Note to Readers

What you're about to read is an early draft of the *Fuckup Almanac* introduction and Chapter 0.

Its purpose is to outline the idea behind the book — so yes, the tone starts off a little more serious than what you might remember from *IT Dictionary*. Don't worry. Once the foundations are set, the familiar irony kicks in. The humor's still here, just tuned to fit the subject matter: real-world failures that sometimes cost billions… or worse.

Introduction

In my previous book, *IT Dictionary*, I poked fun at what doesn't work in IT. The goal there was satire: to say out loud what everyone secretly feels, to strip away the doublespeak, and to make visible the absurdities that otherwise hide behind corporate jargon. It was meant as a catharsis, a survival guide disguised as a dictionary, and—judging by the laughter of readers—it served its purpose.

Fuckup Almanac is the natural sequel. After exploring what doesn't work, in *Fuckup Almanac*, we will ask a deeper question: *why do things sometimes go spectacularly wrong?* Not just in IT, though you'll find plenty of that. We will look beyond software into engineering at large, into corporate blunders, and into the messy intersection where ambition, technology, and human fallibility collide. The disasters range from laughably small to devastatingly large, but the connecting thread is the same: every one of them carries a lesson. Think of this book as Murphy's Law in long form, with footnotes.

Why Failure Fascinates Us Culturally

Before we get to the practical lessons, let's pause for a moment on why failure grips us so tightly. Whole cultures have been shaped by tales of downfall. Greek tragedies are essentially long-form post-mortems set to verse. Fairy tales often smuggle in the warning: *don't do this, or bad things will happen*. Modern news media thrive on calamity because, let's face it, nobody clicks on "bridge remains structurally sound for 80th consecutive year."

There's something magnetic about the spectacle of collapse. It reassures us that our own mistakes are survivable—at least compared to an exploding rocket. It gives us a shared moment of humility: if NASA, Toyota, or the French railway system can screw up, then maybe we shouldn't be too hard on ourselves for burning dinner. That mix of fascination and relief is why "disaster porn" works. But fascination isn't enough. The point of this book is to show that we can channel that same curiosity into learning.

Learning from Failure

Let's be real: some readers may come here for the *disaster porn*, and I won't judge. There's a strange satisfaction in reading about bridges collapsing, projects blowing up in cost, or billion-dollar companies undone by a single misplaced semicolon. (Yes, semicolons—the

punctuation equivalent of banana peels.) If you're here for that, you'll get your fix. But I hope you'll also see the deeper layer—the one that matters. Each case study is more than just a screw-up; it's a window into how systems break, how assumptions fail, and how humans, with all our blind spots, biases, and good intentions, create the conditions for disaster.

That's the real purpose of this almanac: to turn other people's mistakes into your free education. The best way to learn is to study failures. If we can extract the lessons without paying the price ourselves, then why wouldn't we? Every example in this book ends with a short summary of the lessons it offers. Think of it as your personal library of post-mortems—except here, you don't have to bring donuts to the meeting.

And that term, post-mortem, is important enough to dedicate an entire chapter for that. Which I am going to do in Chapter 0 shortly.

This book, in a sense, is one giant cross-disciplinary post-mortem. Some entries will read like an autopsy of a project, a product, or even an entire organization. The difference is, unlike in medicine, no one is squeamish about poking at the guts here. And as you'll soon see, the same logic applies to bridges, satellites, or corporate takeovers: you can't fix what you don't understand.

Why Context Matters

To truly understand why something failed, you often need to understand the building blocks behind it. Sometimes that means a networking protocol. Sometimes it's a piece of physics that determined how a structure held—or didn't hold. Other times it's an organizational pattern or process that quietly set the stage for collapse. And occasionally, it's just someone making a decision at 3 a.m. after too much coffee and not enough sleep.

That's why throughout this book you'll see me step back and explain not just *what happened*, but also *the mechanics behind it*. The catalog of failures will therefore be interwoven with explanatory sections that break down the key ideas, technologies, and phenomena at play. My goal is to give you enough knowledge to follow along, even if you've never touched the field before.

