Pragmatic Agile Development

– a precursor to scaling

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Thank You to Gene Gendel!

Agenda

- A 30-minute “taste” of Pragmatic Agile
- Ask Me Anything – Plenty of time for Q&A

Jot down your biggest challenges

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Who Am I? (Modesty aside)

- Aerospace Engineer turned Software Engineer
- 1981: 5 yr Years Cruise Missile Jet Engine R&D and testing
- 1986: 10 yr DOD Consulting: centrifuge-based F-14/F-18 Flight Simulation, numerous projects, human factors
- 1995: 5 yr Engineering and Software Consulting Company (Founder & President): designed and built IBM's Manufacturing Execution System, among many other cool contracts (including advanced pump sales tool). Sub-contracted with Peter Coad to deliver Java and Object-oriented workshops. Helped dozens of companies.
- 2000: 3 yr Co-founder (with Peter Coad) TogetherSoft UML, grew from 6 people in a basement to 400, sold to Borland
- 2001: Co-creator Agile Manifesto
- 2006: 3 yr OptimalJ Model-driven Architecture Tool & Projects
- 2009: 12+ yr SaaS Application Development… Semantic Web, J2EE, Rails
- 2013: including highly advanced app for configuring engineered-to-order pump systems for the world's most demanding manufacturers and applications
- 2006 – present: build and maintain a production app for "pre-incident plans" for firefighters, schools, industrial plants, pharmaceutical campuses, etc. (My pro-bono side hustle.)

- 2019: Currently consulting with **Adaptavist** customers on how to be more effective whilst making work more meaningful and joyous!

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What would you say you do here (with product dev)?

- Provide client-valued features that…
- Put smiles on the faces of our end users
- Which, in turn, generates value → revenue

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Premature Scaling can Lead to Failing

So what are some of the tips and tricks and pitfalls?

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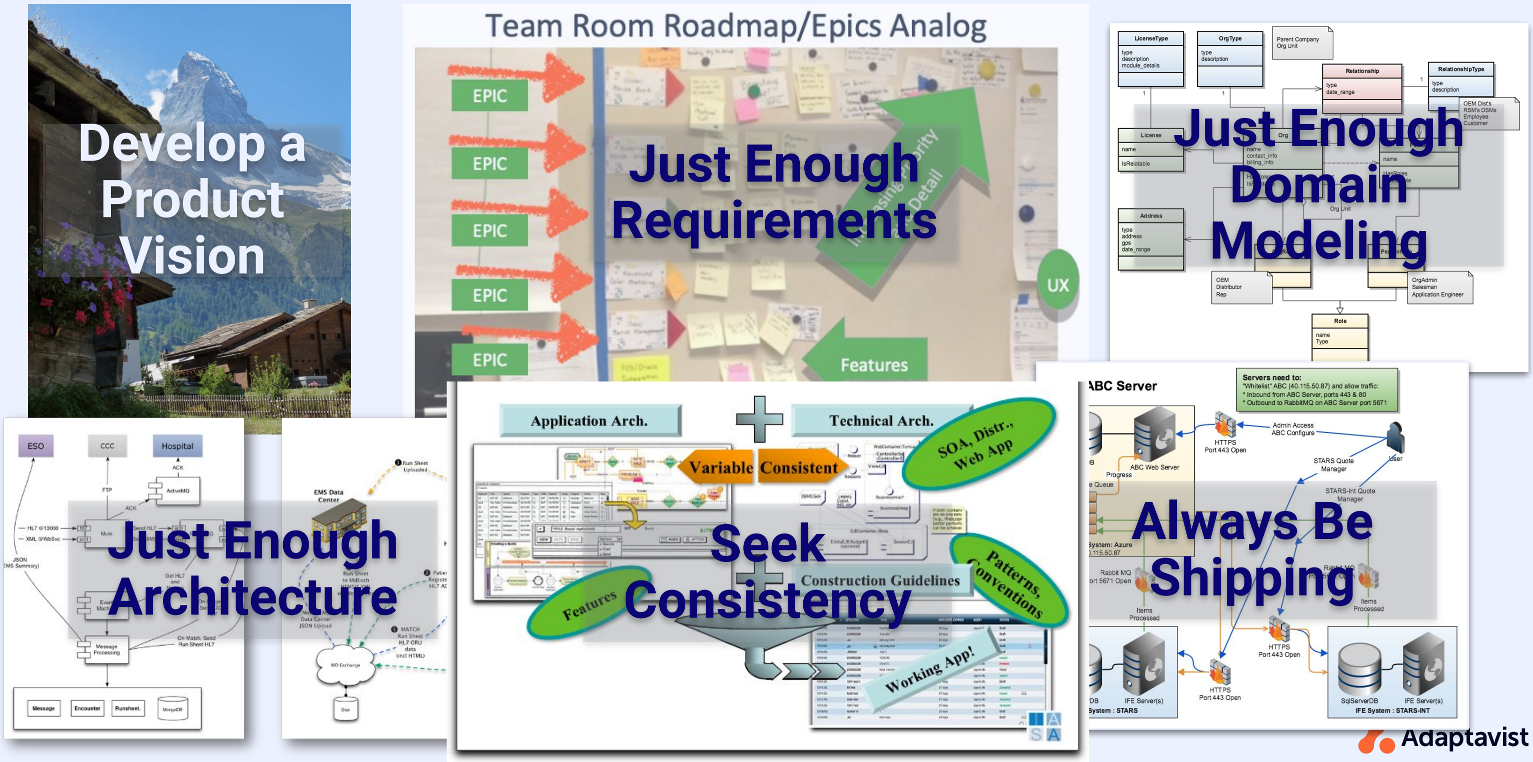
Foundation to Good Software



