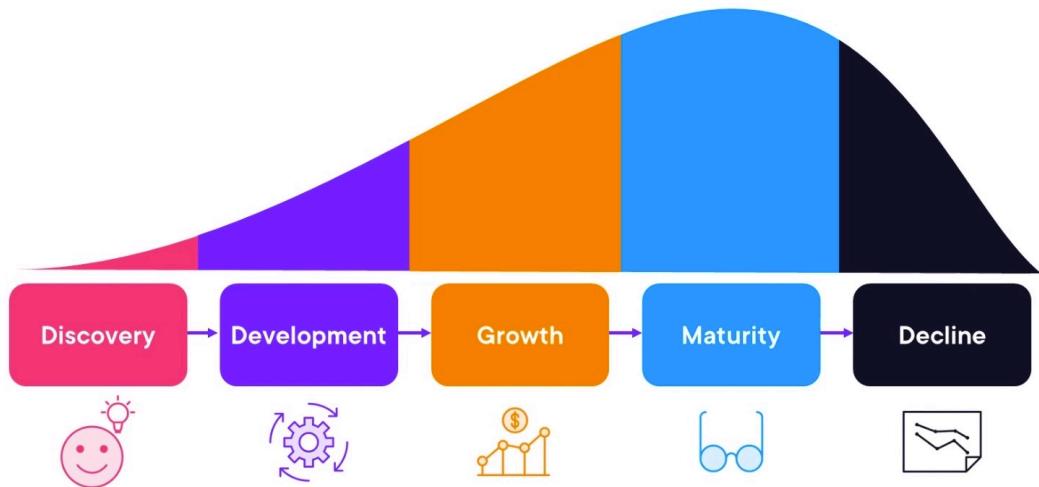


Product Management:

