Aligning Quality & Expectations in Software Development

A Human Centered Approach

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CHUPECO
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About me.

- 15+ years in Product Development, Management, and Strategy
- Human-centered, design thinking doer who believes we can achieve more together
- Started in 3D animation, multimedia, advertising, and graphic design
- Last 15 years predominantly financial technology
- BA Political Science (McGill University 2000)
- MBA (Georgetown University 2011)
- Certified PMP, PMI-ACP, SAFe Agilist, CSM, CSPO, CXCP

Our Discussion Goals.

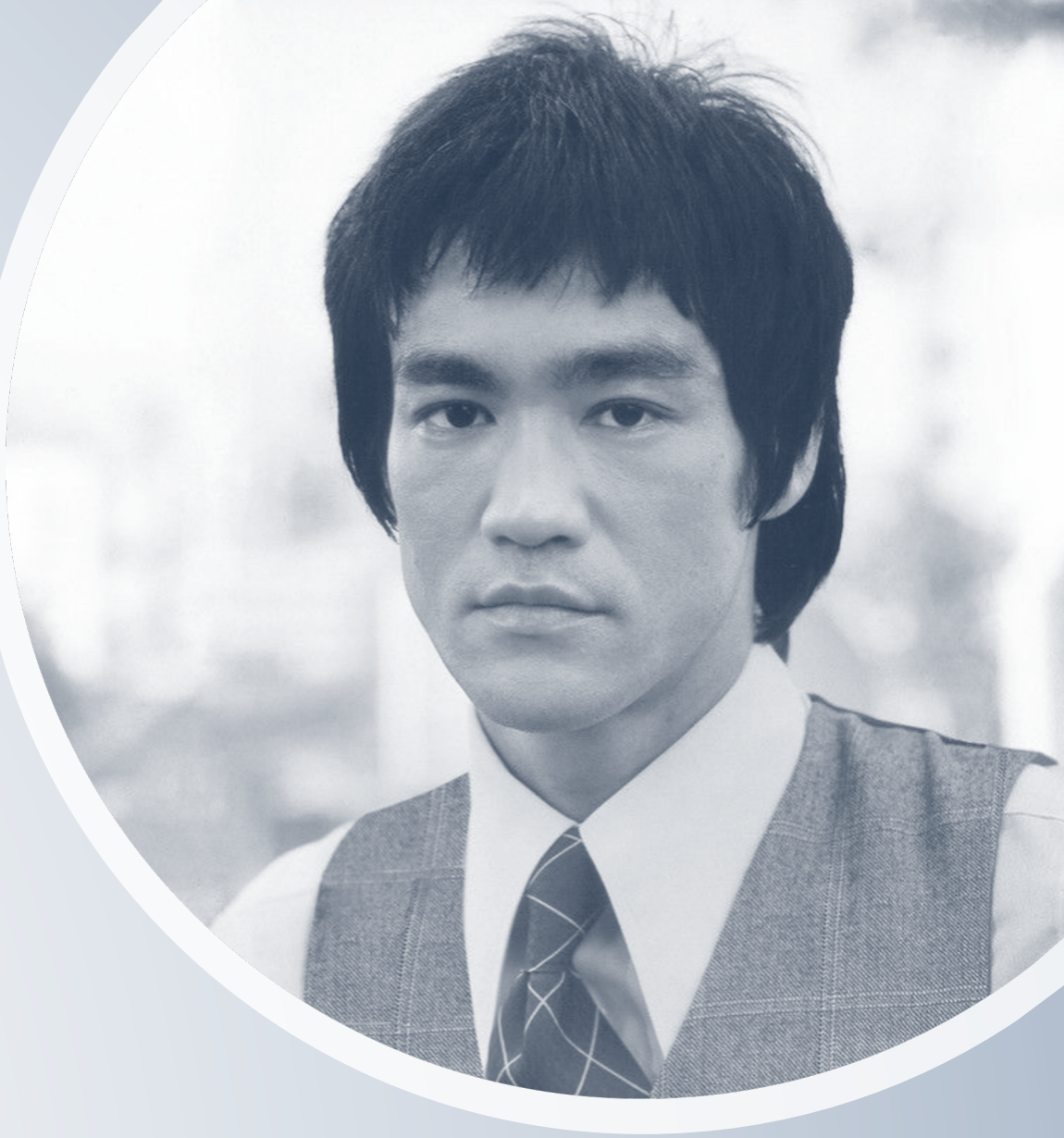
To understand how we might create alignment throughout our process to help improve quality. We will share some best practices that we can leverage to align and maintain alignment with our key stakeholders throughout implementation to drive better business (and quality) outcomes.