This does not mean I'm writing another dry textbook. Quite the opposite: this book is meant to be accessible to anyone, regardless of prior knowledge or professional experience. I'll lean on analogies, strange metaphors, and deliberate simplifications. But here's the key: I simplify without distorting.

The core of the problem will remain intact, free of factual errors—at least I hope so. And if somewhere along the way I do get something wrong, consider this my preemptive apology. After all, this is a book about failure; it would be almost suspicious if I didn't manage to sneak in a couple of my own.

And if there's a side effect, I hope it's this: by the time you finish reading, you'll be armed with enough understanding to make sense of the next headline about something blowing up—without having to run to Wikipedia. You may even start spotting the oversimplifications in articles you read, because you'll know the hidden layers underneath. Bonus: you might become that annoying friend who interrupts the news to say, "Well actually…"

My promise about explanations

Every explainer in this book aims to be clear, simplified, and still factually correct. Specialists may occasionally think, "You could also mention X or Y here," but ideally never "That's wrong." This isn't meant to replace a textbook—it's meant to make one less intimidating.

If you're a curious mind who just wants to understand how things fit together, these explanations should serve you well. You'll get the essence without the academic gibberish.

And as a bonus—if you happen to be learning the topic right now and the term sounds like pure dark magic, I hope these pages will make it feel human again. The goal is simple: you'll grasp the big picture and be able to dig into the details later, armed with context instead of confusion.

Think of it as a friendly map to the territory, not the full geodesic survey.

This Really Happened

Warning: no matter how absurd, unlikely, or straight-up ridiculous the following stories may sound—they all happened. None of this is fan fiction. These are not myths, not half-remembered anecdotes, and not urban legends polished up for drama. They are all documented, verified, and very, very real. (Which honestly should terrify you more than if I'd made them up.)

And occasionally, I'll throw in smaller stories from my own experience. They never made headlines, but they add a personal flavor. In those moments, you'll have to take my word for it, knowing that human memory is imperfect and prone to bias. Still, they offer texture and honesty—and sometimes, the most humbling failures happen on a very small scale.

At the end of this book, you'll find a concise bibliography with the essential sources. For those brave souls who want every last detail, the complete collection of references and source materials will be available online at <TODO: INSERT LINK>. Consider it a bonus feature—or, if you suffer from insomnia, the ultimate cure. Because nothing says "fun bedtime reading" like a hundred links to government PDFs.

How to Read This Book

A quick note before we dive in: you can read this book straight through, from cover to cover. In fact, there's a certain pleasure in watching how the themes build on each other—how small mistakes scale up, how recurring patterns emerge, how the same types of blind spots show up in different domains. If you follow it in sequence, you'll see the cumulative weight of lessons stack up like a slow-motion avalanche.

On the other hand, you don't have to read this book linearly. Feel free to jump around—dip into a chapter about rockets, then skip to one about corporate fiascos, and circle back later. The entries are written to stand alone. That said, some explanations of underlying mechanics appear earlier. So if you hit a concept that feels underexplained, you may want to flip back a few pages for context.

Book Structure (TODO)

Here's a sneak peek at what's inside:

- **Part I:** Foundations of Failure
- **Part II:** The Internet's House of Cards
- **Part III:** Myths of Safety — Backups, Redundancy & Reality
- **Part IV:** Human Factors & Corporate Hubris
- **Part V:** When Physics Strikes Back
- **Part VI:** The Price of Free (Open Source)
- **Part VII:** Supply Chains & Dependency Hell
- **Part VIII:** AI & Algorithms Gone Wild
- **Part IX:** Learning From Catastrophe

So buckle up. You're about to tour the museum of human error—spanning IT outages, engineering miscalculations, corporate mismanagement, and the occasional jaw-dropping oversight. Some will make you laugh, some will make you wince, and some may haunt you. But all of them will teach you something—about systems, about people, and maybe even about yourself. And if nothing else, you'll come away with enough material to make your coworkers roll their eyes at your next "fun fact" rant.

Just try not to spill coffee on it—it's already a book about failure, it doesn't need your help to become one more example.

Note on the Tone

One more thing before we go.