Product Development

⚠ Product life cycle



⚠ Discovery

↳ market research, competitor analysis, technical feasibility research

⚠ Development

↳ design, requirements, develop, launch

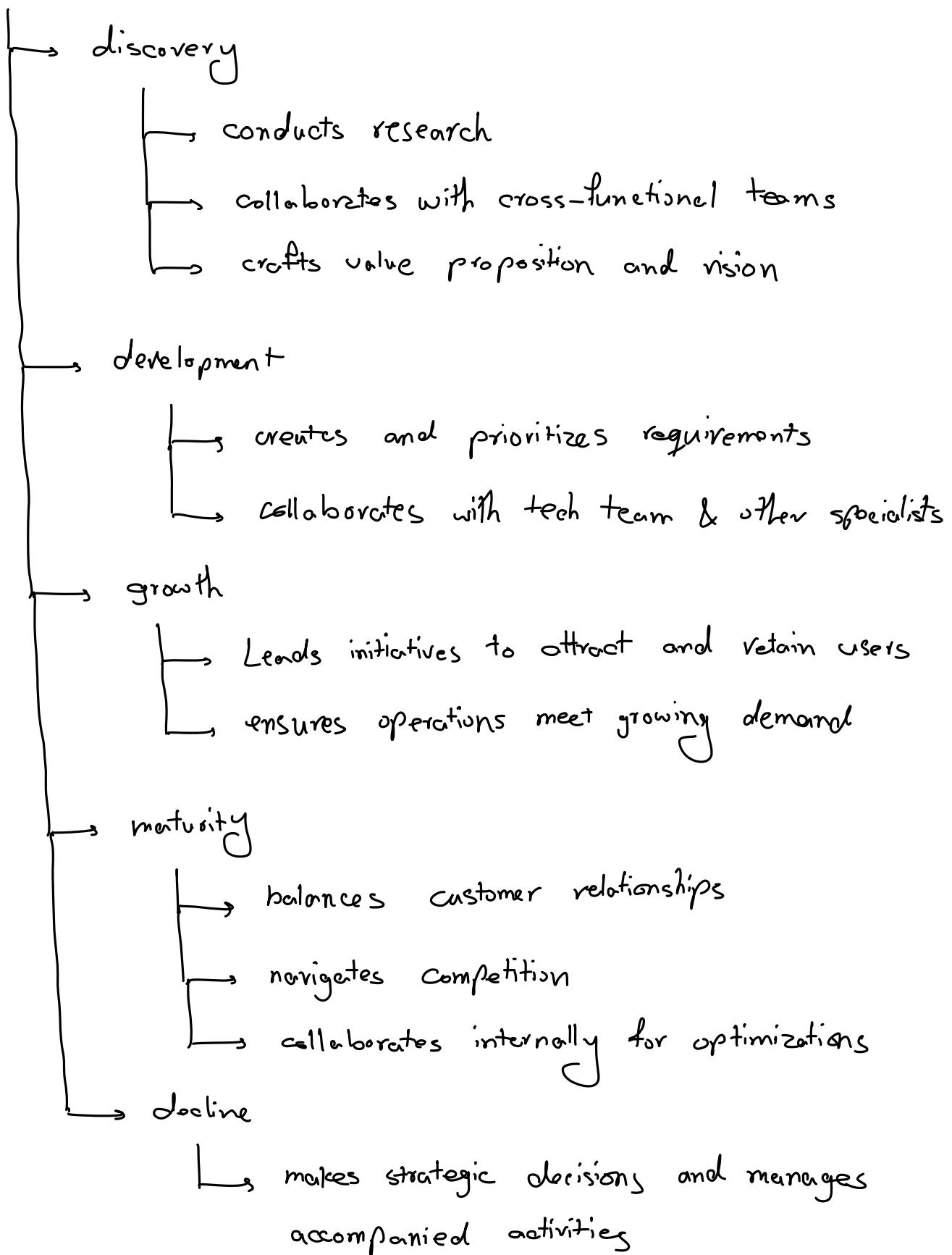
⚠ Growth

↳ expansion

⚠ Maturity → saturation (low acquisition rate)

⚠ Decline → decrease in demand and reduction in market share

⚠ Product Manager activities



⚠ Product manager's key accountability is product success

⚠ UX design

↳ user experience design is about the experience of using the product

⚠ UI design

↳ user interface design focuses on the design of the interface

⚠ collaboration between product managers, developers & testers

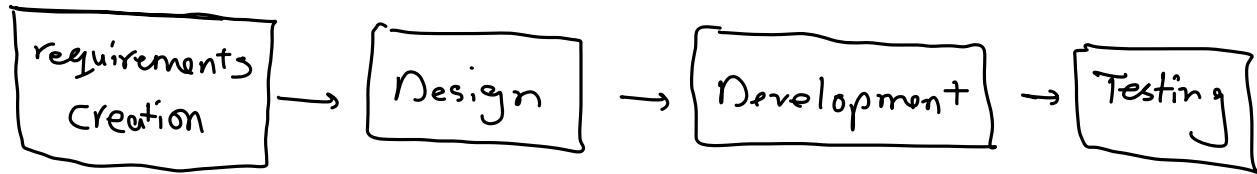
↳ requirements refinement
↳ teaming up for planning
↳ integrating feedback of customers and users
↳ balancing business goals and technical feasibility

⚠ Product Manager Vs Project Manager

↳ Product Manager
 ↳ business goals, visions, and requirements
↳ Project Manager
 ↳ timelines, budget, resource management

⚠ Agile → iterative & customer-centric approach

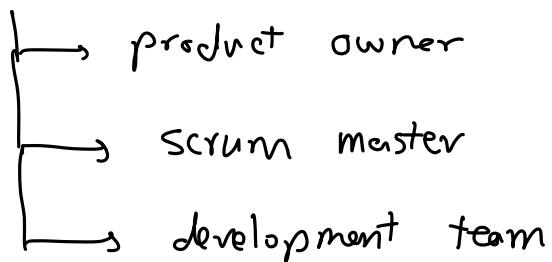
⚠ Waterfall Model



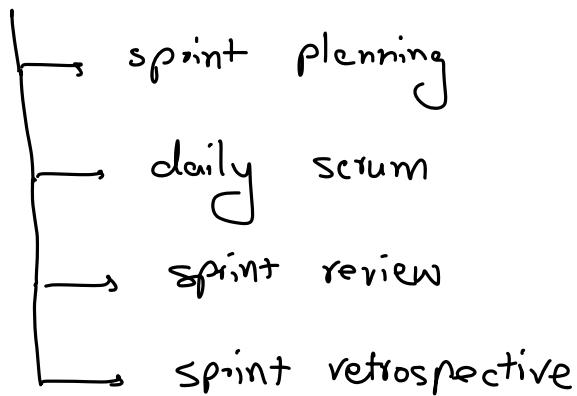
⚠ Waterfall Model challenges

- plans quickly become outdated in complex and rapidly changing environments
- customer expectations evolve continuously
- phase-gate approach separates specialists in functional silos, which hinders adaptability, communication and innovation

