Planning and Tracking

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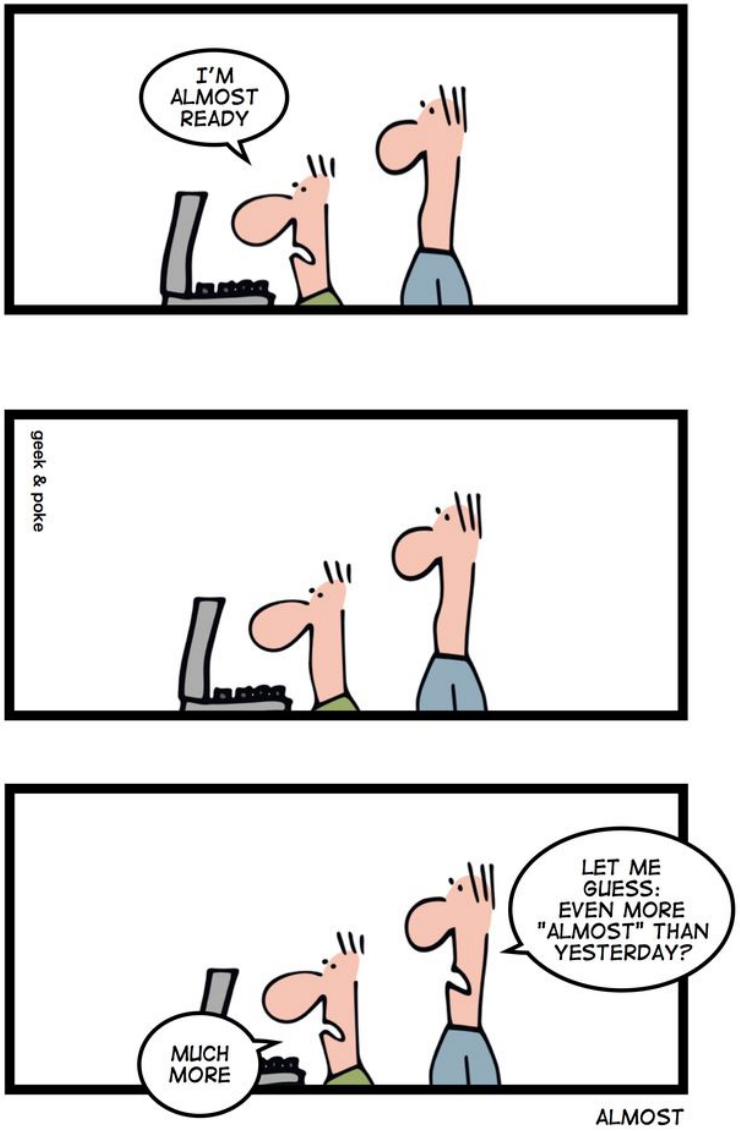
AMOS D02

Agenda

1. Planning horizons
2. Definition of done
3. Types of sprints
4. Sprint planning
5. Release planning
6. Roadmapping


I'M ALMOST READY
geek & poke
LET ME GUESS: EVEN MORE "ALMOST" THAN YESTERDAY?
MUCH MORE
ALMOST

Cartoon Lesson

- Software developers are optimists
- Reliable prediction is difficult
- You are always 80% there

1. Planning Horizons

Product Planning (Practices)

1. Roadmapping
2. Release planning
3. Sprint planning

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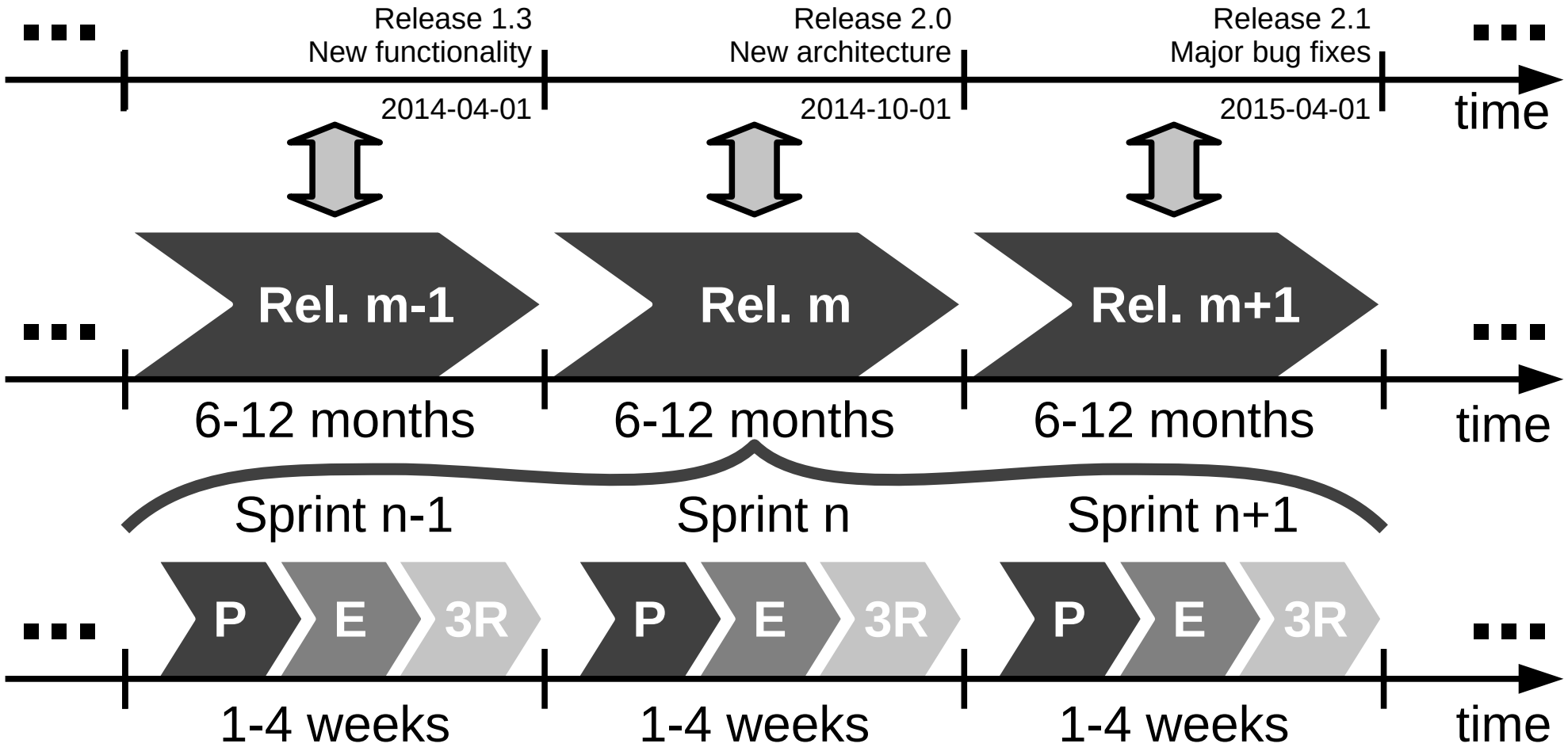
4. Feature planning

