Implementing PROGRAMMER ANARCHY

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Emerging Experiences at...

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- C-level executives understand this

Agile is a Social Change

- Middle management scared of this

- Result: Half-baked Agile implemented

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- Development driven by stories
- Stories small
- Priority set by customer
- Story-level estimates and metrics

Agile Side Effect:

Story Tyranny

Problem:

Developers become disconnected from business problem (Drones)

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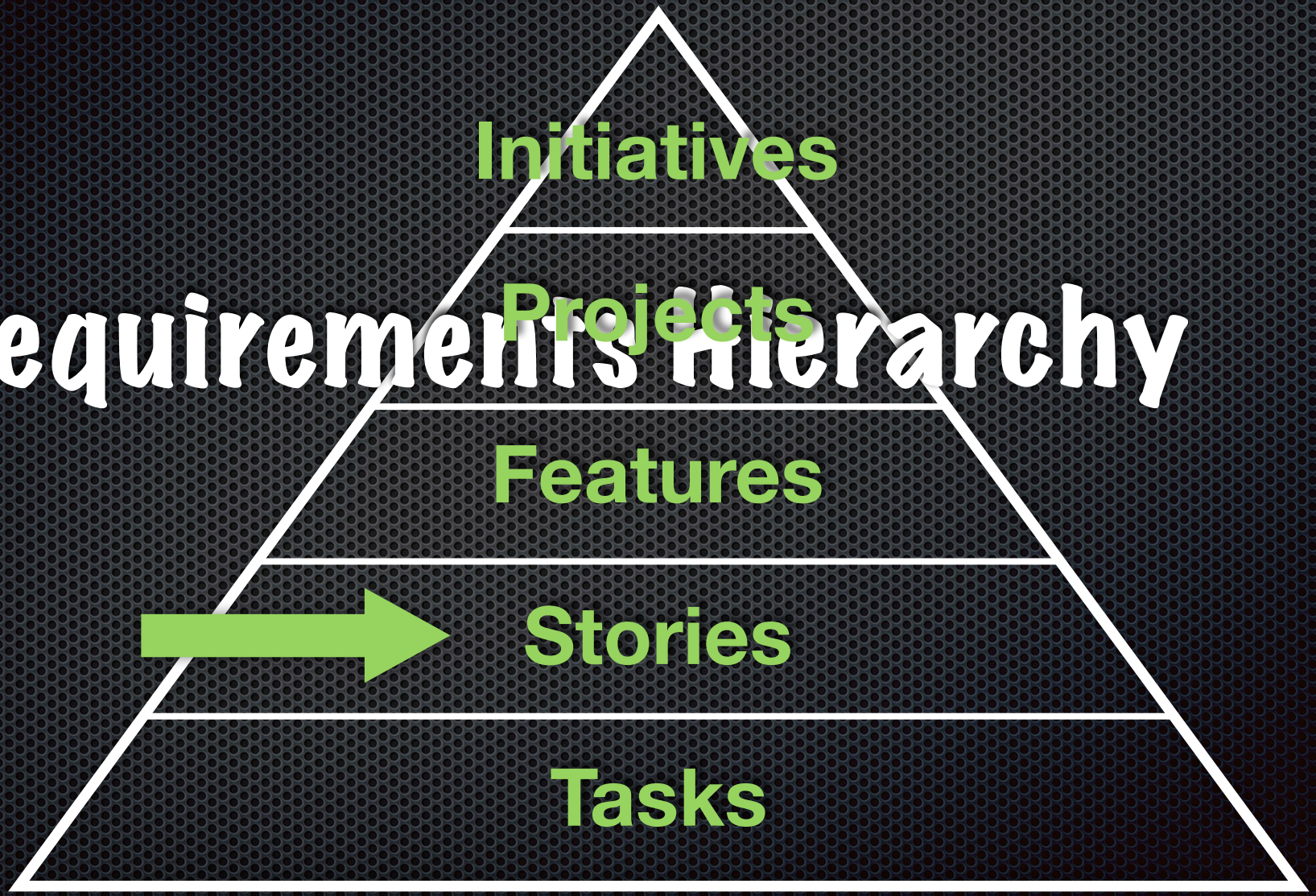
Requirements Hierarchy



