When should you integrate roles in the same team – and when should you separate them?

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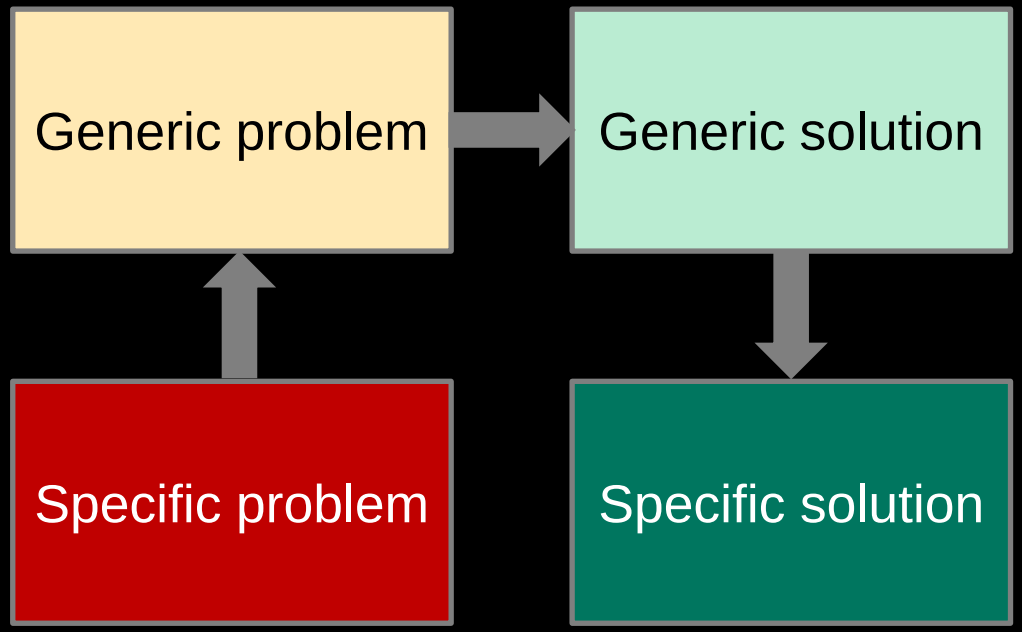
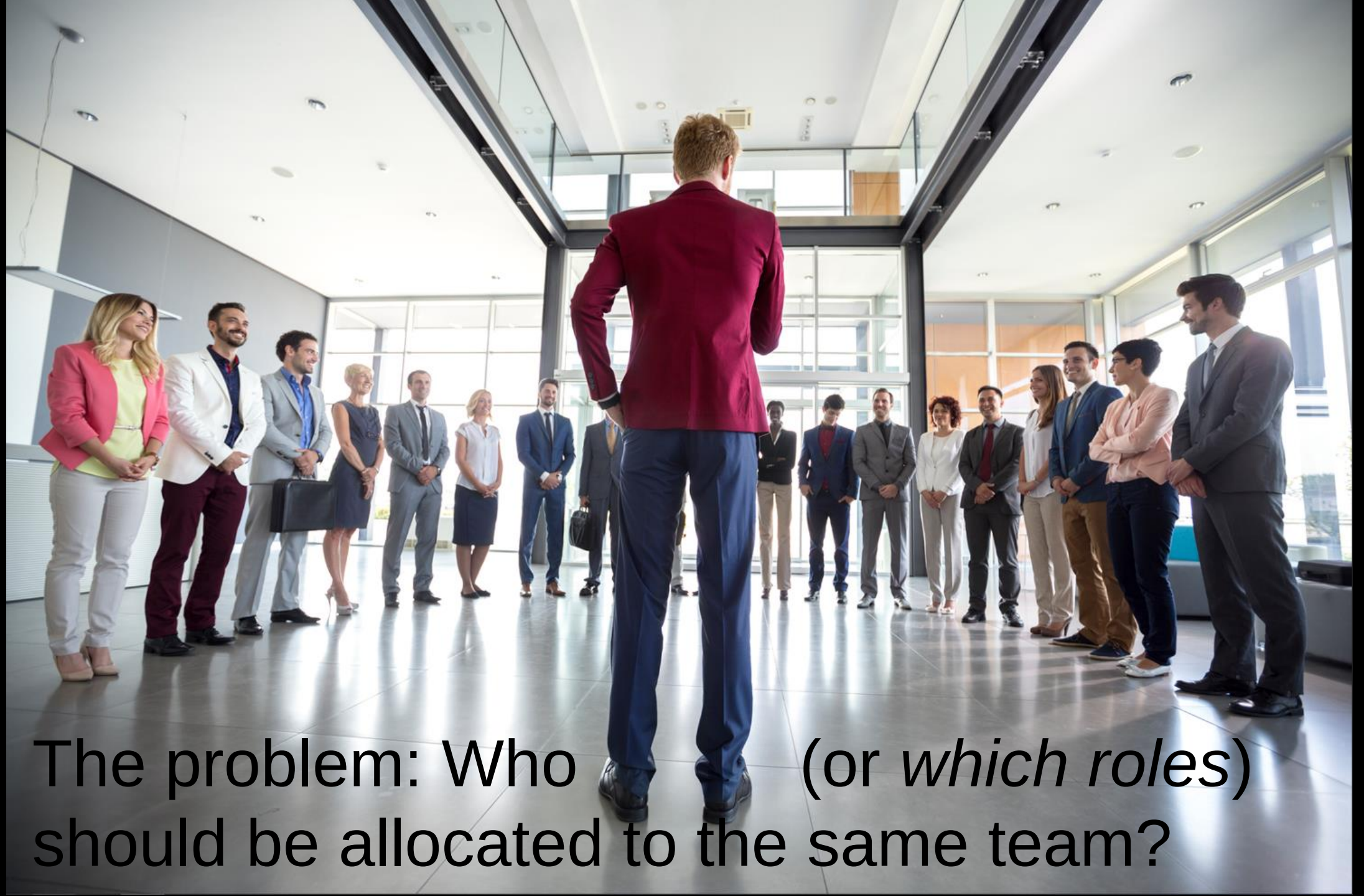
Linking practical problems with theory



The TRIZ problem solving approach
(Altshuller, 1996)

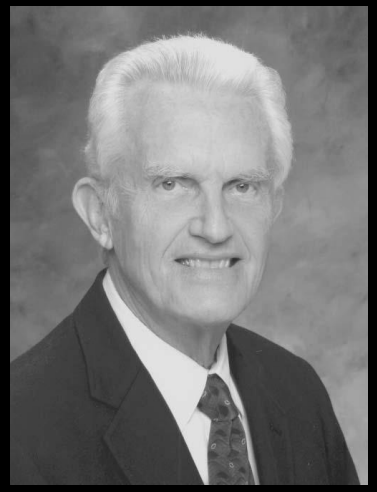


The problem: Who (or *which roles*) should be allocated to the same team?

