Not dead, just resting!
How to win at **maintenance mode**

Steve Smith
Head of Scale

DEVOPS ENTERPRISE SUMMIT

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Hello!

Head of Scale service at Equal Experts

Helping organisations to scale up, scale steady, or scale down at pace to achieve business agility

Solving scaling problems for many teams, many services

Experiences

- 5 teams/20 µliths -> 8 teams/70µliths in 3 years
- 10 teams/50 µservices -> 60 teams/600 µservices in 2 years
- 1 team/1 µservice -> 40 teams, 120 µservices in 2.5 years

Books

'Measuring Continuous Delivery' and 'Build Quality In'

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What is the maintenance mode problem

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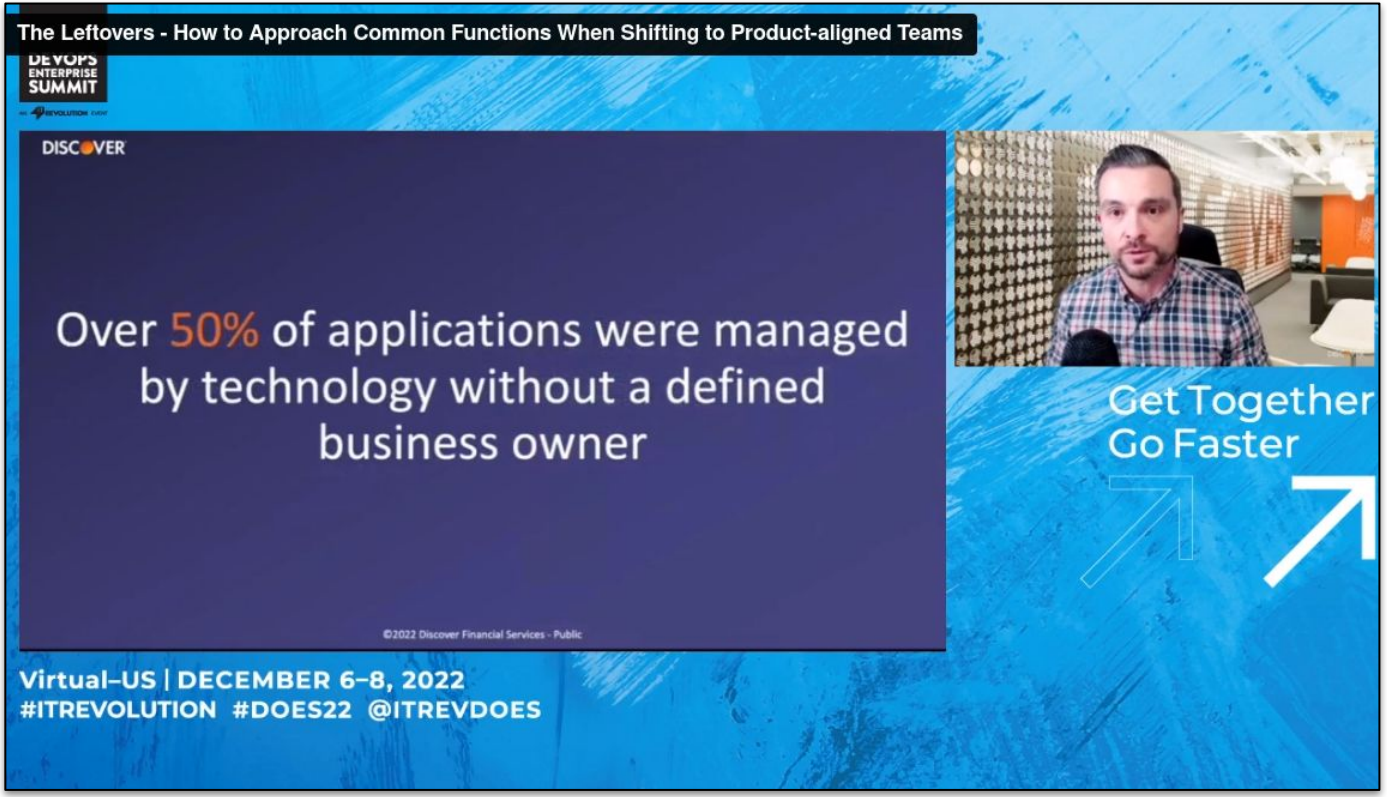
The maintenance mode problem



