

Research and Startup

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COSS D02

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Agenda

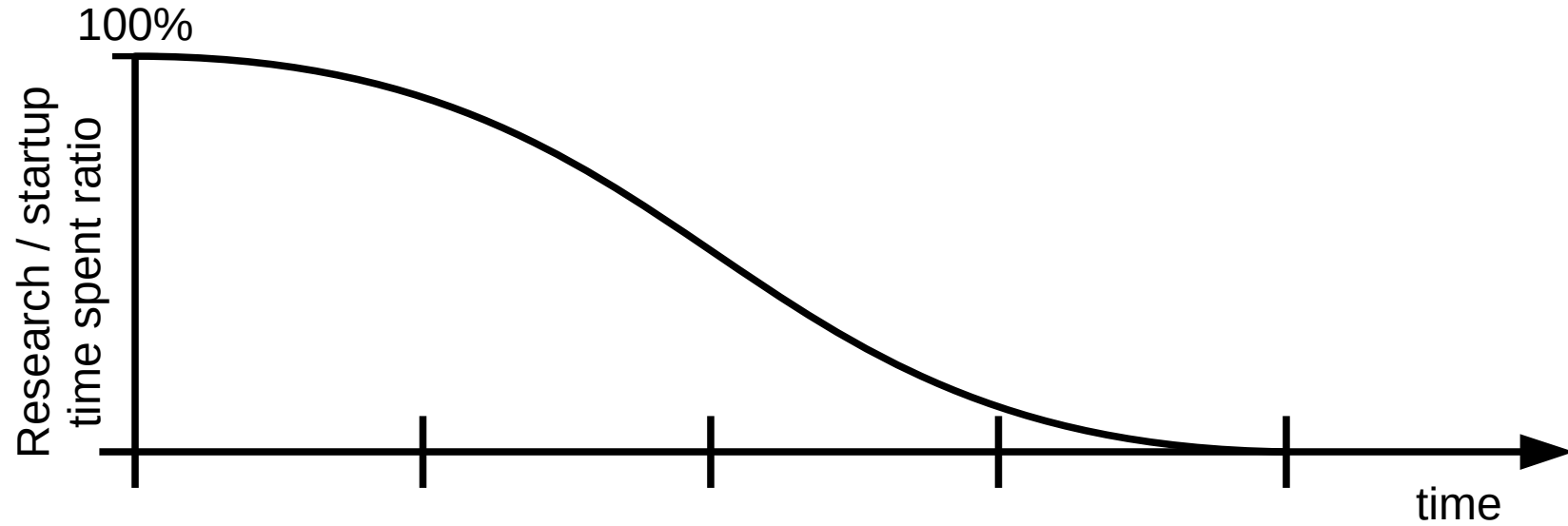
1. Research vs. startup
2. Project management
3. Lead programming
4. Open source strategy
5. Setting-up shop
6. Getting contributions

