

Feature Teams vs. Component Teams: Exposing Local Optimization

presented @



by Gene Gendel

Local Optimization

Local Optimization

(“This Is Not My Job”)



Sourced from: https://static.timesofisrael.com/www/uploads/2019/11/000_1MB1Q8-640x400.jpg

Local Optimization

...whereas, **Global optimization** refers to finding the optimal value of a given function among all possible solution...

... **Local optimization** finds the optimal value within the neighboring set of candidate solution...

<https://www.iqi-global.com/dictionary/from-optimization-to-clustering/45858>

[Pentagon Wars – Bradley Fighting Vehicle Evolution](#)



Local Optimization

"Everyone is busy and working so hard. Yet, the system is delivering slow and Users are not happy"

How could that be?



Sourced from: <https://www.youtube.com/watch?v=5unMIXg6WL4>

Local Optimization

Frequently Heard Justifications:

- Efficient
- Productive
- Best
- Good
- Optimized
- Ideal
- Cost-Effective



Local Optimization In UI/UX Design



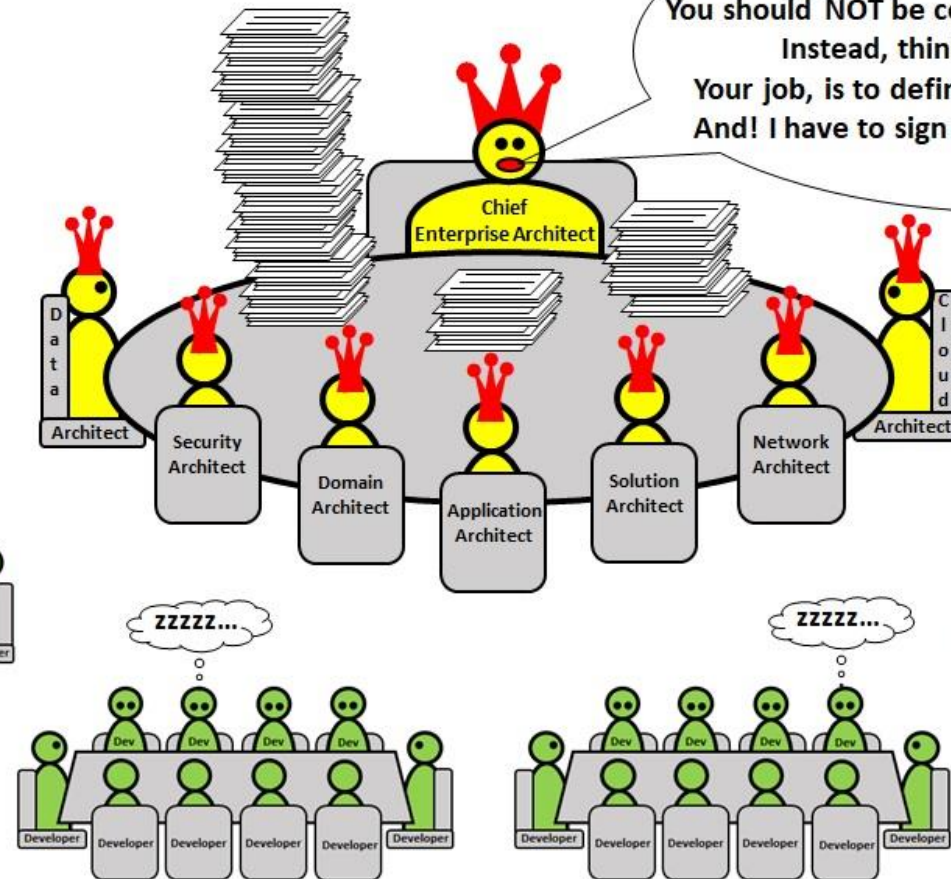
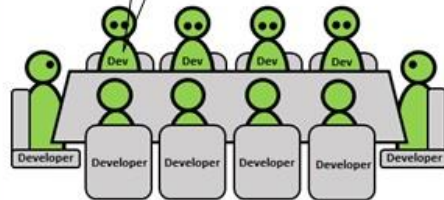
Sourced from: <https://www.meetup.com/Design-Sprint-NYC/>

Local Optimization

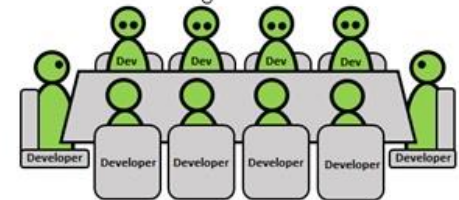
“Power Point Architects” In Action



Guys! We are Master-Programmers, with many decades of experience. How come, we are not allowed to define architecture???



Oh God... Another mandate from the "Ivory Tower"???