Some stories in this book carry real pain—lives lost, communities shaken. I've wrestled with including them in a book that often winks at human folly. The verdict: their lessons are too crucial to skip, but some demand respect over sarcasm.

For cases with multiple fatalities or deep cultural trauma, I drop the irreverence. These sections, clearly marked **[TODO: final visual treatment TBD during DTP]**, stick to facts and lessons—no smirks, no punchlines. Writing in 2025, I treat the turn of the millennium as a natural cutoff point. A generation—roughly 25 years—is long enough for time to heal most wounds and for perspective to settle in, so events from before 2000 are fair game for the regular tongue-in-cheek approach by default. That said, I reserve the right to make exceptions if its wounds still resonate, regardless of when it happened.

The goal of this book is simple: unpack mistakes and teach lessons while keeping things readable and, dare I say, entertaining. But when there's a conflict between being clever and being clear, teaching wins. Every time. If a sarcastic aside would cloud the lesson or disrespect the gravity of what happened, it gets cut.

This book exists to educate, not to trivialize. Sometimes that means a wry observation; other times, it means letting the failure speak for itself.

Chapter Zero: The Anatomy of a Post-Mortem

Before we dive into the catalog of failures, I want to spend a little time on the concept of a post-mortem. Consider this the theory class before the field trip. Don't worry, we won't be dissecting every case in this book with a full formal process. Instead, we'll focus on the story itself and then jump straight to the conclusions and the lessons that flow from it. But it's worth understanding what a post-mortem is and why it matters.

Etymologically, the word *post-mortem* comes from Latin and literally means "after death." Originally, it referred to autopsies: examining a body after life had ended. In the corporate or engineering context, it's the same idea—except the "body" is a project, a system, or an organization that just suffered a collapse. In short: a post-mortem is what you do once something has already gone spectacularly wrong and you're left poking at the remains to figure out why.

At its core, a post-mortem is an analysis conducted after something has gone wrong. Different industries call it by different names—Root Cause Analysis, accident investigation, incident review—but the goals are consistent: understand what broke, and make sure it doesn't happen again. Whether it's an airplane crash, a power outage, or a factory mishap, the terminology varies, but the principles are universal: stop, rewind, analyze, and learn.

What a Post-Mortem Is *Not*

Just as important is what a post-mortem is *not*. It is not a witch-hunt, not a trial, and not a convenient way to find someone to fire or to scapegoat in a press release. Done correctly, a post-mortem focuses on situations, not individuals. It asks *how* and *why* something happened, not *who* to punish.

Sadly, many organizations get this wrong. They confuse the noble art of learning from failure with the cheap thrill of finding someone to blame. The result? A meeting where everyone glares at the intern until the crying begins, or a report that triumphantly concludes "the outage was caused by human error," as if that phrase magically explains everything. Spoiler: it doesn't. "Human error" is not a root cause—it's the starting point of the investigation, not the end.

That doesn't mean people never make mistakes. In fact, as you'll see throughout this book, human error shows up again and again. But a proper analysis goes beyond "she screwed up" or "he pushed the wrong button." Well-designed systems account for human fallibility: fatigue, distraction, lack of knowledge, even the occasional act of sabotage. The real question is: why did the system allow a single human slip to cascade into catastrophe, and how can we prevent that next time?

Why Blameless Matters

You might have noticed the buzzword *blameless post-mortem* floating around in tech culture. It isn't corporate fluff—it's a survival strategy. When people feel that admitting mistakes will get them fired, they clam up. Instead of honesty you get silence, defensiveness, or the classic: *"I have no idea what happened, maybe the database just… felt sad."* In a well-run investigation the truth comes out anyway, but the longer it takes the more expensive it gets. Worse, a blame-heavy culture kills the willingness to take reasonable risks, which in turn kills innovation.

A blameless approach doesn't mean we pretend nobody ever screwed up. It means the focus is on understanding the *systemic* factors that allowed a single misstep to snowball into a disaster. When people know they won't be burned at the stake for speaking up, they actually tell you what went wrong. That psychological safety builds trust, improves learning, and—believe it or not—helps teams feel like a team rather than a firing squad.

