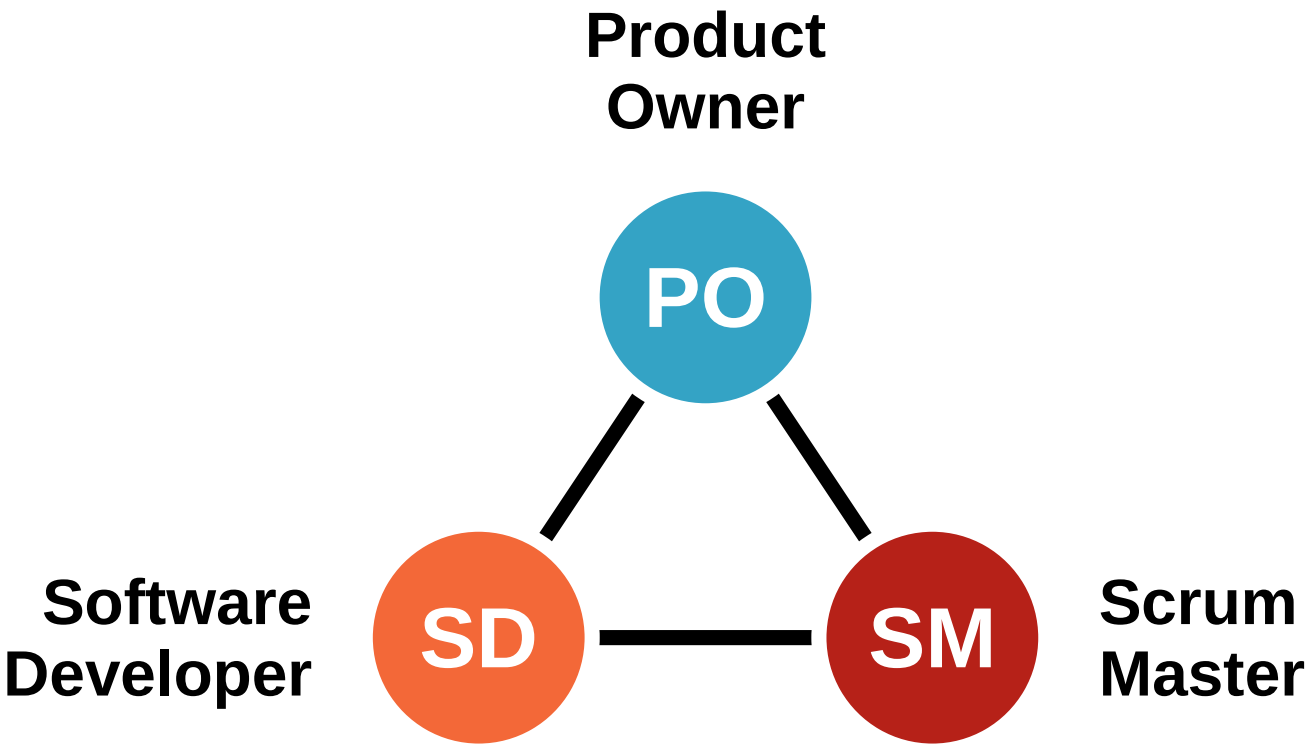
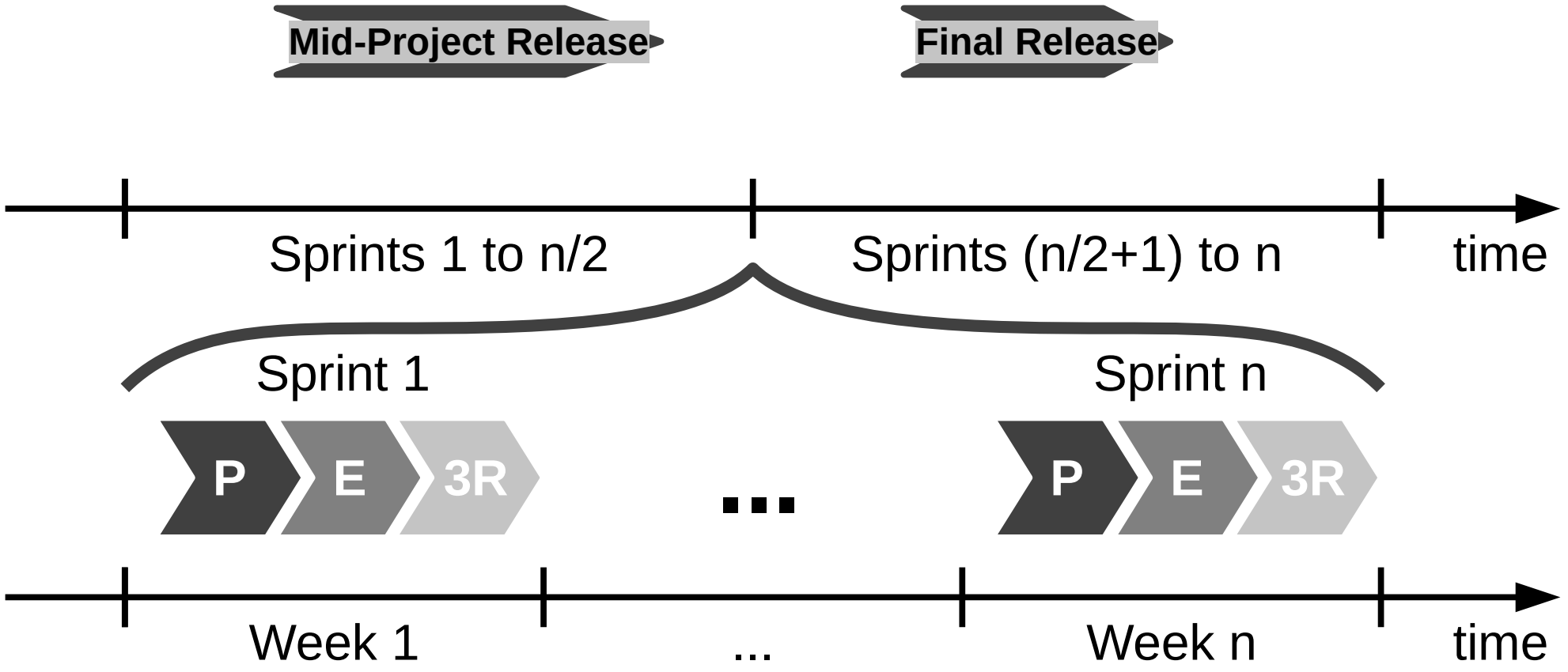
Part A