1. Research vs. Startup

Goal Conflict

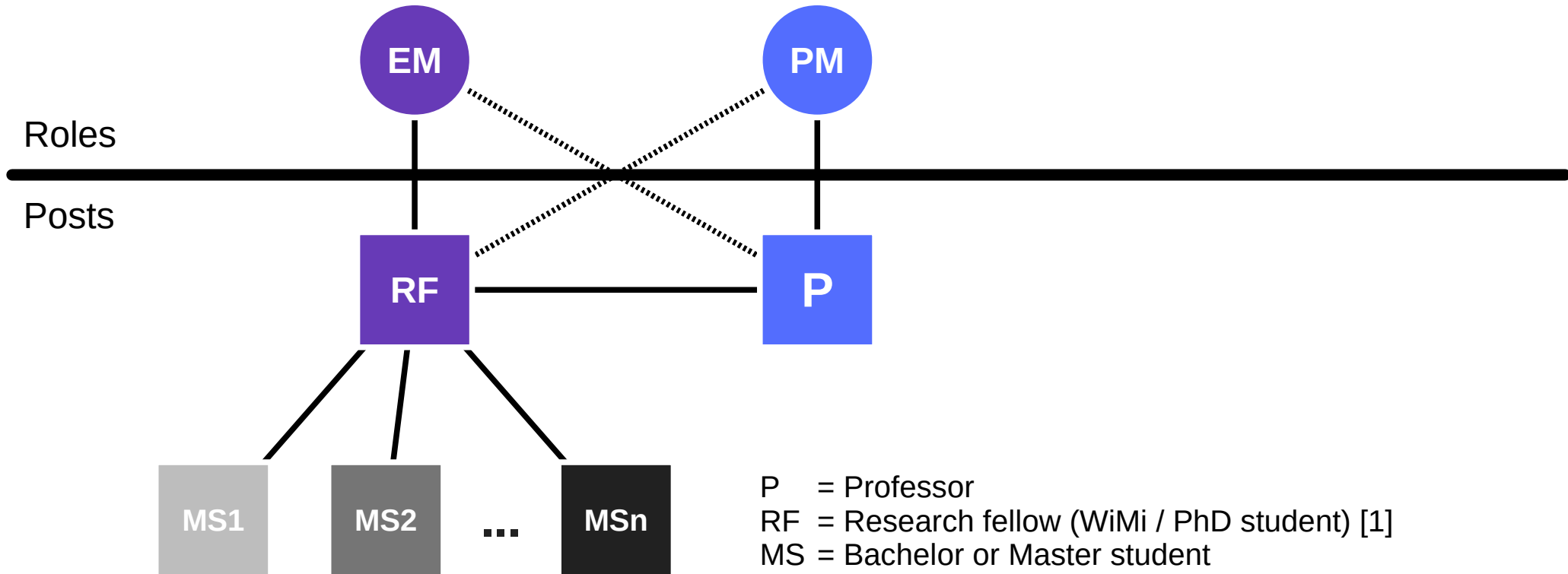
- Research
 - Desired output
 - Research papers
 - A dissertation
- Startup
 - Desired output
 - Software product
 - A startup

