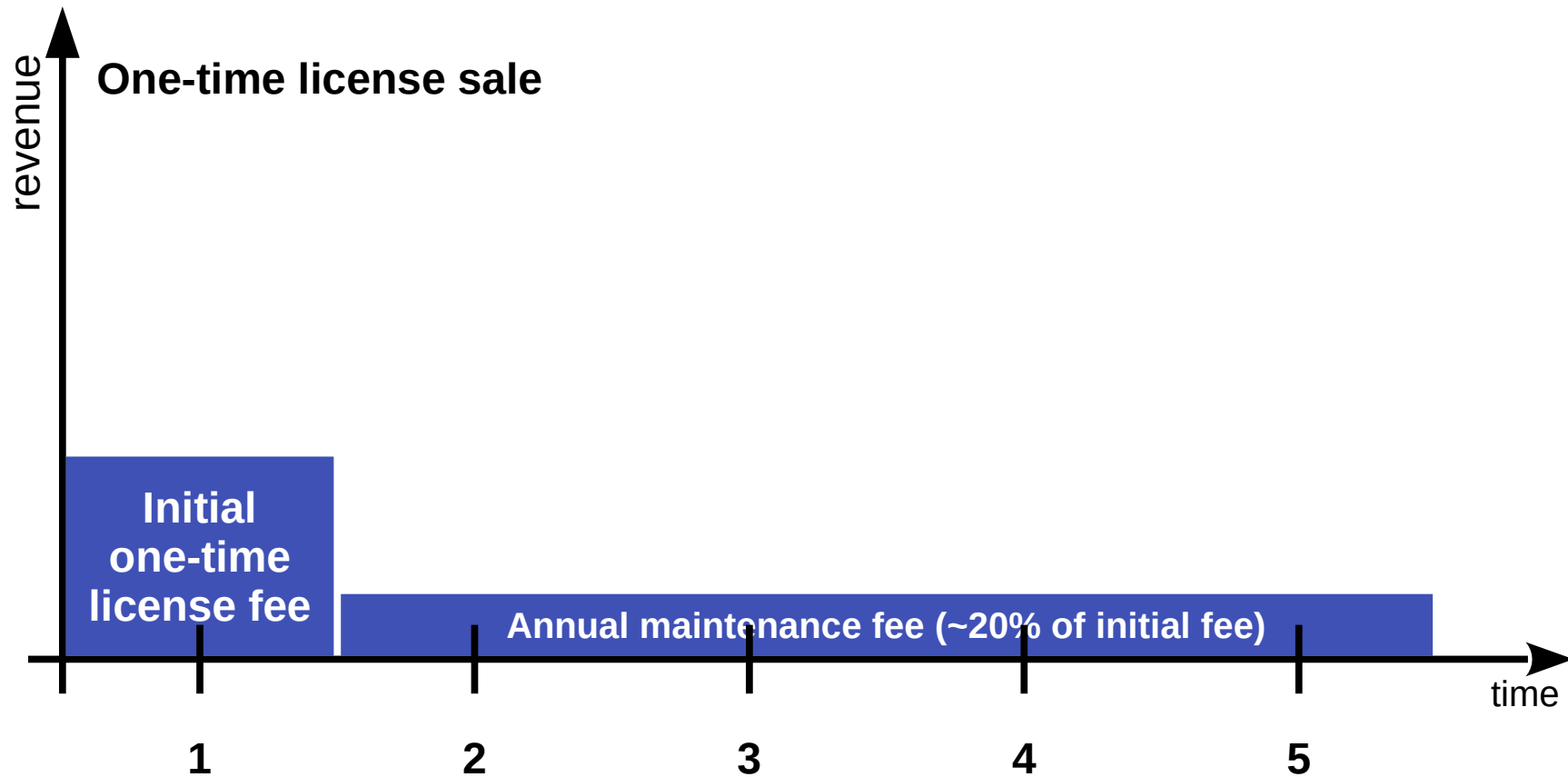


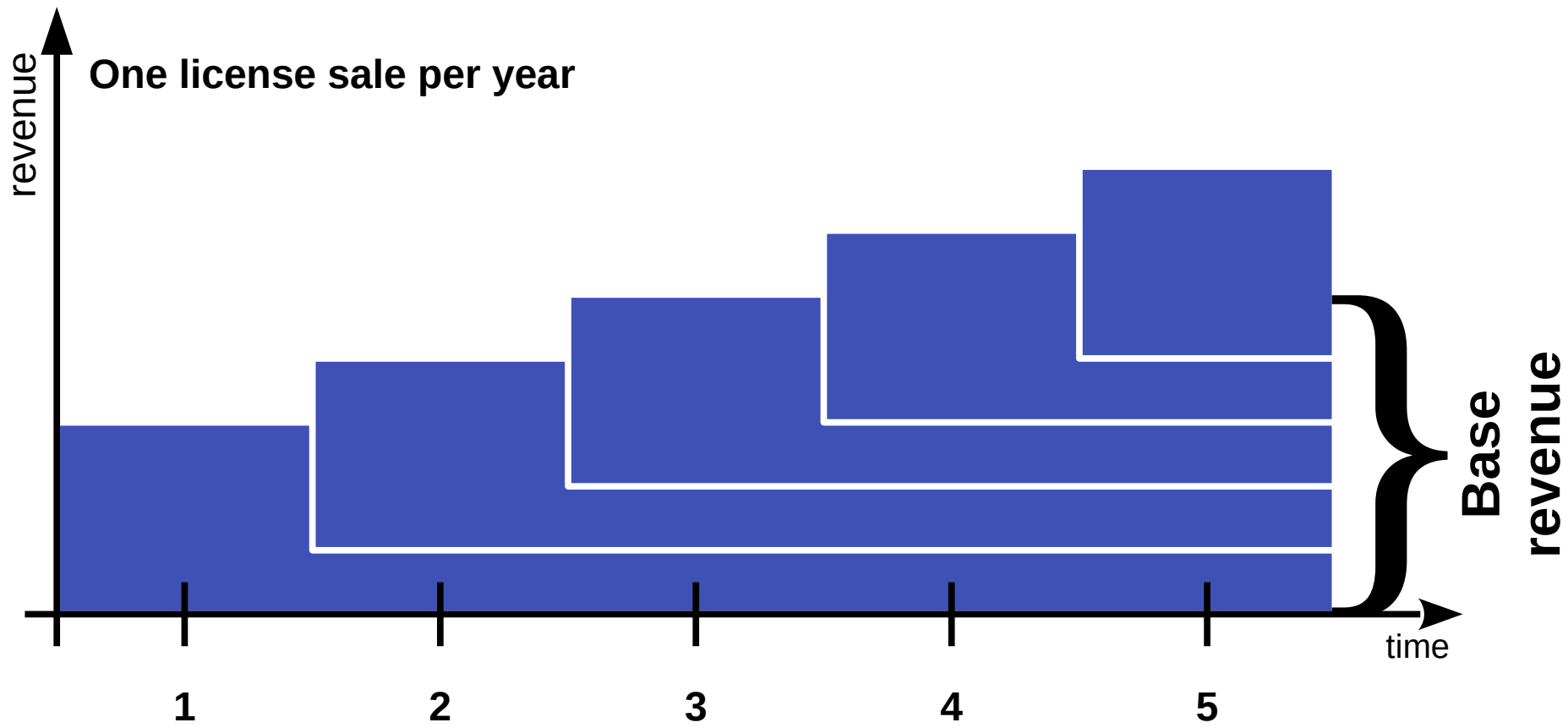


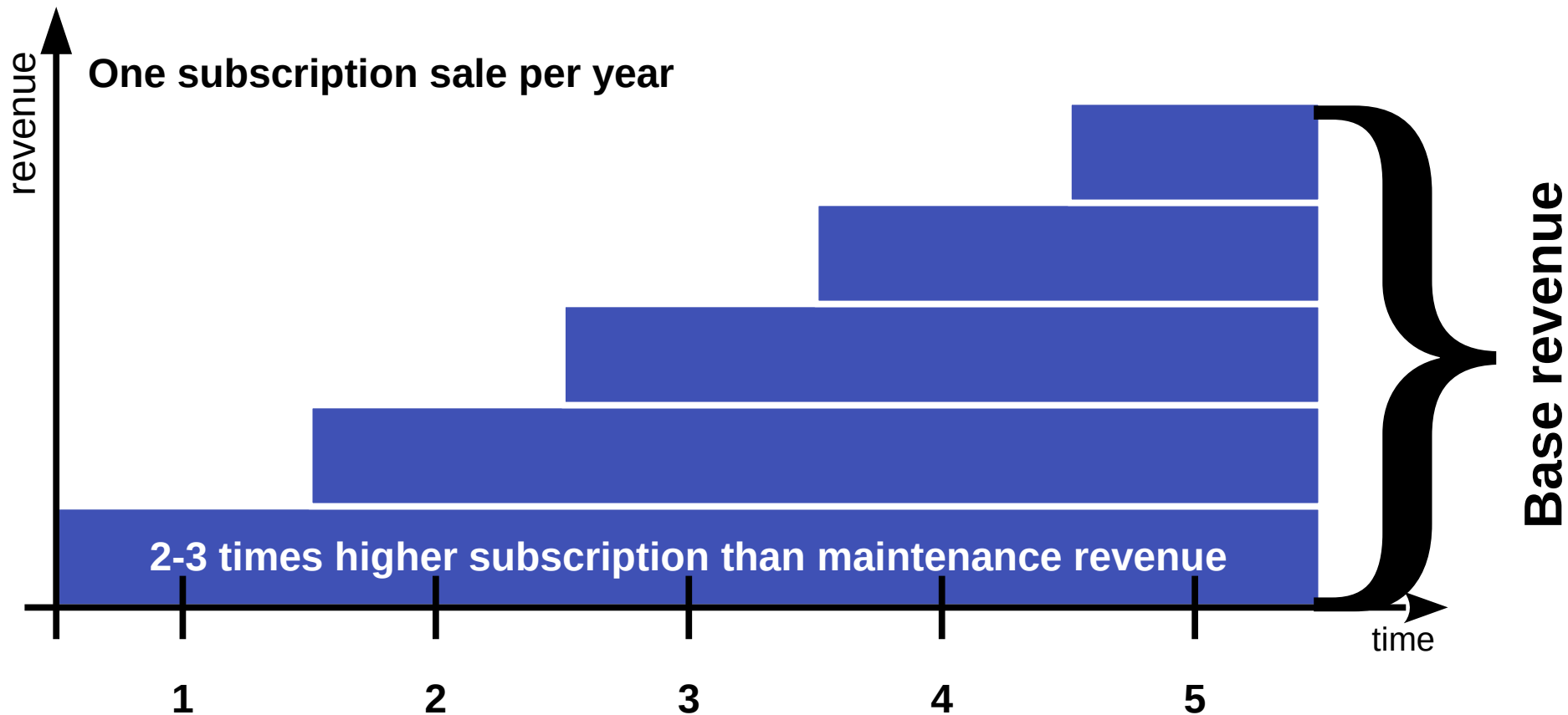


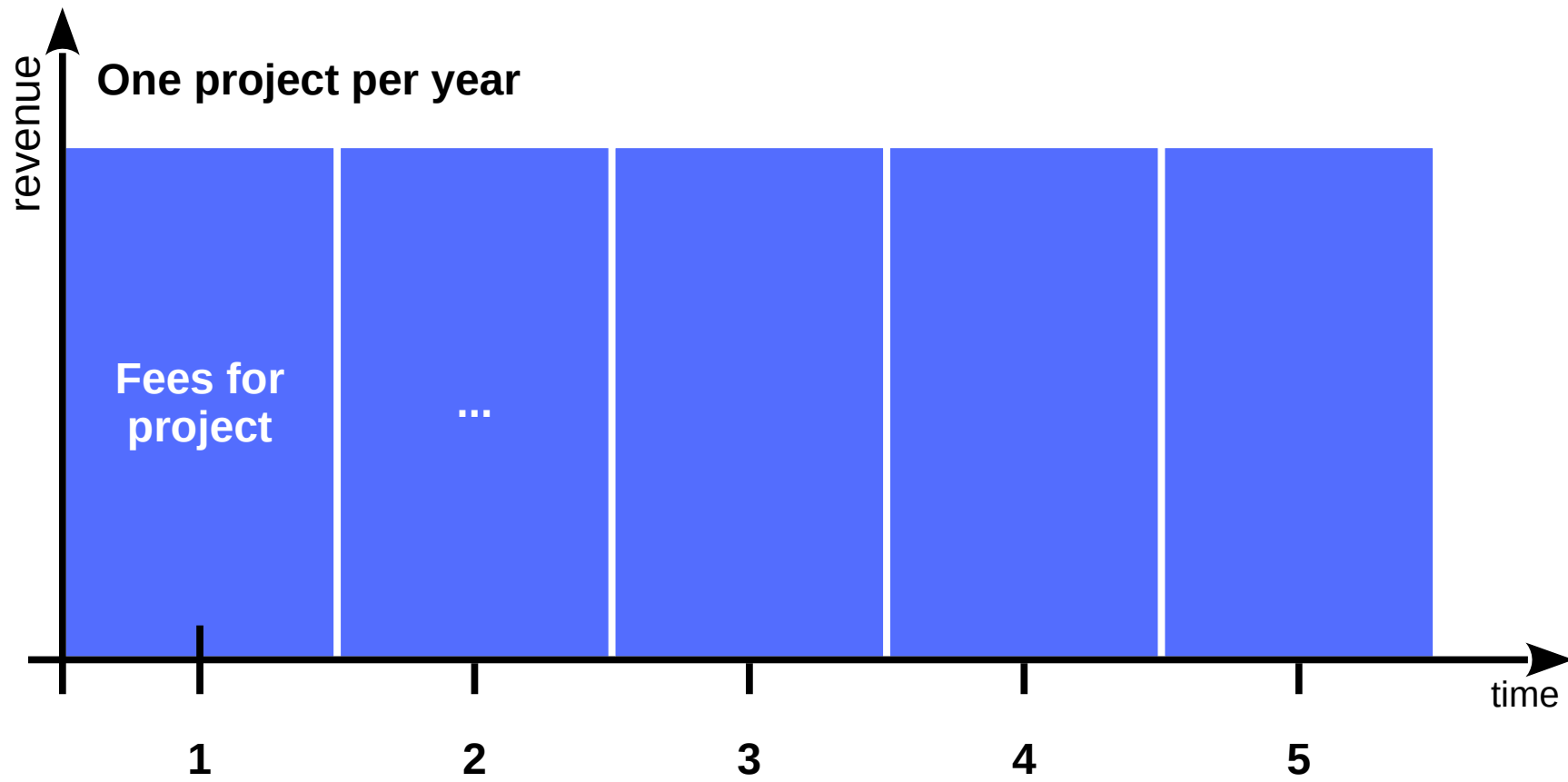
B03

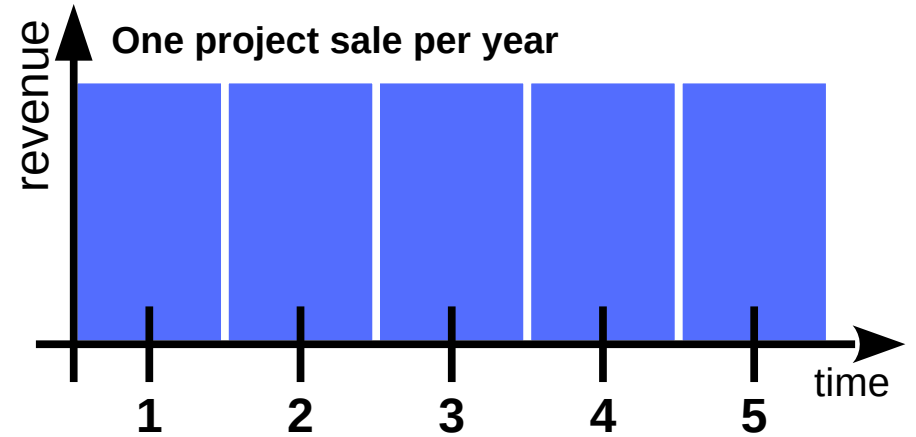
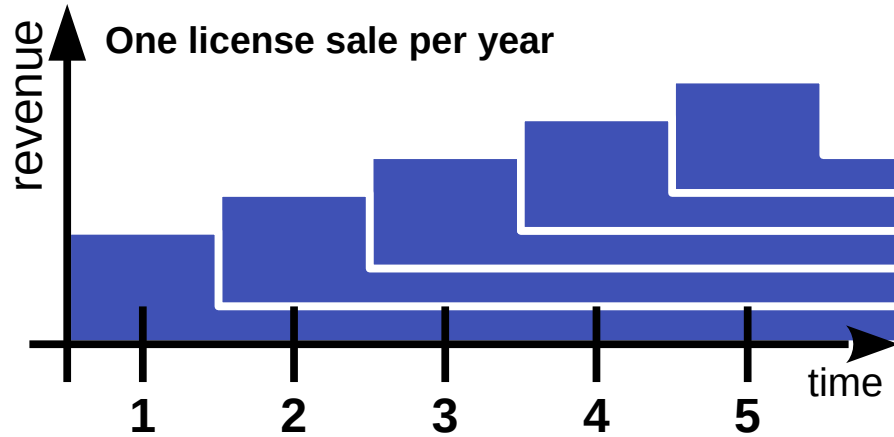
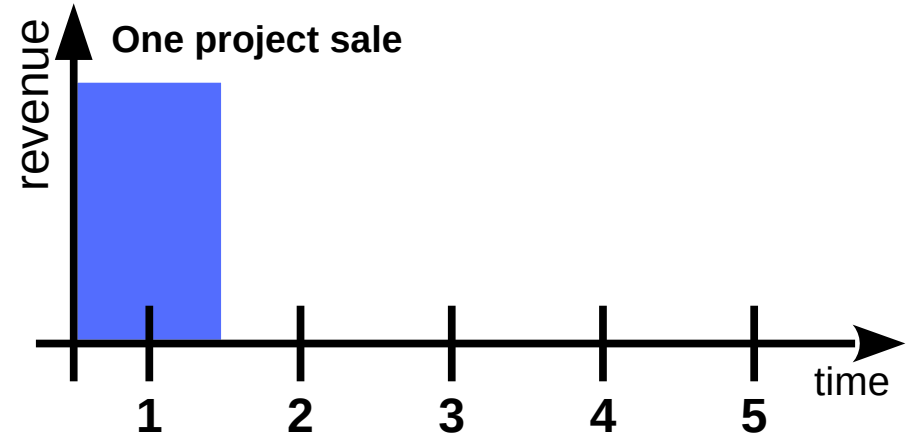
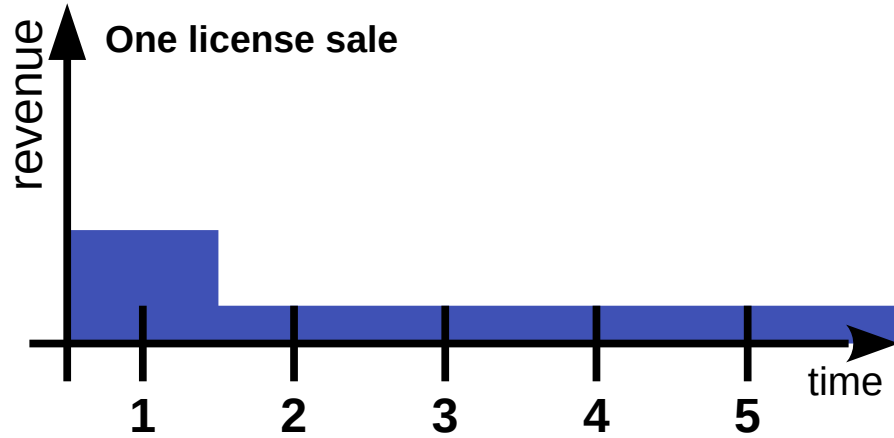
Software Vendors

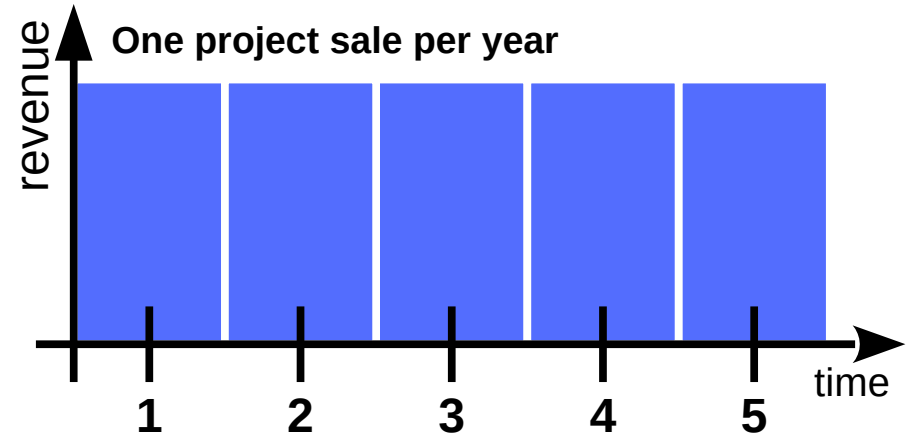
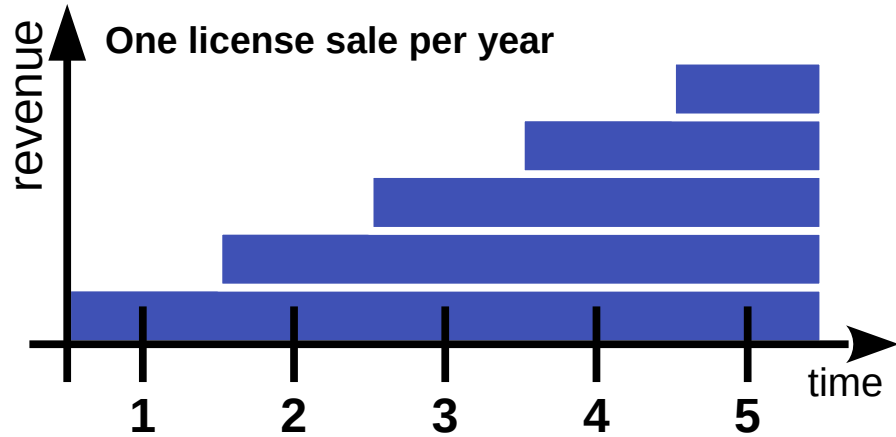
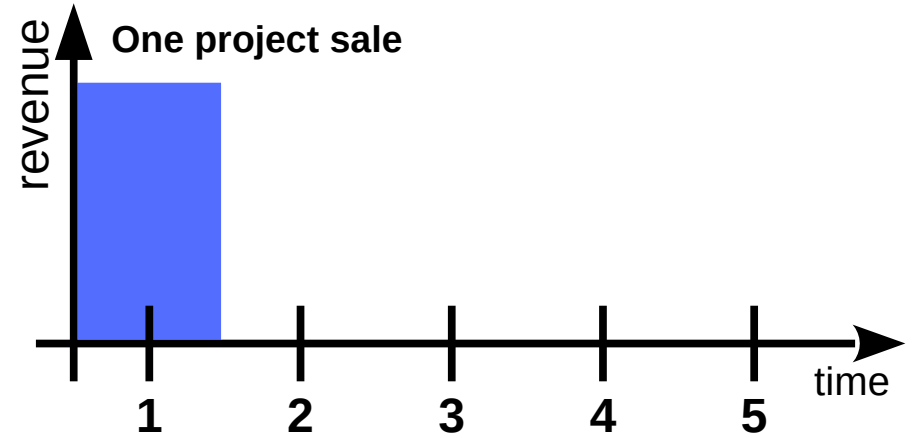




