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Global Scrum Gathering®

Minneapolis

April 16-18, 2018

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Dr. Leigh Griffin
Engineering Manager
Red Hat

The Trials and Tribulations of Agile Adoption

Trials and Tribulations

Cambridge Dictionary Definition: *Troubles and events that cause suffering*

NIV Version of the Bible: James 1:2-3 Trials and Temptations: *Consider it pure joy, my brothers and sisters, whenever you face trials of many kinds, because you know that the testing of your faith produces perseverance.*

Mahatma Ghandi: *What is life worth without trials and tribulations which are the salt of life.*

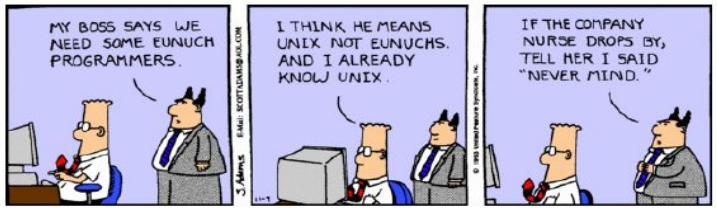

Figure 2: Dilbert's trials and tribulations

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Red Hat Mobile: An ~~Scrum~~ Agile Conversion

- Red Hat Mobile Application Platform (RHMAP) formerly a start-up acquired by Red Hat
  - A “Scrum” BUT Team
  - Releasing every couple of days to customers
- Red Hat have a strong history of long running On Premise / Self Managed solutions
  - 6-24 month release cycles as a traditional Waterfall
  - Rigid security and compliance work

- First SaaS product in Red Hat, releasing monthly, one month after Engineering efforts wrap up

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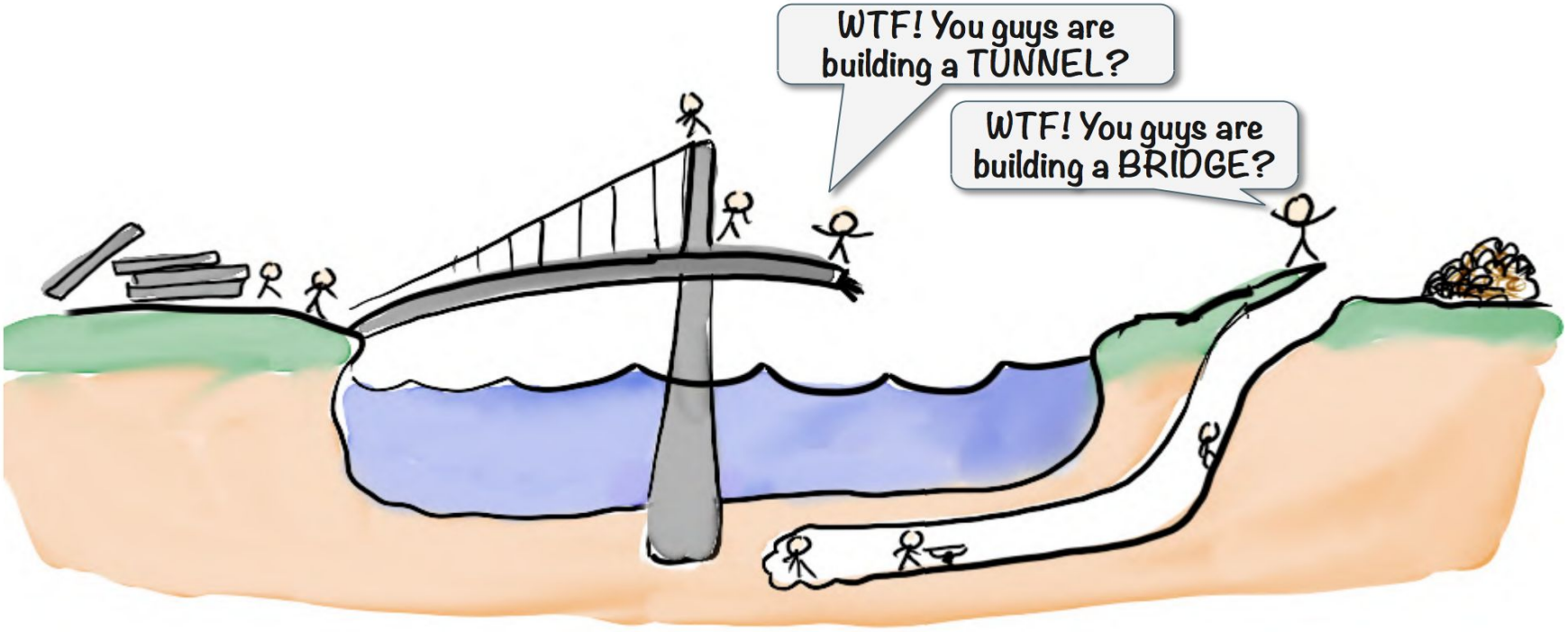
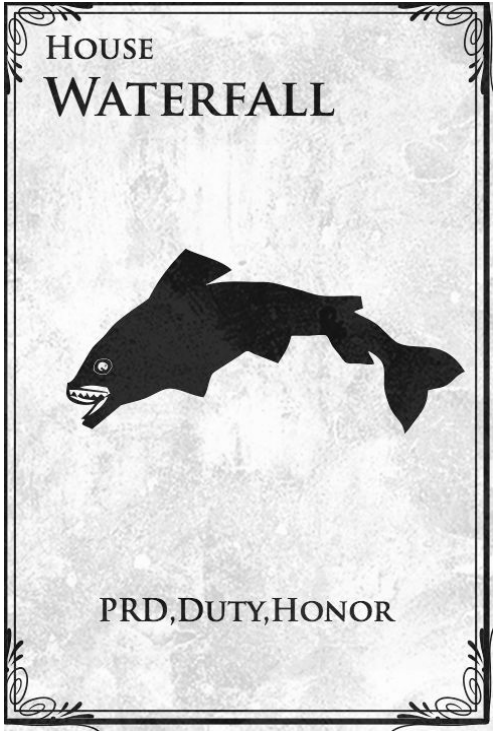
Misaligned way of working