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Local Optimization

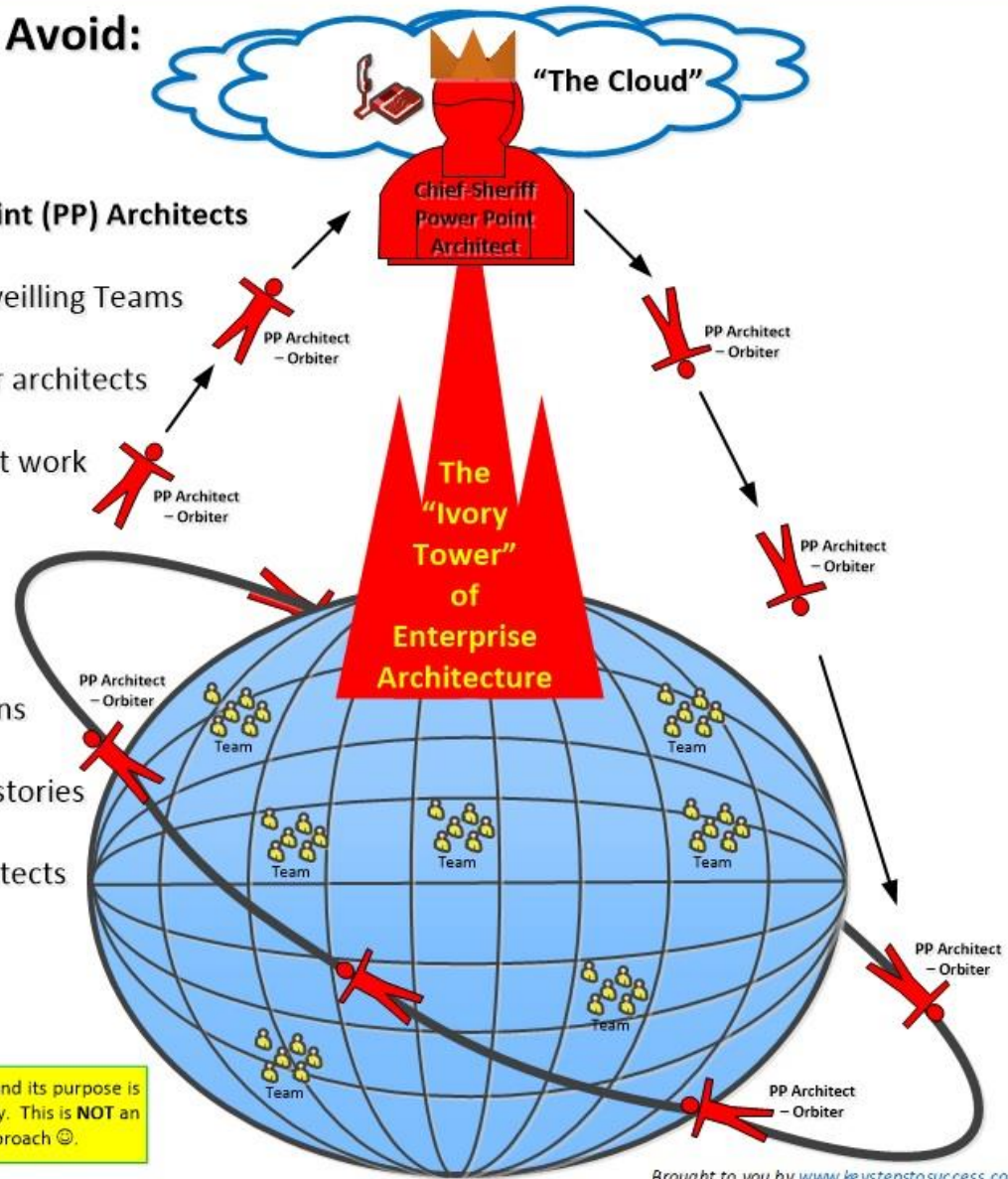
Typical Problems to Avoid:

- Building architecture 'towers'/silos
- Reliance on **Chiefs-Sheriffs Power Point (PP) Architects**
- Squads of **PP Architects-Orbiters**, surveilling Teams
- Separate reporting structures, just for architects
- Architects, not doing any development work
- Local Optimization in architecture
- Architecture "away" from Business
- "One-size-fits-all" architecture solutions
- Architecture work streams, backlogs, stories
- Reliance on expensive vendors - architects



Avoid This:

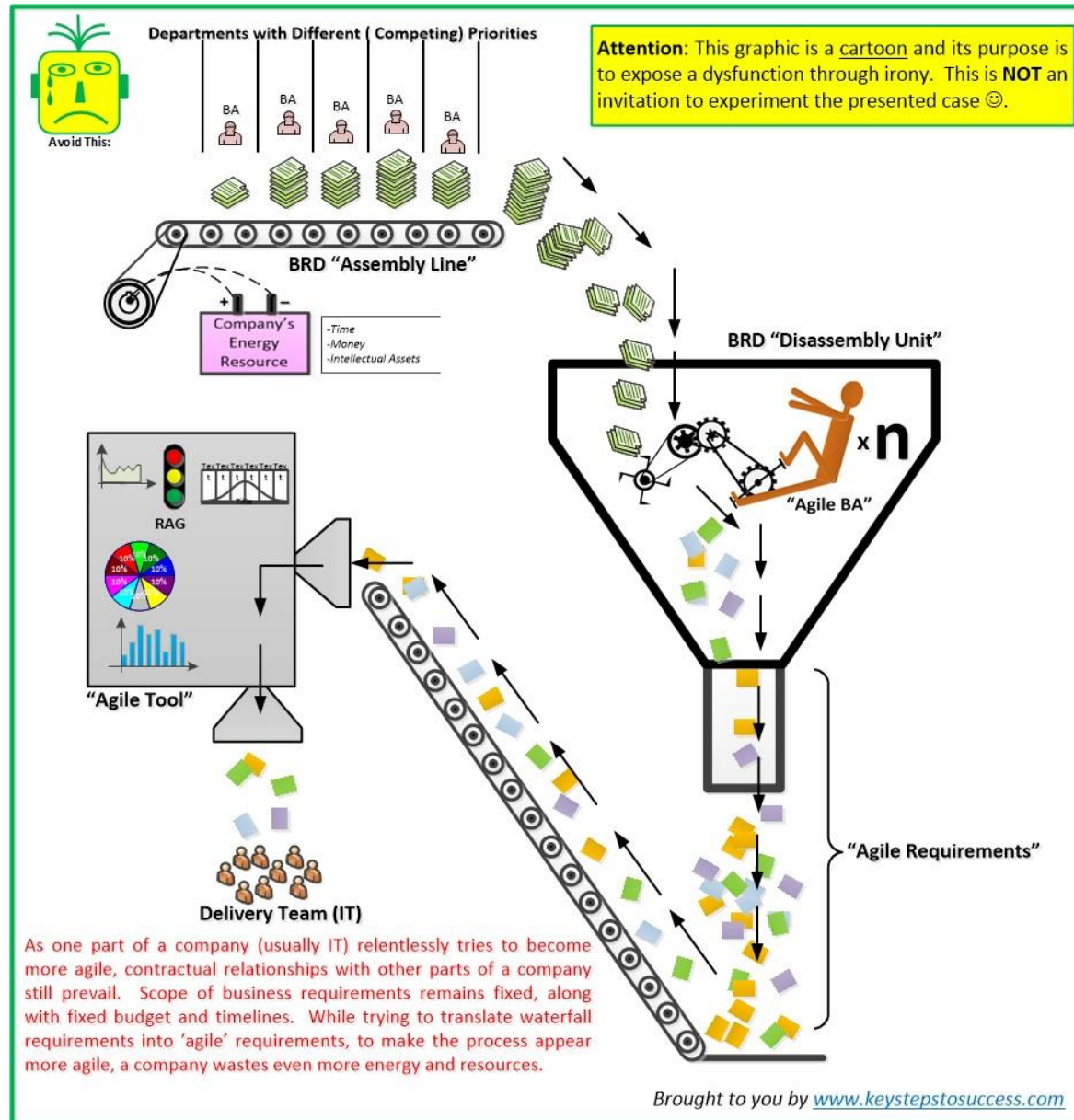
Attention: This graphic is a cartoon and its purpose is to expose a dysfunction through irony. This is **NOT** an invitation to experiment with this approach 😊.