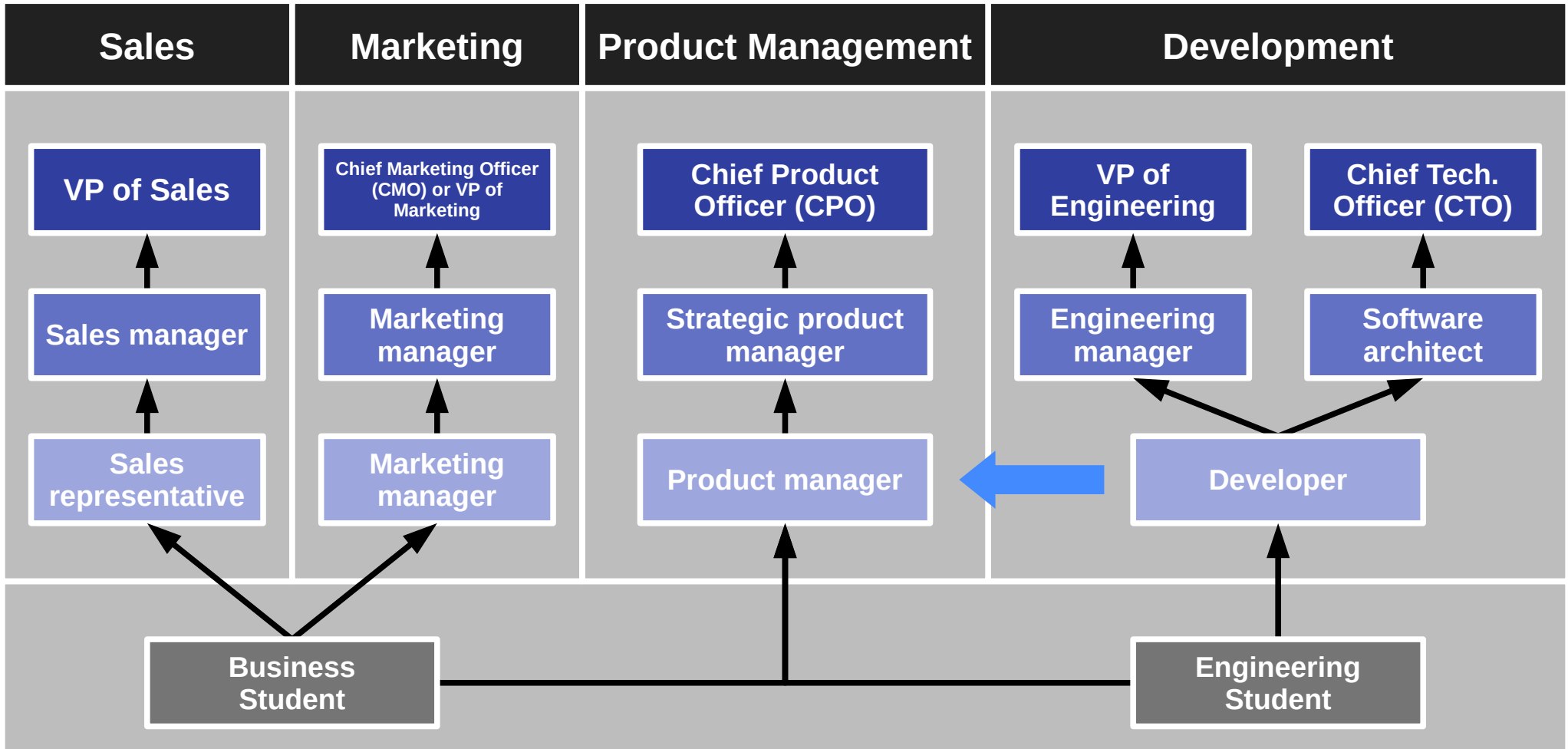


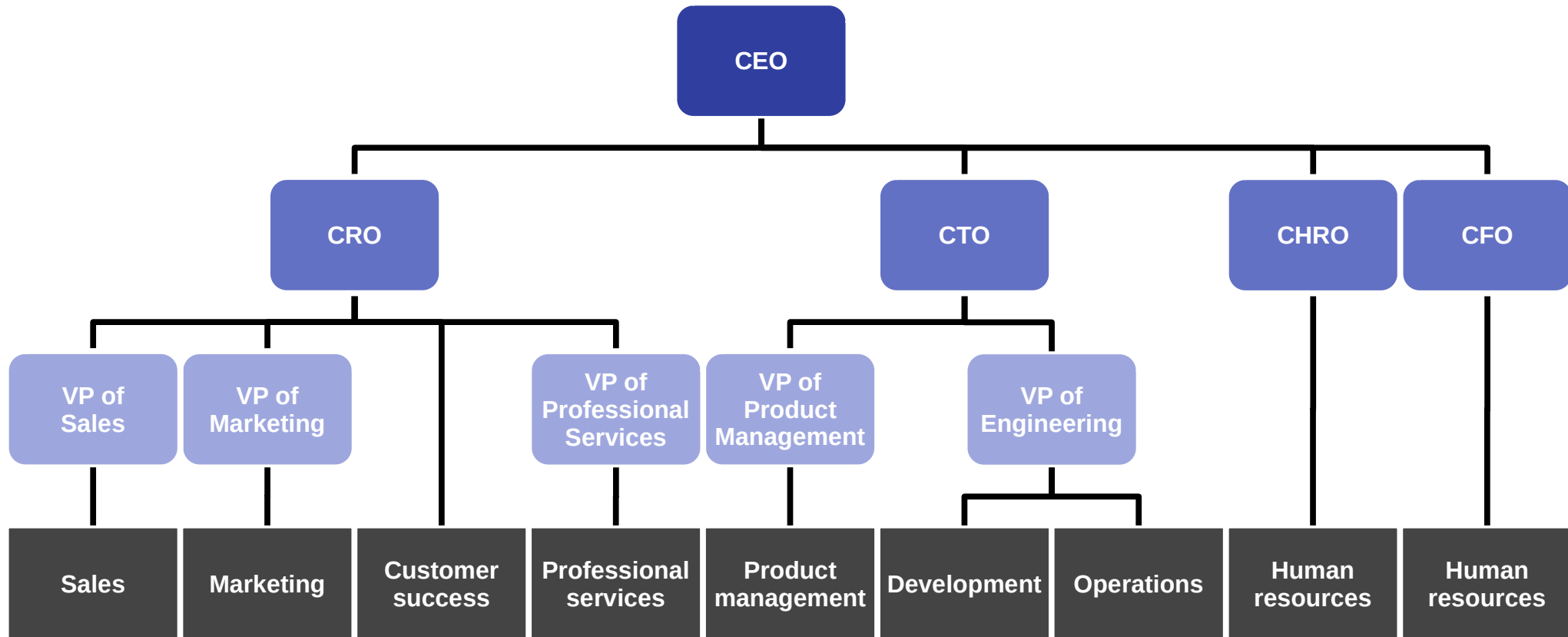


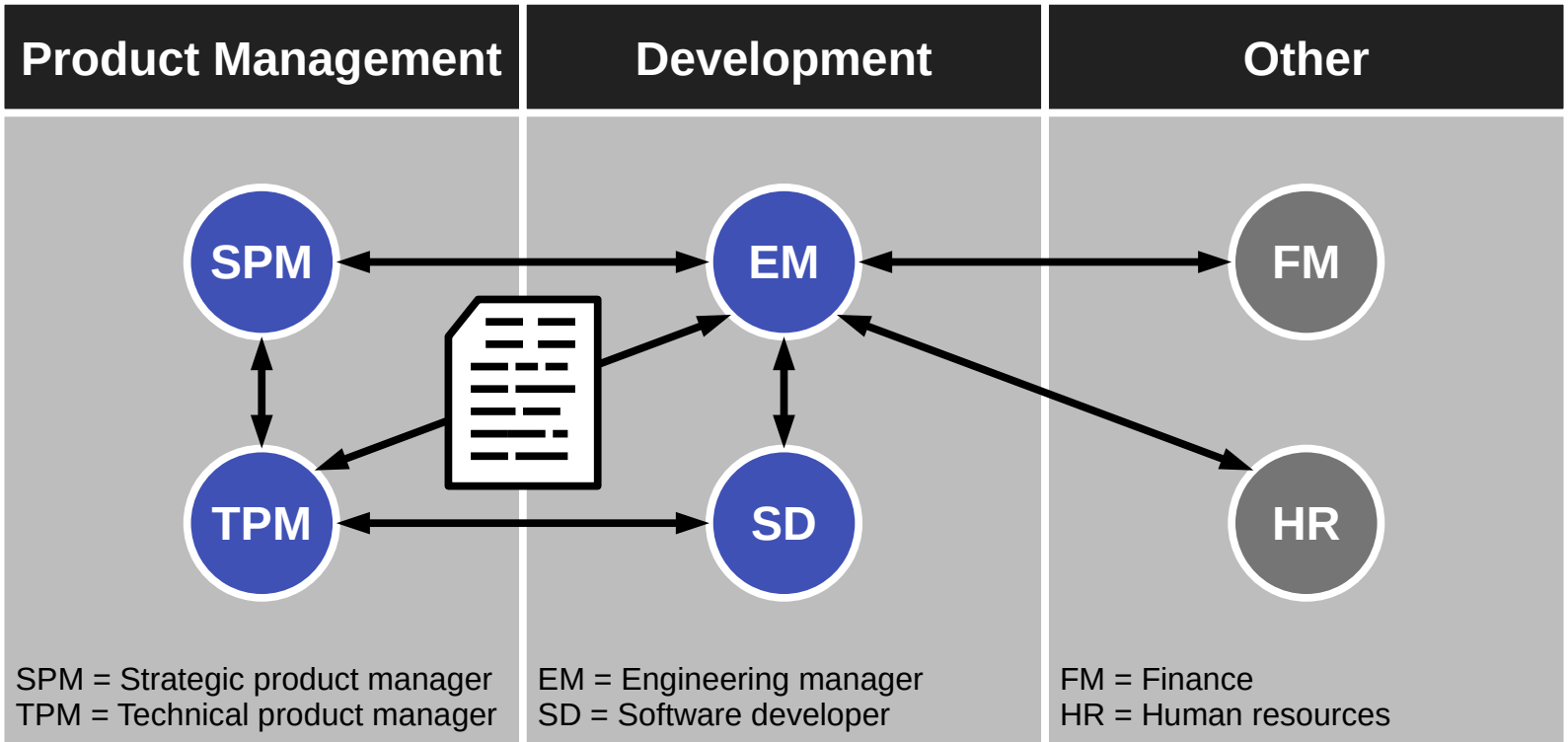


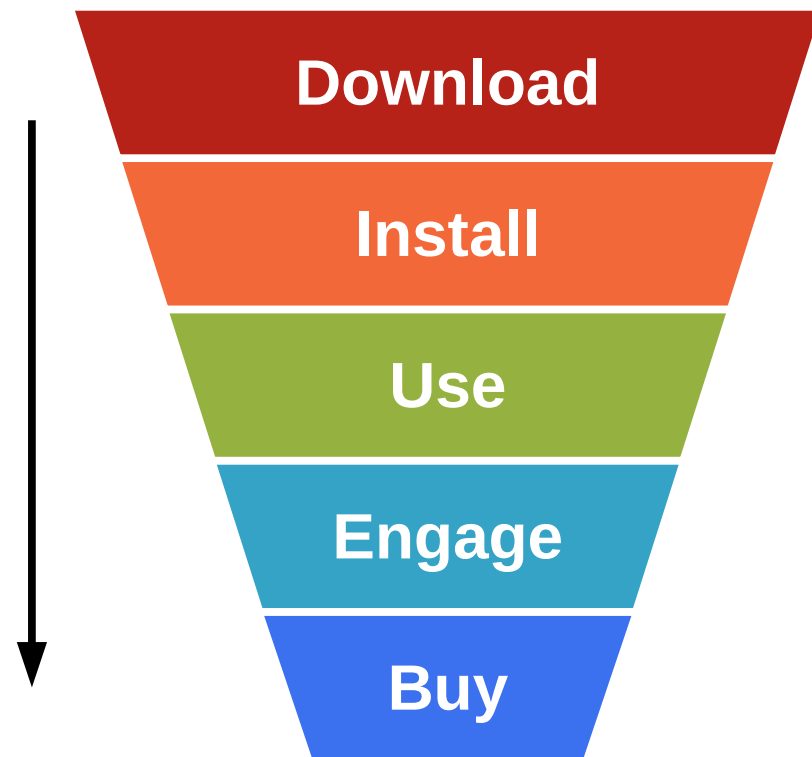


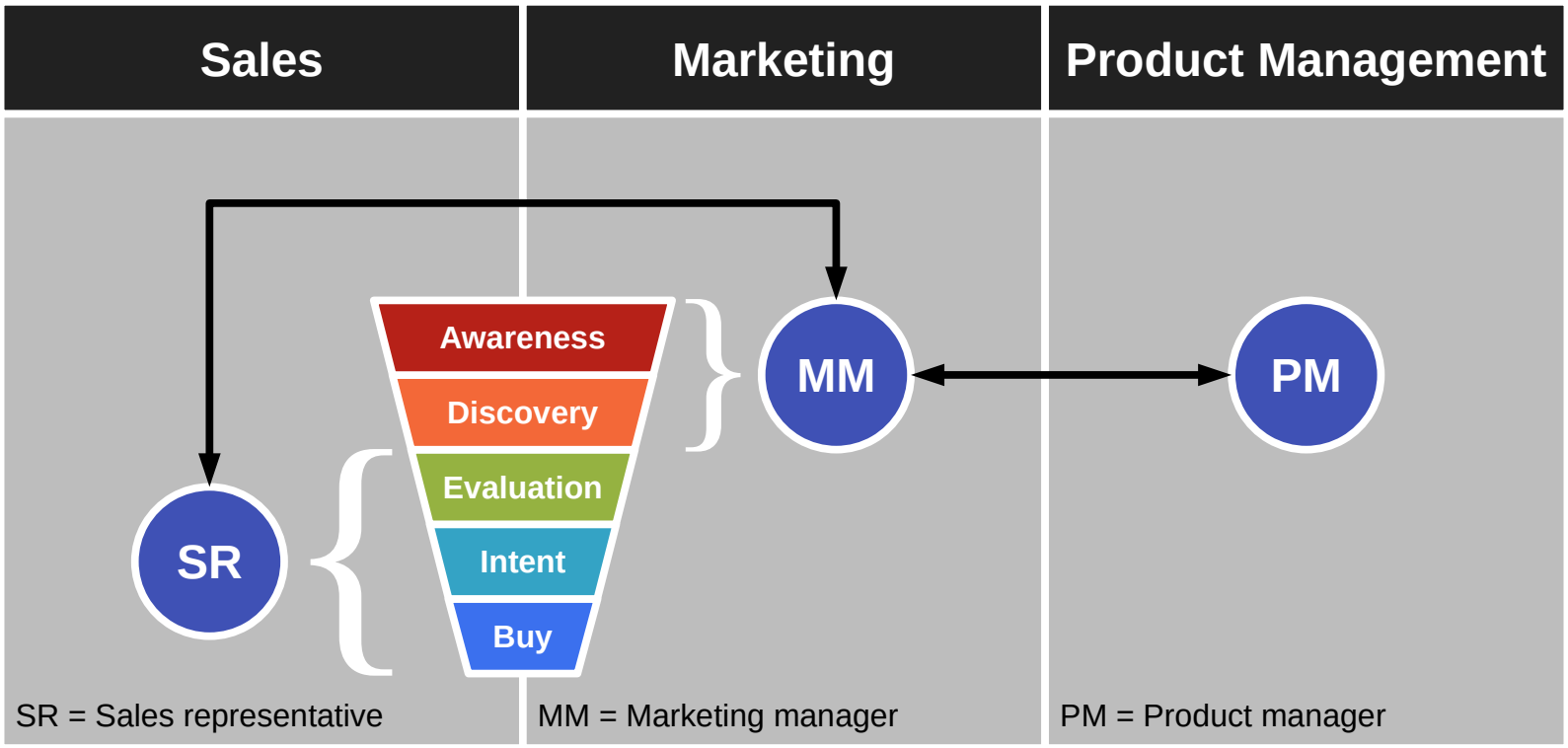
Sales and Marketing			Professional services	Product management	Engineering			Other (HR, Finance, ...)
Sales	Marketing	Customer success			Development	Operations	Support	
1. Build product								
							2. Acquire customers	
3. Operate product								
4. Support customers								
5. Ensure satisfaction								

