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Incidents & Accidents

Matty Stratton, DevOps Evangelist, PagerDuty
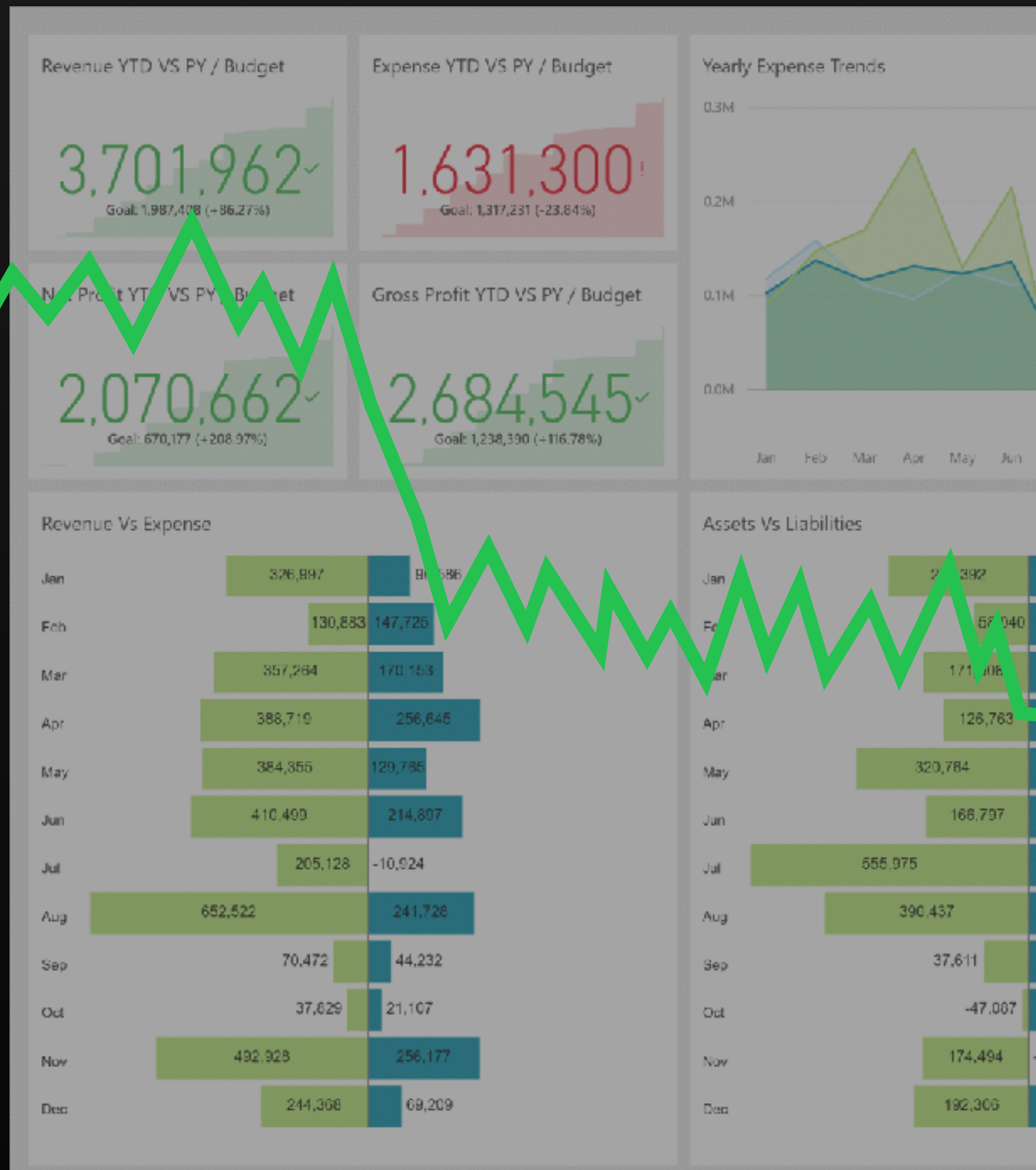
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Gratuitous slide of kids to get you on my side

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Disclaimer, part the first: Learn from other industries, do not take on their stresses.

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Disclaimer, part the second: This is a topic with a surprisingly large number of details.