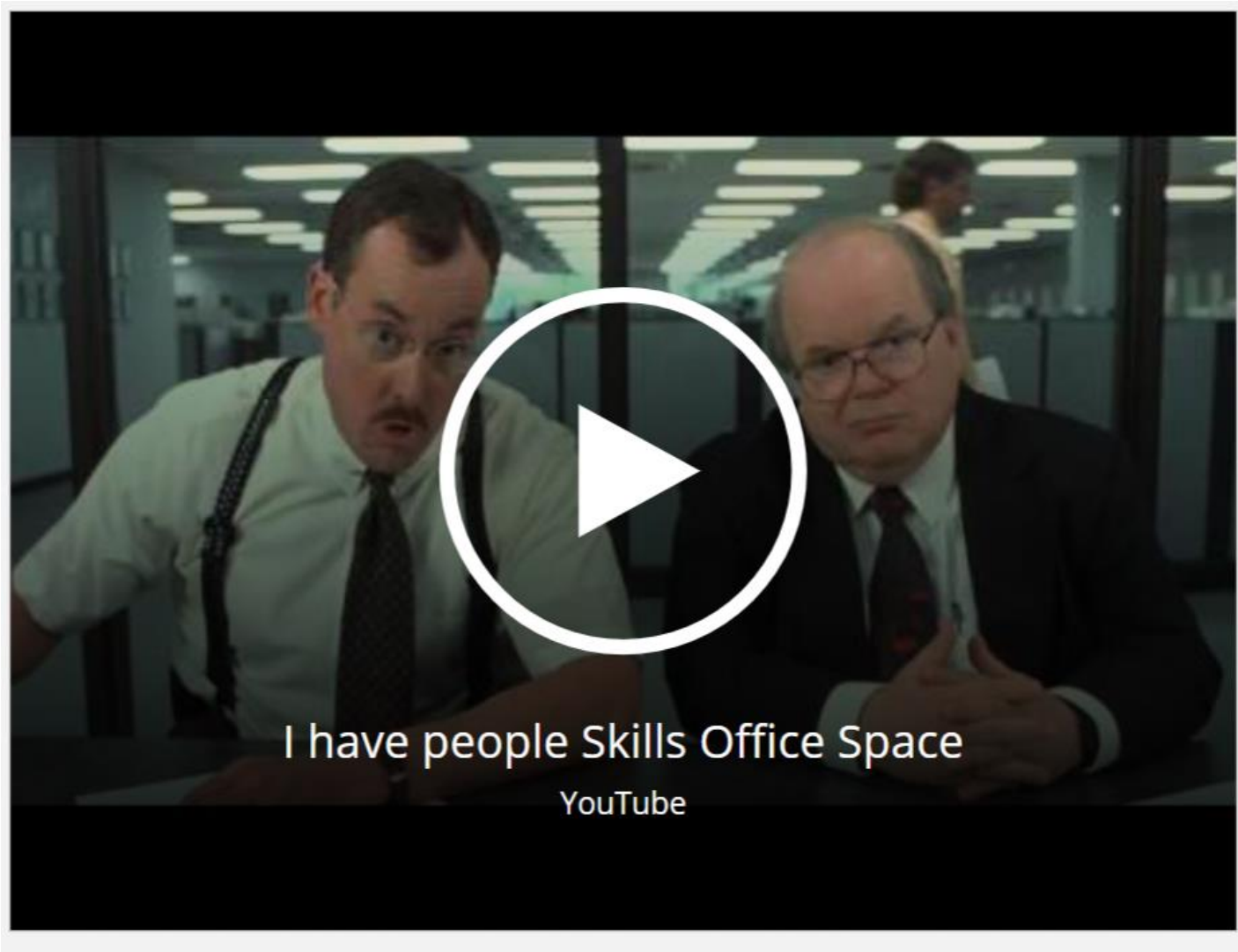
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Local Optimization