And when psychological safety is absent, the opposite happens. People hide problems, delay reporting, or even falsify data to protect themselves. Famous disasters—from space shuttles to nuclear plants—were made worse because engineers felt ignored, managers feared punishment, and truth got buried under politics. Blame culture doesn't just backfire; it actively breeds the very conditions for repeat failures.

Types of Post-Mortems

Not all post-mortems are created equal. Broadly, you'll encounter three flavors:

- **Public incident reports**: polished documents released after high-profile disasters (think aviation accident reports or Post Mortems from big cloud providers). They're meant to reassure the public that the situation is under control, while also demonstrating transparency.
- **Internal post-mortems**: detailed analyses circulated only within an organization. These often contain more brutal honesty—because nobody wants to admit to the world that Bob forgot to plug in the backup generator.
- **Customer-facing reports**: somewhere in between, especially in B2B contexts. Clients affected by an outage expect an explanation, but you don't necessarily want to air *all* your dirty laundry. These reports tend to be diplomatic, balancing honesty with just enough PR polish to avoid panic.

Different audiences, different levels of candor, but the underlying purpose is the same: identify what broke and how to stop it from happening again.

It's also worth noting that some technical details simply *cannot* leave the organization—or at most get shared with a very limited group of "trusted" partners. And let's be real: in corporate speak, "trusted" is usually defined not by friendship but by legal agreements and NDA[1] clauses. In plain English: *"I could tell you, but then Legal would have to kill me."*

Likewise, customer-facing reports aren't always delivered out of goodwill. Sometimes they're required by contract, with deadlines and penalties attached. In those cases, transparency is less about virtue and more about compliance paperwork.

A Short History of Post-Mortems

Post-mortems are not some Silicon Valley gimmick cooked up to justify free pizza after outages; the practice has deep roots across multiple domains. In medicine, 19th-century doctors gathered for what were bluntly called "morbidity and mortality" conferences. Imagine a room full of physicians saying, "Well, that didn't go as planned," and then arguing over scalpels. Brutal? Yes. Effective? Also yes.

The military and naval world had its own flavor. As far back as the 1700s, inquiries were convened after shipwrecks or failed campaigns. Early on, these often turned into ceremonial witch-hunts against commanders—"string him up and the sea will be calmer next time." Over time, though, they evolved into more structured boards of inquiry, realizing that blaming one captain wasn't nearly as useful as fixing the systemic flaws that kept sinking ships.

Then came aviation, which gave us perhaps the most iconic tool of systematic learning from disaster: the flight data recorder, better known as the "black box." After World War II, this tiny device transformed crash investigations from speculative finger-pointing into evidence-based science. Suddenly, investigators could replay the last moments of a flight and know exactly what

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[1] NDA (Non-Disclosure Agreement) — the corporate equivalent of "What happens in Vegas, stays in Vegas"… until it takes down half the Internet and you still can't talk about it.

happened—data that would save countless lives. It also killed the classic defense of "trust me, the pilot sneezed."

Manufacturing, meanwhile, turned failure into a lifestyle choice. The rise of quality movements in the 20th century—Deming's principles, Six Sigma, and endless clipboards—embedded the idea that every defect was a chance to tighten the system. Factories learned to love their post-mortems almost as much as their stopwatches.

And finally, the tech industry picked up the baton. Inspired by aviation and manufacturing, large internet companies like Google, Amazon, and Microsoft began formalizing incident reviews in the late 20th and early 21st centuries. With entire slices of the internet depending on their uptime, the cost of brushing off an outage was too high. Today, even startups dabble in post-mortems—though let's be honest, some of those read more like creative writing exercises than actual analysis.

Across all these fields, the lesson repeats: writing things down and poking at the problem afterward beats shrugging and hoping it won't happen again. Or, put another way: denial may be comforting, but it doesn't keep planes in the air or servers online.