Our focus will be on who, when, and how best to engage with our fellow humans whose definition of quality we strive to meet in software development and innovation.

Our hope is that at minimum this provides a different and valued perspective on how we might apply design thinking in our process to better align stakeholder desire of quality with what is feasible and viable.

“Don't get set into one form, adapt it and build your own, and let it grow, be like water. Empty your mind, be formless, shapeless — like water. Now you put water in a cup, it becomes the cup; You put water into a bottle it becomes the bottle; You put it in a teapot it becomes the teapot. Now water can flow or it can crash. Be water, my friend.”

- Bruce Lee



Quality.

A subjective term for which each person or sector has its own definition.

In technical usage, quality can have two meanings:

1) the characteristics of a product or service that bear on its ability to satisfy stated or implied needs

2) a product or service free of deficiencies. According to Joseph Juran, quality means “fitness for use”; according to Philip Crosby, it means “conformance to requirements.”

- https://asq.org/quality-resources/quality-glossary/q

Quality.

The collection of attributes, which when present in a product, means a product has conformed to or exceeded customer expectations.

- https://www.pdma.org/page/glossary_access2#Q

The degree to which a set of inherent characteristics fulfill requirements.

- Project Management Body of Knowledge 5th Edition

The challenge with quality in software development is that it changes and is welcomed.

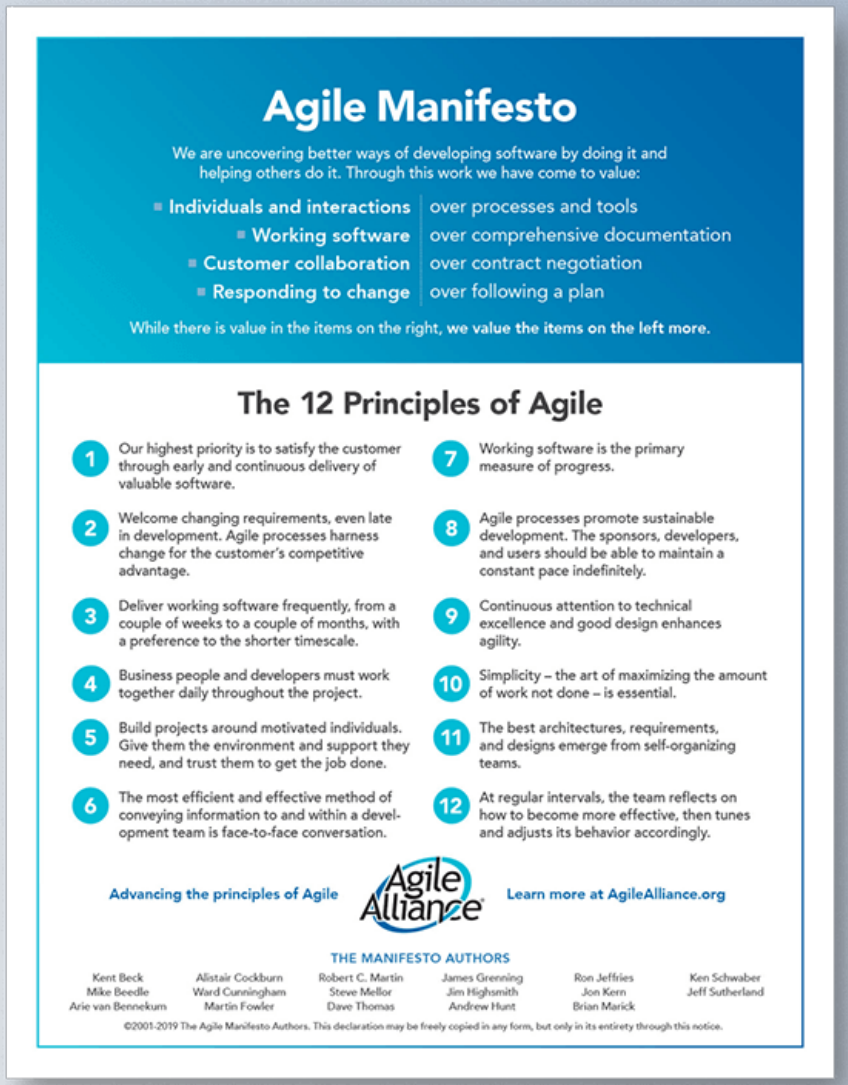
“We are uncovering better ways of developing software by doing it and helping others do it.