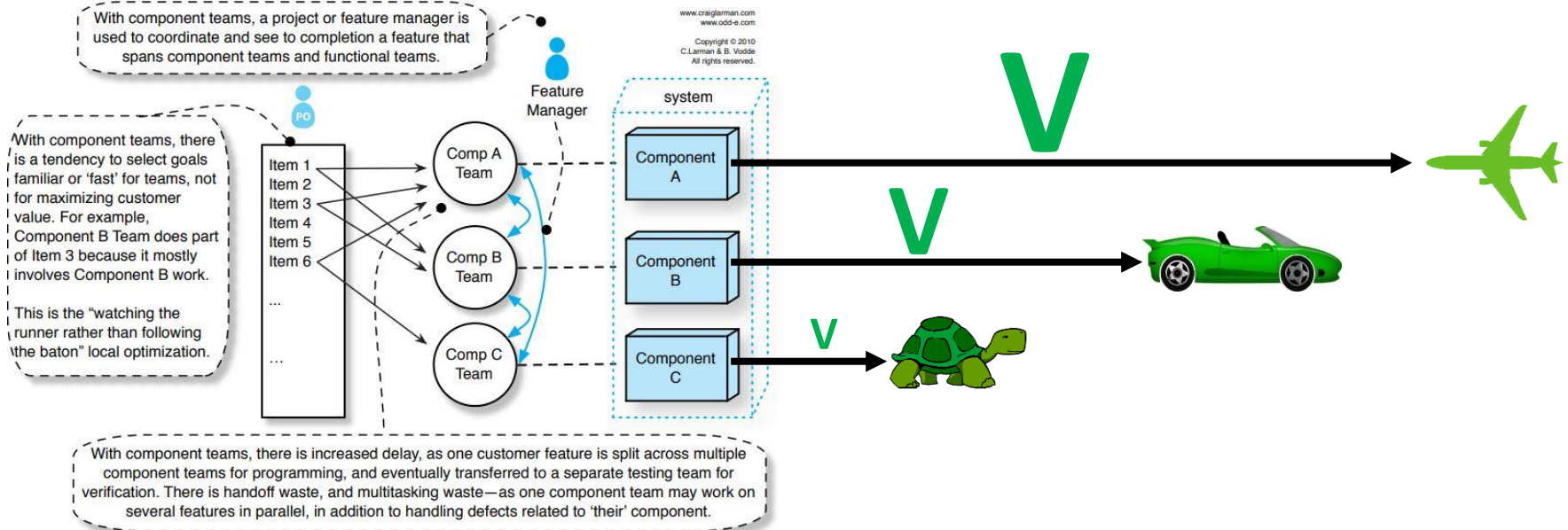
Local Optimization



<https://www.youtube.com/watch?v=hNuu9CpdjIo>

LeSS Guides: *Organize by Customer Value*

Component Teams



Sourced from: <https://less.works/resources/graphics/index.html>

Big Mistake # 1

$$V > V > v = \text{Thinking Face}$$

Big Mistake # 2


$$V + V + v = \text{Thinking Face}$$

Can these velocities be used to reliably estimate volume and complexity of delivered features?

LeSS Guides: *Organize by Customer Value*

Synonyms for “Component Team”

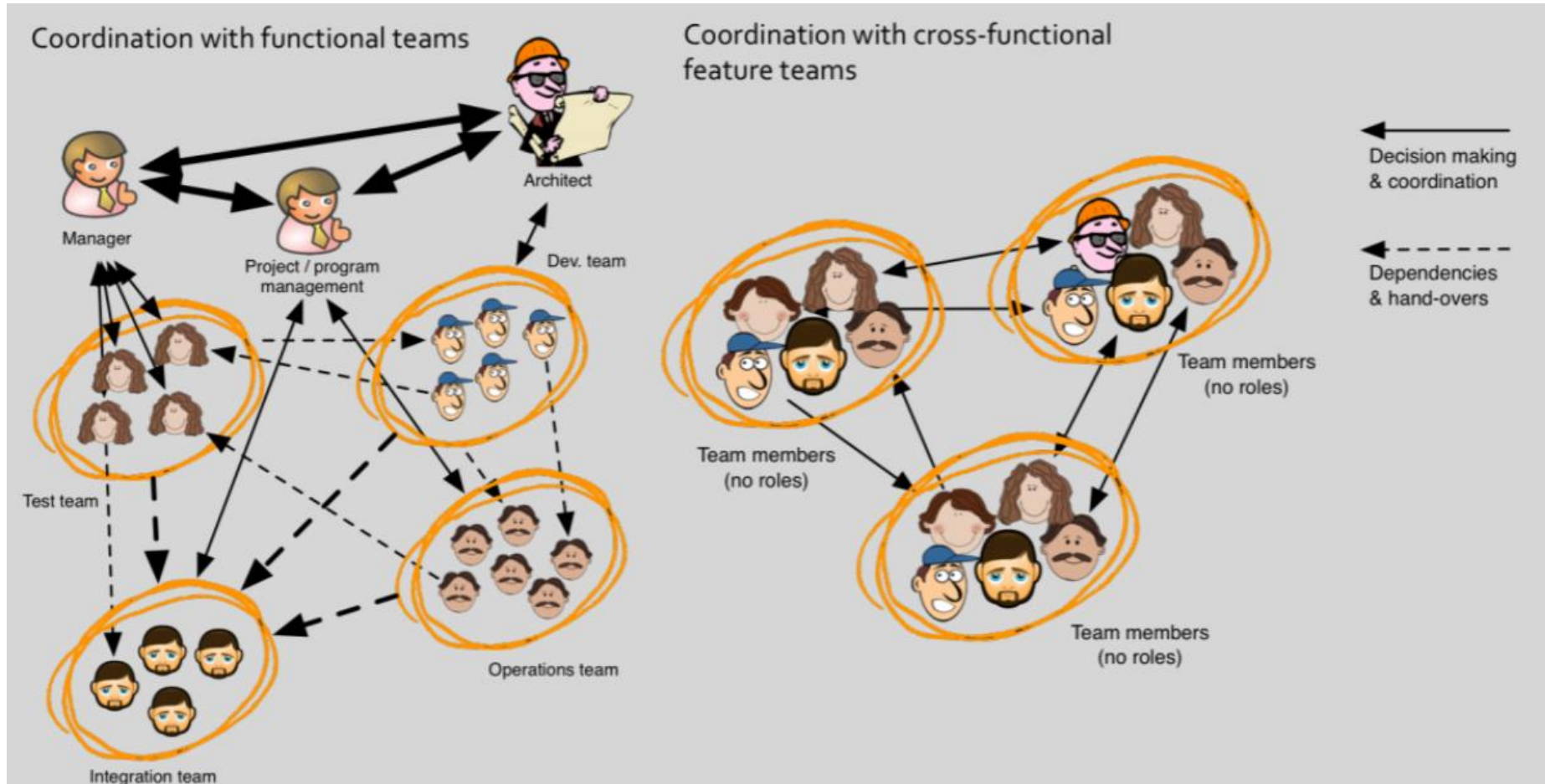
Local Optimization



platform team
core or shared services team
micro-service team
application team
subsystem team
library team
service team
API team
front-end (or back-end) team
DB team
module team
framework team
DDD bounded-context team

Sourced from creative commons repository of Certified LeSS Trainers: <https://less.works/courses/become-less-trainer>