Resulting Time Allocation



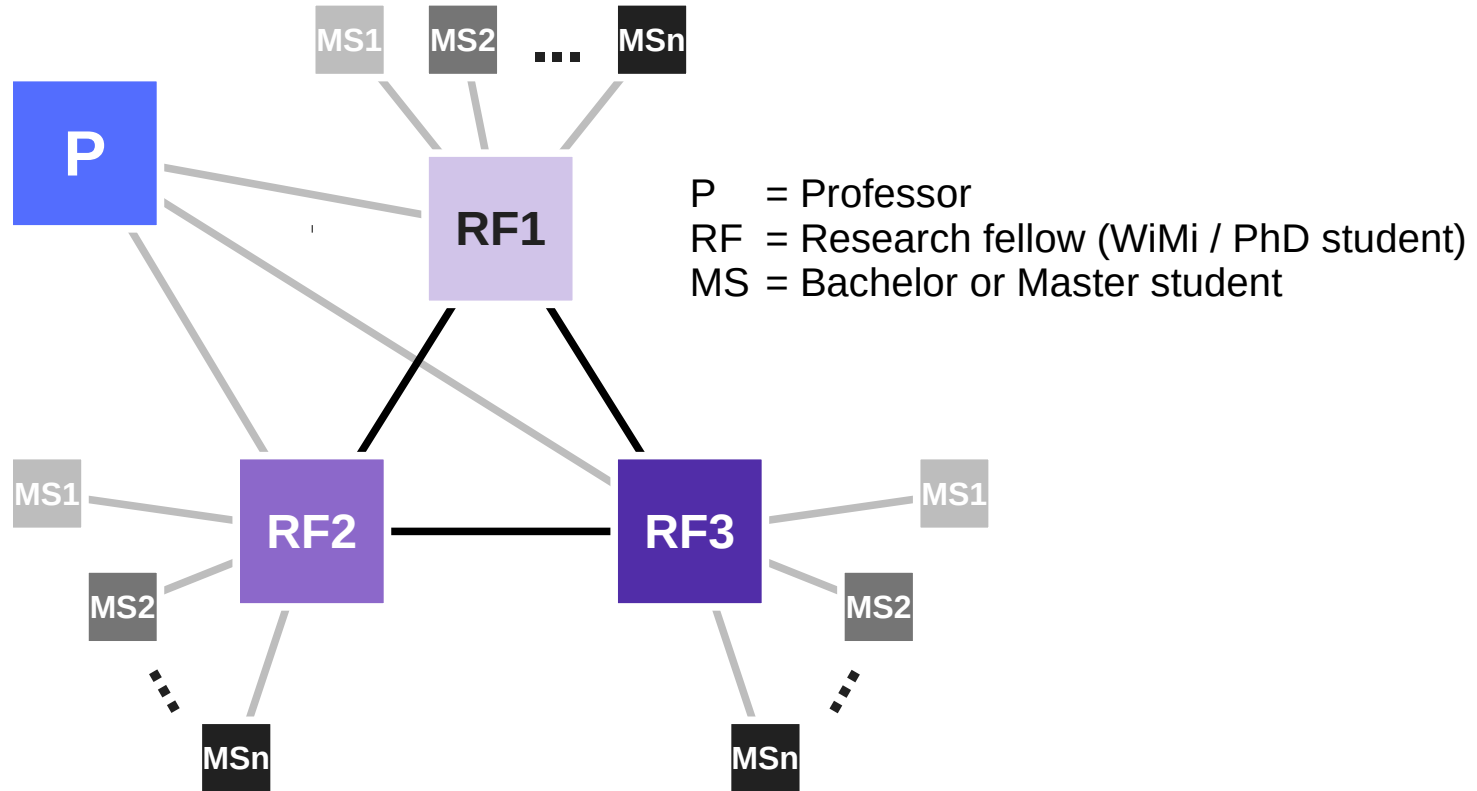
2. Project Management

The Solo Founder Model



[1] The research fellow / PhD students acts as “lead programmer”

The Peer Group Model



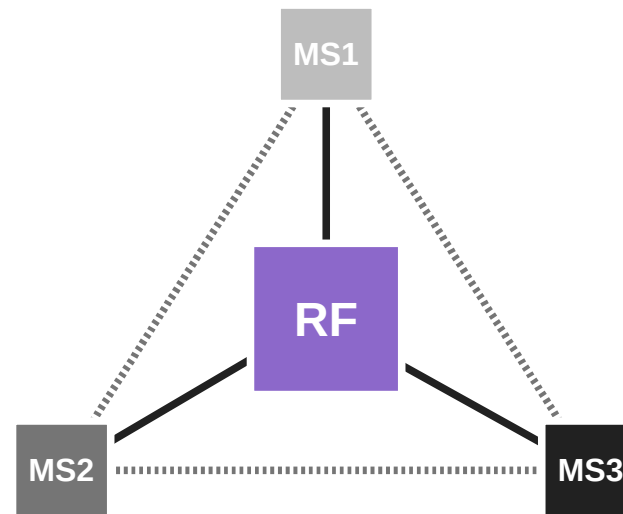
End of Project

- Research project finished
- Startup created (or failed)

3. Lead Programming

Lead Programmer [1]

- A lead programmer
 - Is an engineer who leads the development of a component / system
 - In case of solo founder: The system
 - In case of peer group: A key component
 - W.r.t. the component, is responsible for maintaining
 - Product vision and getting the features done
 - Architectural integrity and code quality
 - Manages other people as they contribute to the component
 - In the beginning, they write most of the code themselves
 - Later, they review and integrate code more than they write
- Other / helper engineers are
 - Students at the university (e.g. Master thesis students)
 - Open source volunteers



[1] A pun on Mills' "chief programmer teams"

Lead Programmer / Helper Engineer Collaboration

- Lead programmer provides feature
 - If necessary breaks it down into tasks
 - Assigns tasks or waits for volunteers
- With helper, discusses design and implementation
 - Helps break down work into tasks / increments
 - Ideally, discussion is public (in open source anyway)
- In multiple increments, reviews and merges code
 - Helper provides sufficiently small commit
 - Lead programmer reviews, comments, integrates
- Until feature is fully implemented

Q

qdacity

Project overview

Repository

Issues134

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Requirements

CI / CD

Security & Compliance

Operations

Packages & Registries

Analytics

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Open134Closed560All694

Edit issuesNew issue

Recent searches ▾ Search or filter results...