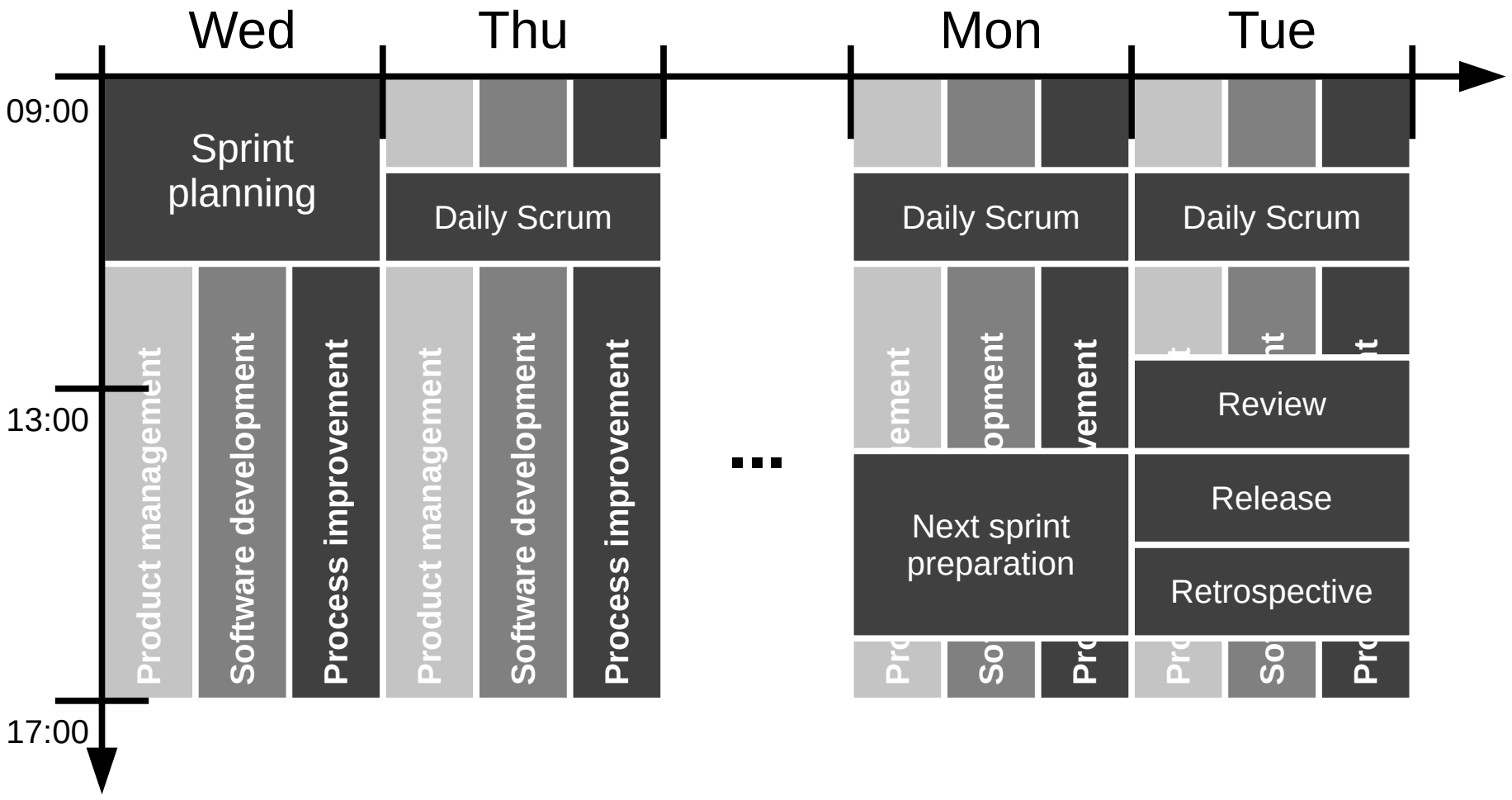
Course Introduction

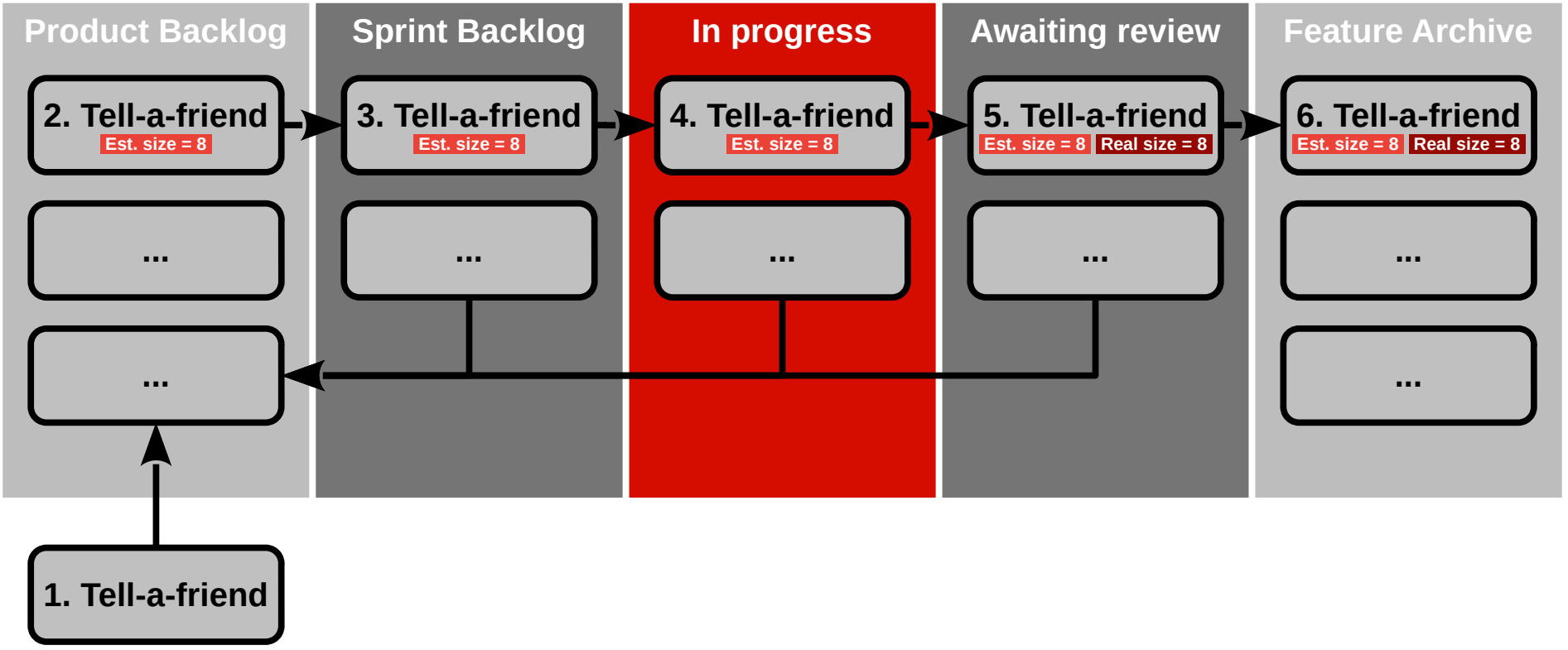
Part B

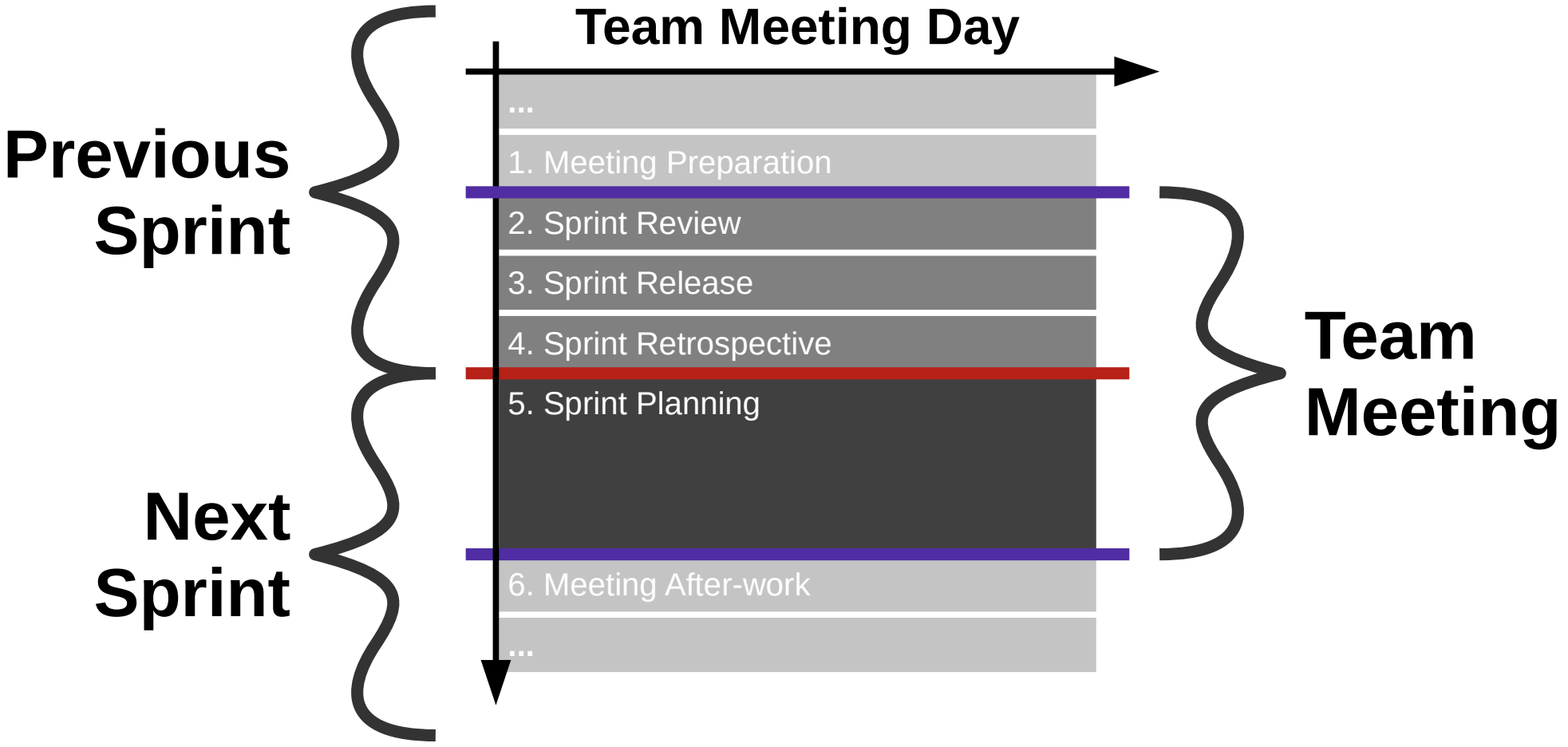
Project Management

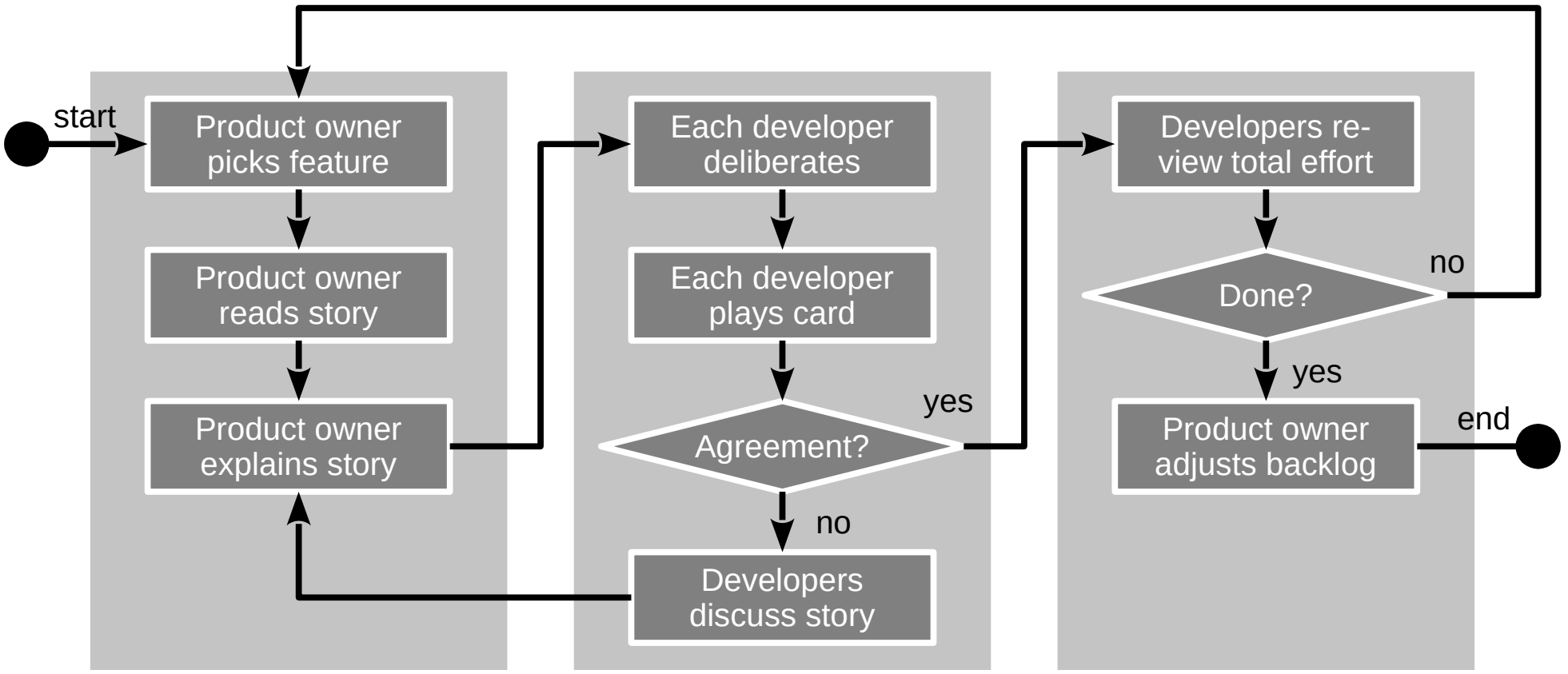

Product
Owner
PO
Software
Developer
SD
SM
Scrum
Master


Mid-Project Release
Final Release
Sprints 1 to n/2
Sprints (n/2+1) to n
time
Sprint 1
Sprint n
P
E
3R
...
P
E
3R
Week 1
...
Week n
time