The maintenance mode problem

Understand the background

You've got many teams, many services. Non-differentiators have zero change demand after live launch. Maintenance tasks are the norm

Recognise the symptoms

- *"We need capacity for more services"*
- *"We need to reduce costs"*
- Unplanned Work Rate is increasing

Solve the problem

Find a zero demand service ownership model that:

- enables teams to be reassigned / resized / retired
- protects live services reliability
- protects job satisfaction
- protects feature delivery

Solution #1
Delivery teams

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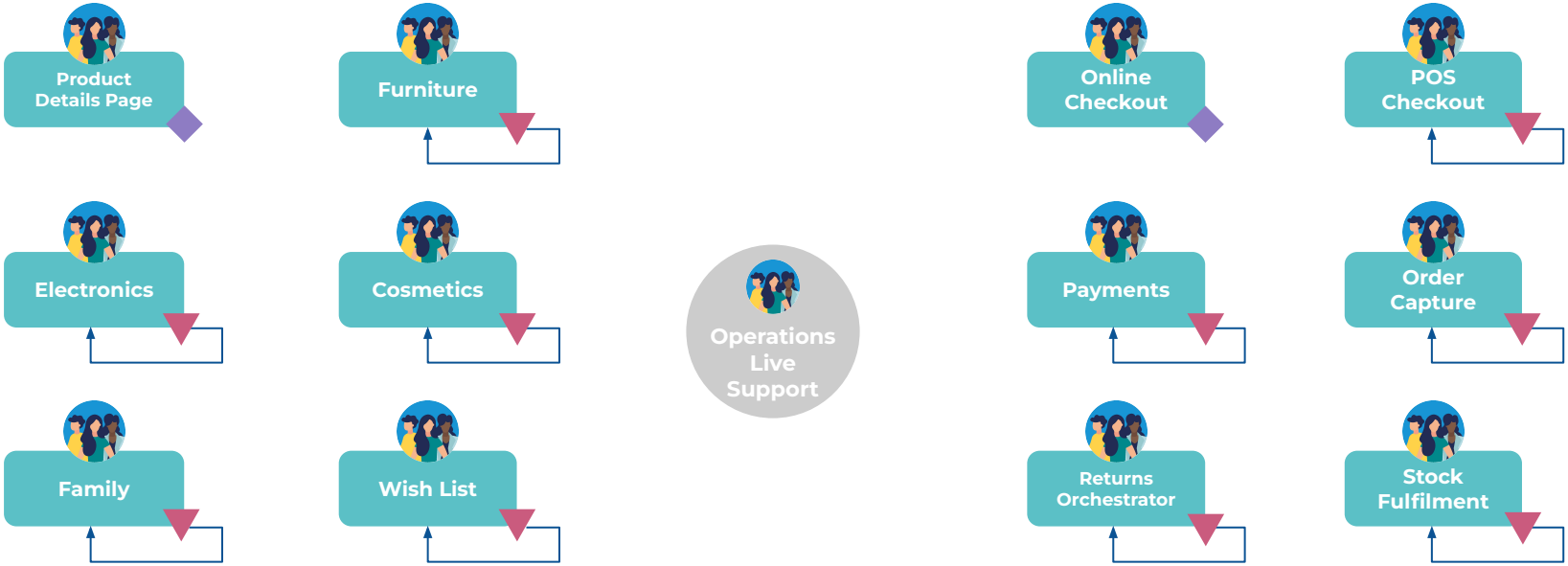
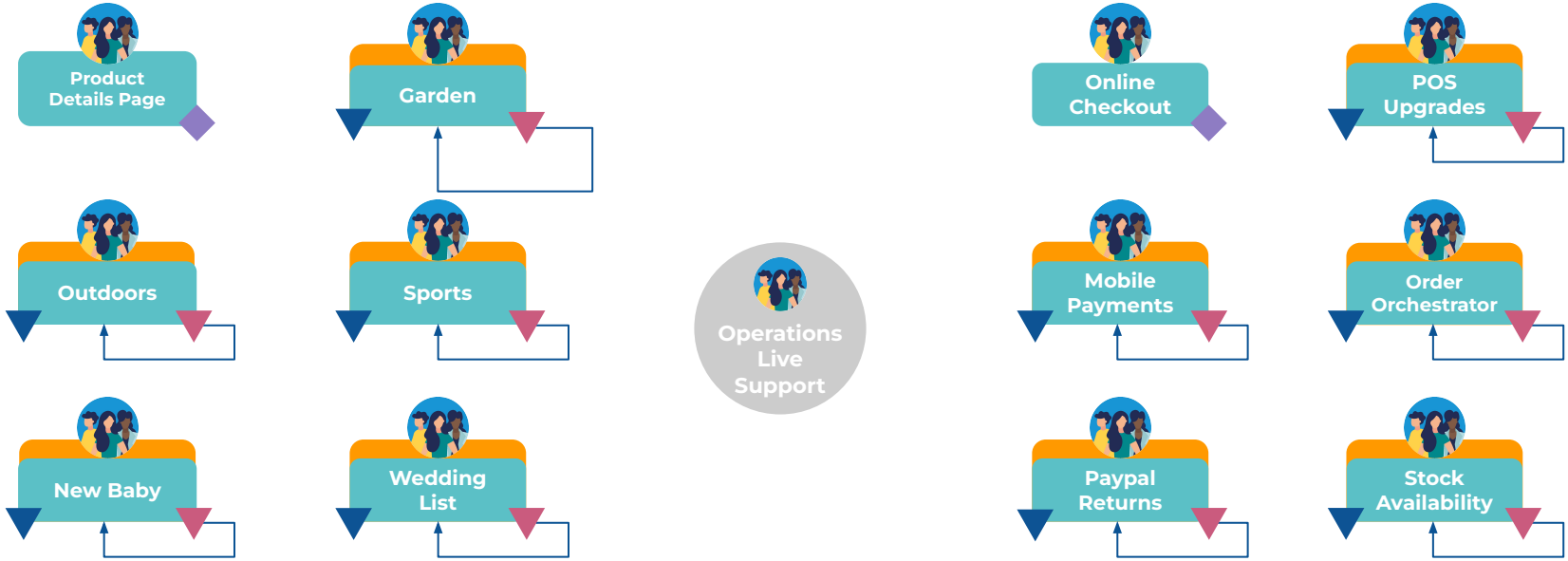
Solution #1 - delivery teams