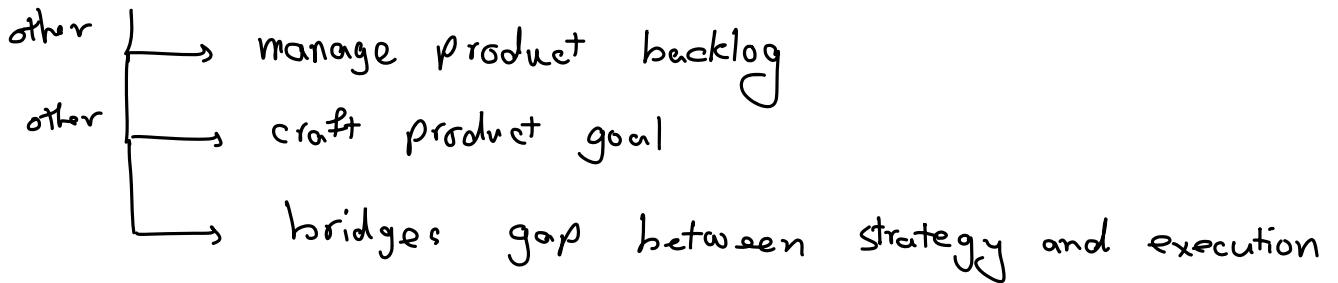
⚠ Scrum Team



⚠ Scrum Events



⚠ product owner's key accountability → maximize product value



⚠ leanban → process optimization

⚠ Product Manager vs. Service request manager

Product Manager	VS	Service Request Manager
Strategic product direction Product development Product life cycle management		Immediate service requests Operational efficiency

⚠ UX specialists conduct user research to better understand user needs, behaviors, and pain points

⚠ A persona is an imaginary representation of a user based on research

⚠ A journey map visually represents a person's experiences and emotions across various touch points with the product

- ⚠ A wireframe is a simplified visual representation that outlines screen's basic structure and layout
- ⚠ A mockup goes beyond wireframe by incorporating visual design elements (colors, typography, imagery, ...)
- ⚠ A prototype is interactive, functional and high fidelity models or simulations of a product
- ⚠ MVP is a product's smallest, simplest version that satisfies user needs
- ⚠ User story map is used to understand the user's journey and prioritize features
- ⚠ The planning Onion

