



Beyond Surviving

A Pre-Mortem to Encourage *Thriving* During
the Adoption of AI-Assisted Coding



Theme

The Adoption of Generative-AI Assisted Coding Tools



Goals

- To facilitate reflection on what “failure” looks like for individuals, teams, and organizations as they work toward adopting Gen-AI Assisted Coding tools
- To encourage analysis and action to prevent these “failure” scenarios



Intended Audience

Engineering teams of any size (i.e., small team all the way to engineering org)



Materials

[Facilitation Deck](#)

Cloud-based brainstorming board



Total Time

90-120 minutes



Rationale

A **pre-mortem** is a strategy in which a team imagines a failure scenario, and then works backwards from that failure scenario to determine what could realistically lead to that failure. The premortem unfolds based on the metaphor of the “patient” having died, with the ultimate outcome being a list of action items that can be taken to keep the metaphorical patient “alive”, or – in other words – ensure that failure or worst-case scenarios don’t occur.

Pre-mortems can be particularly valuable when it has not yet been established for individuals, teams, or organizations just what the worst-case scenario is. For example, in this early age of Generative-AI Assisted Coding, there is a lack of understanding and agreement by individuals, teams and organizations around what constitutes healthy, ethical, and productive Gen-AI use, which can lead to **AI Skill Threat**. [New research](#) from the **Developer Success Lab** found that **74% of developers** plan to take action to upskill in Generative-AI Assisted Coding Technologies, and yet **45% of those developers** showed evidence of **worry, anxiety** and **fear** about whether they could succeed in this era of Generative-AI assisted coding with their current skill sets. Engaging in a **pre-mortem** that seeks to understand what “the patient dying” represents for these developers, their teams and their organizations is a valuable – and even necessary – thought exercise.

During our internal piloting of this **pre-mortem**, we gleaned a variety of powerful insights. For example, some engineers have thought extensively about their anxieties, while some haven’t given it any thought at all. Engineering managers are also worried about the impacts on their engineers,

for example that the company may decide to hire only junior-level engineers and let Gen-AI “mentor” and “coach” them.

This **pre-mortem** template is designed with the goal of helping engineering teams and organizations surface anxieties and fears about the adoption of Generative-AI Assisted Coding Tools – to help them understand what “failure” looks like at various levels – so that they might take action in preventing those failures from happening.



Pre-Mortem Outline

1. [Explanation of Pre-Mortem Concept, Purpose & Procedure](#)
2. [Who is the Patient?](#)
3. [What Killed the Patient?](#)
4. [Keep the Patient Alive](#)
5. [Wrap-Up](#)

Explanation of Pre-Mortem Concept, Purpose & Procedure

10 MINUTES



Rationale: Software practitioners are an analytical bunch by trade, and to earn their full engagement, we should carefully explain the context and situation that warrants their participation in this pre-mortem. This context may be complex and multi-faceted, including factors existing both outside and within the organization.



Facilitation Steps

1. Explain the concept of a pre-mortem.
2. Explain your purpose and goals in running this Generative-AI Assisted Coding Pre-Mortem.
3. Explain how the pre-mortem will unfold. Clarify questions and expectations with participants.



Pro Tips

- This is an excellent time to outline anything specific happening in your organization around Generative-AI Adoption that has spurred you to run this retrospective with your team(s). Explain to participants why the stakes are high enough to warrant using everyone's time to explore these questions.
- Essentially, this part of the pre-mortem is meant to help participants understand **what, why** and **how** they are being asked to engage. Clarifying expectations now will prevent wasting time during the next

phase – where participants will begin recording their thoughts – as well as interrupting the thinking of folks who *do* understand what they're supposed to be doing during their quiet thinking time in the next phase.

Who is the Patient?

20 MINUTES



Rationale: This is where you ask participants to define their worst-case scenario, or what exactly the metaphor of “the dead patient” represents. There is silent, thinking time built into this phase, which we know is beneficial and even necessary for folks to generate, collect, examine, and articulate their thoughts.



