The Virtuous Cycle

Getting Good Things Out of Bad Failures

Joy Scharmen
I’m here to talk about failure.
Why talk about failure?

Failure is amazing.

Failure is our best teacher.
How do we learn from failure?
Have you ever run out of integers in an auto-incrementing primary key column in a database?
Temporarily out of Gasoline OPEN for your other driving needs
Frameworks that default to INT

Looking at you, ActiveRecord.
Assumptions about the size of your database.

(before it hits production)
Just not thinking about it

I’m just happy that it works at all.
Oops, I did it again.

We had this happen to us twice.

...then it happened a third time.
And we’re an operations company.
First, consider it more deeply.
We fixed one occurrence. It was simple.
It happened again. Same fix.
Then it happened again.

Obviously what we are doing here isn’t working.
Who here is familiar with retrospectives?

ret·ro·spec·tive
ˌretrəˈspektiv/
adj·ective

1. looking back on or dealing with past events or situations.
Who has been to a boring retrospective?

I have. I’ve run them. Sorry.
A retrospective is the pivot point between failure and learning.

If it’s boring, no one is learning.
How do we have non-boring retrospectives?
Create engagement. Prepare!

Don’t force people to watch the sausage being made.
Before the retrospective:

Choose a facilitator

They should know who was involved and why.
Before the retrospective:

Build a timeline

Gather your facts.
Use your tools wisely

“We become what we behold. We shape our tools, and thereafter our tools shape us.”
— Marshall McLuhan
My Tools For

Incident Management

ChatOps
Bot Tools
SitReps

Retrospective Prep

Time
Outreach
Organization
My personal incident management tool belt:

ChatOps
My personal incident management tool belt:

Bot Tools

Lex Neva • 10:56 AM

h timeline we've patched things up, checking whether we fixed it

Heimdall Bot • 10:56 AM

✓
My personal incident management tool belt: SitReps
My personal retrospective toolbelt:

Time
Block out time.
My personal retrospective toolbelt:

Outreach

Have roles defined.
My personal retrospective toolbelt:

Organization

Send out the agenda, including the timeline, the day before the retrospective.
People should show up to a retrospective with context to begin a discussion.
Everyone is in the retrospective. The timeline is done. How do we start?
Have the most involved engineer give a brief summary of what happened.
Read the room.

Make sure everyone is engaged.
Talk about customer impact.

Be compassionate for your customers.
Take note.
Pick the point you want to start from and dive in.
If you ever get to “human error”, keep digging.
No, really.

If you ever get to “human error”, *keep digging.*
Most Important: Always Assume Good Intent
Defensiveness kills retrospection.
One way you can tell a retrospective is good:

you have a ridiculous list of remediation items.
Remediations can be anything from:

“re-architect the whole platform”

to

“fix typo on line 5”.

to

“make the speed of light go faster”.

Don’t do every remediation.

and

Don’t discount big projects!
What do you do with all of these remediations?

Bring them to product as well as engineering!
Product can be your best friend.

Do you have a need? Your customers do too.

Product is great at getting needs in front of customers.
Heroku Pipelines

Pipelines is a product that came out of an engineering need.
Is your fix a small thing you can add to existing customer tools?

Engineering should be able to do this with minimal product sign off.
You can improve your customers’ experience.

Your customers, your fellow engineers, and your community can benefit from your own needs and hard won experience.
Back to the story.
Done: Tooling
Done: Process
Next: Automation
Next: Fix inputs

* https://github.com/rails/rails/pull/24962
Every failure is a chance to learn. Make those chances count. Thank you.
Retrospective Resource Wiki:
http://retrospectivewiki.org

Infinite Hows:
https://www.oreilly.com/ideas/the-infinite-hows

Heroku Dev Center:
https://devcenter.heroku.com

Retrospective Template:
https://github.com/peculiaire/incident-lifecycle/blob/master/retrotemplate.md