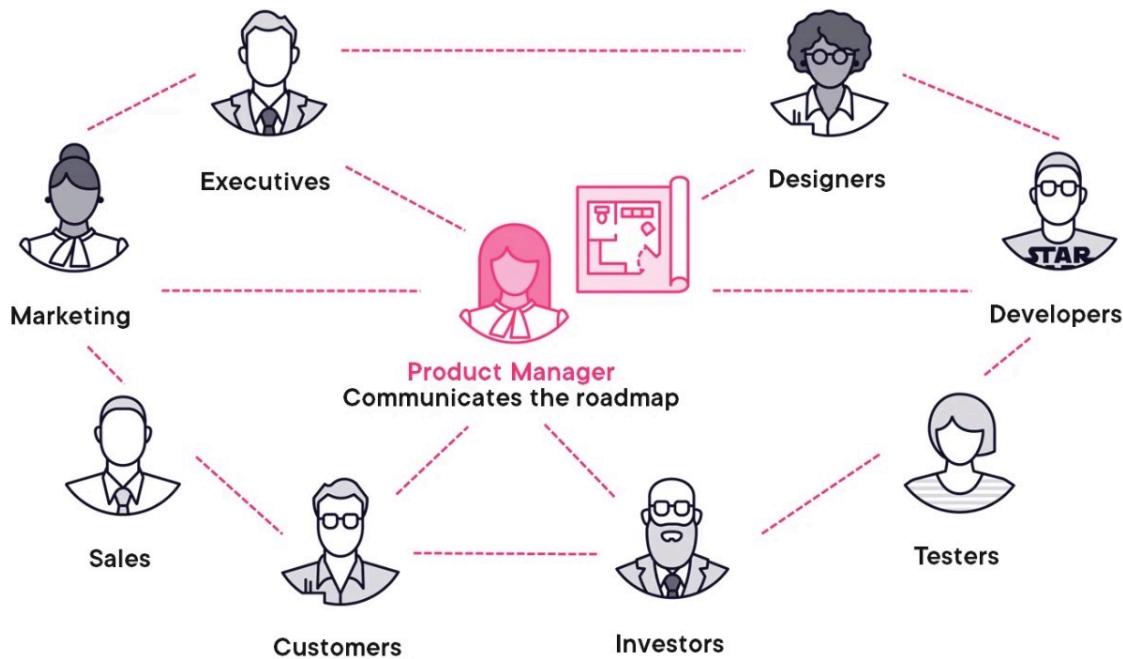


- ⚠ Agile estimations are collective, empirical and regularly refined
- ⚠ Velocity → Number of story points a team can accomplish in a sprint

⚠ The product roadmap communicates the product plan, visualizing the most important information required to navigate the product landscape in one place

- roadmap includes strategic vision, timeline, and important planning information
- in agile environments, roadmap horizons are typically short ≈ 6 or 12 months
- the product manager owns the roadmap

⚠ Audience for the roadmap



⚠ Non-functional items in roadmap

- security, performance, regulations

⚠ Requirements define what a product must have to meet the needs and expectations of users

⚠ Product Manager & Product Owner in a team



Product Manager

Focuses on strategy, vision, and high-level Product Backlog items

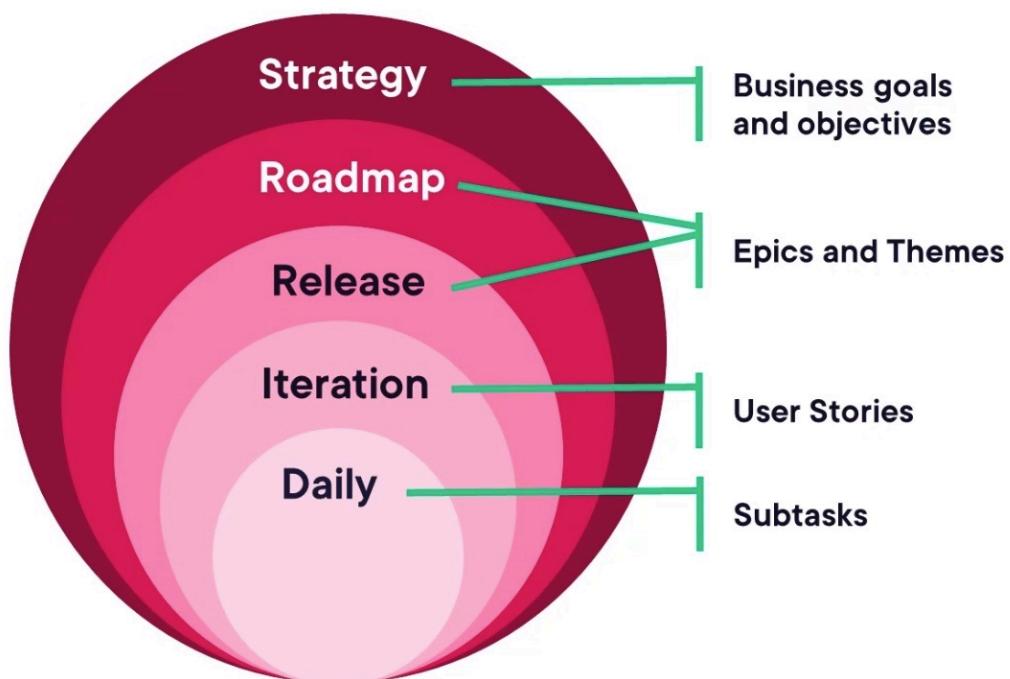


Product Owner

Provides Developers with more granular Product Backlog items

⚠ A usecase is a detailed requirement format describing the interaction between users and a system

⚠ Mapping requirements to planning onion



⚠ A user story involves one type of user, while an epic can involve multiple types

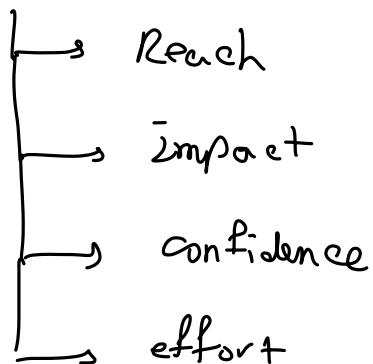
⚠ User story common format

↳ As [a type of user], who?
I want [an action]. what?
So That [benefit] why?