Planning Horizons



Relationship between Planning Horizons

- A roadmap is a sequence of releases
  - A roadmap can stretch over multiple years
- A product release is a sequence of sprints
  - A product release can take anything from 3-12 months or more
- A sprint is a (short) time-box / iteration
  - A sprint can be anything from 1-4 weeks

2. Definition of Done

Definition of Done (Artifact)

- Definition of Done (DoD)
  - An auditable check-list of results
  - Built from value-adding activities
  - That everyone previously agreed to
- Other properties
  - Should be orthogonal to acceptance criteria
  - It is about the non-functional aspects of work

Definition of Done (Practices)

- Agree on Definition of Done
  - Responsible: Product owner, developers
  - Artifacts: Definition of Done
  - Collaborators: Same
- Apply Definition of Done
  - Responsible: Product owner, developers
  - Artifacts: Definition of Done
  - Collaborators: Same

Applicability of Definition of Done

- **Product Release**
- **Sprint Release**
- **Single Feature**

Example DoD for Single Feature

- Single feature DoD
  - Unit tests for feature have been written and are passing
  - Code review has been completed
  - Feature branch has been tagged and merged
- Always expected
  - Project builds, deploys, and tests successfully
  - Feature was demoed and accepted by product owner

Definition of Done vs. Acceptance Criteria

- **DoD (Feature)**
  - The same for every entry
- **Acceptance Criteria**
  - Specific to a backlog entry

3. Types of Sprints

Types of Sprints

1. Regular sprint
2. Exploratory sprint
3. Cleanup sprint
4. Release sprint

Start and Duration of Regular Sprints

- Monthly Sprints
  - Is original recommendation
  - Is too long for some domains
  - Should start 1st Monday
- Two Week Sprints
  - Are realistic even for beginners
  - Align with half-month rhythm
  - Should start on Wed or Thu
- One Week Sprints
  - Requires well-working team
  - Are needed in some domains
  - Should start on Wed or Thu

Irregular Sprints

Quiz: Working with Time 1 / 2

1. Your startup is selling designer clothes to consumers on the web. What sprint duration should you choose?
   a) 1 week sprints
   b) 4 week sprints

2. Your startup is selling cryptography software to enterprise customers. What sprint duration should you choose?
   a) 1 week sprints
   b) 4 week sprints

Quiz: Working with Time 2 / 2

3. Your consulting firm is hired to enhance a bank's email software with a cryptography plug-in. Should you suggest a
   a) Defined scope but no deadline
   b) Project deadline (fixed release date)

4. You are coordinating the development of an open source multi-component JEE platform implementation. Should you release
   a) When a defined scope is reached
   b) When a defined date is reached

4. Sprint Planning

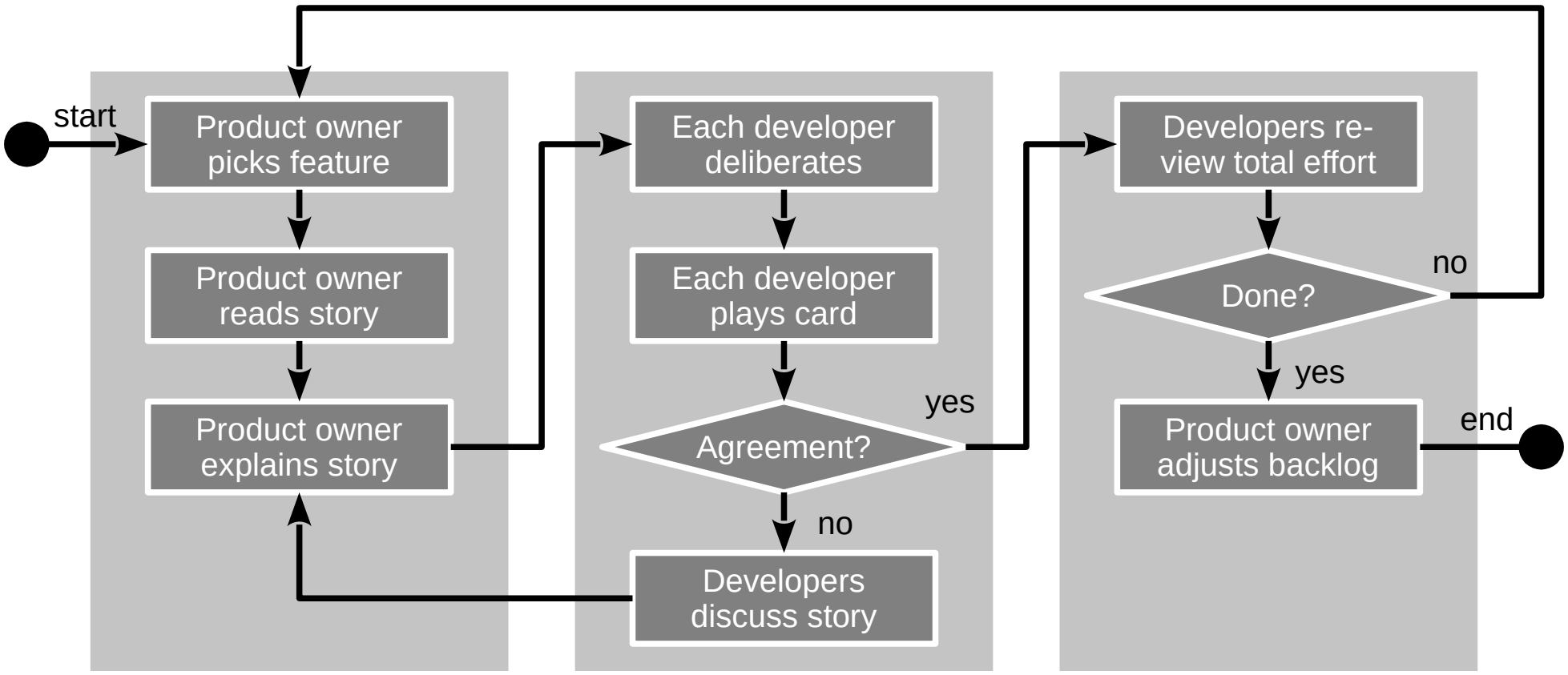
Sprint Planning 1 / 3 (Practices)