Delivery team | Operations team | Differentiator service | Non-differentiator service | Maintenance mode transition

Solution #1 - delivery teams



Delivery team | Operations team | Differentiator service | Non-differentiator service | Maintenance mode transition | Zero demand non-differentiator

Solution #1 - delivery teams

Teams maintain zero demand services in background, and build new services in foreground. Ops team continues on live support

Benefits

- capacity to build more services
- low cognitive load across many teams
- technical skills and domain knowledge for maintenance tasks

Drawbacks

- slow priorities due to multiple business owners for delivery teams
- no intrinsic motivation for teams
- no ability to resize or retire teams

Solution #1 - delivery teams

Maintenance mode solution	Increase capacity	Reduce costs	Protect services reliability	Protect feature delivery	Protect job satisfaction
Delivery teams X delivery teams					

Solution #1 survey - delivery teams

Maintenance mode solution	Increase capacity	Reduce costs	Protect services reliability	Protect feature delivery	Protect job satisfaction
Delivery teams X delivery teams	58%	100%	75%	52%	33%

Solution #2
Operations team

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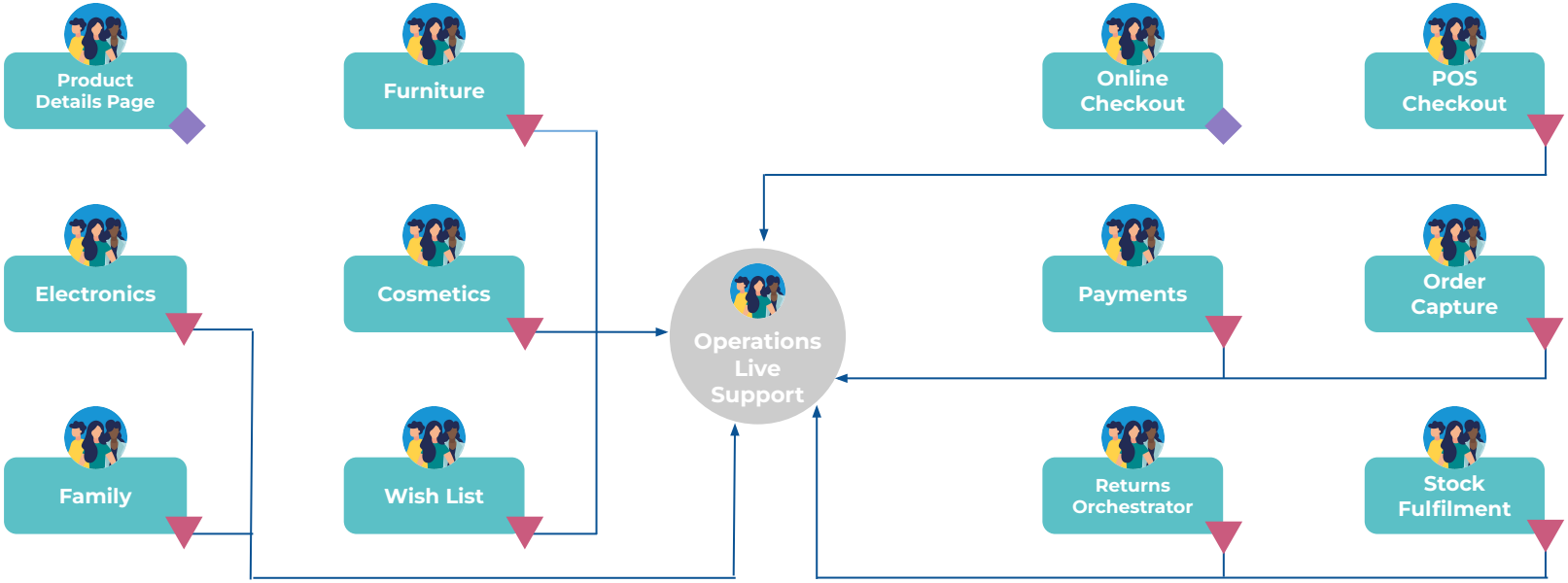
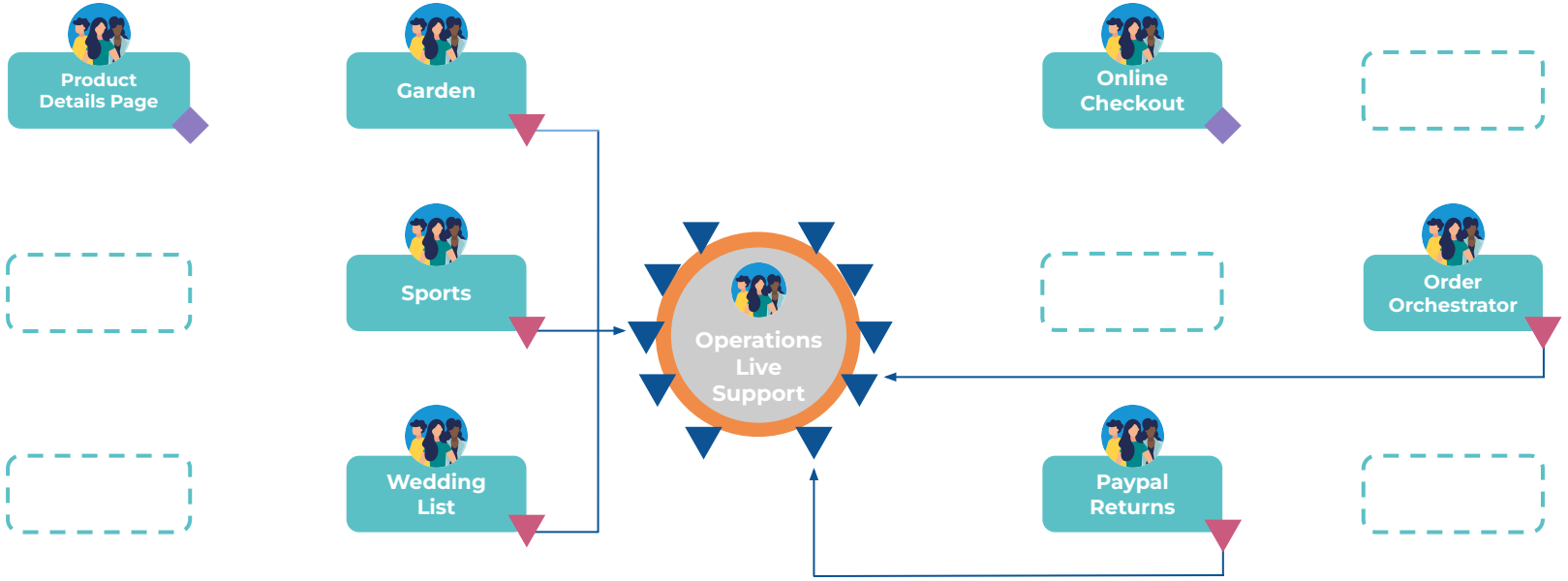
Solution #2 - operations team