Created date ▾ ⌵

Add new Requirement Specification View0 of 2 tasks completed

#700 · opened 1 week ago by Julia

Doing

0

updated 2 days ago

Update to Endpoint API to use Cloud Endpoints Portal

#699 · opened 2 weeks ago by Julia

BackendTo Do

0

updated 2 weeks ago

Save Document on switch between Text- & Coding Editor

#698 · opened 1 month ago by Julia

BugFrontendTo Do

0

updated 1 month ago

Vertically center star icon

#695 · opened 6 months ago by Andreas Kaufmann

Coding EditorFrontendTo Do

0

updated 6 months ago

Saturation Metric Maximum

#694 · opened 7 months ago by Andreas Kaufmann

BackendBugTo Do

0

updated 7 months ago

Add symbol for codebookentry to the code status bar

#693 · opened 7 months ago by Julia

FrontendNice to have

0

updated 7 months ago

Implement Lombok to support a better code overview?

#692 · opened 8 months ago by Julia

Backend

0

updated 7 months ago

Save state of Code System

#690 · opened 8 months ago by Julia

BackendCoding EditorFrontend

0

updated 8 months ago

Notify about not-saved code book entries

#689 · opened 8 months ago by Julia

Coding EditorFrontend

0

updated 8 months ago

Delete coding easier

#688 · opened 8 months ago by Julia

Coding EditorFeatureFrontend

0

updated 8 months ago

Down arrow key to change code segment

#687 · opened 8 months ago by Julia

Coding EditorFeatureFrontend

0

updated 8 months ago

Add Code by Drag'n'Drop

#686 · opened 8 months ago by Julia

Coding EditorFeatureFrontend

0

updated 8 months ago

Code System Search delete button

#685 · opened 8 months ago by Julia

FeatureFrontend

0

updated 8 months ago

Better Solution for CodeIDs

#684 · opened 9 months ago by Julia

BackendCoding Editor

0

updated 9 months ago

Code color inherited from category

0

Q qdacity

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Development ▾ Search or filter results...