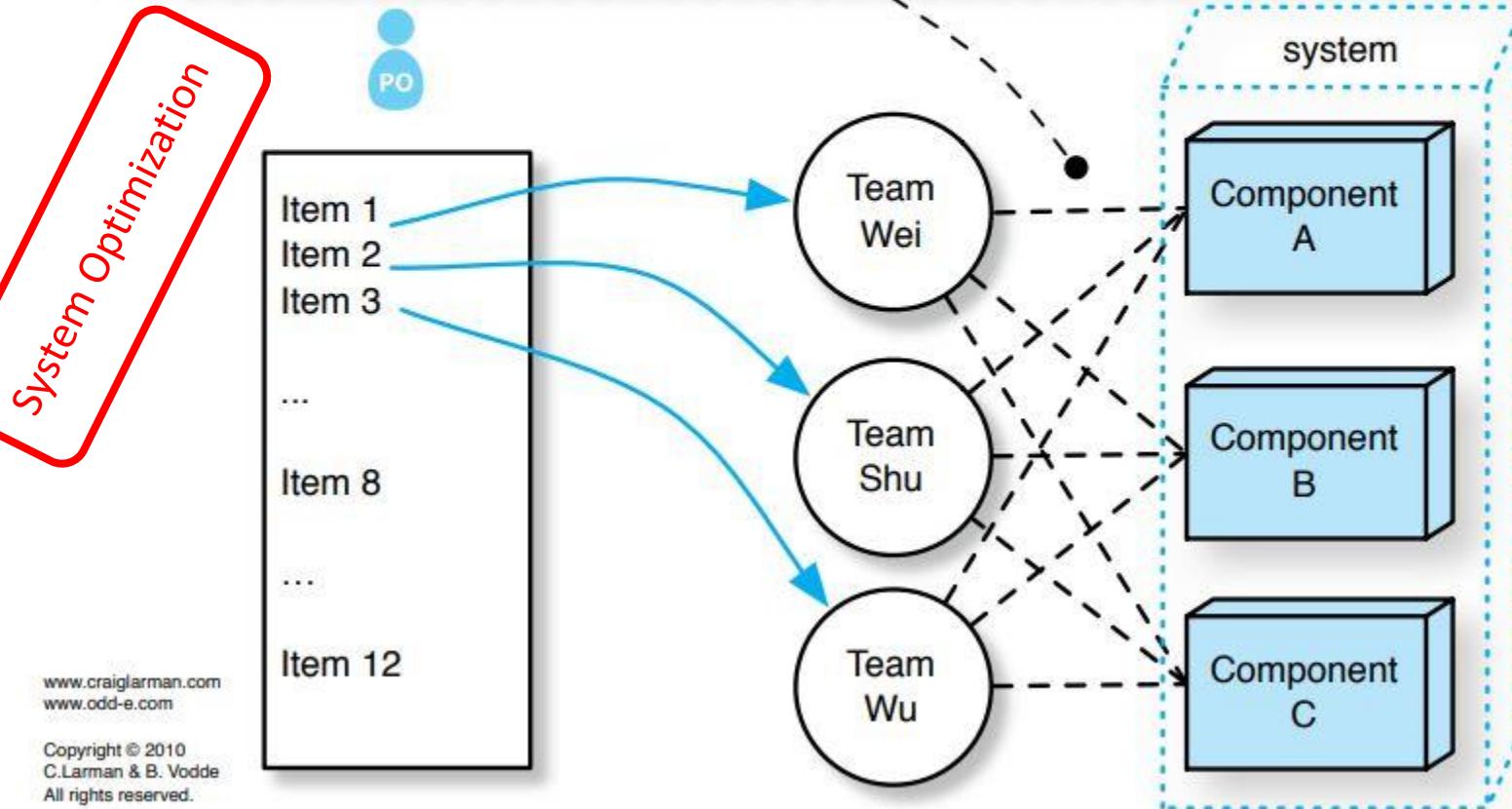
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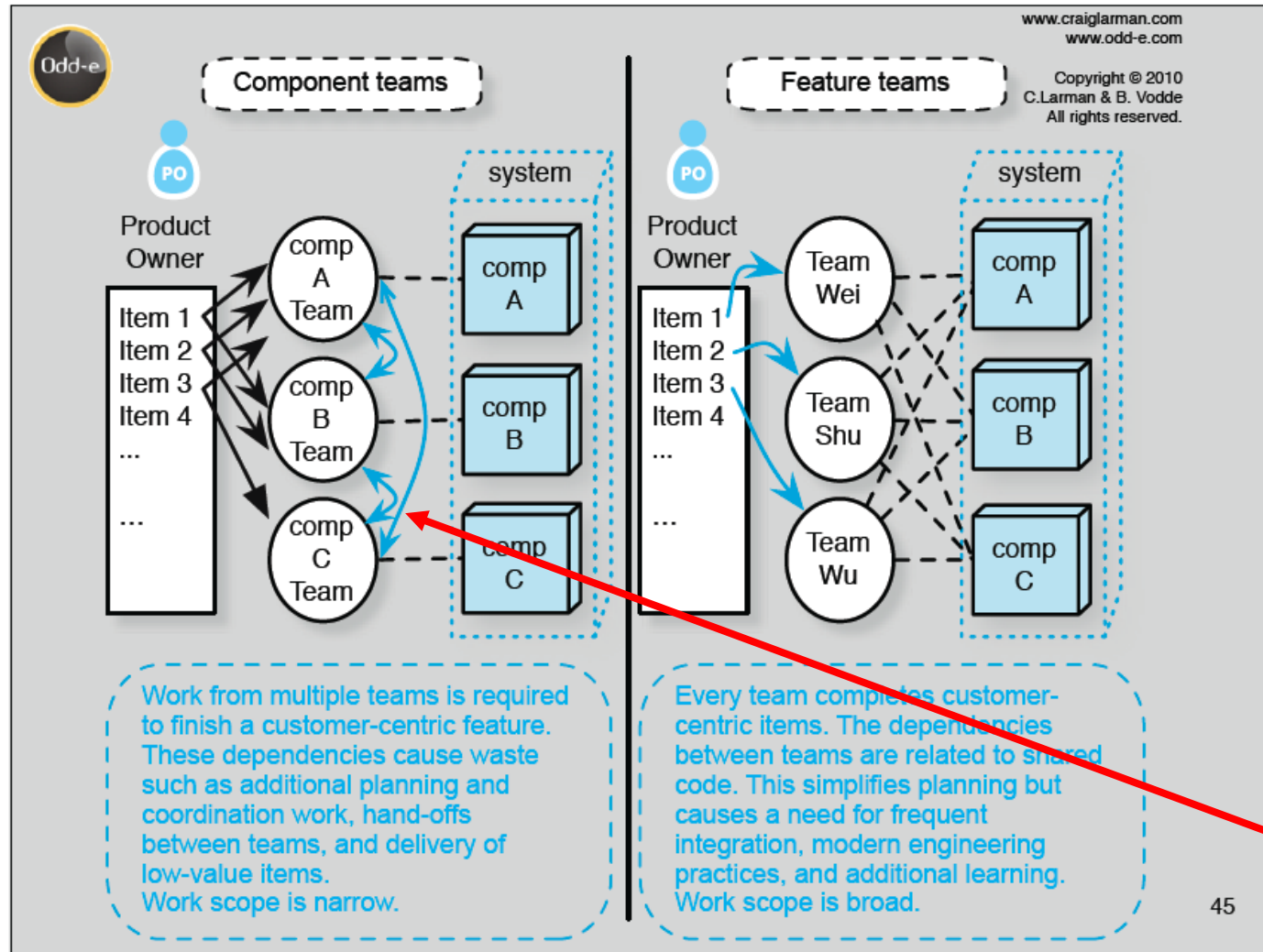
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With feature teams, teams can always work on the highest-value features, there is less delay for delivering value, and coordination issues shift toward the shared code rather than coordination through upfront planning, delayed work, and handoff. In the 1960s and 70s this code coordination was awkward due to weak tools and practices. Modern open-source tools and practices such as TDD and continuous integration make this coordination relatively simple.