Delivery team | Operations team | Differentiator service | Non-differentiator service | Maintenance mode transition

Solution #2 - operations team



Delivery team | Operations team | Differentiator service | Non-differentiator service | Maintenance mode transition | Zero demand non-differentiator

Solution #2 - operations team

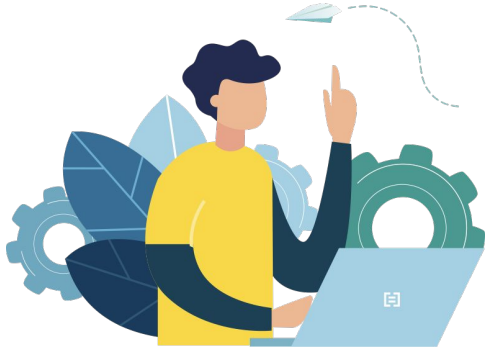
Teams hand over zero demand services to the operations team, who do all the maintenance tasks and live support

Benefits

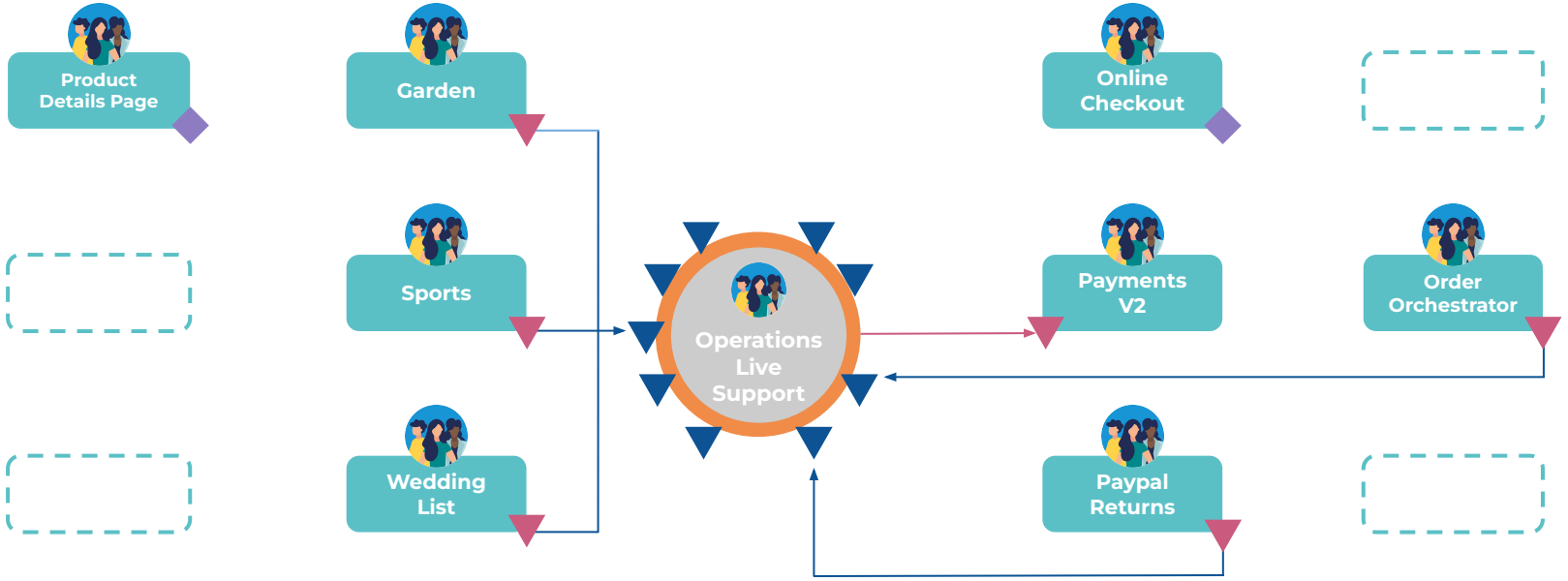
- capacity to build more services
- ability to resize or retire teams

Drawbacks

- high cognitive load, missing skills and knowledge for ops team
- slow priorities due to zero/multiple business owners for ops team
- no intrinsic motivation for teams



Solution #2 - operations team



Solution #2 - operations team

Maintenance mode solution	Increase capacity	Reduced costs	Protect services reliability	Protect feature delivery	Protect job satisfaction
Delivery teams X delivery teams					
Operations team 1 central team					

Solution #2 survey - operations team

Maintenance mode solution	Increase capacity	Reduced costs	Protect services reliability	Protect feature delivery	Protect job satisfaction
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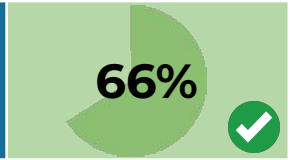
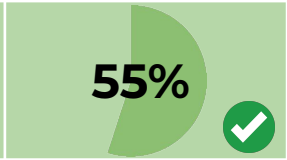
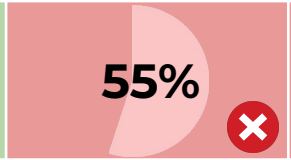
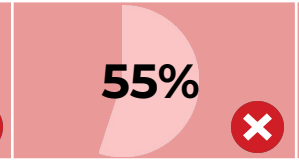
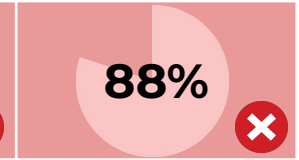
Operations team 1 central team					