Show labels ☒ Edit board Add list ▾ Add issues 

Open570+

Add symbol for codebookentry to the code status bar
Frontend Nice to have
#693

Implement Lombok to support a better code overview?
Backend
#692

Save state of Code System
Backend Coding Editor Frontend
#690

Notify about not-saved code book entries
Coding Editor Frontend
#689

Better Solution for CodeIDs
Backend Coding Editor
#684

Problems with Chrome
Bug Frontend Low Priority
#678

Delete coding easier
Coding Editor Feature Frontend
#688

Down arrow key to change code segment
Coding Editor Feature Frontend
#687

To Do660+

Update to Endpoint API to use Cloud Endpoints Portal
Backend
#699

Save Document on switch between Text- & Coding Editor
Bug Frontend
#698

Vertically center star icon
Coding Editor Frontend
#695

Saturation Metric Maximum
Backend Bug
#694

Code color inherited from category
Coding Editor Feature Frontend
#683

Duplicate code locations
Bug Coding Editor Frontend
#682

Updating coding brackets on rename
Bug Coding Editor Frontend
#681

Crash on switching documents
Bug Coding Editor
#680

Doing40+

Add new Requirement Specification View
#700

List support in Editor
Backend Feature
#645

Fix acceptance tests for pipeline
Dev Feature Refactoring
#673

Wiki Documentation
Dev Documentation Research
#633

In Review70+

Add sync for Meta Model attributes
#657

Finer grained merge
Feature Frontend
#666

Editable Conflict
Feature Frontend
#667

Sync positions in diff views for theirs and mine
Feature Frontend
#669

Deploying the NLP service
Backend Dev
#664

Remove coding when offline
Feature Frontend
#611

No Updates Before Sync Finished
Feature Frontend
#591

Closed

Restructure war folder
Frontend Refactoring
#86

Removing Codings
Bug Coding Editor Frontend
#274

getCurrentUser not working
Backend Bug
#327

Mixed Content
Bug Frontend
#169

General Refactoring
Frontend Refactoring
#171

Update App Engine SDK to 1.
Dev
#318

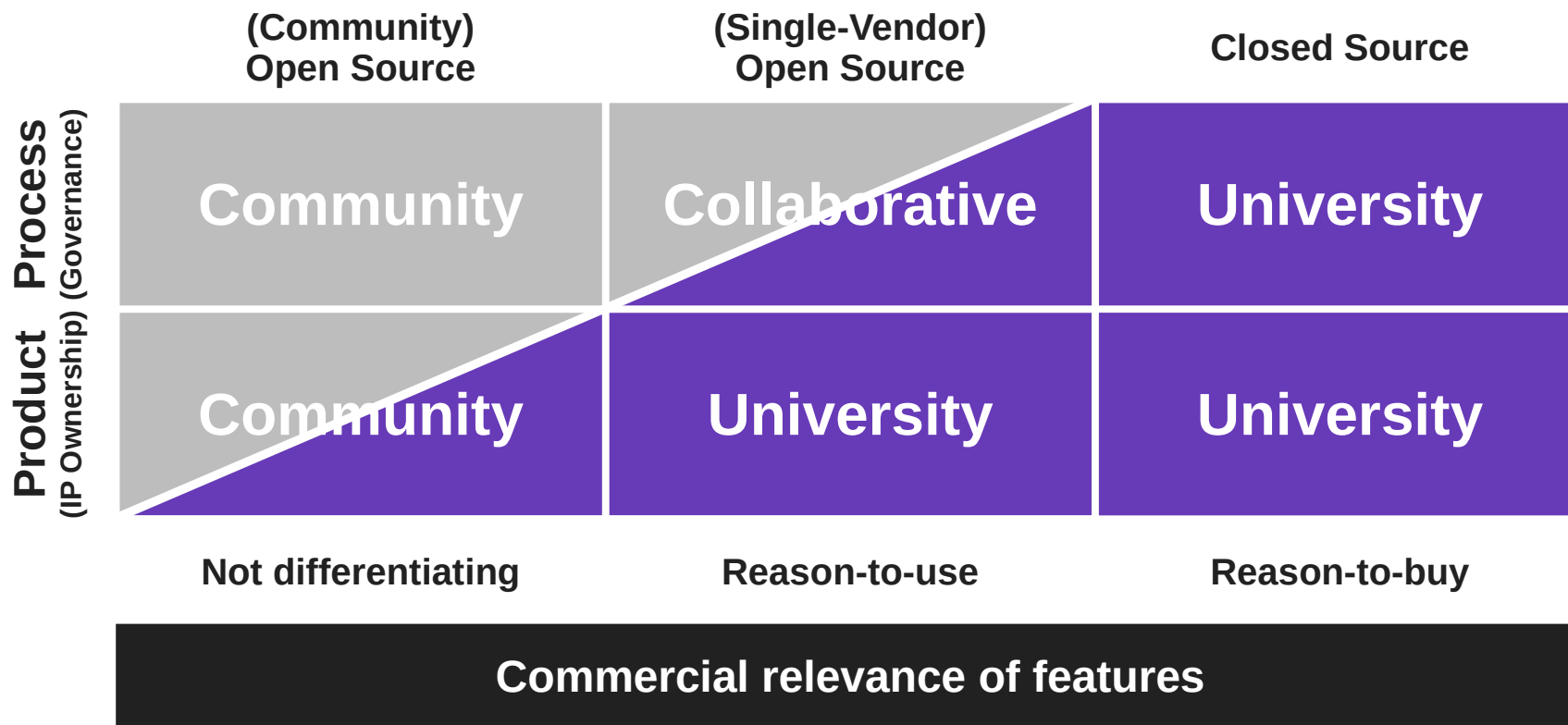
Add servlet for SSL challenge
Backend Feature
#270