Facilitation Steps

1. Introduce the guiding question, which will be one of two questions, depending on whether you want to focus on the individual, team, or organizational level:
 - a. If **you** look twelve months into the future, what is **your** version of “the patient has died” in regards to the adoption of Gen-AI Assisted Coding Tools?
 - b. If **as a team/org, we** look twelve months into the future, what is **our** version of “the patient has died” in regards to the adoption of Gen-AI Assisted Coding Tools?
2. Model for participants what a “correct” and “incorrect” response looks like grammatically. These statements should reflect a future situation, as stated from the future point in time. So, for example, **Novice developers aren’t learning how to think deeply about solutions** is a grammatically correct response to the prompt, while **I’m worried that junior developers aren’t going to learn what they need to learn** is not. Feel free to show the following image to participants as an example of what the board might look like when everyone is done:



3. Give the group 5 minutes to populate the shared board with their statements. After 5 minutes, ask if the group needs more time. Add time in 2-minute increments until everyone is finished.
 - a. As participants are populating the board, the facilitator should begin grouping cards thematically. This won't be perfect – there will likely be cards that *kind of* fit together, but not completely – but that's perfectly fine. Doing this work now will allow you to jump right into the next activity without participants having to sit and watch while the bulk of the grouping occurs.
4. If necessary, ask participants to help you finish grouping the cards thematically, and to double-check your groupings.
5. Ask participants to use some graphic element available via the board to vote for three groups of cards. There's flexibility in how you ask them to vote, here, but everyone should be voting with the same clear criteria. You might ask them to vote for the groups that:

- a. feel the most serious and high-stakes in general
- b. most urgently need to be addressed by the company or team

The board will look something like this when you're done:



Pro Tips

- Based on our piloting, we suggest focusing participants on a time point twelve months into the future, but your preferred time frame may vary based on your own context. For teams and organizations with specific Gen-AI adoption goals and deadlines, you may want to choose a point in time closely following the deadlines for these goals.
- In our facilitation of this step, two insights emerged.
 - First, even after the explanation from the previous slide, not everyone will totally understand exactly what is being asked of them. So consider pre-populating the board with an example of a “good” response for folks to model their own after.

- Second, some folks will have never considered this question in any form, and so may need a bit of time to think. Others will likely have already thought about this *a lot*. Be prepared for varying amounts of participation here. Folks who have considered this already will likely begin populating the board in ways that trigger thoughts and feelings for those who haven't.
- Give everyone a 5-minute break after this step.

What killed the Patient?

