The Agile Architect

Turning Followers into Leaders

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Is it OK that I just donated blood?
Doctor: There isn’t any reason it should interfere
Confession: I`m terrified of needles
Why is the doctor pressing right into where I just had blood taken?
It’s ok, she probably has a really good reason
After all, she’s a doctor
Why didn’t I say anything?
Disclaimer:
This is not a talk about architecture
What is the role of an architect in an agile organization?
What are you hoping to get out of this talk?
Your mileage may vary
Meet Our Protagonist
I could restructure the program’s flow
or use one little ‘goto’ instead.

Eh, screw good practice.
How bad can it be?
goto main_sub3;
*compile*

XKCD
I’d like to get to know you!
Setting the Stage

- 5 teams, 5-9 each (including QA)
- Mix of Scrum/Kanban/Scrumban
- Thick Client
- C++
- Mature Codebase
- Oil & Gas Engineering Analytics
- Recently Adopted Agile
- Major Project – Client / Server
The best architectures, requirements, and designs emerge from self-organizing teams.

Agile Manifesto
Architecture Approach 1: Laissez Faire
Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.

Agile Manifesto
Empowerment is more than just taking your hands off the wheel
How do we incorporate an architect... without sacrificing agile values?
We want to avoid this:
And this:
Architecture Approach 2: The Architecture Scout
I have a hypothesis!

An idea you can test!
My Hypothesis:

• If I feed the team’s a continuous stream of prototypes and examples

• Then they will have enough information to be productive

• AND

• They will take ownership over their designs
Architecture by Example
Problem 1: Mistakes everywhere!
IF YOU COULD JUST GO AHEAD AND REDO THE LAST 2 WEEKS OF WORK THAT'D BE GREAT
Problem 2: Team disagreements
Too many classes makes the system too complex!

Big classes make the system unmaintainable!
WORK HARDER!
Problem 3:
What if the architect is WRONG?
How do you know if the architect is WRONG?
No battle plan ever survives contact with the enemy

Helmuth von Moltke the Elder
I thought you knew something I didn’t
Epiphany: Architect is a leadership role
\[ \sqrt{\heartsuit} = ? \quad \cos \heartsuit = ? \]

\[ \frac{d}{dx} \heartsuit = ? \quad \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} \heartsuit = ? \]

\[ F\{\heartsuit\} = \left\{ \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} f(t) e^{it \heartsuit} dt \right\} = ? \]

My normal approach is useless here.
Alignment

Autonomy

Do what I say

Do whatever

Spotify Engineering Videos
How do I serve the teams without telling them what to do?
Intent-Based Leadership

Turn the Ship Around!

A TRUE STORY OF TURNING FOLLOWERS INTO LEADERS

"The best how-to manual anywhere for managers on delegating, training and driving flawless execution."

—FORTUNE
Don’t move information to authority, move authority to the information

David Marquet
Two pillars that need to be in place: the technical competence .... and organization clarity.

... put those things in place and then you can give control.

David Marquet
I intend to...
We need to cross the river
Build a bridge

We need to cross the river
Figure out how

Hope someone is working on the river problem...
Architecture Approach 3: The Architecture Coach
Resist the urge to provide solutions

David Marquet
Questions communicate values

Sean Dunn
Spend time with the teams
https://www.youtube.com/watch?v=QaZ0L7aDx50
Leaders make it safe to speak truth to power.

11:45 AM - 10 Apr 2016
Daily Design Meeting

- 30 minutes
- Technical lead from each team
- Discuss challenges that being encountered
- Exercise is repeated on the team that brought the challenge
Letting go is hard
Design Steps

• What is the problem you’re trying to solve?
• What solutions should we consider?
• What are the pros/cons of each solution?
6 Thinking Hats Retro

- Intro (5 minutes)
- Blue Hat - Objectives (5)
- White Hat - Facts (4 0)
- Yellow Hat - Positive Outcomes (10)
- Black Hat - Negative Outcomes (10)
- Red Hat - Feelings/Emotive (15)
- Green Hat - Ideas (25)
- Blue Hat - Conclusion (10)

Sources: Edward de Bono, retrospectivewiki.org
Create a common framework for resolving conflict
Scenario

• Design problem with 2 options:
  > Enforce business rules in the database
  > Enforce business rules in the domain layer

• The design team unanimously agrees to put the business rule in the domain layer

• Tech lead brings it back to their team, and they decide to put it in the database
Disagreement is a mechanism for organizational clarity
The end?
Something interesting happened
Do we still need an architect?
Final Architecture Approach:
Architecting as a Team
We need to cross the river (high Alignment)
Build a bridge
Figure out how
Hope someone is working on the river problem...

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Imagine:
You leave your team for 1 year
When you return, the architecture has changed dramatically
How do you react?
“This is just too risky!”

Wouldn’t it be less risky to leverage the brainpower of your entire team?
“My Architect can’t learn this”

Leadership can be taught
Summary

• Empowerment is more than standing back
• Lead through intent
• Every moment is an opportunity to teach
• Resist the urge to provide solutions
• Let go!
• Create a framework for disagreement
• Disagreement is a mechanism for organizational clarity
Approach must evolve over time
Architect is a leadership role
And remember...
KEEP CALM AND RESIST THE DARK SIDE
Thank You!

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