The Great Game Begins

VS



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My House: An Ivory Tower!

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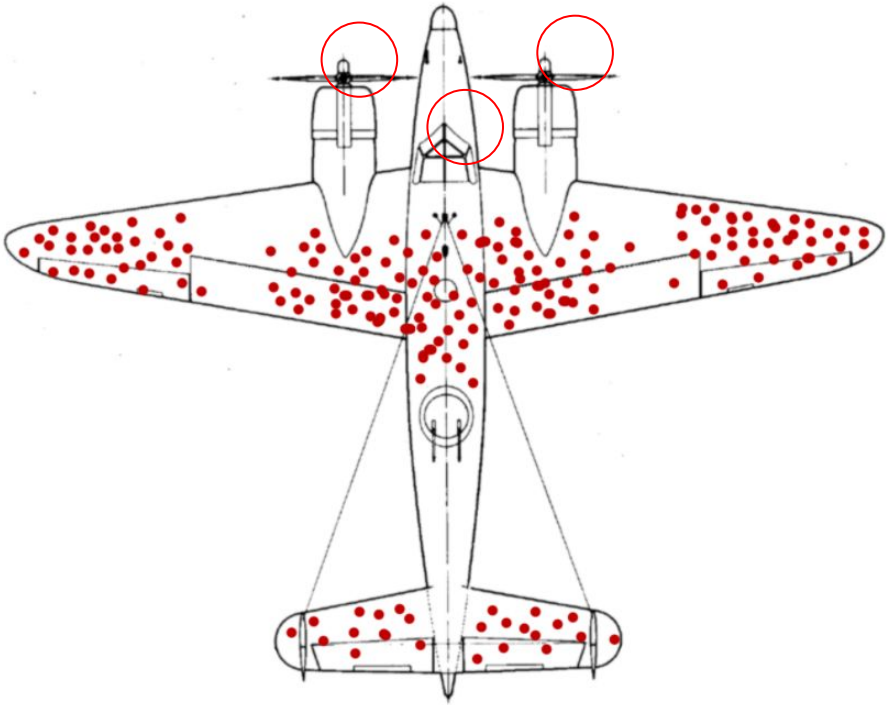
Beware of Success Stories