Develop a Product Vision

Just Enough Requirements

Just Enough Domain Modeling

Just Enough Architecture

Seek Consistency

Always Be Shipping

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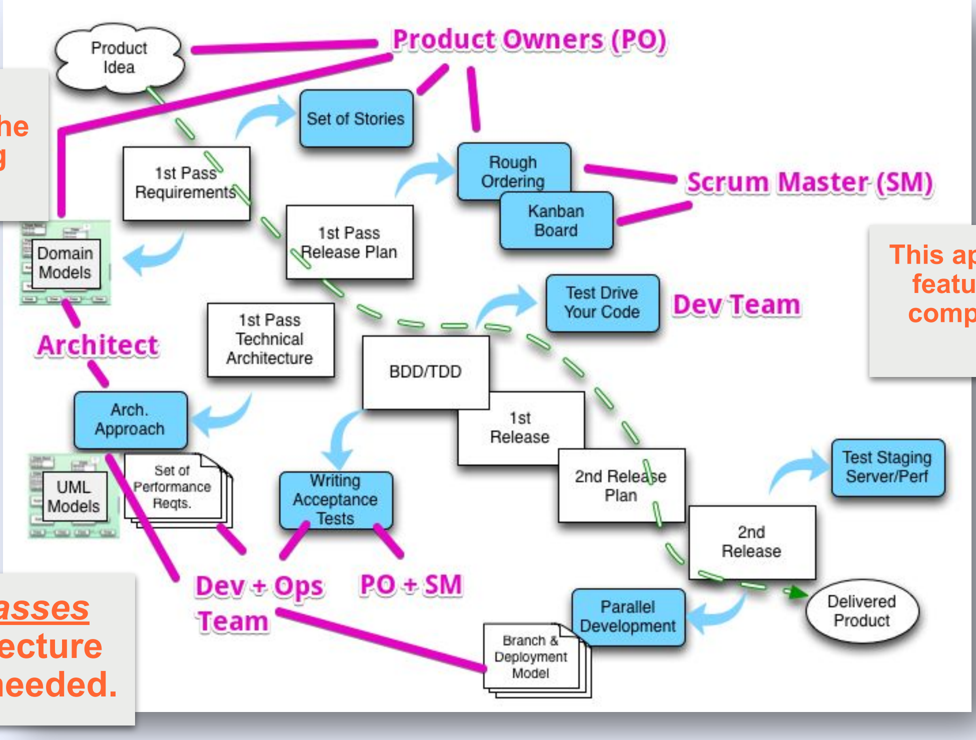
Jon Kern's Holistic Agile Methodology



Excessive collaboration with the customer all along this journey.

