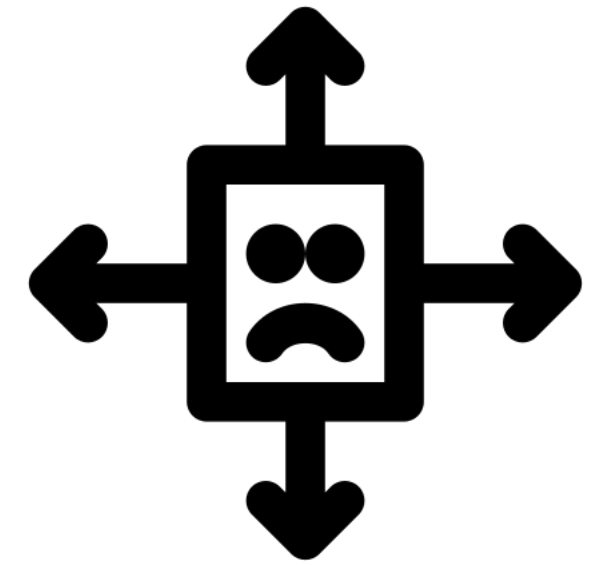




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Founder + CEO | Lab651

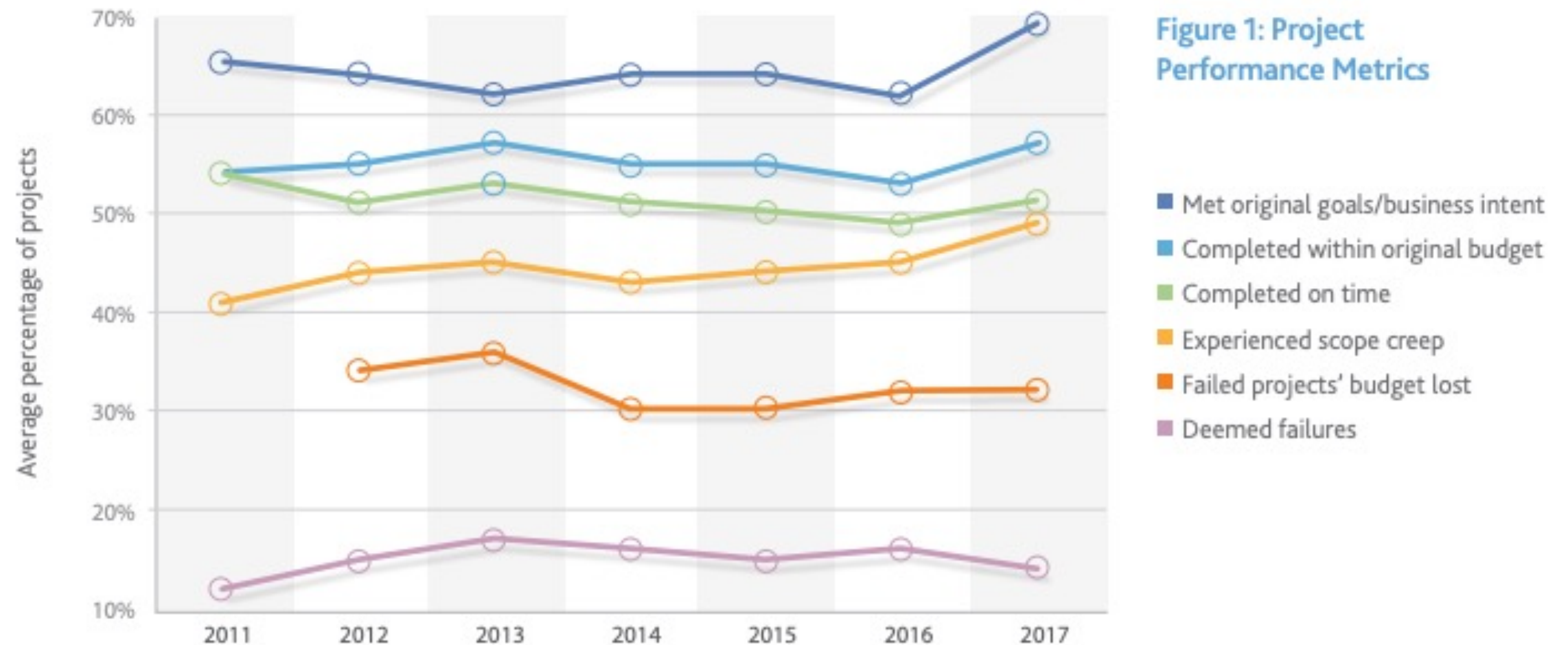
# Welcome to **Scope Creep: Damned If I Do, Damned if I Don't**

Question for you: What is the percentage of projects that experience scope creep?



