[A DEVOPS PERSPECTIVE]

THREE STAGES OF A STARTUP

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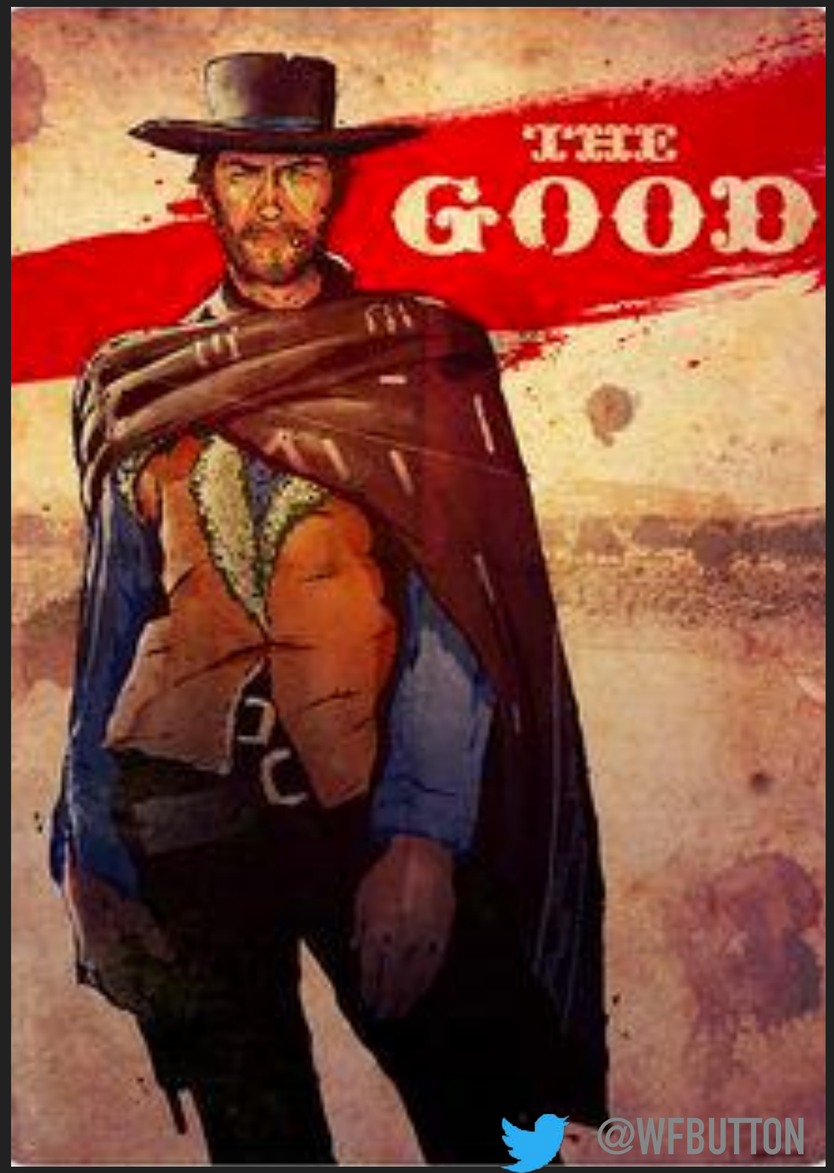
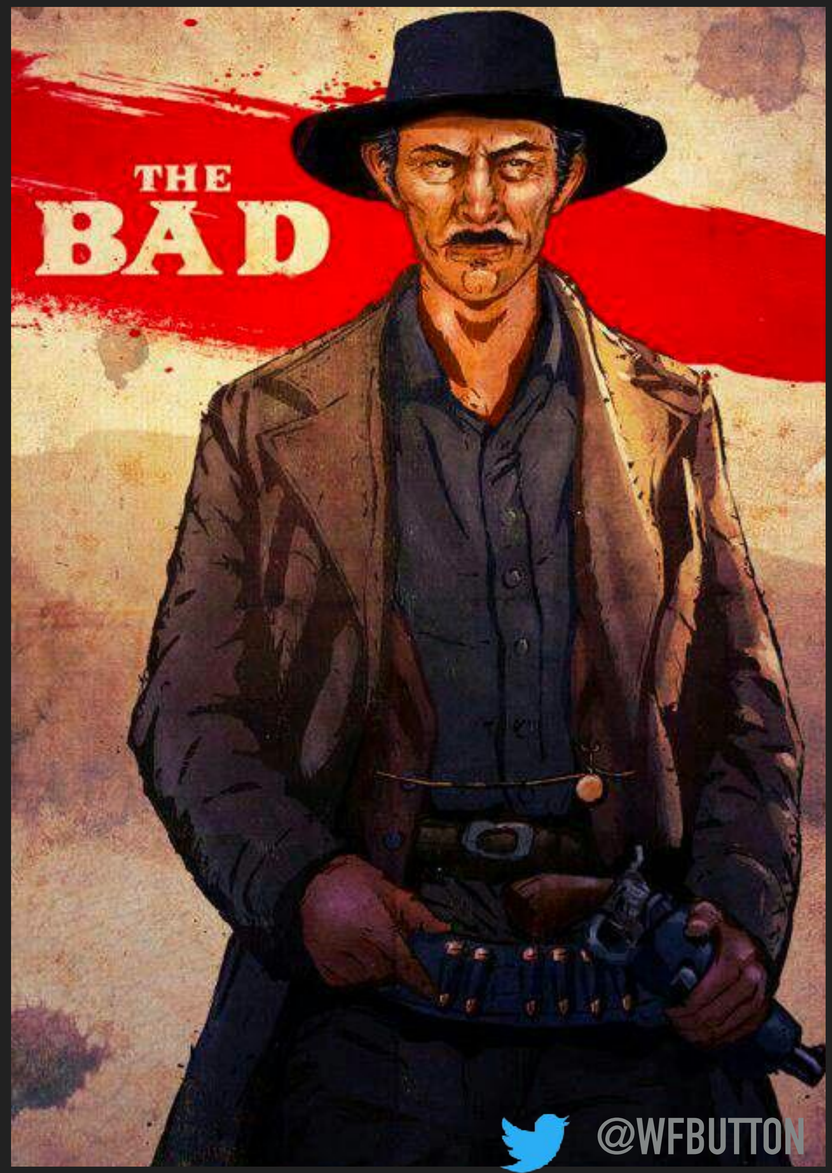
THE GOOD