Principles proposed in the classic literature

James Thompson

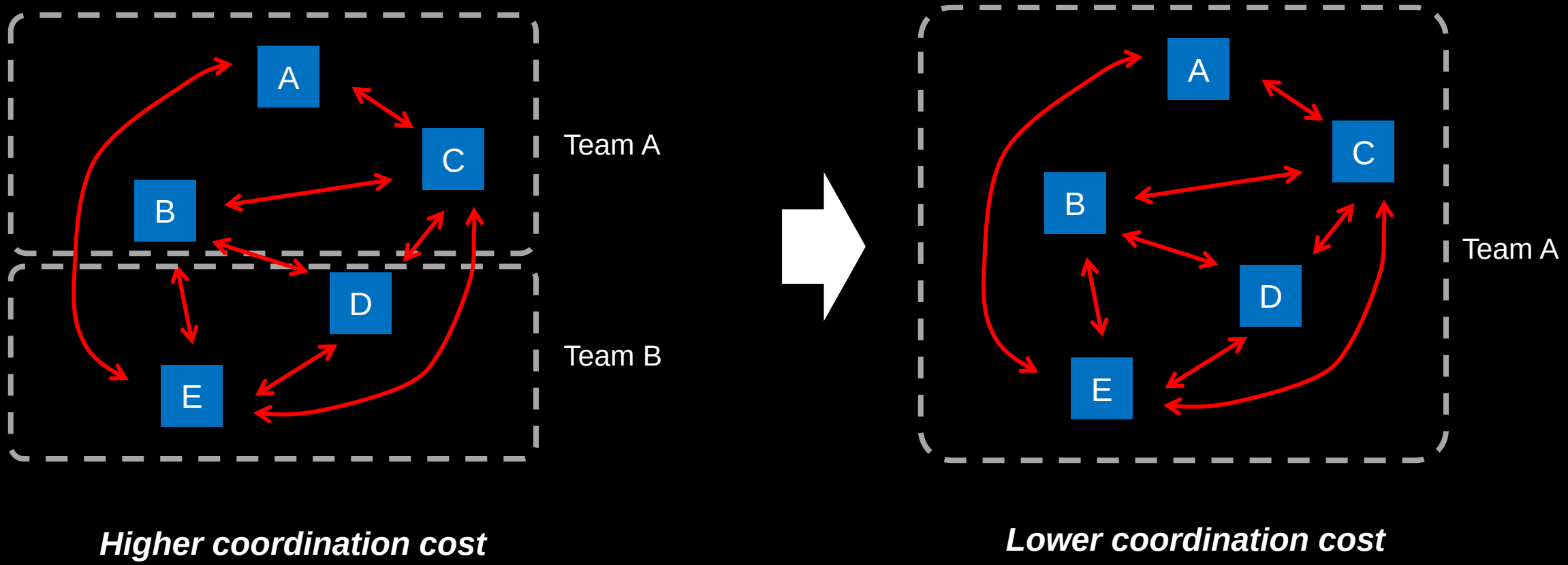
"Under norms of rationality, organizations group positions to minimize coordination costs."



Eberhardt Rechtin

“In partitioning a system into subsystems, choose a configuration with minimal communications between the subsystems.“

Key assumption: Coordination cost is higher between than within units



Higher coordination cost

Lower coordination cost

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Innovation

When Agile Harms Learning and Innovation: (and What Can Be Done About It)

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SUMMARY
Originally developed for software development, Agile approaches are increasingly adopted by organizations that seek flexibility in the face of rapid change. However, little attention has been paid to the potential negative consequences of the implementation of Agile in large-scale settings. This article presents the results of a multi-site study of a multinational telecom company over five years during its implementation of Agile practices in the context of large-scale software development. The article points to six potential pitfalls of implementing such practices that may negatively influence individual learning, ideation, and exploitation capabilities. It offers advice on how to avoid these consequences in large, established firms.

KEYWORDS: agile, large firms, organizational learning, ideation, exploitation

Managers are increasingly under pressure to build organizational flexibility in increasingly complex and dynamic environment. In response, new, adaptable organizational forms and practices are being deployed. Thus, companies such as CISCO, 3M, Microsoft, GE, Ericsson, SAAB, and SAP seek to increase organizational flexibility by adopting new organizational forms; migrating from vertical to lateral, organization-wide communication; moving from traditional hierarchy toward networks; and substituting from formal cooperation and coordination toward more spontaneous forms of interaction. Almost all of them have adopted Agile Scrum practices, which are widely viewed as reliable means of speeding up

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…the data revealed high coordination costs due to relevant information being increasingly dispersed across different teams”

“…middle managers…experienced intense confusion”

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Towards a governance framework for chains of Scrum teams

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ABSTRACT

Context: Large companies operating in the information intensive industries increasingly adopt Agile/Scrum to swiftly change IT functionality because of rapid changing business demands. IT functionality in large enterprises however is typically delivered by a portfolio of interdependent software applications involving a chain of Scrum teams. Usually, each application from the portfolio is allocated to a single Scrum team, which necessitates collaboration between the Scrum teams to jointly deliver functionality.
Objective: Identify the collaboration related issues in chains of Scrum teams.
Method: We used a qualitative approach with transcripted interviews from three case studies that were coded and analyzed to identify the issues.
Results: We identified six issues in chains of codependent Scrum teams; coordination, prioritization, alignment, automation, predictability and visibility. The synthesis of these issues with existing theory resulted in nine propositions. These nine propositions have been combined into a conceptual model.
Conclusion: We propose this conceptual model as a starting point for a governance framework to manage chains of Scrum teams that addresses the identified issues.