Wed
Thu
Mon
Tue
09:00
13:00
17:00
Sprint planning
Daily Scrum
Daily Scrum
Daily Scrum
Product management
Software development
Process improvement
Product management
Software development
Process improvement
...
Review
Release
Next sprint preparation
Retrospective

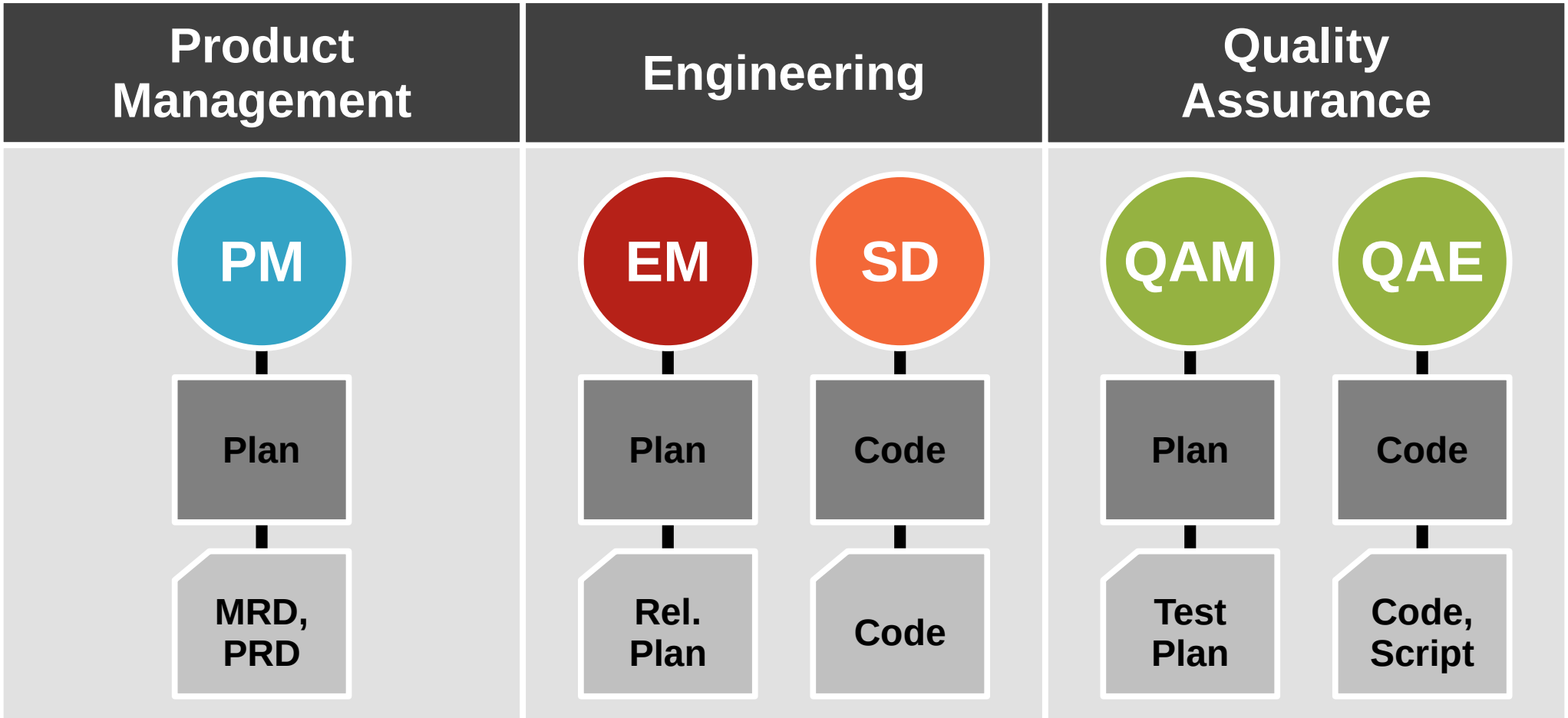

Product Backlog
Sprint Backlog
In progress
Awaiting review
Feature Archive
2. Tell-a-friend
Est. size = 8
3. Tell-a-friend
Est. size = 8
4. Tell-a-friend
Est. size = 8
5. Tell-a-friend
Est. size = 8
Real size = 8
6. Tell-a-friend
Est. size = 8
Real size = 8
...
...
...
...
...
...
...
...
1. Tell-a-friend

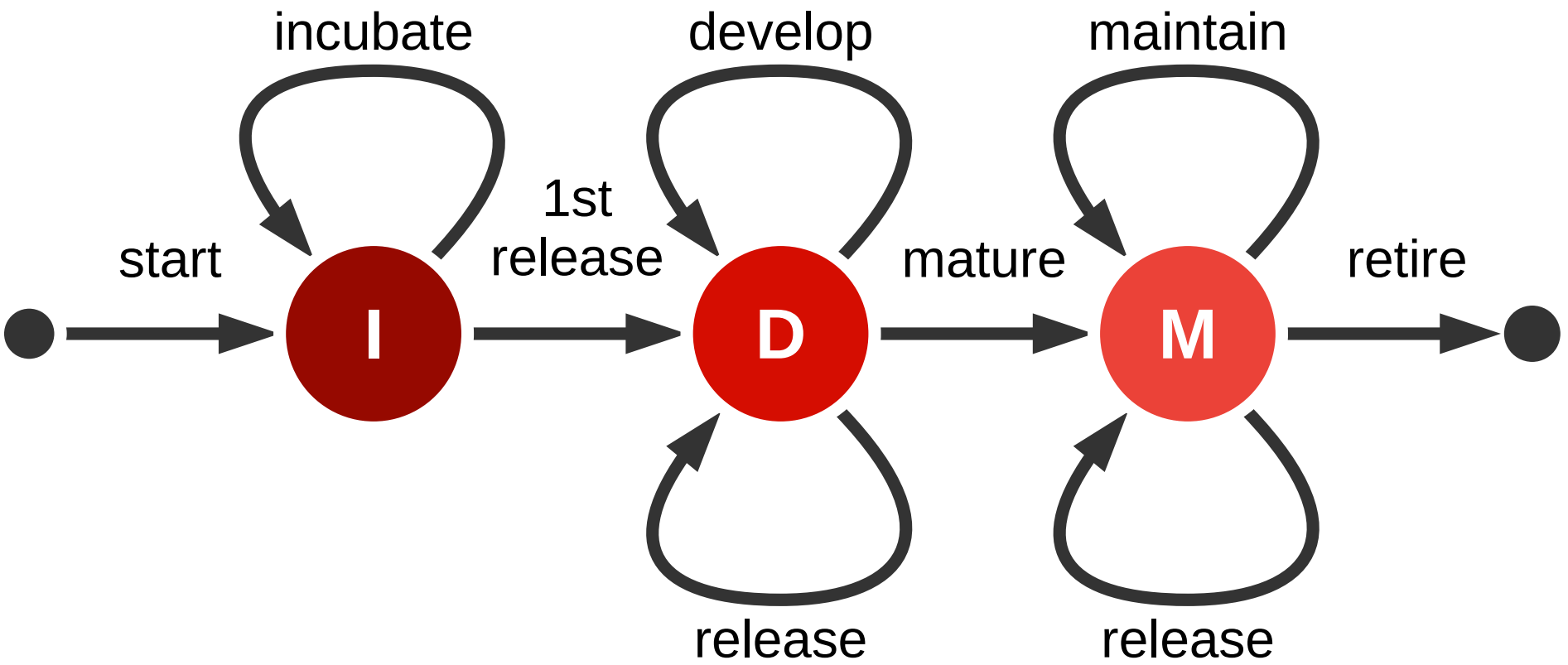

Team Meeting Day
...
1. Meeting Preparation
2. Sprint Review
3. Sprint Release
4. Sprint Retrospective
5. Sprint Planning
6. Meeting After-work
...
Previous Sprint
Next Sprint
Team Meeting

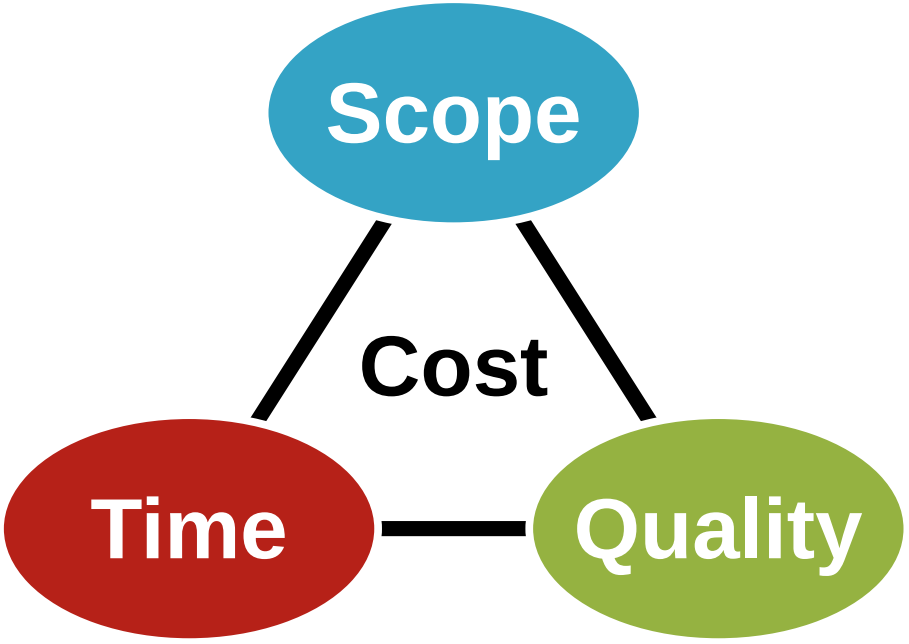

start
Product owner picks feature
Product owner reads story
Product owner explains story
Each developer deliberates
Each developer plays card
Agreement?
yes
no
Developers discuss story
Developers re-view total effort
Done?
no
yes
Product owner adjusts backlog
end

