

# Roles on Software Teams

99-520 Summer 25



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~~... and sold it to 10000 customers. (Or sold in-app purchases.)~~

## What sorts of things do you need to think about?



# Cooking + Software

We All Know How To Fry An Egg



We May  
Get Good  
Enough To  
Cook For  
Friends



We May  
Tackle The  
Holiday  
Meal





We May  
Get Good  
At A  
Particular  
Type of  
Cooking





# Taco Trucks and Michelin Experiences

We go from  
this ...





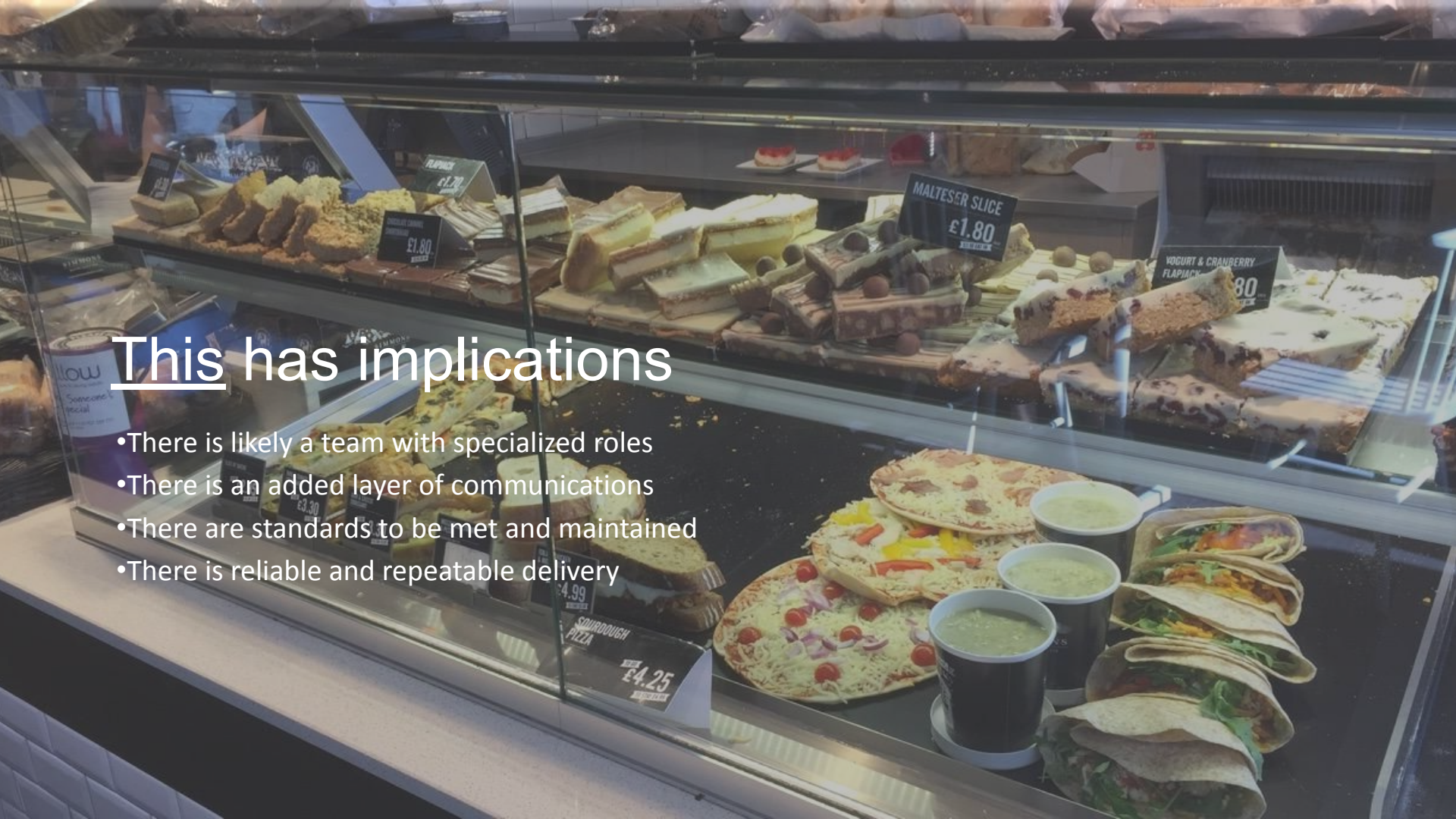


... to this.