Through this work we have come to value:

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.”

- The Agile Manifesto



Agile Manifesto

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Working software	over comprehensive documentation
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The 12 Principles of Agile

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity – the art of maximizing the amount of work not done – is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Advancing the principles of Agile — Agile Alliance — Learn more at AgileAlliance.org

THE MANIFESTO AUTHORS

Kent Beck, Mike Beedle, Arie van Bennekum, Alistair Cockburn, Ward Cunningham, Martin Fowler, Robert C. Martin, Steve Mellor, Dave Thomas, James Grenning, Jim Highsmith, Andrew Hunt, Ron Jeffries, Jon Kern, Brian Marick, Ken Schwaber, Jeff Sutherland

What is design thinking?

Design Thinking.

“Design thinking is a human-centered approach to innovation that draws from the designer’s toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.”

— Tim Brown, Executive Chair, IDEO

3 key concepts of the Design Thinking Process

Empathy.

- Cognitive: Understanding how another person feels and what they may be thinking
- Emotional: Feeling the emotions of the other person
- Compassionate: Taking supportive action if needed

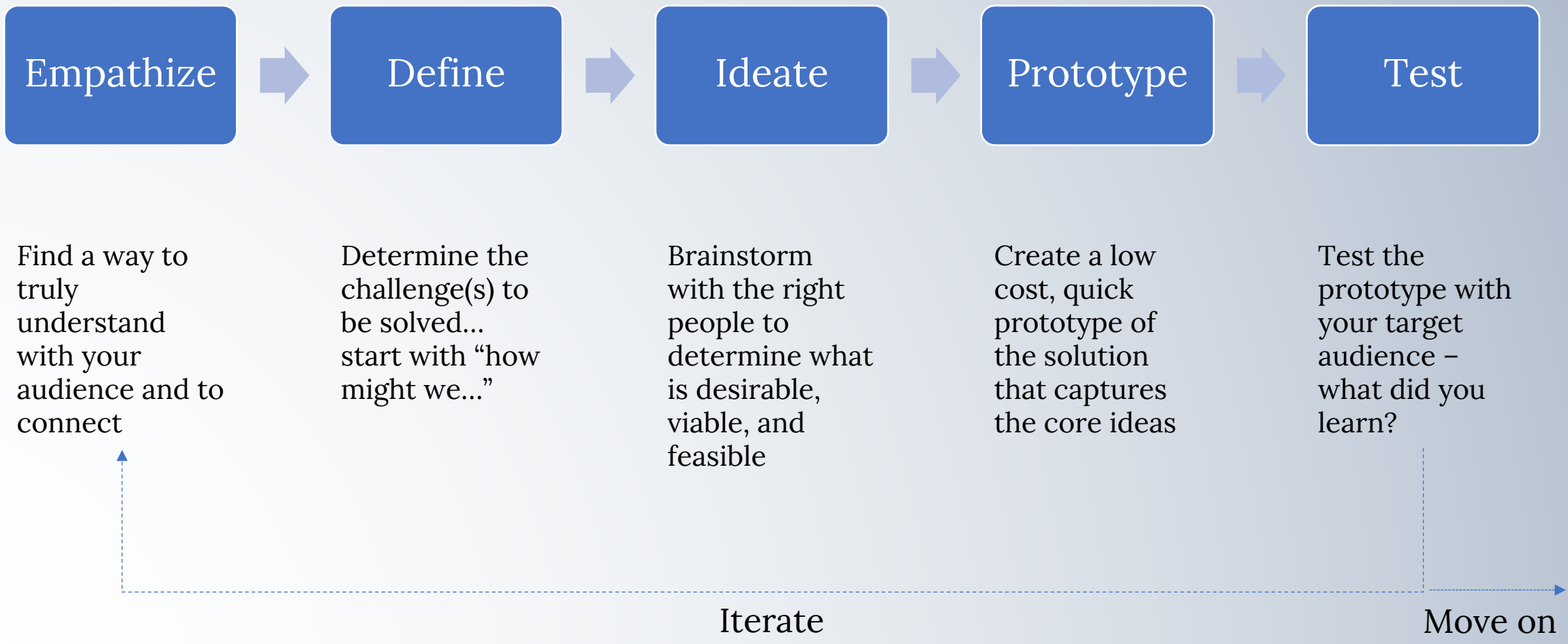
Collaborative Ideation.