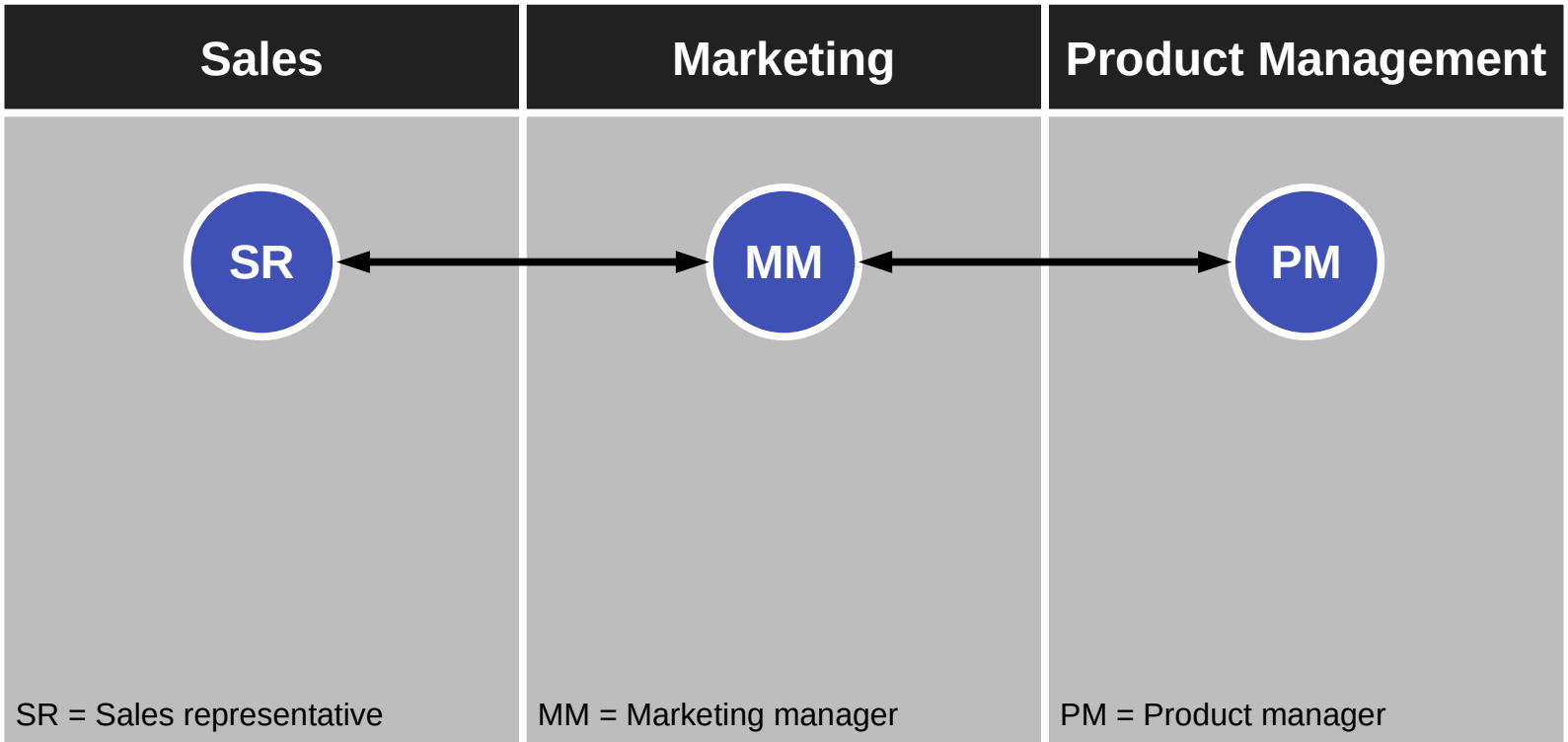


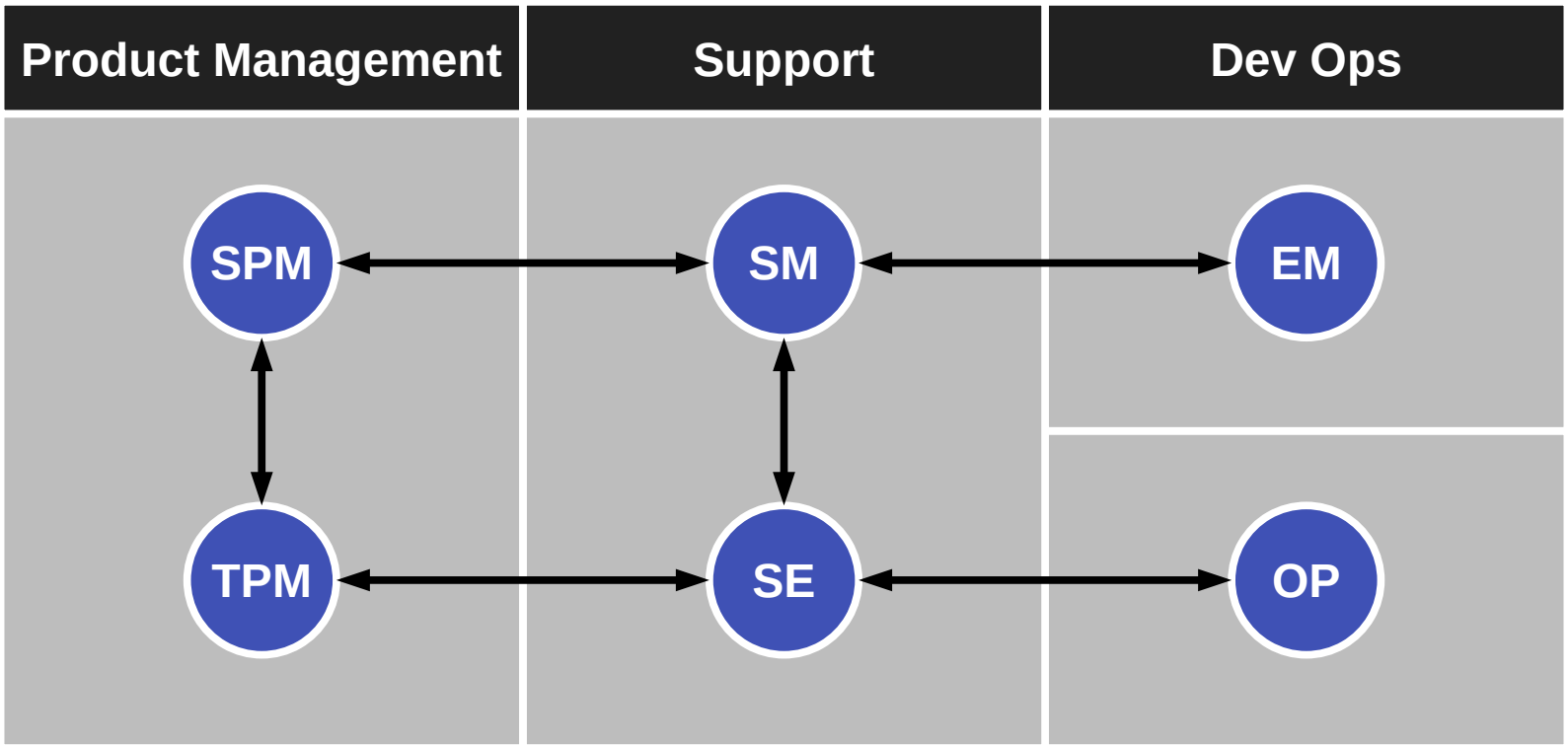


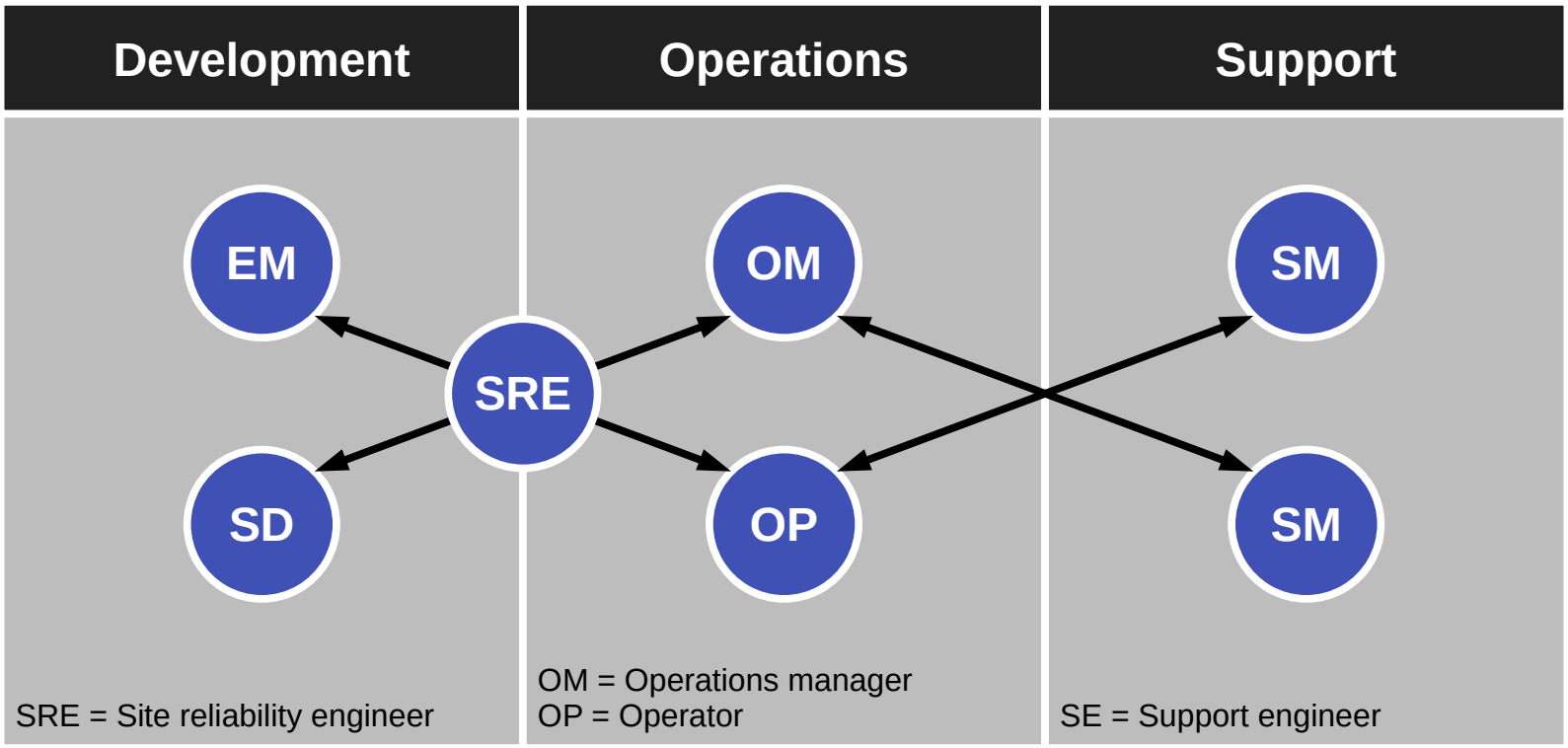












B04

Business Models

Problem / Need

Need

- Remove boredom
- Ease communication
- Display status

- Improve well-being

Problem

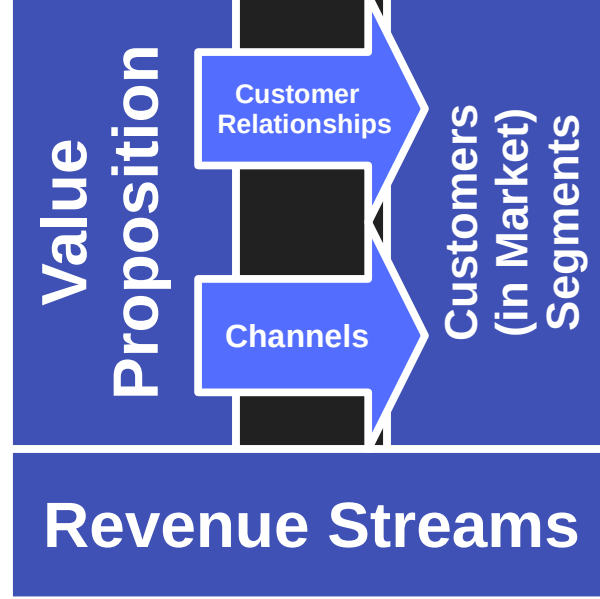
- End challenges
- Eliminate risks

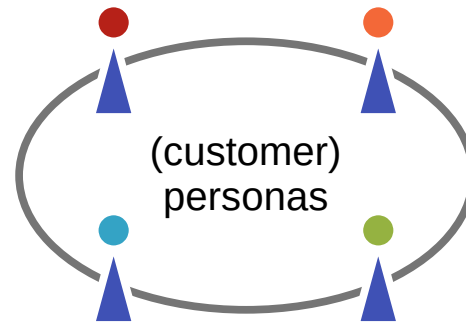
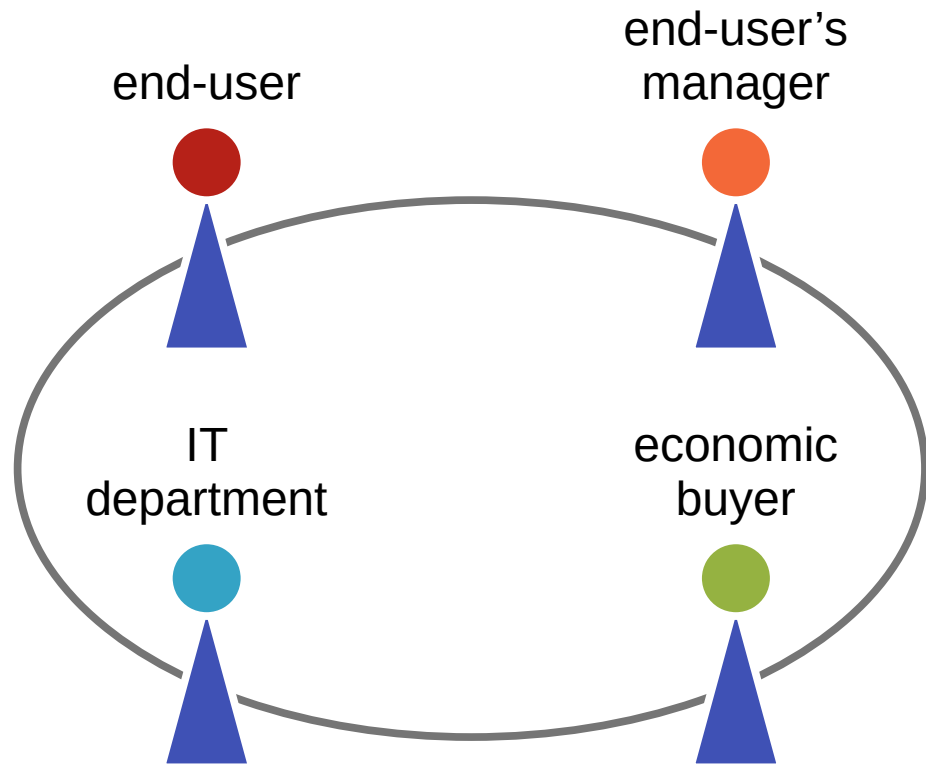
- Create savings

Pain

Gain

Pain / Gain





Customer = user (same legal entity), and economic buyer = end-user



Customer = user (same legal entity), but economic buyer is different from end-user

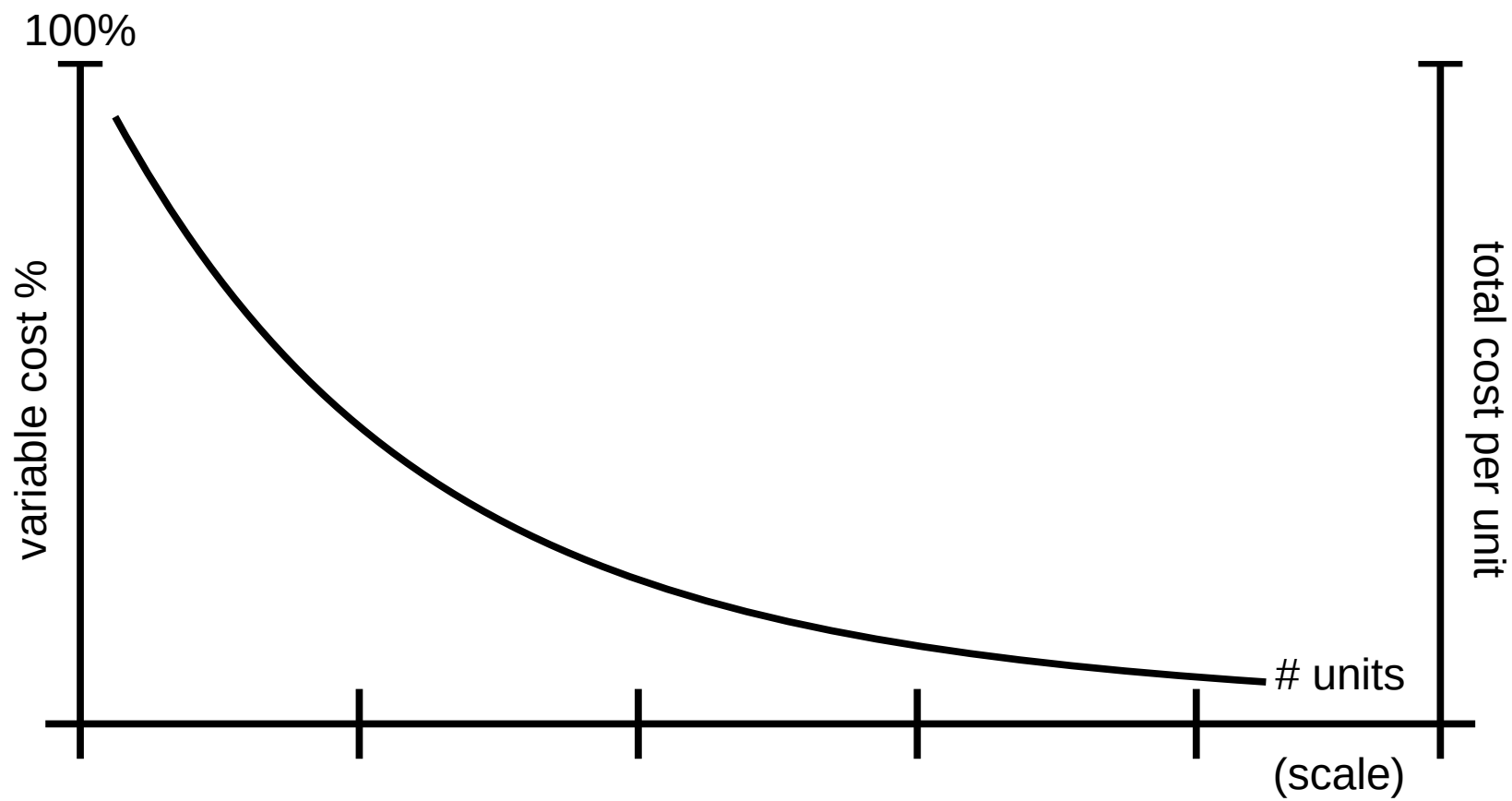


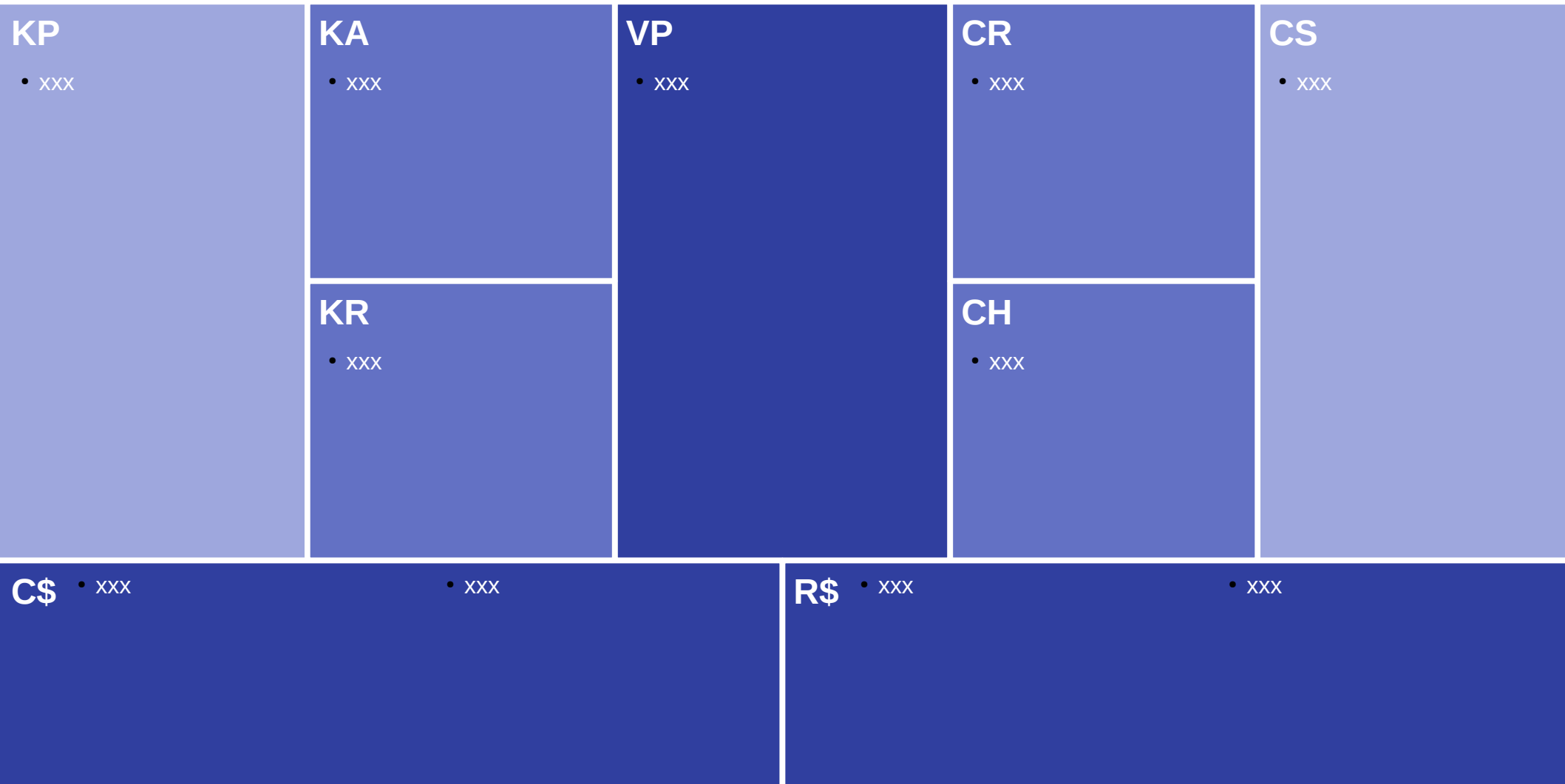
Customer



“User”, i.e. “the product”

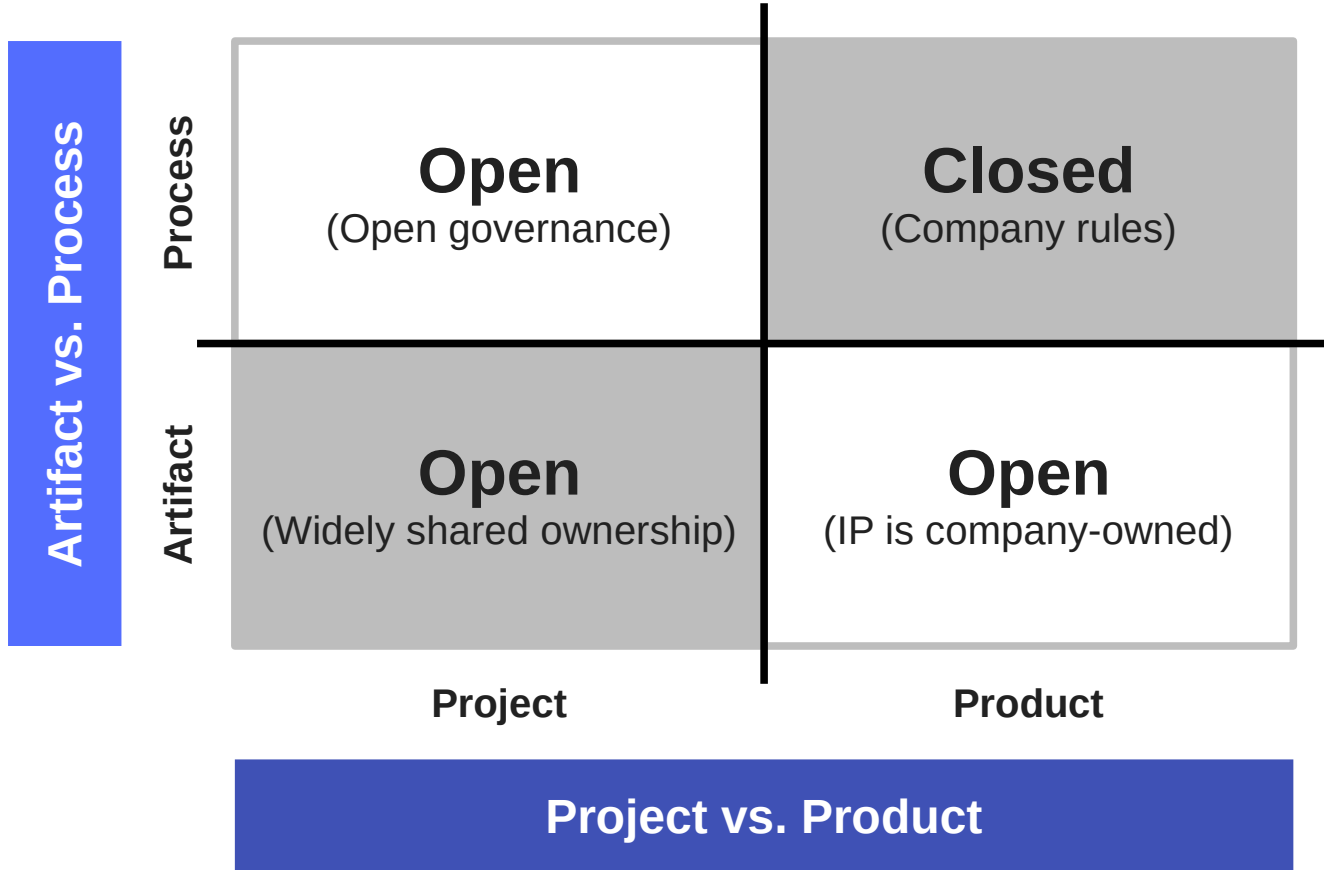


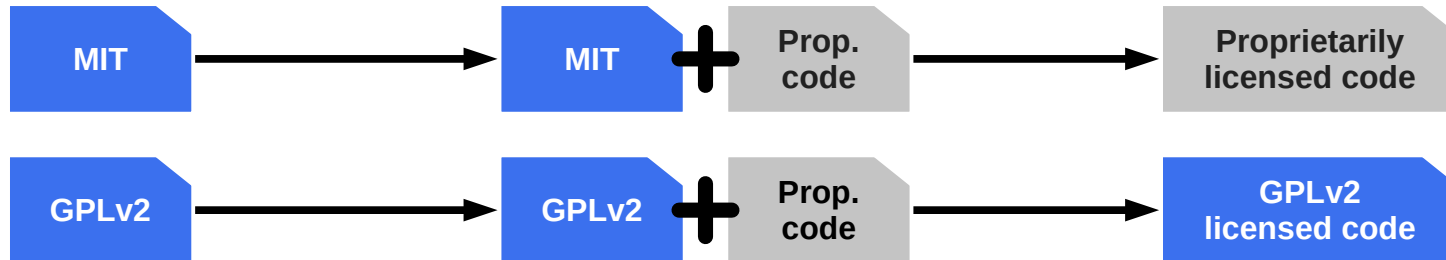
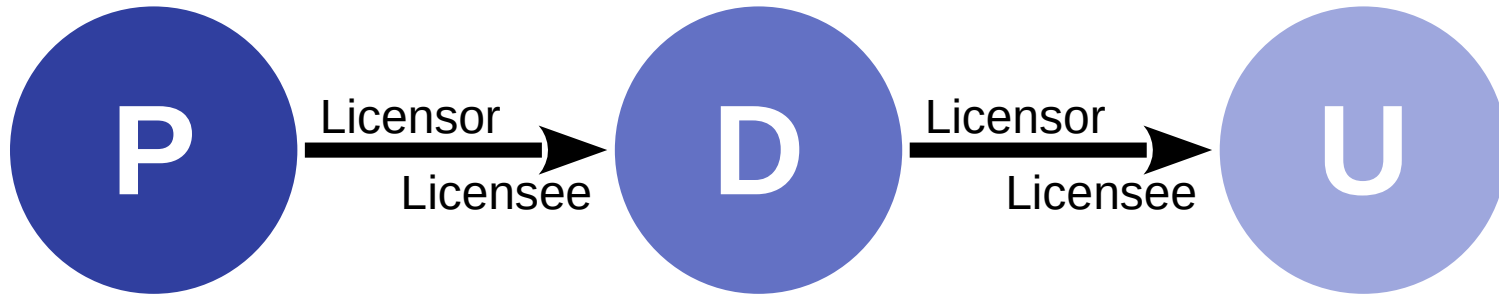