- Blank slate environment
- Chance to “do things right”
- Little technical debt to drag around



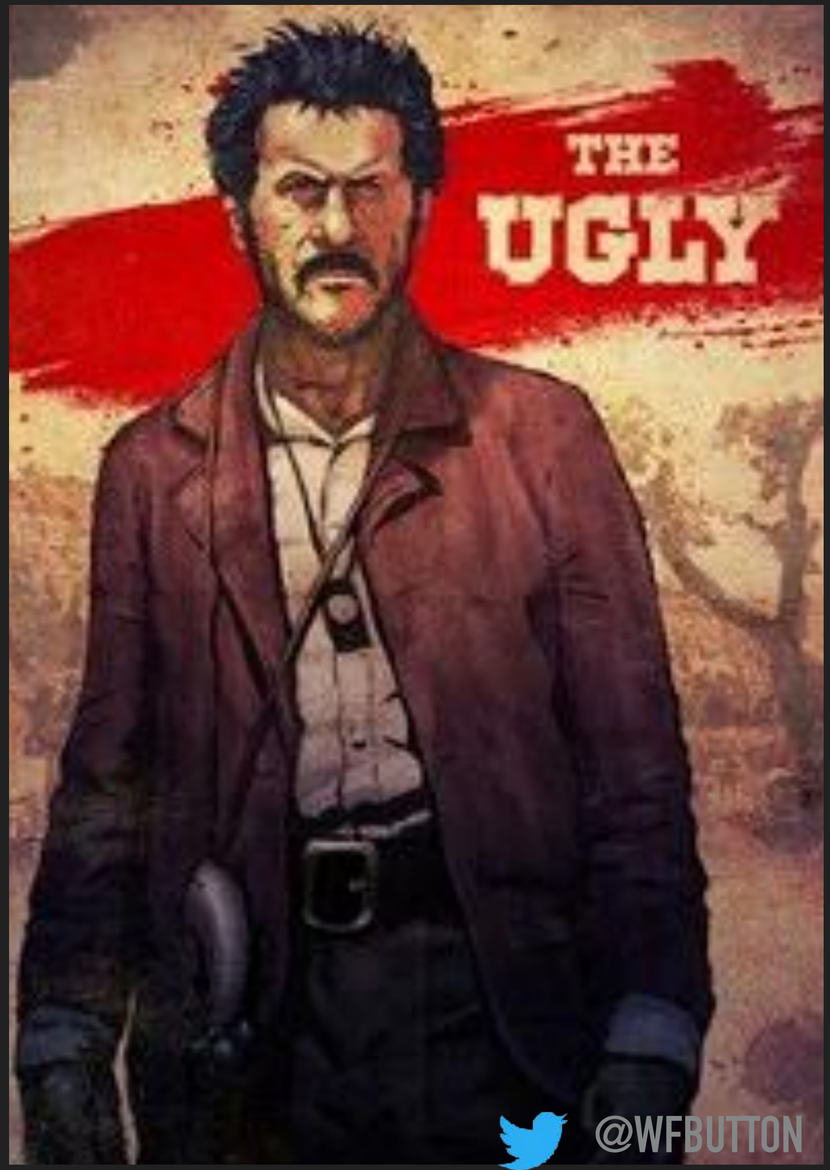
THE BAD

- Little direction
- Quickly changing priorities
- Some projects don’t get com



THE UGLY

- High risk of failure
- That means the company + your job
- Tightly coupled to growth, marketing, and capital