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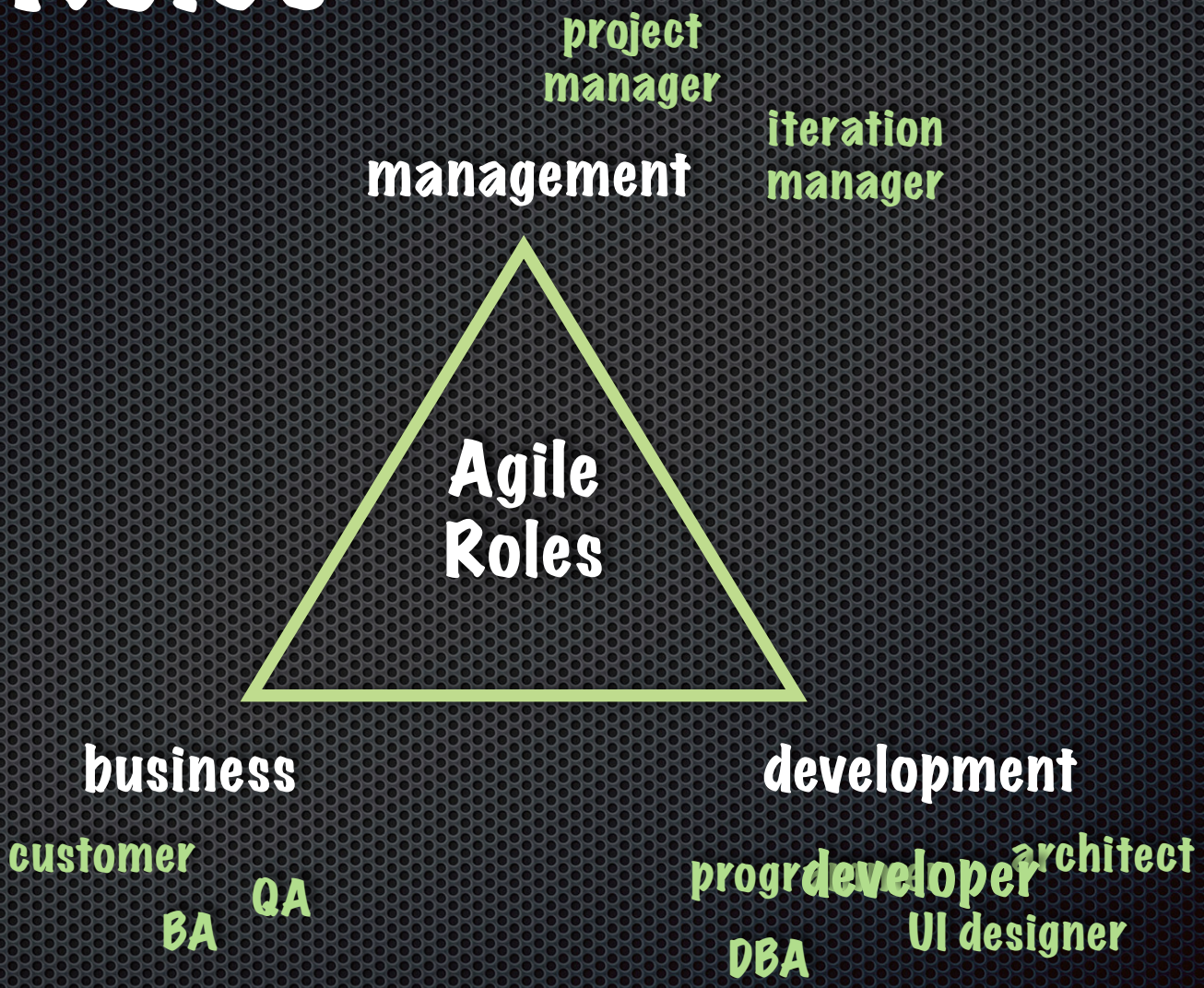
Credit: Greg Reiser, ThoughtWorks, 2005

Agile Roles



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Anarchy Roles

- Customer ✓
- ~~Project manager~~ ✗
- ~~Business analyst~~ ✗
- Developer ✓
- ~~Quality assurance / tester~~ ✗
- ~~Manager of programmers~~ ✗