The Black Box (and its cousins)

Since we've already mentioned aviation's black box, it deserves its own spotlight. Despite the name, a "black box" is not black at all—it's usually painted in a vivid, almost neon orange. The reason is simple: crash sites are chaotic, and investigators need every advantage to locate the recorders quickly. Orange stands out against debris, smoke, and even snow. The box itself is engineered to survive extremes—fire, salt water, crushing impacts—because if it fails, the entire investigation fails.

So why call it a *black* box? The term has two origins. One is colloquial: engineers often use "black box" to describe any system where you can observe inputs and outputs without knowing the internal details. The other comes from accident investigation jargon, where "black" implied secrecy or inaccessibility. Ironically, in modern aviation, the point of the box is the opposite: to spill its secrets.

That leads to a broader metaphor that also shows up in analysis:

- **Black-box analysis**: you only look at inputs and outputs, without knowing (or caring) what's inside. Useful when internals are unknown or too complex.
- **White-box analysis**: you know every detail of the system and trace causes through full transparency.
- **Grey-box analysis**: the messy middle ground, where you have partial knowledge and mix inference with facts.

Real-world post-mortems almost always end up in the grey zone. Pure black-box approaches risk oversimplification ("the server was slow"), while pure white-box analysis is often impractical

(no team has infinite time and resources). The art lies in balancing the two—digging deep enough to find useful lessons without disappearing down every rabbit hole.

And speaking of digging ahead: black boxes are what help us understand the past, but some teams try to anticipate the future. Enter the pre-mortem.

Pre-Mortems

As a quirky cousin to the post-mortem, some organizations experiment with what's called a *pre-mortem*. Instead of waiting for disaster to strike, a team imagines the project has already failed spectacularly, then brainstorms all the possible reasons why. It's like playing "spot the doom" in advance.

This approach isn't free—designing safeguards for every nightmare scenario is costly. But in high-stakes environments (NASA, nuclear power, space exploration), it's been worth the effort. The technique gained traction in the mid-20th century, popularized by NASA, and it's often tied to Murphy's Law: *anything that can go wrong, will go wrong*. A pre-mortem simply asks, "Okay, *how* exactly will it go wrong, and what can we do now to stop it?"

Root Cause Analysis

To get there, investigators use different tools. One of the simplest and surprisingly effective is called the "5 Whys." The idea is straightforward: keep asking "why" until you reach the real root cause. Rarely is the first answer the correct one. You have to dig. It's essentially the grown-up version of that childhood game where a kid bombards you with an endless chain of "but why?" questions—except now it's socially acceptable in the workplace, and occasionally saves billions of dollars.

Take a mundane example: you were late to a meeting.

- Why? Because you were stuck in traffic.
- Why were you stuck in traffic? Because you left home late and hit rush hour.
- Why did you leave home late? Because you overslept.
- Why did you oversleep? Because you went to bed too late.
- Why did you go to bed too late? Because you were binge-watching Netflix.

Suddenly, the problem isn't "traffic"—it's your questionable self-control in front of a glowing screen. That's the value of digging deeper: uncovering the underlying causes that aren't obvious at first glance.

Of course, the "five" in "5 Whys" is just a convention. Sometimes you get to the root cause in three questions; sometimes it takes seven. The point isn't to hit a magic number but to keep digging until you actually understand what happened.

Crucially, this isn't an automatic or mechanical exercise. You *could* keep asking forever—"Why did you binge-watch Netflix?" "Because the show was too good." "Why was it too good?" "Because Netflix invested in strong writing and acting." At some point you're no longer uncovering useful causes, you're just blaming television executives. The art lies in recognizing when you've hit the layer that actually gives you an actionable lesson, not when you've milked the word "why" dry.

Another frequent failure mode is stopping too soon or, conversely, padding out the answers just to reach the magic five. I've seen reports where authors bent over backwards to invent sub-points just to hit exactly five, and others where they triumphantly stopped at the fifth "why"… precisely when things were finally getting interesting. That's process theater, not investigation.

And keep in mind: the 5 Whys are just one tool in the kit. The moment you forget the actual goal—finding real causes—you risk turning it into yet another cargo cult ritual[2], where form trumps substance and the box-checking matters more than the learning.