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The trials we faced

- Going to cover primarily 4 trials we faced in Red Hat Mobile
  - I will bring in our path to success along the way!
  - We are an Agile team heavily influenced by Scrum (modified) and Kanban

- Going to bring in past experiences of having done this style of conversion in other companies
  - A green field Security company
  - A waterfall software house in the Insurance industry
  - A research organisation in the public domain

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Trial 1: Peopleware

Trial 1: Peopleware

- Hardware and Software are easy, Peopleware is hard

- People working in a legacy way
  - Their System, Their Way, Their Job
  - Perception that you are taking their knowledge, power or job
  - They might be wary of risk and exposure
  - They might have built their career on this way of working

- The people want to move in a certain way, in our case Scrum, warts and all.
  - The team understood Scrum loosely
  - The management team wanted to move towards it more formally ← I got a job :)

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Owning Product Direction: Often a singular voice

- Historically 1 voice ruled them all
  - CTO? Architect? Program Manager? Product Manager?
  - Most knowledge? Biggest ego? Loudest?
  - Reckless technical debt becomes a way of life
- Hard to open decisions to a team wide level when rigid command & control exists
  - More people wanted & needed a say in the direction
  - More so as Red Hat is a meritocracy with the best idea winning out
- Scrum, which we followed, demands a Product Owner role

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Traditional Project & Product Management

- The overall program tracked individuals at a percentage capacity level
  - The classic fallacy of a 50:50 split on work
- Agreeing a project plan and outward time commitments months in advance
  - Often before the groundwork and analysis was done
  - Often with commitments already made!!
  - Held accountable for dates, traffic light system had us red most releases
- Sanctity of the Product Requirements Document (PRD)
  - The masterplan, thou shall not deviate from!

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The need for balance

- Teams wanted more say and innovations
  - More room for technical debt paydown
  - More time for research and innovation
  - Unhappy being called a resource!

First Battle:

- 80% capacity with reserved 20% for Backlog Management

- Changed the perception of being 100% focused on Product / New Feature Needs
  - Raised awareness that all work goes to the betterment of the Product

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The need for balance

Second Battle:

- We said no to all new product development for a period of 6 weeks
  - It caused arguments and headaches
  - We got escalated through various managers
  - Ultimately the right call was made as we had the right reasons

- We couldn't stabilise and consolidate the platform with small time investments
  - We dramatically improved the quality of the platform and our tooling
  - We paid down a lot of pain and shortcuts

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The need for balance

Third Battle:

- Eventually we stopped resourcing at an individual level and moved towards a team level (9 months in!)

- We stopped investing huge amounts of time in PRDs (12 months)
  - Moved all our work to User Stories and Epics
  - Changed the view from scope based to vision based

Fourth Battle:

- We broke the matrix and formed a true Scrum Team
  - QE became one with Engineering
  - Exceptionally difficult to do in a matrixed organisation

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The need for balance

The Battles we lost:

- 60:20:20 reverted to 95:5:0 when customer pressure came on
  - We just couldn't say no as a team as everything was a high priority
- Huge push back on depreciation of broken or no longer used features
  - We couldn't make a "for the best" decision
  - We did not have a true neutral Product Owner
- We lost staff members
  - Comfort zone change
  - Exposed skillsets

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Trial 2: The 7 deadly sins

7 Teams ; 7 Streams ; 7 Backlogs ; 7 Silos = 7 headaches

- Historically we had well defined areas within the product that were disconnected
  - It felt like multiple products in one
  - All things to all people
- We rolled our Scrum processes out to 7 fully cross functional teams
- Each team was a well defined part of the product
- Each team had it's own backlog to manage and it's own vision of the world

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Envy and Sloth

- Each teams backlog contained:
  - Technical initiatives
  - Bugs
  - Product features
  - Community features
- Managing Teams Expectation was a battle
  - Some teams were purely product facing
  - Some teams had more community facing
  - Some teams had more flexibility
- We inadvertently created an envy

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Gluttony and Greed

- The liberty to “do what you want” because you are Agile slowly crept in
  - Teams taking too much liberty with personal initiatives
  - We tried to strike a healthy balance but struggled to manage it
- The product team saw 7 teams and a chance to drive 7 features
  - Our releases became overloaded with huge emphasis on new features
  - Our quality dipped because of the moving parts
- Roadmaps became more aggressive
- The value of features were rarely questioned as we had no Product Owner questioning value

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Pride

- We found it very hard to say no
  - Being Agile is a badge of pride
  - We can move fast and give you features you crave

- We convinced ourselves it was working
  - Our stats showed huge improvements:
    - 6% to ~96% verification rates within a Sprint
    - All work now being done in the context of a sprint, no more dark days of hiding work!
  - Our team were for the most part happy
    - Being listened to
    - Masters of their own destiny
  - Management were happy
    - We became a standard bearer within Red Hat
    - We even got a few conferences out of it :)

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Lust

- We wanted to keep improving
- Grand designs about Large Scale Scrum (LeSS) and even Small Scale Scrum
  - We knew practically how to Scale both ways
- Moving some teams to Kanban
  - We had a lot of unplanned work which Kanban is suited to
- We wanted to keep innovating
- The Lust to succeed and better yourself can blind you to imperfections

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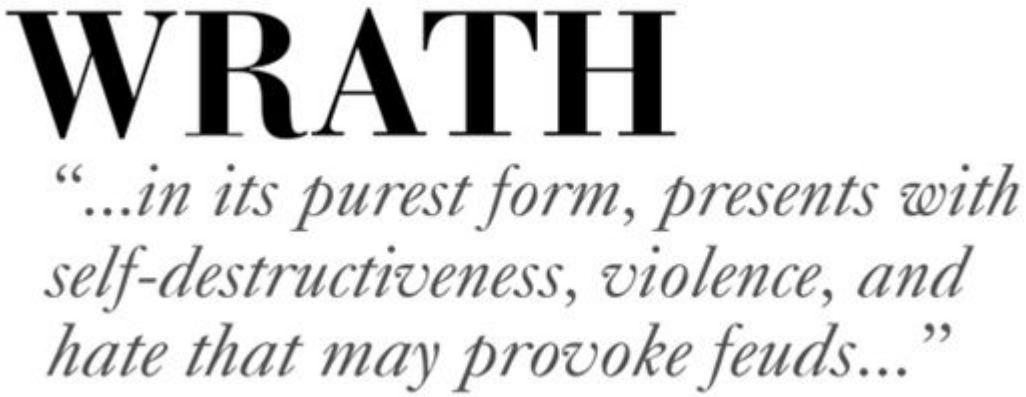
Wrath


WRATH
"...in its purest form, presents with self-destructiveness, violence, and hate that may provoke feuds..."

The mistakes we made

- A lot can be traced to the lack of a Product Owner role
  - Goes back to peopleware, fear of change, political implications and more
  - We lost that neutral best for the product view, we became the PO!
  - This pivoted us from being a Scrum team to being an Agile team
- We created artificial work to satisfy and feed 7 teams
  - Value of what we created was questionable
  - The cost of maintaining code is high
  - Demotivating for staff to work on dead features
- It took 18 months to make a decision on sunsetting
  - Going forward 1 product not 7 in 1

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Trial 3: Evolution Problems

The concept of Dynamic Teams emerge

- We were not comfortable with the pace of work of our static teams
  - Cross skilled teams but our output was not where it could be
  - Traced back to the 7 siloed areas of our product
- Skills based profiling of team members
  - Trying to pick the best skills for the job at hand
- Death to static teams where possible was on our agenda!
  - In the hope it would kill some of our siloed product areas