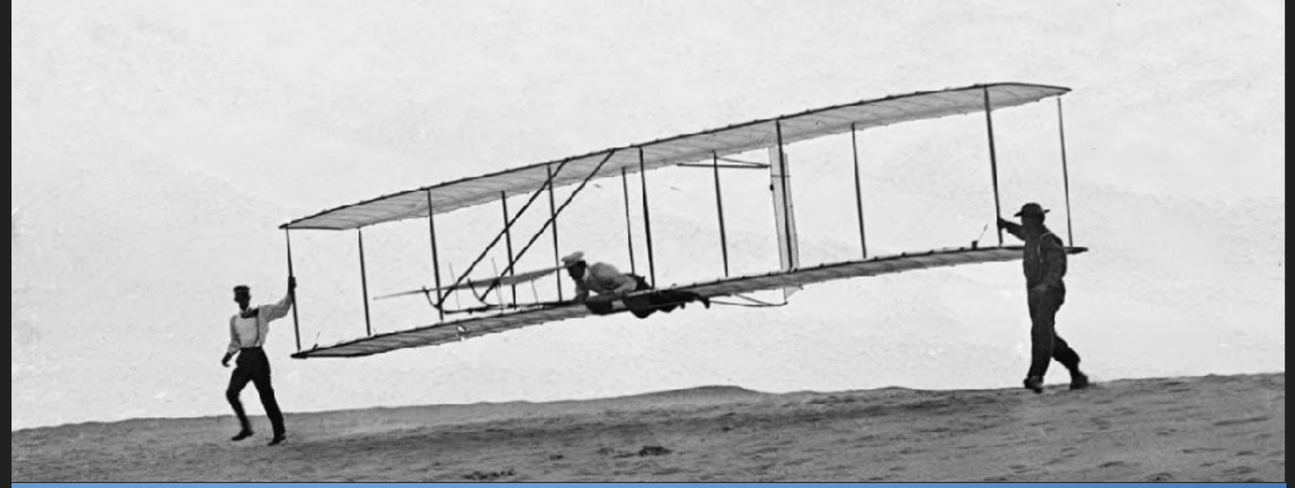


A STARTUP IS A FINANCIAL DECISION

- Decide
- Budget
- Build according to budget

BUDGET FOR A STARTUP

- Bootstrapped or Funded?
- Align with financial objectives
- Align with operational objectives
- Measure, adjust, repeat



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- First startup in 1998?
- Many failures, a few successes
- Web, mobile, blockchain
- 150+ published videos
- 2 published books
- Lead Application Architecture Working Group - Government Blockchain Association

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STAGE ONE STARTUP

- Build Minimum Viable Product (MVP)
- Get someone to give you money for it
- Discover what they wanted vs. what you sold them
- Find more customers like them
- Not much opportunity for DevOps

REAL LIFE EXAMPLE

- New client
  - Website, iOS app, Android app
  - No access to customer data
- Built ETL job: MongoDB –> MySQL
- Used Ansible
- Automated reports via Slack messages

"M VE FAST A ID
BR AK THING
UNLES YOU AR
BREAKIN STUF
YOU A E NOT MO G
AST ENO GH."
FAIL FAST
Mark Zuckerberg
CEO, Facebook

FAIL FAST

- From Shekhar Vemuri, Principle for Clairvoyant
- Fail as soon as possible
- Failing faster means less time spent solving the wrong problem
- Fail fast forces measuring for the failure
- Critical when on limited budget and time

YOU
DON'T NEED
TESTS

STAGE ONE OBJECTIVE:

FIND OUT WHAT THE CUSTOMER IS TRYING TO BUY

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Tune In
Hook Up
YouTube

COACH CARTER
NETFLIX
BUSINESS REPLY MAIL
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GROUPON®

yelp

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STAGE ONE OBJECTIVE:

FIND OUT WHAT THE CUSTOMER IS TRYING TO BUY

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ENTERING STAGE TWO

- Not a “right” answer
- Increasing customers
- Advanced funding (i.e. Series A)
- Financial obligations
- Legal risk

FUNDING ROUNDS FOR STARTUPS

- https://www.forbes.com/sites/alejandrocremades/2018/12/26/how-funding-rounds-work-for-startups
- https://www.investopedia.com/articles/personal-finance/102015/series-b-c-funding-what-it-all-means-and-how-it-works.asp

SYSTEMS, PROCESSES, CULTURE

STAGE TWO

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LOOKS LIKE THIS

- Aligns with business objectives
- Enable efficiency
- Provide feedback

NOT THIS

- Tools
- Technologies
- Frameworks

AFTER SEEING THEIR AWS INFRASTRUCTURE, I HAD TO SIGN UP IMMEDIATELY

– no customer ever

GOALS THAT ALIGN

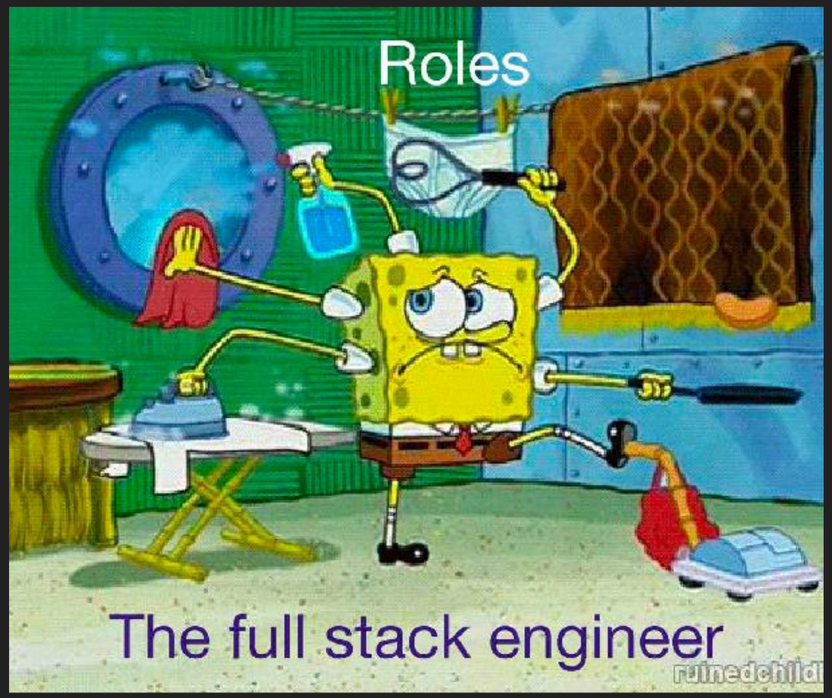
- Standard CI/CD pipeline for all teams
- Automate infrastructure
- Implement consistent monitoring/alerting/logging

CULTURE

- Will be different from Stage One
- Will be different for every company
- Defines “how to be a successful team player”