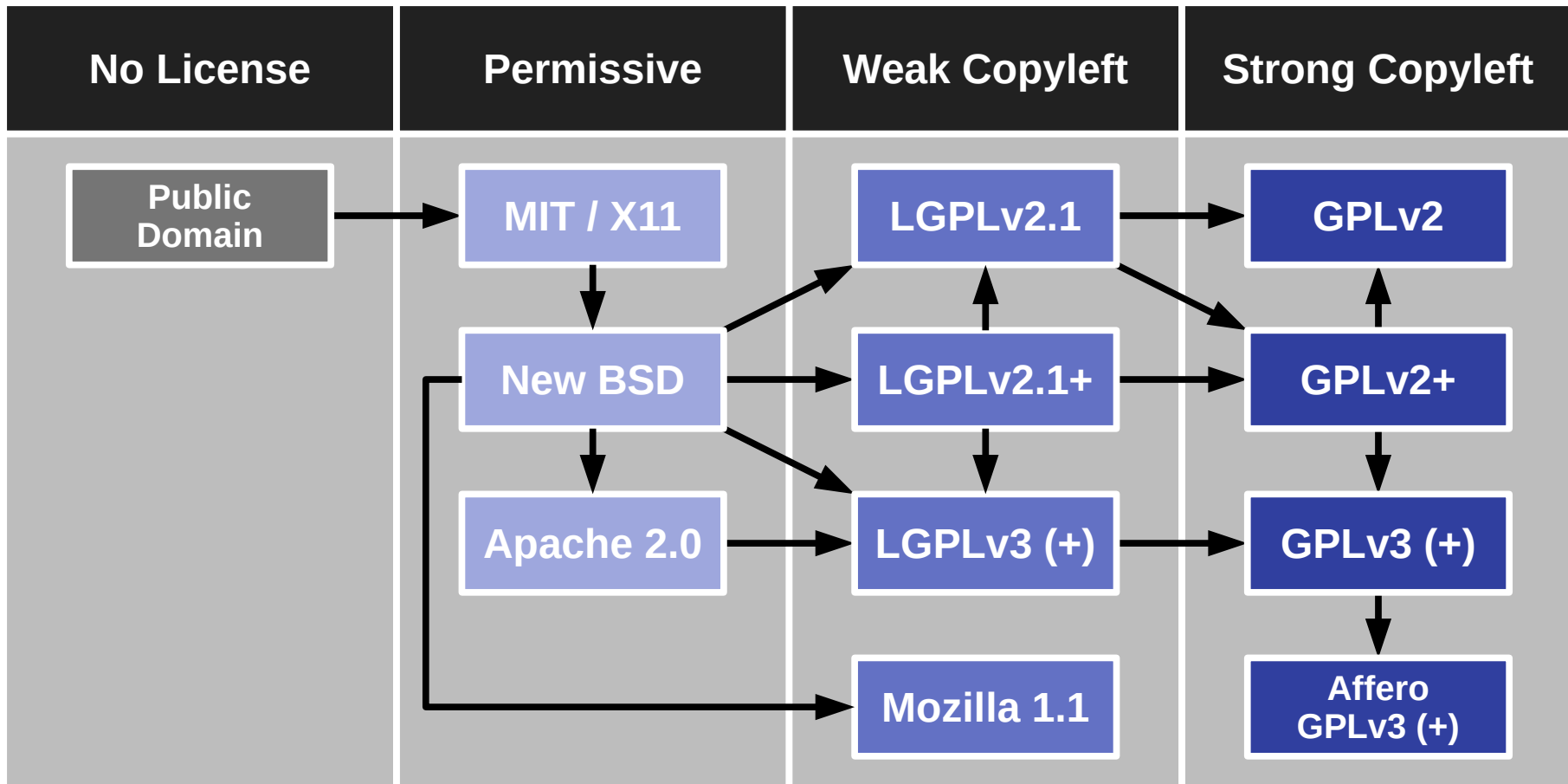


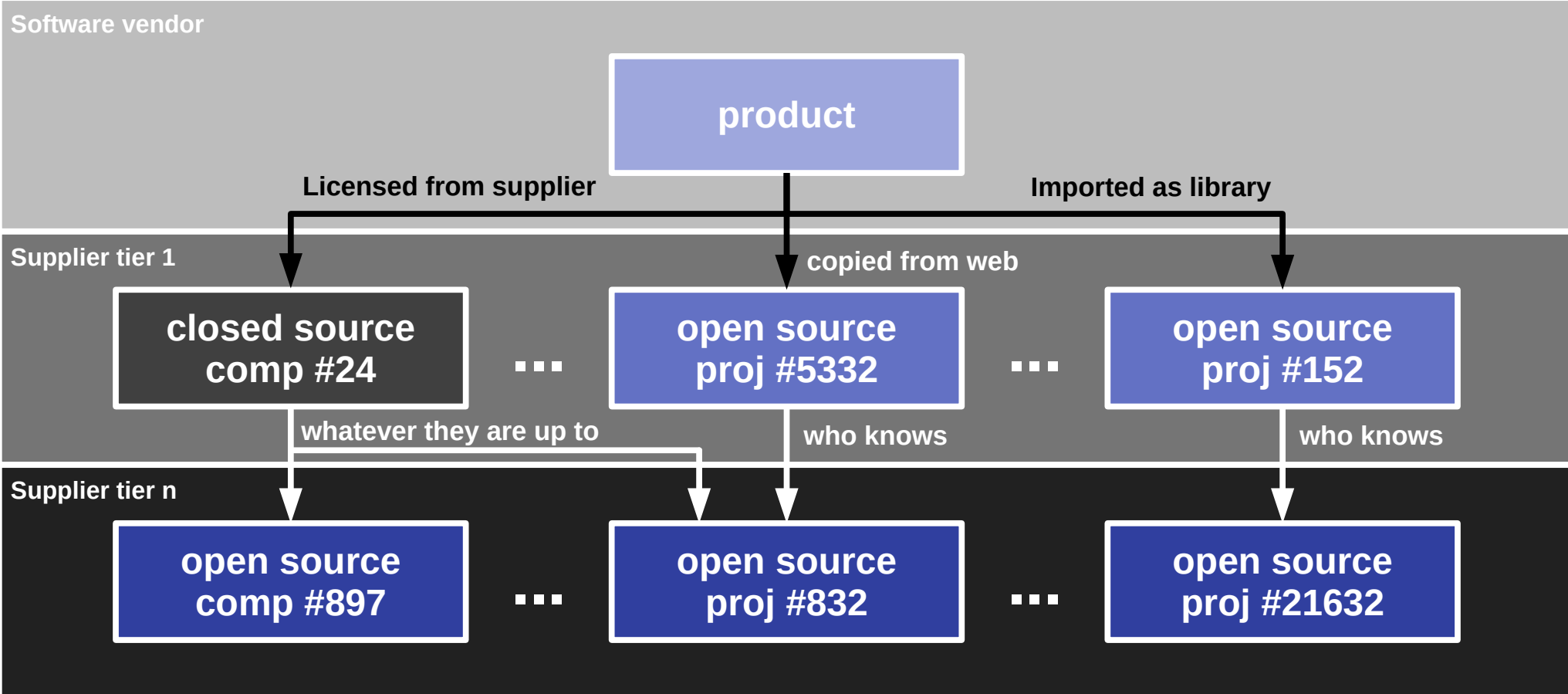
C01

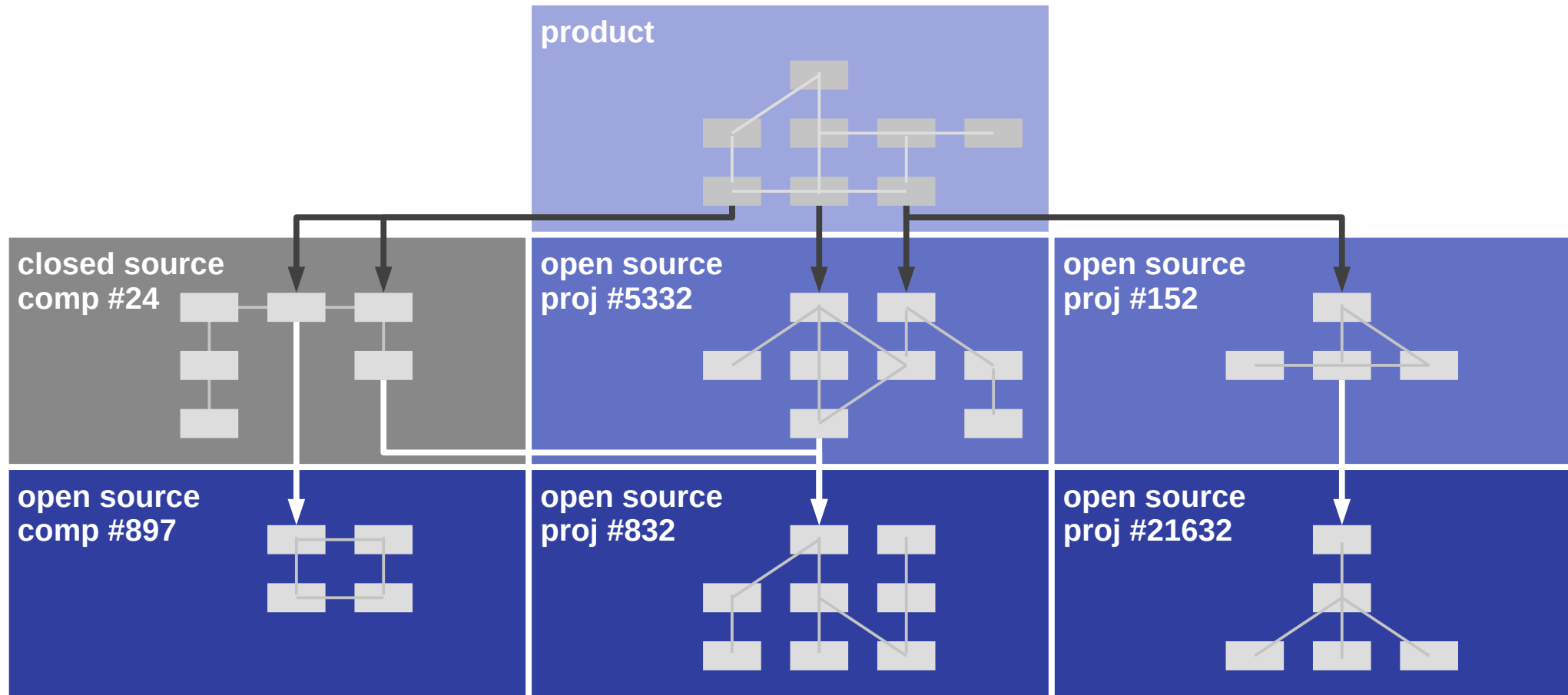
Open Source Software











C02

Open Source Projects

User-led consortia (foundations)

2005 Kuali Foundation
2009 GenIVI Alliance

Single-vendor open source firms

1995 MySQL

2004 SugarCRM, Jaspersoft, Hyperic, ...

Developer-led foundations (Natural persons and vendors)

1999 Apache Software Foundation

2004 Eclipse Foundation

2007 Linux Foundation

Open source distributor firms

1992 Suse

1994 Red Hat

2002 Univention

2004 Canonical

Service and support firms

1989 Cygnus Solutions

2005 Automattic

2009 MariaDB

2011 Hortonworks

Traditional community projects

1984 GNU Emacs

1987 GCC

1991 Linux kernel

1993 Debian

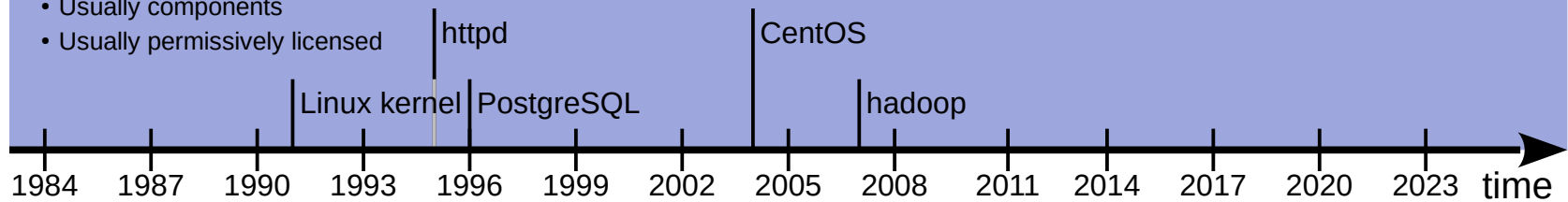
1996 PostgreSQL

2004 CentOS

year

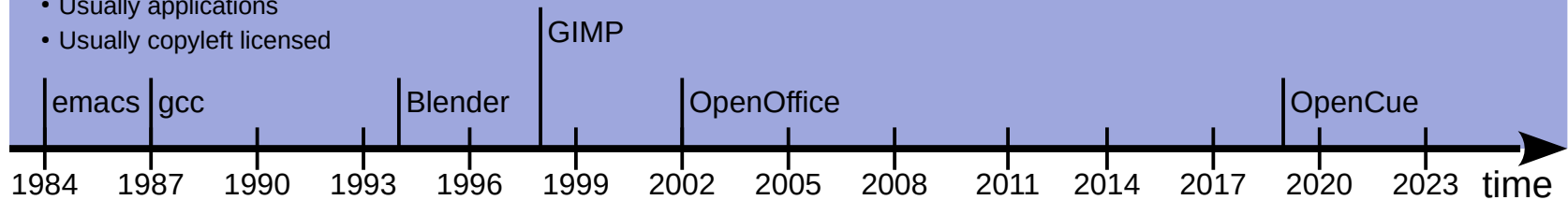
Developer-led open source projects

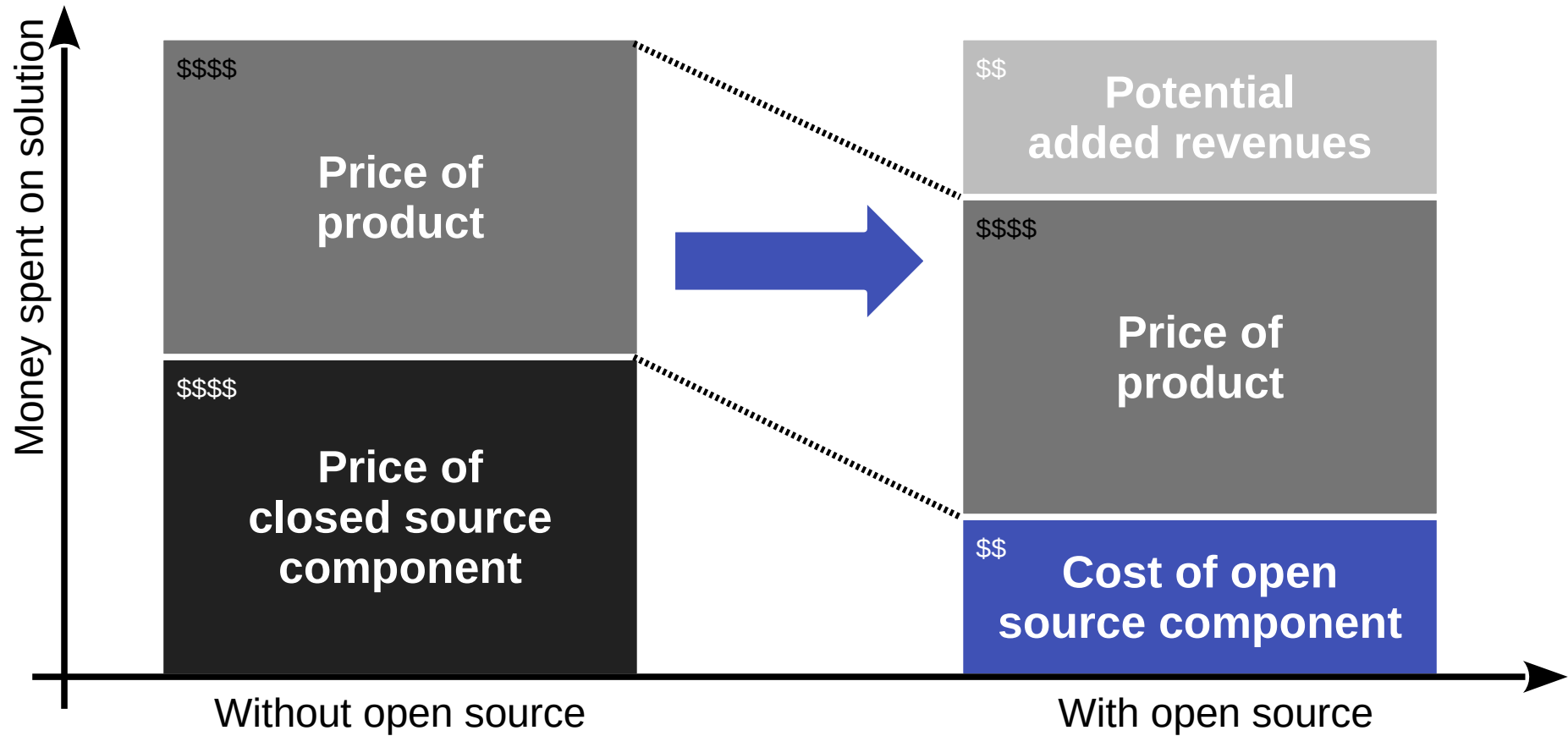
- Usually components
- Usually permissively licensed

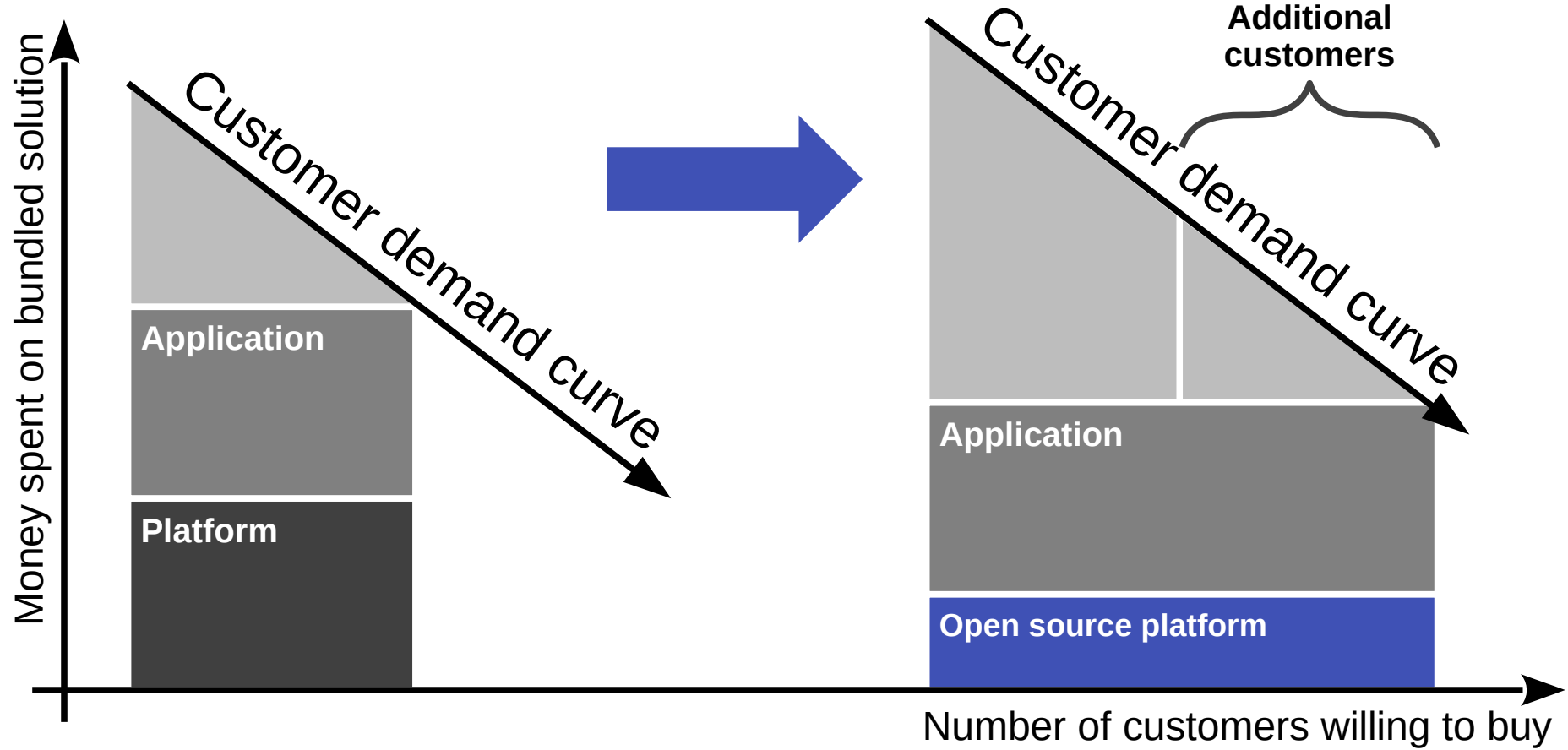


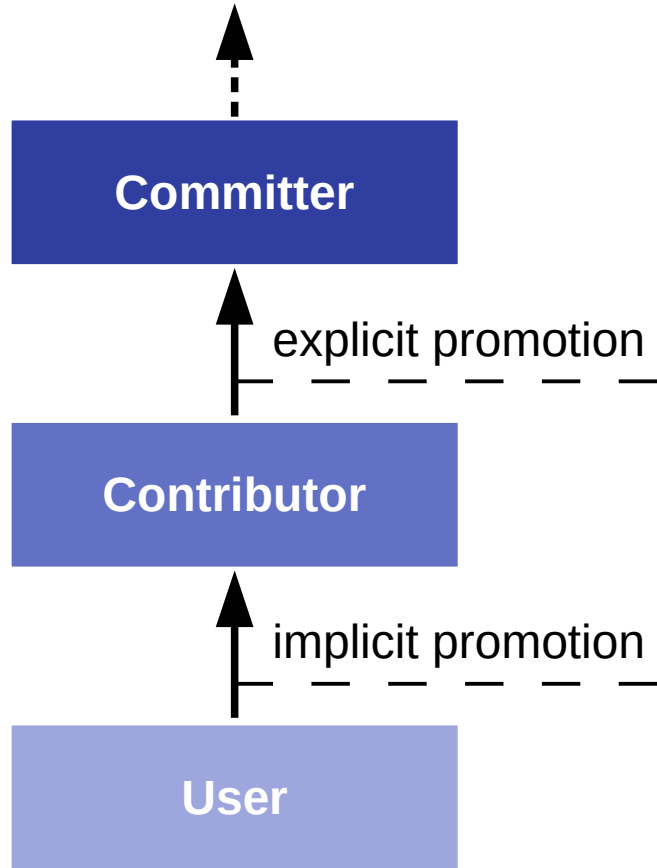
User-led open source projects

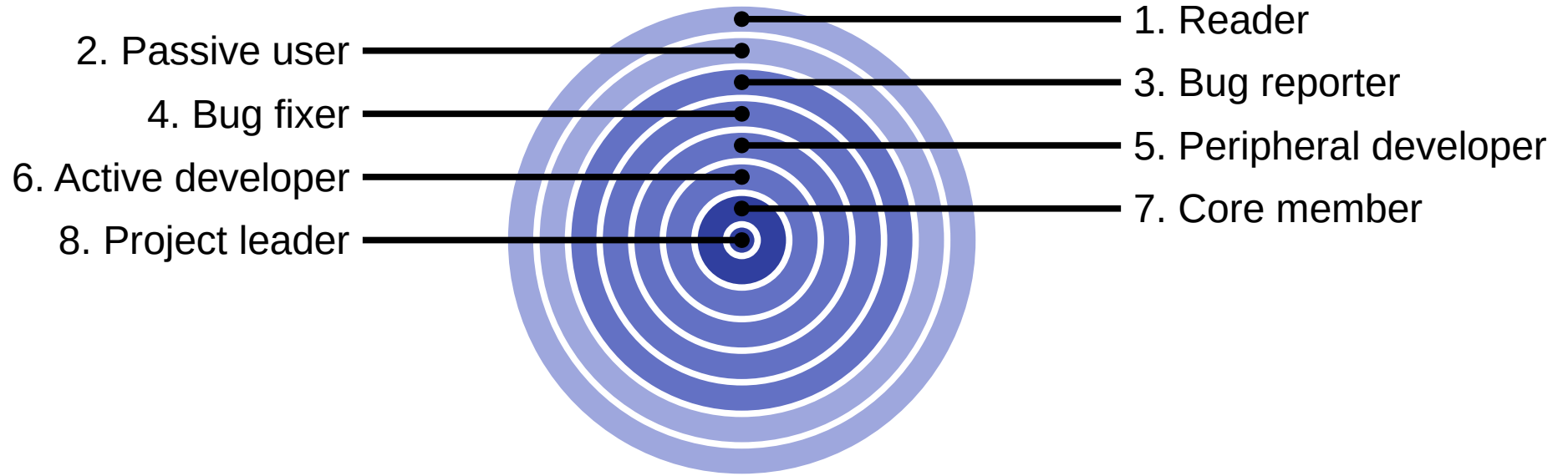
- Usually applications
- Usually copyleft licensed