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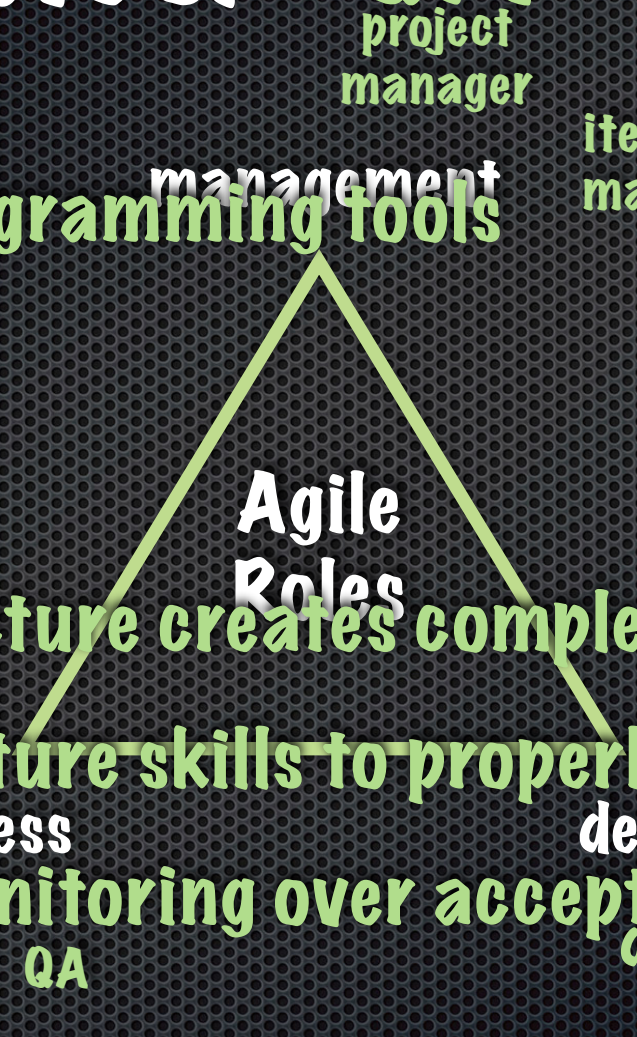
Fate of Roles: QA

- QA tools are Programming tools
  - Selenium
  - Cucumber
- Service Architecture creates complex systems
  - Need architecture skills to properly test
- Shift toward monitoring over acceptance testing



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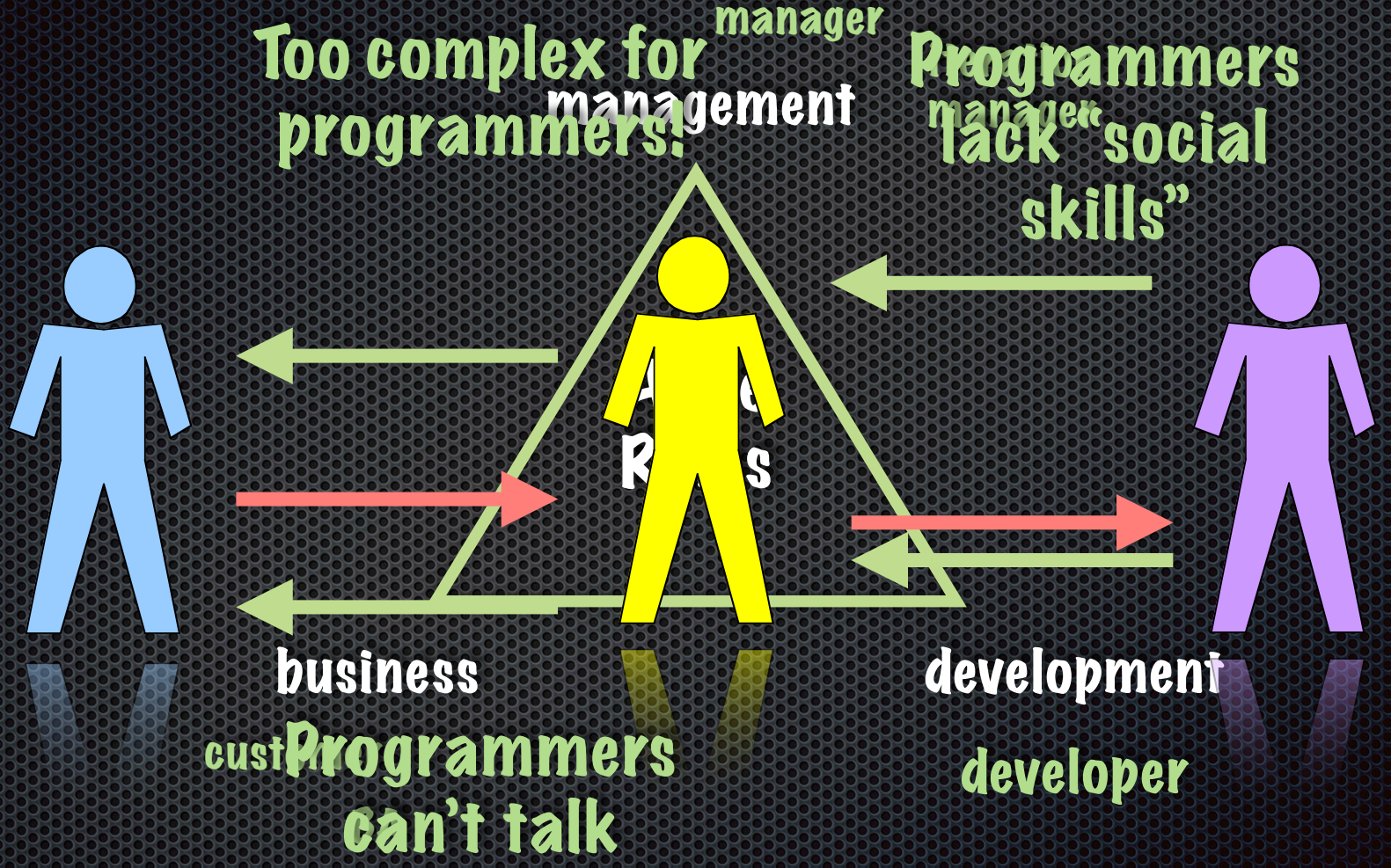
Fate of Roles: BA