Part C

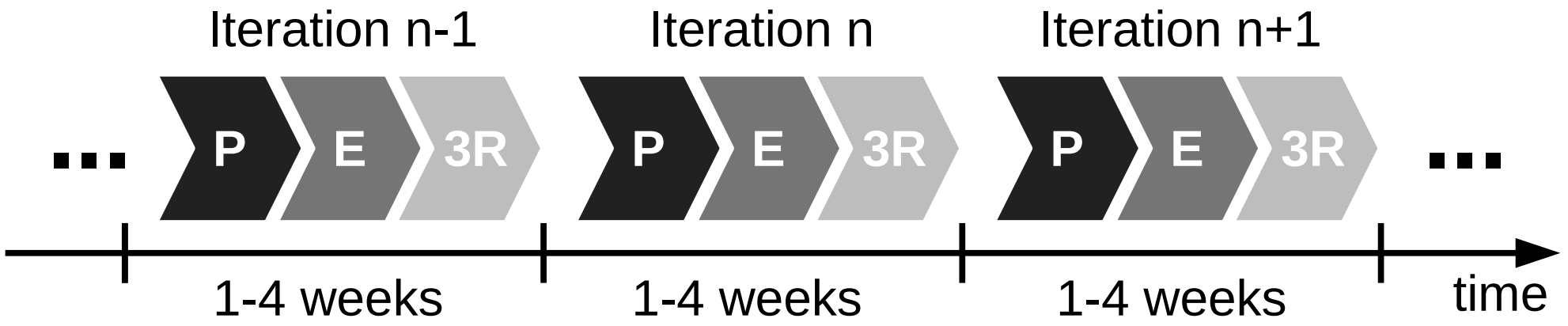
Software Processes

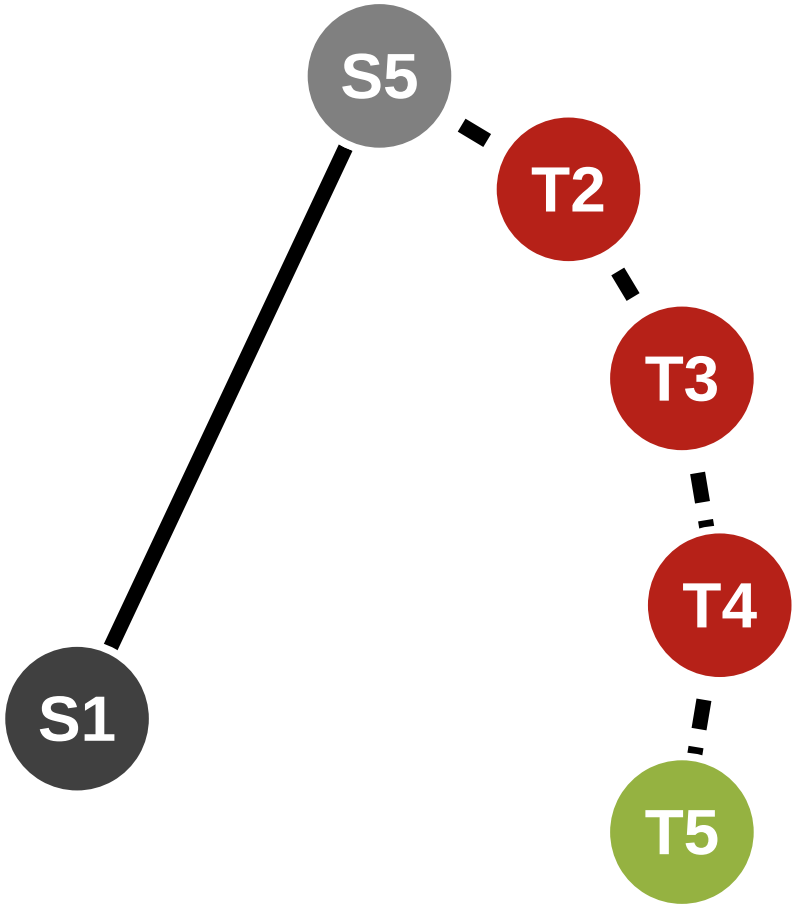

Product Management
Engineering
Quality Assurance
PM
Plan
MRD, PRD
EM
Plan
Rel. Plan
SD
Code
Code
QAM
Plan
Test Plan
QAE
Code
Code, Script