- Prepare Sprint Planning Meeting
  - Responsible: Product owner
  - Artifacts: Features, product backlog
  - Collaborators: Developers

Sprint Planning 2 / 3 (Practices)

- Lead Sprint Planning Meeting
  - Responsible: Product owner / Scrum master
  - Artifact: Product and sprint backlog
  - Collaborators: Developers
- Explain Feature
  - Responsible: Product owner
  - Artifact: Feature
  - Collaborators: Developers
- Estimate Feature Size (a.k.a. Play Planning Poker)
  - Responsible: Developers
  - Artifact: Feature
  - Collaborators: Product owner

Playing Planning Poker (Practice)



Sprint Planning 3 / 3 (Practices)

- Manage Sprint Backlog
  - Responsible: Product owner
  - Artifacts: Features, product and sprint backlog
  - Collaborators: Developers

Sprint Backlog (Artifact)

ID	Theme	Short Name	Item Description	Acceptance Criteria	Size
9	Photo Management	Browse Photo Portfolio	As a user, I can browse my collection of uploaded photos, i.e. my photo portfolio, complemented by basic information	I am provided with a browseable list of all my photos to select one from	8
10	Photo Management	Select Photo	As a user, I can select any one of my photos and have it shown to me, including any added information	After selecting one of my photos I'm presented with a screen that shows the photo and its information	5
11	Photo Management	Change Photo Data	As a user, I can select any of my photos and change the information available for it	After changing the photo's information, the change becomes effective immediately	3
12	Photo Management	Delete Photo	As a user, I can select any photo from my portfolio and have it deleted	After deleting the photo, it will not be shown any longer to any user	5

Chart | Development Speed | Product Backlog | Sprint Backlog | Feature Archive

Example DoD for Sprint Release

- Sprint Release DoD
  - Database consistency checks in test environment succeeded
- Always expected
  - Project builds, deploys, and tests successfully

Quiz: Sprint Planning

1. If a “user registration feature” is 8 story points, then a “user login feature” must be of size
   a) Less than 8 points
   b) Exactly 8 points
   c) More than 8 points
   d) Cannot determine

Development Speed (Velocity)

$$v = s / t$$

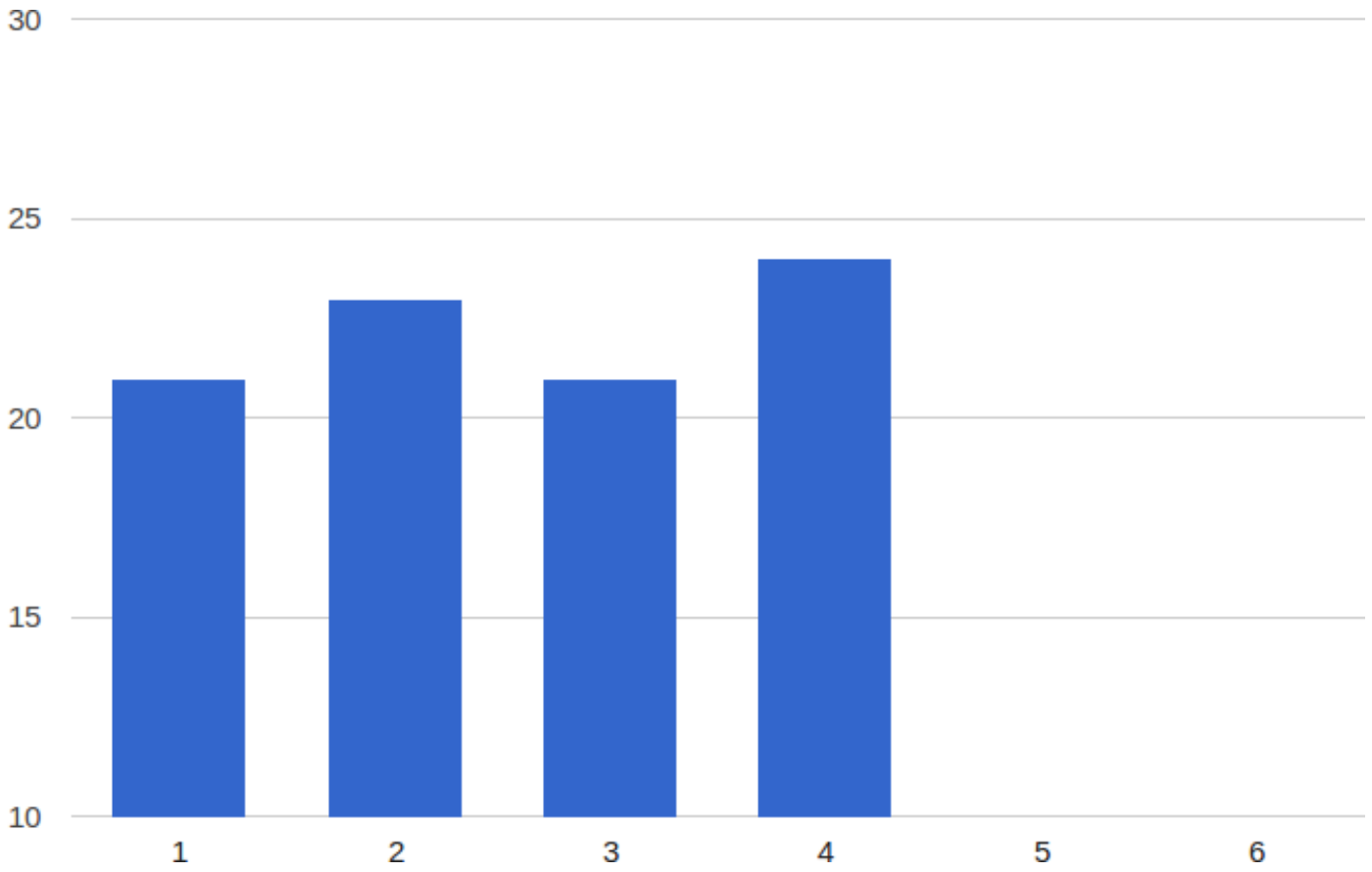
[story points / sprint]

v = speed (velocity)
s = size (of feature)
t = time (in sprints)