1. Introduction

Large companies operating in the information intensive industries experience rapid changing business demands that require swift delivery of new IT functionality. To be able to deliver such IT functionality swiftly internal IT development centers increasingly adopt Agile methods. A common Agile method is Scrum which aims to empower IT development centers to deliver customer focused IT functionality in a fast pace.

IT functionality in large companies however is delivered by a portfolio of interdependent applications, not just a single application. Each application in the portfolio supports a business function in the front to back business process. Typical front to back business functions are: front-office, mid-office, back-office and finance. Fig. 1 illustrates a typical front to back business process with business functions for the mortgage business line.

The front-office – in this example – performs customer facing processes, such as a mortgage client contact center. The mid-office calculates risk by a credibility check of a new client. The back-office performs the mortgage and settlement process, such as account opening. The finance function takes care of the actual funds provisioning, typically performed for multiple business lines.

Scrum is an Agile based method for incremental software development that uses low boundary cross-functional collaboration in software development teams that work toward a set team goal [78,79]. A Scrum development lifecycle normally consists of short (2–4 weeks) iterations, which enables swift feedback from software users and related stakeholders about the developed solution. Scrum defines three roles: the Product Owner, Scrum Master and other Scrum team members. A product owner acts as the single 'voice of the customer' collecting and prioritizing customer needs onto a prioritized list of items: the product backlog. The Scrum Master facilitates the Scrum team in achieving its goal. A Scrum team has a small size (max 10). The small team size eases intra-team knowledge sharing and utilizing the self-organizing ability in professional teams [88]. These self-organizing practices are encouraged by a structure, containing a product backlog, sprint backlog, sprint planning, daily-standups and a sprint review [61]. The team has the task to develop software based on the sprint backlog [70].

Scrum teams can be mapped in different ways onto the application landscape. Some prefer to have one Scrum team for the whole front to back chain. However two constraints make such front to back coverage difficult. First, the amount of involved IT staff then easily exceeds the generally agreed upon maximum Scrum team

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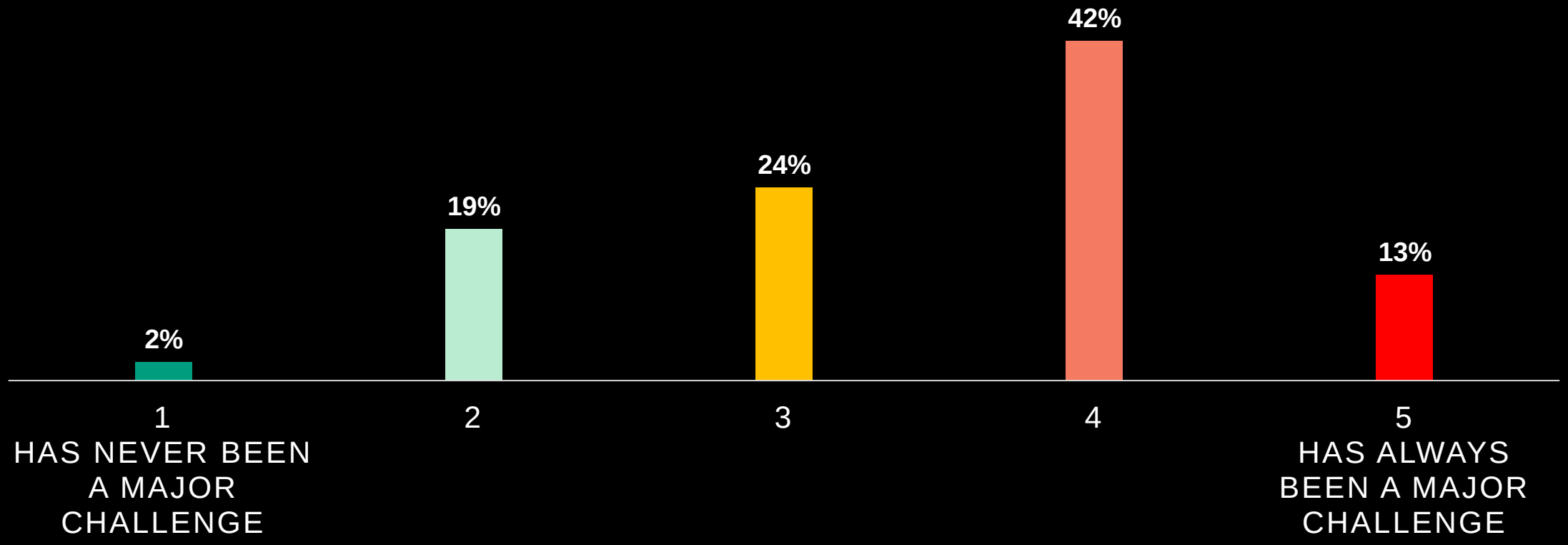
0950-5849/

"...I am drowning in coordination activities"