20 MINUTES

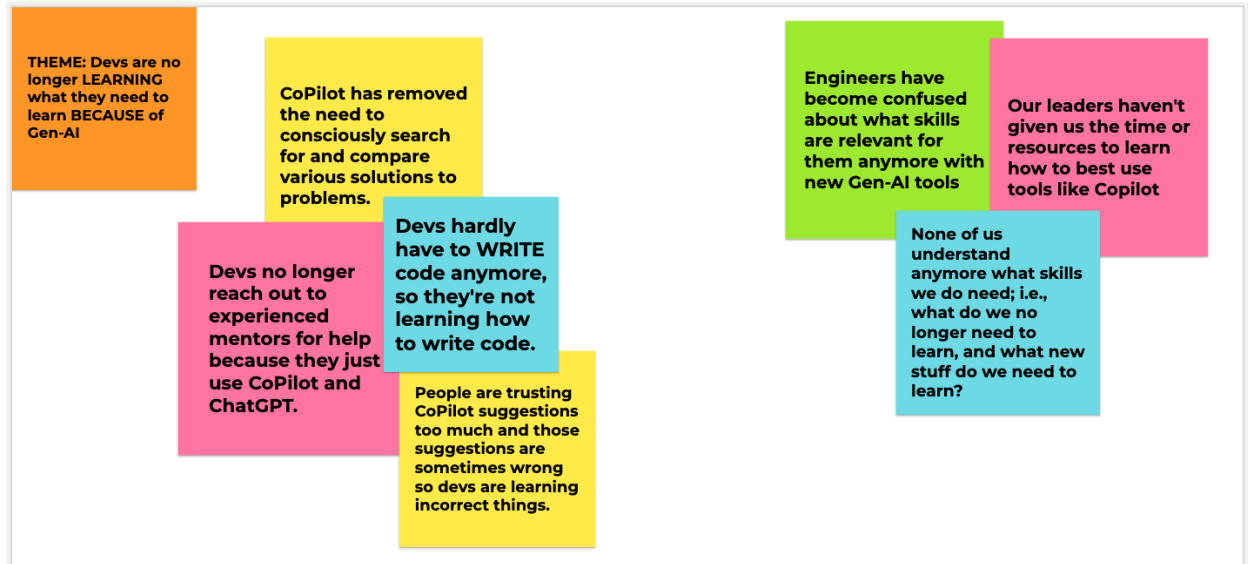


Rationale: Now that folks have had a chance to think about and define worst-case scenarios around Generative-AI Assisted Coding adoption, they'll need some time to think about *how these worst-case scenarios could have transpired*. This step is crucial in getting participants to start thinking about root causes and preemptive solutions.



Facilitation Steps

1. Choose the three most-voted for groups.
2. Put folks into breakout rooms, and assign each a group.
3. Each breakout room should create a new jamboard that at the top, describes their group theme (they can also copy and paste the cards from their grouping there, if that's easier).
4. For ~8 minutes, they should then brainstorm some reasons why these outcomes arose. In other words, what did we do or not do – either as individuals, teams, or a company – that led to these outcomes?
5. For the remaining time in this phase, bring participants back together as a large group, and ask folks to share their major insights from their breakout room jamboards. As folks are sharing major themes and insights, group the items thematically much like you did in the previous activity.



Pro Tips

- Some folks will identify root causes that you and your teams have little control over. For example, **The industry is producing bootcamp grads who have prompt engineered their way to a bootcamp certificate** falls outside any one team's or company's locus of control. But that is okay in this step – we want participants largely thinking without bounds and parameters in this phase of the pre-mortem. In the next phase – “Keep the Patient Alive” – you can encourage participants to ask, “How can we manage the *effects* that this external root cause has on us?” (A response they might give for the above bootcamp example is: **Our hiring practices should include a live coding challenge so that we can understand how much a candidate relies on ChatGPT**).

Keep the Patient Alive

20 MINUTES



Rationale: The reflections that arose from the pre-mortem are only so useful in and of themselves. From these insights, action must be taken. This activity encourages participants to look at the root causes they identified during the previous activity and create action items so that they might keep worst-case scenarios from manifesting.



Facilitation Steps

1. As a large group, give everyone 5 minutes to individually consider the root causes that were presented during the previous exercise, and to come up with action items that address those items. Ask folks to share their action items either on another shared board, or in a Slack channel where they can be easily listed and viewed by everyone.
2. Leave 15 minutes for discussion of the question: *Which of these action items feels most important for us to tackle as individuals? As small teams? As an engineering org? As a company?*
3. Have each person decide on a single, personal action item.
4. Decide on 2-3 action items at the level that the participant group comprises, i.e., if this pre-mortem is being held with a single, ground-level engineering team, then the action items should fall within that team's locus of control and impact.



Pro Tips

- Some folks might have a hard time coming up with action items, particularly when the root cause is too vague or broad. For example, if the root cause is **Junior developers have developed bad engineering practices because they rely too much on ChatGPT**, it can be helpful (and even necessary) to ask folks to get more specific. For example, what do they mean by “bad engineering practices”? Because of the vagueness of this root cause, it’s tough to identify an actionable action item to address it. Ideally, vague root causes will be identified and addressed in the previous phase of the pre-mortem, but they can slip through here. Encourage participants to be on the lookout for these too-broad root causes during this phase.

Wrap-Up

20 MINUTES



Facilitation Steps

1. Decide as a team where action items will be recorded and tracked, and who will be primarily responsible for their execution.
2. Agree to scheduling a follow-up meeting to discuss progress and results around these action items, or decide on an already-scheduled meeting to do so.
3. Invite participant feedback via messaging system DM or a survey link, especially if the pre-mortem will be repeated with additional groups in the organization. This feedback can be used to improve the experience for future participants.

Authorship: This [Toolkit](#) was created by the Developer Success Lab, a team of scientists & software developers that conducts empirical research that aims to both share developers' experiences, and provide models for human-centered software development. The research behind this Toolkit is from [The New Developer](#) project.

Our public-facing work on developer experience thrives when people share and support it!

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