Track Development Speed (Practice)

- Track Development Speed
  - Responsible: Product owner
  - Artifacts: Sprint backlog
  - Collaborators: None

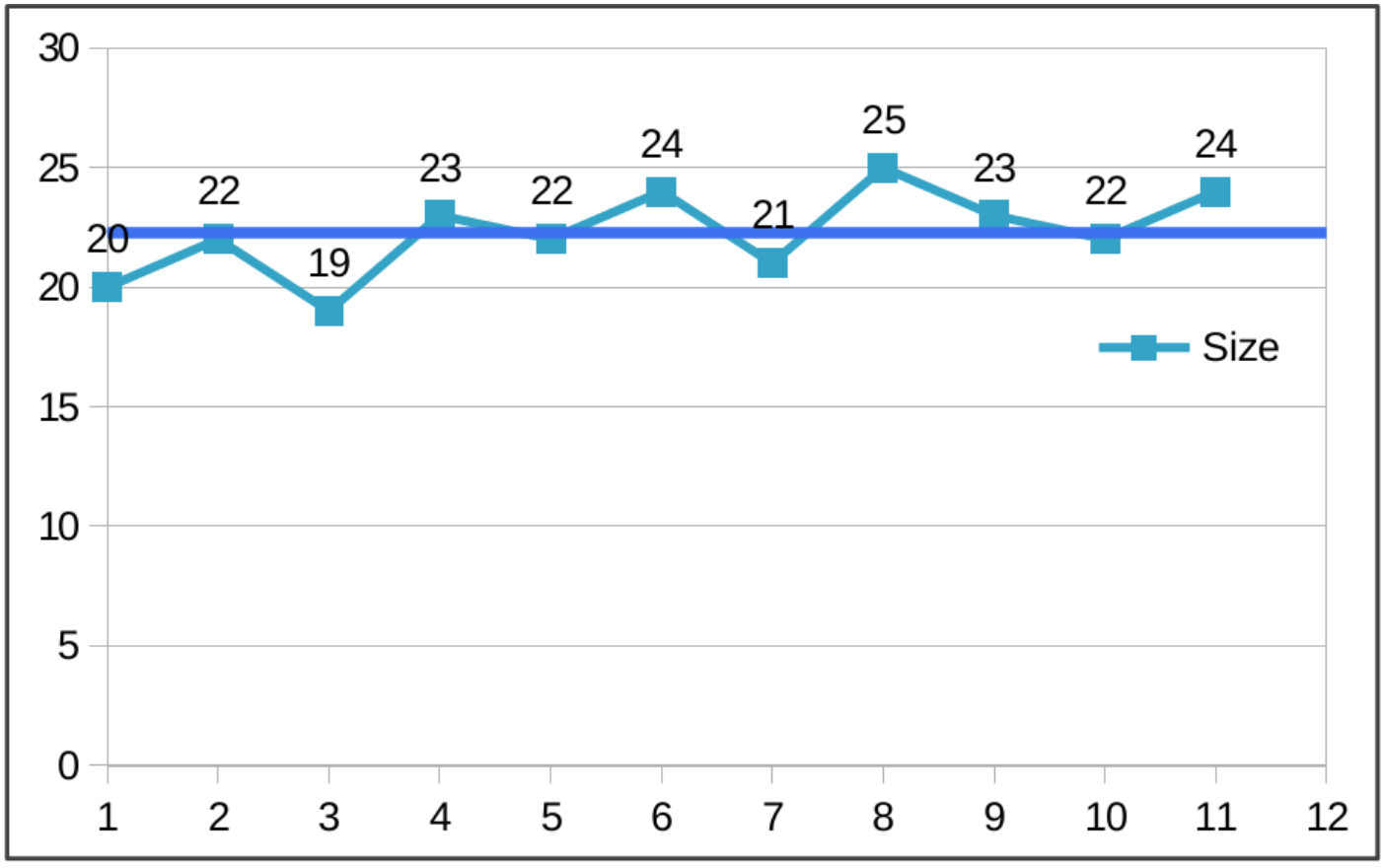
Development Speed Chart (Artifact)



Working with Development Speed

#	Size
1	20
2	22
3	19
4	23
5	22
6	24
7	21
8	25
9	23
10	22
11	24
12	

Avg	22,27



Quiz: Progress Tracking

1. You are calculating development speed using a moving average of the last four sprints. Development speed fluctuates wildly. Possible reasons may be:
   a) The user stories are badly written
   b) The team is being distracted
   c) The code quality is poor
   d) All of the above

5. Release Planning

Release Planning (Practice)

- Plan Releases
  - Responsible: Product owner
  - Artifacts: Release plan
  - Collaborators: Market / customer, funder / sponsor
  - **Note: Not part of Scrum proper**

Release Plan (Artifact)

- Release Plan
  - A sequence of releases with defined start and end times
  - Where each release represents a deployable product increment
  - That provides new significant business value to market / customer
  - **Note: Core of roadmap is captured as the release plan**