Sourced from: <https://less.works/resources/graphics/index.html>

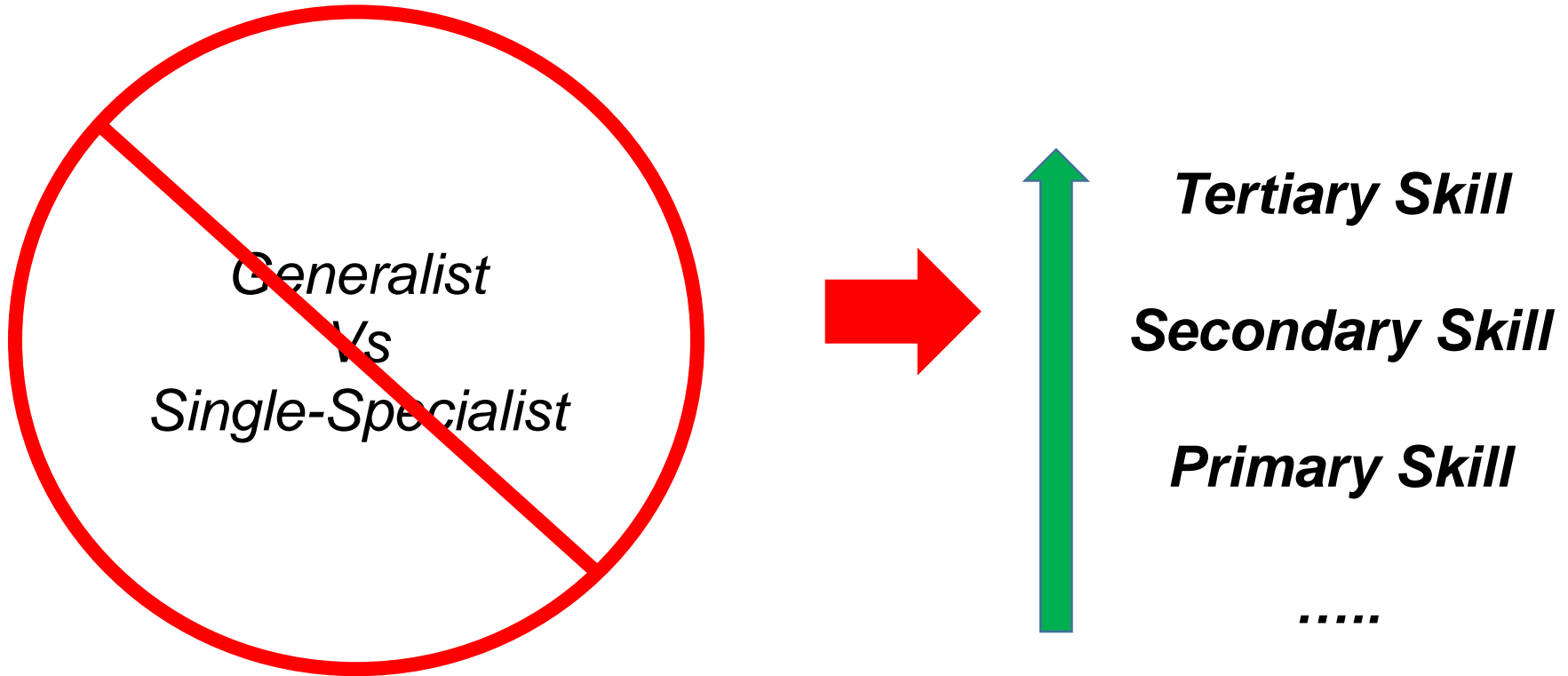
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Coordination Costs
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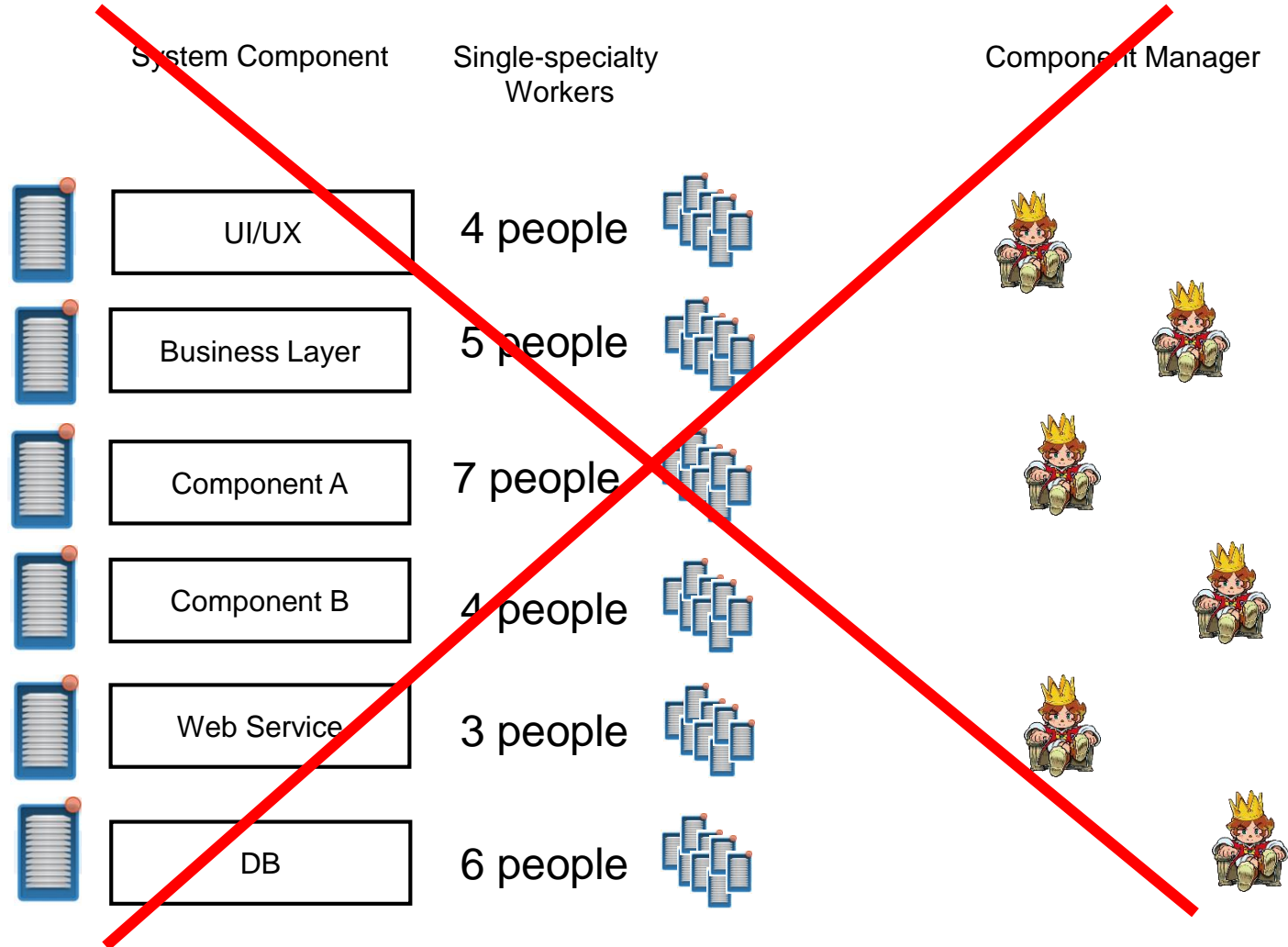
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Avoiding False Dichotomies