Solution #3
Multi-product teams

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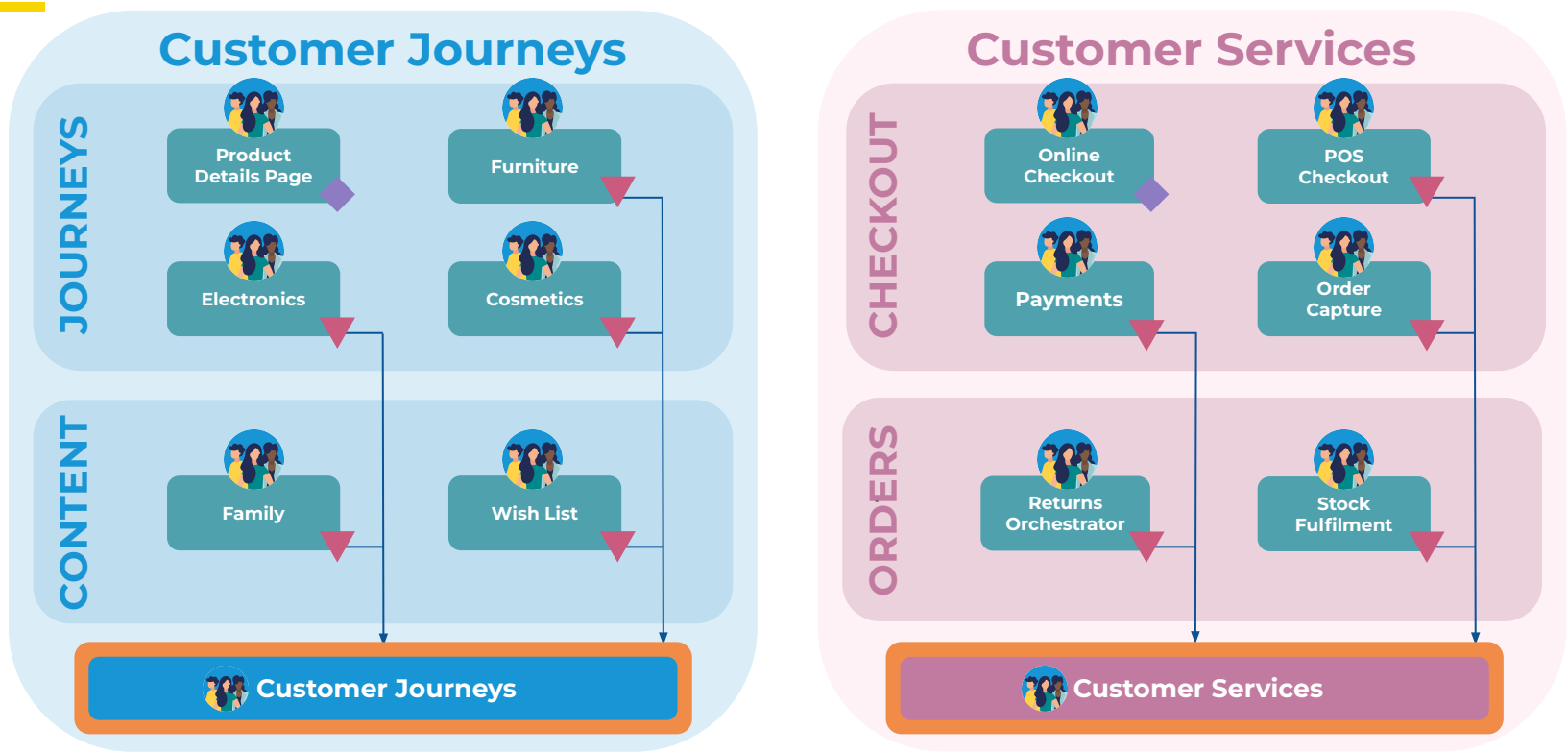
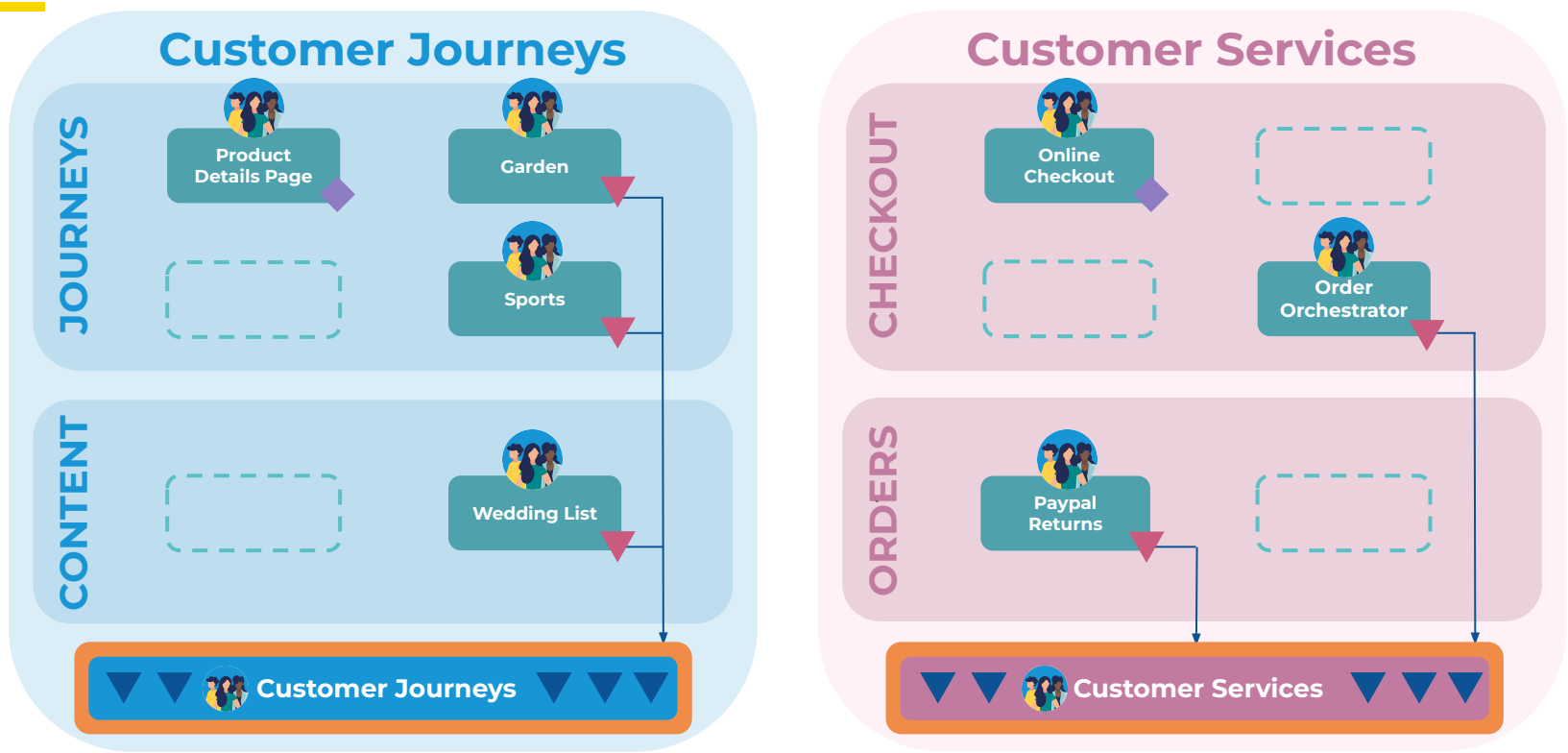
You Build It You Run It