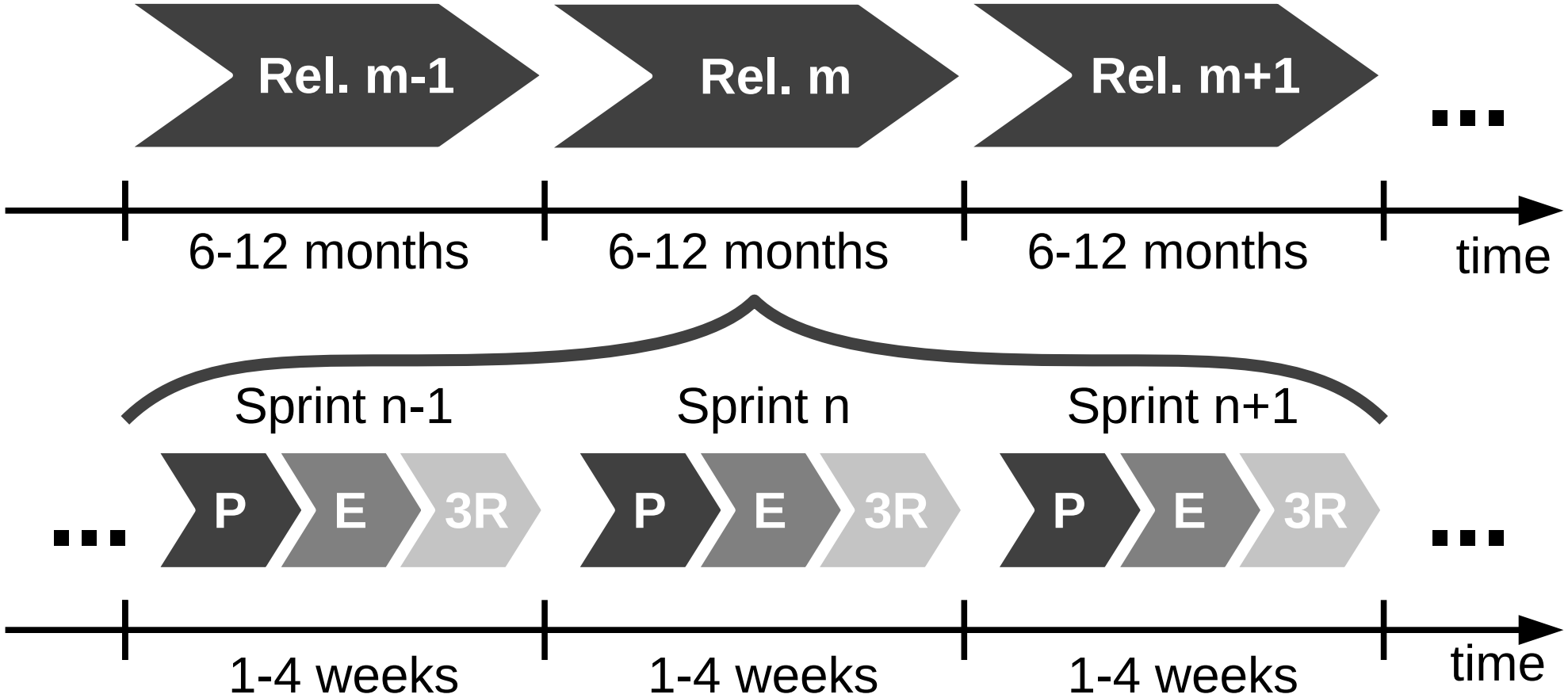
- Other properties
  - Defined rhythm: Releases should be of about equal length in time
    - Common are 3, 6, and 12 months increments
  - External factors: Start and end dates are often determined by external factors

- The release plan defines the release schedule

Example Release Plan

Release	Mid-term						
No Sprints	6						
Due Date	12.04.11						
Sprint	**Sprint Theme**	**User Stories**	**Pred. Size**	**Pred. Burn-Down**	**Real Size**	**Real Burn-Down**	**Dev. Speed**
0				136		134	
1	Basic Visitor Self-Admin	1, 2, 3, 4	21	115	21	113	21
2	Basic User Self-Admin	5, 6, 7, 8	21	94	23	90	22
3	Basic Photo Management	9, 10, 11, 12	25	69	21	69	22
4	Basic Visitor Photo Rating	13, 14, 15	24	45	24	45	22
5	Basic System Administration	16, 17, 18, 19	21	24			18
6	Basic Complaint System	20, 21, 22, 23	24	0			15
Total			**136**		**89**		
Release	**Final**						
No Sprints	6						
Due Date	24.05.11						
Sprint	**Sprint Theme**	**User Stories**	**Pred. Size**	**Pred. Burn-Down**	**Real Size**	**Real Burn-Down**	**Dev. Speed**
6				155			
7	Viral Marketing Features	24, 25, 26, 27	25	130			
8	Advanced Photo Management	28, 29, 30, 31, 32	25	105			
9	Basic Community Forums	33, 34, 35, 36	23	82			
10	Advanced System Management	37, 38, 39	27	55			
11	Advanced Photo Tagging	40, 41, 42, 43	28	27			
12	Search Engine Optimization	44, 45, 46	27	0			
Total			**155**		**0**		

Release as Sequence of Sprints



Single Release Plan (Artifact)

- Single Release Plan
  - Is a product increment for the next market release / customer deployment
  - Consists of all product backlog items considered part of that increment
  - Structures the release into sprints by theme and purpose
  - Is a planning and communication tool, not a strict plan
- Other properties
  - Evolving: Is adapted in reaction to changes in team and environment

Single Release Planning (Practice)

- Plan Single Release
  - Responsible: Product owner
  - Artifacts: Single release plan
  - Collaborators: Market / customer, developers