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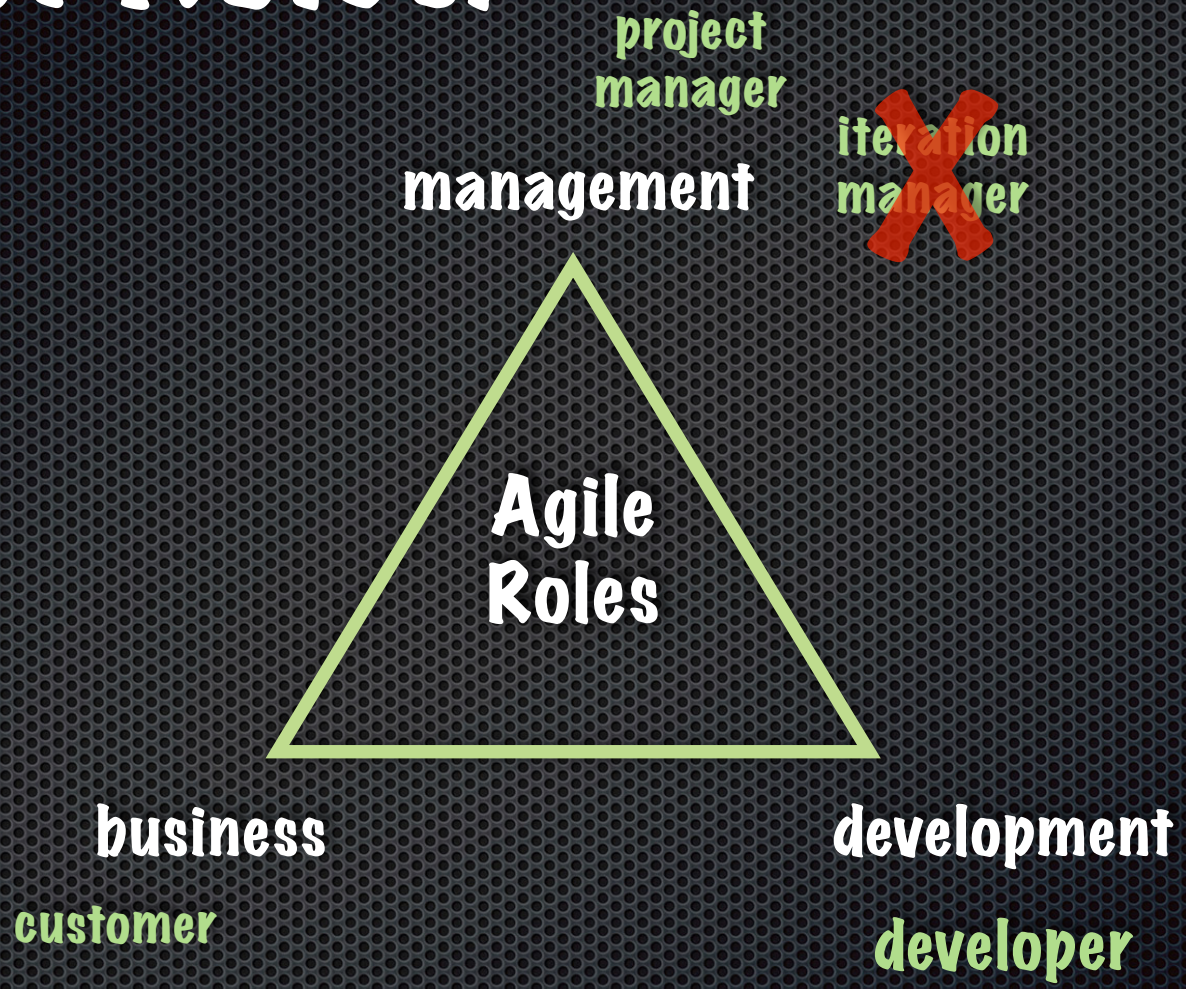
Fate of Roles:



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Fate of Roles: Manager

Power-
Boss

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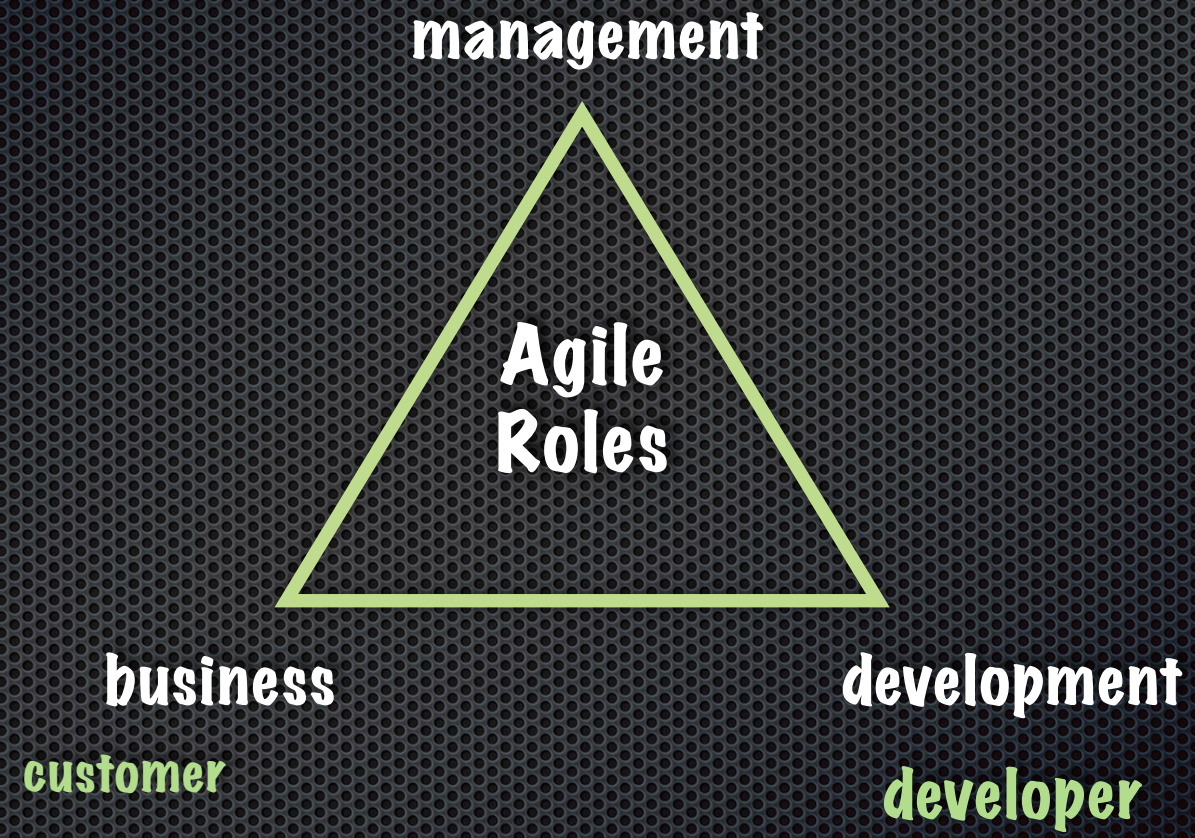
Anarchy Roles