A More Realistic Example

Take aviation. Ever wondered why airplane windows are round? In the 1930s, many aircraft—like the Dewoitine D.332, D.333, or D.338—had rectangular windows, just like in your living room. It looked elegant… until the windows started cracking.

Back then, flying was mostly low-altitude and cabins weren't fully pressurized, so a cracked window was treated as a maintenance issue rather than a looming disaster. The attitude was basically: *no one died, just call the glazier and move on.* Warnings existed, but without fatalities they didn't trigger systemic investigation.

Fast forward to the jet age after World War II. The de Havilland Comet 1, the world's first commercial jet airliner, soared at 12 km where pressurization was non-negotiable. But then, catastrophic failures struck—crashes like BOAC Flight 781 and South African Airways Flight 201, where cabin decompression tore fuselages apart. Cracks weren't just drafts; they were death sentences

Investigators eventually performed pressurized-water tank tests at Farnborough, which showed the real culprit: sharp corners in rectangular windows (and antenna mounts) became stress concentrators, turning metal fatigue into a countdown clock. Every flight cycle weakened the structure until, one day, the plane literally tore itself apart midair.

The fix was simple but revolutionary: remove the corners. Round the windows. That design change, along with stronger fuselage standards, became the template for modern aviation safety.

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[2] Cargo cult ritual — a process faithfully copied from smarter people without grasping why it works, producing the same ceremonies, none of the miracles.
More details: https://en.wikipedia.org/wiki/Cargo_cult

So next time you're staring out of an oval window, remember it's not just a design choice—it's a monument to the power of post-mortem thinking, and a reminder that ignoring early warnings because "nobody died" can be the most dangerous error of all.

Common Pitfalls

Before we move on, it's worth noting the mistakes that crop up again and again:

- Stopping at "human error" and calling it a day.
- Writing the report just to satisfy compliance, with zero intent to change anything.
- Turning the process into a blame-fest rather than a learning exercise.
- Skipping documentation entirely because "we're too busy putting out fires."

If you recognize these patterns in your workplace, congratulations: you've already identified your next failure waiting to happen.

Another critical aspect often overlooked: **action items**. A well-run post-mortem doesn't end with a tidy PDF or Confluence page. It ends with a concrete plan of improvements—technical, organizational, procedural—that someone is actually responsible for carrying out. And yes, those improvements should be tracked, prioritized, and reviewed.

Balancing Rigor and Reality

Now, let's be clear: not every cut deserves stitches. Just as a doctor won't run a full autopsy on a paper cut, an organization doesn't need to launch a 30-person task force because the office printer jammed. Some incidents are worth deep dives; others deserve only a note in the logbook. The trick lies in knowing the difference.

Similar logic applies to action items. Do all of them need to be implemented? Of course not. They compete with new features, customer demands, and limited resources.

Sometimes business reality wins and the fix gets postponed—or dropped. That can be a reasonable decision, but it must be made consciously and justified properly.

Pretending the risk no longer exists just because the document is filed is the worst possible outcome. If your strategy is basically "clench fists, cross fingers, and hope," you don't need a post-mortem. You need a prayer circle.

This "chapter zero" exists to clarify what I mean when I call this book one giant post-mortem — and, let's be honest, to justify the educational value of writing hundreds of pages of disaster gossip. In the chapters ahead, we'll dissect failures big and small, spectacular and mundane. The point isn't to gawk at wreckage, but to understand it — and to make sure the same mistakes don't get repeated.

Think of this book as a highlight reel of failure. Readable, digestible, and just ironic enough to make you smirk while learning something that might save you one day.

And to be clear: this isn't a full-scale forensic exercise. Complete post-mortems of major failures often aren't even possible — most internal details never see daylight, especially the juiciest ones that stay locked behind NDAs and corporate firewalls. Even if they did, the result would be a tome so long and dry that nobody (including me) would finish it. The goal here is to give you a mental toolkit, not a classified dossier. As you read the coming chapters, try applying what you've learned in this one: imagine what might have been happening beneath the surface, where the processes, incentives, or sheer human chaos aligned just right to make things go wrong.

Or, if you'd rather, grab some popcorn and enjoy the show.