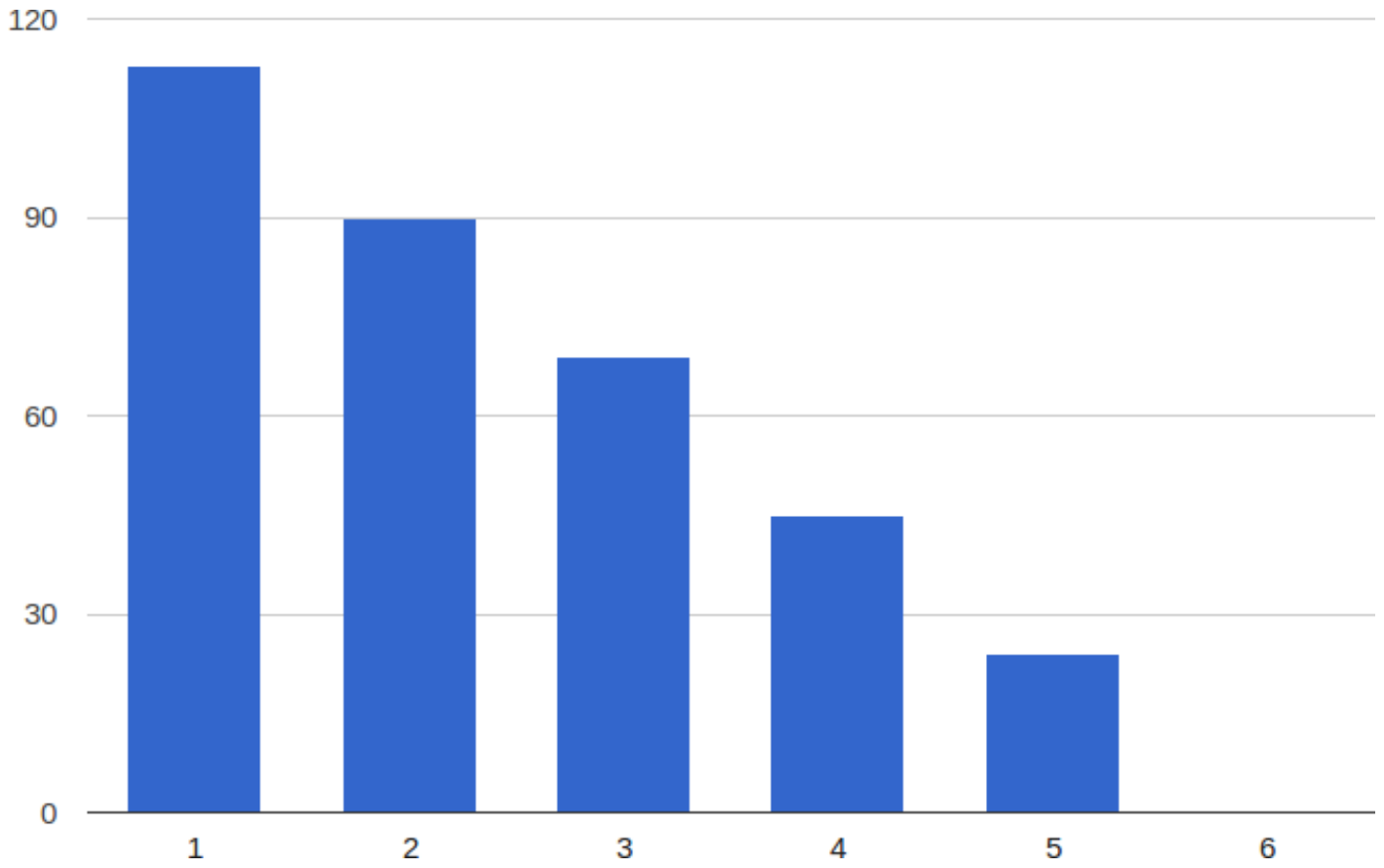
Example DoD for Product Release

- Product release DoD
  - Component test coverage is 70% or higher
  - Software documentation passes external review
  - User manual passes external review
- Always expected
  - Project builds, deploys, and tests successfully

Track Release Burn-Down

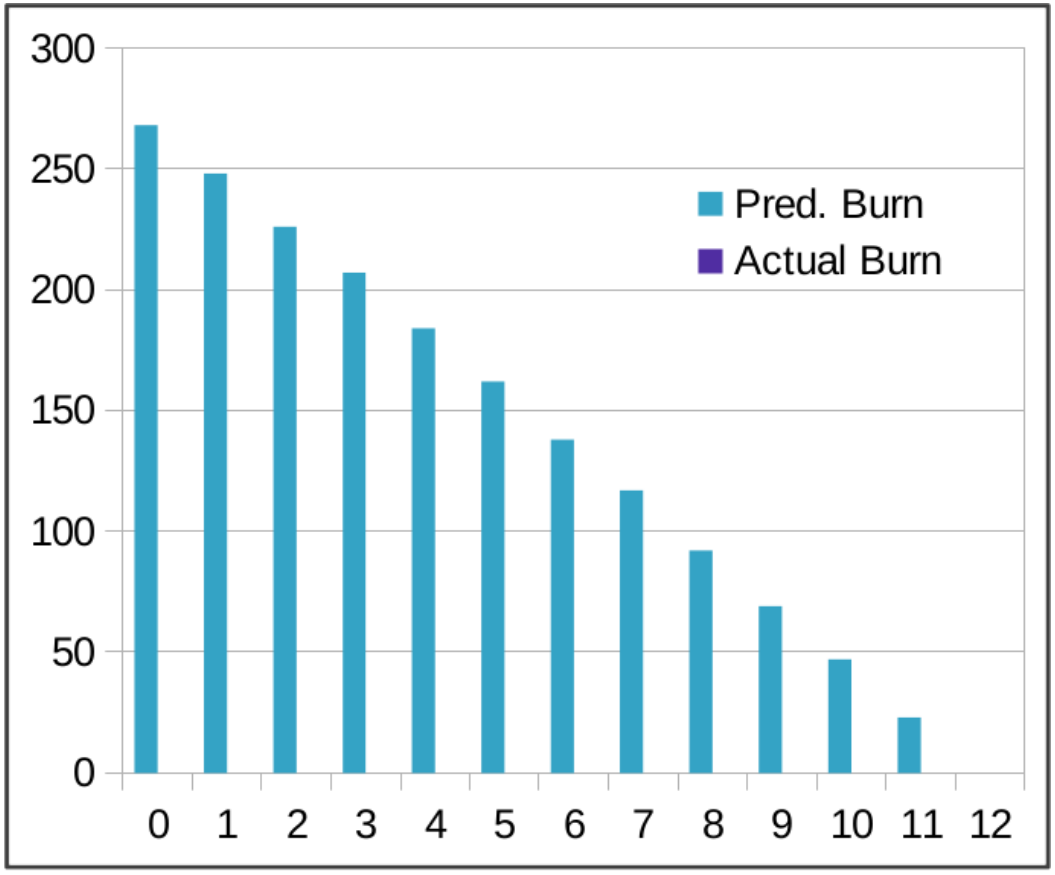
- Track Release Burn-down
  - Responsible: Product owner
  - Artifacts: Release burn-down chart
  - Collaborators: None

Release Burn-down Chart (Artifact)