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PEACETIME

WARTIME

Revenue YTD VS PY / Budget
3,701,962
Goal: 1,987,408 (+86.27%)

Expense YTD VS PY / Budget
1,631,300
Goal: 1,317,231 (-23.84%)

Yearly Expense Trends
0.3M
0.2M
0.1M
0.0M
Jan Feb Mar Apr May Jun

Net Profit YTD VS PY / Budget
2,070,662
Goal: 670,177 (+208.97%)

Gross Profit YTD VS PY / Budget
2,684,545
Goal: 1,238,390 (+116.78%)

Revenue Vs Expense

Jan	328,897	88,586
Feb	130,883	147,726
Mar	357,264	170,163
Apr	388,719	256,645
May	384,355	129,785
Jun	410,499	214,897
Jul	205,128	-10,924
Aug	652,522	241,728
Sep	70,472	44,232
Oct	37,629	21,107
Nov	492,928	256,177
Dec	244,368	69,209

Assets Vs Liabilities

Jan	272,392	
Feb	171,008	87,040
Mar	171,008	
Apr	126,763	
May	320,784	
Jun	168,797	
Jul	555,975	390,437
Aug	390,437	
Sep	37,611	
Oct	-47,007	
Nov	174,494	
Dec	192,306	

...ws has been shut down to prevent damage

...this Stop error screen,
...appaears again, follow

...r software is properly installed.
...ur hardware or software manufacturer
...d.