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Example: Energy Revolution

- Prior system:
  - .NET with SQLServer
- New system:
  - Ruby, Clojure, C++, Node.js, R
  - MySQL, MongoDB
  - HAML, SASS

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Example: Energy Revolution

- Ruby for energy calculation - big improvement!
- Rewrote in Clojure
- Rewrote in Clojure (again)

Question: What manager would let them to do it?

Hence: No manager!

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Example: Click Tracking

- Old system:
  - Ruby-based, 32 servers with 40% utilization
- New system:
  - Node.js, 22 servers with 10% utilization and lower latency

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Agile Best Practices Not Used

- ~~Stand ups~~
- ~~Story narratives~~
- ~~Retrospectives~~
- ~~Estimates~~
- ~~Iterations~~
- ~~Mandatory~~ pairing

Trust w collocation

Results, not blame

- ~~Unit tests~~
- ~~Acceptance tests~~
- ~~Refactoring~~
- ~~Patterns~~
- ~~Continuous integration~~

Small, short-lived apps

Continuous deployment

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Agile 2013:

- Online version of Daily Mail
- Company established in late 1800's
- MailOnline largest online newspaper in world
- Challenge: Introduce Anarchy to an established IT

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Transformation Summary

Was	2013
✦ Project focus ✦ 3-6 month ✦ BAU for smaller ✦ Specialists ✦ Front-end ✦ Back-end ✦ Design ✦ Test ✦ Deployment ✦ SCRUM ✦ Story & task focus	✦ Feature focus ✦ 1 month or less ✦ Longer for new platforms ✦ Poly-skilled ✦ Broadly-skilled developers == Experts ✦ Experts float amongst efforts ✦ Aggressive Agile ✦ Table-based teams of 5-8 ✦ Rotation to balance & broaden

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Pervasive Change Required: so change everything!

- Change the titles (and job descriptions)
- Change technology stack (with intense training)
- Change physical layout

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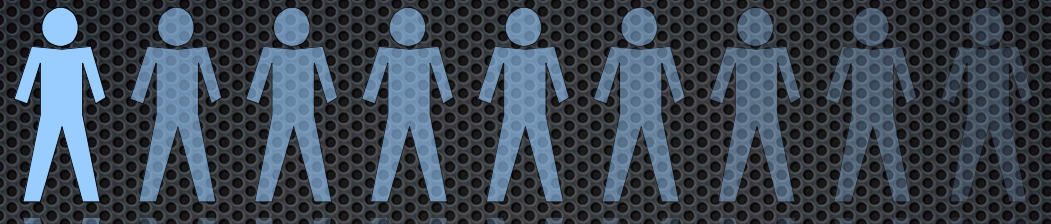
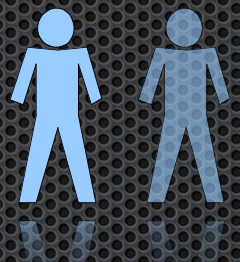
Master



Journeyman



Apprentice

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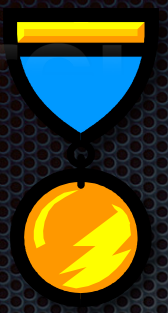
Master