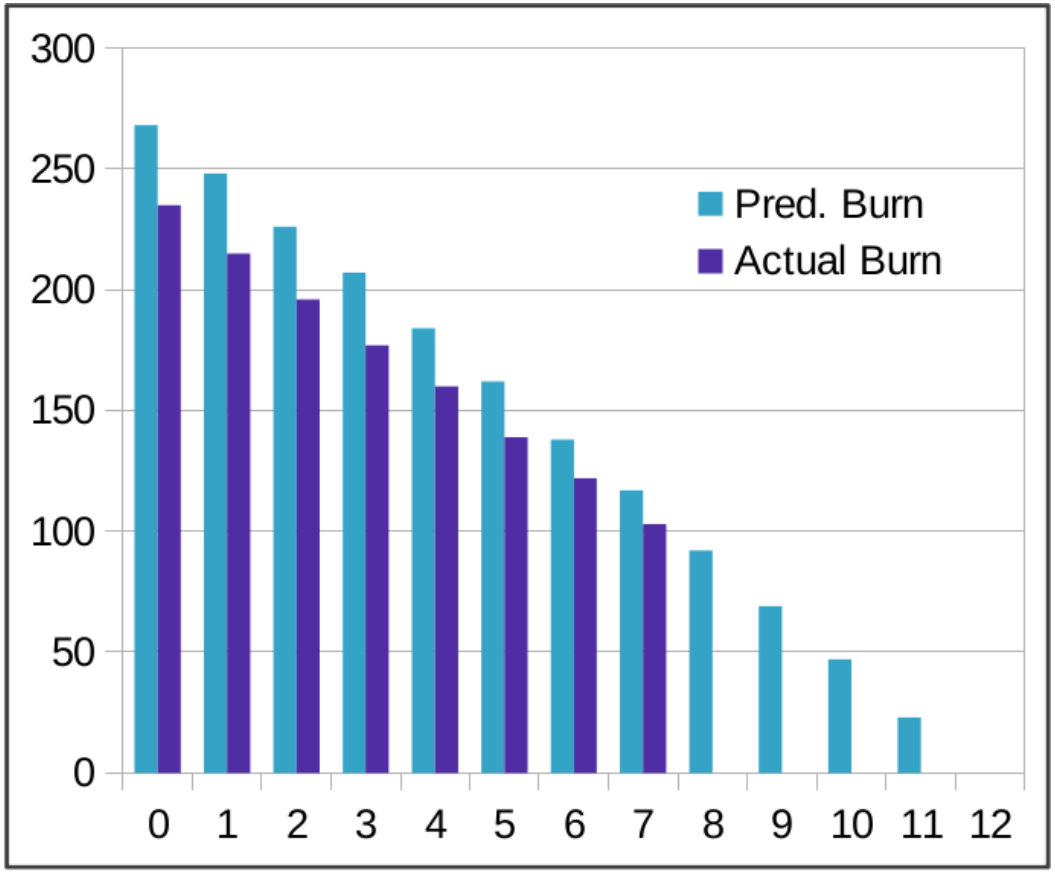
Predicting Burn-down

#	Pred. Size	Pred. Burn	Actual Size	Actual Burn
0		268		
1	20	248		
2	22	226		
3	19	207		
4	23	184		
5	22	162		
6	24	138		
7	21	117		
8	25	92		
9	23	69		
10	22	47		
11	24	23		
12	23	0		



Adjusting Burn-down

#	Pred. Size	Pred. Burn	Actual Size	Actual Burn
0		268		235
1	20	248	**20**	215
2	22	226	**19**	196
3	19	207	**19**	177
4	23	184	**17**	160
5	22	162	**21**	139
6	24	138	**17**	122
7	21	117	**19**	103
8	25	92	21	82
9	23	69	20	62
10	22	47	19	43
11	24	23	22	21
12	23	0	21	0



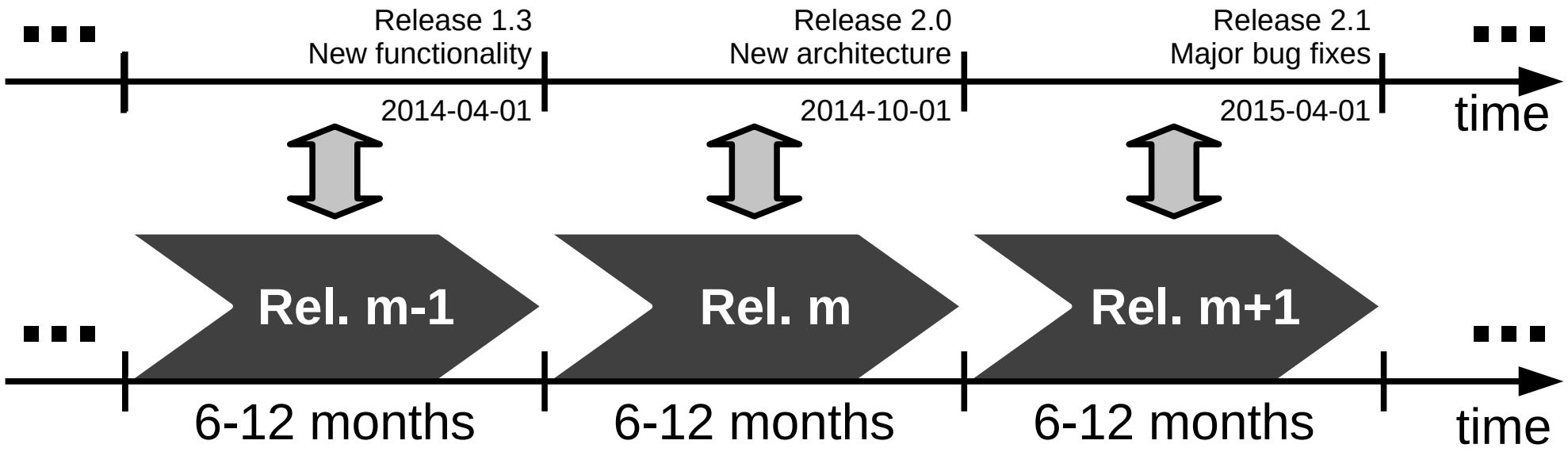
6. Roadmapping

Roadmap (Artifact)

- External Roadmap
  - Overview-oriented; few details are provided
  - Serves communication needs
  - Serves external stakeholders
- Internal Roadmap
  - As detail oriented as needed (richer than external roadmap)
  - Serves planning and communication needs
  - Serves internal stakeholders

