

Experimentation as a Tool for Process Improvement



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What is your “filament problem”?

Where do you see your team getting stuck over and over again?

Hypothesis

The best way to navigate complexity in software is to embrace our scientific roots and become experts in experimentation.

We have to start by thinking like scientists.

Culture

Scientist…

Fall in love with the problem

Genuinely curious

Pragmatic

Insist on results being repeatable by others

“But we’ve always done it this way”

“That will never work”

“Go fast and break things”

“Why would anyone listen to my ideas?”

“Why doesn’t everyone just do what I say?!”

"When we're in **scientist mode**,
we refuse to let our ideas become ideologies.

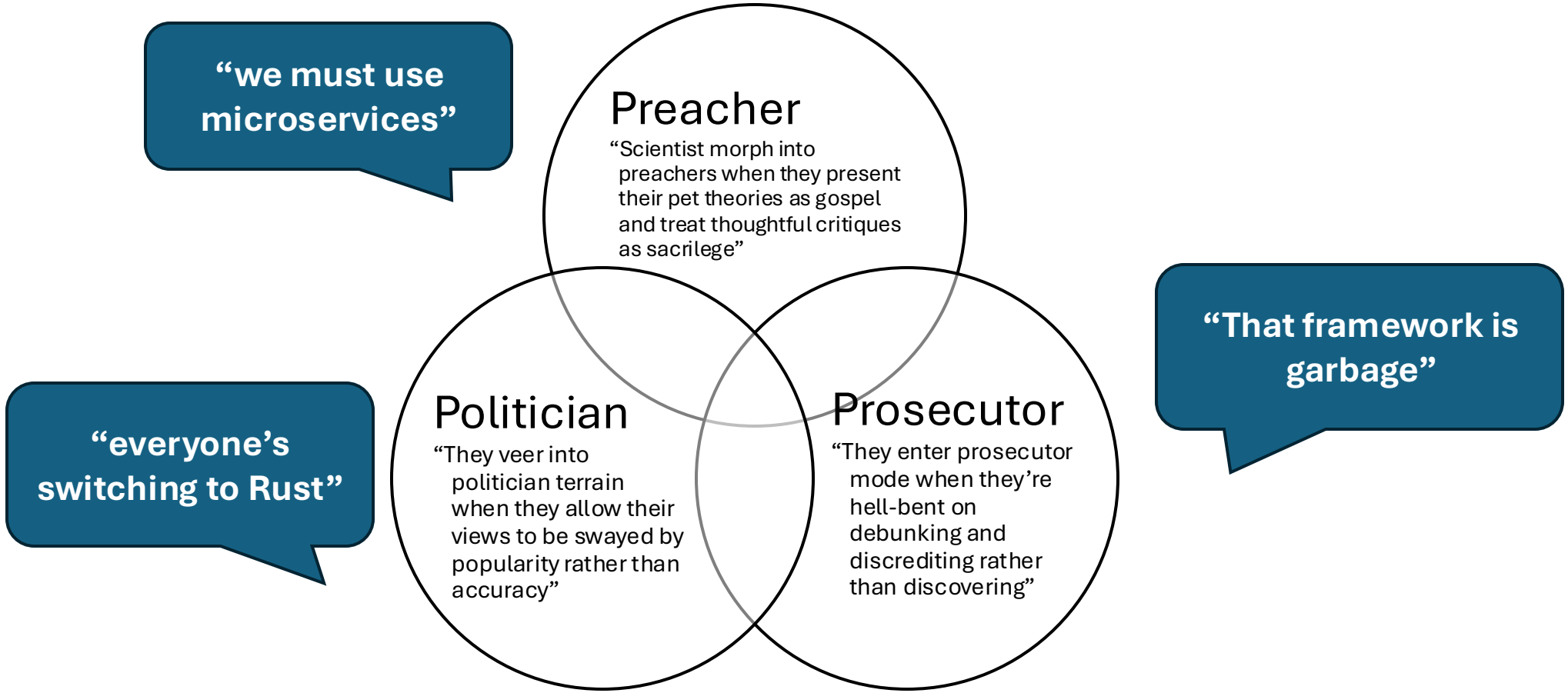
We don't start with answers or solutions;
we **lead with questions and puzzles**.

We don't preach from intuition;
we **teach from evidence**.

We don't just have healthy skepticism about other people's arguments; we **dare to disagree with our own arguments**."

Adam Grant's *"Think Again" (2021),* **emphasis** added

Non-scientist archetypes



Concept adapted from Adam Grant's *"Think Again" (2021)*

Practice

Practice: Key Elements

Meaningful: Why does this problem matter?

Researched: Have you done your homework? What already exists?

Identify a believable hypothesis: State your theory

Define measurable criteria: How is success measured? What do we expect?

Create a runnable experiment: Who? What? When? Where? How?

Record and share: Magnify the impact of what you learned

Title

Dates:

Experiment Lead(s):

Sponsor(s):

Participant(s):

Background Information

Problem Statement / Hypothesis

Experiment

Questions

Acceptance Criteria

Results and Conclusions

Date Closed:

Title	Description	Status	Experiment L	Sponsor
Biz Dev Collaboration Time	Solve a myriad of scheduling challenges with dedicated shared office hour times	In flight	Andrew, Levi, Bri	Brian
Proximity Experiment	Improving Outcomes for Entry Level People: more frequent in-person interactions and a permanent desk close to their team members, will demonstrate improved efficacy and effectiveness	In flight	Bill Udell, Andy U	Bill
OnboardingCommitteeExperiment	Improve onboarding for all roles	In flight	Everett	Chad
Tracking Rework & Missed Requirements		In flight	Lori	Anne

Advice

Keep it simple; don’t over-engineer

Make it safe to fail

Add to existing rhythms / rituals

Start early and refine often

Experiments are not necessarily linear

Examples

Example: Requirements Gathering

How might we improve the experience around gathering requirements from our product owner?

Meaningful: What is the goal? How is this going to make a difference

Researched: Has someone already solved this? What already exists?

Example: Requirements Gathering

How might we improve the experience around gathering requirements from our product owner?

Hypothesis: I hypothesize that a basic chat client with read access to my repository will be able to reduce developer rework and shorten time-to-market by identifying questions the product owner needs to answer and contradictory requirements.

Example: Requirements Gathering

How might we improve the experience around gathering requirements from our product owner?

Measured: Success would mean reducing rework by 25% due to less missed requirements and shortened time-to-market by 25% due to less back-and-forth defining what we are building

Example: Requirements Gathering

How might we improve the experience around gathering requirements from our product owner?

Experiment:

- Who – product owner, developers, project management, …
- What – create agent product owner can use as part of their definition process
- …

Why should developers care?

Context is power: Great developers understand not just code, but the business, tech stack, and process.

Change is risky—but so is standing still: What will happen in the next 1, 5, or 10 years if nothing changes?

Tool to influence: This is one way to create a plan to advocate for yourself or team.

Let’s get experimenting!

Pick one “filament problem”.

Write one hypothesis.

Run one experiment.

Share what you learn.

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