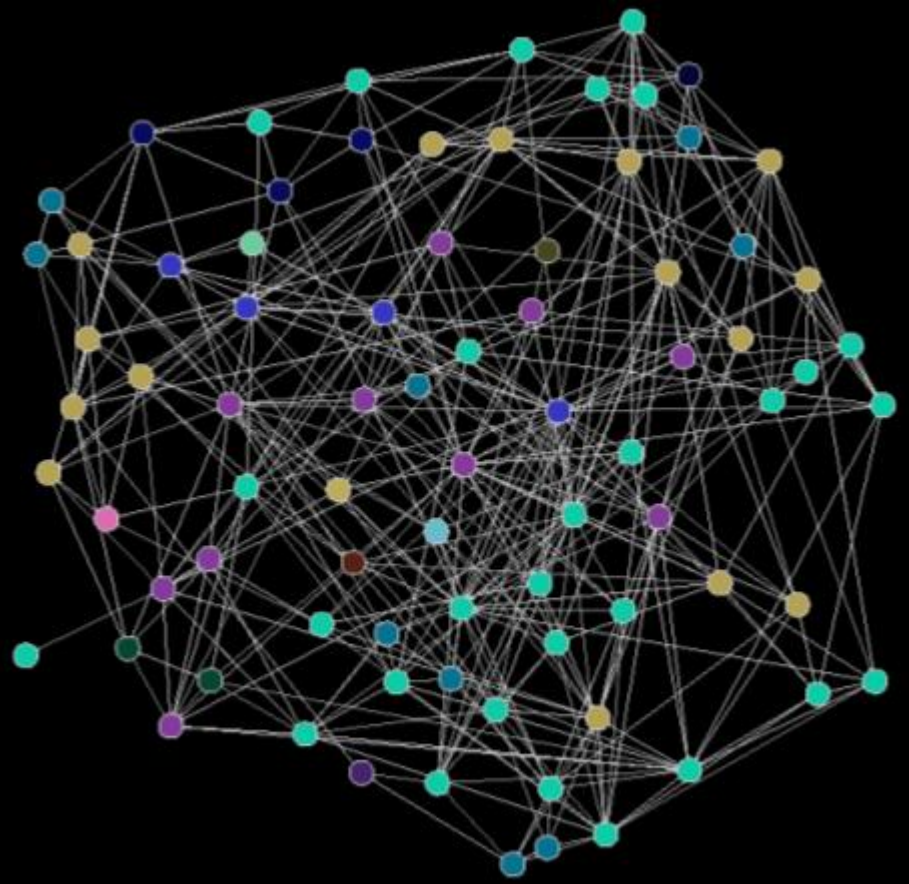
In practice, we don't always have the required information…

"Understanding how people collaborate and/or exchange information across units in the current organization"



Source: Worren et al. (2019): https://jorgdesign.springeropen.com/articles/10.1186/s41469-019-0053-x

…and even if we do, it may be hard to analyze and interpret

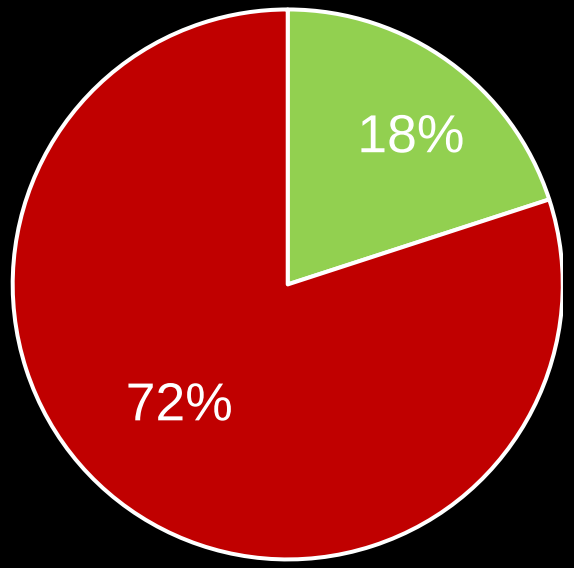


Grouping interdependent roles is hard!

Armfield Production planner Creates production plans that are discussed with Dalton. Provides feedback on proposals from Hood about efficiency improvements.	**Benson** Engineer Considers maintenance statistics together with Hood. Performs quality control in collaboration with Cooper.	**Cooper** Logistics advisor Communicates with Benson with regards to quality control. Follows up agreements with external shipping firms together with Farrar. Works with Ibanex to design the storage areas in the facility.
Dalton Production planner Reviews plans together with Armfield. Identifies equipment (including robots) that needs to be procured, which he communicates to Exton.	**Exton** Engineer Configures the machines and robots in order to follow up proposals from Ibanez. Considers proposals from Dalton regarding procurement priorities.	**Farrar** Production planner Follows up external shipping firms with Cooper; analyzes delivery statistics for raw materials and for shipping of finished goods.
Green Logistics advisor Orders raw materials and follows up the daily production flow in collaboration with Hood.	**Hood** Engineer Works to optimize space utilization and production flow together with Green. Considers statistics for maintenance with Benson. Proposes changes in plans to Armfield.	**Ibanez** Logistics advisor Analyzes the productiviy of the plant and develops proposals that he shares with Exton. Discusses the plans for storage facilities with Cooper.

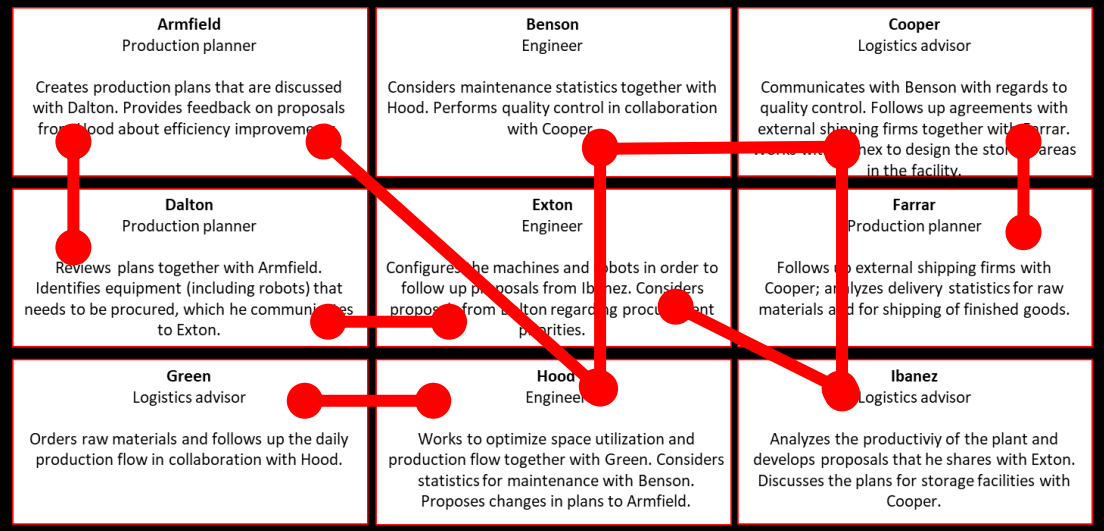
Question: If the firm has a rule that says that each team should have maximum 3 members, who should be placed on the same team?