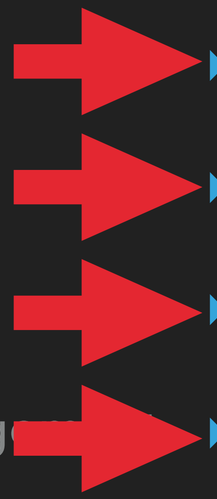
STAGE ONE ENGINEERING

- Independent engineers
- Diverse skillset
- Get shit done
- *May* not have deep areas of expertise



STAGE ONE ENGINEERING

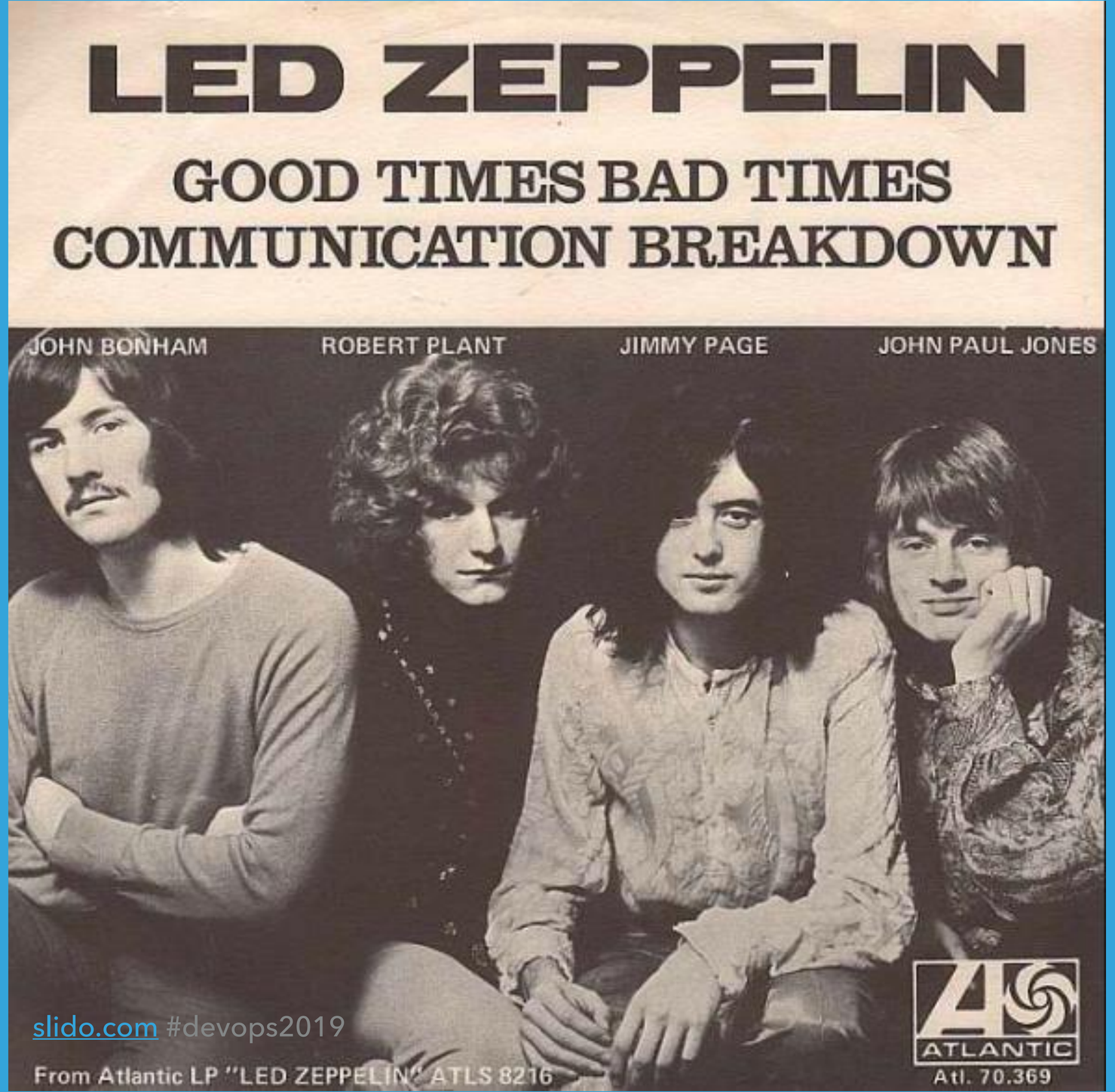
- Deploy code without tests
- Skip staging environment
- No monitoring/alerting
- Missing configuration manag



STAGE TWO ENGINEERING

- All code must have tests
- Deploys follow CI/CD
- Monitoring/alerting standard
- Infrastructure built by configuration management tools

THIS IS DIFFERENT THAN HOW WE'VE DONE IT IN THE PAST.