...ve any newly installed harware
...ns such as caching or shadowing.
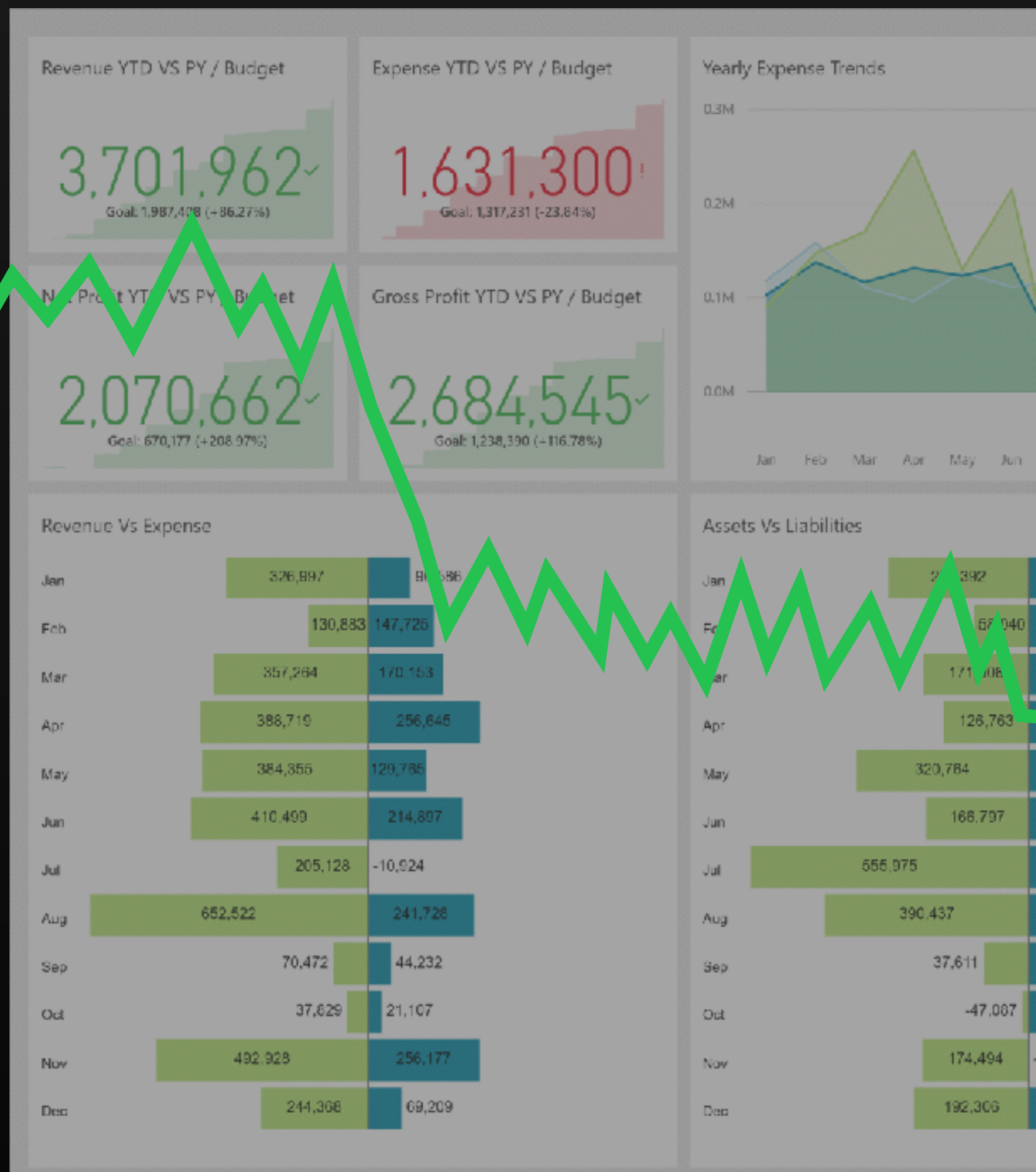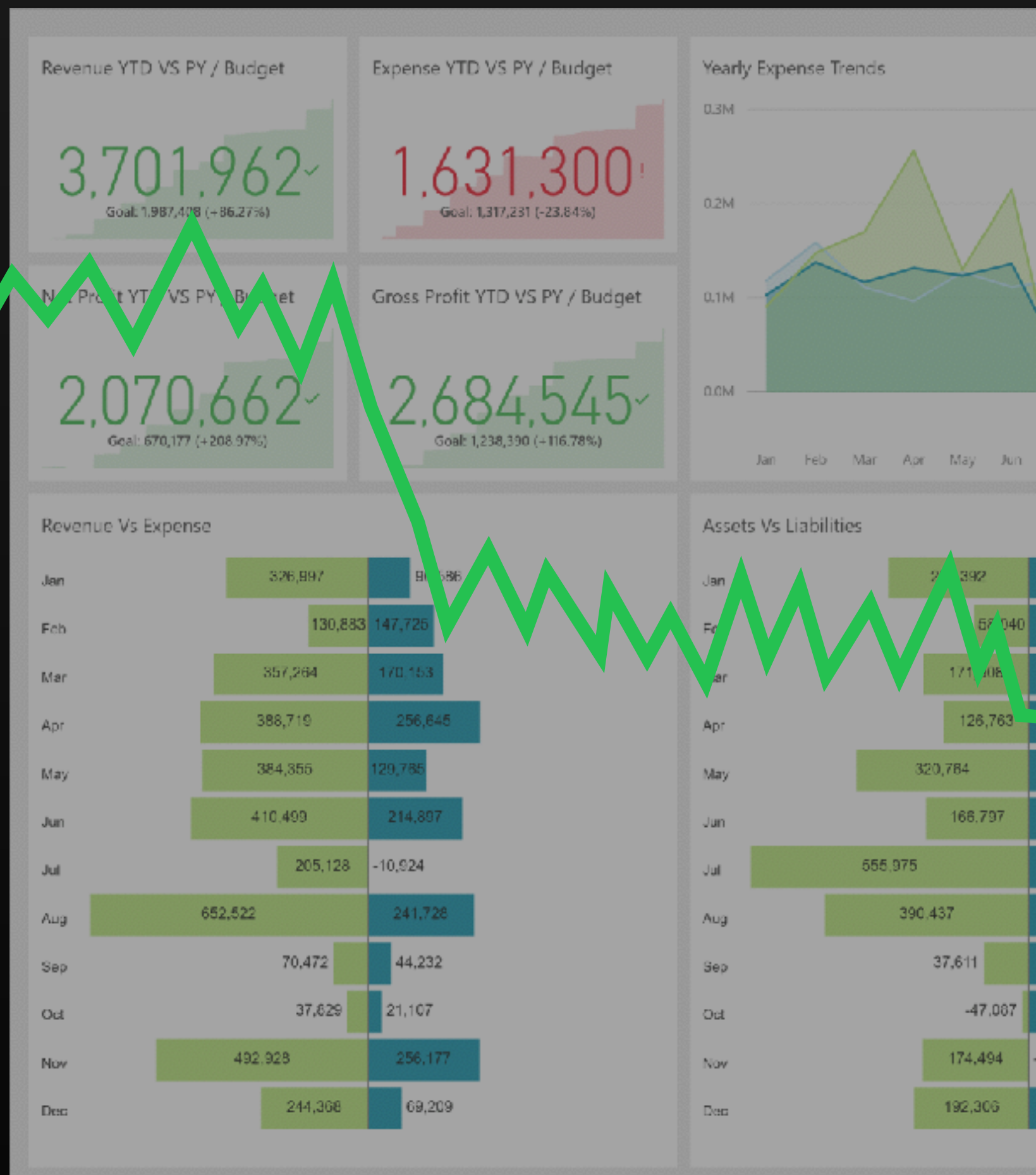...e or disable components, restart
...anced Startup Options, and then

...000001,0x4FQ1CCC7,0x0000000)

...ase at 4S4M5000, Datestamp 4d5dd88c

...technical support for further

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NORMAL

EMERGENCY

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OK

NOT OK

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Before, during, after

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Before

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Have criteria defined for when to have and not have a call.