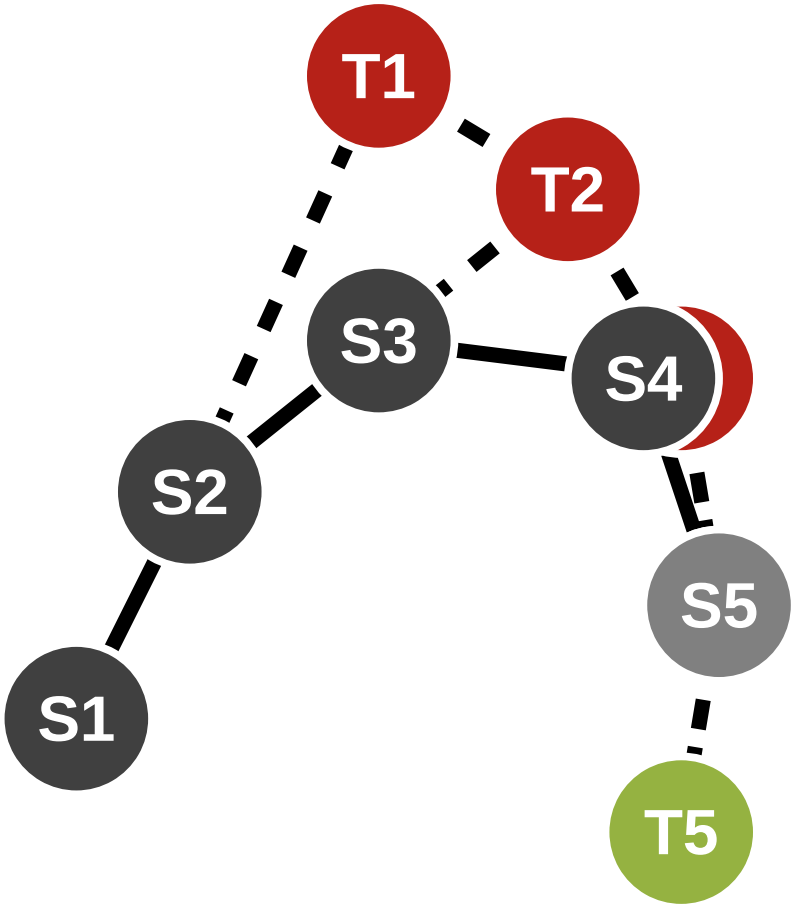

incubate
develop
maintain
start
1st
release
mature
retire
I
D
M
release
release

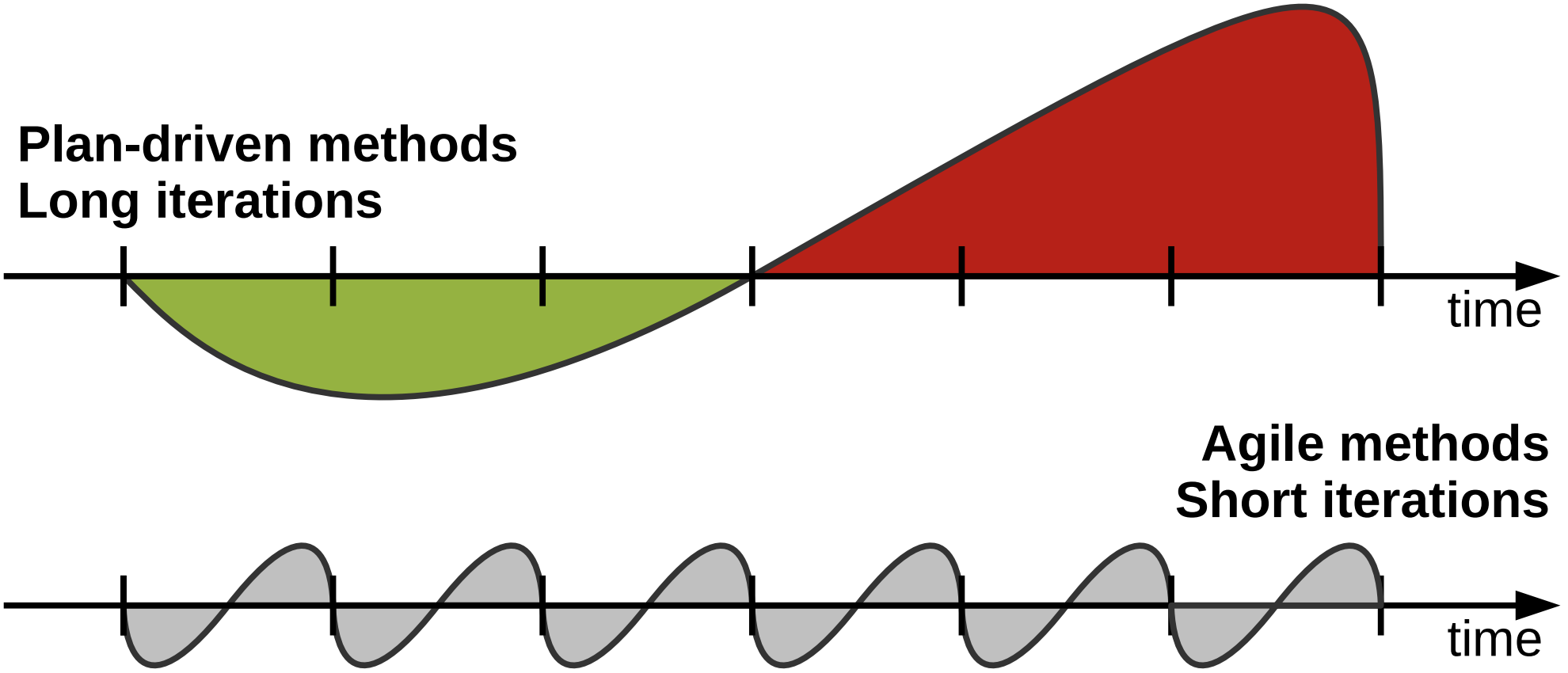

Scope
Cost
Time
Quality

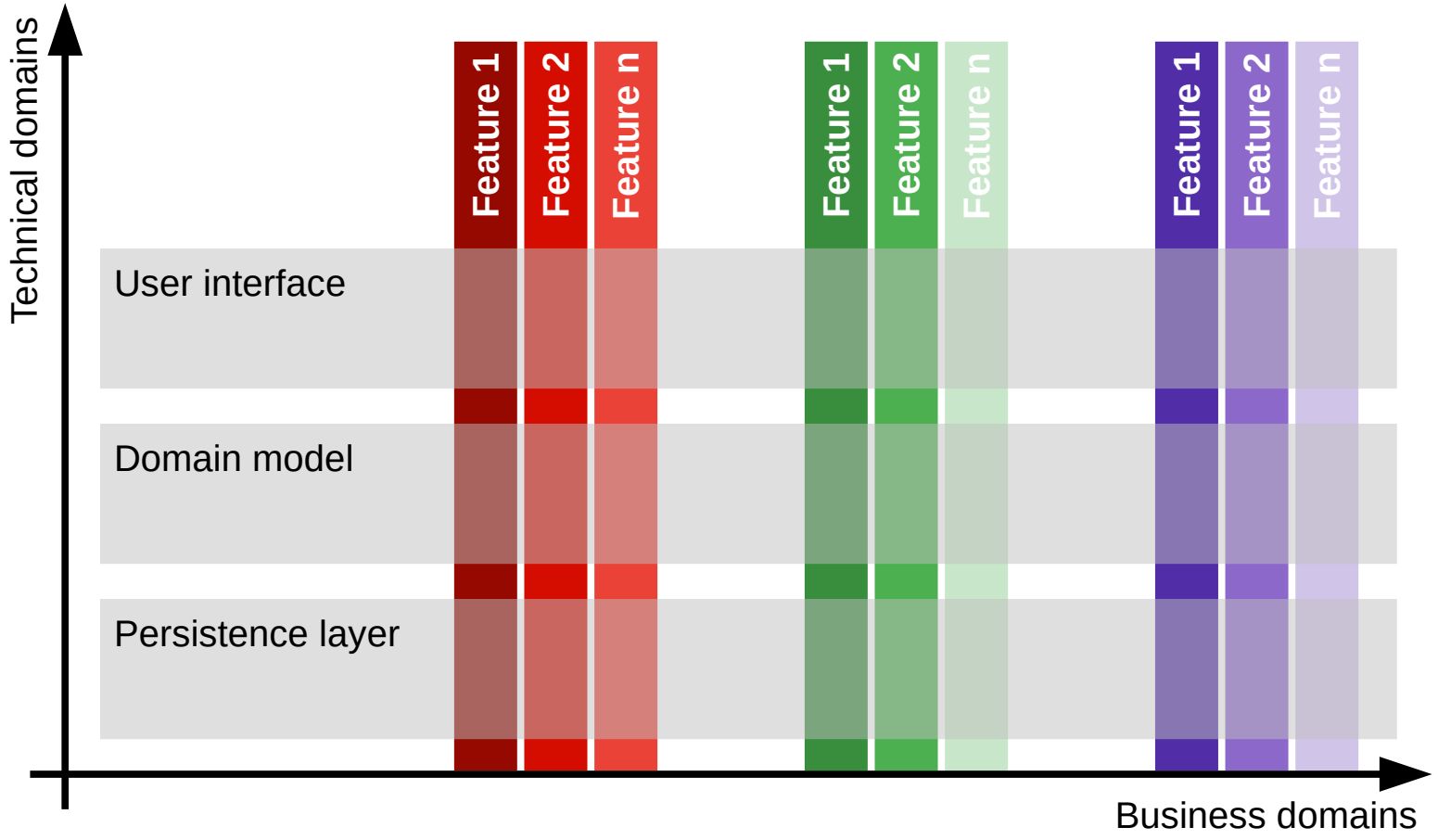
start
Planning
Execution
Review
Release
end
6 months – 5 years
time

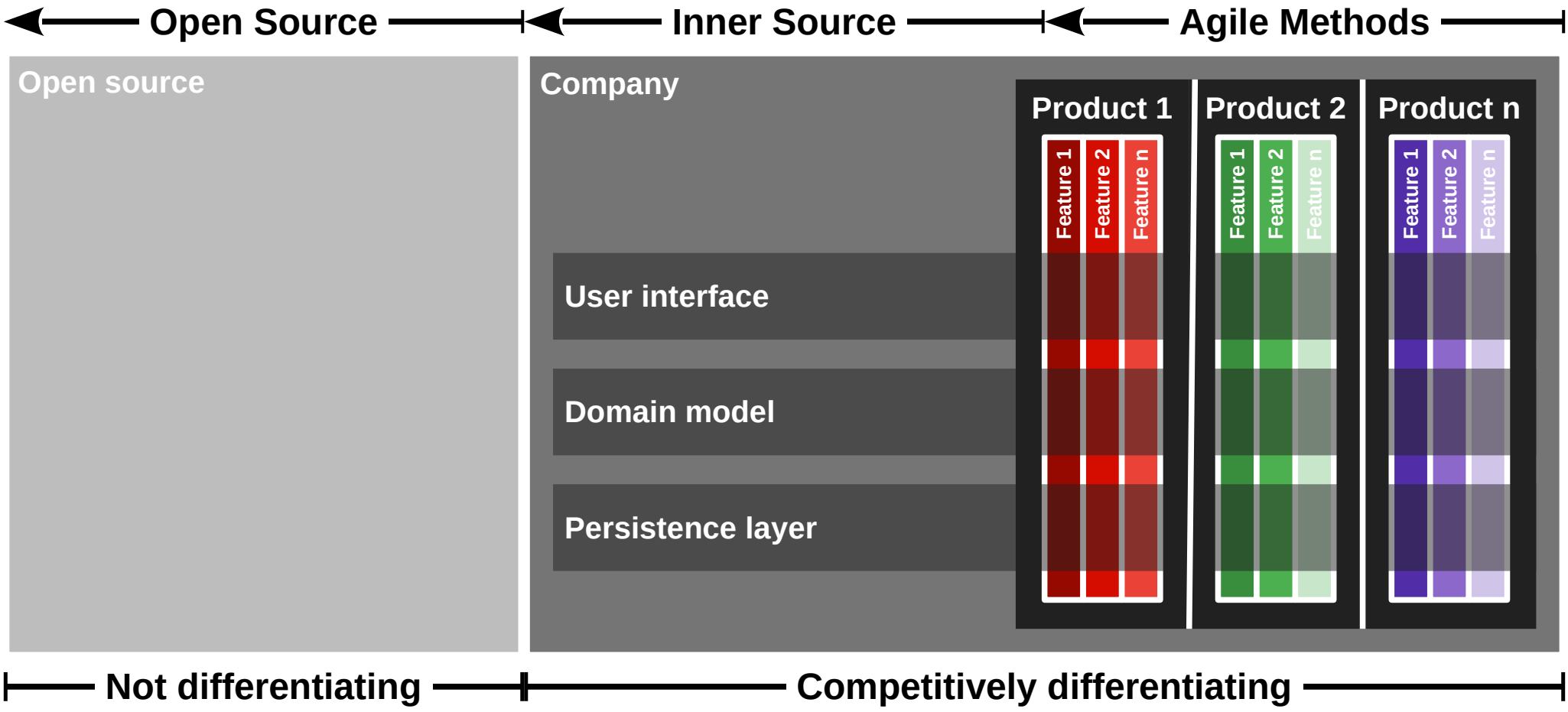

Iteration n-1
Iteration n
Iteration n+1
...
P
E
3R
P
E
3R
P
E
3R
...
1-4 weeks
1-4 weeks
1-4 weeks
time