This applies to adding a feature, a major new component, or a new product.

Successive passes improve architecture and design as needed.

Be Lazy!
Sneak up on the Answer!

Do LESS than you think you should!

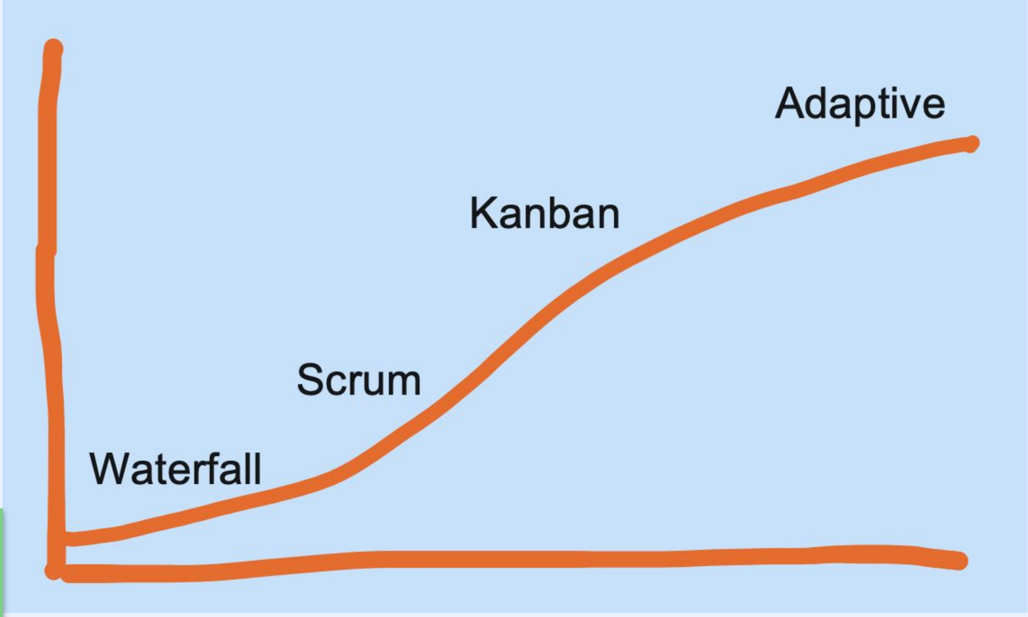
Prefer to do the bare minimum, and then do uncomfortably, ***slightly less***.

Agile and Lean and Kanban. Oh My!

Along a Continuum…

A never-ending journey of discovery to new and better ways…

In your context!



An **Adaptive Organisation** is one that can change and morph itself to meet emerging opportunities and threats without the need for design, blueprint or management diktat.

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Mind the gap.

A play on metros/subways and silos

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Before I get into what Agile and Lean mean to me…

What are your biggest challenges?

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Lean in Software

- Eliminate waste
- Build quality in
- Create knowledge
- Defer commitment
- Deliver fast
- Respect people
- Optimize the whole

Lean Software Development: An Agile Toolkit,
Mary and Tom Poppendieck

Lean in Manufacturing

- Identify Value
- Map the Value Stream
- Create Flow
- Establish Pull
- Seek Perfection

Great easy (free) read:
https://paulakers.net/books/2-second-lean
YouTuber: LeanSmarts
Lean Manufacturing One Piece Flow (Paper Airplane Simulation)

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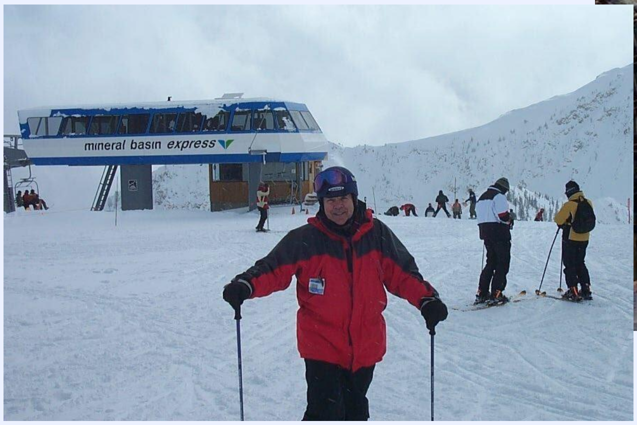
The Gathering

@11,000’ atop Snowbird Ski Resort, Utah

20 Years of Agile

https://agilemanifesto.org/



Be Humble!
(Despite knowing you are right!)