Fewer than 20% found the optimal solution*



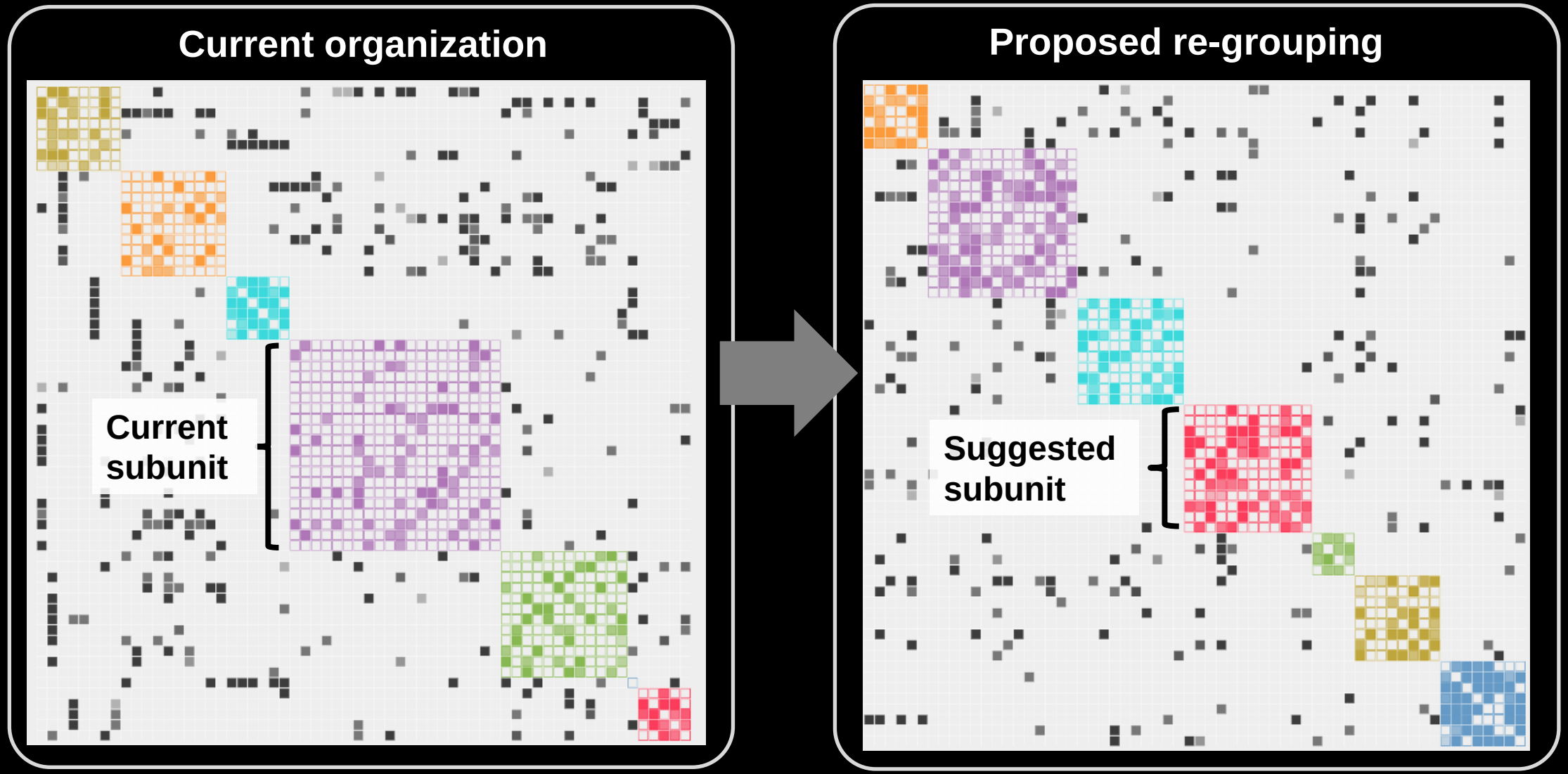
*A higher percentage found the solution to a simpler (but less realistic) role set