2 Years - Never

Journeyman

2-6 Months

Apprentice

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Key Business Tech

Platform
iOS
Android
Databases
Big Data

Languages
HTML/CSS/JS
Java
Ruby
Server-side JS

Software Delivery
Agile management
OOD / Architecture
Testing

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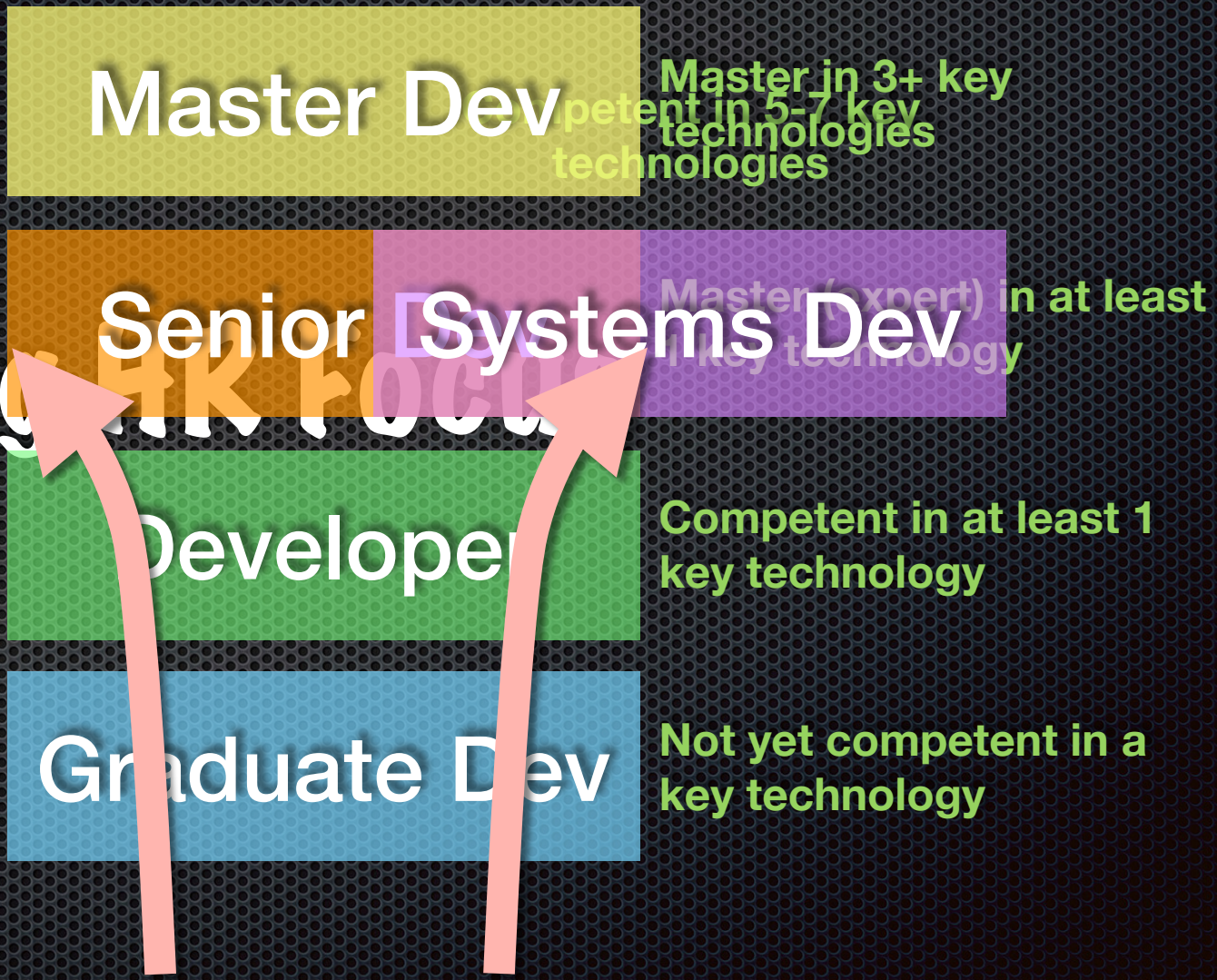
Matching HR Focus

Dual career path for Developers



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Training in Working Together

- Intensive OO training class (40 hourse, off-site)
- Developers, tech leads, QA, and SCRUM masters
- Everyone encouraged to participate (but still optional)