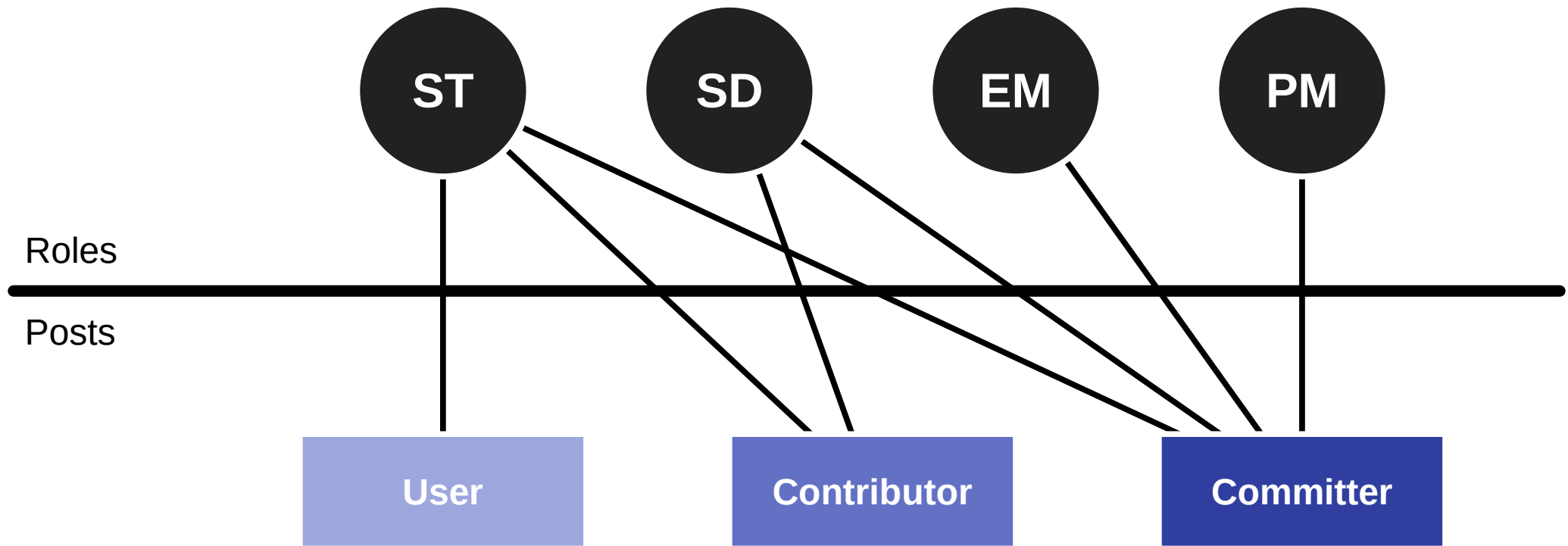




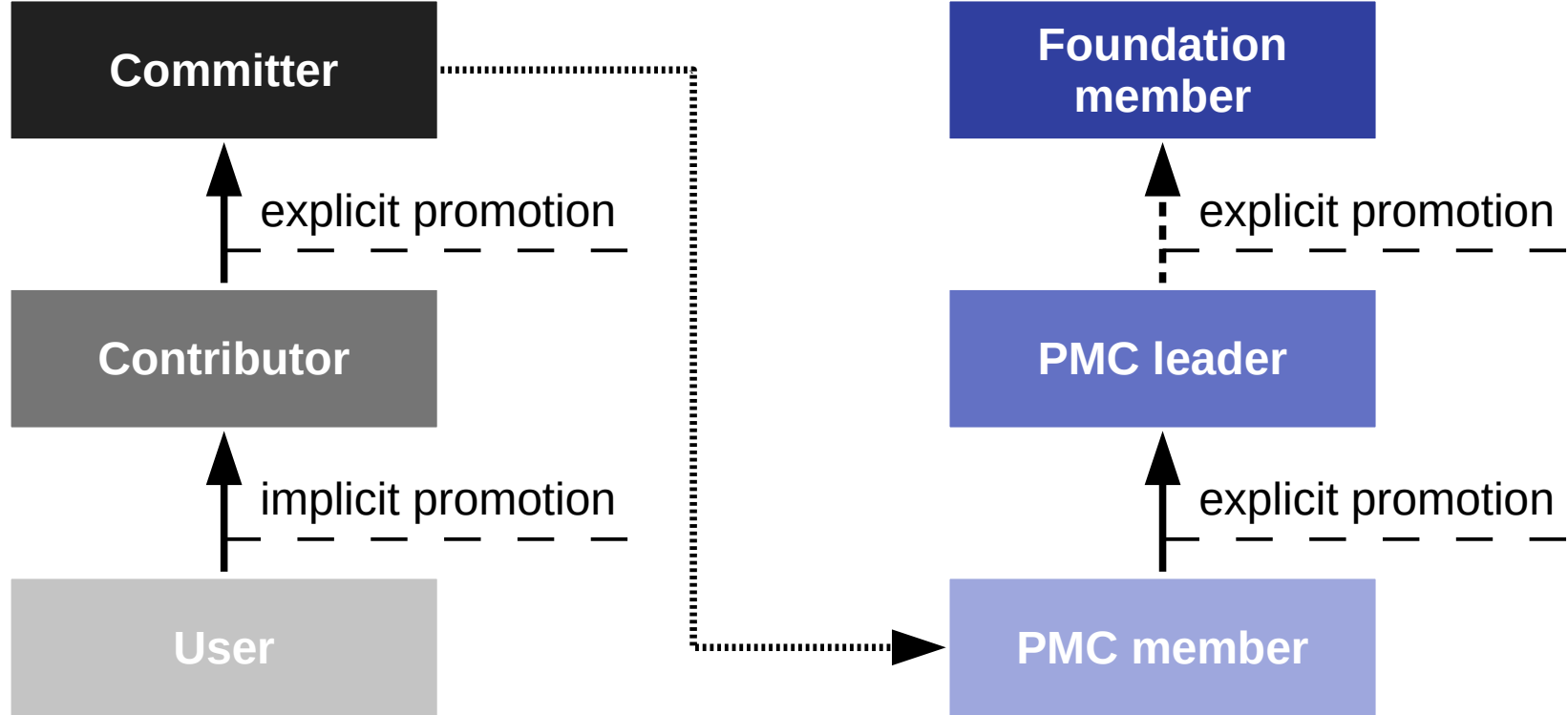
User

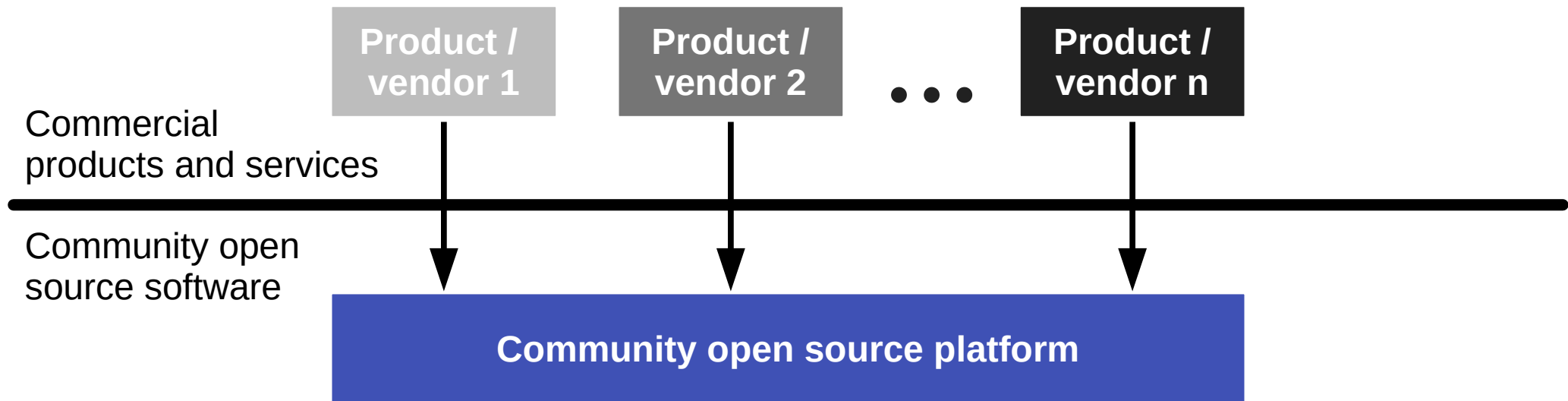
Contributor

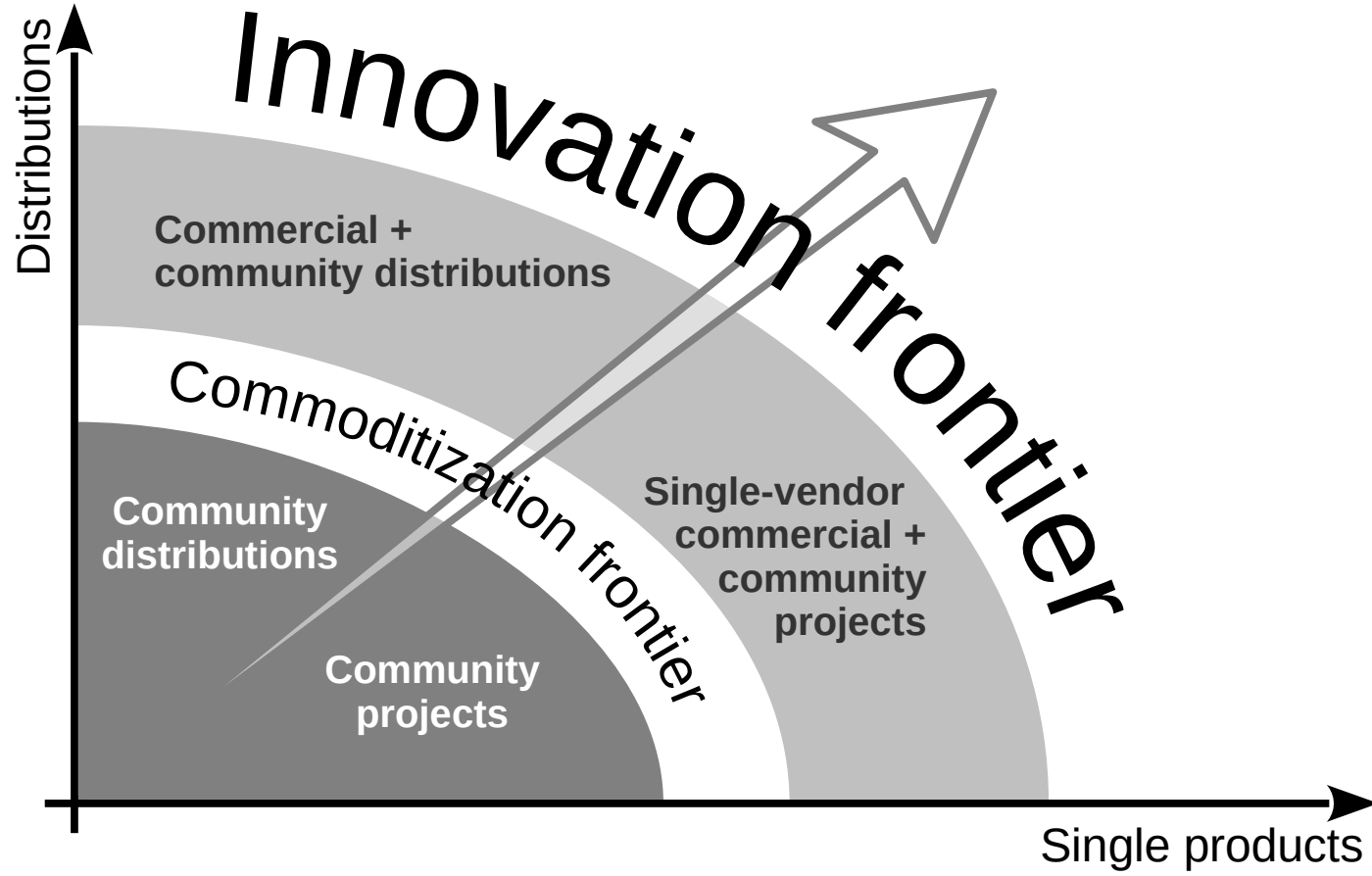
Committer



ST = Software tester
SD = Software developer
EM = Engineering manager
PM = Product manager