# This has implications

- There is likely a team with specialized roles
- There is an added layer of communications
- There are standards to be met and maintained
- There is reliable and repeatable delivery

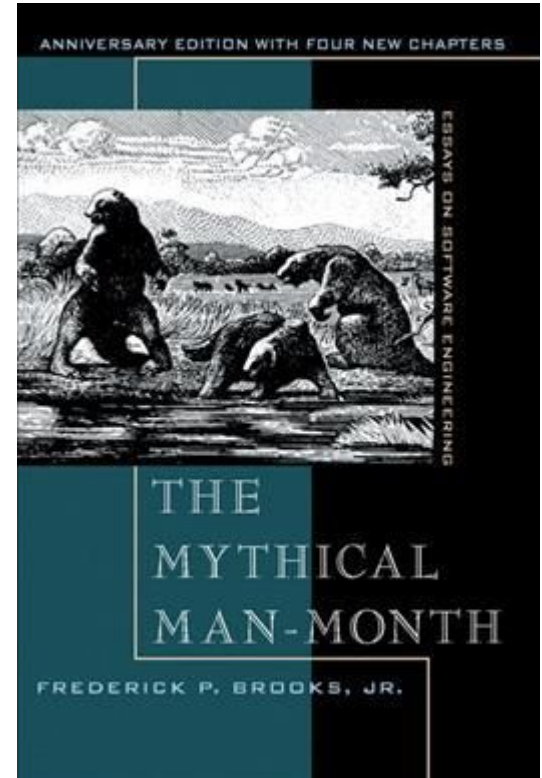




What roles might exist in software teams?

# History ... Brooks's Mythical Man Month

- The Surgeon
- The Copilot
- The Administrator
- The Editor
- Two Secretaries [?!?!?!]
- The Program Clerk
- The Toolsmith
- The Tester
- The [Programming] Language Lawyer



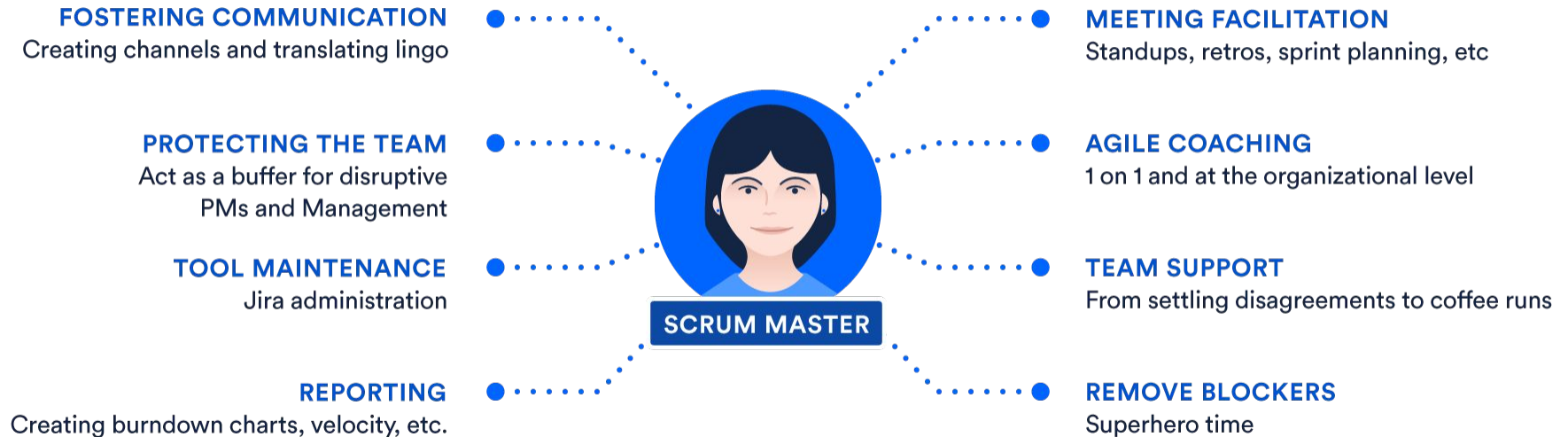
# Roles...