- Desirability: What makes sense to people and for people?
- Feasibility: What is technically possible within the foreseeable future?
- Viability: What is likely to become part of a sustainable business model?

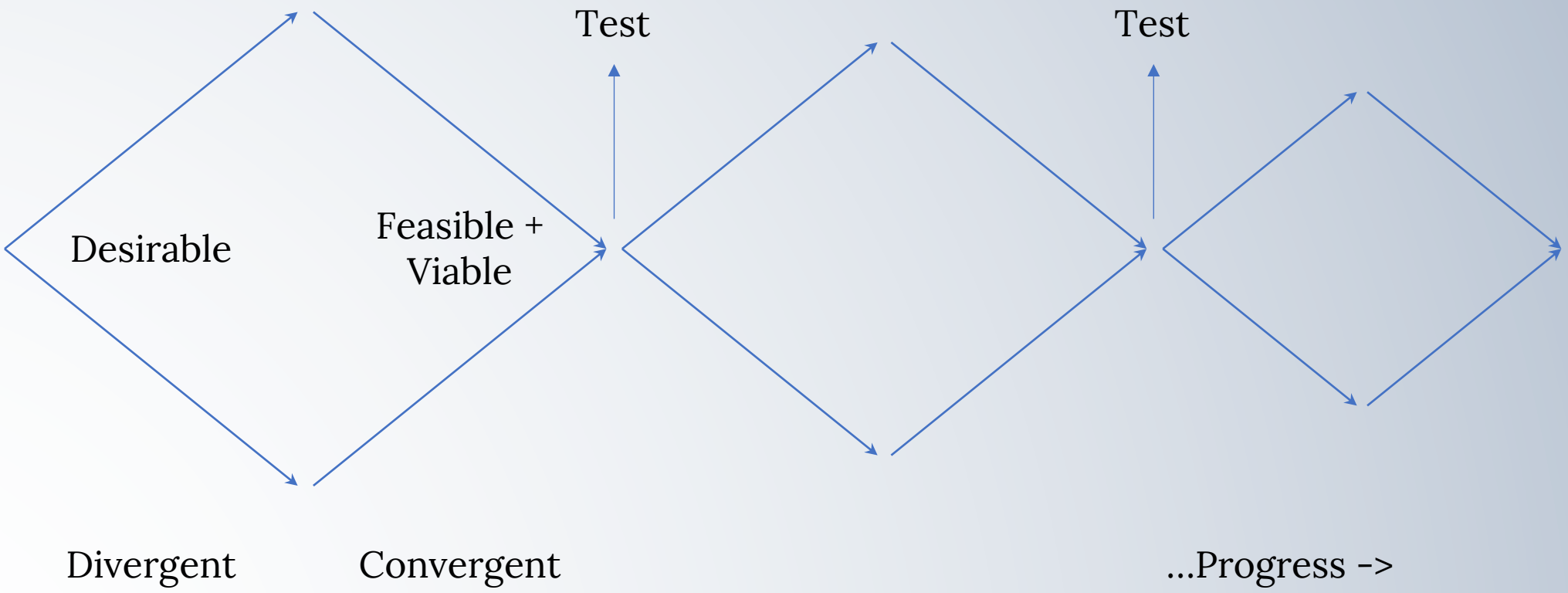
Iteration.

- Rapid prototyping and testing
- Low fidelity mockups (e.g. drawings, models)
- Testing theory in the real world (e.g. popups)

The Design Thinking Process



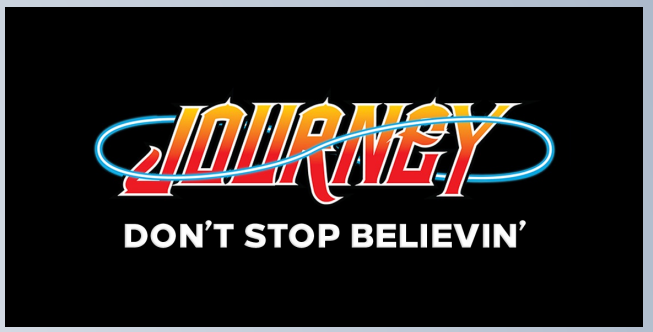
A little bit more on ideation...