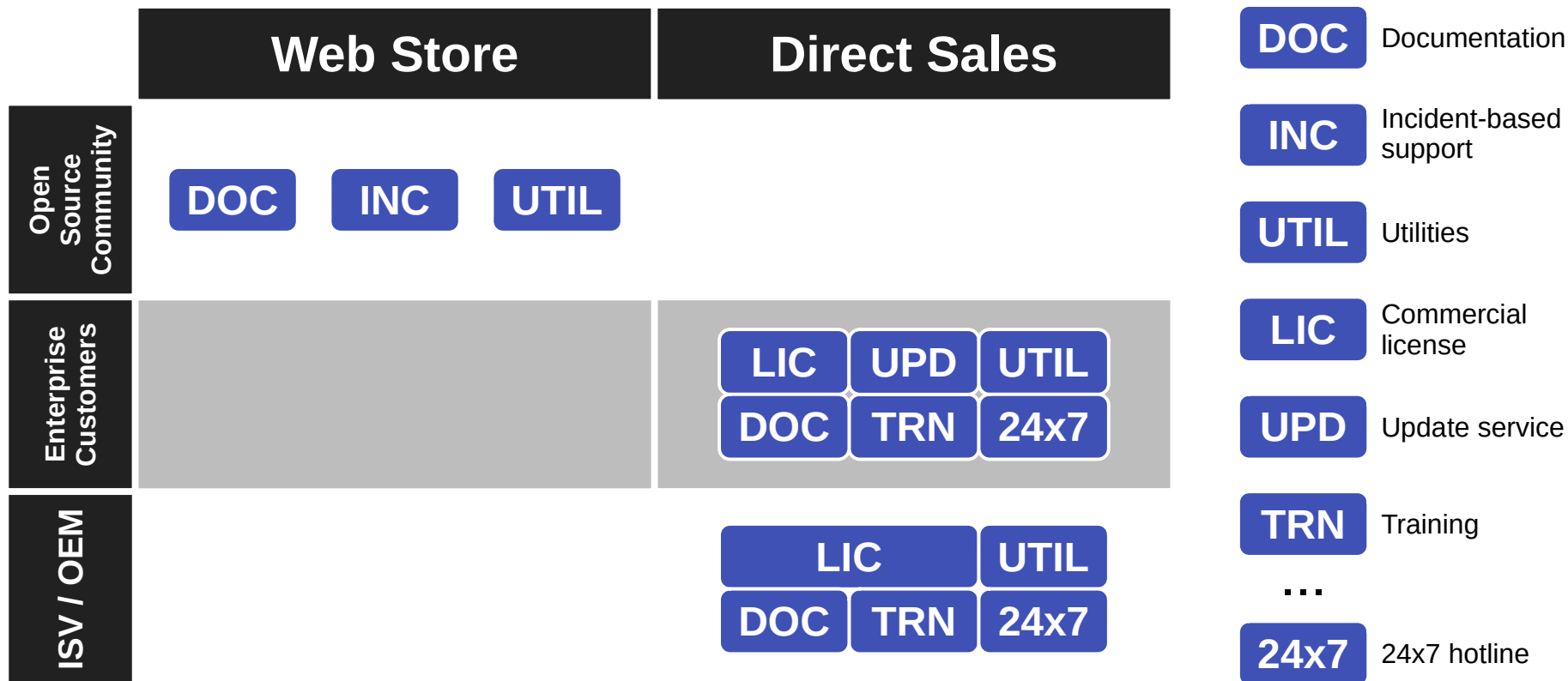


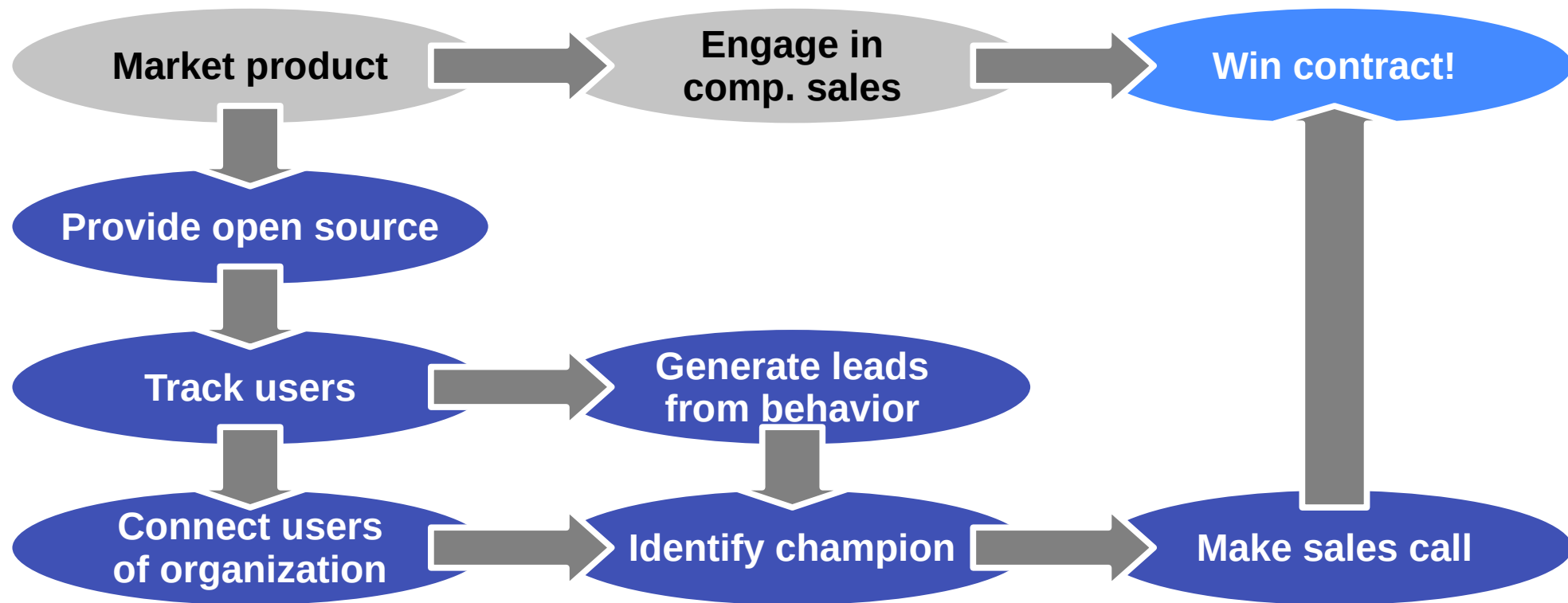




C03

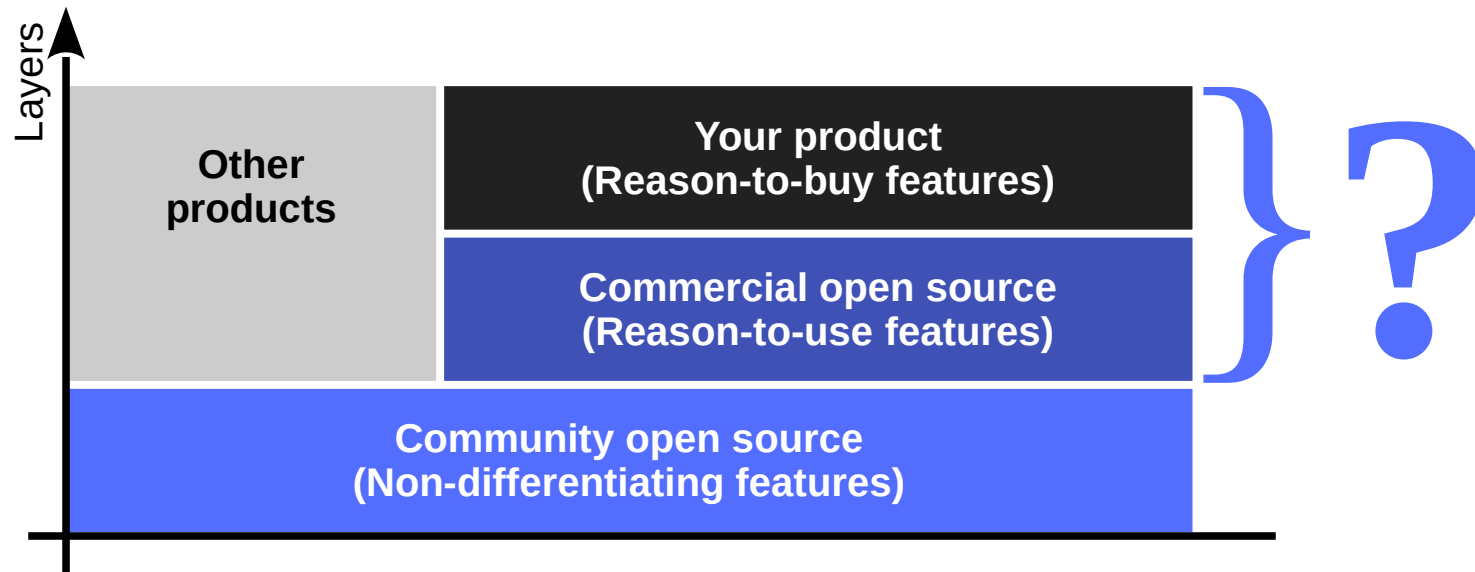
Commercial Open Source

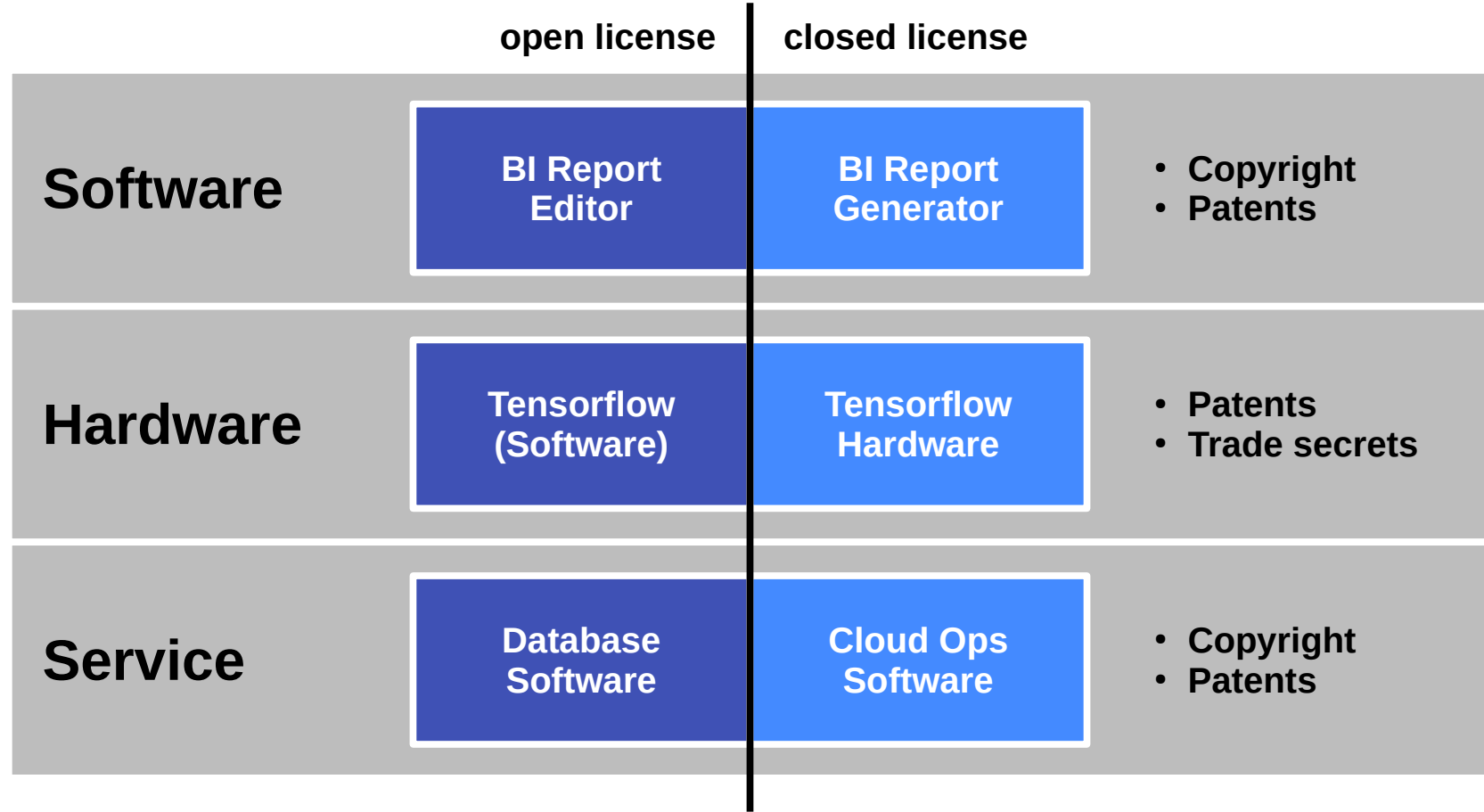


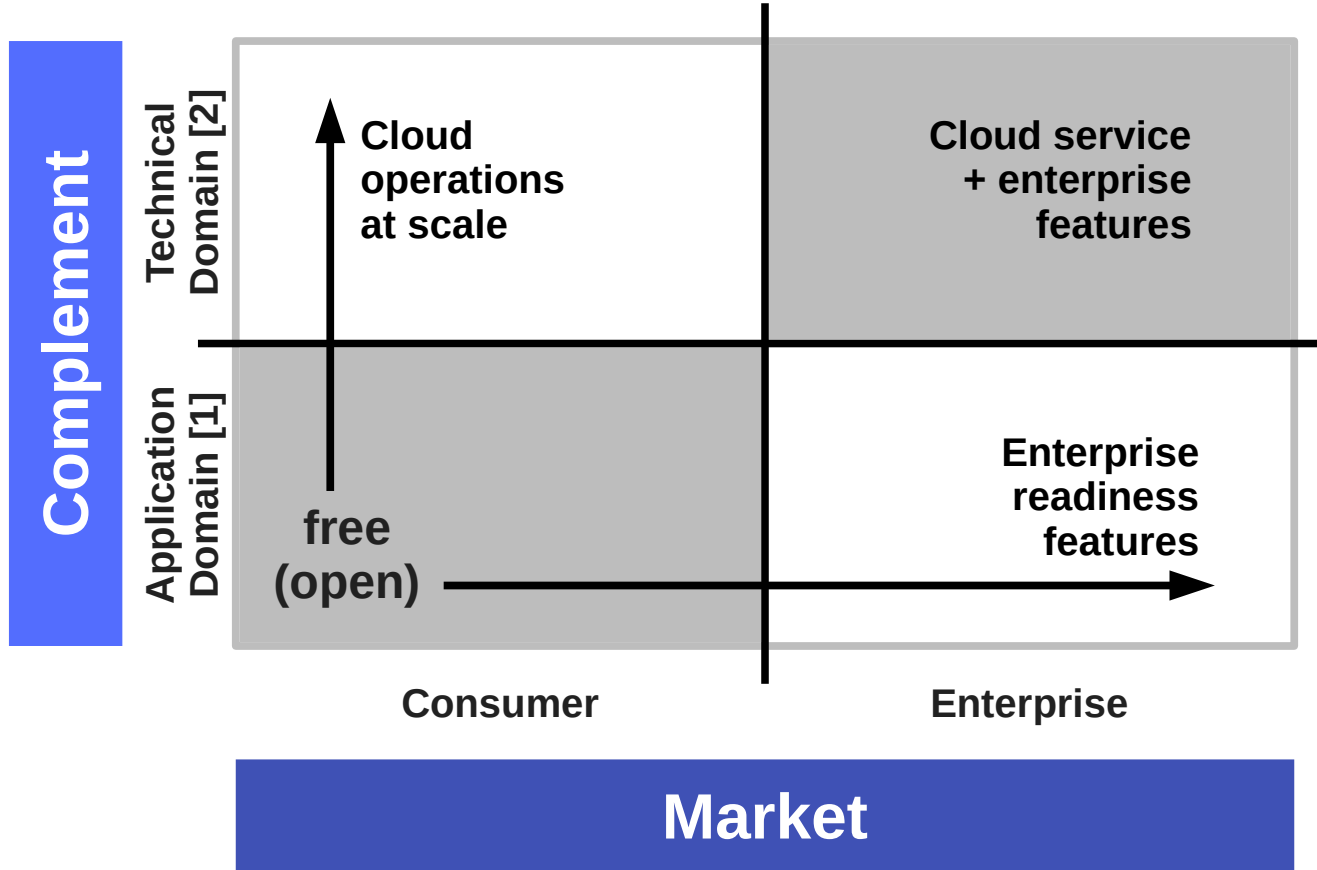


C04

Cloud Strategies





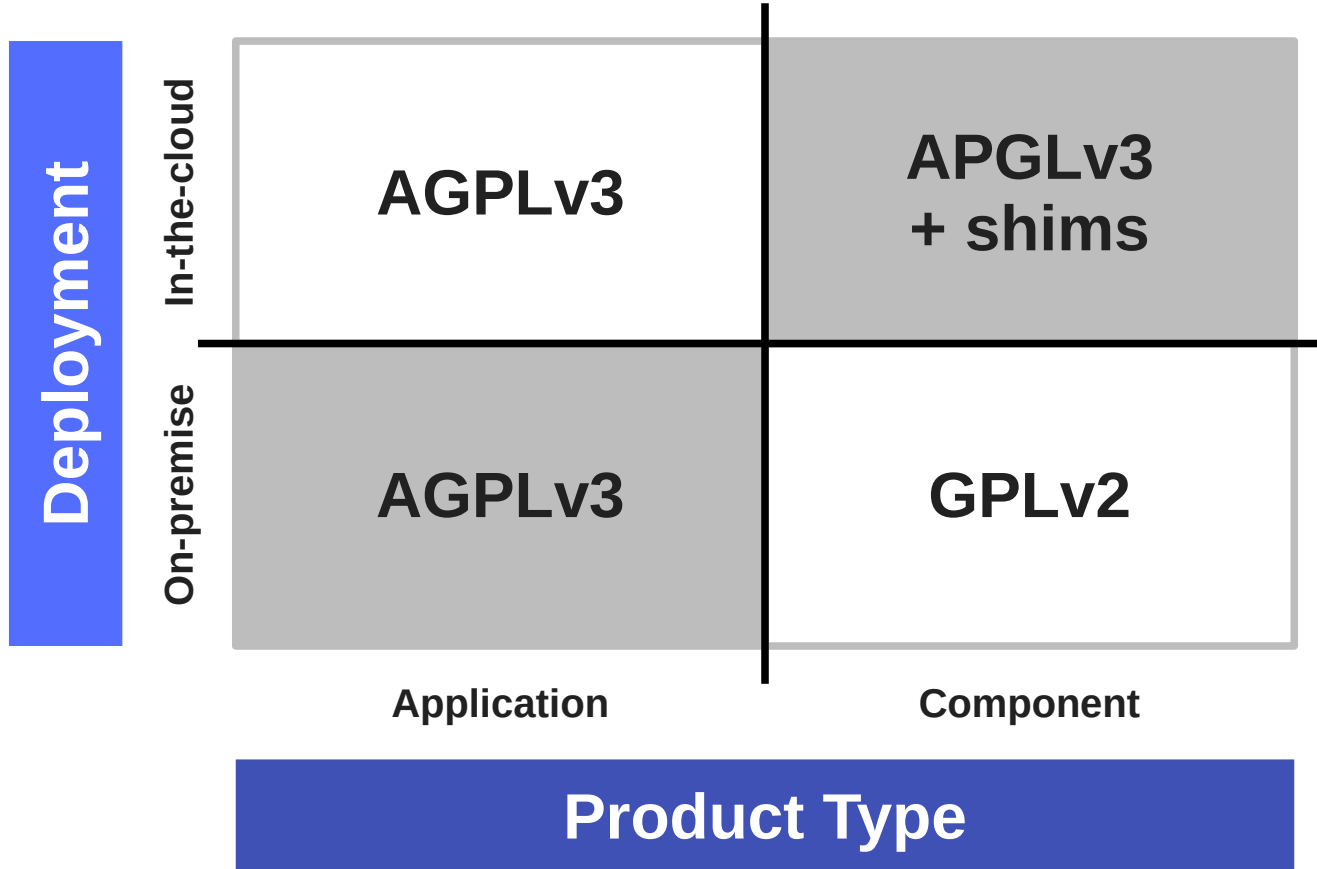


Application

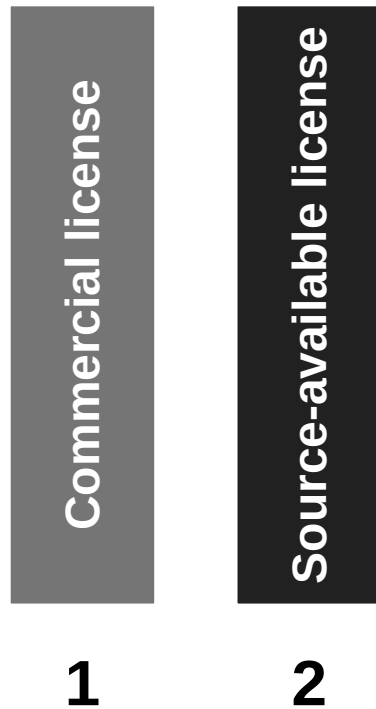


Component

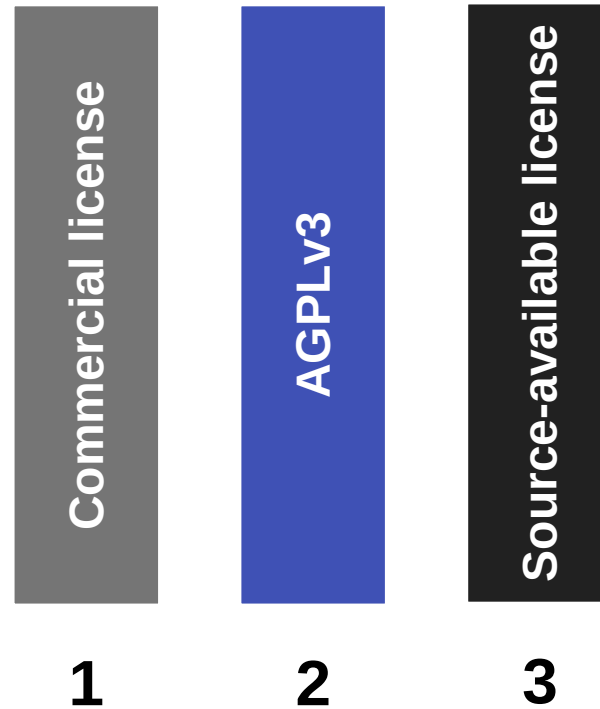


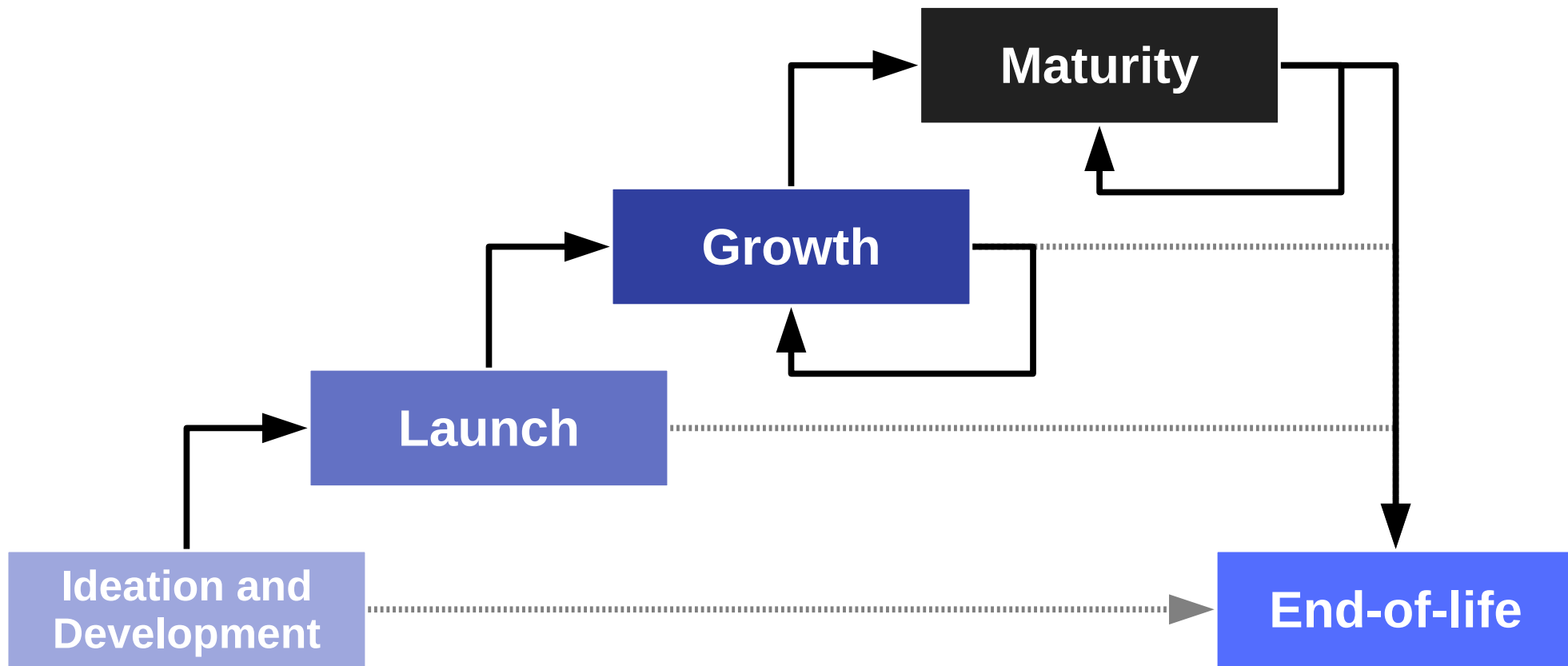


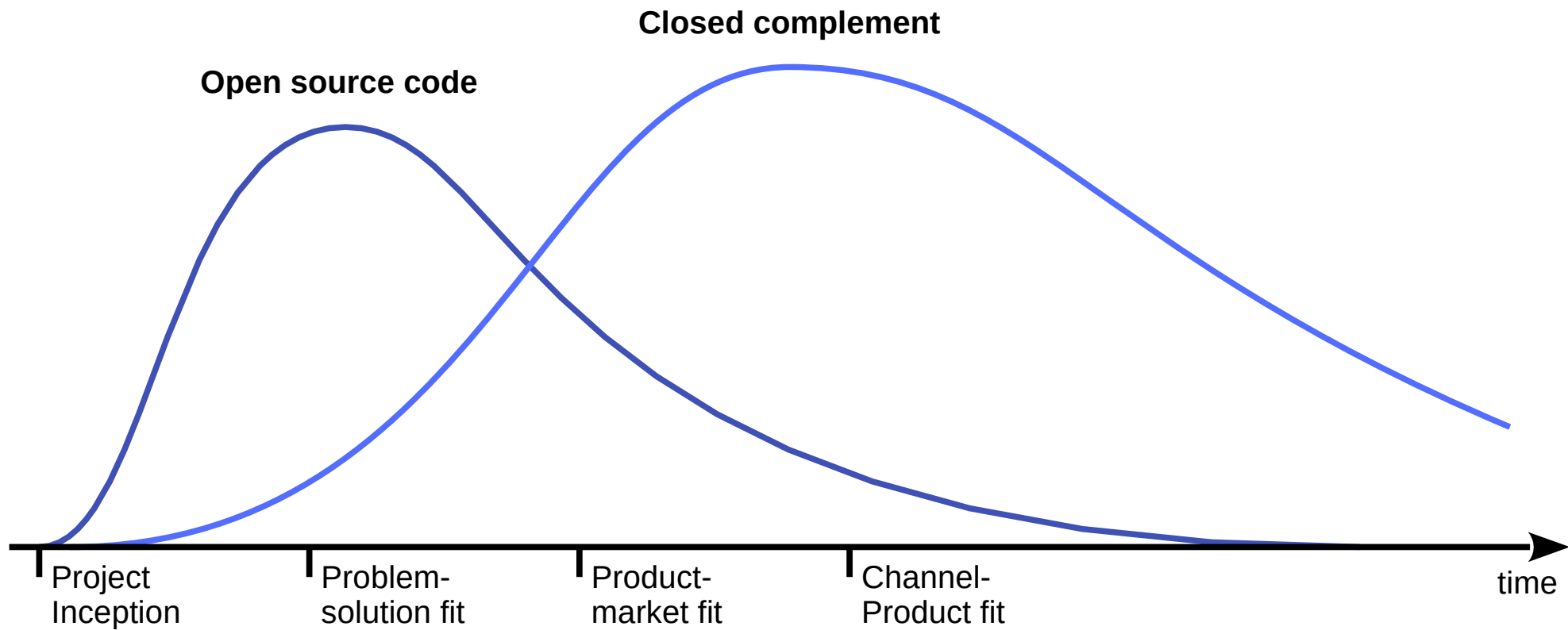
Dual-Licensing



Triple-Licensing

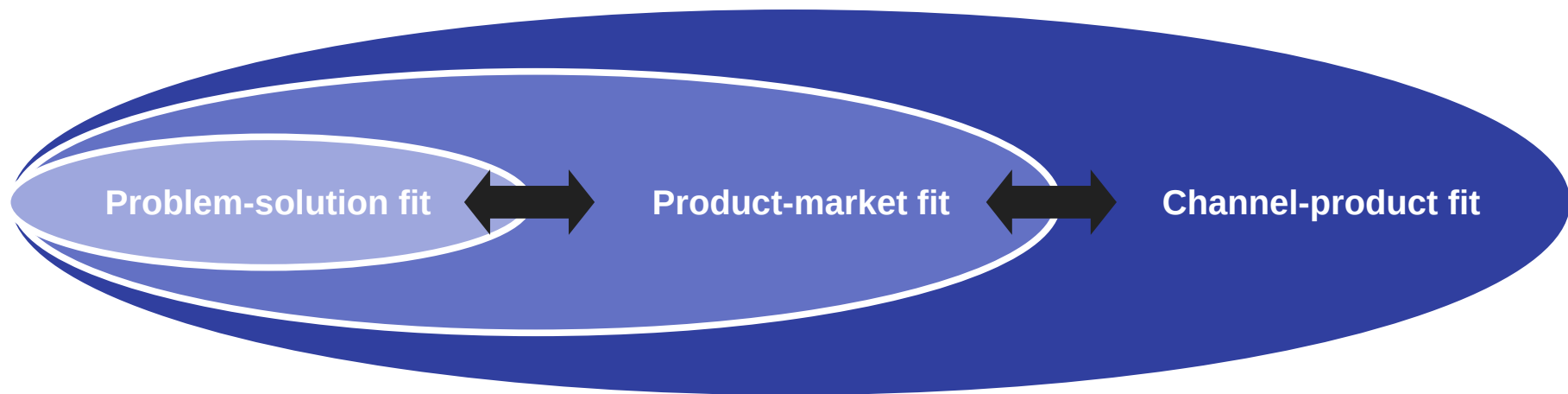


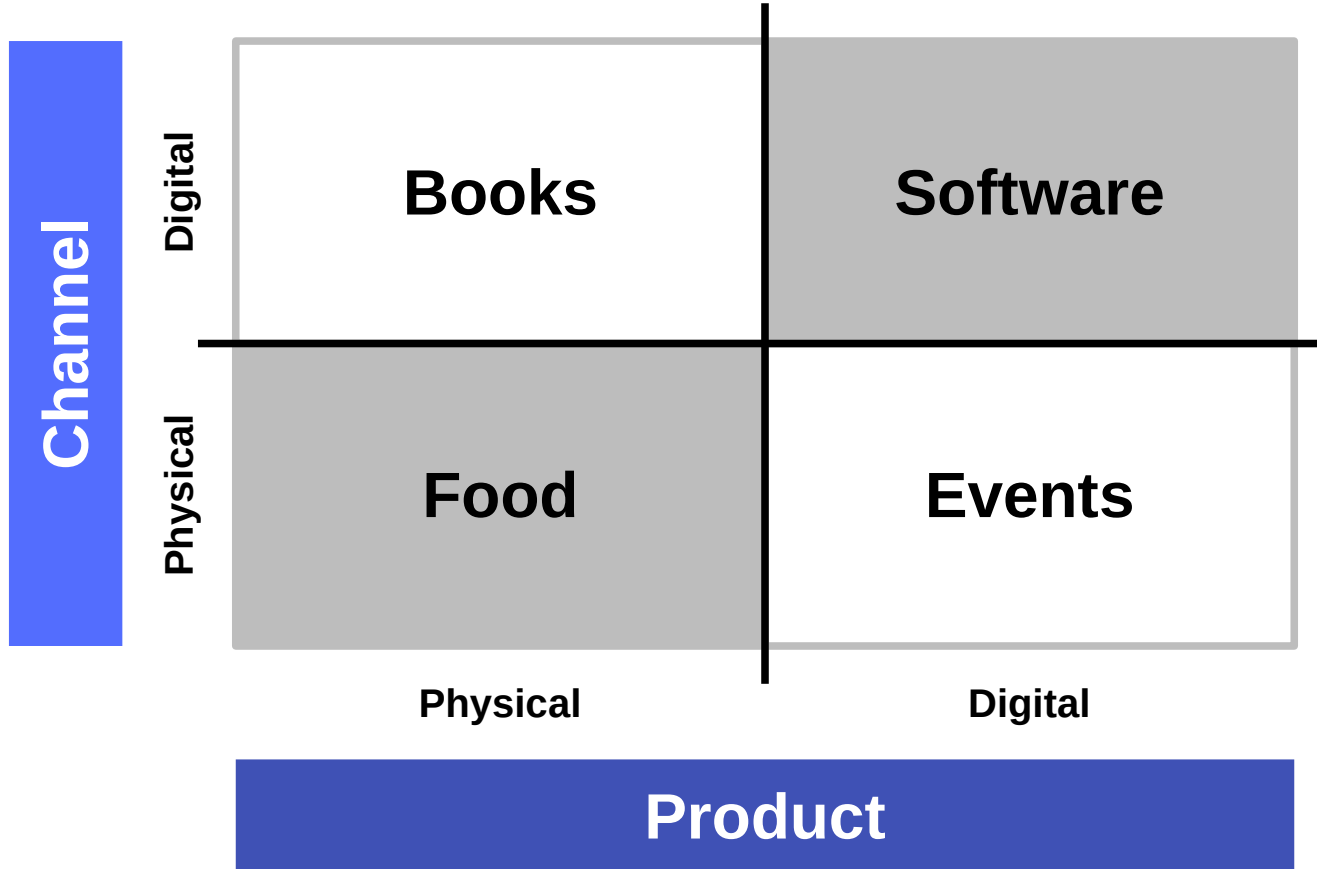