Landing Page
Feature Frontend
#188

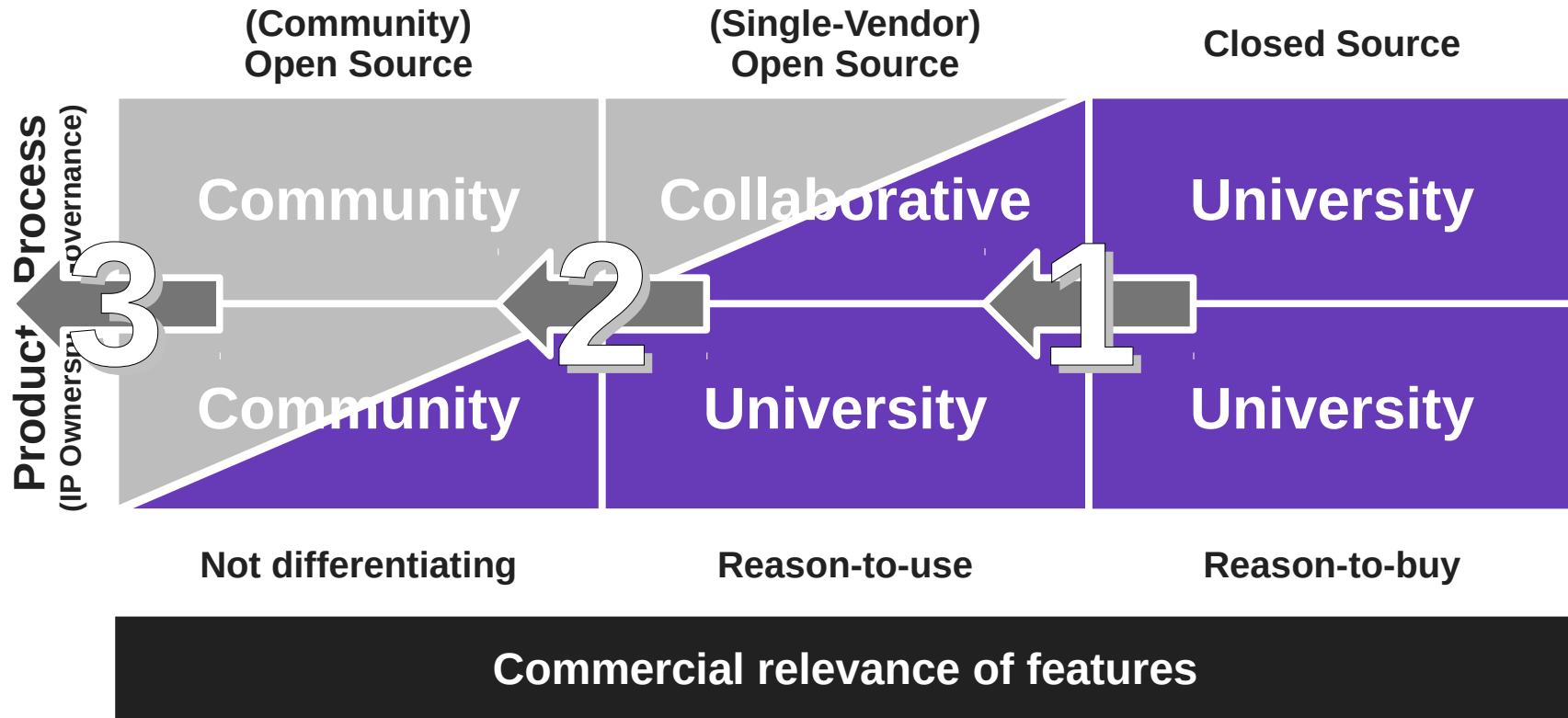
No Delete Btn for Validation
Frontend Refactoring
#187