COM
MUN
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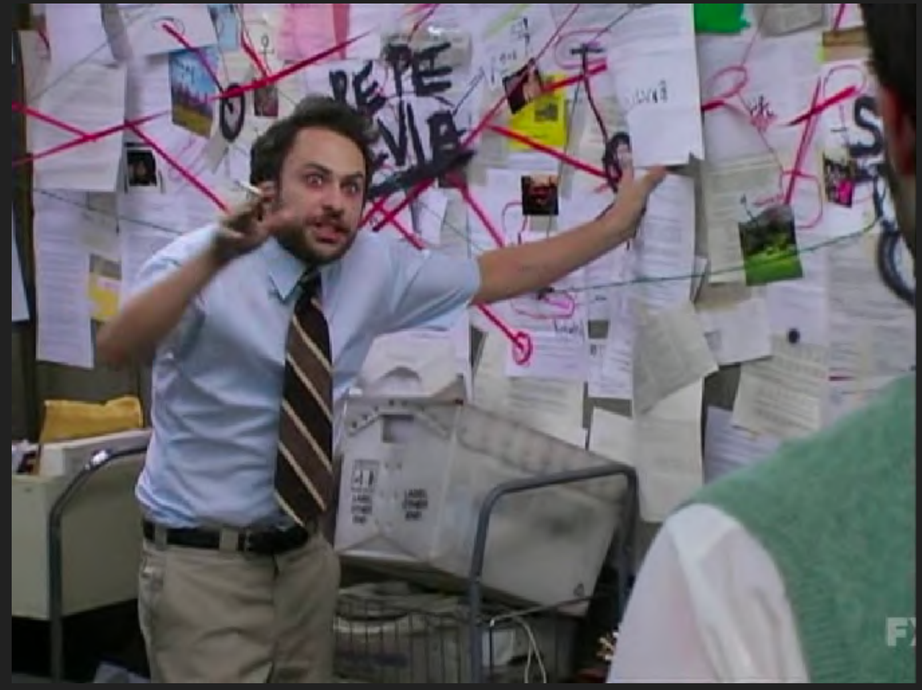
ALL WORKERS ARE REMOTE WORKERS

— The Internet

COMMUNICATION IS NOT THE MESSAGE SENT, BUT THE MESSAGE RECEIVED.

— Unknown

Did you get my email?



Did you get my email?

THESE ARE NOT THE MEMES YOU'RE LOOKING FOR.

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BUDGETING

- Identify “credit card infrastructure”
- Review monthly
- Eliminate with aggression
- Move to invoicing ASAP
- COGS

COST PER USER EXAMPLE

- Tech expenses: $25,000 per month
- 10,000 monthly users
- Tech per user = $2.50
- Monthly subscription fee: $5.00
- 50% of revenue goes to tech costs

WHEN TO HIRE

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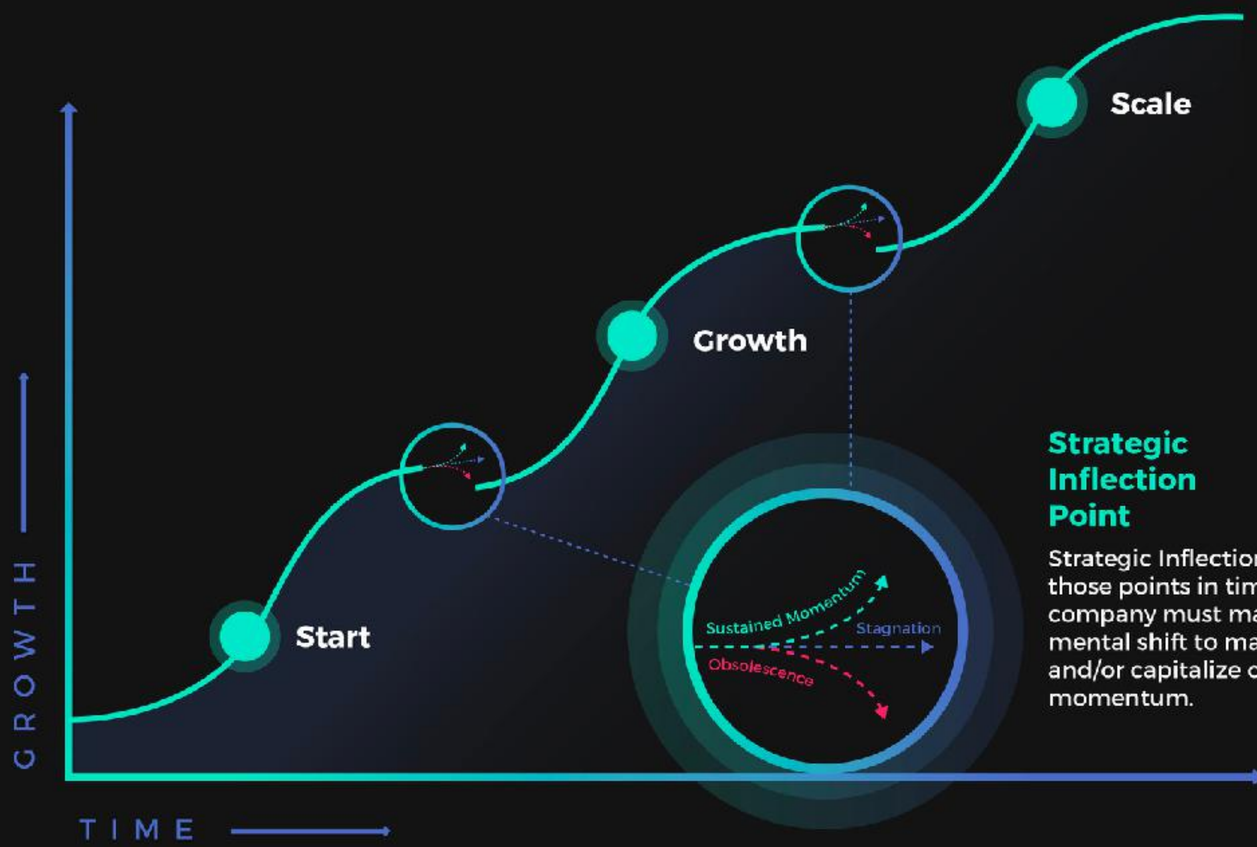
A CLOSER LOOK INTO THE S-CURVE OF BUSINESS GROWTH



Strategic Inflection Point

Strategic Inflection Points are those points in time where a company must make a fundamental shift to maintain and/or capitalize on forward momentum.

If You're Growing You're Shifting

Every growth business encounters Strategic Inflection Points at various points.