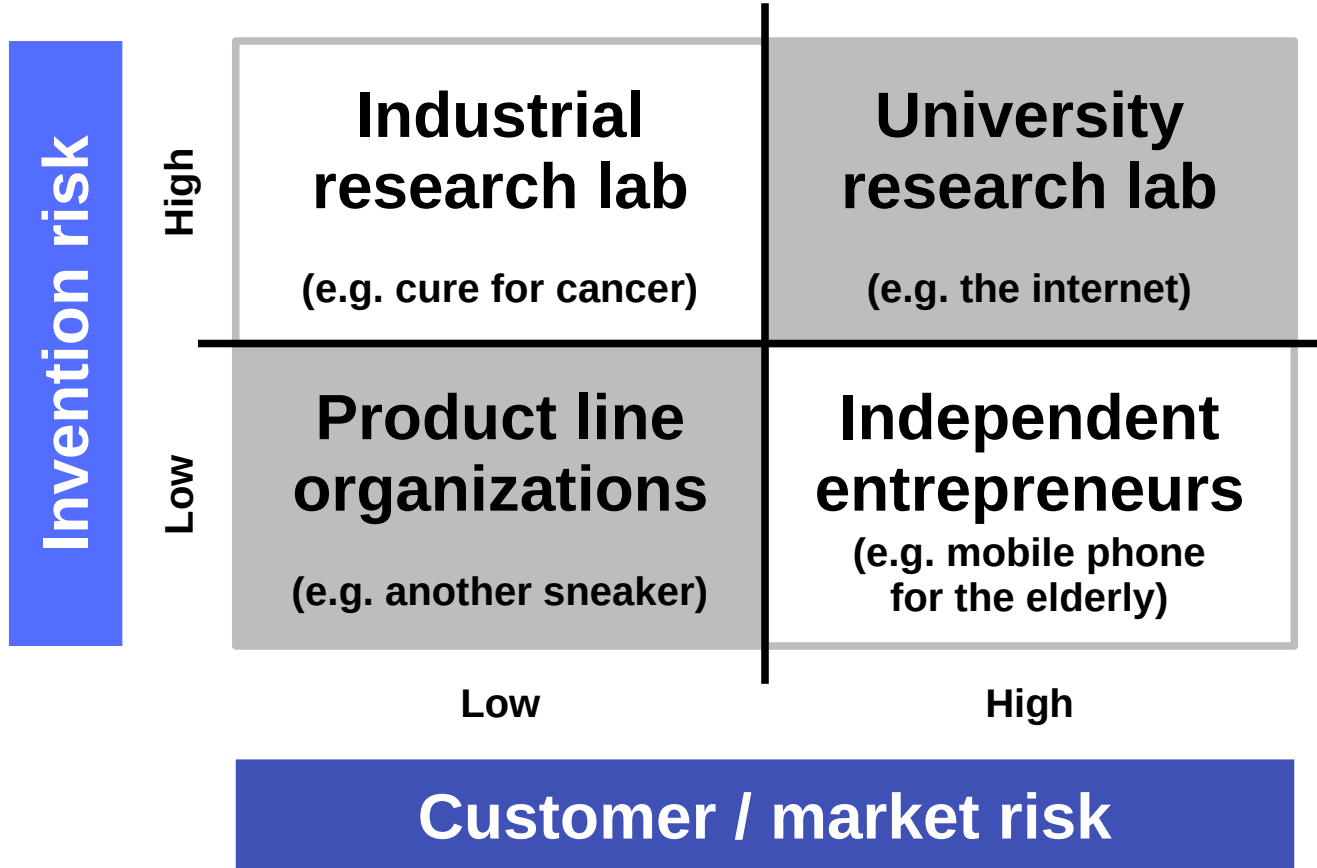


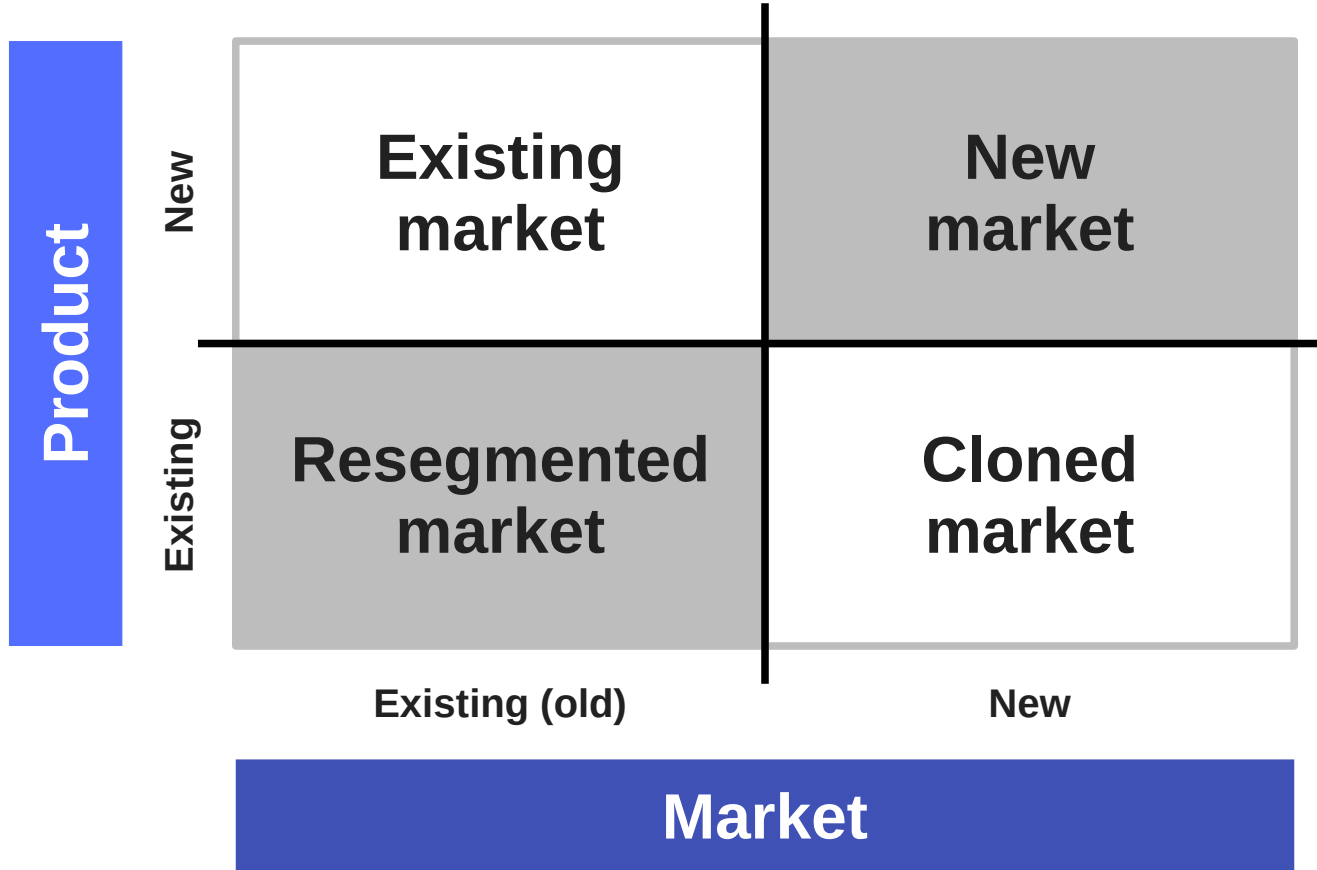
D01

Software Startups









Search

Customer
discovery



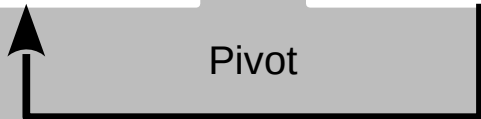
Customer
validation



Customer
creation

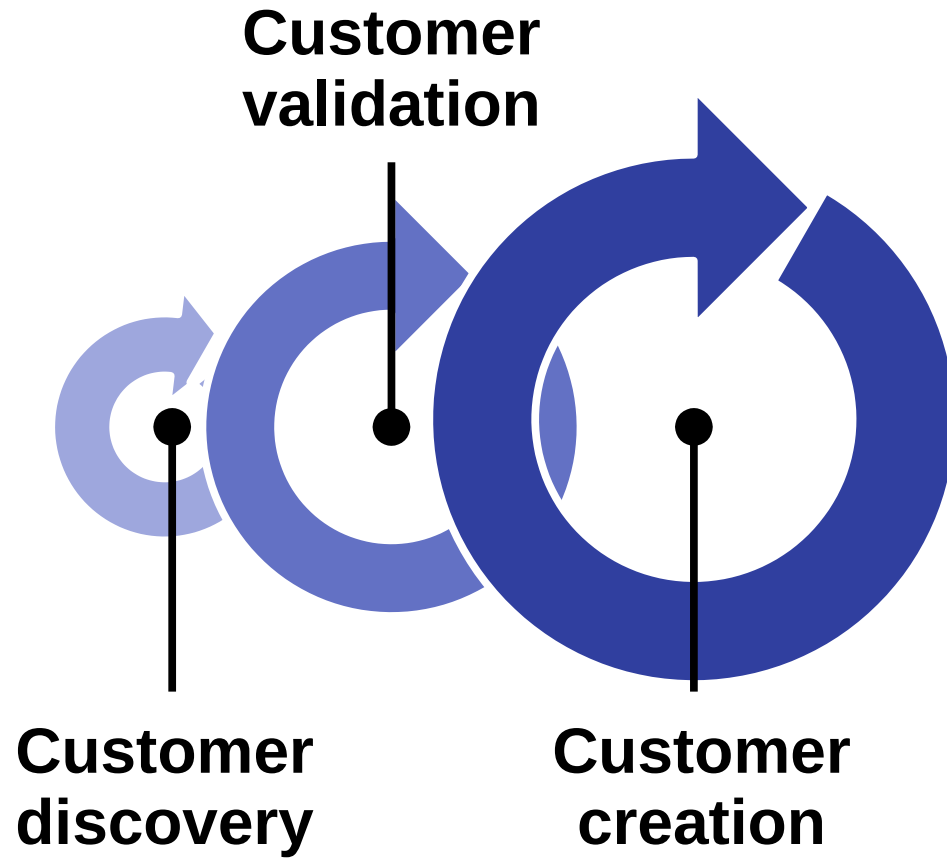


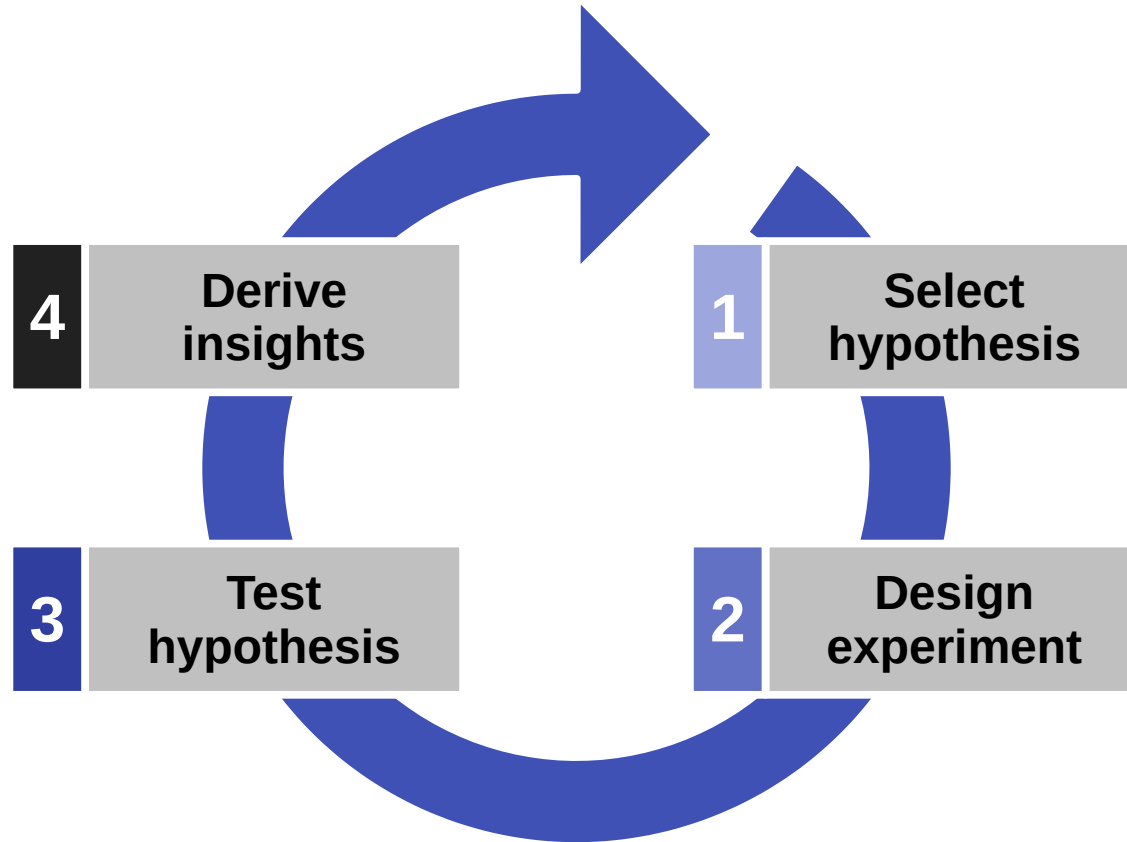
Company
building

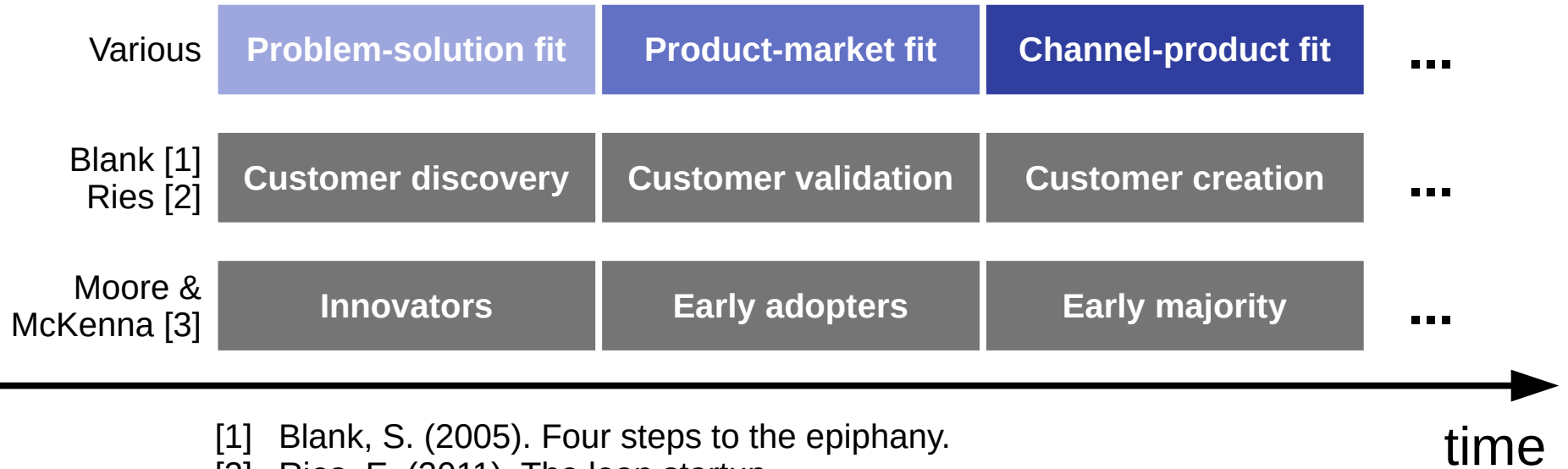


Pivot

Execution







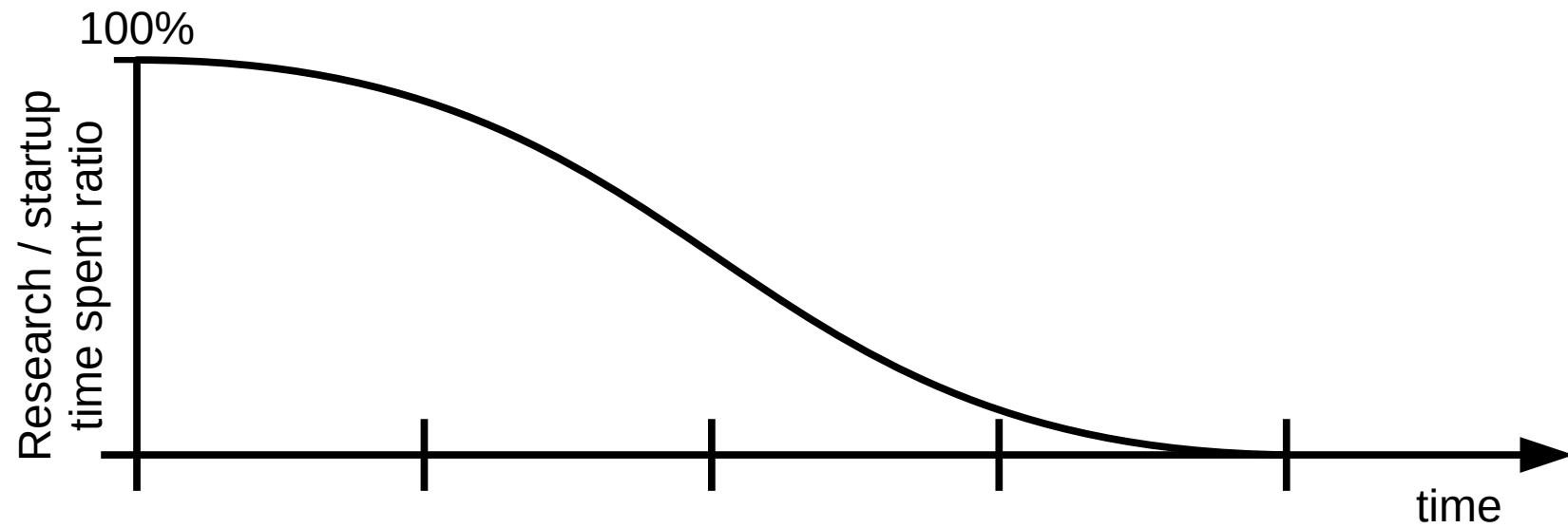
[1] Blank, S. (2005). Four steps to the epiphany.

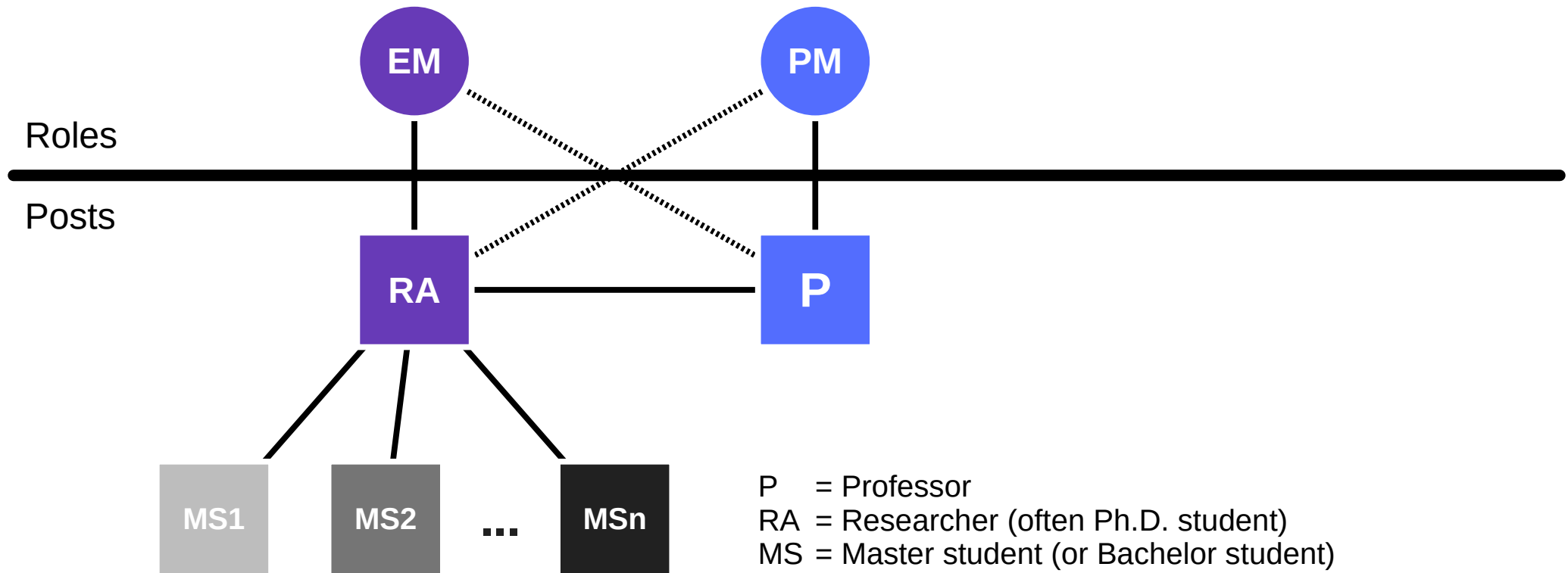
[2] Ries, E. (2011). The lean startup.

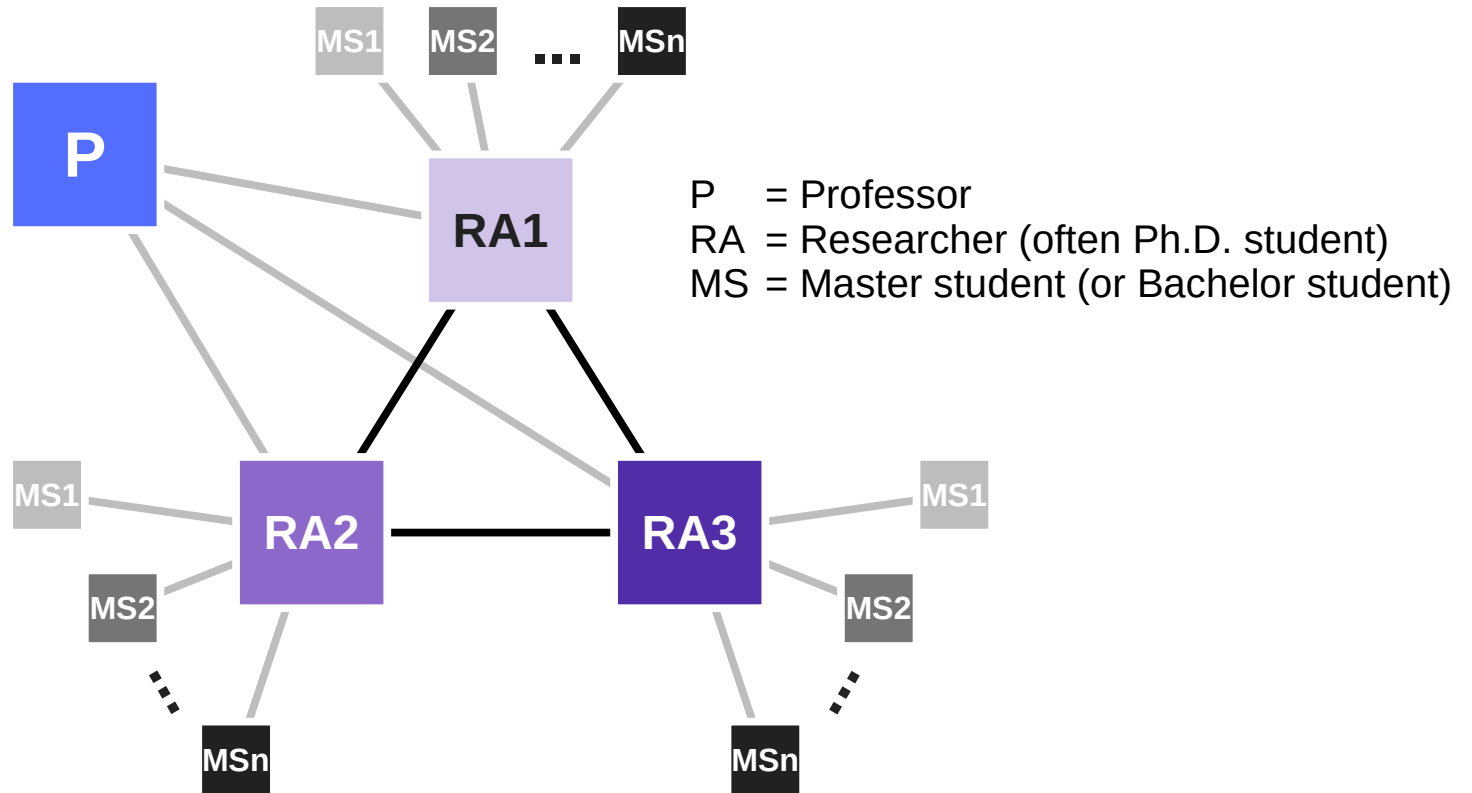
[3] Moore, G. A., & McKenna, R. (1999). Crossing the chasm.