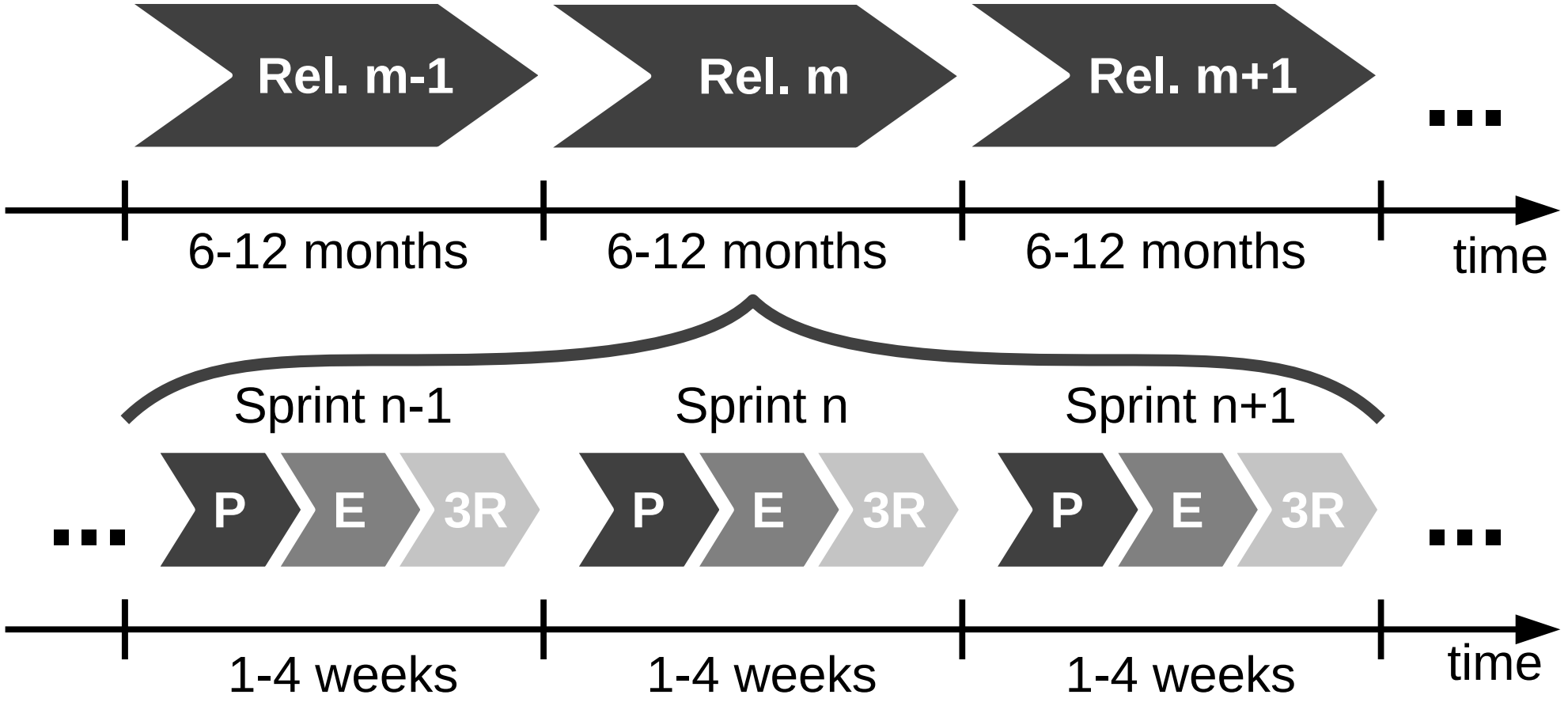

S5
T2
T3
T4
S1
T5

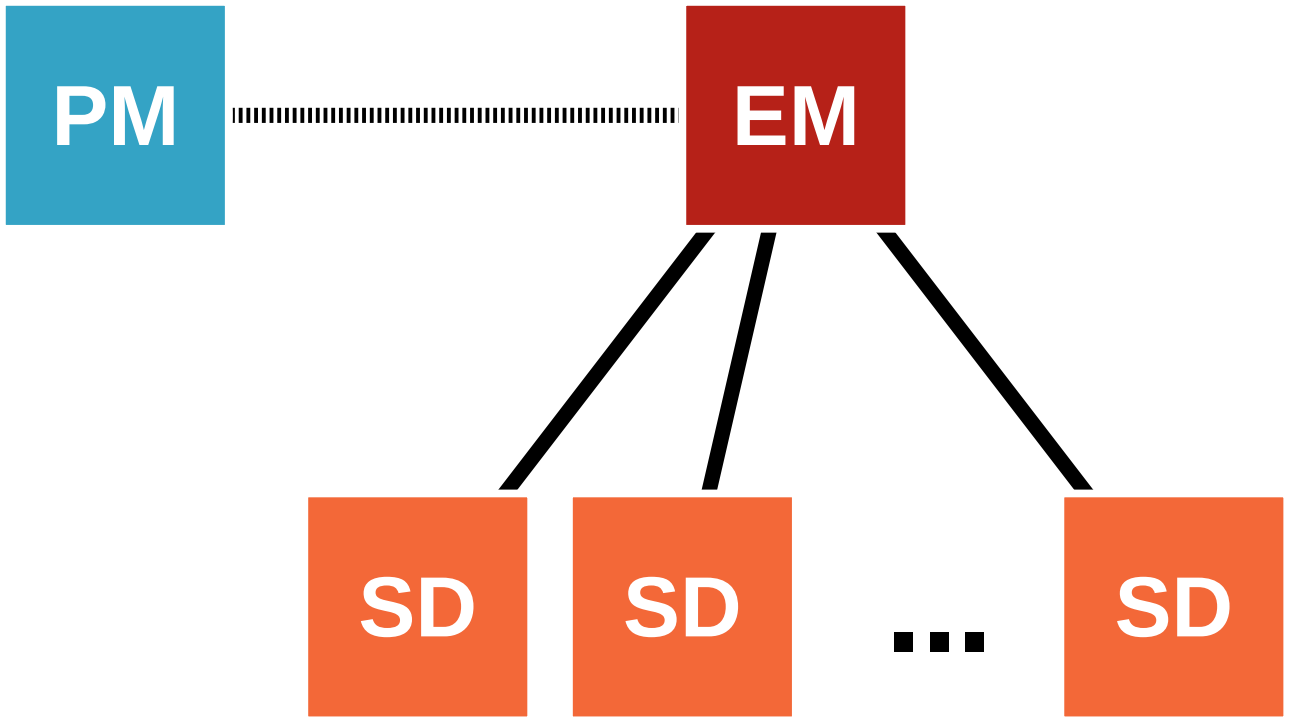

T1
T2
S3
S4
S2
S5
S1
T5


Plan-driven methods
Long iterations
time
Agile methods
Short iterations
time


Technical domains
Feature 1
Feature 2
Feature n
Feature 1
Feature 2
Feature n
Feature 1
Feature 2
Feature n
User interface
Domain model
Persistence layer
Business domains


Open Source
Inner Source
Agile Methods
Open source
Company
Product 1
Product 2
Product n
Feature 1
Feature 2
Feature n
User interface
Domain model
Persistence layer
Not differentiating
Competitively differentiating

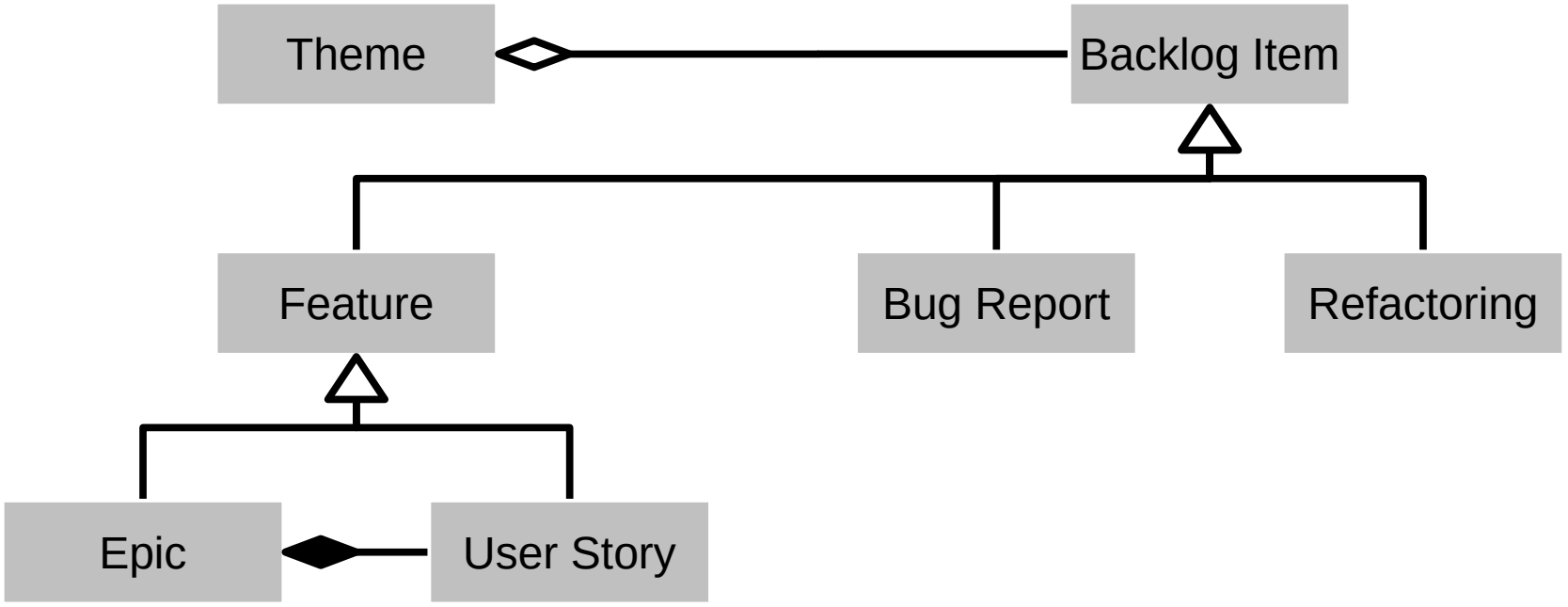

Rel. m-1
Rel. m
Rel. m+1
...
6-12 months
6-12 months
6-12 months
time
Sprint n-1
Sprint n
Sprint n+1
...
P
E
3R
P
E
3R
P
E
3R
...
1-4 weeks
1-4 weeks
1-4 weeks
time