- Can be a full-time position that specializes
- Can be a shared responsibility within a team
- Can be a rotational role for a sprint

# Activity!

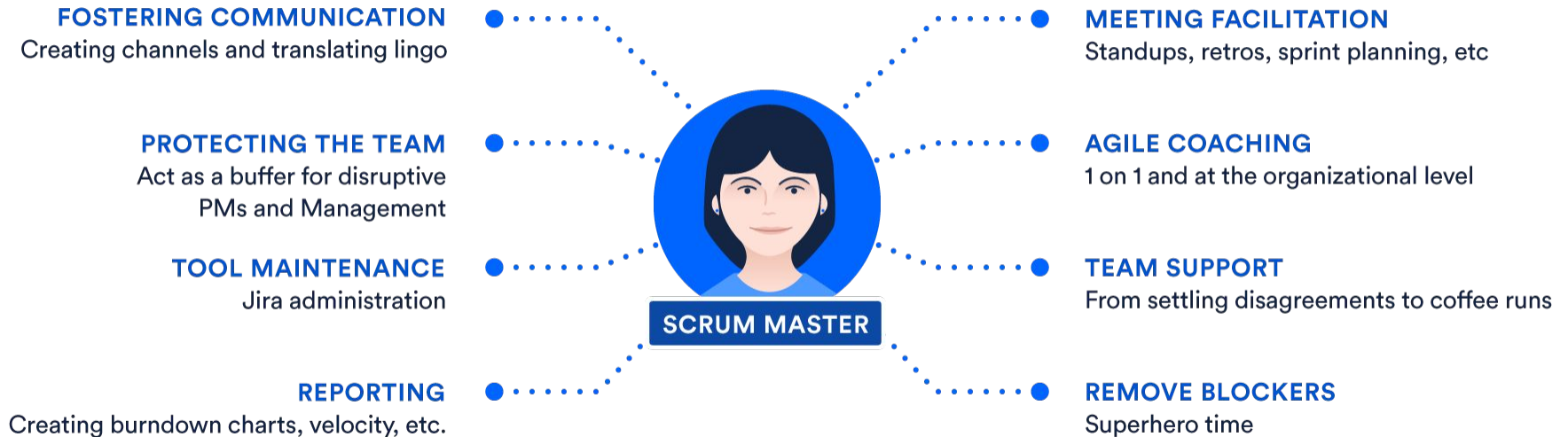
- What roles do you think might be valuable for your group project?
  - What responsibilities does each have?
  - How do you measure their success?
  - How do you think the roles will change over time?
  - What is a possible downside of using these roles?
- Post in #lectures a response to the 4 questions and tag your group members.

# Scrum Master





# Project/Team/Program/Product/Dev Manager/Leader



# Build/Pipeline Manager

- Creates the build infrastructure
- This could be as easy as the makefile hierarchy
- Pipelines are the modern toolchain
- Continuous Integration
- Continuous Deployment

# Release Manager

- Release planning
- Saying “No” to new features
- Running bug burndowns
- Declaring a release complete

# Test Manager

- Creates the test infrastructure
- Defines testing strategy
- Organizes the test suites/cases appropriately

# Reliability Manager

- Keep the servers online
- Build dashboards for reliability metrics
- Notify teams when services go down or have issues



# Docs/Website/Program Management

- Creates the project “information” infrastructure
- Plan and develop website/wiki/library
- Develops tutorial/demo/onboarding work
- Ensures all “documentation” is under version management and tied to the releases appropriately

# Ops & DevOps

- Creates the operations infrastructure
- Monitoring/observability of deployed software
  - Monitoring is capturing and displaying data,
  - Observability discerns system health by analyzing its inputs and outputs
- Responsible for “first responses” to failure conditions
- Continuous Deployment concerns

**SOFTWARE  
DEVELOPERS**



**QA**



## Dev vs. Ops



# Resistance to Testing/DevOps Culture?

From "us vs them" to blameless culture -- How?

Introduction of new tools and processes -- Disruptive? Costly? Competing with current tasks? Who wants to write tests?

Future benefits from rapid feedback and telemetry -- Unrealistic?

Automation and shifting responsibilities -- Hiring freeze and layoffs?

Past experience with poor adoption -- All costs, no benefits? Compliance only?