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The PRD decision

- We put Dynamic Teams forward for defined and scoped work
- We had to revisit the fundamentals of what that meant
- We abandoned the full on 100+ page PRD document for good reasons (waterfall!)
- For several releases we…..
  - Didn't really know whether we solved the problem we set out to solve completely
  - Over and under engineered some solutions as a result

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The lightweight PRD and the Agile BSA

- We hired a Business Systems Analyst (BSA)
  - A very traditional Waterfall role
  - The voice of a customer

- BSA was our front runner, meeting with stakeholders and helping gather requirements

- Facilitated story generation and acted as a bridge
  - For business folks a BSA could distill down the technical needs
  - For technical folks a BSA could distill down the business needs
  - If you say it really quickly it sounds like a Product Owner!!

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Headache 1: The need for a ScrumMaster

- If you pick your best people for a team you want them coding
- Our technical leads / principal engineers were our ScrumMasters
  - Management could not afford to ‘lose’ a developer optically
  - ScrumMaster role became a secondary role
  - Our pace became slower and our processes creaked
- Managers took the role
  - Not ideal, already overloaded
  - Agile enthusiasts and natural coaches to the team
  - Blurs the line between a recommendation and a mandate

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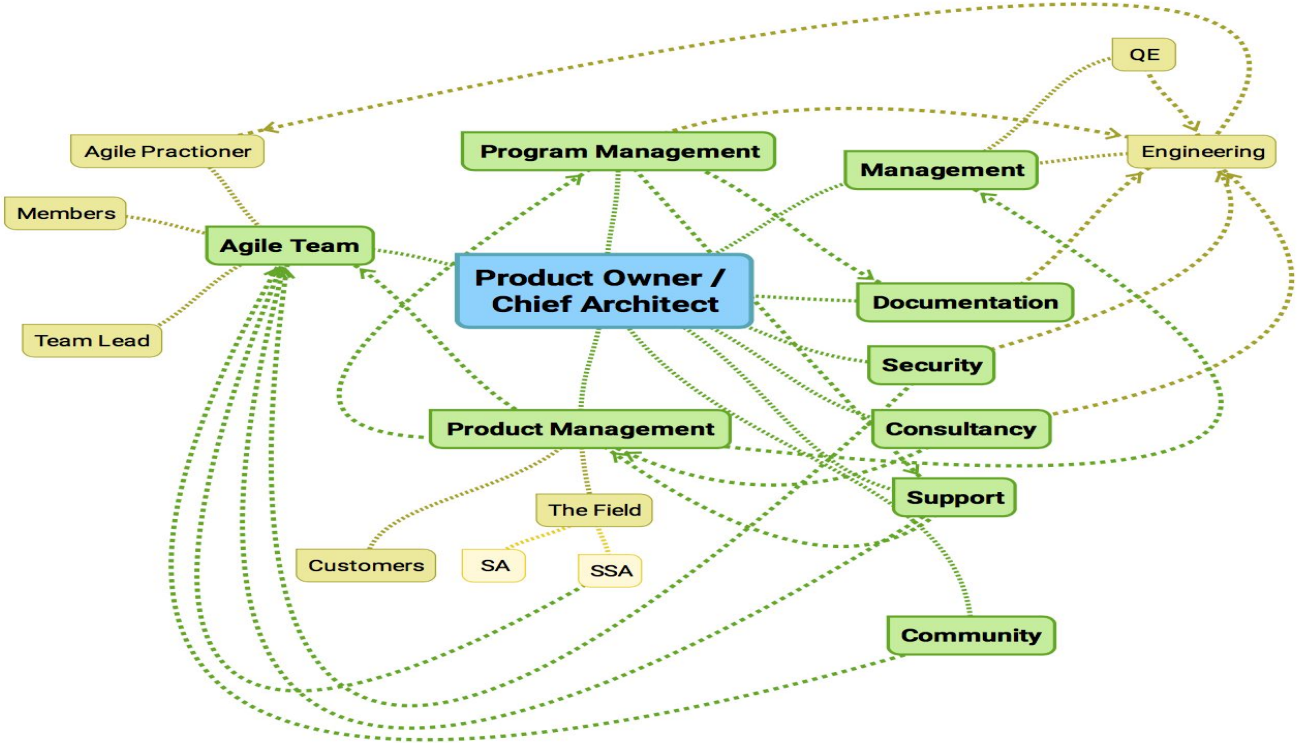
Headache 2: The side bar conversations