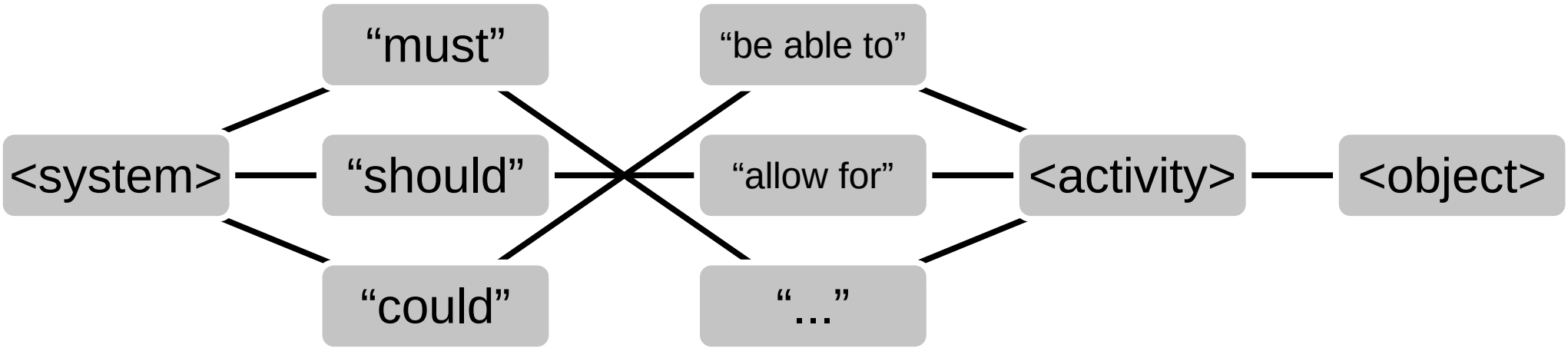

PM
EM
SD
SD
...
SD

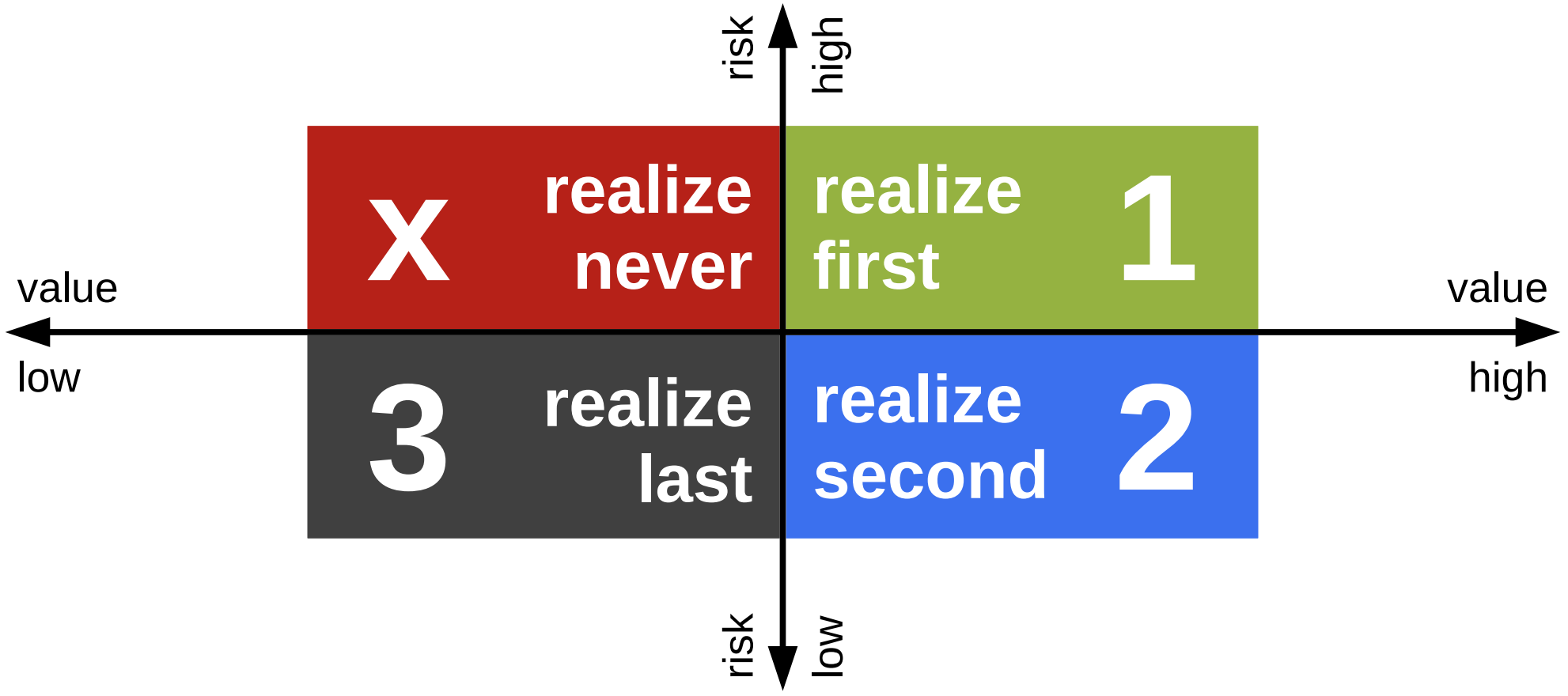
...
P
E
3R
...
time

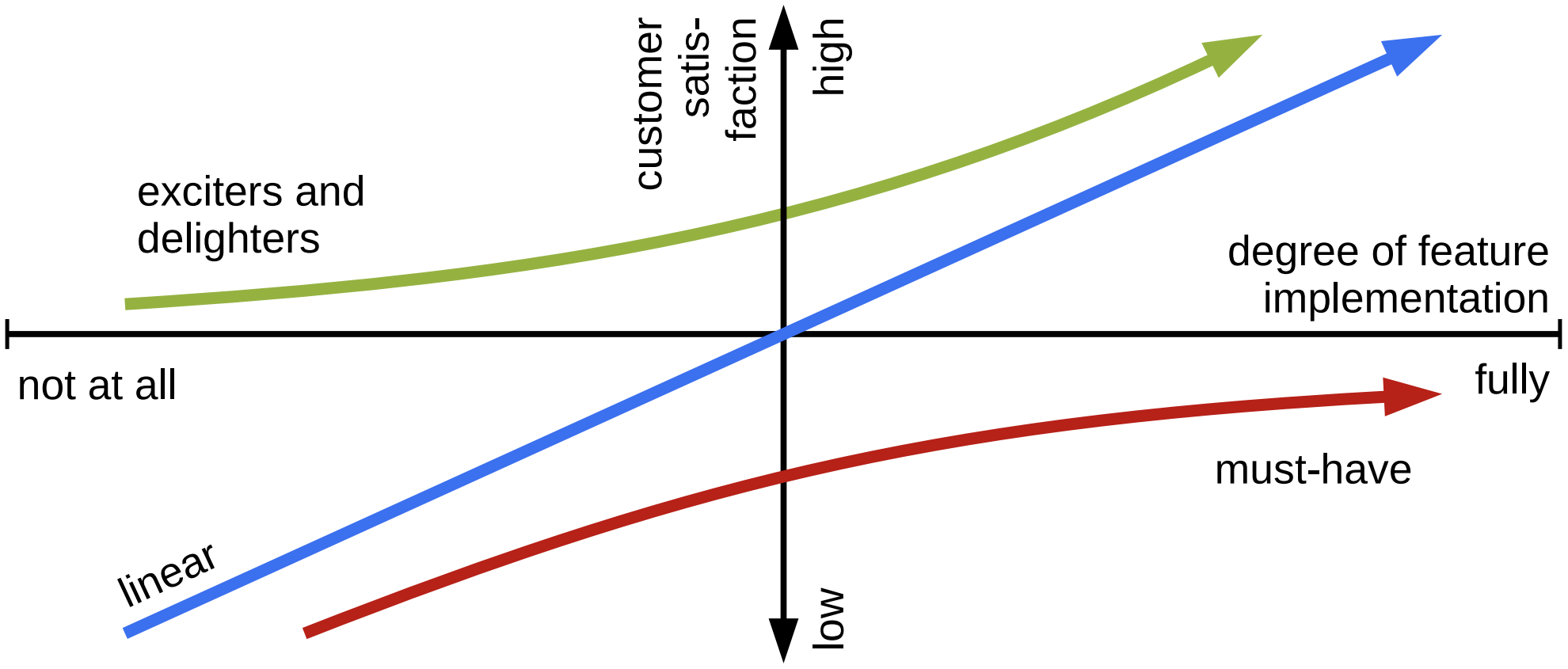
Part D

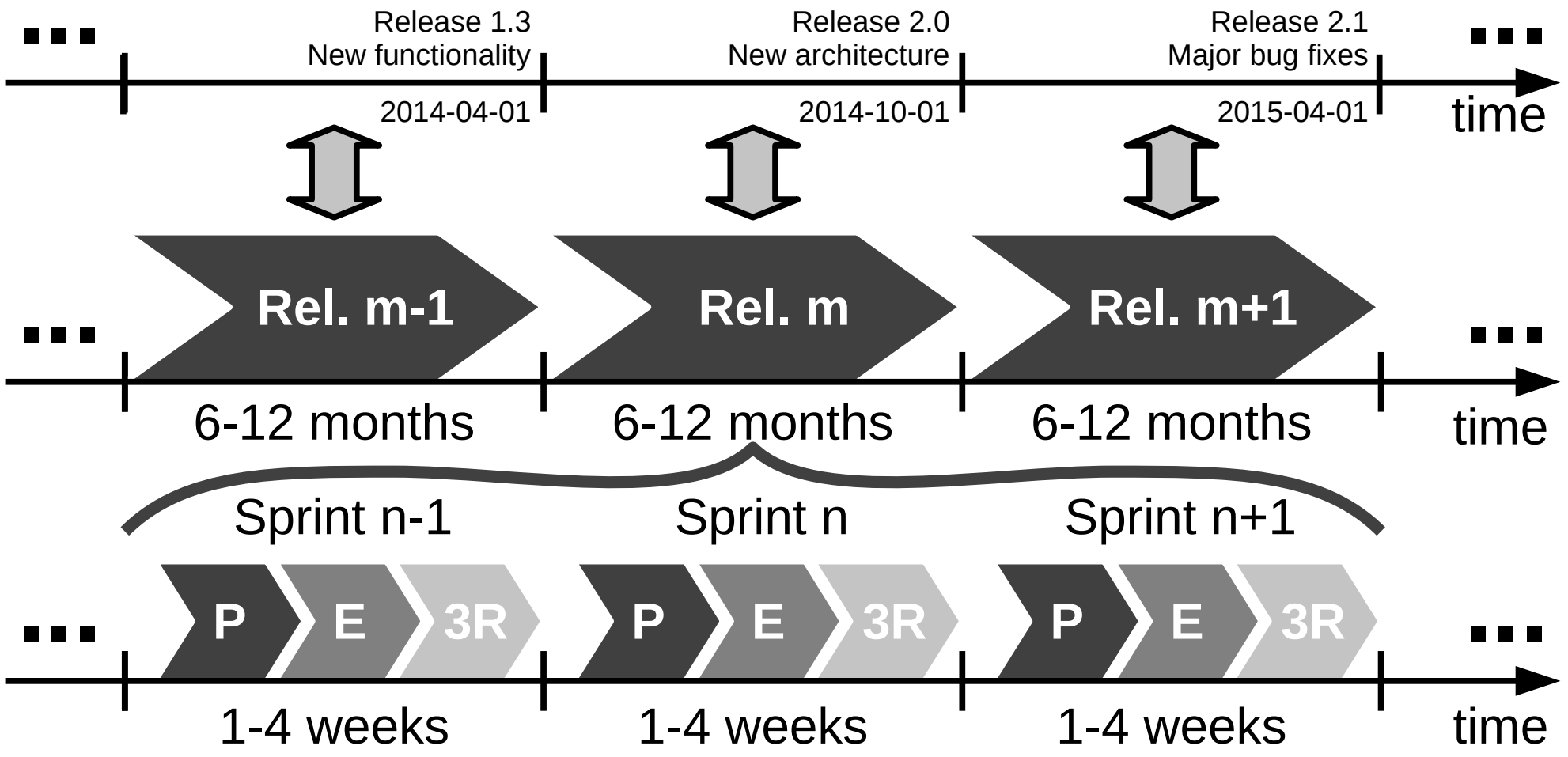
Product Management


Theme
Backlog Item
Feature
Bug Report
Refactoring
Epic
User Story


“must”
“be able to”
<system>
“should”
“allow for”
<activity>
<object>
“could”
“…”


risk
high
X
realize
never
realize
first
1
value
low
value
high
3
realize
last
realize
second
2
risk
low