Scope Creep Icon from: [The Noun Project](#)

Nearly 50%  
according to  
the Project  
Management  
Institute. We  
can do better!



Source: <https://www.pmi.org/-/media/pmi/documents/public/pdf/learning/thought-leadership/pulse/pulse-of-the-profession-2017.pdf>

# WHAT WE WILL COVER

- Who am I
- Define Scope Creep
- Discuss the *What, Who, Why and When* of Scope Creep
- Explore techniques to help mitigate it
- Homework
- Q&A

# Who AM I?



- Founder, Lab651 – Software Development Done Right
- Founder, Recursive Awesome – Machine Learning & AI Consultants
- Host and Creator of the “Conversations on Applied AI Podcast”
- Adjunct Professor – Teaching graduate level courses on IoT & ML at the University of Saint Thomas in Saint Paul, MN
- Co-founder of Applied AI – 501(c)(3) non-profit: Monthly meetups & conferences on Artificial Intelligence

# Why Me?

- Developed Software for 25 years in many sectors & technologies
  - Financial
  - Retail
  - Consumer
  - Scalable Mobile & Cloud Applications
  - IoT, Artificial Intelligence & Machine Learning

All have this same problem of Scope Creep!

WHAT

# IS Scope Creep?

**Scope creep** (also called **requirement creep**, or **kitchen sink syndrome**) Refers to changes, continuous or uncontrolled growth in a project's scope, at any point after the project begins... It is generally considered harmful.

**Source: Wikipedia**

[https://en.wikipedia.org/wiki/Scope\\_creep](https://en.wikipedia.org/wiki/Scope_creep)



WHAT

# IS an Engineer?

The word **engineer** is derived from the Latin words *ingeniare* ("to create, generate, contrive, devise") and *ingenium* ("cleverness").

**Source: Wikipedia**

<https://en.wikipedia.org/wiki/Engineer>



WHAT

# IS The Core Problem?

As engineers we are paid *to fulfill functional objectives*

But engineering is actually *emotional*:

- Want to please those asking us to do the work
- Show that we are *clever*. No problem is too tough!
- Love a good challenge