- Traditional Agile / Scrum teams are command and control centered

Headache 2: The side bar conversations



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The battles we lost

- Upskilling and research time became non existent
  - A static team naturally included that in their backlog
- Dynamic teams gravitated towards the A-Team mentality
  - The same names will solve any job (envy, gluttony, pride, wrath!)
- Controlling side bar conversations and getting the right info to the right people
- We lost the initial battle for dedicated Scrum Roles
  - We got a Product Owner in disguise after 12 months
  - We got part time ScrumMasters and it nearly sunk us
  - We got dedicated ScrumMasters after almost 2 years

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Trial 4: What Agile Exposed

More Teams, Faster Work

- We grew the team to over 50 people all in
  - Almost doubled our Engineering team in a 9 month window
  - All 50 were contributing at several levels
    - JIRA tickets
    - PRDs and ideas
    - Code, code and more code!

- Our overall speed of delivery increased by an order of magnitude
  - 33 releases in 2017 Vs 11 in 2016
  - We were a well oiled machine
  - Teams churned through work
  - Quality did not suffer, in fact it improved
  - That's outwardly a success story

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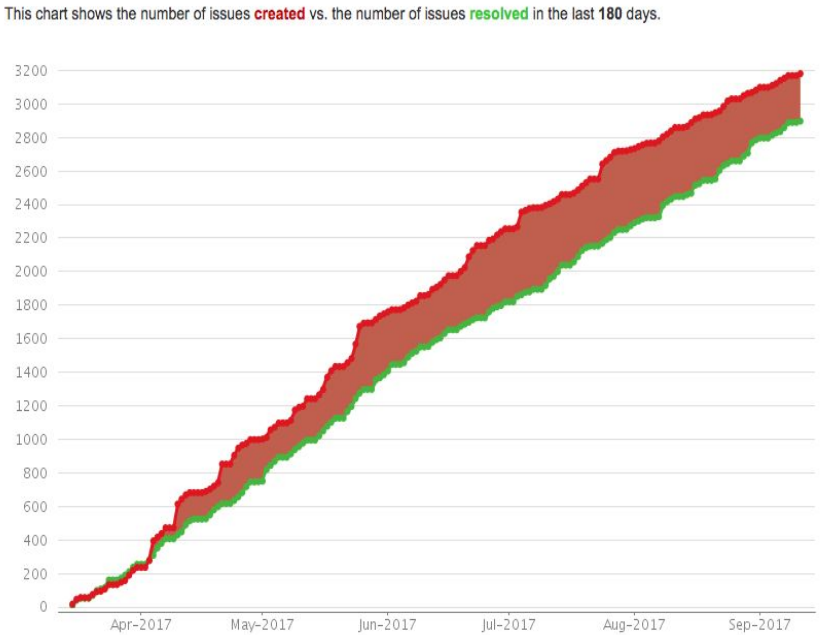
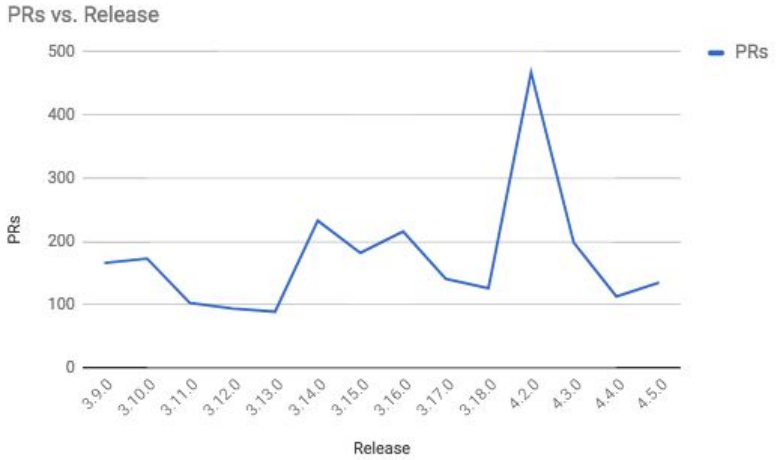
Backlog Overload