4. Open Source Strategy

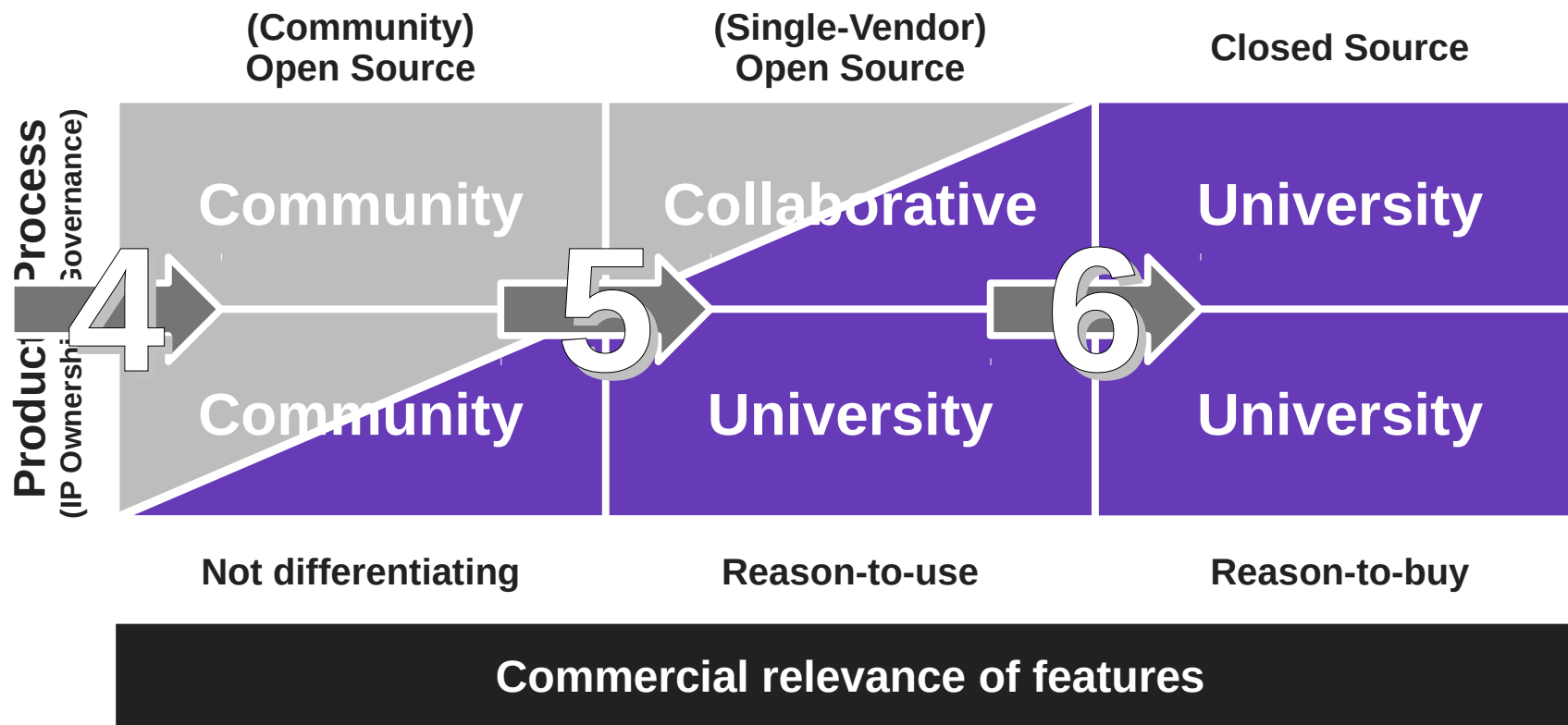
Open Source Community vs. University / Company



Pushing out Features



Pulling in Features



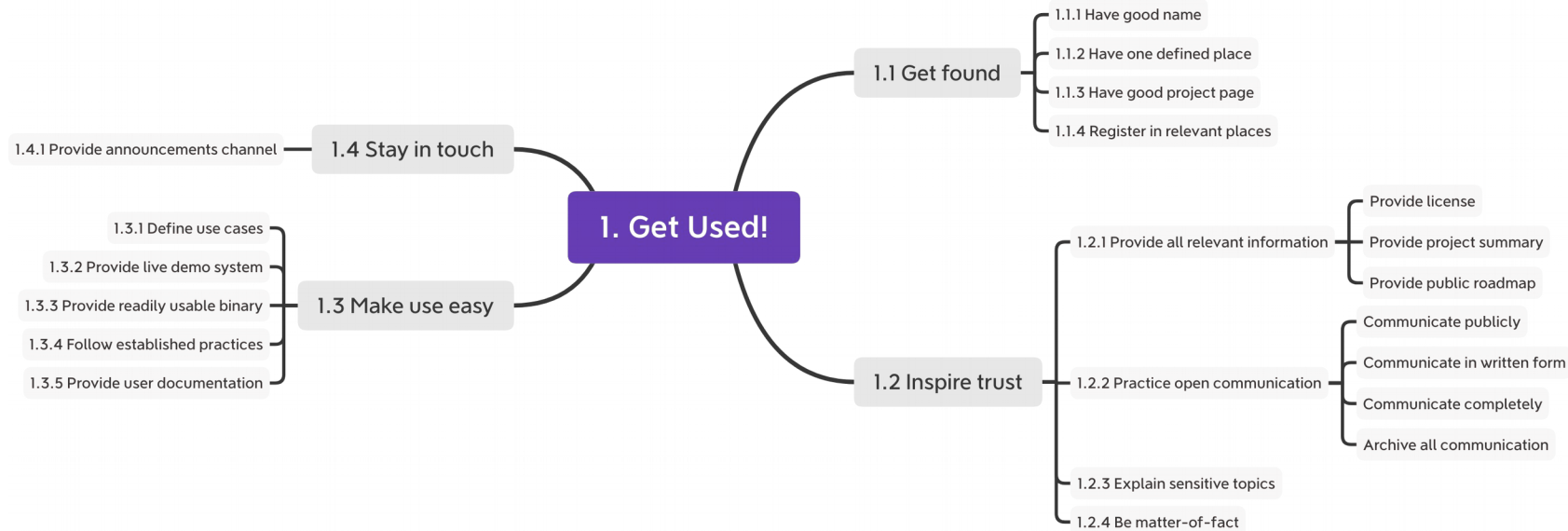
Public Money, Public Code?