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Any unplanned disruption or degradation of service that is <u>actively affecting</u> customers' ability to use the product.

Post incident criteria widely. Don't litigate during a call.
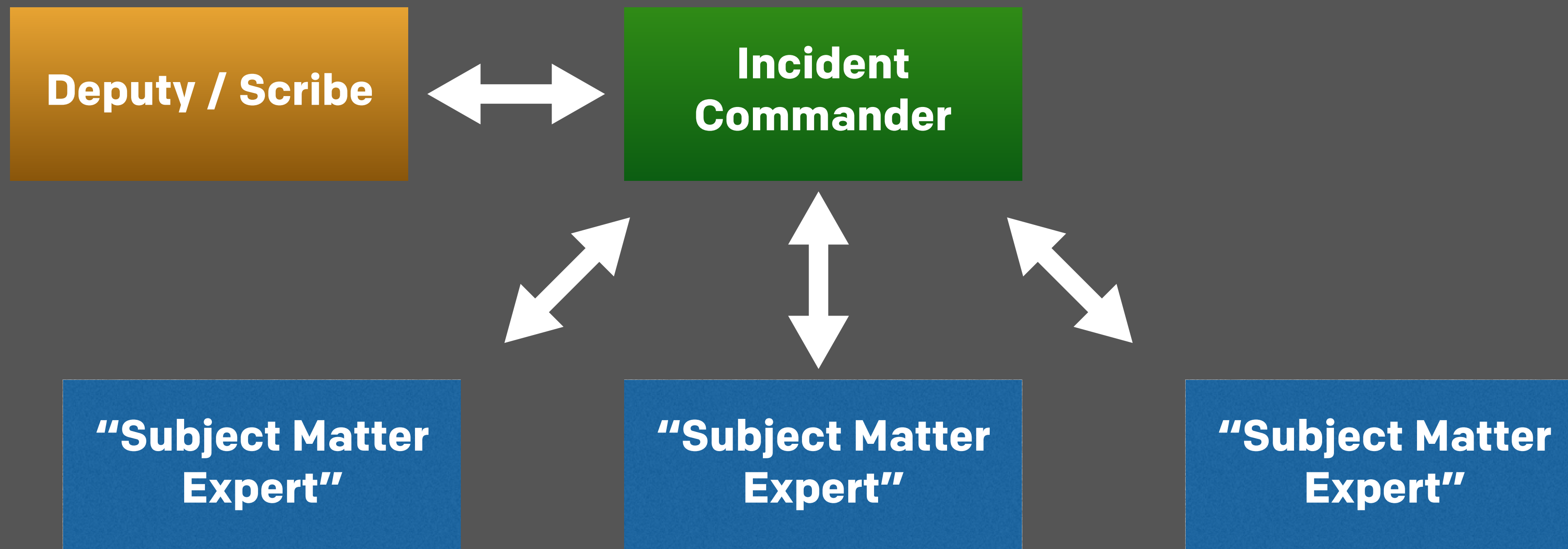
Severities

Severity	Description
★ **SEV-1**	• SEV-2 co... **minutes.**

★ **SEV-2**	• Notificatio...
	   • Notific... **accou...**
	   • Web ... know ...
	 • An event...
	   • i.e. ar...
	   • i.e. th...
	 • Configura...
	 • Custome...
	 • Problems... the **pdt-c...**

	A...

★ **SEV-3**	• Notificatio...
	 • Email eve...
	 • Sales pip...
	   • Marke...
	   • Signu...
	 • Configura... significan...
	 • Configura...

Monitor the business criteria, and act accordingly.

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People are expensive.

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Practice still makes perfect.

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"Know your role"

Deputy / Scribe ↔ Incident Commander

"Subject Matter Expert"   "Subject Matter Expert"   "Subject Matter Expert"

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Have a clear understanding of who is supposed to be involved in each role.