How we analyze these types of tasks

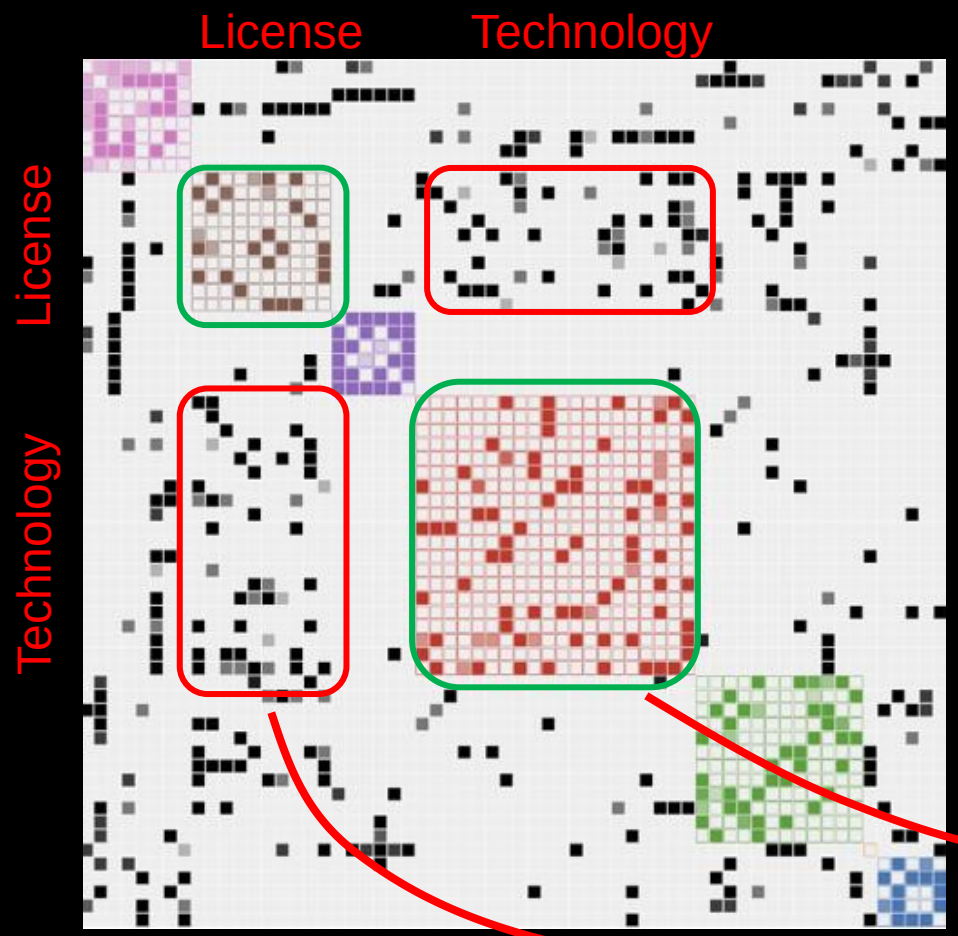


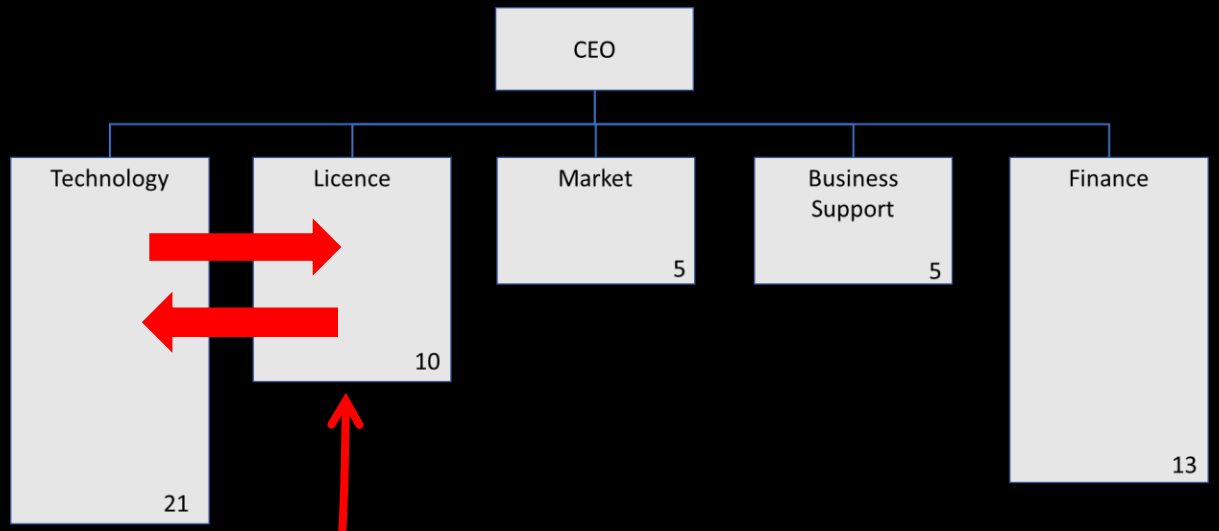
Name	Title		A	G	H	B	C	F	D	E	I
Armfield	Production planner	A			X				X		
Green	Logistics advisor	G			X						
Hood	Engineer	H	X	X		X					
Benson	Engineer	B			X		X				
Cooper	Logistics advisor	C				X		X			X
Farrar	Production planner	F					X				
Dalton	Production planner	D	X							X	
Exton	Engineer	E							X		X
Ibanez	Logistics advisor	I					X			X	

We created Reconfig to help collect, visualize and optimize the grouping of roles