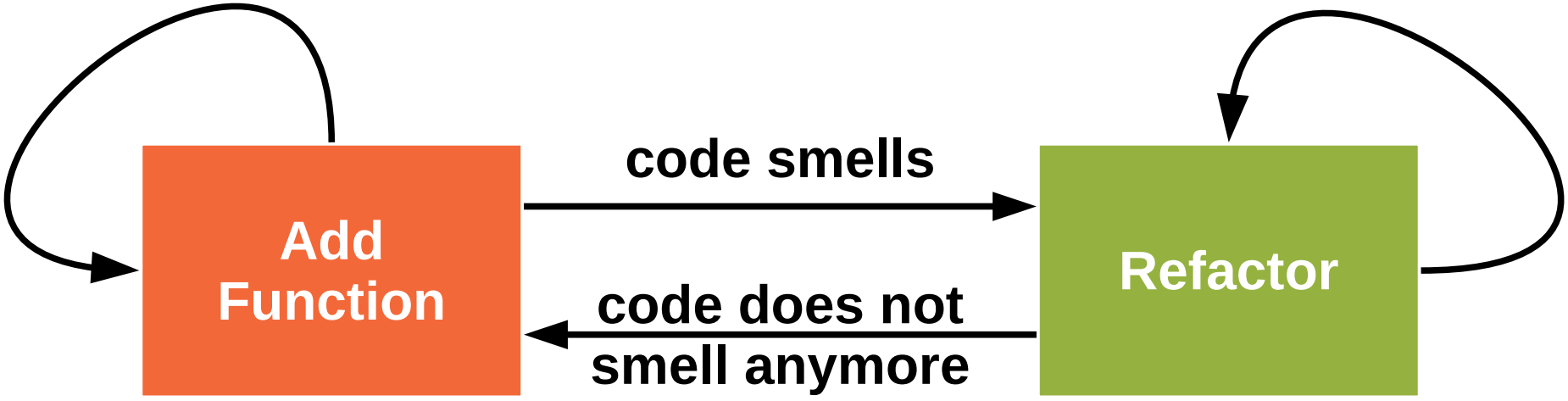

customer satis-faction
high
low
exciters and delighters
degree of feature implementation
not at all
fully
must-have
linear

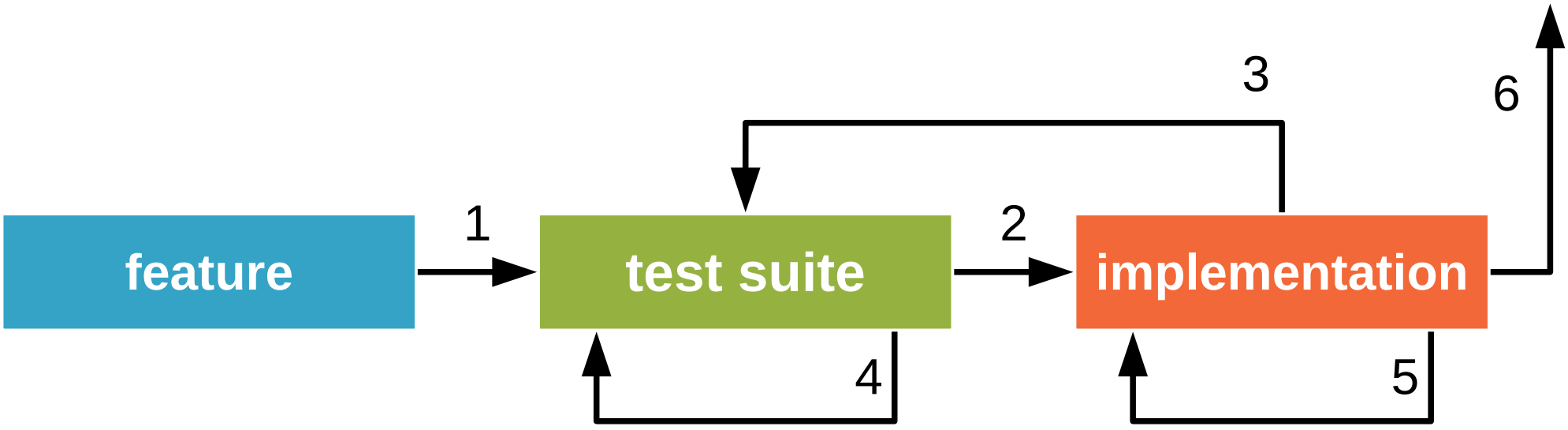

Release 1.3
New functionality
2014-04-01
Release 2.0
New architecture
2014-10-01
Release 2.1
Major bug fixes
2015-04-01
time
Rel. m-1
Rel. m
Rel. m+1
6-12 months
6-12 months
6-12 months
time
Sprint n-1
Sprint n
Sprint n+1
P
E
3R
P
E
3R
P
E
3R
1-4 weeks
1-4 weeks
1-4 weeks
time

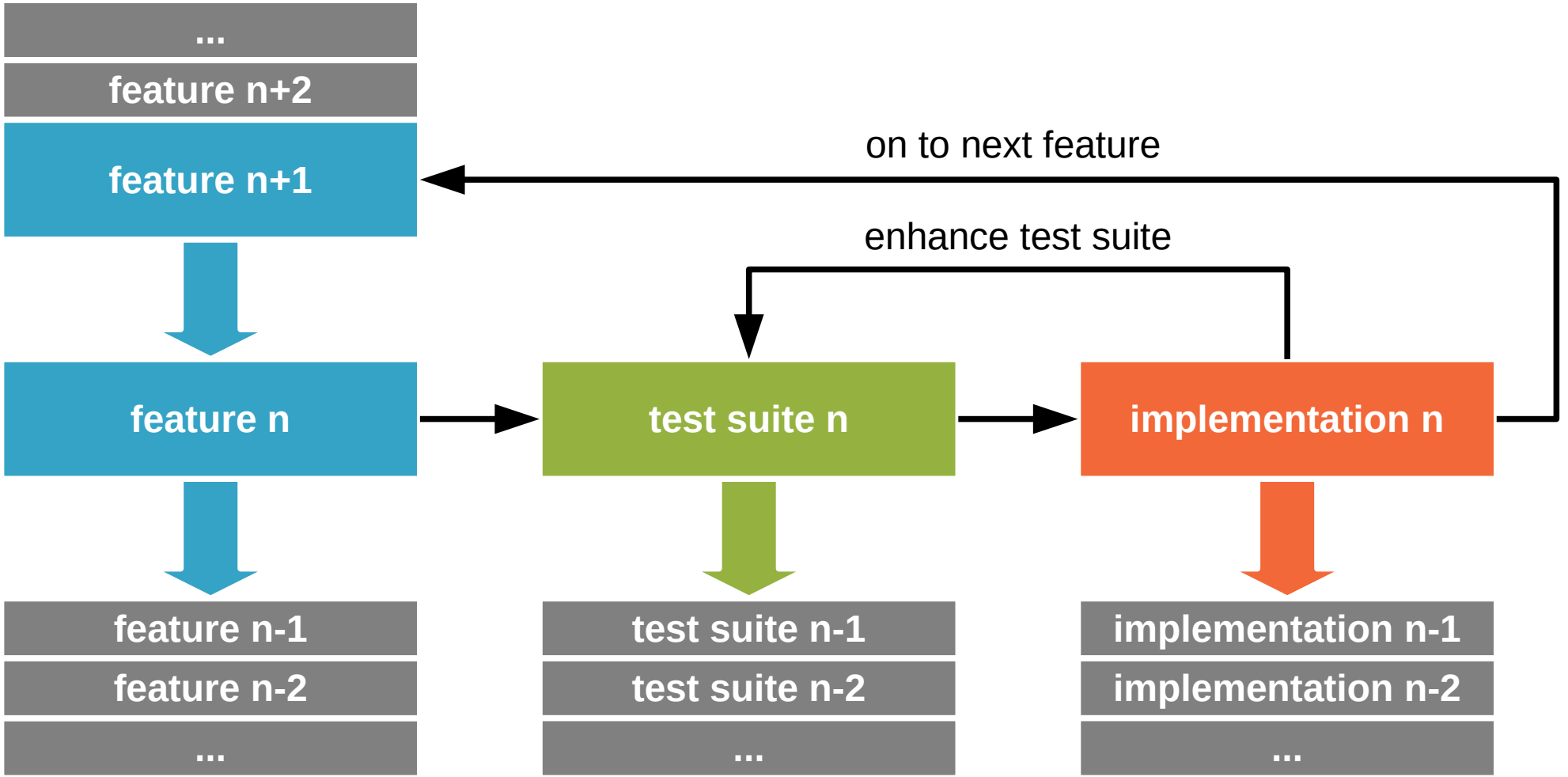
...
P
E
3R
...
P
E
3R
Release
...
time
...
P
E
3R
...
Expo
...
time

Part E

Software Development


Add
Function
code smells
code does not
smell anymore
Refactor


feature
1
test suite
2
implementation
3
4
5
6


...
feature n+2
feature n+1
on to next feature
enhance test suite
feature n
test suite n
implementation n
feature n-1
feature n-2
...
test suite n-1
test suite n-2
...
implementation n-1
implementation n-2
...

Part F

Quality Assurance

Part G

Process Improvement