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During

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I'm Matty.

I'm the Incident Commander.

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Clear is better than concise.

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The IC becomes the highest authority.

(Yes, even higher than the CEO)

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The IC manages the flow of conversation.

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"Can someone..."

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Rich, I'd like you to investigate the increased latency, try to find the cause. I'll come back to you in 5 minutes. Understood?

Understood.

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Humor is best in context.

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DT5: Roger that

GND: Delta Tug 5, you can go right on bravo

DT5: Right on bravo, taxi.

(...): Testing, testing. 1-2-3-4.

GND: Well, you can count to 4. It's a step in the right direction. Find another frequency to test on now.

(...): Sorry

Have a clear roster
of who's been engaged.

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Rally fast, disband faster.

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Have a way to contribute information to the call.

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Have a clear mechanism for making decisions.

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"IC, I think we should do X"
"The proposed action is X, is there any strong objection?"

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Capture everything, and call out what's important now vs. later.

"One last thing..."
(Assign an owner at the end of an incident)

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After

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"After action reports", "Postmortems", "Learning Reviews"

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The impact to people is a part of your incident review as well.

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Record incident calls, review them afterwards.

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Regularly review the incident process itself.

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FD: "OK, why don't, you gotta pass the data for the crew checklist anyway onboard, don't you?"

MC: "Right"

FD: "Don'tcha got a page update? Well why don't we read it up to them and that'll serve both purposes?"

MC: "Alright."

FD: "Both that mattered as well as what page you want it in the checklist?"

MC: "OK."

TELMU: "Flight, TELMU."

FD: "Go TELMU."

TELMU: "We show the LEM overhead hatch is closed, and the heater current looks normal."

FD: "OK."

GUIDE: "Flight, Guidance."

FD: "Go Guidance"

GUIDE: "We've had a hardware restart, I don't know what it was."

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FD: "GNC, you wanna look at it? See if you've seen a problem"

Lovell: "Houston, we've had a problem ..."

FD: "Rog, we're copying it CAPCOM, we see a hardware restart"

Lovell: "... Main B Bus undervolt"

FD: "You see an AC bus undervolt there guidance, er, ah, EECOM?"

EECOM: "Negative flight"

FD: "I believe the crew reported it."

???: "We got a main B undervolt"

EECOM: "OK flight we've got some instrumentation issues ... let me add em up"

FD: "Rog"

CAPCOM: "OK stand by 13 we're looking at it"

EECOM: "We may have had an instrumentation problem flight"

FD: "Rog"

INCO: "Flight, INCO"

FD: "Go INCO"

INCO: "We switched to wide beam about the time he had that problem"

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Haise: "...the voltage is looking good. And we had a pretty large bang associated with the caution and warning there. And as I recall main B was the one that had had an amp spike on it once before."

FD: "OK"

CAPCOM: "Roger, Fred."

FD: "INCO, you said you went to wide beam with that?"

INCO: "Yes"

FD: "Let's see if we can correlate those times get the time when you went to wide-beam there INCO"

INCO: "OK"

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Have structure in place beforehand

Practice, practice, practice

Have clearly delineated roles

Manage the conversation flow

Make clear decisions

Rally fast, disband faster

Review regularly

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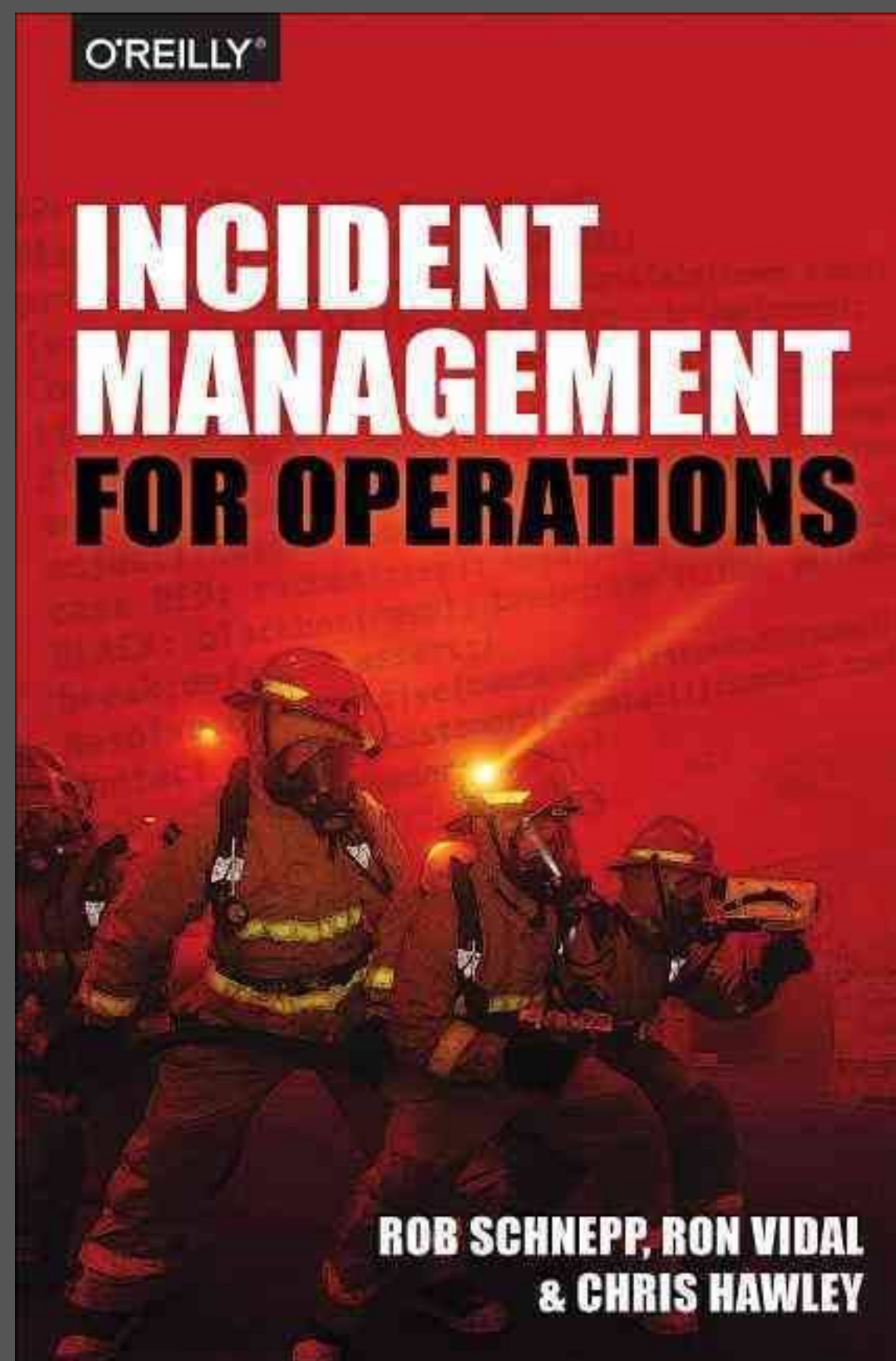
Don't panic.
Stay calm.
Calm people stay alive.

https://response.pagerduty.com

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Home

Getting Started

On-Call

   Being On-Call

   Who's On-Call?

   Alerting Principles

Before an Incident

   What Is an Incident?

   Severity Levels

   Different Roles

   Call Etiquette

   Complex Incidents

During an Incident

   During an Incident

Credit: NASA

So you want to be an incident commander? You've come to the right place! You don't need to be a senior team member to become an IC, anyone can do it providing you have the requisite knowledge (yes, even an intern)!

Purpose

If you could boil down the definition of an Incident Commander to one sentence, it would be,

> *Take whatever actions are necessary to protect PagerDuty systems and customers.*

The purpose of the Incident Commander is to be the decision maker during an major incident; Delegating tasks and listening to input from subject matter experts in order to bring the incident to resolution.

The Incident Commander becomes the highest ranking individual on any major incident call, regardless of their day-to-day rank. Their decisions made as commander are final.

Your job as an IC is to listen to the call and to watch the incident Slack room in order to provide clear coordination, recruiting others to gather context/details. **You should not be performing any actions or remediations, checking graphs, or investigating logs.** Those tasks

Resources:

- Angry Air Traffic Controllers and Pilots - https://youtu.be/Zb5e4SzAkkI
- Blameless Post-Mortems (Etsy Code as Craft) - https://codeascraft.com/2012/05/22/blameless-postmortems/
- Incidents And Accidents: Examining Failure Without Blame (Arrested DevOps) - https://www.arresteddevops.com/blameless/
- PagerDuty Incident Response Process - https://response.pagerduty.com/

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Thank you!

Questions?