⚠ Acceptance criteria common format

↳ Given _____, when _____, Then _____.
conditions trigger outcomes

⚠ RICE prioritization technique



$$\text{RICE scoring} = \frac{\text{Reach} \times \text{Impact} \times \text{Confidence}}{\text{Effort}}$$

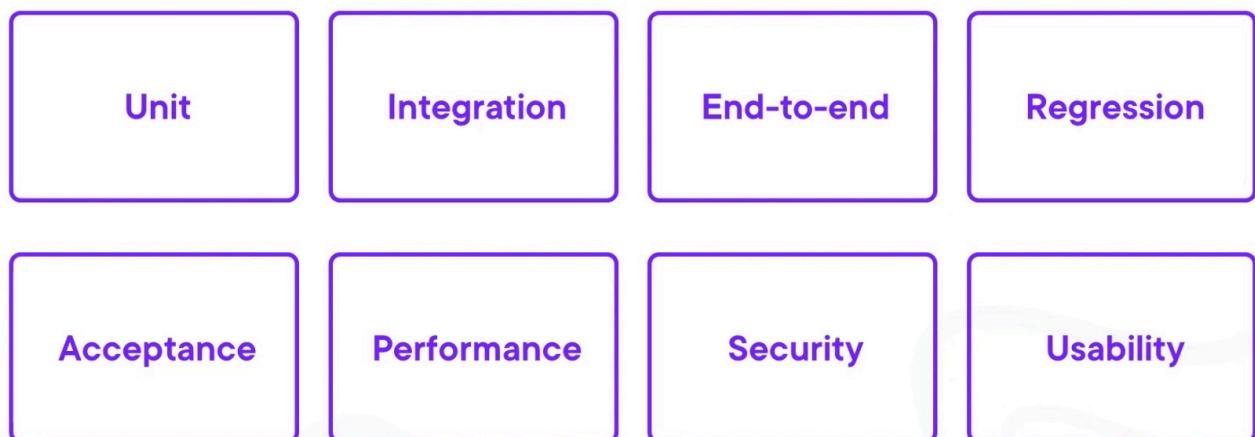
A MoSCoW technique

- Must have
- should have
- could have
- won't have

A weighted shortest job first (WSJF) technique

- considers
 - economic impact of delay (cost of delay)
 - estimation (job duration or job size)
- divide cost of delay by job size
- used in SAFe

A Common test types



⚠ Common test types

- unit : test individual code units
- integration : verify if units work together
- end-to-end : check the entire system from start to finish
- regression : retest previously developed and tested software
- acceptance : validate requirements & expectations of users or customers
- performance : validate performance (speed, ...)
- security : aim to identify security vulnerabilities & threats
- usability : assess the ease of use, intuitiveness, and user experience

⚠ Definition of done

↳ outlines quality criteria that product backlog items must meet to be considered complete

⚠ Acceptance Criteria Vs. Definition of done

Acceptance Criteria

Conditions the item must meet to be accepted as completed

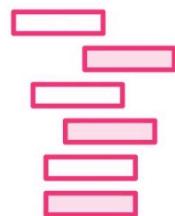
Definition of Done

Broader quality perspective of the item

⚠ DevOps

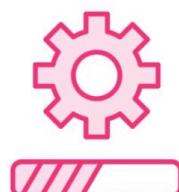
↳ a technical and cultural movement that aims for higher quality, efficiency and reliability but it also emphasizes strong collaboration between development & operations teams

⚠ DevOps practices



Continuous Integration

Code changes regularly merged into a shared repository



Continuous Deployment

Automated code deployment



Infrastructure as Code

Code-driven infrastructure deployments

⚠ Product Release vs Product Launch

Product Release	VS	Product Launch
Makes a new product version available Major releases Minor releases		Brings a new product to the market Demands increased marketing involvement

Releasing quality criteria and deployment standards : An Example

Completing development and testing work on functional and non-functional requirements

Updating release notes and user documentation

Setting up infrastructure and deployment pipelines

Verifying compatibility with platforms or devices