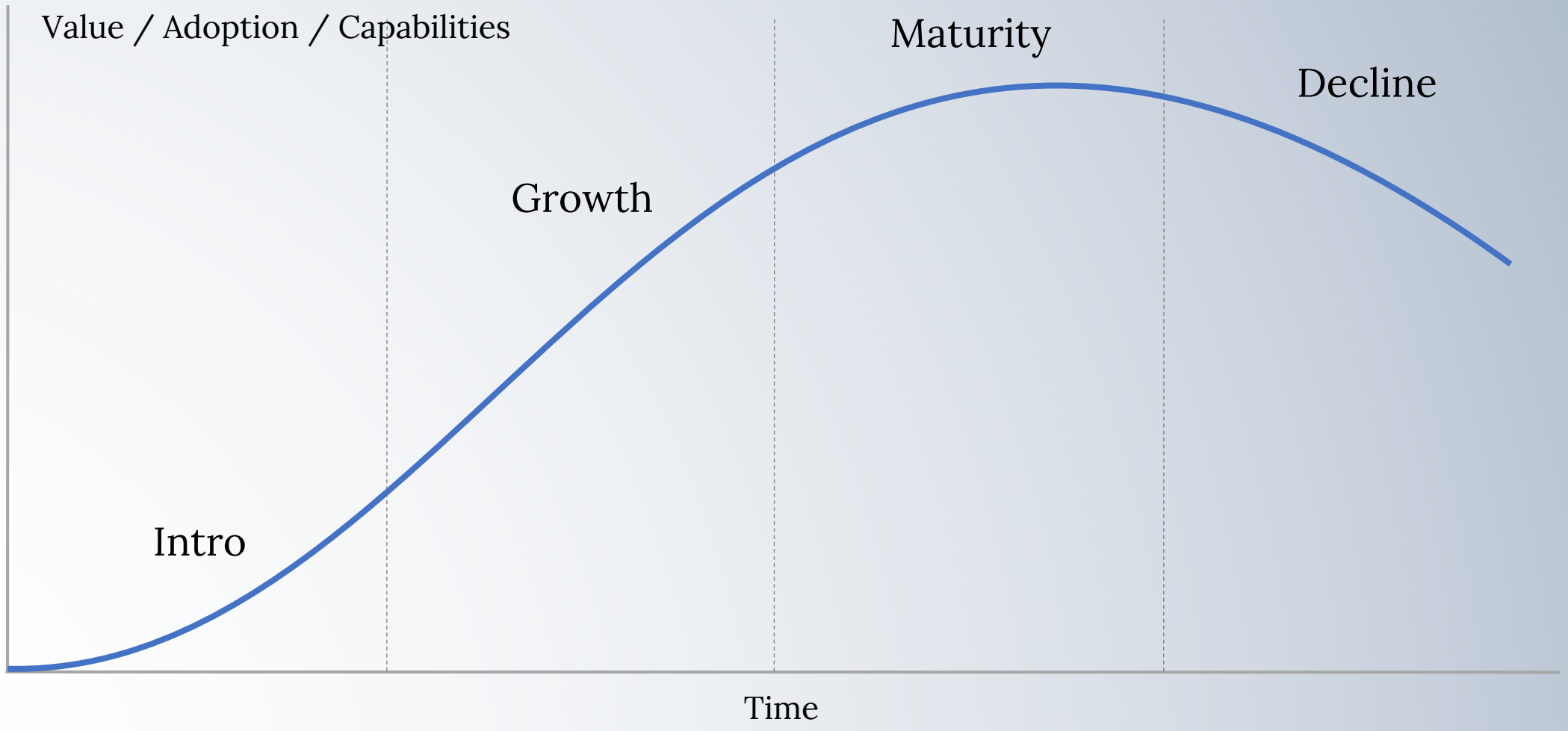
…ultimately, it's about the journey

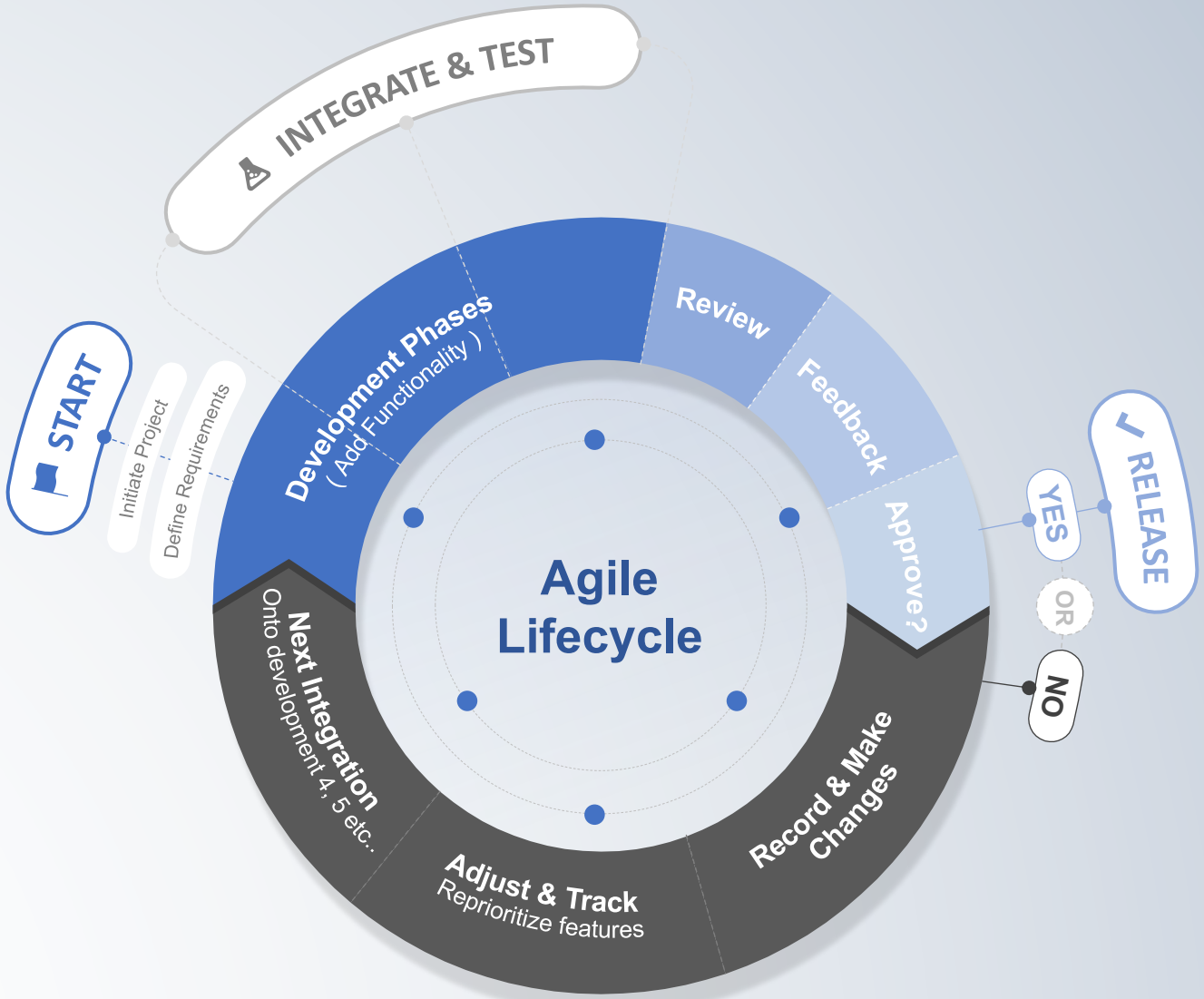
By including the right people on your journey:

- you develop a shared understanding of the challenge(s) to be solved
- align expectations with what is viable and feasible
- increase your probability of pursuing the best solution while minimizing risk



Where can we incorporate design thinking?


Value / Adoption / Capabilities
Intro
Growth
Maturity
Decline
Time



Focus on aligning and understanding the right humans at the right time throughout your process – align expectations with reality.

Alignment by Design.

My real-world examples of aligning stakeholder expectations with quality reality

Business Intelligence, Risk Models, Predictive Analytics, and Data Quality

- Financial Technology
- Where quality is key: Data and Content
- The challenge(s):
  - The wrong people throughout the process
  - Overreliance and lack of understanding of technology
  - Not investing in sustaining, improving quality after delivery

How might we improve the quality of our data and content to help drive insights and analysis?

Let’s discuss!