Roadmap as Sequence of Releases

External roadmap

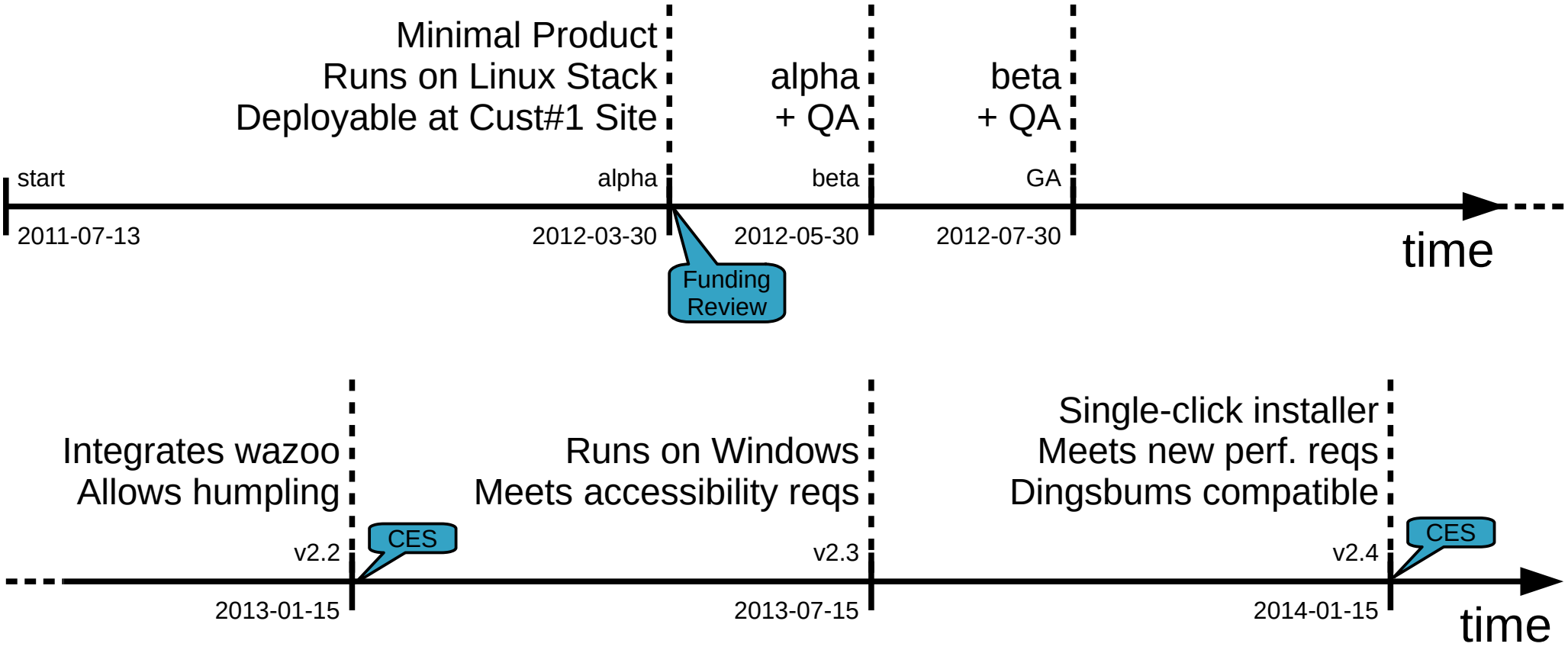


Internal roadmap

Roadmapping (Practice)

- Plan Roadmap
  - Responsible: Product owner
  - Artifacts: Release plan, releases
  - Collaborators: Market / customer, funder / sponsor
  - **Note: Not part of Scrum proper**

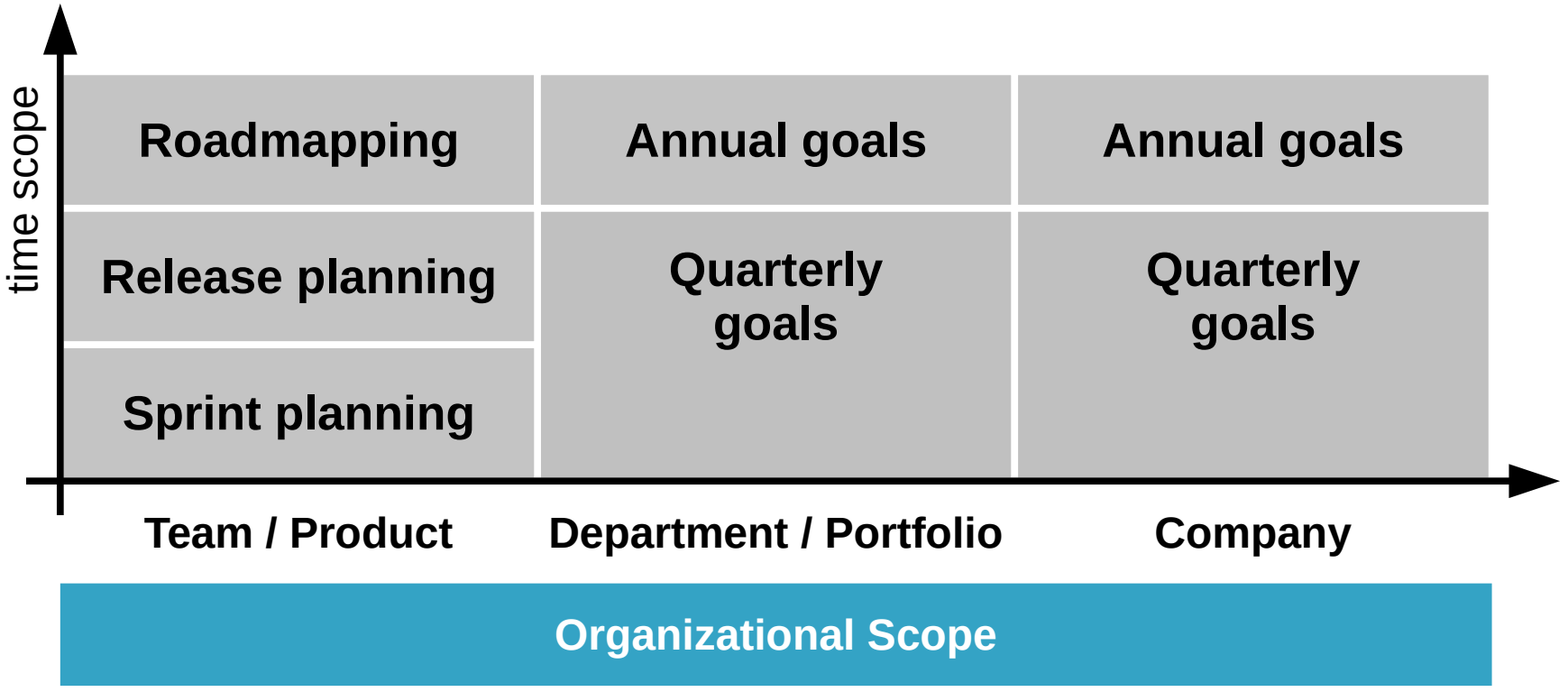
Example Roadmap



Vision vs. Roadmap vs. Release

	Timeframe	Content	Certainty	Owner
Product Vision	Long-term (3+ years)	High-level ideas	Low	CEO
Product Roadmap	Medium (1-5 years)	Themes and epics	Medium	Strategic product manager
Product Release	Short-term (months)	Epics and features	High	Technical product manager

Planning by Organizational Scope



Review / Summary of Session

1. Planning horizons
2. Definition of done
3. Types of sprints
4. Sprint planning
5. Release planning
6. Roadmapping

Thank you! Questions?

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