- JIRA became a dumping ground
  - Ideas, Bugs, Enhancements
  - If it's not logged don't talk to us
- It was a full time job, but nobody owned it
- False expectations set
  - I opened that ticket 3 months ago!!



PR Nightmare

- All our code generates a Pull Request (PR) on Github
- PRs need to be reviewed
  - That can take a variable amount of time
- PRs need to be merged at a cost of ~2 hours per



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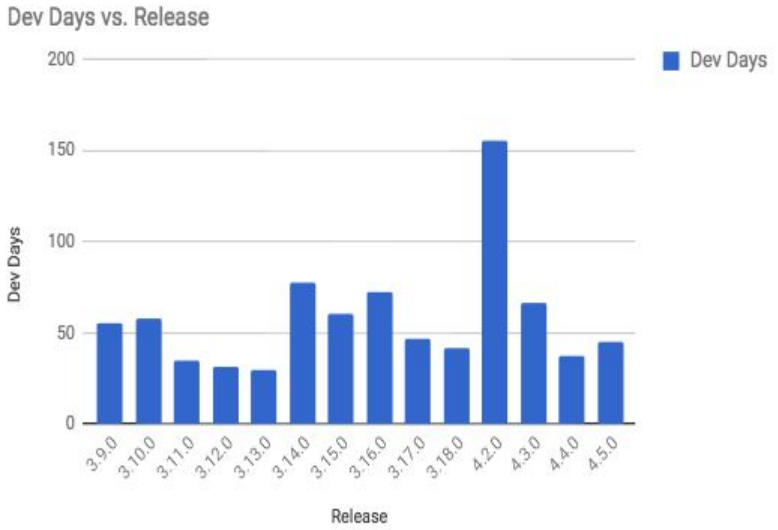
The need for Automation

- Cumulatively we lost 363 developer days in a 9 month window exclusively on merging
  - If we were Lean we would be talking about waste
- Automation was invested in heavily to address this
  - Cost us 1000 developer days to solve



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Battles we Lost

- Expectations on ticket fulfillment were never set
  - We tried aggressively closing tickets with no activity after 3 months, it failed
  - We tried educating people to communicate and not dump tickets, it failed
  - Still losing that war unfortunately

- We lost the battle of the PR
  - But won the war with automation
  - Came at a huge cost of time investment and a bigger battle to secure it

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Summary

We got there, except, there moved

- We are a hugely successful Agile conversion
  - Now we are 5 Agile Teams with a mixture of Scrum and Kanban
  - Our speed of output is possibly the best in Red Hat
  - We united several tribes and are driving an Agile conversion project at a wider level
- When we got to the horizon, it moved
  - We constantly are resetting our expectations
  - We have made a lot of mistakes, some we invented for ourselves!
  - We haven't solved them all, I'm not sure we ever will
- We learned to pick and choose our battles, the war is far more important

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Final tips

- Evaluate yourselves as much as you evaluate your processes
  - We got blinded by our own success to an extent
- Invest in automation or similar processes
  - Predict the best case meteoric success you will have
  - It bit us hard and became an afterthought
- Find a support network
  - In Red Hat I am part of an Agile Coaches community
  - Attending conferences like this one :)
- Be happy you hit a wall
  - Be happier when you find your way past it

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lgriffin@redhat.com

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