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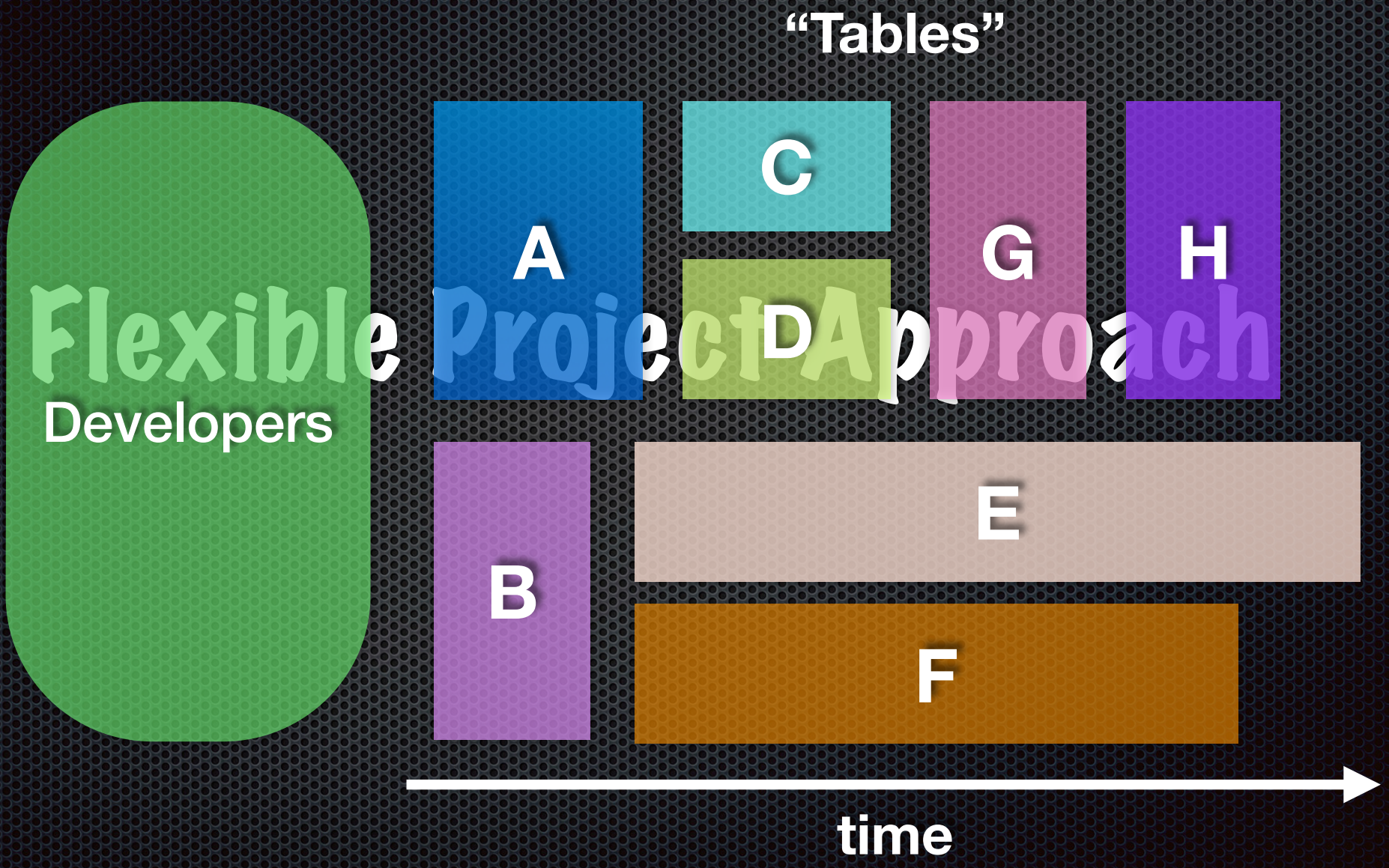

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MailOnline Scorecard

- Absorbed 20 more developers 1 Jan - 1 Mar
- By April 15
  - Delivering LeaderBoard, a new page (Ruby, Node.js)
  - Building first replacement page (Clojure, Node.js)
    - Explored numerous message bus technologies
      - Supporting MicroService architecture
    - Rebuilt Android application
- By September, replaced front-end completely
  - 130K Java with 4K Clojure + Node.js micro-services monitoring

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For last year, creating ...

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- Titles: Only "Developer"
- Remote pairing (4 time zones in US + Canada)
  - Still meet developers face-to-face for the first time quarterly
- Teams decide assignments/roles each day
- New technologies/processes for most developers
  - Clojure
  - Micro-services
  - Flat, self-organizing teams

Like MallOnline, Plus...

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