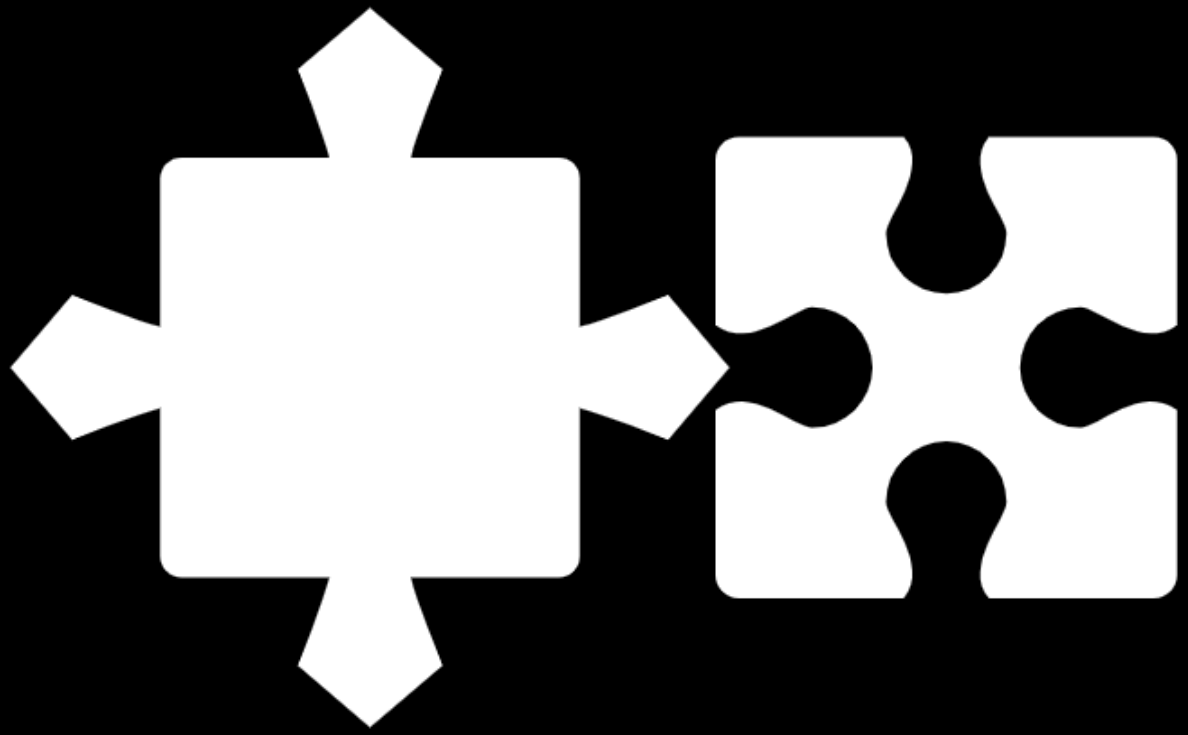


Example: Re-organization of small oil company



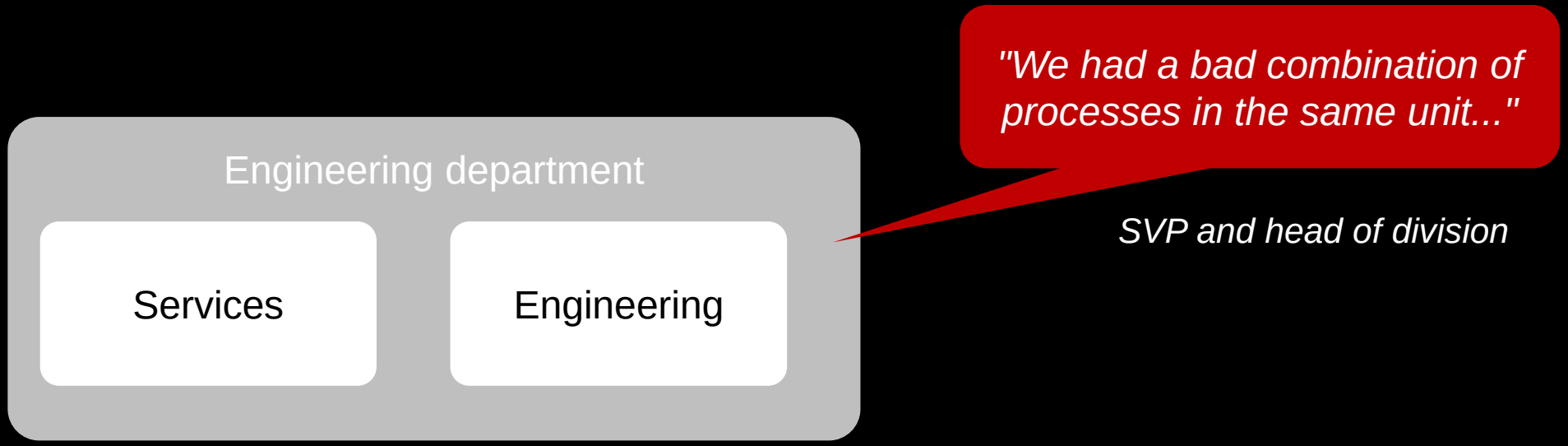


Key exception to the grouping principle:
Roles that may be connected, but still incompatible



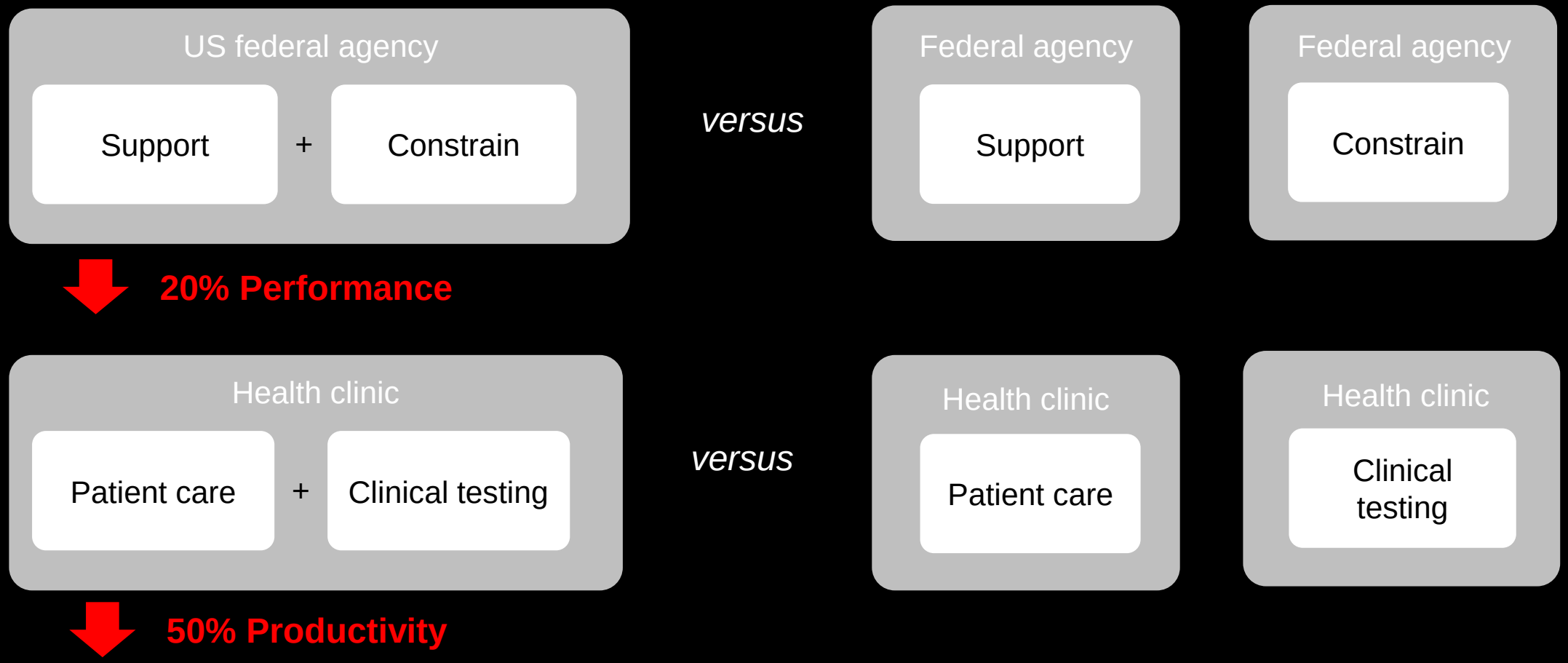
Created by Razmik Badalyan
from the Noun Project