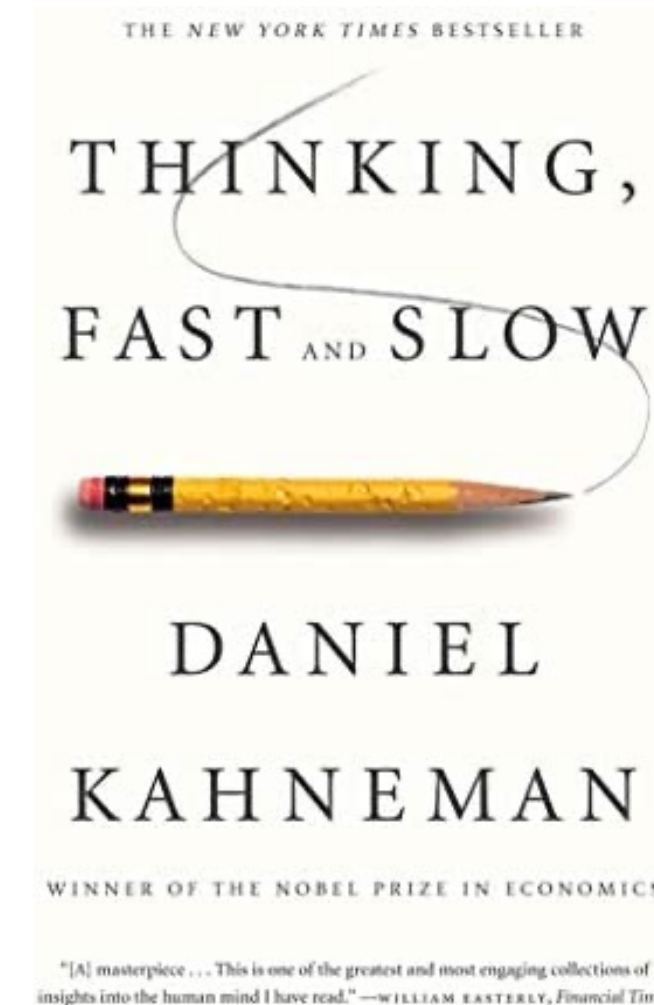
WHAT

# IS The Core Problem?

Humans are terrible at estimating time\*

- Optimism Bias
- Overconfidence

\* [https://en.wikipedia.org/wiki/Thinking,\\_Fast\\_and\\_Slow](https://en.wikipedia.org/wiki/Thinking,_Fast_and_Slow)



## 5. We are too optimistic and want to please others at all costs

Don't worry, dear! We won't have to stay with my parents much longer because our house renovations will be finished in one week.

People significantly underestimate the amount of time it will take them to complete tasks when there are others involved (colleague, client, spouse, you name it). We want to make a good impression so we tend to be much more optimistic, insinuating that we can do things faster because we are better. The paradox is that, by doing so, the estimate will be unrealistic, the outcome won't meet expectations and people will be left disappointed.

<https://medium.com/superokay/why-are-humans-so-bad-at-estimating-4b4290f83716>



***“Damned if I do, Damned if I don’t”***

WHAT

# Are the Signs

- Constantly slipping schedules
- Going over budget
- Delivering undocumented / unrequested features
- Rewriting code, documentation or tests
- Adding tasks after the Sprint has started

WHO

# Are the Guilty Parties

- Everyone!
  - C-Suite
  - Sales
  - Product & Engineering Management
  - Engineers
  - Quality Assurance

*We are all stakeholders in the success of the product!*

WHY

# Scope Creep Happens

- Market conditions change
- Not involving client/project sponsor or users throughout
- Not having a good understanding of the project scope
  - What does “done” look like?
  - What features are/are not a priority for this release?
  - What are the key implementation tasks?
- Lack of a rigorous system and process



WHEN

# Does Scope Creep Happen

- Anytime!
  - Seen it happen at the kickoff meeting
    - Poorly defined requirements
  - Seen it happen in the final build
    - Users finally seeing the product for the first time - yikes!
  - Seen it happen all the way through
    - How hard is it to add X? How about Y?

WHAT

# Are Some Solutions?

- Remember: It's emotional
  - Likely will require a culture shift within your organization
  - Honest conversations with everyone on the team
    - Multiply by X.XX your time estimates
- Implement: "Don't call me, I'll call you"
- Create a template for each task/body of work that must be completed

WHAT

# Are Some Solutions?

- Template for task creation
- Example at Lab651
  - Preconditions
  - Steps
  - Expected Results
  - Errors
  - Logging
  - Notes

TITLE HERE

Attach

Create subtask

Link issue

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Description

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Preconditions:

Steps:

Expected:

Errors:

Logging:

Notes:



WHAT

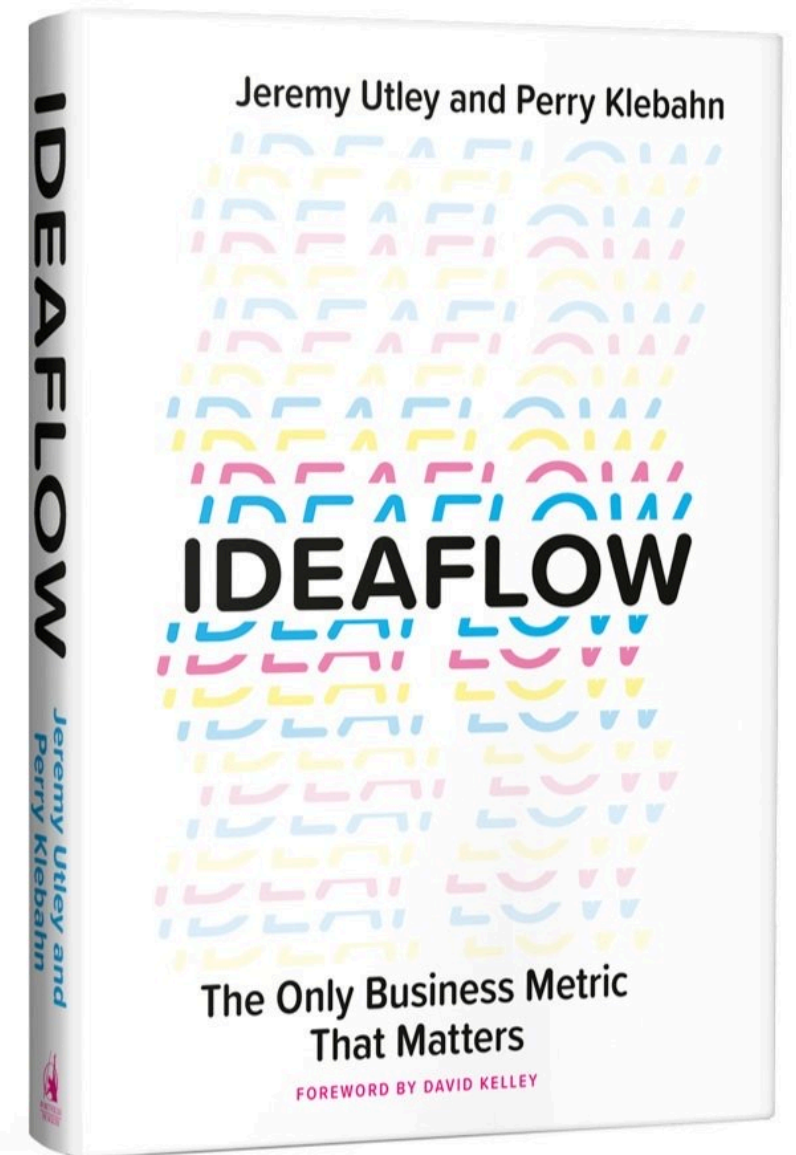
# Are Some Solutions?

- Clearly define the purpose (the WHY) for each feature
  - Gives you a guide marker if requests stray from it
- **As you are the Engineer - YOU** know the technical details:
  - Suggest alternatives!
  - Raise your hand when an ask is creating scope creep
  - Ask for help from a mentor or more experienced engineer
  - Communicate, Communicate, Communicate

WHAT

# Are Some Solutions?

- As a Leader or Product Owner
  - Phrase questions as “how might we?”
  - Give time for members to bring multiple ideas
  - Implement an “Innovation Sandwich”
  - Encourage (or even force) participation by all
  - Allow for timeboxed research & experiments



*Encourage the best ideas when scope changes!*

WHAT

# Are Some Solutions?

- Always have a Sprint review / retrospective
- Demo working code
- Burndown charts
  - Shows estimated vs actual for sprint
- Discuss why if extra time was spent on a feature
- Can this change be moved to a future release?
  - Use tags/labels to mark items for future