Inflection Points Vary

Inflection Points vary based on Internal/External factors (i.e team, processes, access to capital, economic cycles, etc.).

Sustain Forward Momentum

The goal at any Inflection Point is to sustain forward momentum

ROCKET SOURCE

RUNNING THE FACTORY
STAGE THREE
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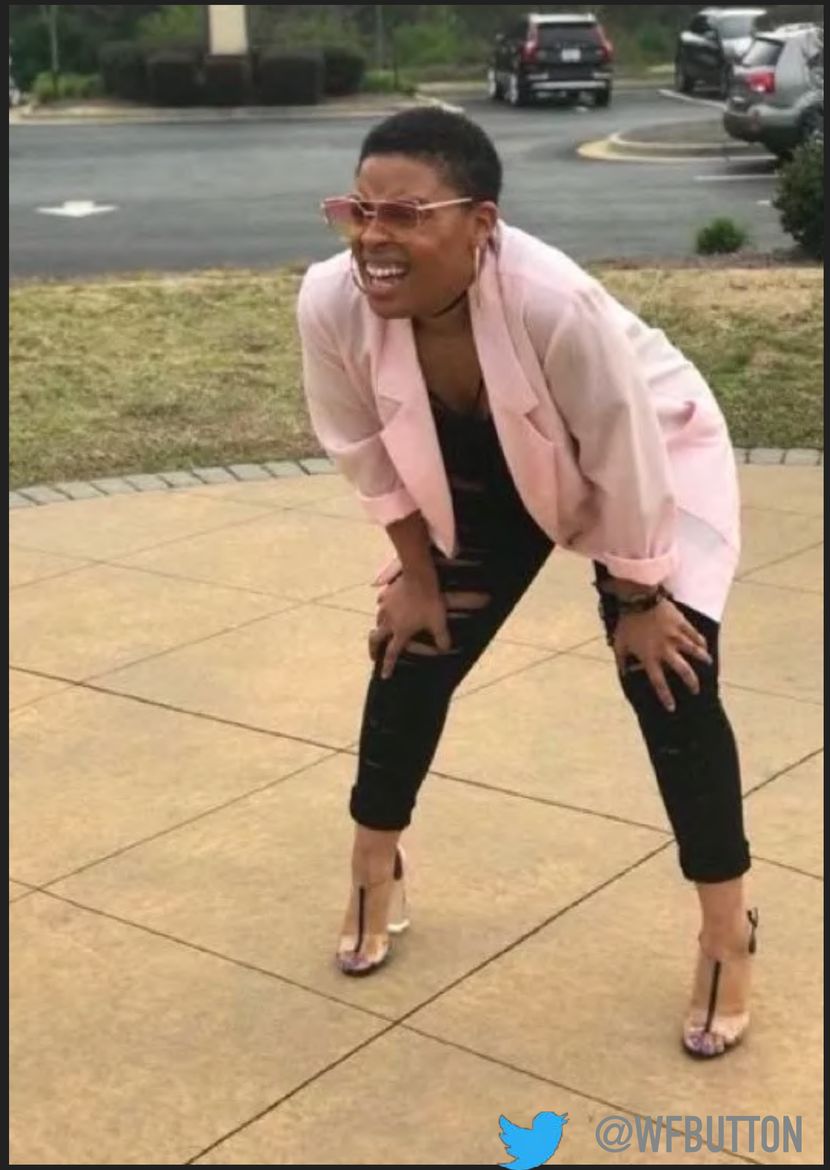
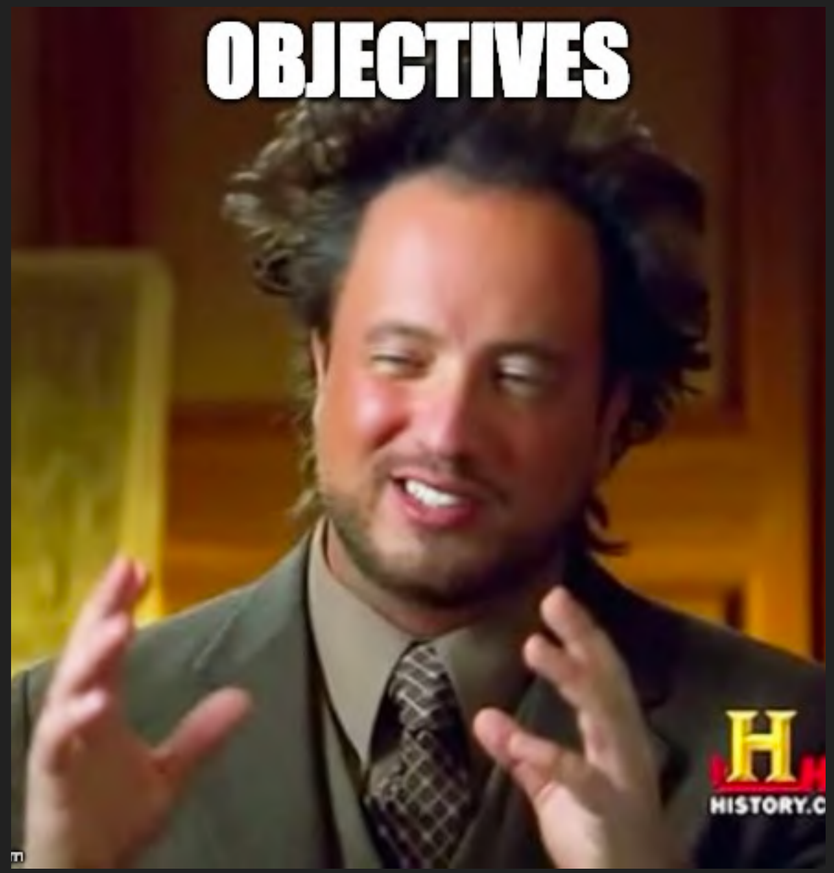
IDENTIFYING STAGE THREE

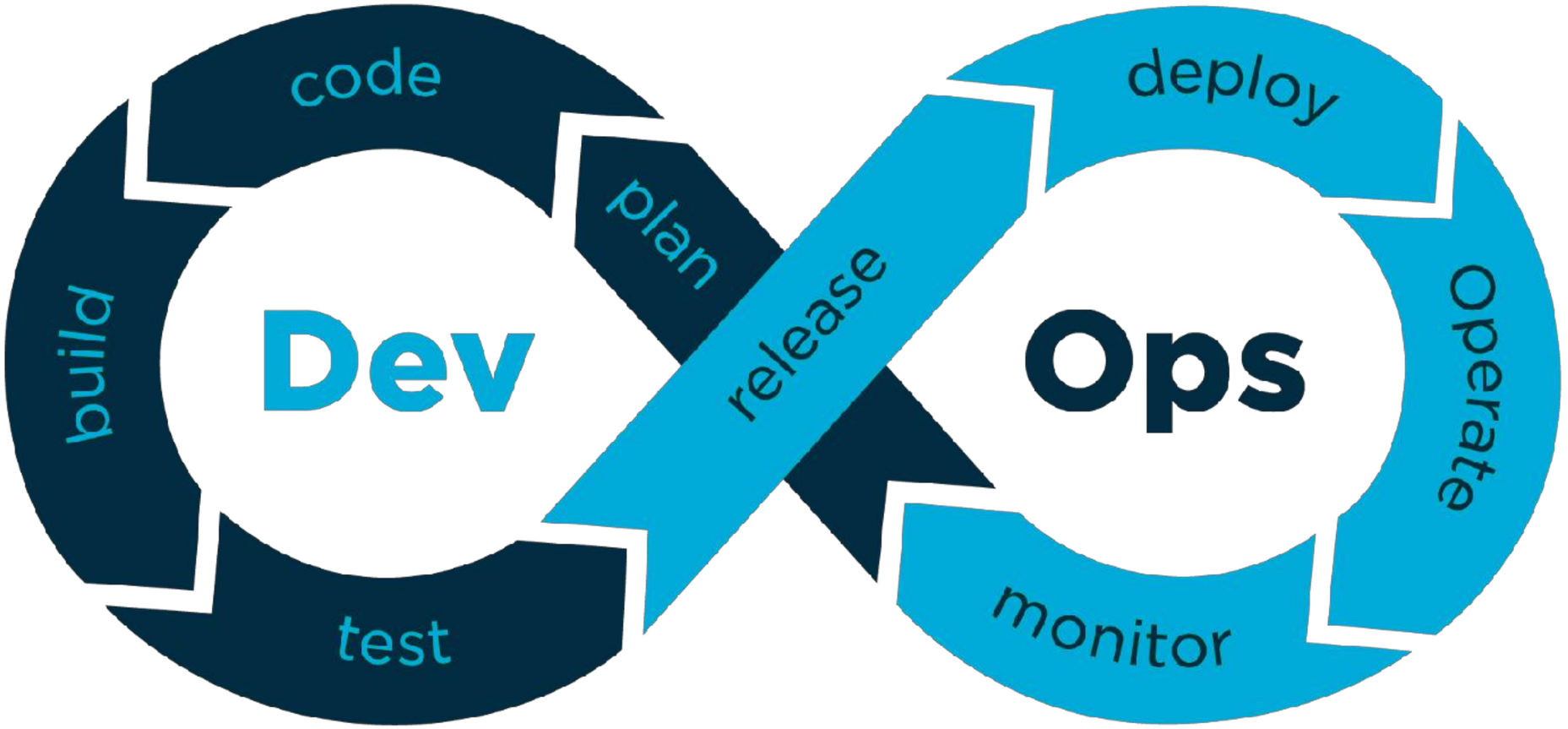
- Series C Funding
- Acquisitions
- Mergers
- Partnerships
- Liquidity Event



DEVOPS OBJECTIVES

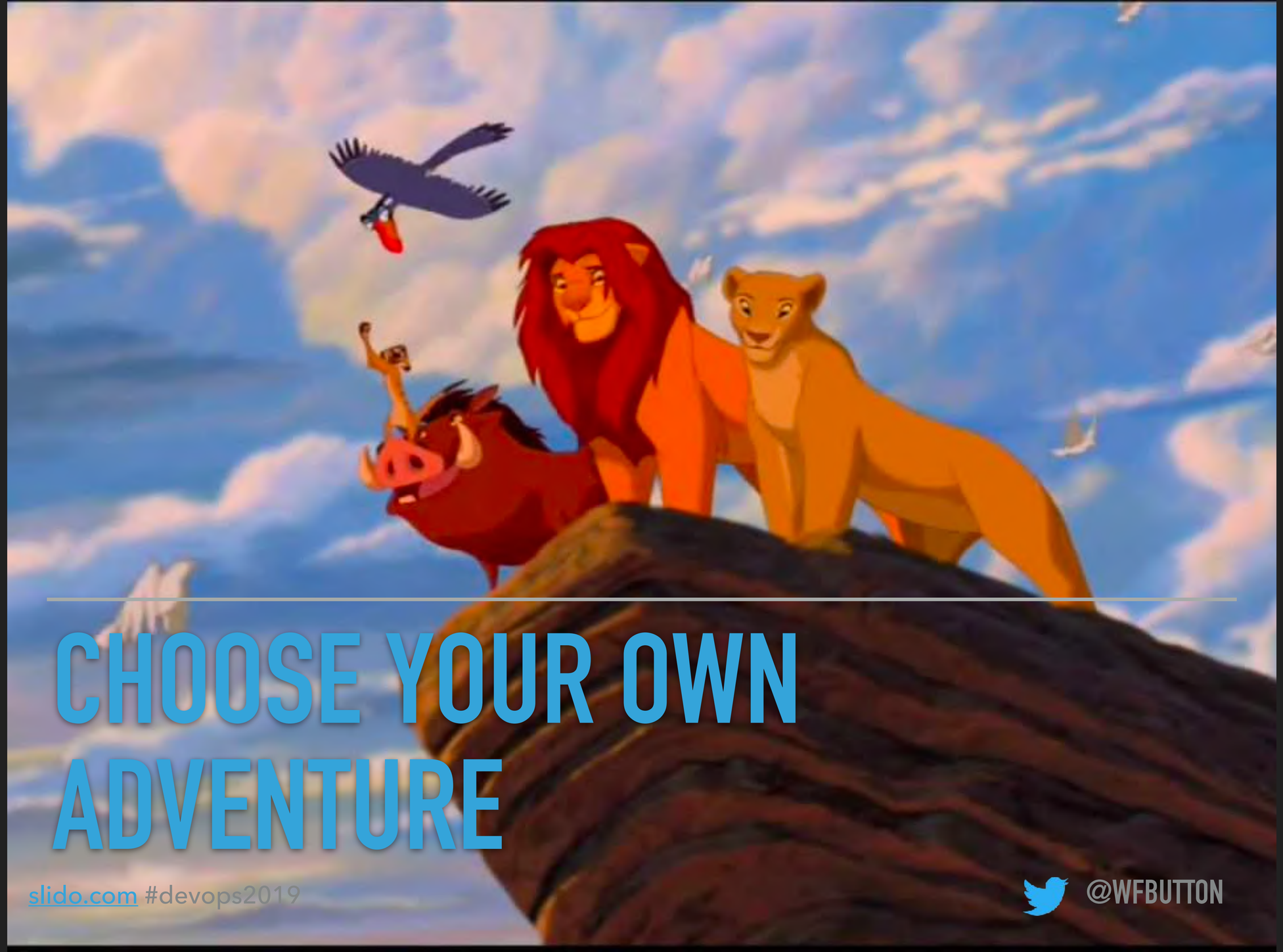
- Tool chain
  - Infrastructure as code
  - CI/CD
  - Test automation
  - Deployment
  - Measurement




code
plan
build
Dev
test
release
deploy
Ops
operate
monitor

REVIEWS, FEEDBACK, CAREERS

- Different type of employees
- Expectations:
  - Reviews
  - Feedback
  - Education/Training
  - Advancement
- Human Resources: UNLOCKED



CHOOSE YOUR OWN ADVENTURE

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KEY TAKEAWAYS

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STAGE ONE

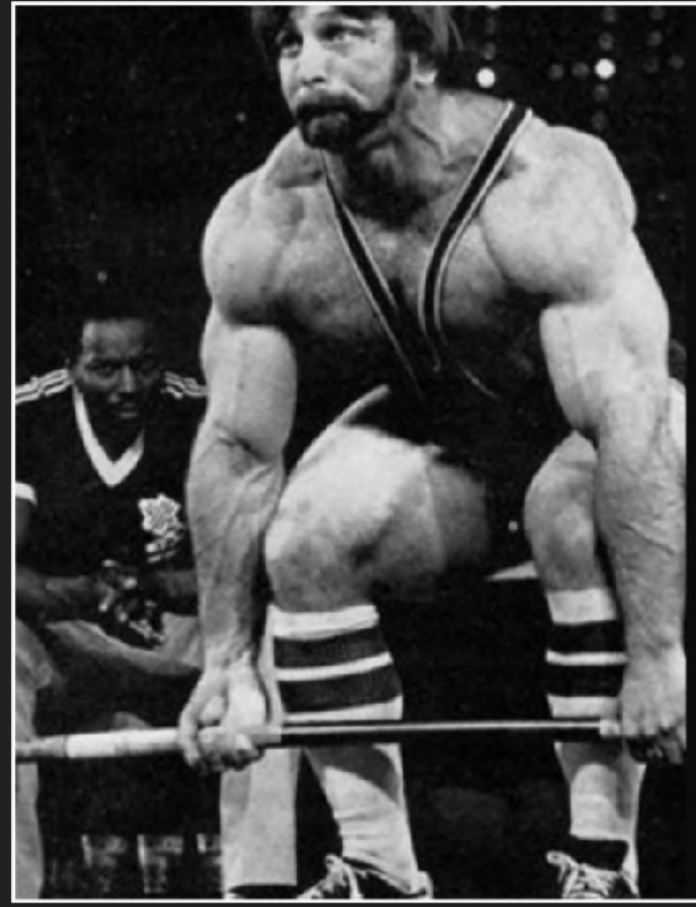
- Simple servers
- Databases
- Automated analytics/reports
- Help them avoid mistakes

STAGE TWO

- Automate the systems and processes
  - CI/CD
  - SDLC
  - Peer reviewed
- Build a culture of communication

STAGE THREE

- Refine our tools
- Reviews
- Feedback
- Career paths
- Starts to look like a mature company
- Choose your own adventure



You are right to be wary. There is much bullshit. Be wary of me too, because I may be wrong. Make up your own mind after you evaluate all the evidence and the logic.

— Mark Rippetoe —

AZ QUOTES

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YMMV

ASK ME ANYTHING CORNER

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