Example: Global engineering firm



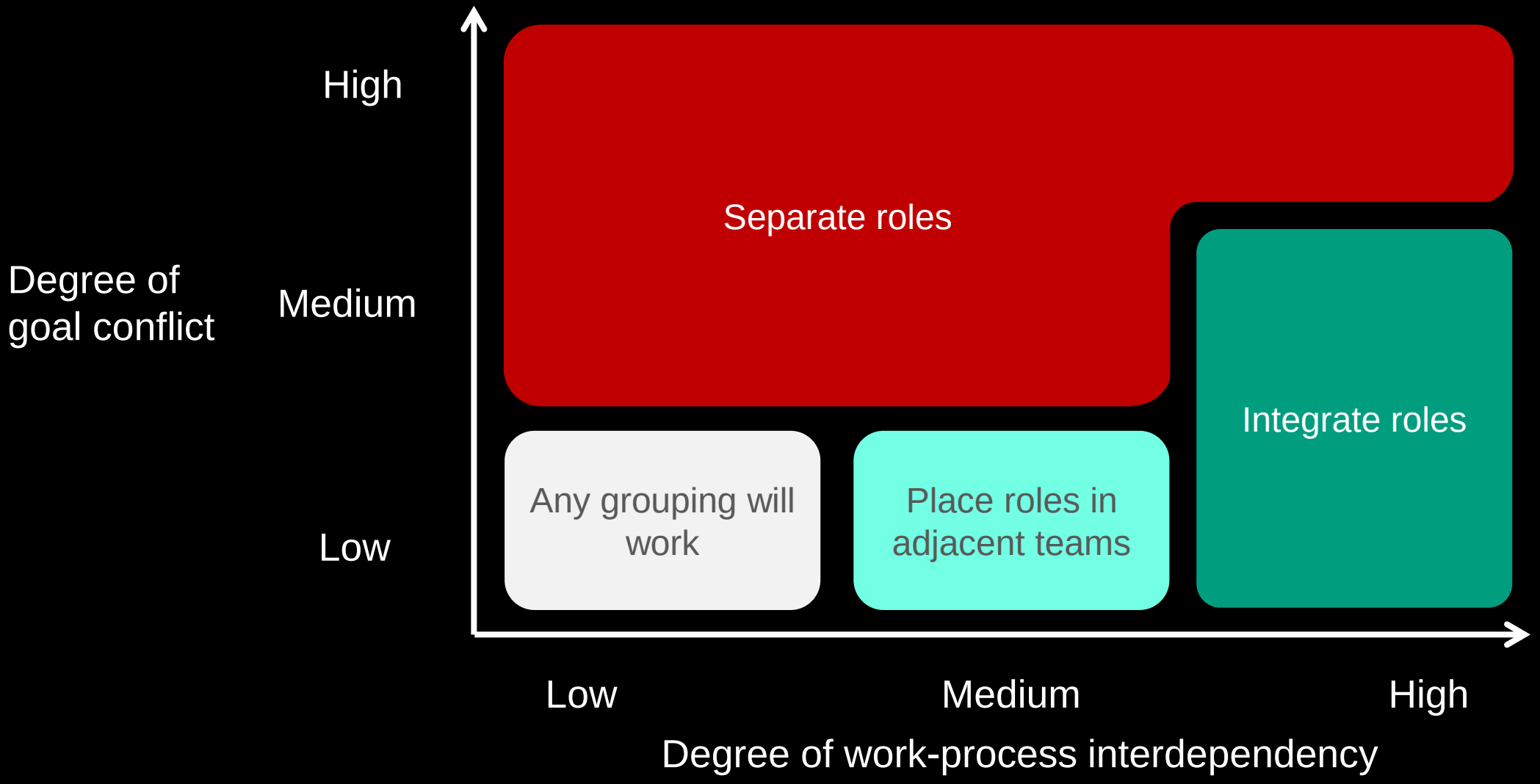
Source: Worren (2017): https://link.springer.com/article/10.1186/s41469-017-0023-0

Integrating incompatible roles leads to lower performance

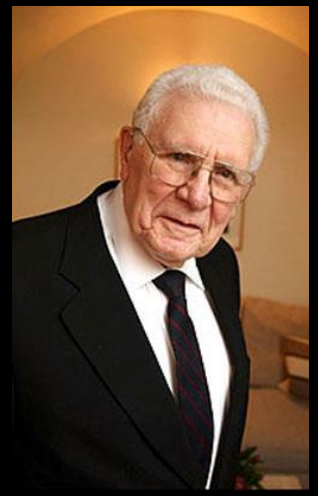


Sources: Carrigan (2018). Unpacking the effects of competing mandates on agency performance. *Public Administration Review, 78,* 5, 669-683.
Huckman, R. S., & Zinner, D. E. (2008). Does focus improve operational performance? Lessons from the management of clinical trials. *Strategic Management Journal, 29*(2): 173–193.

We need to differentiate between different degrees of goal conflicts and interdependency



Source: Worren & Pope (2022) https://journals.aom.org/doi/abs/10.5465/amr.2021.0054



Russell Ackoff
1919 - 2009

If Francis of Assisi was a manager, his prayer would be:

"Help me integrate when I can,

and separate when I should,

and have the wisdom to know the difference"

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