WHAT

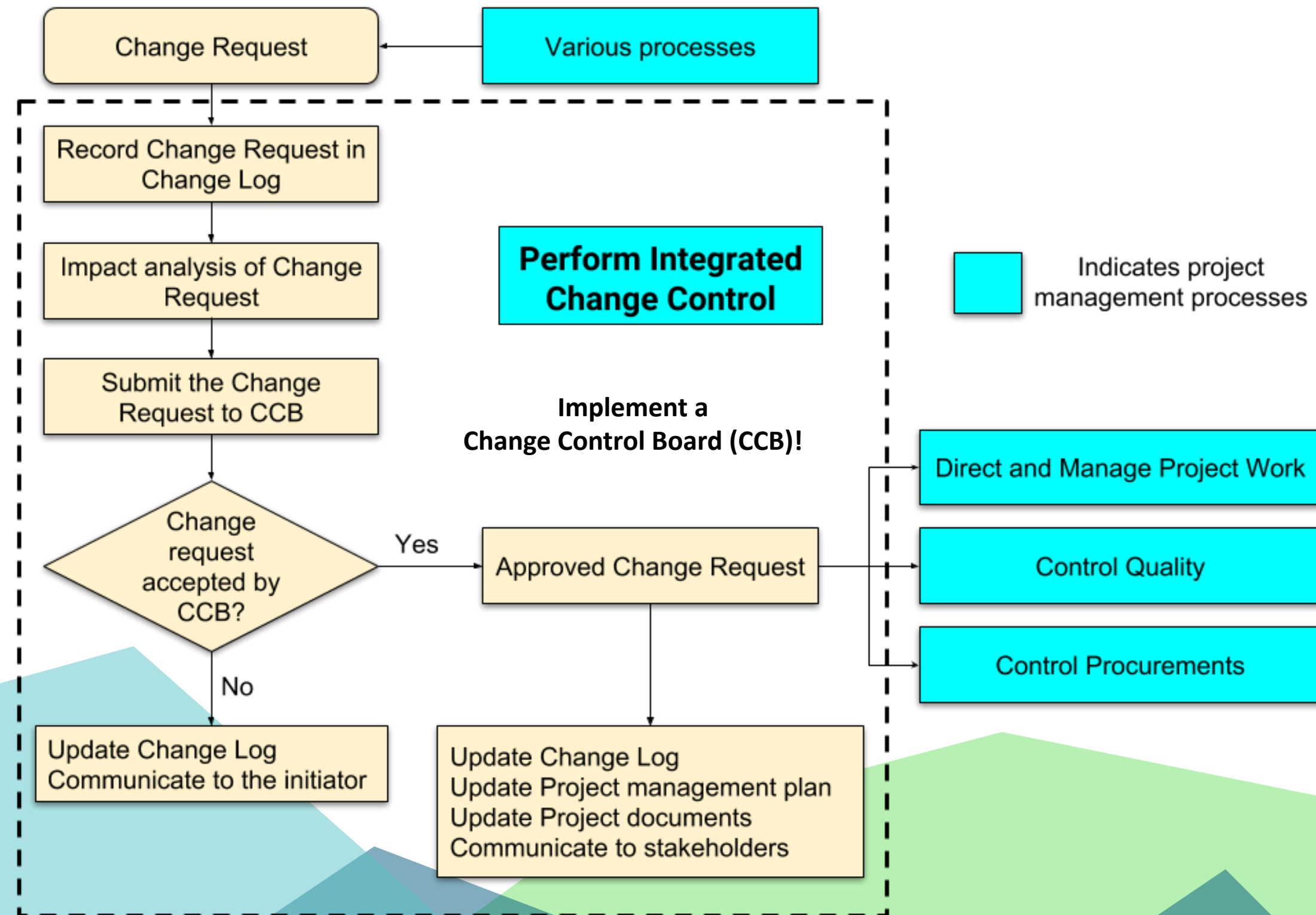
# Are Some Solutions?

- Define and continually review the Project Charter
  - Defines business problems and needs
  - Project objectives
  - Justification and market advantages of completing the project
  - Deliverables
  - Timelines and key milestones
- **Flowchart how YOUR organization will handle changes!**



WHAT

# Are Some Solutions?



<https://www.pmdrill.com/change-control-step-by-step/>

WHAT

# Have We Covered?

- Discussed the *What, Who, Why and When* of Scope Creep
- Engineering is emotional
- Understand that Scope Creep inevitable
- Explored techniques to help mitigate it
  - Process & Procedure driven
  - Emotionally driven ( communication & understanding )

WHAT

# Is the Lesson?

When understood and managed properly...

~~*“Damned if I do,  
Damned if I don’t”*~~



WHAT?

# Homework?

- Tag me on social media @justingrammens
  - Share ways YOU mitigate scope creep with me
  - Share if any of these techniques worked for you
- Use hashtag #ScopeCreep #TechConnect

# PERSONAL INVITE

Applied AI Conference on May 12<sup>th</sup>

<https://appliedaiconf.com>



Promo Code: “mntech” during  
checkout for a discount

# HOW TO REACH ME



Scan to signup to receive a copy of  
my Software Development Done  
Right eBook

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Let us know what you thought of this session!  
Provide your feedback by scanning the QR code below:

