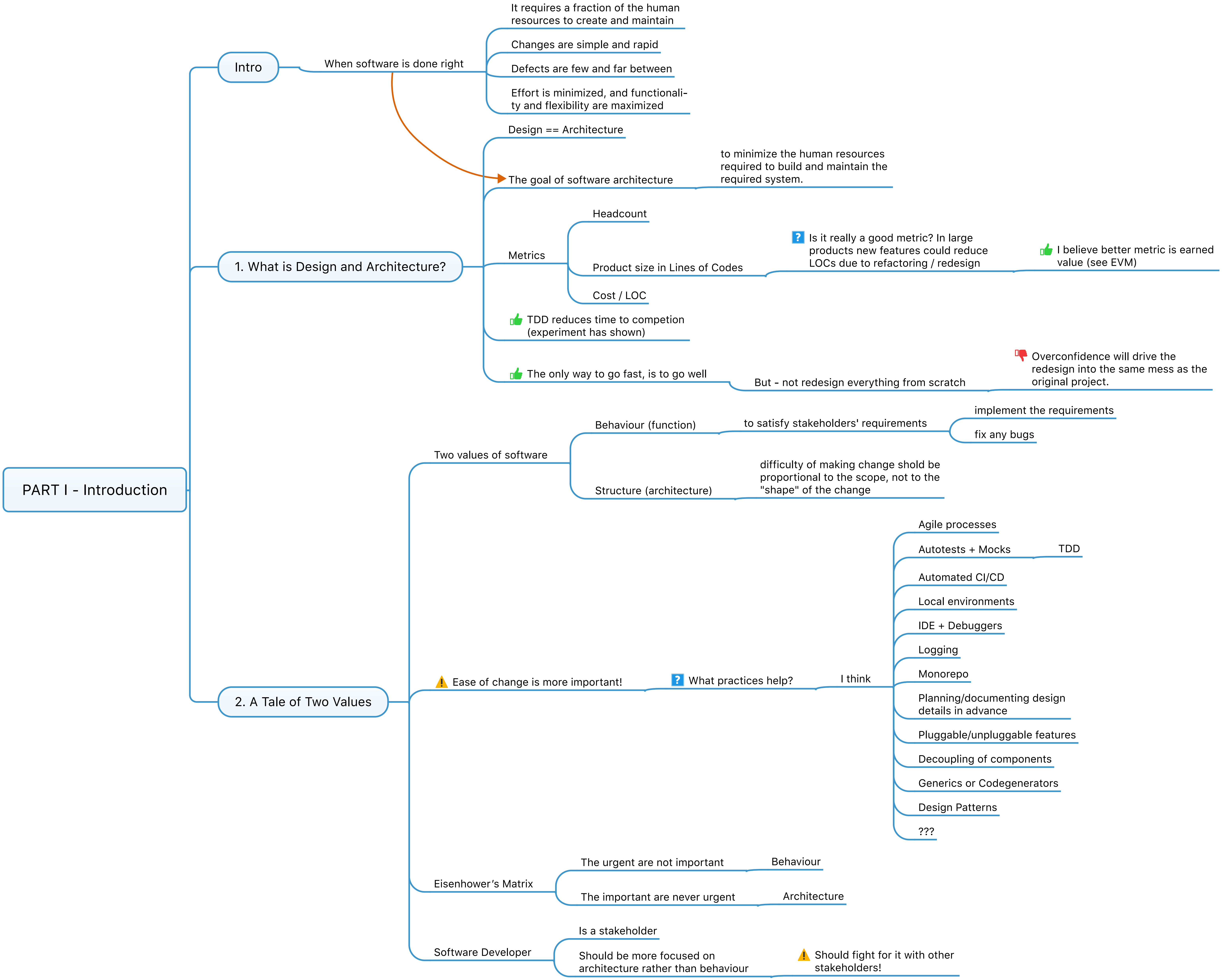

- PART I - Introduction
  - Intro
    - When software is done right
      - It requires a fraction of the human resources to create and maintain
      - Changes are simple and rapid
      - Defects are few and far between
      - Effort is minimized, and functionality and flexibility are maximized
  - 1. What is Design and Architecture?
    - Design == Architecture
    - The goal of software architecture
      - to minimize the human resources required to build and maintain the required system.
    - Metrics
      - Headcount
      - Product size in Lines of Codes
        - ❓ Is it really a good metric? In large products new features could reduce LOCs due to refactoring / redesign
          - 👍 I believe better metric is earned value (see EVM)
      - Cost / LOC
    - 👍 TDD reduces time to competion (experiment has shown)
    - 👍 The only way to go fast, is to go well
      - But - not redesign everything from scratch
        - 👎 Overconfidence will drive the redesign into the same mess as the original project.
  - 2. A Tale of Two Values
    - Two values of software
      - Behaviour (function)
        - to satisfy stakeholders' requirements
          - implement the requirements
          - fix any bugs
      - Structure (architecture)
        - difficulty of making change shold be proportional to the scope, not to the "shape" of the change
    - ⚠ Ease of change is more important!
      - ❓ What practices help?
        - I think
          - Agile processes
          - Autotests + Mocks
            - TDD
          - Automated CI/CD
          - Local environments
          - IDE + Debuggers
          - Logging
          - Monorepo
          - Planning/documenting design details in advance
          - Pluggable/unpluggable features
          - Decoupling of components
          - Generics or Codegenerators
          - Design Patterns
          - ???
    - Eisenhower's Matrix
      - The urgent are not important
        - Behaviour
      - The important are never urgent
        - Architecture
    - Software Developer
      - Is a stakeholder
      - Should be more focused on architecture rather than behaviour
        - ⚠ Should fight for it with other stakeholders!