Treat ideas (new features, processes, etc.) as hypotheses and do the simplest thing to test your hypothesis.

Agile Manifesto

Individuals

Working Software

Customer Collaborations

Responding to change

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

Humble

Individuals & Interactions... ***over process and tools***

Don't be impersonal. Seek to understand. Exhibit empathy

Working Software... ***over comprehensive docs***

Check that your "software" works. And that you delighted your users.

Pragmatic

Customer Collaboration… ***over contract negotiation***

Your customers are real people. Help them solve their problems (don't add new ones).

Responding to Change… ***over following a plan***

Don't be rigid and dogmatic. Learn. Grow. Adapt.

While there is value in the items on the right,
we value the items on the left more.

Humble

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Principles Behind the Manifesto

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

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QUIZ: What are the 3 critical ingredients to build a product?

People

Process

& Tools
(Technology)

In that order...

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QUIZ: What are the 3 critical ingredients to build a product?

People

& Tools
(Technology)

Add in MINDSET...

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The Agile Mindset!

- What is an Agile Mindset?
- Mindset evolves over one's life
- Different stages of development guide the way we view the world
- How can we learn to handle a complex, changing world?

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Cultivate a deliberately developmental environment

- Encourage and reward **safe experimentation** and learning
- Leave **space** for innovating complex problems
- Build in regular **feedback** loops
- **Support development** of individuals and a community

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Agile is SIMPLE, *but it is not* EASY

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The Silo Trap

(Cooperation ≠ Collaboration)

All too often, silos result in too much detailed work being done too far in advance of the need, unwittingly baking in a feeling of needing to "do it all"

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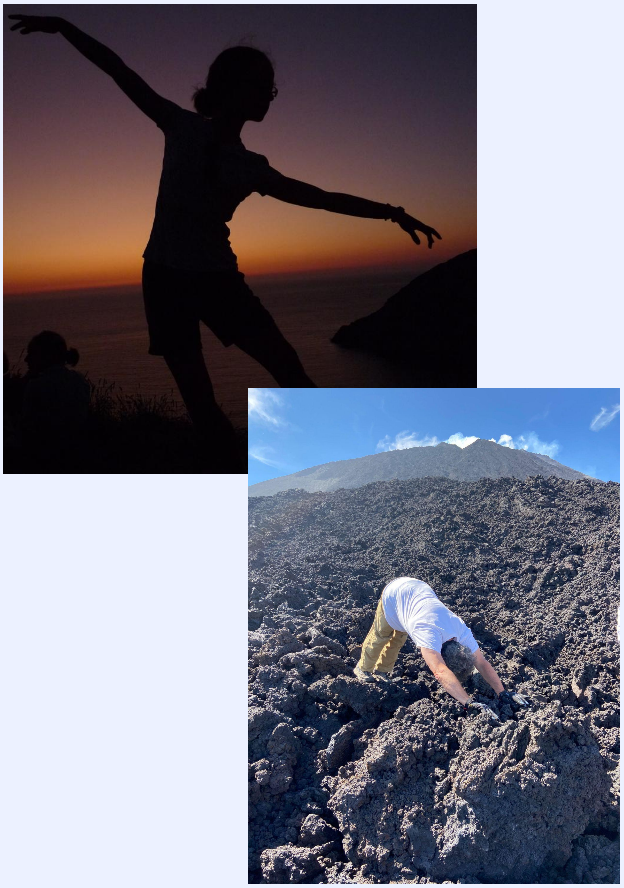
Agile is Holistic

- Consider the product as a system
- Synergies of Practices
- Holistic Approaches
- The parts of the process are intimately connected
- Building a product is a “team sport” wherein the culture is critical
- Agile is a state of mind, not a destination

Do not settle for *Doing* Agile You must strive to *Be* Agile!

- Agile is a **personal PRACTICE**.
- **Never** a master, **always** a student
- “Transformation” starts with me



Q&A
Thank You!

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