- Universities have both a non-profit and commercial part
 - Universities are tasked with research and teaching [1]
 - Universities are also tasked with exploiting their innovations
- It is the university's choice what to give away for free

[1] And spending inordinate amounts on useless administrative matters

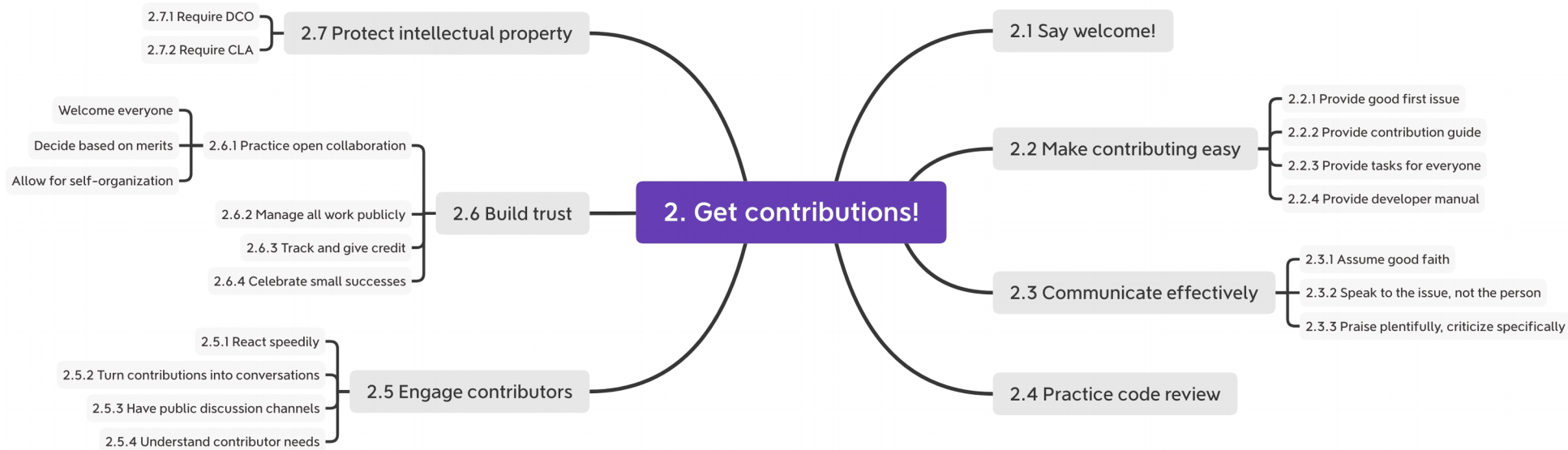
5. Setting-up Shop

Best Practices for Setting-up Shop and Getting Users



6. Getting Contributions

Best Practices for Getting Contributions



Summary

1. Research vs. startup
2. Project management
3. Lead programming
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5. Setting-up shop
6. Getting contributions

Thank you! Questions?

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 - None yet