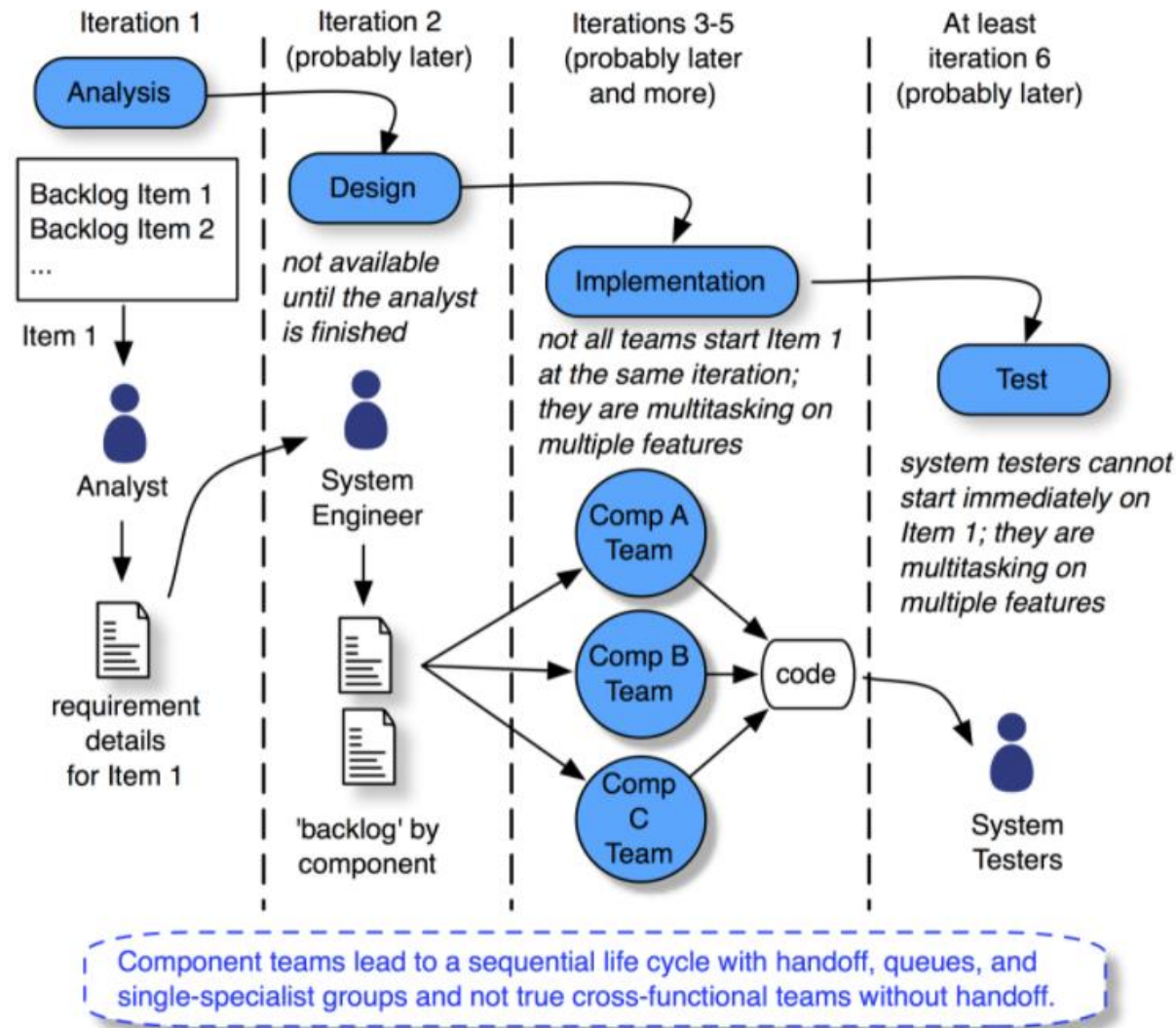


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"Back story" of Component Teams

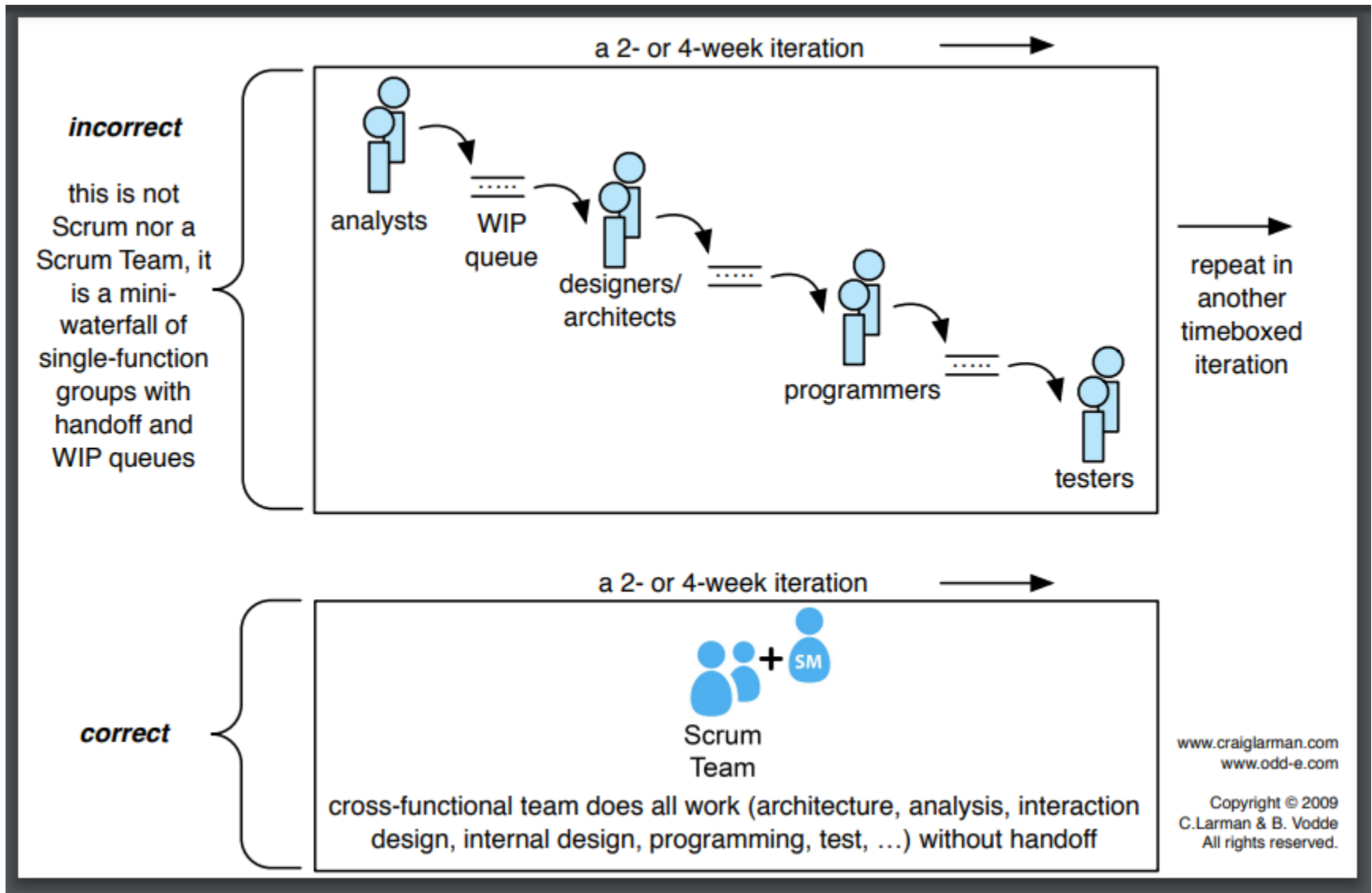


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Sourced from <https://less.works/less/structure/feature-teams>

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Sourced from <https://less.works/scaling-book-images/scaling-agile-lean-development-thinking-tools/chapter-8-single-function-groups-en.pdf>

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Seeing (and Hearing) Local Optimization

“Everyone is doing their best yet overall systems throughput is degrading. How can that be?” This is the paradox of **local optimization** —when a person or departmental decision maker optimizes for the local view or self-interest. The party making the decision frequently *believes they are making the best decision*, but because ‘best’ is a local optimization, in fact it sub-optimizes overall system throughput. This is a result of “silo mentality,” misunderstanding, fear, limited information, delayed feedback, ignorance, careerism, avarice, and other common *organizational learning disorders*.

Team Structures

Org. Structures

Documentation

Definition of Done

Backlogs

Role Definitions

Product Design

Goals & Metrics

Q & A