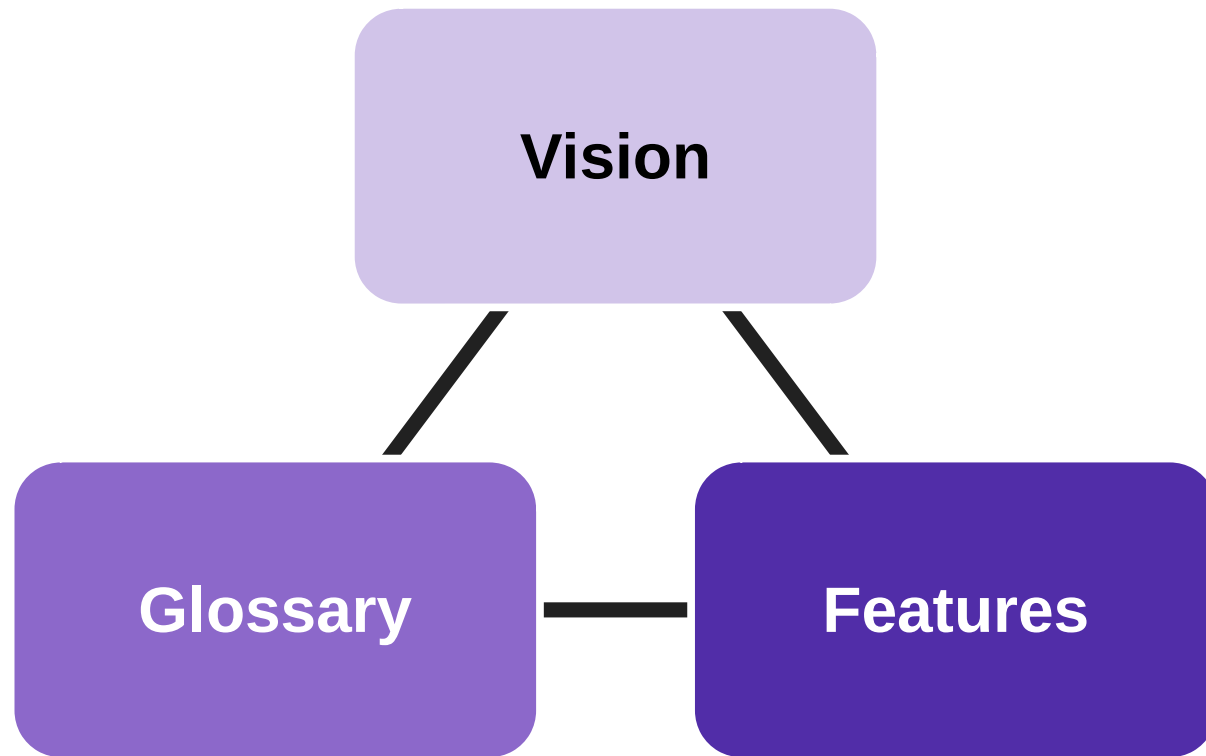
D02

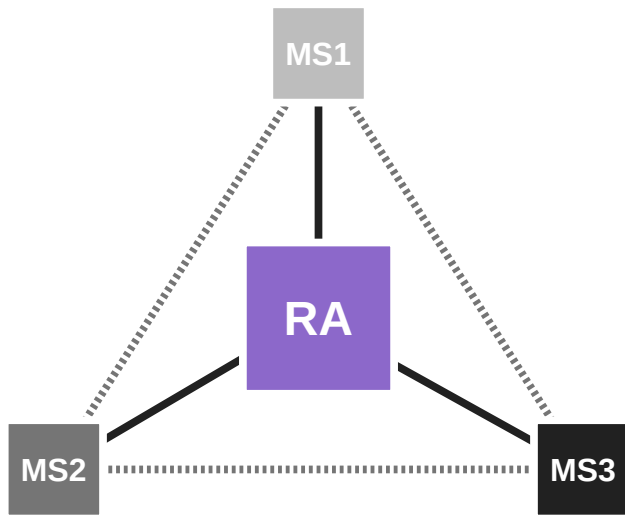
Research vs. Startup

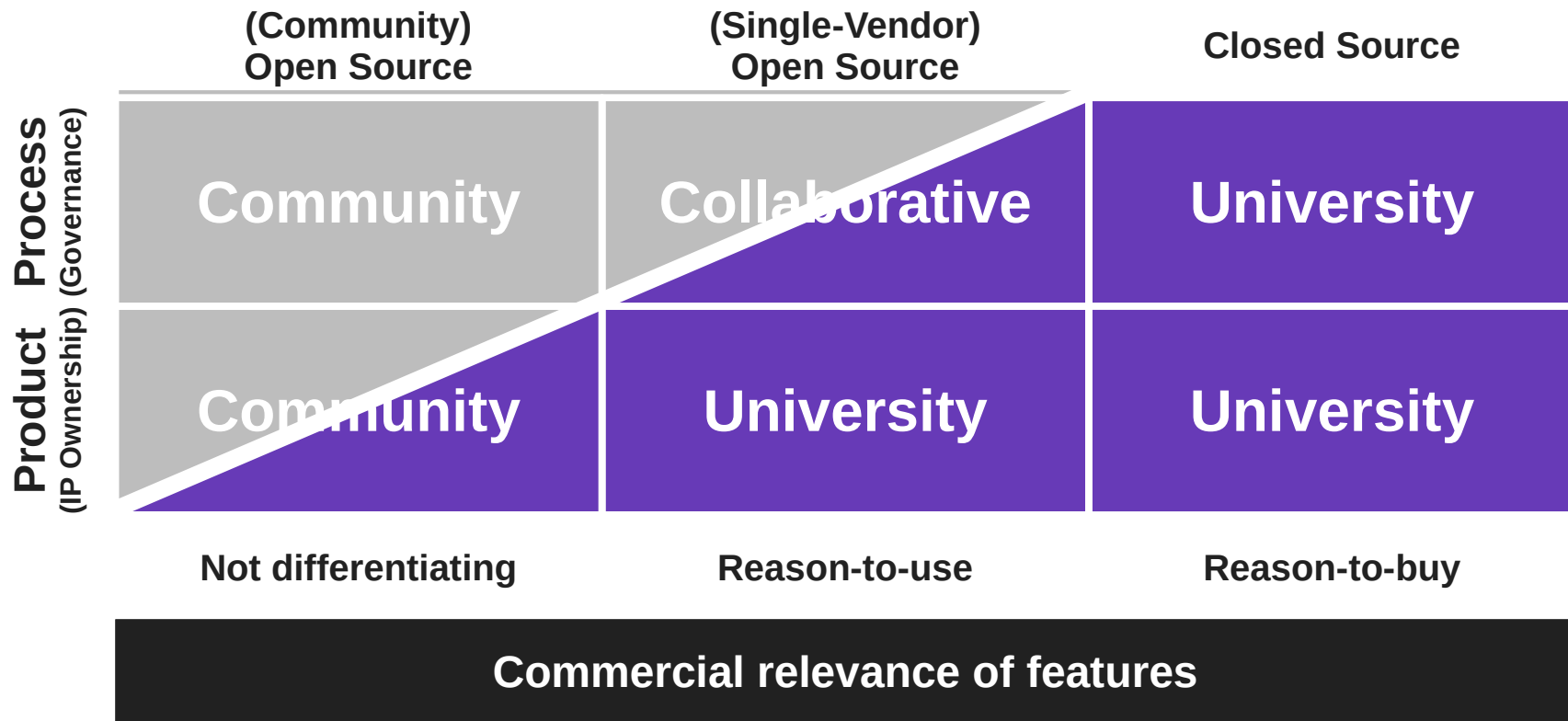


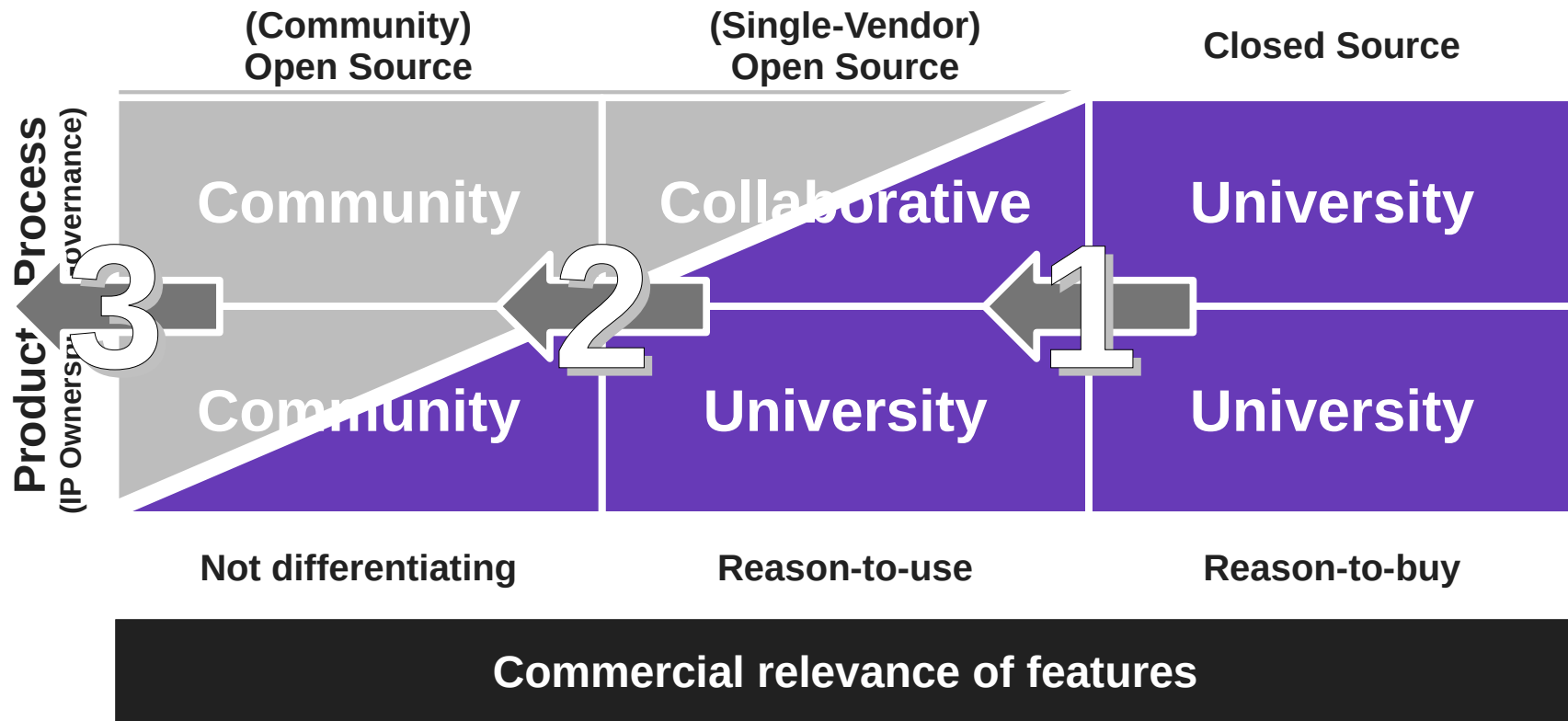


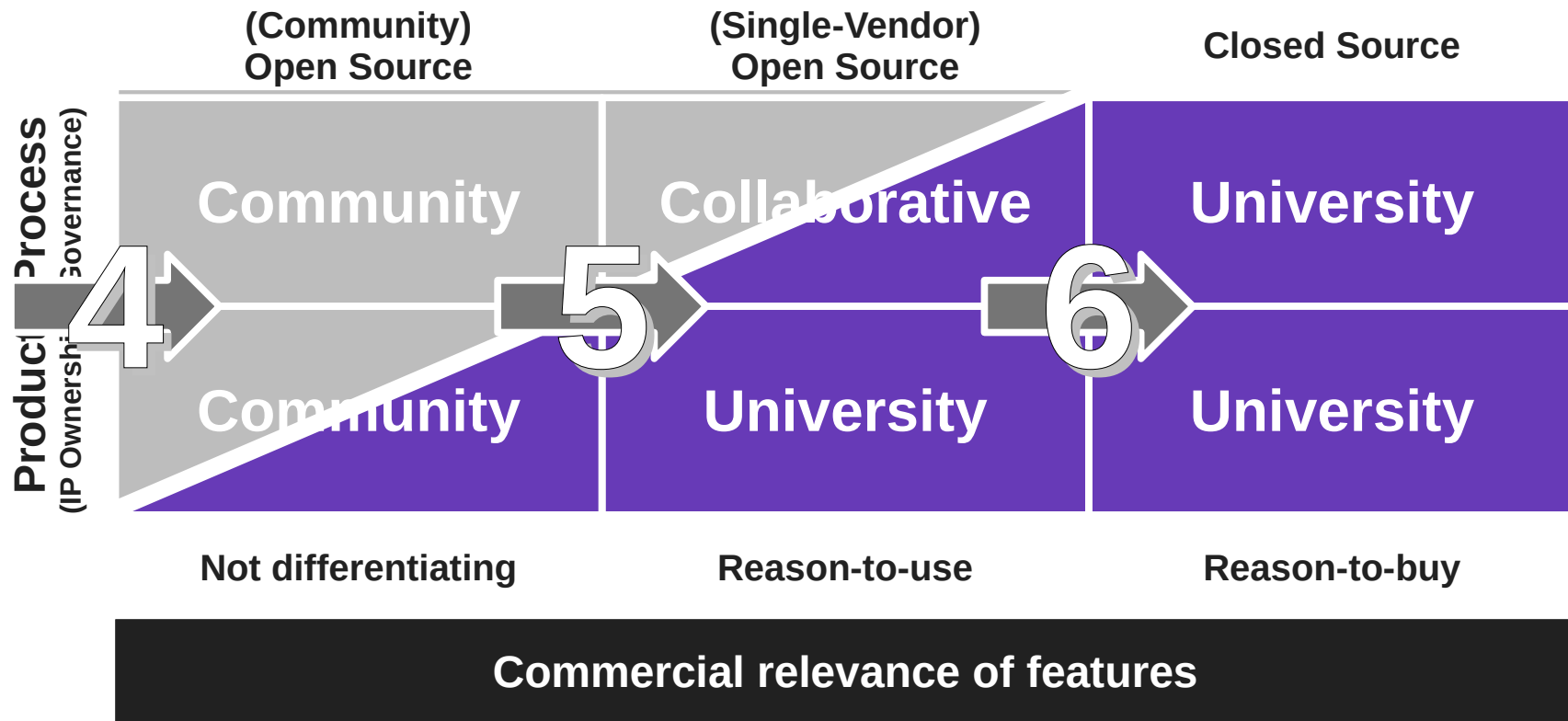






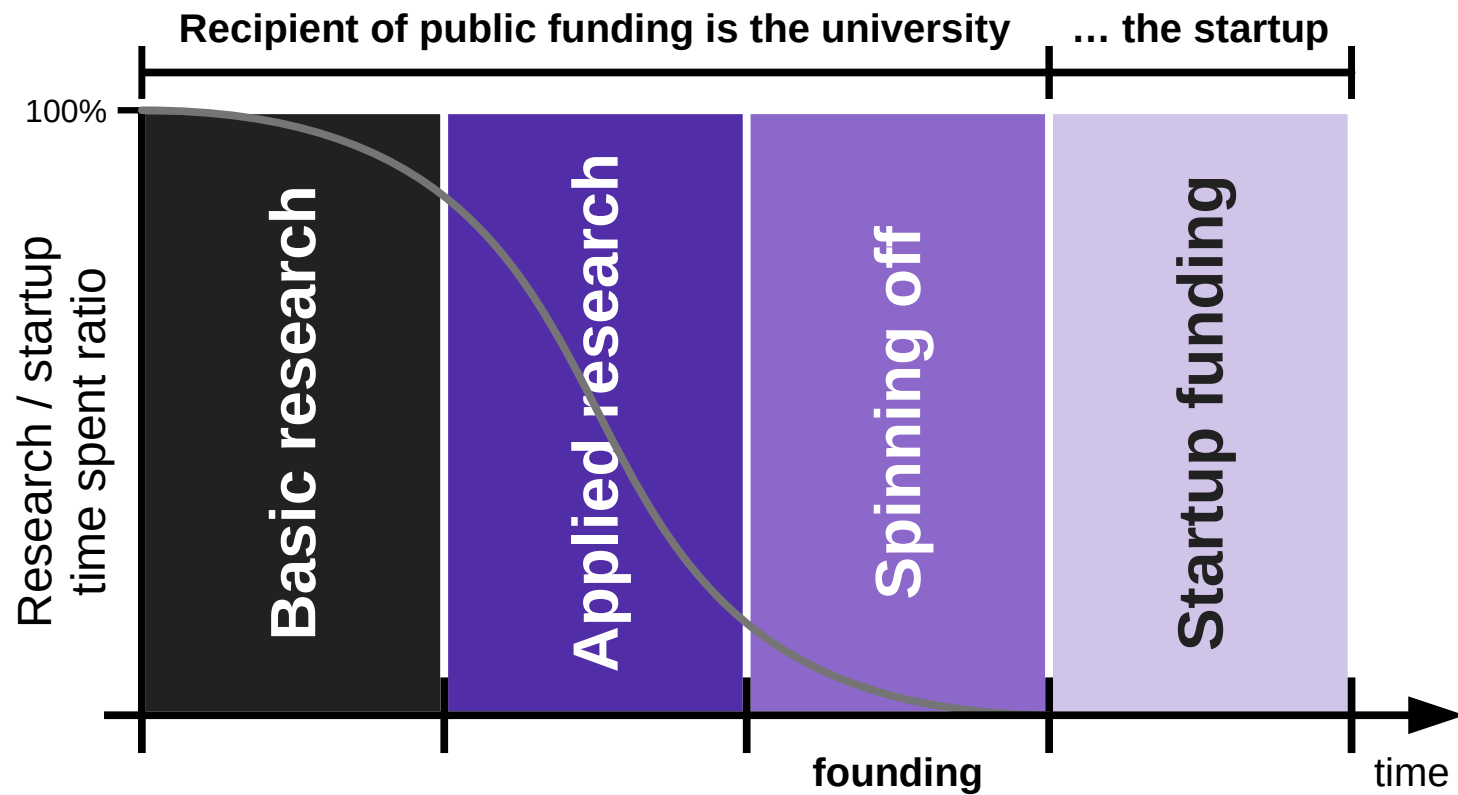






D03

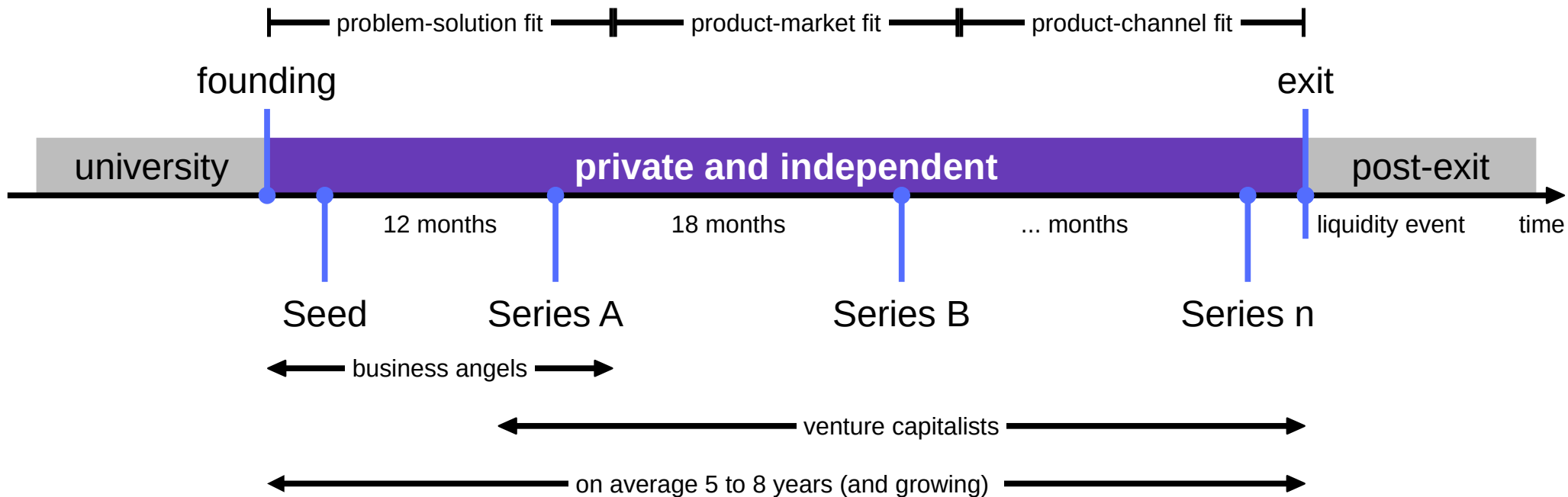
University Spin-offs

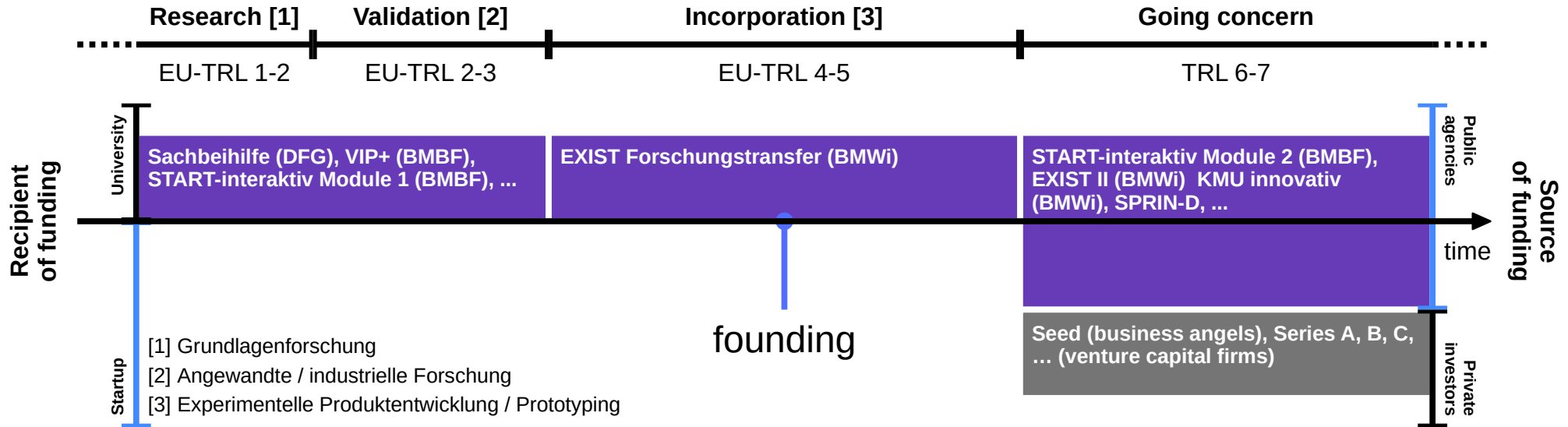


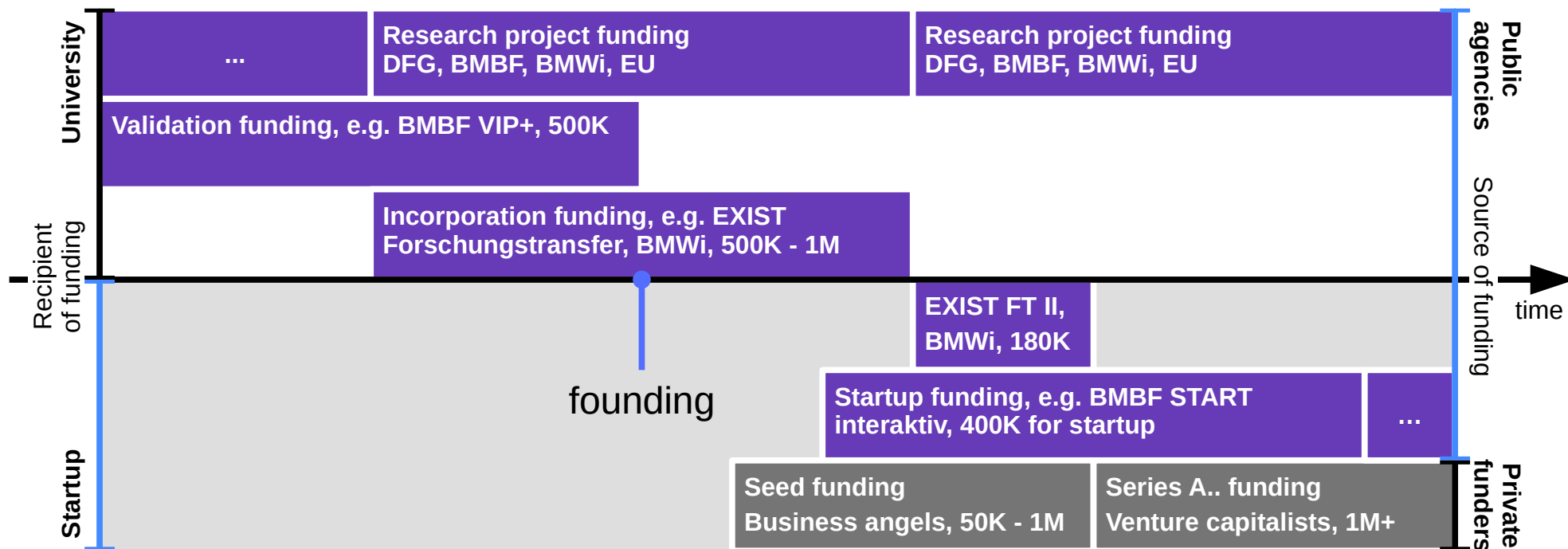
Degree Program			
	Bachelor or Master	Student in class / thesis	Research assistant (WiHi)
	Doctoral	Doctoral student	Research associate (WiMi)
		The individual	The university
Copyright Ownership			

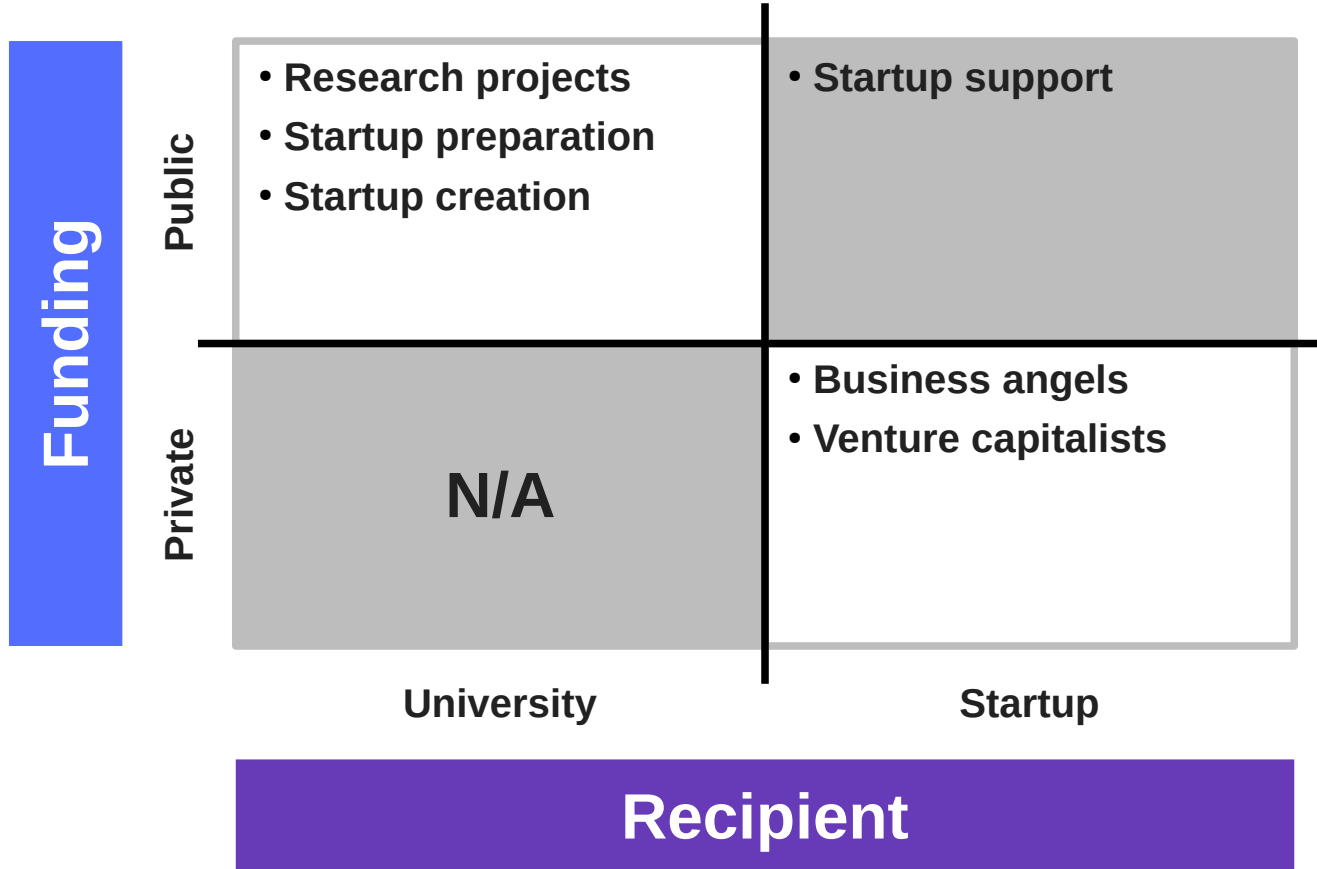
D04

Fundraising









Funder

Program

**Program
manager**

**Grant
proposal**

Proposer