Solution #3 - multi-product teams



Solution #3 - multi-product teams



Delivery team | Multi-product teams | Differentiator service | Non-differentiator service | Maintenance mode transition | Zero demand non-differentiator

Solution #3 - multi-product teams

Teams hand over zero demand services in a product family to its multi-product team, who do all the maintenance tasks and live support

Benefits

- capacity to build more services
- ability to resize or retire product teams
- skills and knowledge can be readily shared between developers
- manageable cognitive load for multi-product teams
- clear ownership of cross-service priorities in a product family
- sense of purpose for multi-product teams

Drawbacks

- strong guardrails are needed on zero demand, team identity, product families, and service transfers
- funding multi-product teams needs to be value based

Solution #3 - multi-product teams

Maintenance mode solution	Increase capacity	Reduced costs	Protect services reliability	Protect feature delivery	Protect job satisfaction
Delivery teams X delivery teams					
Operations team 1 central team					
Multi-product teams Z family teams	✓	✓	✓	✓	✓

Takeaways

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Takeaways

Anticipate the maintenance mode problem

Recognise that budget holders are right to worry about the expense of dedicated delivery teams for maintenance mode

Leave your operations team alone

Understand there are other maintenance mode solutions, that don't sacrifice services reliability, future feature delivery, and staff retention

Adopt You Build It You Run It and multi-product teams

Create outcome-oriented, empowered product teams, and do the same thing in maintenance mode - with some guardrails

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How to win at **maintenance mode**

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